FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
PHOENIX, ARIZONA

RIO VERDE SOUTH FLOODPLAIN DELINEATION STUDY

FCD 93-07

TECHNICAL DATA NOTEBOOK HYDROLOGY

Existing Condition

Book 2 of 2

Registered Professional Engineer (Civil)
CERTIFICATE NO. 23969
FRANK EDWARD BROWN
Date Signed 1 AUG 95
ARIZONA, U.S.A.

McLaughlin Kmetty Engineers, Ltd.
In Association with George V. Sabol Consulting Engineers, Inc.
Phoenix, Arizona

AUGUST 1995

Registered Professional Engineer (Civil)
CERTIFICATE NO. 17928
GEORGE V. SABOL
Date Signed 21 Aug 95
ARIZONA, U.S.A.

ADDENDUM

MKE

McLaughlin Kmetty Engineers, Ltd.

3501 North 16th Street Phoenix, Arizona 85016-6419 (602) 248-7702 Fax (602) 248-7851

MEMORANDUM

GEZA E. KMETTY
RONALD C. McLAUGHLIN
LEO M. EISEL

FRANK E. BROWN

ROBERT E. CONSONI
ROBERT J. STAVER

CHARLES L. JOY
RONALD E. HAUGHT

TO: Hasan Mushtaq
FROM: Frank Brown Frank Brown
DATE: December 19, 1996

SUBJECT: Rio Verde Area South
Contract No. FCD 93-07
MKE Job No. 89-407.003

Enclosed is a memorandum and 3.5 inch computer disk concerning revised hydrologic values within the Rio Verde South watershed. While preparing Table 3-1 of the Hydraulic Technical Data Notebook (TDN), we noticed some drainage areas summed by hand did not match those reported by the HEC-1 model. This issue was brought to the attention of the hydrology sub-consultant, George V. Sabol Consulting Engineers, and was resolved to everyone's satisfaction by adding a footnote to Table 3-1, and the Flood Control District submitted the project to FEMA for approval. Subsequently, George Sabol investigated the matter more thoroughly and discovered a basic logic error in the HEC-1 model. When we met to discuss this issue in February 1996 (at the Arizona Floodplain Management Association meeting in Wickenburg), Pedro Calza recommended we wait for FEMA review comments and proceed from there. At this point in time, FEMA has approved both the hydrology and the hydraulics.

The enclosed memorandum discusses the logic error in more detail, and provides a flow rate comparison table. In light of the enclosed memorandum, we recommend that anyone needing hydrology information within the study watershed replace the Hydrology TDN HEC-1 files with those on the enclosed disk.

We investigated the effect of the revised flowrate on the HEC-2 floodplain analysis and concluded that there is an insignificant change in floodplain and floodway elevations for regulatory purposes. Therefore, the floodplain and floodway values as found in the Hydraulic TDN remain valid. For the case of anyone doing major channel improvements or realignment that requires a new HEC-2 analysis, we recommend that the revised hydrologic values be used in any new HEC-2 models.

Please insert this material in the front portion of the Hydrology TDN and the Hydraulic TDN.

We hope that this memo and the enclosed memo from George V. Sabol Consulting Engineers clarify these issues for you. Please call me or George Sabol if you have any further questions.

Enclosures: HEC-1 disk and memorandum from GVSCE

G:\P\89407003\WP\RevHydro.Mem

RECEIVED NOV 1 2 1996

George V. Sabol Consulting Engineers, Inc.

MEMORANDUM

TO: Frank Edward Brown, PE, MKE

FROM: George V. Sabol, PhD, PE, GVSCE

DATE: 1 November 1996

SUBJECT: Rio Verde (South) Floodplain Delineation Study

At your request, we have reviewed the HEC-1 models and results that were used to set the discharges for the delineation of floodplains for washes for the referenced project. That review resulted in detection of logic errors in the HEC-1 models. Those have been corrected and the HEC-1 models rerun. A diskette is provided containing the corrected HEC-1 models. Tables 1 and 2 summarize the results and provide a comparison of results from the original HEC-1 model that was used for delineation purposes. Table 1 is for the "with levee" condition. Table 2 is for concentration points that are affected under the "without levee" condition. Those tables contain a column that has a heading "Percent Difference." That value is the difference between the larger of either the 6-hour or 24-hour discharge for the original model and the larger of either the 6-hour or 24-hour discharge for the revised model. A (+) indicates that discharge increased and a (-) indicates a decrease. Notice that there are some instances where the design storm shifted from the 24-hour to the 6-hour storm.

The original HEC-1 model became suspect when it was noted that there were unusual contributing drainage areas being reported as output for a few concentration points. Upon inspection, the following error was detected. At C504 and C581 flow enters from the north study area (Wood/Patel model). Because of modeling difficulties with JD records and the use of Tape 21 files, the input hydrographs for C504 and C581 were written out and brought back several times. The flow diagram logic was in error. Instead of combining C512 and C519 at C520, C512 was combined with one of the Wood/Patel hydrographs (TEMP 2) sitting in the stack. The logic error was corrected.

The following is a summary of the discharge changes that have bearing on the floodplain delineations. For Wash 10, discharge at C540 decreased by 0.42% (Table 1), C542 decreased by 0.35% (Table 2), C543 increased by 3.70% (Table 2), and C545 at the confluence of Washes 10 and 11 increased by 6.82% (Table 2). For Wash 11, C546 increased by 6.89% (Table 2). For Wash 9, there are slight changes (±1%) for C566, C567, C568, C569 and C570 (Table 1). For Wash 9, the 24-hour storm produced the larger discharges in the original model, but this shifted to the 6-hour storm in the revised model.

There are some meaningful changes to the hydrology at certain locations within the watershed; for example, TEMP2 (Table 1). Those changes, although meaningful in regard to use of the HEC-1 model as a planning tool, resulted in only minor impact, as discussed, to the discharges for washes being delineated. Overall, the corrected and revised discharges for the washes that were delineated for this study changed somewhat from those that were used for the FEMA submittal. No meaningful difference in floodplain delineation would be expected because of these slight changes in hydrology.

Table 1

Comparison of Peak Discharges for the 100-year, 6-hour and 24-hour storms with the Levee in place

HEC-1 ID	Revised Area Model Discharge, in cfs		Original Area Model Discharge, in cfs		Revised Area Model Control	Percent Difference
	6-hour	24-hour	6-hour	24-hour		
500A	421	280	421	280	6-hour controls	0.00
500B	325	227	325	227	6-hour controls	0.00
500C	248	160	248	160	6-hour controls	0.00
500D	371	250	371	250	6-hour controls	0.00
500E	219	137	219	137	6-hour controls	0.00
500F	647	442	647	442	6-hour controls	0.00
500G	349	228	349	228	6-hour controls	0.00
500H	340	226	340	226	6-hour controls	0.00
500I	644	430	644	430	6-hour controls	0.00
500J	204	124	204	124	6-hour controls	0.00
500K	219	144	219	144	6-hour controls	0.00
500L	292	190	292	190	6-hour controls	0.00
500M	228	142	228	142	6-hour controls	0.00
500N	228	138	228	138	6-hour controls	0.00
500O	182	120	182	120	6-hour controls	0.00
500P	201	125	201	125	6-hour controls	0.00
501A	111	63	111	63	6-hour controls	0.00
501B	151	89	151	89	6-hour controls	0.00
502A	113	69	113	69	6-hour controls	0.00
502B	139	86	139	86	6-hour controls	0.00
502C	100	63	100	63	6-hour controls	0.00
503A	458	292	458	292	6-hour controls	0.00
503B	171	115	171	115	6-hour controls	0.00
503C	278	176	278	176	6-hour controls	0.00
504A	428	290	428	290	6-hour controls	0.00
505A	341	237	341	237	6-hour controls	0.00
505B	378	228	378	228	6-hour controls	0.00
509A	674	498	674	498	6-hour controls	0.00
509B	638	479	638	479	6-hour controls	0.00
509C	279	193	279	193	6-hour controls	0.00
509D	453	324	453	324	6-hour controls	0.00
509E	340	241	340	241	6-hour controls	0.00
509F	367	257	367	257	6-hour controls	0.00
509G	196	134	196	134	6-hour controls	0.00
509H	109	72	109	72	6-hour controls	0.00
509I	61	36	61	36	6-hour controls	0.00
509J	161	106	161	106	6-hour controls	0.00
509K	60	36	60	36	6-hour controls	0.00
509L	209	125	209	125	6-hour controls	0.00
509M	150	101	150	101	6-hour controls	0.00
509N	250	151	250	151	6-hour controls	0.00
509O	100	59	100	59	6-hour controls	0.00
509P	325	193	325	193	6-hour controls	0.00
509Q	244	148	244	148	6-hour controls	0.00

Table 1

Comparison of Peak Discharges for the 100-year, 6-hour and 24-hour storms with the Levee in place

HEC-1 ID	Revised Area Model Discharge, in cfs		Original Area Model Discharge, in cfs		Revised Area Model Control	Percent Difference
	6-hour	24-hour	6-hour	24-hour		
509R	245	147	245	147	6-hour controls	0.00
509S	431	273	431	273	6-hour controls	0.00
510A	994	806	994	806	6-hour controls	0.00
510B	518	374	518	374	6-hour controls	0.00
510C	850	675	850	675	6-hour controls	0.00
510D	126	75	126	75	6-hour controls	0.00
510E	282	195	282	195	6-hour controls	0.00
510F	207	134	207	134	6-hour controls	0.00
510G	316	208	316	208	6-hour controls	0.00
511A	941	704	941	704	6-hour controls	0.00
511B	948	792	948	792	6-hour controls	0.00
511C	878	747	878	747	6-hour controls	0.00
511D	195	140	195	140	6-hour controls	0.00
511E	579	430	579	430	6-hour controls	0.00
511F	340	225	340	225	6-hour controls	0.00
511G	961	768	961	768	6-hour controls	0.00
511H	458	312	458	312	6-hour controls	0.00
511I	382	236	382	236	6-hour controls	0.00
511J	238	136	238	136	6-hour controls	0.00
511K	1001	788	1001	788	6-hour controls	0.00
511L	336	221	336	221	6-hour controls	0.00
511M	182	116	182	116	6-hour controls	0.00
511N	132	85	132	85	6-hour controls	0.00
511O	78	49	78	49	6-hour controls	0.00
511P	493	353	493	353	6-hour controls	0.00
511Q	164	106	164	106	6-hour controls	0.00
B502L	299	239	299	239	6-hour controls	0.00
B508L	277	380	277	380	24-hour controls	0.00
B515L	166	223	166	223	24-hour controls	0.00
B531L	528	551	528	551	24-hour controls	0.00
B532AL	468	494	468	494	24-hour controls	0.00
B532R	877	921	877	921	24-hour controls	0.00
B534L	240	251	240	251	24-hour controls	0.00
B535R	896	941	896	941	24-hour controls	0.00
B537R	746	631	746	631	6-hour controls	0.00
B539R	158	113	158	113	6-hour controls	0.00
B553R	367	305	367	305	6-hour controls	0.00
B554R	261	227	261	227	6-hour controls	0.00
B557L	144	131	144	131	6-hour controls	0.00
B558R	263	223	263	223	6-hour controls	0.00
B559L	76	70	76	70	6-hour controls	0.00
B560L	40	39	40	39	6-hour controls	0.00
B573L	53	57	53	57	24-hour controls	0.00
B574R	211	223	211	223	24-hour controls	0.00

Table 1

Comparison of Peak Discharges for the 100-year, 6-hour and 24-hour storms with the Levee in place

HEC-1 ID	Revised Area Model Discharge, in cfs		Original Area Model Discharge, in cfs		Revised Area Model Control	Percent Difference
	6-hour	24-hour	6-hour	24-hour		
B578L	234	247	234	247	24-hour controls	0.00
BB519	512	606	BB519 is a new recorded		24-hour controls	
C502	491	406	491	406	6-hour controls	0.00
C503	395	297	395	297	6-hour controls	0.00
C504	162	193	162	193	24-hour controls	0.00
C506	265	277	265	277	24-hour controls	0.00
C507	279	346	279	346	24-hour controls	0.00
C508	528	682	528	682	24-hour controls	0.00
C509	371	249	371	249	6-hour controls	0.00
C510	311	365	466	365	24-hour controls	-21.67
C511	447	645	509	670	24-hour controls	-3.73
C512	517	727	579	754	24-hour controls	-3.58
C515	214	278	214	278	24-hour controls	0.00
C517	424	517	424	517	24-hour controls	0.00
C518	462	550	463	550	24-hour controls	0.00
C519	512	606	513	606	24-hour controls	0.00
C520	957	1264	818	1007	24-hour controls	25.52
C522	307	209	307	209	6-hour controls	0.00
C523	1099	1402	949	1108	24-hour controls	26.53
C526	1594	1472	1594	1472	6-hour controls	0.00
C527	1780	1709	1780	1709	6-hour controls	0.00
C528	2229	2257	2229	2257	24-hour controls	0.00
C529	2175	2211	2175	2211	24-hour controls	0.00
C530	2274	2387	2274	2387	24-hour controls	0.00
C531	2232	2337	2232	2337	24-hour controls	0.00
C533	757	791	757	791	24-hour controls	0.00
C534	800	839	800	839	24-hour controls	0.00
C535	1055	1107	1055	1107	24-hour controls	0.00
C536	703	743	703	743	24-hour controls	0.00
C538	863	913	895	930	24-hour controls	-1.83
C540	1277	1409	1288	1415	24-hour controls	-0.42
C541	208	220	208	220	24-hour controls	0.00
C542	1289	1425	1300	1430	24-hour controls	-0.35
C543	1429	1599	1323	1543	24-hour controls	3.63
C545	1876	2132	1592	1996	24-hour controls	6.81
C545L	695	735	695	735	24-hour controls	0.00
C545R	1440	1618	1336	1562	24-hour controls	3.59
C546	1961	2224	1666	2085	24-hour controls	6.67
C550	886	570	886	570	6-hour controls	0.00
C550L	717	456	717	456	6-hour controls	0.00
C553	779	649	779	649	6-hour controls	0.00
C554	410	347	410	347	6-hour controls	0.00
C555	394	387	394	387	6-hour controls	0.00
C556	618	528	618	528	6-hour controls	0.00

Table 1

Comparison of Peak Discharges for the 100-year, 6-hour and 24-hour storms with the Levee in place

HEC-1 ID	Revised Area Model Discharge, in cfs		Original Area Model Discharge, in cfs		Revised Area Model Control	Percent Difference
	6-hour	24-hour	6-hour	24-hour		
C557	755	722	755	722	6-hour controls	0.00
C558	612	531	612	531	6-hour controls	0.00
C559	192	178	192	178	6-hour controls	0.00
C560	127	121	127	121	6-hour controls	0.00
C561	128	122	128	122	6-hour controls	0.00
C562	199	190	199	189	6-hour controls	0.00
C564	347	209	347	209	6-hour controls	0.00
C565	657	635	657	637	6-hour controls	0.00
C566	759	744	762	746	6-hour controls	-0.39
C567	967	958	876	958	6-hour controls	0.94
C568	1007	1002	915	1005	6-hour controls	0.20
C569	1010	1006	920	1008	6-hour controls	0.20
C570	1134	1145	1044	1139	24-hour controls	0.53
C571	325	303	315	302	6-hour controls	3.17
C572	443	423	429	422	6-hour controls	3.26
C575	705	741	705	741	24-hour controls	0.00
C576	1068	1369	875	1063	24-hour controls	28.79
C577	908	812	908	812	6-hour controls	0.00
C579	807	845	807	845	24-hour controls	0.00
C580	518	536	518	536	24-hour controls	0.00
C581	208	267	208	267	24-hour controls	0.00
CLEAR	2767	3362	240	1772	24-hour controls	89.73
CLEAR	1332	1751	2387	3216	24-hour controls	-45.55
CLEAR	240	278	1358	278	24-hour controls	-79.53
D502L	299	239	299	239	6-hour controls	0.00
D502R	192	166	192	166	6-hour controls	0.00
D508L	277	380	277	380	24-hour controls	0.00
D508R	251	303	251	303	24-hour controls	0.00
D510L	126	148	190	148	24-hour controls	-22.11
D510R	185	216	276	217	24-hour controls	-21.74
D515L	166	223	166	223	24-hour controls	0.00
D515R	49	61	49	61	24-hour controls	0.00
D531L	528	551	528	551	24-hour controls	0.00
D531R	1694	1779	1694	1779	24-hour controls	0.00
D532AL	468	494	468	494	24-hour controls	0.00
D532AR	341	353	341	353	24-hour controls	0.00
D532L	810	848	810	848	24-hour controls	0.00
D532R	877	921	877	921	24-hour controls	0.00
D534L	240	251	240	251	24-hour controls	0.00
D534R	560	586	560	586	24-hour controls	0.00
D535L	158	166	158	166	24-hour controls	0.00
D535R	896	941	896	941	24-hour controls	0.00
D537L	248	175	248	175	6-hour controls	0.00
D537R	746	631	746	631	6-hour controls	0.00

Table 1

Comparison of Peak Discharges for the 100-year, 6-hour and 24-hour storms with the Levee in place

HEC-1 ID	Revised Area Model Discharge, in cfs		Original Area Model Discharge, in cfs		Revised Area Model Control	Percent Difference
	6-hour	24-hour	6-hour	24-hour		
D539L	295	211	295	211	6-hour controls	0.00
D539R	158	113	158	113	6-hour controls	0.00
D553L	411	344	411	344	6-hour controls	0.00
D553R	367	305	367	305	6-hour controls	0.00
D554L	149	120	149	120	6-hour controls	0.00
D554R	261	227	261	227	6-hour controls	0.00
D557L	144	131	144	131	6-hour controls	0.00
D557R	610	591	610	591	6-hour controls	0.00
D558L	348	308	348	308	6-hour controls	0.00
D558R	263	223	263	223	6-hour controls	0.00
D559L	76	70	76	70	6-hour controls	0.00
D559R	116	108	116	108	6-hour controls	0.00
D560L	40	39	40	39	6-hour controls	0.00
D560R	86	82	86	82	6-hour controls	0.00
D573L	53	57	53	57	24-hour controls	0.00
D573R	179	188	179	188	24-hour controls	0.00
D574L	685	717	685	717	24-hour controls	0.00
D574R	211	223	211	223	24-hour controls	0.00
D578L	234	247	234	247	24-hour controls	0.00
D578R	234	247	234	247	24-hour controls	0.00
TEMP1	371	249	371	249	6-hour controls	0.00
TEMP2	1300	365	466	365	6-hour controls	178.97
WP504	162	193	162	193	24-hour controls	0.00
WP581	208	267	208	267	24-hour controls	0.00
501502	365	240	365	240	6-hour controls	0.00
502503	294	233	294	233	6-hour controls	0.00
502506	189	164	189	164	6-hour controls	0.00
503508	356	271	356	271	6-hour controls	0.00
504509	155	181	155	181	24-hour controls	0.00
506507	264	275	264	275	24-hour controls	0.00
507508	273	324	273	324	24-hour controls	0.00
508511	271	357	271	357	24-hour controls	0.00
508517	249	291	249	291	24-hour controls	0.00
509510	361	236	361	236	6-hour controls	0.00
510511	184	215	272	215	24-hour controls	-20.96
511512	433	622	492	647	24-hour controls	-3.86
513512	201	130	201	130	6-hour controls	0.00
514518	199	121	199	121	6-hour controls	0.00
515517	159	204	159	204	24-hour controls	0.00
515575	49	57	49	57	24-hour controls	0.00
517518	422	511	423	511	24-hour controls	0.00
518519	454	542	455	542	24-hour controls	0.00
520576	955	1260	817	1004	24-hour controls	25.50
521522	175	114	175	114	6-hour controls	0.00

Table 1

Comparison of Peak Discharges for the 100-year, 6-hour and 24-hour storms with the Levee in place

HEC-1 ID	Revised Area Model Discharge, in cfs		Original Area Model Discharge, in cfs		Revised Area Model Control	Percent Difference
	6-hour	24-hour	6-hour	24-hour		
524526	871	638	871	638	6-hour controls	0.00
525526	943	788	943	788	6-hour controls	0.00
526527	1562	1432	1562	1432	6-hour controls	0.00
527528	1764	1686	1764	1686	6-hour controls	0.00
528529	2180	2188	2180	2188	24-hour controls	0.00
530531	2238	2337	2238	2337	24-hour controls	0.00
531532	1687	1769	1687	1769	24-hour controls	0.00
531533	523	544	523	544	24-hour controls	0.00
532538	866	901	866	901	24-hour controls	0.00
532580	339	350	339	350	24-hour controls	0.00
533579	754	788	754	788	24-hour controls	0.00
534506	239	250	239	250	24-hour controls	0.00
534535	550	571	550	571	24-hour controls	0.00
535515	156	164	156	164	24-hour controls	0.00
536545	696	735	696	735	24-hour controls	0.00
537538	237	165	237	165	6-hour controls	0.00
537577	735	619	735	619	6-hour controls	0.00
538540	840	884	876	900	24-hour controls	-1.78
539555	152	108	152	108	6-hour controls	0.00
539577	292	208	292	208	6-hour controls	0.00
540542	1271	1402	1282	1407	24-hour controls	-0.36
541543	205	215	205	215	24-hour controls	0.00
542543	1283	1419	1294	1424	24-hour controls	-0.35
543545	1414	1585	1311	1530	24-hour controls	3.59
545546	1866	2116	1581	1982	24-hour controls	6.76
549550	445	283	445	283	6-hour controls	0.00
552553	626	458	626	458	6-hour controls	0.00
553554	408	339	408	339	6-hour controls	0.00
553556	365	301	365	301	6-hour controls	0.00
554555	148	119	148	119	6-hour controls	0.00
555557	392	371	392	371	6-hour controls	0.00
556558	613	521	613	521	6-hour controls	0.00
557559	143	129	143	129	6-hour controls	0.00
557565	606	583	606	584	6-hour controls	0.00
558557	347	307	347	307	6-hour controls	0.00
558571	260	219	260	219	6-hour controls	0.00
559560	115	107	115	107	6-hour controls	0.00
559561	76	69	76	69	6-hour controls	0.00
560561	40	39	40	39	6-hour controls	0.00
560566	85	80	85	80	6-hour controls	0.00
561562	128	121	128	121	6-hour controls	0.00
562567	198	188	198	188	6-hour controls	0.00
564570	326	195	326	195	6-hour controls	0.00
565566	655	634	655	635	6-hour controls	0.00

Table 1

Comparison of Peak Discharges for the 100-year, 6-hour and 24-hour storms with the Levee in place

HEC-1 ID	Revised Area Model Discharge, in cfs		Original Area Model Discharge, in cfs		Revised Area Model Control	Percent Difference
	6-hour	24-hour	6-hour	24-hour		
566567	757	740	760	742	6-hour controls	-0.39
567568	966	951	875	955	6-hour controls	1.15
568569	1003	990	911	993	6-hour controls	1.01
569570	1008	1002	918	1001	6-hour controls	0.70
571572	321	294	311	294	6-hour controls	3.22
573580	179	186	179	186	24-hour controls	0.00
574541	208	220	208	220	24-hour controls	0.00
574575	680	710	680	710	24-hour controls	0.00
575536	702	737	702	737	24-hour controls	0.00
576523	1066	1367	874	1061	24-hour controls	28.84
577540	881	772	881	772	6-hour controls	0.00
578573	232	244	232	244	24-hour controls	0.00
579534	803	839	803	839	24-hour controls	0.00
580535	511	526	511	526	24-hour controls	0.00
581510	206	265	206	265	24-hour controls	0.00

Table 2

Comparison of Peak Discharges for the 100-year, 6-hour and 24-hour storms without the Levee in place

HEC-1 ID	Revised Area Model Discharge, in cfs		Original Area Model Discharge, in cfs		Revised Area Model Control	Percent Difference
	6-hour	24-hour	6-hour	24-hour		
510D	126	75	126	75	6-hour controls	0.00
510E	282	195	282	195	6-hour controls	0.00
510G	316	208	316	208	6-hour controls	0.00
511L	336	221	336	221	6-hour controls	0.00
511M	182	116	182	116	6-hour controls	0.00
511N	132	85	132	85	6-hour controls	0.00
511O	78	49	78	49	6-hour controls	0.00
511Q	164	106	164	106	6-hour controls	0.00
B535R	896	941	896	941	24-hour controls	0.00
B574R	211	223	211	223	24-hour controls	0.00
C515	214	278	214	278	24-hour controls	0.00
C535	1055	1107	1055	1107	24-hour controls	0.00
C536	272	319	272	319	24-hour controls	0.00
C541	208	220	208	220	24-hour controls	0.00
C542	1289	1425	1300	1430	24-hour controls	-0.35
C543	1756	1961	1615	1891	24-hour controls	3.70
C545	1899	2147	1611	2010	24-hour controls	6.82
C545L	294	331	294	331	24-hour controls	0.00
C545R	1765	1984	1634	1914	24-hour controls	3.66
C546	1986	2249	1688	2104	24-hour controls	6.89
C575	111	157	111	157	24-hour controls	0.00
C582	884	925	884	925	24-hour controls	0.00
D515L	166	223	166	223	24-hour controls	0.00
D515R	49	61	49	61	24-hour controls	0.00
D535L	158	166	158	166	24-hour controls	0.00
D535R	896	941	896	941	24-hour controls	0.00
D574L	685	717	685	717	24-hour controls	0.00
D574R	211	223	211	223	24-hour controls	0.00
515575	49	57	49	57	24-hour controls	0.00
535515	156	164	156	164	24-hour controls	0.00
536545	266	301	266	301	24-hour controls	0.00
541582	207	218	207	218	24-hour controls	0.00
542543	1283	1419	1294	1424	24-hour controls	-0.35
543545	1749	1946	1609	1876	24-hour controls	3.73
545546	1888	2136	1598	1996	24-hour controls	7.01
574541	208	220	208	220	24-hour controls	0.00
574582	681	711	681	711	24-hour controls	0.00
575536	109	148	109	148	24-hour controls	0.00
582543	879	917	879	917	24-hour controls	0.00

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Table S-1
DTHETA & PSIF Lookup Table
Using XKSAT

Note:
The values in this table are taken from Figure 4.3 of the FCDMC Drainage Design Manual.

XKSAT in/hr (1)	DTHETA Dry (2)	DTHETA Normal (3)	PSIF inches (4)
0.01	0.150	0.050	12.400
0.02	0.193	0.100	11.200
0.03	0.223	0.127	10.100
0.04	0.248	0.150	9.700
0.05	0.269	0.150	8.800
0.06	0.287	0.150	8.400
0.07	0.304	0.150	8.000
0.08	0.319	0.150	7.600
0.09	0.332	0.150	7.300
0.10	0.345	0.150	7.000
0.11	0.357	0.169	6.800
0.12	0.369	0.189	6.600
0.13	0.380	0.209	6.400
0.14	0.390	0.229	6.200
0.15	0.400	0.250	6.000
0.16	0.393	0.250	5.800
0.17	0.387	0.250	5.700
0.18	0.381	0.250	5.600
0.19	0.376	0.250	5.400
0.20	0.371	0.250	5.300
0.21	0.366	0.250	5.200
0.22	0.362	0.250	5.100
0.23	0.358	0.250	5.000
0.24	0.354	0.250	4.900
0.25	0.350	0.250	4.800
0.26	0.350	0.250	4.700
0.27	0.350	0.250	4.650
0.28	0.350	0.250	4.600
0.29	0.350	0.250	4.550
0.30	0.350	0.250	4.500
0.31	0.350	0.250	4.450
0.32	0.350	0.250	4.400
0.33	0.350	0.250	4.350
0.34	0.350	0.250	4.300
0.35	0.350	0.250	4.250
0.36	0.350	0.250	4.200
0.37	0.350	0.250	4.150
0.38	0.350	0.250	4.100
0.39	0.350	0.250	4.000

Table S-1
DTHETA & PSIF Lookup Table
Using XKSAT

XKSAT in/hr (1)	DTHETA Dry (2)	DTHETA Normal (3)	PSIF inches (4)
0.40	0.350	0.250	3.950
0.41	0.350	0.251	3.915
0.42	0.350	0.252	3.880
0.43	0.350	0.253	3.845
0.44	0.350	0.254	3.810
0.45	0.350	0.255	3.775
0.46	0.350	0.256	3.740
0.47	0.350	0.257	3.705
0.48	0.350	0.258	3.670
0.49	0.350	0.259	3.635
0.50	0.350	0.259	3.600
0.51	0.350	0.260	3.575
0.52	0.350	0.261	3.550
0.53	0.350	0.262	3.525
0.54	0.350	0.263	3.500
0.55	0.350	0.264	3.475
0.56	0.350	0.264	3.450
0.57	0.350	0.265	3.425
0.58	0.350	0.266	3.400
0.59	0.350	0.267	3.375
0.60	0.350	0.267	3.350
0.61	0.350	0.268	3.330
0.62	0.350	0.269	3.310
0.63	0.350	0.270	3.290
0.64	0.350	0.270	3.270
0.65	0.350	0.271	3.250
0.66	0.350	0.272	3.230
0.67	0.350	0.272	3.210
0.68	0.350	0.273	3.190
0.69	0.350	0.274	3.170
0.70	0.350	0.274	3.150
0.71	0.350	0.275	3.130
0.72	0.350	0.276	3.110
0.73	0.350	0.276	3.090
0.74	0.350	0.277	3.070
0.75	0.350	0.277	3.050
0.76	0.350	0.278	3.030
0.77	0.350	0.279	3.010
0.78	0.350	0.279	2.990

Table S-1
DTHETA & PSIF Lookup Table
Using XKSAT

XKSAT in/hr (1)	DTHETA Dry (2)	DTHETA Normal (3)	PSIF inches (4)
0.79	0.350	0.280	2.970
0.80	0.350	0.280	2.950
0.81	0.350	0.281	2.935
0.82	0.350	0.282	2.920
0.83	0.350	0.282	2.905
0.84	0.350	0.283	2.890
0.85	0.350	0.283	2.875
0.86	0.350	0.284	2.860
0.87	0.350	0.284	2.845
0.88	0.350	0.285	2.830
0.89	0.350	0.285	2.815
0.90	0.350	0.286	2.800
0.91	0.350	0.287	2.785
0.92	0.350	0.287	2.770
0.93	0.350	0.288	2.755
0.94	0.350	0.288	2.740
0.95	0.350	0.289	2.725
0.96	0.350	0.289	2.710
0.97	0.350	0.290	2.695
0.98	0.350	0.290	2.680
0.99	0.350	0.291	2.665
1.00	0.350	0.291	2.650
1.01	0.350	0.292	2.640
1.02	0.350	0.292	2.630
1.03	0.350	0.292	2.620
1.04	0.350	0.293	2.610
1.05	0.350	0.293	2.600
1.06	0.350	0.294	2.590
1.07	0.350	0.294	2.580
1.08	0.350	0.295	2.570
1.09	0.350	0.295	2.560
1.10	0.350	0.296	2.550
1.11	0.350	0.296	2.540
1.12	0.350	0.297	2.530
1.13	0.350	0.297	2.520
1.14	0.350	0.297	2.510
1.15	0.350	0.298	2.500
1.16	0.350	0.298	2.490
1.17	0.350	0.299	2.480

Table S-1
DTHETA & PSIF Lookup Table
Using XKSAT

XKSAT in/hr (1)	DTHETA Dry (2)	DTHETA Normal (3)	PSIF inches (4)
1.18	0.350	0.299	2.470
1.19	0.350	0.300	2.460
1.20	0.350	0.300	2.450

Table S-2

Rainfall loss characteristics for each soil class in its natural condition

Soil Map Unit (1)	Bare Ground XKSAT in/hr (2)	Natural RTIMP % (3)	Natural Veg. Cover % (4)	Natural Slope Range % (5)	Natural Terrain Class (6)	Natural IA in (7)
6	0.62	0	57	0-3	Rangeland	0.35
12	0.01	0	15	1-8	Hillslope	0.15
22	0.04	0	55	0-3	Rangeland	0.35
33	0.23	0	45	1-8	Rangeland	0.35
41	0.17	0	15	20-40	Hillslope	0.15
44	0.03	0	60	1-8	Rangeland	0.35
60	0.26	0	50	0-3	Rangeland	0.35
61	0.15	0	54	1-10	Rangeland	0.35
63	0.14	25	50	10-65	Hillslope	0.15
72	0.09	30	15	8-65	Hillslope	0.15
93	0.33	0	56	8-30	Hillslope	0.15
96	0.07	0	60	1-10	Rangeland	0.35
111	0.40	0	10	15-40	Hillslope	0.15
115	0.39	0	55	1-5	Rangeland	0.35
121	0.12	0	57	1-5	Rangeland	0.35
122	0.33	0	40	1-5	Rangeland	0.35

Table S-3
Worksheet
Soils, Vegetation Cover, and RTIMP for rainfall losses by Green & Ampt method for each subbasin

500A													
Soil Map Unit No. ...	6	33	96	0	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	7.3	106.8	23.1	—	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.62	0.23	0.07	—	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	—	—	—	—	—	—	—	—	—
Vegetation Cover ...	57%	45%	60%	—	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.20**	
PSIF	**5.30**	
DTHETA (Dry)	**0.37**	
DTHETA (Normal)	**0.25**	
RTIMP avg.	**0.00**	%
Veg. Cover avg.	**48.16**	%
IA avg.	**0.35**	

Total Sub Basin Area in sq. miles = 0.2143

500B												
Soil Map Unit No. ...	6	33	96	122	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	0.1	82.6	27.6	20.9	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.62	0.23	0.07	0.33	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	0%	—	—	—	—	—	—	—	—
Vegetation Cover ...	57%	45%	60%	40%	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	0.35	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.19**	
PSIF	**5.40**	
DTHETA (Dry)	**0.38**	
DTHETA (Normal)	**0.25**	
RTIMP avg.	**0.00**	%
Veg. Cover avg.	**47.36**	%
IA avg.	**0.35**	

Total Sub Basin Area in sq. miles = 0.2049

500C												
Soil Map Unit No. ...	33	96	122	0	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	33.7	2.6	42.4	—	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.23	0.07	0.33	—	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	—	—	—	—	—	—	—	—	—
Vegetation Cover ...	45%	60%	40%	—	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.27**	
PSIF	**4.65**	
DTHETA (Dry)	**0.35**	
DTHETA (Normal)	**0.25**	
RTIMP avg.	**0.00**	%
Veg. Cover avg.	**42.79**	%
IA avg.	**0.35**	

Total Sub Basin Area in sq. miles = 0.1228

Table S-3
Worksheet
Soils, Vegetation Cover, and RTIMP for rainfall losses by Green & Ampt method for each subbasin

500D	Soil Map Unit No.	..	122	0	0	0	0	0	0	0	0	0	0	0
	Sub-Area (acres)	..	149.5	—	—	—	—	—	—	—	—	—	—	—
	XKSAT (bare ground)	..	0.33	—	—	—	—	—	—	—	—	—	—	—
	RTIMP (rock)	..	0%	—	—	—	—	—	—	—	—	—	—	—
	Vegetation Cover	..	40%	—	—	—	—	—	—	—	—	—	—	—
	IA (natural only)	..	0.35	—	—	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.33**	
PSIF	**4.35**	
DTHETA (Dry)	**0.35**	
DTHETA (Normal)	**0.25**	
RTIMP avg.	**0.00**	**%**
Veg. Cover avg.	**40.00**	**%**
IA avg.	**0.35**	

Total Sub Basin Area in sq. miles = 0.2337

500E	Soil Map Unit No.	..	122	0	0	0	0	0	0	0	0	0	0	0
	Sub-Area (acres)	..	67.6	—	—	—	—	—	—	—	—	—	—	—
	XKSAT (bare ground)	..	0.33	—	—	—	—	—	—	—	—	—	—	—
	RTIMP (rock)	..	0%	—	—	—	—	—	—	—	—	—	—	—
	Vegetation Cover	..	40%	—	—	—	—	—	—	—	—	—	—	—
	IA (natural only)	..	0.35	—	—	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.33**	
PSIF	**4.35**	
DTHETA (Dry)	**0.35**	
DTHETA (Normal)	**0.25**	
RTIMP avg.	**0.00**	**%**
Veg. Cover avg.	**40.00**	**%**
IA avg.	**0.35**	

Total Sub Basin Area in sq. miles = 0.1057

500F	Soil Map Unit No.	..	33	122	0	0	0	0	0	0	0	0	0	0
	Sub-Area (acres)	..	13.6	266.3	—	—	—	—	—	—	—	—	—	—
	XKSAT (bare ground)	..	0.23	0.33	—	—	—	—	—	—	—	—	—	—
	RTIMP (rock)	..	0%	0%	—	—	—	—	—	—	—	—	—	—
	Vegetation Cover	..	45%	40%	—	—	—	—	—	—	—	—	—	—
	IA (natural only)	..	0.35	0.35	—	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.32**	
PSIF	**4.40**	
DTHETA (Dry)	**0.35**	
DTHETA (Normal)	**0.25**	
RTIMP avg.	**0.00**	**%**
Veg. Cover avg.	**40.24**	**%**
IA avg.	**0.35**	

Total Sub Basin Area in sq. miles = 0.4373

Table S-3
Worksheet
Soils, Vegetation Cover, and RTIMP for rainfall losses by Green & Ampt method for each subbasin

500G

Soil Map Unit No. ...	22	33	96	122	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	3.3	2.4	14.0	109.8	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.04	0.23	0.07	0.33	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	0%	—	—	—	—	—	—	—	—
Vegetation Cover ...	55%	45%	60%	40%	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	0.35	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.26**
PSIF	**4.70**
DTHETA (Dry)	**0.35**
DTHETA (Normal)	**0.25**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**42.63 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.2022

500H

Soil Map Unit No. ...	6	33	122	0	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	13.1	14.4	107.5	—	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.62	0.23	0.33	—	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	—	—	—	—	—	—	—	—	—
Vegetation Cover ...	57%	45%	40%	—	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.34**
PSIF	**4.30**
DTHETA (Dry)	**0.35**
DTHETA (Normal)	**0.25**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**42.18 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.2109

500I

Soil Map Unit No. ...	6	122	0	0	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	19.5	242.2	—	—	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.62	0.33	—	—	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	—	—	—	—	—	—	—	—	—	—
Vegetation Cover ...	57%	40%	—	—	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	—	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.35**
PSIF	**4.25**
DTHETA (Dry)	**0.35**
DTHETA (Normal)	**0.25**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**41.27 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.4090

Table S-3
Worksheet
Soils, Vegetation Cover, and RTIMP for rainfall losses by Green & Ampt method for each subbasin

500J													
Soil Map Unit No. ...	96	122	0	0	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	2.1	55.6	—	—	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.07	0.33	—	—	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	—	—	—	—	—	—	—	—	—	—
Vegetation Cover ...	60%	40%	—	—	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	—	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.31**	
PSIF	**4.45**	
DTHETA (Dry)	**0.35**	
DTHETA (Normal)	**0.25**	
RTIMP avg.	**0.00**	**%**
Veg. Cover avg.	**40.74**	**%**
IA avg.	**0.35**	

Total Sub Basin Area in sq. miles = 0.0902

500K												
Soil Map Unit No. ...	33	96	122	0	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	1.2	23.0	37.1	—	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.23	0.07	0.33	—	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	—	—	—	—	—	—	—	—	—
Vegetation Cover ...	45%	60%	40%	—	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.18**	
PSIF	**5.60**	
DTHETA (Dry)	**0.38**	
DTHETA (Normal)	**0.25**	
RTIMP avg.	**0.00**	**%**
Veg. Cover avg.	**47.60**	**%**
IA avg.	**0.35**	

Total Sub Basin Area in sq. miles = 0.0958

500L												
Soil Map Unit No. ...	6	96	122	0	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	0.0	0.2	102.4	—	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.62	0.07	0.33	—	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	—	—	—	—	—	—	—	—	—
Vegetation Cover ...	57%	60%	40%	—	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.33**	
PSIF	**4.35**	
DTHETA (Dry)	**0.35**	
DTHETA (Normal)	**0.25**	
RTIMP avg.	**0.00**	**%**
Veg. Cover avg.	**40.05**	**%**
IA avg.	**0.35**	

Total Sub Basin Area in sq. miles = 0.1605

Table S-3
Worksheet
Soils, Vegetation Cover, and RTIMP for rainfall losses by Green & Ampt method for each subbasin

500M

Soil Map Unit No. ...	96	111	122	0	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	10.8	0.8	67.2	—	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.07	0.40	0.33	—	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	—	—	—	—	—	—	—	—	—
Vegetation Cover ...	60%	10%	40%	—	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.15	0.35	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.27**	
PSIF	**4.65**	
DTHETA (Dry)	**0.35**	
DTHETA (Normal)	**0.25**	
RTIMP avg.	**0.00**	**%**
Veg. Cover avg.	**42.47**	**%**
IA avg.	**0.35**	

Total Sub Basin Area in sq. miles = 0.1231

500N

Soil Map Unit No. ...	22	60	96	111	122	0	0	0	0	0	0	0
Sub-Area (acres) ...	19.4	27.4	10.3	2.6	12.8	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.04	0.26	0.07	0.40	0.33	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	0%	0%	—	—	—	—	—	—	—
Vegetation Cover ...	55%	50%	60%	10%	40%	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	0.15	0.35	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.14**	
PSIF	**6.20**	
DTHETA (Dry)	**0.39**	
DTHETA (Normal)	**0.23**	
RTIMP avg.	**0.00**	**%**
Veg. Cover avg.	**49.54**	**%**
IA avg.	**0.34**	

Total Sub Basin Area in sq. miles = 0.1133

500O

Soil Map Unit No. ...	96	122	0	0	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	52.7	11.8	—	—	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.07	0.33	—	—	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	—	—	—	—	—	—	—	—	—	—
Vegetation Cover ...	60%	40%	—	—	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	—	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.09**	
PSIF	**7.30**	
DTHETA (Dry)	**0.33**	
DTHETA (Normal)	**0.15**	
RTIMP avg.	**0.00**	**%**
Veg. Cover avg.	**56.34**	**%**
IA avg.	**0.35**	

Total Sub Basin Area in sq. miles = 0.1008

Table S-3
Worksheet
Soils, Vegetation Cover, and RTIMP for rainfall losses by Green & Ampt method for each subbasin

500P	Soil Map Unit No. ...	22	96	0	0	0	0	0	0	0	0	0	0
	Sub-Area (acres) ...	11.1	42.1	—	—	—	—	—	—	—	—	—	—
	XKSAT (bare ground) ...	0.04	0.07	—	—	—	—	—	—	—	—	—	—
	RTIMP (rock) ...	0%	0%	—	—	—	—	—	—	—	—	—	—
	Vegetation Cover ...	55%	60%	—	—	—	—	—	—	—	—	—	—
	IA (natural only) ...	0.35	0.35	—	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.06**
PSIF	**8.40**
DTHETA (Dry)	**0.29**
DTHETA (Normal)	**0.15**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**58.96 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.0831

501A	Soil Map Unit No. ...	60	0	0	0	0	0	0	0	0	0	0	0
	Sub-Area (acres) ...	25.5	—	—	—	—	—	—	—	—	—	—	—
	XKSAT (bare ground) ...	0.26	—	—	—	—	—	—	—	—	—	—	—
	RTIMP (rock) ...	0%	—	—	—	—	—	—	—	—	—	—	—
	Vegetation Cover ...	50%	—	—	—	—	—	—	—	—	—	—	—
	IA (natural only) ...	0.35	—	—	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.26**
PSIF	**4.70**
DTHETA (Dry)	**0.35**
DTHETA (Normal)	**0.25**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**50.00 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.0399

501B	Soil Map Unit No. ...	22	60	0	0	0	0	0	0	0	0	0	0
	Sub-Area (acres) ...	2.1	45.2	—	—	—	—	—	—	—	—	—	—
	XKSAT (bare ground) ...	0.04	0.26	—	—	—	—	—	—	—	—	—	—
	RTIMP (rock) ...	0%	0%	—	—	—	—	—	—	—	—	—	—
	Vegetation Cover ...	55%	50%	—	—	—	—	—	—	—	—	—	—
	IA (natural only) ...	0.35	0.35	—	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.24**
PSIF	**4.90**
DTHETA (Dry)	**0.35**
DTHETA (Normal)	**0.25**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**50.22 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.0739

Table S-3
Worksheet
Soils, Vegetation Cover, and RTIMP for rainfall losses by Green & Ampt method for each subbasin

502A	Soil Map Unit No.	...	22	0	0	0	0	0	0	0	0	0	0	0
	Sub-Area (acres)	...	25.7	—	—	—	—	—	—	—	—	—	—	—
	XKSAT (bare ground)	...	0.04	—	—	—	—	—	—	—	—	—	—	—
	RTIMP (rock)	...	0%	—	—	—	—	—	—	—	—	—	—	—
	Vegetation Cover	...	55%	—	—	—	—	—	—	—	—	—	—	—
	IA (natural only)	...	0.35	—	—	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.04**	
PSIF	**9.70**	
DTHETA (Dry)	**0.25**	
DTHETA (Normal)	**0.15**	
RTIMP avg.	**0.00**	**%**
Veg. Cover avg.	**55.00**	**%**
IA avg.	**0.35**	

Total Sub Basin Area in sq. miles = 0.0401

502B	Soil Map Unit No.	...	22	0	0	0	0	0	0	0	0	0	0	0
	Sub-Area (acres)	...	33.7	—	—	—	—	—	—	—	—	—	—	—
	XKSAT (bare ground)	...	0.04	—	—	—	—	—	—	—	—	—	—	—
	RTIMP (rock)	...	0%	—	—	—	—	—	—	—	—	—	—	—
	Vegetation Cover	...	55%	—	—	—	—	—	—	—	—	—	—	—
	IA (natural only)	...	0.35	—	—	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.04**	
PSIF	**9.70**	
DTHETA (Dry)	**0.25**	
DTHETA (Normal)	**0.15**	
RTIMP avg.	**0.00**	**%**
Veg. Cover avg.	**55.00**	**%**
IA avg.	**0.35**	

Total Sub Basin Area in sq. miles = 0.0526

502C	Soil Map Unit No.	...	22	0	0	0	0	0	0	0	0	0	0	0
	Sub-Area (acres)	...	29.4	—	—	—	—	—	—	—	—	—	—	—
	XKSAT (bare ground)	...	0.04	—	—	—	—	—	—	—	—	—	—	—
	RTIMP (rock)	...	0%	—	—	—	—	—	—	—	—	—	—	—
	Vegetation Cover	...	55%	—	—	—	—	—	—	—	—	—	—	—
	IA (natural only)	...	0.35	—	—	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.04**	
PSIF	**9.70**	
DTHETA (Dry)	**0.25**	
DTHETA (Normal)	**0.15**	
RTIMP avg.	**0.00**	**%**
Veg. Cover avg.	**55.00**	**%**
IA avg.	**0.35**	

Total Sub Basin Area in sq. miles = 0.0460

Table S-3
Worksheet
Soils, Vegetation Cover, and RTIMP for rainfall losses by Green & Ampt method for each subbasin

503A													
Soil Map Unit No. ...	22	33	96	121	122	0	0	0	0	0	0	0
Sub-Area (acres) ...	1.7	7.3	113.6	8.7	7.1	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.04	0.23	0.07	0.12	0.33	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	0%	0%	—	—	—	—	—	—	—
Vegetation Cover ...	55%	45%	60%	57%	40%	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	0.35	0.35	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.08**
PSIF	**7.60**
DTHETA (Dry)	**0.32**
DTHETA (Normal)	**0.15**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**57.93 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.2163

503B												
Soil Map Unit No. ...	22	96	121	0	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	17.8	49.2	5.2	—	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.04	0.07	0.12	—	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	—	—	—	—	—	—	—	—	—
Vegetation Cover ...	55%	60%	57%	—	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.06**
PSIF	**8.40**
DTHETA (Dry)	**0.29**
DTHETA (Normal)	**0.15**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**58.55 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.1128

503C												
Soil Map Unit No. ...	22	96	121	0	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	43.2	27.0	7.2	—	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.04	0.07	0.12	—	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	—	—	—	—	—	—	—	—	—
Vegetation Cover ...	55%	60%	57%	—	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.05**
PSIF	**8.80**
DTHETA (Dry)	**0.27**
DTHETA (Normal)	**0.15**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**56.93 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.1209

Table S-3
Worksheet
Soils, Vegetation Cover, and RTIMP for rainfall losses by Green & Ampt method for each subbasin

504A

Soil Map Unit No. ...	22	33	44	96	121	0	0	0	0	0	0	0
Sub-Area (acres) ...	84.3	24.7	0.2	8.6	37.1	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.04	0.23	0.03	0.07	0.12	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	0%	0%	—	—	—	—	—	—	—
Vegetation Cover ...	55%	45%	60%	60%	57%	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	0.35	0.35	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.07**
PSIF	**8.00**
DTHETA (Dry)	**0.30**
DTHETA (Normal)	**0.15**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**54.17 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.2419

505A

Soil Map Unit No. ...	33	96	0	0	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	53.9	61.1	—	—	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.23	0.07	—	—	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	—	—	—	—	—	—	—	—	—	—
Vegetation Cover ...	45%	60%	—	—	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	—	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.12**
PSIF	**6.60**
DTHETA (Dry)	**0.37**
DTHETA (Normal)	**0.19**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**52.97 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.1797

505B

Soil Map Unit No. ...	33	96	121	0	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	19.5	61.8	11.2	—	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.23	0.07	0.12	—	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	—	—	—	—	—	—	—	—	—
Vegetation Cover ...	45%	60%	57%	—	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.10**
PSIF	**7.00**
DTHETA (Dry)	**0.35**
DTHETA (Normal)	**0.15**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**56.47 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.1446

Table S-3
Worksheet
Soils, Vegetation Cover, and RTIMP for rainfall losses by Green & Ampt method for each subbasin

509A

Soil Map Unit No. ...	33	61	63	93	96	0	0	0	0	0	0	0
Sub-Area (acres) ...	46.0	203.3	1.6	5.9	109.7	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.23	0.15	0.14	0.33	0.07	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	25%	0%	0%	—	—	—	—	—	—	—
Vegetation Cover ...	45%	54%	50%	56%	60%	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.15	0.15	0.35	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.13**
PSIF	**6.40**
DTHETA (Dry)	**0.38**
DTHETA (Normal)	**0.21**
RTIMP avg.	**0.11 %**
Veg. Cover avg.	**54.68 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.5728

509B

Soil Map Unit No. ...	6	33	96	121	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	15.9	340.2	10.9	41.0	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.62	0.23	0.07	0.12	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	0%	—	—	—	—	—	—	—	—
Vegetation Cover ...	57%	45%	60%	57%	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	0.35	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.22**
PSIF	**5.10**
DTHETA (Dry)	**0.36**
DTHETA (Normal)	**0.25**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**47.07 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.6374

509C

Soil Map Unit No. ...	33	96	121	0	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	43.7	45.4	4.6	—	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.23	0.07	0.12	—	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	—	—	—	—	—	—	—	—	—
Vegetation Cover ...	45%	60%	57%	—	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.13**
PSIF	**6.40**
DTHETA (Dry)	**0.38**
DTHETA (Normal)	**0.21**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**52.86 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.1465

Table S-3
Worksheet
Soils, Vegetation Cover, and RTIMP for rainfall losses by Green & Ampt method for each subbasin

509D	Soil Map Unit No. ...	33	96	0	0	0	0	0	0	0	0	0	0
	Sub-Area (acres) ...	134.8	81.1	—	—	—	—	—	—	—	—	—	—
	XKSAT (bare ground) ...	0.23	0.07	—	—	—	—	—	—	—	—	—	—
	RTIMP (rock) ...	0%	0%	—	—	—	—	—	—	—	—	—	—
	Vegetation Cover ...	45%	60%	—	—	—	—	—	—	—	—	—	—
	IA (natural only) ...	0.35	0.35	—	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.15**
PSIF	**6.00**
DTHETA (Dry)	**0.40**
DTHETA (Normal)	**0.25**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**50.63 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.3374

509E	Soil Map Unit No. ...	33	96	0	0	0	0	0	0	0	0	0	0
	Sub-Area (acres) ...	36.9	84.6	—	—	—	—	—	—	—	—	—	—
	XKSAT (bare ground) ...	0.23	0.07	—	—	—	—	—	—	—	—	—	—
	RTIMP (rock) ...	0%	0%	—	—	—	—	—	—	—	—	—	—
	Vegetation Cover ...	45%	60%	—	—	—	—	—	—	—	—	—	—
	IA (natural only) ...	0.35	0.35	—	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.10**
PSIF	**7.00**
DTHETA (Dry)	**0.35**
DTHETA (Normal)	**0.15**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**55.45 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.1897

509F	Soil Map Unit No. ...	33	96	121	0	0	0	0	0	0	0	0	0
	Sub-Area (acres) ...	53.4	71.3	3.8	—	—	—	—	—	—	—	—	—
	XKSAT (bare ground) ...	0.23	0.07	0.12	—	—	—	—	—	—	—	—	—
	RTIMP (rock) ...	0%	0%	0%	—	—	—	—	—	—	—	—	—
	Vegetation Cover ...	45%	60%	57%	—	—	—	—	—	—	—	—	—
	IA (natural only) ...	0.35	0.35	0.35	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.12**
PSIF	**6.60**
DTHETA (Dry)	**0.37**
DTHETA (Normal)	**0.19**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**53.68 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.2007

Table S-3
Worksheet
Soils, Vegetation Cover, and RTIMP for rainfall losses by Green & Ampt method for each subbasin

509G	Soil Map Unit No. ...	33	96	0	0	0	0	0	0	0	0	0	0
	Sub-Area (acres) ...	24.9	35.0	—	—	—	—	—	—	—	—	—	—
	XKSAT (bare ground) ...	0.23	0.07	—	—	—	—	—	—	—	—	—	—
	RTIMP (rock) ...	0%	0%	—	—	—	—	—	—	—	—	—	—
	Vegetation Cover ...	45%	60%	—	—	—	—	—	—	—	—	—	—
	IA (natural only) ...	0.35	0.35	—	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.11**
PSIF	**6.80**
DTHETA (Dry)	**0.36**
DTHETA (Normal)	**0.17**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**53.76 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.0936

509H	Soil Map Unit No. ...	33	96	111	0	0	0	0	0	0	0	0	0
	Sub-Area (acres) ...	8.3	33.2	2.7	—	—	—	—	—	—	—	—	—
	XKSAT (bare ground) ...	0.23	0.07	0.40	—	—	—	—	—	—	—	—	—
	RTIMP (rock) ...	0%	0%	0%	—	—	—	—	—	—	—	—	—
	Vegetation Cover ...	45%	60%	10%	—	—	—	—	—	—	—	—	—
	IA (natural only) ...	0.35	0.35	0.15	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.10**
PSIF	**7.00**
DTHETA (Dry)	**0.35**
DTHETA (Normal)	**0.15**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**54.14 %**
IA avg.	**0.34**

Total Sub Basin Area in sq. miles = 0.0691

509I	Soil Map Unit No. ...	33	96	0	0	0	0	0	0	0	0	0	0
	Sub-Area (acres) ...	14.7	4.3	—	—	—	—	—	—	—	—	—	—
	XKSAT (bare ground) ...	0.23	0.07	—	—	—	—	—	—	—	—	—	—
	RTIMP (rock) ...	0%	0%	—	—	—	—	—	—	—	—	—	—
	Vegetation Cover ...	45%	60%	—	—	—	—	—	—	—	—	—	—
	IA (natural only) ...	0.35	0.35	—	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.18**
PSIF	**5.60**
DTHETA (Dry)	**0.38**
DTHETA (Normal)	**0.25**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**48.39 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.0297

Table S-3
Worksheet
Soils, Vegetation Cover, and RTIMP for rainfall losses by Green & Ampt method for each subbasin

509J

Soil Map Unit No. ...	33	96	111	121	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	35.0	11.2	19.4	0.6	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.23	0.07	0.40	0.12	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	0%	—	—	—	—	—	—	—	—
Vegetation Cover ...	45%	60%	10%	57%	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.15	0.35	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.22**
PSIF	**5.10**
DTHETA (Dry)	**0.36**
DTHETA (Normal)	**0.25**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**37.39 %**
IA avg.	**0.29**

Total Sub Basin Area in sq. miles = 0.1034

509K

Soil Map Unit No. ...	33	96	111	0	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	1.5	10.5	6.7	—	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.23	0.07	0.40	—	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	—	—	—	—	—	—	—	—	—
Vegetation Cover ...	45%	60%	10%	—	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.15	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.14**
PSIF	**6.20**
DTHETA (Dry)	**0.39**
DTHETA (Normal)	**0.23**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**40.90 %**
IA avg.	**0.28**

Total Sub Basin Area in sq. miles = 0.0292

509L

Soil Map Unit No. ...	33	96	121	0	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	24.7	23.8	2.7	—	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.23	0.07	0.12	—	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	—	—	—	—	—	—	—	—	—
Vegetation Cover ...	45%	60%	57%	—	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.13**
PSIF	**6.40**
DTHETA (Dry)	**0.38**
DTHETA (Normal)	**0.21**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**52.61 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.0799

Table S-3
Worksheet
Soils, Vegetation Cover, and RTIMP for rainfall losses by Green & Ampt method for each subbasin

509M	Soil Map Unit No. ...	33	96	0	0	0	0	0	0	0	0	0	0
	Sub-Area (acres) ...	49.5	17.0	—	—	—	—	—	—	—	—	—	—
	XKSAT (bare ground) ...	0.23	0.07	—	—	—	—	—	—	—	—	—	—
	RTIMP (rock) ...	0%	0%	—	—	—	—	—	—	—	—	—	—
	Vegetation Cover ...	45%	60%	—	—	—	—	—	—	—	—	—	—
	IA (natural only) ...	0.35	0.35	—	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.17**
PSIF	**5.70**
DTHETA (Dry)	**0.39**
DTHETA (Normal)	**0.25**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**48.84 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.1040

509N	Soil Map Unit No. ...	33	96	121	0	0	0	0	0	0	0	0	0
	Sub-Area (acres) ...	58.4	6.1	8.4	—	—	—	—	—	—	—	—	—
	XKSAT (bare ground) ...	0.23	0.07	0.12	—	—	—	—	—	—	—	—	—
	RTIMP (rock) ...	0%	0%	0%	—	—	—	—	—	—	—	—	—
	Vegetation Cover ...	45%	60%	57%	—	—	—	—	—	—	—	—	—
	IA (natural only) ...	0.35	0.35	0.35	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.19**
PSIF	**5.40**
DTHETA (Dry)	**0.38**
DTHETA (Normal)	**0.25**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**47.63 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.1139

509O	Soil Map Unit No. ...	33	0	0	0	0	0	0	0	0	0	0	0
	Sub-Area (acres) ...	23.6	—	—	—	—	—	—	—	—	—	—	—
	XKSAT (bare ground) ...	0.23	—	—	—	—	—	—	—	—	—	—	—
	RTIMP (rock) ...	0%	—	—	—	—	—	—	—	—	—	—	—
	Vegetation Cover ...	45%	—	—	—	—	—	—	—	—	—	—	—
	IA (natural only) ...	0.35	—	—	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.23**
PSIF	**5.00**
DTHETA (Dry)	**0.36**
DTHETA (Normal)	**0.25**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**45.00 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.0369

Table S-3
Worksheet
Soils, Vegetation Cover, and RTIMP for rainfall losses by Green & Ampt method for each subbasin

509P													
Soil Map Unit No. ...	33	96	121	0	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	27.4	35.3	7.9	—	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.23	0.07	0.12	—	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	—	—	—	—	—	—	—	—	—
Vegetation Cover ...	45%	60%	57%	—	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.12**	
PSIF	**6.60**	
DTHETA (Dry)	**0.37**	
DTHETA (Normal)	**0.19**	
RTIMP avg.	**0.00**	**%**
Veg. Cover avg.	**53.83**	**%**
IA avg.	**0.35**	

Total Sub Basin Area in sq. miles = 0.1102

509Q												
Soil Map Unit No. ...	33	96	121	0	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	13.0	7.8	47.9	—	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.23	0.07	0.12	—	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	—	—	—	—	—	—	—	—	—
Vegetation Cover ...	45%	60%	57%	—	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.13**	
PSIF	**6.40**	
DTHETA (Dry)	**0.38**	
DTHETA (Normal)	**0.21**	
RTIMP avg.	**0.00**	**%**
Veg. Cover avg.	**55.07**	**%**
IA avg.	**0.35**	

Total Sub Basin Area in sq. miles = 0.1073

509R												
Soil Map Unit No. ...	33	96	115	121	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	1.2	30.1	3.9	26.9	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.23	0.07	0.39	0.12	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	0%	—	—	—	—	—	—	—	—
Vegetation Cover ...	45%	60%	55%	57%	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	0.35	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.10**	
PSIF	**7.00**	
DTHETA (Dry)	**0.35**	
DTHETA (Normal)	**0.15**	
RTIMP avg.	**0.00**	**%**
Veg. Cover avg.	**58.10**	**%**
IA avg.	**0.35**	

Total Sub Basin Area in sq. miles = 0.0970

Table S-3
Worksheet
Soils, Vegetation Cover, and RTIMP for rainfall losses by Green & Ampt method for each subbasin

509S													
Soil Map Unit No. ...	22	33	96	115	121	0	0	0	0	0	0	0
Sub-Area (acres) ...	48.2	36.0	20.3	4.5	16.0	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.04	0.23	0.07	0.39	0.12	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	0%	0%	—	—	—	—	—	—	—
Vegetation Cover ...	55%	45%	60%	55%	57%	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	0.35	0.35	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.09**
PSIF	**7.30**
DTHETA (Dry)	**0.33**
DTHETA (Normal)	**0.15**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**53.19 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.1953

510A												
Soil Map Unit No. ...	6	33	96	0	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	0.4	335.1	248.5	—	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.62	0.23	0.07	—	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	—	—	—	—	—	—	—	—	—
Vegetation Cover ...	57%	45%	60%	—	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.14**
PSIF	**6.20**
DTHETA (Dry)	**0.39**
DTHETA (Normal)	**0.23**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**51.39 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.9125

510B												
Soil Map Unit No. ...	6	33	96	121	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	25.8	3.7	149.9	50.3	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.62	0.23	0.07	0.12	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	0%	—	—	—	—	—	—	—	—
Vegetation Cover ...	57%	45%	60%	57%	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	0.35	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.10**
PSIF	**7.00**
DTHETA (Dry)	**0.35**
DTHETA (Normal)	**0.15**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**58.77 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.3587

Table S-3
Worksheet
Soils, Vegetation Cover, and RTIMP for rainfall losses by Green & Ampt method for each subbasin

510C

Soil Map Unit No. ...	12	33	41	96	111	121	0	0	0	0	0	0
Sub-Area (acres) ...	2.1	111.8	37.8	178.3	86.9	127.6	—	—	—	—	—	—
XKSAT (bare ground) ...	0.01	0.23	0.17	0.07	0.40	0.12	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	0%	0%	0%	—	—	—	—	—	—
Vegetation Cover ...	15%	45%	15%	60%	10%	57%	—	—	—	—	—	—
IA (natural only) ...	0.15	0.35	0.15	0.35	0.15	0.35	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.14**	
PSIF	**6.20**	
DTHETA (Dry)	**0.39**	
DTHETA (Normal)	**0.23**	
RTIMP avg.	**0.00**	**%**
Veg. Cover avg.	**44.94**	**%**
IA avg.	**0.30**	

Total Sub Basin Area in sq. miles = 0.8509

510D

Soil Map Unit No. ...	6	12	33	41	111	122	0	0	0	0	0	0
Sub-Area (acres) ...	5.3	6.9	2.8	3.6	16.5	2.6	—	—	—	—	—	—
XKSAT (bare ground) ...	0.62	0.01	0.23	0.17	0.40	0.33	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	0%	0%	0%	—	—	—	—	—	—
Vegetation Cover ...	57%	15%	45%	15%	10%	40%	—	—	—	—	—	—
IA (natural only) ...	0.35	0.15	0.35	0.15	0.15	0.35	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.19**	
PSIF	**5.40**	
DTHETA (Dry)	**0.38**	
DTHETA (Normal)	**0.25**	
RTIMP avg.	**0.00**	**%**
Veg. Cover avg.	**22.60**	**%**
IA avg.	**0.21**	

Total Sub Basin Area in sq. miles = 0.0588

510E

Soil Map Unit No. ...	6	33	96	122	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	1.2	3.2	89.1	23.1	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.62	0.23	0.07	0.33	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	0%	—	—	—	—	—	—	—	—
Vegetation Cover ...	57%	45%	60%	40%	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	0.35	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.10**	
PSIF	**7.00**	
DTHETA (Dry)	**0.35**	
DTHETA (Normal)	**0.15**	
RTIMP avg.	**0.00**	**%**
Veg. Cover avg.	**55.60**	**%**
IA avg.	**0.35**	

Total Sub Basin Area in sq. miles = 0.1822

Table S-3
Worksheet
Soils, Vegetation Cover, and RTIMP for rainfall losses by Green & Ampt method for each subbasin

510F													
Soil Map Unit No. ...	33	96	111	121	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	30.2	30.8	11.9	0.5	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.23	0.07	0.40	0.12	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	0%	—	—	—	—	—	—	—	—
Vegetation Cover ...	45%	60%	10%	57%	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.15	0.35	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.15**	
PSIF	**6.00**	
DTHETA (Dry)	**0.40**	
DTHETA (Normal)	**0.25**	
RTIMP avg.	**0.00**	**%**
Veg. Cover avg.	**45.72**	**%**
IA avg.	**0.32**	

Total Sub Basin Area in sq. miles = 0.1147

510G												
Soil Map Unit No. ...	22	96	122	0	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	14.9	29.9	70.0	—	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.04	0.07	0.33	—	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	—	—	—	—	—	—	—	—	—
Vegetation Cover ...	55%	60%	40%	—	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.17**	
PSIF	**5.70**	
DTHETA (Dry)	**0.39**	
DTHETA (Normal)	**0.25**	
RTIMP avg.	**0.00**	**%**
Veg. Cover avg.	**47.15**	**%**
IA avg.	**0.35**	

Total Sub Basin Area in sq. miles = 0.1794

511A												
Soil Map Unit No. ...	61	96	0	0	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	374.3	40.8	—	—	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.15	0.07	—	—	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	—	—	—	—	—	—	—	—	—	—
Vegetation Cover ...	54%	60%	—	—	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	—	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.14**	
PSIF	**6.20**	
DTHETA (Dry)	**0.39**	
DTHETA (Normal)	**0.23**	
RTIMP avg.	**0.00**	**%**
Veg. Cover avg.	**54.59**	**%**
IA avg.	**0.35**	

Total Sub Basin Area in sq. miles = 0.6486

Table S-3
Worksheet
Soils, Vegetation Cover, and RTIMP for rainfall losses by Green & Ampt method for each subbasin

511B

Soil Map Unit No. ...	33	61	72	96	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	17.7	470.0	103.7	112.5	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.23	0.15	0.09	0.07	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	30%	0%	—	—	—	—	—	—	—	—
Vegetation Cover ...	45%	54%	15%	60%	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.15	0.35	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.12**
PSIF	**6.60**
DTHETA (Dry)	**0.37**
DTHETA (Normal)	**0.19**
RTIMP avg.	**4.42 %**
Veg. Cover avg.	**48.99 %**
IA avg.	**0.32**

Total Sub Basin Area in sq. miles = 1.0998

511C

Soil Map Unit No. ...	6	33	61	63	93	96	0	0	0	0	0	0
Sub-Area (acres) ...	7.9	23.0	638.6	7.0	7.8	81.3	—	—	—	—	—	—
XKSAT (bare ground) ...	0.62	0.23	0.15	0.14	0.33	0.07	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	25%	0%	0%	—	—	—	—	—	—
Vegetation Cover ...	57%	45%	54%	50%	56%	60%	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	0.15	0.15	0.35	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.14**
PSIF	**6.20**
DTHETA (Dry)	**0.39**
DTHETA (Normal)	**0.23**
RTIMP avg.	**0.23 %**
Veg. Cover avg.	**54.38 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 1.1960

511D

Soil Map Unit No. ...	33	61	96	0	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	4.9	38.9	38.1	—	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.23	0.15	0.07	—	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	—	—	—	—	—	—	—	—	—
Vegetation Cover ...	45%	54%	60%	—	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.11**
PSIF	**6.80**
DTHETA (Dry)	**0.36**
DTHETA (Normal)	**0.17**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**56.26 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.1280

Table S-3
Worksheet
Soils, Vegetation Cover, and RTIMP for rainfall losses by Green & Ampt method for each subbasin

511E	Soil Map Unit No. ...	6	33	61	96	0	0	0	0	0	0	0	0
	Sub-Area (acres) ...	0.3	7.0	290.2	66.2	—	—	—	—	—	—	—	—
	XKSAT (bare ground) ...	0.62	0.23	0.15	0.07	—	—	—	—	—	—	—	—
	RTIMP (rock) ...	0%	0%	0%	0%	—	—	—	—	—	—	—	—
	Vegetation Cover ...	57%	45%	54%	60%	—	—	—	—	—	—	—	—
	IA (natural only) ...	0.35	0.35	0.35	0.35	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.13**
PSIF	**6.40**
DTHETA (Dry)	**0.38**
DTHETA (Normal)	**0.21**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**54.92 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.5684

511F	Soil Map Unit No. ...	6	33	61	96	0	0	0	0	0	0	0	0
	Sub-Area (acres) ...	4.3	41.6	7.9	44.7	—	—	—	—	—	—	—	—
	XKSAT (bare ground) ...	0.62	0.23	0.15	0.07	—	—	—	—	—	—	—	—
	RTIMP (rock) ...	0%	0%	0%	0%	—	—	—	—	—	—	—	—
	Vegetation Cover ...	57%	45%	54%	60%	—	—	—	—	—	—	—	—
	IA (natural only) ...	0.35	0.35	0.35	0.35	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.14**
PSIF	**6.20**
DTHETA (Dry)	**0.39**
DTHETA (Normal)	**0.23**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**53.06 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.1538

511G	Soil Map Unit No. ...	6	33	72	121	0	0	0	0	0	0	0	0
	Sub-Area (acres) ...	32.5	443.8	54.4	25.0	—	—	—	—	—	—	—	—
	XKSAT (bare ground) ...	0.62	0.23	0.09	0.12	—	—	—	—	—	—	—	—
	RTIMP (rock) ...	0%	0%	30%	0%	—	—	—	—	—	—	—	—
	Vegetation Cover ...	57%	45%	15%	57%	—	—	—	—	—	—	—	—
	IA (natural only) ...	0.35	0.35	0.15	0.35	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.22**
PSIF	**5.10**
DTHETA (Dry)	**0.36**
DTHETA (Normal)	**0.25**
RTIMP avg.	**2.94 %**
Veg. Cover avg.	**43.30 %**
IA avg.	**0.33**

Total Sub Basin Area in sq. miles = 0.8681

Table S-3
Worksheet
Soils, Vegetation Cover, and RTIMP for rainfall losses by Green & Ampt method for each subbasin

511H													
Soil Map Unit No. ...	6	33	63	96	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	61.0	137.2	0.0	0.0	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.62	0.23	0.14	0.07	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	25%	0%	—	—	—	—	—	—	—	—
Vegetation Cover ...	57%	45%	50%	60%	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.15	0.35	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.31**
PSIF	**4.45**
DTHETA (Dry)	**0.35**
DTHETA (Normal)	**0.25**
RTIMP avg.	**0.01 %**
Veg. Cover avg.	**48.69 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.3097

511I												
Soil Map Unit No. ...	6	33	96	0	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	71.4	62.6	0.9	—	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.62	0.23	0.07	—	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	—	—	—	—	—	—	—	—	—
Vegetation Cover ...	57%	45%	60%	—	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.39**
PSIF	**4.00**
DTHETA (Dry)	**0.35**
DTHETA (Normal)	**0.25**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**51.45 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.2108

511J												
Soil Map Unit No. ...	6	96	122	0	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	47.5	5.4	23.5	—	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.62	0.07	0.33	—	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	—	—	—	—	—	—	—	—	—
Vegetation Cover ...	57%	60%	40%	—	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.44**
PSIF	**3.81**
DTHETA (Dry)	**0.35**
DTHETA (Normal)	**0.25**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**51.97 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.1194

Table S-3
Worksheet
Soils, Vegetation Cover, and RTIMP for rainfall losses by Green & Ampt method for each subbasin

511K													
Soil Map Unit No. ...	6	33	41	96	111	121	122	0	0	0	0	0
Sub-Area (acres) ...	59.2	24.6	32.7	311.4	16.1	28.5	34.0	—	—	—	—	—
XKSAT (bare ground) ...	0.62	0.23	0.17	0.07	0.40	0.12	0.33	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	0%	0%	0%	0%	—	—	—	—	—
Vegetation Cover ...	57%	45%	15%	60%	10%	57%	40%	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.15	0.35	0.15	0.35	0.35	—	—	—	—	—

XKSAT log avg (bare ground)	**0.12**	
PSIF	**6.60**	
DTHETA (Dry)	**0.37**	
DTHETA (Normal)	**0.19**	
RTIMP avg.	**0.00**	%
Veg. Cover avg.	**52.92**	%
IA avg.	**0.33**	

Total Sub Basin Area in sq. miles = 0.7914

511L												
Soil Map Unit No. ...	6	33	122	0	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	6.7	8.0	108.6	—	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.62	0.23	0.33	—	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	—	—	—	—	—	—	—	—	—
Vegetation Cover ...	57%	45%	40%	—	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.33**	
PSIF	**4.35**	
DTHETA (Dry)	**0.35**	
DTHETA (Normal)	**0.25**	
RTIMP avg.	**0.00**	%
Veg. Cover avg.	**41.24**	%
IA avg.	**0.35**	

Total Sub Basin Area in sq. miles = 0.1927

511M												
Soil Map Unit No. ...	6	96	122	0	0	0	0	0	0	0	0	0
Sub-Area (acres) ...	8.9	19.4	25.0	—	—	—	—	—	—	—	—	—
XKSAT (bare ground) ...	0.62	0.07	0.33	—	—	—	—	—	—	—	—	—
RTIMP (rock) ...	0%	0%	0%	—	—	—	—	—	—	—	—	—
Vegetation Cover ...	57%	60%	40%	—	—	—	—	—	—	—	—	—
IA (natural only) ...	0.35	0.35	0.35	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.21**	
PSIF	**5.20**	
DTHETA (Dry)	**0.37**	
DTHETA (Normal)	**0.25**	
RTIMP avg.	**0.00**	%
Veg. Cover avg.	**50.14**	%
IA avg.	**0.35**	

Total Sub Basin Area in sq. miles = 0.0833

Table S-3
Worksheet
Soils, Vegetation Cover, and RTIMP for rainfall losses by Green & Ampt method for each subbasin

511N	Soil Map Unit No. ...	96	122	0	0	0	0	0	0	0	0	0	0
	Sub-Area (acres) ...	33.2	10.7	—	—	—	—	—	—	—	—	—	—
	XKSAT (bare ground) ...	0.07	0.33	—	—	—	—	—	—	—	—	—	—
	RTIMP (rock) ...	0%	0%	—	—	—	—	—	—	—	—	—	—
	Vegetation Cover ...	60%	40%	—	—	—	—	—	—	—	—	—	—
	IA (natural only) ...	0.35	0.35	—	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.10**
PSIF	**7.00**
DTHETA (Dry)	**0.35**
DTHETA (Normal)	**0.15**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**55.15 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.0686

511O	Soil Map Unit No. ...	22	96	122	0	0	0	0	0	0	0	0	0
	Sub-Area (acres) ...	8.7	4.2	16.2	—	—	—	—	—	—	—	—	—
	XKSAT (bare ground) ...	0.04	0.07	0.33	—	—	—	—	—	—	—	—	—
	RTIMP (rock) ...	0%	0%	0%	—	—	—	—	—	—	—	—	—
	Vegetation Cover ...	55%	60%	40%	—	—	—	—	—	—	—	—	—
	IA (natural only) ...	0.35	0.35	0.35	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.14**
PSIF	**6.20**
DTHETA (Dry)	**0.39**
DTHETA (Normal)	**0.23**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**47.37 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.0455

511P	Soil Map Unit No. ...	22	96	122	0	0	0	0	0	0	0	0	0
	Sub-Area (acres) ...	137.4	56.4	7.2	—	—	—	—	—	—	—	—	—
	XKSAT (bare ground) ...	0.04	0.07	0.33	—	—	—	—	—	—	—	—	—
	RTIMP (rock) ...	0%	0%	0%	—	—	—	—	—	—	—	—	—
	Vegetation Cover ...	55%	60%	40%	—	—	—	—	—	—	—	—	—
	IA (natural only) ...	0.35	0.35	0.35	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.05**
PSIF	**8.80**
DTHETA (Dry)	**0.27**
DTHETA (Normal)	**0.15**
RTIMP avg.	**0.00 %**
Veg. Cover avg.	**55.87 %**
IA avg.	**0.35**

Total Sub Basin Area in sq. miles = 0.3140

Table S-3
Worksheet
Soils, Vegetation Cover, and RTIMP for rainfall losses by Green & Ampt method for each subbasin

511Q													
Soil Map Unit No.	...	96	122	0	0	0	0	0	0	0	0	0	0
Sub-Area (acres)	...	46.2	9.0	—	—	—	—	—	—	—	—	—	—
XKSAT (bare ground)	...	0.07	0.33	—	—	—	—	—	—	—	—	—	—
RTIMP (rock)	...	0%	0%	—	—	—	—	—	—	—	—	—	—
Vegetation Cover	...	60%	40%	—	—	—	—	—	—	—	—	—	—
IA (natural only)	...	0.35	0.35	—	—	—	—	—	—	—	—	—	—

XKSAT log avg (bare ground)	**0.09**	
PSIF	**7.30**	
DTHETA (Dry)	**0.33**	
DTHETA (Normal)	**0.15**	
RTIMP avg.	**0.00**	%
Veg. Cover avg.	**56.75**	%
IA avg.	**0.35**	

Total Sub Basin Area in sq. miles = 0.0861

Table S-5

Worksheet
Land-Use characteristics for rainfall losses for each subbasin
Existing Conditions

500A

Land Use ID ...	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	137.2	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0**	**%**
Developed Area	**0.0**	**%**
RTIMP (Dev.) avg.	**0.00**	**%**
Veg Cover (Dev.) avg.	**0.00**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.2143

500B

Land Use ID ...	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	131.1	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0**	**%**
Developed Area	**0.0**	**%**
RTIMP (Dev.) avg.	**0.00**	**%**
Veg Cover (Dev.) avg.	**0.00**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.2049

500C

Land Use ID ...	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	78.6	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0**	**%**
Developed Area	**0.0**	**%**
RTIMP (Dev.) avg.	**0.00**	**%**
Veg Cover (Dev.) avg.	**0.00**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.1228

Table S-5

Worksheet
Land-Use characteristics for rainfall losses for each subbasin
Existing Conditions

500D

Land Use ID ..	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ..	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ..	149.5	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ..	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ..	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ..	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0**	**%**
Developed Area	**0.0**	**%**
RTIMP (Dev.) avg.	**0.00**	**%**
Veg Cover (Dev.) avg.	**0.00**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.2337

500E

Land Use ID ..	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ..	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ..	67.6	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ..	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ..	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ..	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0**	**%**
Developed Area	**0.0**	**%**
RTIMP (Dev.) avg.	**0.00**	**%**
Veg Cover (Dev.) avg.	**0.00**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.1057

500F

Land Use ID ..	NC	ND	0	0	0	0	0	0	0	0	0	0
Natural or Developed ..	N	N	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ..	6.1	273.8	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ..	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ..	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ..	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0**	**%**
Developed Area	**0.0**	**%**
RTIMP (Dev.) avg.	**0.00**	**%**
Veg Cover (Dev.) avg.	**0.00**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.4373

Table S-5

Worksheet
Land-Use characteristics for rainfall losses for each subbasin
Existing Conditions

500G

Land Use ID ...	C	GC	LDR	MFR	ND	0	0	0	0	0	0	0
Natural or Developed ...	D	D	D	D	N	—	—	—	—	—	—	—
Sub-Area (acres) ...	10.7	48.0	32.2	12.2	26.3	—	—	—	—	—	—	—
RTIMP (Developed) ...	75%	10%	25%	65%	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	1%	81%	11%	4%	—	—	—	—	—	—	—	—
IA (Developed) ...	0.02	0.18	0.08	0.04	—	—	—	—	—	—	—	—

Natural Area	**20.3**	**%**
Developed Area	**79.7**	**%**
RTIMP (Dev.) avg.	**22.25**	**%**
Veg Cover (Dev.) avg.	**33.30**	**%**
IA (Dev.) avg.	**0.09**	

Total Sub Basin Area in sq. miles = 0.2022

500H

Land Use ID ...	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	135.0	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0**	**%**
Developed Area	**0.0**	**%**
RTIMP (Dev.) avg.	**0.00**	**%**
Veg Cover (Dev.) avg.	**0.00**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.2109

500I

Land Use ID ...	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	261.8	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0**	**%**
Developed Area	**0.0**	**%**
RTIMP (Dev.) avg.	**0.00**	**%**
Veg Cover (Dev.) avg.	**0.00**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.4090

Table S-5

Worksheet

Land-Use characteristics for rainfall losses for each subbasin

Existing Conditions

500J

Land Use ID ...	GC	LDR	NC	ND	0	0	0	0	0	0	0	0
Natural or Developed ...	D	D	N	N	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	0.6	2.2	7.8	47.2	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	10%	25%	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	81%	11%	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.18	0.08	—	—	—	—	—	—	—	—	—	—

Natural Area	**95.2**	**%**
Developed Area	**4.8**	**%**
RTIMP (Dev.) avg.	**1.06**	**%**
Veg Cover (Dev.) avg.	**1.24**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.0902

500K

Land Use ID ...	GC	LDR	NC	ND	0	0	0	0	0	0	0	0
Natural or Developed ...	D	D	N	N	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	11.8	18.6	0.2	30.6	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	10%	25%	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	81%	11%	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.18	0.08	—	—	—	—	—	—	—	—	—	—

Natural Area	**50.4**	**%**
Developed Area	**49.6**	**%**
RTIMP (Dev.) avg.	**9.51**	**%**
Veg Cover (Dev.) avg.	**19.05**	**%**
IA (Dev.) avg.	**0.06**	

Total Sub Basin Area in sq. miles = 0.0958

500L

Land Use ID ...	GC	LDR	NC	ND	0	0	0	0	0	0	0	0
Natural or Developed ...	D	D	N	N	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	1.3	0.2	6.8	94.4	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	10%	25%	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	81%	11%	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.18	0.08	—	—	—	—	—	—	—	—	—	—

Natural Area	**98.5**	**%**
Developed Area	**1.5**	**%**
RTIMP (Dev.) avg.	**0.18**	**%**
Veg Cover (Dev.) avg.	**1.03**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.1605

Table S-5

Worksheet

Land-Use characteristics for rainfall losses for each subbasin

Existing Conditions

500M

Land Use ID ...	GC	LDR	MFR	ND	0	0	0	0	0	0	0	0
Natural or Developed ...	D	D	D	N	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	29.3	31.2	7.5	10.8	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	10%	25%	65%	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	81%	11%	4%	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.18	0.08	0.04	—	—	—	—	—	—	—	—	—

Natural Area	**13.7**	**%**
Developed Area	**86.3**	**%**
RTIMP (Dev.) avg.	**19.81**	**%**
Veg Cover (Dev.) avg.	**34.88**	**%**
IA (Dev.) avg.	**0.10**	

Total Sub Basin Area in sq. miles = 0.1231

500N

Land Use ID ...	LDR	ND	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	D	N	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	0.1	72.4	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	25%	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	11%	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.08	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**99.9**	**%**
Developed Area	**0.1**	**%**
RTIMP (Dev.) avg.	**0.02**	**%**
Veg Cover (Dev.) avg.	**0.01**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.1133

500O

Land Use ID ...	GC	LDR	MFR	ND	0	0	0	0	0	0	0	0
Natural or Developed ...	D	D	D	N	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	29.5	16.8	5.0	13.2	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	10%	25%	65%	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	81%	11%	4%	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.18	0.08	0.04	—	—	—	—	—	—	—	—	—

Natural Area	**20.4**	**%**
Developed Area	**79.6**	**%**
RTIMP (Dev.) avg.	**16.14**	**%**
Veg Cover (Dev.) avg.	**40.24**	**%**
IA (Dev.) avg.	**0.10**	

Total Sub Basin Area in sq. miles = 0.1008

Table S-5

Worksheet
Land-Use characteristics for rainfall losses for each subbasin
Existing Conditions

500P

Land Use ID ...	GC	LDR	MFR	ND	0	0	0	0	0	0	0	0
Natural or Developed ...	D	D	D	N	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	3.7	4.8	1.6	43.2	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	10%	25%	65%	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	81%	11%	4%	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.18	0.08	0.04	—	—	—	—	—	—	—	—	—

Natural Area 81.1 %
Developed Area 18.9 %

RTIMP (Dev.) avg. 4.89 %
Veg Cover (Dev.) avg. 6.70 %
IA (Dev.) avg. 0.02

Total Sub Basin Area in sq. miles = 0.0831

501A

Land Use ID ...	AG	ND	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	D	N	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	18.6	7.0	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	10%	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	5%	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.36	—	—	—	—	—	—	—	—	—	—	—

Natural Area 27.3 %
Developed Area 72.7 %

RTIMP (Dev.) avg. 7.27 %
Veg Cover (Dev.) avg. 3.27 %
IA (Dev.) avg. 0.26

Total Sub Basin Area in sq. miles = 0.0399

501B

Land Use ID ...	AG	ND	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	D	N	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	8.9	38.3	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	10%	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	5%	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.36	—	—	—	—	—	—	—	—	—	—	—

Natural Area 81.1 %
Developed Area 18.9 %

RTIMP (Dev.) avg. 1.89 %
Veg Cover (Dev.) avg. 0.85 %
IA (Dev.) avg. 0.07

Total Sub Basin Area in sq. miles = 0.0739

Table S-5

Worksheet
Land-Use characteristics for rainfall losses for each subbasin
Existing Conditions

502A

Land Use ID ...	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	25.7	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0**	**%**
Developed Area	**0.0**	**%**
RTIMP (Dev.) avg.	**0.00**	**%**
Veg Cover (Dev.) avg.	**0.00**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.0401

502B

Land Use ID ...	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	33.7	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0**	**%**
Developed Area	**0.0**	**%**
RTIMP (Dev.) avg.	**0.00**	**%**
Veg Cover (Dev.) avg.	**0.00**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.0526

502C

Land Use ID ...	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	29.4	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0**	**%**
Developed Area	**0.0**	**%**
RTIMP (Dev.) avg.	**0.00**	**%**
Veg Cover (Dev.) avg.	**0.00**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.0460

Table S-5

Worksheet

Land-Use characteristics for rainfall losses for each subbasin

Existing Conditions

503A

Land Use ID ...	C	GC	LDR	MFR	ND	0	0	0	0	0	0	0
Natural or Developed ...	D	D	D	D	N	—	—	—	—	—	—	—
Sub-Area (acres) ...	0.0	48.2	64.8	9.2	16.1	—	—	—	—	—	—	—
RTIMP (Developed) ...	75%	10%	25%	65%	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	1%	81%	11%	4%	—	—	—	—	—	—	—	—
IA (Developed) ...	0.02	0.18	0.08	0.04	—	—	—	—	—	—	—	—

Natural Area 11.7 %
Developed Area 88.3 %

RTIMP (Dev.) avg. 19.55 %
Veg Cover (Dev.) avg. 33.70 %
IA (Dev.) avg. 0.10

Total Sub Basin Area in sq. miles = 0.2163

503B

Land Use ID ...	GC	LDR	MFR	ND	0	0	0	0	0	0	0	0
Natural or Developed ...	D	D	D	N	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	8.5	10.2	4.0	49.5	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	10%	25%	65%	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	81%	11%	4%	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.18	0.08	0.04	—	—	—	—	—	—	—	—	—

Natural Area 68.6 %
Developed Area 31.4 %

RTIMP (Dev.) avg. 8.31 %
Veg Cover (Dev.) avg. 11.33 %
IA (Dev.) avg. 0.03

Total Sub Basin Area in sq. miles = 0.1128

503C

Land Use ID ...	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	77.4	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area 100.0 %
Developed Area 0.0 %

RTIMP (Dev.) avg. 0.00 %
Veg Cover (Dev.) avg. 0.00 %
IA (Dev.) avg. 0.00

Total Sub Basin Area in sq. miles = 0.1209

Table S-5

Worksheet

Land-Use characteristics for rainfall losses for each subbasin

Existing Conditions

504A

Land Use ID ...	GC	LDR	ND	0	0	0	0	0	0	0	0	0
Natural or Developed ...	D	D	N	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	17.5	22.5	114.9	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	10%	25%	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	81%	11%	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.18	0.08	—	—	—	—	—	—	—	—	—	—

Natural Area	**74.2**	**%**
Developed Area	**25.8**	**%**
RTIMP (Dev.) avg.	**4.75**	**%**
Veg Cover (Dev.) avg.	**10.77**	**%**
IA (Dev.) avg.	**0.03**	

Total Sub Basin Area in sq. miles = 0.2419

505A

Land Use ID ...	LDR	ND	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	D	N	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	2.3	112.7	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	25%	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	11%	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.08	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**98.0**	**%**
Developed Area	**2.0**	**%**
RTIMP (Dev.) avg.	**0.50**	**%**
Veg Cover (Dev.) avg.	**0.22**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.1797

505B

Land Use ID ...	GC	LDR	ND	0	0	0	0	0	0	0	0	0
Natural or Developed ...	D	D	N	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	38.2	50.2	4.1	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	10%	25%	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	81%	11%	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.18	0.08	—	—	—	—	—	—	—	—	—	—

Natural Area	**4.5**	**%**
Developed Area	**95.5**	**%**
RTIMP (Dev.) avg.	**17.69**	**%**
Veg Cover (Dev.) avg.	**39.56**	**%**
IA (Dev.) avg.	**0.12**	

Total Sub Basin Area in sq. miles = 0.1446

Table S-5

Worksheet
Land-Use characteristics for rainfall losses for each subbasin
Existing Conditions

509A

Land Use ID ...	LDR	ND	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	D	N	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	65.2	301.4	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	25%	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	11%	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.08	—	—	—	—	—	—	—	—	—	—	—

Natural Area 82.2 %
Developed Area 17.8 %

RTIMP (Dev.) avg. 4.45 %
Veg Cover (Dev.) avg. 2.00 %
IA (Dev.) avg. 0.01

Total Sub Basin Area in sq. miles = 0.5728

509B

Land Use ID ...	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	408.0	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area 100.0 %
Developed Area 0.0 %

RTIMP (Dev.) avg. 0.00 %
Veg Cover (Dev.) avg. 0.00 %
IA (Dev.) avg. 0.00

Total Sub Basin Area in sq. miles = 0.6374

509C

Land Use ID ...	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	93.8	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area 100.0 %
Developed Area 0.0 %

RTIMP (Dev.) avg. 0.00 %
Veg Cover (Dev.) avg. 0.00 %
IA (Dev.) avg. 0.00

Total Sub Basin Area in sq. miles = 0.1465

Table S-5

Worksheet
Land-Use characteristics for rainfall losses for each subbasin
Existing Conditions

509D

Land Use ID ...	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	215.9	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area 100.0 %
Developed Area 0.0 %

RTIMP (Dev.) avg. 0.00 %
Veg Cover (Dev.) avg. 0.00 %
IA (Dev.) avg. 0.00

Total Sub Basin Area in sq. miles = 0.3374

509E

Land Use ID ...	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	121.4	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area 100.0 %
Developed Area 0.0 %

RTIMP (Dev.) avg. 0.00 %
Veg Cover (Dev.) avg. 0.00 %
IA (Dev.) avg. 0.00

Total Sub Basin Area in sq. miles = 0.1897

509F

Land Use ID ...	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	128.4	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area 100.0 %
Developed Area 0.0 %

RTIMP (Dev.) avg. 0.00 %
Veg Cover (Dev.) avg. 0.00 %
IA (Dev.) avg. 0.00

Total Sub Basin Area in sq. miles = 0.2007

Table S-5

Worksheet
Land-Use characteristics for rainfall losses for each subbasin
Existing Conditions

509G

Land Use ID ...	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	59.9	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0 %**
Developed Area	**0.0 %**
RTIMP (Dev.) avg.	**0.00 %**
Veg Cover (Dev.) avg.	**0.00 %**
IA (Dev.) avg.	**0.00**

Total Sub Basin Area in sq. miles = 0.0936

509H

Land Use ID ...	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	44.2	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0 %**
Developed Area	**0.0 %**
RTIMP (Dev.) avg.	**0.00 %**
Veg Cover (Dev.) avg.	**0.00 %**
IA (Dev.) avg.	**0.00**

Total Sub Basin Area in sq. miles = 0.0691

509I

Land Use ID ...	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	19.0	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0 %**
Developed Area	**0.0 %**
RTIMP (Dev.) avg.	**0.00 %**
Veg Cover (Dev.) avg.	**0.00 %**
IA (Dev.) avg.	**0.00**

Total Sub Basin Area in sq. miles = 0.0297

Table S-5

Worksheet
Land-Use characteristics for rainfall losses for each subbasin
Existing Conditions

509J

Land Use ID ...	GC	LDR	ND	0	0	0	0	0	0	0	0	0
Natural or Developed ...	D	D	N	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	6.6	21.1	38.5	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	10%	25%	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	81%	11%	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.18	0.08	—	—	—	—	—	—	—	—	—	—

Natural Area	**58.1**	**%**
Developed Area	**41.9**	**%**
RTIMP (Dev.) avg.	**8.97**	**%**
Veg Cover (Dev.) avg.	**11.70**	**%**
IA (Dev.) avg.	**0.04**	

Total Sub Basin Area in sq. miles = 0.1034

509K

Land Use ID ...	LDR	ND	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	D	N	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	0.1	18.6	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	25%	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	11%	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.08	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**99.6**	**%**
Developed Area	**0.4**	**%**
RTIMP (Dev.) avg.	**0.11**	**%**
Veg Cover (Dev.) avg.	**0.05**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.0292

509L

Land Use ID ...	GC	LDR	ND	0	0	0	0	0	0	0	0	0
Natural or Developed ...	D	D	N	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	6.8	31.6	12.7	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	10%	25%	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	81%	11%	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.18	0.08	—	—	—	—	—	—	—	—	—	—

Natural Area	**24.9**	**%**
Developed Area	**75.1**	**%**
RTIMP (Dev.) avg.	**16.78**	**%**
Veg Cover (Dev.) avg.	**17.74**	**%**
IA (Dev.) avg.	**0.07**	

Total Sub Basin Area in sq. miles = 0.0799

Table S-5

Worksheet

Land-Use characteristics for rainfall losses for each subbasin

Existing Conditions

509M

Land Use ID ...	LDR	ND	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	D	N	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	4.6	61.9	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	25%	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	11%	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.08	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**93.0**	**%**
Developed Area	**7.0**	**%**
RTIMP (Dev.) avg.	**1.74**	**%**
Veg Cover (Dev.) avg.	**0.78**	**%**
IA (Dev.) avg.	**0.01**	

Total Sub Basin Area in sq. miles = 0.1040

509N

Land Use ID ...	C	GC	LDR	MFR	ND	0	0	0	0	0	0	0
Natural or Developed ...	D	D	D	D	N	—	—	—	—	—	—	—
Sub-Area (acres) ...	5.2	21.9	33.6	9.2	2.9	—	—	—	—	—	—	—
RTIMP (Developed) ...	75%	10%	25%	65%	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	1%	81%	11%	4%	—	—	—	—	—	—	—	—
IA (Developed) ...	0.02	0.18	0.08	0.04	—	—	—	—	—	—	—	—

Natural Area	**4.0**	**%**
Developed Area	**96.0**	**%**
RTIMP (Dev.) avg.	**28.08**	**%**
Veg Cover (Dev.) avg.	**30.10**	**%**
IA (Dev.) avg.	**0.09**	

Total Sub Basin Area in sq. miles = 0.1139

509O

Land Use ID ...	C	GC	LDR	MFR	0	0	0	0	0	0	0	0
Natural or Developed ...	D	D	D	D	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	14.4	6.3	1.8	1.2	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	75%	10%	25%	65%	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	1%	81%	11%	4%	—	—	—	—	—	—	—	—
IA (Developed) ...	0.02	0.18	0.08	0.04	—	—	—	—	—	—	—	—

Natural Area	**0.0**	**%**
Developed Area	**100.0**	**%**
RTIMP (Dev.) avg.	**53.46**	**%**
Veg Cover (Dev.) avg.	**23.27**	**%**
IA (Dev.) avg.	**0.07**	

Total Sub Basin Area in sq. miles = 0.0369

Table S-5

Worksheet
Land-Use characteristics for rainfall losses for each subbasin
Existing Conditions

509P

Land Use ID ...	C	GC	LDR	MFR	0	0	0	0	0	0	0	0
Natural or Developed ...	D	D	D	D	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	9.3	22.7	33.9	4.5	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	75%	10%	25%	65%	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	1%	81%	11%	4%	—	—	—	—	—	—	—	—
IA (Developed) ...	0.02	0.18	0.08	0.04	—	—	—	—	—	—	—	—

Natural Area	**0.0**	**%**
Developed Area	**100.0**	**%**
RTIMP (Dev.) avg.	**29.36**	**%**
Veg Cover (Dev.) avg.	**31.92**	**%**
IA (Dev.) avg.	**0.10**	

Total Sub Basin Area in sq. miles = 0.1102

509Q

Land Use ID ...	GC	LDR	ND	0	0	0	0	0	0	0	0	0
Natural or Developed ...	D	D	N	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	19.0	46.1	3.6	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	10%	25%	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	81%	11%	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.18	0.08	—	—	—	—	—	—	—	—	—	—

Natural Area	**5.3**	**%**
Developed Area	**94.7**	**%**
RTIMP (Dev.) avg.	**19.54**	**%**
Veg Cover (Dev.) avg.	**29.93**	**%**
IA (Dev.) avg.	**0.10**	

Total Sub Basin Area in sq. miles = 0.1073

509R

Land Use ID ...	GC	LDR	MFR	ND	0	0	0	0	0	0	0	0
Natural or Developed ...	D	D	D	N	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	2.1	3.9	1.8	54.3	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	10%	25%	65%	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	81%	11%	4%	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.18	0.08	0.04	—	—	—	—	—	—	—	—	—

Natural Area	**87.4**	**%**
Developed Area	**12.6**	**%**
RTIMP (Dev.) avg.	**3.77**	**%**
Veg Cover (Dev.) avg.	**3.59**	**%**
IA (Dev.) avg.	**0.01**	

Total Sub Basin Area in sq. miles = 0.0971

Table S-5

Worksheet

Land-Use characteristics for rainfall losses for each subbasin

Existing Conditions

509S

Land Use ID ...	GC	LDR	MFR	ND	0	0	0	0	0	0	0	0
Natural or Developed ...	D	D	D	N	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	18.1	20.9	4.7	81.2	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	10%	25%	65%	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	81%	11%	4%	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.18	0.08	0.04	—	—	—	—	—	—	—	—	—

Natural Area	**65.0**	**%**
Developed Area	**35.0**	**%**
RTIMP (Dev.) avg.	**8.10**	**%**
Veg Cover (Dev.) avg.	**13.77**	**%**
IA (Dev.) avg.	**0.04**	

Total Sub Basin Area in sq. miles = 0.1953

510A

Land Use ID ...	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	584.0	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0**	**%**
Developed Area	**0.0**	**%**
RTIMP (Dev.) avg.	**0.00**	**%**
Veg Cover (Dev.) avg.	**0.00**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.9125

510B

Land Use ID ...	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	229.6	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0**	**%**
Developed Area	**0.0**	**%**
RTIMP (Dev.) avg.	**0.00**	**%**
Veg Cover (Dev.) avg.	**0.00**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.3587

Table S-5

Worksheet
Land-Use characteristics for rainfall losses for each subbasin
Existing Conditions

510C

Land Use ID ...	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	544.6	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0**	**%**
Developed Area	**0.0**	**%**
RTIMP (Dev.) avg.	**0.00**	**%**
Veg Cover (Dev.) avg.	**0.00**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.8509

510D

Land Use ID ...	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	37.7	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0**	**%**
Developed Area	**0.0**	**%**
RTIMP (Dev.) avg.	**0.00**	**%**
Veg Cover (Dev.) avg.	**0.00**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.0588

510E

Land Use ID ...	GC	LDR	ND	0	0	0	0	0	0	0	0	0
Natural or Developed ...	D	D	N	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	17.1	39.8	59.7	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	10%	25%	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	81%	11%	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.18	0.08	—	—	—	—	—	—	—	—	—	—

Natural Area	**51.2**	**%**
Developed Area	**48.8**	**%**
RTIMP (Dev.) avg.	**9.99**	**%**
Veg Cover (Dev.) avg.	**15.71**	**%**
IA (Dev.) avg.	**0.05**	

Total Sub Basin Area in sq. miles = 0.1822

Table S-4

Rainfall loss characteristics for each land-use class in its developed condition

Land Use ID (1)	Developed RTIMP % (2)	Developed Veg. Cover % (3)	Developed IA in (4)
LDR	25	15	0.10
MFR	65	10	0.10
C	75	5	0.07
AG	10	5	0.40
GC	10	90	0.20
NC	0	0	0.00

* The vegetation cover for the golf course land-use is reduce from 100% to correct for the natural desert out-of bounds area included in the land-use polygon.

Table S-5

Worksheet
Land-Use characteristics for rainfall losses for each subbasin
Existing Conditions

510F

Land Use ID ...	GC	LDR	ND	0	0	0	0	0	0	0	0	0
Natural or Developed ...	D	D	N	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	2.1	16.9	54.4	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	10%	25%	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	81%	11%	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.18	0.08	—	—	—	—	—	—	—	—	—	—

Natural Area	**74.1 %**
Developed Area	**25.9 %**
RTIMP (Dev.) avg.	**6.04 %**
Veg Cover (Dev.) avg.	**4.96 %**
IA (Dev.) avg.	**0.02**

Total Sub Basin Area in sq. miles = 0.1147

510G

Land Use ID ...	C	GC	LDR	ND	0	0	0	0	0	0	0	0
Natural or Developed ...	D	D	D	N	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	5.9	5.4	39.3	64.2	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	75%	10%	25%	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	1%	81%	11%	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.02	0.18	0.08	—	—	—	—	—	—	—	—	—

Natural Area	**55.9 %**
Developed Area	**44.1 %**
RTIMP (Dev.) avg.	**12.87 %**
Veg Cover (Dev.) avg.	**7.74 %**
IA (Dev.) avg.	**0.04**

Total Sub Basin Area in sq. miles = 0.1794

511A

Land Use ID ...	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	415.1	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0 %**
Developed Area	**0.0 %**
RTIMP (Dev.) avg.	**0.00 %**
Veg Cover (Dev.) avg.	**0.00 %**
IA (Dev.) avg.	**0.00**

Total Sub Basin Area in sq. miles = 0.6486

Table S-5

Worksheet
Land-Use characteristics for rainfall losses for each subbasin
Existing Conditions

511B	Land Use ID	...	ND	0	0	0	0	0	0	0	0	0	0	0
	Natural or Developed	...	N	—	—	—	—	—	—	—	—	—	—	—
	Sub-Area (acres)	...	703.9	—	—	—	—	—	—	—	—	—	—	—
	RTIMP (Developed)	...	—	—	—	—	—	—	—	—	—	—	—	—
	Veg. Cover (Developed)	...	—	—	—	—	—	—	—	—	—	—	—	—
	IA (Developed)	...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0**	**%**
Developed Area	**0.0**	**%**
RTIMP (Dev.) avg.	**0.00**	**%**
Veg Cover (Dev.) avg.	**0.00**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 1.0998

511C	Land Use ID	...	LDR	ND	0	0	0	0	0	0	0	0	0	0
	Natural or Developed	...	D	N	—	—	—	—	—	—	—	—	—	—
	Sub-Area (acres)	...	20.7	744.7	—	—	—	—	—	—	—	—	—	—
	RTIMP (Developed)	...	25%	—	—	—	—	—	—	—	—	—	—	—
	Veg. Cover (Developed)	...	11%	—	—	—	—	—	—	—	—	—	—	—
	IA (Developed)	...	0.08	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**97.3**	**%**
Developed Area	**2.7**	**%**
RTIMP (Dev.) avg.	**0.68**	**%**
Veg Cover (Dev.) avg.	**0.30**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 1.1960

511D	Land Use ID	...	LDR	ND	0	0	0	0	0	0	0	0	0	0
	Natural or Developed	...	D	N	—	—	—	—	—	—	—	—	—	—
	Sub-Area (acres)	...	0.0	81.9	—	—	—	—	—	—	—	—	—	—
	RTIMP (Developed)	...	25%	—	—	—	—	—	—	—	—	—	—	—
	Veg. Cover (Developed)	...	11%	—	—	—	—	—	—	—	—	—	—	—
	IA (Developed)	...	0.08	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0**	**%**
Developed Area	**0.0**	**%**
RTIMP (Dev.) avg.	**0.01**	**%**
Veg Cover (Dev.) avg.	**0.00**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.1280

Table S-5

Worksheet
Land-Use characteristics for rainfall losses for each subbasin
Existing Conditions

511E

Land Use ID ...	LDR	ND	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	D	N	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	17.0	346.8	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	25%	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	11%	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.08	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**95.3**	**%**
Developed Area	**4.7**	**%**
RTIMP (Dev.) avg.	**1.17**	**%**
Veg Cover (Dev.) avg.	**0.53**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.5684

511F

Land Use ID ...	LDR	ND	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	D	N	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	3.8	94.7	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	25%	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	11%	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.08	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**96.2**	**%**
Developed Area	**3.8**	**%**
RTIMP (Dev.) avg.	**0.96**	**%**
Veg Cover (Dev.) avg.	**0.43**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.1538

511G

Land Use ID ...	NC	ND	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	N	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	0.9	554.7	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0**	**%**
Developed Area	**0.0**	**%**
RTIMP (Dev.) avg.	**0.00**	**%**
Veg Cover (Dev.) avg.	**0.00**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.8681

Table S-5

Worksheet

Land-Use characteristics for rainfall losses for each subbasin

Existing Conditions

511H

Land Use ID ...	LDR	NC	ND	0	0	0	0	0	0	0	0	0
Natural or Developed ...	D	N	N	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	2.8	2.0	193.4	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	25%	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	11%	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.08	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**98.6**	**%**
Developed Area	**1.4**	**%**
RTIMP (Dev.) avg.	**0.35**	**%**
Veg Cover (Dev.) avg.	**0.16**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.3097

511I

Land Use ID ...	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	134.9	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0**	**%**
Developed Area	**0.0**	**%**
RTIMP (Dev.) avg.	**0.00**	**%**
Veg Cover (Dev.) avg.	**0.00**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.2108

511J

Land Use ID ...	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	76.4	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0**	**%**
Developed Area	**0.0**	**%**
RTIMP (Dev.) avg.	**0.00**	**%**
Veg Cover (Dev.) avg.	**0.00**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.1194

Table S-5

Worksheet
Land-Use characteristics for rainfall losses for each subbasin
Existing Conditions

511K

Land Use ID ...	ND	0	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	—	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	506.5	—	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0 %**
Developed Area	**0.0 %**
RTIMP (Dev.) avg.	**0.00 %**
Veg Cover (Dev.) avg.	**0.00 %**
IA (Dev.) avg.	**0.00**

Total Sub Basin Area in sq. miles = 0.7914

511L

Land Use ID ...	NC	ND	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	N	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	3.2	120.1	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0 %**
Developed Area	**0.0 %**
RTIMP (Dev.) avg.	**0.00 %**
Veg Cover (Dev.) avg.	**0.00 %**
IA (Dev.) avg.	**0.00**

Total Sub Basin Area in sq. miles = 0.1927

511M

Land Use ID ...	NC	ND	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	N	N	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	3.0	50.3	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	—	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**100.0 %**
Developed Area	**0.0 %**
RTIMP (Dev.) avg.	**0.00 %**
Veg Cover (Dev.) avg.	**0.00 %**
IA (Dev.) avg.	**0.00**

Total Sub Basin Area in sq. miles = 0.0833

Table S-5

Worksheet
Land-Use characteristics for rainfall losses for each subbasin
Existing Conditions

511N

Land Use ID ...	GC	LDR	MFR	0	0	0	0	0	0	0	0	0
Natural or Developed ...	D	D	N	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	22.8	13.6	7.6	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	10%	25%	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	81%	11%	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.18	0.08	—	—	—	—	—	—	—	—	—	—

Natural Area	**17.2**	**%**
Developed Area	**82.8**	**%**
RTIMP (Dev.) avg.	**12.91**	**%**
Veg Cover (Dev.) avg.	**45.48**	**%**
IA (Dev.) avg.	**0.12**	

Total Sub Basin Area in sq. miles = 0.0686

511O

Land Use ID ...	LDR	ND	0	0	0	0	0	0	0	0	0	0
Natural or Developed ...	D	N	—	—	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	0.3	28.8	—	—	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	25%	—	—	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	11%	—	—	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.08	—	—	—	—	—	—	—	—	—	—	—

Natural Area	**98.9**	**%**
Developed Area	**1.1**	**%**
RTIMP (Dev.) avg.	**0.28**	**%**
Veg Cover (Dev.) avg.	**0.13**	**%**
IA (Dev.) avg.	**0.00**	

Total Sub Basin Area in sq. miles = 0.0455

511P

Land Use ID ...	GC	LDR	MFR	ND	0	0	0	0	0	0	0	0
Natural or Developed ...	D	D	D	N	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	19.6	8.6	4.3	168.5	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	10%	25%	65%	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	81%	11%	4%	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.18	0.08	0.04	—	—	—	—	—	—	—	—	—

Natural Area	**83.8**	**%**
Developed Area	**16.2**	**%**
RTIMP (Dev.) avg.	**3.42**	**%**
Veg Cover (Dev.) avg.	**8.47**	**%**
IA (Dev.) avg.	**0.02**	

Total Sub Basin Area in sq. miles = 0.3140

Table S-5

Worksheet
Land-Use characteristics for rainfall losses for each subbasin
Existing Conditions

511Q													
Land Use ID ...	GC	LDR	MFR	ND	0	0	0	0	0	0	0	0
Natural or Developed ...	D	D	D	N	—	—	—	—	—	—	—	—
Sub-Area (acres) ...	29.1	19.2	3.0	3.8	—	—	—	—	—	—	—	—
RTIMP (Developed) ...	10%	25%	65%	—	—	—	—	—	—	—	—	—
Veg. Cover (Developed) ...	81%	11%	4%	—	—	—	—	—	—	—	—	—
IA (Developed) ...	0.18	0.08	0.04	—	—	—	—	—	—	—	—	—

Natural Area	**6.9**	**%**
Developed Area	**93.1**	**%**
RTIMP (Dev.) avg.	**17.54**	**%**
Veg Cover (Dev.) avg.	**46.85**	**%**
IA (Dev.) avg.	**0.12**	

Total Sub Basin Area in sq. miles = 0.0861

Table S-6
Rainfall loss parameters for Green & Ampt method for each subbasin
Existing Conditions

Sub Basin ID (1)	Area Total sq. mi. (2)	Area Natural % (3)	Area Urban % (4)	IA, in inches Natural (5)	IA, in inches Urban (6)	IA, in inches Weighted (7)	RTIMP, in % Natural (8)	RTIMP, in % Urban (9)	RTIMP, in % Total (10)	Vegetation Cover, in % Natural (11)	Vegetation Cover, in % Urban (12)	Vegetation Cover, in % Weighted (13)	XKSAT Bare Ground in/hr (14)	PSIF inches (15)	DTHETA Natural dry (16)	DTHETA Urban normal (17)	DTHETA Weighted (18)	XKSAT Corrected for Veg. in/hr (19)
500A	0.2143	100.0	0.0	0.35	0.00	0.35	0.00	0.00	0.00	48.16	0.00	48.16	0.20	5.30	0.37	0.25	0.37	0.28
500B	0.2049	100.0	0.0	0.35	0.00	0.35	0.00	0.00	0.00	47.36	0.00	47.36	0.19	5.40	0.38	0.25	0.38	0.27
500C	0.1228	100.0	0.0	0.35	0.00	0.35	0.00	0.00	0.00	42.79	0.00	42.79	0.27	4.65	0.35	0.25	0.35	0.37
500D	0.2337	100.0	0.0	0.35	0.00	0.35	0.00	0.00	0.00	40.00	0.00	40.00	0.33	4.35	0.35	0.25	0.35	0.44
500E	0.1057	100.0	0.0	0.35	0.00	0.35	0.00	0.00	0.00	40.00	0.00	40.00	0.33	4.35	0.35	0.25	0.35	0.44
500F	0.4373	100.0	0.0	0.35	0.00	0.35	0.00	0.00	0.00	40.24	0.00	40.24	0.32	4.40	0.35	0.25	0.35	0.43
500G	0.2022	20.3	79.7	0.35	0.09	0.16	0.00	22.25	22.25	42.63	33.30	41.97	0.26	4.70	0.35	0.25	0.27	0.35
500H	0.2109	100.0	0.0	0.35	0.00	0.35	0.00	0.00	0.00	42.18	0.00	42.18	0.34	4.30	0.35	0.25	0.35	0.46
500I	0.4090	100.0	0.0	0.35	0.00	0.35	0.00	0.00	0.00	41.27	0.00	41.27	0.35	4.25	0.35	0.25	0.35	0.47
500J	0.0902	95.2	4.8	0.35	0.00	0.34	0.00	1.06	1.06	40.74	1.24	40.02	0.31	4.45	0.35	0.25	0.35	0.41
500K	0.0958	50.4	49.6	0.35	0.06	0.23	0.00	9.51	9.51	47.60	19.05	43.03	0.18	5.60	0.38	0.25	0.32	0.25
500L	0.1605	98.5	1.5	0.35	0.00	0.35	0.00	0.18	0.18	40.05	1.03	40.50	0.33	4.35	0.35	0.25	0.35	0.44
500M	0.1231	13.7	86.3	0.35	0.10	0.15	0.00	19.81	19.81	42.47	34.88	40.72	0.27	4.65	0.35	0.25	0.26	0.36
500N	0.1133	99.9	0.1	0.34	0.00	0.34	0.00	0.02	0.02	49.54	0.01	49.52	0.14	6.20	0.39	0.23	0.39	0.20
500O	0.1008	20.4	79.6	0.35	0.10	0.18	0.00	16.14	16.14	56.34	40.24	51.75	0.09	7.30	0.33	0.15	0.19	0.13
500P	0.0831	81.1	18.9	0.35	0.02	0.30	0.00	4.89	4.89	58.96	6.70	54.54	0.06	8.40	0.29	0.15	0.26	0.09
501A	0.0399	27.3	72.7	0.35	0.26	0.36	0.00	7.27	7.27	50.00	3.27	16.93	0.26	4.70	0.35	0.25	0.28	0.28
501B	0.0739	81.1	18.9	0.35	0.07	0.35	0.00	1.89	1.89	50.22	0.85	41.58	0.24	4.90	0.35	0.25	0.33	0.32
502A	0.0401	100.0	0.0	0.35	0.00	0.35	0.00	0.00	0.00	55.00	0.00	55.00	0.04	9.70	0.25	0.15	0.25	0.06
502B	0.0526	100.0	0.0	0.35	0.00	0.35	0.00	0.00	0.00	55.00	0.00	55.00	0.04	9.70	0.25	0.15	0.25	0.06
502C	0.0460	100.0	0.0	0.35	0.00	0.35	0.00	0.00	0.00	55.00	0.00	55.00	0.04	9.70	0.25	0.15	0.25	0.06
503A	0.2163	11.7	88.3	0.35	0.10	0.14	0.00	19.55	19.55	57.93	33.70	40.45	0.08	7.60	0.32	0.15	0.17	0.11
503B	0.1128	68.6	31.4	0.35	0.03	0.27	0.00	8.31	8.31	58.55	11.33	51.47	0.06	8.40	0.29	0.15	0.24	0.09
503C	0.1209	100.0	0.0	0.35	0.00	0.35	0.00	0.00	0.00	56.93	0.00	56.93	0.05	8.80	0.27	0.15	0.27	0.08
504A	0.2419	74.2	25.8	0.35	0.03	0.29	0.00	4.75	4.75	54.17	10.77	50.97	0.07	8.00	0.30	0.15	0.26	0.10
505A	0.1797	98.0	2.0	0.35	0.00	0.34	0.00	0.50	0.50	52.97	0.22	52.14	0.12	6.60	0.37	0.19	0.37	0.18
505B	0.1446	4.5	95.5	0.35	0.12	0.13	0.00	17.69	17.69	56.47	39.56	42.08	0.10	7.00	0.35	0.15	0.16	0.14
509A	0.5728	82.2	17.8	0.35	0.01	0.30	0.11	4.45	4.56	54.68	2.00	46.95	0.13	6.40	0.38	0.21	0.35	0.18
509B	0.6374	100.0	0.0	0.35	0.00	0.35	0.00	0.00	0.00	47.07	0.00	47.07	0.22	5.10	0.36	0.25	0.36	0.31
509C	0.1465	100.0	0.0	0.35	0.00	0.35	0.00	0.00	0.00	52.86	0.00	52.86	0.13	6.40	0.38	0.21	0.38	0.19

Table S-6
Rainfall loss parameters for Green & Ampt method for each subbasin
Existing Conditions

Sub Basin ID (1)	Area Total sq. mi. (2)	Area Natural % (3)	Area Urban % (4)	IA, in inches Natural (5)	IA, in inches Urban (6)	IA, in inches Weighted (7)	RTIMP, in % Natural (8)	RTIMP, in % Urban (9)	RTIMP, in % Total (10)	Vegetation Cover, in % Natural (11)	Vegetation Cover, in % Urban (12)	Vegetation Cover, in % Weighted (13)	XKSAT Bare Ground in/hr (14)	PSIF inches (15)	DTHETA Natural dry (16)	DTHETA Urban normal (17)	DTHETA Weighted (18)	XKSAT Corrected for Veg. in/hr (19)
509D	0.3374	100.0	0.0	0.35	0.00	0.35	0.00	0.00	0.00	50.63	0.00	50.63	0.15	6.00	0.40	0.25	0.40	0.22
509E	0.1897	100.0	0.0	0.35	0.00	0.35	0.00	0.00	0.00	55.45	0.00	55.45	0.10	7.00	0.35	0.15	0.35	0.15
509F	0.2007	100.0	0.0	0.35	0.00	0.35	0.00	0.00	0.00	53.68	0.00	53.68	0.12	6.60	0.37	0.19	0.37	0.18
509G	0.0936	100.0	0.0	0.35	0.00	0.35	0.00	0.00	0.00	53.76	0.00	53.76	0.11	6.80	0.36	0.17	0.36	0.16
509H	0.0691	100.0	0.0	0.34	0.00	0.34	0.00	0.00	0.00	54.14	0.00	54.14	0.10	7.00	0.35	0.15	0.35	0.15
509I	0.0297	100.0	0.0	0.35	0.00	0.35	0.00	0.00	0.00	48.39	0.00	48.39	0.18	5.60	0.38	0.25	0.38	0.26
509J	0.1034	58.1	41.9	0.29	0.04	0.21	0.00	8.97	8.97	37.39	11.70	33.43	0.22	5.10	0.36	0.25	0.32	0.28
509K	0.0292	99.6	0.4	0.28	0.00	0.28	0.00	0.11	0.11	40.90	0.05	40.77	0.14	6.20	0.39	0.23	0.39	0.19
509L	0.0799	24.9	75.1	0.35	0.07	0.16	0.00	16.78	16.78	52.61	17.74	30.83	0.13	6.40	0.38	0.21	0.25	0.16
509M	0.1040	93.0	7.0	0.35	0.01	0.33	0.00	1.74	1.74	48.84	0.78	46.22	0.17	5.70	0.39	0.25	0.38	0.24
509N	0.1139	4.0	96.0	0.35	0.09	0.11	0.00	28.08	28.08	47.63	30.10	32.01	0.19	5.40	0.38	0.25	0.26	0.24
509O	0.0369	0.0	100.0	0.35	0.07	0.07	0.00	53.46	53.46	45.00	23.27	23.27	0.23	5.00	0.36	0.25	0.25	0.26
509P	0.1102	0.0	100.0	0.35	0.10	0.10	0.00	29.36	29.36	53.83	31.92	31.92	0.12	6.60	0.37	0.19	0.19	0.15
509Q	0.1073	5.3	94.7	0.35	0.10	0.12	0.00	19.54	19.54	55.07	29.93	32.82	0.13	6.40	0.38	0.21	0.22	0.16
509R	0.0970	87.4	12.6	0.35	0.01	0.32	0.00	3.77	3.77	58.10	3.59	54.37	0.10	7.00	0.35	0.15	0.32	0.15
509S	0.1953	65.0	35.0	0.35	0.04	0.27	0.00	8.10	8.10	53.19	13.77	48.33	0.09	7.30	0.33	0.15	0.27	0.13
510A	0.9125	100.0	0.0	0.35	0.00	0.35	0.00	0.00	0.00	51.39	0.00	51.39	0.14	6.20	0.39	0.23	0.39	0.20
510B	0.3587	100.0	0.0	0.35	0.00	0.35	0.00	0.00	0.00	58.77	0.00	58.77	0.10	7.00	0.35	0.15	0.35	0.15
510C	0.8509	100.0	0.0	0.30	0.00	0.30	0.00	0.00	0.00	44.94	0.00	44.94	0.14	6.20	0.39	0.23	0.39	0.19
510D	0.0588	100.0	0.0	0.21	0.00	0.21	0.00	0.00	0.00	22.60	0.00	22.60	0.19	5.40	0.38	0.25	0.38	0.22
510E	0.1822	51.2	48.8	0.35	0.05	0.23	0.00	9.99	9.99	55.60	15.71	44.19	0.10	7.00	0.35	0.15	0.25	0.14
510F	0.1147	74.1	25.9	0.32	0.02	0.26	0.00	6.04	6.04	45.72	4.96	38.82	0.15	6.00	0.40	0.25	0.36	0.20
510G	0.1794	55.9	44.1	0.35	0.04	0.23	0.00	12.87	12.87	47.15	7.74	34.12	0.17	5.70	0.39	0.25	0.33	0.22
511A	0.6486	100.0	0.0	0.35	0.00	0.35	0.00	0.00	0.00	54.59	0.00	54.59	0.14	6.20	0.39	0.23	0.39	0.21
511B	1.0998	100.0	0.0	0.32	0.00	0.32	4.42	0.00	4.42	48.99	0.00	48.99	0.12	6.60	0.37	0.19	0.37	0.17
511C	1.1960	97.3	2.7	0.35	0.00	0.34	0.23	0.68	0.90	54.38	0.30	53.21	0.14	6.20	0.39	0.23	0.39	0.21
511D	0.1280	100.0	0.0	0.35	0.00	0.35	0.00	0.01	0.01	56.26	0.00	56.25	0.11	6.80	0.36	0.17	0.36	0.17
511E	0.5684	95.3	4.7	0.35	0.00	0.34	0.00	1.17	1.17	54.92	0.53	52.88	0.13	6.40	0.38	0.21	0.37	0.19
511F	0.1538	96.2	3.8	0.35	0.00	0.34	0.00	0.96	0.96	53.06	0.43	51.45	0.14	6.20	0.39	0.23	0.38	0.20
511G	0.8681	100.0	0.0	0.33	0.00	0.33	2.94	0.00	2.94	43.30	0.00	43.30	0.22	5.10	0.36	0.25	0.36	0.30

Table S-6
Rainfall loss parameters for Green & Ampt method for each subbasin
Existing Conditions

Sub Basin ID (1)	Area Total sq. mi. (2)	Area Natural % (3)	Area Urban % (4)	IA, in inches Natural (5)	IA, in inches Urban (6)	IA, in inches Weighted (7)	RTIMP, in % Natural (8)	RTIMP, in % Urban (9)	RTIMP, in % Total (10)	Vegetation Cover, in % Natural (11)	Vegetation Cover, in % Urban (12)	Vegetation Cover, in % Weighted (13)	XKSAT Bare Ground in/hr (14)	PSIF inches (15)	DTHETA Natural dry (16)	DTHETA Urban normal (17)	DTHETA Weighted (18)	XKSAT Corrected for Veg. in/hr (19)
511H	0.3097	98.6	1.4	0.35	0.00	0.35	0.01	0.35	0.35	48.69	0.16	48.17	0.31	4.45	0.35	0.25	0.35	0.44
511I	0.2108	100.0	0.0	0.35	0.00	0.35	0.00	0.00	0.00	51.45	0.00	51.45	0.39	4.00	0.35	0.25	0.35	0.57
511J	0.1194	100.0	0.0	0.35	0.00	0.35	0.00	0.00	0.00	51.97	0.00	51.97	0.44	3.81	0.35	0.25	0.35	0.65
511K	0.7914	100.0	0.0	0.33	0.00	0.33	0.00	0.00	0.00	52.92	0.00	52.92	0.12	6.60	0.37	0.19	0.37	0.18
511L	0.1927	100.0	0.0	0.35	0.00	0.35	0.00	0.00	0.00	41.24	0.00	41.24	0.33	4.35	0.35	0.25	0.35	0.44
511M	0.0833	100.0	0.0	0.35	0.00	0.35	0.00	0.00	0.00	50.14	0.00	50.14	0.21	5.20	0.37	0.25	0.37	0.30
511N	0.0686	17.2	82.8	0.35	0.12	0.18	0.00	12.91	12.91	55.15	45.48	55.00	0.10	7.00	0.35	0.15	0.18	0.15
511O	0.0455	98.9	1.1	0.35	0.00	0.35	0.00	0.28	0.28	47.37	0.13	46.96	0.14	6.20	0.39	0.23	0.39	0.20
511P	0.3140	83.8	16.2	0.35	0.02	0.31	0.00	3.42	3.42	55.87	8.47	55.31	0.05	8.80	0.27	0.15	0.25	0.08
511Q	0.0861	6.9	93.1	0.35	0.12	0.15	0.00	17.54	17.54	56.75	46.85	50.78	0.09	7.30	0.33	0.15	0.16	0.13

IA composite : (7) = (5)*(3)/100+(6)

RTIMP total : (10) = (8) + (9)

Vegetation Cover composite : (13) = (11)*(3)/100+(12)

DTHETA composite : (18) = (16)*(3)/100 + (17)*(4)/100

XKSAT Corrected : (19) = (14)*[(13)/100 * 1.111 + 0.889] where (13) > 10 and (14) < 1.2

Table S-7

Time of Concentration or Lag Parameters for Each Subbasin

Sub basin ID (1)	Hydrograph Type (2)	Elevation, in feet Top (3)	Elevation, in feet Bottom (4)	Lag or Tc Flow Path miles (5)	Slope ft/mile (6)	Adjusted Slope ft/mile (7)	Lca miles (8)	Surface Roughness Type (9)*	Kb (10)	Kn (11)
500A	Mountain	2462	2327	1.0604	127	---	0.559	B/C	---	0.04
500B	Mountain	2398	2187	1.7591	120	---	0.767	B/C	---	0.04
500C	Mountain	2260	2065	1.4682	133	---	0.682	B	---	0.03
500D	Mountain	2180	1878	2.0565	147	---	1.146	B	---	0.03
500E	Mountain	1878	1720	1.1231	141	---	0.710	B	---	0.03
500F	Mountain	2007	1678.1	2.3703	139	---	1.269	B	---	0.03
500G	Clark	1709	1564.3	1.3140	110	110	---	B	0.05	---
500H	Mountain	2228	1964	1.9039	139	---	1.098	B	---	0.03
500I	Mountain	2166	1871	2.0687	143	---	1.089	B	---	0.03
500J	Mountain	1858	1664.2	1.4049	138	---	0.417	B	---	0.03
500K	Mountain	1794	1621.6	1.4160	122	---	0.629	B	---	0.03
500L	Mountain	1892	1672	1.6627	132	---	0.805	B	---	0.03
500M	Clark	1692.1	1569	1.0508	117	117	---	B	0.05	---
500N	Clark	1590	1495.6	0.8594	110	110	---	B	0.05	---
500O	Clark	1718.2	1598.6	1.0374	115	115	---	B	0.06	---
500P	Clark	1614.2	1537.9	0.6417	119	119	---	B	0.06	---
501A	Clark	1548.8	1496	0.3638	145	145	---	B	0.06	---
501B	Clark	1570.9	1500	0.6101	116	116	---	B	0.06	---
502A	Clark	1540	1495.1	0.3933	114	114	---	B	0.06	---
502B	Clark	1553	1495	0.5064	115	115	---	B	0.06	---
502C	Clark	1556	1495	0.6093	100	100	---	B	0.06	---
503A	Clark	1680	1550	1.5341	85	85	---	A	0.03	---
503B	Clark	1615.2	1496	1.3976	85	85	---	A/B	0.04	---
503C	Clark	1550	1496	0.7651	71	71	---	B	0.05	---
504A	Clark	1609	1486	1.4742	83	83	---	A/B	0.04	---
505A	Mountain	1795	1643.6	1.2533	121	---	0.672	B/C	---	0.04
505B	Clark	1661	1560.7	1.0337	97	97	---	A	0.03	---
509A	Mountain	2644	2378	2.2186	120	---	1.042	C/D	---	0.055
509B	Mountain	2382	1960	3.3418	126	---	1.714	B/C	---	0.04
509C	Mountain	2105	1898	1.3744	151	---	0.639	B/C	---	0.04
509D	Mountain	2331	2008	2.5354	127	---	1.098	B/C	---	0.04
509E	Mountain	2112	1869	1.6390	148	---	0.795	B/C	---	0.04
509F	Mountain	1960	1779	1.4152	128	---	0.701	B/C	---	0.04
509G	Mountain	1871	1724	1.0678	138	---	0.597	B/C	---	0.04
509H	Clark	1805	1698	0.8132	132	132	---	B/C	0.08	---
509I	Clark	1720	1677	0.3751	115	115	---	B/C	0.09	---
509J	Clark	1781	1615.6	0.8784	188	188	---	C	0.10	---
509K	Clark	1781	1651.9	0.4369	296	260	---	C	0.12	---
509L	Clark	1690	1604.9	0.7894	108	108	---	A	0.03	---
509M	Clark	1742	1639.5	0.8573	120	120	---	B/C	0.08	---
509N	Clark	1674	1570.8	1.1237	92	92	---	A	0.03	---
509O	Clark	1635	1579.8	0.5775	96	96	---	A	0.03	---
509P	Clark	1645	1563	0.7647	107	107	---	A	0.03	---
509Q	Clark	1647	1540.5	1.0905	98	98	---	A	0.03	---
509R	Clark	1568.2	1510.1	0.6464	90	90	---	A/B	0.04	---

Table S-8

Time of Concentration and Duration of Rainfall Excess for Subbasins Modeled Using the Clark Unit Hydrograph Existing Condition 100-year, 6-hour Storm

Sub-basin ID	Excess Rainfall Values (inches) By Decreasing Rank (time interval in minutes)																		Total Excess (inches)	Time at 90% Excess (minutes)	Tc (min.)	Tc (hours)	R (hours)
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90					
500G	0.47	0.46	0.46	0.14	0.11	0.10	0.04	0.04	0.03	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	2.086	55	22	0.367	0.376
500M	0.47	0.46	0.46	0.14	0.11	0.10	0.04	0.04	0.03	0.02	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	2.049	50	19	0.308	0.344
500N	0.45	0.45	0.44	0.12	0.08	0.06	0.03	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.695	25	17	0.279	0.275
500O	0.49	0.49	0.49	0.17	0.14	0.13	0.06	0.06	0.06	0.05	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	2.343	50	20	0.338	0.422
500P	0.49	0.48	0.48	0.16	0.13	0.12	0.06	0.06	0.05	0.04	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	2.140	40	15	0.246	0.226
501A	0.46	0.46	0.45	0.13	0.10	0.08	0.04	0.04	0.03	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.856	30	11	0.179	0.153
501B	0.45	0.44	0.43	0.11	0.07	0.05	0.02	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.629	25	15	0.250	0.236
502A	0.49	0.49	0.48	0.17	0.13	0.13	0.06	0.06	0.06	0.04	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	2.148	35	12	0.196	0.179
502B	0.49	0.49	0.48	0.17	0.13	0.13	0.06	0.06	0.06	0.04	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	2.147	35	13	0.221	0.215
502C	0.49	0.49	0.48	0.17	0.13	0.13	0.06	0.06	0.06	0.04	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	2.148	35	15	0.254	0.315
503A	0.50	0.49	0.49	0.18	0.15	0.14	0.07	0.07	0.06	0.06	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	2.457	55	18	0.304	0.333
503B	0.49	0.48	0.48	0.17	0.13	0.13	0.06	0.06	0.06	0.04	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	2.223	40	21	0.354	0.530
503C	0.48	0.48	0.48	0.16	0.13	0.12	0.06	0.06	0.05	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.058	35	18	0.300	0.262
504A	0.48	0.48	0.48	0.16	0.13	0.12	0.06	0.06	0.05	0.03	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	2.117	35	22	0.371	0.377
505B	0.49	0.49	0.49	0.17	0.14	0.14	0.06	0.06	0.06	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	2.403	50	14	0.229	0.223
509H	0.47	0.46	0.46	0.14	0.10	0.09	0.04	0.04	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.822	30	21	0.346	0.443
509I	0.45	0.44	0.43	0.11	0.07	0.04	0.02	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.604	25	15	0.242	0.259
509J	0.46	0.45	0.45	0.13	0.10	0.09	0.04	0.03	0.03	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.880	35	22	0.367	0.399
509K	0.46	0.45	0.45	0.13	0.09	0.08	0.04	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.756	25	14	0.233	0.284
509L	0.49	0.48	0.48	0.16	0.13	0.13	0.06	0.06	0.05	0.04	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	2.258	50	12	0.196	0.212
509M	0.45	0.44	0.44	0.12	0.08	0.06	0.03	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.679	25	23	0.383	0.410
509N	0.48	0.48	0.48	0.16	0.13	0.12	0.05	0.05	0.05	0.04	0.03	0.03	0.01	0.01	0.01	0.01	0.01	0.01	2.319	60	15	0.246	0.295
509O	0.50	0.49	0.49	0.18	0.15	0.14	0.07	0.07	0.06	0.06	0.05	0.05	0.01	0.01	0.01	0.01	0.01	0.01	2.710	90	10	0.171	0.220
509P	0.50	0.49	0.49	0.18	0.14	0.14	0.07	0.07	0.06	0.06	0.05	0.05	0.01	0.01	0.01	0.01	0.01	0.01	2.518	60	12	0.192	0.168
509Q	0.49	0.48	0.48	0.17	0.14	0.13	0.06	0.06	0.05	0.05	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	2.342	50	14	0.238	0.287
509R	0.47	0.47	0.46	0.15	0.11	0.10	0.05	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.918	30	13	0.221	0.184
509S	0.48	0.48	0.47	0.16	0.12	0.12	0.05	0.05	0.05	0.03	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	2.096	40	18	0.296	0.249
510D	0.46	0.45	0.45	0.13	0.10	0.08	0.04	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.773	30	15	0.250	0.264
510E	0.48	0.48	0.48	0.16	0.13	0.12	0.06	0.05	0.05	0.03	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	2.150	40	26	0.425	0.459
510F	0.46	0.46	0.45	0.14	0.10	0.09	0.04	0.04	0.03	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.873	30	21	0.342	0.317

Table S-8

Time of Concentration and Duration of Rainfall Excess for Subbasins Modeled Using the Clark Unit Hydrograph Existing Condition 100-year, 6-hour Storm

Sub-basin ID	Excess Rainfall Values (inches) By Decreasing Rank (time interval in minutes)																		Total Excess (inches)	Time at 90% Excess (minutes)	Tc (min.)	Tc (hours)	R (hours)
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90					
510G	0.47	0.46	0.46	0.14	0.11	0.10	0.04	0.04	0.04	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.995	40	22	0.358	0.339
511N	0.49	0.48	0.48	0.17	0.14	0.13	0.06	0.06	0.05	0.04	0.04	0.03	0.00	0.00	0.00	0.00	0.00	0.00	2.280	45	18	0.296	0.382
511O	0.46	0.45	0.44	0.12	0.08	0.06	0.03	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.697	25	17	0.283	0.366
511P	0.49	0.48	0.48	0.17	0.13	0.12	0.06	0.06	0.05	0.04	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	2.142	35	28	0.458	0.450
511Q	0.49	0.49	0.49	0.18	0.14	0.14	0.06	0.06	0.06	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	2.409	50	19	0.313	0.398

Table S-9

Time of Concentration and Duration of Rainfall Excess for Subbasins Modeled Using the Clark Unit Hydrograph Existing Condition 100-year, 24-hour Storm

Sub-basin ID	Excess Rainfall Values (inches) By Decreasing Rank (time interval in minutes)																		Total Excess (inches)	Time at 90% Excess (minutes)	Tc (min.)	Tc (hours)	R (hours)
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90					
500G	0.27	0.26	0.26	0.26	0.26	0.26	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	2.010	90	25	0.413	0.428
500M	0.27	0.26	0.26	0.26	0.26	0.26	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	1.932	90	22	0.363	0.412
500N	0.26	0.26	0.25	0.25	0.25	0.25	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.384	25	20	0.338	0.340
500O	0.29	0.29	0.29	0.29	0.29	0.29	0.03	0.03	0.03	0.03	0.03	0.03	0.01	0.01	0.01	0.01	0.01	0.01	2.211	85	23	0.383	0.486
500P	0.29	0.29	0.28	0.28	0.28	0.28	0.03	0.03	0.03	0.03	0.03	0.03	0.01	0.01	0.01	0.01	0.01	0.01	1.940	40	18	0.300	0.282
501A	0.26	0.26	0.26	0.26	0.26	0.25	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.613	30	13	0.221	0.193
501B	0.25	0.25	0.24	0.24	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.333	25	19	0.313	0.302
502A	0.29	0.29	0.29	0.29	0.29	0.29	0.04	0.04	0.04	0.04	0.04	0.03	0.01	0.01	0.01	0.01	0.01	0.01	1.996	40	14	0.238	0.222
502B	0.29	0.29	0.29	0.29	0.29	0.29	0.04	0.04	0.04	0.04	0.04	0.03	0.01	0.01	0.01	0.01	0.01	0.01	1.996	40	16	0.267	0.265
502C	0.29	0.29	0.29	0.29	0.29	0.29	0.04	0.04	0.04	0.04	0.04	0.03	0.01	0.01	0.01	0.01	0.01	0.01	1.996	40	19	0.308	0.390
503A	0.30	0.30	0.29	0.29	0.29	0.29	0.04	0.04	0.04	0.04	0.04	0.04	0.02	0.02	0.02	0.02	0.02	0.02	2.406	90	22	0.358	0.399
503B	0.29	0.29	0.29	0.29	0.29	0.29	0.03	0.03	0.03	0.03	0.03	0.03	0.01	0.01	0.01	0.01	0.01	0.01	2.064	50	24	0.400	0.607
503C	0.29	0.29	0.28	0.28	0.28	0.28	0.03	0.03	0.03	0.03	0.03	0.03	0.01	0.01	0.01	0.01	0.01	0.01	1.830	30	21	0.350	0.311
504A	0.29	0.29	0.28	0.28	0.28	0.28	0.03	0.03	0.03	0.03	0.03	0.03	0.01	0.01	0.01	0.01	0.01	0.01	1.897	35	25	0.413	0.424
505B	0.29	0.29	0.29	0.29	0.29	0.29	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.01	0.01	0.01	0.01	0.01	2.278	90	17	0.283	0.282
509H	0.27	0.27	0.27	0.27	0.26	0.26	0.02	0.02	0.02	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.515	30	24	0.392	0.508
509I	0.25	0.25	0.24	0.24	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.289	25	18	0.304	0.334
509J	0.26	0.26	0.26	0.26	0.26	0.25	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.639	30	25	0.413	0.455
509K	0.26	0.26	0.26	0.26	0.26	0.25	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.430	25	17	0.288	0.358
509L	0.29	0.28	0.28	0.28	0.28	0.28	0.03	0.03	0.03	0.03	0.03	0.03	0.01	0.01	0.01	0.01	0.01	0.01	2.097	75	15	0.242	0.267
509M	0.26	0.25	0.25	0.25	0.25	0.24	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.380	25	26	0.425	0.460
509N	0.28	0.28	0.28	0.28	0.28	0.28	0.03	0.03	0.03	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	2.316	90	18	0.304	0.374
509O	0.29	0.29	0.29	0.29	0.29	0.29	0.04	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	3.051	90	13	0.213	0.280
509P	0.29	0.29	0.29	0.29	0.29	0.29	0.04	0.04	0.04	0.04	0.04	0.04	0.02	0.02	0.02	0.02	0.01	0.01	2.534	90	14	0.233	0.209
509Q	0.29	0.29	0.28	0.28	0.28	0.28	0.03	0.03	0.03	0.03	0.03	0.03	0.01	0.01	0.01	0.01	0.01	0.01	2.210	90	18	0.292	0.361
509R	0.28	0.27	0.27	0.27	0.27	0.27	0.02	0.02	0.02	0.02	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	1.652	30	16	0.271	0.231
509S	0.28	0.28	0.28	0.28	0.28	0.28	0.03	0.03	0.03	0.03	0.03	0.03	0.01	0.00	0.00	0.00	0.00	0.00	1.869	35	21	0.350	0.300
510D	0.26	0.26	0.26	0.26	0.26	0.25	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.423	25	19	0.308	0.333
510E	0.29	0.28	0.28	0.28	0.28	0.28	0.03	0.03	0.03	0.03	0.03	0.03	0.01	0.01	0.01	0.00	0.00	0.00	1.930	40	28	0.458	0.499
510F	0.27	0.26	0.26	0.26	0.26	0.26	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.620	30	24	0.392	0.369

Table S-9

Time of Concentration and Duration of Rainfall Excess for Subbasins Modeled Using the Clark Unit Hydrograph Existing Condition 100-year, 24-hour Storm

Sub-basin ID	Excess Rainfall Values (inches) By Decreasing Rank (time interval in minutes)																		Total Excess (inches)	Time at 90% Excess (minutes)	Tc (min.)	Tc (hours)	R (hours)
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90					
510G	0.27	0.27	0.27	0.27	0.26	0.26	0.02	0.02	0.02	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.826	45	24	0.404	0.387
511N	0.29	0.29	0.28	0.28	0.28	0.28	0.03	0.03	0.03	0.03	0.03	0.03	0.01	0.01	0.01	0.01	0.01	0.01	2.080	60	21	0.346	0.454
511O	0.26	0.26	0.25	0.25	0.25	0.25	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.391	25	20	0.338	0.445
511P	0.29	0.29	0.29	0.29	0.29	0.28	0.03	0.03	0.03	0.03	0.03	0.03	0.01	0.01	0.01	0.01	0.01	0.01	1.961	40	29	0.483	0.477
511Q	0.29	0.29	0.29	0.29	0.29	0.29	0.04	0.04	0.04	0.04	0.04	0.03	0.02	0.02	0.02	0.02	0.01	0.01	2.296	90	22	0.363	0.469

APPENDIX B

Flow Split Hydraulic Calculations

C502
Table D-1 Discharge vs Stage Curve for Flow Split at C502
Figure D-1 Discharge vs Stage Curve for Flow Split at C502
Supporting Calculations
C508
Table D-2 Discharge vs Stage Curve for Flow Split at C508
Figure D-2 Discharge vs Stage Curve for Flow Split at C508
Supporting Calculations
C510
Table D-3 Discharge vs Stage Curve for Flow Split at C510
Figure D-3 Discharge vs Stage Curve for Flow Split at C510
Supporting Calculations
C515
Table D-4 Discharge vs Stage Curve for Flow Split at C515
Figure D-4 Discharge vs Stage Curve for Flow Split at C515
Supporting Calculations
C531
Table D-5 Discharge vs Stage Curve for Flow Split at C531
Figure D-5 Discharge vs Stage Curve for Flow Split at C531
Supporting Calculations
C532
Table D-6 Discharge vs Stage Curve for Flow Split at C532
Figure D-6 Discharge vs Stage Curve for Flow Split at C532
Supporting Calculations
C532a
Table D-7 Discharge vs Stage Curve for Flow Split at C532a
Figure D-7 Discharge vs Stage Curve for Flow Split at C532a
Supporting Calculations
C534
Table D-8 Discharge vs Stage Curve for Flow Split at C534
Figure D-8 Discharge vs Stage Curve for Flow Split at C534
Supporting Calculations
C535
Table D-9 Discharge vs Stage Curve for Flow Split at C535
Figure D-9 Discharge vs Stage Curve for Flow Split at C535
Supporting Calculations
C537
Table D-10 Discharge vs Stage Curve for Flow Split at C537
Figure D-10 Discharge vs Stage Curve for Flow Split at C537
Supporting Calculations
C539
Table D-11 Discharge vs Stage Curve for Flow Split at C539
Figure D-11 Discharge vs Stage Curve for Flow Split at C539
Supporting Calculations

APPENDIX B (continued)

Flow Split Hydraulic Calculations (continued)

C553
Table D-12 Discharge vs Stage Curve for Flow Split at C553
Figure D-12 Discharge vs Stage Curve for Flow Split at C553
Supporting Calculations
C554
Table D-13 Discharge vs Stage Curve for Flow Split at C554
Figure D-13 Discharge vs Stage Curve for Flow Split at C554
Supporting Calculations
C557
Table D-14 Discharge vs Stage Curve for Flow Split at C557
Figure D-14 Discharge vs Stage Curve for Flow Split at C557
Supporting Calculations
C558
Table D-15 Discharge vs Stage Curve for Flow Split at C558
Figure D-15 Discharge vs Stage Curve for Flow Split at C558
Supporting Calculations
C559
Table D-16 Discharge vs Stage Curve for Flow Split at C559
Figure D-16 Discharge vs Stage Curve for Flow Split at C559
Supporting Calculations
C560
Table D-17 Discharge vs Stage Curve for Flow Split at C560
Figure D-17 Discharge vs Stage Curve for Flow Split at C560
Supporting Calculations
C573
Table D-18 Discharge vs Stage Curve for Flow Split at C573
Figure D-18 Discharge vs Stage Curve for Flow Split at C573
Supporting Calculations
C574
Table D-19 Discharge vs Stage Curve for Flow Split at C574
Figure D-19 Discharge vs Stage Curve for Flow Split at C574
Supporting Calculations
C578
Table D-20 Discharge vs Stage Curve for Flow Split at C578
Figure D-20 Discharge vs Stage Curve for Flow Split at C578
Supporting Calculations

Table D-1
Flow split at C502

Stage	Discharge, in cfs		
	Left	Right	Total
2156.7	0	0	0
2157.0	0	10	10
2157.3	0	18	18
2157.5	0	30	30
2157.7	8	45	53
2158.0	20	68	88
2158.2	44	87	131
2158.4	83	106	189
2158.6	135	128	263
2158.8	190	150	340
2159.0	260	175	435
2159.2	328	200	528
2159.4	402	235	637
2159.6	488	274	762
2159.8	590	315	905
2160.0	679	356	1035
2160.2	760	398	1158
2160.4	850	450	1300
2160.6	980	513	1493
2160.8	1134	588	1722

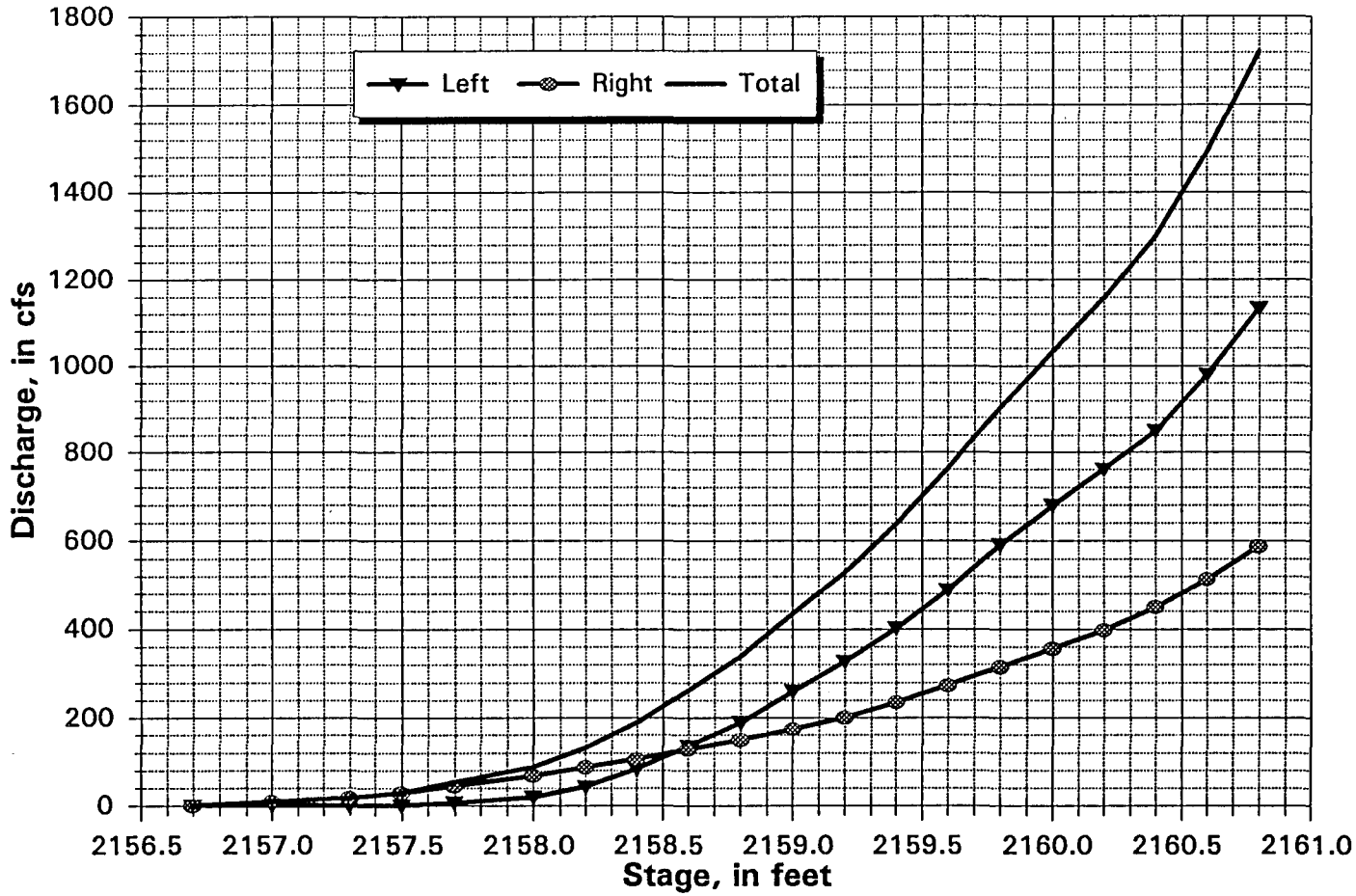

Figure D-1

Flow split at C502

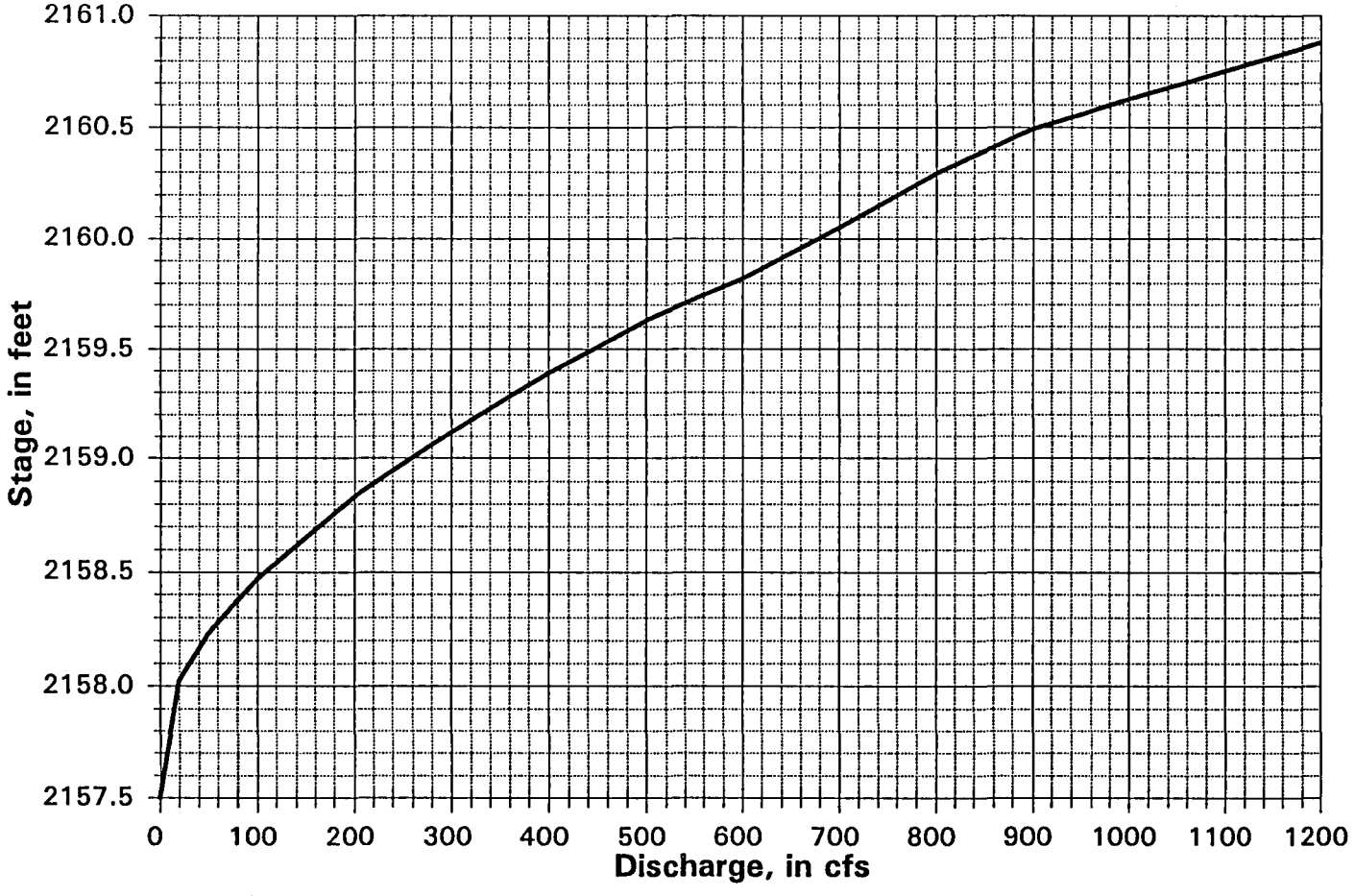

Figure D-1a

C502 Split Left

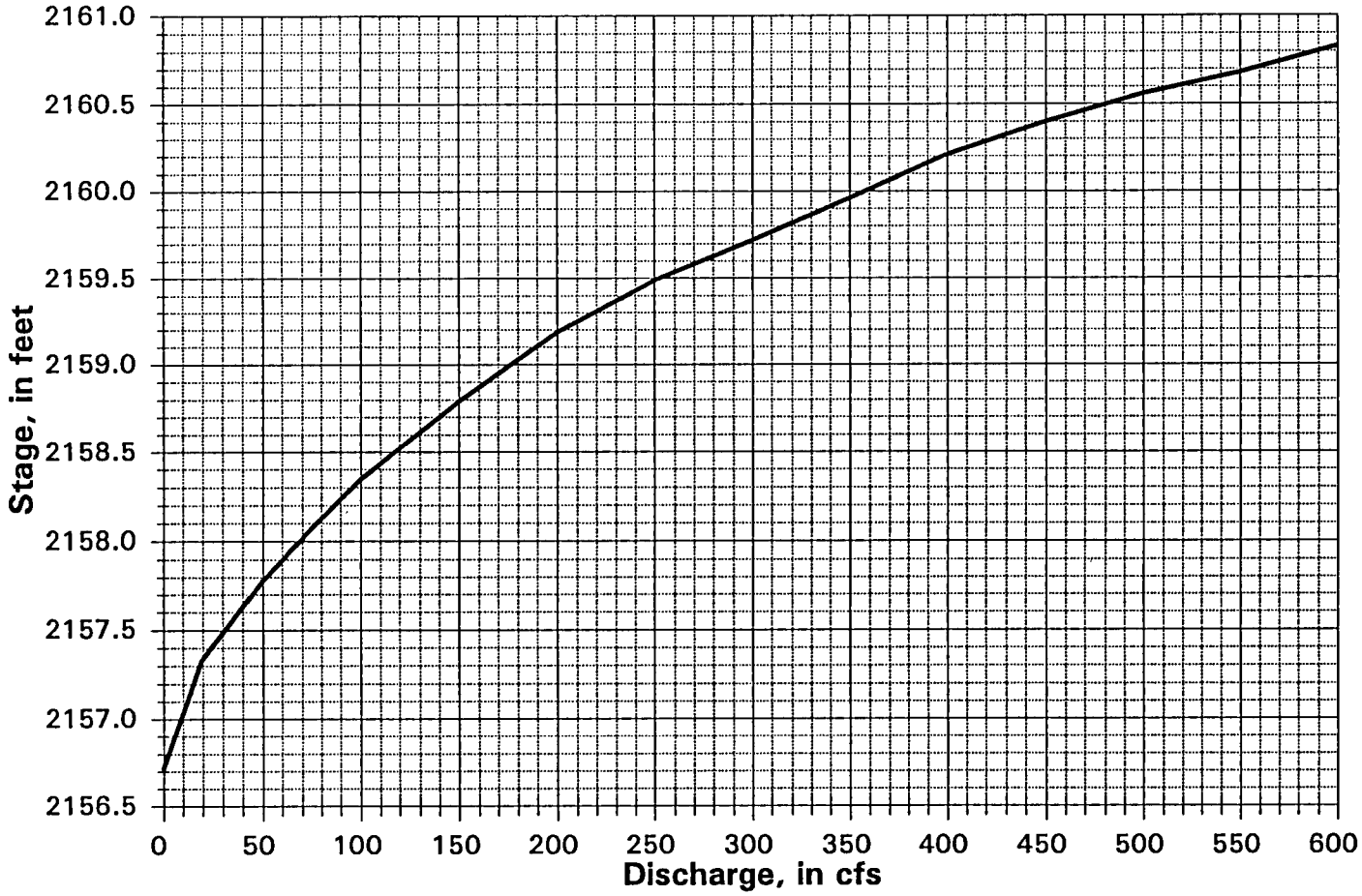

Figure D-1b

C502 Split Right

```
1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
 *  RUN DATE    16JUN94    TIME   16:42:08 *
 *****************************************

                                                                                  ***************************************
                                                                                  *  U.S. ARMY CORPS OF ENGINEERS       *
                                                                                  *  HYDROLOGIC ENGINEERING CENTER      *
                                                                                  *  609 SECOND STREET, SUITE D         *
                                                                                  *  DAVIS, CALIFORNIA 95616-4687       *
                                                                                  *          (916) 756-1104             *
                                                                                  ***************************************

                                        X     X  XXXXXXX   XXXXX              XXXXX
                                        X     X  X        X     X            X     X
                                        X     X  X        X                        X
                                        XXXXXXX  XXXX     X          XXXXX    XXXXX
                                        X     X  X        X                  X
                                        X     X  X        X     X            X
                                        X     X  XXXXXXX   XXXXX             XXXXXXX
1
   16JUN94      16:42:08                                                                                          PAGE    1


                                                                                THIS RUN EXECUTED 16JUN94    16:42:08
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************


 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      502 Left                                          FILE:     C502L.IH2
 T4                                                        DATE:     06-16-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 502
 T6                SPLIT  LEFT
 T7
 T8      Single X-Section Run
                   Ditch slope =   0.0245 ft/ft  From Hydrologic Field Survey

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                         0.0245

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                        -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                     ********REQUESTED SECTION NUMBERS********

     -10       -10


 NC    0.075      0.075      0.035        .1         .3
 QT       14         20         50        75        100        200        300        400        500        600
 QT      700        800        900      1000       1200

 NH        4      0.075     1101.3     0.035     1136.4     0.075     1150.1      0.01       1151
         X-Section #1
 X1        1          7     1101.3    1136.4          0         0         0
 GR     2161        999    2160.39    1000.0    2159.84    1075.1    2157.49    1101.3    2158.06    1136.4
 GR   2159.3     1150.1       2161      1151

1
   16JUN94      16:42:08                                                                                          PAGE    2


 X1        2                                                .2        .2        .2

 X1        3                                                .2        .2        .2

 X1        4                                                .2        .2        .2

 X1        5                                                .2        .2        .2

 X1        6                                                .2        .2        .2

1
   16JUN94      16:42:08                                                                                          PAGE    3

 T3            Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                         0.0245

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     2                -1                                  -1

1
   16JUN94      16:42:08                                                                                PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                         0.0245
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     3                   -1                                      -1

1
   16JUN94      16:42:08                                                                                PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                         0.0245
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     4                   -1                                      -1

1
   16JUN94      16:42:08                                                                                PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                         0.0245
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     5                   -1                                      -1

1
   16JUN94      16:42:08                                                                                PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                         0.0245
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     6                   -1                                      -1

1
   16JUN94      16:42:08                                                                                PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                         0.0245
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     7                   -1                                      -1

1
   16JUN94      16:42:08                                                                                PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                         0.0245
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     8                   -1                                      -1

1
   16JUN94      16:42:08                                                                                PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 10                        0.0245
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     9                -1                                  -1

1
   16JUN94      16:42:08                                                                                PAGE   11

 T3           Q10
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               11                            0.0245
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                  -1                                      -1

1
   16JUN94      16:42:08                                                                                PAGE   12

 T3           Q11
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               12                            0.0245
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                  -1                                      -1

1
   16JUN94      16:42:08                                                                                PAGE   13

 T3           Q12
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               13                            0.0245
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                  -1                                      -1

1
   16JUN94      16:42:08                                                                                PAGE   14

 T3           Q13
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               14                            0.0245
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                  -1                                      -1

1
   16JUN94      16:42:08                                                                                PAGE   15

 T3           Q14
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               15                            0.0245
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                  -1                                      -1


1
   16JUN94      16:42:08                                                                                PAGE   16


                                                                    THIS RUN EXECUTED 16JUN94     16:42:20
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

502 Left

SUMMARY PRINTOUT

      SECNO       Q       CWSEL     DEPTH      VCH      CRIWS      EG        HL       10*KS    KRATIO
```

	1.000	20.00	2157.97	.48	2.57	2157.95	2158.07	.00	243.58	.00
	1.000	50.00	2158.15	.66	3.48	2158.14	2158.33	.00	244.99	.00
	1.000	75.00	2158.26	.77	4.09	2158.26	2158.50	.00	243.75	.00
*	1.000	100.00	2158.36	.87	4.47	2158.36	2158.65	.00	225.04	.00
*	1.000	200.00	2158.71	1.22	5.53	2158.71	2159.14	.00	186.51	.00
*	1.000	300.00	2158.99	1.50	6.25	2158.99	2159.53	.00	167.66	.00
*	1.000	400.00	2159.23	1.74	6.82	2159.23	2159.87	.00	155.89	.00
*	1.000	500.00	2159.46	1.97	7.24	2159.46	2160.17	.00	145.11	.00
*	1.000	600.00	2159.64	2.15	7.72	2159.64	2160.43	.00	144.08	.00
*	1.000	700.00	2159.89	2.40	7.80	2159.89	2160.68	.00	124.53	.00
*	1.000	800.00	2160.07	2.58	8.05	2160.07	2160.90	.00	119.10	.00
*	1.000	900.00	2160.25	2.76	8.20	2160.25	2161.10	.00	111.33	.00
*	1.000	1000.00	2160.45	2.96	8.16	2160.45	2161.27	.00	99.15	.00
*	1.000	1200.00	2160.70	3.21	8.59	2160.70	2161.57	.00	97.80	.00
	2.000	20.00	2157.98	.49	2.52	2157.95	2158.07	.00	230.86	1.03
	2.000	50.00	2158.16	.67	3.44	2158.15	2158.34	.00	234.82	1.02
	2.000	75.00	2158.27	.78	4.05	2158.26	2158.51	.00	235.68	1.02
	2.000	100.00	2158.37	.88	4.44	2158.36	2158.66	.00	219.44	1.01
	2.000	200.00	2158.72	1.23	5.51	2158.71	2159.15	.00	184.00	1.01
	2.000	300.00	2159.00	1.51	6.23	2158.99	2159.54	.00	166.01	1.00
	2.000	400.00	2159.24	1.75	6.80	2159.23	2159.87	.00	154.69	1.00
	2.000	500.00	2159.46	1.97	7.22	2159.46	2160.17	.00	144.20	1.00
	2.000	600.00	2159.68	2.19	7.56	2159.65	2160.44	.00	134.82	1.03
	2.000	700.00	2159.89	2.40	7.79	2159.88	2160.69	.00	123.99	1.00
	2.000	800.00	2160.07	2.58	8.04	2160.07	2160.90	.00	118.62	1.00
	2.000	900.00	2160.25	2.76	8.19	2160.24	2161.10	.00	110.94	1.00
	2.000	1000.00	2160.49	3.00	8.01	2160.46	2161.27	.00	94.07	1.03
	2.000	1200.00	2160.74	3.25	8.42	2160.71	2161.58	.00	92.46	1.03

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	20.00	2157.99	.50	2.43	2157.95	2158.08	.00	210.44	1.05
3.000	50.00	2158.18	.69	3.36	2158.14	2158.34	.00	216.52	1.04
3.000	75.00	2158.31	.82	3.74	2158.26	2158.52	.00	181.20	1.14
3.000	100.00	2158.39	.90	4.37	2158.36	2158.66	.00	208.21	1.03
3.000	200.00	2158.73	1.24	5.46	2158.71	2159.15	.00	178.78	1.01
3.000	300.00	2159.01	1.52	6.19	2158.99	2159.54	.00	162.66	1.01
3.000	400.00	2159.25	1.76	6.76	2159.23	2159.88	.00	152.15	1.01
3.000	500.00	2159.47	1.98	7.19	2159.46	2160.17	.00	142.32	1.01
3.000	600.00	2159.69	2.20	7.52	2159.66	2160.44	.00	132.52	1.01
3.000	700.00	2159.90	2.41	7.76	2159.88	2160.69	.00	122.86	1.00
3.000	800.00	2160.08	2.59	8.02	2160.06	2160.91	.00	117.60	1.00
3.000	900.00	2160.26	2.77	8.17	2160.24	2161.10	.00	110.11	1.00
3.000	1000.00	2160.50	3.01	7.98	2160.45	2161.28	.00	93.06	1.01
3.000	1200.00	2160.75	3.26	8.39	2160.69	2161.58	.00	91.47	1.01
4.000	20.00	2158.01	.52	2.33	2157.95	2158.08	.00	186.77	1.06
4.000	50.00	2158.20	.71	3.20	2158.14	2158.35	.00	185.46	1.08
4.000	75.00	2158.33	.84	3.65	2158.26	2158.52	.00	167.54	1.04
4.000	100.00	2158.44	.95	3.97	2158.37	2158.67	.00	152.69	1.17
4.000	200.00	2158.81	1.32	4.97	2158.70	2159.16	.00	131.50	1.17
4.000	300.00	2159.09	1.60	5.78	2158.98	2159.55	.00	129.99	1.12
4.000	400.00	2159.36	1.87	6.25	2159.23	2159.89	.00	118.32	1.13
4.000	500.00	2159.57	2.08	6.78	2159.45	2160.18	.00	118.15	1.10
4.000	600.00	2159.79	2.30	7.09	2159.67	2160.46	.00	109.91	1.10
4.000	700.00	2159.91	2.42	7.73	2159.88	2160.69	.00	121.11	1.01
4.000	800.00	2160.09	2.60	7.98	2160.06	2160.91	.00	115.97	1.01
4.000	900.00	2160.27	2.78	8.13	2160.25	2161.10	.00	108.82	1.01
4.000	1000.00	2160.51	3.02	7.94	2160.45	2161.28	.00	91.75	1.01
4.000	1200.00	2160.77	3.28	8.35	2160.69	2161.58	.00	90.20	1.01
5.000	20.00	2158.02	.53	2.22	2157.95	2158.09	.00	165.78	1.06
5.000	50.00	2158.22	.73	3.06	2158.14	2158.35	.00	159.62	1.08
5.000	75.00	2158.34	.85	3.53	2158.26	2158.52	.00	149.99	1.06
5.000	100.00	2158.46	.97	3.90	2158.36	2158.68	.00	143.46	1.03
5.000	200.00	2158.82	1.33	4.92	2158.71	2159.17	.00	127.26	1.02
5.000	300.00	2159.11	1.62	5.70	2158.99	2159.56	.00	124.24	1.02
5.000	400.00	2159.37	1.88	6.20	2159.23	2159.89	.00	115.32	1.01
5.000	500.00	2159.63	2.14	6.49	2159.46	2160.19	.00	102.86	1.07
5.000	600.00	2159.80	2.31	7.04	2159.64	2160.46	.00	107.76	1.01
5.000	700.00	2160.03	2.54	7.21	2159.88	2160.71	.00	98.08	1.11
5.000	800.00	2160.28	2.79	7.18	2160.06	2160.93	.00	84.25	1.17
5.000	900.00	2160.48	2.99	7.28	2160.25	2161.12	.00	78.53	1.18
5.000	1000.00	2160.62	3.13	7.50	2160.44	2161.29	.00	77.74	1.09
5.000	1200.00	2160.87	3.38	7.93	2160.71	2161.59	.00	77.70	1.08

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	20.00	2158.03	.54	2.14	2157.95	2158.09	.00	148.99	1.05
6.000	50.00	2158.23	.74	2.98	2158.14	2158.36	.00	145.42	1.05
6.000	75.00	2158.35	.86	3.45	2158.26	2158.53	.00	139.65	1.04
6.000	100.00	2158.47	.98	3.83	2158.36	2158.68	.00	135.25	1.03
6.000	200.00	2158.83	1.34	4.87	2158.71	2159.17	.00	123.09	1.02
6.000	300.00	2159.12	1.63	5.62	2158.99	2159.56	.00	118.73	1.02
6.000	400.00	2159.39	1.90	6.12	2159.24	2159.90	.00	110.87	1.02
6.000	500.00	2159.63	2.14	6.47	2159.46	2160.19	.00	101.93	1.00
6.000	600.00	2159.82	2.33	7.00	2159.64	2160.46	.00	105.61	1.01
6.000	700.00	2160.05	2.56	7.15	2159.88	2160.71	.00	95.35	1.01
6.000	800.00	2160.29	2.80	7.16	2160.07	2160.93	.00	83.46	1.00
6.000	900.00	2160.49	3.00	7.25	2160.24	2161.13	.00	77.35	1.01
6.000	1000.00	2160.63	3.14	7.47	2160.47	2161.29	.00	76.73	1.01
6.000	1200.00	2160.88	3.39	7.89	2160.70	2161.59	.00	76.69	1.01

1

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SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED
```

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1*****************************************                    ****************************************
 *  HEC-2 WATER SURFACE PROFILES           *                    *  U.S. ARMY CORPS OF ENGINEERS        *
 *                                         *                    *  HYDROLOGIC ENGINEERING CENTER       *
 *  Version   4.6.2;  May 1991             *                    *  609 SECOND STREET, SUITE D          *
 *                                         *                    *  DAVIS, CALIFORNIA 95616-4687        *
 *  RUN DATE    16JUN94    TIME   11:08:30 *                    *          (916) 756-1104              *
*****************************************                    ****************************************

                                        X     X  XXXXXXX   XXXXX             XXXXX
                                        X     X  X        X     X           X     X
                                        X     X  X        X                       X
                                        XXXXXXX  XXXX     X          XXXXX    XXXXX
                                        X     X  X        X                  X
                                        X     X  X        X     X            X
                                        X     X  XXXXXXX   XXXXX             XXXXXXX
1
   16JUN94      11:08:30                                                                                    PAGE    1


                                                                                  THIS RUN EXECUTED 16JUN94    11:08:30
*************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
*************************************

T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
T3      502 Right                                        FILE:     C502R.IH2
T4                                                       DATE:     06-16-94  dtp
T4
T5              This model is used to develop a flow split rating curve
T6              for the split that occurs at hydrologic concentration point 502
T6                SPLIT  RIGHT
T7
T8      Single X-Section Run
                Ditch slope =   0.0271 ft/ft  From Hydrologic Field Survey

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                2                         0.0271

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

     1                  -1                                        -1

   SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

J3  VARIABLE CODES FOR SUMMARY PRINTOUT

    38         43          1          8         26          2          3         11          5         58

J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

    -10       -10

NC    0.075      0.075      0.035        .1         .3
QT       14         20         50        75        100        150        200        250        300        350
QT      400        450        500       550        600

NH        4       0.01       1000      0.075     1020.4      0.035     1029.5      0.075       1036
        X-Section #1
X1        1          7     1020.4     1029.5          0          0          0
GR     2161        999    2159.33     1000.0    2158.28     1014.5    2156.74     1020.4    2156.72     1029.5
GR   2159.3     1035.0       2161       1036
1
   16JUN94      11:08:30                                                                                    PAGE    2


X1        2                                        .2         .2         .2

X1        3                                        .2         .2         .2

X1        4                                        .2         .2         .2

X1        5                                        .2         .2         .2

X1        6                                        .2         .2         .2
1
   16JUN94      11:08:30                                                                                    PAGE    3

T3            Q2

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                3                         0.0271

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     2                -1                                  -1

1
   16JUN94      11:08:30                                                                                PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                           0.0271
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     3                   -1                                      -1

1
   16JUN94      11:08:30                                                                                PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                           0.0271
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     4                   -1                                      -1

1
   16JUN94      11:08:30                                                                                PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                           0.0271
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     5                   -1                                      -1

1
   16JUN94      11:08:30                                                                                PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                           0.0271
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     6                   -1                                      -1

1
   16JUN94      11:08:30                                                                                PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                           0.0271
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     7                   -1                                      -1

1
   16JUN94      11:08:30                                                                                PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                           0.0271
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     8                   -1                                      -1

1
   16JUN94      11:08:30                                                                                PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 10                          0.0271
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     9                -1                                  -1

1
   16JUN94      11:08:30                                                                                PAGE   11

 T3           Q10
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               11                            0.0271
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                  -1                                      -1

1
   16JUN94      11:08:30                                                                                PAGE   12

 T3           Q11
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               12                            0.0271
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                  -1                                      -1

1
   16JUN94      11:08:30                                                                                PAGE   13

 T3           Q12
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               13                            0.0271
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                  -1                                      -1

1
   16JUN94      11:08:30                                                                                PAGE   14

 T3           Q13
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               14                            0.0271
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                  -1                                      -1

1
   16JUN94      11:08:30                                                                                PAGE   15

 T3           Q14
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               15                            0.0271
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                  -1                                      -1

1
   16JUN94      11:08:30                                                                                PAGE   16

                                                                          THIS RUN EXECUTED 16JUN94    11:08:43
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

502 Right

SUMMARY PRINTOUT

      SECNO       Q       CWSEL     DEPTH      VCH      CRIWS      EG        HL       10*KS    KRATIO
```

*	1.000	20.00	2157.24	.52	4.09	2157.24	2157.49	.00	225.20	.00
*	1.000	50.00	2157.66	.94	5.43	2157.66	2158.09	.00	179.24	.00
*	1.000	75.00	2157.94	1.22	6.14	2157.94	2158.47	.00	162.16	.00
*	1.000	100.00	2158.17	1.45	6.73	2158.17	2158.80	.00	154.27	.00
*	1.000	150.00	2158.61	1.89	7.38	2158.61	2159.34	.00	129.98	.00
*	1.000	200.00	2158.97	2.25	7.94	2158.97	2159.77	.00	119.58	.00
*	1.000	250.00	2159.33	2.61	8.11	2159.33	2160.14	.00	101.81	.00
*	1.000	300.00	2159.56	2.84	8.61	2159.56	2160.44	.00	102.52	.00
*	1.000	350.00	2159.77	3.05	9.06	2159.77	2160.71	.00	103.29	.00
*	1.000	400.00	2159.96	3.24	9.49	2159.96	2160.97	.00	104.71	.00
*	1.000	450.00	2160.14	3.42	9.87	2160.14	2161.21	.00	105.49	.00
*	1.000	500.00	2160.30	3.58	10.23	2160.30	2161.44	.00	106.33	.00
*	1.000	550.00	2160.47	3.75	10.55	2160.47	2161.66	.00	106.31	.00
*	1.000	600.00	2160.63	3.91	10.85	2160.63	2161.87	.00	106.41	.00
	2.000	20.00	2157.25	.53	4.05	2157.25	2157.50	.00	218.73	1.01
	2.000	50.00	2157.67	.95	5.40	2157.66	2158.09	.00	176.81	1.01
	2.000	75.00	2157.95	1.23	6.12	2157.94	2158.47	.00	160.67	1.00
	2.000	100.00	2158.18	1.46	6.71	2158.17	2158.80	.00	153.06	1.00
*	2.000	150.00	2158.62	1.90	7.37	2158.61	2159.34	.00	129.28	1.00
	2.000	200.00	2159.00	2.28	7.81	2158.97	2159.77	.00	113.65	1.03
	2.000	250.00	2159.37	2.65	7.96	2159.34	2160.14	.00	96.51	1.03
	2.000	300.00	2159.60	2.88	8.47	2159.57	2160.44	.00	97.86	1.02
	2.000	350.00	2159.82	3.10	8.86	2159.79	2160.72	.00	96.95	1.03
	2.000	400.00	2160.00	3.28	9.31	2159.97	2160.98	.00	99.19	1.03
	2.000	450.00	2160.18	3.46	9.71	2160.14	2161.22	.00	100.53	1.02
	2.000	500.00	2160.35	3.63	10.06	2160.31	2161.45	.00	101.12	1.03
	2.000	550.00	2160.47	3.75	10.54	2160.47	2161.66	.00	106.05	1.00
	2.000	600.00	2160.63	3.91	10.84	2160.62	2161.87	.00	106.16	1.00

1
16JUN94 11:08:30 PAGE 17

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	20.00	2157.27	.55	3.98	2157.25	2157.50	.00	205.83	1.03
3.000	50.00	2157.68	.96	5.36	2157.66	2158.09	.00	171.90	1.01
3.000	75.00	2157.96	1.24	6.08	2157.93	2158.48	.00	157.50	1.01
3.000	100.00	2158.19	1.47	6.68	2158.17	2158.81	.00	150.59	1.01
3.000	150.00	2158.63	1.91	7.34	2158.61	2159.34	.00	127.84	1.01
3.000	200.00	2159.01	2.29	7.77	2158.96	2159.78	.00	112.18	1.01
3.000	250.00	2159.38	2.66	7.93	2159.33	2160.15	.00	95.38	1.01
3.000	300.00	2159.61	2.89	8.44	2159.55	2160.45	.00	96.83	1.01
3.000	350.00	2159.83	3.11	8.83	2159.78	2160.72	.00	95.95	1.01
3.000	400.00	2160.01	3.29	9.28	2159.95	2160.98	.00	98.16	1.01
3.000	450.00	2160.19	3.47	9.68	2160.13	2161.22	.00	99.61	1.00
3.000	500.00	2160.36	3.64	10.03	2160.29	2161.45	.00	100.18	1.00
3.000	550.00	2160.48	3.76	10.52	2160.46	2161.66	.00	105.50	1.00
3.000	600.00	2160.64	3.92	10.82	2160.61	2161.87	.00	105.63	1.00
4.000	20.00	2157.31	.59	3.63	2157.25	2157.51	.00	153.24	1.16
4.000	50.00	2157.75	1.03	4.99	2157.66	2158.10	.00	137.12	1.12
4.000	75.00	2158.03	1.31	5.69	2157.93	2158.49	.00	127.58	1.11
4.000	100.00	2158.32	1.60	6.04	2158.15	2158.82	.00	109.50	1.17
4.000	150.00	2158.64	1.92	7.30	2158.61	2159.34	.00	125.62	1.01
4.000	200.00	2159.10	2.38	7.38	2158.96	2159.79	.00	95.97	1.08
4.000	250.00	2159.47	2.75	7.57	2159.32	2160.15	.00	83.41	1.07
4.000	300.00	2159.70	2.98	8.08	2159.55	2160.46	.00	85.29	1.07
4.000	350.00	2159.87	3.15	8.69	2159.78	2160.73	.00	91.61	1.02
4.000	400.00	2160.21	3.49	8.50	2159.95	2161.00	.00	75.97	1.14
4.000	450.00	2160.40	3.68	8.83	2160.12	2161.24	.00	76.04	1.14
4.000	500.00	2160.55	3.83	9.28	2160.29	2161.47	.00	79.96	1.12
4.000	550.00	2160.49	3.77	10.49	2160.46	2161.67	.00	104.63	1.00
4.000	600.00	2160.65	3.93	10.79	2160.61	2161.88	.00	104.81	1.00
5.000	20.00	2157.33	.61	3.55	2157.25	2157.51	.00	141.75	1.04
5.000	50.00	2157.76	1.04	4.90	2157.66	2158.11	.00	129.16	1.03
5.000	75.00	2158.05	1.33	5.61	2157.94	2158.49	.00	121.77	1.02
5.000	100.00	2158.33	1.61	6.00	2158.18	2158.82	.00	107.47	1.01
5.000	150.00	2158.78	2.06	6.66	2158.61	2159.36	.00	94.93	1.15
5.000	200.00	2159.11	2.39	7.34	2158.97	2159.79	.00	94.22	1.01
5.000	250.00	2159.48	2.76	7.53	2159.33	2160.16	.00	82.15	1.01
5.000	300.00	2159.71	2.99	8.04	2159.56	2160.46	.00	84.05	1.01
5.000	350.00	2159.95	3.23	8.38	2159.79	2160.74	.00	82.29	1.06
5.000	400.00	2160.21	3.49	8.51	2159.96	2161.00	.00	76.33	1.00
5.000	450.00	2160.40	3.68	8.85	2160.13	2161.24	.00	76.58	1.00
5.000	500.00	2160.55	3.83	9.28	2160.30	2161.47	.00	79.96	1.00
5.000	550.00	2160.67	3.95	9.80	2160.46	2161.69	.00	85.81	1.10
5.000	600.00	2160.82	4.10	10.15	2160.61	2161.89	.00	87.59	1.09

1
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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	20.00	2157.34	.62	3.47	2157.25	2157.52	.00	131.90	1.04
6.000	50.00	2157.78	1.06	4.84	2157.66	2158.11	.00	124.00	1.02
6.000	75.00	2158.07	1.35	5.53	2157.94	2158.49	.00	116.44	1.02
6.000	100.00	2158.34	1.62	5.97	2158.18	2158.83	.00	105.37	1.01
6.000	150.00	2158.79	2.07	6.63	2158.61	2159.36	.00	93.51	1.01
6.000	200.00	2159.19	2.47	6.98	2158.97	2159.80	.00	81.22	1.08
6.000	250.00	2159.49	2.77	7.49	2159.32	2160.16	.00	80.82	1.01
6.000	300.00	2159.72	3.00	7.98	2159.56	2160.46	.00	82.15	1.01
6.000	350.00	2159.96	3.24	8.34	2159.79	2160.74	.00	81.13	1.01
6.000	400.00	2160.21	3.49	8.52	2159.96	2161.00	.00	76.39	1.00
6.000	450.00	2160.40	3.68	8.85	2160.13	2161.25	.00	76.75	1.00
6.000	500.00	2160.56	3.84	9.28	2160.30	2161.47	.00	79.81	1.00
6.000	550.00	2160.68	3.96	9.77	2160.46	2161.69	.00	84.90	1.01
6.000	600.00	2160.83	4.11	10.11	2160.61	2161.90	.00	86.63	1.01

1
16JUN94 11:08:30 PAGE 19

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED

CAUTION SECNO=      2.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
```

Table D-2
Flow split at C508

Stage	Discharge, in cfs		
	Left	Right	Total
1845.1	0	0	0
1845.3	0	5	5
1845.5	0	11	11
1845.7	3	18	21
1845.9	10	35	45
1846.1	15	58	73
1846.3	23	83	106
1846.5	45	115	160
1846.7	88	152	240
1846.9	160	192	352
1847.1	268	245	513
1847.3	390	308	698
1847.5	520	393	913
1847.7	670	490	1160
1847.9	839	600	1439
1848.1	1130	723	1853

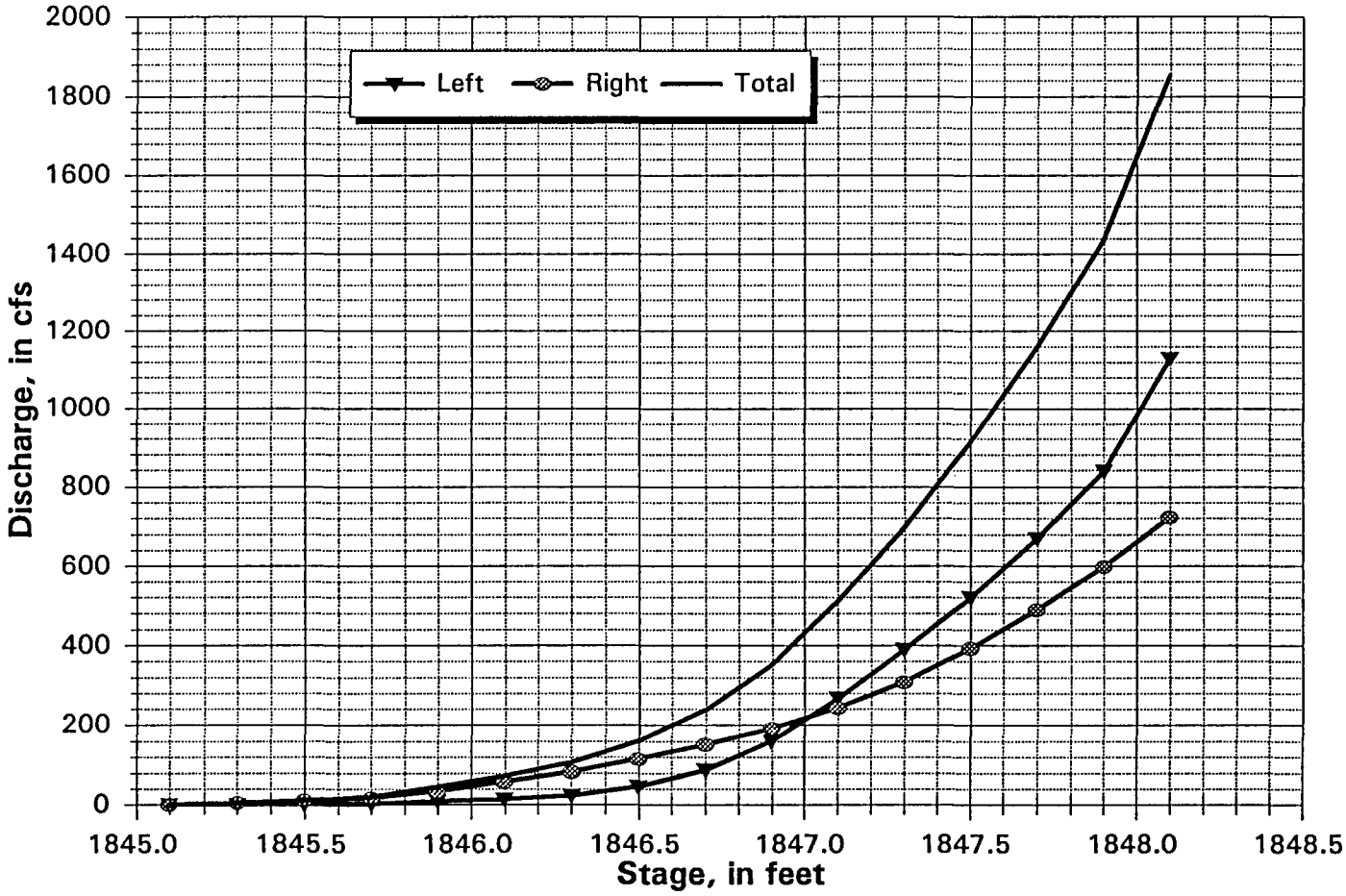

Figure D-2

Flow split at C508

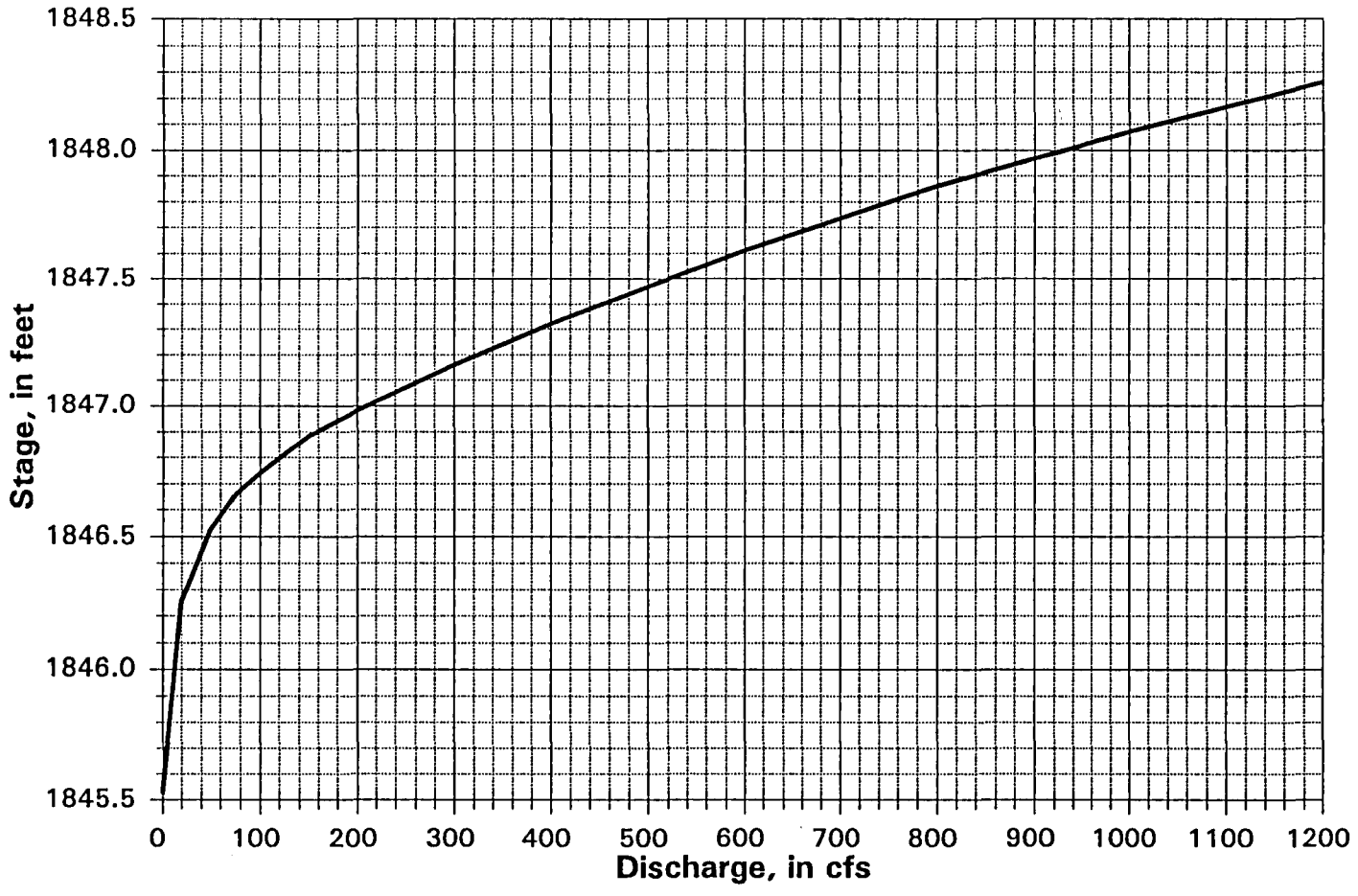

Figure D-2a

C508 Split Left

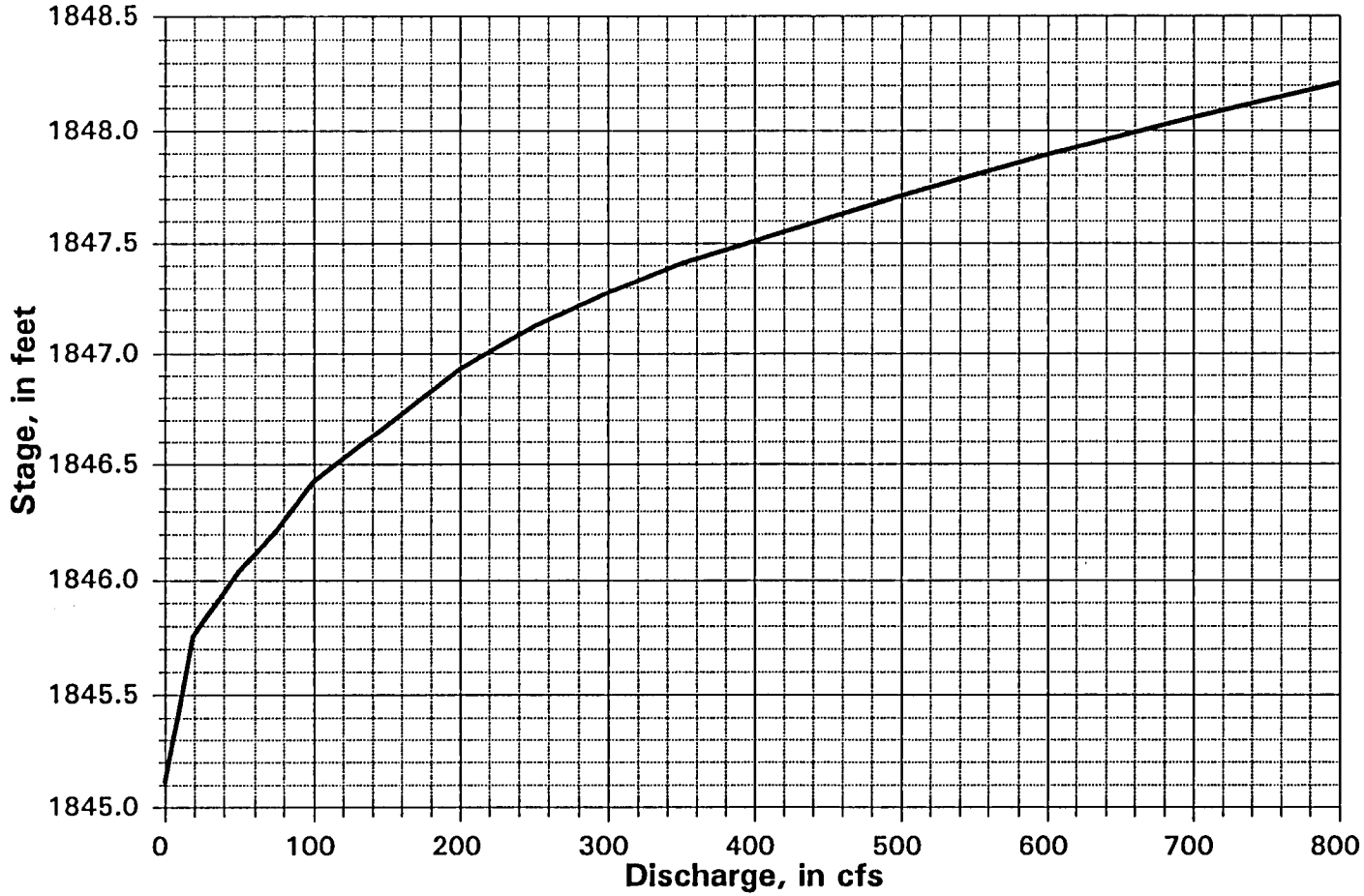

Figure D-2b

C508 Split Right

```
1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
 *  RUN DATE    16JUN94    TIME   16:50:33 *
 *****************************************

                                                                                  ***************************************
                                                                                  *  U.S. ARMY CORPS OF ENGINEERS       *
                                                                                  *  HYDROLOGIC ENGINEERING CENTER      *
                                                                                  *  609 SECOND STREET, SUITE D         *
                                                                                  *  DAVIS, CALIFORNIA 95616-4687       *
                                                                                  *          (916) 756-1104             *
                                                                                  ***************************************

                                        X     X  XXXXXXX   XXXXX              XXXXX
                                        X     X  X        X     X            X     X
                                        X     X  X        X                        X
                                        XXXXXXX  XXXX     X          XXXXX    XXXXX
                                        X     X  X        X                  X
                                        X     X  X        X     X            X
                                        X     X  XXXXXXX   XXXXX             XXXXXXX
1
   16JUN94      16:50:33                                                                                          PAGE    1


                                                                                THIS RUN EXECUTED 16JUN94    16:50:33
 *************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 *************************************

 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      508 Left                                          FILE:     C508L.IH2
 T4                                                        DATE:     06-16-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 508
 T6                SPLIT  LEFT
 T7
 T8      Single X-Section Run
                   Ditch slope =   0.0222 ft/ft  From 1000 Scale Mapping

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                         0.0222

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      1                  -1                                        -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

     -10       -10

 NC    0.075      0.075      0.035        .1         .3
 QT       14         20         50         75        100        150        200        250        300        400
 QT      500        600        800       1000       1200

 NH        4      0.075     1057.5      0.035     1062.2      0.075     1136.6       0.01       1138
         X-Section #1
 X1        1         11     1057.5     1062.2          0          0          0
 GR     1849        999    1847.75     1000.0    1845.53     1037.2    1846.75     1047.7    1845.69     1057.5
 GR   1845.7     1062.2    1846.69     1067.7    1846.17     1106.3    1846.25     1123.7    1846.34     1136.6
 GR     1849       1138
1
   16JUN94      16:50:33                                                                                          PAGE    2


 X1        2                                          .2         .2         .2

 X1        3                                          .2         .2         .2

 X1        4                                          .2         .2         .2

 X1        5                                          .2         .2         .2

 X1        6                                          .2         .2         .2
1
   16JUN94      16:50:33                                                                                          PAGE    3

 T3            Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                         0.0222

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     2                -1                                  -1

1
   16JUN94      16:50:33                                                                                PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                           0.0222
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     3                   -1                                      -1

1
   16JUN94      16:50:33                                                                                PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                           0.0222
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     4                   -1                                      -1

1
   16JUN94      16:50:33                                                                                PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                           0.0222
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     5                   -1                                      -1

1
   16JUN94      16:50:33                                                                                PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                           0.0222
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     6                   -1                                      -1

1
   16JUN94      16:50:33                                                                                PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                           0.0222
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     7                   -1                                      -1

1
   16JUN94      16:50:33                                                                                PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                           0.0222
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     8                   -1                                      -1

1
   16JUN94      16:50:33                                                                                PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 10                          0.0222
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
      9                -1                                  -1

1
   16JUN94      16:50:33                                                                                PAGE   11

 T3           Q10
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                11                          0.0222
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      10                -1                                  -1

1
   16JUN94      16:50:33                                                                                PAGE   12

 T3           Q11
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                12                          0.0222
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      11                -1                                  -1

1
   16JUN94      16:50:33                                                                                PAGE   13

 T3           Q12
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                13                          0.0222
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      12                -1                                  -1

1
   16JUN94      16:50:33                                                                                PAGE   14

 T3           Q13
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                14                          0.0222
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      13                -1                                  -1

1
   16JUN94      16:50:33                                                                                PAGE   15

 T3           Q14
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                15                          0.0222
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      14                -1                                  -1


1
   16JUN94      16:50:33                                                                                PAGE   16


                                                                    THIS RUN EXECUTED 16JUN94    16:50:51
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

508 Left

SUMMARY PRINTOUT

      SECNO       Q       CWSEL     DEPTH      VCH       CRIWS      EG        HL       10*KS    KRATIO
```

	1.000	20.00	1846.20	.67	4.02	1846.15	1846.34	.00	221.50	.00
*	1.000	50.00	1846.45	.92	4.97	1846.45	1846.61	.00	199.35	.00
*	1.000	75.00	1846.56	1.03	5.67	1846.56	1846.74	.00	217.86	.00
*	1.000	100.00	1846.65	1.12	6.06	1846.65	1846.84	.00	216.34	.00
	1.000	150.00	1846.79	1.26	6.75	1846.78	1847.00	.00	224.13	.00
	1.000	200.00	1846.91	1.38	7.21	1846.88	1847.13	.00	223.38	.00
	1.000	250.00	1847.01	1.48	7.60	1846.98	1847.25	.00	222.62	.00
	1.000	300.00	1847.10	1.57	7.95	1847.06	1847.36	.00	222.45	.00
	1.000	400.00	1847.27	1.74	8.60	1847.18	1847.56	.00	223.97	.00
	1.000	500.00	1847.42	1.89	9.10	1847.30	1847.74	.00	221.72	.00
	1.000	600.00	1847.56	2.03	9.57	1847.40	1847.91	.00	221.38	.00
	1.000	800.00	1847.81	2.28	10.37	1847.60	1848.21	.00	220.15	.00
	1.000	1000.00	1848.02	2.49	11.07	1847.82	1848.48	.00	221.35	.00
	1.000	1200.00	1848.21	2.68	11.68	1847.97	1848.72	.00	221.53	.00
	2.000	20.00	1846.21	.68	3.97	1846.16	1846.34	.00	214.10	1.02
	2.000	50.00	1846.46	.93	4.92	1846.45	1846.61	.00	193.60	1.01
	2.000	75.00	1846.58	1.05	5.43	1846.56	1846.74	.00	194.87	1.06
	2.000	100.00	1846.66	1.13	6.00	1846.64	1846.84	.00	211.06	1.01
	2.000	150.00	1846.80	1.27	6.69	1846.78	1847.00	.00	218.80	1.01
	2.000	200.00	1846.91	1.38	7.15	1846.88	1847.14	.00	218.82	1.01
	2.000	250.00	1847.02	1.49	7.55	1846.98	1847.25	.00	218.67	1.01
	2.000	300.00	1847.11	1.58	7.91	1847.07	1847.36	.00	218.88	1.01
	2.000	400.00	1847.28	1.75	8.55	1847.18	1847.56	.00	220.80	1.01
	2.000	500.00	1847.43	1.90	9.06	1847.30	1847.75	.00	219.02	1.01
	2.000	600.00	1847.57	2.04	9.53	1847.40	1847.91	.00	218.93	1.01
	2.000	800.00	1847.81	2.28	10.33	1847.60	1848.22	.00	217.98	1.00
	2.000	1000.00	1848.02	2.49	11.04	1847.81	1848.48	.00	219.43	1.00
	2.000	1200.00	1848.22	2.69	11.65	1847.97	1848.73	.00	219.81	1.00

1

16JUN94 16:50:33 PAGE 17

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	20.00	1846.22	.69	3.89	1846.15	1846.35	.00	201.40	1.03
3.000	50.00	1846.47	.94	4.80	1846.45	1846.62	.00	182.19	1.03
3.000	75.00	1846.60	1.07	5.24	1846.57	1846.75	.00	177.08	1.05
3.000	100.00	1846.67	1.14	5.89	1846.64	1846.85	.00	200.67	1.03
3.000	150.00	1846.81	1.28	6.56	1846.77	1847.01	.00	208.48	1.02
3.000	200.00	1846.93	1.40	7.05	1846.88	1847.14	.00	210.49	1.02
3.000	250.00	1847.03	1.50	7.45	1846.99	1847.26	.00	211.46	1.02
3.000	300.00	1847.12	1.59	7.82	1847.05	1847.37	.00	212.51	1.01
3.000	400.00	1847.29	1.76	8.48	1847.18	1847.57	.00	215.44	1.01
3.000	500.00	1847.44	1.91	8.99	1847.29	1847.75	.00	214.39	1.01
3.000	600.00	1847.58	2.05	9.47	1847.40	1847.92	.00	214.81	1.01
3.000	800.00	1847.82	2.29	10.27	1847.60	1848.22	.00	214.31	1.01
3.000	1000.00	1848.03	2.50	10.98	1847.81	1848.49	.00	216.23	1.01
3.000	1200.00	1848.23	2.70	11.60	1847.97	1848.73	.00	216.92	1.01
4.000	20.00	1846.23	.70	3.79	1846.15	1846.35	.00	185.52	1.04
4.000	50.00	1846.51	.98	4.26	1846.46	1846.62	.00	133.02	1.17
4.000	75.00	1846.66	1.13	4.41	1846.58	1846.76	.00	112.72	1.25
4.000	100.00	1846.72	1.19	5.24	1846.64	1846.86	.00	147.68	1.17
4.000	150.00	1846.86	1.33	5.90	1846.80	1847.02	.00	157.83	1.15
4.000	200.00	1846.95	1.42	6.84	1846.87	1847.15	.00	194.81	1.04
4.000	250.00	1847.04	1.51	7.33	1846.98	1847.26	.00	202.07	1.02
4.000	300.00	1847.13	1.60	7.71	1847.04	1847.37	.00	204.38	1.02
4.000	400.00	1847.30	1.77	8.38	1847.18	1847.57	.00	208.59	1.02
4.000	500.00	1847.45	1.92	8.90	1847.29	1847.76	.00	208.55	1.01
4.000	600.00	1847.59	2.06	9.39	1847.40	1847.92	.00	209.63	1.01
4.000	800.00	1847.83	2.30	10.19	1847.60	1848.23	.00	209.81	1.01
4.000	1000.00	1848.04	2.51	10.91	1847.81	1848.49	.00	212.18	1.01
4.000	1200.00	1848.24	2.71	11.53	1847.96	1848.74	.00	213.31	1.01
5.000	20.00	1846.25	.72	3.67	1846.15	1846.36	.00	168.71	1.05
5.000	50.00	1846.52	.99	4.15	1846.46	1846.63	.00	123.98	1.04
5.000	75.00	1846.66	1.13	4.46	1846.58	1846.76	.00	115.92	.99
5.000	100.00	1846.73	1.20	5.13	1846.64	1846.86	.00	139.95	1.03
5.000	150.00	1846.87	1.34	5.80	1846.80	1847.02	.00	151.34	1.02
5.000	200.00	1846.96	1.43	6.63	1846.88	1847.15	.00	179.43	1.04
5.000	250.00	1847.06	1.53	7.13	1846.98	1847.27	.00	188.02	1.04
5.000	300.00	1847.15	1.62	7.58	1847.04	1847.38	.00	195.44	1.02
5.000	400.00	1847.31	1.78	8.27	1847.17	1847.58	.00	201.17	1.02
5.000	500.00	1847.46	1.93	8.80	1847.29	1847.76	.00	202.24	1.02
5.000	600.00	1847.60	2.07	9.30	1847.40	1847.93	.00	204.05	1.01
5.000	800.00	1847.85	2.32	10.10	1847.60	1848.23	.00	204.77	1.01
5.000	1000.00	1848.05	2.52	10.83	1847.81	1848.50	.00	207.78	1.01
5.000	1200.00	1848.25	2.72	11.46	1847.97	1848.74	.00	209.36	1.01

1

16JUN94 16:50:33 PAGE 18

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	20.00	1846.26	.73	3.55	1846.15	1846.36	.00	153.10	1.05
6.000	50.00	1846.53	1.00	4.05	1846.47	1846.63	.00	116.41	1.03
6.000	75.00	1846.66	1.13	4.46	1846.58	1846.76	.00	116.00	1.00
6.000	100.00	1846.74	1.21	5.03	1846.64	1846.86	.00	132.90	1.03
6.000	150.00	1846.88	1.35	5.71	1846.80	1847.02	.00	145.18	1.02
6.000	200.00	1846.98	1.45	6.43	1846.88	1847.16	.00	165.18	1.04
6.000	250.00	1847.07	1.54	7.00	1846.98	1847.27	.00	179.08	1.02
6.000	300.00	1847.16	1.63	7.45	1847.06	1847.38	.00	186.52	1.02
6.000	400.00	1847.32	1.79	8.15	1847.17	1847.58	.00	193.73	1.02
6.000	500.00	1847.47	1.94	8.71	1847.29	1847.77	.00	195.97	1.02
6.000	600.00	1847.61	2.08	9.20	1847.40	1847.93	.00	198.42	1.01
6.000	800.00	1847.86	2.33	10.01	1847.62	1848.24	.00	199.61	1.01
6.000	1000.00	1848.07	2.54	10.74	1847.81	1848.50	.00	203.25	1.01
6.000	1200.00	1848.26	2.73	11.38	1847.97	1848.75	.00	205.23	1.01

1

16JUN94 16:50:33 PAGE 19

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
```

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1*****************************************                    ****************************************
 *  HEC-2 WATER SURFACE PROFILES           *                    *  U.S. ARMY CORPS OF ENGINEERS        *
 *                                         *                    *  HYDROLOGIC ENGINEERING CENTER       *
 *  Version   4.6.2;  May 1991             *                    *  609 SECOND STREET, SUITE D          *
 *                                         *                    *  DAVIS, CALIFORNIA 95616-4687        *
 *  RUN DATE    16JUN94    TIME   16:53:34  *                    *        (916) 756-1104              *
 *****************************************                    ****************************************


                                        X     X  XXXXXXX   XXXXX             XXXXX
                                        X     X  X        X     X           X     X
                                        X     X  X        X                       X
                                        XXXXXXX  XXXX     X          XXXXX    XXXXX
                                        X     X  X        X                 X
                                        X     X  X        X     X           X
                                        X     X  XXXXXXX   XXXXX            XXXXXXX
1
   16JUN94      16:53:34                                                                                    PAGE    1


                                                                                   THIS RUN EXECUTED 16JUN94    16:53:34
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************


 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      508 Right                                        FILE:     C508R.IH2
 T4                                                       DATE:     06-16-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 508
 T6                SPLIT  RIGHT
 T7
 T8      Single X-Section Run
                  Ditch slope =   0.0274 ft/ft  From Hydrologic Survey

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                           0.0274

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                  -1                                      -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

     -10       -10


 NC    0.075      0.075      0.035        .1         .3
 QT       14         20         50         75        100        150        200        250        300        350
 QT      400        500        600        700        800

 NH        4       0.01       1000      0.075     1009.2      0.035     1029.0      0.075       1097
         X-Section #1
 X1        1          7     1009.2     1029.0          0          0          0
 GR     1849        999    1846.34     1000.0    1845.64     1009.2    1845.12     1029.0    1846.35     1033.7
 GR   1847.1     1096.0       1849       1097
1
   16JUN94      16:53:34                                                                                    PAGE    2


 X1        2                                        .2         .2         .2

 X1        3                                        .2         .2         .2

 X1        4                                        .2         .2         .2

 X1        5                                        .2         .2         .2

 X1        6                                        .2         .2         .2
1
   16JUN94      16:53:34                                                                                    PAGE    3

 T3            Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                           0.0274

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     2                -1                                   -1

1                                                                                                                PAGE    4
   16JUN94      16:53:34

T3            Q3
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                           0.0274
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     3                  -1                                        -1

1                                                                                                                PAGE    5
   16JUN94      16:53:34

T3            Q4
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                           0.0274
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     4                  -1                                        -1

1                                                                                                                PAGE    6
   16JUN94      16:53:34

T3            Q5
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                           0.0274
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     5                  -1                                        -1

1                                                                                                                PAGE    7
   16JUN94      16:53:34

T3            Q6
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                           0.0274
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     6                  -1                                        -1

1                                                                                                                PAGE    8
   16JUN94      16:53:34

T3            Q7
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                           0.0274
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     7                  -1                                        -1

1                                                                                                                PAGE    9
   16JUN94      16:53:34

T3            Q8
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                           0.0274
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     8                  -1                                        -1

1                                                                                                                PAGE   10
   16JUN94      16:53:34

T3            Q9
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                10                           0.0274
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     9                -1                                  -1

1
   16JUN94      16:53:34                                                                                PAGE   11

 T3           Q10
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               11                          0.0274
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                  -1                                      -1

1
   16JUN94      16:53:34                                                                                PAGE   12

 T3           Q11
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               12                          0.0274
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                  -1                                      -1

1
   16JUN94      16:53:34                                                                                PAGE   13

 T3           Q12
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               13                          0.0274
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                  -1                                      -1

1
   16JUN94      16:53:34                                                                                PAGE   14

 T3           Q13
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               14                          0.0274
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                  -1                                      -1

1
   16JUN94      16:53:34                                                                                PAGE   15

 T3           Q14
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               15                          0.0274
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                  -1                                      -1


1
   16JUN94      16:53:34                                                                                PAGE   16


                                                                    THIS RUN EXECUTED 16JUN94    16:53:47
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

508 Right

SUMMARY PRINTOUT

      SECNO       Q       CWSEL     DEPTH      VCH       CRIWS      EG        HL       10*KS    KRATIO
```

	1.000	20.00	1845.69	.57	3.17	1845.68	1845.84	.00	271.58	.00
*	1.000	50.00	1845.94	.82	4.29	1845.94	1846.21	.00	221.12	.00
*	1.000	75.00	1846.11	.99	4.83	1846.11	1846.46	.00	195.25	.00
*	1.000	100.00	1846.25	1.13	5.34	1846.25	1846.67	.00	189.50	.00
*	1.000	150.00	1846.56	1.44	5.68	1846.56	1847.01	.00	143.64	.00
*	1.000	200.00	1846.79	1.67	6.00	1846.79	1847.27	.00	125.65	.00
*	1.000	250.00	1847.02	1.90	6.11	1847.02	1847.48	.00	107.29	.00
*	1.000	300.00	1847.17	2.05	6.34	1847.17	1847.65	.00	102.15	.00
*	1.000	350.00	1847.29	2.17	6.65	1847.29	1847.80	.00	103.26	.00
*	1.000	400.00	1847.41	2.29	6.91	1847.41	1847.94	.00	103.34	.00
*	1.000	500.00	1847.58	2.46	7.58	1847.58	1848.20	.00	111.35	.00
*	1.000	600.00	1847.76	2.64	8.04	1847.76	1848.43	.00	113.31	.00
*	1.000	700.00	1847.90	2.78	8.57	1847.90	1848.64	.00	118.92	.00
*	1.000	800.00	1848.04	2.92	9.01	1848.04	1848.84	.00	122.37	.00
	2.000	20.00	1845.70	.58	3.12	1845.68	1845.84	.01	256.32	1.03
	2.000	50.00	1845.95	.83	4.25	1845.94	1846.22	.00	215.30	1.01
	2.000	75.00	1846.12	1.00	4.80	1846.11	1846.46	.00	191.70	1.01
	2.000	100.00	1846.29	1.17	5.18	1846.27	1846.67	.00	171.82	1.05
	2.000	150.00	1846.57	1.45	5.66	1846.56	1847.01	.00	142.29	1.00
	2.000	200.00	1846.80	1.68	5.98	1846.80	1847.27	.00	124.74	1.00
	2.000	250.00	1847.02	1.90	6.09	1846.98	1847.49	.00	106.68	1.00
	2.000	300.00	1847.20	2.08	6.20	1847.18	1847.66	.00	95.96	1.03
	2.000	350.00	1847.30	2.18	6.64	1847.29	1847.81	.00	102.75	1.00
	2.000	400.00	1847.41	2.29	6.90	1847.39	1847.94	.00	102.85	1.00
	2.000	500.00	1847.62	2.50	7.41	1847.59	1848.20	.00	104.60	1.03
	2.000	600.00	1847.76	2.64	8.03	1847.75	1848.43	.00	112.82	1.00
	2.000	700.00	1847.94	2.82	8.39	1847.90	1848.64	.00	112.03	1.03
	2.000	800.00	1848.08	2.96	8.81	1848.05	1848.85	.00	114.79	1.03

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	20.00	1845.72	.60	2.97	1845.68	1845.85	.00	217.53	1.09
3.000	50.00	1845.96	.84	4.18	1845.94	1846.22	.00	203.63	1.03
3.000	75.00	1846.14	1.02	4.75	1846.11	1846.46	.00	184.52	1.02
3.000	100.00	1846.34	1.22	4.89	1846.27	1846.68	.00	142.05	1.10
3.000	150.00	1846.57	1.45	5.63	1846.56	1847.01	.00	139.60	1.01
3.000	200.00	1846.81	1.69	5.95	1846.79	1847.28	.00	122.85	1.01
3.000	250.00	1847.03	1.91	6.07	1846.99	1847.49	.00	105.47	1.01
3.000	300.00	1847.21	2.09	6.16	1847.17	1847.66	.00	94.42	1.01
3.000	350.00	1847.31	2.19	6.61	1847.29	1847.81	.00	101.66	1.01
3.000	400.00	1847.42	2.30	6.88	1847.39	1847.95	.00	101.84	1.00
3.000	500.00	1847.63	2.51	7.37	1847.57	1848.20	.00	103.03	1.01
3.000	600.00	1847.77	2.65	8.01	1847.75	1848.43	.00	111.81	1.00
3.000	700.00	1847.95	2.83	8.35	1847.89	1848.65	.00	110.48	1.01
3.000	800.00	1848.09	2.97	8.77	1848.03	1848.85	.00	113.21	1.01
4.000	20.00	1845.74	.62	2.80	1845.68	1845.85	.00	178.92	1.10
4.000	50.00	1846.01	.89	3.82	1845.94	1846.23	.00	152.18	1.16
4.000	75.00	1846.20	1.08	4.35	1846.12	1846.47	.00	139.56	1.15
4.000	100.00	1846.36	1.24	4.79	1846.27	1846.68	.00	133.47	1.03
4.000	150.00	1846.58	1.46	5.62	1846.55	1847.02	.00	139.33	1.00
4.000	200.00	1846.82	1.70	5.90	1846.79	1847.28	.00	119.99	1.01
4.000	250.00	1847.04	1.92	6.03	1846.99	1847.49	.00	103.68	1.01
4.000	300.00	1847.22	2.10	6.11	1847.17	1847.66	.00	92.40	1.01
4.000	350.00	1847.31	2.19	6.57	1847.29	1847.81	.00	99.98	1.01
4.000	400.00	1847.43	2.31	6.84	1847.39	1847.95	.00	100.28	1.01
4.000	500.00	1847.69	2.57	7.03	1847.57	1848.21	.00	90.05	1.07
4.000	600.00	1847.78	2.66	7.97	1847.74	1848.43	.00	110.28	1.01
4.000	700.00	1848.04	2.92	7.91	1847.88	1848.66	.00	94.71	1.08
4.000	800.00	1848.17	3.05	8.40	1848.03	1848.86	.00	100.06	1.06
5.000	20.00	1845.75	.63	2.69	1845.68	1845.86	.00	157.48	1.07
5.000	50.00	1846.03	.91	3.74	1845.94	1846.23	.00	141.64	1.04
5.000	75.00	1846.21	1.09	4.29	1846.11	1846.48	.00	132.88	1.02
5.000	100.00	1846.43	1.31	4.32	1846.27	1846.69	.00	96.07	1.18
5.000	150.00	1846.67	1.55	5.14	1846.56	1847.03	.00	105.69	1.15
5.000	200.00	1846.93	1.81	5.33	1846.79	1847.29	.00	88.59	1.16
5.000	250.00	1847.05	1.93	5.99	1847.00	1847.49	.00	101.32	1.01
5.000	300.00	1847.26	2.14	5.90	1847.18	1847.67	.00	83.46	1.05
5.000	350.00	1847.40	2.28	6.12	1847.28	1847.82	.00	81.71	1.11
5.000	400.00	1847.44	2.32	6.79	1847.38	1847.95	.00	98.21	1.01
5.000	500.00	1847.70	2.58	6.98	1847.58	1848.21	.00	88.37	1.01
5.000	600.00	1847.88	2.76	7.45	1847.74	1848.44	.00	91.05	1.10
5.000	700.00	1848.05	2.93	7.87	1847.90	1848.66	.00	93.27	1.01
5.000	800.00	1848.19	3.07	8.33	1848.04	1848.86	.00	97.51	1.01

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	20.00	1845.76	.64	2.60	1845.68	1845.86	.00	140.78	1.06
6.000	50.00	1846.04	.92	3.66	1845.94	1846.24	.00	132.27	1.03
6.000	75.00	1846.22	1.10	4.22	1846.11	1846.48	.00	126.60	1.02
6.000	100.00	1846.43	1.31	4.34	1846.26	1846.70	.00	97.76	.99
6.000	150.00	1846.68	1.56	5.08	1846.56	1847.03	.00	102.00	1.02
6.000	200.00	1846.93	1.81	5.29	1846.79	1847.29	.00	86.80	1.01
6.000	250.00	1847.12	2.00	5.62	1847.01	1847.50	.00	84.64	1.09
6.000	300.00	1847.28	2.16	5.84	1847.18	1847.67	.00	81.23	1.01
6.000	350.00	1847.41	2.29	6.07	1847.29	1847.82	.00	80.07	1.01
6.000	400.00	1847.51	2.39	6.42	1847.40	1847.96	.00	83.84	1.08
6.000	500.00	1847.71	2.59	6.93	1847.58	1848.22	.00	86.63	1.01
6.000	600.00	1847.89	2.77	7.41	1847.74	1848.45	.00	89.58	1.01
6.000	700.00	1848.06	2.94	7.83	1847.90	1848.66	.00	91.80	1.01
6.000	800.00	1848.21	3.09	8.25	1848.04	1848.86	.00	95.02	1.01

1

16JUN94 16:53:34 PAGE 19

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED
```

Table D-3
Flow split at C510

Stage	Discharge, in cfs		
	Left	Right	Total
1714.0	0	0	0
1714.2	1	4	6
1714.4	7	15	23
1714.6	18	32	50
1714.8	32	53	85
1715.0	49	78	127
1715.2	70	107	178
1715.4	94	141	235
1715.6	122	179	301
1715.8	152	220	372
1716.0	184	266	450
1716.2	219	318	537
1716.4	258	378	637
1716.6	301	448	749
1716.8	347	528	875
1717.0	397	619	1016
1717.2	452	723	1174
1717.4	511	838	1349
1717.6	576	965	1541
1717.8	646	1104	1749
1718.0	721	1251	1972

Split developed from 200 scale mapping (sheet 8).

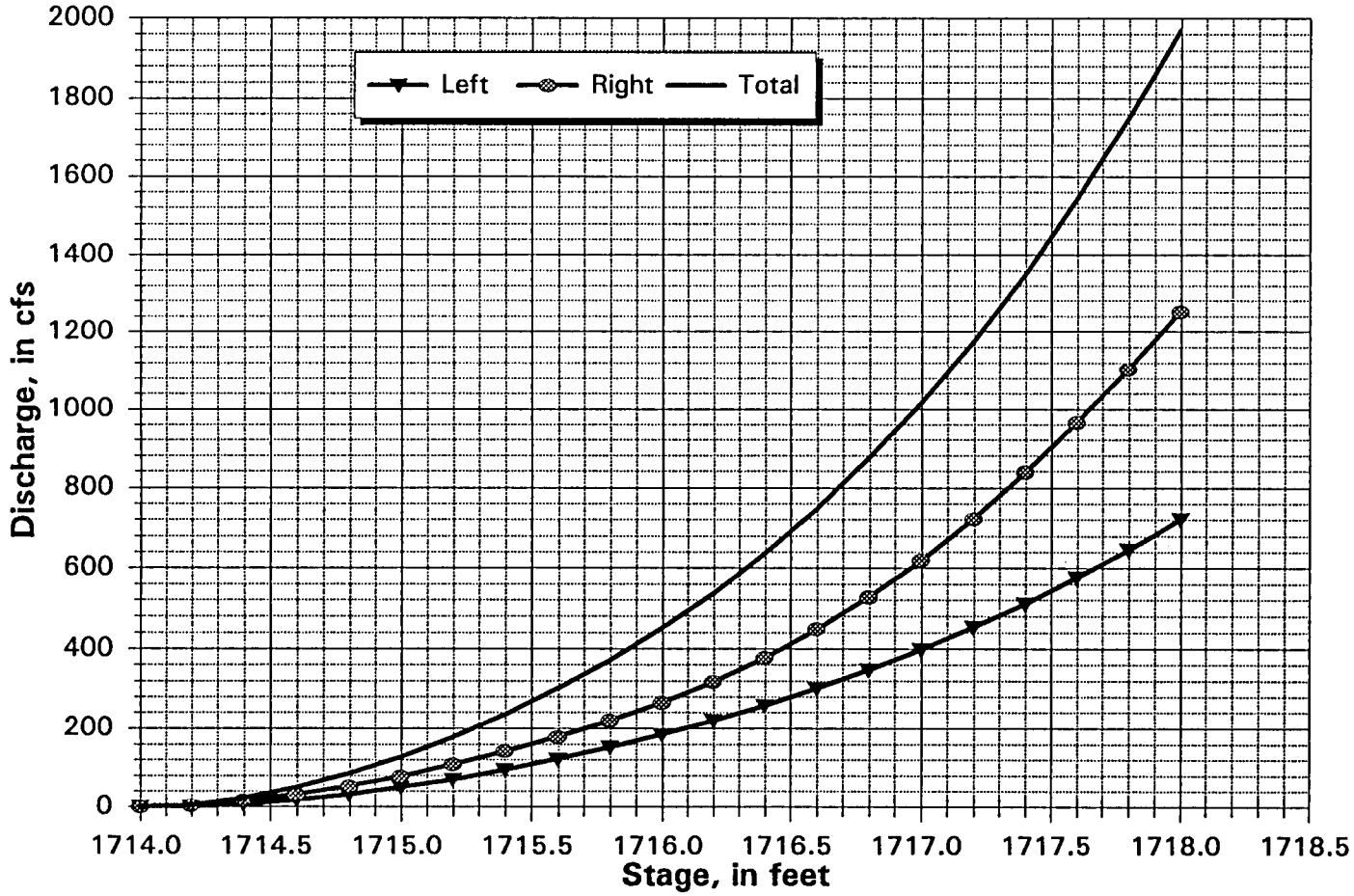

Figure D-3

Flow split at C510

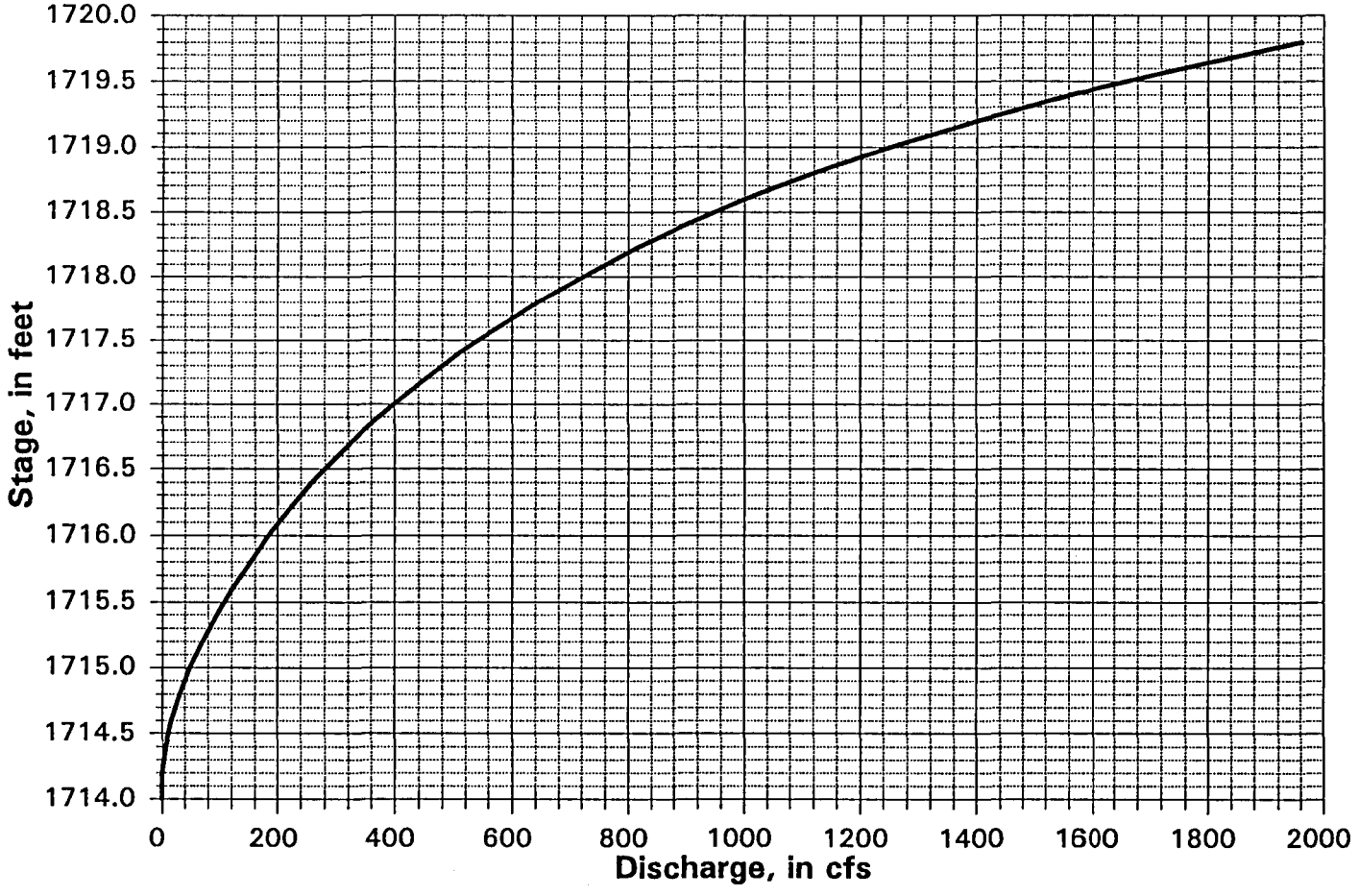

Figure D-3a

C510 Split Left

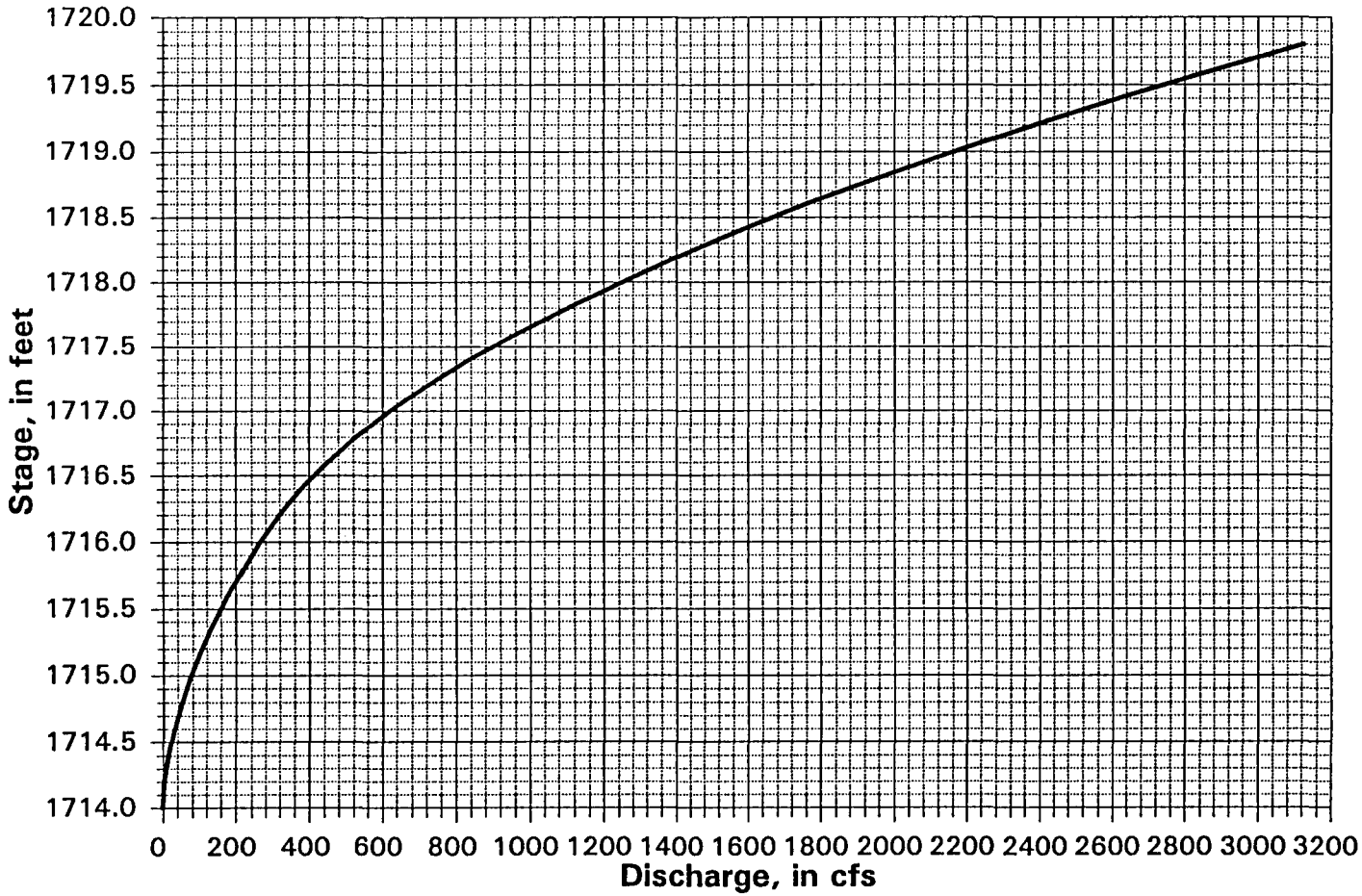

Figure D-3b

C510 Split Right

```
*******************************************
    UNEVEN WEIR FLOW PROGRAM
    FORTRAN VERSION 1.0
*******************************************

    PROJECT:  Rio Verde South FIS                    Split Right @ 510
    ENGINEER:  dtp
    DATE:   6/22/1994
    TIME:  13:41.25

---------------------------------------------
    INPUT PARAMETERS
---------------------------------------------

    STARTING WSEL:       1714.00
    MAXIMUM WSEL:        1720.00
    STEP SIZE:              0.20
    BREADTH OF WEIR:       25.00

*******************************************
    INPUT ELEVATION/STATION TABLE.
    PROJECT:  Rio Verde South FIS                    Split Right @ 510
    DATE:   6/22/1994
    TIME:  13:41.25
*******************************************
```

POINT	ELEVATION	STATION
1	1722.00	999.00
2	1714.30	1000.00
3	1714.00	1015.00
4	1714.00	1030.00
5	1716.00	1045.00
6	1716.20	1060.00
7	1717.00	1100.00
8	1718.00	1130.00
9	1720.00	1180.00

```
*******************************************
    WEIR COEFFICIENT TABLE
    PROJECT:  Rio Verde South FIS                    Split Right @ 510
    DATE:   6/22/1994
    TIME:  13:41.25
*******************************************

    REFERENCE:  COE CHART - UPPER CURVE
```

POINT	HEAD	COEFFICIENT
1	0.00	2.5000
2	0.20	2.5267
3	0.40	2.5533
4	0.60	2.5800
5	0.80	2.6067
6	1.00	2.6333
7	1.20	2.6600
8	1.40	2.6867
9	1.60	2.7133
10	1.80	2.7400
11	2.00	2.7667
12	2.20	2.7933
13	2.40	2.8200
14	2.60	2.8467
15	2.80	2.8733
16	3.00	2.9000
17	3.20	2.9267
18	3.40	2.9533
19	3.60	2.9800
20	3.80	3.0004
21	4.00	3.0022
22	4.20	3.0040
23	4.40	3.0058
24	4.60	3.0076
25	4.80	3.0093
26	5.00	3.0111
27	5.20	3.0129
28	5.40	3.0147
29	5.60	3.0164
30	5.80	3.0182

```
*******************************************
    UNEVEN WEIR FLOW PROGRAM
    FORTRAN VERSION 1.0
    PROJECT:  Rio Verde South FIS                    Split Right @ 510
    DATE:   6/22/1994
    TIME:  13:41.25
*******************************************
```

ELEVATION	DISCHARGE (CFS)
1714.00	0.00
1714.20	4.42
1714.40	15.42
1714.60	31.86
1714.80	52.83
1715.00	78.06
1715.20	107.43
1715.40	140.91
1715.60	178.51
1715.80	220.26
1716.00	266.22
1716.20	317.93
1716.40	378.14
1716.60	447.81
1716.80	527.86
1717.00	619.19
1717.20	722.54
1717.40	837.70
1717.60	964.86
1717.80	1103.68
1718.00	1251.42
1718.20	1410.15
1718.40	1581.23
1718.60	1764.89
1718.80	1960.73
1719.00	2167.31
1719.20	2386.89
1719.40	2619.75
1719.60	2866.19
1719.80	3126.51

```
*******************************************
    UNEVEN WEIR FLOW PROGRAM
    FORTRAN VERSION 1.0
*******************************************

    PROJECT:  Rio Verde South FIS                    Split Left @ 510
    ENGINEER:  dtp
    DATE:   6/22/1994
    TIME:  13:39. 6


-------------------------------------------
    INPUT PARAMETERS
-------------------------------------------

    STARTING WSEL:       1714.00
    MAXIMUM WSEL:        1720.00
    STEP SIZE:              0.20
    BREADTH OF WEIR:       10.00


*******************************************
    INPUT ELEVATION/STATION TABLE.
    PROJECT:  Rio Verde South FIS                    Split Left @ 510
    DATE:   6/22/1994
    TIME:  13:39. 6
*******************************************
```

POINT	ELEVATION	STATION
1	1720.00	1000.00
2	1718.00	1150.00
3	1716.00	1180.00
4	1714.00	1190.00
5	1714.30	1210.00
6	1722.00	1211.00

```
*******************************************
    WEIR COEFFICIENT TABLE
    PROJECT:  Rio Verde South FIS                    Split Left @ 510
    DATE:   6/22/1994
    TIME:  13:39. 6
*******************************************

    REFERENCE:  COE CHART - UPPER CURVE
```

POINT	HEAD	COEFFICIENT
1	0.00	2.5000
2	0.20	2.5667
3	0.40	2.6333
4	0.60	2.7000
5	0.80	2.7667
6	1.00	2.8333
7	1.20	2.9000
8	1.40	2.9667
9	1.60	3.0022
10	1.80	3.0067
11	2.00	3.0111
12	2.20	3.0156
13	2.40	3.0200
14	2.60	3.0244
15	2.80	3.0289
16	3.00	3.0333
17	3.20	3.0378
18	3.40	3.0422
19	3.60	3.0467
20	3.80	3.0511
21	4.00	3.0556
22	4.20	3.0600
23	4.40	3.0644
24	4.60	3.0689
25	4.80	3.0733
26	5.00	3.0778
27	5.20	3.0822
28	5.40	3.0867
29	5.60	3.0911
30	5.80	3.0956

```
*******************************************
    UNEVEN WEIR FLOW PROGRAM
    FORTRAN VERSION 1.0
    PROJECT:  Rio Verde South FIS                    Split Left @ 510
    DATE:   6/22/1994
    TIME:  13:39. 6
*******************************************
```

ELEVATION	DISCHARGE (CFS)
1714.00	0.00
1714.20	1.30
1714.40	7.27
1714.60	17.67
1714.80	31.68
1715.00	49.16
1715.20	70.07
1715.40	94.48
1715.60	122.45
1715.80	152.11
1716.00	184.01
1716.20	219.38
1716.40	258.46
1716.60	301.00
1716.80	346.96
1717.00	397.16
1717.20	451.87
1717.40	511.34
1717.60	575.83
1717.80	645.60
1718.00	720.94
1718.20	804.57
1718.40	898.89
1718.60	1004.20
1718.80	1121.28
1719.00	1253.41
1719.20	1402.15
1719.40	1568.98
1719.60	1755.41
1719.80	1962.90

```
1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
 *  RUN DATE    12JUL94    TIME   15:30:29 *
 *****************************************

                                                                                  ***************************************
                                                                                  *  U.S. ARMY CORPS OF ENGINEERS       *
                                                                                  *  HYDROLOGIC ENGINEERING CENTER      *
                                                                                  *  609 SECOND STREET, SUITE D         *
                                                                                  *  DAVIS, CALIFORNIA 95616-4687       *
                                                                                  *          (916) 756-1104             *
                                                                                  ***************************************

                                        X     X  XXXXXXX   XXXXX             XXXXX
                                        X     X  X        X     X           X     X
                                        X     X  X        X                       X
                                        XXXXXXX  XXXX     X          XXXXX    XXXXX
                                        X     X  X        X                 X
                                        X     X  X        X     X           X
                                        X     X  XXXXXXX   XXXXX            XXXXXXX
1
   12JUL94      15:30:29                                                                                          PAGE    1


                                                                                THIS RUN EXECUTED 12JUL94    15:30:29
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************


 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      510 Left                                          FILE:     C510L.IH2
 T4                                                        DATE:     07-11-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 510
 T6                SPLIT  LEFT
 T7
 T8      Single X-Section Run
                 Ditch slope =   0.0333 ft/ft  From Hydrologic Field Survey

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                           0.0333

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      1                  -1                                        -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                   ********REQUESTED SECTION NUMBERS********

     -10       -10


 NC     .075       .075       .035        .1         .3
 QT      14         20         50         75        100        150        200        250        300        350
 QT     400        450        500        550        600

 NH       5       0.01       1000      0.075       1037      0.035       1070      0.075       1081       0.01
 NH    1082
        X-Section #1
 X1       1          7       1037       1070          0          0          0
 GR     102        999      100.0       1000      100.1       1033       99.8       1037      100.0       1070
 GR   100.3       1081        102       1082

1
   12JUL94      15:30:29                                                                                          PAGE    2


 X1       2                                                  .2         .2         .2

 X1       3                                                  .2         .2         .2

 X1       4                                                  .2         .2         .2

 X1       5                                                  .2         .2         .2

 X1       6                                                  .2         .2         .2

1
   12JUL94      15:30:29                                                                                          PAGE    3

 T3            Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                           0.0333

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     2                -1                                   -1

1
   12JUL94      15:30:29                                                                                PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                         0.0333
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      3                  -1                                      -1

1
   12JUL94      15:30:29                                                                                PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                         0.0333
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      4                  -1                                      -1

1
   12JUL94      15:30:29                                                                                PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                         0.0333
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      5                  -1                                      -1

1
   12JUL94      15:30:29                                                                                PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                         0.0333
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      6                  -1                                      -1

1
   12JUL94      15:30:29                                                                                PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                         0.0333
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      7                  -1                                      -1

1
   12JUL94      15:30:29                                                                                PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                         0.0333
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      8                  -1                                      -1

1
   12JUL94      15:30:29                                                                                PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                10                         0.0333
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     9                -1                                  -1

1
   12JUL94      15:30:29                                                                                PAGE   11

 T3           Q10
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               11                          0.0333
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                  -1                                      -1

1
   12JUL94      15:30:29                                                                                PAGE   12

 T3           Q11
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               12                          0.0333
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                  -1                                      -1

1
   12JUL94      15:30:29                                                                                PAGE   13

 T3           Q12
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               13                          0.0333
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                  -1                                      -1

1
   12JUL94      15:30:29                                                                                PAGE   14

 T3           Q13
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               14                          0.0333
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                  -1                                      -1

1
   12JUL94      15:30:29                                                                                PAGE   15

 T3           Q14
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               15                          0.0333
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                  -1                                      -1


1
   12JUL94      15:30:29                                                                                PAGE   16


                                                                    THIS RUN EXECUTED 12JUL94     15:30:43
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

510 Left

SUMMARY PRINTOUT

      SECNO       Q       CWSEL     DEPTH      VCH       CRIWS      EG        HL        10*KS     KRATIO
```

*	1.000	20.00	100.12	.32	2.44	100.12	100.21	.00	245.66	.00
*	1.000	50.00	100.26	.46	3.34	100.26	100.40	.00	241.60	.00
*	1.000	75.00	100.35	.55	3.80	100.35	100.53	.00	231.49	.00
*	1.000	100.00	100.43	.63	4.20	100.43	100.64	.00	229.07	.00
*	1.000	150.00	100.55	.75	4.96	100.55	100.83	.00	244.99	.00
*	1.000	200.00	100.67	.87	5.38	100.67	101.00	.00	227.70	.00
*	1.000	250.00	100.78	.98	5.81	100.78	101.16	.00	222.95	.00
*	1.000	300.00	100.89	1.09	6.07	100.89	101.30	.00	207.04	.00
*	1.000	350.00	100.97	1.17	6.52	100.97	101.44	.00	216.35	.00
*	1.000	400.00	101.06	1.26	6.79	101.06	101.57	.00	210.43	.00
*	1.000	450.00	101.14	1.34	7.10	101.14	101.70	.00	210.46	.00
*	1.000	500.00	101.22	1.42	7.36	101.22	101.82	.00	207.41	.00
*	1.000	550.00	101.30	1.50	7.58	101.30	101.93	.00	203.71	.00
*	1.000	600.00	101.38	1.58	7.79	101.38	102.04	.00	199.83	.00
	2.000	20.00	100.13	.33	2.38	100.12	100.21	.00	225.82	1.04
	2.000	50.00	100.27	.47	3.29	100.26	100.41	.00	229.71	1.03
	2.000	75.00	100.36	.56	3.75	100.35	100.53	.00	222.74	1.02
	2.000	100.00	100.44	.64	4.15	100.43	100.64	.00	221.83	1.02
	2.000	150.00	100.57	.77	4.78	100.56	100.84	.00	217.53	1.06
	2.000	200.00	100.68	.88	5.35	100.67	101.01	.00	222.89	1.01
	2.000	250.00	100.79	.99	5.77	100.78	101.16	.00	218.93	1.01
	2.000	300.00	100.90	1.10	6.04	100.87	101.31	.00	203.97	1.01
	2.000	350.00	100.98	1.18	6.49	100.97	101.44	.00	213.25	1.01
	2.000	400.00	101.07	1.27	6.77	101.05	101.57	.00	207.74	1.01
	2.000	450.00	101.15	1.35	7.08	101.14	101.70	.00	207.94	1.01
	2.000	500.00	101.23	1.43	7.33	101.22	101.82	.00	205.12	1.01
	2.000	550.00	101.31	1.51	7.56	101.30	101.94	.00	201.63	1.01
	2.000	600.00	101.39	1.59	7.77	101.37	102.05	.00	197.94	1.00

1

12JUL94 15:30:29 PAGE 17

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	20.00	100.15	.35	2.25	100.12	100.22	.00	191.68	1.09
3.000	50.00	100.28	.48	3.18	100.26	100.41	.00	207.46	1.05
3.000	75.00	100.38	.58	3.66	100.35	100.54	.00	206.05	1.04
3.000	100.00	100.45	.65	4.07	100.42	100.65	.00	207.84	1.03
3.000	150.00	100.62	.82	4.47	100.56	100.85	.00	176.16	1.11
3.000	200.00	100.69	.89	5.32	100.67	101.01	.00	219.74	1.01
3.000	250.00	100.80	1.00	5.71	100.77	101.17	.00	210.83	1.02
3.000	300.00	100.91	1.11	5.98	100.89	101.31	.00	197.91	1.02
3.000	350.00	100.99	1.19	6.43	100.97	101.45	.00	206.95	1.02
3.000	400.00	101.08	1.28	6.71	101.05	101.58	.00	202.28	1.01
3.000	450.00	101.16	1.36	7.02	101.14	101.70	.00	202.80	1.01
3.000	500.00	101.24	1.44	7.28	101.22	101.82	.00	200.43	1.01
3.000	550.00	101.32	1.52	7.51	101.30	101.94	.00	197.37	1.01
3.000	600.00	101.40	1.60	7.72	101.37	102.05	.00	194.07	1.01
4.000	20.00	100.16	.36	2.10	100.12	100.22	.00	155.66	1.11
4.000	50.00	100.33	.53	2.73	100.26	100.42	.00	129.04	1.27
4.000	75.00	100.42	.62	3.22	100.35	100.54	.00	138.78	1.22
4.000	100.00	100.50	.70	3.64	100.43	100.66	.00	146.44	1.19
4.000	150.00	100.63	.83	4.34	100.55	100.85	.00	160.44	1.05
4.000	200.00	100.76	.96	4.82	100.67	101.02	.00	160.11	1.17
4.000	250.00	100.87	1.07	5.24	100.79	101.18	.00	160.64	1.15
4.000	300.00	100.96	1.16	5.65	100.90	101.32	.00	164.78	1.10
4.000	350.00	101.08	1.28	5.87	100.96	101.46	.00	154.90	1.16
4.000	400.00	101.19	1.39	6.08	101.06	101.59	.00	147.11	1.17
4.000	450.00	101.26	1.46	6.46	101.13	101.72	.00	155.42	1.14
4.000	500.00	101.34	1.54	6.74	101.21	101.84	.00	156.85	1.13
4.000	550.00	101.43	1.63	6.90	101.29	101.95	.00	150.41	1.15
4.000	600.00	101.52	1.72	7.05	101.37	102.07	.00	145.01	1.16
5.000	20.00	100.17	.37	1.97	100.12	100.22	.00	127.43	1.11
5.000	50.00	100.33	.53	2.68	100.26	100.42	.00	122.62	1.03
5.000	75.00	100.43	.63	3.17	100.35	100.55	.00	132.06	1.03
5.000	100.00	100.51	.71	3.58	100.42	100.66	.00	139.31	1.03
5.000	150.00	100.65	.85	4.20	100.55	100.86	.00	145.66	1.05
5.000	200.00	100.77	.97	4.74	100.67	101.02	.00	152.03	1.03
5.000	250.00	100.88	1.08	5.17	100.78	101.18	.00	153.57	1.02
5.000	300.00	100.98	1.18	5.58	100.87	101.32	.00	158.26	1.02
5.000	350.00	101.09	1.29	5.81	100.97	101.46	.00	149.85	1.02
5.000	400.00	101.19	1.39	6.04	101.05	101.60	.00	144.29	1.01
5.000	450.00	101.27	1.47	6.40	101.14	101.72	.00	150.59	1.02
5.000	500.00	101.36	1.56	6.65	101.22	101.84	.00	149.96	1.02
5.000	550.00	101.44	1.64	6.85	101.30	101.96	.00	146.86	1.01
5.000	600.00	101.53	1.73	7.02	101.37	102.07	.00	142.68	1.01

1

12JUL94 15:30:29 PAGE 18

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	20.00	100.18	.38	1.87	100.12	100.23	.00	108.94	1.08
6.000	50.00	100.34	.54	2.64	100.26	100.42	.00	117.20	1.02
6.000	75.00	100.43	.63	3.13	100.35	100.55	.00	126.14	1.02
6.000	100.00	100.52	.72	3.53	100.42	100.66	.00	132.90	1.02
6.000	150.00	100.66	.86	4.12	100.56	100.86	.00	137.05	1.03
6.000	200.00	100.78	.98	4.67	100.67	101.03	.00	144.64	1.03
6.000	250.00	100.90	1.10	5.05	100.78	101.19	.00	143.49	1.03
6.000	300.00	100.99	1.19	5.48	100.87	101.33	.00	149.13	1.03
6.000	350.00	101.10	1.30	5.75	100.97	101.47	.00	144.87	1.02
6.000	400.00	101.20	1.40	6.00	101.05	101.60	.00	141.24	1.01
6.000	450.00	101.28	1.48	6.33	101.14	101.72	.00	145.79	1.02
6.000	500.00	101.37	1.57	6.56	101.22	101.85	.00	143.64	1.02
6.000	550.00	101.46	1.66	6.80	101.30	101.96	.00	143.20	1.01
6.000	600.00	101.54	1.74	6.98	101.37	102.07	.00	140.10	1.01

1

12JUL94 15:30:29 PAGE 19

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED
```

```
1*******************************************
 *  HEC-2 WATER SURFACE PROFILES            *
 *                                          *
 *  Version   4.6.2;  May 1991              *
 *                                          *
 *  RUN DATE    11JUL94    TIME   13:51:17  *
 *******************************************
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*************************************
*  U.S. ARMY CORPS OF ENGINEERS     *
*  HYDROLOGIC ENGINEERING CENTER    *
*  609 SECOND STREET, SUITE D       *
*  DAVIS, CALIFORNIA 95616-4687     *
*          (916) 756-1104           *
*************************************
```

```
X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                        X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X                  X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX              XXXXXXX
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1
   11JUL94      13:51:17                                                                                    PAGE    1


                                                                                THIS RUN EXECUTED 11JUL94    13:51:17
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************


 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      510 Right                                        FILE:     C510R.IH2
 T4                                                       DATE:     07-11-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 510
 T6                SPLIT  RIGHT
 T7
 T8      Single X-Section Run
                 Ditch slope =   0.0286 ft/ft  From 200 Scale Mapping

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                         0.0286

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                        -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

     -10       -10


 NC    0.075      0.075      0.035        .1         .3
 QT       14         20         50        75        100        150        200        250        300        350
 QT      400        450        500       550        600

 NH        5       0.01       1000     0.075       1048      0.035       1061      0.075       1076       0.01
 NH     1077
         X-Section #1
 X1        1         10       1048      1061          0          0          0
 GR      102        999      100.3      1000      100.1       1008       99.8       1011       99.2       1048
 GR     99.0       1051       98.9      1058       99.4       1061      100.2       1076        102       1077

1
   11JUL94      13:51:17                                                                                    PAGE    2


 X1        2                                          .2         .2         .2

 X1        3                                          .2         .2         .2

 X1        4                                          .2         .2         .2

 X1        5                                          .2         .2         .2

 X1        6                                          .2         .2         .2

1
   11JUL94      13:51:17                                                                                    PAGE    3

 T3            Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                         0.0286

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
      2                -1                                  -1

1
   11JUL94      13:51:17                                                                                PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                         0.0286
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      3                  -1                                      -1

1
   11JUL94      13:51:17                                                                                PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                         0.0286
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      4                  -1                                      -1

1
   11JUL94      13:51:17                                                                                PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                         0.0286
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      5                  -1                                      -1

1
   11JUL94      13:51:17                                                                                PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                         0.0286
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      6                  -1                                      -1

1
   11JUL94      13:51:17                                                                                PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                         0.0286
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      7                  -1                                      -1

1
   11JUL94      13:51:17                                                                                PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                         0.0286
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      8                  -1                                      -1

1
   11JUL94      13:51:17                                                                                PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                10                         0.0286
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     9                -1                                  -1

1
   11JUL94      13:51:17                                                                                PAGE   11

 T3           Q10
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                11                          0.0286
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                  -1                                      -1

1
   11JUL94      13:51:17                                                                                PAGE   12

 T3           Q11
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                12                          0.0286
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                  -1                                      -1

1
   11JUL94      13:51:17                                                                                PAGE   13

 T3           Q12
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                13                          0.0286
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                  -1                                      -1

1
   11JUL94      13:51:17                                                                                PAGE   14

 T3           Q13
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                14                          0.0286
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                  -1                                      -1

1
   11JUL94      13:51:17                                                                                PAGE   15

 T3           Q14
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                15                          0.0286
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                  -1                                      -1


1
   11JUL94      13:51:17                                                                                PAGE   16


                                                                    THIS RUN EXECUTED 11JUL94     13:51:33
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

510 Right

SUMMARY PRINTOUT

      SECNO       Q       CWSEL     DEPTH      VCH       CRIWS      EG        HL       10*KS    KRATIO
```

*	1.000	20.00	99.45	.55	3.37	99.45	99.62	.00	199.15	.00
*	1.000	50.00	99.73	.83	4.37	99.73	99.97	.00	171.09	.00
*	1.000	75.00	99.91	1.01	4.64	99.91	100.15	.00	142.64	.00
*	1.000	100.00	100.02	1.12	5.16	100.02	100.30	.00	151.53	.00
*	1.000	150.00	100.21	1.31	5.81	100.21	100.55	.00	150.62	.00
*	1.000	200.00	100.36	1.46	6.42	100.36	100.75	.00	156.37	.00
*	1.000	250.00	100.49	1.59	6.95	100.49	100.93	.00	162.48	.00
*	1.000	300.00	100.61	1.71	7.39	100.61	101.09	.00	165.41	.00
*	1.000	350.00	100.72	1.82	7.80	100.72	101.24	.00	168.23	.00
*	1.000	400.00	100.82	1.92	8.17	100.82	101.39	.00	170.88	.00
*	1.000	450.00	100.91	2.01	8.55	100.91	101.52	.00	175.37	.00
*	1.000	500.00	101.01	2.11	8.84	101.01	101.65	.00	175.12	.00
*	1.000	550.00	101.09	2.19	9.20	101.09	101.78	.00	180.32	.00
*	1.000	600.00	101.17	2.27	9.49	101.17	101.90	.00	182.11	.00
	2.000	20.00	99.46	.56	3.33	99.45	99.62	.00	192.33	1.02
	2.000	50.00	99.76	.86	4.17	99.75	99.98	.00	148.95	1.07
	2.000	75.00	99.92	1.02	4.61	99.91	100.16	.00	140.56	1.01
	2.000	100.00	100.04	1.14	5.04	100.02	100.30	.00	141.39	1.04
	2.000	150.00	100.22	1.32	5.79	100.22	100.55	.00	148.89	1.01
	2.000	200.00	100.39	1.49	6.27	100.37	100.75	.00	146.67	1.03
	2.000	250.00	100.52	1.62	6.80	100.50	100.93	.00	152.74	1.03
	2.000	300.00	100.62	1.72	7.37	100.61	101.09	.00	163.91	1.00
	2.000	350.00	100.73	1.83	7.78	100.72	101.25	.00	166.80	1.00
	2.000	400.00	100.85	1.95	8.02	100.83	101.39	.00	161.65	1.03
	2.000	450.00	100.92	2.02	8.53	100.92	101.53	.00	173.99	1.00
	2.000	500.00	101.02	2.12	8.81	101.00	101.66	.00	173.83	1.00
	2.000	550.00	101.12	2.22	9.03	101.09	101.78	.00	170.91	1.03
	2.000	600.00	101.21	2.31	9.32	101.18	101.90	.00	172.37	1.03

1

11JUL94 13:51:17 PAGE 17

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	20.00	99.48	.58	3.26	99.46	99.63	.00	179.21	1.04
3.000	50.00	99.77	.87	4.09	99.75	99.98	.00	141.11	1.03
3.000	75.00	99.92	1.02	4.57	99.91	100.16	.00	136.33	1.02
3.000	100.00	100.05	1.15	4.98	100.01	100.31	.00	136.79	1.02
3.000	150.00	100.23	1.33	5.74	100.21	100.55	.00	145.33	1.01
3.000	200.00	100.40	1.50	6.21	100.36	100.76	.00	142.86	1.01
3.000	250.00	100.53	1.63	6.74	100.49	100.94	.00	149.00	1.01
3.000	300.00	100.63	1.73	7.32	100.61	101.10	.00	160.82	1.01
3.000	350.00	100.74	1.84	7.73	100.72	101.25	.00	163.86	1.01
3.000	400.00	100.86	1.96	7.96	100.82	101.40	.00	158.51	1.01
3.000	450.00	100.93	2.03	8.48	100.91	101.53	.00	171.13	1.01
3.000	500.00	101.03	2.13	8.77	101.00	101.66	.00	171.15	1.01
3.000	550.00	101.23	2.33	8.43	101.08	101.80	.00	139.13	1.11
3.000	600.00	101.31	2.41	8.71	101.17	101.92	.00	141.24	1.10
4.000	20.00	99.52	.62	2.87	99.45	99.63	.00	120.76	1.22
4.000	50.00	99.83	.93	3.68	99.74	99.99	.00	103.53	1.17
4.000	75.00	99.94	1.04	4.49	99.90	100.16	.00	130.14	1.02
4.000	100.00	100.09	1.19	4.68	100.02	100.31	.00	114.81	1.09
4.000	150.00	100.30	1.40	5.27	100.21	100.56	.00	113.87	1.13
4.000	200.00	100.44	1.54	5.95	100.37	100.76	.00	126.30	1.06
4.000	250.00	100.59	1.69	6.37	100.50	100.94	.00	126.67	1.08
4.000	300.00	100.72	1.82	6.74	100.60	101.11	.00	126.84	1.13
4.000	350.00	100.82	1.92	7.22	100.72	101.26	.00	134.52	1.10
4.000	400.00	100.93	2.03	7.54	100.82	101.41	.00	135.46	1.08
4.000	450.00	101.04	2.14	7.86	100.91	101.54	.00	136.99	1.12
4.000	500.00	101.13	2.23	8.21	101.00	101.67	.00	140.86	1.10
4.000	550.00	101.24	2.34	8.38	101.09	101.80	.00	137.08	1.01
4.000	600.00	101.32	2.42	8.67	101.17	101.92	.00	139.09	1.01
5.000	20.00	99.53	.63	2.81	99.45	99.64	.00	113.68	1.03
5.000	50.00	99.84	.94	3.61	99.74	99.99	.00	97.90	1.03
5.000	75.00	99.97	1.07	4.22	99.91	100.17	.00	108.94	1.09
5.000	100.00	100.10	1.20	4.61	100.02	100.32	.00	110.09	1.02
5.000	150.00	100.31	1.41	5.21	100.21	100.57	.00	110.08	1.02
5.000	200.00	100.46	1.56	5.84	100.36	100.77	.00	119.46	1.03
5.000	250.00	100.60	1.70	6.30	100.49	100.95	.00	122.75	1.02
5.000	300.00	100.73	1.83	6.69	100.61	101.11	.00	123.87	1.01
5.000	350.00	100.84	1.94	7.11	100.72	101.27	.00	128.84	1.02
5.000	400.00	100.95	2.05	7.45	100.82	101.41	.00	130.43	1.02
5.000	450.00	101.05	2.15	7.79	100.91	101.55	.00	133.70	1.01
5.000	500.00	101.14	2.24	8.14	101.00	101.67	.00	137.58	1.01
5.000	550.00	101.25	2.35	8.33	101.09	101.80	.00	134.75	1.01
5.000	600.00	101.33	2.43	8.61	101.17	101.92	.00	136.67	1.01

1

11JUL94 13:51:17 PAGE 18

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	20.00	99.53	.63	2.76	99.45	99.64	.00	107.58	1.03
6.000	50.00	99.85	.95	3.54	99.75	99.99	.00	92.70	1.03
6.000	75.00	99.98	1.08	4.14	99.91	100.17	.00	102.97	1.03
6.000	100.00	100.11	1.21	4.54	100.02	100.32	.00	105.49	1.02
6.000	150.00	100.32	1.42	5.14	100.21	100.57	.00	106.33	1.02
6.000	200.00	100.47	1.57	5.73	100.36	100.77	.00	113.18	1.03
6.000	250.00	100.61	1.71	6.23	100.49	100.95	.00	118.80	1.02
6.000	300.00	100.74	1.84	6.63	100.61	101.12	.00	120.84	1.01
6.000	350.00	100.86	1.96	7.01	100.72	101.27	.00	123.65	1.02
6.000	400.00	100.96	2.06	7.38	100.82	101.41	.00	127.07	1.01
6.000	450.00	101.07	2.17	7.70	100.91	101.55	.00	128.98	1.02
6.000	500.00	101.16	2.26	8.04	101.00	101.68	.00	132.75	1.02
6.000	550.00	101.26	2.36	8.28	101.09	101.81	.00	132.18	1.01
6.000	600.00	101.35	2.45	8.56	101.17	101.93	.00	134.02	1.01

1

11JUL94 13:51:17 PAGE 19

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED
```

Table D-4
Flow split at C515

Stage	Discharge, in cfs		
	Left	Right	Total
1732.0	0	0	0
1732.2	10	5	15
1732.4	20	10	30
1732.6	50	15	65
1732.8	105	20	125
1733.0	155	40	195
1733.2	180	62	242
1733.4	245	90	335
1733.6	325	125	450
1733.8	425	158	583
1734.0	540	205	745
1734.2	660	238	898
1734.4	810	300	1110
1734.6	970	350	1320
1734.8	1160	410	1570
1735.0	1330	465	1795

Split developed from 200 scale mapping (sheet 8)

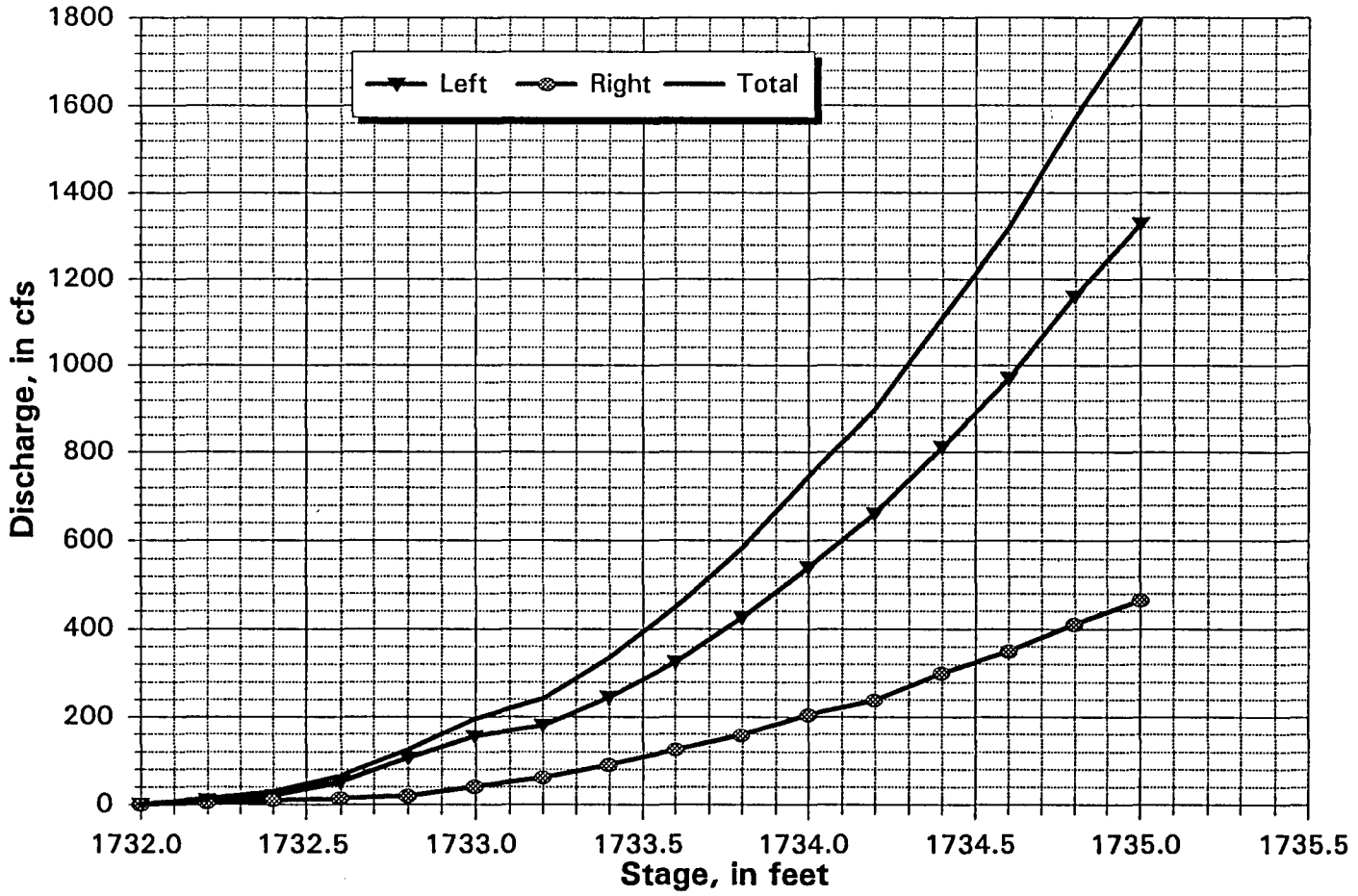

Figure D-4

Flow split at C515

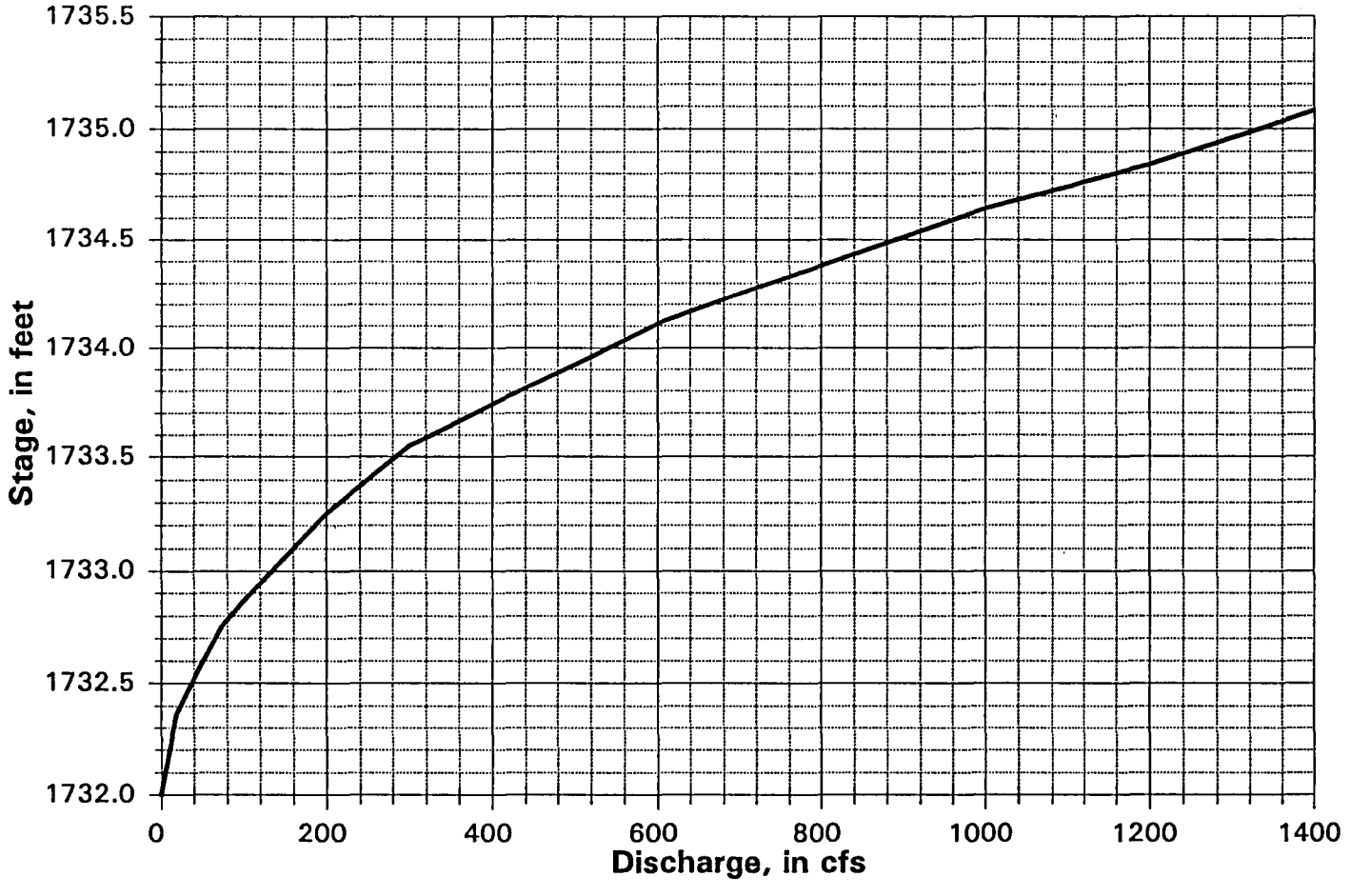

Figure D-4a

C515 Split Left

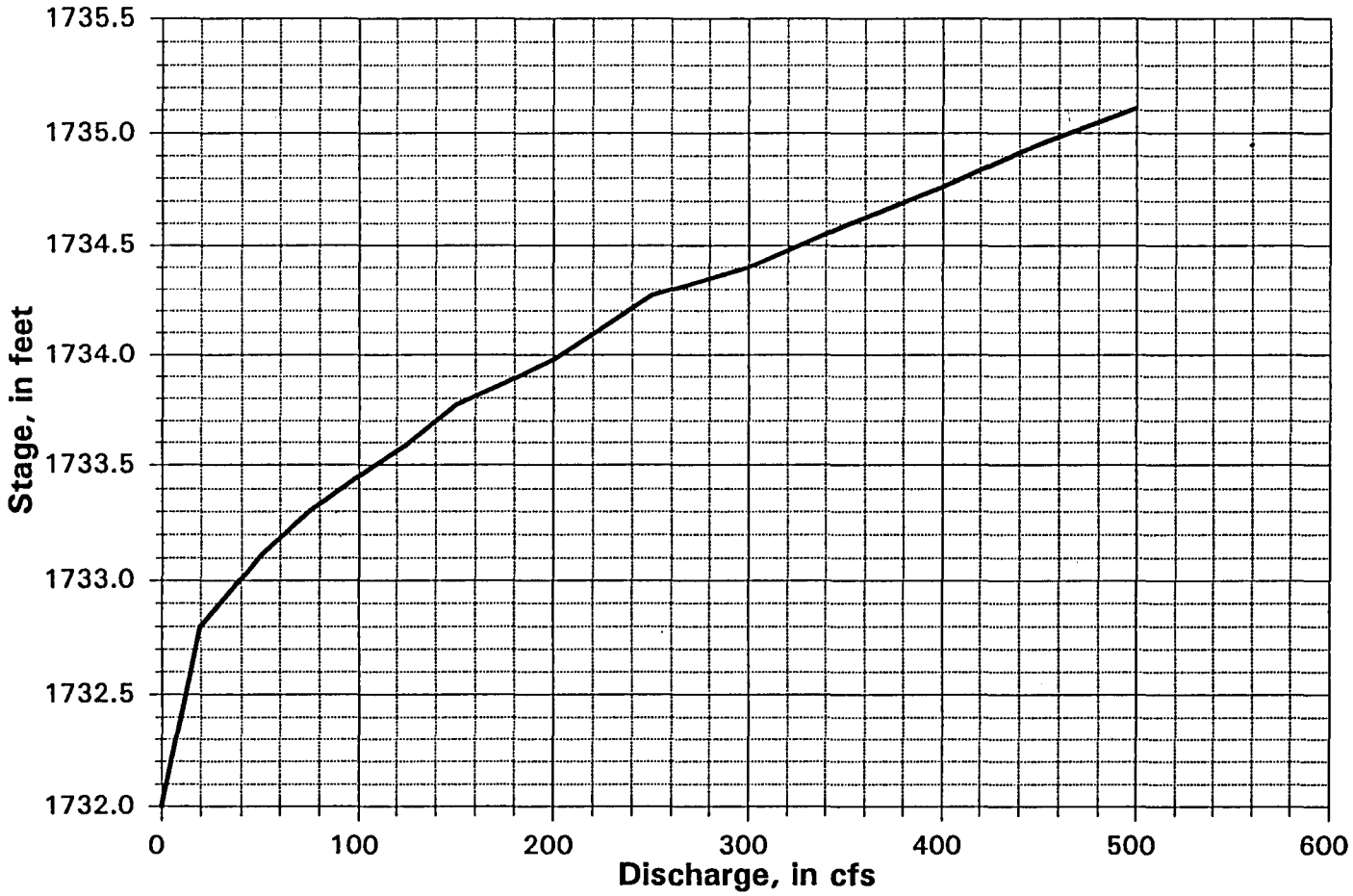

Figure D-4b

C515 Split Right

```
1*******************************************
 *  HEC-2 WATER SURFACE PROFILES            *
 *                                          *
 *  Version   4.6.2;  May 1991              *
 *                                          *
 *  RUN DATE    22JUN94    TIME   13:17:19  *
 *******************************************

                                                                                  ***************************************
                                                                                  *  U.S. ARMY CORPS OF ENGINEERS       *
                                                                                  *  HYDROLOGIC ENGINEERING CENTER      *
                                                                                  *  609 SECOND STREET, SUITE D         *
                                                                                  *  DAVIS, CALIFORNIA 95616-4687       *
                                                                                  *          (916) 756-1104             *
                                                                                  ***************************************

                                        X     X  XXXXXXX   XXXXX              XXXXX
                                        X     X  X        X     X            X     X
                                        X     X  X        X                        X
                                        XXXXXXX  XXXX     X          XXXXX    XXXXX
                                        X     X  X        X                  X
                                        X     X  X        X     X            X
                                        X     X  XXXXXXX   XXXXX             XXXXXXX
1
   22JUN94      13:17:19                                                                                          PAGE    1


                                                                                THIS RUN EXECUTED 22JUN94    13:17:19
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      515 Left                                          FILE:     C515L.IH2
 T4                                                        DATE:     06-22-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 515
 T6                SPLIT  LEFT
 T7
 T8      Single X-Section Run
                 Ditch slope =   0.0182 ft/ft  From Hydrologic Field Survey

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                           0.0182

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      1                  -1                                        -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

     -10       -10

 NC    0.075      0.075      0.035        .1         .3
 QT       14         20         50         75        100        200        300        400        500        600
 QT      700        800       1000       1200       1400

 NH        4      0.075       1100      0.035       1120      0.075       1125       0.01       1126
         X-Section #1
 X1        1          7       1100       1120          0          0          0
 GR     1735        999       1734     1000.0       1733       1050       1732       1100       1732       1120
 GR     1733       1125       1735       1126

1
   22JUN94      13:17:19                                                                                          PAGE    2


 X1        2                                                  .2         .2         .2

 X1        3                                                  .2         .2         .2

 X1        4                                                  .2         .2         .2

 X1        5                                                  .2         .2         .2

 X1        6                                                  .2         .2         .2

1
   22JUN94      13:17:19                                                                                          PAGE    3


 T3           Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                           0.0182

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     2                -1                                  -1

1
   22JUN94      13:17:19                                                                                PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                           0.0182
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     3                   -1                                      -1

1
   22JUN94      13:17:19                                                                                PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                           0.0182
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     4                   -1                                      -1

1
   22JUN94      13:17:19                                                                                PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                           0.0182
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     5                   -1                                      -1

1
   22JUN94      13:17:19                                                                                PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                           0.0182
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     6                   -1                                      -1

1
   22JUN94      13:17:19                                                                                PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                           0.0182
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     7                   -1                                      -1

1
   22JUN94      13:17:19                                                                                PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                           0.0182
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     8                   -1                                      -1

1
   22JUN94      13:17:19                                                                                PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 10                          0.0182
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     9                -1                                  -1

1
   22JUN94      13:17:19                                                                                PAGE   11

 T3           Q10
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                11                          0.0182
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                  -1                                      -1

1
   22JUN94      13:17:19                                                                                PAGE   12

 T3           Q11
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                12                          0.0182
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                  -1                                      -1

1
   22JUN94      13:17:19                                                                                PAGE   13

 T3           Q12
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                13                          0.0182
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                  -1                                      -1

1
   22JUN94      13:17:19                                                                                PAGE   14

 T3           Q13
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                14                          0.0182
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                  -1                                      -1

1
   22JUN94      13:17:19                                                                                PAGE   15

 T3           Q14
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                15                          0.0182
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                  -1                                      -1


1
   22JUN94      13:17:19                                                                                PAGE   16


                                                                                THIS RUN EXECUTED 22JUN94    13:17:33
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

515 Left

SUMMARY PRINTOUT

      SECNO       Q       CWSEL     DEPTH      VCH      CRIWS      EG        HL       10*KS    KRATIO
```

	1.000	20.00	1732.33	.33	2.71	1732.29	1732.43	.00	181.57	.00
	1.000	50.00	1732.54	.54	3.80	1732.52	1732.73	.00	181.61	.00
	1.000	75.00	1732.67	.67	4.38	1732.66	1732.91	.00	179.87	.00
	1.000	100.00	1732.78	.78	4.86	1732.78	1733.07	.00	181.65	.00
*	1.000	200.00	1733.15	1.15	5.78	1733.15	1733.52	.00	152.91	.00
*	1.000	300.00	1733.39	1.39	6.61	1733.39	1733.84	.00	155.49	.00
*	1.000	400.00	1733.61	1.61	7.15	1733.61	1734.11	.00	150.14	.00
*	1.000	500.00	1733.79	1.79	7.67	1733.79	1734.34	.00	150.08	.00
*	1.000	600.00	1733.96	1.96	8.08	1733.96	1734.55	.00	147.82	.00
*	1.000	700.00	1734.11	2.11	8.43	1734.11	1734.73	.00	145.60	.00
*	1.000	800.00	1734.23	2.23	8.84	1734.23	1734.90	.00	148.71	.00
*	1.000	1000.00	1734.45	2.45	9.58	1734.45	1735.22	.00	153.77	.00
*	1.000	1200.00	1734.66	2.66	10.19	1734.66	1735.51	.00	156.19	.00
*	1.000	1400.00	1734.85	2.85	10.80	1734.85	1735.78	.00	160.35	.00
	2.000	20.00	1732.33	.33	2.68	1732.29	1732.43	.00	174.48	1.02
	2.000	50.00	1732.55	.55	3.77	1732.52	1732.73	.00	177.14	1.01
	2.000	75.00	1732.68	.68	4.35	1732.66	1732.92	.00	176.36	1.01
	2.000	100.00	1732.79	.79	4.83	1732.78	1733.07	.00	178.44	1.01
	2.000	200.00	1733.16	1.16	5.76	1733.16	1733.52	.00	151.21	1.01
	2.000	300.00	1733.42	1.42	6.49	1733.40	1733.84	.00	147.51	1.03
	2.000	400.00	1733.62	1.62	7.13	1733.61	1734.11	.00	148.95	1.00
	2.000	500.00	1733.80	1.80	7.65	1733.78	1734.34	.00	149.00	1.00
	2.000	600.00	1733.96	1.96	8.06	1733.96	1734.55	.00	146.88	1.00
	2.000	700.00	1734.12	2.12	8.41	1734.11	1734.74	.00	144.71	1.00
	2.000	800.00	1734.24	2.24	8.82	1734.23	1734.91	.00	147.86	1.00
	2.000	1000.00	1734.49	2.49	9.41	1734.46	1735.22	.00	145.96	1.03
	2.000	1200.00	1734.67	2.67	10.17	1734.66	1735.51	.00	155.40	1.00
	2.000	1400.00	1734.89	2.89	10.61	1734.85	1735.79	.00	152.46	1.03

1

22JUN94 13:17:19 PAGE 17

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	20.00	1732.34	.34	2.62	1732.29	1732.44	.00	163.00	1.03
3.000	50.00	1732.56	.56	3.71	1732.52	1732.74	.00	169.01	1.02
3.000	75.00	1732.69	.69	4.29	1732.66	1732.92	.00	169.48	1.02
3.000	100.00	1732.80	.80	4.77	1732.77	1733.08	.00	172.13	1.02
3.000	200.00	1733.17	1.17	5.71	1733.15	1733.52	.00	147.69	1.01
3.000	300.00	1733.43	1.43	6.44	1733.39	1733.85	.00	144.18	1.01
3.000	400.00	1733.63	1.63	7.09	1733.61	1734.11	.00	146.56	1.01
3.000	500.00	1733.81	1.81	7.61	1733.78	1734.35	.00	146.83	1.01
3.000	600.00	1733.97	1.97	8.03	1733.96	1734.56	.00	144.95	1.01
3.000	700.00	1734.12	2.12	8.37	1734.11	1734.74	.00	142.89	1.01
3.000	800.00	1734.25	2.25	8.78	1734.23	1734.91	.00	146.08	1.01
3.000	1000.00	1734.50	2.50	9.36	1734.44	1735.23	.00	143.70	1.01
3.000	1200.00	1734.68	2.68	10.14	1734.66	1735.52	.00	153.75	1.01
3.000	1400.00	1734.98	2.98	10.14	1734.84	1735.80	.00	133.35	1.07
4.000	20.00	1732.35	.35	2.55	1732.30	1732.44	.00	149.95	1.04
4.000	50.00	1732.57	.57	3.63	1732.52	1732.74	.00	158.51	1.03
4.000	75.00	1732.70	.70	4.21	1732.66	1732.93	.00	160.03	1.03
4.000	100.00	1732.85	.85	4.45	1732.78	1733.08	.00	139.25	1.11
4.000	200.00	1733.22	1.22	5.36	1733.15	1733.53	.00	122.71	1.10
4.000	300.00	1733.47	1.47	6.15	1733.40	1733.85	.00	126.05	1.07
4.000	400.00	1733.64	1.64	7.06	1733.61	1734.12	.00	144.49	1.01
4.000	500.00	1733.90	1.90	7.08	1733.78	1734.36	.00	118.59	1.11
4.000	600.00	1734.07	2.07	7.46	1733.96	1734.57	.00	117.45	1.11
4.000	700.00	1734.23	2.23	7.77	1734.10	1734.75	.00	115.56	1.11
4.000	800.00	1734.36	2.36	8.16	1734.23	1734.92	.00	118.24	1.11
4.000	1000.00	1734.62	2.62	8.73	1734.46	1735.24	.00	117.41	1.11
4.000	1200.00	1734.82	2.82	9.42	1734.66	1735.53	.00	124.09	1.11
4.000	1400.00	1735.07	3.07	9.65	1734.85	1735.81	.00	115.40	1.07
5.000	20.00	1732.36	.36	2.48	1732.29	1732.44	.00	137.35	1.04
5.000	50.00	1732.58	.58	3.55	1732.52	1732.74	.00	146.93	1.04
5.000	75.00	1732.75	.75	3.84	1732.66	1732.93	.00	120.36	1.15
5.000	100.00	1732.86	.86	4.38	1732.78	1733.09	.00	132.31	1.03
5.000	200.00	1733.24	1.24	5.29	1733.15	1733.53	.00	117.95	1.02
5.000	300.00	1733.55	1.55	5.62	1733.39	1733.86	.00	96.88	1.14
5.000	400.00	1733.73	1.73	6.48	1733.62	1734.13	.00	112.67	1.13
5.000	500.00	1733.91	1.91	7.03	1733.79	1734.36	.00	116.19	1.01
5.000	600.00	1734.09	2.09	7.37	1733.95	1734.57	.00	113.38	1.02
5.000	700.00	1734.24	2.24	7.72	1734.11	1734.75	.00	113.34	1.01
5.000	800.00	1734.37	2.37	8.11	1734.23	1734.93	.00	115.98	1.01
5.000	1000.00	1734.63	2.63	8.69	1734.45	1735.24	.00	115.99	1.01
5.000	1200.00	1734.83	2.83	9.37	1734.66	1735.53	.00	122.23	1.01
5.000	1400.00	1735.08	3.08	9.66	1734.84	1735.81	.00	115.59	1.00

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	20.00	1732.37	.37	2.42	1732.29	1732.45	.00	126.51	1.04
6.000	50.00	1732.59	.59	3.46	1732.52	1732.75	.00	135.75	1.04
6.000	75.00	1732.76	.76	3.81	1732.66	1732.93	.00	117.50	1.01
6.000	100.00	1732.87	.87	4.31	1732.78	1733.09	.00	125.66	1.03
6.000	200.00	1733.25	1.25	5.18	1733.15	1733.54	.00	111.18	1.03
6.000	300.00	1733.55	1.55	5.65	1733.39	1733.87	.00	98.10	.99
6.000	400.00	1733.74	1.74	6.43	1733.61	1734.13	.00	110.04	1.01
6.000	500.00	1733.92	1.92	6.97	1733.79	1734.36	.00	113.66	1.01
6.000	600.00	1734.11	2.11	7.28	1733.96	1734.57	.00	109.43	1.02
6.000	700.00	1734.25	2.25	7.67	1734.11	1734.76	.00	111.02	1.01
6.000	800.00	1734.38	2.38	8.05	1734.23	1734.93	.00	113.64	1.01
6.000	1000.00	1734.64	2.64	8.65	1734.45	1735.25	.00	114.41	1.01
6.000	1200.00	1734.84	2.84	9.32	1734.66	1735.54	.00	120.24	1.01
6.000	1400.00	1735.08	3.08	9.65	1734.84	1735.81	.00	115.35	1.00

1

22JUN94 13:17:19 PAGE 19

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED
```

```
1*******************************************
 *  HEC-2 WATER SURFACE PROFILES            *
 *                                          *
 *  Version   4.6.2;  May 1991              *
 *                                          *
 *  RUN DATE    22JUN94    TIME   13:25:48  *
 *******************************************

                                                                                  ***************************************
                                                                                  *  U.S. ARMY CORPS OF ENGINEERS       *
                                                                                  *  HYDROLOGIC ENGINEERING CENTER      *
                                                                                  *  609 SECOND STREET, SUITE D         *
                                                                                  *  DAVIS, CALIFORNIA 95616-4687       *
                                                                                  *          (916) 756-1104             *
                                                                                  ***************************************

                                        X     X  XXXXXXX   XXXXX              XXXXX
                                        X     X  X        X     X            X     X
                                        X     X  X        X                        X
                                        XXXXXXX  XXXX     X          XXXXX    XXXXX
                                        X     X  X        X                  X
                                        X     X  X        X     X            X
                                        X     X  XXXXXXX   XXXXX             XXXXXXX
1
   22JUN94      13:25:48                                                                                          PAGE    1


                                                                                THIS RUN EXECUTED 22JUN94    13:25:48
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

 T1       FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2       RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3       515 Right                                        FILE:     C515R.IH2
 T4                                                        DATE:     06-22-94  dtp
 T4
 T5               This model is used to develop a flow split rating curve
 T6               for the split that occurs at hydrologic concentration point 515
 T6                 SPLIT  RIGHT
 T7
 T8       Single X-Section Run
                    Ditch slope =   0.0211 ft/ft  From Hydrologic Field Survey

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                  2                         0.0211

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                  -1                                      -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

     -10       -10

 NC    0.075      0.075      0.035        .1         .3
 QT       14         20         50        75        100        125        150        175        200        250
 QT      300        350        400       450        500

 NH        3       0.01       1000     0.035       1020      0.075       1040
         X-Section #1
 X1        1          6       1000      1020          0          0          0
 GR     1735        999       1733    1000.0       1732       1020       1734       1030       1736       1032
 GR     1737       1040
1
   22JUN94      13:25:48                                                                                          PAGE    2


 X1        2                                                .2         .2         .2

 X1        3                                                .2         .2         .2

 X1        4                                                .2         .2         .2

 X1        5                                                .2         .2         .2

 X1        6                                                .2         .2         .2
1
   22JUN94      13:25:48                                                                                          PAGE    3

 T3            Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                  3                         0.0211

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     2                -1                                  -1

1
   22JUN94      13:25:48                                                                                PAGE    4

 T3             Q3
 J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                           0.0211
 J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      3                   -1                                      -1

1
   22JUN94      13:25:48                                                                                PAGE    5

 T3             Q4
 J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                           0.0211
 J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      4                   -1                                      -1

1
   22JUN94      13:25:48                                                                                PAGE    6

 T3             Q5
 J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                           0.0211
 J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      5                   -1                                      -1

1
   22JUN94      13:25:48                                                                                PAGE    7

 T3             Q6
 J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                           0.0211
 J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      6                   -1                                      -1

1
   22JUN94      13:25:48                                                                                PAGE    8

 T3             Q7
 J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                           0.0211
 J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      7                   -1                                      -1

1
   22JUN94      13:25:48                                                                                PAGE    9

 T3             Q8
 J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                           0.0211
 J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      8                   -1                                      -1

1
   22JUN94      13:25:48                                                                                PAGE   10

 T3             Q9
 J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 10                          0.0211
 J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     9                -1                                  -1

1
   22JUN94      13:25:48                                                                                PAGE   11

 T3           Q10
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                11                          0.0211
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                  -1                                      -1

1
   22JUN94      13:25:48                                                                                PAGE   12

 T3           Q11
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                12                          0.0211
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                  -1                                      -1

1
   22JUN94      13:25:48                                                                                PAGE   13

 T3           Q12
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                13                          0.0211
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                  -1                                      -1

1
   22JUN94      13:25:48                                                                                PAGE   14

 T3           Q13
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                14                          0.0211
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                  -1                                      -1

1
   22JUN94      13:25:48                                                                                PAGE   15

 T3           Q14
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                15                          0.0211
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                  -1                                      -1


1
   22JUN94      13:25:48                                                                                PAGE   16


                                                                          THIS RUN EXECUTED 22JUN94    13:26:00
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2:  May 1991
 ************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

515 Right

SUMMARY PRINTOUT

      SECNO       Q       CWSEL     DEPTH      VCH      CRIWS      EG        HL       10*KS    KRATIO
```

	1.000	20.00	1732.75	.75	3.20	1732.71	1732.89	.00	210.85	.00
	1.000	50.00	1733.05	1.05	4.11	1733.02	1733.29	.00	210.54	.00
	1.000	75.00	1733.20	1.20	4.83	1733.18	1733.53	.00	207.74	.00
*	1.000	100.00	1733.34	1.34	5.40	1733.34	1733.75	.00	205.28	.00
*	1.000	125.00	1733.48	1.48	5.76	1733.48	1733.95	.00	189.75	.00
*	1.000	150.00	1733.62	1.62	6.03	1733.62	1734.14	.00	173.06	.00
*	1.000	175.00	1733.71	1.71	6.49	1733.71	1734.31	.00	181.79	.00
*	1.000	200.00	1733.83	1.83	6.70	1733.83	1734.47	.00	169.56	.00
*	1.000	250.00	1734.06	2.06	7.09	1734.06	1734.77	.00	154.31	.00
*	1.000	300.00	1734.25	2.25	7.51	1734.25	1735.04	.00	149.11	.00
*	1.000	350.00	1734.42	2.42	7.91	1734.42	1735.29	.00	145.95	.00
*	1.000	400.00	1734.58	2.58	8.28	1734.58	1735.53	.00	143.41	.00
*	1.000	450.00	1734.74	2.74	8.57	1734.74	1735.76	.00	138.94	.00
*	1.000	500.00	1734.88	2.88	8.91	1734.88	1735.98	.00	138.31	.00
	2.000	20.00	1732.76	.76	3.16	1732.71	1732.90	.00	204.54	1.02
	2.000	50.00	1733.05	1.05	4.08	1733.02	1733.29	.00	205.38	1.01
	2.000	75.00	1733.21	1.21	4.80	1733.17	1733.54	.00	203.72	1.01
	2.000	100.00	1733.35	1.35	5.37	1733.33	1733.76	.00	201.92	1.01
	2.000	125.00	1733.49	1.49	5.74	1733.46	1733.96	.00	187.31	1.01
	2.000	150.00	1733.63	1.63	6.01	1733.62	1734.14	.00	171.30	1.01
	2.000	175.00	1733.74	1.74	6.35	1733.72	1734.31	.00	169.15	1.04
	2.000	200.00	1733.84	1.84	6.68	1733.83	1734.47	.00	168.09	1.00
	2.000	250.00	1734.09	2.09	6.97	1734.06	1734.77	.00	145.91	1.03
	2.000	300.00	1734.25	2.25	7.50	1734.24	1735.04	.00	148.23	1.00
	2.000	350.00	1734.42	2.42	7.90	1734.42	1735.29	.00	145.16	1.00
	2.000	400.00	1734.59	2.59	8.26	1734.58	1735.53	.00	142.73	1.00
	2.000	450.00	1734.75	2.75	8.56	1734.74	1735.76	.00	138.33	1.00
	2.000	500.00	1734.92	2.92	8.77	1734.89	1735.99	.00	131.60	1.03

1

22JUN94 13:25:48 PAGE 17

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	20.00	1732.77	.77	3.10	1732.71	1732.90	.00	193.75	1.03
3.000	50.00	1733.07	1.07	4.03	1733.01	1733.30	.00	195.82	1.02
3.000	75.00	1733.22	1.22	4.74	1733.19	1733.54	.00	195.87	1.02
3.000	100.00	1733.36	1.36	5.32	1733.33	1733.76	.00	195.23	1.02
3.000	125.00	1733.50	1.50	5.70	1733.47	1733.96	.00	182.40	1.01
3.000	150.00	1733.68	1.68	5.73	1733.62	1734.15	.00	147.03	1.08
3.000	175.00	1733.84	1.84	5.83	1733.71	1734.32	.00	127.49	1.15
3.000	200.00	1733.85	1.85	6.64	1733.82	1734.48	.00	165.08	1.01
3.000	250.00	1734.10	2.10	6.93	1734.06	1734.78	.00	143.16	1.01
3.000	300.00	1734.26	2.26	7.47	1734.24	1735.04	.00	146.38	1.01
3.000	350.00	1734.43	2.43	7.87	1734.42	1735.30	.00	143.55	1.01
3.000	400.00	1734.59	2.59	8.24	1734.58	1735.54	.00	141.27	1.01
3.000	450.00	1734.76	2.76	8.53	1734.74	1735.77	.00	137.07	1.00
3.000	500.00	1734.94	2.94	8.73	1734.88	1735.99	.00	129.96	1.01
4.000	20.00	1732.78	.78	3.02	1732.71	1732.91	.00	180.71	1.04
4.000	50.00	1733.08	1.08	3.95	1733.02	1733.30	.00	183.57	1.03
4.000	75.00	1733.28	1.28	4.37	1733.19	1733.55	.00	148.88	1.15
4.000	100.00	1733.42	1.42	4.93	1733.33	1733.77	.00	151.91	1.13
4.000	125.00	1733.56	1.56	5.35	1733.48	1733.97	.00	147.91	1.11
4.000	150.00	1733.76	1.76	5.29	1733.62	1734.16	.00	113.20	1.14
4.000	175.00	1733.85	1.85	5.80	1733.72	1734.33	.00	125.61	1.01
4.000	200.00	1733.97	1.97	6.09	1733.81	1734.49	.00	124.10	1.15
4.000	250.00	1734.17	2.17	6.60	1734.07	1734.79	.00	122.68	1.08
4.000	300.00	1734.37	2.37	7.01	1734.24	1735.06	.00	119.56	1.11
4.000	350.00	1734.56	2.56	7.33	1734.42	1735.31	.00	114.37	1.12
4.000	400.00	1734.73	2.73	7.69	1734.58	1735.55	.00	113.22	1.12
4.000	450.00	1734.77	2.77	8.50	1734.73	1735.77	.00	135.13	1.01
4.000	500.00	1735.10	3.10	8.13	1734.87	1736.01	.00	103.00	1.12
5.000	20.00	1732.79	.79	2.93	1732.71	1732.91	.00	167.29	1.04
5.000	50.00	1733.10	1.10	3.83	1733.02	1733.31	.00	165.55	1.05
5.000	75.00	1733.29	1.29	4.33	1733.18	1733.56	.00	144.37	1.02
5.000	100.00	1733.44	1.44	4.87	1733.33	1733.78	.00	145.40	1.02
5.000	125.00	1733.58	1.58	5.29	1733.47	1733.97	.00	142.57	1.02
5.000	150.00	1733.76	1.76	5.31	1733.62	1734.16	.00	114.24	1.00
5.000	175.00	1733.86	1.86	5.77	1733.72	1734.33	.00	123.42	1.01
5.000	200.00	1733.98	1.98	6.05	1733.82	1734.49	.00	121.89	1.01
5.000	250.00	1734.27	2.27	6.15	1734.06	1734.80	.00	97.83	1.12
5.000	300.00	1734.39	2.39	6.94	1734.24	1735.06	.00	115.74	1.02
5.000	350.00	1734.58	2.58	7.29	1734.42	1735.31	.00	112.24	1.01
5.000	400.00	1734.74	2.74	7.65	1734.58	1735.56	.00	111.20	1.01
5.000	450.00	1734.94	2.94	7.83	1734.73	1735.79	.00	104.12	1.14
5.000	500.00	1735.10	3.10	8.11	1734.88	1736.01	.00	102.25	1.00

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	20.00	1732.80	.80	2.85	1732.71	1732.92	.00	155.03	1.04
6.000	50.00	1733.11	1.11	3.75	1733.01	1733.31	.00	154.42	1.04
6.000	75.00	1733.30	1.30	4.29	1733.18	1733.56	.00	139.61	1.02
6.000	100.00	1733.45	1.45	4.80	1733.33	1733.78	.00	139.06	1.02
6.000	125.00	1733.59	1.59	5.20	1733.47	1733.98	.00	134.95	1.03
6.000	150.00	1733.77	1.77	5.30	1733.62	1734.16	.00	114.09	1.00
6.000	175.00	1733.87	1.87	5.73	1733.72	1734.33	.00	120.94	1.01
6.000	200.00	1733.98	1.98	6.02	1733.82	1734.50	.00	119.55	1.01
6.000	250.00	1734.27	2.27	6.17	1734.06	1734.80	.00	99.01	.99
6.000	300.00	1734.40	2.40	6.87	1734.24	1735.06	.00	112.00	1.02
6.000	350.00	1734.59	2.59	7.23	1734.42	1735.32	.00	109.06	1.01
6.000	400.00	1734.76	2.76	7.58	1734.58	1735.56	.00	108.20	1.01
6.000	450.00	1734.95	2.95	7.81	1734.73	1735.79	.00	103.04	1.01
6.000	500.00	1735.11	3.11	8.09	1734.88	1736.01	.00	101.38	1.00

1

22JUN94 13:25:48 PAGE 19

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
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CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED
```

Table D-5
Flow split at C531

Stage	Discharge, in cfs		
	Left	Right	Total
2155.5	0	0	0
2155.7	0	10	10
2155.9	0	25	25
2156.1	12	40	52
2156.3	25	85	110
2156.5	47	190	237
2156.7	80	310	390
2156.9	140	450	590
2157.1	200	650	850
2157.3	290	875	1165
2157.5	390	1175	1565
2157.7	480	1500	1980
2157.9	620	2040	2660
2158.1	750	2500	3250
2158.3	910	2960	3870
2158.5	1090	3600	4690
2158.7	1250	4300	5550
2158.9	1440	4950	6390

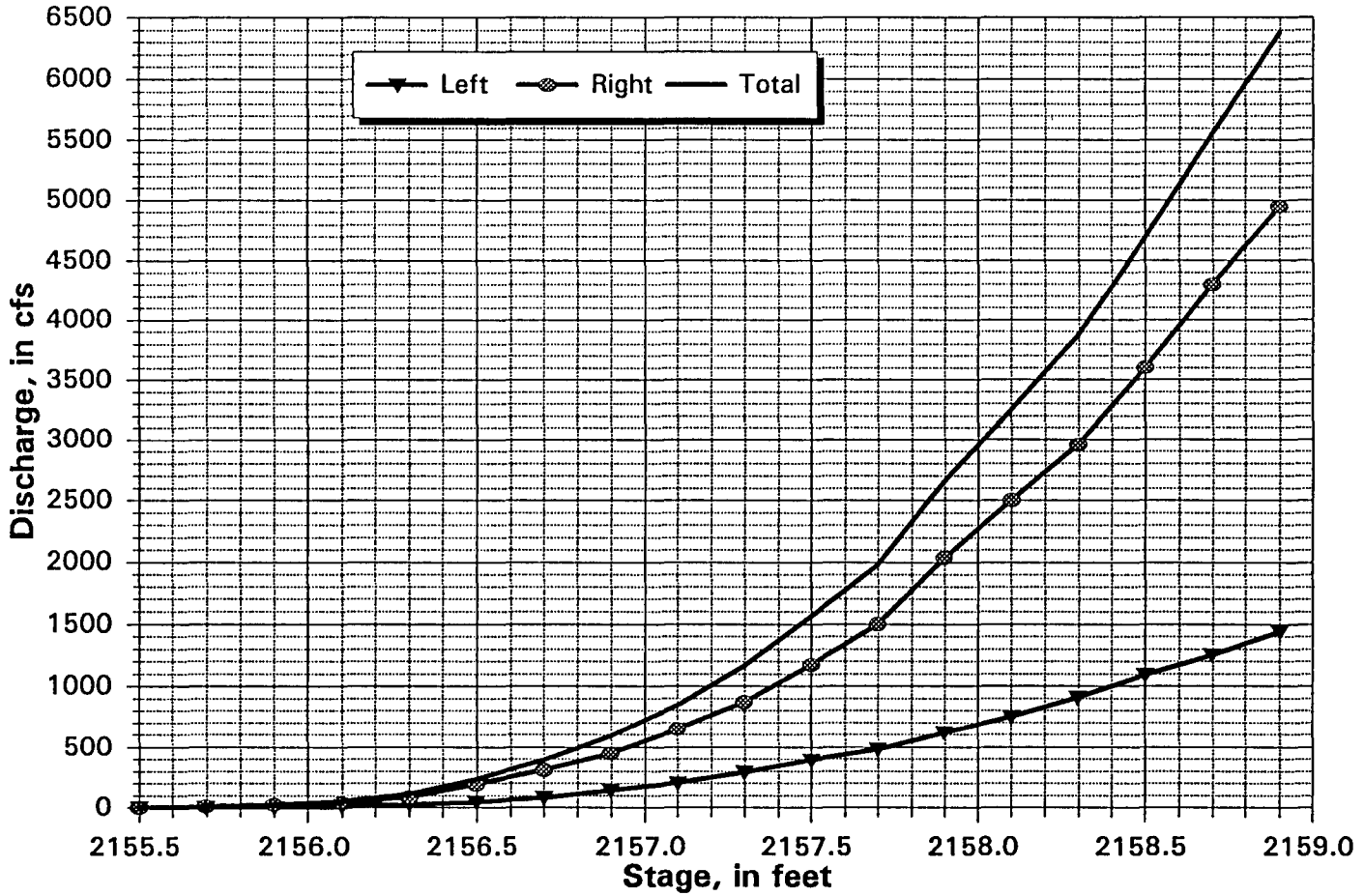

Figure D-5

Flow split at C531

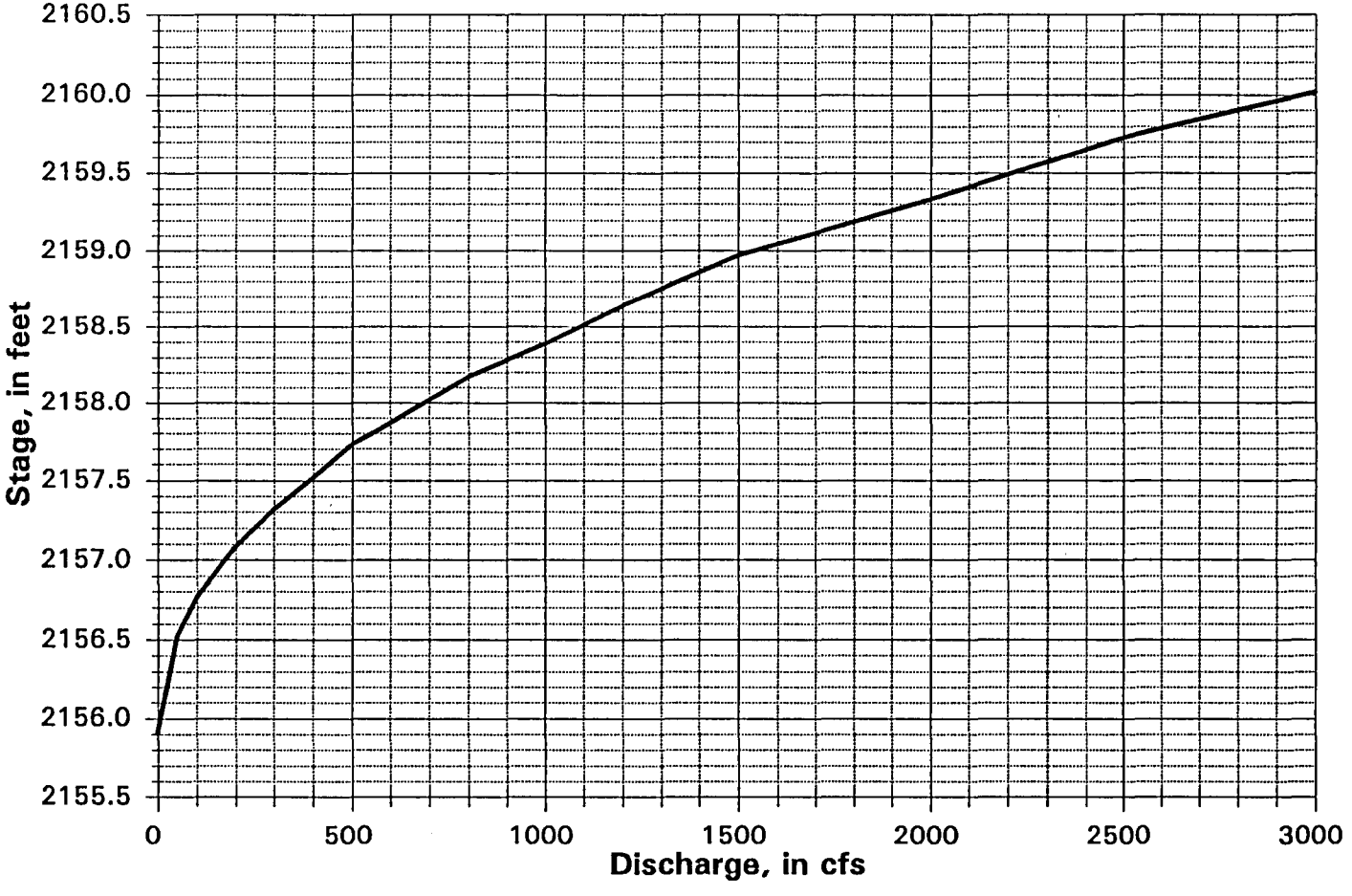

Figure D-5a

C531 Split Left

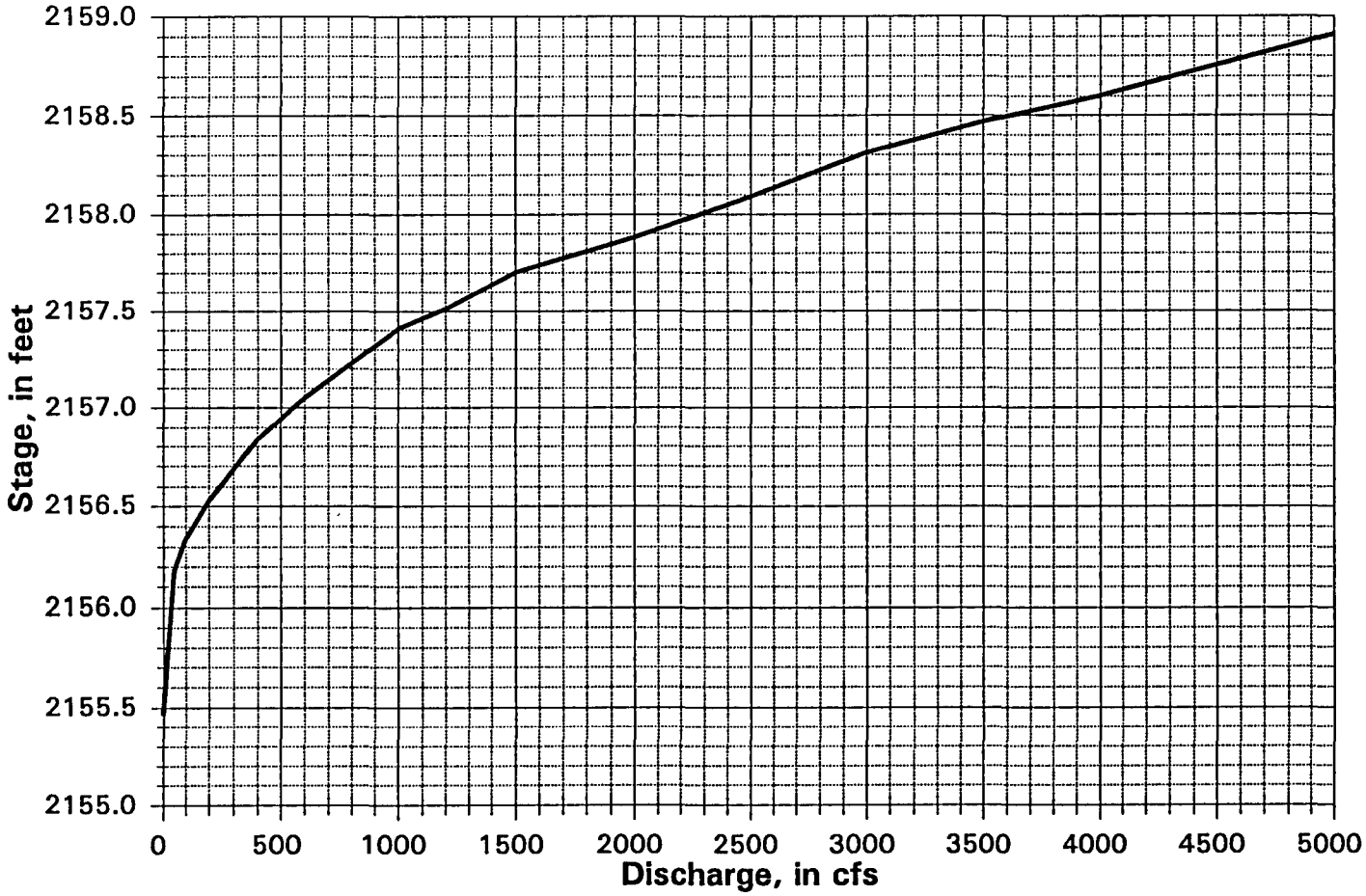

Figure D5-b

C531 Split Right

```
1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
 *  RUN DATE    16JUN94    TIME   16:46:04 *
 *****************************************
```

```
*************************************
*  U.S. ARMY CORPS OF ENGINEERS     *
*  HYDROLOGIC ENGINEERING CENTER    *
*  609 SECOND STREET, SUITE D       *
*  DAVIS, CALIFORNIA 95616-4687     *
*          (916) 756-1104           *
*************************************
```

```
X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                        X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X                  X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX             XXXXXXX
```

```
1
   16JUN94      16:46:04                                                                                    PAGE    1


                                                                                THIS RUN EXECUTED 16JUN94    16:46:04
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      531 Left                                        FILE:     C531L.IH2
 T4                                                      DATE:     06-16-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 531
 T6                SPLIT  LEFT
 T7
 T8      Single X-Section Run
                   Ditch slope =   0.0235 ft/ft  From Hydrologic Field Survey

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                         0.0235

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                        -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

     -10       -10


 NC    0.075      0.075      0.035        .1         .3
 QT       14         50        100       200        300        400        500        600        800       1000
 QT     1200       1500       2000      2500       3000

 NH        4      0.075     1082.2     0.035     1107.2     0.075     1161.2      0.01       1162
         X-Section #1
 X1        1          8     1082.2    1107.2          0         0         0
 GR     2160        999    2158.54    1000.0    2157.53    1052.4    2155.91    1082.2    2156.06    1107.2
 GR   2156.6     1139.3    2156.98    1161.2      2160      1162

1
   16JUN94      16:46:04                                                                                    PAGE    2


 X1        2                                          .2         .2         .2

 X1        3                                          .2         .2         .2

 X1        4                                          .2         .2         .2

 X1        5                                          .2         .2         .2

 X1        6                                          .2         .2         .2

1
   16JUN94      16:46:04                                                                                    PAGE    3

 T3           Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                         0.0235

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
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     2                -1                                  -1

1
   16JUN94      16:46:04                                                                                PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                         0.0235
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     3                   -1                                      -1

1
   16JUN94      16:46:04                                                                                PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                         0.0235
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     4                   -1                                      -1

1
   16JUN94      16:46:04                                                                                PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                         0.0235
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     5                   -1                                      -1

1
   16JUN94      16:46:04                                                                                PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                         0.0235
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     6                   -1                                      -1

1
   16JUN94      16:46:04                                                                                PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                         0.0235
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     7                   -1                                      -1

1
   16JUN94      16:46:04                                                                                PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                         0.0235
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     8                   -1                                      -1

1
   16JUN94      16:46:04                                                                                PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                10                         0.0235
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

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      9                -1                                  -1

1
   16JUN94      16:46:04                                                                                PAGE   11

 T3           Q10
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                11                          0.0235
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      10                -1                                  -1

1
   16JUN94      16:46:04                                                                                PAGE   12

 T3           Q11
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                12                          0.0235
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      11                -1                                  -1

1
   16JUN94      16:46:04                                                                                PAGE   13

 T3           Q12
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                13                          0.0235
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      12                -1                                  -1

1
   16JUN94      16:46:04                                                                                PAGE   14

 T3           Q13
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                14                          0.0235
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      13                -1                                  -1

1
   16JUN94      16:46:04                                                                                PAGE   15

 T3           Q14
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                15                          0.0235
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      14                -1                                  -1


1
   16JUN94      16:46:04                                                                                PAGE   16


                                                                                THIS RUN EXECUTED 16JUN94    16:46:18
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

531 Left

SUMMARY PRINTOUT

      SECNO       Q       CWSEL     DEPTH      VCH      CRIWS      EG        HL       10*KS    KRATIO
```

*	1.000	50.00	2156.44	.53	3.73	2156.44	2156.63	.00	218.66	.00
*	1.000	100.00	2156.68	.77	4.45	2156.68	2156.93	.00	178.34	.00
*	1.000	200.00	2156.99	1.08	5.47	2156.99	2157.32	.00	164.77	.00
*	1.000	300.00	2157.21	1.30	6.27	2157.21	2157.62	.00	167.44	.00
*	1.000	400.00	2157.38	1.47	6.96	2157.38	2157.87	.00	172.10	.00
*	1.000	500.00	2157.57	1.66	7.33	2157.57	2158.10	.00	161.31	.00
*	1.000	600.00	2157.73	1.82	7.73	2157.73	2158.30	.00	158.34	.00
*	1.000	800.00	2157.99	2.08	8.47	2157.99	2158.65	.00	157.65	.00
*	1.000	1000.00	2158.23	2.32	9.08	2158.23	2158.96	.00	155.94	.00
*	1.000	1200.00	2158.43	2.52	9.62	2158.43	2159.24	.00	155.37	.00
*	1.000	1500.00	2158.73	2.82	10.20	2158.73	2159.60	.00	150.28	.00
*	1.000	2000.00	2159.11	3.20	11.28	2159.11	2160.14	.00	154.29	.00
*	1.000	2500.00	2159.46	3.55	12.14	2159.46	2160.62	.00	155.42	.00
*	1.000	3000.00	2159.76	3.85	13.00	2159.76	2161.07	.00	159.69	.00
	2.000	50.00	2156.45	.54	3.69	2156.44	2156.63	.00	211.12	1.02
	2.000	100.00	2156.69	.78	4.42	2156.68	2156.93	.00	174.67	1.01
	2.000	200.00	2157.00	1.09	5.44	2156.99	2157.33	.00	162.65	1.01
	2.000	300.00	2157.21	1.30	6.25	2157.21	2157.62	.00	165.55	1.01
	2.000	400.00	2157.41	1.50	6.79	2157.39	2157.88	.00	160.05	1.04
	2.000	500.00	2157.60	1.69	7.21	2157.57	2158.10	.00	153.18	1.03
	2.000	600.00	2157.73	1.82	7.71	2157.71	2158.30	.00	157.16	1.00
	2.000	800.00	2158.00	2.09	8.46	2157.98	2158.65	.00	156.63	1.00
	2.000	1000.00	2158.23	2.32	9.06	2158.22	2158.96	.00	155.03	1.00
	2.000	1200.00	2158.44	2.53	9.60	2158.43	2159.24	.00	154.54	1.00
	2.000	1500.00	2158.77	2.86	10.02	2158.74	2159.61	.00	142.39	1.03
	2.000	2000.00	2159.16	3.25	11.07	2159.12	2160.15	.00	146.25	1.03
	2.000	2500.00	2159.47	3.56	12.13	2159.45	2160.63	.00	154.84	1.00
	2.000	3000.00	2159.81	3.90	12.78	2159.77	2161.07	.00	151.70	1.03

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	50.00	2156.46	.55	3.60	2156.44	2156.64	.00	196.61	1.04
3.000	100.00	2156.70	.79	4.36	2156.68	2156.93	.00	167.62	1.02
3.000	200.00	2157.01	1.10	5.39	2156.99	2157.33	.00	158.22	1.01
3.000	300.00	2157.22	1.31	6.20	2157.21	2157.63	.00	161.58	1.01
3.000	400.00	2157.43	1.52	6.74	2157.40	2157.88	.00	155.91	1.01
3.000	500.00	2157.61	1.70	7.15	2157.56	2158.11	.00	149.94	1.01
3.000	600.00	2157.74	1.83	7.67	2157.71	2158.30	.00	154.75	1.01
3.000	800.00	2158.01	2.10	8.42	2157.98	2158.66	.00	154.54	1.01
3.000	1000.00	2158.24	2.33	9.02	2158.22	2158.97	.00	153.17	1.01
3.000	1200.00	2158.45	2.54	9.56	2158.43	2159.25	.00	152.84	1.01
3.000	1500.00	2158.78	2.87	9.97	2158.72	2159.61	.00	140.44	1.01
3.000	2000.00	2159.30	3.40	10.38	2159.10	2160.16	.00	120.92	1.10
3.000	2500.00	2159.48	3.57	12.10	2159.45	2160.63	.00	153.63	1.00
3.000	3000.00	2159.98	4.07	12.04	2159.75	2161.09	.00	127.00	1.09
4.000	50.00	2156.51	.60	3.18	2156.44	2156.65	.00	133.02	1.22
4.000	100.00	2156.75	.84	3.96	2156.68	2156.94	.00	125.71	1.15
4.000	200.00	2157.07	1.16	4.98	2156.99	2157.34	.00	124.58	1.13
4.000	300.00	2157.30	1.39	5.70	2157.20	2157.64	.00	125.78	1.13
4.000	400.00	2157.50	1.59	6.26	2157.41	2157.89	.00	125.29	1.12
4.000	500.00	2157.67	1.76	6.80	2157.58	2158.12	.00	129.31	1.08
4.000	600.00	2157.86	1.95	6.99	2157.71	2158.32	.00	117.57	1.15
4.000	800.00	2158.10	2.19	7.91	2157.98	2158.67	.00	128.60	1.10
4.000	1000.00	2158.36	2.45	8.41	2158.22	2158.98	.00	124.25	1.11
4.000	1200.00	2158.62	2.71	8.71	2158.43	2159.26	.00	116.16	1.15
4.000	1500.00	2158.96	3.05	9.03	2158.72	2159.63	.00	105.25	1.16
4.000	2000.00	2159.31	3.40	10.35	2159.11	2160.17	.00	119.82	1.00
4.000	2500.00	2159.65	3.74	11.33	2159.45	2160.65	.00	126.43	1.10
4.000	3000.00	2159.99	4.08	12.01	2159.76	2161.10	.00	125.91	1.00
5.000	50.00	2156.52	.61	3.12	2156.44	2156.65	.00	125.68	1.03
5.000	100.00	2156.76	.85	3.90	2156.68	2156.94	.00	119.80	1.02
5.000	200.00	2157.08	1.17	4.91	2156.99	2157.34	.00	119.73	1.02
5.000	300.00	2157.31	1.40	5.64	2157.21	2157.64	.00	121.87	1.02
5.000	400.00	2157.51	1.60	6.21	2157.38	2157.90	.00	122.25	1.01
5.000	500.00	2157.73	1.82	6.41	2157.57	2158.12	.00	108.52	1.09
5.000	600.00	2157.87	1.96	6.96	2157.71	2158.32	.00	116.14	1.01
5.000	800.00	2158.12	2.21	7.82	2157.98	2158.67	.00	124.34	1.02
5.000	1000.00	2158.37	2.46	8.35	2158.22	2158.98	.00	121.95	1.01
5.000	1200.00	2158.63	2.72	8.66	2158.44	2159.27	.00	114.39	1.01
5.000	1500.00	2158.96	3.05	9.05	2158.73	2159.64	.00	105.90	1.00
5.000	2000.00	2159.32	3.41	10.31	2159.11	2160.17	.00	118.55	1.01
5.000	2500.00	2159.67	3.76	11.26	2159.45	2160.65	.00	124.14	1.01
5.000	3000.00	2160.00	4.09	11.97	2159.76	2161.10	.00	124.67	1.00

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	50.00	2156.53	.62	3.07	2156.44	2156.65	.00	119.24	1.03
6.000	100.00	2156.77	.86	3.84	2156.68	2156.95	.00	114.23	1.02
6.000	200.00	2157.09	1.18	4.84	2156.99	2157.34	.00	115.11	1.02
6.000	300.00	2157.32	1.41	5.58	2157.21	2157.64	.00	118.02	1.02
6.000	400.00	2157.52	1.61	6.16	2157.38	2157.90	.00	119.16	1.01
6.000	500.00	2157.73	1.82	6.40	2157.57	2158.13	.00	108.08	1.00
6.000	600.00	2157.87	1.96	6.93	2157.71	2158.32	.00	114.48	1.01
6.000	800.00	2158.17	2.26	7.52	2157.98	2158.68	.00	110.73	1.06
6.000	1000.00	2158.39	2.48	8.27	2158.22	2158.99	.00	118.45	1.01
6.000	1200.00	2158.64	2.73	8.62	2158.44	2159.27	.00	112.52	1.01
6.000	1500.00	2158.97	3.06	9.05	2158.73	2159.64	.00	105.97	1.00
6.000	2000.00	2159.33	3.42	10.27	2159.11	2160.17	.00	117.12	1.01
6.000	2500.00	2159.73	3.82	10.97	2159.45	2160.66	.00	114.97	1.04
6.000	3000.00	2160.02	4.11	11.92	2159.76	2161.10	.00	123.30	1.01

1

16JUN94 16:46:04 PAGE 19

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED
```

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1*****************************************
*  HEC-2 WATER SURFACE PROFILES           *
*                                         *
*  Version   4.6.2;  May 1991             *
*                                         *
*  RUN DATE    16JUN94    TIME   16:49:02 *
*****************************************
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```
*************************************
*  U.S. ARMY CORPS OF ENGINEERS     *
*  HYDROLOGIC ENGINEERING CENTER    *
*  609 SECOND STREET, SUITE D       *
*  DAVIS, CALIFORNIA 95616-4687     *
*        (916) 756-1104             *
*************************************
```

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X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                        X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X                  X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX             XXXXXXX
```

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1
   16JUN94      16:49:02                                                                                    PAGE    1


                                                                                THIS RUN EXECUTED 16JUN94    16:49:02
 *************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
 *************************************


 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      531 Right                                        FILE:     C531R.IH2
 T4                                                       DATE:     06-16-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 531
 T6                SPLIT  RIGHT
 T7
 T8      Single X-Section Run
                 Ditch slope =   0.0238 ft/ft  From Hydrologic Field Survey

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                           0.0238

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                        -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

     -10       -10


 NC    0.075      0.075      0.035        .1         .3
 QT       14         50        100       200        400        600       1000       1200       1500       2000
 QT     2500       3000       3500      4000       5000

 NH        4       0.01       1000     0.075     1016.4      0.035     1086.0      0.075       1429
         X-Section #1
 X1        1         17     1016.4    1086.0          0          0          0
 GR     2160        999    2156.98    1000.0    2156.47     1016.4    2155.47     1086.0    2156.87     1103.0
 GR   2157.3     1125.3    2155.98    1164.1    2157.17     1200.6    2155.90     1214.2    2157.14     1223.0
 GR   2156.8     1271.8    2155.95    1276.6    2155.97     1311.4    2157.13     1340.7    2156.90     1390.1
 GR   2159.3     1427.9       2160      1429
1
   16JUN94      16:49:02                                                                                    PAGE    2


 X1        2                                          .2         .2         .2

 X1        3                                          .2         .2         .2

 X1        4                                          .2         .2         .2

 X1        5                                          .2         .2         .2

 X1        6                                          .2         .2         .2
1
   16JUN94      16:49:02                                                                                    PAGE    3


 T3            Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                           0.0238
```

```
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
       2                 -1                                      -1

1
   16JUN94      16:49:02                                                                                PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                           0.0238
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
       3                 -1                                      -1

1
   16JUN94      16:49:02                                                                                PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                           0.0238
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
       4                 -1                                      -1

1
   16JUN94      16:49:02                                                                                PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                           0.0238
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
       5                 -1                                      -1

1
   16JUN94      16:49:02                                                                                PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                           0.0238
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
       6                 -1                                      -1

1
   16JUN94      16:49:02                                                                                PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                           0.0238
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
       7                 -1                                      -1

1
   16JUN94      16:49:02                                                                                PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                           0.0238
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
       8                 -1                                      -1

1
   16JUN94      16:49:02                                                                                PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                10                           0.0238
```

```
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     9                   -1                                      -1

1
   16JUN94      16:49:02                                                                          PAGE   11

T3           Q10
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               11                          0.0238
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                  -1                                      -1

1
   16JUN94      16:49:02                                                                          PAGE   12

T3           Q11
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               12                          0.0238
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                  -1                                      -1

1
   16JUN94      16:49:02                                                                          PAGE   13

T3           Q12
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               13                          0.0238
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                  -1                                      -1

1
   16JUN94      16:49:02                                                                          PAGE   14

T3           Q13
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               14                          0.0238
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                  -1                                      -1

1
   16JUN94      16:49:02                                                                          PAGE   15

T3           Q14
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               15                          0.0238
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                  -1                                      -1


1
   16JUN94      16:49:02                                                                          PAGE   16


                                                                    THIS RUN EXECUTED 16JUN94    16:49:24
 ************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
 ************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

531 Right

SUMMARY PRINTOUT
```

	SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
*	1.000	50.00	2156.10	.63	3.00	2156.10	2156.22	.00	230.64	.00
	1.000	100.00	2156.26	.79	3.52	2156.25	2156.41	.00	238.20	.00
	1.000	200.00	2156.46	.99	4.10	2156.45	2156.65	.00	238.53	.00
	1.000	400.00	2156.70	1.23	5.30	2156.69	2157.01	.00	237.32	.00
*	1.000	600.00	2156.92	1.45	5.88	2156.92	2157.29	.00	206.49	.00
*	1.000	1000.00	2157.28	1.81	6.36	2157.28	2157.67	.00	156.73	.00
*	1.000	1200.00	2157.38	1.91	6.79	2157.38	2157.82	.00	160.89	.00
*	1.000	1500.00	2157.53	2.06	7.32	2157.53	2158.02	.00	164.60	.00
*	1.000	2000.00	2157.75	2.28	8.03	2157.75	2158.31	.00	165.74	.00
*	1.000	2500.00	2157.93	2.46	8.73	2157.93	2158.57	.00	172.64	.00
*	1.000	3000.00	2158.09	2.63	9.34	2158.09	2158.82	.00	177.34	.00
*	1.000	3500.00	2158.25	2.78	9.87	2158.25	2159.05	.00	179.69	.00
*	1.000	4000.00	2158.41	2.94	10.29	2158.41	2159.26	.00	178.86	.00
*	1.000	5000.00	2158.68	3.21	11.20	2158.68	2159.66	.00	184.25	.00
	2.000	50.00	2156.11	.64	2.94	2156.10	2156.23	.00	220.28	1.02
	2.000	100.00	2156.27	.80	3.46	2156.25	2156.41	.00	229.26	1.02
	2.000	200.00	2156.47	1.00	4.05	2156.45	2156.66	.00	231.61	1.01
	2.000	400.00	2156.71	1.24	5.26	2156.69	2157.02	.00	232.02	1.01
	2.000	600.00	2156.93	1.46	5.85	2156.92	2157.29	.00	203.15	1.01
	2.000	1000.00	2157.29	1.82	6.34	2157.28	2157.68	.00	155.10	1.01
	2.000	1200.00	2157.42	1.95	6.58	2157.39	2157.82	.00	147.54	1.04
	2.000	1500.00	2157.56	2.09	7.13	2157.54	2158.02	.00	152.68	1.04
	2.000	2000.00	2157.76	2.29	8.00	2157.74	2158.31	.00	164.40	1.00
	2.000	2500.00	2157.94	2.47	8.71	2157.93	2158.58	.00	171.39	1.00
	2.000	3000.00	2158.14	2.67	9.14	2158.10	2158.82	.00	166.04	1.03
	2.000	3500.00	2158.30	2.83	9.66	2158.26	2159.05	.00	168.75	1.03
	2.000	4000.00	2158.42	2.95	10.27	2158.41	2159.27	.00	177.78	1.00
	2.000	5000.00	2158.73	3.26	10.95	2158.69	2159.67	.00	172.62	1.03

1

16JUN94 16:49:02 PAGE 17

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	50.00	2156.13	.66	2.84	2156.10	2156.23	.00	201.14	1.05
3.000	100.00	2156.28	.81	3.36	2156.26	2156.42	.00	212.56	1.04
3.000	200.00	2156.48	1.01	3.97	2156.45	2156.66	.00	218.67	1.03
3.000	400.00	2156.75	1.28	4.99	2156.69	2157.03	.00	196.51	1.09
3.000	600.00	2156.94	1.47	5.79	2156.92	2157.30	.00	196.29	1.02
3.000	1000.00	2157.30	1.83	6.29	2157.28	2157.68	.00	151.79	1.01
3.000	1200.00	2157.43	1.96	6.52	2157.38	2157.83	.00	143.47	1.01
3.000	1500.00	2157.57	2.10	7.07	2157.52	2158.03	.00	148.98	1.01
3.000	2000.00	2157.77	2.30	7.96	2157.74	2158.32	.00	161.58	1.01
3.000	2500.00	2157.95	2.48	8.67	2157.93	2158.58	.00	168.74	1.01
3.000	3000.00	2158.22	2.75	8.66	2158.09	2158.84	.00	141.49	1.08
3.000	3500.00	2158.39	2.92	9.15	2158.24	2159.06	.00	143.63	1.08
3.000	4000.00	2158.43	2.96	10.23	2158.41	2159.27	.00	175.57	1.01
3.000	5000.00	2158.88	3.41	10.17	2158.67	2159.69	.00	138.01	1.12
4.000	50.00	2156.18	.71	2.20	2156.10	2156.24	.00	105.72	1.38
4.000	100.00	2156.33	.86	2.90	2156.25	2156.43	.00	145.29	1.21
4.000	200.00	2156.50	1.03	3.82	2156.43	2156.67	.00	192.65	1.07
4.000	400.00	2156.82	1.35	4.39	2156.69	2157.04	.00	130.70	1.23
4.000	600.00	2157.03	1.56	5.16	2156.91	2157.31	.00	137.76	1.19
4.000	1000.00	2157.36	1.89	5.89	2157.28	2157.69	.00	125.42	1.10
4.000	1200.00	2157.48	2.01	6.19	2157.40	2157.83	.00	123.25	1.08
4.000	1500.00	2157.63	2.16	6.73	2157.56	2158.03	.00	128.94	1.07
4.000	2000.00	2157.85	2.38	7.47	2157.74	2158.33	.00	134.21	1.10
4.000	2500.00	2158.05	2.58	8.06	2157.92	2158.59	.00	136.26	1.11
4.000	3000.00	2158.24	2.77	8.60	2158.09	2158.84	.00	138.63	1.01
4.000	3500.00	2158.40	2.93	9.09	2158.25	2159.07	.00	140.89	1.01
4.000	4000.00	2158.58	3.11	9.44	2158.40	2159.29	.00	138.19	1.13
4.000	5000.00	2158.89	3.42	10.14	2158.68	2159.69	.00	136.87	1.00
5.000	50.00	2156.18	.71	2.24	2156.10	2156.24	.00	110.57	.98
5.000	100.00	2156.33	.86	2.84	2156.25	2156.43	.00	138.38	1.02
5.000	200.00	2156.52	1.05	3.67	2156.45	2156.67	.00	170.42	1.06
5.000	400.00	2156.83	1.36	4.41	2156.69	2157.04	.00	132.61	.99
5.000	600.00	2157.04	1.57	5.09	2156.92	2157.31	.00	132.32	1.02
5.000	1000.00	2157.40	1.93	5.55	2157.28	2157.69	.00	106.17	1.09
5.000	1200.00	2157.50	2.03	6.08	2157.38	2157.84	.00	117.43	1.02
5.000	1500.00	2157.70	2.23	6.22	2157.53	2158.04	.00	102.40	1.12
5.000	2000.00	2157.87	2.40	7.37	2157.74	2158.33	.00	129.09	1.02
5.000	2500.00	2158.07	2.60	7.96	2157.93	2158.60	.00	131.51	1.02
5.000	3000.00	2158.31	2.84	8.14	2158.09	2158.85	.00	117.95	1.08
5.000	3500.00	2158.47	3.00	8.72	2158.25	2159.08	.00	124.37	1.06
5.000	4000.00	2158.59	3.12	9.39	2158.40	2159.29	.00	136.03	1.01
5.000	5000.00	2158.90	3.43	10.11	2158.68	2159.70	.00	135.48	1.01

1

16JUN94 16:49:02 PAGE 18

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	50.00	2156.18	.71	2.25	2156.10	2156.25	.00	111.05	1.00
6.000	100.00	2156.34	.87	2.79	2156.25	2156.43	.00	132.31	1.02
6.000	200.00	2156.53	1.06	3.59	2156.45	2156.68	.00	157.72	1.04
6.000	400.00	2156.83	1.36	4.41	2156.69	2157.04	.00	132.20	1.00
6.000	600.00	2157.05	1.58	5.03	2156.92	2157.32	.00	127.25	1.02
6.000	1000.00	2157.41	1.94	5.52	2157.28	2157.70	.00	104.45	1.01
6.000	1200.00	2157.51	2.04	6.01	2157.40	2157.84	.00	113.66	1.02
6.000	1500.00	2157.70	2.23	6.25	2157.53	2158.04	.00	103.76	.99
6.000	2000.00	2157.88	2.41	7.27	2157.74	2158.33	.00	124.29	1.02
6.000	2500.00	2158.09	2.62	7.87	2157.92	2158.60	.00	127.03	1.02
6.000	3000.00	2158.31	2.84	8.16	2158.09	2158.85	.00	118.50	1.00
6.000	3500.00	2158.47	3.00	8.71	2158.25	2159.08	.00	124.03	1.00
6.000	4000.00	2158.60	3.13	9.34	2158.40	2159.29	.00	133.81	1.01
6.000	5000.00	2158.91	3.44	10.07	2158.68	2159.70	.00	133.84	1.01

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED
```

Table D-6
Flow split at C532

Stage	Discharge, in cfs		
	Left	Right	Total
2059.5	0	0	0
2059.7	0	12	12
2059.9	0	25	25
2060.1	18	40	58
2060.3	40	60	100
2060.5	65	90	155
2060.7	110	125	235
2060.9	160	180	340
2061.1	200	205	405
2061.3	275	260	535
2061.5	350	335	685
2061.7	425	440	865
2061.9	525	550	1075
2062.1	630	675	1305
2062.3	735	800	1535
2062.5	850	960	1810
2062.7	1050	1140	2190
2062.9	1250	1320	2570
2063.1	1450	1500	2950

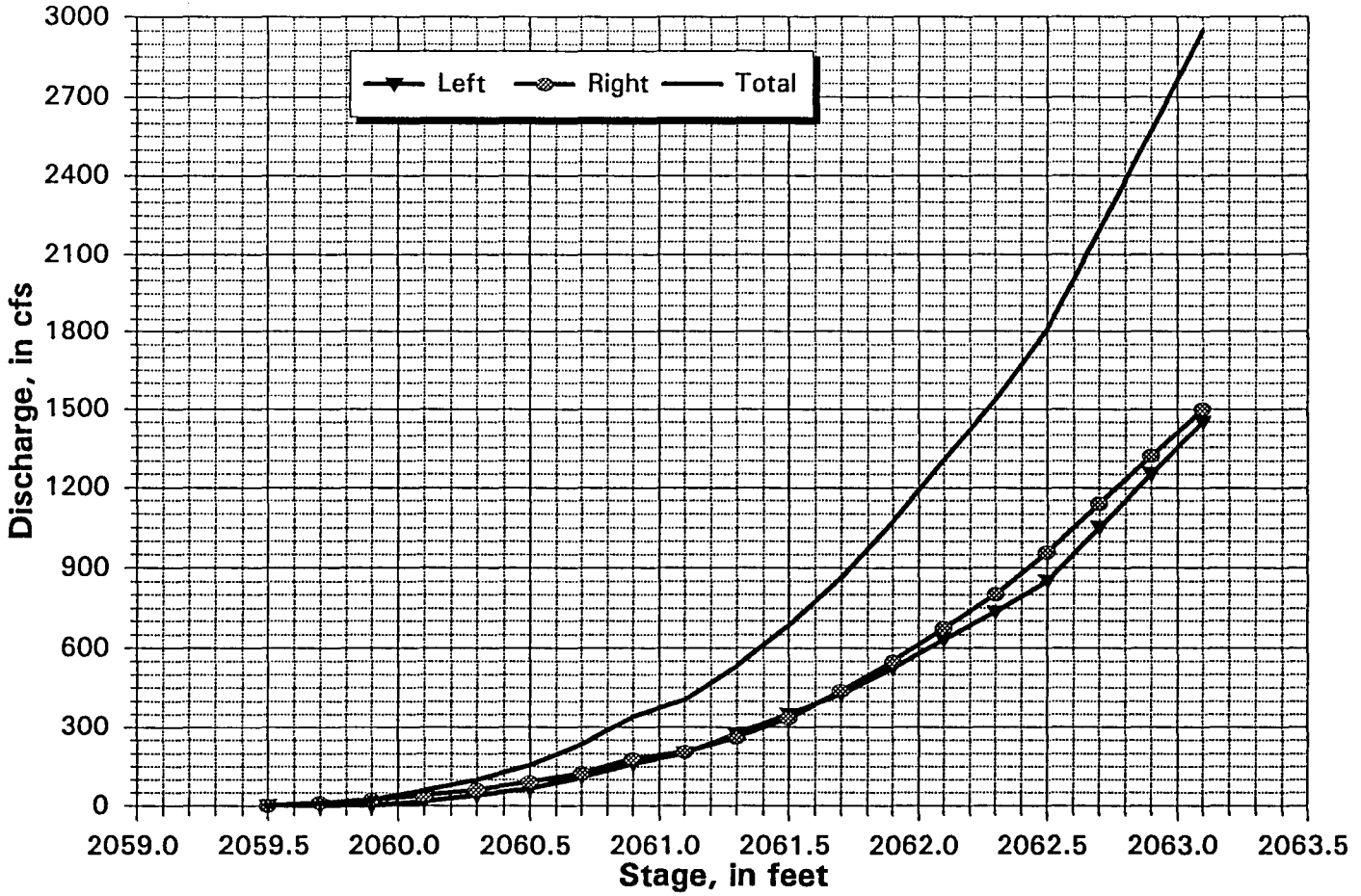

Figure D-6

Flow split at C532

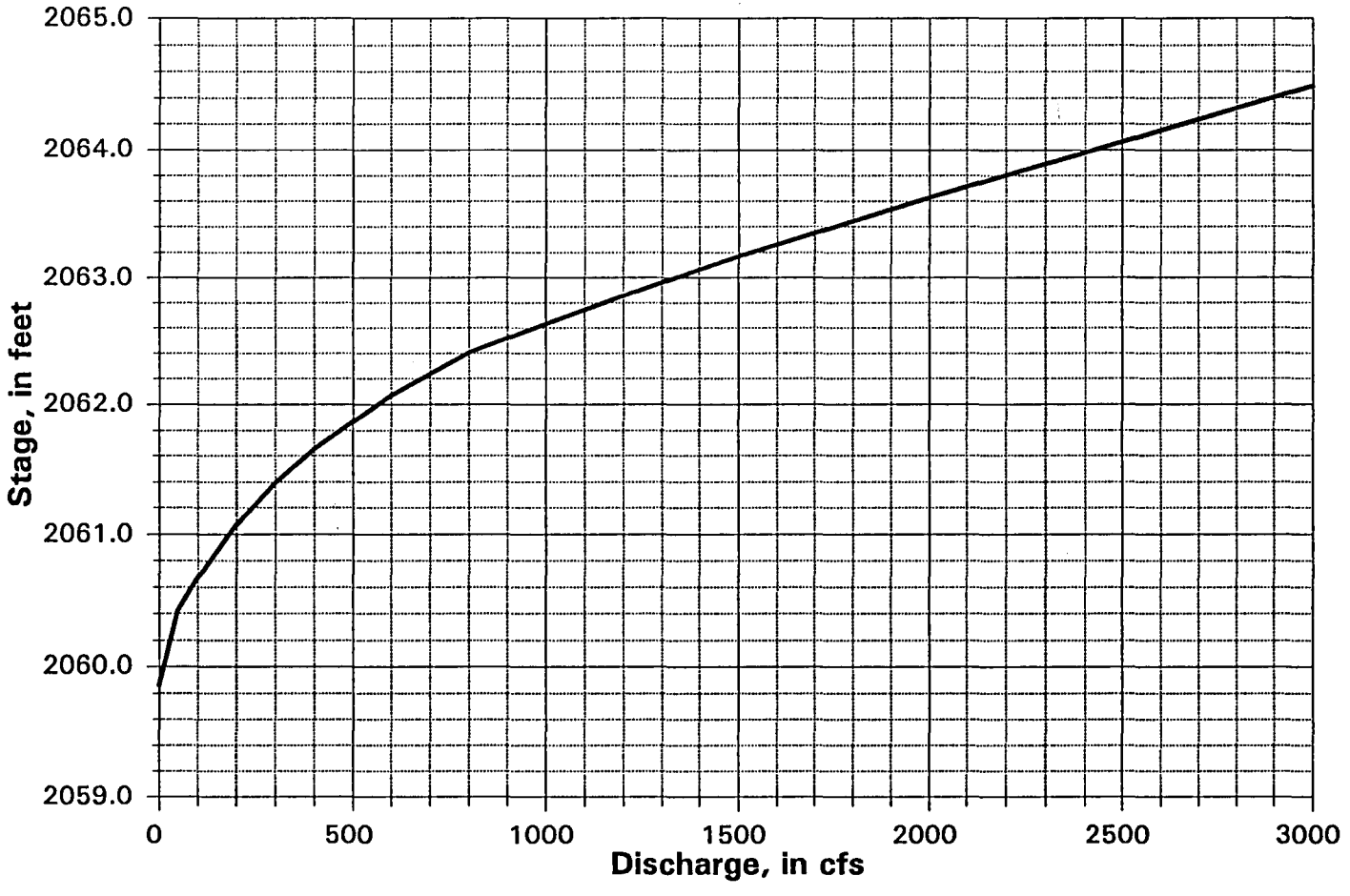

Figure D-6a

C532 Split Left

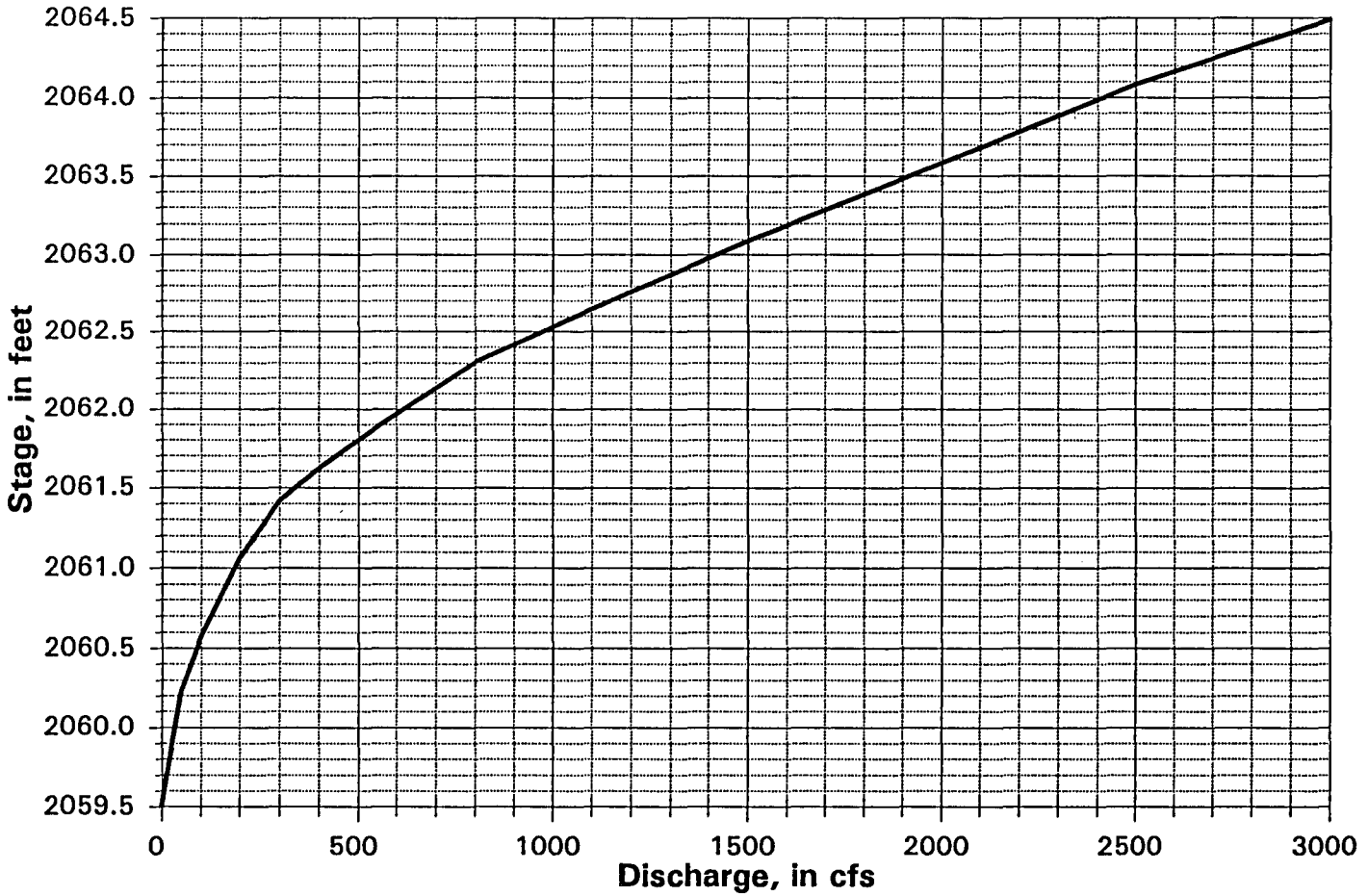

Figure D-6b

C532 Split Right

```
1*****************************************                    ***************************************
 *  HEC-2 WATER SURFACE PROFILES           *                    *  U.S. ARMY CORPS OF ENGINEERS       *
 *                                         *                    *  HYDROLOGIC ENGINEERING CENTER      *
 *  Version   4.6.2;  May 1991             *                    *  609 SECOND STREET, SUITE D         *
 *                                         *                    *  DAVIS, CALIFORNIA 95616-4687       *
 *  RUN DATE    11JUL94    TIME   16:14:22 *                    *          (916) 756-1104             *
 *****************************************                    ***************************************


                                        X     X  XXXXXXX   XXXXX             XXXXX
                                        X     X  X        X     X           X     X
                                        X     X  X        X                       X
                                        XXXXXXX  XXXX     X          XXXXX    XXXXX
                                        X     X  X        X                 X
                                        X     X  X        X     X           X
                                        X     X  XXXXXXX   XXXXX            XXXXXXX
1
   11JUL94      16:14:22                                                                                    PAGE    1


                                                                                THIS RUN EXECUTED 11JUL94    16:14:22
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      532 Left                                          FILE:     C532L.IH2
 T4                                                        DATE:     07-11-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 532
 T6                SPLIT  LEFT
 T7
 T8      Single X-Section Run
                 Ditch slope =   0.0217 ft/ft  From Hydrologic Field Survey

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                         0.0217

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                        -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

     -10       -10

 NC    0.075      0.075      0.035        .1         .3
 QT       14         50        100       200        300        400        500        600        800       1000
 QT     1200       1500       2000      2500       3000

 NH        4      0.085     1086.0     0.040     1112.5      0.085     1120.3       0.01       1121

         X-Section #1
 X1        1          8     1086.0     1112.5          0          0          0
 X2                                                                                                        15
 GR     2064        999     2061.9     1000.0    2060.77     1069.1    2059.86     1086.0     2059.89    1099.25
 GR   2059.9     1112.5     2060.1     1120.3       2064       1121
1
   11JUL94      16:14:22                                                                                    PAGE    2


 X1        2                                          .2         .2         .2

 X1        3                                          .2         .2         .2

 X1        4                                          .2         .2         .2

 X1        5                                          .2         .2         .2

 X1        6                                          .2         .2         .2
1
   11JUL94      16:14:22                                                                                    PAGE    3

     SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
     Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
     TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
     SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST
```

```
FLOW DISTRIBUTION FOR SECNO=      1.00          CWSEL=   2060.37

STA=    1076.    1086.    1113.    1120.    1120.
  PER Q=      5.0     87.2      7.7       .0
   AREA=      2.4     12.9      2.9       .0
    VEL=      1.0      3.4      1.3       .2
  DEPTH=       .3       .5       .4       .1

1
   11JUL94      16:14:22                                                                    PAGE    4

T3            Q2

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                         0.0217

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      2                  -1                                      -1

FLOW DISTRIBUTION FOR SECNO=      1.00          CWSEL=   2060.61

STA=    1072.    1086.    1113.    1120.    1120.
  PER Q=      6.9     84.3      8.8       .0
   AREA=      5.2     19.2      4.7       .0
    VEL=      1.3      4.4      1.8       .2
  DEPTH=       .4       .7       .6       .3

1
   11JUL94      16:14:22                                                                    PAGE    5

T3            Q3

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 4                         0.0217

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      3                  -1                                      -1

FLOW DISTRIBUTION FOR SECNO=      1.00          CWSEL=   2060.95

STA=    1058.    1069.    1086.    1113.    1120.    1120.
  PER Q=       .3     10.2     80.4      9.2       .0
   AREA=      1.0     10.7     28.2      7.4       .1
    VEL=       .5      1.9      5.7      2.5       .2
  DEPTH=       .1       .6      1.1       .9       .4

1
   11JUL94      16:14:22                                                                    PAGE    6

T3            Q4

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 5                         0.0217

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      4                  -1                                      -1

FLOW DISTRIBUTION FOR SECNO=      1.00          CWSEL=   2061.23

STA=    1041.    1069.    1086.    1113.    1120.    1121.
  PER Q=      2.1     12.1     76.5      9.1       .2
   AREA=      6.6     15.5     35.8      9.6       .1
    VEL=       .9      2.3      6.4      2.8      4.5
  DEPTH=       .2       .9      1.3      1.2       .6

1
   11JUL94      16:14:22                                                                    PAGE    7

T3            Q5

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 6                         0.0217

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      5                  -1                                      -1

FLOW DISTRIBUTION FOR SECNO=      1.00          CWSEL=   2061.48

STA=    1025.    1069.    1086.    1113.    1120.    1121.
  PER Q=      4.7     13.0     73.2      8.9       .2
   AREA=     15.6     19.8     42.4     11.6       .2
    VEL=      1.2      2.6      6.9      3.1      5.0
  DEPTH=       .4      1.2      1.6      1.5       .7

1
   11JUL94      16:14:22                                                                    PAGE    8
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```
T3            Q6

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                7                           0.0217

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      6                  -1                                      -1

FLOW DISTRIBUTION FOR SECNO=      1.00          CWSEL=   2061.70

STA=    1012.    1069.    1086.    1113.    1120.    1121.
  PER Q=      7.3      13.4     70.3      8.7       .2
   AREA=     26.5      23.4     48.1     13.3       .2
    VEL=      1.4       2.9      7.3      3.3      5.3
  DEPTH=       .5       1.4      1.8      1.7       .8

1
   11JUL94      16:14:22                                                                          PAGE    9

T3            Q7

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                8                           0.0217

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      7                  -1                                      -1

FLOW DISTRIBUTION FOR SECNO=      1.00          CWSEL=   2061.93

STA=    1000.    1069.    1086.    1113.    1120.    1121.
  PER Q=     10.5      13.6     67.2      8.4       .3
   AREA=     41.0      27.3     54.1     15.0       .3
    VEL=      1.5       3.0      7.4      3.4      5.5
  DEPTH=       .6       1.6      2.0      1.9       .9

1
   11JUL94      16:14:22                                                                          PAGE   10

T3            Q8

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                9                           0.0217

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      8                  -1                                      -1

FLOW DISTRIBUTION FOR SECNO=      1.00          CWSEL=   2062.21

STA=    1000.    1069.    1086.    1113.    1120.    1121.
  PER Q=     15.2      13.4     63.1      8.0       .3
   AREA=     60.4      32.0     61.6     17.2       .4
    VEL=      2.0       3.4      8.2      3.7      6.1
  DEPTH=       .9       1.9      2.3      2.2      1.1

1
   11JUL94      16:14:22                                                                          PAGE   11

T3            Q9

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

               10                           0.0217

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      9                  -1                                      -1

FLOW DISTRIBUTION FOR SECNO=      1.00          CWSEL=   2062.44

STA=    1000.    1069.    1086.    1113.    1120.    1121.
  PER Q=     18.3      13.3     60.3      7.7       .3
   AREA=     76.4      35.9     67.7     19.0       .5
    VEL=      2.4       3.7      8.9      4.1      6.7
  DEPTH=      1.1       2.1      2.6      2.4      1.2

1
   11JUL94      16:14:22                                                                          PAGE   12

T3           Q10

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

               11                           0.0217

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

     10                  -1                                      -1

FLOW DISTRIBUTION FOR SECNO=      1.00          CWSEL=   2062.66
```

```
STA=    1000.    1069.    1086.    1113.    1120.    1121.
  PER Q=     20.8     13.2     58.2      7.5       .3
   AREA=     91.7     39.6     73.5     20.8       .6
    VEL=      2.7      4.0      9.5      4.3      7.1
  DEPTH=      1.3      2.3      2.8      2.7      1.3

1
   11JUL94      16:14:22                                                    PAGE   13

T3          Q11

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

               12                        0.0217

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE

     11                 -1                                  -1

FLOW DISTRIBUTION FOR SECNO=      1.00          CWSEL=   2062.94

STA=    1000.    1000.    1069.    1086.    1113.    1120.    1121.
  PER Q=       .0     23.5     13.0     55.9      7.3       .4
   AREA=       .3    111.1     44.4     81.0     23.0       .7
    VEL=       .9      3.2      4.4     10.3      4.7      7.8
  DEPTH=       .5      1.6      2.6      3.1      2.9      1.4

1
   11JUL94      16:14:22                                                    PAGE   14

T3          Q12

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

               13                        0.0217

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE

     12                 -1                                  -1

FLOW DISTRIBUTION FOR SECNO=      1.00          CWSEL=   2063.40

STA=     999.    1000.    1069.    1086.    1113.    1120.    1121.
  PER Q=       .0     26.8     12.8     53.0      6.9       .4
   AREA=       .5    142.4     52.1     93.0     26.5      1.0
    VEL=      1.1      3.8      4.9     11.4      5.2      8.7
  DEPTH=       .7      2.1      3.1      3.5      3.4      1.6

1
   11JUL94      16:14:22                                                    PAGE   15

T3          Q13

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

               14                        0.0217

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE

     13                 -1                                  -1

FLOW DISTRIBUTION FOR SECNO=      1.00          CWSEL=   2063.77

STA=     999.    1000.    1069.    1086.    1113.    1120.    1121.
  PER Q=       .0     28.9     12.6     51.2      6.7       .5
   AREA=       .8    168.6     58.5    103.1     29.4      1.2
    VEL=      1.3      4.3      5.4     12.4      5.7      9.5
  DEPTH=       .9      2.4      3.5      3.9      3.8      1.8

1
   11JUL94      16:14:22                                                    PAGE   16

T3          Q14

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

               15                        0.0217

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE

     14                 -1                                  -1

FLOW DISTRIBUTION FOR SECNO=      1.00          CWSEL=   2064.14

STA=     999.    1000.    1069.    1086.    1113.    1120.    1121.
  PER Q=       .1     30.5     12.5     49.8      6.6       .5
   AREA=      1.2    193.9     64.7    112.8     32.3      1.5
    VEL=      1.5      4.7      5.8     13.3      6.1     10.2
  DEPTH=      1.2      2.8      3.8      4.3      4.1      2.1

1
   11JUL94      16:14:22                                                    PAGE   17
```

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	50.00	2060.42	.56	3.08	2060.32	2060.55	.00	160.33	1.03
6.000	100.00	2060.67	.81	4.09	2060.56	2060.89	.00	170.95	1.03
6.000	200.00	2061.07	1.21	5.05	2060.94	2061.40	.00	148.61	1.02
6.000	300.00	2061.39	1.53	5.66	2061.23	2061.77	.00	136.04	1.01
6.000	400.00	2061.67	1.81	5.98	2061.48	2062.08	.00	119.58	1.00
6.000	500.00	2061.89	2.02	6.41	2061.70	2062.34	.00	118.47	1.00
6.000	600.00	2062.07	2.21	6.76	2061.93	2062.56	.00	116.94	1.02
6.000	800.00	2062.36	2.50	7.49	2062.20	2062.94	.00	121.80	1.01
6.000	1000.00	2062.62	2.76	8.11	2062.44	2063.27	.00	124.97	1.01
6.000	1200.00	2062.85	2.99	8.70	2062.65	2063.58	.00	129.41	1.01
6.000	1500.00	2063.19	3.33	9.28	2062.95	2064.00	.00	126.57	1.00
6.000	2000.00	2063.63	3.77	10.49	2063.38	2064.64	.00	137.42	1.01
6.000	2500.00	2064.06	4.20	11.37	2063.77	2065.21	.00	139.97	1.01
6.000	3000.00	2064.48	4.62	12.04	2064.14	2065.75	.00	137.70	1.00

1

11JUL94 16:14:22 PAGE 20

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED
```

THIS RUN EXECUTED 11JUL94 16:14:37

****
HEC-2 WATER SURFACE PROFILES

Version 4.6.2; May 1991
****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

532 Left

SUMMARY PRINTOUT

	SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
	1.000	50.00	2060.37	.51	3.37	2060.33	2060.53	.00	214.77	.00
	1.000	100.00	2060.61	.75	4.39	2060.56	2060.87	.00	215.30	.00
	1.000	200.00	2060.95	1.09	5.70	2060.94	2061.37	.00	216.26	.00
*	1.000	300.00	2061.23	1.37	6.42	2061.23	2061.74	.00	200.03	.00
*	1.000	400.00	2061.48	1.62	6.90	2061.48	2062.05	.00	184.55	.00
*	1.000	500.00	2061.70	1.84	7.30	2061.70	2062.31	.00	174.46	.00
*	1.000	600.00	2061.93	2.07	7.45	2061.93	2062.54	.00	154.92	.00
*	1.000	800.00	2062.21	2.35	8.19	2062.21	2062.91	.00	157.74	.00
*	1.000	1000.00	2062.44	2.58	8.91	2062.44	2063.24	.00	164.74	.00
*	1.000	1200.00	2062.66	2.80	9.49	2062.66	2063.55	.00	167.21	.00
*	1.000	1500.00	2062.94	3.08	10.34	2062.94	2063.97	.00	174.42	.00
*	1.000	2000.00	2063.40	3.54	11.40	2063.40	2064.60	.00	176.49	.00
*	1.000	2500.00	2063.77	3.91	12.42	2063.77	2065.18	.00	182.83	.00
*	1.000	3000.00	2064.14	4.28	13.25	2064.14	2065.71	.00	184.44	.00
	2.000	50.00	2060.38	.52	3.34	2060.33	2060.53	.00	208.13	1.02
	2.000	100.00	2060.62	.76	4.37	2060.56	2060.87	.00	210.77	1.01
	2.000	200.00	2060.96	1.10	5.67	2060.94	2061.37	.00	213.01	1.01
	2.000	300.00	2061.24	1.38	6.39	2061.23	2061.75	.00	197.84	1.01
	2.000	400.00	2061.49	1.63	6.88	2061.49	2062.05	.00	182.90	1.00
	2.000	500.00	2061.71	1.85	7.28	2061.70	2062.32	.00	173.15	1.00
	2.000	600.00	2061.96	2.10	7.32	2061.93	2062.54	.00	147.23	1.03
	2.000	800.00	2062.22	2.36	8.17	2062.20	2062.92	.00	156.82	1.00
	2.000	1000.00	2062.48	2.62	8.76	2062.44	2063.25	.00	156.65	1.03
	2.000	1200.00	2062.67	2.81	9.47	2062.66	2063.55	.00	166.35	1.00
	2.000	1500.00	2062.99	3.13	10.16	2062.95	2063.98	.00	165.58	1.03
	2.000	2000.00	2063.40	3.54	11.39	2063.39	2064.60	.00	175.79	1.00
	2.000	2500.00	2063.83	3.97	12.23	2063.78	2065.18	.00	174.37	1.02
	2.000	3000.00	2064.20	4.34	13.06	2064.15	2065.72	.00	176.49	1.02

1
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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	50.00	2060.39	.53	3.29	2060.32	2060.54	.00	197.31	1.03
3.000	100.00	2060.63	.77	4.32	2060.56	2060.88	.00	203.01	1.02
3.000	200.00	2060.97	1.11	5.62	2060.93	2061.38	.00	206.70	1.02
3.000	300.00	2061.26	1.40	6.35	2061.23	2061.75	.00	193.28	1.01
3.000	400.00	2061.50	1.64	6.84	2061.48	2062.06	.00	179.44	1.01
3.000	500.00	2061.72	1.86	7.24	2061.70	2062.32	.00	170.37	1.01
3.000	600.00	2061.97	2.11	7.27	2061.92	2062.55	.00	144.69	1.01
3.000	800.00	2062.23	2.37	8.14	2062.20	2062.92	.00	154.92	1.01
3.000	1000.00	2062.49	2.63	8.71	2062.43	2063.25	.00	154.23	1.01
3.000	1200.00	2062.68	2.82	9.44	2062.65	2063.56	.00	164.59	1.01
3.000	1500.00	2063.10	3.24	9.66	2062.94	2063.99	.00	142.81	1.08
3.000	2000.00	2063.41	3.55	11.35	2063.38	2064.61	.00	174.32	1.00
3.000	2500.00	2064.01	4.15	11.53	2063.76	2065.20	.00	146.09	1.09
3.000	3000.00	2064.38	4.52	12.37	2064.13	2065.74	.00	149.66	1.09
4.000	50.00	2060.40	.54	3.22	2060.33	2060.54	.00	184.38	1.03
4.000	100.00	2060.64	.78	4.25	2060.56	2060.88	.00	192.93	1.03
4.000	200.00	2061.05	1.19	5.16	2060.94	2061.39	.00	159.00	1.14
4.000	300.00	2061.36	1.50	5.76	2061.23	2061.77	.00	143.61	1.16
4.000	400.00	2061.60	1.74	6.34	2061.48	2062.07	.00	142.70	1.12
4.000	500.00	2061.82	1.96	6.75	2061.69	2062.33	.00	137.74	1.11
4.000	600.00	2062.04	2.18	6.92	2061.93	2062.56	.00	125.33	1.07
4.000	800.00	2062.34	2.48	7.61	2062.20	2062.93	.00	127.67	1.10
4.000	1000.00	2062.59	2.73	8.26	2062.43	2063.27	.00	131.93	1.08
4.000	1200.00	2062.81	2.95	8.84	2062.65	2063.57	.00	136.02	1.10
4.000	1500.00	2063.19	3.33	9.30	2062.95	2064.00	.00	127.37	1.06
4.000	2000.00	2063.60	3.74	10.59	2063.38	2064.63	.00	141.49	1.11
4.000	2500.00	2064.02	4.16	11.50	2063.78	2065.21	.00	144.67	1.00
4.000	3000.00	2064.40	4.54	12.33	2064.14	2065.74	.00	148.21	1.00
5.000	50.00	2060.41	.55	3.15	2060.33	2060.55	.00	171.68	1.04
5.000	100.00	2060.65	.79	4.17	2060.56	2060.89	.00	181.82	1.03
5.000	200.00	2061.06	1.20	5.11	2060.94	2061.39	.00	153.88	1.02
5.000	300.00	2061.37	1.51	5.71	2061.23	2061.77	.00	139.90	1.01
5.000	400.00	2061.67	1.81	5.98	2061.48	2062.08	.00	119.91	1.09
5.000	500.00	2061.88	2.02	6.43	2061.70	2062.34	.00	119.42	1.07
5.000	600.00	2062.06	2.20	6.84	2061.93	2062.56	.00	121.10	1.02
5.000	800.00	2062.35	2.49	7.56	2062.20	2062.93	.00	125.30	1.01
5.000	1000.00	2062.60	2.74	8.18	2062.44	2063.27	.00	128.41	1.01
5.000	1200.00	2062.83	2.97	8.77	2062.65	2063.57	.00	132.71	1.01
5.000	1500.00	2063.19	3.33	9.29	2062.95	2064.00	.00	127.14	1.00
5.000	2000.00	2063.61	3.75	10.55	2063.38	2064.63	.00	139.89	1.01
5.000	2500.00	2064.04	4.18	11.44	2063.77	2065.21	.00	142.36	1.01
5.000	3000.00	2064.47	4.61	12.05	2064.14	2065.75	.00	138.22	1.04

1
11JUL94 16:14:22 PAGE 19

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1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
 *  RUN DATE    16JUN94    TIME   16:27:17 *
 *****************************************

                                                                                  ************************************
                                                                                  *  U.S. ARMY CORPS OF ENGINEERS      *
                                                                                  *  HYDROLOGIC ENGINEERING CENTER     *
                                                                                  *  609 SECOND STREET, SUITE D        *
                                                                                  *  DAVIS, CALIFORNIA 95616-4687      *
                                                                                  *          (916) 756-1104            *
                                                                                  ************************************

                                        X     X  XXXXXXX   XXXXX              XXXXX
                                        X     X  X        X     X            X     X
                                        X     X  X        X                        X
                                        XXXXXXX  XXXX     X          XXXXX    XXXXX
                                        X     X  X        X                  X
                                        X     X  X        X     X            X
                                        X     X  XXXXXXX   XXXXX             XXXXXXX
1
   16JUN94      16:27:17                                                                                          PAGE    1


                                                                                THIS RUN EXECUTED 16JUN94    16:27:17
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************


 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      532 Right                                        FILE:     C532R.IH2
 T4                                                       DATE:     06-16-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 532
 T6                SPLIT  RIGHT
 T7
 T8      Single X-Section Run
                 Ditch slope =   0.0300 ft/ft  From Hydrologic Field Survey

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                         0.0300

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      1                  -1                                        -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

     -10       -10


 NC    0.075      0.075      0.035        .1         .3
 QT       14         50        100       200        300        400        500        600        800       1000
 QT     1200       1500       2000      2500       3000

 NH        4       0.01        999     0.085     1007.1      0.040     1026.1      0.085       1108
         X-Section #1
 X1        1          7    1007.1    1026.1          0          0          0
 GR     2064        999   2060.12    1000.0    2059.51     1007.1    2059.61     1026.1    2060.45     1034.0
 GR   2061.2     1106.9      2064      1108
1
   16JUN94      16:27:17                                                                                          PAGE    2


 X1        2                                                .2         .2         .2

 X1        3                                                .2         .2         .2

 X1        4                                                .2         .2         .2

 X1        5                                                .2         .2         .2

 X1        6                                                .2         .2         .2
1
   16JUN94      16:27:17                                                                                          PAGE    3


 T3            Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                         0.030

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     2                -1                                  -1

1
   16JUN94      16:27:17                                                                                PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                           0.030
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      3                  -1                                      -1

1
   16JUN94      16:27:17                                                                                PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                           0.030
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      4                  -1                                      -1

1
   16JUN94      16:27:17                                                                                PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                           0.030
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      5                  -1                                      -1

1
   16JUN94      16:27:17                                                                                PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                           0.030
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      6                  -1                                      -1

1
   16JUN94      16:27:17                                                                                PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                           0.030
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      7                  -1                                      -1

1
   16JUN94      16:27:17                                                                                PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                           0.030
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      8                  -1                                      -1

1
   16JUN94      16:27:17                                                                                PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                10                           0.030
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     9                -1                                  -1

1
   16JUN94      16:27:17                                                                                PAGE   11

 T3           Q10
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               11                            0.030
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                  -1                                      -1

1
   16JUN94      16:27:17                                                                                PAGE   12

 T3           Q11
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               12                            0.030
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                  -1                                      -1

1
   16JUN94      16:27:17                                                                                PAGE   13

 T3           Q12
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               13                            0.030
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                  -1                                      -1

1
   16JUN94      16:27:17                                                                                PAGE   14

 T3           Q13
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               14                            0.030
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                  -1                                      -1

1
   16JUN94      16:27:17                                                                                PAGE   15

 T3           Q14
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               15                            0.030
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                  -1                                      -1


1
   16JUN94      16:27:17                                                                                PAGE   16


                                                                    THIS RUN EXECUTED 16JUN94    16:27:31
 ************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
 ************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

532 Right

SUMMARY PRINTOUT

      SECNO       Q       CWSEL     DEPTH      VCH      CRIWS      EG        HL       10*KS    KRATIO
```

*	1.000	50.00	2060.13	.62	4.18	2060.13	2060.38	.00	266.48	.00
*	1.000	100.00	2060.43	.92	5.24	2060.43	2060.81	.00	239.45	.00
*	1.000	200.00	2060.94	1.43	5.94	2060.94	2061.37	.00	166.70	.00
*	1.000	300.00	2061.29	1.78	6.29	2061.29	2061.73	.00	138.30	.00
*	1.000	400.00	2061.49	1.98	6.98	2061.49	2062.00	.00	147.37	.00
*	1.000	500.00	2061.66	2.15	7.55	2061.66	2062.23	.00	153.51	.00
*	1.000	600.00	2061.81	2.30	8.09	2061.81	2062.44	.00	160.87	.00
*	1.000	800.00	2062.10	2.59	8.90	2062.10	2062.83	.00	165.36	.00
*	1.000	1000.00	2062.33	2.82	9.76	2062.33	2063.18	.00	177.54	.00
*	1.000	1200.00	2062.56	3.05	10.38	2062.56	2063.50	.00	180.20	.00
*	1.000	1500.00	2062.85	3.34	11.35	2062.85	2063.94	.00	190.30	.00
*	1.000	2000.00	2063.33	3.82	12.52	2063.33	2064.61	.00	193.54	.00
*	1.000	2500.00	2063.73	4.22	13.66	2063.73	2065.23	.00	201.59	.00
*	1.000	3000.00	2064.12	4.61	14.55	2064.12	2065.80	.00	202.44	.00
	2.000	50.00	2060.14	.63	4.14	2060.13	2060.39	.01	257.75	1.02
	2.000	100.00	2060.44	.93	5.21	2060.43	2060.81	.00	234.73	1.01
	2.000	200.00	2060.94	1.43	5.92	2060.94	2061.38	.00	165.00	1.01
	2.000	300.00	2061.29	1.78	6.28	2061.29	2061.73	.00	137.28	1.00
	2.000	400.00	2061.52	2.01	6.81	2061.49	2062.00	.00	137.69	1.03
	2.000	500.00	2061.69	2.18	7.40	2061.67	2062.24	.00	145.14	1.03
	2.000	600.00	2061.85	2.34	7.90	2061.82	2062.45	.00	150.27	1.03
	2.000	800.00	2062.11	2.60	8.88	2062.09	2062.83	.00	164.38	1.00
	2.000	1000.00	2062.34	2.83	9.74	2062.33	2063.18	.00	176.52	1.00
	2.000	1200.00	2062.57	3.06	10.36	2062.55	2063.50	.00	179.26	1.00
	2.000	1500.00	2062.90	3.39	11.16	2062.86	2063.95	.00	181.03	1.03
	2.000	2000.00	2063.34	3.83	12.50	2063.32	2064.62	.00	192.72	1.00
	2.000	2500.00	2063.79	4.28	13.44	2063.74	2065.23	.00	191.88	1.02
	2.000	3000.00	2064.13	4.62	14.53	2064.12	2065.80	.00	201.71	1.00

1

16JUN94 16:27:17 PAGE 17

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	50.00	2060.19	.68	3.83	2060.13	2060.40	.00	201.56	1.13
3.000	100.00	2060.52	1.01	4.73	2060.43	2060.82	.00	172.57	1.17
3.000	200.00	2060.96	1.45	5.87	2060.94	2061.38	.00	161.54	1.01
3.000	300.00	2061.30	1.79	6.24	2061.29	2061.74	.00	135.19	1.01
3.000	400.00	2061.53	2.02	6.76	2061.48	2062.00	.00	134.90	1.01
3.000	500.00	2061.70	2.19	7.35	2061.65	2062.24	.00	142.48	1.01
3.000	600.00	2061.93	2.42	7.49	2061.80	2062.46	.00	128.96	1.08
3.000	800.00	2062.12	2.61	8.84	2062.09	2062.84	.00	162.37	1.01
3.000	1000.00	2062.35	2.84	9.70	2062.33	2063.18	.00	174.44	1.01
3.000	1200.00	2062.58	3.07	10.32	2062.55	2063.50	.00	177.35	1.01
3.000	1500.00	2063.06	3.55	10.42	2062.85	2063.96	.00	148.20	1.11
3.000	2000.00	2063.35	3.84	12.47	2063.32	2064.62	.00	191.05	1.00
3.000	2500.00	2063.98	4.47	12.67	2063.72	2065.25	.00	160.75	1.09
3.000	3000.00	2064.15	4.64	14.49	2064.12	2065.80	.00	200.23	1.00
4.000	50.00	2060.21	.70	3.71	2060.13	2060.40	.00	181.18	1.05
4.000	100.00	2060.53	1.02	4.66	2060.43	2060.83	.00	165.34	1.02
4.000	200.00	2061.04	1.53	5.42	2060.94	2061.39	.00	127.80	1.12
4.000	300.00	2061.32	1.81	6.19	2061.29	2061.74	.00	131.99	1.01
4.000	400.00	2061.59	2.08	6.43	2061.50	2062.01	.00	116.90	1.07
4.000	500.00	2061.77	2.26	6.97	2061.67	2062.25	.00	122.63	1.08
4.000	600.00	2061.94	2.43	7.44	2061.81	2062.46	.00	126.53	1.01
4.000	800.00	2062.30	2.79	7.92	2062.08	2062.85	.00	118.32	1.17
4.000	1000.00	2062.51	3.00	8.92	2062.33	2063.20	.00	136.84	1.13
4.000	1200.00	2062.73	3.22	9.64	2062.55	2063.52	.00	145.15	1.11
4.000	1500.00	2063.07	3.56	10.39	2062.85	2063.97	.00	146.88	1.00
4.000	2000.00	2063.54	4.03	11.65	2063.31	2064.64	.00	156.06	1.11
4.000	2500.00	2063.99	4.48	12.63	2063.73	2065.26	.00	159.21	1.00
4.000	3000.00	2064.41	4.90	13.49	2064.11	2065.83	.00	161.23	1.11
5.000	50.00	2060.22	.71	3.62	2060.13	2060.41	.00	168.44	1.04
5.000	100.00	2060.55	1.04	4.60	2060.44	2060.83	.00	157.89	1.02
5.000	200.00	2061.05	1.54	5.33	2060.94	2061.40	.00	121.67	1.02
5.000	300.00	2061.41	1.90	5.65	2061.28	2061.75	.00	102.42	1.14
5.000	400.00	2061.60	2.09	6.37	2061.49	2062.02	.00	113.99	1.01
5.000	500.00	2061.79	2.28	6.91	2061.66	2062.25	.00	119.81	1.01
5.000	600.00	2061.95	2.44	7.38	2061.81	2062.47	.00	123.86	1.01
5.000	800.00	2062.30	2.79	7.94	2062.09	2062.86	.00	119.39	1.00
5.000	1000.00	2062.52	3.01	8.88	2062.33	2063.20	.00	134.86	1.01
5.000	1200.00	2062.74	3.23	9.59	2062.55	2063.52	.00	143.04	1.01
5.000	1500.00	2063.08	3.57	10.35	2062.85	2063.97	.00	145.28	1.01
5.000	2000.00	2063.56	4.05	11.58	2063.31	2064.65	.00	153.42	1.01
5.000	2500.00	2064.07	4.56	12.29	2063.73	2065.27	.00	146.58	1.04
5.000	3000.00	2064.42	4.91	13.43	2064.11	2065.84	.00	158.96	1.01

1

16JUN94 16:27:17 PAGE 18

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	50.00	2060.23	.72	3.54	2060.13	2060.41	.00	157.03	1.04
6.000	100.00	2060.56	1.05	4.53	2060.43	2060.84	.00	150.44	1.02
6.000	200.00	2061.07	1.56	5.27	2060.94	2061.40	.00	117.66	1.02
6.000	300.00	2061.42	1.91	5.60	2061.29	2061.75	.00	100.20	1.01
6.000	400.00	2061.62	2.11	6.29	2061.49	2062.02	.00	109.82	1.02
6.000	500.00	2061.80	2.29	6.83	2061.66	2062.26	.00	115.67	1.02
6.000	600.00	2061.97	2.46	7.30	2061.81	2062.47	.00	119.89	1.02
6.000	800.00	2062.30	2.79	7.95	2062.09	2062.86	.00	119.48	1.00
6.000	1000.00	2062.53	3.02	8.83	2062.33	2063.21	.00	132.82	1.01
6.000	1200.00	2062.76	3.25	9.52	2062.55	2063.53	.00	139.83	1.01
6.000	1500.00	2063.09	3.58	10.31	2062.85	2063.98	.00	143.46	1.01
6.000	2000.00	2063.58	4.07	11.51	2063.31	2064.65	.00	150.76	1.01
6.000	2500.00	2064.08	4.57	12.29	2063.73	2065.27	.00	146.46	1.00
6.000	3000.00	2064.49	4.98	13.17	2064.11	2065.84	.00	149.82	1.03

1

16JUN94 16:27:17 PAGE 19

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED
```

Table D-7
Flow split at C532a

Stage	Discharge, in cfs		
	Left	Right	Total
2059.9	0	0	0
2060.1	18	20	38
2060.3	25	25	50
2060.5	40	35	75
2060.7	55	55	110
2060.9	75	85	160
2061.1	100	110	210
2061.3	140	145	285
2061.5	170	180	350
2061.7	230	215	445
2061.9	280	250	530
2062.1	360	290	650
2062.3	450	335	785
2062.5	550	380	930
2062.7	680	430	1110
2062.9	820	480	1300
2063.1	925	540	1465
2063.3	1090	590	1680
2063.5	1250	640	1890
2063.7	1470	690	2160

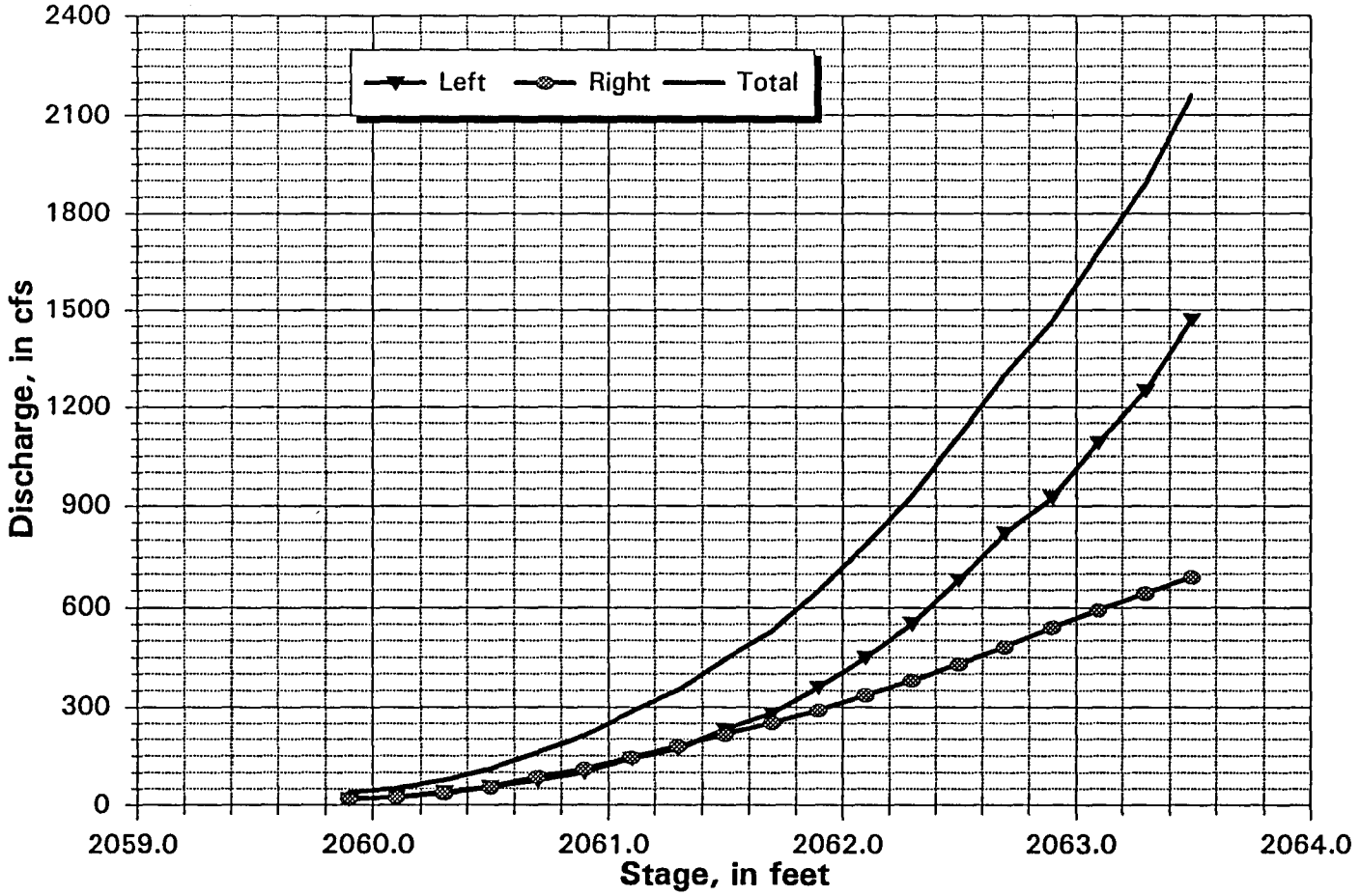

Figure D-7

Flow split at C532a

Figure D-7a

C532a Split Right

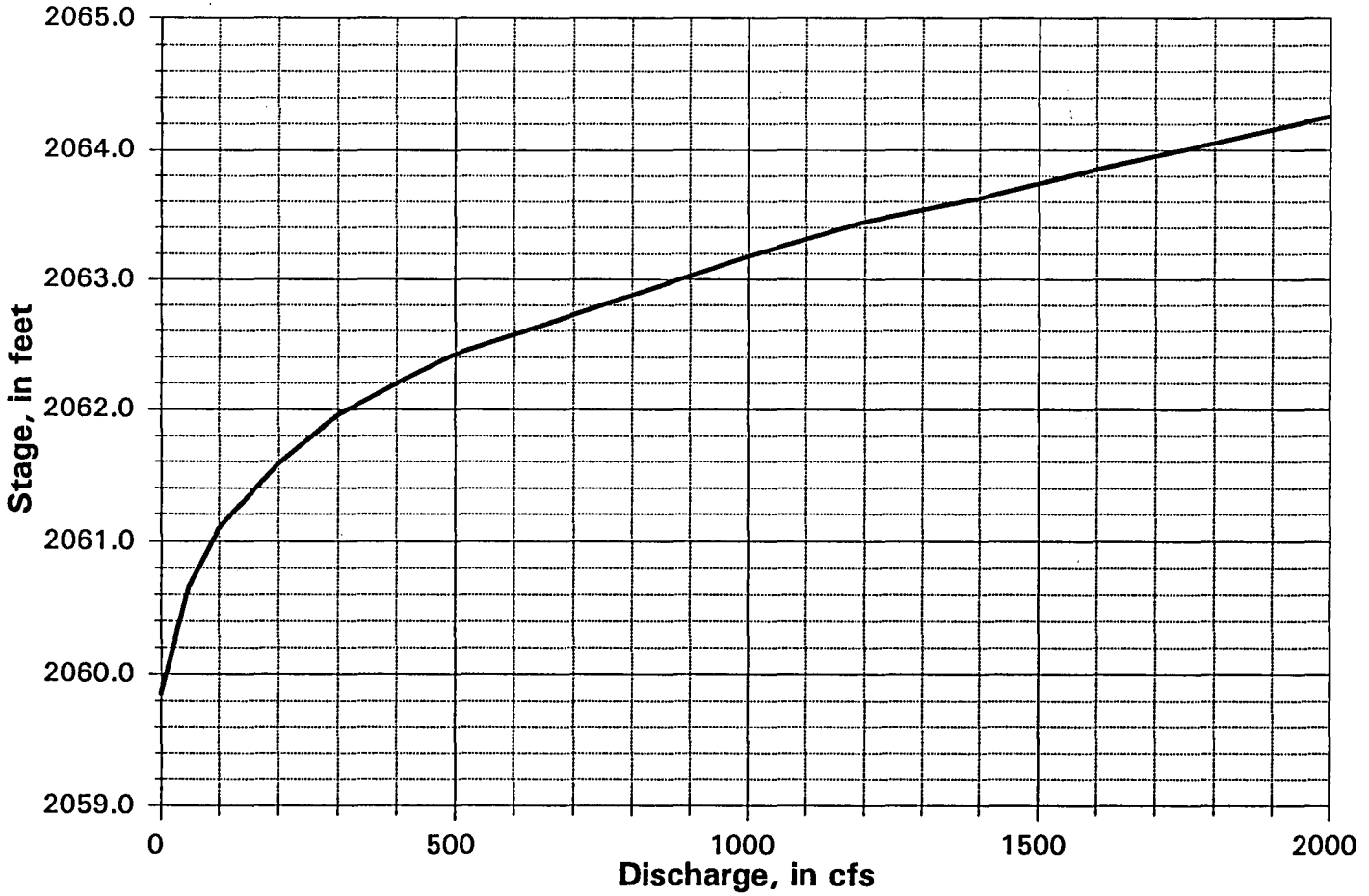

Figure D-7b

C532a Split Left

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED
```

```
1*****************************************                    ****************************************
 *  HEC-2 WATER SURFACE PROFILES           *                    *  U.S. ARMY CORPS OF ENGINEERS        *
 *                                         *                    *  HYDROLOGIC ENGINEERING CENTER       *
 *  Version   4.6.2;  May 1991             *                    *  609 SECOND STREET, SUITE D          *
 *                                         *                    *  DAVIS, CALIFORNIA 95616-4687        *
 *  RUN DATE    11JUL94    TIME   16:23:22 *                    *          (916) 756-1104              *
 *****************************************                    ****************************************

                                        X     X  XXXXXXX   XXXXX              XXXXX
                                        X     X  X        X     X            X     X
                                        X     X  X        X                        X
                                        XXXXXXX  XXXX     X          XXXXX    XXXXX
                                        X     X  X        X                  X
                                        X     X  X        X     X            X
                                        X     X  XXXXXXX   XXXXX             XXXXXXX
1
   11JUL94      16:23:22                                                                                    PAGE    1


                                                                                   THIS RUN EXECUTED 11JUL94    16:23:22
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      532a Left                                        FILE:    C532aL.IH2
 T4                                                       DATE:     07-11-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 532a
 T6                SPLIT LEFT (Left portion of three way split)
 T7
 T8      Single X-Section Run
                   Ditch slope =   0.0217 ft/ft  From Hydrologic Field Survey

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                           0.0217

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                        -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

     -10       -10

 NC    0.075      0.075      0.035        .1         .3
 QT       14         50        100       200        300        400        500        600        800       1000
 QT     1200       1400       1600      1800       2000

 NH        3      0.085     1086.0     0.040    1099.25       0.01       1100

         X-Section #1
 X1        1          6     1086.0    1099.25          0          0          0
 GR     2064        999     2061.9     1000.0    2060.77     1069.1    2059.86     1086.0    2059.89    1099.25
 GR     2064       1100
1
   11JUL94      16:23:22                                                                                    PAGE    2


 X1        2                                        .2         .2         .2

 X1        3                                        .2         .2         .2

 X1        4                                        .2         .2         .2

 X1        5                                        .2         .2         .2

 X1        6                                        .2         .2         .2
1
   11JUL94      16:23:22                                                                                    PAGE    3

 T3            Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                           0.0217

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

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      2                -1                                  -1

1
   11JUL94      16:23:22                                                                                PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                         0.0217
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      3                  -1                                      -1

1
   11JUL94      16:23:22                                                                                PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                         0.0217
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      4                  -1                                      -1

1
   11JUL94      16:23:22                                                                                PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                         0.0217
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      5                  -1                                      -1

1
   11JUL94      16:23:22                                                                                PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                         0.0217
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      6                  -1                                      -1

1
   11JUL94      16:23:22                                                                                PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                         0.0217
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      7                  -1                                      -1

1
   11JUL94      16:23:22                                                                                PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                         0.0217
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      8                  -1                                      -1

1
   11JUL94      16:23:22                                                                                PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                10                         0.0217
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     9                -1                                  -1

1
   11JUL94      16:23:22                                                                                PAGE   11

 T3           Q10
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               11                          0.0217
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                -1                                  -1

1
   11JUL94      16:23:22                                                                                PAGE   12

 T3           Q11
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               12                          0.0217
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                -1                                  -1

1
   11JUL94      16:23:22                                                                                PAGE   13

 T3           Q12
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               13                          0.0217
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                -1                                  -1

1
   11JUL94      16:23:22                                                                                PAGE   14

 T3           Q13
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               14                          0.0217
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                -1                                  -1

1
   11JUL94      16:23:22                                                                                PAGE   15

 T3           Q14
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               15                          0.0217
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                -1                                  -1


1
   11JUL94      16:23:22                                                                                PAGE   16


                                                                                THIS RUN EXECUTED 11JUL94    16:23:35
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

 NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

 532a Left

 SUMMARY PRINTOUT

       SECNO       Q       CWSEL     DEPTH      VCH      CRIWS      EG        HL       10*KS    KRATIO
```

	1.000	50.00	2060.61	.75	4.44	2060.57	2060.87	.00	217.03	.00
*	1.000	100.00	2060.96	1.10	5.51	2060.96	2061.34	.00	197.79	.00
*	1.000	200.00	2061.46	1.60	6.46	2061.46	2061.92	.00	163.94	.00
*	1.000	300.00	2061.81	1.95	7.11	2061.81	2062.31	.00	152.25	.00
*	1.000	400.00	2062.06	2.20	7.59	2062.06	2062.59	.00	147.10	.00
*	1.000	500.00	2062.24	2.38	8.24	2062.24	2062.84	.00	155.84	.00
*	1.000	600.00	2062.40	2.54	8.81	2062.40	2063.06	.00	163.23	.00
*	1.000	800.00	2062.71	2.85	9.69	2062.71	2063.46	.00	169.97	.00
*	1.000	1000.00	2062.94	3.08	10.63	2062.94	2063.82	.00	183.96	.00
*	1.000	1200.00	2063.18	3.32	11.32	2063.18	2064.15	.00	188.51	.00
*	1.000	1400.00	2063.38	3.52	12.04	2063.38	2064.46	.00	196.78	.00
*	1.000	1600.00	2063.58	3.72	12.65	2063.58	2064.76	.00	201.98	.00
*	1.000	1800.00	2063.78	3.92	13.17	2063.78	2065.04	.00	204.32	.00
*	1.000	2000.00	2063.97	4.11	13.64	2063.97	2065.31	.00	205.46	.00
	2.000	50.00	2060.62	.76	4.41	2060.58	2060.88	.00	212.41	1.01
	2.000	100.00	2060.97	1.11	5.48	2060.96	2061.35	.00	195.00	1.01
	2.000	200.00	2061.47	1.61	6.44	2061.46	2061.92	.00	162.52	1.00
	2.000	300.00	2061.81	1.95	7.09	2061.79	2062.31	.00	151.19	1.00
	2.000	400.00	2062.10	2.24	7.42	2062.07	2062.60	.00	137.99	1.03
	2.000	500.00	2062.28	2.42	8.04	2062.25	2062.84	.00	145.82	1.03
	2.000	600.00	2062.44	2.58	8.63	2062.41	2063.07	.00	154.03	1.03
	2.000	800.00	2062.71	2.85	9.67	2062.69	2063.46	.00	169.02	1.00
	2.000	1000.00	2062.99	3.13	10.42	2062.95	2063.83	.00	173.85	1.03
	2.000	1200.00	2063.19	3.33	11.30	2063.17	2064.16	.00	187.58	1.00
	2.000	1400.00	2063.44	3.58	11.81	2063.39	2064.47	.00	186.49	1.03
	2.000	1600.00	2063.64	3.78	12.40	2063.60	2064.77	.00	190.76	1.03
	2.000	1800.00	2063.84	3.98	12.95	2063.79	2065.05	.00	194.47	1.03
	2.000	2000.00	2063.98	4.12	13.62	2063.97	2065.31	.00	204.58	1.00

1

11JUL94 16:23:22 PAGE 17

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	50.00	2060.63	.77	4.36	2060.58	2060.88	.00	203.77	1.02
3.000	100.00	2060.98	1.12	5.43	2060.96	2061.35	.00	189.22	1.02
3.000	200.00	2061.48	1.62	6.40	2061.46	2061.93	.00	159.50	1.01
3.000	300.00	2061.82	1.96	7.05	2061.79	2062.31	.00	148.94	1.01
3.000	400.00	2062.11	2.25	7.37	2062.05	2062.60	.00	135.38	1.01
3.000	500.00	2062.29	2.43	7.99	2062.23	2062.85	.00	143.10	1.01
3.000	600.00	2062.45	2.59	8.57	2062.40	2063.07	.00	151.32	1.01
3.000	800.00	2062.72	2.86	9.63	2062.69	2063.47	.00	167.06	1.01
3.000	1000.00	2063.09	3.23	9.88	2062.93	2063.84	.00	149.28	1.08
3.000	1200.00	2063.20	3.34	11.26	2063.17	2064.16	.00	185.61	1.01
3.000	1400.00	2063.60	3.74	11.02	2063.37	2064.49	.00	152.71	1.11
3.000	1600.00	2063.82	3.96	11.56	2063.57	2064.79	.00	155.66	1.11
3.000	1800.00	2064.01	4.15	12.13	2063.77	2065.07	.00	160.56	1.10
3.000	2000.00	2064.00	4.14	13.58	2063.96	2065.32	.00	202.74	1.00
4.000	50.00	2060.65	.79	4.25	2060.58	2060.89	.00	188.22	1.04
4.000	100.00	2061.09	1.23	4.70	2060.96	2061.36	.00	122.62	1.24
4.000	200.00	2061.56	1.70	5.94	2061.45	2061.94	.00	128.91	1.11
4.000	300.00	2061.90	2.04	6.60	2061.81	2062.32	.00	123.81	1.10
4.000	400.00	2062.18	2.32	6.98	2062.07	2062.61	.00	116.75	1.08
4.000	500.00	2062.36	2.50	7.61	2062.25	2062.86	.00	125.42	1.07
4.000	600.00	2062.55	2.69	8.01	2062.41	2063.08	.00	125.22	1.10
4.000	800.00	2062.86	3.00	8.91	2062.68	2063.48	.00	133.99	1.12
4.000	1000.00	2063.11	3.25	9.82	2062.94	2063.84	.00	146.95	1.01
4.000	1200.00	2063.36	3.50	10.47	2063.17	2064.18	.00	150.98	1.11
4.000	1400.00	2063.61	3.75	10.99	2063.38	2064.49	.00	151.38	1.00
4.000	1600.00	2063.83	3.97	11.53	2063.58	2064.79	.00	154.39	1.00
4.000	1800.00	2064.03	4.17	12.09	2063.78	2065.07	.00	159.13	1.00
4.000	2000.00	2064.23	4.37	12.51	2063.96	2065.34	.00	159.55	1.13
5.000	50.00	2060.66	.80	4.13	2060.57	2060.89	.00	172.56	1.04
5.000	100.00	2061.10	1.24	4.69	2060.96	2061.37	.00	121.63	1.00
5.000	200.00	2061.57	1.71	5.85	2061.46	2061.94	.00	123.23	1.02
5.000	300.00	2061.91	2.05	6.55	2061.77	2062.33	.00	120.83	1.01
5.000	400.00	2062.19	2.33	6.92	2062.06	2062.61	.00	114.09	1.01
5.000	500.00	2062.41	2.55	7.31	2062.24	2062.86	.00	111.90	1.06
5.000	600.00	2062.56	2.70	7.96	2062.40	2063.08	.00	123.27	1.01
5.000	800.00	2062.87	3.01	8.87	2062.68	2063.49	.00	132.58	1.01
5.000	1000.00	2063.17	3.31	9.46	2062.94	2063.85	.00	132.12	1.05
5.000	1200.00	2063.37	3.51	10.42	2063.17	2064.18	.00	148.76	1.01
5.000	1400.00	2063.62	3.76	10.95	2063.38	2064.50	.00	149.80	1.01
5.000	1600.00	2063.84	3.98	11.49	2063.58	2064.79	.00	152.85	1.01
5.000	1800.00	2064.04	4.18	12.05	2063.78	2065.07	.00	157.48	1.01
5.000	2000.00	2064.24	4.38	12.48	2063.96	2065.35	.00	158.25	1.00

1

11JUL94 16:23:22 PAGE 18

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	50.00	2060.68	.82	4.06	2060.57	2060.90	.00	162.60	1.03
6.000	100.00	2061.10	1.24	4.67	2060.96	2061.37	.00	120.16	1.01
6.000	200.00	2061.59	1.73	5.76	2061.46	2061.94	.00	117.84	1.02
6.000	300.00	2061.96	2.10	6.25	2061.78	2062.33	.00	106.38	1.07
6.000	400.00	2062.20	2.34	6.86	2062.06	2062.62	.00	111.39	1.01
6.000	500.00	2062.42	2.56	7.28	2062.24	2062.87	.00	110.92	1.00
6.000	600.00	2062.57	2.71	7.91	2062.40	2063.09	.00	121.17	1.01
6.000	800.00	2062.88	3.02	8.83	2062.69	2063.49	.00	130.95	1.01
6.000	1000.00	2063.18	3.32	9.45	2062.94	2063.86	.00	131.73	1.00
6.000	1200.00	2063.45	3.59	10.02	2063.17	2064.19	.00	132.77	1.06
6.000	1400.00	2063.63	3.77	10.90	2063.38	2064.50	.00	147.99	1.01
6.000	1600.00	2063.85	3.99	11.45	2063.59	2064.80	.00	151.09	1.01
6.000	1800.00	2064.05	4.19	11.98	2063.78	2065.08	.00	154.77	1.01
6.000	2000.00	2064.26	4.40	12.44	2063.96	2065.35	.00	156.75	1.00

1

11JUL94 16:23:22 PAGE 19

```
1*****************************************                    ****************************************
 *  HEC-2 WATER SURFACE PROFILES           *                    *  U.S. ARMY CORPS OF ENGINEERS        *
 *                                         *                    *  HYDROLOGIC ENGINEERING CENTER       *
 *  Version   4.6.2;  May 1991             *                    *  609 SECOND STREET, SUITE D          *
 *                                         *                    *  DAVIS, CALIFORNIA 95616-4687        *
 *  RUN DATE    11JUL94    TIME   16:22:36 *                    *          (916) 756-1104              *
*****************************************                    ****************************************


                                        X     X  XXXXXXX   XXXXX              XXXXX
                                        X     X  X        X     X            X     X
                                        X     X  X        X                        X
                                        XXXXXXX  XXXX     X          XXXXX    XXXXX
                                        X     X  X        X                  X
                                        X     X  X        X     X            X
                                        X     X  XXXXXXX   XXXXX             XXXXXXX
1
   11JUL94      16:22:36                                                                                    PAGE    1


                                                                                  THIS RUN EXECUTED 11JUL94    16:22:36
*************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
*************************************

T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
T3      532a Right                                          FILE:    C532aR.IH2
T4                                                          DATE:     07-11-94  dtp
T4
T5              This model is used to develop a flow split rating curve
T6              for the split that occurs at hydrologic concentration point 532a
T6                SPLIT RIGHT (Middle portion of three way split)
T7
T8      Single X-Section Run
                Ditch slope =   0.0217 ft/ft  From Hydrologic Field Survey

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                2                         0.0217

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

     1                  -1                                      -1

   SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

J3  VARIABLE CODES FOR SUMMARY PRINTOUT

    38         43          1          8         26          2          3         11          5         58

J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

    -10       -10

NC    0.075      0.075      0.035        .1         .3
QT       14         25         50       100        150        200        250        300        350        400
QT      450        500        600       700        800

NH        4       0.01    1099.25      0.04     1112.5      0.085     1120.3       0.01       1121

        X-Section #1
X1        1          5    1099.25    1112.5          0          0          0
GR     2064       1098     2059.8   1099.25     2059.9     1112.5     2060.1     1120.3       2064       1121

1
   11JUL94      16:22:36                                                                                    PAGE    2


X1        2                                        .2         .2         .2

X1        3                                        .2         .2         .2

X1        4                                        .2         .2         .2

X1        5                                        .2         .2         .2

X1        6                                        .2         .2         .2

1
   11JUL94      16:22:36                                                                                    PAGE    3

T3            Q2

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                3                         0.0217

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     2                -1                                  -1

1
   11JUL94      16:22:36                                                                                PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                           0.0217
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     3                   -1                                      -1

1
   11JUL94      16:22:36                                                                                PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                           0.0217
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     4                   -1                                      -1

1
   11JUL94      16:22:36                                                                                PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                           0.0217
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     5                   -1                                      -1

1
   11JUL94      16:22:36                                                                                PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                           0.0217
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     6                   -1                                      -1

1
   11JUL94      16:22:36                                                                                PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                           0.0217
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     7                   -1                                      -1

1
   11JUL94      16:22:36                                                                                PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                           0.0217
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     8                   -1                                      -1

1
   11JUL94      16:22:36                                                                                PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                10                           0.0217
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     9                -1                                  -1

1
   11JUL94      16:22:36                                                                                PAGE   11

 T3           Q10
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                11                          0.0217
 J2  NPROF     IPLOT     PREVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                 -1                                        -1

1
   11JUL94      16:22:36                                                                                PAGE   12

 T3           Q11
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                12                          0.0217
 J2  NPROF     IPLOT     PREVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                 -1                                        -1

1
   11JUL94      16:22:36                                                                                PAGE   13

 T3           Q12
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                13                          0.0217
 J2  NPROF     IPLOT     PREVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                 -1                                        -1

1
   11JUL94      16:22:36                                                                                PAGE   14

 T3           Q13
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                14                          0.0217
 J2  NPROF     IPLOT     PREVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                 -1                                        -1

1
   11JUL94      16:22:36                                                                                PAGE   15

 T3           Q14
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                15                          0.0217
 J2  NPROF     IPLOT     PREVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                 -1                                        -1


1
   11JUL94      16:22:36                                                                                PAGE   16


                                                                          THIS RUN EXECUTED 11JUL94    16:22:49
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

 NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

 532a Right

 SUMMARY PRINTOUT

       SECNO       Q       CWSEL     DEPTH      VCH       CRIWS      EG        HL       10*KS    KRATIO
```

	1.000	25.00	2060.34	.54	3.37	2060.29	2060.49	.00	215.72	.00
	1.000	50.00	2060.57	.77	4.40	2060.52	2060.83	.00	216.57	.00
	1.000	100.00	2060.92	1.12	5.76	2060.88	2061.36	.00	220.41	.00
*	1.000	150.00	2061.20	1.40	6.68	2061.20	2061.80	.00	215.86	.00
	1.000	200.00	2061.45	1.65	7.49	2061.44	2062.19	.00	217.24	.00
*	1.000	250.00	2061.68	1.88	8.12	2061.68	2062.55	.00	213.44	.00
*	1.000	300.00	2061.90	2.10	8.62	2061.90	2062.88	.00	206.02	.00
*	1.000	350.00	2062.12	2.32	9.07	2062.12	2063.20	.00	200.20	.00
*	1.000	400.00	2062.31	2.51	9.49	2062.31	2063.50	.00	195.80	.00
*	1.000	450.00	2062.51	2.71	9.84	2062.51	2063.78	.00	190.41	.00
*	1.000	500.00	2062.70	2.90	10.16	2062.70	2064.06	.00	184.71	.00
*	1.000	600.00	2063.05	3.25	10.78	2063.05	2064.58	.00	178.27	.00
*	1.000	700.00	2063.39	3.59	11.33	2063.39	2065.07	.00	172.38	.00
*	1.000	800.00	2063.71	3.91	11.79	2063.71	2065.54	.00	166.10	.00
	2.000	25.00	2060.34	.54	3.34	2060.29	2060.50	.00	208.98	1.02
	2.000	50.00	2060.58	.78	4.37	2060.52	2060.84	.00	212.06	1.01
	2.000	100.00	2060.92	1.12	5.73	2060.88	2061.36	.00	217.31	1.01
	2.000	150.00	2061.21	1.41	6.66	2061.17	2061.80	.00	213.46	1.01
	2.000	200.00	2061.46	1.66	7.46	2061.43	2062.19	.00	215.20	1.00
	2.000	250.00	2061.69	1.89	8.10	2061.68	2062.55	.00	211.79	1.00
	2.000	300.00	2061.91	2.11	8.60	2061.90	2062.89	.00	204.59	1.00
	2.000	350.00	2062.12	2.32	9.05	2062.12	2063.20	.00	199.02	1.00
	2.000	400.00	2062.36	2.56	9.35	2062.32	2063.50	.00	186.93	1.02
	2.000	450.00	2062.55	2.75	9.72	2062.52	2063.79	.00	182.79	1.02
	2.000	500.00	2062.71	2.91	10.14	2062.70	2064.06	.00	183.90	1.00
	2.000	600.00	2063.06	3.26	10.77	2063.06	2064.58	.00	177.57	1.00
	2.000	700.00	2063.44	3.64	11.19	2063.39	2065.08	.00	165.72	1.02
	2.000	800.00	2063.72	3.92	11.78	2063.71	2065.54	.00	165.59	1.00

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	25.00	2060.35	.55	3.28	2060.29	2060.50	.00	198.00	1.03
3.000	50.00	2060.59	.79	4.32	2060.52	2060.84	.00	204.09	1.02
3.000	100.00	2060.94	1.14	5.68	2060.88	2061.37	.00	211.26	1.01
3.000	150.00	2061.23	1.43	6.61	2061.17	2061.81	.00	208.77	1.01
3.000	200.00	2061.47	1.67	7.42	2061.43	2062.20	.00	211.07	1.01
3.000	250.00	2061.70	1.90	8.06	2061.67	2062.56	.00	208.33	1.01
3.000	300.00	2061.93	2.13	8.56	2061.90	2062.89	.00	201.62	1.01
3.000	350.00	2062.14	2.34	9.02	2062.11	2063.21	.00	196.54	1.01
3.000	400.00	2062.48	2.68	8.90	2062.31	2063.52	.00	158.77	1.09
3.000	450.00	2062.70	2.90	9.19	2062.51	2063.81	.00	152.16	1.10
3.000	500.00	2062.72	2.92	10.12	2062.70	2064.07	.00	182.18	1.00
3.000	600.00	2063.07	3.27	10.74	2063.06	2064.59	.00	176.13	1.00
3.000	700.00	2063.62	3.82	10.61	2063.38	2065.10	.00	139.45	1.09
3.000	800.00	2063.73	3.93	11.75	2063.70	2065.54	.00	164.55	1.00
4.000	25.00	2060.36	.56	3.22	2060.29	2060.51	.00	184.92	1.03
4.000	50.00	2060.60	.80	4.25	2060.52	2060.85	.00	194.06	1.03
4.000	100.00	2060.99	1.19	5.36	2060.87	2061.38	.00	175.02	1.10
4.000	150.00	2061.30	1.50	6.23	2061.21	2061.82	.00	171.72	1.10
4.000	200.00	2061.59	1.79	6.88	2061.44	2062.21	.00	165.22	1.13
4.000	250.00	2061.85	2.05	7.44	2061.67	2062.57	.00	160.25	1.14
4.000	300.00	2062.10	2.30	7.86	2061.90	2062.91	.00	152.50	1.15
4.000	350.00	2062.32	2.52	8.32	2062.11	2063.23	.00	150.99	1.14
4.000	400.00	2062.56	2.76	8.59	2062.32	2063.53	.00	141.84	1.06
4.000	450.00	2062.72	2.92	9.13	2062.51	2063.81	.00	149.05	1.01
4.000	500.00	2062.94	3.14	9.36	2062.69	2064.09	.00	141.28	1.14
4.000	600.00	2063.32	3.52	9.94	2063.05	2064.61	.00	136.74	1.13
4.000	700.00	2063.74	3.94	10.23	2063.39	2065.11	.00	123.97	1.06
4.000	800.00	2064.02	4.22	10.87	2063.71	2065.57	.00	127.71	1.14
5.000	25.00	2060.38	.58	3.14	2060.29	2060.51	.00	172.07	1.04
5.000	50.00	2060.62	.82	4.18	2060.52	2060.85	.00	183.23	1.03
5.000	100.00	2061.00	1.20	5.32	2060.88	2061.38	.00	170.95	1.01
5.000	150.00	2061.31	1.51	6.19	2061.17	2061.82	.00	167.98	1.01
5.000	200.00	2061.60	1.80	6.84	2061.43	2062.22	.00	161.98	1.01
5.000	250.00	2061.86	2.06	7.39	2061.68	2062.58	.00	157.11	1.01
5.000	300.00	2062.11	2.31	7.82	2061.90	2062.91	.00	150.29	1.01
5.000	350.00	2062.33	2.53	8.28	2062.11	2063.23	.00	148.69	1.01
5.000	400.00	2062.57	2.77	8.58	2062.32	2063.53	.00	140.92	1.00
5.000	450.00	2062.79	2.99	8.88	2062.51	2063.82	.00	135.93	1.05
5.000	500.00	2062.95	3.15	9.33	2062.70	2064.09	.00	139.79	1.01
5.000	600.00	2063.33	3.53	9.91	2063.05	2064.62	.00	135.38	1.01
5.000	700.00	2063.74	3.94	10.24	2063.39	2065.11	.00	124.21	1.00
5.000	800.00	2064.03	4.23	10.85	2063.70	2065.58	.00	126.93	1.00

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	25.00	2060.39	.58	3.08	2060.29	2060.51	.00	160.36	1.04
6.000	50.00	2060.66	.86	3.86	2060.52	2060.86	.00	143.06	1.13
6.000	100.00	2061.01	1.21	5.28	2060.87	2061.38	.00	166.40	1.01
6.000	150.00	2061.33	1.53	6.14	2061.17	2061.83	.00	163.88	1.01
6.000	200.00	2061.61	1.81	6.79	2061.44	2062.22	.00	158.36	1.01
6.000	250.00	2061.88	2.08	7.32	2061.68	2062.58	.00	152.39	1.02
6.000	300.00	2062.12	2.32	7.79	2061.90	2062.92	.00	147.96	1.01
6.000	350.00	2062.35	2.55	8.22	2062.11	2063.23	.00	145.26	1.01
6.000	400.00	2062.57	2.77	8.55	2062.32	2063.54	.00	139.66	1.00
6.000	450.00	2062.79	2.99	8.86	2062.51	2063.82	.00	135.23	1.00
6.000	500.00	2062.96	3.16	9.29	2062.70	2064.10	.00	138.09	1.01
6.000	600.00	2063.34	3.54	9.88	2063.05	2064.62	.00	133.91	1.01
6.000	700.00	2063.74	3.94	10.24	2063.39	2065.12	.00	124.10	1.00
6.000	800.00	2064.04	4.24	10.83	2063.70	2065.58	.00	126.04	1.00

1

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SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED
```

Table D-8
Flow split at C534

Stage	Discharge, in cfs		
	Left	Right	Total
---	0	0	0
---	70	30	100
---	140	60	200
---	420	180	600
---	700	300	1000
---	1050	450	1500
---	1400	600	2000

Based on field reconnaissance and aerial photographs, a 70 / 30 split was used.

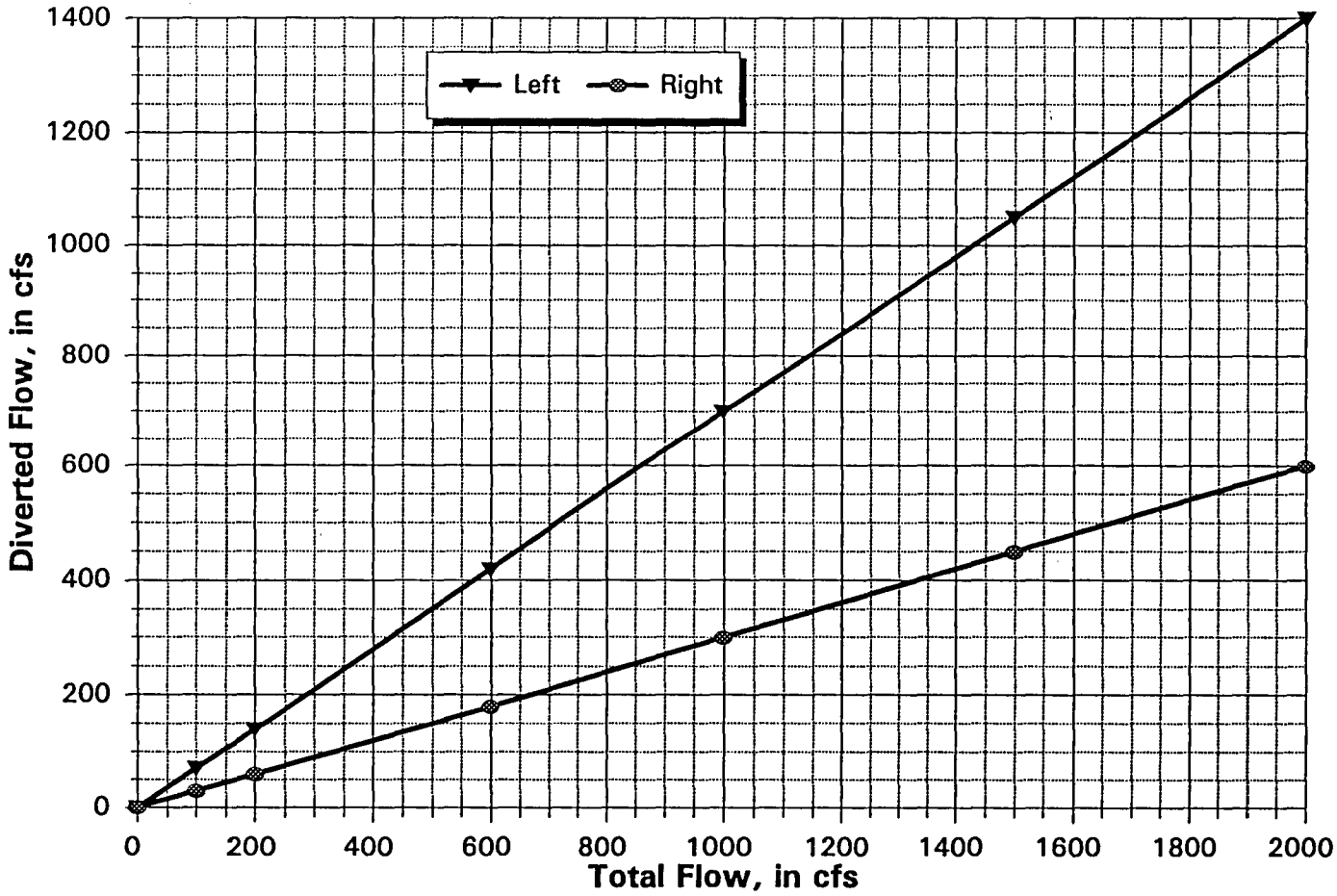

Figure D-8

Flow split at C534

Table D-9
Flow split at C535

Stage	Discharge, in cfs		
	Left	Right	Total
---	0	0	0
---	15	85	100
---	30	170	200
---	90	510	600
---	150	850	1000
---	225	1275	1500

Based on field reconnaissance and aerial photographs, a 15 / 85 split was used.

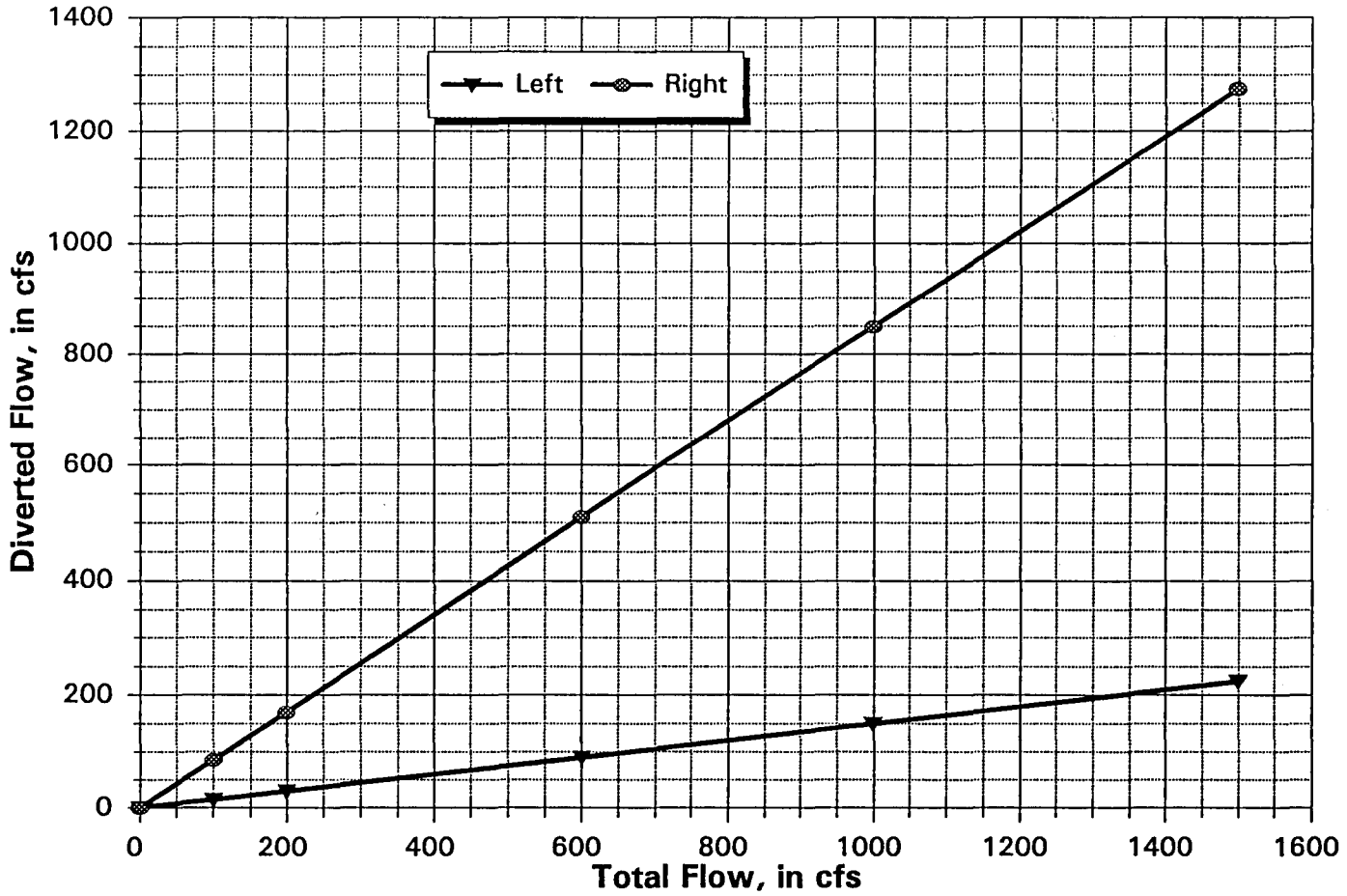

Figure D-9

Flow split at C535

Table D-10
Flow split at C537

Stage	Discharge, in cfs		
	Left	Right	Total
2057.3	0	0	0
2057.5	0	7	7
2057.7	0	18	18
2057.9	0	40	40
2058.1	0	75	75
2058.3	0	125	125
2058.5	0	180	180
2058.7	10	245	255
2058.9	30	320	350
2059.1	54	400	454
2059.3	100	500	600
2059.5	160	585	745
2059.7	220	710	930
2059.9	310	845	1155
2060.1	410	965	1375
2060.3	520	1110	1630
2060.5	640	1315	1955

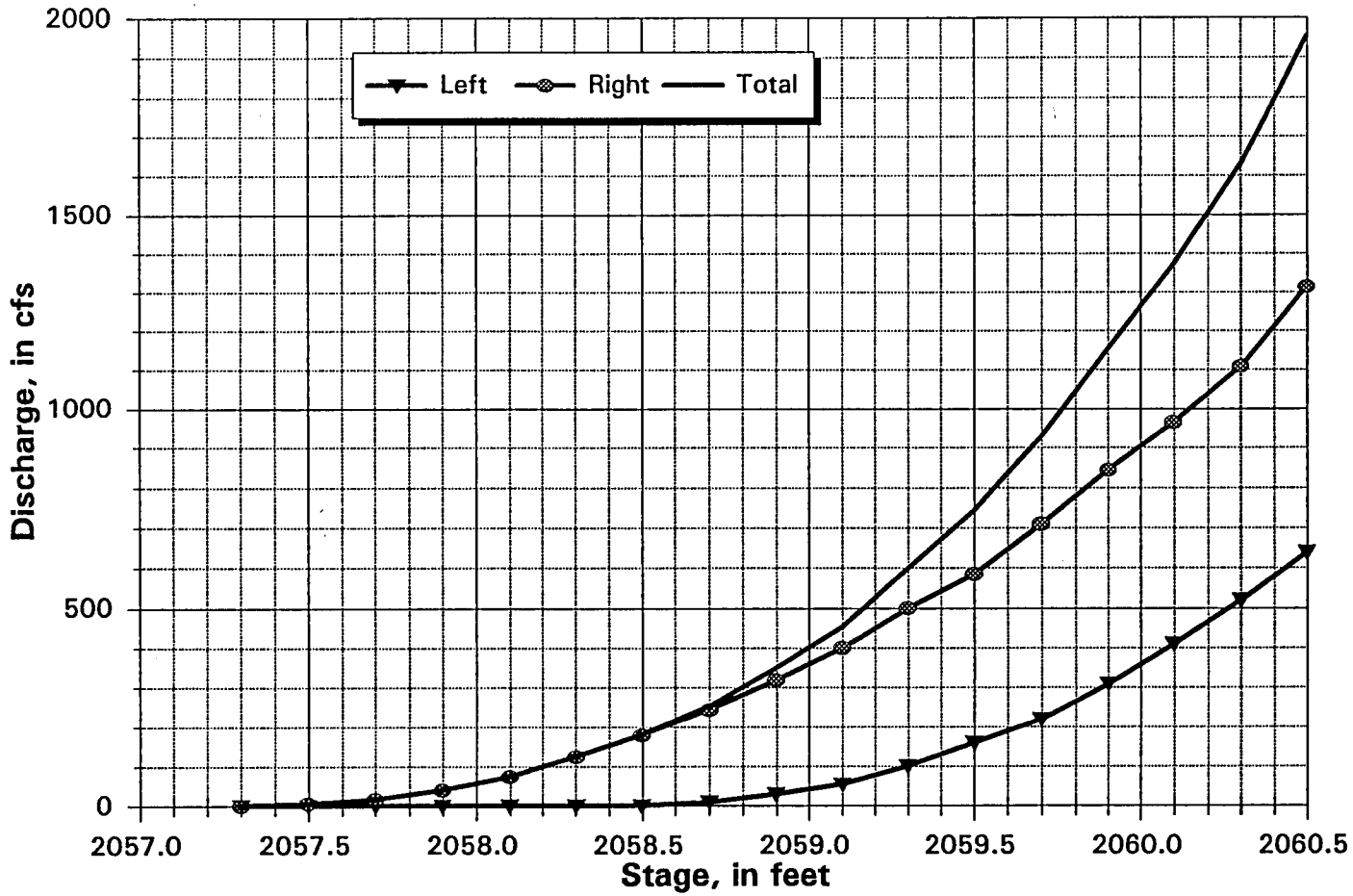

Figure D-10

Flow split at C537

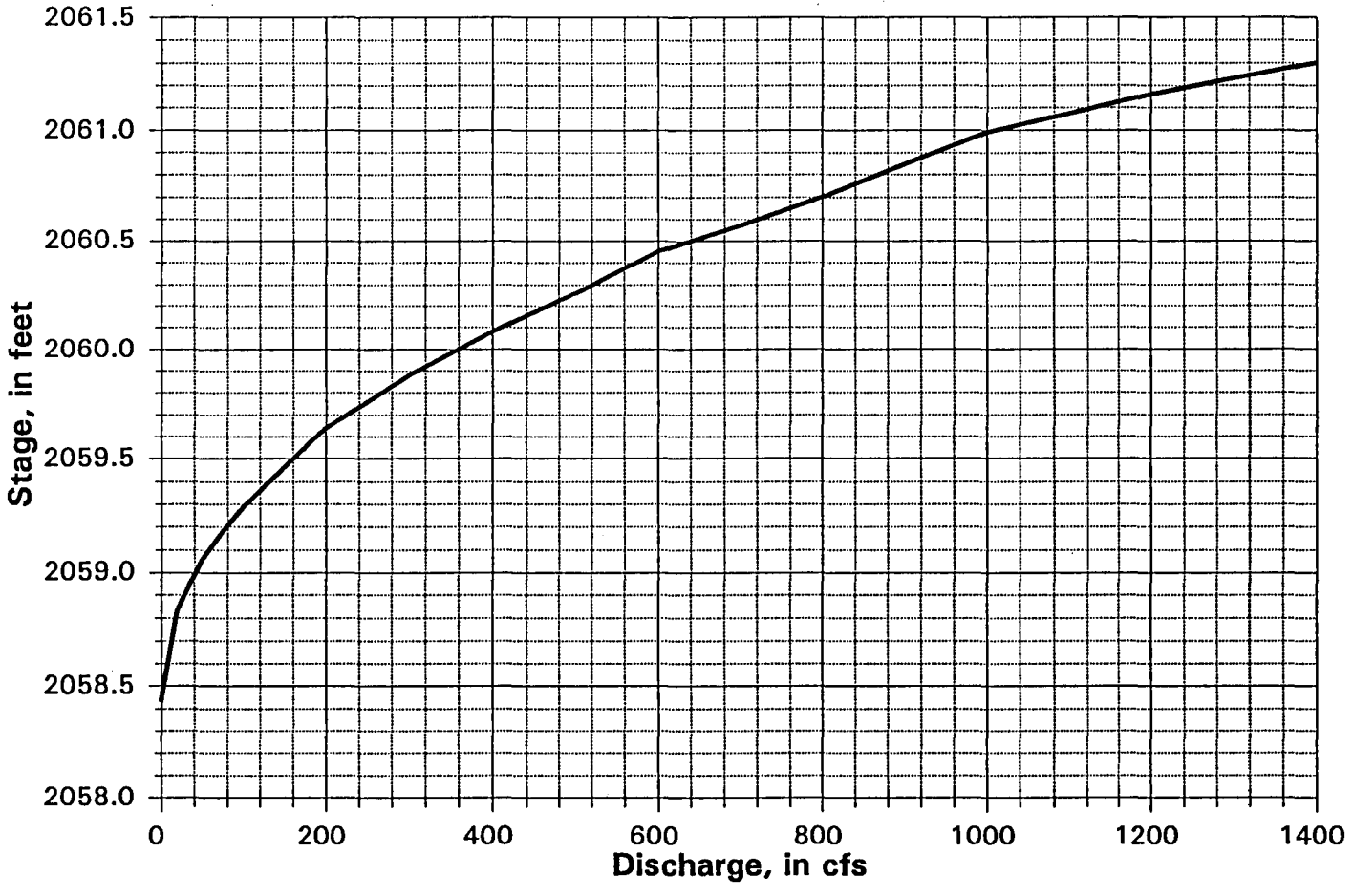

Figure D-10a

C537 Split Left

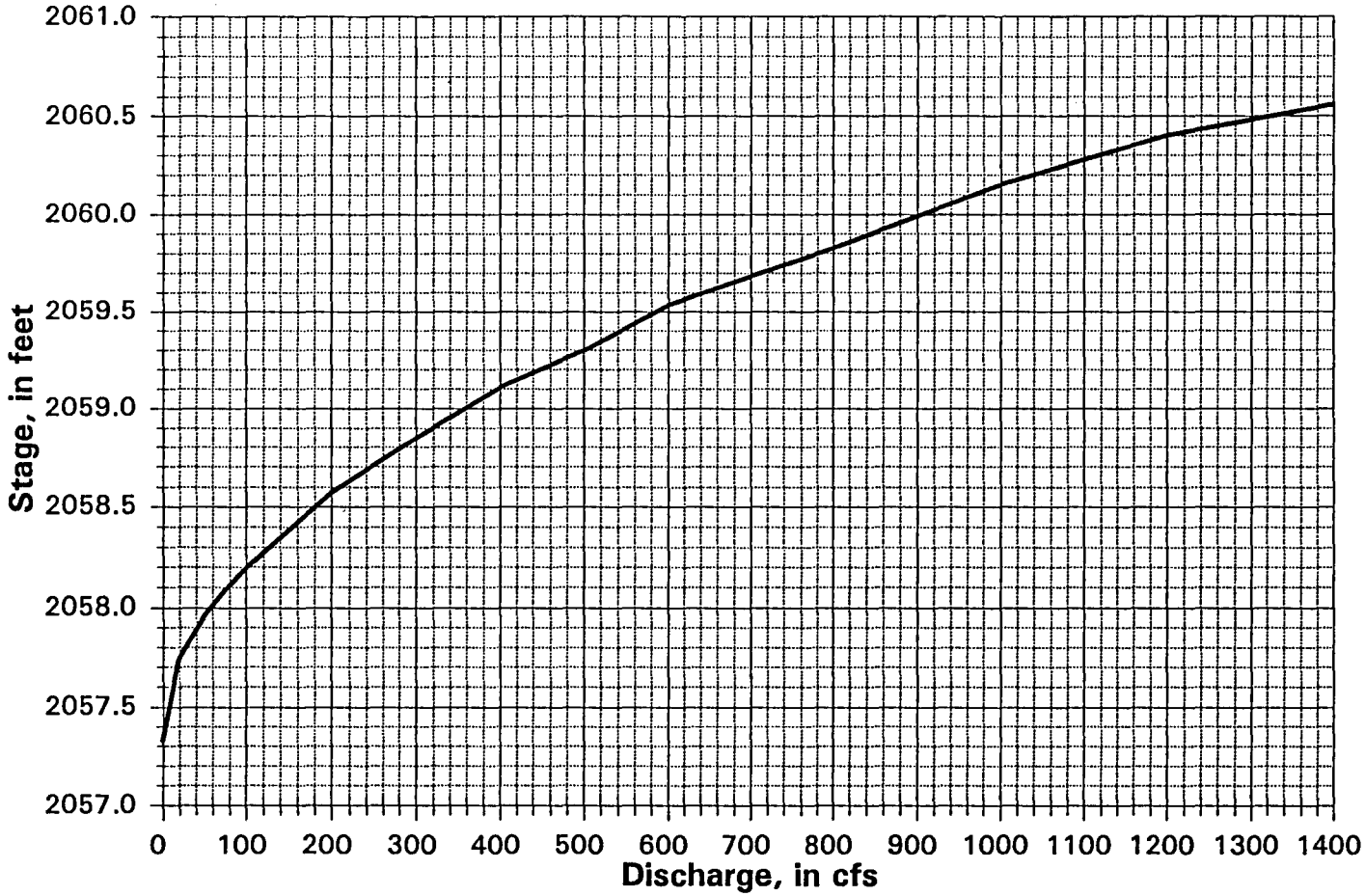

Figure D-10b

C537 Split Right

```
1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
 *  RUN DATE    16JUN94    TIME   16:35:19 *
 *****************************************

                                                                                                  ***************************************
                                                                                                  *  U.S. ARMY CORPS OF ENGINEERS       *
                                                                                                  *  HYDROLOGIC ENGINEERING CENTER      *
                                                                                                  *  609 SECOND STREET, SUITE D         *
                                                                                                  *  DAVIS, CALIFORNIA 95616-4687       *
                                                                                                  *          (916) 756-1104             *
                                                                                                  ***************************************

                                        X     X  XXXXXXX   XXXXX              XXXXX
                                        X     X  X        X     X            X     X
                                        X     X  X        X                  X
                                        XXXXXXX  XXXX     X          XXXXX    XXXXX
                                        X     X  X        X                  X
                                        X     X  X        X     X            X
                                        X     X  XXXXXXX   XXXXX             XXXXXXX
1
   16JUN94      16:35:19                                                                                                          PAGE    1


                                                                                                THIS RUN EXECUTED 16JUN94    16:35:19
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      537 Left                                          FILE:     C537L.IH2
 T4                                                        DATE:     06-16-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 537
 T6                SPLIT  LEFT
 T7
 T8      Single X-Section Run
                   Ditch slope =   0.0247 ft/ft  From Hydrologic Field Survey

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                           0.0247

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                        -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

     -10       -10

 NC    0.075      0.075      0.035        .1         .3
 QT       14         20         50         75        100        200        300        400        500        600
 QT      700        800       1000       1200       1400

 NH        4      0.075     1248.6      0.035     1269.5      0.075       1294       0.01       1295
         X-Section #1
 X1        1         15     1248.6     1269.5          0          0          0
 GR     2063        999    2062.74     1000.0    2060.07     1035.8    2059.89     1048.5    2060.77     1088.0
 GR   2060.6     1104.2    2060.88     1138.5    2059.03     1218.4    2058.97     1223.6    2058.90     1230.3
 GR   2058.5     1247.5    2058.51     1248.6    2058.44     1269.5    2059.58     1294.0       2063       1295

1
   16JUN94      16:35:19                                                                                                          PAGE    2


 X1        2                                          .2         .2         .2

 X1        3                                          .2         .2         .2

 X1        4                                          .2         .2         .2

 X1        5                                          .2         .2         .2

 X1        6                                          .2         .2         .2

1
   16JUN94      16:35:19                                                                                                          PAGE    3

 T3          Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                           0.0247

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
      2                -1                                  -1

1
   16JUN94      16:35:19                                                                                PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                         0.0247
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      3                -1                                  -1

1
   16JUN94      16:35:19                                                                                PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                         0.0247
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      4                -1                                  -1

1
   16JUN94      16:35:19                                                                                PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                         0.0247
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      5                -1                                  -1

1
   16JUN94      16:35:19                                                                                PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                         0.0247
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      6                -1                                  -1

1
   16JUN94      16:35:19                                                                                PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                         0.0247
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      7                -1                                  -1

1
   16JUN94      16:35:19                                                                                PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                         0.0247
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      8                -1                                  -1

1
   16JUN94      16:35:19                                                                                PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                10                         0.0247
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     9                -1                                  -1

1
   16JUN94      16:35:19                                                                                PAGE   11

 T3           Q10
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                11                          0.0247
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                  -1                                      -1

1
   16JUN94      16:35:19                                                                                PAGE   12

 T3           Q11
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                12                          0.0247
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                  -1                                      -1

1
   16JUN94      16:35:19                                                                                PAGE   13

 T3           Q12
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                13                          0.0247
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                  -1                                      -1

1
   16JUN94      16:35:19                                                                                PAGE   14

 T3           Q13
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                14                          0.0247
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                  -1                                      -1

1
   16JUN94      16:35:19                                                                                PAGE   15

 T3           Q14
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                15                          0.0247
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                  -1                                      -1


1
   16JUN94      16:35:19                                                                                PAGE   16


                                                                    THIS RUN EXECUTED 16JUN94     16:35:36
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

 NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

 537 Left

 SUMMARY PRINTOUT

       SECNO       Q       CWSEL     DEPTH      VCH       CRIWS      EG        HL       10*KS    KRATIO
```

	1.000	20.00	2058.76	.32	2.91	2058.75	2058.88	.00	247.47	.00
*	1.000	50.00	2058.97	.53	3.82	2058.97	2059.16	.00	204.38	.00
*	1.000	75.00	2059.10	.66	4.27	2059.10	2059.32	.00	187.65	.00
*	1.000	100.00	2059.20	.76	4.69	2059.20	2059.46	.00	186.56	.00
*	1.000	200.00	2059.51	1.07	5.87	2059.51	2059.87	.00	183.11	.00
*	1.000	300.00	2059.76	1.32	6.44	2059.76	2060.16	.00	164.11	.00
*	1.000	400.00	2059.95	1.51	7.07	2059.95	2060.41	.00	165.51	.00
*	1.000	500.00	2060.13	1.69	7.47	2060.13	2060.62	.00	158.06	.00
*	1.000	600.00	2060.29	1.85	7.81	2060.29	2060.81	.00	152.89	.00
*	1.000	700.00	2060.42	1.98	8.18	2060.42	2060.97	.00	152.99	.00
*	1.000	800.00	2060.54	2.10	8.51	2060.54	2061.12	.00	153.07	.00
*	1.000	1000.00	2060.82	2.38	8.63	2060.82	2061.38	.00	132.86	.00
*	1.000	1200.00	2060.99	2.55	9.06	2060.99	2061.58	.00	133.07	.00
*	1.000	1400.00	2061.13	2.69	9.54	2061.13	2061.76	.00	137.14	.00
	2.000	20.00	2058.77	.33	2.85	2058.75	2058.88	.00	233.03	1.03
	2.000	50.00	2058.98	.54	3.78	2058.97	2059.16	.00	197.99	1.02
	2.000	75.00	2059.11	.67	4.23	2059.10	2059.33	.00	183.40	1.01
	2.000	100.00	2059.21	.77	4.66	2059.20	2059.46	.00	182.87	1.01
	2.000	200.00	2059.54	1.10	5.70	2059.52	2059.87	.00	167.77	1.04
	2.000	300.00	2059.77	1.33	6.41	2059.76	2060.17	.00	162.42	1.01
	2.000	400.00	2059.96	1.52	7.05	2059.95	2060.42	.00	163.91	1.00
	2.000	500.00	2060.14	1.70	7.45	2060.13	2060.63	.00	156.76	1.00
	2.000	600.00	2060.29	1.85	7.79	2060.28	2060.81	.00	151.72	1.00
	2.000	700.00	2060.43	1.99	8.16	2060.42	2060.97	.00	151.88	1.00
	2.000	800.00	2060.57	2.13	8.35	2060.54	2061.13	.00	144.86	1.03
	2.000	1000.00	2060.82	2.38	8.62	2060.82	2061.38	.00	132.13	1.00
	2.000	1200.00	2061.04	2.60	8.76	2061.01	2061.58	.00	121.45	1.05
	2.000	1400.00	2061.19	2.75	9.22	2061.15	2061.76	.00	125.23	1.05

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	20.00	2058.79	.35	2.75	2058.76	2058.89	.00	206.61	1.06
3.000	50.00	2058.99	.55	3.70	2058.98	2059.17	.00	185.94	1.03
3.000	75.00	2059.12	.68	4.17	2059.10	2059.33	.00	174.73	1.02
3.000	100.00	2059.22	.78	4.60	2059.20	2059.47	.00	175.30	1.02
3.000	200.00	2059.55	1.11	5.63	2059.52	2059.88	.00	161.75	1.02
3.000	300.00	2059.78	1.34	6.37	2059.75	2060.17	.00	158.86	1.01
3.000	400.00	2059.97	1.53	7.00	2059.95	2060.42	.00	160.75	1.01
3.000	500.00	2060.15	1.71	7.40	2060.13	2060.63	.00	154.01	1.01
3.000	600.00	2060.30	1.86	7.74	2060.28	2060.81	.00	149.41	1.01
3.000	700.00	2060.44	2.00	8.12	2060.42	2060.98	.00	149.69	1.01
3.000	800.00	2060.58	2.14	8.29	2060.53	2061.13	.00	142.21	1.01
3.000	1000.00	2060.83	2.39	8.58	2060.82	2061.38	.00	130.61	1.01
3.000	1200.00	2061.13	2.69	8.23	2060.99	2061.59	.00	102.55	1.09
3.000	1400.00	2061.26	2.82	8.74	2061.13	2061.77	.00	108.33	1.08
4.000	20.00	2058.80	.36	2.57	2058.75	2058.89	.00	167.82	1.11
4.000	50.00	2059.04	.60	3.32	2058.97	2059.17	.00	133.19	1.18
4.000	75.00	2059.16	.72	3.85	2059.10	2059.34	.00	137.86	1.13
4.000	100.00	2059.27	.83	4.26	2059.20	2059.47	.00	139.92	1.12
4.000	200.00	2059.62	1.18	5.13	2059.52	2059.89	.00	123.14	1.15
4.000	300.00	2059.86	1.42	5.81	2059.75	2060.18	.00	121.86	1.14
4.000	400.00	2060.05	1.61	6.51	2059.94	2060.43	.00	129.81	1.11
4.000	500.00	2060.24	1.80	6.84	2060.12	2060.64	.00	122.59	1.12
4.000	600.00	2060.37	1.93	7.34	2060.28	2060.82	.00	128.10	1.08
4.000	700.00	2060.55	2.11	7.43	2060.41	2060.99	.00	116.45	1.13
4.000	800.00	2060.68	2.24	7.67	2060.56	2061.14	.00	114.07	1.12
4.000	1000.00	2060.84	2.40	8.53	2060.82	2061.39	.00	128.34	1.01
4.000	1200.00	2061.14	2.70	8.17	2061.00	2061.60	.00	100.81	1.01
4.000	1400.00	2061.27	2.83	8.68	2061.14	2061.78	.00	106.35	1.01
5.000	20.00	2058.82	.38	2.46	2058.76	2058.90	.00	146.33	1.07
5.000	50.00	2059.05	.61	3.25	2058.97	2059.18	.00	124.90	1.03
5.000	75.00	2059.17	.73	3.77	2059.10	2059.34	.00	129.37	1.03
5.000	100.00	2059.28	.84	4.14	2059.20	2059.48	.00	128.18	1.04
5.000	200.00	2059.63	1.19	5.07	2059.50	2059.89	.00	118.56	1.02
5.000	300.00	2059.87	1.43	5.77	2059.75	2060.18	.00	119.37	1.01
5.000	400.00	2060.06	1.62	6.41	2059.95	2060.43	.00	123.95	1.02
5.000	500.00	2060.25	1.81	6.77	2060.13	2060.65	.00	119.30	1.01
5.000	600.00	2060.44	2.00	6.87	2060.29	2060.83	.00	106.08	1.10
5.000	700.00	2060.56	2.12	7.38	2060.42	2060.99	.00	114.00	1.01
5.000	800.00	2060.69	2.25	7.62	2060.54	2061.14	.00	111.95	1.01
5.000	1000.00	2060.98	2.54	7.68	2060.83	2061.40	.00	96.52	1.15
5.000	1200.00	2061.15	2.71	8.12	2061.00	2061.60	.00	99.00	1.01
5.000	1400.00	2061.29	2.85	8.61	2061.14	2061.78	.00	104.27	1.01

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	20.00	2058.83	.39	2.37	2058.75	2058.90	.00	129.85	1.06
6.000	50.00	2059.06	.62	3.19	2058.97	2059.18	.00	117.62	1.03
6.000	75.00	2059.18	.74	3.70	2059.10	2059.34	.00	121.68	1.03
6.000	100.00	2059.29	.85	4.06	2059.20	2059.48	.00	121.08	1.03
6.000	200.00	2059.64	1.20	5.00	2059.51	2059.89	.00	114.09	1.02
6.000	300.00	2059.88	1.44	5.73	2059.76	2060.19	.00	116.68	1.01
6.000	400.00	2060.08	1.64	6.31	2059.95	2060.44	.00	118.40	1.02
6.000	500.00	2060.26	1.82	6.71	2060.13	2060.65	.00	115.97	1.01
6.000	600.00	2060.45	2.01	6.85	2060.28	2060.83	.00	105.32	1.00
6.000	700.00	2060.57	2.13	7.32	2060.42	2061.00	.00	111.49	1.01
6.000	800.00	2060.70	2.26	7.57	2060.54	2061.15	.00	109.71	1.01
6.000	1000.00	2060.99	2.55	7.62	2060.81	2061.40	.00	94.77	1.01
6.000	1200.00	2061.16	2.72	8.06	2061.00	2061.60	.00	97.15	1.01
6.000	1400.00	2061.30	2.86	8.55	2061.14	2061.78	.00	102.11	1.01

1

16JUN94 16:35:19 PAGE 19

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED
```

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1*****************************************                    ****************************************
 *  HEC-2 WATER SURFACE PROFILES           *                    *  U.S. ARMY CORPS OF ENGINEERS        *
 *                                         *                    *  HYDROLOGIC ENGINEERING CENTER       *
 *  Version   4.6.2;  May 1991             *                    *  609 SECOND STREET, SUITE D          *
 *                                         *                    *  DAVIS, CALIFORNIA 95616-4687        *
 *  RUN DATE    16JUN94    TIME   16:37:44 *                    *        (916) 756-1104                *
 *****************************************                    ****************************************

                                        X     X  XXXXXXX   XXXXX              XXXXX
                                        X     X  X        X     X            X     X
                                        X     X  X        X                        X
                                        XXXXXXX  XXXX     X          XXXXX    XXXXX
                                        X     X  X        X                  X
                                        X     X  X        X     X            X
                                        X     X  XXXXXXX   XXXXX             XXXXXXX
1
   16JUN94      16:37:44                                                                                    PAGE    1


                                                                                THIS RUN EXECUTED 16JUN94    16:37:44
 ************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
 ************************************

 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      537 Right                                        FILE:     C537R.IH2
 T4                                                       DATE:     06-16-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 537
 T6                SPLIT  RIGHT
 T7
 T8      Single X-Section Run
                 Ditch slope =   0.0229 ft/ft  From Hydrologic Field Survey

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                           0.0229

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                        -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

     -10       -10

 NC    0.075      0.075      0.035        .1         .3
 QT       14         20         50         75        100        200        300        400        500        600
 QT      700        800       1000       1200       1400

 NH        4       0.01       1000      0.075     1032.4      0.035     1060.8      0.075       1159
         X-Section #1
 X1        1          5     1032.4     1060.8          0          0          0
 GR     2063        999    2059.58     1000.0    2057.58     1032.4    2057.33     1060.8    2060.80     1157.7

1
   16JUN94      16:37:44                                                                                    PAGE    2


 X1        2                                        .2         .2         .2

 X1        3                                        .2         .2         .2

 X1        4                                        .2         .2         .2

 X1        5                                        .2         .2         .2

 X1        6                                        .2         .2         .2

1
   16JUN94      16:37:44                                                                                    PAGE    3

 T3            Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                           0.0229

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       2                 -1                                        -1
```

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1
   16JUN94      16:37:44                                                                                PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                           0.0229
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
       3                 -1                                        -1

1
   16JUN94      16:37:44                                                                                PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                           0.0229
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
       4                 -1                                        -1

1
   16JUN94      16:37:44                                                                                PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                           0.0229
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
       5                 -1                                        -1

1
   16JUN94      16:37:44                                                                                PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                           0.0229
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
       6                 -1                                        -1

1
   16JUN94      16:37:44                                                                                PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                           0.0229
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
       7                 -1                                        -1

1
   16JUN94      16:37:44                                                                                PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                           0.0229
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
       8                 -1                                        -1

1
   16JUN94      16:37:44                                                                                PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 10                          0.0229
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
       9                 -1                                        -1
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1
16JUN94 16:37:44 PAGE 11

T3 Q10

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
		11			0.0229					

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	10		-1				-1			

1
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T3 Q11

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
		12			0.0229					

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	11		-1				-1			

1
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T3 Q12

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
		13			0.0229					

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	12		-1				-1			

1
16JUN94 16:37:44 PAGE 14

T3 Q13

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
		14			0.0229					

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	13		-1				-1			

1
16JUN94 16:37:44 PAGE 15

T3 Q14

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
		15			0.0229					

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	14		-1				-1			

1
16JUN94 16:37:44 PAGE 16

THIS RUN EXECUTED 16JUN94 16:37:55

****
HEC-2 WATER SURFACE PROFILES

Version 4.6.2; May 1991
****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

537 Right

SUMMARY PRINTOUT

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
1.000	20.00	2057.70	.37	2.54	2057.69	2057.80	.00	228.44	.00
1.000	50.00	2057.88	.55	3.63	2057.87	2058.06	.00	228.42	.00

*	1.000	75.00	2057.99	.66	4.22	2057.99	2058.24	.00	225.18	.00
*	1.000	100.00	2058.11	.78	4.57	2058.11	2058.39	.00	205.52	.00
*	1.000	200.00	2058.45	1.12	5.64	2058.45	2058.85	.00	177.94	.00
*	1.000	300.00	2058.72	1.39	6.35	2058.72	2059.21	.00	163.51	.00
*	1.000	400.00	2058.95	1.62	6.91	2058.95	2059.51	.00	155.31	.00
*	1.000	500.00	2059.15	1.82	7.38	2059.15	2059.77	.00	149.82	.00
*	1.000	600.00	2059.34	2.01	7.72	2059.34	2060.00	.00	142.29	.00
*	1.000	700.00	2059.50	2.17	8.11	2059.50	2060.21	.00	140.77	.00
*	1.000	800.00	2059.67	2.34	8.29	2059.67	2060.40	.00	131.81	.00
*	1.000	1000.00	2059.93	2.60	8.86	2059.93	2060.74	.00	129.81	.00
*	1.000	1200.00	2060.15	2.82	9.47	2060.15	2061.04	.00	132.56	.00
*	1.000	1400.00	2060.38	3.04	9.88	2060.38	2061.33	.00	129.86	.00
	2.000	20.00	2057.71	.38	2.50	2057.69	2057.80	.00	214.66	1.03
	2.000	50.00	2057.89	.56	3.59	2057.87	2058.07	.00	220.00	1.02
	2.000	75.00	2058.00	.67	4.19	2058.00	2058.24	.00	218.85	1.01
	2.000	100.00	2058.11	.78	4.54	2058.10	2058.39	.00	200.92	1.01
	2.000	200.00	2058.46	1.13	5.62	2058.45	2058.86	.00	175.54	1.01
	2.000	300.00	2058.73	1.40	6.33	2058.72	2059.21	.00	161.98	1.00
	2.000	400.00	2058.95	1.62	6.89	2058.95	2059.51	.00	154.05	1.00
	2.000	500.00	2059.17	1.84	7.25	2059.15	2059.77	.00	142.19	1.03
	2.000	600.00	2059.34	2.01	7.70	2059.33	2060.00	.00	141.43	1.00
	2.000	700.00	2059.50	2.17	8.09	2059.49	2060.21	.00	139.97	1.00
	2.000	800.00	2059.70	2.37	8.15	2059.67	2060.41	.00	125.44	1.03
	2.000	1000.00	2059.94	2.61	8.85	2059.93	2060.74	.00	129.23	1.00
	2.000	1200.00	2060.19	2.86	9.30	2060.16	2061.05	.00	125.86	1.03
	2.000	1400.00	2060.38	3.05	9.87	2060.37	2061.33	.00	129.37	1.00

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	20.00	2057.72	.39	2.41	2057.69	2057.81	.00	192.55	1.06
3.000	50.00	2057.90	.57	3.51	2057.87	2058.07	.00	204.70	1.04
3.000	75.00	2058.02	.69	4.11	2057.99	2058.25	.00	206.19	1.03
3.000	100.00	2058.13	.80	4.48	2058.10	2058.40	.00	192.10	1.02
3.000	200.00	2058.47	1.14	5.57	2058.45	2058.86	.00	170.88	1.01
3.000	300.00	2058.74	1.41	6.29	2058.72	2059.22	.00	158.73	1.01
3.000	400.00	2058.96	1.63	6.85	2058.95	2059.51	.00	151.48	1.01
3.000	500.00	2059.19	1.86	7.21	2059.14	2059.78	.00	139.63	1.01
3.000	600.00	2059.35	2.02	7.67	2059.32	2060.01	.00	139.65	1.01
3.000	700.00	2059.51	2.18	8.06	2059.50	2060.22	.00	138.40	1.01
3.000	800.00	2059.71	2.38	8.11	2059.66	2060.41	.00	123.71	1.01
3.000	1000.00	2059.95	2.62	8.82	2059.93	2060.74	.00	128.04	1.00
3.000	1200.00	2060.20	2.87	9.26	2060.14	2061.05	.00	124.21	1.01
3.000	1400.00	2060.39	3.06	9.85	2060.37	2061.33	.00	128.35	1.00
4.000	20.00	2057.73	.40	2.32	2057.69	2057.81	.00	169.62	1.07
4.000	50.00	2057.95	.62	3.15	2057.87	2058.08	.00	143.30	1.20
4.000	75.00	2058.07	.74	3.71	2058.00	2058.26	.00	149.03	1.18
4.000	100.00	2058.17	.84	4.17	2058.11	2058.40	.00	152.37	1.12
4.000	200.00	2058.55	1.22	5.10	2058.45	2058.87	.00	130.01	1.15
4.000	300.00	2058.82	1.49	5.80	2058.72	2059.23	.00	123.90	1.13
4.000	400.00	2059.05	1.72	6.41	2058.95	2059.53	.00	123.30	1.11
4.000	500.00	2059.27	1.94	6.80	2059.15	2059.79	.00	116.69	1.09
4.000	600.00	2059.37	2.04	7.62	2059.32	2060.01	.00	136.99	1.01
4.000	700.00	2059.66	2.33	7.36	2059.50	2060.23	.00	105.33	1.15
4.000	800.00	2059.79	2.46	7.74	2059.66	2060.42	.00	107.70	1.07
4.000	1000.00	2059.96	2.63	8.78	2059.92	2060.75	.00	126.19	1.01
4.000	1200.00	2060.40	3.07	8.34	2060.14	2061.07	.00	90.99	1.17
4.000	1400.00	2060.40	3.07	9.80	2060.37	2061.33	.00	126.77	1.01
5.000	20.00	2057.74	.41	2.24	2057.68	2057.81	.00	150.52	1.06
5.000	50.00	2057.95	.62	3.10	2057.87	2058.08	.00	136.96	1.02
5.000	75.00	2058.08	.75	3.64	2058.00	2058.26	.00	139.24	1.03
5.000	100.00	2058.19	.86	4.08	2058.10	2058.41	.00	142.97	1.03
5.000	200.00	2058.56	1.23	5.05	2058.45	2058.87	.00	125.43	1.02
5.000	300.00	2058.84	1.51	5.75	2058.72	2059.23	.00	120.26	1.02
5.000	400.00	2059.10	1.77	6.10	2058.95	2059.53	.00	106.28	1.08
5.000	500.00	2059.28	1.95	6.74	2059.15	2059.79	.00	113.96	1.01
5.000	600.00	2059.53	2.20	6.79	2059.32	2060.03	.00	96.39	1.19
5.000	700.00	2059.67	2.34	7.31	2059.49	2060.24	.00	103.28	1.01
5.000	800.00	2059.81	2.48	7.66	2059.67	2060.42	.00	104.64	1.01
5.000	1000.00	2060.07	2.74	8.26	2059.92	2060.76	.00	105.58	1.09
5.000	1200.00	2060.40	3.07	8.36	2060.15	2061.08	.00	91.81	1.00
5.000	1400.00	2060.55	3.22	9.14	2060.37	2061.35	.00	103.15	1.11

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	20.00	2057.75	.42	2.17	2057.68	2057.82	.00	135.62	1.05
6.000	50.00	2057.96	.63	3.06	2057.87	2058.09	.00	130.96	1.02
6.000	75.00	2058.09	.76	3.57	2058.00	2058.26	.00	130.80	1.03
6.000	100.00	2058.20	.87	4.00	2058.10	2058.41	.00	134.28	1.03
6.000	200.00	2058.57	1.24	4.99	2058.45	2058.88	.00	120.96	1.02
6.000	300.00	2058.85	1.52	5.69	2058.72	2059.23	.00	116.60	1.02
6.000	400.00	2059.11	1.78	6.08	2058.95	2059.53	.00	105.19	1.01
6.000	500.00	2059.30	1.97	6.66	2059.15	2059.79	.00	109.92	1.02
6.000	600.00	2059.53	2.20	6.80	2059.33	2060.03	.00	96.80	1.00
6.000	700.00	2059.68	2.35	7.26	2059.50	2060.24	.00	101.14	1.01
6.000	800.00	2059.83	2.50	7.59	2059.67	2060.42	.00	101.64	1.01
6.000	1000.00	2060.15	2.82	7.88	2059.92	2060.77	.00	91.71	1.07
6.000	1200.00	2060.40	3.07	8.37	2060.15	2061.08	.00	92.07	1.00
6.000	1400.00	2060.56	3.23	9.10	2060.38	2061.35	.00	101.62	1.01

1

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SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED
```

Table D-11
Flow split at C539

Stage	Discharge, in cfs		
	Left	Right	Total
2001.5	0	0	0
2001.7	8	8	16
2001.9	20	15	35
2002.1	48	32	80
2002.3	85	50	135
2002.5	133	74	207
2002.7	191	102	293
2002.9	250	135	385
2003.1	317	170	487
2003.3	400	203	603
2003.5	480	240	720
2003.7	575	280	855

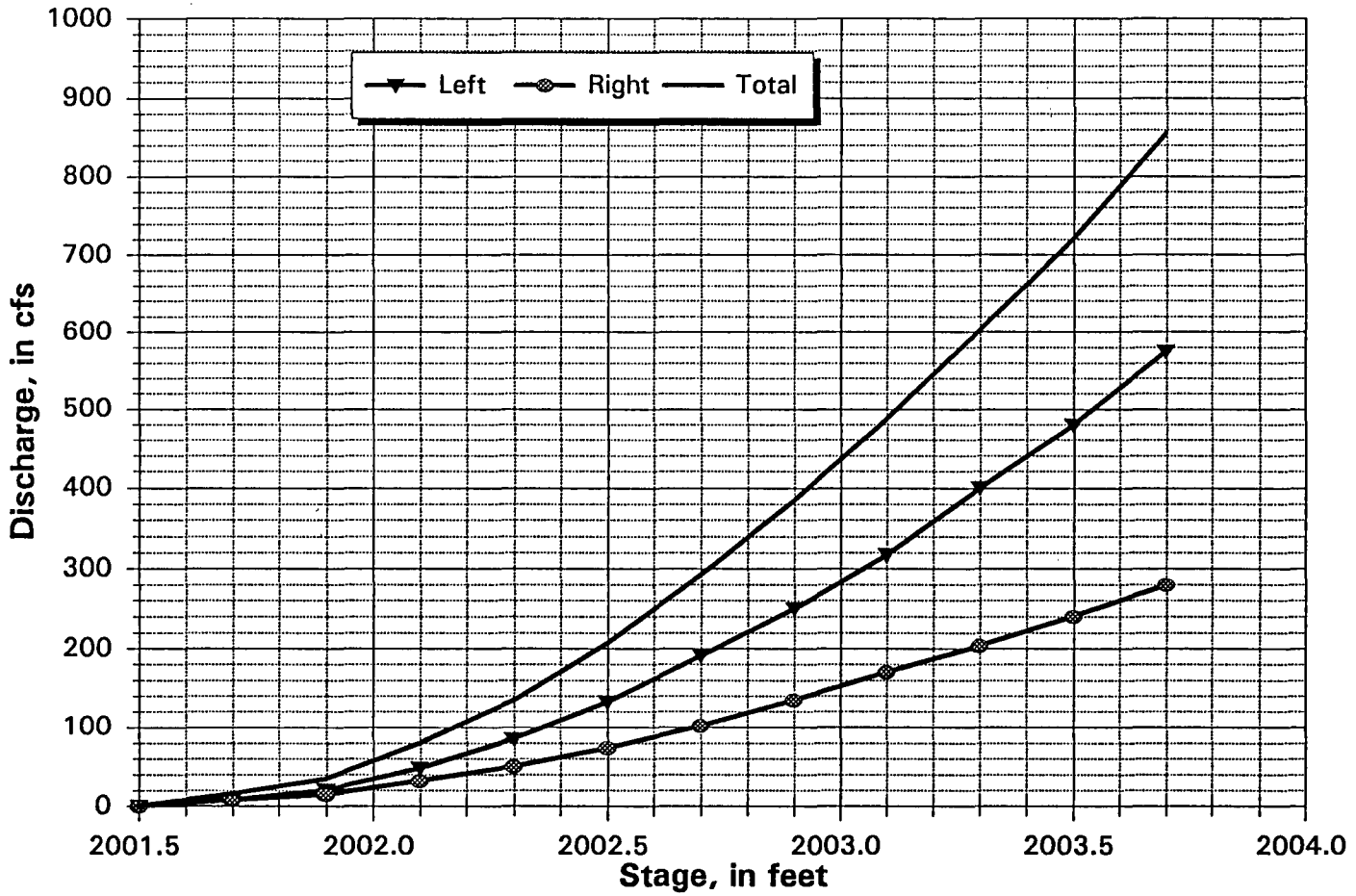

Figure D-11

Flow split at C539

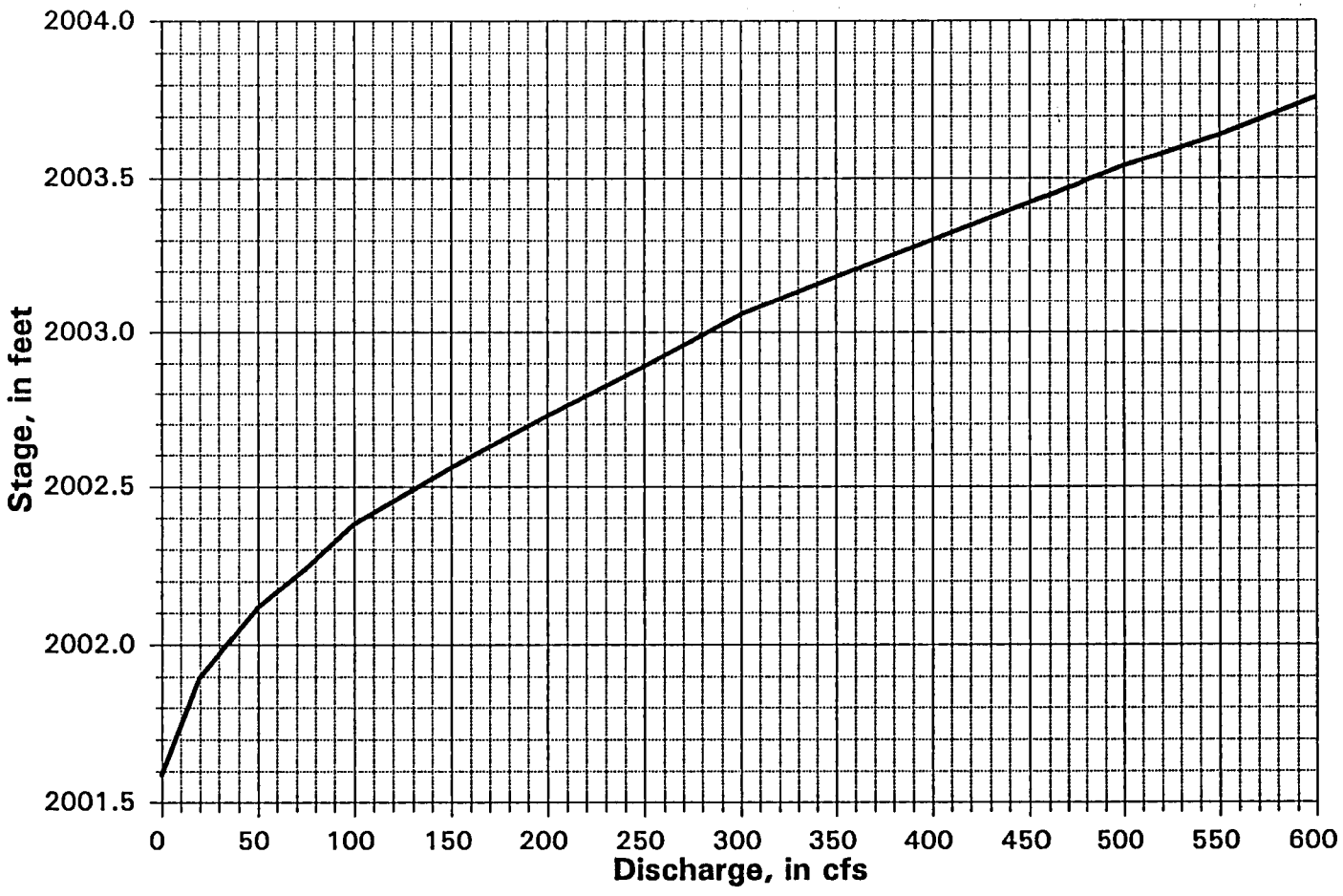

Figure D-11a

C539 Split Left

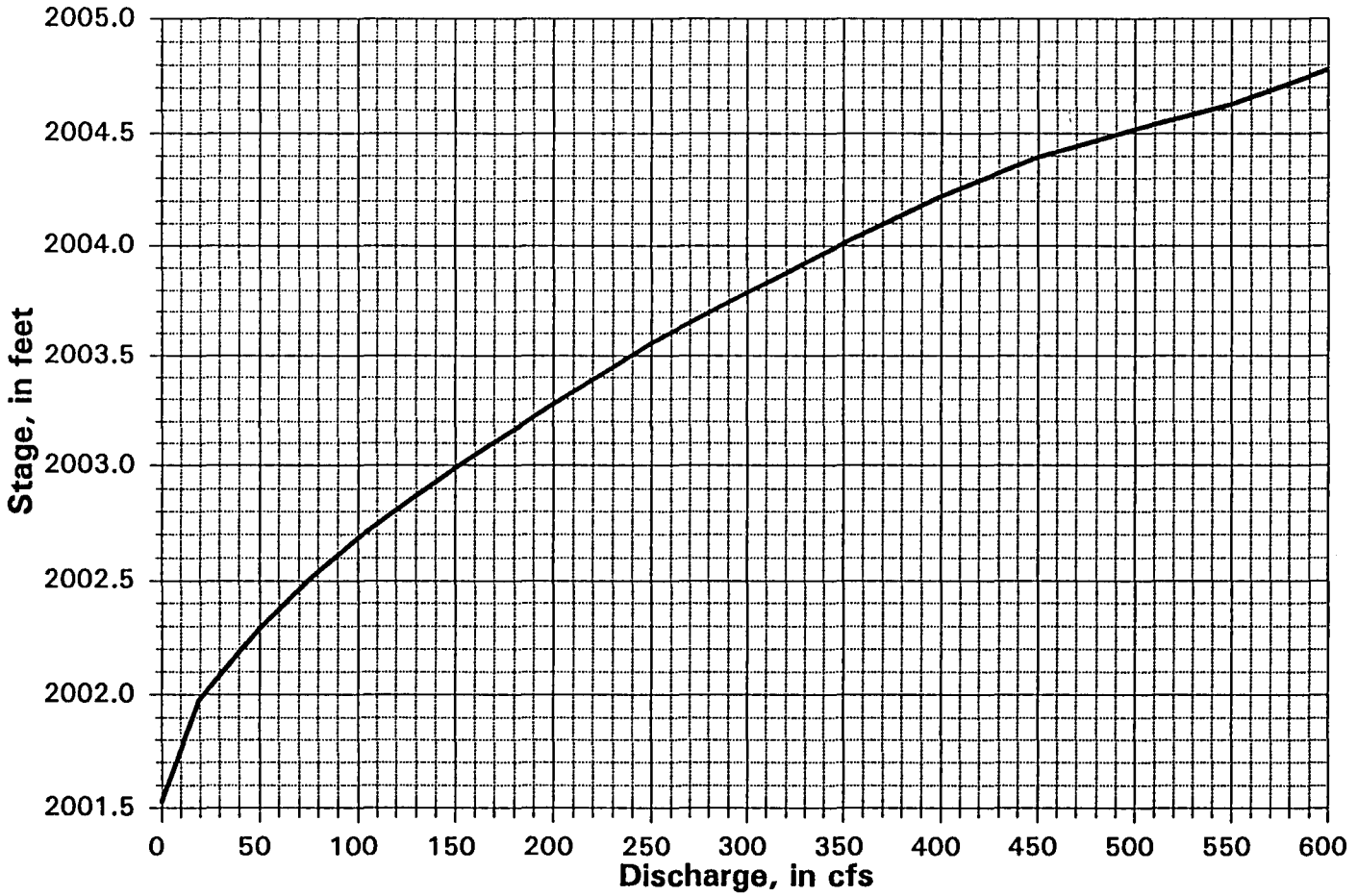

Figure D-11b

C539 Split Right

```
1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
 *  RUN DATE    15JUN94    TIME   16:05:30 *
 *****************************************

                                                                                  ***************************************
                                                                                  *  U.S. ARMY CORPS OF ENGINEERS       *
                                                                                  *  HYDROLOGIC ENGINEERING CENTER      *
                                                                                  *  609 SECOND STREET, SUITE D         *
                                                                                  *  DAVIS, CALIFORNIA 95616-4687       *
                                                                                  *          (916) 756-1104             *
                                                                                  ***************************************

                                        X     X  XXXXXXX   XXXXX              XXXXX
                                        X     X  X        X     X            X     X
                                        X     X  X        X                        X
                                        XXXXXXX  XXXX     X          XXXXX    XXXXX
                                        X     X  X        X                  X
                                        X     X  X        X     X            X
                                        X     X  XXXXXXX   XXXXX             XXXXXXX
1
   15JUN94      16:05:30                                                                                          PAGE    1


                                                                                THIS RUN EXECUTED 15JUN94    16:05:30
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      539 Left                                          FILE:     C539L.IH2
 T4                                                        DATE:     06-15-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 539
 T6                SPLIT  LEFT
 T7
 T8      Single X-Section Run
                 Ditch slope =   0.0260 ft/ft  From Hydrologic Field Survey

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                           0.0260

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      1                  -1                                        -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

     -10       -10

 NC    0.075      0.010      0.035        .1         .3
 QT       14         20         50         75        100        150        200        250        300        350
 QT      400        450        500        550        600

         X-Section #1
 X1        1          8     1107.3     1128.7          0          0          0
 GR     2005        999    2003.76     1000.0    2003.43     1034.0    2002.92     1061.1    2001.64     1090.8
 GR   2001.6     1107.3    2001.59    1128.70       2005       1130
1
   15JUN94      16:05:30                                                                                          PAGE    2


 X1        2                                        .2         .2         .2

 X1        3                                        .2         .2         .2

 X1        4                                        .2         .2         .2

 X1        5                                        .2         .2         .2

 X1        6                                        .2         .2         .2
1
   15JUN94      16:05:30                                                                                          PAGE    3

 T3            Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                           0.0260

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     2                -1                                  -1

1
   15JUN94      16:05:30                                                                                PAGE    4

T3            Q3
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                         0.0260
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     3                  -1                                      -1

1
   15JUN94      16:05:30                                                                                PAGE    5

T3            Q4
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                         0.0260
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     4                  -1                                      -1

1
   15JUN94      16:05:30                                                                                PAGE    6

T3            Q5
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                         0.0260
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     5                  -1                                      -1

1
   15JUN94      16:05:30                                                                                PAGE    7

T3            Q6
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                         0.0260
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     6                  -1                                      -1

1
   15JUN94      16:05:30                                                                                PAGE    8

T3            Q7
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                         0.0260
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     7                  -1                                      -1

1
   15JUN94      16:05:30                                                                                PAGE    9

T3            Q8
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                         0.0260
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     8                  -1                                      -1

1
   15JUN94      16:05:30                                                                                PAGE   10

T3            Q9
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                10                         0.0260
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     9                -1                                  -1

1
   15JUN94      16:05:30                                                                                PAGE   11

 T3           Q10
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                11                          0.0260
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                  -1                                      -1

1
   15JUN94      16:05:30                                                                                PAGE   12

 T3           Q11
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                12                          0.0260
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                  -1                                      -1

1
   15JUN94      16:05:30                                                                                PAGE   13

 T3           Q12
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                13                          0.0260
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                  -1                                      -1

1
   15JUN94      16:05:30                                                                                PAGE   14

 T3           Q13
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                14                          0.0260
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                  -1                                      -1

1
   15JUN94      16:05:30                                                                                PAGE   15

 T3           Q14
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                15                          0.0260
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                  -1                                      -1


1
   15JUN94      16:05:30                                                                                PAGE   16


                                                                    THIS RUN EXECUTED 15JUN94     16:05:41
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

 NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

 539 Left

 SUMMARY PRINTOUT

       SECNO       Q       CWSEL     DEPTH      VCH       CRIWS      EG        HL       10*KS    KRATIO
```

1.000	20.00	2001.85	.26	2.75	2001.83	2001.94	.00	258.95	.00
1.000	50.00	2002.03	.44	3.91	2002.02	2002.21	.00	258.61	.00
1.000	75.00	2002.14	.55	4.57	2002.14	2002.39	.00	259.88	.00
1.000	100.00	2002.24	.65	5.09	2002.24	2002.54	.00	257.57	.00
* 1.000	150.00	2002.44	.85	5.68	2002.44	2002.81	.00	225.04	.00
* 1.000	200.00	2002.60	1.01	6.20	2002.60	2003.04	.00	211.35	.00
* 1.000	250.00	2002.75	1.16	6.64	2002.75	2003.24	.00	201.96	.00
* 1.000	300.00	2002.90	1.31	6.91	2002.90	2003.43	.00	184.95	.00
* 1.000	350.00	2003.04	1.45	7.16	2003.04	2003.59	.00	174.74	.00
* 1.000	400.00	2003.15	1.56	7.42	2003.15	2003.74	.00	169.23	.00
* 1.000	450.00	2003.27	1.68	7.64	2003.27	2003.88	.00	163.37	.00
* 1.000	500.00	2003.37	1.78	7.89	2003.37	2004.01	.00	160.88	.00
* 1.000	550.00	2003.49	1.90	7.97	2003.49	2004.13	.00	150.60	.00
* 1.000	600.00	2003.59	2.00	8.08	2003.59	2004.24	.00	144.31	.00
2.000	20.00	2001.86	.27	2.69	2001.83	2001.95	.01	241.70	1.04
2.000	50.00	2002.04	.45	3.86	2002.02	2002.22	.01	248.25	1.02
2.000	75.00	2002.15	.56	4.53	2002.14	2002.39	.01	251.34	1.02
2.000	100.00	2002.26	.67	4.95	2002.25	2002.55	.00	235.77	1.05
2.000	150.00	2002.45	.86	5.64	2002.44	2002.81	.00	220.81	1.01
2.000	200.00	2002.61	1.02	6.17	2002.60	2003.04	.00	208.17	1.01
2.000	250.00	2002.76	1.17	6.61	2002.75	2003.24	.00	199.43	1.01
2.000	300.00	2002.91	1.32	6.89	2002.91	2003.43	.00	183.08	1.01
2.000	350.00	2003.06	1.47	7.05	2003.04	2003.59	.00	166.53	1.02
2.000	400.00	2003.16	1.57	7.40	2003.16	2003.74	.00	167.81	1.00
2.000	450.00	2003.27	1.68	7.63	2003.26	2003.88	.00	162.13	1.00
2.000	500.00	2003.37	1.78	7.87	2003.37	2004.01	.00	159.76	1.00
2.000	550.00	2003.49	1.90	7.95	2003.48	2004.13	.00	149.63	1.00
2.000	600.00	2003.60	2.01	8.07	2003.58	2004.25	.00	143.46	1.00

1

15JUN94 16:05:30 PAGE 17

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	20.00	2001.87	.28	2.60	2001.83	2001.95	.00	214.08	1.06
3.000	50.00	2002.05	.46	3.77	2002.02	2002.22	.00	229.28	1.04
3.000	75.00	2002.20	.61	4.15	2002.14	2002.40	.00	190.45	1.15
3.000	100.00	2002.31	.72	4.61	2002.25	2002.56	.00	187.31	1.12
3.000	150.00	2002.46	.87	5.58	2002.43	2002.82	.00	212.31	1.02
3.000	200.00	2002.62	1.03	6.11	2002.60	2003.04	.00	201.82	1.02
3.000	250.00	2002.77	1.18	6.56	2002.75	2003.25	.00	194.29	1.01
3.000	300.00	2002.92	1.33	6.84	2002.91	2003.43	.00	179.30	1.01
3.000	350.00	2003.07	1.48	7.00	2003.03	2003.60	.00	162.86	1.01
3.000	400.00	2003.17	1.58	7.36	2003.15	2003.75	.00	164.88	1.01
3.000	450.00	2003.28	1.69	7.59	2003.26	2003.89	.00	159.55	1.01
3.000	500.00	2003.38	1.79	7.83	2003.37	2004.02	.00	157.43	1.01
3.000	550.00	2003.50	1.91	7.92	2003.48	2004.14	.00	147.64	1.01
3.000	600.00	2003.61	2.02	8.03	2003.58	2004.25	.00	141.69	1.01
4.000	20.00	2001.88	.29	2.48	2001.83	2001.96	.00	185.56	1.07
4.000	50.00	2002.11	.52	3.16	2002.02	2002.23	.00	130.10	1.33
4.000	75.00	2002.21	.62	4.07	2002.14	2002.41	.00	177.55	1.04
4.000	100.00	2002.37	.78	4.09	2002.25	2002.57	.00	128.60	1.21
4.000	150.00	2002.53	.94	5.08	2002.44	2002.83	.00	158.06	1.16
4.000	200.00	2002.70	1.11	5.61	2002.60	2003.06	.00	153.74	1.15
4.000	250.00	2002.87	1.28	5.99	2002.74	2003.26	.00	145.95	1.15
4.000	300.00	2003.03	1.44	6.24	2002.92	2003.45	.00	135.18	1.15
4.000	350.00	2003.15	1.56	6.59	2003.04	2003.61	.00	135.36	1.10
4.000	400.00	2003.27	1.68	6.83	2003.15	2003.76	.00	131.11	1.12
4.000	450.00	2003.39	1.80	7.04	2003.26	2003.90	.00	127.41	1.12
4.000	500.00	2003.51	1.92	7.16	2003.37	2004.03	.00	120.33	1.14
4.000	550.00	2003.62	2.03	7.30	2003.48	2004.15	.00	115.92	1.13
4.000	600.00	2003.61	2.02	8.02	2003.58	2004.25	.00	141.02	1.00
5.000	20.00	2001.89	.30	2.38	2001.83	2001.96	.00	161.76	1.07
5.000	50.00	2002.11	.52	3.21	2002.02	2002.24	.00	135.71	.98
5.000	75.00	2002.23	.64	3.98	2002.14	2002.41	.00	165.17	1.04
5.000	100.00	2002.37	.78	4.11	2002.25	2002.57	.00	130.39	.99
5.000	150.00	2002.55	.96	5.01	2002.44	2002.83	.00	151.15	1.02
5.000	200.00	2002.72	1.13	5.54	2002.60	2003.06	.00	147.88	1.02
5.000	250.00	2002.88	1.29	5.94	2002.75	2003.26	.00	141.64	1.02
5.000	300.00	2003.04	1.45	6.18	2002.89	2003.45	.00	130.90	1.02
5.000	350.00	2003.16	1.57	6.49	2003.04	2003.61	.00	129.53	1.02
5.000	400.00	2003.29	1.70	6.74	2003.15	2003.76	.00	125.96	1.02
5.000	450.00	2003.40	1.81	6.99	2003.26	2003.90	.00	124.26	1.01
5.000	500.00	2003.52	1.93	7.10	2003.37	2004.03	.00	117.44	1.01
5.000	550.00	2003.63	2.04	7.25	2003.48	2004.15	.00	113.52	1.01
5.000	600.00	2003.76	2.17	7.26	2003.57	2004.27	.00	105.17	1.16

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	20.00	2001.90	.31	2.30	2001.83	2001.97	.00	144.35	1.06
6.000	50.00	2002.12	.53	3.21	2002.02	2002.24	.00	136.16	1.00
6.000	75.00	2002.24	.65	3.89	2002.14	2002.42	.00	153.87	1.04
6.000	100.00	2002.38	.79	4.11	2002.25	2002.57	.00	130.03	1.00
6.000	150.00	2002.56	.97	4.95	2002.44	2002.83	.00	144.62	1.02
6.000	200.00	2002.73	1.14	5.47	2002.60	2003.06	.00	142.13	1.02
6.000	250.00	2002.89	1.30	5.88	2002.75	2003.27	.00	137.29	1.02
6.000	300.00	2003.06	1.47	6.08	2002.90	2003.45	.00	125.04	1.02
6.000	350.00	2003.18	1.59	6.40	2003.04	2003.62	.00	124.00	1.02
6.000	400.00	2003.30	1.71	6.65	2003.15	2003.77	.00	121.12	1.02
6.000	450.00	2003.42	1.83	6.90	2003.26	2003.91	.00	119.68	1.02
6.000	500.00	2003.54	1.95	7.02	2003.37	2004.04	.00	113.26	1.02
6.000	550.00	2003.64	2.05	7.19	2003.48	2004.16	.00	111.01	1.01
6.000	600.00	2003.76	2.17	7.23	2003.59	2004.27	.00	103.62	1.01

1

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SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED
```

```
1*****************************************                    ****************************************
 *  HEC-2 WATER SURFACE PROFILES           *                    *  U.S. ARMY CORPS OF ENGINEERS        *
 *                                         *                    *  HYDROLOGIC ENGINEERING CENTER       *
 *  Version   4.6.2;  May 1991             *                    *  609 SECOND STREET, SUITE D          *
 *                                         *                    *  DAVIS, CALIFORNIA 95616-4687        *
 *  RUN DATE    25JUL94    TIME   08:54:45 *                    *          (916) 756-1104              *
 *****************************************                    ****************************************

                                        X     X  XXXXXXX   XXXXX              XXXXX
                                        X     X  X        X     X            X     X
                                        X     X  X        X                        X
                                        XXXXXXX  XXXX     X          XXXXX    XXXXX
                                        X     X  X        X                  X
                                        X     X  X        X     X            X
                                        X     X  XXXXXXX   XXXXX             XXXXXXX
1
   25JUL94      08:54:45                                                                                PAGE    1


                                                                                THIS RUN EXECUTED 25JUL94    08:54:45
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      539 Right                                          FILE:     C539R.IH2
 T4                                                         DATE:     06-15-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 539
 T6                SPLIT  RIGHT
 T7
 T8      Single X-Section Run
                 Ditch slope =   0.0266 ft/ft  From Hydrologic Field Survey

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                           0.0266

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                      -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                     ********REQUESTED SECTION NUMBERS********

     -10       -10

 NC     0.01      0.075      0.035        .1         .3
 QT       14         20         50        75        100        150        200        250        300        350
 QT      400        450        500       550        600

         X-Section #1
 X1        1          5       1000    1021.4          0          0          0
 GR     2005     1000.0     2001.6    1000.0     2001.5     1016.4     2002.9     1021.4       2004     1061.4

1
   25JUL94      08:54:45                                                                                PAGE    2


 X1        2                                        .2         .2         .2

 X1        3                                        .2         .2         .2

 X1        4                                        .2         .2         .2

 X1        5                                        .2         .2         .2

 X1        6                                        .2         .2         .2

1
   25JUL94      08:54:45                                                                                PAGE    3

 T3            Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                           0.0266

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     2                -1                                  -1

1
   25JUL94      08:54:45                                                                                PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                           0.0266
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     3                   -1                                      -1

1
   25JUL94      08:54:45                                                                                PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                           0.0266
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     4                   -1                                      -1

1
   25JUL94      08:54:45                                                                                PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                           0.0266
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     5                   -1                                      -1

1
   25JUL94      08:54:45                                                                                PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                           0.0266
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     6                   -1                                      -1

1
   25JUL94      08:54:45                                                                                PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                           0.0266
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     7                   -1                                      -1

1
   25JUL94      08:54:45                                                                                PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                           0.0266
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     8                   -1                                      -1

1
   25JUL94      08:54:45                                                                                PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 10                          0.0266
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     9                -1                                  -1

1
   25JUL94      08:54:45                                                                                PAGE   11

 T3           Q10
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                11                          0.0266
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                  -1                                      -1

1
   25JUL94      08:54:45                                                                                PAGE   12

 T3           Q11
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                12                          0.0266
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                  -1                                      -1

1
   25JUL94      08:54:45                                                                                PAGE   13

 T3           Q12
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                13                          0.0266
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                  -1                                      -1

1
   25JUL94      08:54:45                                                                                PAGE   14

 T3           Q13
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                14                          0.0266
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                  -1                                      -1

1
   25JUL94      08:54:45                                                                                PAGE   15

 T3           Q14
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                15                          0.0266
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                  -1                                      -1


1
   25JUL94      08:54:45                                                                                PAGE   16


                                                                          THIS RUN EXECUTED 25JUL94    08:54:46
 ************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
 ************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

539 Right

SUMMARY PRINTOUT

      SECNO       Q       CWSEL     DEPTH      VCH       CRIWS      EG        HL       10*KS    KRATIO
```

	1.000	20.00	2001.90	.40	3.31	2001.90	2002.07	.00	265.16	.00
*	1.000	50.00	2002.19	.69	4.41	2002.19	2002.49	.00	223.29	.00
*	1.000	75.00	2002.38	.88	5.00	2002.38	2002.77	.00	209.08	.00
*	1.000	100.00	2002.55	1.05	5.45	2002.55	2003.01	.00	200.54	.00
*	1.000	150.00	2002.84	1.34	6.14	2002.84	2003.43	.00	188.63	.00
*	1.000	200.00	2003.11	1.61	6.60	2003.11	2003.79	.00	169.06	.00
*	1.000	250.00	2003.39	1.89	6.83	2003.39	2004.10	.00	145.14	.00
*	1.000	300.00	2003.62	2.12	7.06	2003.62	2004.36	.00	132.76	.00
*	1.000	350.00	2003.81	2.31	7.31	2003.81	2004.60	.00	126.31	.00
*	1.000	400.00	2004.06	2.56	7.20	2004.06	2004.80	.00	107.04	.00
*	1.000	450.00	2004.19	2.69	7.50	2004.19	2004.97	.00	108.63	.00
*	1.000	500.00	2004.32	2.82	7.76	2004.32	2005.14	.00	109.87	.00
*	1.000	550.00	2004.44	2.94	8.01	2004.44	2005.30	.00	111.16	.00
*	1.000	600.00	2004.54	3.04	8.27	2004.54	2005.45	.00	112.99	.00
	2.000	20.00	2001.91	.41	3.26	2001.90	2002.08	.01	252.35	1.03
	2.000	50.00	2002.20	.70	4.38	2002.19	2002.50	.00	218.10	1.01
	2.000	75.00	2002.39	.89	4.97	2002.38	2002.77	.00	205.61	1.01
	2.000	100.00	2002.56	1.06	5.43	2002.55	2003.01	.00	197.85	1.01
	2.000	150.00	2002.85	1.35	6.12	2002.85	2003.43	.00	186.77	1.00
	2.000	200.00	2003.12	1.62	6.59	2003.12	2003.79	.00	167.71	1.00
	2.000	250.00	2003.39	1.89	6.81	2003.38	2004.10	.00	144.26	1.00
	2.000	300.00	2003.62	2.12	7.05	2003.62	2004.37	.00	132.09	1.00
	2.000	350.00	2003.84	2.34	7.20	2003.82	2004.60	.00	120.47	1.02
	2.000	400.00	2004.07	2.57	7.19	2004.06	2004.80	.00	106.63	1.00
	2.000	450.00	2004.23	2.73	7.36	2004.20	2004.98	.00	103.00	1.03
	2.000	500.00	2004.36	2.86	7.61	2004.33	2005.14	.00	104.06	1.03
	2.000	550.00	2004.48	2.98	7.87	2004.44	2005.30	.00	105.65	1.03
	2.000	600.00	2004.59	3.09	8.11	2004.55	2005.45	.00	106.97	1.03

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	20.00	2001.95	.45	2.93	2001.90	2002.08	.00	178.53	1.19
3.000	50.00	2002.21	.71	4.31	2002.19	2002.50	.00	208.05	1.02
3.000	75.00	2002.40	.90	4.91	2002.38	2002.78	.00	198.62	1.02
3.000	100.00	2002.57	1.07	5.38	2002.55	2003.02	.00	192.28	1.01
3.000	150.00	2002.86	1.36	6.08	2002.84	2003.44	.00	182.90	1.01
3.000	200.00	2003.13	1.63	6.55	2003.11	2003.80	.00	164.94	1.01
3.000	250.00	2003.40	1.90	6.79	2003.38	2004.10	.00	142.46	1.01
3.000	300.00	2003.63	2.13	7.03	2003.61	2004.37	.00	130.70	1.01
3.000	350.00	2003.85	2.35	7.16	2003.82	2004.60	.00	118.86	1.01
3.000	400.00	2004.07	2.57	7.17	2004.06	2004.80	.00	105.78	1.00
3.000	450.00	2004.24	2.74	7.33	2004.19	2004.98	.00	101.79	1.01
3.000	500.00	2004.37	2.87	7.58	2004.31	2005.15	.00	102.84	1.01
3.000	550.00	2004.49	2.99	7.84	2004.43	2005.30	.00	104.47	1.01
3.000	600.00	2004.60	3.10	8.08	2004.54	2005.46	.00	105.75	1.01
4.000	20.00	2001.96	.46	2.85	2001.90	2002.09	.00	163.58	1.04
4.000	50.00	2002.26	.76	3.97	2002.19	2002.51	.00	160.66	1.14
4.000	75.00	2002.47	.97	4.53	2002.38	2002.79	.00	154.89	1.13
4.000	100.00	2002.64	1.14	4.98	2002.55	2003.03	.00	152.03	1.12
4.000	150.00	2002.96	1.46	5.60	2002.84	2003.45	.00	141.69	1.14
4.000	200.00	2003.25	1.75	6.02	2003.11	2003.81	.00	126.01	1.14
4.000	250.00	2003.40	1.90	6.79	2003.38	2004.11	.00	142.82	1.00
4.000	300.00	2003.64	2.14	6.99	2003.61	2004.37	.00	128.55	1.01
4.000	350.00	2003.98	2.48	6.64	2003.83	2004.62	.00	95.24	1.12
4.000	400.00	2004.08	2.58	7.14	2004.06	2004.81	.00	104.51	1.01
4.000	450.00	2004.32	2.82	7.02	2004.19	2004.99	.00	90.36	1.06
4.000	500.00	2004.44	2.94	7.29	2004.31	2005.16	.00	92.13	1.06
4.000	550.00	2004.56	3.06	7.55	2004.42	2005.31	.00	93.99	1.05
4.000	600.00	2004.78	3.28	7.37	2004.53	2005.47	.00	81.61	1.14
5.000	20.00	2001.97	.47	2.78	2001.90	2002.09	.00	150.36	1.04
5.000	50.00	2002.28	.78	3.90	2002.19	2002.51	.00	151.27	1.03
5.000	75.00	2002.48	.98	4.44	2002.38	2002.79	.00	145.24	1.03
5.000	100.00	2002.66	1.16	4.89	2002.55	2003.03	.00	143.59	1.03
5.000	150.00	2002.97	1.47	5.55	2002.84	2003.45	.00	137.36	1.02
5.000	200.00	2003.26	1.76	5.97	2003.11	2003.81	.00	122.84	1.01
5.000	250.00	2003.55	2.05	6.17	2003.38	2004.12	.00	106.24	1.16
5.000	300.00	2003.77	2.27	6.44	2003.61	2004.39	.00	100.76	1.13
5.000	350.00	2003.99	2.49	6.60	2003.83	2004.62	.00	93.60	1.01
5.000	400.00	2004.21	2.71	6.64	2004.06	2004.82	.00	85.13	1.11
5.000	450.00	2004.33	2.83	6.98	2004.21	2004.99	.00	88.85	1.01
5.000	500.00	2004.46	2.96	7.23	2004.34	2005.16	.00	89.89	1.01
5.000	550.00	2004.63	3.13	7.28	2004.45	2005.32	.00	84.78	1.05
5.000	600.00	2004.78	3.28	7.38	2004.54	2005.48	.00	82.05	1.00

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	20.00	2001.98	.48	2.71	2001.90	2002.10	.00	138.90	1.04
6.000	50.00	2002.29	.79	3.82	2002.19	2002.52	.00	142.58	1.03
6.000	75.00	2002.50	1.00	4.38	2002.38	2002.79	.00	139.18	1.02
6.000	100.00	2002.68	1.18	4.80	2002.55	2003.04	.00	136.04	1.03
6.000	150.00	2002.99	1.49	5.47	2002.84	2003.46	.00	131.25	1.02
6.000	200.00	2003.28	1.78	5.90	2003.11	2003.82	.00	118.21	1.02
6.000	250.00	2003.56	2.06	6.13	2003.38	2004.13	.00	104.20	1.01
6.000	300.00	2003.79	2.29	6.38	2003.61	2004.39	.00	97.79	1.02
6.000	350.00	2004.01	2.51	6.56	2003.83	2004.62	.00	91.93	1.01
6.000	400.00	2004.22	2.72	6.61	2004.06	2004.82	.00	83.80	1.01
6.000	450.00	2004.39	2.89	6.72	2004.20	2005.00	.00	79.77	1.06
6.000	500.00	2004.52	3.02	6.97	2004.32	2005.17	.00	81.12	1.05
6.000	550.00	2004.63	3.13	7.26	2004.44	2005.32	.00	84.18	1.00
6.000	600.00	2004.78	3.28	7.38	2004.54	2005.48	.00	82.12	1.00

1

25JUL94 08:54:45 PAGE 19

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED
```

Table D12
Flow split at C553

Stage	Discharge, in cfs		
	Left	Right	Total
1937.0	0	0	0
1937.2	5	8	13
1937.4	10	15	25
1937.6	17	20	37
1937.8	20	35	55
1938.0	42	52	94
1938.2	70	75	145
1938.4	100	105	205
1938.6	150	150	300
1938.8	200	193	393
1939.0	270	250	520
1939.2	345	305	650
1939.4	425	380	805
1939.6	510	460	970
1939.8	610	555	1165
1940.0	710	660	1370
1940.2	820	780	1600
1940.4	930	885	1815
1940.6	1050	1070	2120
1940.8	1080	1210	2290

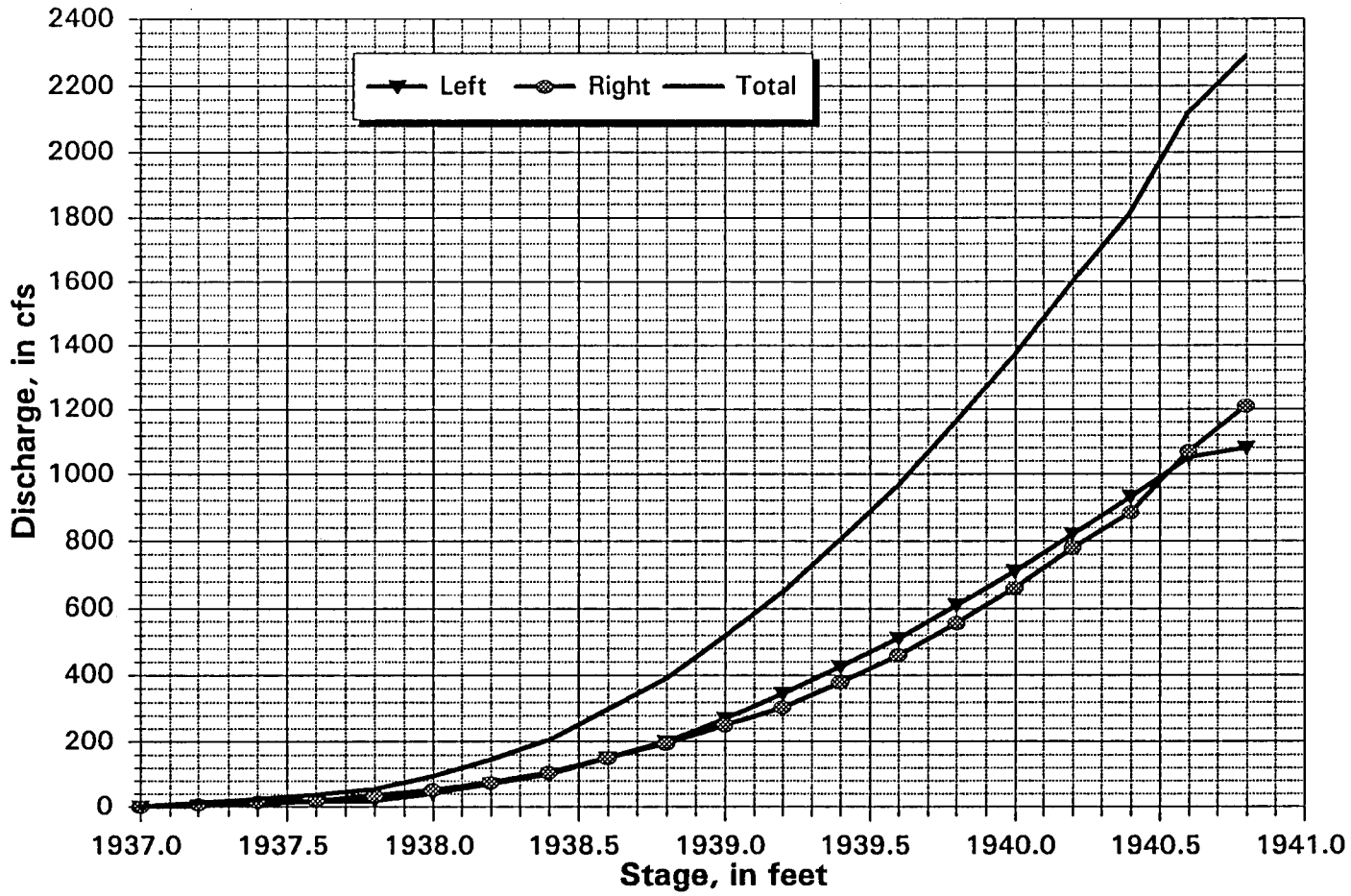

Figure D-12

Flow split at C553

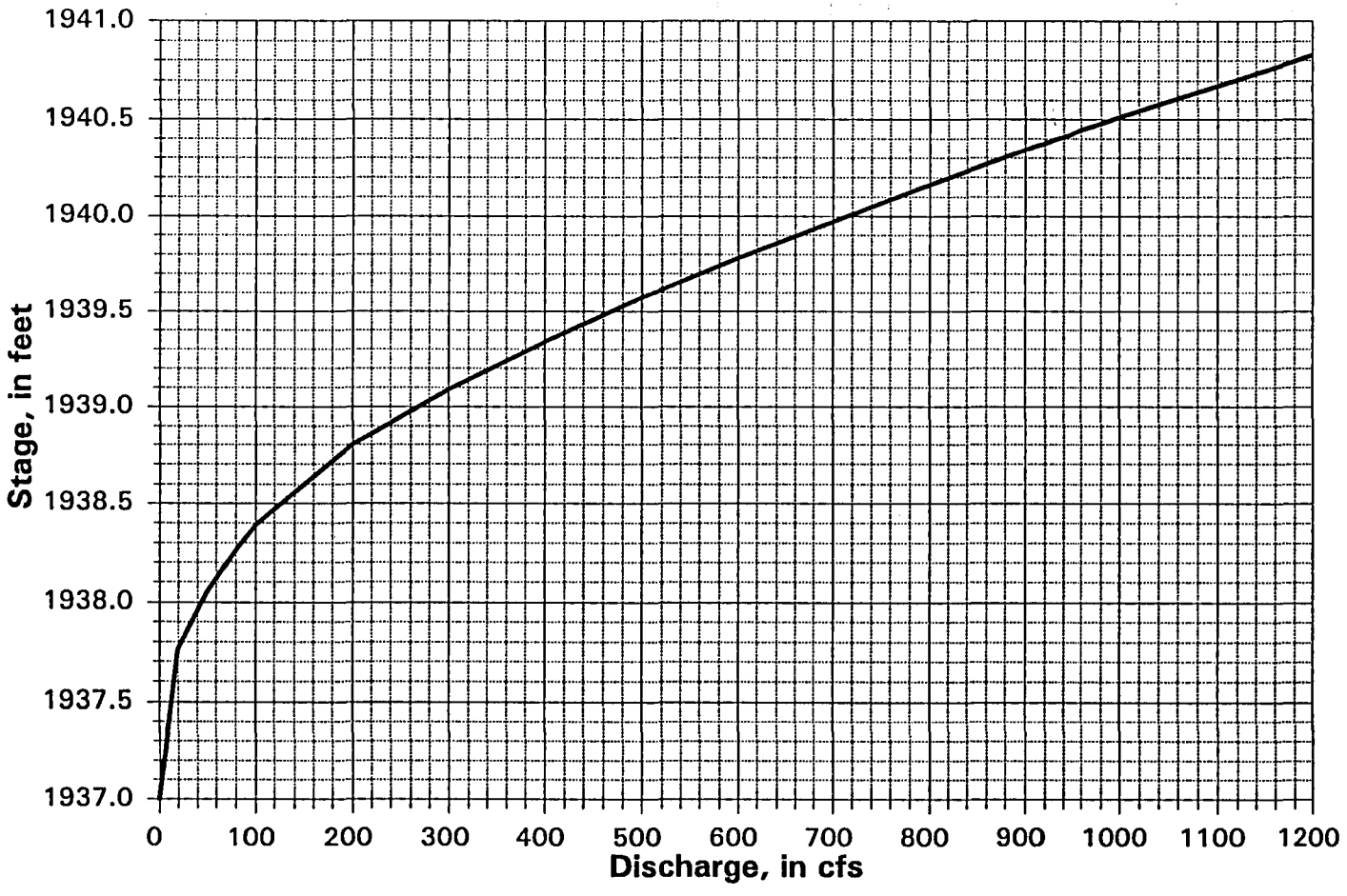

Figure D-12a

C553 Split Left

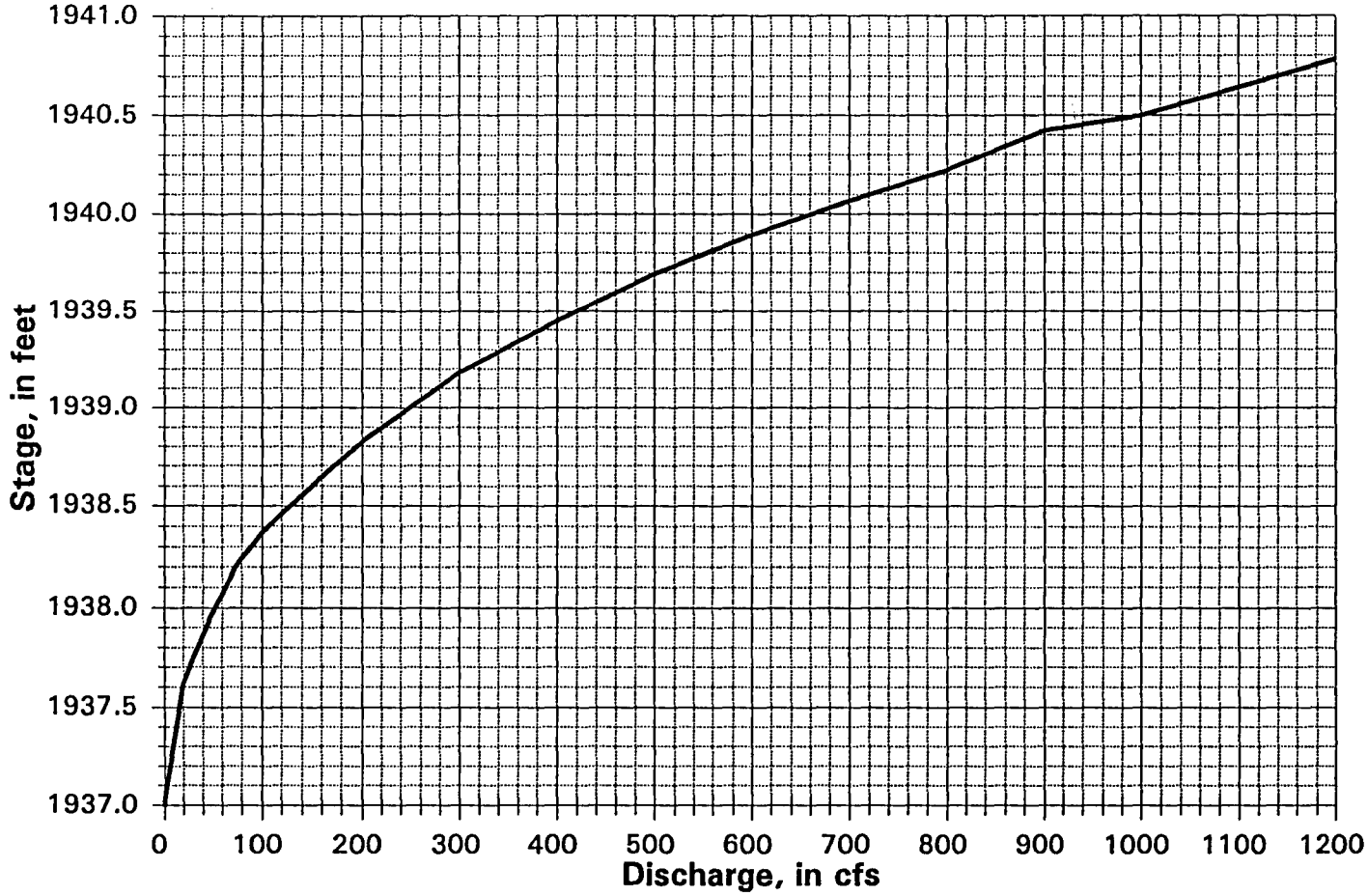

Figure D-12b

C553 Split Right

```
1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
 *  RUN DATE    16JUN94    TIME   15:37:51 *
 *****************************************

                                                                                                  ***************************************
                                                                                                  *  U.S. ARMY CORPS OF ENGINEERS       *
                                                                                                  *  HYDROLOGIC ENGINEERING CENTER      *
                                                                                                  *  609 SECOND STREET, SUITE D         *
                                                                                                  *  DAVIS, CALIFORNIA 95616-4687       *
                                                                                                  *          (916) 756-1104             *
                                                                                                  ***************************************

                                                X     X  XXXXXXX   XXXXX              XXXXX
                                                X     X  X        X     X            X     X
                                                X     X  X        X                  X
                                                XXXXXXX  XXXX     X          XXXXX    XXXXX
                                                X     X  X        X                  X
                                                X     X  X        X     X            X
                                                X     X  XXXXXXX   XXXXX             XXXXXXX
1
   16JUN94      15:37:51                                                                                                          PAGE    1


                                                                                                THIS RUN EXECUTED 16JUN94    15:37:51
 ***************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ***************************************

 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      553 Left                                          FILE:     C553L.IH2
 T4                                                        DATE:     06-16-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 553
 T6                SPLIT  LEFT
 T7
 T8      Single X-Section Run
                  Ditch slope =   0.0243 ft/ft  From Hydrologic Field Survey

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                           0.0243

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                        -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                     ********REQUESTED SECTION NUMBERS********

     -10       -10


 NC    0.075      0.010      0.035        .1         .3
 QT       14         20         50         75        100        200        300        400        500        600
 QT      700        800        900       1000       1200


         X-Section #1
 X1        1          8    1050.23    1060.34          0          0          0
 GR     1941        999    1938.44       1000    1937.25    1026.53    1937.45    1034.12    1938.69    1042.97
 GR   1937.7    1050.23    1937.00    1060.34       1941       1061
1
   16JUN94      15:37:51                                                                                                          PAGE    2


 X1        2                                                  .2         .2         .2

 X1        3                                                  .2         .2         .2

 X1        4                                                  .2         .2         .2

 X1        5                                                  .2         .2         .2

 X1        6                                                  .2         .2         .2
1
   16JUN94      15:37:51                                                                                                          PAGE    3


 T3            Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                           0.0243

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     2                -1                                  -1

1
   16JUN94      15:37:51                                                                                PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                           0.0243
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     3                   -1                                      -1

1
   16JUN94      15:37:51                                                                                PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                           0.0243
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     4                   -1                                      -1

1
   16JUN94      15:37:51                                                                                PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                           0.0243
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     5                   -1                                      -1

1
   16JUN94      15:37:51                                                                                PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                           0.0243
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     6                   -1                                      -1

1
   16JUN94      15:37:51                                                                                PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                           0.0243
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     7                   -1                                      -1

1
   16JUN94      15:37:51                                                                                PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                           0.0243
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     8                   -1                                      -1

1
   16JUN94      15:37:51                                                                                PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                10                           0.0243
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
      9                -1                                -1

1
   16JUN94      15:37:51                                                                                PAGE   11

 T3           Q10
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                11                          0.0243
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      10                -1                                -1

1
   16JUN94      15:37:51                                                                                PAGE   12

 T3           Q11
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                12                          0.0243
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      11                -1                                -1

1
   16JUN94      15:37:51                                                                                PAGE   13

 T3           Q12
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                13                          0.0243
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      12                -1                                -1

1
   16JUN94      15:37:51                                                                                PAGE   14

 T3           Q13
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                14                          0.0243
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      13                -1                                -1

1
   16JUN94      15:37:51                                                                                PAGE   15

 T3           Q14
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                15                          0.0243
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      14                -1                                -1


1
   16JUN94      15:37:51                                                                                PAGE   16


                                                                                THIS RUN EXECUTED 16JUN94    15:38:04
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

553 Left

SUMMARY PRINTOUT

      SECNO       Q       CWSEL     DEPTH      VCH       CRIWS      EG        HL        10*KS     KRATIO
```

	1.000	20.00	1937.72	.72	3.38	1937.69	1937.84	.00	242.53	.00
	1.000	50.00	1937.96	.96	4.76	1937.94	1938.19	.00	242.20	.00
	1.000	75.00	1938.11	1.11	5.50	1938.11	1938.40	.00	242.98	.00
*	1.000	100.00	1938.24	1.24	6.02	1938.24	1938.58	.00	235.00	.00
*	1.000	200.00	1938.67	1.67	7.12	1938.67	1939.10	.00	194.03	.00
*	1.000	300.00	1938.95	1.95	8.15	1938.95	1939.49	.00	197.05	.00
*	1.000	400.00	1939.17	2.17	9.09	1939.17	1939.83	.00	206.50	.00
*	1.000	500.00	1939.38	2.38	9.87	1939.38	1940.13	.00	211.11	.00
*	1.000	600.00	1939.58	2.58	10.51	1939.58	1940.42	.00	211.37	.00
*	1.000	700.00	1939.77	2.77	11.02	1939.77	1940.69	.00	208.25	.00
*	1.000	800.00	1939.93	2.93	11.64	1939.93	1940.94	.00	213.39	.00
*	1.000	900.00	1940.09	3.09	12.12	1940.09	1941.19	.00	212.73	.00
*	1.000	1000.00	1940.26	3.26	12.54	1940.26	1941.42	.00	211.06	.00
*	1.000	1200.00	1940.55	3.55	13.38	1940.55	1941.87	.00	211.04	.00
	2.000	20.00	1937.73	.73	3.33	1937.69	1937.84	.00	231.57	1.02
	2.000	50.00	1937.97	.97	4.72	1937.95	1938.20	.00	235.26	1.01
	2.000	75.00	1938.12	1.12	5.46	1938.11	1938.41	.00	237.22	1.01
	2.000	100.00	1938.25	1.25	5.99	1938.25	1938.59	.00	230.40	1.01
	2.000	200.00	1938.68	1.68	7.09	1938.67	1939.11	.00	191.69	1.01
	2.000	300.00	1938.96	1.96	8.12	1938.94	1939.49	.00	195.09	1.01
	2.000	400.00	1939.18	2.18	9.07	1939.17	1939.83	.00	204.62	1.00
	2.000	500.00	1939.42	2.42	9.68	1939.39	1940.14	.00	198.93	1.03
	2.000	600.00	1939.58	2.58	10.48	1939.58	1940.42	.00	209.80	1.00
	2.000	700.00	1939.78	2.78	11.00	1939.76	1940.69	.00	206.88	1.00
	2.000	800.00	1939.97	2.97	11.44	1939.93	1940.95	.00	202.43	1.03
	2.000	900.00	1940.10	3.10	12.09	1940.10	1941.19	.00	211.47	1.00
	2.000	1000.00	1940.27	3.27	12.52	1940.25	1941.43	.00	209.89	1.00
	2.000	1200.00	1940.60	3.60	13.18	1940.56	1941.88	.00	201.48	1.02

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	20.00	1937.74	.74	3.25	1937.69	1937.85	.00	213.62	1.04
3.000	50.00	1937.99	.99	4.63	1937.95	1938.20	.00	222.43	1.03
3.000	75.00	1938.16	1.16	5.17	1938.10	1938.42	.00	200.48	1.09
3.000	100.00	1938.31	1.31	5.58	1938.24	1938.60	.00	185.61	1.11
3.000	200.00	1938.69	1.69	7.03	1938.67	1939.11	.00	186.91	1.01
3.000	300.00	1938.97	1.97	8.06	1938.94	1939.50	.00	191.06	1.01
3.000	400.00	1939.20	2.20	9.01	1939.17	1939.83	.00	200.77	1.01
3.000	500.00	1939.52	2.52	9.05	1939.37	1940.15	.00	162.57	1.11
3.000	600.00	1939.60	2.60	10.43	1939.57	1940.43	.00	206.56	1.01
3.000	700.00	1939.79	2.79	10.95	1939.75	1940.70	.00	204.05	1.01
3.000	800.00	1940.11	3.11	10.73	1939.92	1940.97	.00	165.99	1.10
3.000	900.00	1940.12	3.12	12.04	1940.10	1941.20	.00	208.85	1.01
3.000	1000.00	1940.28	3.28	12.47	1940.25	1941.43	.00	207.52	1.01
3.000	1200.00	1940.78	3.78	12.34	1940.54	1941.90	.00	163.91	1.11
4.000	20.00	1937.75	.75	3.16	1937.69	1937.85	.00	193.96	1.05
4.000	50.00	1938.04	1.04	4.19	1937.94	1938.21	.00	162.61	1.17
4.000	75.00	1938.21	1.21	4.73	1938.14	1938.42	.00	152.21	1.15
4.000	100.00	1938.38	1.38	4.99	1938.24	1938.61	.00	132.16	1.19
4.000	200.00	1938.77	1.77	6.50	1938.67	1939.12	.00	148.31	1.12
4.000	300.00	1939.06	2.06	7.50	1938.93	1939.51	.00	154.43	1.11
4.000	400.00	1939.31	2.31	8.32	1939.17	1939.85	.00	158.16	1.13
4.000	500.00	1939.54	2.54	9.00	1939.38	1940.16	.00	159.59	1.01
4.000	600.00	1939.76	2.76	9.54	1939.57	1940.45	.00	157.43	1.15
4.000	700.00	1939.93	2.93	10.22	1939.75	1940.71	.00	164.93	1.11
4.000	800.00	1940.12	3.12	10.68	1939.93	1940.97	.00	163.59	1.01
4.000	900.00	1940.31	3.31	11.08	1940.09	1941.22	.00	161.28	1.14
4.000	1000.00	1940.47	3.47	11.52	1940.25	1941.45	.00	162.34	1.13
4.000	1200.00	1940.80	3.80	12.30	1940.55	1941.90	.00	162.28	1.01
5.000	20.00	1937.76	.76	3.06	1937.69	1937.86	.00	175.78	1.05
5.000	50.00	1938.04	1.04	4.15	1937.95	1938.21	.00	157.03	1.02
5.000	75.00	1938.22	1.22	4.69	1938.14	1938.43	.00	148.33	1.01
5.000	100.00	1938.38	1.38	5.01	1938.25	1938.61	.00	133.56	.99
5.000	200.00	1938.79	1.79	6.38	1938.67	1939.13	.00	140.55	1.03
5.000	300.00	1939.07	2.07	7.44	1938.94	1939.51	.00	150.22	1.01
5.000	400.00	1939.33	2.33	8.22	1939.17	1939.85	.00	152.54	1.02
5.000	500.00	1939.55	2.55	8.94	1939.38	1940.16	.00	156.35	1.01
5.000	600.00	1939.77	2.77	9.49	1939.57	1940.45	.00	154.89	1.01
5.000	700.00	1939.95	2.95	10.13	1939.75	1940.72	.00	160.62	1.01
5.000	800.00	1940.14	3.14	10.59	1939.93	1940.98	.00	159.75	1.01
5.000	900.00	1940.32	3.32	11.02	1940.09	1941.22	.00	158.91	1.01
5.000	1000.00	1940.49	3.49	11.47	1940.25	1941.46	.00	160.10	1.01
5.000	1200.00	1940.81	3.81	12.25	1940.55	1941.91	.00	160.37	1.01

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	20.00	1937.77	.77	2.98	1937.69	1937.86	.00	160.37	1.05
6.000	50.00	1938.05	1.05	4.10	1937.95	1938.22	.00	151.19	1.02
6.000	75.00	1938.23	1.23	4.65	1938.14	1938.43	.00	144.04	1.01
6.000	100.00	1938.39	1.39	5.00	1938.25	1938.61	.00	133.07	1.00
6.000	200.00	1938.80	1.80	6.30	1938.68	1939.13	.00	135.53	1.02
6.000	300.00	1939.09	2.09	7.33	1938.94	1939.52	.00	144.16	1.02
6.000	400.00	1939.34	2.34	8.13	1939.17	1939.86	.00	147.29	1.02
6.000	500.00	1939.57	2.57	8.84	1939.38	1940.17	.00	151.40	1.02
6.000	600.00	1939.78	2.78	9.43	1939.57	1940.45	.00	152.20	1.01
6.000	700.00	1939.97	2.97	10.04	1939.75	1940.72	.00	156.35	1.01
6.000	800.00	1940.16	3.16	10.51	1939.93	1940.98	.00	155.85	1.01
6.000	900.00	1940.34	3.34	10.94	1940.09	1941.23	.00	155.37	1.01
6.000	1000.00	1940.51	3.51	11.39	1940.25	1941.46	.00	156.69	1.01
6.000	1200.00	1940.83	3.83	12.18	1940.55	1941.91	.00	157.31	1.01

1

16JUN94 15:37:51 PAGE 19

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED
```

```
1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
 *  RUN DATE    16JUN94    TIME   15:41:14 *
 *****************************************

                                                                                  ***************************************
                                                                                  *  U.S. ARMY CORPS OF ENGINEERS       *
                                                                                  *  HYDROLOGIC ENGINEERING CENTER      *
                                                                                  *  609 SECOND STREET, SUITE D         *
                                                                                  *  DAVIS, CALIFORNIA 95616-4687       *
                                                                                  *          (916) 756-1104             *
                                                                                  ***************************************

                                        X     X  XXXXXXX   XXXXX             XXXXX
                                        X     X  X        X     X           X     X
                                        X     X  X        X                       X
                                        XXXXXXX  XXXX     X          XXXXX    XXXXX
                                        X     X  X        X                 X
                                        X     X  X        X     X           X
                                        X     X  XXXXXXX   XXXXX            XXXXXXX
1
   16JUN94      15:41:14                                                                                          PAGE    1


                                                                                THIS RUN EXECUTED 16JUN94    15:41:14
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

 T1       FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2       RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3       553 Right                                        FILE:     C553R.IH2
 T4                                                        DATE:     06-16-94  dtp
 T4
 T5               This model is used to develop a flow split rating curve
 T6               for the split that occurs at hydrologic concentration point 553
 T6                 SPLIT  RIGHT
 T7
 T8       Single X-Section Run
                    Ditch slope =   0.0266 ft/ft  From Hydrologic Field Survey

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                           0.0266

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                        -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                     ********REQUESTED SECTION NUMBERS********

     -10       -10


 NC    0.010      0.075      0.035        .1         .3
 QT       14         20         50        75        100        200        300        400        500        600
 QT      700        800        900      1000       1200

         X-Section #1
 X1        1          9       1000    1012.2          0          0          0
 GR     1941        999    1937.00    1000.0    1937.18     1012.2    1938.20     1016.7    1938.29     1031.0
 GR   1937.4     1037.2    1937.57    1043.2    1939.77     1089.1       1941       1090

1
   16JUN94      15:41:14                                                                                          PAGE    2


 X1        2                                                  .2         .2         .2

 X1        3                                                  .2         .2         .2

 X1        4                                                  .2         .2         .2

 X1        5                                                  .2         .2         .2

 X1        6                                                  .2         .2         .2

1
   16JUN94      15:41:14                                                                                          PAGE    3


 T3            Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                           0.0266

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       2                 -1                                        -1
```

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1
   16JUN94      15:41:14                                                                                    PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                           0.0266
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
       3                 -1                                        -1

1
   16JUN94      15:41:14                                                                                    PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                           0.0266
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
       4                 -1                                        -1

1
   16JUN94      15:41:14                                                                                    PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                           0.0266
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
       5                 -1                                        -1

1
   16JUN94      15:41:14                                                                                    PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                           0.0266
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
       6                 -1                                        -1

1
   16JUN94      15:41:14                                                                                    PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                           0.0266
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
       7                 -1                                        -1

1
   16JUN94      15:41:14                                                                                    PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                           0.0266
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
       8                 -1                                        -1

1
   16JUN94      15:41:14                                                                                    PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 10                          0.0266
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
       9                 -1                                        -1
```

1
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T3 Q10

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
		11			0.0266					
J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	10		-1				-1			

1
16JUN94 15:41:14 PAGE 12

T3 Q11

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
		12			0.0266					
J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	11		-1				-1			

1
16JUN94 15:41:14 PAGE 13

T3 Q12

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
		13			0.0266					
J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	12		-1				-1			

1
16JUN94 15:41:14 PAGE 14

T3 Q13

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
		14			0.0266					
J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	13		-1				-1			

1
16JUN94 15:41:14 PAGE 15

T3 Q14

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
		15			0.0266					
J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	14		-1				-1			

1
16JUN94 15:41:14 PAGE 16

THIS RUN EXECUTED 16JUN94 15:41:28

****
HEC-2 WATER SURFACE PROFILES

Version 4.6.2; May 1991
****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

553 Right

SUMMARY PRINTOUT

	SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
*	1.000	20.00	1937.53	.53	3.65	1937.53	1937.73	.00	221.08	.00
*	1.000	50.00	1937.89	.89	4.48	1937.89	1938.17	.00	149.16	.00

*	1.000	75.00	1938.07	1.07	5.14	1938.07	1938.42	.00	150.22	.00
*	1.000	100.00	1938.26	1.26	5.41	1938.26	1938.62	.00	131.77	.00
*	1.000	200.00	1938.71	1.71	6.56	1938.71	1939.16	.00	125.82	.00
*	1.000	300.00	1939.02	2.02	7.45	1939.02	1939.56	.00	128.29	.00
*	1.000	400.00	1939.27	2.27	8.18	1939.27	1939.89	.00	131.46	.00
*	1.000	500.00	1939.48	2.48	8.87	1939.48	1940.18	.00	136.72	.00
*	1.000	600.00	1939.69	2.69	9.33	1939.69	1940.44	.00	135.09	.00
*	1.000	700.00	1939.89	2.89	9.64	1939.89	1940.66	.00	130.48	.00
*	1.000	800.00	1940.04	3.04	10.12	1940.04	1940.87	.00	134.41	.00
*	1.000	900.00	1940.18	3.18	10.54	1940.18	1941.07	.00	136.78	.00
*	1.000	1000.00	1940.32	3.32	10.92	1940.32	1941.26	.00	138.44	.00
*	1.000	1200.00	1940.56	3.56	11.73	1940.56	1941.61	.00	145.41	.00
	2.000	20.00	1937.54	.54	3.61	1937.53	1937.74	.00	213.56	1.02
	2.000	50.00	1937.92	.92	4.30	1937.90	1938.17	.00	132.66	1.06
	2.000	75.00	1938.08	1.08	5.12	1938.07	1938.42	.00	148.38	1.01
	2.000	100.00	1938.27	1.27	5.39	1938.26	1938.62	.00	130.52	1.00
	2.000	200.00	1938.73	1.73	6.42	1938.71	1939.17	.00	118.43	1.03
	2.000	300.00	1939.02	2.02	7.43	1939.01	1939.56	.00	127.53	1.00
	2.000	400.00	1939.28	2.28	8.17	1939.26	1939.89	.00	130.74	1.00
	2.000	500.00	1939.52	2.52	8.69	1939.49	1940.18	.00	128.94	1.03
	2.000	600.00	1939.73	2.73	9.14	1939.70	1940.44	.00	127.15	1.03
	2.000	700.00	1939.94	2.94	9.42	1939.90	1940.67	.00	122.30	1.03
	2.000	800.00	1940.09	3.09	9.90	1940.05	1940.88	.00	126.19	1.03
	2.000	900.00	1940.22	3.22	10.35	1940.19	1941.07	.00	129.91	1.03
	2.000	1000.00	1940.33	3.33	10.91	1940.32	1941.26	.00	137.90	1.00
	2.000	1200.00	1940.61	3.61	11.51	1940.57	1941.62	.00	137.77	1.03

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	20.00	1937.55	.55	3.53	1937.53	1937.74	.00	198.89	1.04
3.000	50.00	1937.93	.93	4.23	1937.90	1938.18	.00	126.66	1.02
3.000	75.00	1938.09	1.09	5.08	1938.07	1938.42	.00	144.65	1.01
3.000	100.00	1938.27	1.27	5.36	1938.26	1938.63	.00	128.01	1.01
3.000	200.00	1938.74	1.74	6.38	1938.70	1939.17	.00	116.19	1.01
3.000	300.00	1939.03	2.03	7.40	1939.01	1939.56	.00	125.91	1.01
3.000	400.00	1939.28	2.28	8.14	1939.26	1939.89	.00	129.28	1.01
3.000	500.00	1939.53	2.53	8.64	1939.47	1940.19	.00	126.94	1.01
3.000	600.00	1939.74	2.74	9.10	1939.72	1940.45	.00	125.55	1.01
3.000	700.00	1939.95	2.95	9.37	1939.89	1940.67	.00	120.48	1.01
3.000	800.00	1940.10	3.10	9.85	1940.03	1940.88	.00	124.40	1.01
3.000	900.00	1940.24	3.24	10.31	1940.17	1941.08	.00	128.27	1.01
3.000	1000.00	1940.34	3.34	10.87	1940.31	1941.26	.00	136.78	1.00
3.000	1200.00	1940.75	3.75	10.81	1940.55	1941.64	.00	115.05	1.09
4.000	20.00	1937.60	.60	3.13	1937.54	1937.75	.00	135.83	1.21
4.000	50.00	1937.94	.94	4.16	1937.89	1938.18	.00	120.17	1.03
4.000	75.00	1938.13	1.13	4.81	1938.07	1938.43	.00	123.30	1.08
4.000	100.00	1938.29	1.29	5.30	1938.26	1938.63	.00	124.25	1.01
4.000	200.00	1938.75	1.75	6.32	1938.71	1939.17	.00	113.17	1.01
4.000	300.00	1939.04	2.04	7.35	1939.01	1939.57	.00	123.45	1.01
4.000	400.00	1939.30	2.30	8.09	1939.26	1939.90	.00	127.02	1.01
4.000	500.00	1939.60	2.60	8.26	1939.49	1940.19	.00	111.43	1.07
4.000	600.00	1939.87	2.87	8.42	1939.72	1940.46	.00	101.15	1.11
4.000	700.00	1940.04	3.04	8.88	1939.91	1940.68	.00	103.76	1.08
4.000	800.00	1940.20	3.20	9.32	1940.05	1940.89	.00	106.57	1.08
4.000	900.00	1940.42	3.42	9.37	1940.17	1941.10	.00	97.83	1.15
4.000	1000.00	1940.48	3.48	10.17	1940.31	1941.28	.00	113.07	1.10
4.000	1200.00	1940.76	3.76	10.78	1940.56	1941.64	.00	114.05	1.00
5.000	20.00	1937.61	.61	3.05	1937.53	1937.75	.00	124.54	1.04
5.000	50.00	1937.96	.96	4.05	1937.89	1938.18	.00	110.98	1.04
5.000	75.00	1938.21	1.21	4.28	1938.07	1938.44	.00	86.68	1.19
5.000	100.00	1938.35	1.35	4.90	1938.27	1938.64	.00	98.60	1.12
5.000	200.00	1938.81	1.81	5.96	1938.71	1939.18	.00	96.09	1.09
5.000	300.00	1939.18	2.18	6.55	1939.00	1939.58	.00	88.87	1.18
5.000	400.00	1939.45	2.45	7.19	1939.25	1939.91	.00	90.79	1.18
5.000	500.00	1939.69	2.69	7.73	1939.47	1940.21	.00	92.12	1.10
5.000	600.00	1939.88	2.88	8.37	1939.69	1940.46	.00	99.46	1.01
5.000	700.00	1940.05	3.05	8.83	1939.89	1940.69	.00	102.13	1.01
5.000	800.00	1940.21	3.21	9.28	1940.04	1940.90	.00	105.00	1.01
5.000	900.00	1940.42	3.42	9.39	1940.18	1941.10	.00	98.44	1.00
5.000	1000.00	1940.49	3.49	10.13	1940.31	1941.28	.00	111.59	1.01
5.000	1200.00	1940.77	3.77	10.74	1940.56	1941.64	.00	112.92	1.01

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	20.00	1937.62	.62	2.98	1937.53	1937.76	.00	115.36	1.04
6.000	50.00	1937.97	.97	3.98	1937.90	1938.19	.00	105.35	1.03
6.000	75.00	1938.21	1.21	4.31	1938.07	1938.44	.00	88.43	.99
6.000	100.00	1938.37	1.37	4.80	1938.26	1938.64	.00	92.93	1.03
6.000	200.00	1938.82	1.82	5.91	1938.71	1939.18	.00	93.61	1.01
6.000	300.00	1939.18	2.18	6.55	1939.01	1939.58	.00	89.17	1.00
6.000	400.00	1939.45	2.45	7.21	1939.26	1939.92	.00	91.41	1.00
6.000	500.00	1939.69	2.69	7.75	1939.48	1940.21	.00	92.86	1.00
6.000	600.00	1939.89	2.89	8.32	1939.69	1940.47	.00	97.72	1.01
6.000	700.00	1940.06	3.06	8.78	1939.89	1940.69	.00	100.43	1.01
6.000	800.00	1940.22	3.22	9.22	1940.04	1940.90	.00	103.37	1.01
6.000	900.00	1940.42	3.42	9.39	1940.18	1941.10	.00	98.54	1.00
6.000	1000.00	1940.50	3.50	10.07	1940.31	1941.28	.00	110.02	1.01
6.000	1200.00	1940.78	3.78	10.70	1940.56	1941.65	.00	111.65	1.01

1

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SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED
```

Table D-13
Flow split at C554

Stage	Discharge, in cfs		
	Left	Right	Total
1871.0	0	0	0
1871.2	0	5	5
1871.4	5	10	15
1871.6	10	20	30
1871.8	13	30	43
1872.0	20	50	70
1872.2	30	77	107
1872.4	40	104	144
1872.6	50	140	190
1872.8	78	175	253
1873.0	106	210	316
1873.2	145	258	403
1873.4	190	310	500
1873.6	250	420	670
1873.8	320	534	854
1874.0	400	670	1070
1874.2	480	810	1290
1874.4	603	950	1553
1874.6	720	1120	1840
1874.8	840	1310	2150
1875.0	980	1520	2500

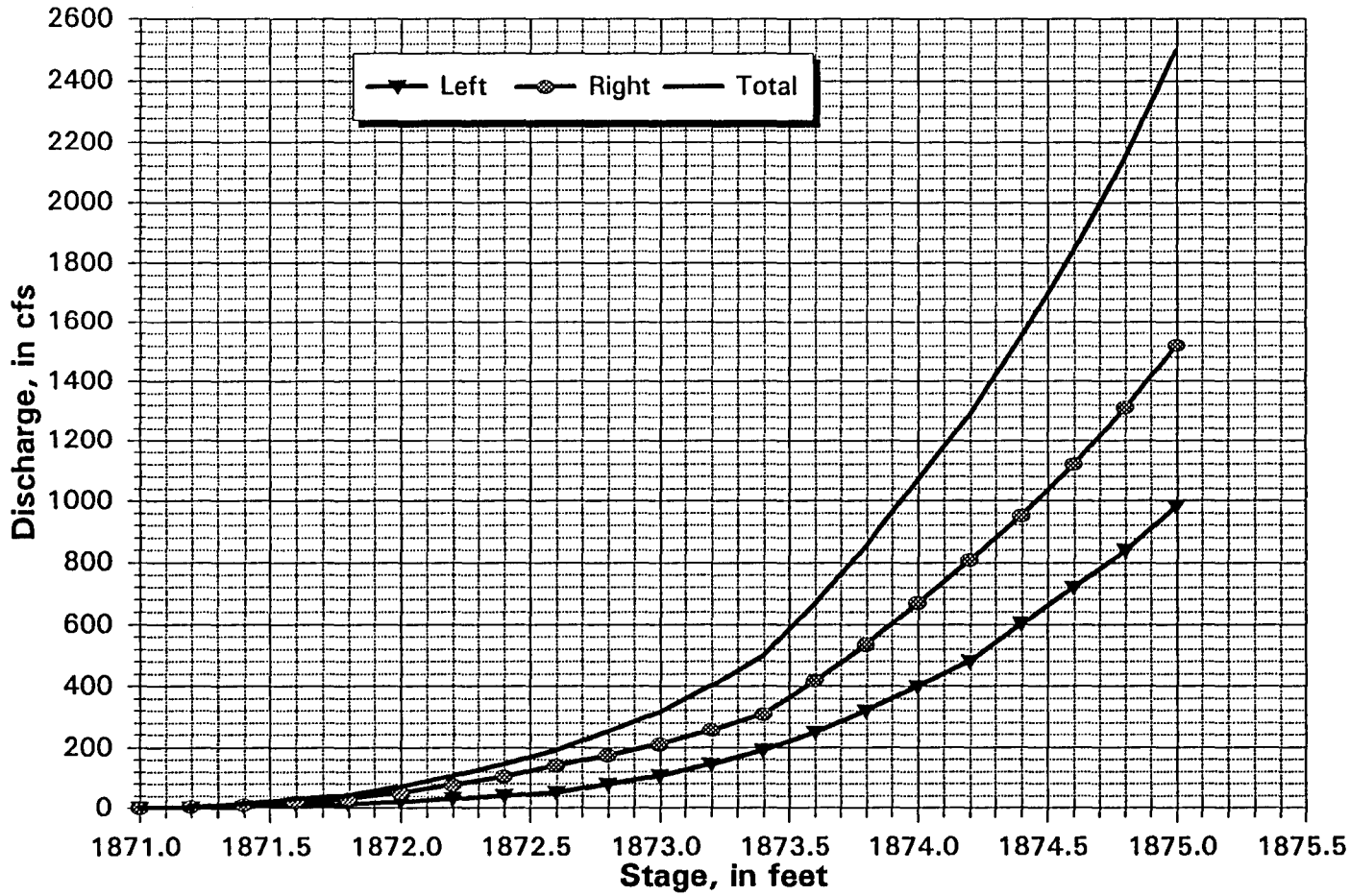

Figure D-13

Flow split at C554

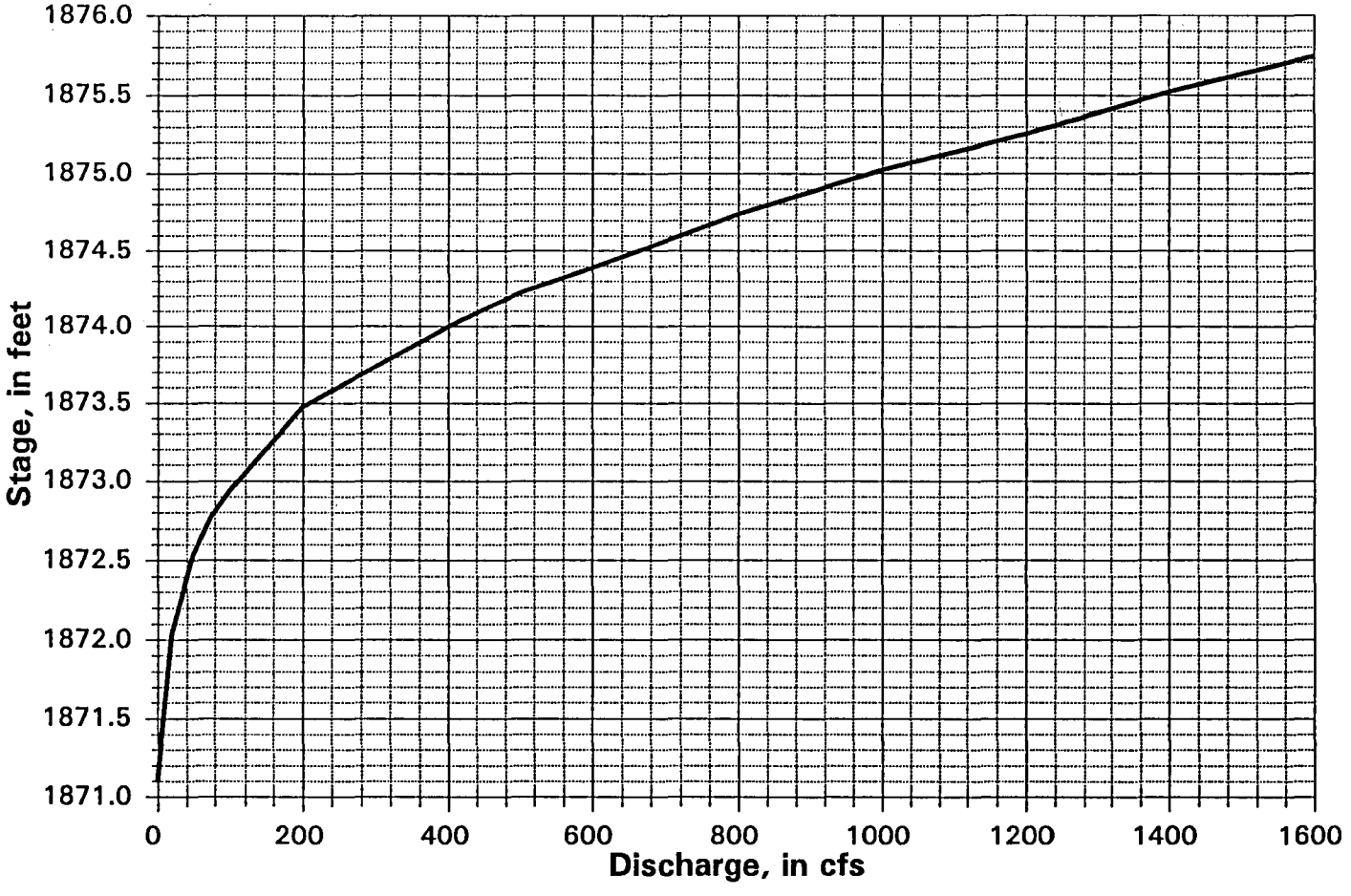

Figure D-13a

C554 Split Left

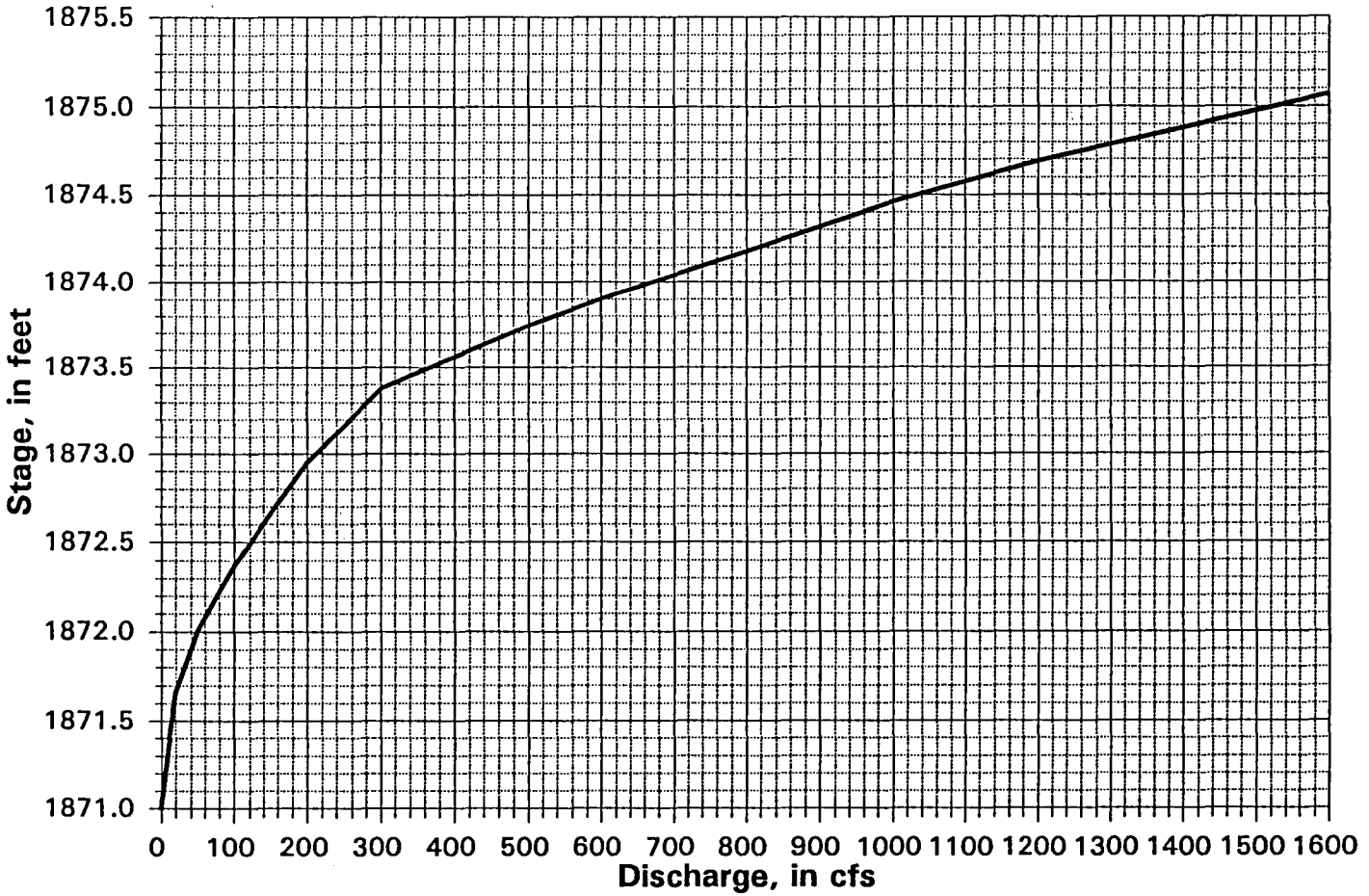

Figure D-13b

C554 Split Right

```
1*****************************************                                    ****************************************
 *  HEC-2 WATER SURFACE PROFILES           *                                    *  U.S. ARMY CORPS OF ENGINEERS        *
 *                                         *                                    *  HYDROLOGIC ENGINEERING CENTER       *
 *  Version   4.6.2;  May 1991             *                                    *  609 SECOND STREET, SUITE D          *
 *                                         *                                    *  DAVIS, CALIFORNIA 95616-4687        *
 *  RUN DATE    16JUN94    TIME   15:46:46 *                                    *        (916) 756-1104                *
*****************************************                                    ****************************************


                                        X     X  XXXXXXX   XXXXX              XXXXX
                                        X     X  X        X     X            X     X
                                        X     X  X        X                  X
                                        XXXXXXX  XXXX     X          XXXXX    XXXXX
                                        X     X  X        X                  X
                                        X     X  X        X     X            X
                                        X     X  XXXXXXX   XXXXX             XXXXXXX
1
   16JUN94      15:46:46                                                                                    PAGE    1


                                                                                  THIS RUN EXECUTED 16JUN94    15:46:46
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      554 Left                                          FILE:     C554L.IH2
 T4                                                        DATE:     06-16-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 554
 T6                SPLIT  LEFT
 T7
 T8      Single X-Section Run
                   Ditch slope =   0.0250 ft/ft  From Hydrologic Field Survey

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                           0.0250

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                        -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

     -10       -10

 NC    0.075      0.075      0.035        .1         .3
 QT       14         20         50         75        100        200        300        400        500        600
 QT      800       1000       1200       1400       1600

 NH        4      0.075     1136.2      0.035     1144.4      0.075     1153.6       0.01       1155
         X-Section #1
 X1        1         12     1136.2     1144.4          0          0          0
 GR     1878        999    1873.51     1000.0    1872.05     1054.5    1874.08     1063.2    1875.08     1069.1
 GR   1877.1     1073.9    1876.13     1123.2    1871.11     1136.2    1871.71     1144.4    1872.44     1149.3
 GR   1872.5     1153.6       1878       1155
1
   16JUN94      15:46:46                                                                                    PAGE    2


 X1        2                                          .2         .2         .2

 X1        3                                          .2         .2         .2

 X1        4                                          .2         .2         .2

 X1        5                                          .2         .2         .2

 X1        6                                          .2         .2         .2

1
   16JUN94      15:46:46                                                                                    PAGE    3

 T3          Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                           0.0250

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     2                -1                                  -1

1
   16JUN94      15:46:46                                                                                PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                           0.0250
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     3                   -1                                      -1

1
   16JUN94      15:46:46                                                                                PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                           0.0250
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     4                   -1                                      -1

1
   16JUN94      15:46:46                                                                                PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                           0.0250
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     5                   -1                                      -1

1
   16JUN94      15:46:46                                                                                PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                           0.0250
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     6                   -1                                      -1

1
   16JUN94      15:46:46                                                                                PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                           0.0250
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     7                   -1                                      -1

1
   16JUN94      15:46:46                                                                                PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                           0.0250
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     8                   -1                                      -1

1
   16JUN94      15:46:46                                                                                PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 10                          0.0250
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     9                -1                                  -1

1
   16JUN94      15:46:46                                                                                PAGE   11

 T3           Q10
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                11                          0.0250
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                  -1                                      -1

1
   16JUN94      15:46:46                                                                                PAGE   12

 T3           Q11
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                12                          0.0250
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                  -1                                      -1

1
   16JUN94      15:46:46                                                                                PAGE   13

 T3           Q12
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                13                          0.0250
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                  -1                                      -1

1
   16JUN94      15:46:46                                                                                PAGE   14

 T3           Q13
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                14                          0.0250
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                  -1                                      -1

1
   16JUN94      15:46:46                                                                                PAGE   15

 T3           Q14
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                15                          0.0250
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                  -1                                      -1


1
   16JUN94      15:46:46                                                                                PAGE   16


                                                                          THIS RUN EXECUTED 16JUN94    15:47:01
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

554 Left

SUMMARY PRINTOUT

      SECNO       Q       CWSEL     DEPTH      VCH      CRIWS      EG        HL       10*KS    KRATIO
```

*	1.000	20.00	1871.95	.84	4.20	1871.95	1872.20	.00	225.63	.00
*	1.000	50.00	1872.43	1.32	4.98	1872.43	1872.76	.00	133.88	.00
*	1.000	75.00	1872.68	1.57	5.37	1872.68	1873.02	.00	116.71	.00
*	1.000	100.00	1872.86	1.75	5.75	1872.86	1873.22	.00	111.88	.00
*	1.000	200.00	1873.32	2.21	7.07	1873.32	1873.77	.00	117.32	.00
*	1.000	300.00	1873.70	2.59	7.47	1873.70	1874.14	.00	103.06	.00
*	1.000	400.00	1873.91	2.80	8.36	1873.91	1874.43	.00	114.69	.00
*	1.000	500.00	1874.08	2.97	9.22	1874.08	1874.69	.00	127.92	.00
*	1.000	600.00	1874.23	3.12	10.01	1874.23	1874.92	.00	140.27	.00
*	1.000	800.00	1874.52	3.41	11.11	1874.52	1875.33	.00	151.10	.00
*	1.000	1000.00	1874.79	3.68	12.02	1874.79	1875.71	.00	158.33	.00
*	1.000	1200.00	1875.07	3.96	12.64	1875.07	1876.05	.00	157.97	.00
*	1.000	1400.00	1875.26	4.15	13.51	1875.26	1876.36	.00	168.33	.00
*	1.000	1600.00	1875.48	4.37	14.11	1875.48	1876.66	.00	170.41	.00
	2.000	20.00	1871.95	.84	4.16	1871.94	1872.21	.00	219.28	1.01
	2.000	50.00	1872.44	1.33	4.96	1872.43	1872.76	.00	132.46	1.01
	2.000	75.00	1872.70	1.59	5.25	1872.68	1873.03	.00	109.28	1.03
	2.000	100.00	1872.87	1.76	5.73	1872.85	1873.22	.00	111.08	1.00
	2.000	200.00	1873.33	2.22	7.05	1873.32	1873.78	.00	116.62	1.00
	2.000	300.00	1873.70	2.59	7.46	1873.64	1874.14	.00	102.56	1.00
	2.000	400.00	1873.91	2.80	8.35	1873.85	1874.43	.00	114.14	1.00
	2.000	500.00	1874.08	2.97	9.21	1874.06	1874.69	.00	127.29	1.00
	2.000	600.00	1874.28	3.17	9.73	1874.24	1874.92	.00	129.94	1.04
	2.000	800.00	1874.58	3.47	10.82	1874.54	1875.34	.00	140.48	1.04
	2.000	1000.00	1874.85	3.74	11.73	1874.80	1875.71	.00	148.08	1.03
	2.000	1200.00	1875.07	3.96	12.62	1875.04	1876.05	.00	157.33	1.00
	2.000	1400.00	1875.33	4.22	13.19	1875.28	1876.37	.00	157.39	1.03
	2.000	1600.00	1875.54	4.43	13.84	1875.49	1876.67	.00	161.53	1.03

1

16JUN94 15:46:46 PAGE 17

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	20.00	1871.97	.86	4.09	1871.94	1872.21	.00	207.09	1.03
3.000	50.00	1872.45	1.34	4.93	1872.43	1872.77	.00	129.52	1.01
3.000	75.00	1872.71	1.60	5.21	1872.68	1873.03	.00	106.87	1.01
3.000	100.00	1872.87	1.76	5.70	1872.85	1873.23	.00	109.41	1.01
3.000	200.00	1873.33	2.22	7.02	1873.32	1873.78	.00	115.16	1.01
3.000	300.00	1873.71	2.60	7.43	1873.68	1874.14	.00	101.56	1.00
3.000	400.00	1873.92	2.81	8.32	1873.89	1874.43	.00	113.04	1.00
3.000	500.00	1874.09	2.98	9.17	1874.06	1874.69	.00	125.98	1.01
3.000	600.00	1874.35	3.24	9.27	1874.21	1874.93	.00	113.98	1.07
3.000	800.00	1874.66	3.55	10.34	1874.51	1875.35	.00	124.10	1.06
3.000	1000.00	1874.99	3.88	10.90	1874.78	1875.73	.00	120.74	1.11
3.000	1200.00	1875.08	3.97	12.58	1875.04	1876.05	.00	156.01	1.00
3.000	1400.00	1875.49	4.39	12.30	1875.25	1876.39	.00	129.08	1.10
3.000	1600.00	1875.70	4.59	12.97	1875.46	1876.69	.00	134.41	1.10
4.000	20.00	1872.02	.91	3.71	1871.94	1872.22	.00	150.16	1.17
4.000	50.00	1872.46	1.35	4.87	1872.43	1872.77	.00	125.14	1.02
4.000	75.00	1872.72	1.61	5.15	1872.69	1873.03	.00	103.63	1.02
4.000	100.00	1872.88	1.77	5.65	1872.85	1873.23	.00	106.83	1.01
4.000	200.00	1873.34	2.23	6.97	1873.31	1873.78	.00	112.86	1.01
4.000	300.00	1873.72	2.61	7.39	1873.68	1874.15	.00	100.10	1.01
4.000	400.00	1873.93	2.82	8.27	1873.90	1874.44	.00	111.39	1.01
4.000	500.00	1874.10	2.99	9.12	1874.05	1874.69	.00	123.96	1.01
4.000	600.00	1874.36	3.25	9.21	1874.22	1874.94	.00	111.92	1.01
4.000	800.00	1874.73	3.62	9.95	1874.52	1875.36	.00	111.56	1.05
4.000	1000.00	1875.00	3.89	10.87	1874.79	1875.73	.00	119.88	1.00
4.000	1200.00	1875.23	4.12	11.81	1875.04	1876.07	.00	130.52	1.09
4.000	1400.00	1875.50	4.39	12.26	1875.26	1876.39	.00	128.10	1.00
4.000	1600.00	1875.71	4.60	12.93	1875.47	1876.69	.00	133.29	1.00
5.000	20.00	1872.03	.92	3.64	1871.94	1872.22	.00	141.44	1.03
5.000	50.00	1872.52	1.41	4.48	1872.43	1872.78	.00	98.24	1.13
5.000	75.00	1872.77	1.66	4.85	1872.69	1873.04	.00	87.72	1.09
5.000	100.00	1872.93	1.82	5.38	1872.84	1873.23	.00	93.10	1.07
5.000	200.00	1873.48	2.37	6.10	1873.30	1873.80	.00	78.56	1.20
5.000	300.00	1873.73	2.62	7.34	1873.69	1874.15	.00	98.21	1.01
5.000	400.00	1873.94	2.83	8.21	1873.90	1874.44	.00	109.28	1.01
5.000	500.00	1874.21	3.10	8.47	1874.05	1874.71	.00	101.64	1.10
5.000	600.00	1874.38	3.27	9.12	1874.22	1874.94	.00	108.77	1.01
5.000	800.00	1874.73	3.62	9.93	1874.52	1875.36	.00	110.86	1.00
5.000	1000.00	1875.01	3.90	10.84	1874.79	1875.74	.00	118.81	1.00
5.000	1200.00	1875.24	4.13	11.75	1875.04	1876.07	.00	128.84	1.01
5.000	1400.00	1875.51	4.40	12.23	1875.26	1876.40	.00	126.95	1.00
5.000	1600.00	1875.72	4.61	12.89	1875.47	1876.69	.00	132.00	1.00

1

16JUN94 15:46:46 PAGE 18

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	20.00	1872.04	.93	3.58	1871.94	1872.23	.00	133.53	1.03
6.000	50.00	1872.53	1.42	4.41	1872.43	1872.78	.00	93.83	1.02
6.000	75.00	1872.78	1.67	4.80	1872.68	1873.04	.00	84.89	1.02
6.000	100.00	1872.94	1.83	5.31	1872.85	1873.24	.00	89.89	1.02
6.000	200.00	1873.48	2.37	6.11	1873.34	1873.80	.00	78.72	1.00
6.000	300.00	1873.74	2.63	7.28	1873.69	1874.15	.00	96.02	1.01
6.000	400.00	1874.00	2.89	7.88	1873.91	1874.45	.00	97.68	1.06
6.000	500.00	1874.22	3.11	8.43	1874.06	1874.71	.00	100.17	1.01
6.000	600.00	1874.39	3.28	9.05	1874.22	1874.94	.00	106.66	1.01
6.000	800.00	1874.74	3.63	9.90	1874.52	1875.36	.00	109.94	1.00
6.000	1000.00	1875.02	3.91	10.80	1874.79	1875.74	.00	117.56	1.01
6.000	1200.00	1875.25	4.14	11.67	1875.04	1876.08	.00	126.23	1.01
6.000	1400.00	1875.52	4.41	12.18	1875.26	1876.40	.00	125.63	1.01
6.000	1600.00	1875.74	4.63	12.84	1875.47	1876.70	.00	130.54	1.01

1

16JUN94 15:46:46 PAGE 19

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED
```

```
1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
 *  RUN DATE    16JUN94    TIME   15:48:04 *
 *****************************************

                                                                                  ***************************************
                                                                                  *  U.S. ARMY CORPS OF ENGINEERS       *
                                                                                  *  HYDROLOGIC ENGINEERING CENTER      *
                                                                                  *  609 SECOND STREET, SUITE D         *
                                                                                  *  DAVIS, CALIFORNIA 95616-4687       *
                                                                                  *          (916) 756-1104             *
                                                                                  ***************************************

                                        X     X  XXXXXXX   XXXXX             XXXXX
                                        X     X  X        X     X           X     X
                                        X     X  X        X                       X
                                        XXXXXXX  XXXX     X          XXXXX    XXXXX
                                        X     X  X        X                 X
                                        X     X  X        X     X           X
                                        X     X  XXXXXXX   XXXXX            XXXXXXX
1
   16JUN94      15:48:04                                                                                          PAGE    1


                                                                                THIS RUN EXECUTED 16JUN94    15:48:04
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      554 Right                                        FILE:     C554R.IH2
 T4                                                       DATE:     06-16-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 554
 T6                SPLIT  RIGHT
 T7
 T8      Single X-Section Run
                 Ditch slope =   0.0275 ft/ft  From Hydrologic Field Survey

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                         0.0275

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      1                  -1                                        -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

     -10       -10

 NC    0.075      0.075      0.035        .1         .3
 QT       14         20         50        75        100        200        300        400        500        600
 QT      800       1000       1200      1400       1600

 NH        4       0.01        999      0.075     1007.5      0.035       1014      0.075       1110
         X-Section #1
 X1        1         10     1007.5     1014.0          0          0          0
 GR     1878        999    1872.45     1000.0    1871.00     1007.5    1871.40     1014.0    1872.59    1019.58
 GR   1871.0     1027.4    1871.26     1034.7    1872.64     1043.4    1873.22     1108.8       1878       1110
1
   16JUN94      15:48:04                                                                                          PAGE    2


 X1        2                                                  .2         .2         .2

 X1        3                                                  .2         .2         .2

 X1        4                                                  .2         .2         .2

 X1        5                                                  .2         .2         .2

 X1        6                                                  .2         .2         .2

1
   16JUN94      15:48:04                                                                                          PAGE    3

 T3           Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                         0.0275

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
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     2                -1                                  -1

1
   16JUN94      15:48:04                                                                                PAGE    4

T3            Q3
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                         0.0275
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     3                  -1                                      -1

1
   16JUN94      15:48:04                                                                                PAGE    5

T3            Q4
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                         0.0275
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     4                  -1                                      -1

1
   16JUN94      15:48:04                                                                                PAGE    6

T3            Q5
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                         0.0275
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     5                  -1                                      -1

1
   16JUN94      15:48:04                                                                                PAGE    7

T3            Q6
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                         0.0275
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     6                  -1                                      -1

1
   16JUN94      15:48:04                                                                                PAGE    8

T3            Q7
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                         0.0275
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     7                  -1                                      -1

1
   16JUN94      15:48:04                                                                                PAGE    9

T3            Q8
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                         0.0275
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     8                  -1                                      -1

1
   16JUN94      15:48:04                                                                                PAGE   10

T3            Q9
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 10                        0.0275
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

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     9                -1                                  -1

1
   16JUN94      15:48:04                                                                                PAGE   11

 T3           Q10
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               11                          0.0275
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                -1                                  -1

1
   16JUN94      15:48:04                                                                                PAGE   12

 T3           Q11
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               12                          0.0275
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                -1                                  -1

1
   16JUN94      15:48:04                                                                                PAGE   13

 T3           Q12
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               13                          0.0275
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                -1                                  -1

1
   16JUN94      15:48:04                                                                                PAGE   14

 T3           Q13
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               14                          0.0275
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                -1                                  -1

1
   16JUN94      15:48:04                                                                                PAGE   15

 T3           Q14
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               15                          0.0275
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                -1                                  -1


1
   16JUN94      15:48:04                                                                                PAGE   16


                                                                                THIS RUN EXECUTED 16JUN94    15:48:21
 ************************************
  HEC-2 WATER SURFACE PROFILES
  Version   4.6.2;  May 1991
 ************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

554 Right
SUMMARY PRINTOUT

      SECNO       Q       CWSEL     DEPTH      VCH      CRIWS      EG        HL       10*KS    KRATIO
```

	1.000	20.00	1871.60	.60	3.83	1871.55	1871.74	.00	273.96	.00
	1.000	50.00	1871.89	.89	5.48	1871.86	1872.16	.00	272.72	.00
	1.000	75.00	1872.07	1.07	6.39	1872.06	1872.42	.00	274.71	.00
*	1.000	100.00	1872.23	1.23	6.98	1872.23	1872.64	.00	261.11	.00
*	1.000	200.00	1872.80	1.80	7.90	1872.80	1873.27	.00	186.46	.00
*	1.000	300.00	1873.20	2.20	8.23	1873.20	1873.65	.00	149.69	.00
*	1.000	400.00	1873.41	2.41	9.02	1873.41	1873.91	.00	157.35	.00
*	1.000	500.00	1873.58	2.58	9.75	1873.58	1874.13	.00	166.53	.00
*	1.000	600.00	1873.73	2.73	10.38	1873.73	1874.34	.00	173.89	.00
*	1.000	800.00	1873.99	2.99	11.51	1873.99	1874.70	.00	187.36	.00
*	1.000	1000.00	1874.22	3.22	12.46	1874.22	1875.03	.00	197.57	.00
*	1.000	1200.00	1874.42	3.42	13.42	1874.42	1875.33	.00	210.98	.00
*	1.000	1400.00	1874.63	3.63	14.04	1874.63	1875.61	.00	212.27	.00
*	1.000	1600.00	1874.82	3.82	14.66	1874.82	1875.88	.00	215.17	.00
	2.000	20.00	1871.61	.61	3.77	1871.55	1871.75	.01	260.39	1.03
	2.000	50.00	1871.90	.90	5.43	1871.87	1872.17	.01	265.24	1.01
	2.000	75.00	1872.08	1.08	6.34	1872.06	1872.43	.01	268.50	1.01
	2.000	100.00	1872.24	1.24	6.94	1872.23	1872.65	.01	256.24	1.01
	2.000	200.00	1872.80	1.80	7.88	1872.80	1873.27	.00	184.57	1.01
	2.000	300.00	1873.20	2.20	8.21	1873.20	1873.65	.00	148.57	1.00
	2.000	400.00	1873.45	2.45	8.76	1873.42	1873.91	.00	145.31	1.04
	2.000	500.00	1873.62	2.62	9.46	1873.59	1874.14	.00	153.67	1.04
	2.000	600.00	1873.77	2.77	10.10	1873.74	1874.34	.00	161.37	1.04
	2.000	800.00	1874.04	3.04	11.20	1874.00	1874.71	.00	173.99	1.04
	2.000	1000.00	1874.27	3.27	12.15	1874.23	1875.04	.00	184.32	1.04
	2.000	1200.00	1874.60	3.60	12.23	1874.45	1875.35	.00	162.98	1.14
	2.000	1400.00	1874.69	3.69	13.71	1874.64	1875.62	.00	198.59	1.03
	2.000	1600.00	1874.83	3.83	14.63	1874.82	1875.88	.00	214.00	1.00

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	20.00	1871.63	.63	3.68	1871.55	1871.75	.01	240.27	1.04
3.000	50.00	1871.92	.92	5.34	1871.87	1872.17	.01	251.48	1.03
3.000	75.00	1872.14	1.14	5.88	1872.06	1872.44	.00	210.94	1.13
3.000	100.00	1872.33	1.33	6.32	1872.23	1872.66	.00	191.53	1.16
3.000	200.00	1872.82	1.82	7.82	1872.79	1873.28	.00	180.74	1.01
3.000	300.00	1873.21	2.21	8.16	1873.20	1873.65	.00	146.37	1.01
3.000	400.00	1873.46	2.46	8.69	1873.40	1873.92	.00	142.10	1.01
3.000	500.00	1873.71	2.71	8.86	1873.57	1874.15	.00	128.80	1.09
3.000	600.00	1873.86	2.86	9.52	1873.72	1874.35	.00	137.35	1.08
3.000	800.00	1874.14	3.14	10.55	1873.98	1874.72	.00	147.59	1.09
3.000	1000.00	1874.38	3.38	11.48	1874.21	1875.05	.00	157.57	1.08
3.000	1200.00	1874.62	3.62	12.16	1874.43	1875.35	.00	160.41	1.01
3.000	1400.00	1874.85	3.85	12.67	1874.62	1875.64	.00	159.17	1.12
3.000	1600.00	1875.04	4.04	13.34	1874.82	1875.90	.00	164.76	1.14
4.000	20.00	1871.64	.64	3.58	1871.55	1871.76	.00	219.60	1.05
4.000	50.00	1871.99	.99	4.67	1871.86	1872.18	.00	163.04	1.24
4.000	75.00	1872.16	1.16	5.74	1872.06	1872.44	.00	195.89	1.04
4.000	100.00	1872.34	1.34	6.24	1872.23	1872.66	.00	183.83	1.02
4.000	200.00	1872.92	1.92	7.09	1872.79	1873.29	.00	136.26	1.15
4.000	300.00	1873.23	2.23	8.10	1873.20	1873.66	.00	143.09	1.01
4.000	400.00	1873.54	2.54	8.09	1873.42	1873.93	.00	117.33	1.10
4.000	500.00	1873.72	2.72	8.80	1873.58	1874.15	.00	126.42	1.01
4.000	600.00	1873.87	2.87	9.45	1873.73	1874.36	.00	134.68	1.01
4.000	800.00	1874.15	3.15	10.48	1873.99	1874.72	.00	144.88	1.01
4.000	1000.00	1874.39	3.39	11.37	1874.22	1875.05	.00	153.46	1.01
4.000	1200.00	1874.69	3.69	11.69	1874.43	1875.36	.00	143.72	1.06
4.000	1400.00	1874.86	3.86	12.64	1874.63	1875.64	.00	157.95	1.00
4.000	1600.00	1875.05	4.05	13.30	1874.81	1875.91	.00	163.49	1.00
5.000	20.00	1871.65	.65	3.49	1871.55	1871.76	.00	200.93	1.05
5.000	50.00	1871.99	.99	4.69	1871.86	1872.19	.00	165.84	.99
5.000	75.00	1872.18	1.18	5.61	1872.06	1872.45	.00	181.99	1.04
5.000	100.00	1872.36	1.36	6.12	1872.23	1872.67	.00	173.01	1.03
5.000	200.00	1872.94	1.94	7.01	1872.80	1873.29	.00	132.14	1.02
5.000	300.00	1873.38	2.38	6.91	1873.20	1873.67	.00	93.50	1.24
5.000	400.00	1873.55	2.55	8.03	1873.41	1873.93	.00	115.07	1.01
5.000	500.00	1873.73	2.73	8.73	1873.58	1874.16	.00	123.81	1.01
5.000	600.00	1873.88	2.88	9.37	1873.73	1874.36	.00	131.79	1.01
5.000	800.00	1874.17	3.17	10.37	1873.99	1874.73	.00	140.75	1.01
5.000	1000.00	1874.46	3.46	10.93	1874.22	1875.06	.00	137.36	1.06
5.000	1200.00	1874.69	3.69	11.69	1874.43	1875.37	.00	143.60	1.00
5.000	1400.00	1874.87	3.87	12.59	1874.63	1875.65	.00	156.38	1.01
5.000	1600.00	1875.06	4.06	13.26	1874.81	1875.91	.00	161.89	1.00

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	20.00	1871.66	.66	3.41	1871.55	1871.77	.00	185.54	1.04
6.000	50.00	1872.00	1.00	4.68	1871.87	1872.19	.00	165.20	1.00
6.000	75.00	1872.19	1.19	5.52	1872.06	1872.45	.00	173.10	1.03
6.000	100.00	1872.37	1.37	6.04	1872.23	1872.67	.00	165.95	1.02
6.000	200.00	1872.95	1.95	6.90	1872.79	1873.30	.00	126.30	1.02
6.000	300.00	1873.38	2.38	6.95	1873.20	1873.67	.00	95.03	.99
6.000	400.00	1873.56	2.56	7.97	1873.41	1873.93	.00	112.74	1.01
6.000	500.00	1873.74	2.74	8.66	1873.58	1874.16	.00	121.12	1.01
6.000	600.00	1873.90	2.90	9.26	1873.73	1874.36	.00	127.53	1.02
6.000	800.00	1874.18	3.18	10.26	1873.99	1874.73	.00	136.79	1.01
6.000	1000.00	1874.46	3.46	10.92	1874.25	1875.06	.00	137.06	1.00
6.000	1200.00	1874.69	3.69	11.67	1874.46	1875.37	.00	142.97	1.00
6.000	1400.00	1874.88	3.88	12.54	1874.63	1875.65	.00	154.50	1.01
6.000	1600.00	1875.07	4.07	13.20	1874.81	1875.92	.00	159.98	1.01

1

16JUN94 15:48:04 PAGE 19

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED
```

Table D-14
Flow split at C557

Stage	Discharge, in cfs		
	Left	Right	Total
1718.8	0	0	0
1719.0	0	4	4
1719.2	0	8	8
1719.4	0	12	12
1719.6	0	16	16
1719.8	0	19	19
1720.0	0	30	30
1720.2	0	40	40
1720.4	0	60	60
1720.6	0	80	80
1720.8	0	120	120
1721.0	0	144	144
1721.2	0	180	180
1721.4	5	220	225
1721.6	10	264	274
1721.8	16	320	336
1722.0	32	380	412
1722.2	50	445	495
1722.4	80	520	600
1722.6	135	600	735
1722.8	195	700	895
1723.0	280	800	1080
1723.2	380	900	1280
1723.4	525	1020	1545
1723.6	680	1160	1840
1723.8	870	1320	2190
1724.0	1120	1500	2620

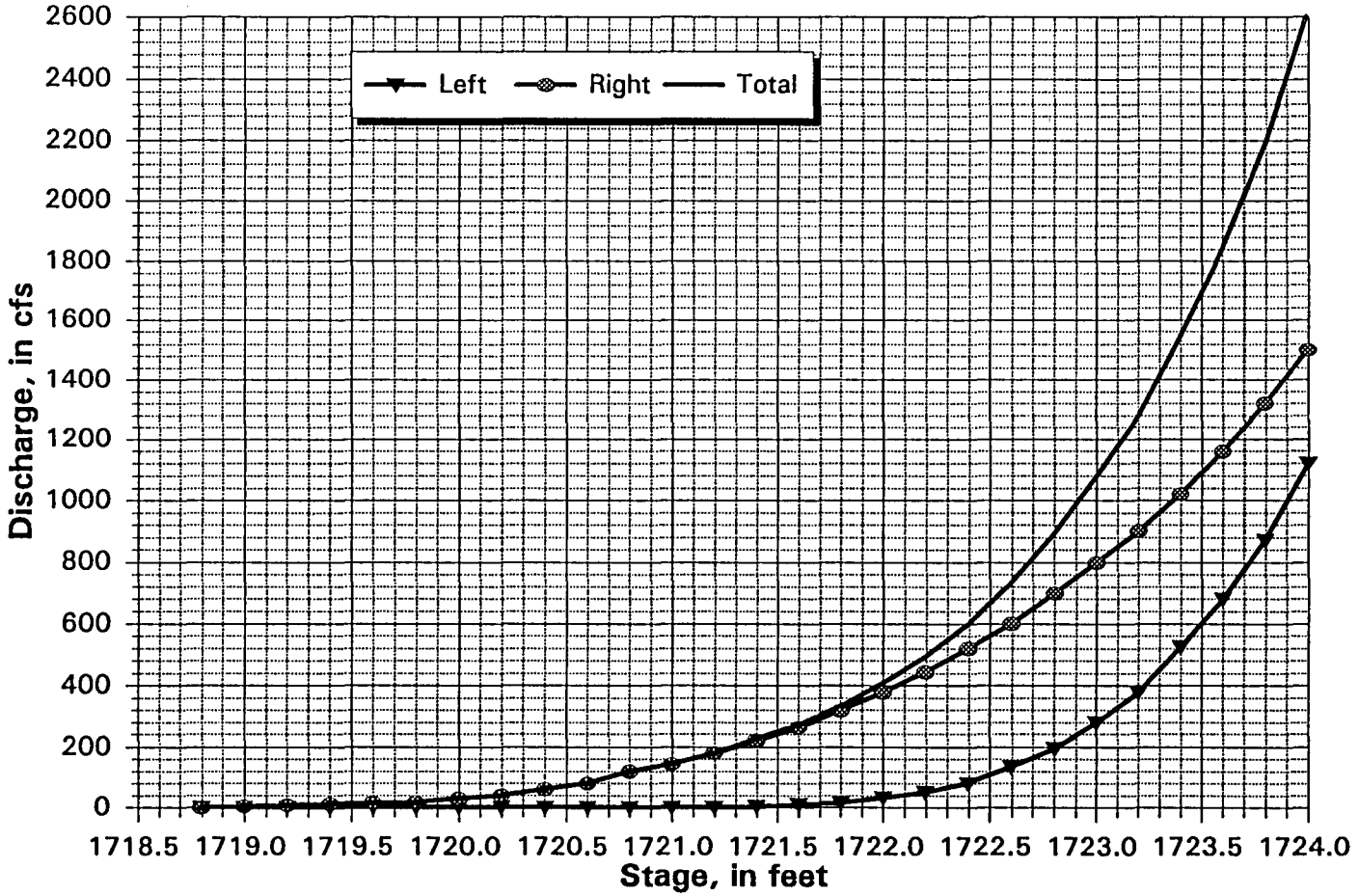

Figure D-14

Flow split at C557

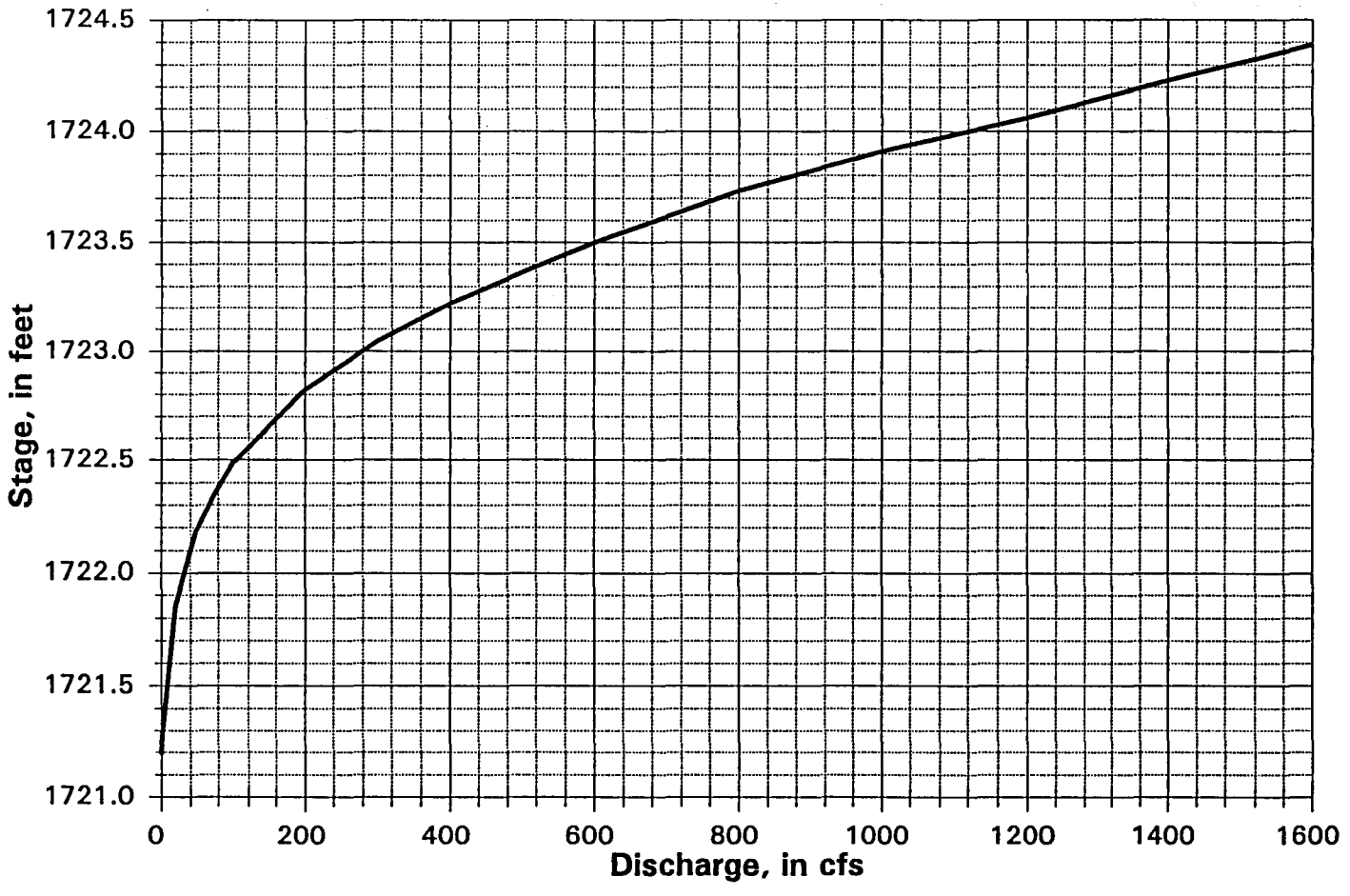

Figure D-14a

C557 Split Left

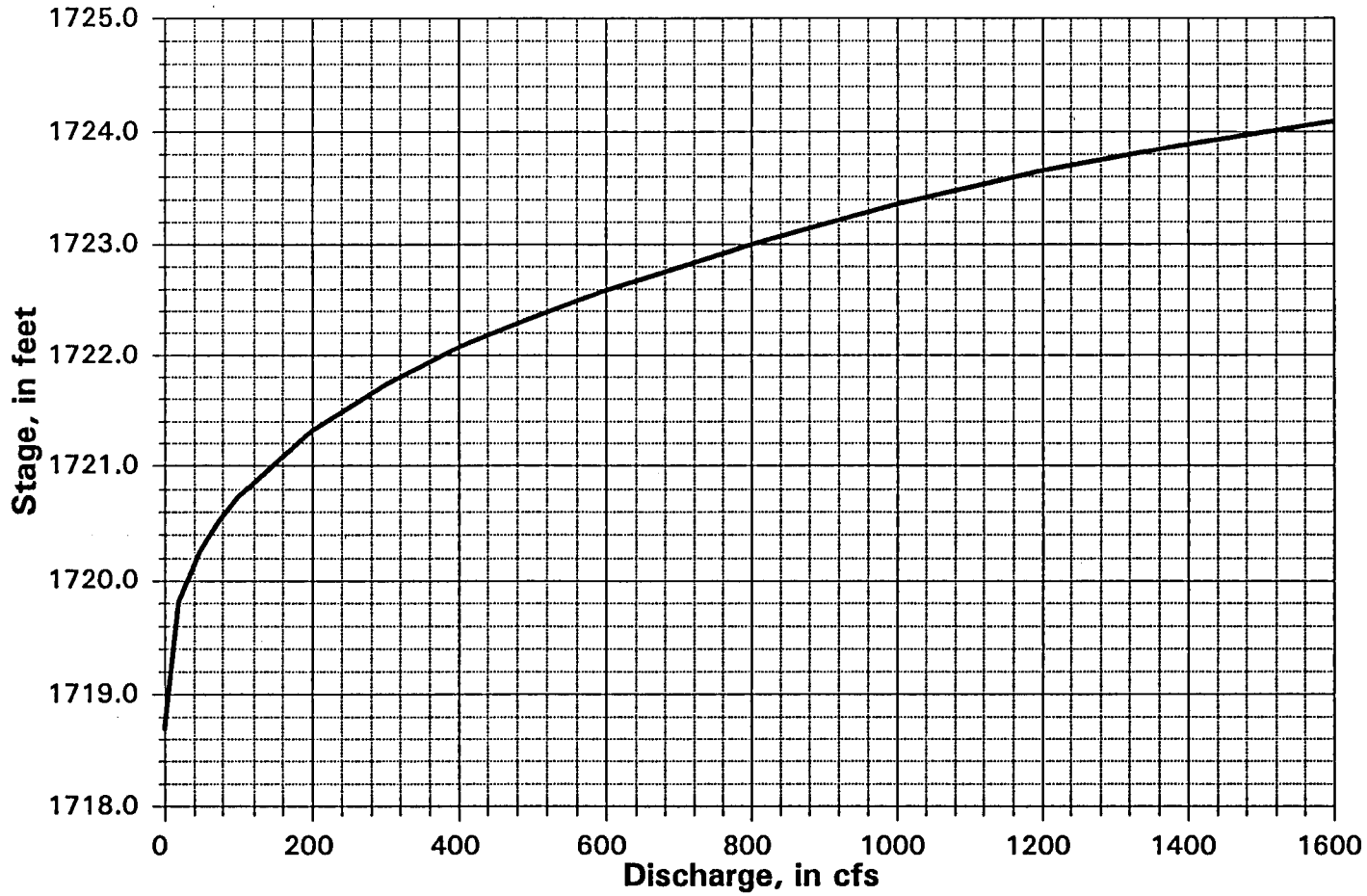

Figure D-14b

C557 Split Right

```
1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
 *  RUN DATE    16JUN94    TIME   16:05:18 *
 *****************************************

                                                                                  ***************************************
                                                                                  *  U.S. ARMY CORPS OF ENGINEERS       *
                                                                                  *  HYDROLOGIC ENGINEERING CENTER      *
                                                                                  *  609 SECOND STREET, SUITE D         *
                                                                                  *  DAVIS, CALIFORNIA 95616-4687       *
                                                                                  *          (916) 756-1104             *
                                                                                  ***************************************

                                        X     X  XXXXXXX   XXXXX              XXXXX
                                        X     X  X        X     X            X     X
                                        X     X  X        X                        X
                                        XXXXXXX  XXXX     X          XXXXX    XXXXX
                                        X     X  X        X                  X
                                        X     X  X        X     X            X
                                        X     X  XXXXXXX   XXXXX             XXXXXXX
1
   16JUN94      16:05:18                                                                                          PAGE    1


                                                                                THIS RUN EXECUTED 16JUN94    16:05:18
 *************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 *************************************

 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      557 Left                                          FILE:     C557L.IH2
 T4                                                        DATE:     06-16-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 557
 T6                SPLIT  LEFT
 T7
 T8      Single X-Section Run
                 Ditch slope =    0.025 ft/ft  From 1000 scale mapping

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                           0.025

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      1                  -1                                        -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

     -10       -10

 NC    0.075      0.075      0.035        .1         .3
 QT       14         20         50        75        100        200        300        400        500        600
 QT      800       1000       1200      1400       1600

 NH        4      0.075     1178.1     0.035     1185.2     0.075     1213.1       0.01       1214
         X-Section #1
 X1        1         12     1178.1    1185.2          0         0         0
 GR     1725        999    1724.70    1000.0    1722.13    1084.7    1721.43     1104.3    1722.38     1130.2
 GR   1722.8     1147.7    1722.45    1172.5    1721.21    1178.1    1721.20     1185.2    1722.26     1191.1
 GR   1723.0     1213.1       1725      1214
1
   16JUN94      16:05:18                                                                                          PAGE    2


 X1        2                                                .2         .2         .2

 X1        3                                                .2         .2         .2

 X1        4                                                .2         .2         .2

 X1        5                                                .2         .2         .2

 X1        6                                                .2         .2         .2
1
   16JUN94      16:05:18                                                                                          PAGE    3

 T3            Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                           0.025

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
      2                -1                                  -1

1
   16JUN94      16:05:18                                                                                PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                           0.025
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      3                  -1                                      -1

1
   16JUN94      16:05:18                                                                                PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                           0.025
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      4                  -1                                      -1

1
   16JUN94      16:05:18                                                                                PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                           0.025
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      5                  -1                                      -1

1
   16JUN94      16:05:18                                                                                PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                           0.025
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      6                  -1                                      -1

1
   16JUN94      16:05:18                                                                                PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                           0.025
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      7                  -1                                      -1

1
   16JUN94      16:05:18                                                                                PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                           0.025
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      8                  -1                                      -1

1
   16JUN94      16:05:18                                                                                PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 10                          0.025
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     9                -1                                  -1

1
   16JUN94      16:05:18                                                                                PAGE   11

 T3           Q10
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                11                          0.025
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                  -1                                      -1

1
   16JUN94      16:05:18                                                                                PAGE   12

 T3           Q11
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                12                          0.025
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                  -1                                      -1

1
   16JUN94      16:05:18                                                                                PAGE   13

 T3           Q12
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                13                          0.025
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                  -1                                      -1

1
   16JUN94      16:05:18                                                                                PAGE   14

 T3           Q13
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                14                          0.025
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                  -1                                      -1

1
   16JUN94      16:05:18                                                                                PAGE   15

 T3           Q14
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                15                          0.025
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                  -1                                      -1


1
   16JUN94      16:05:18                                                                                PAGE   16


                                                                    THIS RUN EXECUTED 16JUN94     16:05:34
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

 NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

 557 Left

 SUMMARY PRINTOUT

       SECNO       Q       CWSEL     DEPTH      VCH       CRIWS      EG        HL       10*KS    KRATIO
```

*	1.000	20.00	1721.78	.58	3.80	1721.78	1721.96	.00	167.49	.00
*	1.000	50.00	1722.08	.88	4.89	1722.08	1722.32	.00	157.15	.00
*	1.000	75.00	1722.26	1.06	5.29	1722.26	1722.51	.00	144.09	.00
*	1.000	100.00	1722.40	1.20	5.66	1722.40	1722.65	.00	141.07	.00
*	1.000	200.00	1722.74	1.54	6.71	1722.74	1723.03	.00	141.30	.00
*	1.000	300.00	1722.95	1.76	7.52	1722.95	1723.28	.00	148.63	.00
*	1.000	400.00	1723.10	1.91	8.32	1723.10	1723.47	.00	163.12	.00
*	1.000	500.00	1723.23	2.03	9.05	1723.23	1723.64	.00	177.70	.00
*	1.000	600.00	1723.35	2.16	9.51	1723.35	1723.79	.00	180.88	.00
*	1.000	800.00	1723.54	2.34	10.62	1723.54	1724.06	.00	201.44	.00
*	1.000	1000.00	1723.73	2.53	11.34	1723.73	1724.30	.00	207.21	.00
*	1.000	1200.00	1723.87	2.67	12.23	1723.87	1724.51	.00	224.32	.00
*	1.000	1400.00	1724.02	2.82	12.84	1724.02	1724.71	.00	229.52	.00
*	1.000	1600.00	1724.17	2.97	13.32	1724.17	1724.90	.00	230.97	.00
	2.000	20.00	1721.79	.59	3.76	1721.78	1721.96	.00	163.46	1.01
	2.000	50.00	1722.09	.89	4.86	1722.08	1722.32	.00	154.56	1.01
	2.000	75.00	1722.27	1.07	5.27	1722.26	1722.51	.00	142.10	1.01
	2.000	100.00	1722.41	1.21	5.53	1722.40	1722.66	.00	132.02	1.03
	2.000	200.00	1722.75	1.55	6.69	1722.73	1723.03	.00	139.86	1.01
	2.000	300.00	1722.96	1.76	7.49	1722.95	1723.28	.00	147.19	1.00
	2.000	400.00	1723.11	1.91	8.29	1723.10	1723.48	.00	161.47	1.01
	2.000	500.00	1723.26	2.06	8.79	1723.23	1723.65	.00	164.86	1.04
	2.000	600.00	1723.36	2.16	9.48	1723.34	1723.80	.00	179.16	1.00
	2.000	800.00	1723.55	2.35	10.58	1723.55	1724.07	.00	199.56	1.00
	2.000	1000.00	1723.74	2.54	11.31	1723.72	1724.30	.00	205.41	1.00
	2.000	1200.00	1723.92	2.72	11.90	1723.89	1724.52	.00	208.20	1.04
	2.000	1400.00	1724.07	2.87	12.54	1724.03	1724.72	.00	215.61	1.03
	2.000	1600.00	1724.18	2.98	13.28	1724.16	1724.90	.00	229.14	1.00

1

16JUN94 16:05:18 PAGE 17

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	20.00	1721.80	.60	3.70	1721.78	1721.96	.00	155.19	1.03
3.000	50.00	1722.10	.90	4.80	1722.08	1722.33	.00	149.23	1.02
3.000	75.00	1722.28	1.08	5.21	1722.26	1722.52	.00	138.15	1.01
3.000	100.00	1722.42	1.22	5.46	1722.39	1722.66	.00	127.96	1.02
3.000	200.00	1722.75	1.55	6.64	1722.73	1723.04	.00	136.96	1.01
3.000	300.00	1722.97	1.77	7.43	1722.94	1723.28	.00	144.18	1.01
3.000	400.00	1723.12	1.92	8.22	1723.10	1723.48	.00	158.08	1.01
3.000	500.00	1723.27	2.07	8.71	1723.22	1723.65	.00	160.51	1.01
3.000	600.00	1723.37	2.17	9.41	1723.34	1723.80	.00	175.73	1.01
3.000	800.00	1723.57	2.37	10.50	1723.55	1724.07	.00	195.65	1.01
3.000	1000.00	1723.76	2.56	11.23	1723.71	1724.31	.00	201.71	1.01
3.000	1200.00	1724.03	2.83	11.03	1723.87	1724.54	.00	169.80	1.11
3.000	1400.00	1724.21	3.01	11.41	1724.01	1724.74	.00	166.90	1.14
3.000	1600.00	1724.30	3.10	12.36	1724.16	1724.92	.00	188.46	1.10
4.000	20.00	1721.83	.63	3.40	1721.78	1721.97	.00	121.89	1.13
4.000	50.00	1722.14	.94	4.47	1722.09	1722.33	.00	122.32	1.10
4.000	75.00	1722.29	1.09	5.13	1722.26	1722.52	.00	132.21	1.02
4.000	100.00	1722.44	1.24	5.37	1722.40	1722.67	.00	122.55	1.02
4.000	200.00	1722.77	1.57	6.55	1722.73	1723.04	.00	132.58	1.02
4.000	300.00	1722.99	1.79	7.29	1722.94	1723.29	.00	137.37	1.02
4.000	400.00	1723.19	1.99	7.60	1723.09	1723.49	.00	128.93	1.11
4.000	500.00	1723.34	2.14	8.06	1723.25	1723.66	.00	131.32	1.11
4.000	600.00	1723.49	2.29	8.35	1723.33	1723.81	.00	128.17	1.17
4.000	800.00	1723.67	2.47	9.66	1723.54	1724.08	.00	156.58	1.12
4.000	1000.00	1723.90	2.70	9.98	1723.71	1724.32	.00	146.92	1.17
4.000	1200.00	1724.04	2.84	10.96	1723.87	1724.54	.00	166.72	1.01
4.000	1400.00	1724.21	3.01	11.38	1724.02	1724.74	.00	165.64	1.00
4.000	1600.00	1724.38	3.18	11.69	1724.16	1724.93	.00	161.78	1.08
5.000	20.00	1721.84	.64	3.31	1721.78	1721.97	.00	112.94	1.04
5.000	50.00	1722.19	.99	4.05	1722.08	1722.34	.00	93.21	1.15
5.000	75.00	1722.34	1.14	4.72	1722.26	1722.53	.00	105.21	1.12
5.000	100.00	1722.49	1.29	4.93	1722.40	1722.67	.00	97.23	1.12
5.000	200.00	1722.81	1.61	6.15	1722.73	1723.05	.00	112.18	1.09
5.000	300.00	1723.04	1.84	6.80	1722.95	1723.30	.00	114.79	1.09
5.000	400.00	1723.20	2.00	7.50	1723.10	1723.49	.00	124.75	1.02
5.000	500.00	1723.35	2.15	7.99	1723.24	1723.66	.00	128.20	1.01
5.000	600.00	1723.49	2.29	8.34	1723.36	1723.82	.00	128.09	1.00
5.000	800.00	1723.73	2.53	9.10	1723.54	1724.09	.00	133.75	1.08
5.000	1000.00	1723.90	2.70	9.98	1723.74	1724.33	.00	146.92	1.00
5.000	1200.00	1724.05	2.85	10.87	1723.87	1724.54	.00	163.31	1.01
5.000	1400.00	1724.22	3.02	11.33	1724.02	1724.75	.00	163.84	1.01
5.000	1600.00	1724.39	3.19	11.69	1724.16	1724.93	.00	162.06	1.00

1

16JUN94 16:05:18 PAGE 18

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	20.00	1721.85	.65	3.23	1721.78	1721.97	.00	104.93	1.04
6.000	50.00	1722.19	.99	4.01	1722.08	1722.34	.00	90.91	1.01
6.000	75.00	1722.35	1.15	4.65	1722.26	1722.53	.00	100.97	1.02
6.000	100.00	1722.49	1.29	4.87	1722.40	1722.67	.00	94.18	1.02
6.000	200.00	1722.82	1.62	6.05	1722.74	1723.05	.00	107.59	1.02
6.000	300.00	1723.05	1.85	6.71	1722.94	1723.30	.00	110.98	1.02
6.000	400.00	1723.22	2.02	7.41	1723.13	1723.49	.00	120.61	1.02
6.000	500.00	1723.36	2.16	7.91	1723.24	1723.67	.00	125.05	1.01
6.000	600.00	1723.50	2.30	8.33	1723.36	1723.82	.00	127.42	1.00
6.000	800.00	1723.73	2.53	9.10	1723.56	1724.09	.00	133.68	1.00
6.000	1000.00	1723.91	2.71	9.96	1723.74	1724.33	.00	146.26	1.00
6.000	1200.00	1724.06	2.86	10.78	1723.87	1724.55	.00	159.67	1.01
6.000	1400.00	1724.23	3.03	11.27	1724.02	1724.75	.00	161.54	1.01
6.000	1600.00	1724.39	3.19	11.68	1724.16	1724.94	.00	161.44	1.00

1

16JUN94 16:05:18 PAGE 19

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED
```

```
1*****************************************                    ***************************************
 *  HEC-2 WATER SURFACE PROFILES           *                    *  U.S. ARMY CORPS OF ENGINEERS       *
 *                                         *                    *  HYDROLOGIC ENGINEERING CENTER      *
 *  Version   4.6.2;  May 1991             *                    *  609 SECOND STREET, SUITE D         *
 *                                         *                    *  DAVIS, CALIFORNIA 95616-4687       *
 *  RUN DATE    16JUN94    TIME   16:06:38 *                    *          (916) 756-1104             *
 *****************************************                    ***************************************


                                        X     X  XXXXXXX   XXXXX              XXXXX
                                        X     X  X        X     X            X     X
                                        X     X  X        X                        X
                                        XXXXXXX  XXXX     X          XXXXX    XXXXX
                                        X     X  X        X                  X
                                        X     X  X        X     X            X
                                        X     X  XXXXXXX   XXXXX             XXXXXXX
1
   16JUN94      16:06:38                                                                                    PAGE    1


                                                                                  THIS RUN EXECUTED 16JUN94    16:06:38
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      557 Right                                        FILE:     C557R.IH2
 T4                                                       DATE:     06-16-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 557
 T6                SPLIT  RIGHT
 T7
 T8      Single X-Section Run
                 Ditch slope =    0.020 ft/ft  From 1000 scale mapping

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                           0.020

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                  -1                                      -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

     -10       -10


 NC    0.075      0.075      0.035        .1         .3
 QT       14         20         50         75        100        200        300        400        500        600
 QT      800       1000       1200       1400       1600

 NH        4       0.01       1000      0.075     1024.9      0.035     1027.9      0.075       1108
         X-Section #1
 X1        1          8     1024.9     1027.9          0          0          0
 GR     1725        999    1722.99     1000.0    1723.11     1013.7    1721.35     1018.9    1721.64     1024.9
 GR   1718.7     1027.9    1723.60     1106.7       1725       1108

1
   16JUN94      16:06:38                                                                                    PAGE    2


 X1        2                                          .2         .2         .2

 X1        3                                          .2         .2         .2

 X1        4                                          .2         .2         .2

 X1        5                                          .2         .2         .2

 X1        6                                          .2         .2         .2

1
   16JUN94      16:06:38                                                                                    PAGE    3

 T3            Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                           0.020

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     2                -1                                  -1

1
   16JUN94      16:06:38                                                                                PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                           0.020
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      3                  -1                                      -1

1
   16JUN94      16:06:38                                                                                PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                           0.020
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      4                  -1                                      -1

1
   16JUN94      16:06:38                                                                                PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                           0.020
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      5                  -1                                      -1

1
   16JUN94      16:06:38                                                                                PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                           0.020
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      6                  -1                                      -1

1
   16JUN94      16:06:38                                                                                PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                           0.020
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      7                  -1                                      -1

1
   16JUN94      16:06:38                                                                                PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                           0.020
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      8                  -1                                      -1

1
   16JUN94      16:06:38                                                                                PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                10                           0.020
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     9                -1                                  -1

1
   16JUN94      16:06:38                                                                                PAGE   11

 T3           Q10
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               11                            0.020
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                  -1                                      -1

1
   16JUN94      16:06:38                                                                                PAGE   12

 T3           Q11
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               12                            0.020
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                  -1                                      -1

1
   16JUN94      16:06:38                                                                                PAGE   13

 T3           Q12
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               13                            0.020
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                  -1                                      -1

1
   16JUN94      16:06:38                                                                                PAGE   14

 T3           Q13
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               14                            0.020
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                  -1                                      -1

1
   16JUN94      16:06:38                                                                                PAGE   15

 T3           Q14
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               15                            0.020
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                  -1                                      -1


1
   16JUN94      16:06:38                                                                                PAGE   16


                                                                    THIS RUN EXECUTED 16JUN94    16:06:52
*************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
*************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

557 Right

SUMMARY PRINTOUT

      SECNO       Q       CWSEL     DEPTH      VCH      CRIWS      EG        HL       10*KS    KRATIO
```

1.000	20.00	1719.80	1.10	3.20	1719.52	1719.86	.00	198.54	.00
1.000	50.00	1720.24	1.54	4.04	1719.88	1720.35	.00	200.20	.00
1.000	75.00	1720.50	1.80	4.47	1720.08	1720.62	.00	200.85	.00
1.000	100.00	1720.70	2.00	4.81	1720.25	1720.84	.00	201.40	.00
1.000	200.00	1721.29	2.59	5.72	1720.75	1721.50	.00	200.93	.00
1.000	300.00	1721.71	3.01	6.42	1721.11	1721.96	.00	201.67	.00
1.000	400.00	1722.04	3.34	7.27	1721.41	1722.33	.00	199.78	.00
1.000	500.00	1722.31	3.61	7.96	1721.65	1722.65	.00	199.29	.00
1.000	600.00	1722.55	3.85	8.54	1721.90	1722.92	.00	199.06	.00
1.000	800.00	1722.97	4.27	9.51	1722.29	1723.40	.00	199.17	.00
1.000	1000.00	1723.32	4.62	10.29	1722.60	1723.80	.00	199.42	.00
1.000	1200.00	1723.61	4.91	10.92	1722.89	1724.14	.00	199.19	.00
1.000	1400.00	1723.85	5.15	11.36	1723.20	1724.42	.00	197.19	.00
1.000	1600.00	1724.05	5.35	11.87	1723.49	1724.67	.00	201.05	.00
2.000	20.00	1719.80	1.10	3.18	1719.52	1719.86	.00	194.69	1.01
2.000	50.00	1720.25	1.55	4.02	1719.88	1720.35	.00	197.44	1.01
2.000	75.00	1720.50	1.80	4.45	1720.09	1720.63	.00	198.46	1.01
2.000	100.00	1720.70	2.00	4.79	1720.25	1720.85	.00	199.25	1.01
2.000	200.00	1721.30	2.60	5.70	1720.75	1721.50	.00	199.28	1.00
2.000	300.00	1721.72	3.02	6.41	1721.11	1721.97	.00	200.15	1.00
2.000	400.00	1722.04	3.34	7.26	1721.41	1722.34	.00	198.41	1.00
2.000	500.00	1722.32	3.62	7.94	1721.65	1722.65	.00	198.04	1.00
2.000	600.00	1722.56	3.86	8.53	1721.89	1722.93	.00	197.90	1.00
2.000	800.00	1722.98	4.28	9.50	1722.27	1723.41	.00	198.12	1.00
2.000	1000.00	1723.32	4.62	10.27	1722.62	1723.80	.00	198.42	1.00
2.000	1200.00	1723.62	4.92	10.90	1722.88	1724.14	.00	198.07	1.00
2.000	1400.00	1723.86	5.16	11.33	1723.23	1724.42	.00	196.20	1.00
2.000	1600.00	1724.05	5.35	11.85	1723.48	1724.68	.00	200.07	1.00

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	20.00	1719.81	1.11	3.15	1719.52	1719.87	.00	190.14	1.01
3.000	50.00	1720.25	1.55	3.99	1719.88	1720.35	.00	193.98	1.01
3.000	75.00	1720.51	1.81	4.43	1720.08	1720.63	.00	195.40	1.01
3.000	100.00	1720.71	2.01	4.77	1720.25	1720.85	.00	196.43	1.01
3.000	200.00	1721.30	2.60	5.68	1720.75	1721.51	.00	197.09	1.01
3.000	300.00	1721.72	3.02	6.39	1721.11	1721.97	.00	198.10	1.01
3.000	400.00	1722.05	3.35	7.24	1721.41	1722.34	.00	196.53	1.00
3.000	500.00	1722.32	3.62	7.92	1721.65	1722.65	.00	196.31	1.00
3.000	600.00	1722.57	3.87	8.50	1721.89	1722.93	.00	196.25	1.00
3.000	800.00	1722.98	4.28	9.47	1722.27	1723.41	.00	196.61	1.00
3.000	1000.00	1723.33	4.63	10.25	1722.62	1723.81	.00	196.90	1.00
3.000	1200.00	1723.63	4.93	10.86	1722.88	1724.15	.00	196.17	1.00
3.000	1400.00	1723.86	5.16	11.30	1723.23	1724.43	.00	194.63	1.00
3.000	1600.00	1724.06	5.36	11.82	1723.48	1724.68	.00	198.55	1.00
4.000	20.00	1719.81	1.11	3.12	1719.52	1719.87	.00	185.62	1.01
4.000	50.00	1720.26	1.56	3.96	1719.88	1720.36	.00	190.52	1.01
4.000	75.00	1720.51	1.81	4.40	1720.08	1720.63	.00	192.33	1.01
4.000	100.00	1720.72	2.02	4.74	1720.25	1720.86	.00	193.58	1.01
4.000	200.00	1721.31	2.61	5.65	1720.75	1721.51	.00	194.79	1.01
4.000	300.00	1721.73	3.03	6.37	1721.11	1721.98	.00	195.89	1.01
4.000	400.00	1722.06	3.36	7.21	1721.41	1722.35	.00	194.51	1.01
4.000	500.00	1722.33	3.63	7.90	1721.65	1722.66	.00	194.45	1.00
4.000	600.00	1722.57	3.87	8.48	1721.89	1722.94	.00	194.48	1.00
4.000	800.00	1722.99	4.29	9.45	1722.27	1723.41	.00	194.96	1.00
4.000	1000.00	1723.34	4.64	10.22	1722.62	1723.81	.00	195.20	1.00
4.000	1200.00	1723.64	4.94	10.82	1722.88	1724.15	.00	194.07	1.01
4.000	1400.00	1723.87	5.17	11.26	1723.23	1724.43	.00	192.78	1.00
4.000	1600.00	1724.07	5.37	11.78	1723.48	1724.69	.00	196.73	1.00
5.000	20.00	1719.82	1.12	3.09	1719.52	1719.88	.00	181.32	1.01
5.000	50.00	1720.26	1.56	3.94	1719.88	1720.36	.00	187.13	1.01
5.000	75.00	1720.52	1.82	4.38	1720.08	1720.64	.00	189.24	1.01
5.000	100.00	1720.72	2.02	4.72	1720.26	1720.86	.00	190.73	1.01
5.000	200.00	1721.32	2.62	5.63	1720.75	1721.52	.00	192.47	1.01
5.000	300.00	1721.73	3.03	6.35	1721.11	1721.98	.00	193.67	1.01
5.000	400.00	1722.06	3.36	7.19	1721.41	1722.35	.00	192.48	1.01
5.000	500.00	1722.34	3.64	7.88	1721.65	1722.66	.00	192.50	1.01
5.000	600.00	1722.58	3.88	8.46	1721.89	1722.94	.00	192.63	1.00
5.000	800.00	1723.00	4.30	9.42	1722.27	1723.42	.00	193.27	1.00
5.000	1000.00	1723.35	4.65	10.18	1722.61	1723.81	.00	193.39	1.00
5.000	1200.00	1723.65	4.95	10.77	1722.88	1724.15	.00	191.86	1.01
5.000	1400.00	1723.88	5.18	11.22	1723.23	1724.44	.00	190.82	1.01
5.000	1600.00	1724.08	5.38	11.74	1723.48	1724.69	.00	194.81	1.00

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	20.00	1719.82	1.12	3.07	1719.52	1719.88	.00	177.25	1.01
6.000	50.00	1720.27	1.57	3.91	1719.88	1720.37	.00	183.82	1.01
6.000	75.00	1720.52	1.82	4.35	1720.08	1720.64	.00	186.35	1.01
6.000	100.00	1720.73	2.03	4.69	1720.25	1720.86	.00	187.99	1.01
6.000	200.00	1721.32	2.62	5.60	1720.75	1721.52	.00	190.19	1.01
6.000	300.00	1721.74	3.04	6.33	1721.11	1721.98	.00	191.48	1.01
6.000	400.00	1722.07	3.37	7.17	1721.41	1722.35	.00	190.46	1.01
6.000	500.00	1722.34	3.64	7.85	1721.65	1722.67	.00	190.54	1.01
6.000	600.00	1722.59	3.89	8.43	1721.89	1722.94	.00	190.76	1.00
6.000	800.00	1723.00	4.30	9.39	1722.27	1723.42	.00	191.56	1.00
6.000	1000.00	1723.35	4.65	10.15	1722.61	1723.82	.00	191.57	1.00
6.000	1200.00	1723.65	4.95	10.73	1722.88	1724.16	.00	189.63	1.01
6.000	1400.00	1723.89	5.19	11.18	1723.23	1724.44	.00	188.87	1.01
6.000	1600.00	1724.09	5.39	11.70	1723.48	1724.70	.00	192.86	1.01

1

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SUMMARY OF ERRORS AND SPECIAL NOTES

Table D-15
Flow split at C558

Stage	Discharge, in cfs		
	Left	Right	Total
1731.7	0	0	0
1731.9	5	0	5
1732.1	10	4	14
1732.3	16	10	26
1732.5	30	16	46
1732.7	45	30	75
1732.9	62	45	107
1733.1	90	70	160
1733.3	130	95	225
1733.5	178	126	304
1733.7	220	160	380
1733.9	280	195	475
1734.1	360	270	630
1734.3	460	375	835
1734.5	570	485	1055
1734.7	680	638	1318
1734.9	790	785	1575
1735.1	940	960	1900
1735.3	1100	1160	2260
1735.5	1280	1345	2625

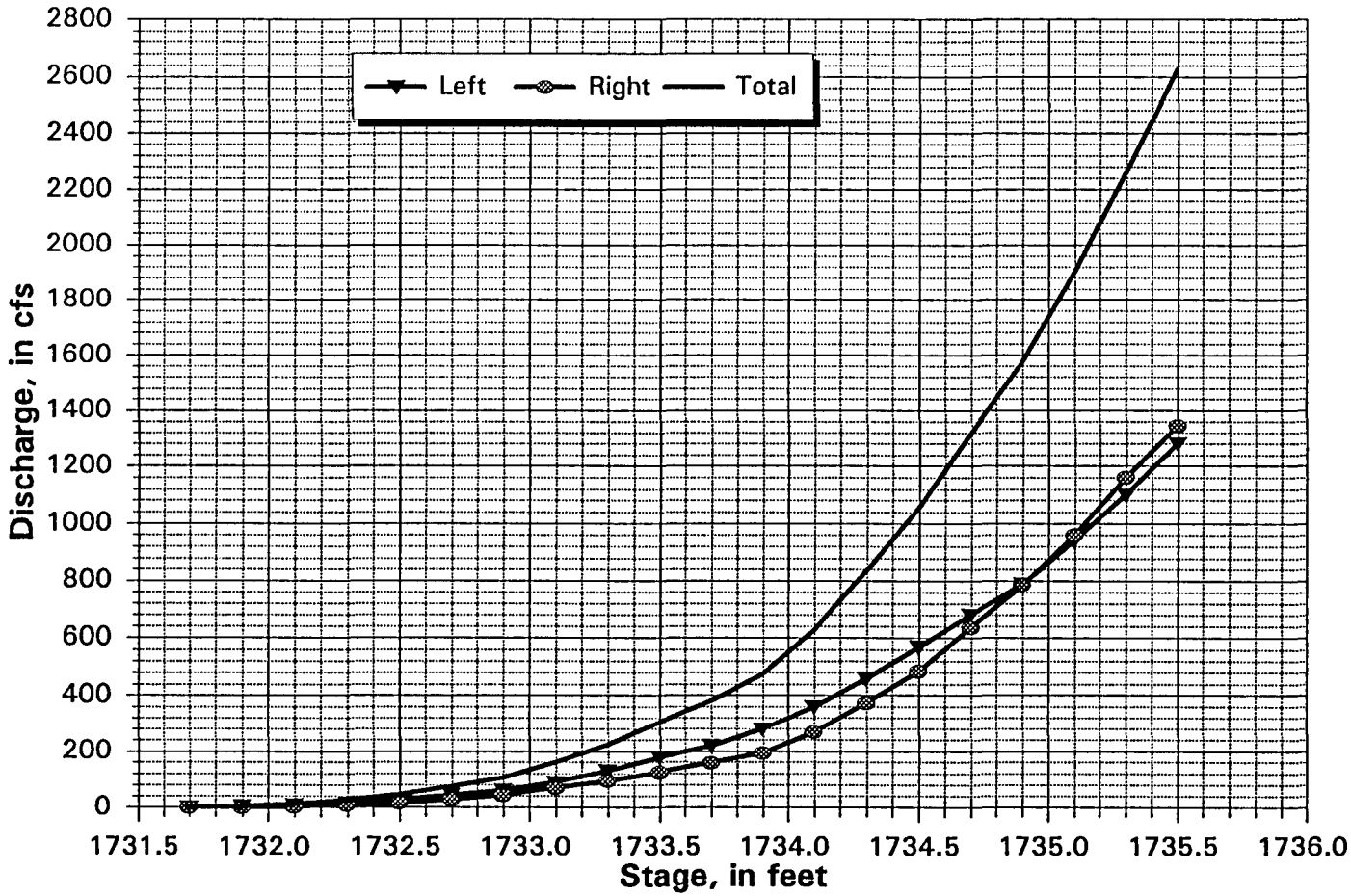

Figure D-15

Flow split at C558

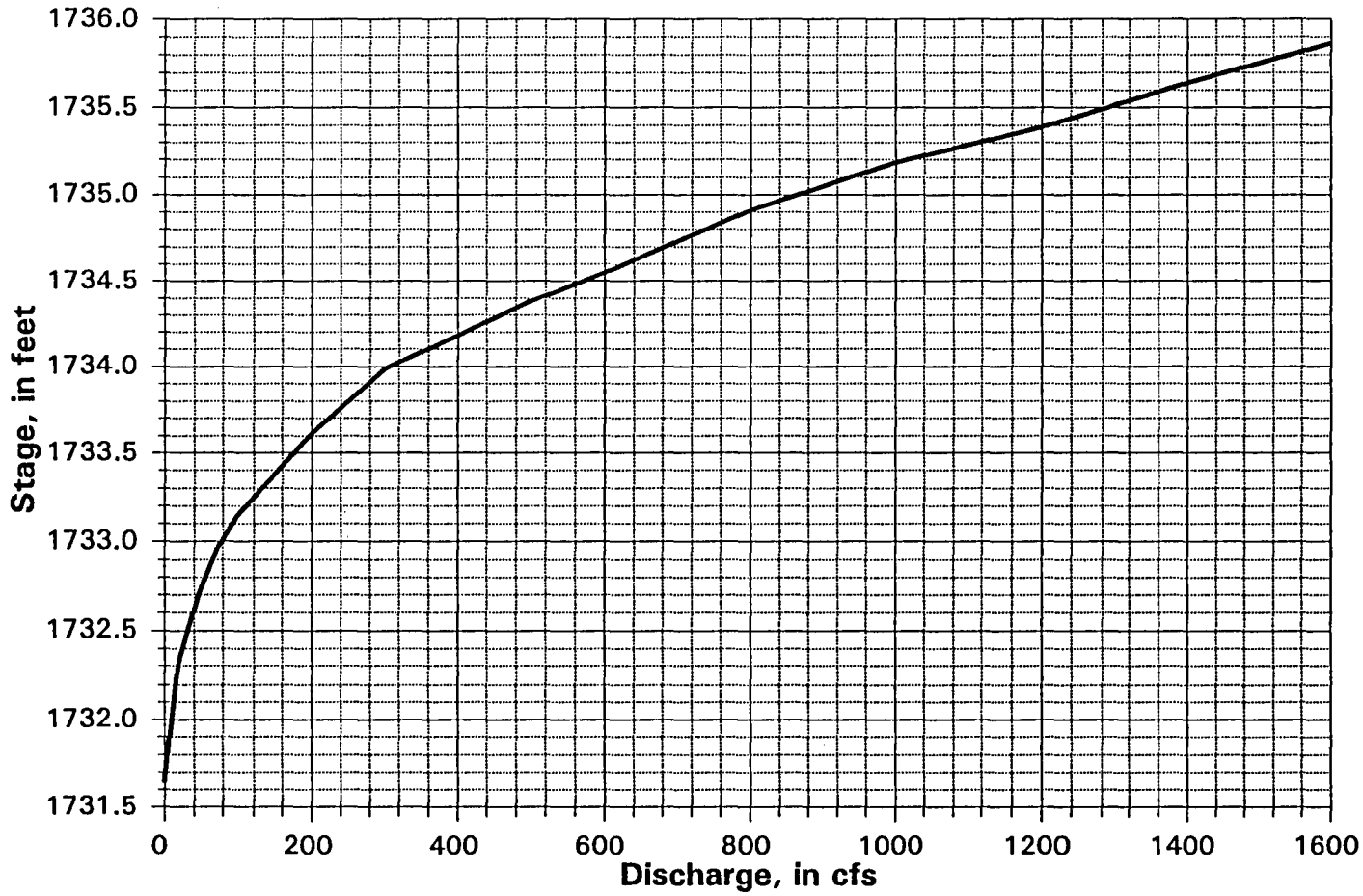

Figure D-15a

C558 Split Left

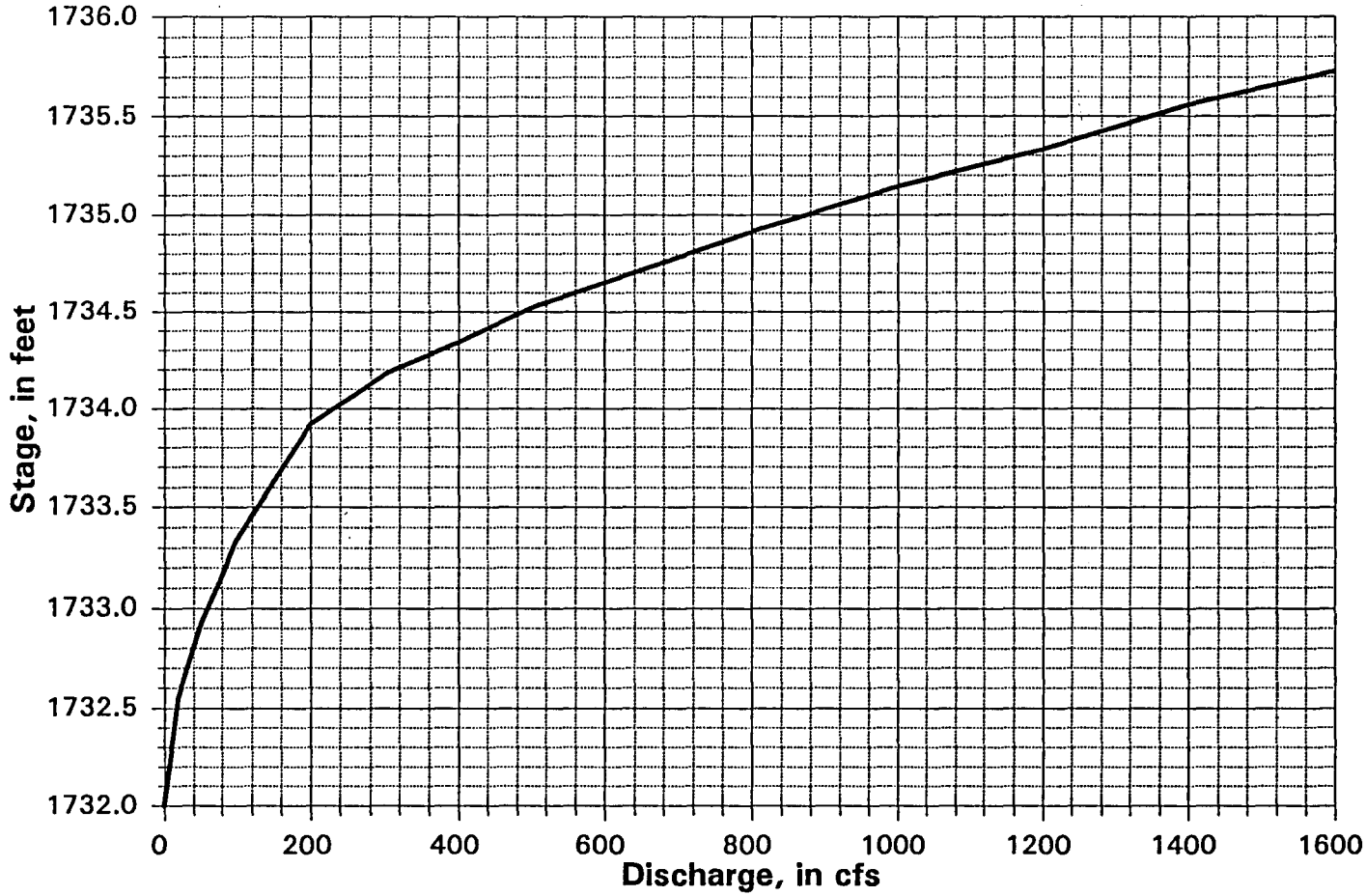

Figure D-15b

C558 Split Right

```
1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
 *  RUN DATE    16JUN94    TIME   15:50:41 *
 *****************************************

                                                                                  ***************************************
                                                                                  *  U.S. ARMY CORPS OF ENGINEERS       *
                                                                                  *  HYDROLOGIC ENGINEERING CENTER      *
                                                                                  *  609 SECOND STREET, SUITE D         *
                                                                                  *  DAVIS, CALIFORNIA 95616-4687       *
                                                                                  *          (916) 756-1104             *
                                                                                  ***************************************

                                        X     X  XXXXXXX   XXXXX              XXXXX
                                        X     X  X        X     X            X     X
                                        X     X  X        X                  X
                                        XXXXXXX  XXXX     X          XXXXX    XXXXX
                                        X     X  X        X                  X
                                        X     X  X        X     X            X
                                        X     X  XXXXXXX   XXXXX             XXXXXXX
1
   16JUN94      15:50:41                                                                                          PAGE    1


                                                                                THIS RUN EXECUTED 16JUN94    15:50:41
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************


 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      558 Left                                          FILE:     C558L.IH2
 T4                                                        DATE:     06-16-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 558
 T6                SPLIT  LEFT
 T7
 T8      Single X-Section Run
                  Ditch slope =    0.020 ft/ft  from 1000 scale mapping

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                           0.020

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                        -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

     -10       -10


 NC    0.075      0.075      0.035        .1         .3
 QT       14         20         50         75        100        200        300        400        500        600
 QT      800       1000       1200       1400       1600


 NH        4      0.075     1065.9      0.035     1076.7      0.075     1091.7       0.01       1093
        X-Section #1
 X1        1          8     1065.9     1076.7          0          0          0
 GR     1736        999    1733.83     1000.0    1732.59     1059.6    1731.65     1065.9    1731.98     1076.7
 GR   1732.7     1082.7    1732.80     1091.7       1736       1093
1
   16JUN94      15:50:41                                                                                          PAGE    2


 X1        2                                                  .2         .2         .2

 X1        3                                                  .2         .2         .2

 X1        4                                                  .2         .2         .2

 X1        5                                                  .2         .2         .2

 X1        6                                                  .2         .2         .2

1
   16JUN94      15:50:41                                                                                          PAGE    3

 T3            Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                           0.020

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     2                -1                                  -1

1
   16JUN94      15:50:41                                                                                PAGE    4

 T3             Q3
 J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                           0.020
 J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      3                   -1                                      -1

1
   16JUN94      15:50:41                                                                                PAGE    5

 T3             Q4
 J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                           0.020
 J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      4                   -1                                      -1

1
   16JUN94      15:50:41                                                                                PAGE    6

 T3             Q5
 J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                           0.020
 J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      5                   -1                                      -1

1
   16JUN94      15:50:41                                                                                PAGE    7

 T3             Q6
 J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                           0.020
 J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      6                   -1                                      -1

1
   16JUN94      15:50:41                                                                                PAGE    8

 T3             Q7
 J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                           0.020
 J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      7                   -1                                      -1

1
   16JUN94      15:50:41                                                                                PAGE    9

 T3             Q8
 J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                           0.020
 J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      8                   -1                                      -1

1
   16JUN94      15:50:41                                                                                PAGE   10

 T3             Q9
 J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                10                           0.020
 J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     9                -1                                  -1

1
   16JUN94      15:50:41                                                                                PAGE   11

 T3           Q10
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               11                           0.020
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                -1                                        -1

1
   16JUN94      15:50:41                                                                                PAGE   12

 T3           Q11
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               12                           0.020
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                -1                                        -1

1
   16JUN94      15:50:41                                                                                PAGE   13

 T3           Q12
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               13                           0.020
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                -1                                        -1

1
   16JUN94      15:50:41                                                                                PAGE   14

 T3           Q13
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               14                           0.020
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                -1                                        -1

1
   16JUN94      15:50:41                                                                                PAGE   15

 T3           Q14
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               15                           0.020
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                -1                                        -1


1
   16JUN94      15:50:41                                                                                PAGE   16


                                                                          THIS RUN EXECUTED 16JUN94     15:50:55
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

 NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

 558 Left

 SUMMARY PRINTOUT

       SECNO       Q       CWSEL     DEPTH      VCH       CRIWS      EG        HL       10*KS    KRATIO
```

	1.000	20.00	1732.28	.63	3.61	1732.26	1732.46	.00	203.24	.00
*	1.000	50.00	1732.62	.97	4.92	1732.62	1732.94	.00	180.04	.00
*	1.000	75.00	1732.88	1.23	5.13	1732.88	1733.21	.00	134.40	.00
*	1.000	100.00	1733.05	1.40	5.52	1733.05	1733.40	.00	128.24	.00
*	1.000	200.00	1733.51	1.86	6.57	1733.51	1733.94	.00	118.03	.00
*	1.000	300.00	1733.86	2.21	7.18	1733.86	1734.31	.00	110.30	.00
*	1.000	400.00	1734.06	2.41	8.00	1734.06	1734.59	.00	120.80	.00
*	1.000	500.00	1734.23	2.58	8.77	1734.23	1734.84	.00	131.74	.00
*	1.000	600.00	1734.40	2.75	9.33	1734.40	1735.07	.00	136.32	.00
*	1.000	800.00	1734.68	3.03	10.43	1734.68	1735.48	.00	148.14	.00
*	1.000	1000.00	1734.94	3.29	11.28	1734.94	1735.85	.00	154.40	.00
*	1.000	1200.00	1735.20	3.55	11.96	1735.20	1736.19	.00	156.33	.00
*	1.000	1400.00	1735.40	3.75	12.78	1735.40	1736.51	.00	165.47	.00
*	1.000	1600.00	1735.61	3.96	13.39	1735.61	1736.82	.00	168.08	.00
	2.000	20.00	1732.28	.63	3.58	1732.26	1732.47	.00	197.23	1.02
	2.000	50.00	1732.63	.98	4.90	1732.62	1732.95	.00	177.14	1.01
	2.000	75.00	1732.89	1.24	5.11	1732.88	1733.21	.00	132.98	1.01
	2.000	100.00	1733.07	1.42	5.40	1733.05	1733.41	.00	120.32	1.03
	2.000	200.00	1733.52	1.87	6.55	1733.49	1733.94	.00	117.28	1.00
	2.000	300.00	1733.86	2.21	7.16	1733.85	1734.32	.00	109.68	1.00
	2.000	400.00	1734.07	2.42	7.99	1734.06	1734.60	.00	120.14	1.00
	2.000	500.00	1734.27	2.62	8.53	1734.24	1734.85	.00	122.19	1.04
	2.000	600.00	1734.41	2.76	9.32	1734.40	1735.07	.00	135.63	1.00
	2.000	800.00	1734.73	3.08	10.18	1734.69	1735.49	.00	138.47	1.03
	2.000	1000.00	1734.99	3.34	11.07	1734.95	1735.86	.00	146.36	1.03
	2.000	1200.00	1735.21	3.56	11.94	1735.18	1736.19	.00	155.68	1.00
	2.000	1400.00	1735.45	3.80	12.51	1735.41	1736.52	.00	155.76	1.03
	2.000	1600.00	1735.66	4.01	13.15	1735.61	1736.82	.00	159.56	1.03

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	20.00	1732.30	.65	3.52	1732.25	1732.47	.00	186.03	1.03
3.000	50.00	1732.64	.99	4.84	1732.62	1732.95	.00	171.14	1.02
3.000	75.00	1732.89	1.24	5.07	1732.88	1733.21	.00	130.08	1.01
3.000	100.00	1733.08	1.43	5.35	1733.04	1733.41	.00	117.55	1.01
3.000	200.00	1733.53	1.88	6.52	1733.49	1733.94	.00	115.76	1.01
3.000	300.00	1733.87	2.22	7.13	1733.85	1734.32	.00	108.41	1.01
3.000	400.00	1734.08	2.43	7.95	1734.06	1734.60	.00	118.74	1.01
3.000	500.00	1734.29	2.64	8.48	1734.22	1734.85	.00	120.01	1.01
3.000	600.00	1734.41	2.76	9.28	1734.40	1735.08	.00	134.19	1.01
3.000	800.00	1734.81	3.16	9.72	1734.67	1735.50	.00	121.59	1.07
3.000	1000.00	1735.07	3.42	10.63	1734.93	1735.87	.00	130.30	1.06
3.000	1200.00	1735.22	3.57	11.91	1735.18	1736.20	.00	154.33	1.00
3.000	1400.00	1735.62	3.97	11.70	1735.39	1736.54	.00	128.33	1.10
3.000	1600.00	1735.83	4.18	12.35	1735.60	1736.84	.00	133.05	1.10
4.000	20.00	1732.31	.66	3.43	1732.25	1732.47	.00	171.97	1.04
4.000	50.00	1732.70	1.05	4.41	1732.62	1732.96	.00	127.76	1.16
4.000	75.00	1732.91	1.26	5.02	1732.88	1733.22	.00	125.67	1.02
4.000	100.00	1733.09	1.44	5.29	1733.05	1733.41	.00	113.79	1.02
4.000	200.00	1733.54	1.89	6.47	1733.49	1733.95	.00	113.43	1.01
4.000	300.00	1733.88	2.23	7.09	1733.84	1734.32	.00	106.43	1.01
4.000	400.00	1734.09	2.44	7.90	1734.05	1734.60	.00	116.60	1.01
4.000	500.00	1734.35	2.70	8.08	1734.27	1734.86	.00	104.99	1.07
4.000	600.00	1734.52	2.87	8.69	1734.40	1735.09	.00	111.82	1.10
4.000	800.00	1734.83	3.18	9.66	1734.68	1735.50	.00	119.53	1.01
4.000	1000.00	1735.17	3.52	10.06	1734.96	1735.88	.00	111.39	1.08
4.000	1200.00	1735.37	3.72	11.10	1735.17	1736.22	.00	126.35	1.11
4.000	1400.00	1735.62	3.97	11.67	1735.40	1736.54	.00	127.32	1.00
4.000	1600.00	1735.84	4.19	12.31	1735.61	1736.84	.00	131.85	1.00
5.000	20.00	1732.32	.67	3.34	1732.25	1732.48	.00	157.34	1.05
5.000	50.00	1732.72	1.07	4.34	1732.62	1732.96	.00	121.80	1.02
5.000	75.00	1732.97	1.32	4.59	1732.88	1733.23	.00	96.85	1.14
5.000	100.00	1733.14	1.49	4.99	1733.05	1733.42	.00	96.15	1.09
5.000	200.00	1733.60	1.95	6.11	1733.52	1733.96	.00	96.58	1.08
5.000	300.00	1733.99	2.34	6.39	1733.84	1734.33	.00	80.36	1.15
5.000	400.00	1734.17	2.52	7.42	1734.05	1734.61	.00	98.11	1.09
5.000	500.00	1734.37	2.72	8.01	1734.23	1734.86	.00	102.81	1.01
5.000	600.00	1734.54	2.89	8.60	1734.39	1735.09	.00	108.52	1.02
5.000	800.00	1734.91	3.26	9.18	1734.68	1735.51	.00	103.63	1.07
5.000	1000.00	1735.18	3.53	10.07	1734.94	1735.88	.00	111.68	1.00
5.000	1200.00	1735.38	3.73	11.06	1735.18	1736.22	.00	125.00	1.01
5.000	1400.00	1735.63	3.98	11.63	1735.40	1736.54	.00	126.12	1.00
5.000	1600.00	1735.85	4.20	12.27	1735.60	1736.85	.00	130.51	1.01

1

16JUN94 15:50:41 PAGE 18

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	20.00	1732.33	.68	3.25	1732.25	1732.48	.00	143.78	1.05
6.000	50.00	1732.73	1.08	4.27	1732.62	1732.97	.00	116.02	1.02
6.000	75.00	1732.98	1.33	4.53	1732.88	1733.23	.00	93.46	1.02
6.000	100.00	1733.15	1.50	4.93	1733.05	1733.42	.00	92.87	1.02
6.000	200.00	1733.61	1.96	6.06	1733.49	1733.96	.00	94.27	1.01
6.000	300.00	1733.99	2.34	6.38	1733.86	1734.34	.00	80.16	1.00
6.000	400.00	1734.18	2.53	7.35	1734.05	1734.61	.00	95.78	1.01
6.000	500.00	1734.38	2.73	7.95	1734.23	1734.87	.00	100.59	1.01
6.000	600.00	1734.55	2.90	8.51	1734.39	1735.09	.00	105.35	1.01
6.000	800.00	1734.91	3.26	9.19	1734.68	1735.51	.00	103.91	1.00
6.000	1000.00	1735.18	3.53	10.06	1734.94	1735.88	.00	111.51	1.00
6.000	1200.00	1735.39	3.74	11.02	1735.18	1736.22	.00	123.50	1.01
6.000	1400.00	1735.64	3.99	11.59	1735.40	1736.55	.00	124.76	1.01
6.000	1600.00	1735.86	4.21	12.22	1735.60	1736.85	.00	129.01	1.01

1

16JUN94 15:50:41 PAGE 19

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED
```

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1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
 *  RUN DATE    16JUN94    TIME   15:52:05 *
 *****************************************

                                                                                  ***************************************
                                                                                  *  U.S. ARMY CORPS OF ENGINEERS       *
                                                                                  *  HYDROLOGIC ENGINEERING CENTER      *
                                                                                  *  609 SECOND STREET, SUITE D         *
                                                                                  *  DAVIS, CALIFORNIA 95616-4687       *
                                                                                  *          (916) 756-1104             *
                                                                                  ***************************************

                                        X     X  XXXXXXX   XXXXX              XXXXX
                                        X     X  X        X     X            X     X
                                        X     X  X        X                        X
                                        XXXXXXX  XXXX     X          XXXXX    XXXXX
                                        X     X  X        X                  X
                                        X     X  X        X     X            X
                                        X     X  XXXXXXX   XXXXX             XXXXXXX
1
   16JUN94      15:52:05                                                                                          PAGE    1


                                                                                THIS RUN EXECUTED 16JUN94    15:52:05
 *************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 *************************************

 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      558 Right                                        FILE:     C558R.IH2
 T4                                                       DATE:     06-15-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 558
 T6                SPLIT  RIGHT
 T7
 T8      Single X-Section Run
                  Ditch slope =    0.021 ft/ft  from 1000 scale mapping

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                           0.021

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                        -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

     -10       -10


 NC    0.075      0.075      0.035         .1         .3
 QT       14         20         50         75        100        200        300        400        500        600
 QT      800       1000       1200       1400       1600


 NH        4       0.01       1000      0.075     1006.1      0.035       1019      0.075       1132
         X-Section #1
 X1        1          7     1006.1       1019          0          0          0
 GR     1736        999    1732.80     1000.0    1732.18     1006.1    1731.97     1019.0    1733.17     1025.8
 GR   1733.8     1130.9       1736       1132
1
   16JUN94      15:52:05                                                                                          PAGE    2


 X1        2                                        .2         .2         .2

 X1        3                                        .2         .2         .2

 X1        4                                        .2         .2         .2

 X1        5                                        .2         .2         .2

 X1        6                                        .2         .2         .2

1
   16JUN94      15:52:05                                                                                          PAGE    3

 T3            Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                           0.021

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
      2                -1                                  -1

1
   16JUN94      15:52:05                                                                          PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                           0.021
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      3                  -1                                      -1

1
   16JUN94      15:52:05                                                                          PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                           0.021
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      4                  -1                                      -1

1
   16JUN94      15:52:05                                                                          PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                           0.021
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      5                  -1                                      -1

1
   16JUN94      15:52:05                                                                          PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                           0.021
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      6                  -1                                      -1

1
   16JUN94      15:52:05                                                                          PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                           0.021
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      7                  -1                                      -1

1
   16JUN94      15:52:05                                                                          PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                           0.021
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      8                  -1                                      -1

1
   16JUN94      15:52:05                                                                          PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                10                           0.021
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     9                -1                                  -1

1
   16JUN94      15:52:05                                                                                PAGE   11

 T3           Q10
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               11                            0.021
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                  -1                                      -1

1
   16JUN94      15:52:05                                                                                PAGE   12

 T3           Q11
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               12                            0.021
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                  -1                                      -1

1
   16JUN94      15:52:05                                                                                PAGE   13

 T3           Q12
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               13                            0.021
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                  -1                                      -1

1
   16JUN94      15:52:05                                                                                PAGE   14

 T3           Q13
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               14                            0.021
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                  -1                                      -1

1
   16JUN94      15:52:05                                                                                PAGE   15

 T3           Q14
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               15                            0.021
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                  -1                                      -1


1
   16JUN94      15:52:05                                                                                PAGE   16


                                                                    THIS RUN EXECUTED 16JUN94    15:52:18
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

558 Right

SUMMARY PRINTOUT

      SECNO       Q       CWSEL     DEPTH      VCH       CRIWS      EG        HL       10*KS    KRATIO
```

	1.000	20.00	1732.49	.52	3.45	1732.48	1732.67	.00	210.42	.00
*	1.000	50.00	1732.81	.84	4.69	1732.81	1733.12	.00	184.04	.00
*	1.000	75.00	1733.01	1.04	5.37	1733.01	1733.40	.00	175.98	.00
*	1.000	100.00	1733.20	1.23	5.78	1733.20	1733.64	.00	158.76	.00
*	1.000	200.00	1733.84	1.87	5.69	1733.84	1734.18	.00	84.20	.00
*	1.000	300.00	1734.06	2.09	6.54	1734.06	1734.45	.00	95.11	.00
*	1.000	400.00	1734.25	2.28	7.15	1734.25	1734.68	.00	100.28	.00
*	1.000	500.00	1734.38	2.41	7.91	1734.38	1734.89	.00	113.74	.00
*	1.000	600.00	1734.53	2.56	8.41	1734.53	1735.07	.00	118.75	.00
*	1.000	800.00	1734.75	2.78	9.45	1734.75	1735.40	.00	133.10	.00
*	1.000	1000.00	1734.97	3.00	10.23	1734.97	1735.70	.00	140.47	.00
*	1.000	1200.00	1735.18	3.21	10.84	1735.18	1735.97	.00	143.90	.00
*	1.000	1400.00	1735.33	3.36	11.64	1735.33	1736.23	.00	155.56	.00
*	1.000	1600.00	1735.50	3.53	12.21	1735.50	1736.47	.00	159.94	.00
	2.000	20.00	1732.50	.53	3.42	1732.48	1732.67	.00	203.38	1.02
	2.000	50.00	1732.82	.85	4.67	1732.81	1733.12	.00	180.76	1.01
	2.000	75.00	1733.01	1.04	5.35	1733.01	1733.40	.00	173.58	1.01
	2.000	100.00	1733.20	1.23	5.76	1733.20	1733.64	.00	157.11	1.01
	2.000	200.00	1733.87	1.90	5.47	1733.85	1734.18	.00	76.18	1.05
	2.000	300.00	1734.10	2.13	6.32	1734.07	1734.46	.00	86.76	1.05
	2.000	400.00	1734.26	2.29	7.13	1734.24	1734.69	.00	99.78	1.00
	2.000	500.00	1734.43	2.46	7.66	1734.40	1734.89	.00	104.32	1.04
	2.000	600.00	1734.53	2.56	8.40	1734.53	1735.07	.00	118.16	1.00
	2.000	800.00	1734.80	2.83	9.18	1734.77	1735.41	.00	123.00	1.04
	2.000	1000.00	1734.98	3.01	10.21	1734.97	1735.70	.00	139.80	1.00
	2.000	1200.00	1735.19	3.22	10.82	1735.16	1735.98	.00	143.25	1.00
	2.000	1400.00	1735.39	3.42	11.37	1735.35	1736.24	.00	145.58	1.03
	2.000	1600.00	1735.56	3.59	11.96	1735.51	1736.48	.00	150.77	1.03

1

16JUN94 15:52:05 PAGE 17

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	20.00	1732.51	.54	3.35	1732.48	1732.68	.00	190.38	1.03
3.000	50.00	1732.83	.86	4.61	1732.81	1733.13	.00	174.11	1.02
3.000	75.00	1733.03	1.06	5.30	1733.00	1733.41	.00	168.66	1.01
3.000	100.00	1733.22	1.25	5.72	1733.20	1733.65	.00	153.69	1.01
3.000	200.00	1733.88	1.91	5.43	1733.83	1734.18	.00	74.60	1.01
3.000	300.00	1734.11	2.14	6.27	1734.05	1734.46	.00	85.02	1.01
3.000	400.00	1734.26	2.29	7.10	1734.24	1734.69	.00	98.74	1.01
3.000	500.00	1734.44	2.47	7.60	1734.38	1734.90	.00	102.33	1.01
3.000	600.00	1734.54	2.57	8.36	1734.53	1735.08	.00	116.89	1.01
3.000	800.00	1734.82	2.85	9.12	1734.75	1735.41	.00	120.84	1.01
3.000	1000.00	1734.99	3.02	10.17	1734.97	1735.71	.00	138.41	1.01
3.000	1200.00	1735.20	3.23	10.79	1735.16	1735.98	.00	141.90	1.00
3.000	1400.00	1735.48	3.51	10.88	1735.32	1736.25	.00	128.92	1.06
3.000	1600.00	1735.70	3.73	11.16	1735.49	1736.50	.00	124.35	1.10
4.000	20.00	1732.53	.56	3.26	1732.48	1732.68	.00	174.05	1.05
4.000	50.00	1732.89	.92	4.23	1732.81	1733.14	.00	132.71	1.15
4.000	75.00	1733.10	1.13	4.86	1733.00	1733.42	.00	127.79	1.15
4.000	100.00	1733.31	1.34	5.16	1733.19	1733.66	.00	112.28	1.17
4.000	200.00	1733.89	1.92	5.37	1733.87	1734.18	.00	72.69	1.01
4.000	300.00	1734.12	2.15	6.21	1734.09	1734.46	.00	82.86	1.01
4.000	400.00	1734.27	2.30	7.06	1734.23	1734.69	.00	97.10	1.01
4.000	500.00	1734.50	2.53	7.23	1734.42	1734.90	.00	89.52	1.07
4.000	600.00	1734.55	2.58	8.31	1734.52	1735.08	.00	114.95	1.01
4.000	800.00	1734.89	2.92	8.69	1734.79	1735.42	.00	106.07	1.07
4.000	1000.00	1735.11	3.14	9.43	1734.97	1735.72	.00	112.49	1.11
4.000	1200.00	1735.30	3.33	10.21	1735.15	1735.99	.00	121.98	1.08
4.000	1400.00	1735.55	3.58	10.49	1735.34	1736.26	.00	116.24	1.05
4.000	1600.00	1735.71	3.74	11.13	1735.50	1736.50	.00	123.35	1.00
5.000	20.00	1732.55	.58	3.12	1732.48	1732.69	.00	151.14	1.07
5.000	50.00	1732.90	.93	4.17	1732.81	1733.14	.00	126.76	1.02
5.000	75.00	1733.11	1.14	4.80	1733.01	1733.42	.00	123.55	1.02
5.000	100.00	1733.32	1.35	5.11	1733.20	1733.66	.00	108.51	1.02
5.000	200.00	1733.90	1.93	5.31	1733.85	1734.19	.00	70.50	1.02
5.000	300.00	1734.17	2.20	5.85	1734.09	1734.47	.00	71.08	1.08
5.000	400.00	1734.28	2.31	7.00	1734.23	1734.69	.00	94.92	1.01
5.000	500.00	1734.51	2.54	7.17	1734.44	1734.91	.00	87.69	1.01
5.000	600.00	1734.64	2.67	7.78	1734.52	1735.09	.00	96.39	1.09
5.000	800.00	1734.90	2.93	8.63	1734.76	1735.42	.00	103.96	1.01
5.000	1000.00	1735.13	3.16	9.37	1734.97	1735.72	.00	110.62	1.01
5.000	1200.00	1735.31	3.34	10.16	1735.16	1735.99	.00	120.03	1.01
5.000	1400.00	1735.55	3.58	10.46	1735.33	1736.26	.00	115.52	1.00
5.000	1600.00	1735.72	3.75	11.10	1735.50	1736.50	.00	122.18	1.00

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	20.00	1732.56	.59	3.03	1732.48	1732.69	.00	138.06	1.05
6.000	50.00	1732.91	.94	4.11	1732.81	1733.14	.00	121.14	1.02
6.000	75.00	1733.12	1.15	4.75	1733.01	1733.42	.00	119.39	1.02
6.000	100.00	1733.34	1.37	5.05	1733.20	1733.67	.00	104.75	1.02
6.000	200.00	1733.92	1.95	5.21	1733.86	1734.19	.00	67.01	1.03
6.000	300.00	1734.18	2.21	5.81	1734.09	1734.47	.00	69.74	1.01
6.000	400.00	1734.34	2.37	6.62	1734.27	1734.70	.00	81.83	1.08
6.000	500.00	1734.52	2.55	7.12	1734.45	1734.91	.00	85.81	1.01
6.000	600.00	1734.65	2.68	7.72	1734.52	1735.09	.00	94.19	1.01
6.000	800.00	1734.91	2.94	8.56	1734.76	1735.43	.00	101.82	1.01
6.000	1000.00	1735.14	3.17	9.31	1734.97	1735.73	.00	108.69	1.01
6.000	1200.00	1735.33	3.36	10.06	1735.16	1736.00	.00	117.03	1.01
6.000	1400.00	1735.56	3.59	10.43	1735.33	1736.26	.00	114.61	1.00
6.000	1600.00	1735.73	3.76	11.05	1735.50	1736.50	.00	120.84	1.01

1

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SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED
```

Table D-16
Flow split at C559

Stage	Discharge, in cfs		
	Left	Right	Total
1688.0	0	0	0
1688.2	4	5	9
1688.4	8	10	18
1688.6	14	15	29
1688.8	20	30	50
1689.0	38	50	88
1689.2	50	85	135
1689.4	80	125	205
1689.6	120	170	290
1689.8	180	220	400
1690.0	255	280	535
1690.2	340	355	695
1690.4	440	430	870
1690.6	560	520	1080
1690.8	680	620	1300
1691.0	824	725	1549
1691.2	980	845	1825
1691.4	1135	970	2105
1691.6	1330	1125	2455
1691.8	1525	1280	2805

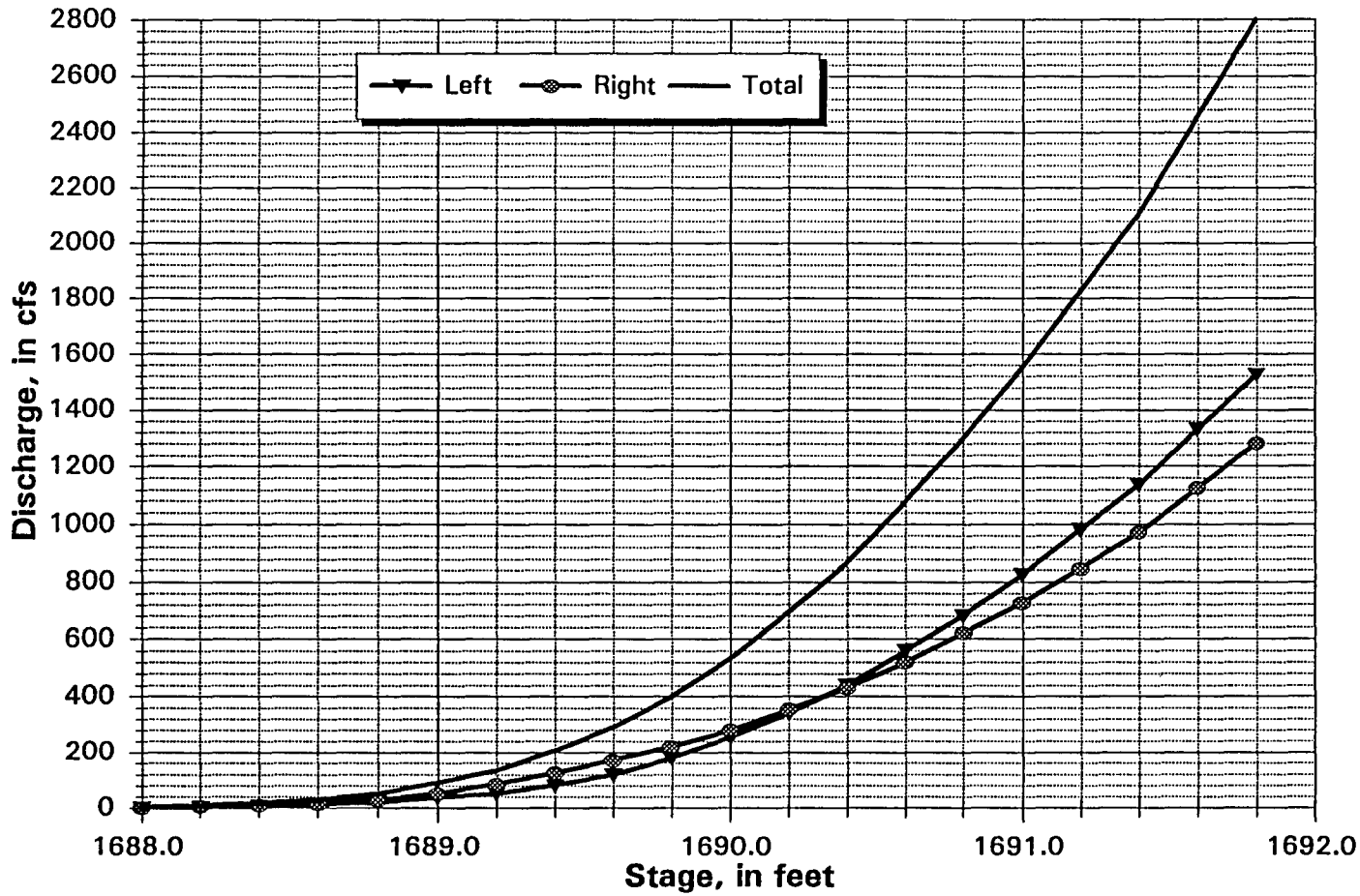

Figure D-16

Flow split at C559

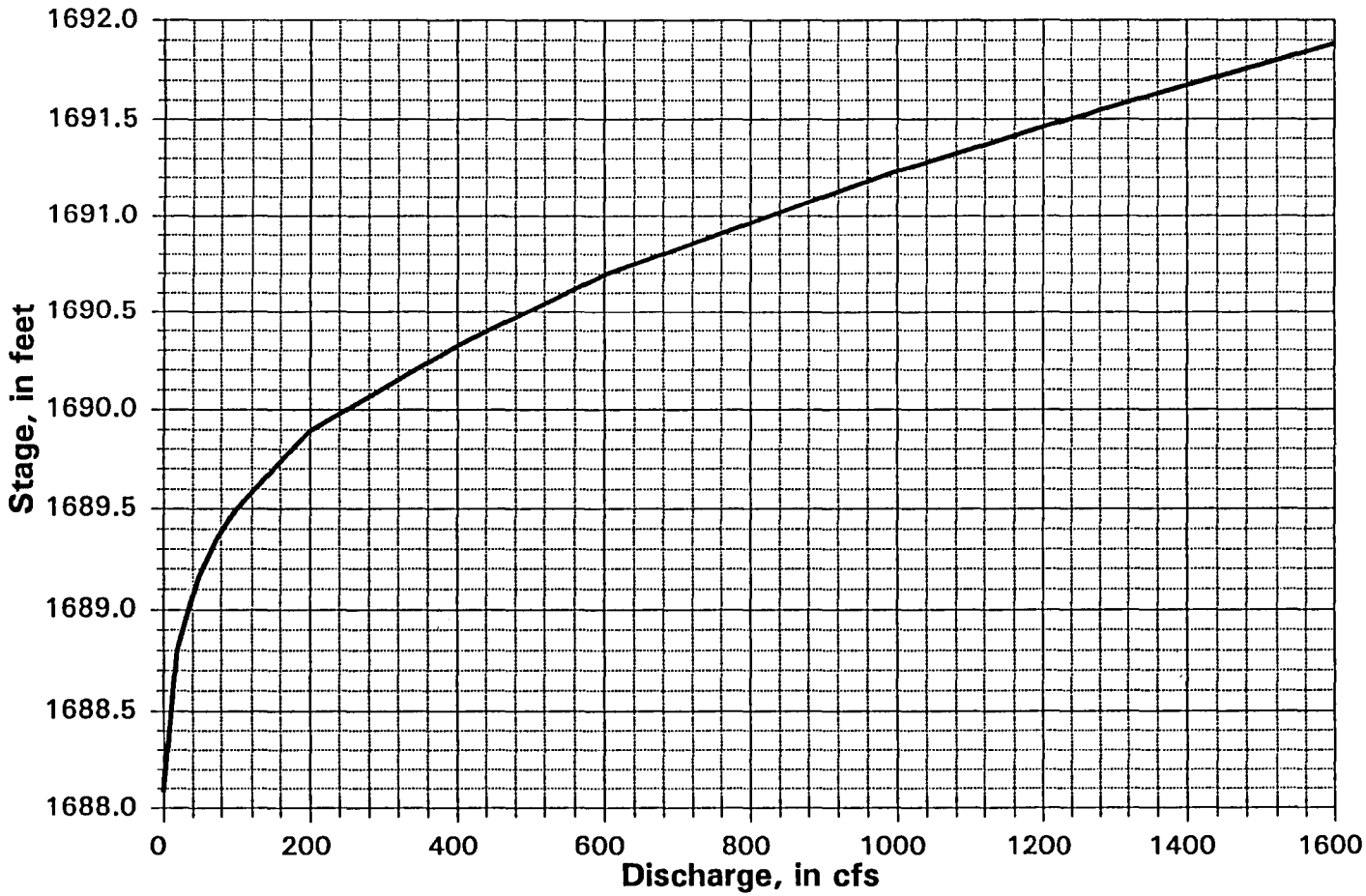

Figure D-16a

C559 Split Left

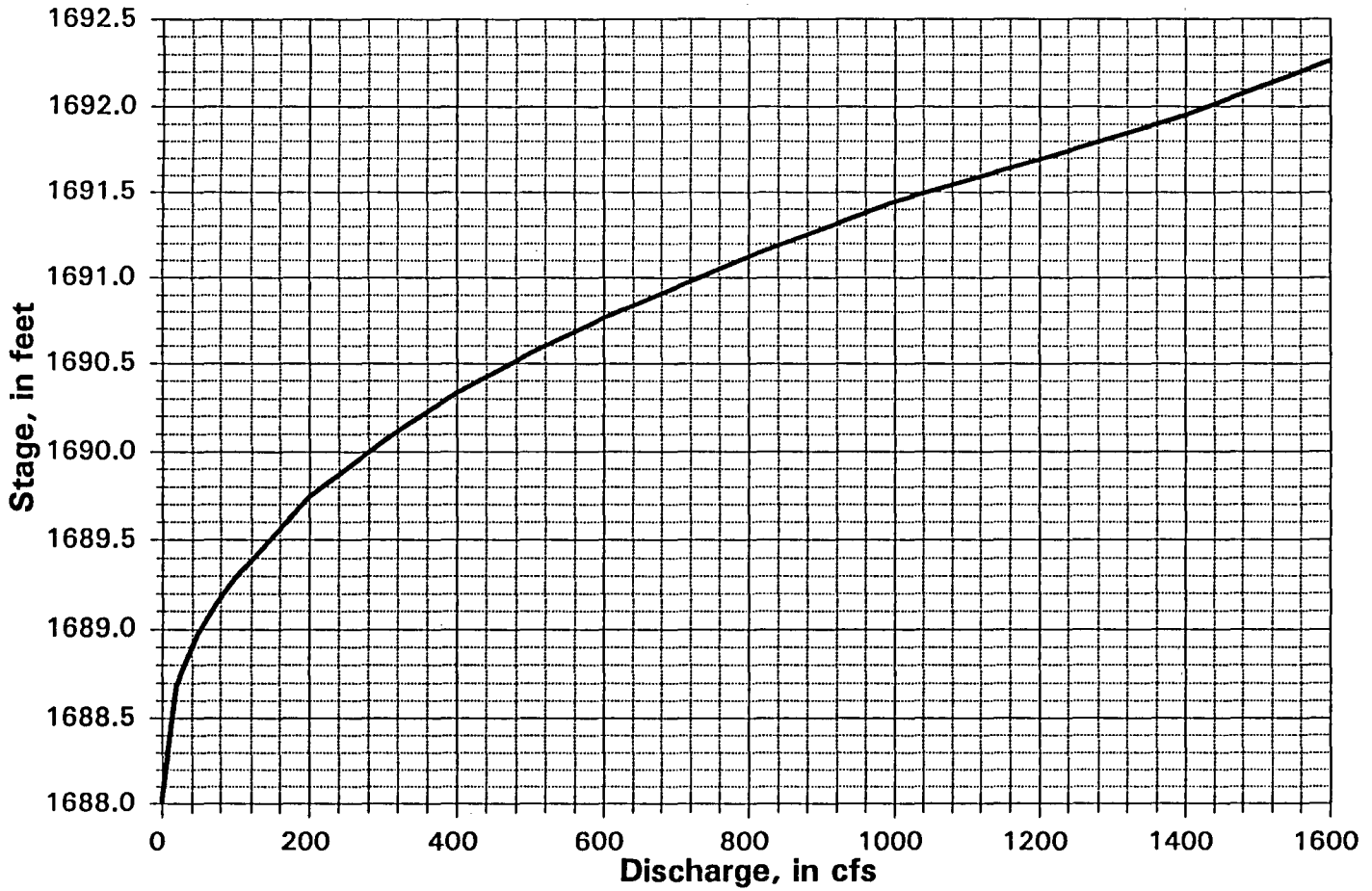

Figure D-16b

C559 Split Right

```
1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
 *  RUN DATE    16JUN94    TIME   16:09:21 *
 *****************************************
```

```
*************************************
 *  U.S. ARMY CORPS OF ENGINEERS     *
 *  HYDROLOGIC ENGINEERING CENTER    *
 *  609 SECOND STREET, SUITE D       *
 *  DAVIS, CALIFORNIA 95616-4687     *
 *          (916) 756-1104           *
*************************************
```

```
X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                        X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X                   X
X     X  X        X     X             X
X     X  XXXXXXX   XXXXX              XXXXXXX
```

```
1
   16JUN94      16:09:21                                                                                    PAGE    1


                                                                                  THIS RUN EXECUTED 16JUN94    16:09:21
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************


 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      559 Left                                        FILE:     C559L.IH2
 T4                                                      DATE:     06-16-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 559
 T6                SPLIT  LEFT
 T7
 T8      Single X-Section Run
                 Ditch slope =   0.0177 ft/ft  From Hydrologic Field Survey

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                           0.0177

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                        -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

     -10       -10


 NC    0.075      0.010      0.035        .1         .3
 QT       14         20         50        75        100        200        300        400        500        600
 QT      800       1000       1200      1400       1600

 NH        4      0.075     1108.2     0.035     1114.8     0.075       1121       0.01       1122
         X-Section #1
 X1        1         10     1108.2    1114.8          0          0          0
 GR     1693        999    1691.15    1000.0    1689.18     1046.1    1688.25     1049.8    1688.89     1062.3
 GR   1689.5     1102.1    1688.09    1108.2    1688.15     1114.8    1689.07     1121.0       1693       1122

1
   16JUN94      16:09:21                                                                                    PAGE    2


 X1        2                                                  .2         .2         .2

 X1        3                                                  .2         .2         .2

 X1        4                                                  .2         .2         .2

 X1        5                                                  .2         .2         .2

 X1        6                                                  .2         .2         .2

1
   16JUN94      16:09:21                                                                                    PAGE    3

 T3            Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                           0.0177

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
      2                -1                                  -1

1
   16JUN94      16:09:21                                                                                PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                           0.0177
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      3                  -1                                      -1

1
   16JUN94      16:09:21                                                                                PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                           0.0177
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      4                  -1                                      -1

1
   16JUN94      16:09:21                                                                                PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                           0.0177
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      5                  -1                                      -1

1
   16JUN94      16:09:21                                                                                PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                           0.0177
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      6                  -1                                      -1

1
   16JUN94      16:09:21                                                                                PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                           0.0177
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      7                  -1                                      -1

1
   16JUN94      16:09:21                                                                                PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                           0.0177
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      8                  -1                                      -1

1
   16JUN94      16:09:21                                                                                PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 10                          0.0177
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     9                -1                                  -1

1
   16JUN94      16:09:21                                                                                PAGE   11

 T3           Q10
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               11                          0.0177
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                -1                                  -1

1
   16JUN94      16:09:21                                                                                PAGE   12

 T3           Q11
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               12                          0.0177
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                -1                                  -1

1
   16JUN94      16:09:21                                                                                PAGE   13

 T3           Q12
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               13                          0.0177
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                -1                                  -1

1
   16JUN94      16:09:21                                                                                PAGE   14

 T3           Q13
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               14                          0.0177
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                -1                                  -1

1
   16JUN94      16:09:21                                                                                PAGE   15

 T3           Q14
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               15                          0.0177
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                -1                                  -1


1
   16JUN94      16:09:21                                                                                PAGE   16


                                                                                THIS RUN EXECUTED 16JUN94    16:09:37
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

 NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

 559 Left

 SUMMARY PRINTOUT

       SECNO       Q       CWSEL     DEPTH      VCH       CRIWS      EG        HL       10*KS    KRATIO
```

	1.000	20.00	1688.71	.62	3.97	1688.70	1688.90	.00	177.12	.00
*	1.000	50.00	1689.07	.98	4.95	1689.07	1689.32	.00	144.92	.00
*	1.000	75.00	1689.26	1.17	5.49	1689.26	1689.53	.00	141.13	.00
*	1.000	100.00	1689.39	1.30	6.01	1689.39	1689.69	.00	146.48	.00
*	1.000	200.00	1689.78	1.69	6.97	1689.78	1690.11	.00	136.78	.00
*	1.000	300.00	1689.98	1.89	8.32	1689.98	1690.42	.00	167.66	.00
*	1.000	400.00	1690.18	2.09	9.18	1690.18	1690.68	.00	178.53	.00
	1.000	500.00	1690.37	2.28	9.71	1690.35	1690.91	.00	177.17	.00
	1.000	600.00	1690.54	2.45	10.20	1690.49	1691.11	.00	177.10	.00
	1.000	800.00	1690.85	2.76	11.03	1690.78	1691.48	.00	176.81	.00
	1.000	1000.00	1691.12	3.03	11.74	1691.02	1691.81	.00	176.69	.00
	1.000	1200.00	1691.35	3.26	12.34	1691.26	1692.10	.00	176.78	.00
	1.000	1400.00	1691.57	3.48	12.88	1691.45	1692.36	.00	176.84	.00
	1.000	1600.00	1691.77	3.68	13.38	1691.62	1692.62	.00	176.90	.00
	2.000	20.00	1688.72	.63	3.94	1688.70	1688.90	.00	172.94	1.01
	2.000	50.00	1689.08	.99	4.92	1689.07	1689.32	.00	142.86	1.01
	2.000	75.00	1689.26	1.17	5.47	1689.26	1689.53	.00	139.44	1.01
	2.000	100.00	1689.42	1.33	5.79	1689.40	1689.70	.00	131.87	1.05
	2.000	200.00	1689.79	1.70	6.94	1689.74	1690.11	.00	135.60	1.00
	2.000	300.00	1690.02	1.93	8.08	1689.99	1690.42	.00	155.00	1.04
	2.000	400.00	1690.21	2.12	8.94	1690.19	1690.68	.00	166.12	1.04
	2.000	500.00	1690.38	2.29	9.68	1690.35	1690.91	.00	175.79	1.00
	2.000	600.00	1690.55	2.46	10.17	1690.49	1691.12	.00	175.84	1.00
	2.000	800.00	1690.86	2.77	11.01	1690.79	1691.49	.00	175.71	1.00
	2.000	1000.00	1691.13	3.04	11.72	1691.02	1691.82	.00	175.71	1.00
	2.000	1200.00	1691.36	3.27	12.32	1691.28	1692.10	.00	175.84	1.00
	2.000	1400.00	1691.57	3.48	12.86	1691.47	1692.37	.00	175.97	1.00
	2.000	1600.00	1691.77	3.68	13.36	1691.61	1692.62	.00	176.10	1.00

1
16JUN94 16:09:21 PAGE 17

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	20.00	1688.73	.64	3.87	1688.70	1688.91	.00	164.80	1.02
3.000	50.00	1689.09	1.00	4.87	1689.07	1689.33	.00	138.60	1.02
3.000	75.00	1689.27	1.18	5.42	1689.26	1689.54	.00	135.99	1.01
3.000	100.00	1689.43	1.34	5.71	1689.40	1689.70	.00	127.47	1.02
3.000	200.00	1689.79	1.70	6.90	1689.77	1690.12	.00	133.28	1.01
3.000	300.00	1690.03	1.94	8.01	1689.98	1690.43	.00	151.07	1.01
3.000	400.00	1690.27	2.18	8.51	1690.17	1690.69	.00	145.44	1.07
3.000	500.00	1690.39	2.30	9.63	1690.34	1690.91	.00	172.98	1.01
3.000	600.00	1690.56	2.47	10.12	1690.51	1691.12	.00	173.31	1.01
3.000	800.00	1690.87	2.78	10.96	1690.79	1691.49	.00	173.59	1.01
3.000	1000.00	1691.14	3.05	11.67	1691.02	1691.82	.00	173.83	1.01
3.000	1200.00	1691.37	3.28	12.27	1691.28	1692.11	.00	174.02	1.01
3.000	1400.00	1691.58	3.49	12.82	1691.47	1692.37	.00	174.32	1.00
3.000	1600.00	1691.78	3.69	13.32	1691.61	1692.62	.00	174.59	1.00
4.000	20.00	1688.74	.65	3.79	1688.70	1688.91	.00	153.76	1.04
4.000	50.00	1689.10	1.01	4.79	1689.07	1689.33	.00	132.45	1.02
4.000	75.00	1689.28	1.19	5.34	1689.25	1689.54	.00	130.70	1.02
4.000	100.00	1689.48	1.39	5.35	1689.41	1689.71	.00	106.42	1.09
4.000	200.00	1689.81	1.72	6.83	1689.78	1690.12	.00	129.85	1.01
4.000	300.00	1690.08	1.99	7.60	1690.00	1690.44	.00	131.23	1.07
4.000	400.00	1690.29	2.20	8.39	1690.18	1690.70	.00	139.82	1.02
4.000	500.00	1690.47	2.38	9.06	1690.34	1690.92	.00	146.43	1.09
4.000	600.00	1690.61	2.52	9.79	1690.52	1691.13	.00	158.49	1.05
4.000	800.00	1690.88	2.79	10.89	1690.79	1691.50	.00	170.51	1.01
4.000	1000.00	1691.15	3.06	11.61	1691.02	1691.82	.00	171.15	1.01
4.000	1200.00	1691.38	3.29	12.20	1691.28	1692.11	.00	171.40	1.01
4.000	1400.00	1691.60	3.51	12.75	1691.44	1692.38	.00	172.00	1.01
4.000	1600.00	1691.79	3.70	13.26	1691.61	1692.63	.00	172.48	1.01
5.000	20.00	1688.80	.71	3.21	1688.70	1688.92	.00	93.70	1.28
5.000	50.00	1689.15	1.06	4.40	1689.07	1689.34	.00	104.60	1.13
5.000	75.00	1689.34	1.25	4.91	1689.26	1689.55	.00	103.84	1.12
5.000	100.00	1689.49	1.40	5.27	1689.40	1689.71	.00	102.32	1.02
5.000	200.00	1689.82	1.73	6.70	1689.78	1690.12	.00	123.48	1.03
5.000	300.00	1690.10	2.01	7.47	1689.98	1690.44	.00	125.28	1.02
5.000	400.00	1690.31	2.22	8.26	1690.18	1690.70	.00	134.17	1.02
5.000	500.00	1690.48	2.39	8.98	1690.35	1690.93	.00	143.15	1.01
5.000	600.00	1690.69	2.60	9.17	1690.50	1691.14	.00	132.09	1.10
5.000	800.00	1690.95	2.86	10.38	1690.80	1691.51	.00	149.19	1.07
5.000	1000.00	1691.22	3.13	11.09	1691.02	1691.83	.00	151.11	1.06
5.000	1200.00	1691.46	3.37	11.70	1691.26	1692.12	.00	152.54	1.06
5.000	1400.00	1691.66	3.57	12.31	1691.44	1692.38	.00	155.88	1.05
5.000	1600.00	1691.81	3.72	13.15	1691.61	1692.63	.00	168.75	1.01

1
16JUN94 16:09:21 PAGE 18

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	20.00	1688.80	.71	3.25	1688.70	1688.92	.00	97.22	.98
6.000	50.00	1689.16	1.07	4.33	1689.07	1689.34	.00	99.89	1.02
6.000	75.00	1689.35	1.26	4.83	1689.26	1689.55	.00	99.41	1.02
6.000	100.00	1689.50	1.41	5.19	1689.40	1689.71	.00	98.30	1.02
6.000	200.00	1689.89	1.80	6.10	1689.79	1690.13	.00	95.81	1.14
6.000	300.00	1690.11	2.02	7.38	1689.98	1690.44	.00	121.37	1.02
6.000	400.00	1690.32	2.23	8.14	1690.18	1690.70	.00	128.87	1.02
6.000	500.00	1690.50	2.41	8.87	1690.35	1690.93	.00	138.17	1.02
6.000	600.00	1690.69	2.60	9.17	1690.50	1691.14	.00	132.36	1.00
6.000	800.00	1690.96	2.87	10.33	1690.79	1691.51	.00	147.48	1.01
6.000	1000.00	1691.23	3.14	11.04	1691.04	1691.84	.00	149.08	1.01
6.000	1200.00	1691.46	3.37	11.66	1691.26	1692.12	.00	151.12	1.00
6.000	1400.00	1691.67	3.58	12.28	1691.44	1692.39	.00	154.80	1.00
6.000	1600.00	1691.88	3.79	12.71	1691.61	1692.64	.00	153.13	1.05

1
16JUN94 16:09:21 PAGE 19

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
```

```
1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
 *  RUN DATE    16JUN94    TIME   16:08:03 *
 *****************************************
```

```
*************************************
*  U.S. ARMY CORPS OF ENGINEERS     *
*  HYDROLOGIC ENGINEERING CENTER    *
*  609 SECOND STREET, SUITE D       *
*  DAVIS, CALIFORNIA 95616-4687     *
*          (916) 756-1104           *
*************************************
```

```
X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                        X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X                  X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX             XXXXXXX
```

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1
   16JUN94      16:08:03                                                                    PAGE    1


                                                                THIS RUN EXECUTED 16JUN94    16:08:03
 ************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
 ************************************


T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
T3      559 Right                                        FILE:     C559R.IH2
T4                                                       DATE:     06-16-94  dtp
T4
T5              This model is used to develop a flow split rating curve
T6              for the split that occurs at hydrologic concentration point 559
T6                SPLIT  RIGHT
T7
T8      Single X-Section Run
                Ditch slope =   0.0173 ft/ft  From Hydrologic Field Survey

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                2                           0.0173

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      1                 -1                                        -1

   SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

J3  VARIABLE CODES FOR SUMMARY PRINTOUT

     38        43         1         8        26         2         3        11         5        58

J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

    -10       -10


NC    0.075     0.075     0.035       .1        .3
QT       14        20        50       75       100       200       300       400       500       600
QT      800      1000      1200     1400      1600

NH        4      0.01    1000.0    0.075    1005.4    0.035    1016.3    0.075      1158
        X-Section #1
X1        1        10    1005.4   1016.3         0         0         0
GR     1693       999   1689.07   1000.0   1688.45    1005.4   1688.16   1016.3   1689.04    1021.9
GR   1688.0    1029.4   1688.02   1033.7   1688.94    1037.4   1692.14   1156.8      1693      1158

1
   16JUN94      16:08:03                                                                    PAGE    2


X1        2                                          .2        .2        .2

X1        3                                          .2        .2        .2

X1        4                                          .2        .2        .2

X1        5                                          .2        .2        .2

X1        6                                          .2        .2        .2

1
   16JUN94      16:08:03                                                                    PAGE    3

T3          Q2

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                3                           0.0173

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     2                -1                                  -1

1
   16JUN94      16:08:03                                                                                PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                           0.0173
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      3                  -1                                      -1

1
   16JUN94      16:08:03                                                                                PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                           0.0173
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      4                  -1                                      -1

1
   16JUN94      16:08:03                                                                                PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                           0.0173
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      5                  -1                                      -1

1
   16JUN94      16:08:03                                                                                PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                           0.0173
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      6                  -1                                      -1

1
   16JUN94      16:08:03                                                                                PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                           0.0173
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      7                  -1                                      -1

1
   16JUN94      16:08:03                                                                                PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                           0.0173
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      8                  -1                                      -1

1
   16JUN94      16:08:03                                                                                PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 10                          0.0173
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     9                -1                                  -1

1
   16JUN94      16:08:03                                                                                PAGE   11

 T3           Q10
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                11                          0.0173
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                  -1                                      -1

1
   16JUN94      16:08:03                                                                                PAGE   12

 T3           Q11
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                12                          0.0173
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                  -1                                      -1

1
   16JUN94      16:08:03                                                                                PAGE   13

 T3           Q12
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                13                          0.0173
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                  -1                                      -1

1
   16JUN94      16:08:03                                                                                PAGE   14

 T3           Q13
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                14                          0.0173
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                  -1                                      -1

1
   16JUN94      16:08:03                                                                                PAGE   15

 T3           Q14
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                15                          0.0173
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                  -1                                      -1


1
   16JUN94      16:08:03                                                                                PAGE   16


                                                                                THIS RUN EXECUTED 16JUN94     16:08:19
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

559 Right

SUMMARY PRINTOUT

      SECNO       Q       CWSEL     DEPTH      VCH       CRIWS      EG        HL       10*KS    KRATIO
```

	1.000	20.00	1688.66	.66	2.79	1688.52	1688.74	.00	173.12	.00
	1.000	50.00	1688.94	.94	4.13	1688.81	1689.12	.00	172.84	.00
	1.000	75.00	1689.11	1.11	4.82	1689.00	1689.34	.00	172.60	.00
	1.000	100.00	1689.24	1.24	5.34	1689.17	1689.52	.00	172.57	.00
	1.000	200.00	1689.65	1.65	6.79	1689.59	1690.05	.00	172.77	.00
	1.000	300.00	1689.94	1.94	7.82	1689.92	1690.45	.00	175.80	.00
	1.000	400.00	1690.19	2.19	8.54	1690.16	1690.77	.00	173.52	.00
	1.000	500.00	1690.41	2.41	9.18	1690.39	1691.05	.00	173.70	.00
	1.000	600.00	1690.60	2.60	9.71	1690.58	1691.29	.00	172.95	.00
	1.000	800.00	1690.93	2.93	10.60	1690.93	1691.72	.00	172.51	.00
*	1.000	1000.00	1691.22	3.22	11.31	1691.22	1692.08	.00	170.75	.00
*	1.000	1200.00	1691.49	3.49	11.84	1691.49	1692.40	.00	166.04	.00
*	1.000	1400.00	1691.71	3.71	12.47	1691.71	1692.68	.00	168.73	.00
	1.000	1600.00	1691.90	3.90	13.08	1691.89	1692.95	.00	172.69	.00
	2.000	20.00	1688.66	.66	2.77	1688.52	1688.74	.00	168.34	1.01
	2.000	50.00	1688.95	.95	4.11	1688.81	1689.12	.00	169.77	1.01
	2.000	75.00	1689.11	1.11	4.79	1689.00	1689.34	.00	169.91	1.01
	2.000	100.00	1689.25	1.25	5.32	1689.17	1689.52	.00	170.22	1.01
	2.000	200.00	1689.65	1.65	6.77	1689.60	1690.06	.00	171.05	1.01
	2.000	300.00	1689.95	1.95	7.79	1689.91	1690.45	.00	174.27	1.00
	2.000	400.00	1690.20	2.20	8.52	1690.16	1690.77	.00	172.23	1.00
	2.000	500.00	1690.41	2.41	9.16	1690.39	1691.05	.00	172.52	1.00
	2.000	600.00	1690.60	2.60	9.68	1690.58	1691.30	.00	171.86	1.00
	2.000	800.00	1690.94	2.94	10.58	1690.93	1691.72	.00	171.54	1.00
	2.000	1000.00	1691.23	3.23	11.29	1691.22	1692.08	.00	169.87	1.00
	2.000	1200.00	1691.50	3.50	11.82	1691.48	1692.40	.00	165.28	1.00
	2.000	1400.00	1691.76	3.76	12.21	1691.71	1692.69	.00	159.12	1.03
	2.000	1600.00	1691.90	3.90	13.06	1691.89	1692.95	.00	171.95	1.00

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	20.00	1688.67	.67	2.74	1688.52	1688.75	.00	161.95	1.02
3.000	50.00	1688.95	.95	4.07	1688.81	1689.12	.00	164.87	1.01
3.000	75.00	1689.12	1.12	4.75	1689.01	1689.35	.00	165.23	1.01
3.000	100.00	1689.26	1.26	5.27	1689.17	1689.52	.00	165.95	1.01
3.000	200.00	1689.66	1.66	6.72	1689.60	1690.06	.00	167.66	1.01
3.000	300.00	1689.96	1.96	7.75	1689.91	1690.46	.00	171.25	1.01
3.000	400.00	1690.21	2.21	8.48	1690.16	1690.78	.00	169.58	1.01
3.000	500.00	1690.42	2.42	9.11	1690.38	1691.06	.00	170.10	1.01
3.000	600.00	1690.62	2.62	9.64	1690.58	1691.30	.00	169.58	1.01
3.000	800.00	1690.95	2.95	10.54	1690.93	1691.72	.00	169.52	1.01
3.000	1000.00	1691.24	3.24	11.25	1691.22	1692.09	.00	168.05	1.01
3.000	1200.00	1691.51	3.51	11.78	1691.47	1692.40	.00	163.69	1.00
3.000	1400.00	1691.92	3.92	11.37	1691.70	1692.71	.00	129.60	1.11
3.000	1600.00	1691.91	3.91	13.02	1691.88	1692.95	.00	170.39	1.00
4.000	20.00	1688.67	.67	2.71	1688.52	1688.75	.00	155.55	1.02
4.000	50.00	1688.96	.96	4.03	1688.81	1689.13	.00	159.25	1.02
4.000	75.00	1689.13	1.13	4.70	1689.01	1689.35	.00	159.30	1.02
4.000	100.00	1689.27	1.27	5.22	1689.17	1689.53	.00	160.42	1.02
4.000	200.00	1689.68	1.68	6.66	1689.60	1690.06	.00	162.90	1.01
4.000	300.00	1690.03	2.03	7.34	1689.94	1690.47	.00	145.83	1.08
4.000	400.00	1690.31	2.31	7.85	1690.17	1690.79	.00	135.22	1.12
4.000	500.00	1690.54	2.54	8.43	1690.38	1691.07	.00	135.65	1.12
4.000	600.00	1690.73	2.73	9.00	1690.58	1691.31	.00	138.98	1.10
4.000	800.00	1691.10	3.10	9.68	1690.92	1691.74	.00	132.68	1.13
4.000	1000.00	1691.42	3.42	10.26	1691.22	1692.10	.00	128.91	1.14
4.000	1200.00	1691.67	3.67	10.89	1691.47	1692.42	.00	130.78	1.12
4.000	1400.00	1691.93	3.93	11.33	1691.71	1692.71	.00	128.36	1.00
4.000	1600.00	1692.24	4.24	11.24	1691.86	1692.99	.00	112.91	1.23
5.000	20.00	1688.68	.68	2.68	1688.52	1688.75	.00	149.62	1.02
5.000	50.00	1688.97	.97	3.98	1688.81	1689.13	.00	153.38	1.02
5.000	75.00	1689.14	1.14	4.63	1689.01	1689.35	.00	152.71	1.02
5.000	100.00	1689.28	1.28	5.15	1689.17	1689.53	.00	154.15	1.02
5.000	200.00	1689.73	1.73	6.28	1689.59	1690.07	.00	136.58	1.09
5.000	300.00	1690.04	2.04	7.27	1689.92	1690.47	.00	142.03	1.01
5.000	400.00	1690.32	2.32	7.81	1690.16	1690.79	.00	133.45	1.01
5.000	500.00	1690.55	2.55	8.39	1690.39	1691.07	.00	133.43	1.01
5.000	600.00	1690.74	2.74	8.91	1690.58	1691.32	.00	134.90	1.02
5.000	800.00	1691.11	3.11	9.62	1690.92	1691.74	.00	130.42	1.01
5.000	1000.00	1691.43	3.43	10.21	1691.22	1692.11	.00	127.20	1.01
5.000	1200.00	1691.68	3.68	10.84	1691.47	1692.42	.00	129.12	1.01
5.000	1400.00	1691.94	3.94	11.28	1691.71	1692.71	.00	126.95	1.01
5.000	1600.00	1692.25	4.25	11.19	1691.92	1692.99	.00	111.73	1.01

1

16JUN94 16:08:03 PAGE 18

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	20.00	1688.68	.68	2.65	1688.52	1688.76	.00	144.10	1.02
6.000	50.00	1688.98	.98	3.94	1688.81	1689.13	.00	147.87	1.02
6.000	75.00	1689.15	1.15	4.57	1689.01	1689.36	.00	146.14	1.02
6.000	100.00	1689.29	1.29	5.08	1689.17	1689.54	.00	147.69	1.02
6.000	200.00	1689.74	1.74	6.25	1689.59	1690.08	.00	134.69	1.01
6.000	300.00	1690.06	2.06	7.17	1689.92	1690.47	.00	136.36	1.02
6.000	400.00	1690.33	2.33	7.77	1690.16	1690.80	.00	131.37	1.01
6.000	500.00	1690.56	2.56	8.33	1690.39	1691.08	.00	130.99	1.01
6.000	600.00	1690.76	2.76	8.82	1690.58	1691.32	.00	130.85	1.02
6.000	800.00	1691.12	3.12	9.56	1690.92	1691.75	.00	128.07	1.01
6.000	1000.00	1691.44	3.44	10.16	1691.22	1692.11	.00	125.38	1.01
6.000	1200.00	1691.69	3.69	10.79	1691.47	1692.43	.00	127.32	1.01
6.000	1400.00	1691.95	3.95	11.23	1691.72	1692.72	.00	125.35	1.01
6.000	1600.00	1692.26	4.26	11.15	1691.90	1692.99	.00	110.46	1.01

1

16JUN94 16:08:03 PAGE 19

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
```

Table D-17
Flow split at C560

Stage	Discharge, in cfs		
	Left	Right	Total
1672.7	0	0	0
1672.9	4	0	4
1673.1	8	4	12
1673.3	12	10	22
1673.5	16	16	32
1673.7	20	30	50
1673.9	30	50	80
1674.1	40	100	140
1674.3	65	180	245
1674.5	90	265	355
1674.7	130	365	495
1674.9	190	500	690
1675.1	265	638	903
1675.3	345	800	1145
1675.5	435	1000	1435
1675.7	530	1200	1730
1675.9	650	1480	2130
1676.1	780	1720	2500

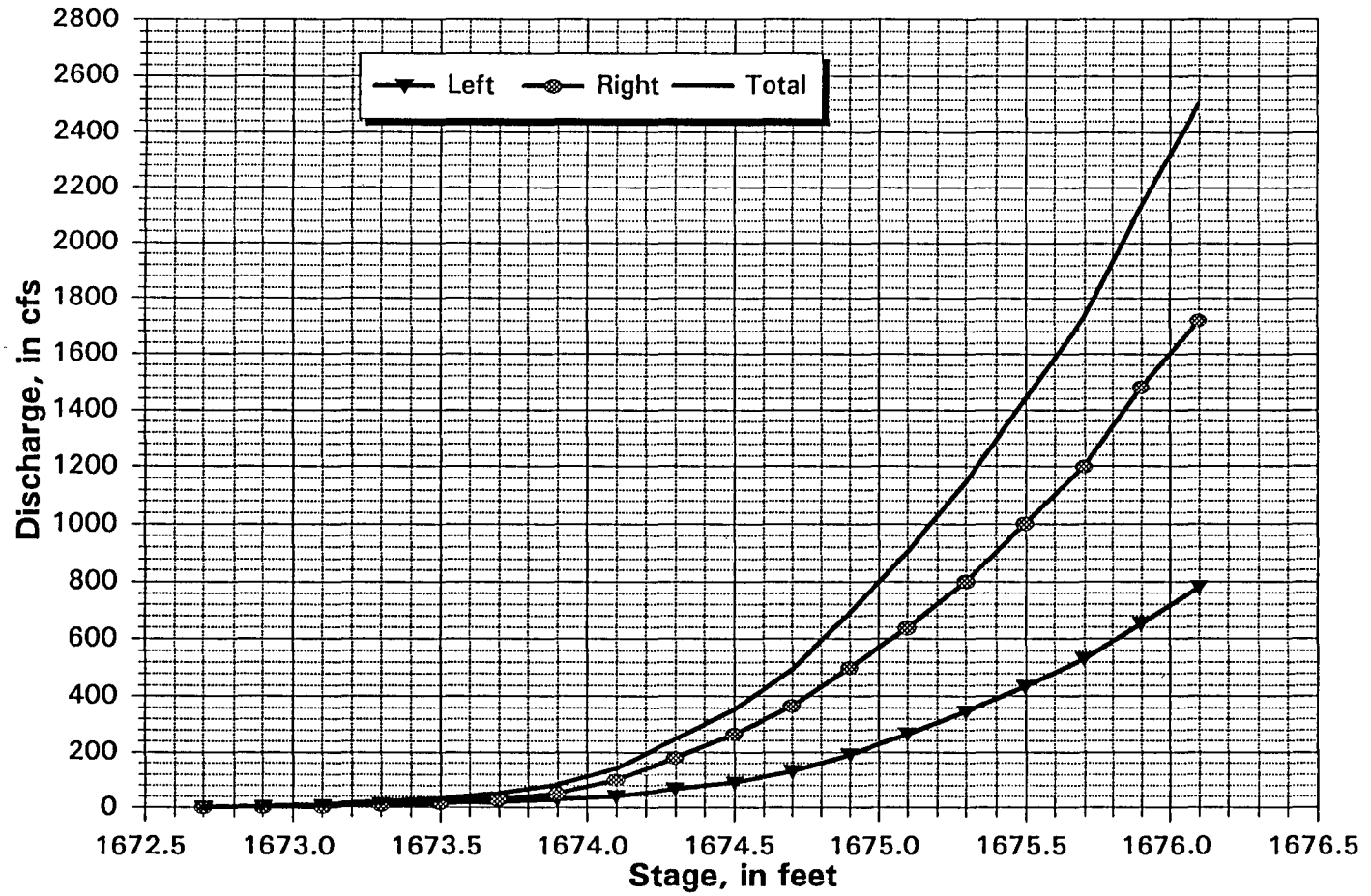

Figure D-17

Flow split at C560

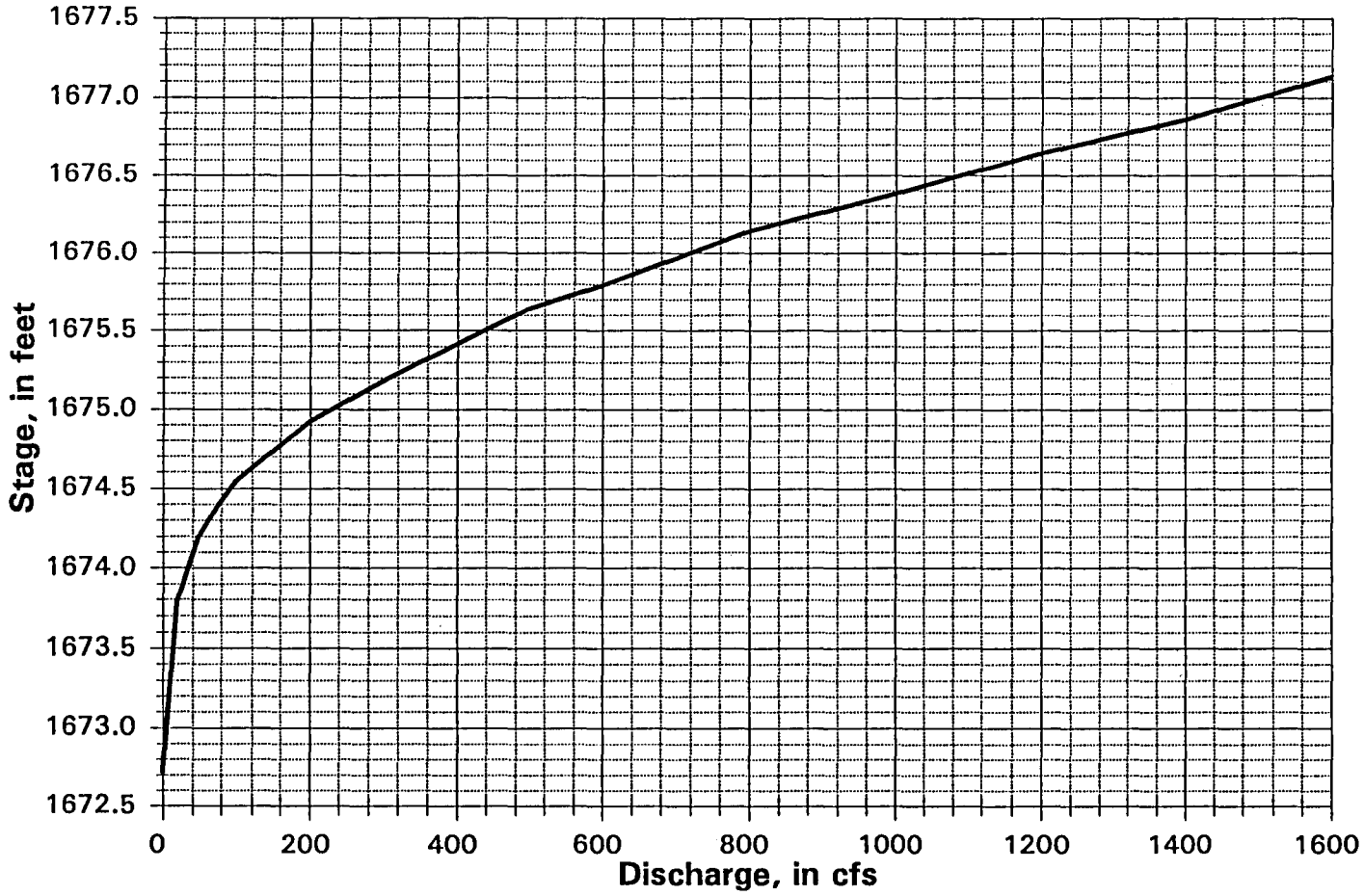

Figure D-17a

C560 Split Left

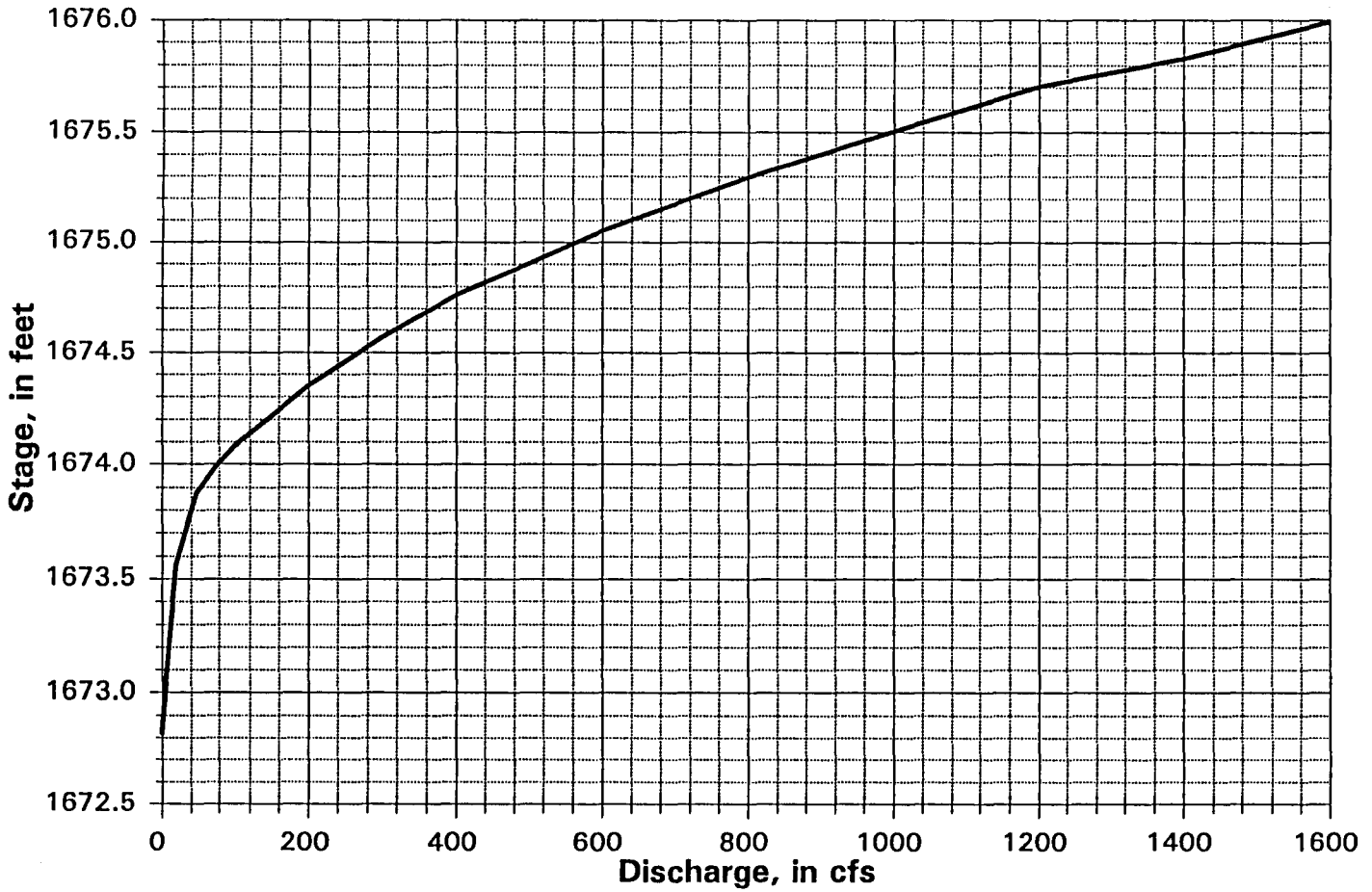

Figure D-17b

C560 Split Right

```
1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
 *  RUN DATE    16JUN94    TIME   16:14:35 *
 *****************************************
```

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*************************************
*  U.S. ARMY CORPS OF ENGINEERS     *
*  HYDROLOGIC ENGINEERING CENTER    *
*  609 SECOND STREET, SUITE D       *
*  DAVIS, CALIFORNIA 95616-4687     *
*          (916) 756-1104           *
*************************************
```

```
X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                        X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X                  X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX             XXXXXXX
```

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1
   16JUN94      16:14:35                                                                    PAGE    1


                                                                  THIS RUN EXECUTED 16JUN94    16:14:35
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************


 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      560 Left                                        FILE:     C560L.IH2
 T4                                                      DATE:     06-16-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 560
 T6                SPLIT  LEFT
 T7
 T8      Single X-Section Run
                   Ditch slope =   0.0237 ft/ft  From Hydrologic Field Survey

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                         0.0237

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                      -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

     -10       -10


 NC    0.075      0.075      0.035        .1         .3
 QT       14         20         50        75        100        200        300        400        500        600
 QT      800       1000       1200      1400       1600

 NH        4      0.075     1041.6     0.035     1045.4     0.075     1061.0       0.01       1062
         X-Section #1
 X1        1          8     1041.6    1045.4          0          0          0
 GR     1677      930.5     1674.2    1000.0    1673.79     1038.3    1672.85     1041.6    1672.72     1045.4
 GR   1673.6     1048.7     1673.7    1061.0      1677       1062

1
   16JUN94      16:14:35                                                                    PAGE    2


 X1        2                                          .2         .2         .2

 X1        3                                          .2         .2         .2

 X1        4                                          .2         .2         .2

 X1        5                                          .2         .2         .2

 X1        6                                          .2         .2         .2

1
   16JUN94      16:14:35                                                                    PAGE    3

 T3           Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                         0.0237

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

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     2                -1                                  -1

1
   16JUN94     16:14:35                                                                                PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                           0.0237
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     3                   -1                                      -1

1
   16JUN94     16:14:35                                                                                PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                           0.0237
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     4                   -1                                      -1

1
   16JUN94     16:14:35                                                                                PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                           0.0237
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     5                   -1                                      -1

1
   16JUN94     16:14:35                                                                                PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                           0.0237
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     6                   -1                                      -1

1
   16JUN94     16:14:35                                                                                PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                           0.0237
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     7                   -1                                      -1

1
   16JUN94     16:14:35                                                                                PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                           0.0237
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     8                   -1                                      -1

1
   16JUN94     16:14:35                                                                                PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                10                           0.0237
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     9                -1                                  -1

1
   16JUN94      16:14:35                                                                                    PAGE   11

 T3           Q10
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               11                            0.0237
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                  -1                                      -1

1
   16JUN94      16:14:35                                                                                    PAGE   12

 T3           Q11
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               12                            0.0237
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                  -1                                      -1

1
   16JUN94      16:14:35                                                                                    PAGE   13

 T3           Q12
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               13                            0.0237
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                  -1                                      -1

1
   16JUN94      16:14:35                                                                                    PAGE   14

 T3           Q13
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               14                            0.0237
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                  -1                                      -1

1
   16JUN94      16:14:35                                                                                    PAGE   15

 T3           Q14
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               15                            0.0237
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                  -1                                      -1


1
   16JUN94      16:14:35                                                                                    PAGE   16


                                                                                THIS RUN EXECUTED 16JUN94    16:14:49
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2:  May 1991
 ************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

560 Left

SUMMARY PRINTOUT

      SECNO       Q       CWSEL     DEPTH      VCH       CRIWS      EG        HL       10*KS    KRATIO
```

*	1.000	20.00	1673.67	.95	4.75	1673.67	1673.95	.00	147.73	.00
*	1.000	50.00	1674.16	1.44	5.18	1674.16	1674.40	.00	97.62	.00
*	1.000	75.00	1674.35	1.63	5.62	1674.35	1674.59	.00	96.44	.00
*	1.000	100.00	1674.46	1.74	6.29	1674.46	1674.74	.00	109.91	.00
*	1.000	200.00	1674.83	2.11	7.86	1674.83	1675.18	.00	132.21	.00
*	1.000	300.00	1675.05	2.33	9.40	1675.05	1675.51	.00	165.30	.00
*	1.000	400.00	1675.25	2.53	10.43	1675.25	1675.79	.00	181.22	.00
*	1.000	500.00	1675.44	2.72	11.14	1675.44	1676.03	.00	186.86	.00
*	1.000	600.00	1675.60	2.88	11.88	1675.60	1676.25	.00	197.05	.00
*	1.000	800.00	1675.90	3.18	13.01	1675.90	1676.63	.00	206.68	.00
*	1.000	1000.00	1676.18	3.46	13.79	1676.18	1676.97	.00	207.10	.00
*	1.000	1200.00	1676.38	3.66	14.79	1676.38	1677.27	.00	220.44	.00
*	1.000	1400.00	1676.60	3.88	15.45	1676.60	1677.55	.00	222.33	.00
*	1.000	1600.00	1676.79	4.07	16.09	1676.79	1677.80	.00	225.68	.00
	2.000	20.00	1673.69	.97	4.63	1673.67	1673.96	.00	137.31	1.04
	2.000	50.00	1674.16	1.44	5.17	1674.16	1674.40	.00	96.80	1.00
	2.000	75.00	1674.35	1.63	5.60	1674.32	1674.59	.00	95.67	1.00
	2.000	100.00	1674.47	1.75	6.27	1674.46	1674.74	.00	109.01	1.00
	2.000	200.00	1674.83	2.11	7.83	1674.81	1675.18	.00	131.20	1.00
	2.000	300.00	1675.05	2.33	9.37	1675.05	1675.51	.00	163.93	1.00
	2.000	400.00	1675.30	2.58	10.10	1675.26	1675.79	.00	166.63	1.04
	2.000	500.00	1675.45	2.73	11.10	1675.44	1676.03	.00	185.42	1.00
	2.000	600.00	1675.65	2.93	11.57	1675.61	1676.26	.00	183.29	1.04
	2.000	800.00	1675.94	3.22	12.70	1675.90	1676.64	.00	193.86	1.03
	2.000	1000.00	1676.18	3.46	13.75	1676.15	1676.97	.00	205.80	1.00
	2.000	1200.00	1676.44	3.72	14.41	1676.40	1677.28	.00	205.22	1.04
	2.000	1400.00	1676.65	3.93	15.12	1676.61	1677.56	.00	209.50	1.03
	2.000	1600.00	1676.80	4.08	16.06	1676.78	1677.81	.00	224.40	1.00

1

16JUN94 16:14:35 PAGE 17

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	20.00	1673.70	.98	4.58	1673.69	1673.96	.00	132.97	1.02
3.000	50.00	1674.17	1.45	5.13	1674.16	1674.40	.00	95.09	1.01
3.000	75.00	1674.36	1.64	5.56	1674.32	1674.59	.00	94.11	1.01
3.000	100.00	1674.48	1.76	6.22	1674.45	1674.74	.00	107.14	1.01
3.000	200.00	1674.84	2.12	7.79	1674.82	1675.18	.00	129.14	1.01
3.000	300.00	1675.06	2.34	9.31	1675.05	1675.52	.00	161.05	1.01
3.000	400.00	1675.38	2.66	9.40	1675.24	1675.80	.00	138.05	1.10
3.000	500.00	1675.46	2.74	11.04	1675.44	1676.04	.00	182.45	1.01
3.000	600.00	1675.76	3.04	10.67	1675.59	1676.27	.00	147.90	1.11
3.000	800.00	1676.05	3.33	11.92	1675.89	1676.65	.00	163.48	1.09
3.000	1000.00	1676.20	3.48	13.69	1676.15	1676.98	.00	203.11	1.01
3.000	1200.00	1676.61	3.89	13.21	1676.37	1677.30	.00	162.37	1.12
3.000	1400.00	1676.82	4.10	13.91	1676.57	1677.58	.00	167.28	1.12
3.000	1600.00	1677.01	4.29	14.63	1676.78	1677.83	.00	174.04	1.14
4.000	20.00	1673.76	1.04	4.16	1673.69	1673.97	.00	101.04	1.15
4.000	50.00	1674.18	1.46	5.08	1674.16	1674.40	.00	92.54	1.01
4.000	75.00	1674.37	1.65	5.51	1674.35	1674.59	.00	91.80	1.01
4.000	100.00	1674.49	1.77	6.16	1674.45	1674.74	.00	104.36	1.01
4.000	200.00	1674.85	2.13	7.72	1674.82	1675.19	.00	126.29	1.01
4.000	300.00	1675.16	2.44	8.51	1675.04	1675.53	.00	127.20	1.13
4.000	400.00	1675.39	2.67	9.34	1675.25	1675.81	.00	135.45	1.01
4.000	500.00	1675.64	2.92	9.57	1675.43	1676.06	.00	124.85	1.21
4.000	600.00	1675.77	3.05	10.62	1675.60	1676.27	.00	145.96	1.01
4.000	800.00	1676.06	3.34	11.84	1675.90	1676.66	.00	160.46	1.01
4.000	1000.00	1676.36	3.64	12.46	1676.14	1677.00	.00	157.76	1.13
4.000	1200.00	1676.62	3.90	13.17	1676.38	1677.30	.00	161.04	1.00
4.000	1400.00	1676.83	4.11	13.87	1676.65	1677.58	.00	165.86	1.00
4.000	1600.00	1677.03	4.31	14.51	1676.78	1677.84	.00	170.43	1.01
5.000	20.00	1673.77	1.05	4.04	1673.67	1673.97	.00	93.32	1.04
5.000	50.00	1674.19	1.47	5.01	1674.16	1674.41	.00	89.31	1.02
5.000	75.00	1674.38	1.66	5.44	1674.35	1674.60	.00	88.95	1.02
5.000	100.00	1674.50	1.78	6.07	1674.45	1674.75	.00	100.80	1.02
5.000	200.00	1674.86	2.14	7.63	1674.82	1675.19	.00	122.67	1.01
5.000	300.00	1675.17	2.45	8.43	1675.10	1675.53	.00	124.06	1.01
5.000	400.00	1675.40	2.68	9.26	1675.27	1675.81	.00	132.64	1.01
5.000	500.00	1675.64	2.92	9.61	1675.46	1676.06	.00	126.22	.99
5.000	600.00	1675.78	3.06	10.56	1675.60	1676.28	.00	143.71	1.01
5.000	800.00	1676.13	3.41	11.26	1675.89	1676.67	.00	140.23	1.07
5.000	1000.00	1676.37	3.65	12.42	1676.15	1677.00	.00	156.31	1.00
5.000	1200.00	1676.62	3.90	13.12	1676.38	1677.31	.00	159.38	1.01
5.000	1400.00	1676.84	4.12	13.82	1676.65	1677.58	.00	164.08	1.01
5.000	1600.00	1677.13	4.41	13.78	1676.78	1677.85	.00	148.43	1.07

1

16JUN94 16:14:35 PAGE 18

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	20.00	1673.79	1.07	3.97	1673.67	1673.97	.00	88.54	1.03
6.000	50.00	1674.20	1.48	4.92	1674.16	1674.41	.00	85.48	1.02
6.000	75.00	1674.39	1.67	5.36	1674.35	1674.60	.00	85.66	1.02
6.000	100.00	1674.55	1.83	5.60	1674.46	1674.75	.00	82.26	1.11
6.000	200.00	1674.92	2.20	7.16	1674.83	1675.20	.00	103.96	1.09
6.000	300.00	1675.18	2.46	8.34	1675.06	1675.54	.00	120.90	1.01
6.000	400.00	1675.41	2.69	9.18	1675.27	1675.82	.00	129.67	1.01
6.000	500.00	1675.64	2.92	9.61	1675.46	1676.06	.00	126.39	1.00
6.000	600.00	1675.79	3.07	10.49	1675.60	1676.28	.00	141.20	1.01
6.000	800.00	1676.14	3.42	11.27	1675.89	1676.67	.00	140.45	1.00
6.000	1000.00	1676.38	3.66	12.37	1676.15	1677.01	.00	154.53	1.01
6.000	1200.00	1676.64	3.92	13.06	1676.38	1677.31	.00	157.39	1.01
6.000	1400.00	1676.86	4.14	13.75	1676.65	1677.59	.00	161.98	1.01
6.000	1600.00	1677.13	4.41	13.78	1676.78	1677.85	.00	148.61	1.00

1

16JUN94 16:14:35 PAGE 19

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED
```

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1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
 *  RUN DATE    16JUN94    TIME   16:19:42 *
 *****************************************
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*************************************
*  U.S. ARMY CORPS OF ENGINEERS     *
*  HYDROLOGIC ENGINEERING CENTER    *
*  609 SECOND STREET, SUITE D       *
*  DAVIS, CALIFORNIA 95616-4687     *
*          (916) 756-1104           *
*************************************
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X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                  X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X                  X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX              XXXXXXX
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1
   16JUN94      16:19:42                                                                                    PAGE    1


                                                                                  THIS RUN EXECUTED 16JUN94    16:19:42
 *************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 *************************************


 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      560 Right                                        FILE:     C560R.IH2
 T4                                                       DATE:     06-16-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 560
 T6                SPLIT  RIGHT
 T7
 T8      Single X-Section Run
                 Ditch slope =   0.0219 ft/ft  From Hydrologic Field Survey

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                           0.0219

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      1                  -1                                      -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

     -10       -10


 NC    0.075      0.075      0.035        .1         .3
 QT       14         20         50        75        100        200        300        400        500        600
 QT      800       1000       1200      1400       1600

 NH        4       0.01       1000     0.075     1014.2     0.035     1021.8     0.075       1137
         X-Section #1
 X1        1          9     1014.2    1021.8          0         0          0
 GR     1676        999    1673.75    1000.0    1673.79    1008.1    1672.92    1014.2    1672.82    1021.8
 GR   1673.9     1024.0    1673.28    1085.3    1674.98    1135.9       1676      1137

1
   16JUN94      16:19:42                                                                                    PAGE    2


 X1        2                                          .2         .2         .2

 X1        3                                          .2         .2         .2

 X1        4                                          .2         .2         .2

 X1        5                                          .2         .2         .2

 X1        6                                          .2         .2         .2

1
   16JUN94      16:19:42                                                                                    PAGE    3

 T3            Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                           0.0219

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     2                -1                                  -1

1
   16JUN94      16:19:42                                                                                PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                           0.0219
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     3                   -1                                      -1

1
   16JUN94      16:19:42                                                                                PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                           0.0219
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     4                   -1                                      -1

1
   16JUN94      16:19:42                                                                                PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                           0.0219
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     5                   -1                                      -1

1
   16JUN94      16:19:42                                                                                PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                           0.0219
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     6                   -1                                      -1

1
   16JUN94      16:19:42                                                                                PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                           0.0219
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     7                   -1                                      -1

1
   16JUN94      16:19:42                                                                                PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                           0.0219
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     8                   -1                                      -1

1
   16JUN94      16:19:42                                                                                PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 10                          0.0219
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     9                -1                                  -1

1
   16JUN94      16:19:42                                                                                PAGE   11

 T3           Q10
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                11                          0.0219
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                  -1                                      -1

1
   16JUN94      16:19:42                                                                                PAGE   12

 T3           Q11
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                12                          0.0219
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                  -1                                      -1

1
   16JUN94      16:19:42                                                                                PAGE   13

 T3           Q12
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                13                          0.0219
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                  -1                                      -1

1
   16JUN94      16:19:42                                                                                PAGE   14

 T3           Q13
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                14                          0.0219
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                  -1                                      -1

1
   16JUN94      16:19:42                                                                                PAGE   15

 T3           Q14
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                15                          0.0219
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                  -1                                      -1


1
   16JUN94      16:19:42                                                                                PAGE   16


                                                                    THIS RUN EXECUTED 16JUN94     16:19:58
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

560 Right

SUMMARY PRINTOUT

      SECNO       Q       CWSEL     DEPTH      VCH       CRIWS      EG        HL       10*KS    KRATIO
```

*	1.000	20.00	1673.49	.67	3.61	1673.49	1673.66	.00	137.65	.00
*	1.000	50.00	1673.80	.98	4.32	1673.80	1673.98	.00	113.93	.00
*	1.000	75.00	1673.96	1.14	4.54	1673.96	1674.12	.00	102.64	.00
*	1.000	100.00	1674.04	1.22	5.02	1674.04	1674.23	.00	113.12	.00
*	1.000	200.00	1674.30	1.48	6.47	1674.30	1674.56	.00	144.28	.00
*	1.000	300.00	1674.45	1.63	7.88	1674.45	1674.81	.00	187.15	.00
*	1.000	400.00	1674.62	1.80	8.57	1674.62	1675.03	.00	192.50	.00
*	1.000	500.00	1674.75	1.93	9.38	1674.75	1675.22	.00	210.50	.00
	1.000	600.00	1674.88	2.06	9.97	1674.88	1675.39	.00	217.39	.00
	1.000	800.00	1675.12	2.30	10.75	1675.11	1675.69	.00	216.96	.00
	1.000	1000.00	1675.34	2.52	11.44	1675.31	1675.96	.00	218.10	.00
	1.000	1200.00	1675.53	2.71	12.05	1675.47	1676.22	.00	218.51	.00
	1.000	1400.00	1675.71	2.89	12.59	1675.63	1676.45	.00	218.72	.00
	1.000	1600.00	1675.87	3.05	13.19	1675.79	1676.68	.00	223.18	.00
	2.000	20.00	1673.49	.67	3.59	1673.49	1673.66	.00	134.93	1.01
	2.000	50.00	1673.80	.98	4.29	1673.80	1673.98	.00	112.36	1.01
	2.000	75.00	1673.96	1.14	4.52	1673.94	1674.13	.00	101.42	1.01
	2.000	100.00	1674.05	1.23	5.00	1674.02	1674.23	.00	111.77	1.01
	2.000	200.00	1674.30	1.48	6.44	1674.28	1674.56	.00	142.64	1.01
	2.000	300.00	1674.48	1.66	7.62	1674.46	1674.82	.00	171.14	1.05
	2.000	400.00	1674.63	1.81	8.53	1674.61	1675.03	.00	190.30	1.01
	2.000	500.00	1674.78	1.96	9.15	1674.76	1675.22	.00	196.75	1.03
	2.000	600.00	1674.89	2.07	9.93	1674.87	1675.40	.00	215.05	1.01
	2.000	800.00	1675.13	2.31	10.71	1675.12	1675.70	.00	214.85	1.00
	2.000	1000.00	1675.34	2.52	11.41	1675.29	1675.97	.00	216.23	1.00
	2.000	1200.00	1675.54	2.72	12.01	1675.48	1676.22	.00	216.81	1.00
	2.000	1400.00	1675.72	2.90	12.56	1675.65	1676.46	.00	217.17	1.00
	2.000	1600.00	1675.88	3.06	13.16	1675.80	1676.68	.00	221.67	1.00

1

16JUN94 16:19:42 PAGE 17

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	20.00	1673.50	.68	3.54	1673.49	1673.67	.00	129.54	1.02
3.000	50.00	1673.81	.99	4.25	1673.80	1673.99	.00	109.21	1.01
3.000	75.00	1673.97	1.15	4.48	1673.93	1674.13	.00	99.03	1.01
3.000	100.00	1674.05	1.23	4.96	1674.04	1674.24	.00	109.28	1.01
3.000	200.00	1674.31	1.49	6.39	1674.29	1674.57	.00	139.52	1.01
3.000	300.00	1674.53	1.71	7.25	1674.44	1674.83	.00	149.83	1.07
3.000	400.00	1674.64	1.82	8.45	1674.61	1675.04	.00	185.87	1.01
3.000	500.00	1674.88	2.06	8.31	1674.74	1675.24	.00	150.97	1.14
3.000	600.00	1674.98	2.16	9.25	1674.87	1675.41	.00	176.80	1.10
3.000	800.00	1675.15	2.33	10.64	1675.11	1675.70	.00	210.59	1.01
3.000	1000.00	1675.36	2.54	11.33	1675.29	1675.97	.00	212.49	1.01
3.000	1200.00	1675.55	2.73	11.95	1675.48	1676.23	.00	213.43	1.01
3.000	1400.00	1675.73	2.91	12.50	1675.65	1676.46	.00	214.15	1.01
3.000	1600.00	1675.89	3.07	13.10	1675.80	1676.69	.00	218.75	1.01
4.000	20.00	1673.51	.69	3.46	1673.49	1673.67	.00	121.72	1.03
4.000	50.00	1673.82	1.00	4.18	1673.79	1673.99	.00	104.55	1.02
4.000	75.00	1673.97	1.15	4.42	1673.95	1674.13	.00	95.57	1.02
4.000	100.00	1674.06	1.24	4.89	1674.04	1674.24	.00	105.66	1.02
4.000	200.00	1674.32	1.50	6.31	1674.29	1674.57	.00	135.15	1.02
4.000	300.00	1674.54	1.72	7.10	1674.49	1674.83	.00	141.97	1.03
4.000	400.00	1674.75	1.93	7.52	1674.60	1675.05	.00	135.16	1.17
4.000	500.00	1674.89	2.07	8.27	1674.78	1675.24	.00	149.21	1.01
4.000	600.00	1675.04	2.22	8.72	1674.87	1675.42	.00	150.84	1.08
4.000	800.00	1675.27	2.45	9.60	1675.11	1675.72	.00	159.21	1.15
4.000	1000.00	1675.43	2.61	10.78	1675.31	1675.98	.00	185.07	1.07
4.000	1200.00	1675.61	2.79	11.49	1675.49	1676.24	.00	191.20	1.06
4.000	1400.00	1675.80	2.98	11.99	1675.65	1676.47	.00	190.27	1.06
4.000	1600.00	1675.97	3.15	12.57	1675.80	1676.70	.00	194.88	1.06
5.000	20.00	1673.55	.73	3.12	1673.49	1673.68	.00	90.49	1.16
5.000	50.00	1673.83	1.01	4.08	1673.81	1673.99	.00	98.60	1.03
5.000	75.00	1673.98	1.16	4.34	1673.96	1674.13	.00	91.32	1.02
5.000	100.00	1674.07	1.25	4.81	1674.04	1674.24	.00	101.26	1.02
5.000	200.00	1674.34	1.52	6.22	1674.30	1674.57	.00	129.92	1.02
5.000	300.00	1674.56	1.74	6.96	1674.46	1674.83	.00	134.47	1.03
5.000	400.00	1674.75	1.93	7.50	1674.61	1675.05	.00	134.54	1.00
5.000	500.00	1674.90	2.08	8.23	1674.78	1675.24	.00	146.90	1.01
5.000	600.00	1675.05	2.23	8.66	1674.87	1675.42	.00	148.22	1.01
5.000	800.00	1675.28	2.46	9.55	1675.13	1675.72	.00	156.97	1.01
5.000	1000.00	1675.50	2.68	10.22	1675.30	1675.99	.00	159.51	1.08
5.000	1200.00	1675.63	2.81	11.36	1675.47	1676.24	.00	185.57	1.02
5.000	1400.00	1675.82	3.00	11.93	1675.63	1676.48	.00	187.61	1.01
5.000	1600.00	1675.98	3.16	12.52	1675.78	1676.70	.00	192.31	1.01

1

16JUN94 16:19:42 PAGE 18

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	20.00	1673.56	.74	3.05	1673.49	1673.68	.00	85.40	1.03
6.000	50.00	1673.88	1.06	3.63	1673.81	1674.00	.00	72.41	1.17
6.000	75.00	1673.99	1.17	4.25	1673.96	1674.14	.00	86.70	1.03
6.000	100.00	1674.08	1.26	4.72	1674.05	1674.24	.00	96.43	1.02
6.000	200.00	1674.35	1.53	6.07	1674.30	1674.58	.00	121.80	1.03
6.000	300.00	1674.57	1.75	6.87	1674.47	1674.84	.00	129.64	1.02
6.000	400.00	1674.76	1.94	7.48	1674.61	1675.05	.00	133.32	1.00
6.000	500.00	1674.90	2.08	8.17	1674.76	1675.25	.00	144.17	1.01
6.000	600.00	1675.05	2.23	8.60	1674.87	1675.42	.00	145.27	1.01
6.000	800.00	1675.29	2.47	9.50	1675.13	1675.73	.00	154.42	1.01
6.000	1000.00	1675.50	2.68	10.21	1675.32	1676.00	.00	159.23	1.00
6.000	1200.00	1675.70	2.88	10.81	1675.47	1676.25	.00	161.43	1.07
6.000	1400.00	1675.83	3.01	11.85	1675.63	1676.48	.00	184.38	1.01
6.000	1600.00	1675.99	3.17	12.44	1675.78	1676.71	.00	189.18	1.01

1

16JUN94 16:19:42 PAGE 19

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
```

Table D-18
Flow split at C573

Stage	Discharge, in cfs		
	Left	Right	Total
2049.2	0	0	0
2049.4	0	5	5
2049.6	0	20	20
2049.8	0	30	30
2050.0	0	48	48
2050.2	0	60	60
2050.4	5	80	85
2050.6	20	120	140
2050.8	35	160	195
2051.0	50	190	240
2051.2	75	240	315
2051.4	115	285	400
2051.6	170	340	510
2051.8	210	380	590
2052.0	260	440	700
2052.2	325	500	825
2052.4	400	600	1000
2052.6	500	680	1180
2052.8	590	775	1365
2053.0	710	900	1610
2053.2	830	1015	1845
2053.4	960	1115	2075
2053.6	1100	1215	2315
2053.8	1230	1355	2585
2054.0	1360	1515	2875

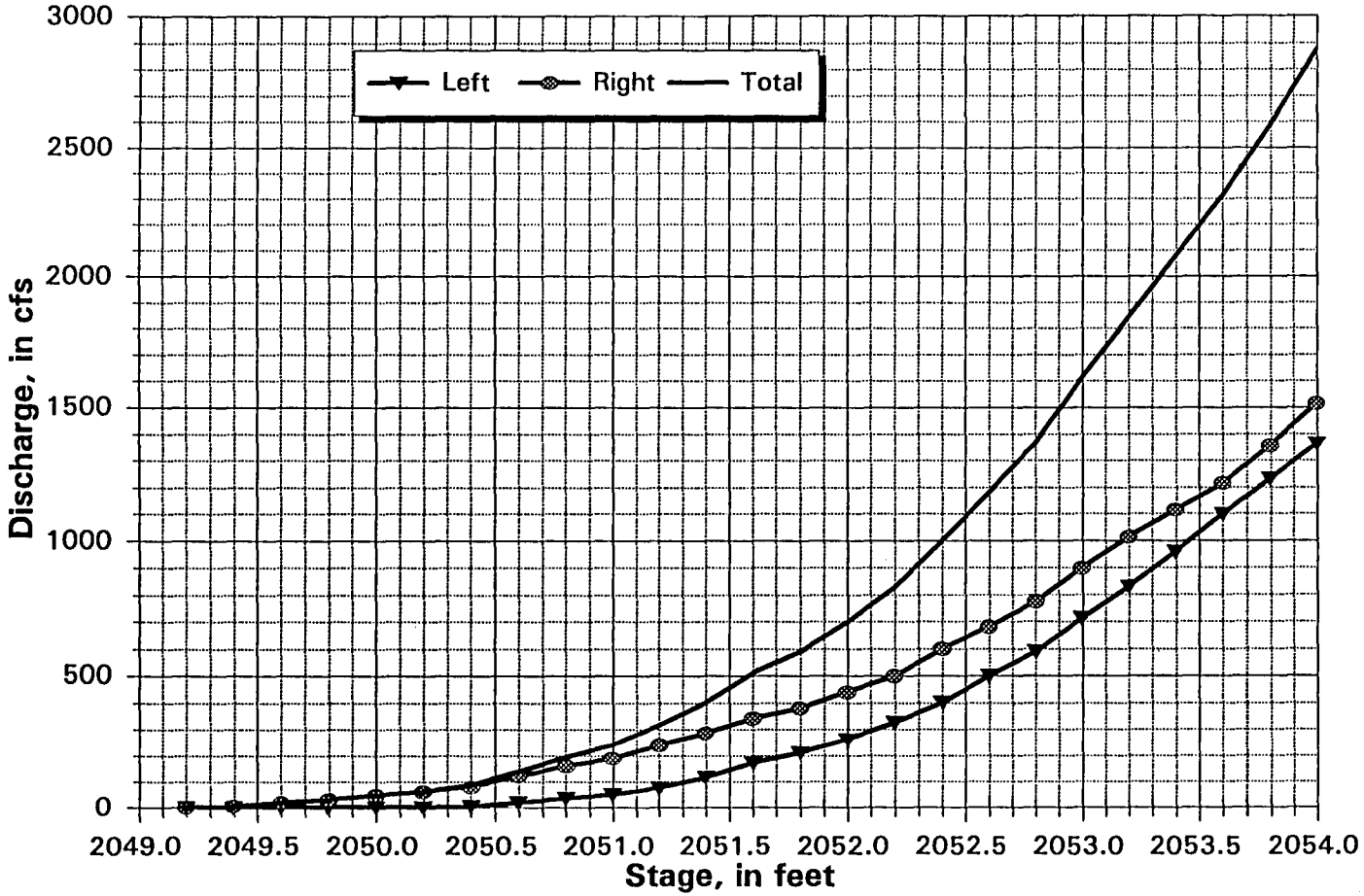

Figure D-18

Flow split at C573

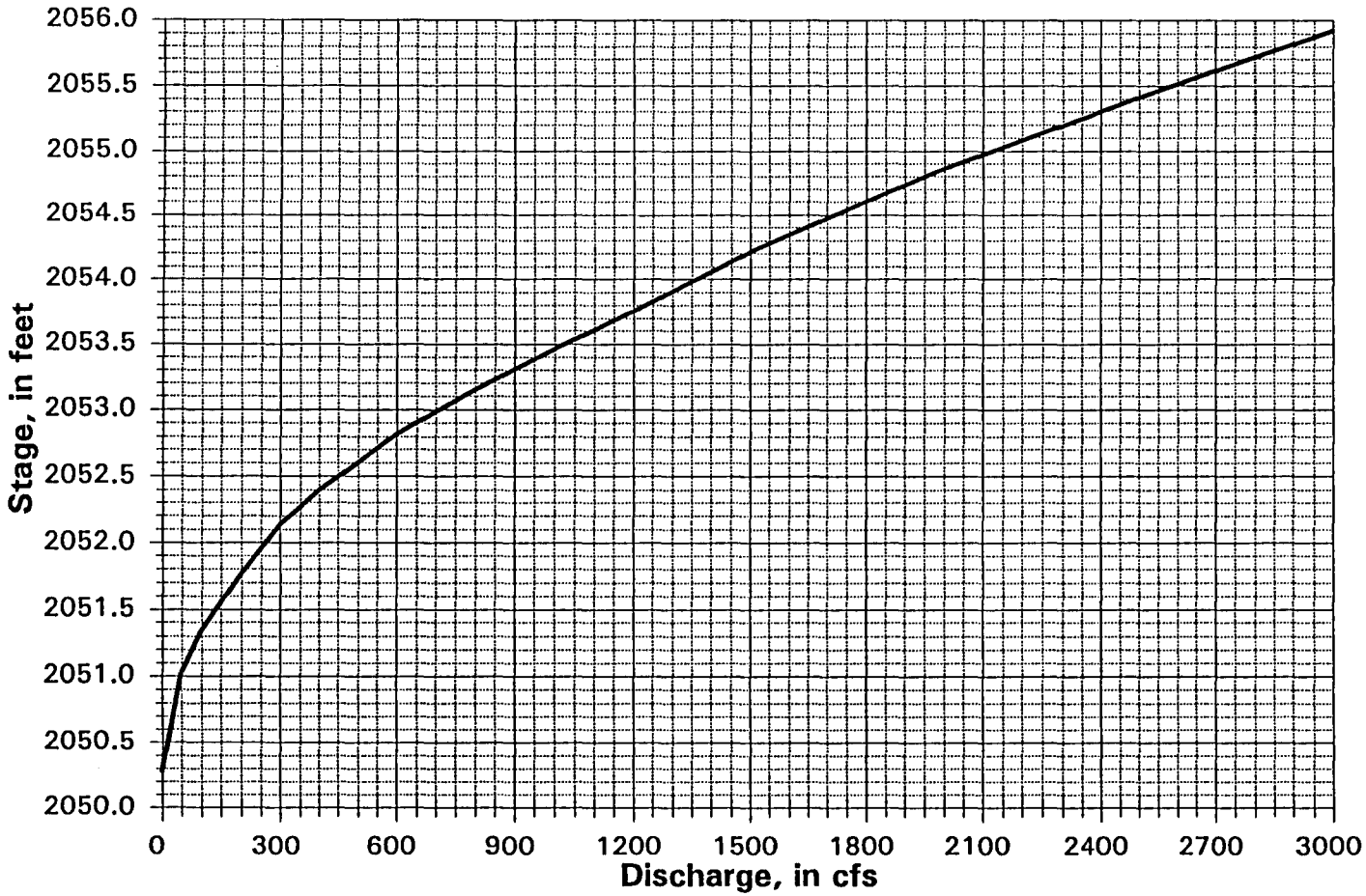

Figure D-18a

C573 Split Left

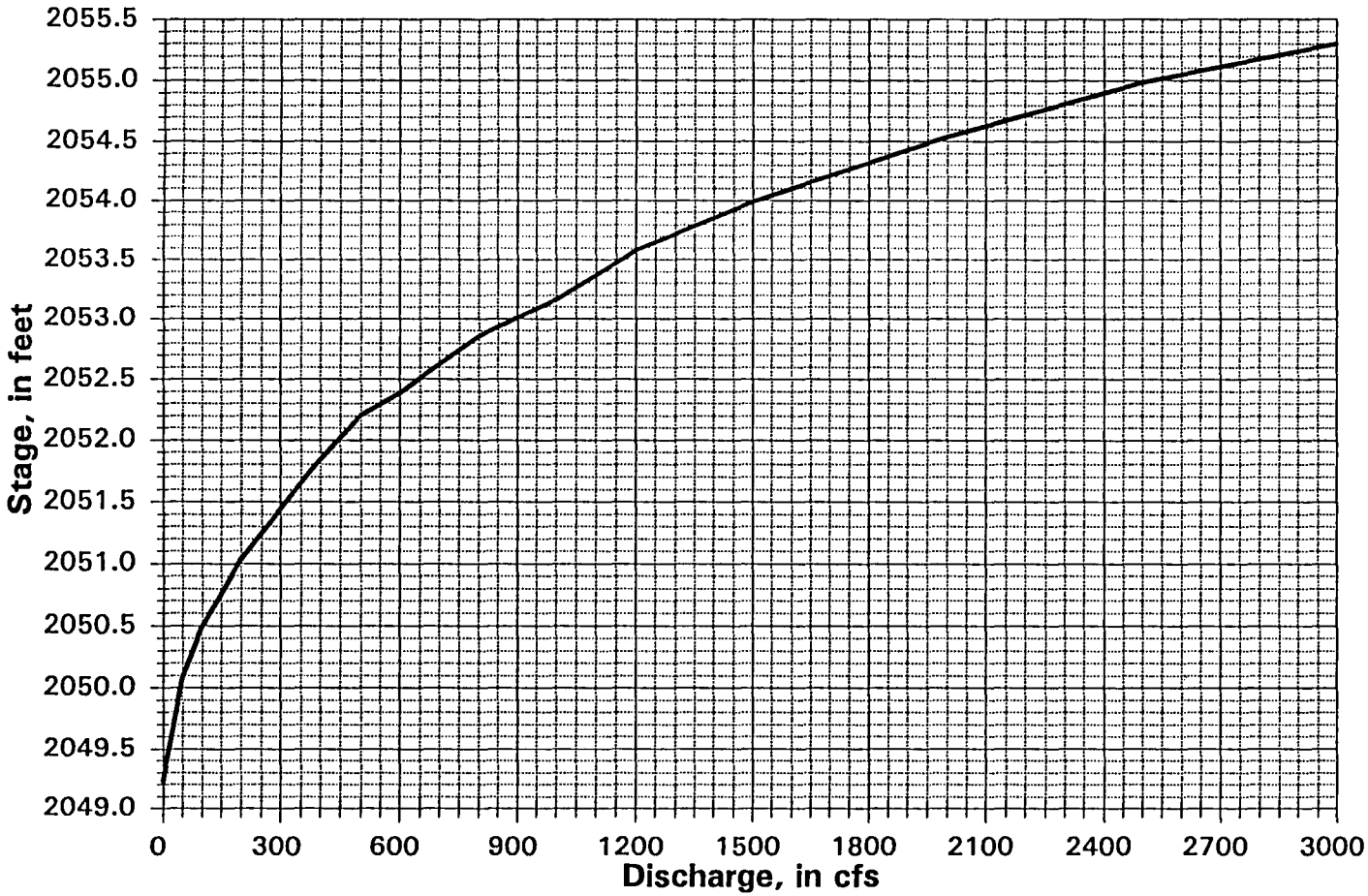

Figure D-18b

C573 Split Right

```
1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
 *  RUN DATE    22AUG94    TIME   15:33:50 *
 *****************************************
```

```
*************************************
*  U.S. ARMY CORPS OF ENGINEERS     *
*  HYDROLOGIC ENGINEERING CENTER    *
*  609 SECOND STREET, SUITE D       *
*  DAVIS, CALIFORNIA 95616-4687     *
*          (916) 756-1104           *
*************************************
```

```
X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                        X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X                  X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX             XXXXXXX
```

```
1
   22AUG94      15:33:50                                                                                    PAGE    1


                                                                                THIS RUN EXECUTED 22AUG94    15:33:50
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************


 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      573 Left                                        FILE:     C573L.IH2
 T4                                                      DATE:     06-21-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 573
 T6                SPLIT  LEFT
 T7
 T8      Single X-Section Run
                   Ditch slope =   0.0165 ft/ft  From Hydrologic Field Survey

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                         0.0165

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                        -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

     -10       -10


 NC    0.075      0.075      0.035        .1         .3
 QT       14         50        100       200        300        400        500        600        800       1000
 QT     1200       1500       2000      2500       3000

 NH        4      0.085     1034.8     0.035     1050.4      0.085     1079.6       0.01       1081
          X-Section #1
 X1        1          8     1034.8    1050.4          0          0          0
 GR     2056        999    2051.98    1000.0    2050.87     1019.1    2050.37     1034.8    2050.28     1050.4
 GR   2050.8     1055.1    2052.02    1079.6       2056       1081

1
   22AUG94      15:33:50                                                                                    PAGE    2


 X1        2                                          .2         .2         .2

 X1        3                                          .2         .2         .2

 X1        4                                          .2         .2         .2

 X1        5                                          .2         .2         .2

 X1        6                                          .2         .2         .2

1
   22AUG94      15:33:50                                                                                    PAGE    3

 T3           Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                         0.0165

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
      2                -1                                  -1

1
   22AUG94      15:33:50                                                                                PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                           0.0165
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      3                -1                                  -1

1
   22AUG94      15:33:50                                                                                PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                           0.0165
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      4                -1                                  -1

1
   22AUG94      15:33:50                                                                                PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                           0.0165
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      5                -1                                  -1

1
   22AUG94      15:33:50                                                                                PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                           0.0165
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      6                -1                                  -1

1
   22AUG94      15:33:50                                                                                PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                           0.0165
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      7                -1                                  -1

1
   22AUG94      15:33:50                                                                                PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                           0.0165
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      8                -1                                  -1

1
   22AUG94      15:33:50                                                                                PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 10                          0.0165
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     9                -1                                  -1

1
   22AUG94      15:33:50                                                                                PAGE   11

 T3           Q10
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                11                          0.0165
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                 -1                                        -1

1
   22AUG94      15:33:50                                                                                PAGE   12

 T3           Q11
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                12                          0.0165
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                 -1                                        -1

1
   22AUG94      15:33:50                                                                                PAGE   13

 T3           Q12
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                13                          0.0165
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                 -1                                        -1

1
   22AUG94      15:33:50                                                                                PAGE   14

 T3           Q13
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                14                          0.0165
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                 -1                                        -1

1
   22AUG94      15:33:50                                                                                PAGE   15

 T3           Q14
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                15                          0.0165
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                 -1                                        -1


1
   22AUG94      15:33:50                                                                                PAGE   16


                                                                    THIS RUN EXECUTED 22AUG94    15:33:52
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

573 Left

SUMMARY PRINTOUT

      SECNO       Q       CWSEL     DEPTH      VCH       CRIWS      EG        HL       10*KS    KRATIO
```

	1.000	50.00	2050.97	.69	4.07	2050.95	2051.19	.00	164.56	.00
	1.000	100.00	2051.26	.98	5.16	2051.24	2051.57	.00	162.28	.00
*	1.000	200.00	2051.66	1.38	6.49	2051.66	2052.12	.00	159.12	.00
*	1.000	300.00	2052.00	1.72	7.17	2052.00	2052.53	.00	142.80	.00
*	1.000	400.00	2052.24	1.96	7.92	2052.24	2052.85	.00	146.68	.00
*	1.000	500.00	2052.44	2.16	8.58	2052.44	2053.13	.00	150.38	.00
*	1.000	600.00	2052.61	2.33	9.20	2052.61	2053.40	.00	155.71	.00
*	1.000	800.00	2052.95	2.67	10.17	2052.95	2053.87	.00	158.33	.00
*	1.000	1000.00	2053.25	2.97	11.02	2053.25	2054.31	.00	161.12	.00
*	1.000	1200.00	2053.54	3.26	11.72	2053.54	2054.71	.00	160.64	.00
*	1.000	1500.00	2053.91	3.63	12.74	2053.91	2055.27	.00	164.27	.00
*	1.000	2000.00	2054.48	4.20	14.11	2054.48	2056.11	.00	165.30	.00
*	1.000	2500.00	2055.01	4.73	15.24	2055.01	2056.89	.00	164.17	.00
*	1.000	3000.00	2055.52	5.24	16.18	2055.52	2057.60	.00	161.49	.00
	2.000	50.00	2050.98	.70	4.05	2050.95	2051.19	.00	161.53	1.01
	2.000	100.00	2051.26	.98	5.13	2051.24	2051.58	.00	160.15	1.01
	2.000	200.00	2051.67	1.39	6.47	2051.65	2052.12	.00	157.63	1.00
	2.000	300.00	2052.01	1.73	7.15	2052.01	2052.53	.00	141.78	1.00
	2.000	400.00	2052.27	1.99	7.77	2052.24	2052.85	.00	138.69	1.03
	2.000	500.00	2052.45	2.17	8.56	2052.44	2053.14	.00	149.52	1.00
	2.000	600.00	2052.66	2.38	9.02	2052.63	2053.40	.00	146.68	1.03
	2.000	800.00	2052.99	2.71	10.01	2052.96	2053.88	.00	150.99	1.02
	2.000	1000.00	2053.29	3.01	10.86	2053.25	2054.31	.00	154.03	1.02
	2.000	1200.00	2053.54	3.26	11.70	2053.53	2054.71	.00	160.02	1.00
	2.000	1500.00	2053.96	3.68	12.56	2053.91	2055.27	.00	157.34	1.02
	2.000	2000.00	2054.54	4.26	13.91	2054.49	2056.12	.00	158.10	1.02
	2.000	2500.00	2055.02	4.74	15.23	2055.01	2056.89	.00	163.75	1.00
	2.000	3000.00	2055.52	5.24	16.17	2055.50	2057.61	.00	161.13	1.00

1

22AUG94 15:33:50 PAGE 17

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	50.00	2050.99	.71	4.00	2050.95	2051.19	.00	155.24	1.02
3.000	100.00	2051.27	.99	5.09	2051.24	2051.58	.00	156.01	1.01
3.000	200.00	2051.68	1.40	6.43	2051.65	2052.13	.00	154.59	1.01
3.000	300.00	2052.02	1.74	7.11	2052.01	2052.53	.00	139.67	1.01
3.000	400.00	2052.28	2.00	7.72	2052.23	2052.86	.00	136.22	1.01
3.000	500.00	2052.46	2.18	8.52	2052.44	2053.14	.00	147.68	1.01
3.000	600.00	2052.74	2.46	8.61	2052.61	2053.41	.00	127.78	1.07
3.000	800.00	2053.00	2.72	9.97	2052.94	2053.88	.00	148.95	1.01
3.000	1000.00	2053.42	3.14	10.29	2053.24	2054.33	.00	130.86	1.08
3.000	1200.00	2053.55	3.27	11.67	2053.53	2054.71	.00	158.75	1.00
3.000	1500.00	2054.12	3.84	11.88	2053.90	2055.29	.00	132.59	1.09
3.000	2000.00	2054.73	4.45	13.20	2054.47	2056.14	.00	134.37	1.08
3.000	2500.00	2055.03	4.75	15.20	2055.01	2056.89	.00	162.86	1.00
3.000	3000.00	2055.53	5.25	16.14	2055.50	2057.61	.00	160.34	1.00
4.000	50.00	2051.00	.72	3.93	2050.95	2051.20	.00	146.92	1.03
4.000	100.00	2051.28	1.00	5.03	2051.24	2051.59	.00	150.04	1.02
4.000	200.00	2051.75	1.47	5.98	2051.65	2052.14	.00	124.63	1.11
4.000	300.00	2052.03	1.75	7.06	2052.01	2052.54	.00	136.53	1.01
4.000	400.00	2052.37	2.09	7.24	2052.24	2052.87	.00	112.89	1.10
4.000	500.00	2052.58	2.30	7.89	2052.44	2053.15	.00	117.64	1.12
4.000	600.00	2052.76	2.48	8.53	2052.63	2053.42	.00	124.26	1.01
4.000	800.00	2053.13	2.85	9.37	2052.94	2053.90	.00	123.66	1.10
4.000	1000.00	2053.43	3.15	10.25	2053.25	2054.33	.00	129.17	1.01
4.000	1200.00	2053.72	3.44	10.94	2053.52	2054.73	.00	130.31	1.10
4.000	1500.00	2054.13	3.85	11.84	2053.91	2055.29	.00	131.25	1.01
4.000	2000.00	2054.74	4.46	13.14	2054.48	2056.15	.00	132.47	1.01
4.000	2500.00	2055.32	5.04	14.16	2055.01	2056.92	.00	130.78	1.12
4.000	3000.00	2055.92	5.64	14.79	2055.49	2057.65	.00	122.02	1.15
5.000	50.00	2051.01	.73	3.84	2050.95	2051.20	.00	137.44	1.03
5.000	100.00	2051.34	1.06	4.67	2051.24	2051.59	.00	119.97	1.12
5.000	200.00	2051.76	1.48	5.93	2051.65	2052.14	.00	121.19	1.01
5.000	300.00	2052.13	1.85	6.47	2052.00	2052.55	.00	105.82	1.14
5.000	400.00	2052.38	2.10	7.20	2052.23	2052.87	.00	110.88	1.01
5.000	500.00	2052.59	2.31	7.84	2052.44	2053.16	.00	115.56	1.01
5.000	600.00	2052.82	2.54	8.21	2052.63	2053.42	.00	110.80	1.06
5.000	800.00	2053.14	2.86	9.33	2052.95	2053.90	.00	121.99	1.01
5.000	1000.00	2053.45	3.17	10.18	2053.25	2054.33	.00	126.48	1.01
5.000	1200.00	2053.73	3.45	10.89	2053.53	2054.74	.00	128.69	1.01
5.000	1500.00	2054.14	3.86	11.80	2053.91	2055.30	.00	129.75	1.01
5.000	2000.00	2054.86	4.58	12.67	2054.48	2056.16	.00	118.40	1.06
5.000	2500.00	2055.33	5.05	14.12	2055.01	2056.93	.00	129.66	1.00
5.000	3000.00	2055.92	5.64	14.80	2055.50	2057.65	.00	122.31	1.00

1

22AUG94 15:33:50 PAGE 18

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	50.00	2051.03	.75	3.72	2050.95	2051.21	.00	124.61	1.05
6.000	100.00	2051.34	1.06	4.63	2051.24	2051.60	.00	116.64	1.01
6.000	200.00	2051.77	1.49	5.87	2051.65	2052.14	.00	117.63	1.02
6.000	300.00	2052.14	1.86	6.42	2052.00	2052.55	.00	103.48	1.01
6.000	400.00	2052.39	2.11	7.15	2052.24	2052.87	.00	108.75	1.01
6.000	500.00	2052.60	2.32	7.79	2052.44	2053.16	.00	113.38	1.01
6.000	600.00	2052.82	2.54	8.19	2052.61	2053.43	.00	109.88	1.00
6.000	800.00	2053.15	2.87	9.28	2052.95	2053.90	.00	120.23	1.01
6.000	1000.00	2053.46	3.18	10.10	2053.25	2054.34	.00	123.79	1.01
6.000	1200.00	2053.75	3.47	10.82	2053.52	2054.74	.00	126.21	1.01
6.000	1500.00	2054.21	3.93	11.51	2053.91	2055.31	.00	120.34	1.04
6.000	2000.00	2054.86	4.58	12.69	2054.48	2056.16	.00	118.96	1.00
6.000	2500.00	2055.41	5.13	13.82	2055.01	2056.94	.00	121.21	1.03
6.000	3000.00	2055.92	5.64	14.80	2055.50	2057.65	.00	122.31	1.00

1

22AUG94 15:33:50 PAGE 19

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED
```

```
1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
 *  RUN DATE    21JUN94    TIME   10:21:09 *
 *****************************************
```

```
*************************************
* U.S. ARMY CORPS OF ENGINEERS      *
* HYDROLOGIC ENGINEERING CENTER     *
* 609 SECOND STREET, SUITE D        *
* DAVIS, CALIFORNIA 95616-4687      *
*          (916) 756-1104           *
*************************************
```

```
X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                        X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X                   X
X     X  X        X     X             X
X     X  XXXXXXX   XXXXX              XXXXXXX
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1
   21JUN94      10:21:09                                                                    PAGE    1


                                                                THIS RUN EXECUTED 21JUN94    10:21:09
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************


 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      573 Right                                        FILE:     C573R.IH2
 T4                                                       DATE:     06-21-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 573
 T6                SPLIT  RIGHT
 T7
 T8      Single X-Section Run
                 Ditch slope =   0.0166 ft/ft  From Hydrologic Field Survey

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                         0.0166

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                        -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

     -10       -10


 NC    0.075      0.075      0.035        .1         .3
 QT       14         50        100       200        300        400        500        600        800       1000
 QT     1200       1500       2000      2500       3000

 NH        4       0.01       1000     0.085     1046.3      0.035     1062.5      0.085       1135
         X-Section #1
 X1        1          9    1046.3    1062.5          0          0          0
 GR     2057        999   2053.02    1000.0    2052.73     1013.7    2051.69     1021.4    2049.23     1046.3
 GR   2049.5     1062.5   2050.88    1070.6    2053.36     1133.7       2057       1135

1
   21JUN94      10:21:09                                                                    PAGE    2


 X1        2                                        .2         .2         .2

 X1        3                                        .2         .2         .2

 X1        4                                        .2         .2         .2

 X1        5                                        .2         .2         .2

 X1        6                                        .2         .2         .2

1
   21JUN94      10:21:09                                                                    PAGE    3

 T3           Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                         0.0166

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
      2                -1                                  -1

1
   21JUN94     10:21:09                                                                                PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                         0.0166
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      3                -1                                  -1

1
   21JUN94     10:21:09                                                                                PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                         0.0166
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      4                -1                                  -1

1
   21JUN94     10:21:09                                                                                PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                         0.0166
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      5                -1                                  -1

1
   21JUN94     10:21:09                                                                                PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                         0.0166
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      6                -1                                  -1

1
   21JUN94     10:21:09                                                                                PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                         0.0166
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      7                -1                                  -1

1
   21JUN94     10:21:09                                                                                PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                         0.0166
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      8                -1                                  -1

1
   21JUN94     10:21:09                                                                                PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 10                        0.0166
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     9                -1                                  -1

1
   21JUN94      10:21:09                                                                                PAGE   11

 T3          Q10
 J1  ICHECK   INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ
               11                       0.0166
 J2  NPROF    IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE
     10                -1                                  -1

1
   21JUN94      10:21:09                                                                                PAGE   12

 T3          Q11
 J1  ICHECK   INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ
               12                       0.0166
 J2  NPROF    IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE
     11                -1                                  -1

1
   21JUN94      10:21:09                                                                                PAGE   13

 T3          Q12
 J1  ICHECK   INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ
               13                       0.0166
 J2  NPROF    IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE
     12                -1                                  -1

1
   21JUN94      10:21:09                                                                                PAGE   14

 T3          Q13
 J1  ICHECK   INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ
               14                       0.0166
 J2  NPROF    IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE
     13                -1                                  -1

1
   21JUN94      10:21:09                                                                                PAGE   15

 T3          Q14
 J1  ICHECK   INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ
               15                       0.0166
 J2  NPROF    IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE
     14                -1                                  -1


1
   21JUN94      10:21:09                                                                                PAGE   16


                                                                    THIS RUN EXECUTED 21JUN94    10:21:21
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

573 Right

SUMMARY PRINTOUT

      SECNO       Q       CWSEL     DEPTH      VCH      CRIWS      EG        HL       10*KS    KRATIO
```

	1.000	50.00	2050.03	.80	4.18	2049.99	2050.28	.00	165.88	.00
	1.000	100.00	2050.36	1.13	5.44	2050.34	2050.76	.00	165.71	.00
*	1.000	200.00	2050.87	1.64	6.79	2050.87	2051.47	.00	148.44	.00
*	1.000	300.00	2051.29	2.06	7.57	2051.29	2052.00	.00	132.90	.00
*	1.000	400.00	2051.69	2.46	7.89	2051.69	2052.43	.00	111.91	.00
*	1.000	500.00	2051.96	2.73	8.43	2051.96	2052.76	.00	110.67	.00
*	1.000	600.00	2052.20	2.97	8.86	2052.20	2053.06	.00	108.35	.00
*	1.000	800.00	2052.63	3.40	9.57	2052.63	2053.57	.00	104.68	.00
*	1.000	1000.00	2053.05	3.82	9.94	2053.05	2054.00	.00	96.42	.00
*	1.000	1200.00	2053.39	4.16	10.32	2053.39	2054.37	.00	92.16	.00
*	1.000	1500.00	2053.72	4.49	11.25	2053.72	2054.83	.00	98.68	.00
*	1.000	2000.00	2054.21	4.98	12.48	2054.21	2055.49	.00	105.37	.00
*	1.000	2500.00	2054.64	5.41	13.52	2054.64	2056.09	.00	110.38	.00
*	1.000	3000.00	2055.06	5.83	14.35	2055.06	2056.63	.00	112.42	.00
	2.000	50.00	2050.04	.81	4.16	2049.99	2050.28	.00	162.97	1.01
	2.000	100.00	2050.36	1.13	5.42	2050.33	2050.77	.00	163.70	1.01
	2.000	200.00	2050.88	1.65	6.78	2050.87	2051.48	.00	147.40	1.00
	2.000	300.00	2051.32	2.09	7.45	2051.29	2052.00	.00	126.73	1.02
	2.000	400.00	2051.73	2.50	7.74	2051.70	2052.43	.00	105.99	1.03
	2.000	500.00	2052.00	2.77	8.27	2051.97	2052.77	.00	104.64	1.03
	2.000	600.00	2052.21	2.98	8.85	2052.20	2053.06	.00	107.99	1.00
	2.000	800.00	2052.64	3.41	9.56	2052.62	2053.57	.00	104.38	1.00
	2.000	1000.00	2053.05	3.82	9.93	2052.98	2054.01	.00	96.19	1.00
	2.000	1200.00	2053.40	4.17	10.31	2053.39	2054.37	.00	91.94	1.00
	2.000	1500.00	2053.79	4.56	10.97	2053.74	2054.84	.00	92.05	1.04
	2.000	2000.00	2054.28	5.05	12.20	2054.22	2055.50	.00	99.04	1.03
	2.000	2500.00	2054.71	5.48	13.28	2054.65	2056.09	.00	104.81	1.03
	2.000	3000.00	2055.06	5.83	14.34	2055.02	2056.63	.00	112.22	1.00

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	50.00	2050.05	.82	4.12	2049.99	2050.29	.00	157.93	1.02
3.000	100.00	2050.37	1.14	5.38	2050.34	2050.77	.00	159.91	1.01
3.000	200.00	2050.89	1.66	6.75	2050.87	2051.48	.00	145.24	1.01
3.000	300.00	2051.33	2.10	7.42	2051.28	2052.01	.00	124.91	1.01
3.000	400.00	2051.74	2.51	7.71	2051.69	2052.43	.00	104.62	1.01
3.000	500.00	2052.01	2.78	8.23	2051.96	2052.77	.00	103.33	1.01
3.000	600.00	2052.22	2.99	8.83	2052.20	2053.06	.00	107.24	1.00
3.000	800.00	2052.65	3.42	9.54	2052.61	2053.58	.00	103.77	1.00
3.000	1000.00	2053.06	3.83	9.92	2052.97	2054.01	.00	95.73	1.00
3.000	1200.00	2053.40	4.17	10.29	2053.39	2054.38	.00	91.51	1.00
3.000	1500.00	2053.98	4.75	10.15	2053.71	2054.85	.00	74.19	1.11
3.000	2000.00	2054.53	5.30	11.19	2054.20	2055.53	.00	77.63	1.13
3.000	2500.00	2054.98	5.75	12.21	2054.62	2056.12	.00	82.67	1.13
3.000	3000.00	2055.07	5.84	14.33	2055.02	2056.64	.00	111.81	1.00
4.000	50.00	2050.06	.83	4.06	2049.99	2050.29	.00	151.20	1.02
4.000	100.00	2050.39	1.16	5.29	2050.34	2050.77	.00	151.76	1.03
4.000	200.00	2050.89	1.66	6.72	2050.87	2051.48	.00	143.78	1.01
4.000	300.00	2051.41	2.18	7.04	2051.28	2052.02	.00	106.64	1.08
4.000	400.00	2051.82	2.59	7.36	2051.68	2052.44	.00	91.35	1.07
4.000	500.00	2052.09	2.86	7.89	2051.95	2052.78	.00	91.39	1.06
4.000	600.00	2052.23	3.00	8.80	2052.20	2053.07	.00	106.06	1.01
4.000	800.00	2052.65	3.42	9.51	2052.61	2053.58	.00	102.83	1.00
4.000	1000.00	2053.07	3.84	9.89	2052.97	2054.01	.00	95.01	1.00
4.000	1200.00	2053.41	4.18	10.26	2053.38	2054.38	.00	90.84	1.00
4.000	1500.00	2053.98	4.75	10.15	2053.72	2054.86	.00	74.24	1.00
4.000	2000.00	2054.53	5.30	11.21	2054.21	2055.53	.00	78.14	1.00
4.000	2500.00	2054.98	5.75	12.23	2054.63	2056.12	.00	83.14	1.00
4.000	3000.00	2055.08	5.85	14.30	2055.02	2056.64	.00	111.16	1.00
5.000	50.00	2050.07	.84	4.00	2049.99	2050.30	.00	143.59	1.03
5.000	100.00	2050.48	1.25	4.73	2050.34	2050.79	.00	105.82	1.20
5.000	200.00	2051.03	1.80	6.01	2050.87	2051.50	.00	101.44	1.19
5.000	300.00	2051.43	2.20	6.97	2051.30	2052.02	.00	103.47	1.02
5.000	400.00	2051.83	2.60	7.31	2051.68	2052.45	.00	89.68	1.01
5.000	500.00	2052.20	2.97	7.37	2051.98	2052.79	.00	74.83	1.11
5.000	600.00	2052.37	3.14	8.20	2052.20	2053.08	.00	86.42	1.11
5.000	800.00	2052.84	3.61	8.71	2052.61	2053.60	.00	79.85	1.13
5.000	1000.00	2053.08	3.85	9.86	2053.03	2054.01	.00	94.05	1.01
5.000	1200.00	2053.42	4.19	10.23	2053.38	2054.38	.00	89.94	1.01
5.000	1500.00	2053.99	4.76	10.14	2053.72	2054.86	.00	74.17	1.00
5.000	2000.00	2054.53	5.30	11.22	2054.21	2055.53	.00	78.32	1.00
5.000	2500.00	2054.98	5.75	12.24	2054.63	2056.13	.00	83.31	1.00
5.000	3000.00	2055.29	6.06	13.50	2055.02	2056.66	.00	94.43	1.08

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	50.00	2050.08	.85	3.93	2049.99	2050.30	.00	136.14	1.03
6.000	100.00	2050.48	1.25	4.75	2050.33	2050.79	.00	107.56	.99
6.000	200.00	2051.04	1.81	5.99	2050.87	2051.50	.00	100.44	1.00
6.000	300.00	2051.44	2.21	6.90	2051.29	2052.02	.00	100.23	1.02
6.000	400.00	2051.84	2.61	7.24	2051.68	2052.45	.00	87.16	1.01
6.000	500.00	2052.20	2.97	7.39	2051.96	2052.79	.00	75.52	1.00
6.000	600.00	2052.38	3.15	8.15	2052.20	2053.08	.00	85.10	1.01
6.000	800.00	2052.85	3.62	8.69	2052.61	2053.60	.00	79.52	1.00
6.000	1000.00	2053.16	3.93	9.51	2053.04	2054.02	.00	84.95	1.05
6.000	1200.00	2053.57	4.34	9.59	2053.37	2054.40	.00	75.40	1.09
6.000	1500.00	2053.99	4.76	10.14	2053.72	2054.86	.00	74.00	1.00
6.000	2000.00	2054.53	5.30	11.22	2054.21	2055.53	.00	78.28	1.00
6.000	2500.00	2054.98	5.75	12.24	2054.63	2056.13	.00	83.27	1.00
6.000	3000.00	2055.30	6.07	13.46	2055.02	2056.66	.00	93.70	1.00

1

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SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 14  CRITICAL DEPTH ASSUMED
```

Table D-19
Flow split at C574

Stage	Discharge, in cfs		
	Left	Right	Total
1777.8	0	0	0
1778.0	20	0	20
1778.2	25	0	25
1778.4	30	0	30
1778.6	45	0	45
1778.8	70	20	90
1779.0	110	25	135
1779.2	175	30	205
1779.4	250	50	300
1779.6	350	80	430
1779.8	485	140	625
1780.0	660	200	860
1780.2	875	290	1165
1780.4	1150	400	1550
1780.6	1470	490	1960
1780.8	1825	700	2525
1781.0	2200	900	3100
1781.2	2600	1140	3740

Split developed from 200 scale mapping (sheet 8)

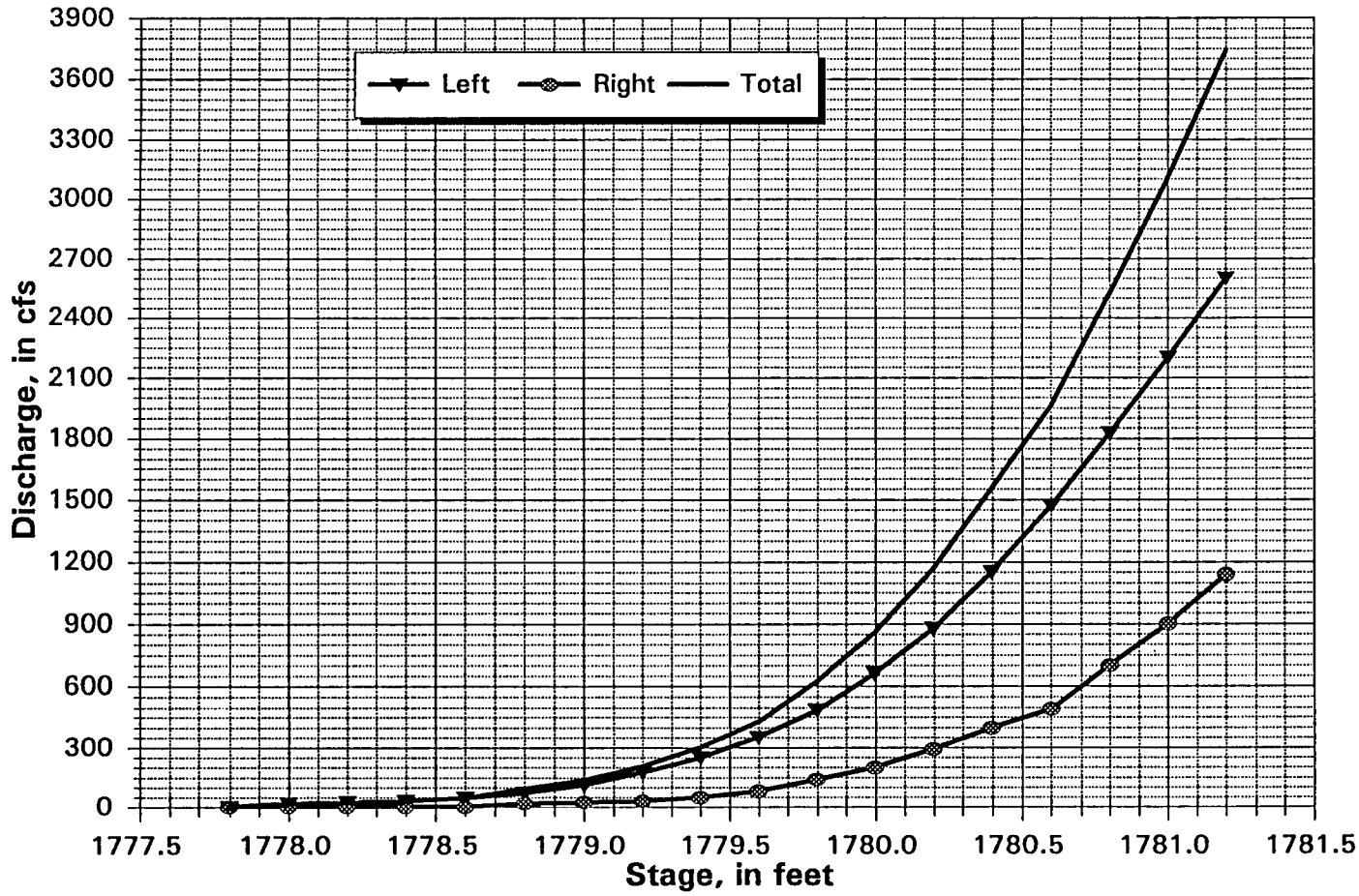

Figure D-19

Flow split at C574

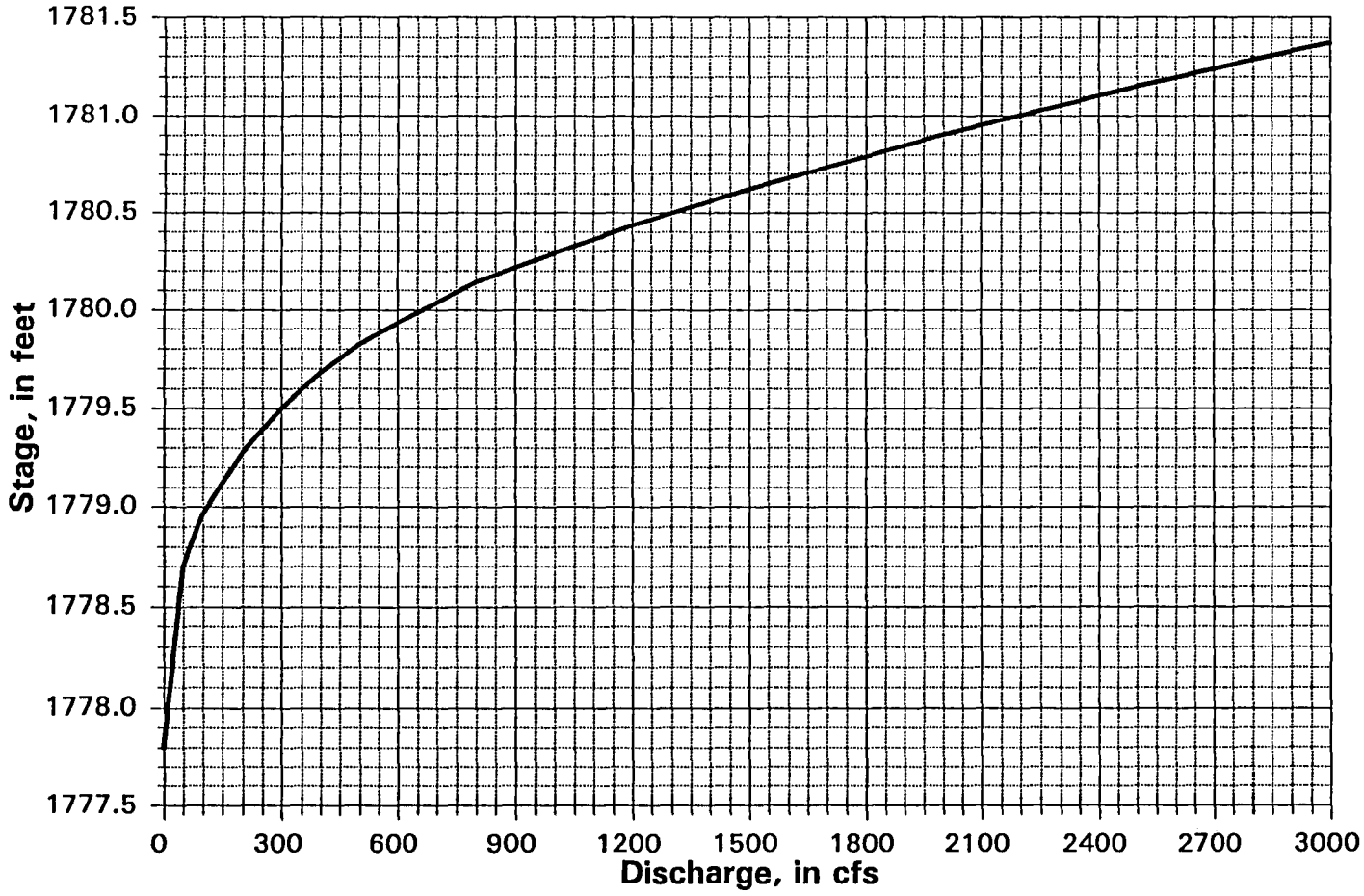

Figure D-19a

C574 Split Left

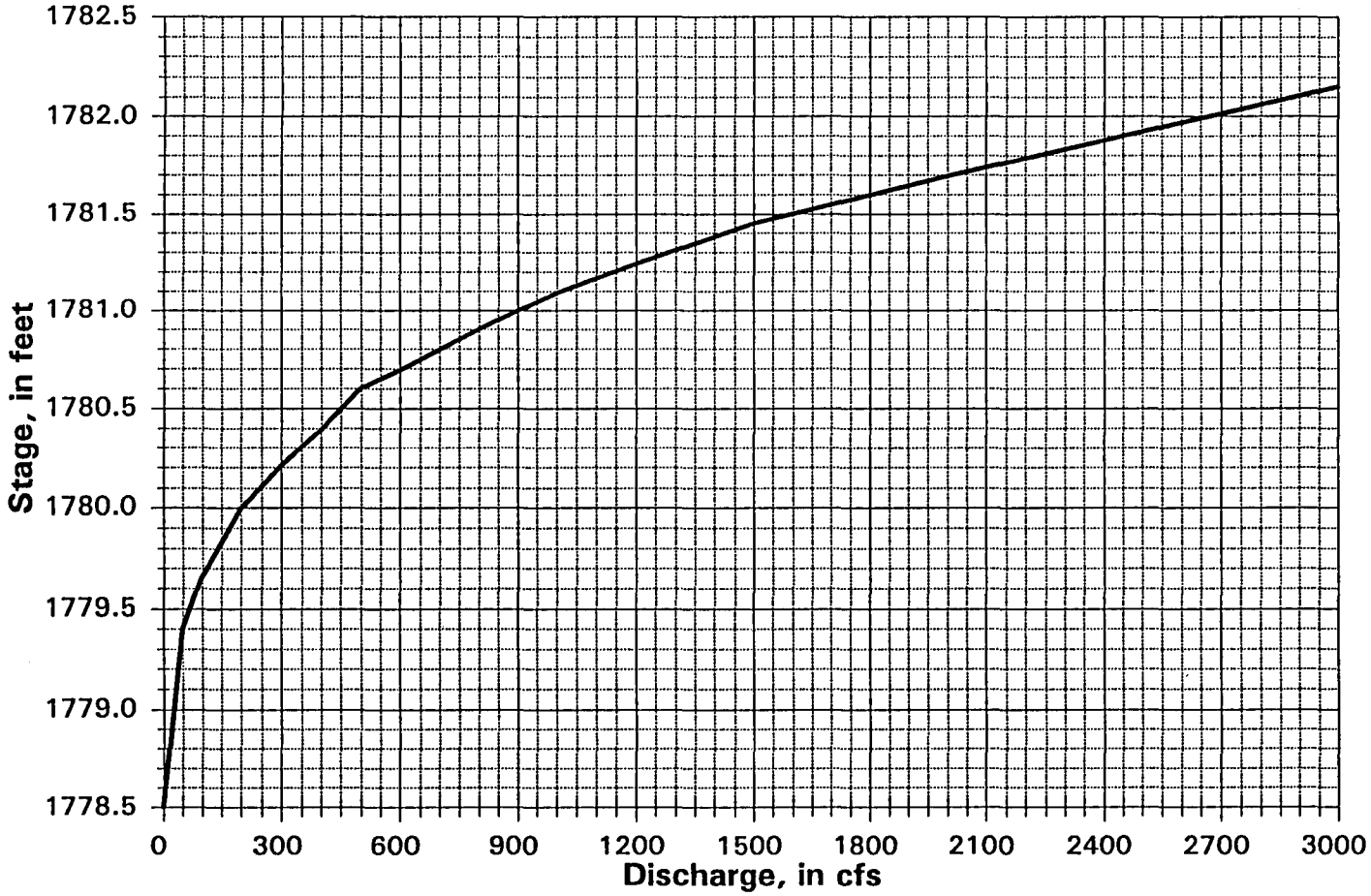

Figure D-19b

C574 Split Right

```
1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
 *  RUN DATE    22JUN94    TIME   13:08:17 *
 *****************************************
```

```
*************************************
*  U.S. ARMY CORPS OF ENGINEERS     *
*  HYDROLOGIC ENGINEERING CENTER    *
*  609 SECOND STREET, SUITE D       *
*  DAVIS, CALIFORNIA 95616-4687     *
*          (916) 756-1104           *
*************************************
```

```
X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                        X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X                  X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX             XXXXXXX
```

```
1
   22JUN94      13:08:17                                                                                PAGE    1


                                                                                THIS RUN EXECUTED 22JUN94    13:08:17
 *************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 *************************************


 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      574 Left                                        FILE:     C574L.IH2
 T4                                                      DATE:     06-22-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 574
 T6                SPLIT  LEFT
 T7
 T8      Single X-Section Run
                  Ditch slope =   0.0167 ft/ft  From 200 Scale Mapping

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                         0.0167

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                        -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

     -10       -10


 NC    0.075      0.075      0.035        .1         .3
 QT       14         50        100        200        300        400        500        600        800       1000
 QT     1200       1500       2000       2500       3000

 NH        4      0.075       1090      0.035       1125      0.075       1300       0.01       1301
         X-Section #1
 X1        1         15       1090       1125          0          0          0
 GR     1783        999       1781       1000       1780       1030       1778       1065     1779.5       1080
 GR     1778       1090     1777.8       1095       1778       1100       1780       1125       1780       1160
 GR     1779       1200       1780       1255     1778.2       1280       1779       1300       1785       1301

1
   22JUN94      13:08:17                                                                                PAGE    2


 X1        2                                          .2         .2         .2

 X1        3                                          .2         .2         .2

 X1        4                                          .2         .2         .2

 X1        5                                          .2         .2         .2

 X1        6                                          .2         .2         .2

1
   22JUN94      13:08:17                                                                                PAGE    3

 T3            Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                         0.0167

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     2                -1                                  -1

1
   22JUN94      13:08:17                                                                                PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                           0.0167
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     3                   -1                                      -1

1
   22JUN94      13:08:17                                                                                PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                           0.0167
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     4                   -1                                      -1

1
   22JUN94      13:08:17                                                                                PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                           0.0167
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     5                   -1                                      -1

1
   22JUN94      13:08:17                                                                                PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                           0.0167
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     6                   -1                                      -1

1
   22JUN94      13:08:17                                                                                PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                           0.0167
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     7                   -1                                      -1

1
   22JUN94      13:08:17                                                                                PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                           0.0167
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     8                   -1                                      -1

1
   22JUN94      13:08:17                                                                                PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 10                          0.0167
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     9                -1                                  -1

1
   22JUN94      13:08:17                                                                                PAGE   11

 T3           Q10
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               11                          0.0167
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                -1                                  -1

1
   22JUN94      13:08:17                                                                                PAGE   12

 T3           Q11
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               12                          0.0167
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                -1                                  -1

1
   22JUN94      13:08:17                                                                                PAGE   13

 T3           Q12
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               13                          0.0167
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                -1                                  -1

1
   22JUN94      13:08:17                                                                                PAGE   14

 T3           Q13
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               14                          0.0167
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                -1                                  -1

1
   22JUN94      13:08:17                                                                                PAGE   15

 T3           Q14
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               15                          0.0167
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                -1                                  -1


1
   22JUN94      13:08:17                                                                                PAGE   16


                                                                          THIS RUN EXECUTED 22JUN94    13:08:37
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

574 Left

SUMMARY PRINTOUT

      SECNO       Q       CWSEL     DEPTH      VCH       CRIWS      EG        HL       10*KS    KRATIO
```

1.000	50.00	1778.65	.85	3.73	1778.62	1778.82	.00	167.99	.00
1.000	100.00	1778.91	1.11	4.36	1778.87	1779.11	.00	166.04	.00
1.000	200.00	1779.23	1.43	5.09	1779.18	1779.48	.00	167.40	.00
1.000	300.00	1779.45	1.65	5.56	1779.39	1779.73	.00	168.14	.00
1.000	400.00	1779.62	1.82	5.89	1779.56	1779.92	.00	168.19	.00
1.000	500.00	1779.76	1.96	6.14	1779.69	1780.07	.00	167.50	.00
1.000	600.00	1779.88	2.08	6.37	1779.80	1780.21	.00	167.20	.00
1.000	800.00	1780.09	2.29	6.81	1780.02	1780.45	.00	164.63	.00
1.000	1000.00	1780.23	2.43	7.37	1780.16	1780.64	.00	168.82	.00
1.000	1200.00	1780.38	2.58	7.78	1780.29	1780.82	.00	167.23	.00
1.000	1500.00	1780.57	2.77	8.34	1780.46	1781.06	.00	166.91	.00
1.000	2000.00	1780.85	3.05	9.15	1780.73	1781.42	.00	166.75	.00
1.000	2500.00	1781.09	3.29	9.83	1780.95	1781.74	.00	166.68	.00
1.000	3000.00	1781.32	3.52	10.44	1781.16	1782.04	.00	166.80	.00
2.000	50.00	1778.65	.85	3.70	1778.62	1778.82	.00	164.52	1.01
2.000	100.00	1778.91	1.11	4.34	1778.86	1779.12	.00	163.45	1.01
2.000	200.00	1779.23	1.43	5.07	1779.19	1779.48	.00	165.26	1.01
2.000	300.00	1779.45	1.65	5.53	1779.40	1779.73	.00	166.16	1.01
2.000	400.00	1779.62	1.82	5.86	1779.57	1779.92	.00	166.33	1.01
2.000	500.00	1779.76	1.96	6.12	1779.71	1780.08	.00	165.84	1.00
2.000	600.00	1779.89	2.09	6.34	1779.84	1780.22	.00	165.64	1.00
2.000	800.00	1780.09	2.29	6.79	1780.02	1780.45	.00	163.00	1.00
2.000	1000.00	1780.24	2.44	7.34	1780.18	1780.64	.00	167.25	1.00
2.000	1200.00	1780.38	2.58	7.75	1780.29	1780.82	.00	165.86	1.00
2.000	1500.00	1780.57	2.77	8.32	1780.46	1781.06	.00	165.69	1.00
2.000	2000.00	1780.85	3.05	9.13	1780.71	1781.42	.00	165.70	1.00
2.000	2500.00	1781.10	3.30	9.81	1780.95	1781.74	.00	165.75	1.00
2.000	3000.00	1781.32	3.52	10.42	1781.15	1782.04	.00	165.95	1.00

1

22JUN94 13:08:17 PAGE 17

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	50.00	1778.66	.86	3.64	1778.62	1778.82	.00	158.31	1.02
3.000	100.00	1778.92	1.12	4.29	1778.86	1779.12	.00	158.61	1.02
3.000	200.00	1779.24	1.44	5.02	1779.19	1779.49	.00	161.14	1.01
3.000	300.00	1779.46	1.66	5.48	1779.40	1779.73	.00	162.47	1.01
3.000	400.00	1779.63	1.83	5.81	1779.58	1779.92	.00	162.86	1.01
3.000	500.00	1779.77	1.97	6.07	1779.69	1780.08	.00	162.64	1.01
3.000	600.00	1779.90	2.10	6.30	1779.85	1780.22	.00	162.75	1.01
3.000	800.00	1780.10	2.30	6.74	1780.02	1780.45	.00	159.77	1.01
3.000	1000.00	1780.25	2.45	7.30	1780.16	1780.65	.00	164.27	1.01
3.000	1200.00	1780.39	2.59	7.71	1780.29	1780.83	.00	163.21	1.01
3.000	1500.00	1780.58	2.78	8.28	1780.46	1781.07	.00	163.42	1.01
3.000	2000.00	1780.86	3.06	9.09	1780.71	1781.43	.00	163.79	1.01
3.000	2500.00	1781.11	3.31	9.78	1780.95	1781.75	.00	164.04	1.01
3.000	3000.00	1781.33	3.53	10.38	1781.15	1782.04	.00	164.37	1.00
4.000	50.00	1778.67	.87	3.57	1778.62	1778.83	.00	150.05	1.03
4.000	100.00	1778.93	1.13	4.22	1778.87	1779.13	.00	152.18	1.02
4.000	200.00	1779.25	1.45	4.95	1779.18	1779.49	.00	155.52	1.02
4.000	300.00	1779.47	1.67	5.41	1779.40	1779.74	.00	157.42	1.02
4.000	400.00	1779.64	1.84	5.74	1779.56	1779.93	.00	158.04	1.02
4.000	500.00	1779.79	1.99	6.01	1779.69	1780.09	.00	158.29	1.01
4.000	600.00	1779.91	2.11	6.24	1779.85	1780.22	.00	158.77	1.01
4.000	800.00	1780.11	2.31	6.68	1780.01	1780.46	.00	155.45	1.01
4.000	1000.00	1780.26	2.46	7.24	1780.16	1780.65	.00	160.18	1.01
4.000	1200.00	1780.40	2.60	7.65	1780.29	1780.83	.00	159.60	1.01
4.000	1500.00	1780.59	2.79	8.23	1780.46	1781.07	.00	160.28	1.01
4.000	2000.00	1780.87	3.07	9.04	1780.71	1781.43	.00	161.12	1.01
4.000	2500.00	1781.12	3.32	9.73	1780.95	1781.75	.00	161.64	1.01
4.000	3000.00	1781.34	3.54	10.34	1781.15	1782.05	.00	162.20	1.01
5.000	50.00	1778.69	.89	3.48	1778.62	1778.83	.00	140.86	1.03
5.000	100.00	1778.95	1.15	4.14	1778.87	1779.13	.00	144.90	1.02
5.000	200.00	1779.27	1.47	4.86	1779.18	1779.50	.00	148.85	1.02
5.000	300.00	1779.49	1.69	5.33	1779.40	1779.74	.00	151.40	1.02
5.000	400.00	1779.66	1.86	5.62	1779.56	1779.93	.00	149.87	1.03
5.000	500.00	1779.80	2.00	5.93	1779.69	1780.09	.00	153.13	1.02
5.000	600.00	1779.92	2.12	6.16	1779.83	1780.23	.00	154.06	1.02
5.000	800.00	1780.13	2.33	6.60	1780.01	1780.46	.00	150.34	1.02
5.000	1000.00	1780.27	2.47	7.16	1780.15	1780.66	.00	155.25	1.02
5.000	1200.00	1780.42	2.61	7.58	1780.35	1780.83	.00	155.30	1.01
5.000	1500.00	1780.60	2.80	8.16	1780.46	1781.08	.00	156.50	1.01
5.000	2000.00	1780.88	3.08	8.98	1780.71	1781.44	.00	157.88	1.01
5.000	2500.00	1781.13	3.33	9.67	1780.95	1781.76	.00	158.77	1.01
5.000	3000.00	1781.36	3.56	10.28	1781.15	1782.05	.00	159.59	1.01

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	50.00	1778.70	.90	3.40	1778.62	1778.83	.00	131.75	1.03
6.000	100.00	1778.96	1.16	4.06	1778.87	1779.13	.00	137.49	1.03
6.000	200.00	1779.28	1.48	4.73	1779.18	1779.50	.00	138.97	1.03
6.000	300.00	1779.50	1.70	5.20	1779.39	1779.75	.00	142.35	1.03
6.000	400.00	1779.68	1.88	5.50	1779.56	1779.94	.00	141.76	1.03
6.000	500.00	1779.82	2.02	5.81	1779.69	1780.09	.00	145.35	1.03
6.000	600.00	1779.93	2.13	6.08	1779.83	1780.23	.00	148.95	1.02
6.000	800.00	1780.14	2.34	6.48	1780.01	1780.47	.00	142.81	1.03
6.000	1000.00	1780.29	2.49	7.04	1780.22	1780.66	.00	147.79	1.02
6.000	1200.00	1780.43	2.63	7.47	1780.35	1780.84	.00	148.66	1.02
6.000	1500.00	1780.62	2.82	8.06	1780.48	1781.08	.00	150.67	1.02
6.000	2000.00	1780.90	3.10	8.88	1780.71	1781.44	.00	152.90	1.02
6.000	2500.00	1781.15	3.35	9.58	1780.95	1781.76	.00	154.28	1.01
6.000	3000.00	1781.37	3.57	10.22	1781.15	1782.06	.00	156.72	1.01

1

22JUN94 13:08:17 PAGE 19

SUMMARY OF ERRORS AND SPECIAL NOTES

```
1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
 *  RUN DATE    22JUN94    TIME   13:09:48 *
 *****************************************
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```
*************************************
* U.S. ARMY CORPS OF ENGINEERS      *
* HYDROLOGIC ENGINEERING CENTER     *
* 609 SECOND STREET, SUITE D        *
* DAVIS, CALIFORNIA 95616-4687      *
*        (916) 756-1104             *
*************************************
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```
X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                        X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X                  X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX              XXXXXXX
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1
   22JUN94      13:09:48                                                                                    PAGE    1


                                                                                THIS RUN EXECUTED 22JUN94    13:09:48
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************


 T1      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY:  FCD#93-07
 T2      RIO VERDE SOUTH FIS STUDY by GVSCE for MKE
 T3      574 Right                                        FILE:     C574R.IH2
 T4                                                       DATE:     06-22-94  dtp
 T4
 T5              This model is used to develop a flow split rating curve
 T6              for the split that occurs at hydrologic concentration point 574
 T6                SPLIT  RIGHT
 T7
 T8      Single X-Section Run
                 Ditch slope =   0.0167 ft/ft  From 200 Scale Mapping

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                         0.0167

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                        -1

    SECNO       Q   CWSEL   DEPTH     VCH   CRIWS      EG      HL   SLOPE  KRATIO

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38         43          1          8         26          2          3         11          5         58

 J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

     -10       -10


 NC    0.075     0.075     0.035       .1        .3
 QT       14        50       100      200       300       400       500       600       800      1000
 QT     1200      1500      2000     2500      3000

 NH        4      0.01      1000    0.075      1020     0.035      1050     0.075      1380
         X-Section #1
 X1        1        12      1020     1050         0         0         0
 GR     1785       999      1779     1000    1778.5      1020      1780      1050    1780.5      1070
 GR     1780      1120      1779     1150      1780      1165      1781      1200      1780      1250
 GR     1782      1350      1790     1380

1
   22JUN94      13:09:48                                                                                    PAGE    2


 X1        2                                          .2        .2        .2

 X1        3                                          .2        .2        .2

 X1        4                                          .2        .2        .2

 X1        5                                          .2        .2        .2

 X1        6                                          .2        .2        .2

1
   22JUN94      13:09:48                                                                                    PAGE    3

 T3            Q2

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                         0.0167

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     2                -1                                  -1

1
   22JUN94      13:09:48                                                                                PAGE    4

 T3            Q3
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 4                           0.0167
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     3                   -1                                      -1

1
   22JUN94      13:09:48                                                                                PAGE    5

 T3            Q4
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 5                           0.0167
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     4                   -1                                      -1

1
   22JUN94      13:09:48                                                                                PAGE    6

 T3            Q5
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 6                           0.0167
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     5                   -1                                      -1

1
   22JUN94      13:09:48                                                                                PAGE    7

 T3            Q6
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 7                           0.0167
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     6                   -1                                      -1

1
   22JUN94      13:09:48                                                                                PAGE    8

 T3            Q7
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 8                           0.0167
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     7                   -1                                      -1

1
   22JUN94      13:09:48                                                                                PAGE    9

 T3            Q8
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 9                           0.0167
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     8                   -1                                      -1

1
   22JUN94      13:09:48                                                                                PAGE   10

 T3            Q9
 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
                 10                          0.0167
 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
```

```
     9                -1                                  -1

1
   22JUN94      13:09:48                                                                                PAGE   11

 T3           Q10
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               11                          0.0167
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     10                -1                                        -1

1
   22JUN94      13:09:48                                                                                PAGE   12

 T3           Q11
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               12                          0.0167
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     11                -1                                        -1

1
   22JUN94      13:09:48                                                                                PAGE   13

 T3           Q12
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               13                          0.0167
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     12                -1                                        -1

1
   22JUN94      13:09:48                                                                                PAGE   14

 T3           Q13
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               14                          0.0167
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     13                -1                                        -1

1
   22JUN94      13:09:48                                                                                PAGE   15

 T3           Q14
 J1  ICHECK   INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
               15                          0.0167
 J2  NPROF    IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     14                -1                                        -1


1
   22JUN94      13:09:48                                                                                PAGE   16


                                                                          THIS RUN EXECUTED 22JUN94     13:10:06
 ************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
 ************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

574 Right

SUMMARY PRINTOUT

      SECNO       Q       CWSEL     DEPTH      VCH       CRIWS      EG        HL       10*KS    KRATIO
```

	1.000	50.00	1779.37	.87	3.15	1779.25	1779.47	.00	165.94	.00
	1.000	100.00	1779.63	1.13	3.75	1779.48	1779.77	.00	166.61	.00
	1.000	200.00	1779.96	1.46	4.47	1779.79	1780.17	.00	168.27	.00
	1.000	300.00	1780.17	1.67	5.22	1780.02	1780.44	.00	168.24	.00
	1.000	400.00	1780.34	1.84	5.80	1780.23	1780.65	.00	166.87	.00
	1.000	500.00	1780.48	1.98	6.28	1780.41	1780.83	.00	166.71	.00
	1.000	600.00	1780.59	2.09	6.66	1780.56	1780.97	.00	166.72	.00
*	1.000	800.00	1780.80	2.30	7.18	1780.80	1781.22	.00	159.23	.00
	1.000	1000.00	1780.95	2.45	7.81	1780.94	1781.42	.00	166.80	.00
*	1.000	1200.00	1781.10	2.60	8.22	1781.10	1781.60	.00	165.29	.00
*	1.000	1500.00	1781.29	2.79	8.75	1781.29	1781.83	.00	164.08	.00
	1.000	2000.00	1781.56	3.06	9.63	1781.53	1782.18	.00	168.62	.00
	1.000	2500.00	1781.80	3.30	10.29	1781.73	1782.48	.00	168.56	.00
	1.000	3000.00	1782.03	3.53	10.83	1781.97	1782.76	.00	166.79	.00
	2.000	50.00	1779.38	.88	3.12	1779.25	1779.48	.00	162.61	1.01
	2.000	100.00	1779.64	1.14	3.72	1779.48	1779.78	.00	164.04	1.01
	2.000	200.00	1779.97	1.47	4.45	1779.79	1780.17	.00	166.20	1.01
	2.000	300.00	1780.18	1.68	5.20	1780.02	1780.44	.00	166.14	1.01
	2.000	400.00	1780.35	1.85	5.78	1780.23	1780.66	.00	165.02	1.01
	2.000	500.00	1780.48	1.98	6.25	1780.40	1780.83	.00	164.97	1.01
	2.000	600.00	1780.60	2.10	6.64	1780.55	1780.98	.00	165.02	1.01
	2.000	800.00	1780.81	2.31	7.15	1780.78	1781.22	.00	157.83	1.00
	2.000	1000.00	1780.96	2.46	7.79	1780.93	1781.42	.00	165.40	1.00
	2.000	1200.00	1781.11	2.61	8.19	1781.08	1781.60	.00	163.96	1.00
	2.000	1500.00	1781.30	2.80	8.73	1781.25	1781.84	.00	162.89	1.00
	2.000	2000.00	1781.57	3.07	9.60	1781.50	1782.18	.00	167.51	1.00
	2.000	2500.00	1781.81	3.31	10.27	1781.77	1782.49	.00	167.56	1.00
	2.000	3000.00	1782.04	3.54	10.81	1781.95	1782.76	.00	165.89	1.00

1

22JUN94 13:09:48 PAGE 17

SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
3.000	50.00	1779.39	.89	3.09	1779.25	1779.48	.00	157.81	1.02
3.000	100.00	1779.64	1.14	3.69	1779.48	1779.78	.00	160.22	1.01
3.000	200.00	1779.98	1.48	4.42	1779.79	1780.17	.00	163.00	1.01
3.000	300.00	1780.19	1.69	5.17	1780.02	1780.45	.00	162.69	1.01
3.000	400.00	1780.35	1.85	5.75	1780.23	1780.66	.00	161.73	1.01
3.000	500.00	1780.49	1.99	6.21	1780.40	1780.84	.00	161.67	1.01
3.000	600.00	1780.61	2.11	6.59	1780.56	1780.98	.00	161.63	1.01
3.000	800.00	1780.82	2.32	7.11	1780.79	1781.22	.00	155.13	1.01
3.000	1000.00	1780.97	2.47	7.74	1780.93	1781.43	.00	162.52	1.01
3.000	1200.00	1781.12	2.62	8.15	1781.07	1781.60	.00	161.19	1.01
3.000	1500.00	1781.31	2.81	8.69	1781.24	1781.84	.00	160.54	1.01
3.000	2000.00	1781.58	3.08	9.56	1781.49	1782.18	.00	165.32	1.01
3.000	2500.00	1781.82	3.32	10.23	1781.77	1782.49	.00	165.60	1.01
3.000	3000.00	1782.05	3.55	10.77	1781.97	1782.77	.00	164.09	1.01
4.000	50.00	1779.39	.89	3.05	1779.25	1779.48	.00	152.62	1.02
4.000	100.00	1779.65	1.15	3.65	1779.48	1779.78	.00	155.80	1.01
4.000	200.00	1779.98	1.48	4.38	1779.80	1780.18	.00	159.24	1.01
4.000	300.00	1780.20	1.70	5.13	1780.02	1780.45	.00	158.40	1.01
4.000	400.00	1780.36	1.86	5.70	1780.23	1780.67	.00	157.27	1.01
4.000	500.00	1780.50	2.00	6.15	1780.40	1780.84	.00	157.10	1.01
4.000	600.00	1780.62	2.12	6.52	1780.56	1780.98	.00	156.66	1.02
4.000	800.00	1780.83	2.33	7.05	1780.79	1781.23	.00	151.16	1.01
4.000	1000.00	1781.02	2.52	7.39	1780.93	1781.44	.00	142.26	1.07
4.000	1200.00	1781.22	2.72	7.42	1781.07	1781.62	.00	123.60	1.14
4.000	1500.00	1781.36	2.86	8.40	1781.29	1781.85	.00	146.08	1.05
4.000	2000.00	1781.61	3.11	9.40	1781.55	1782.19	.00	157.45	1.02
4.000	2500.00	1781.83	3.33	10.17	1781.78	1782.49	.00	162.78	1.01
4.000	3000.00	1782.07	3.57	10.65	1781.97	1782.77	.00	158.84	1.02
5.000	50.00	1779.40	.90	3.01	1779.25	1779.49	.00	147.63	1.02
5.000	100.00	1779.65	1.15	3.61	1779.48	1779.79	.00	151.36	1.01
5.000	200.00	1779.99	1.49	4.34	1779.79	1780.18	.00	155.38	1.01
5.000	300.00	1780.20	1.70	5.08	1780.02	1780.45	.00	153.76	1.01
5.000	400.00	1780.38	1.88	5.64	1780.23	1780.67	.00	152.21	1.02
5.000	500.00	1780.52	2.02	6.05	1780.40	1780.84	.00	149.09	1.03
5.000	600.00	1780.68	2.18	6.09	1780.57	1780.99	.00	128.45	1.10
5.000	800.00	1780.89	2.39	6.63	1780.80	1781.23	.00	126.39	1.09
5.000	1000.00	1781.08	2.58	6.97	1780.94	1781.44	.00	120.56	1.09
5.000	1200.00	1781.23	2.73	7.39	1781.10	1781.62	.00	122.26	1.01
5.000	1500.00	1781.45	2.95	7.75	1781.25	1781.86	.00	116.13	1.12
5.000	2000.00	1781.68	3.18	8.92	1781.53	1782.20	.00	135.79	1.08
5.000	2500.00	1781.91	3.41	9.66	1781.78	1782.51	.00	140.79	1.08
5.000	3000.00	1782.14	3.64	10.20	1781.97	1782.78	.00	140.66	1.06

1

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SECNO	Q	CWSEL	DEPTH	VCH	CRIWS	EG	HL	10*KS	KRATIO
6.000	50.00	1779.40	.90	2.98	1779.25	1779.49	.00	142.83	1.02
6.000	100.00	1779.66	1.16	3.57	1779.48	1779.79	.00	147.14	1.01
6.000	200.00	1780.00	1.50	4.30	1779.79	1780.18	.00	151.50	1.01
6.000	300.00	1780.21	1.71	5.03	1780.02	1780.46	.00	148.96	1.02
6.000	400.00	1780.39	1.89	5.57	1780.23	1780.67	.00	146.80	1.02
6.000	500.00	1780.60	2.10	5.46	1780.41	1780.85	.00	110.40	1.16
6.000	600.00	1780.69	2.19	6.04	1780.56	1781.00	.00	125.46	1.01
6.000	800.00	1780.90	2.40	6.58	1780.79	1781.24	.00	124.16	1.01
6.000	1000.00	1781.09	2.59	6.93	1780.93	1781.45	.00	118.61	1.01
6.000	1200.00	1781.24	2.74	7.35	1781.10	1781.62	.00	120.63	1.01
6.000	1500.00	1781.45	2.95	7.78	1781.28	1781.86	.00	117.38	.99
6.000	2000.00	1781.69	3.19	8.88	1781.51	1782.20	.00	133.98	1.01
6.000	2500.00	1781.92	3.42	9.62	1781.72	1782.51	.00	139.07	1.01
6.000	3000.00	1782.15	3.65	10.15	1781.97	1782.79	.00	138.75	1.01

1

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SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      1.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
```

Table D-20
Flow split at C578

Stage	Discharge, in cfs		
	Left	Right	Total
---	0	0	0
---	20	20	40
---	50	50	100
---	85	85	170
---	140	140	280
---	225	225	450
---	410	410	820
---	545	545	1090
---	625	625	1250
---	735	735	1470

Based on field reconnaissance and aerial photographs, a 50 / 50 split was used.

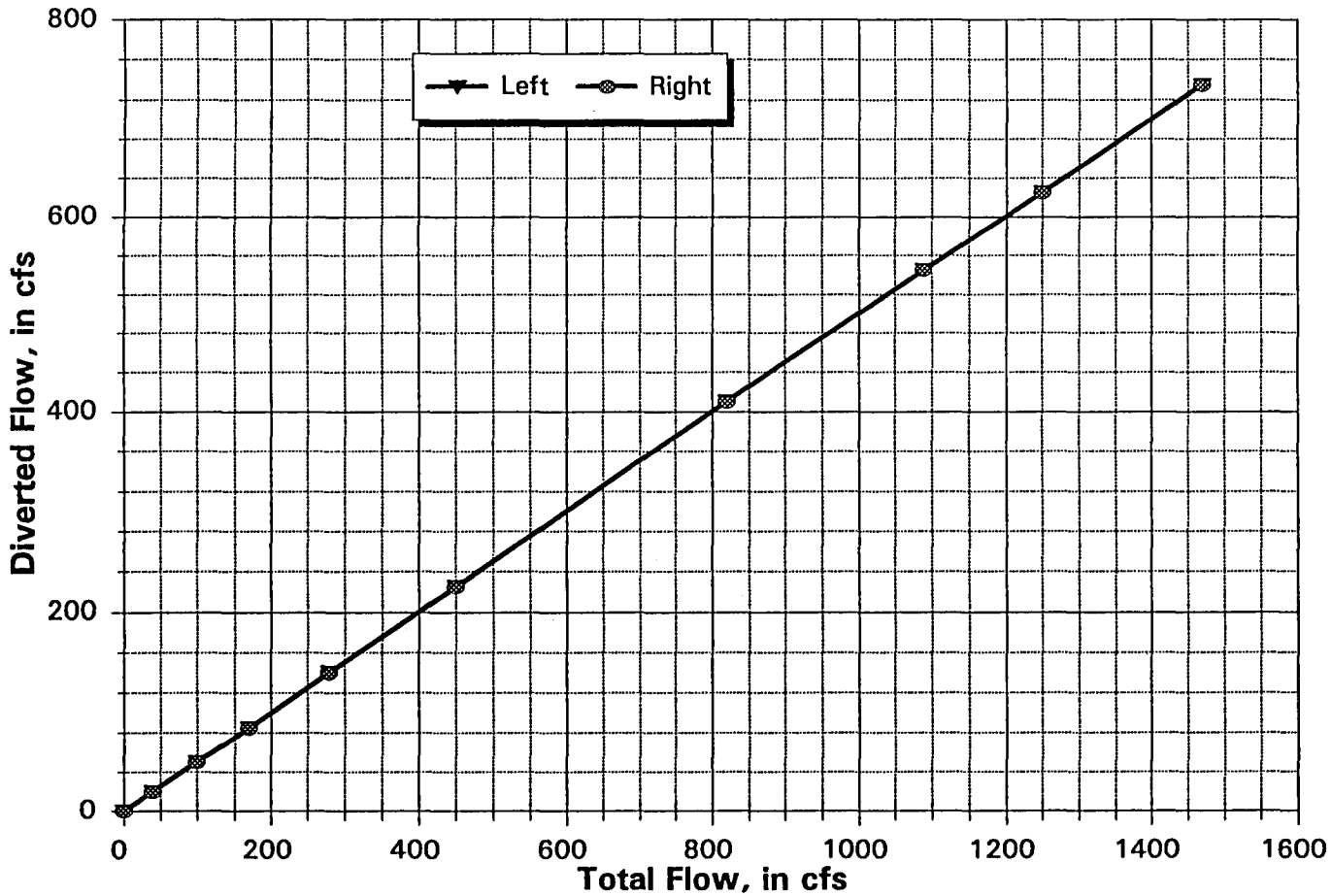
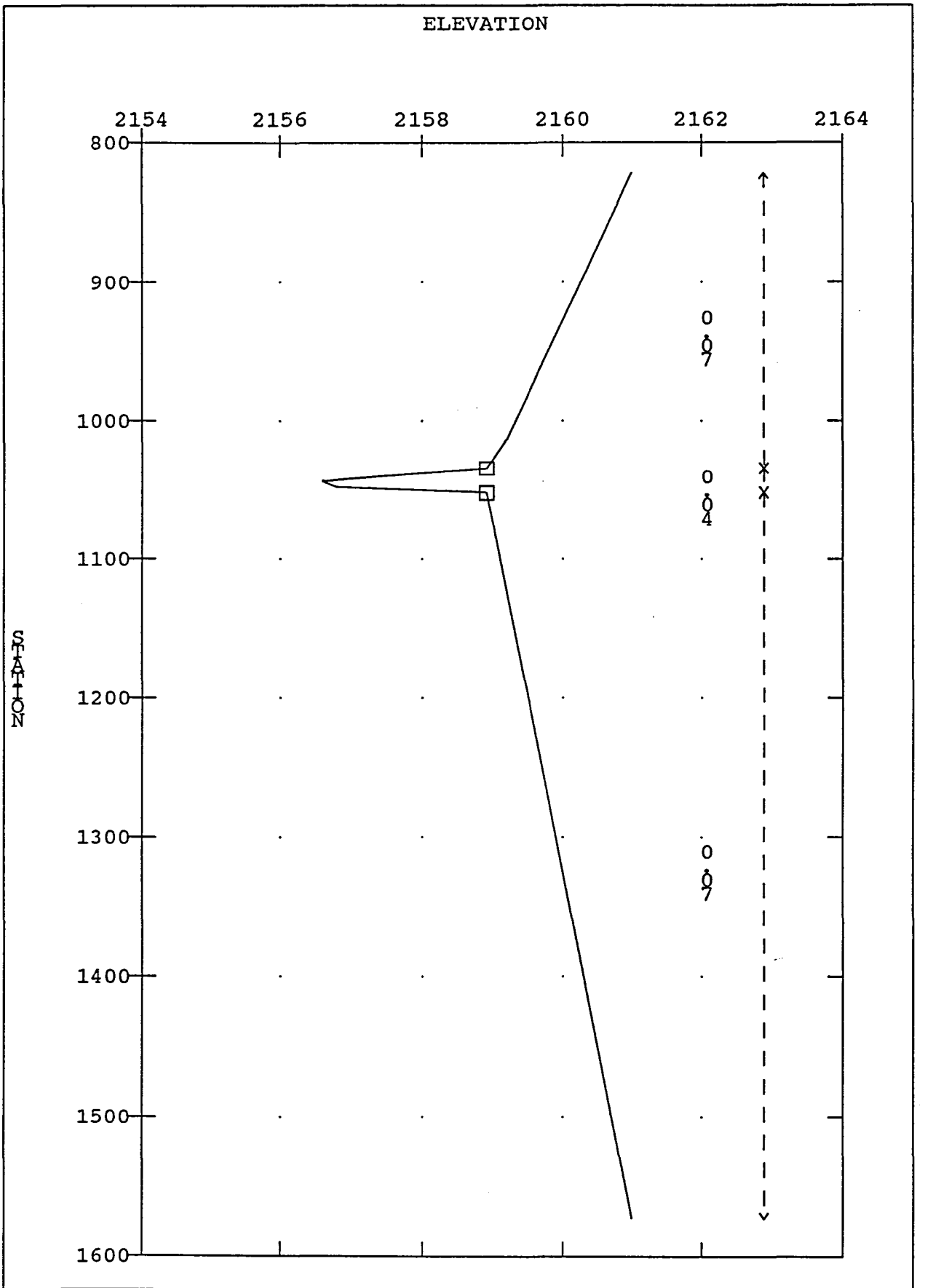


Figure D-20

Flow split at C578

APPENDIX C

Reach Route Cross Section Plots



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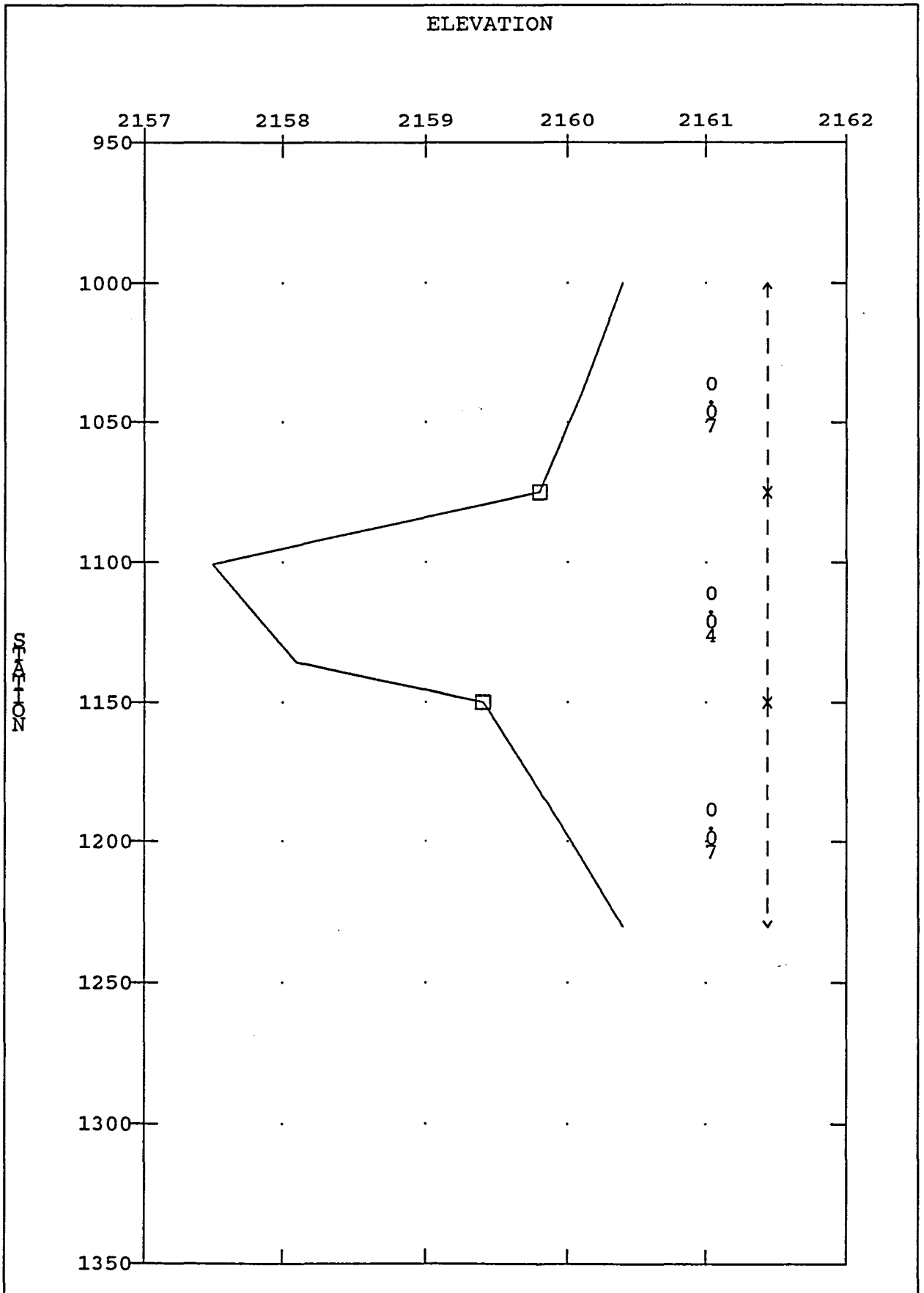

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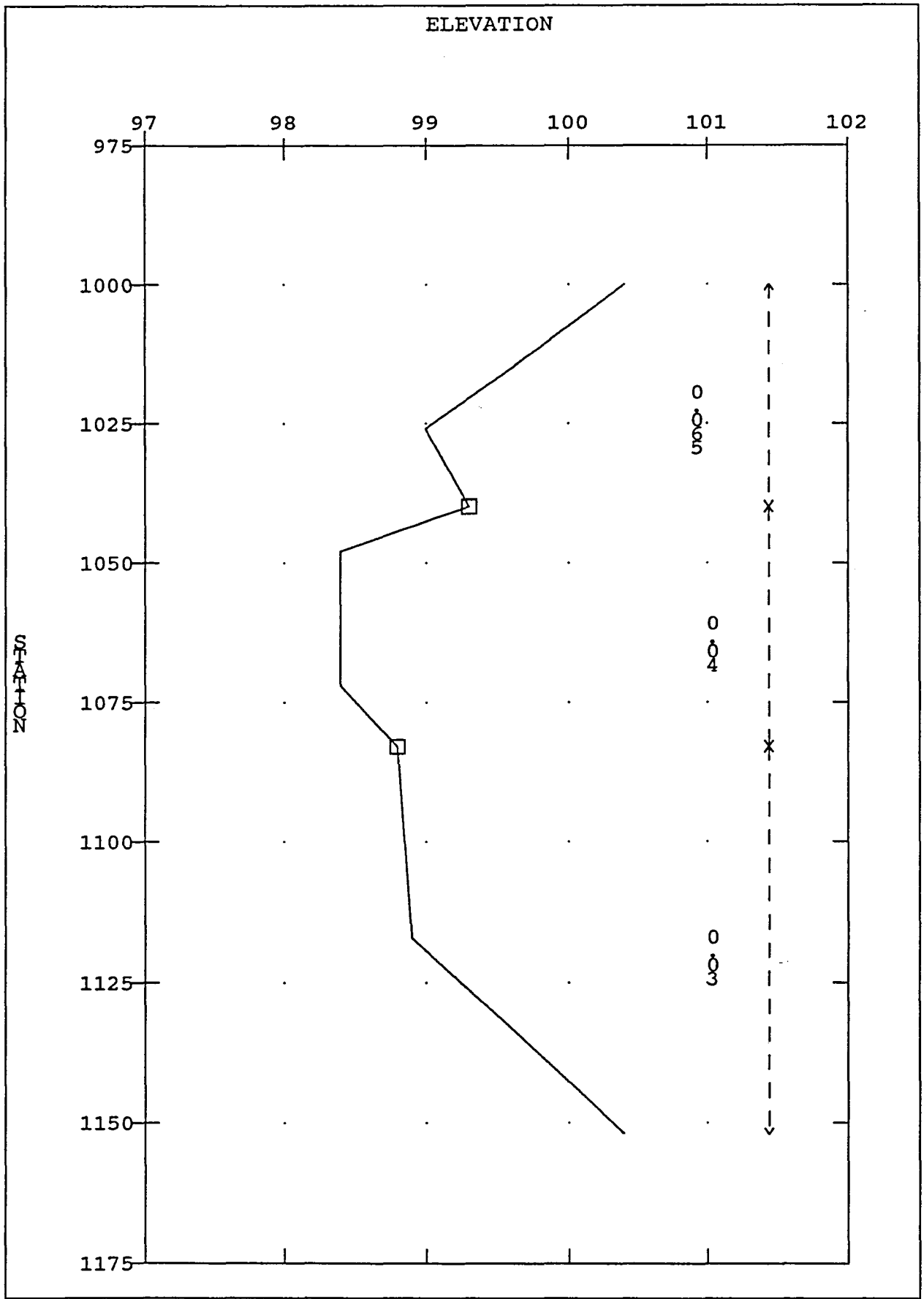

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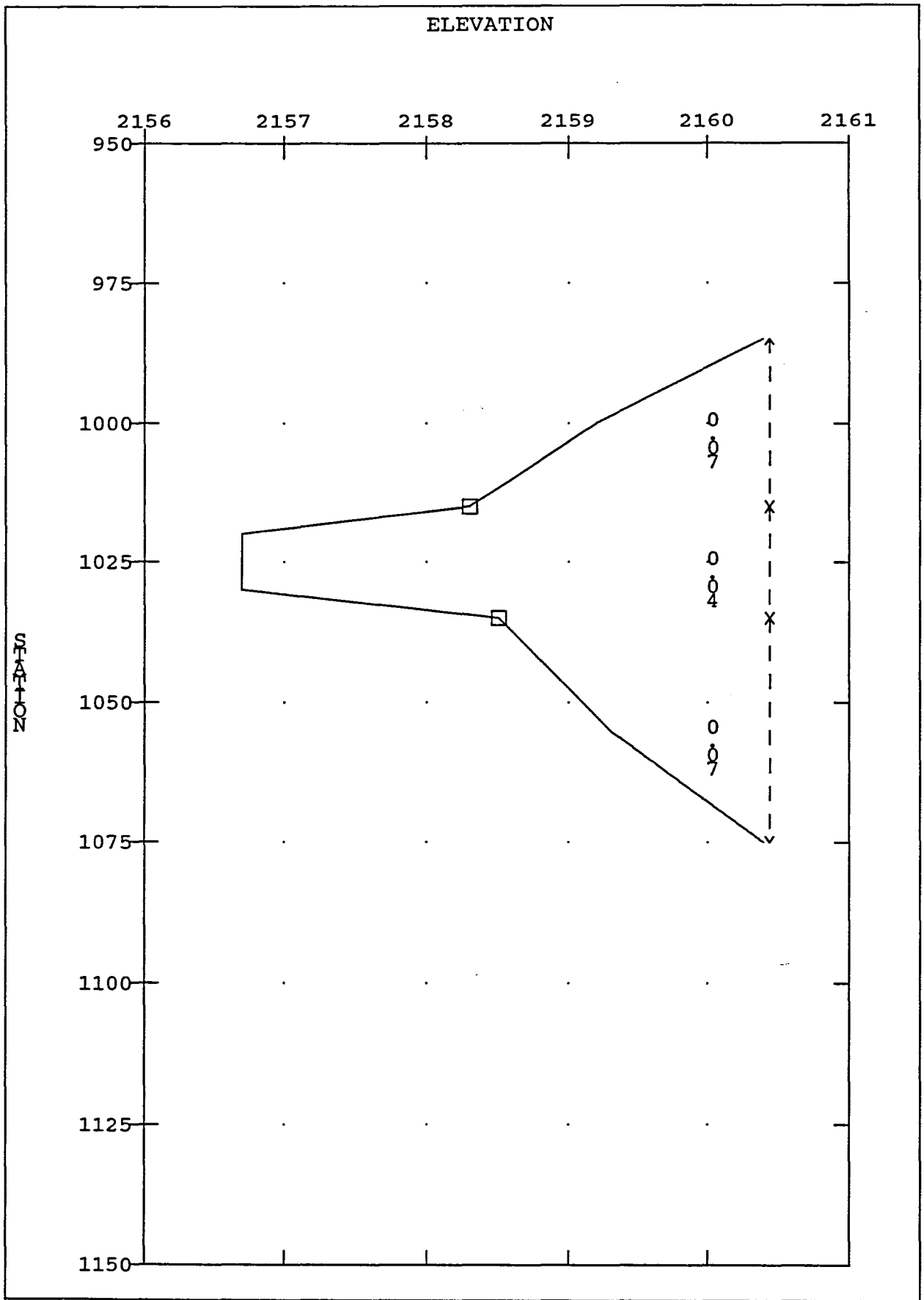

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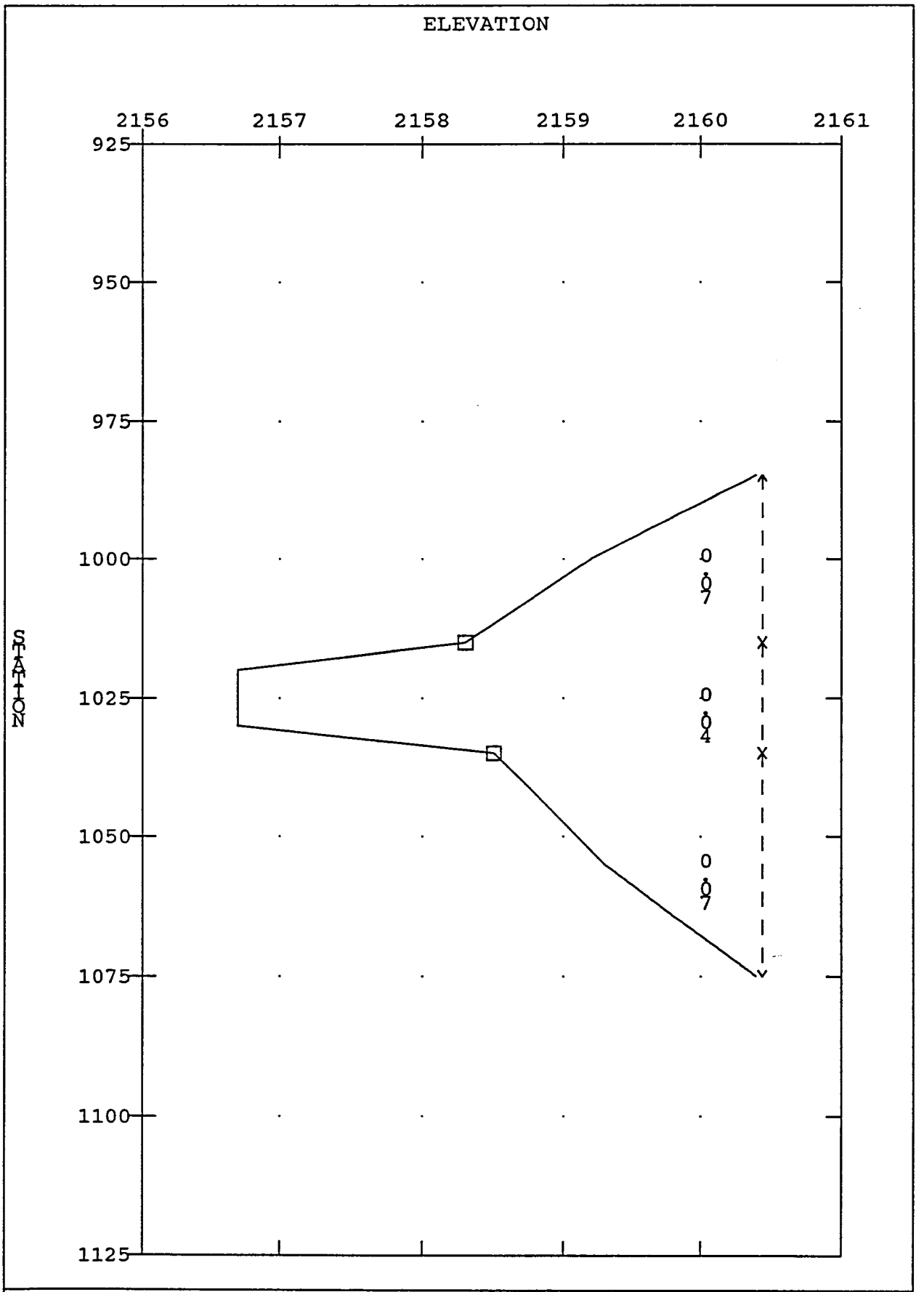

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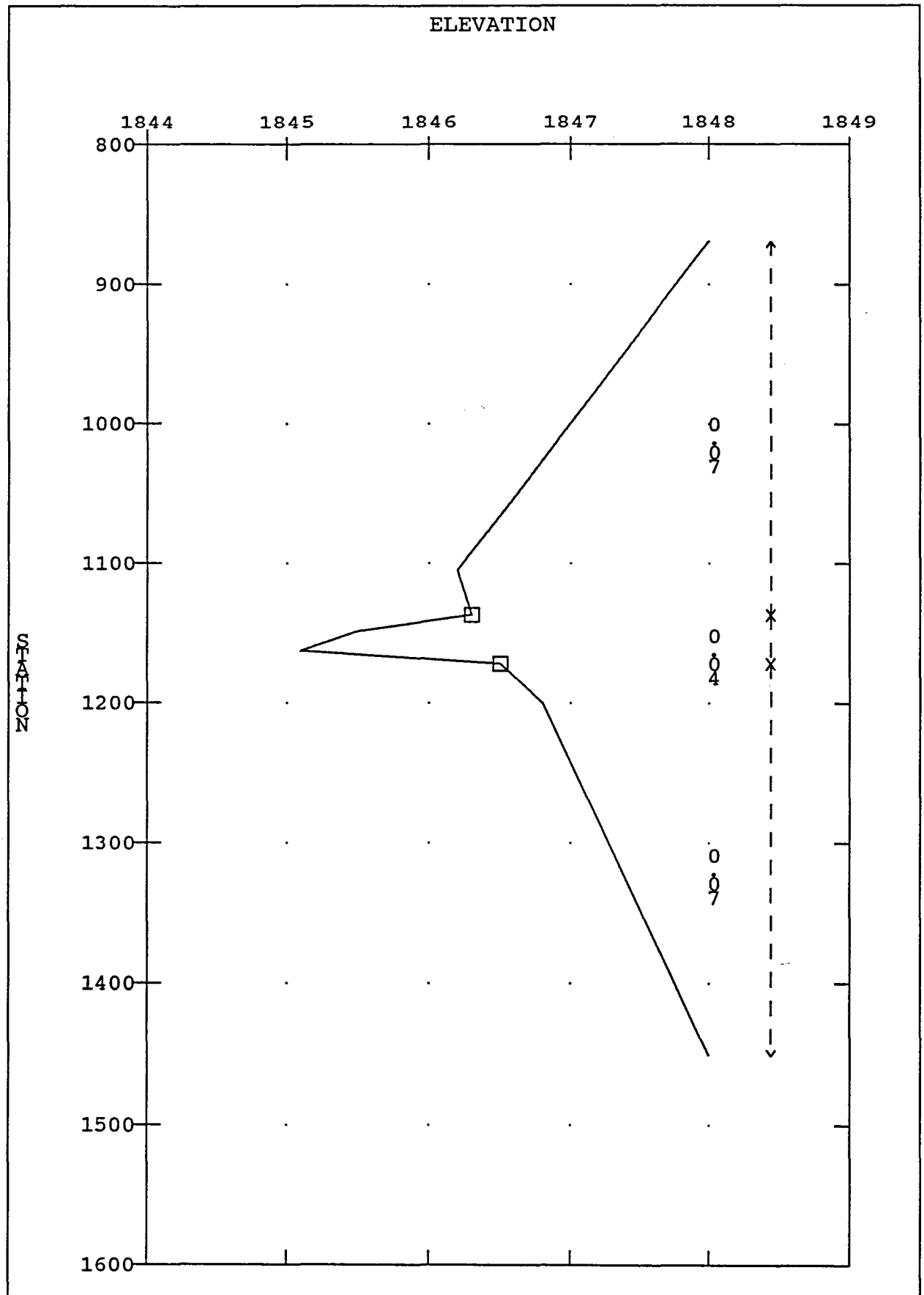

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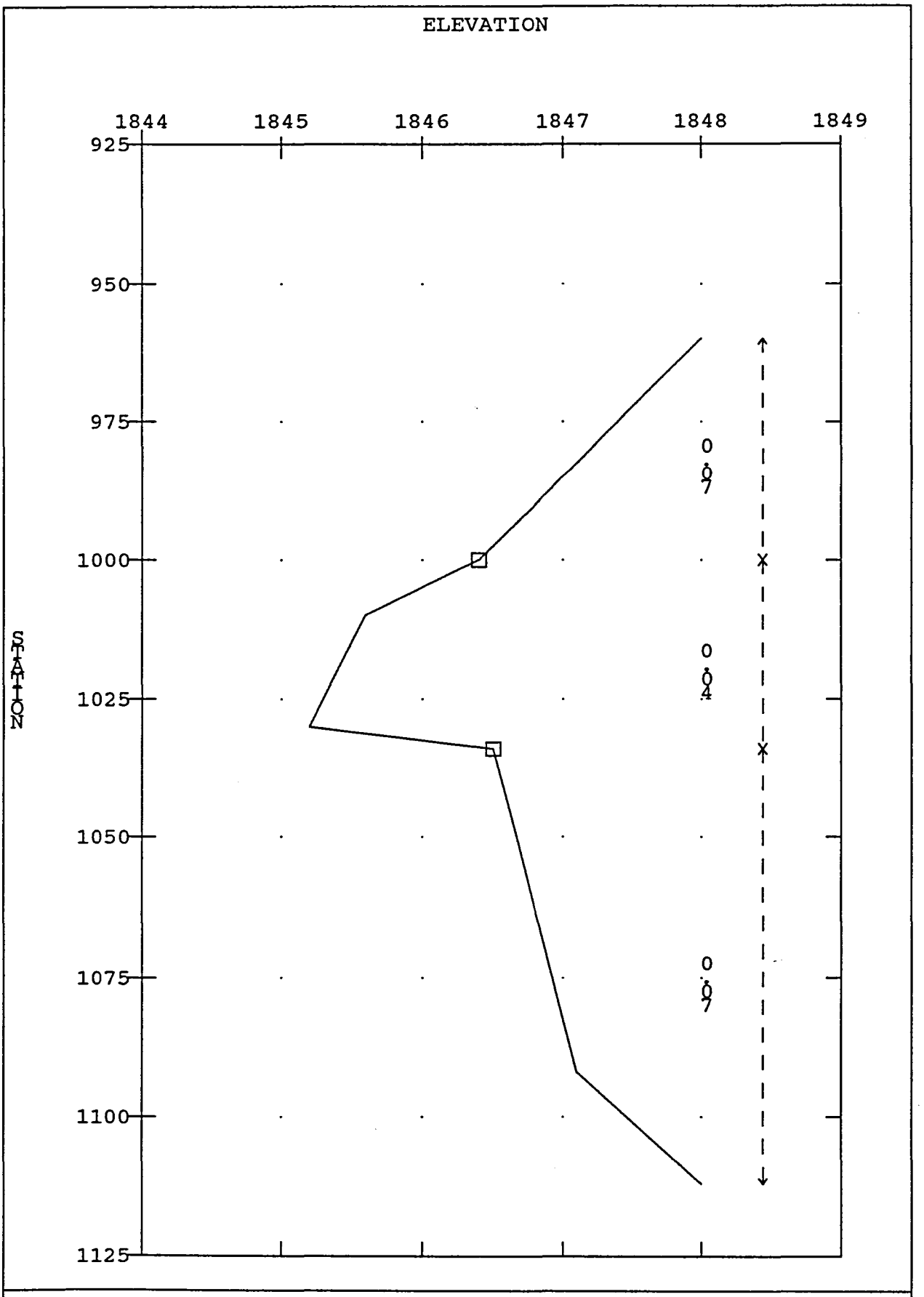

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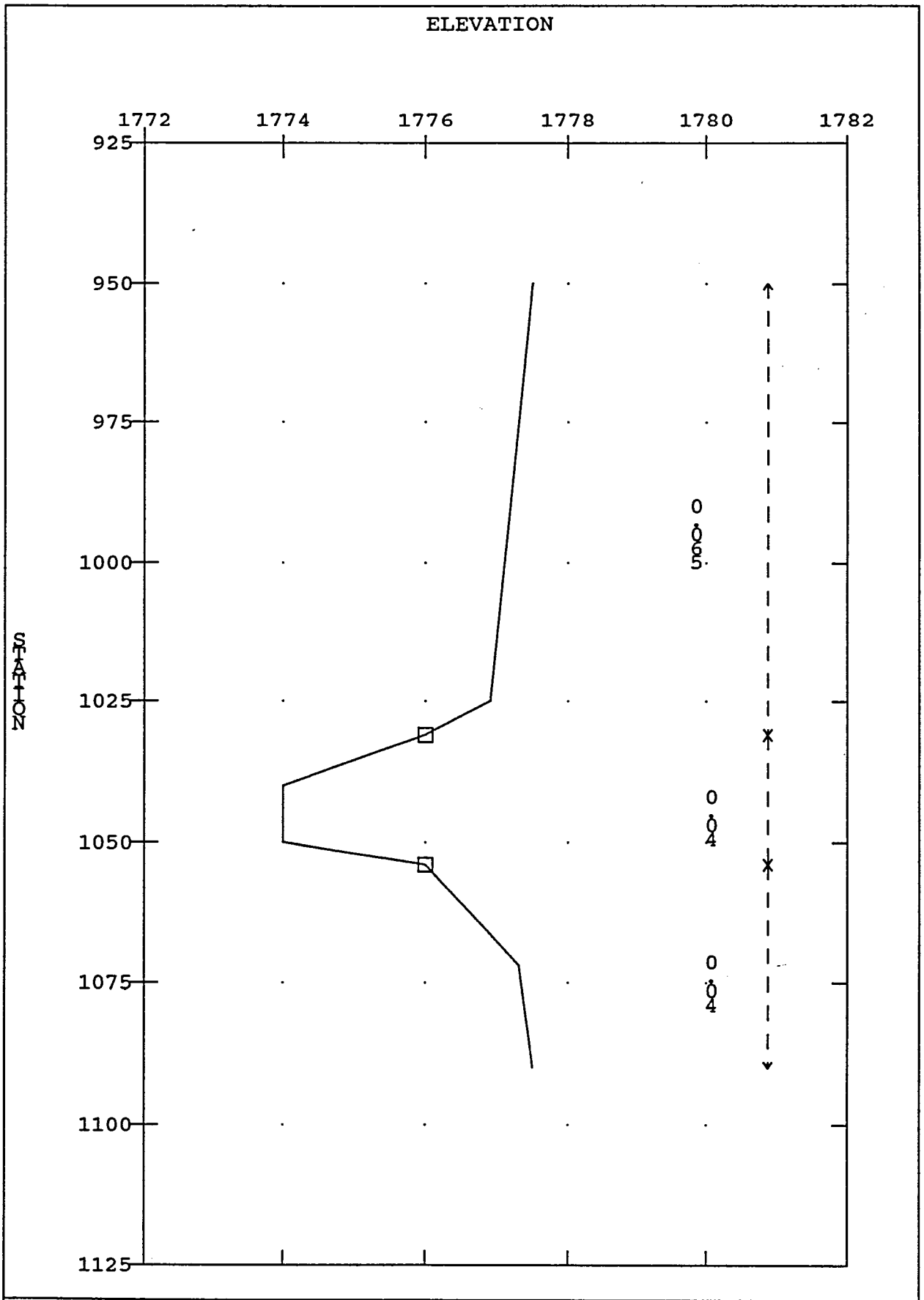

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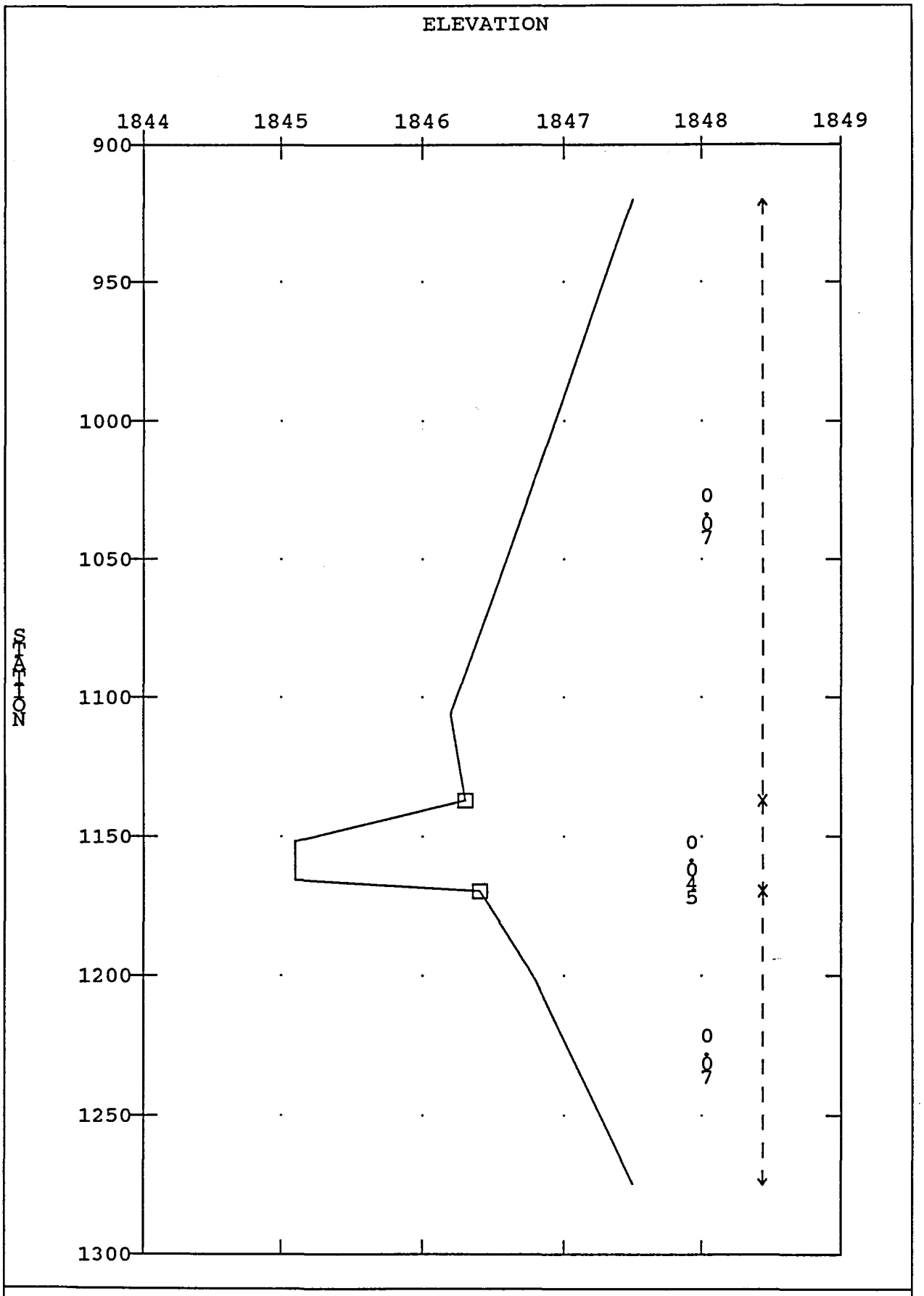

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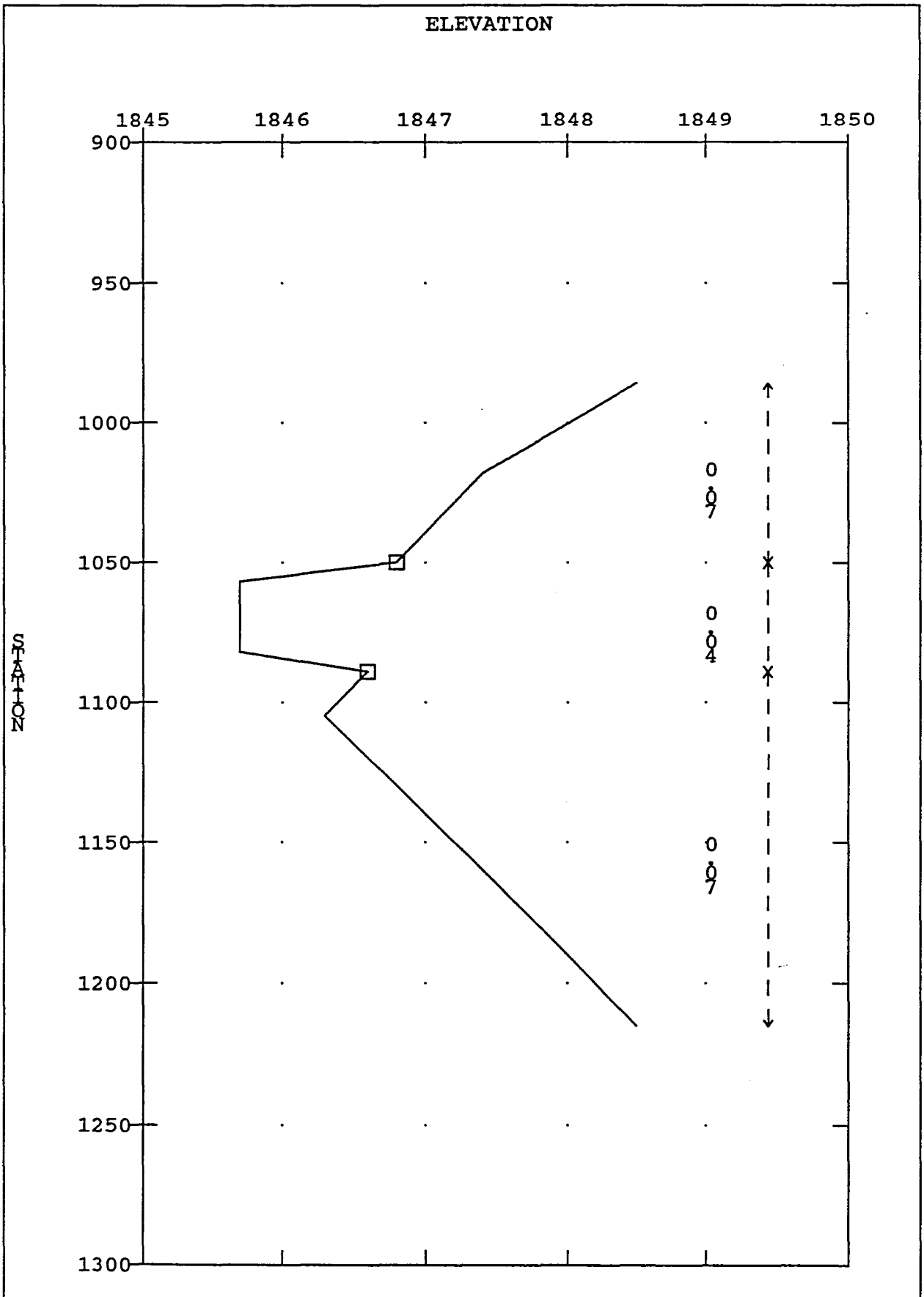

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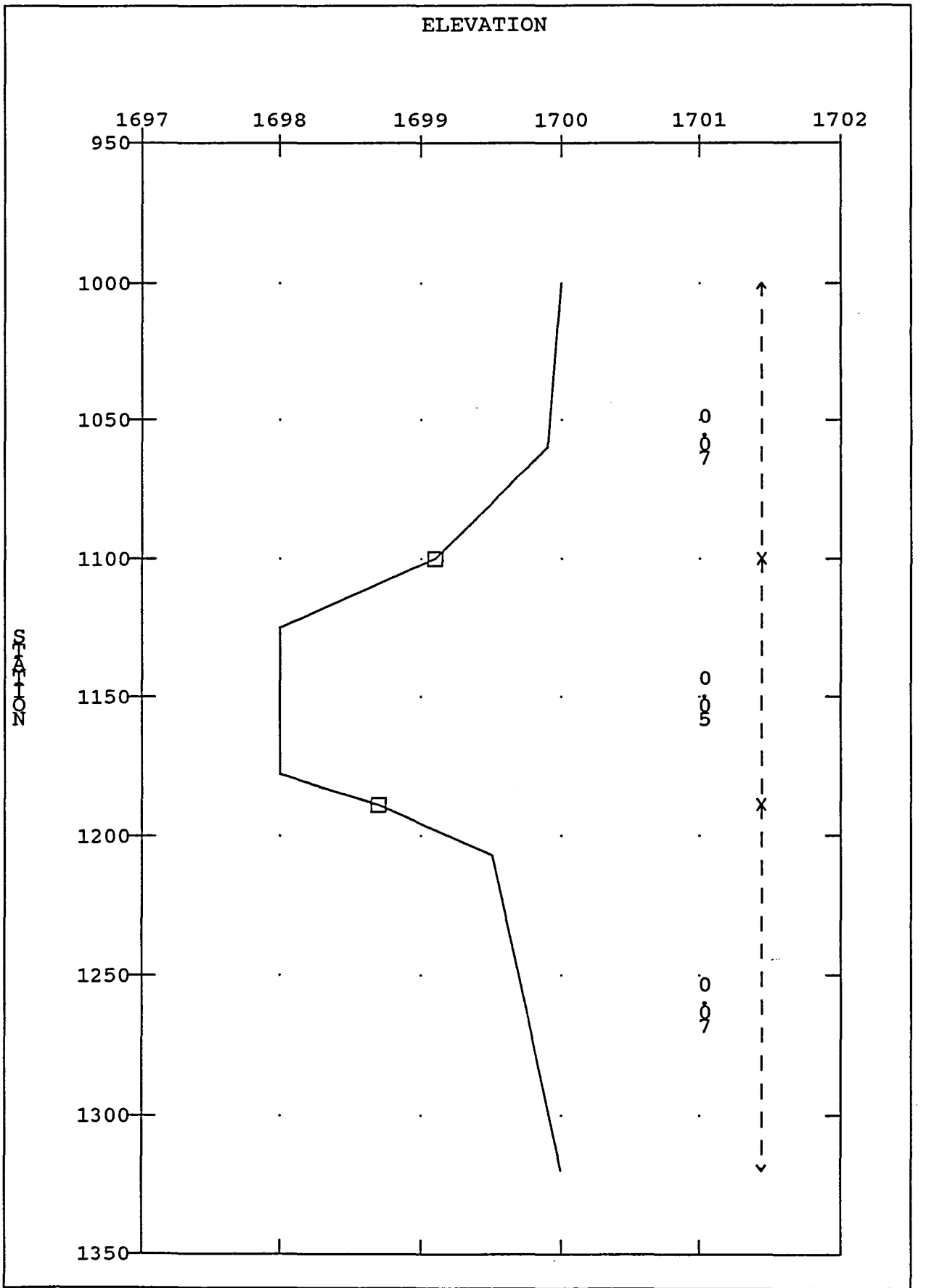

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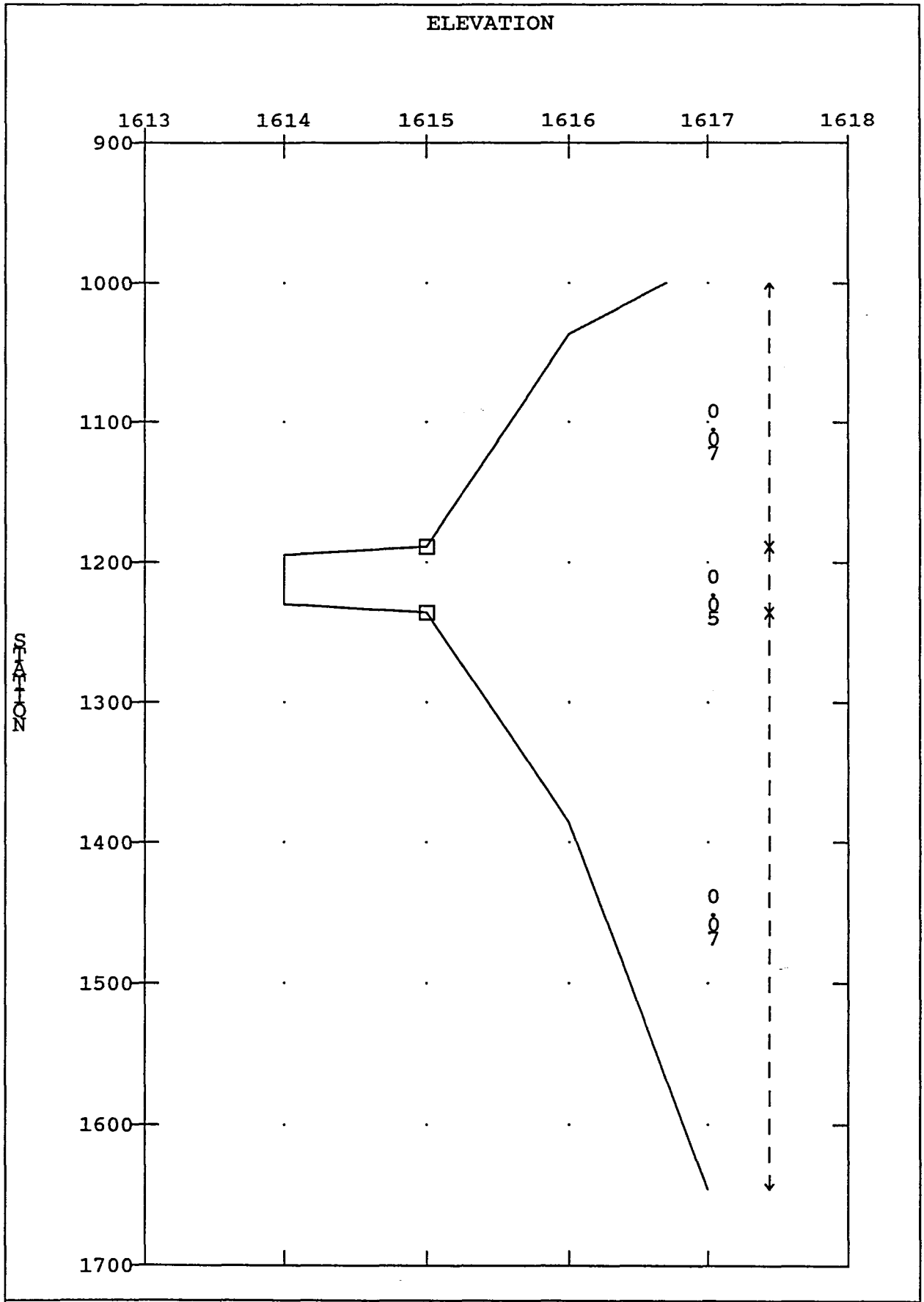

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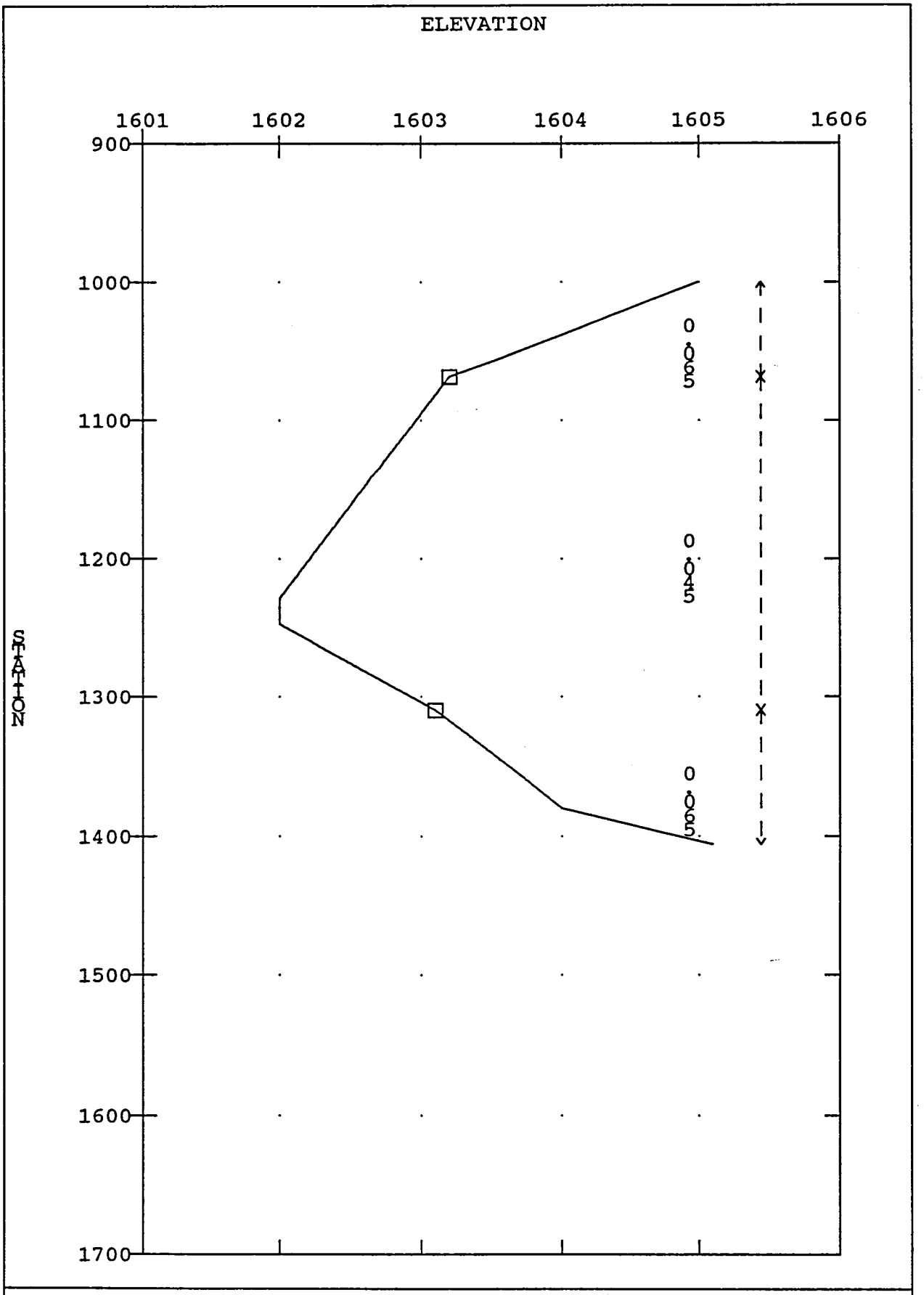

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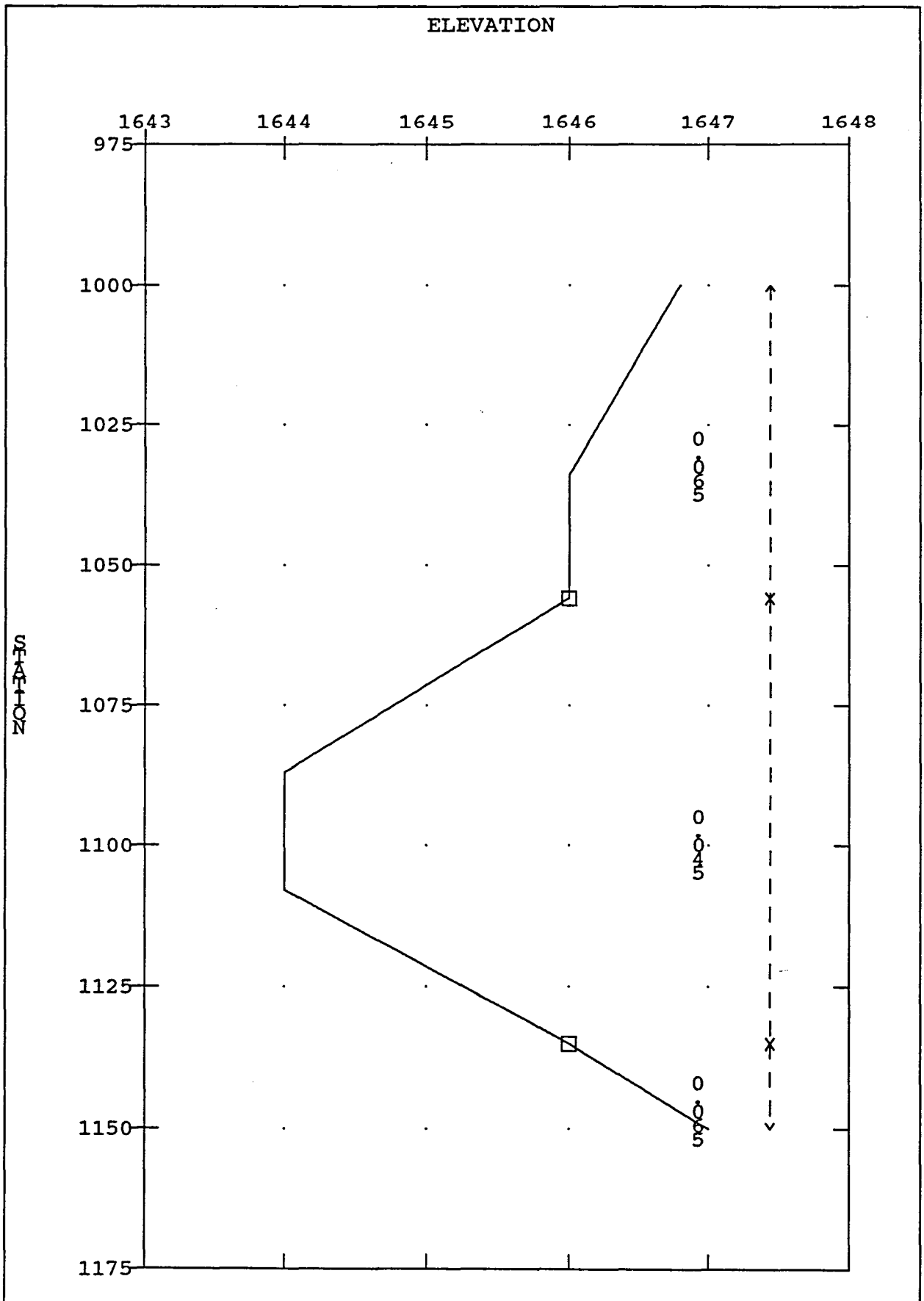

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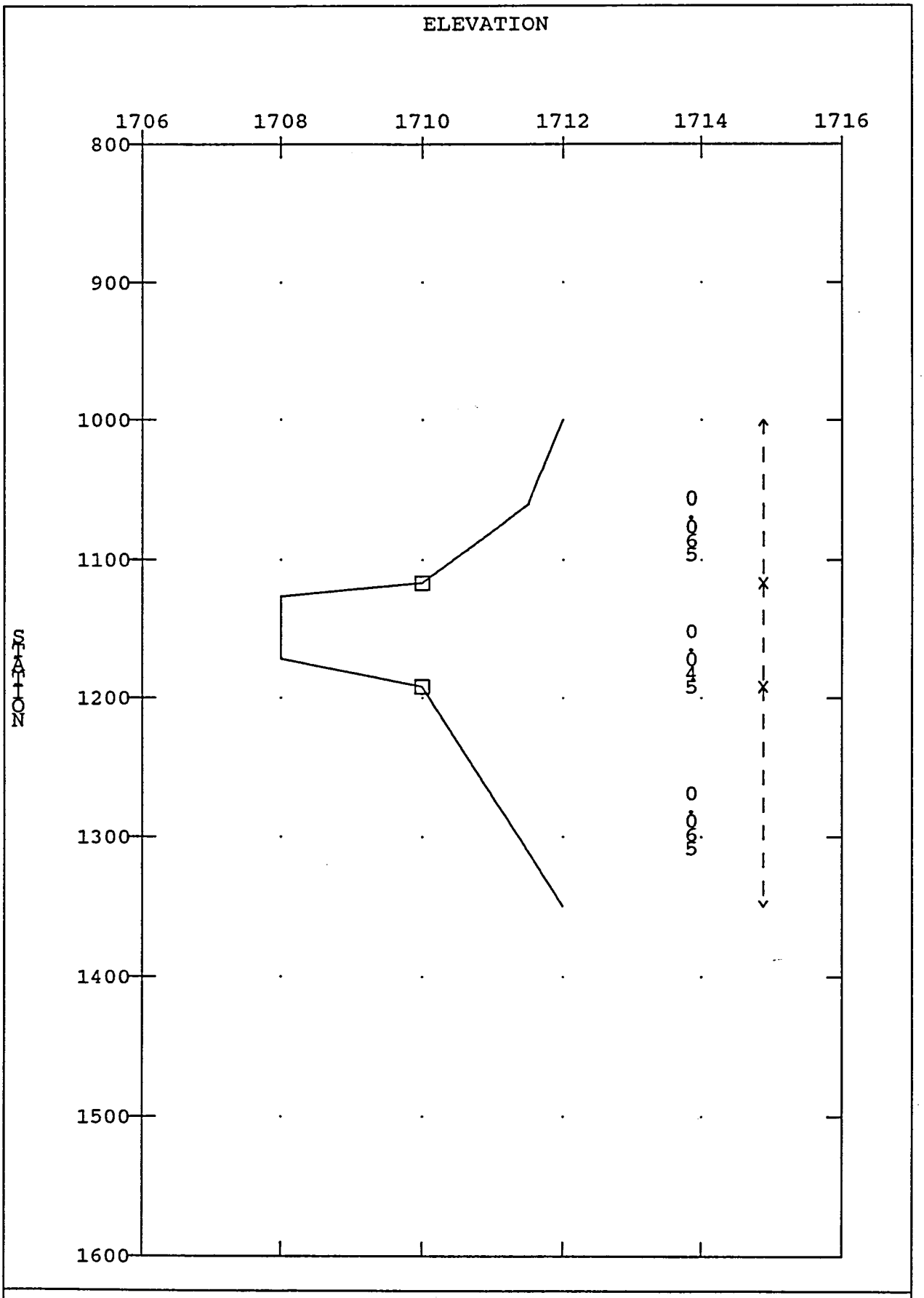

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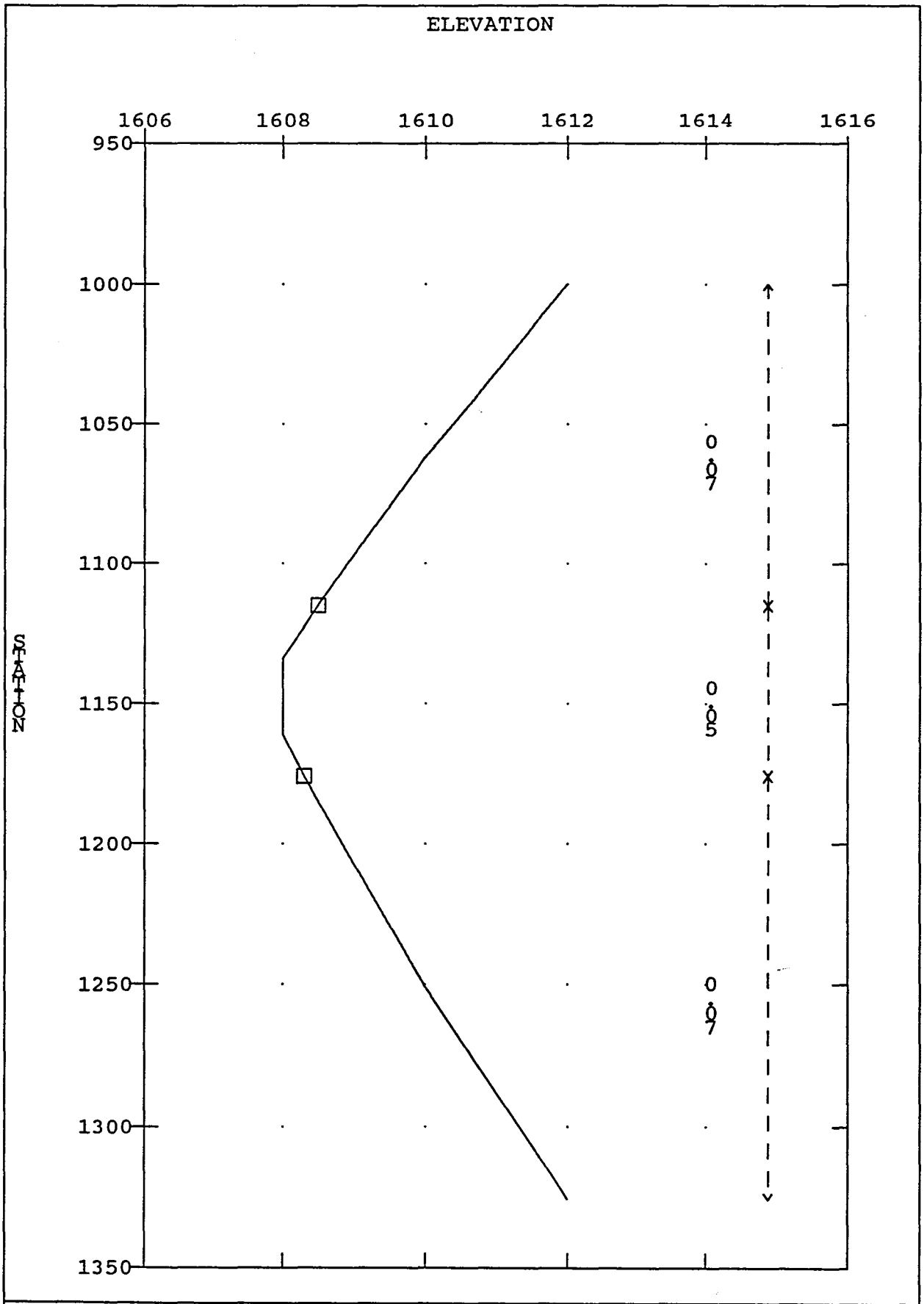

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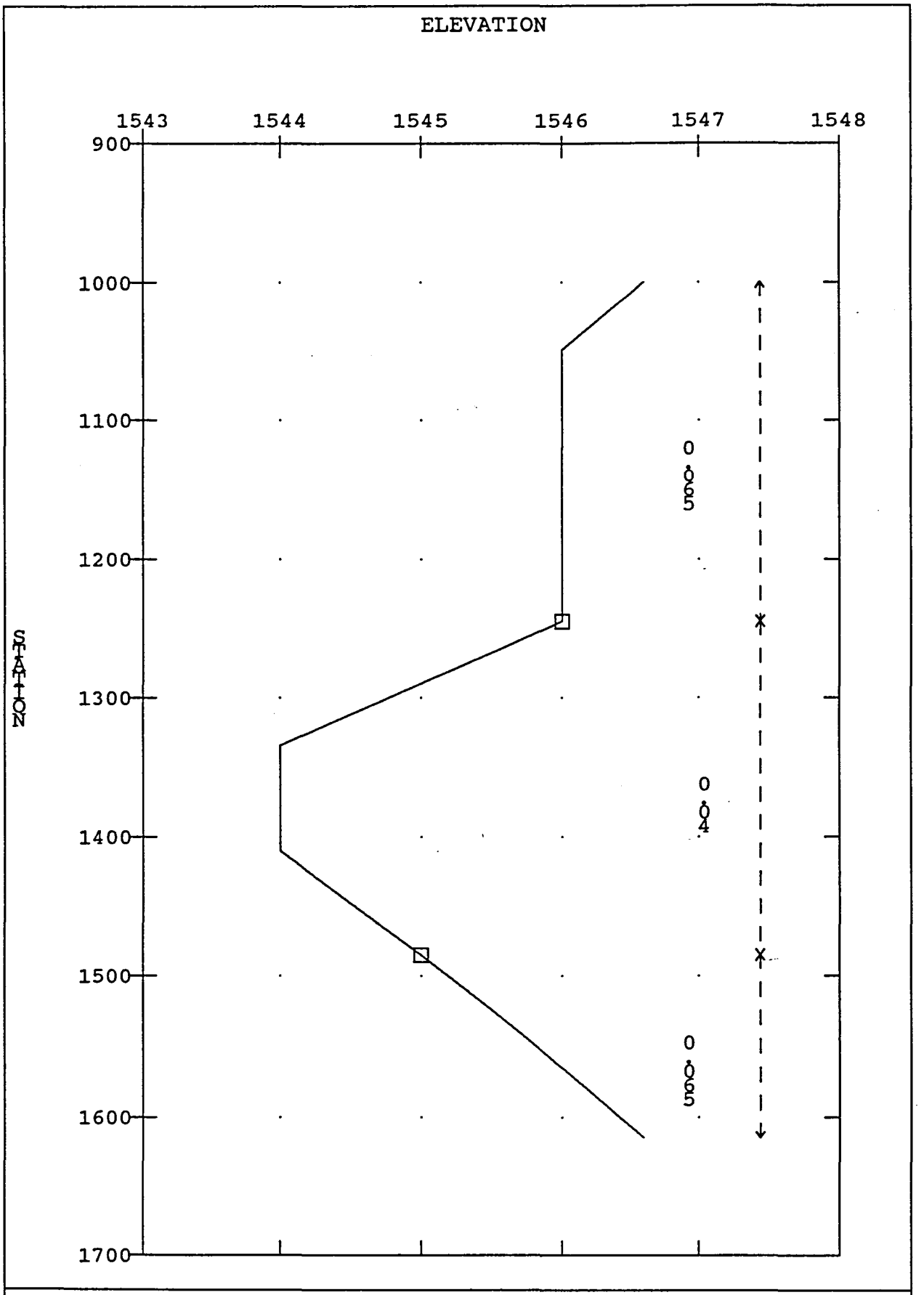

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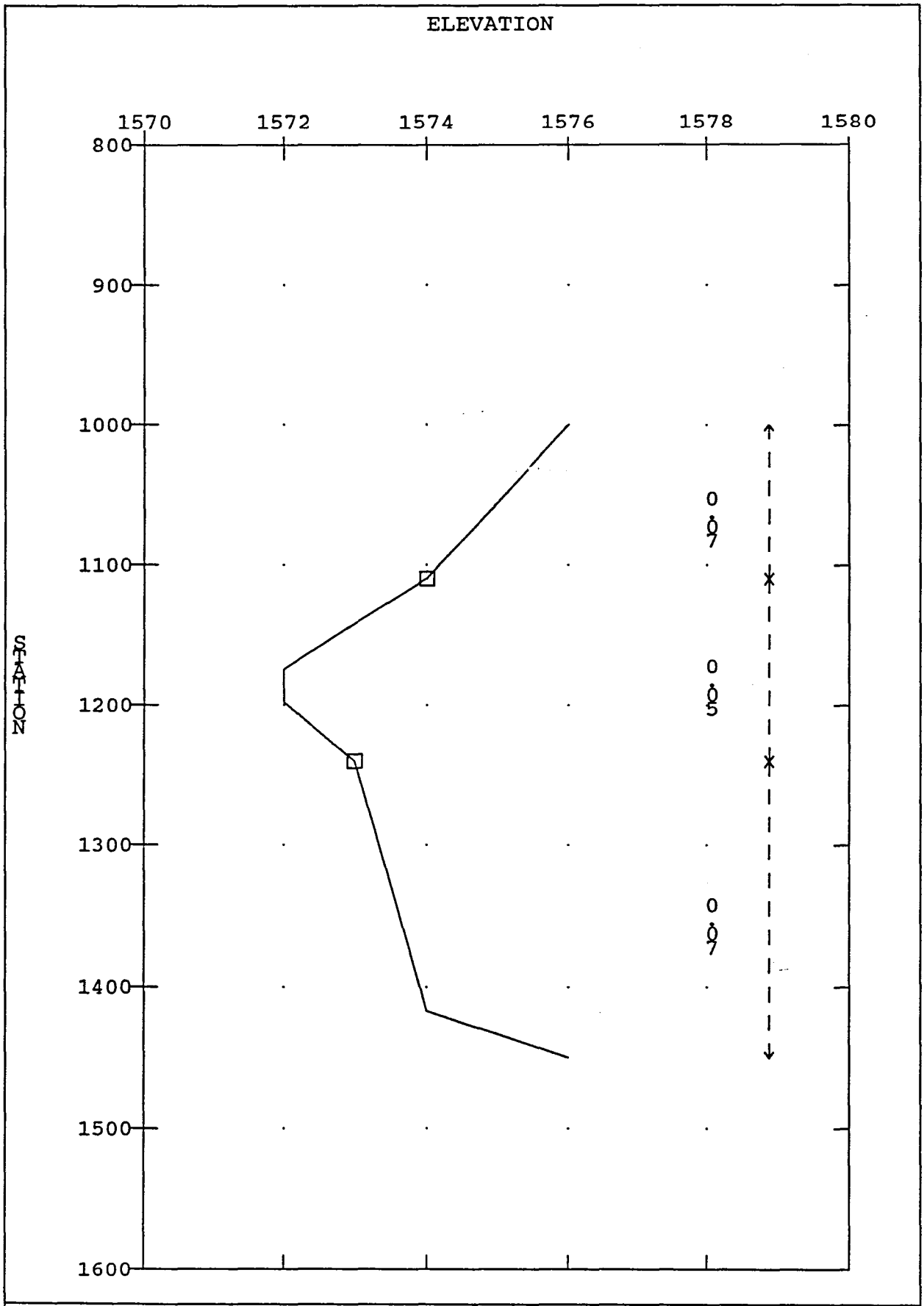

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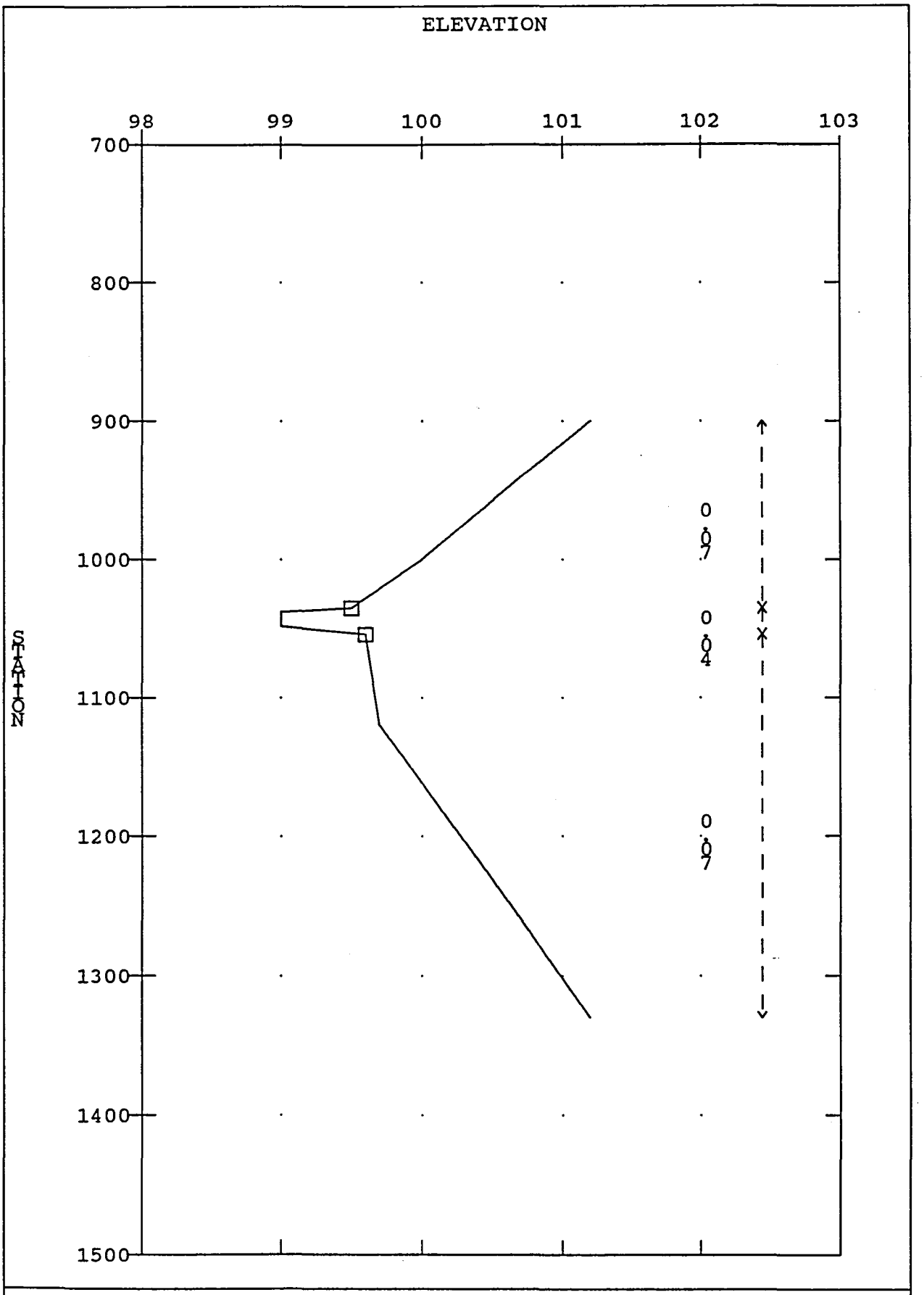

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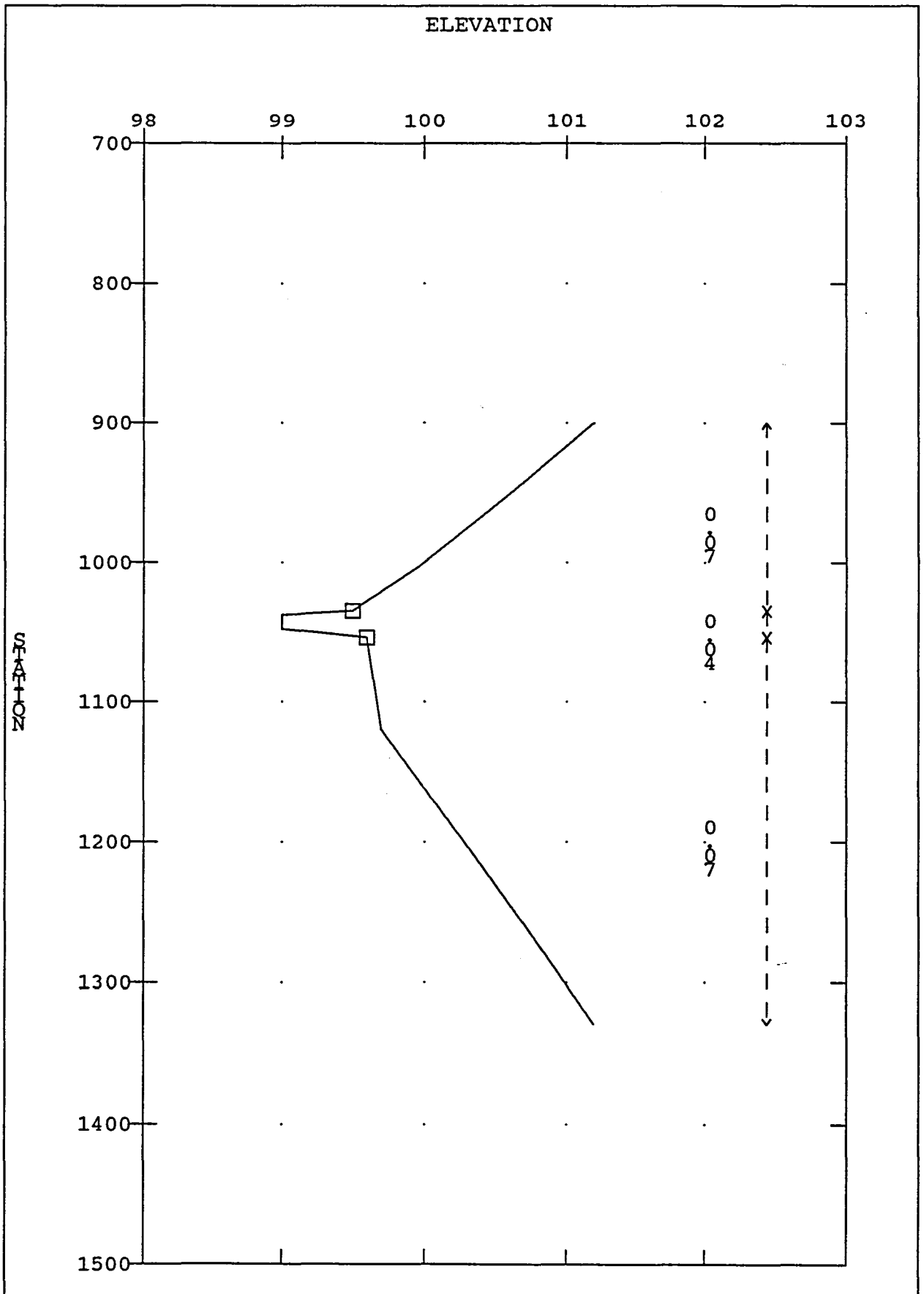

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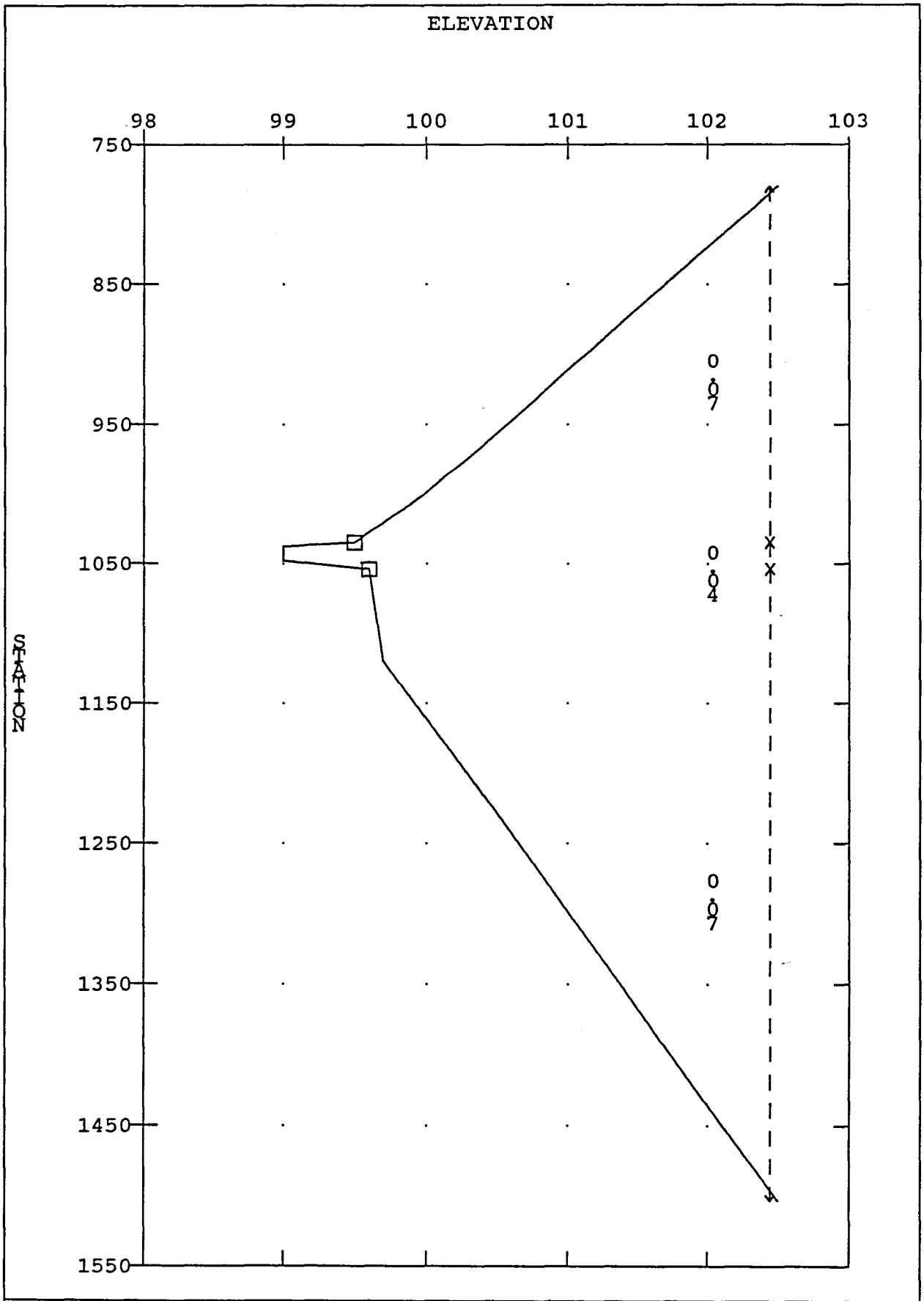

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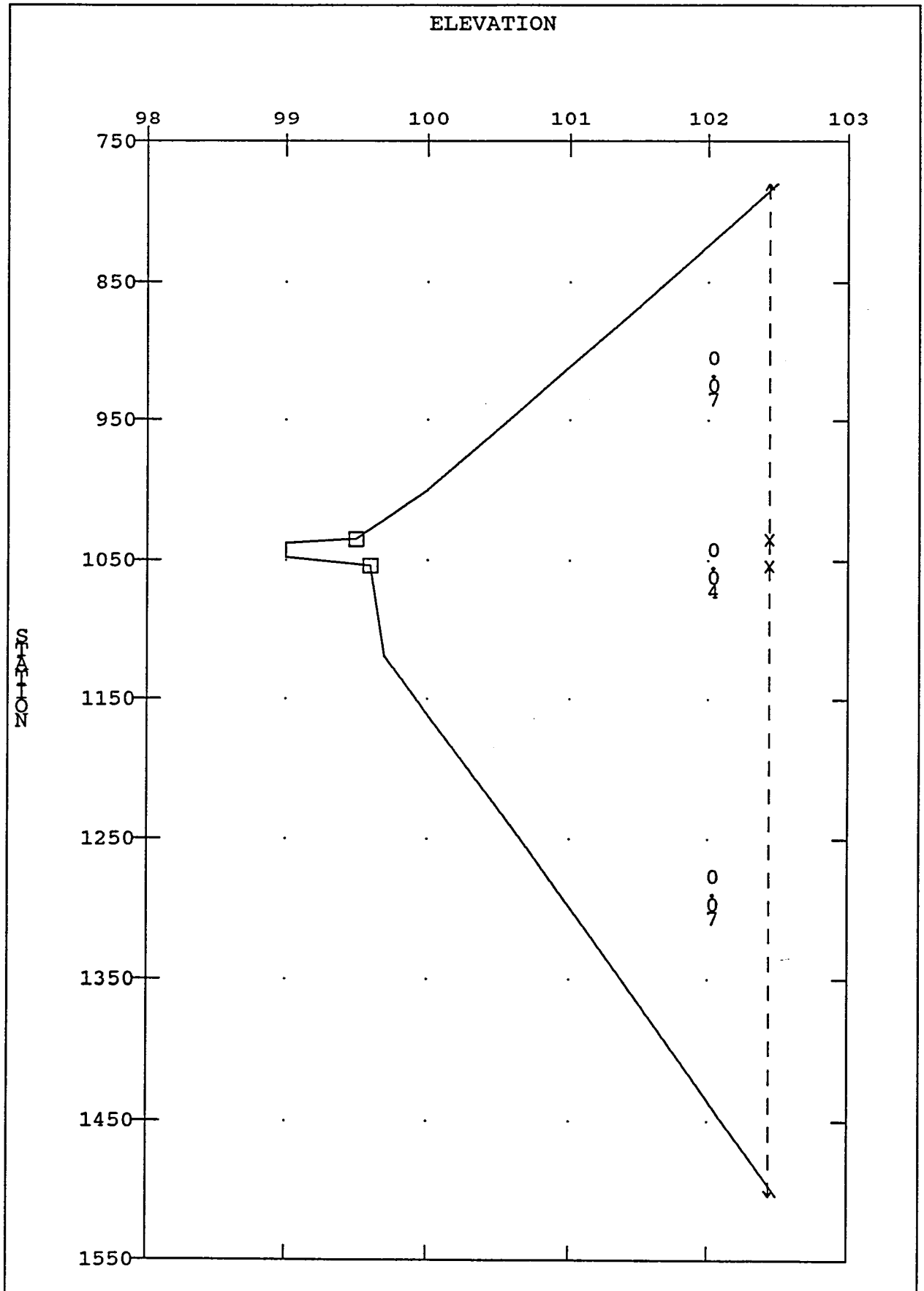

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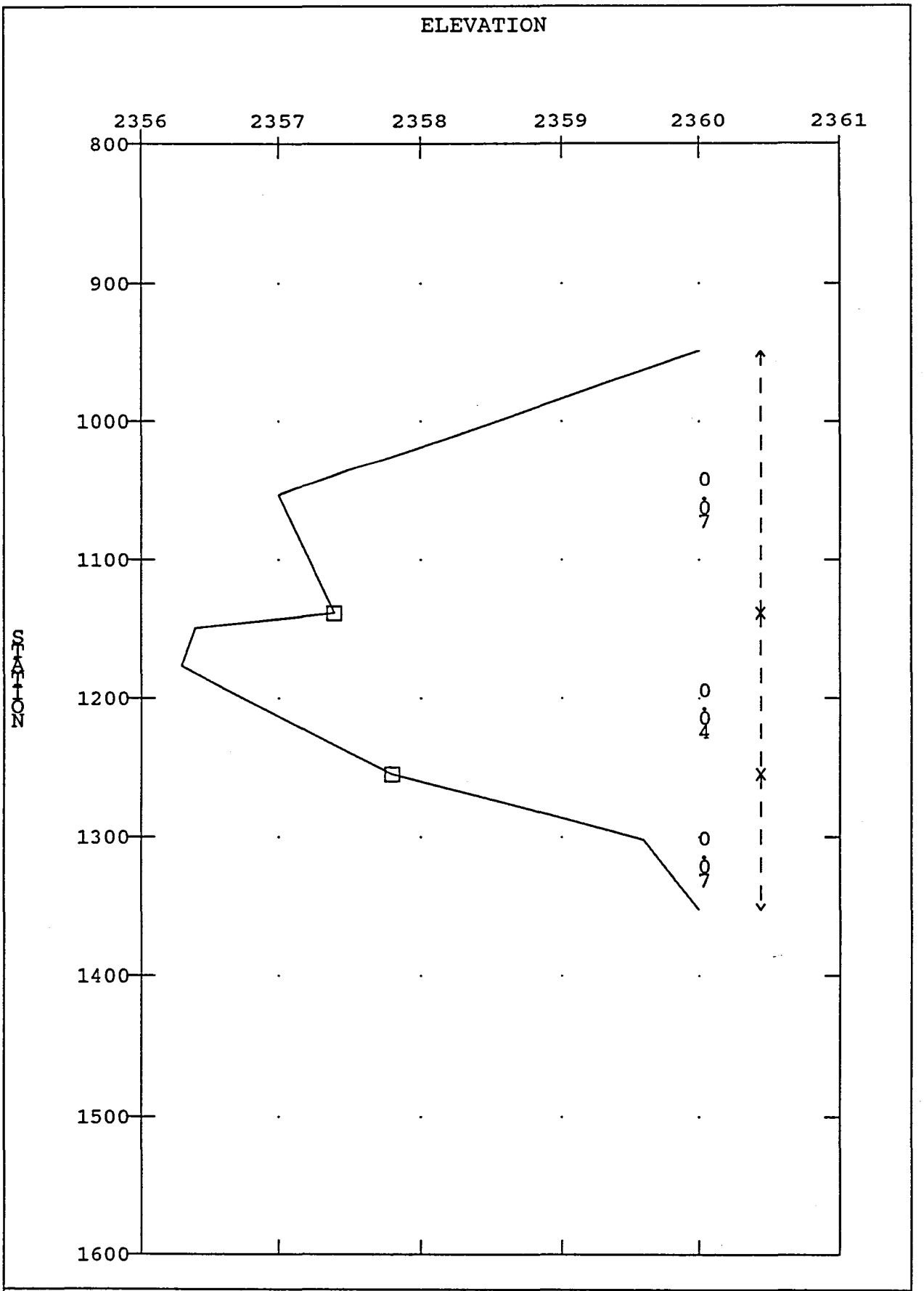

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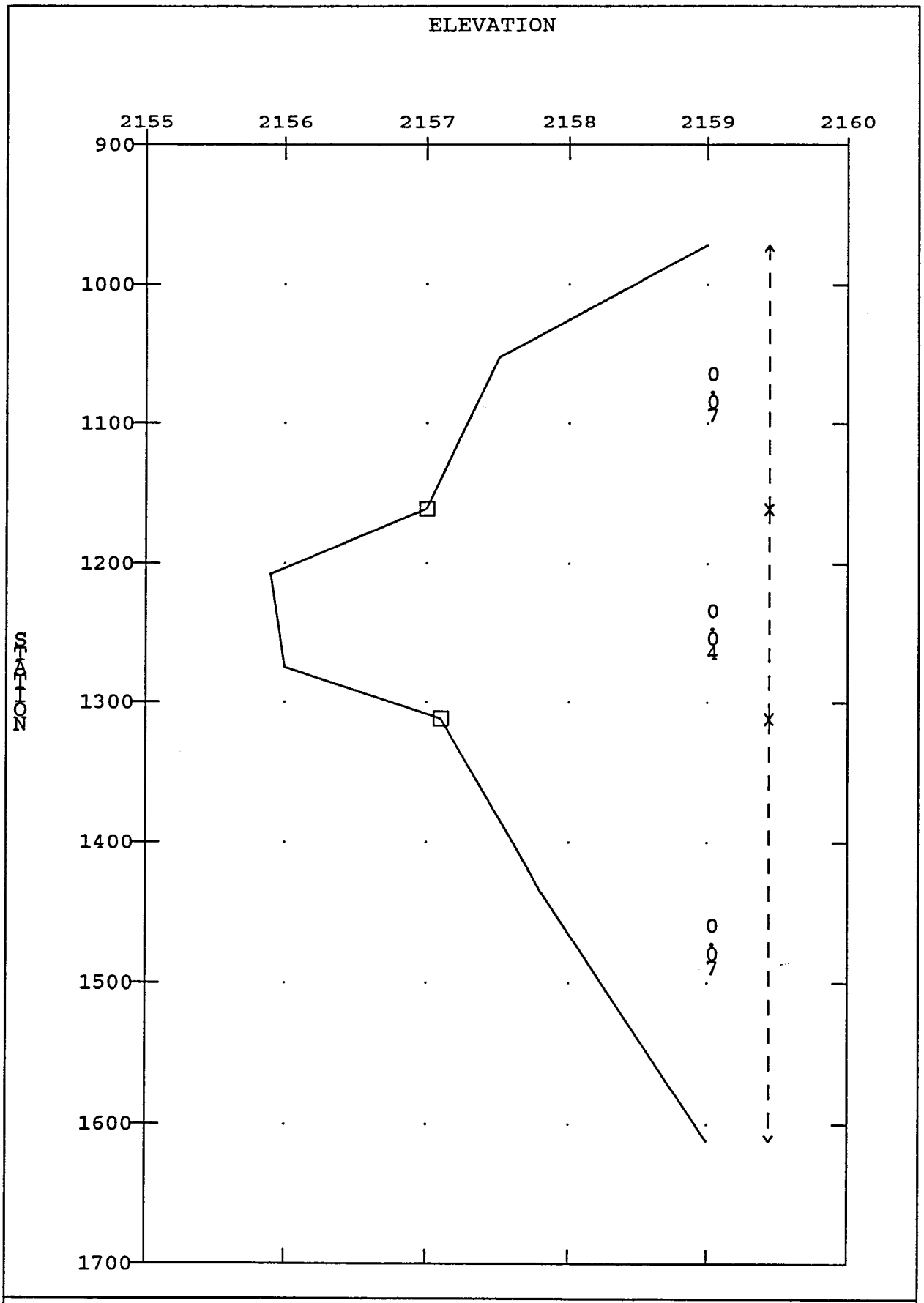

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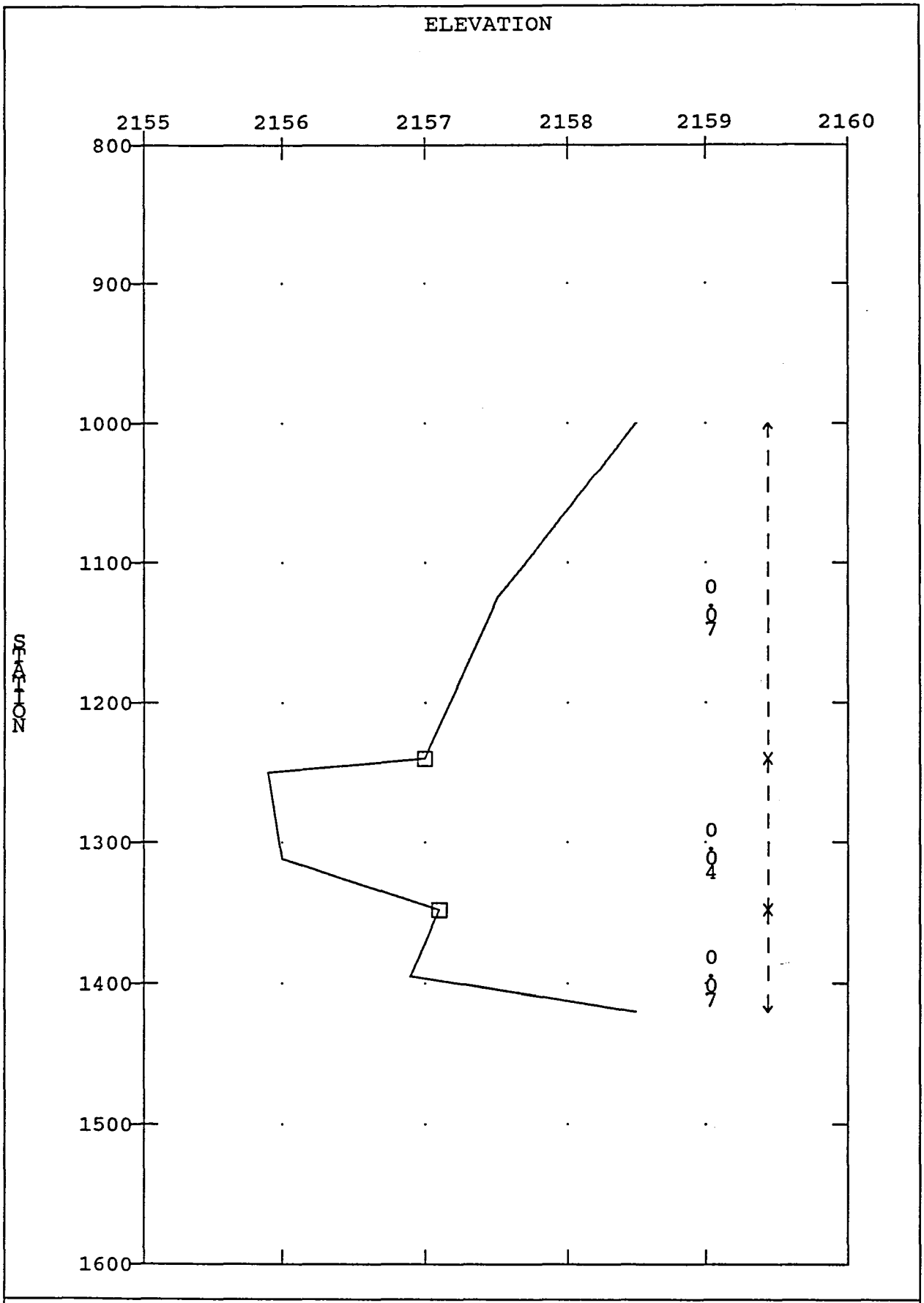

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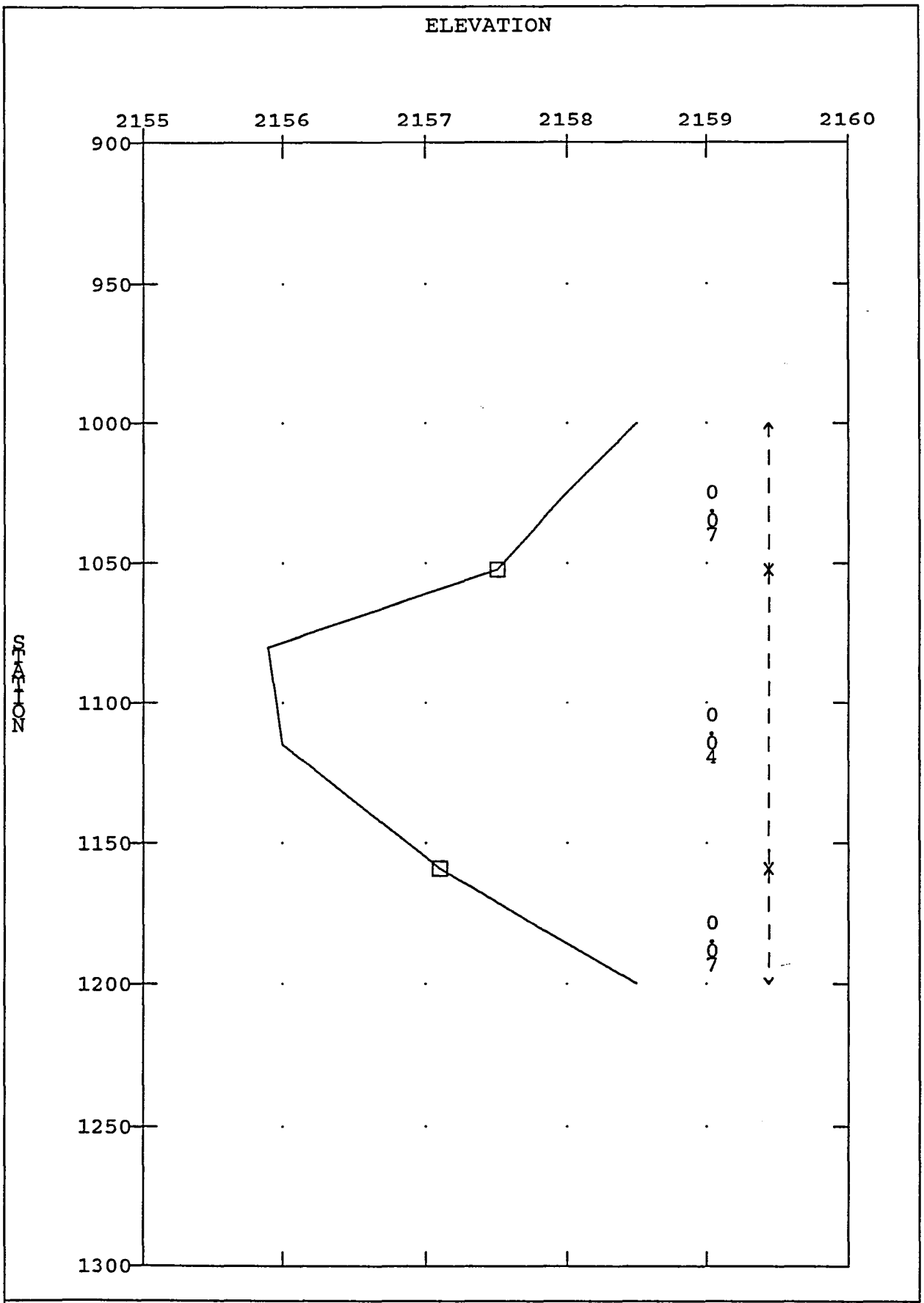

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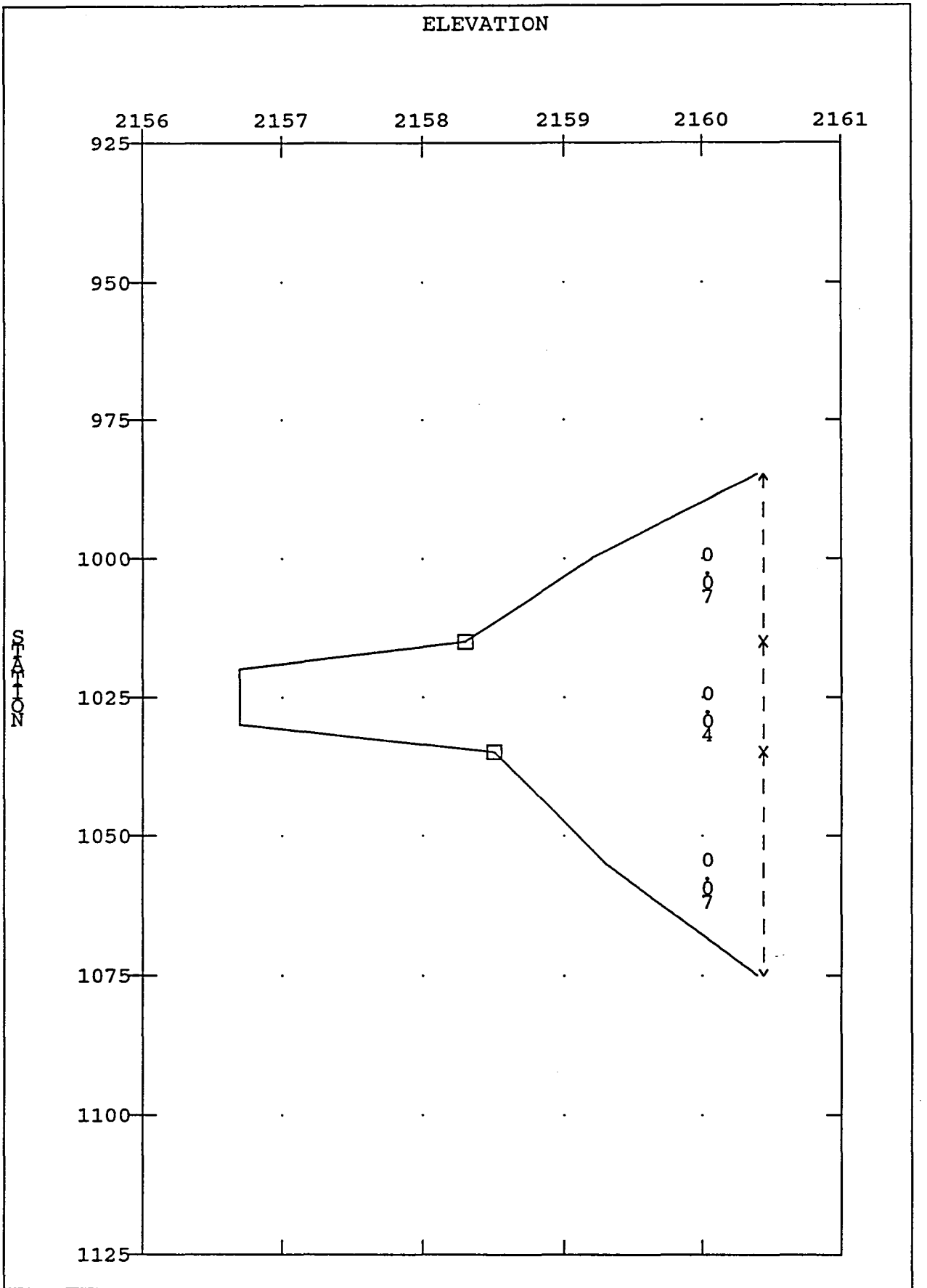

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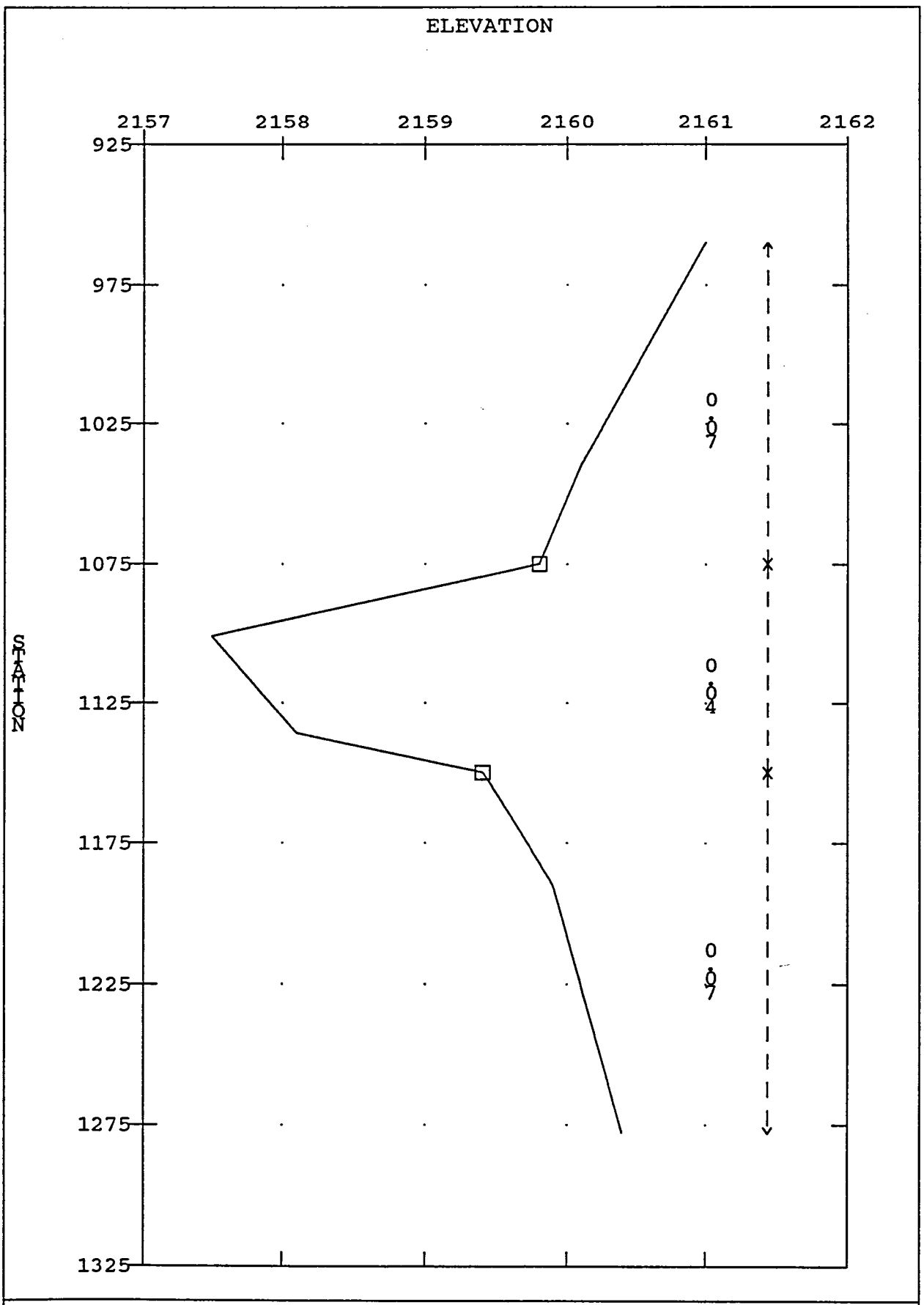

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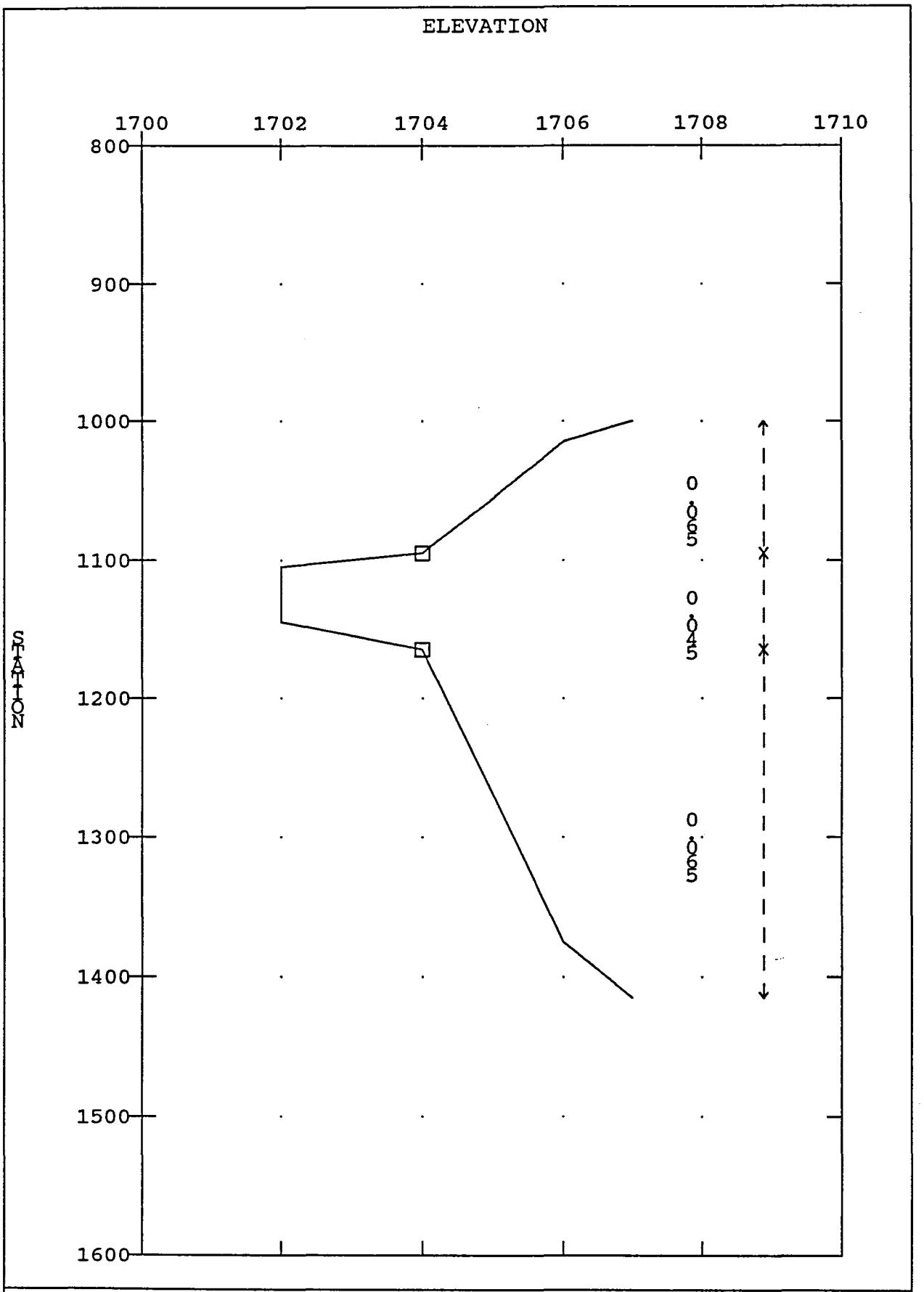

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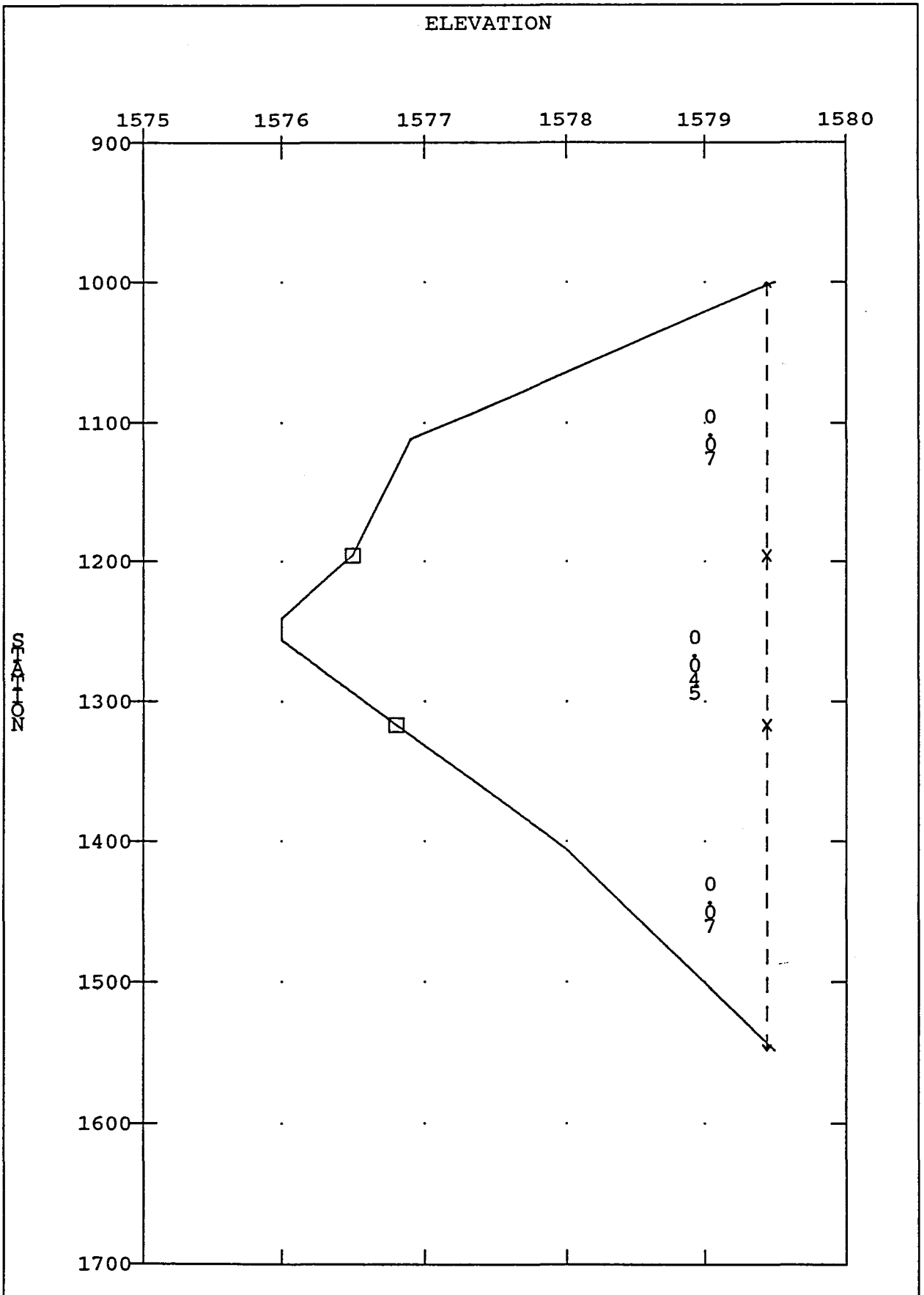

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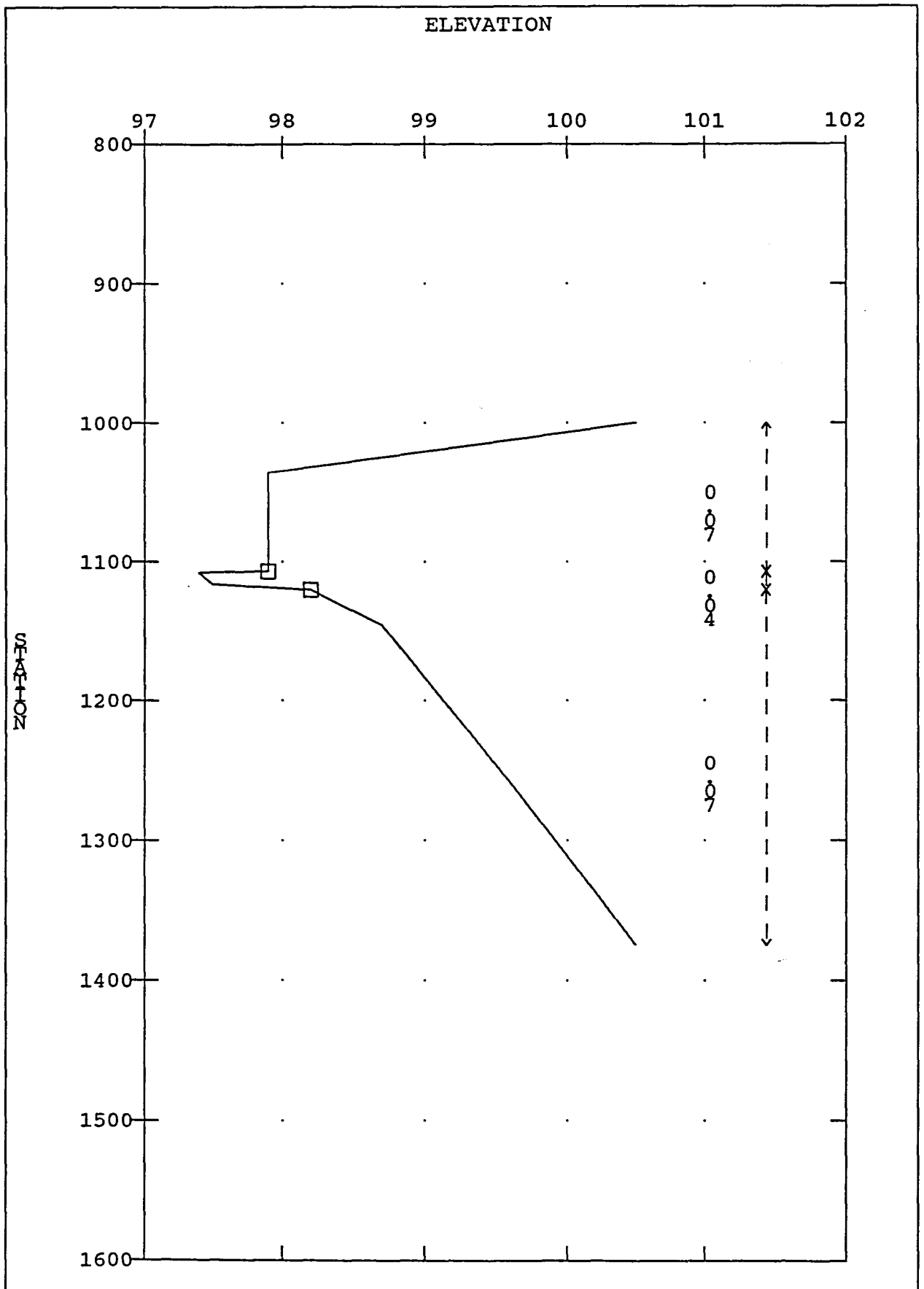

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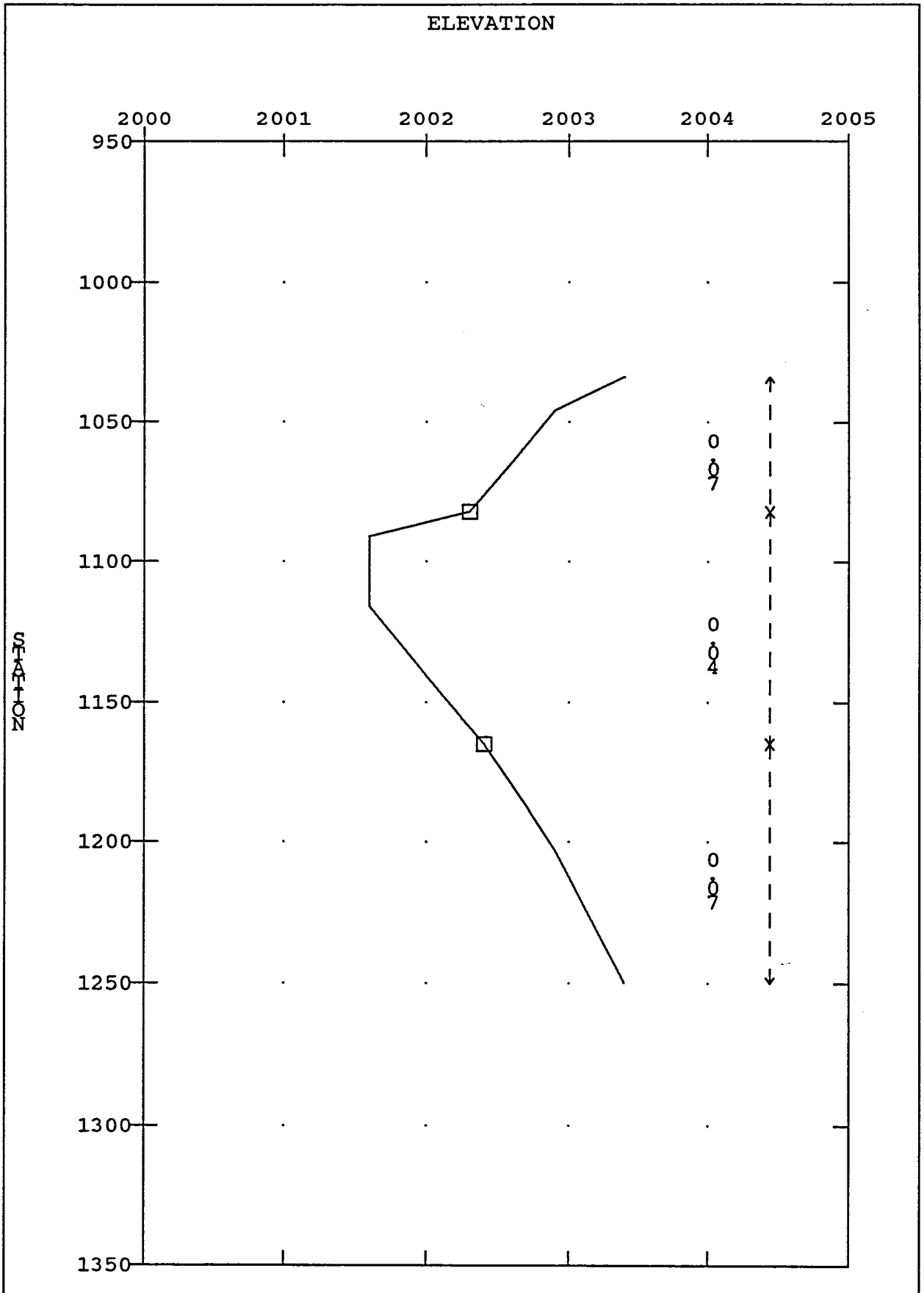

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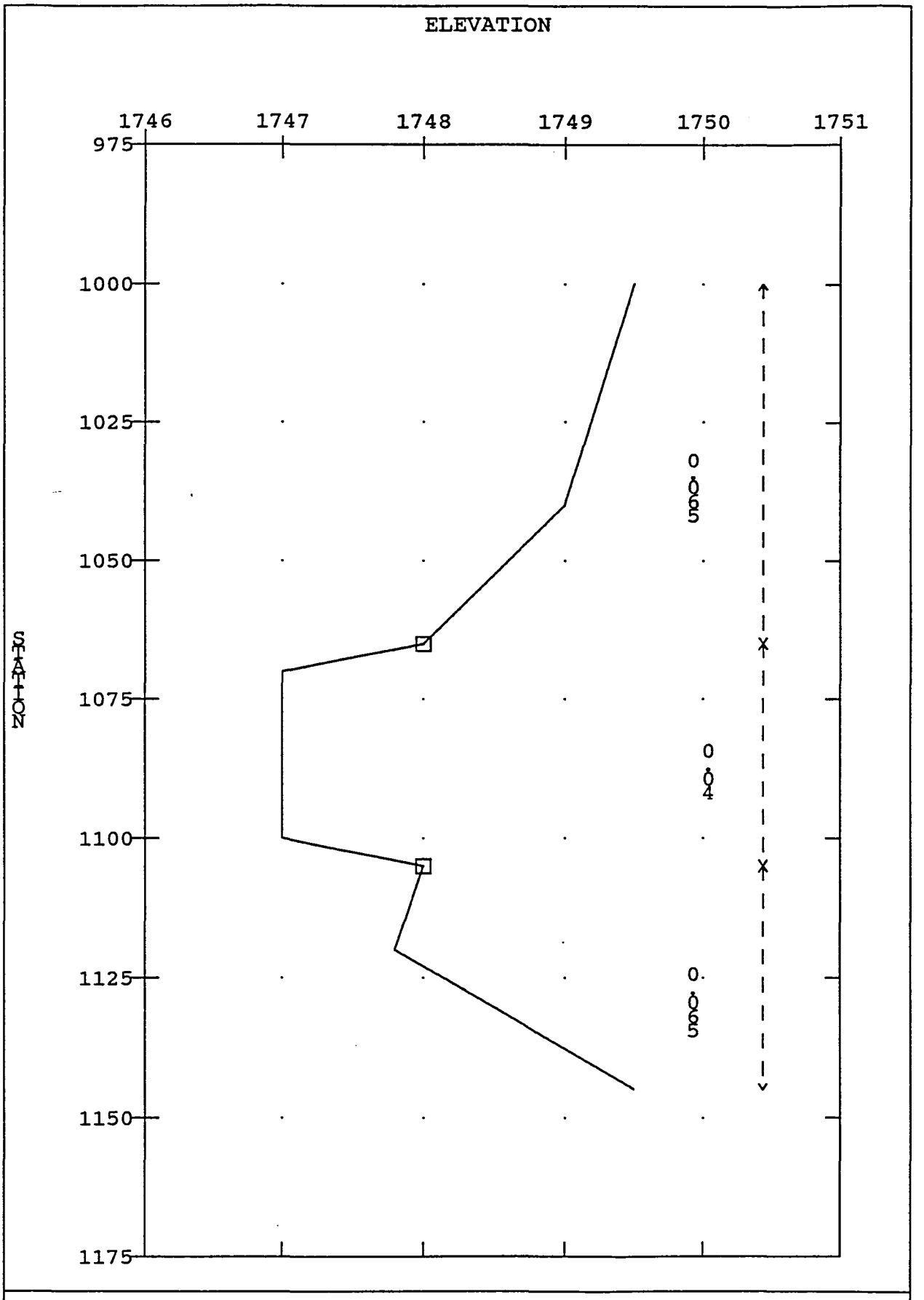

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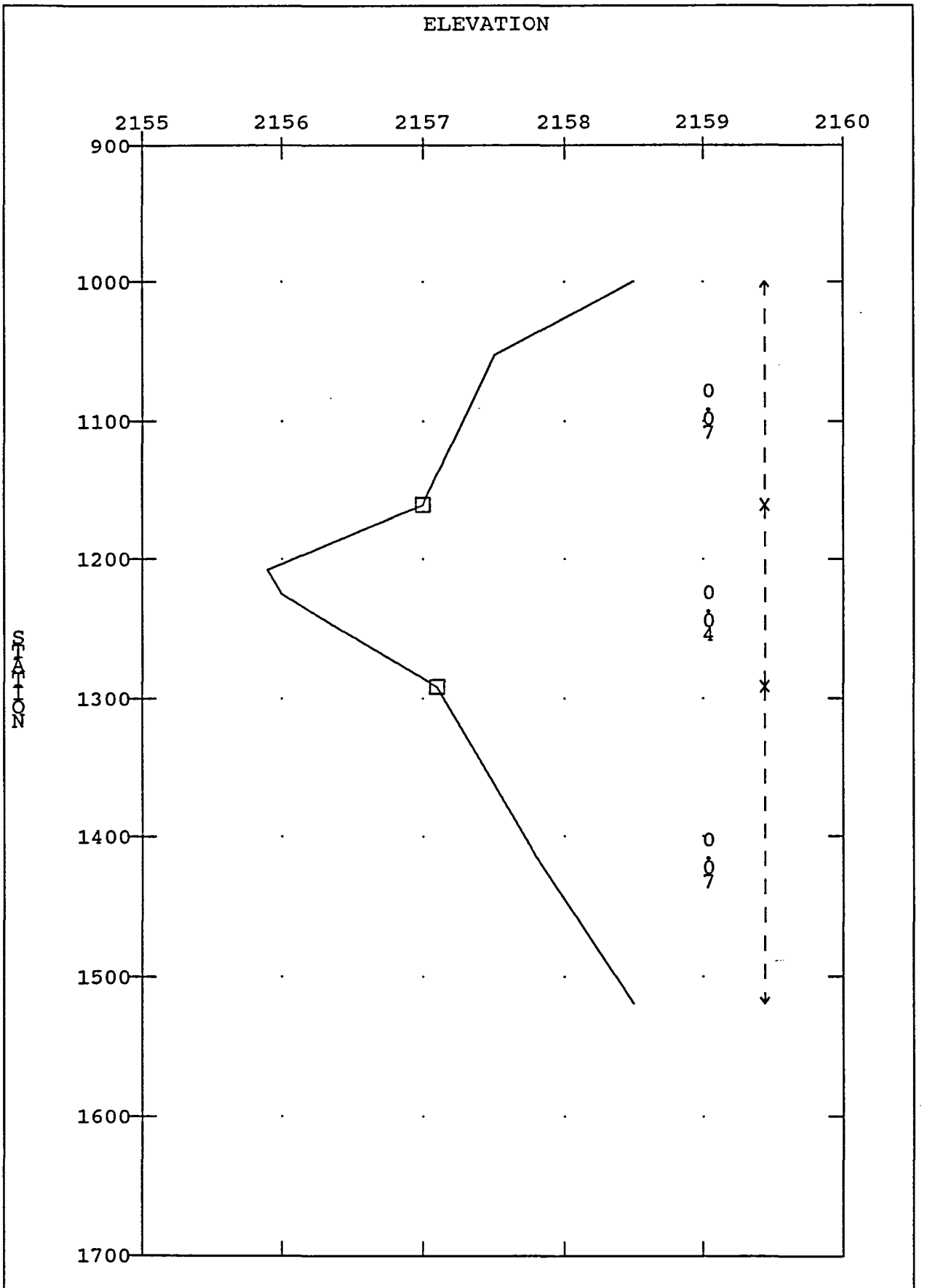

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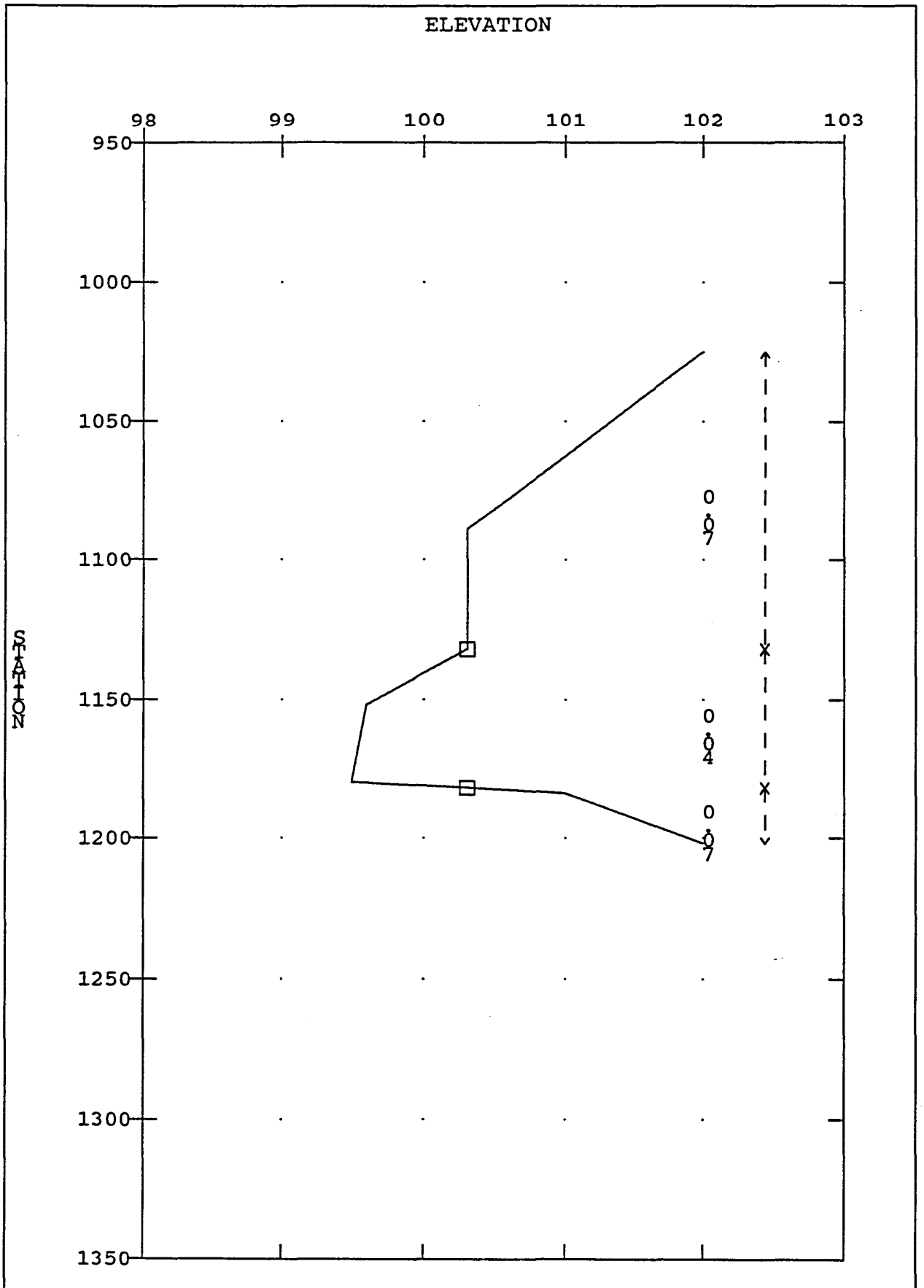

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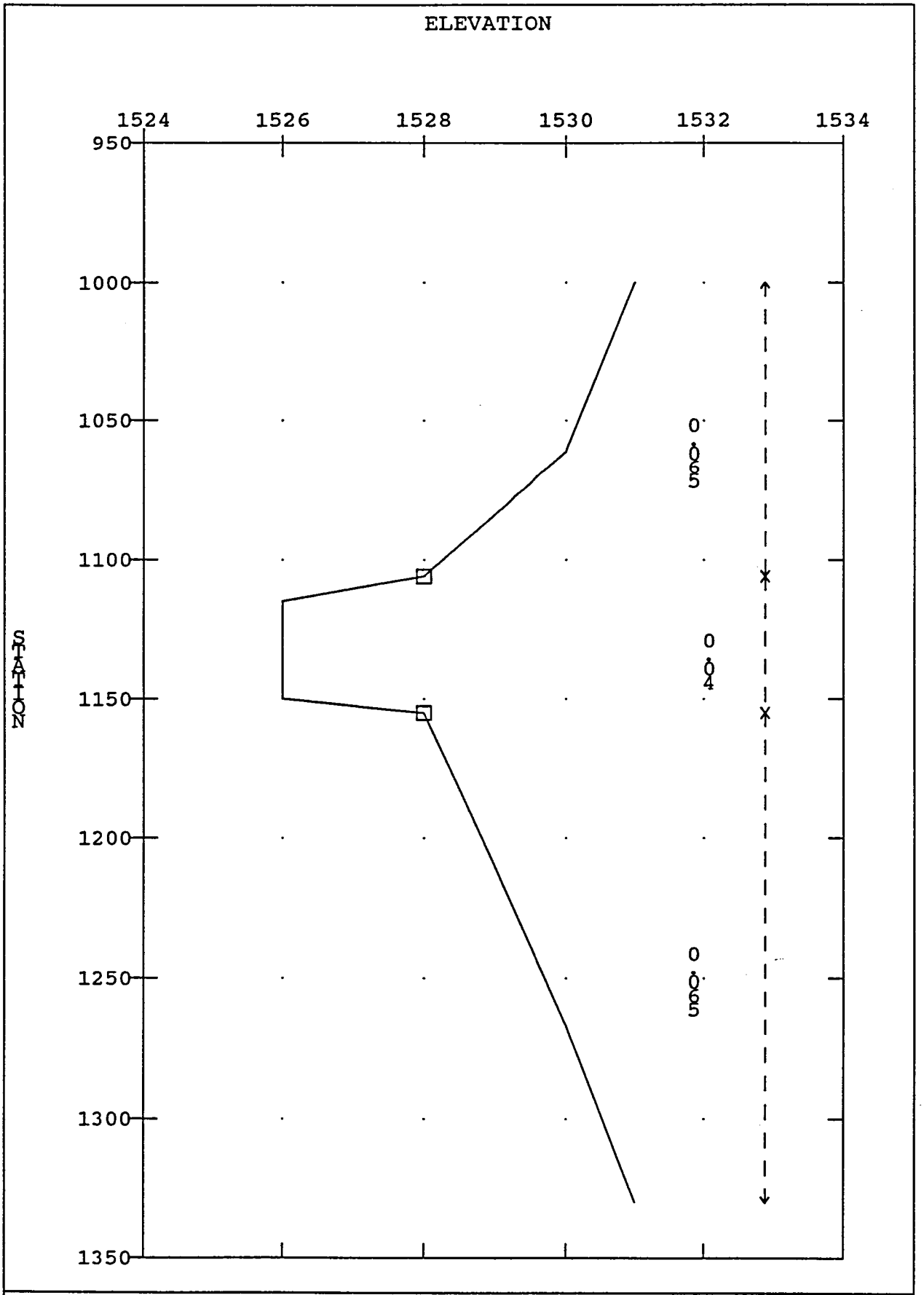

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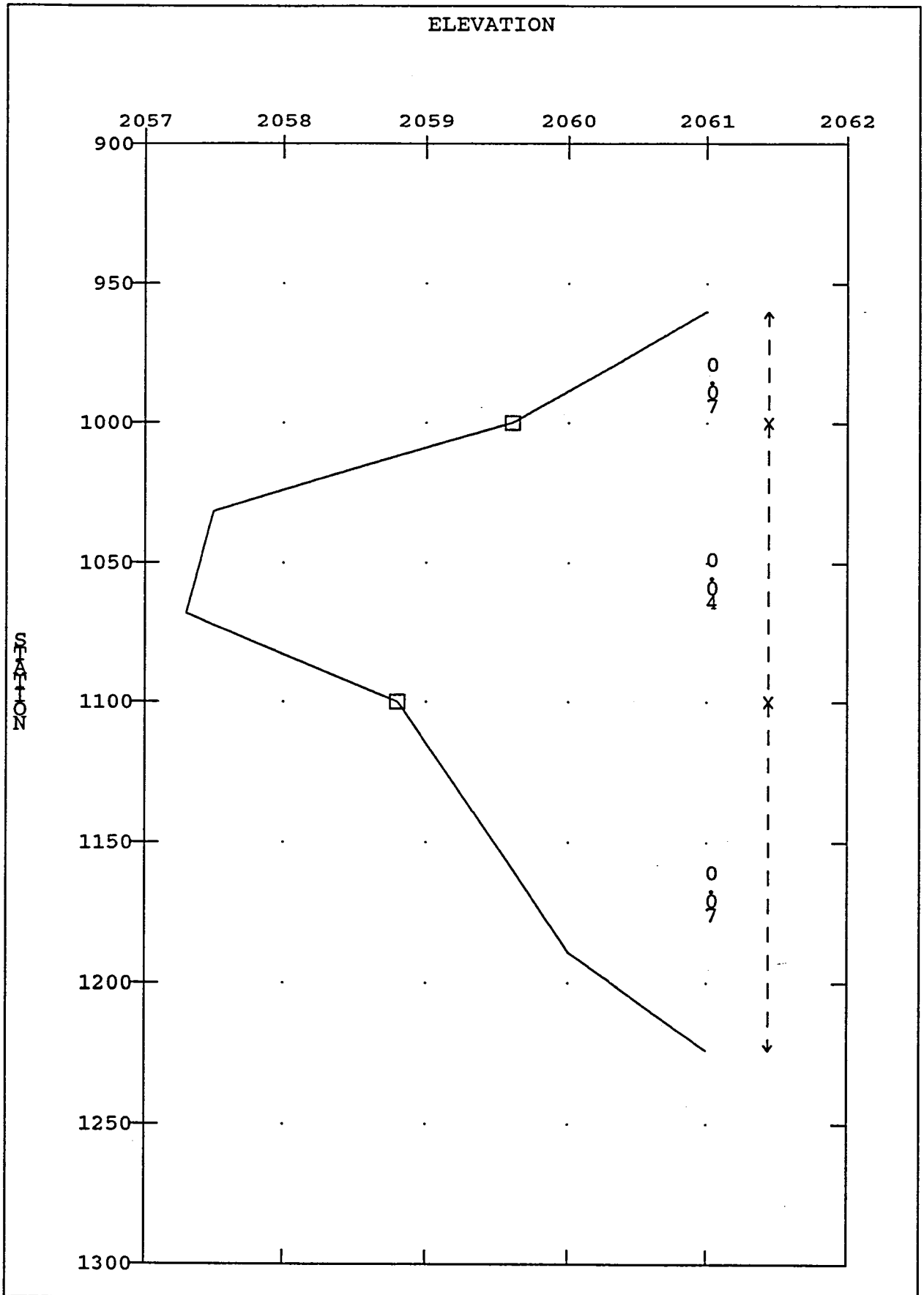

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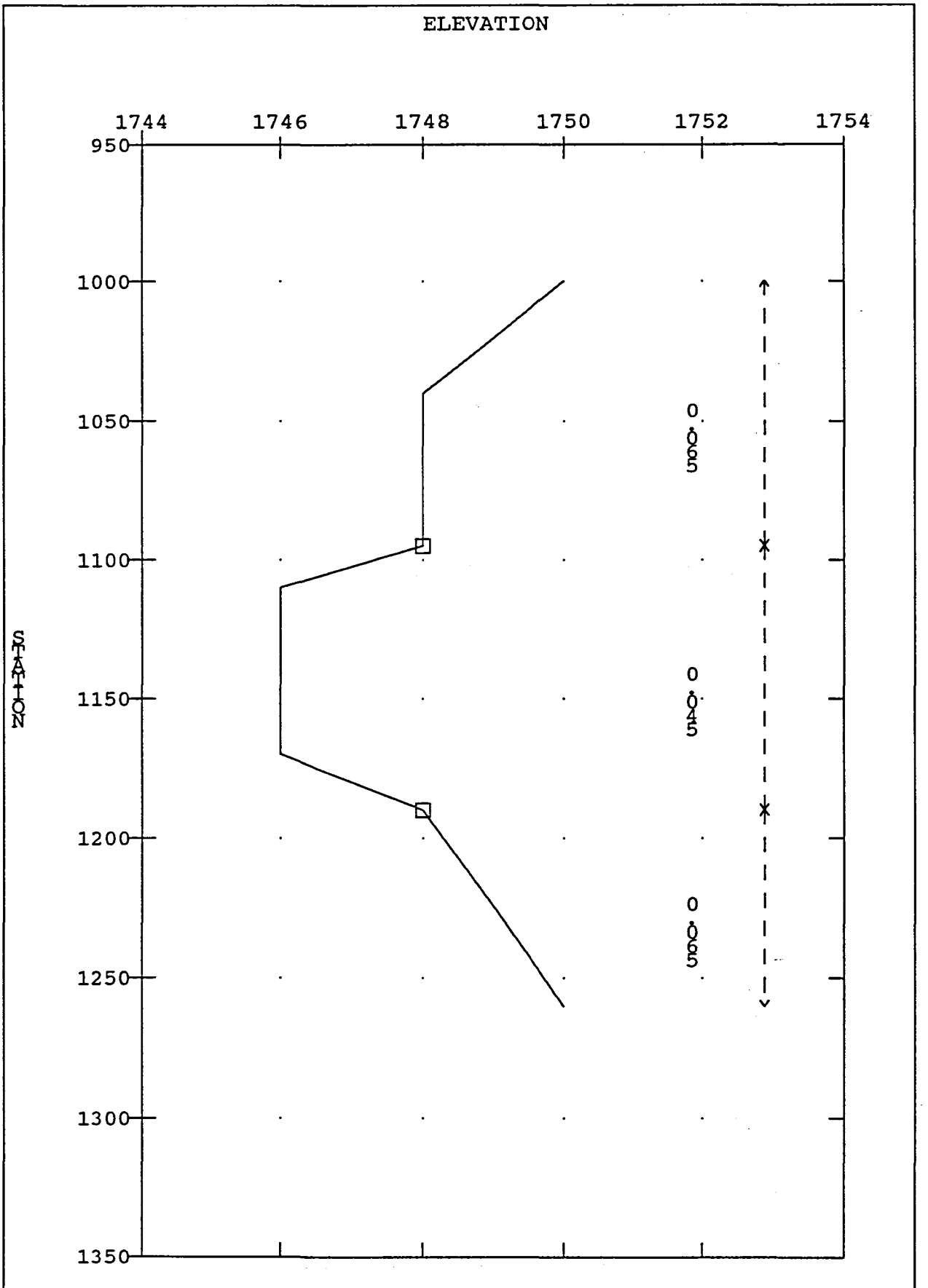

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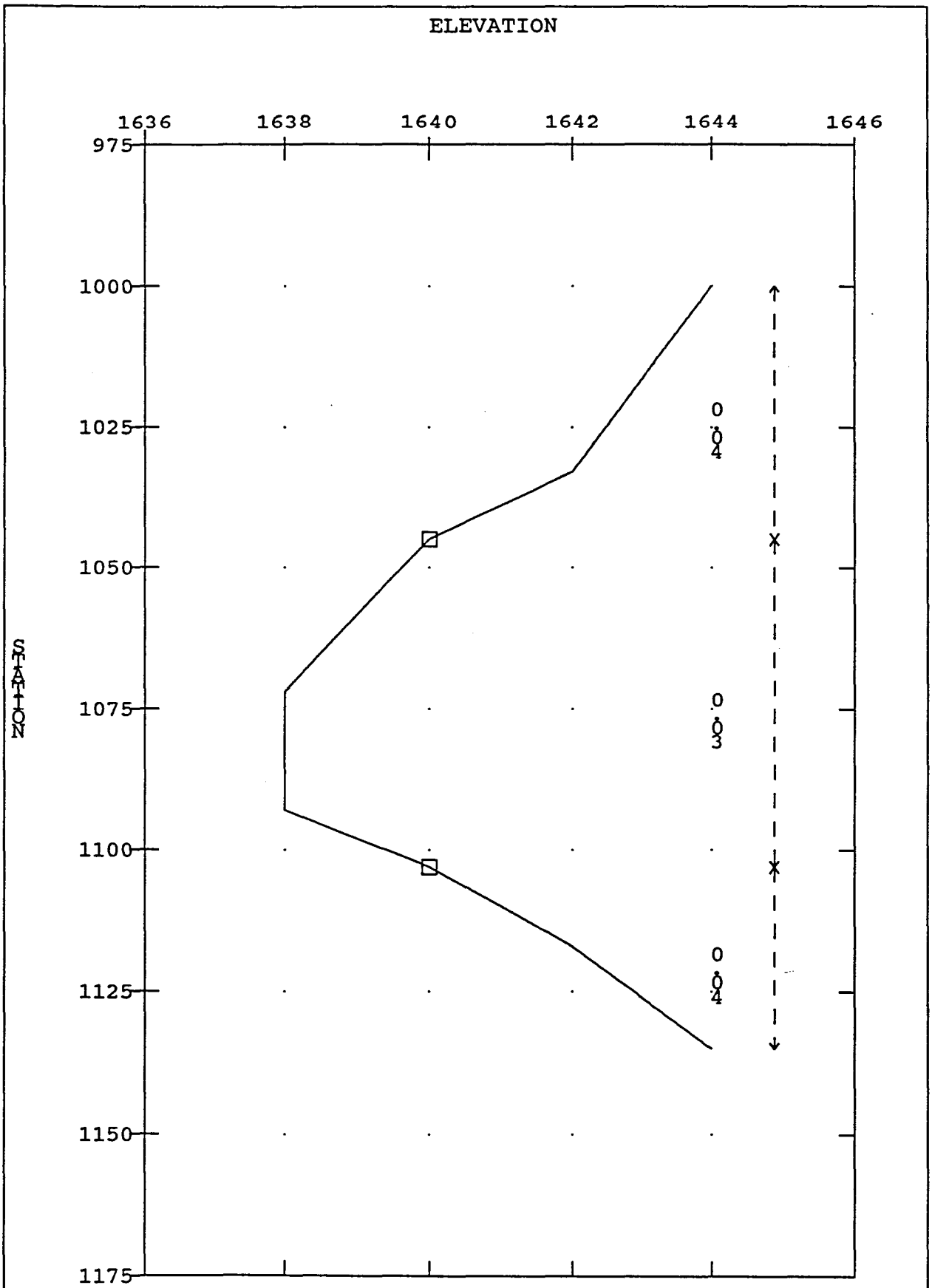

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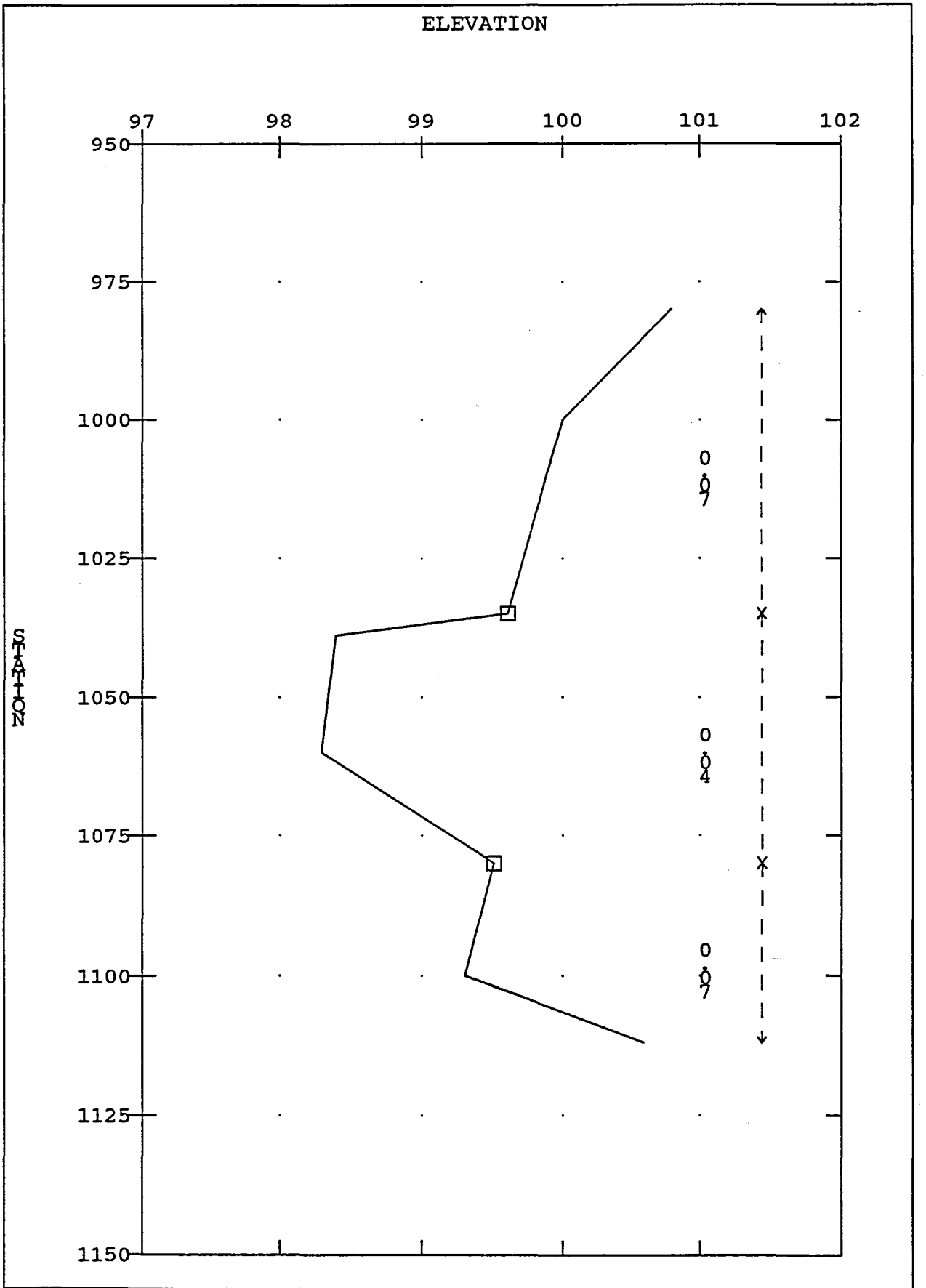

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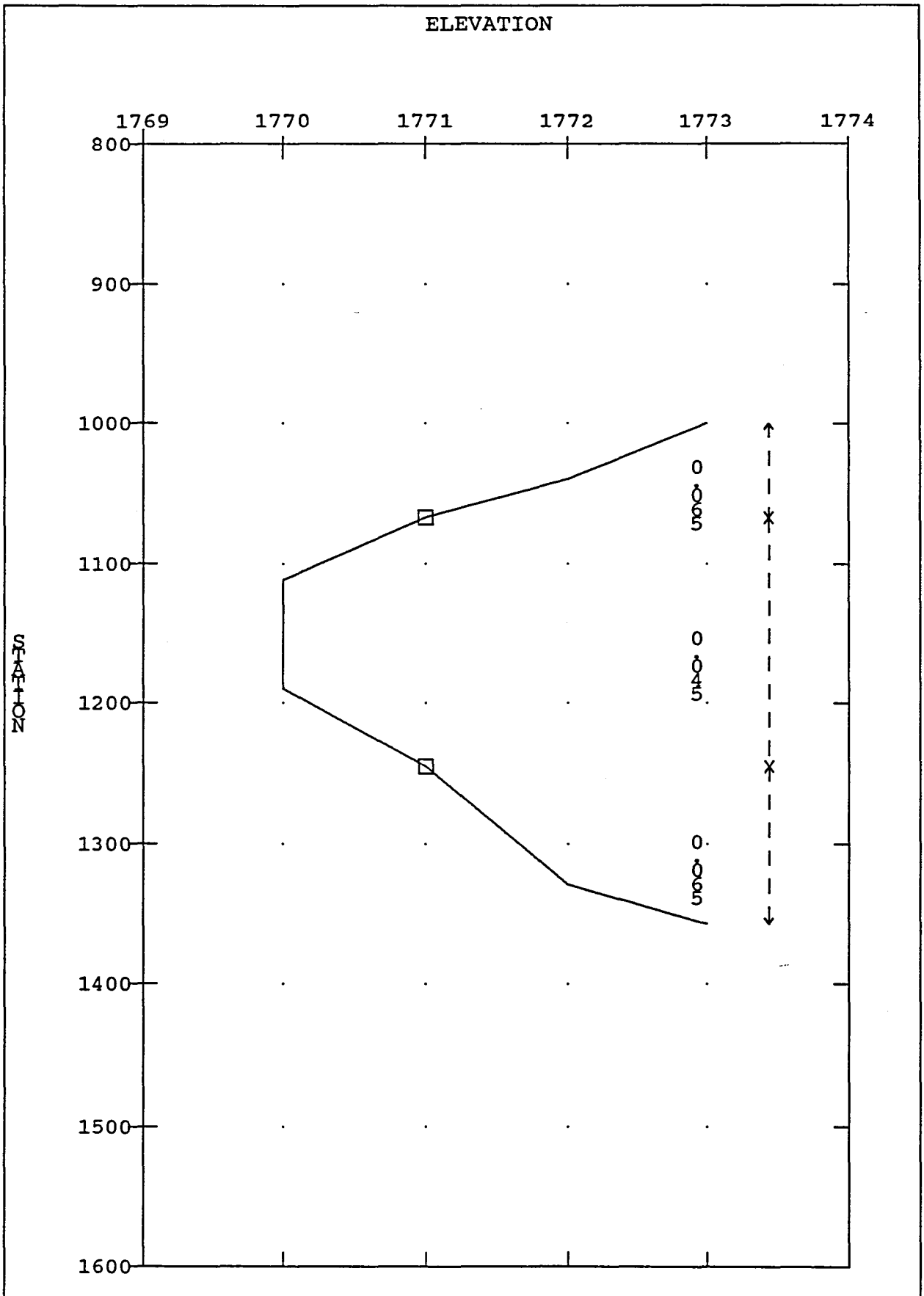

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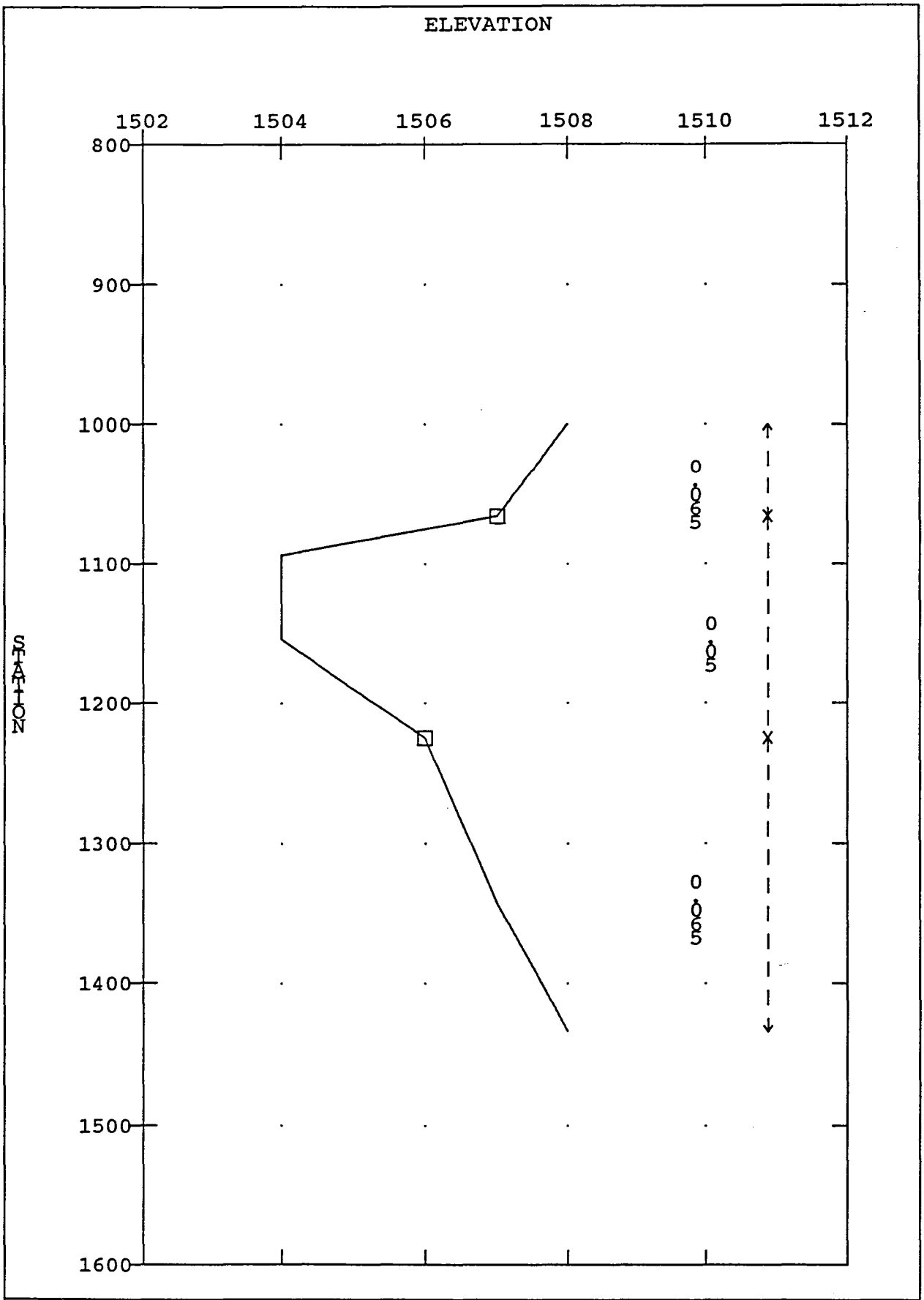

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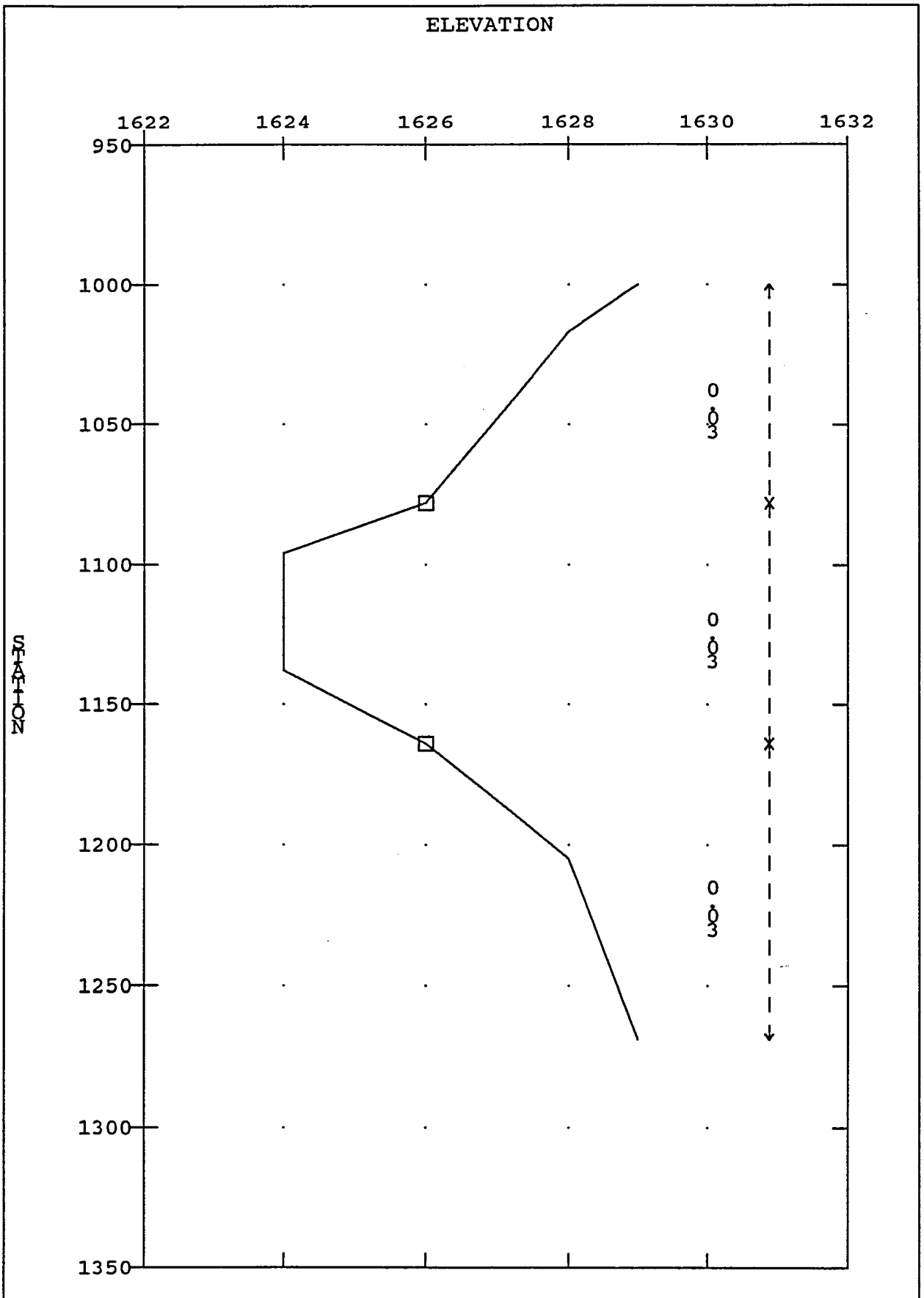
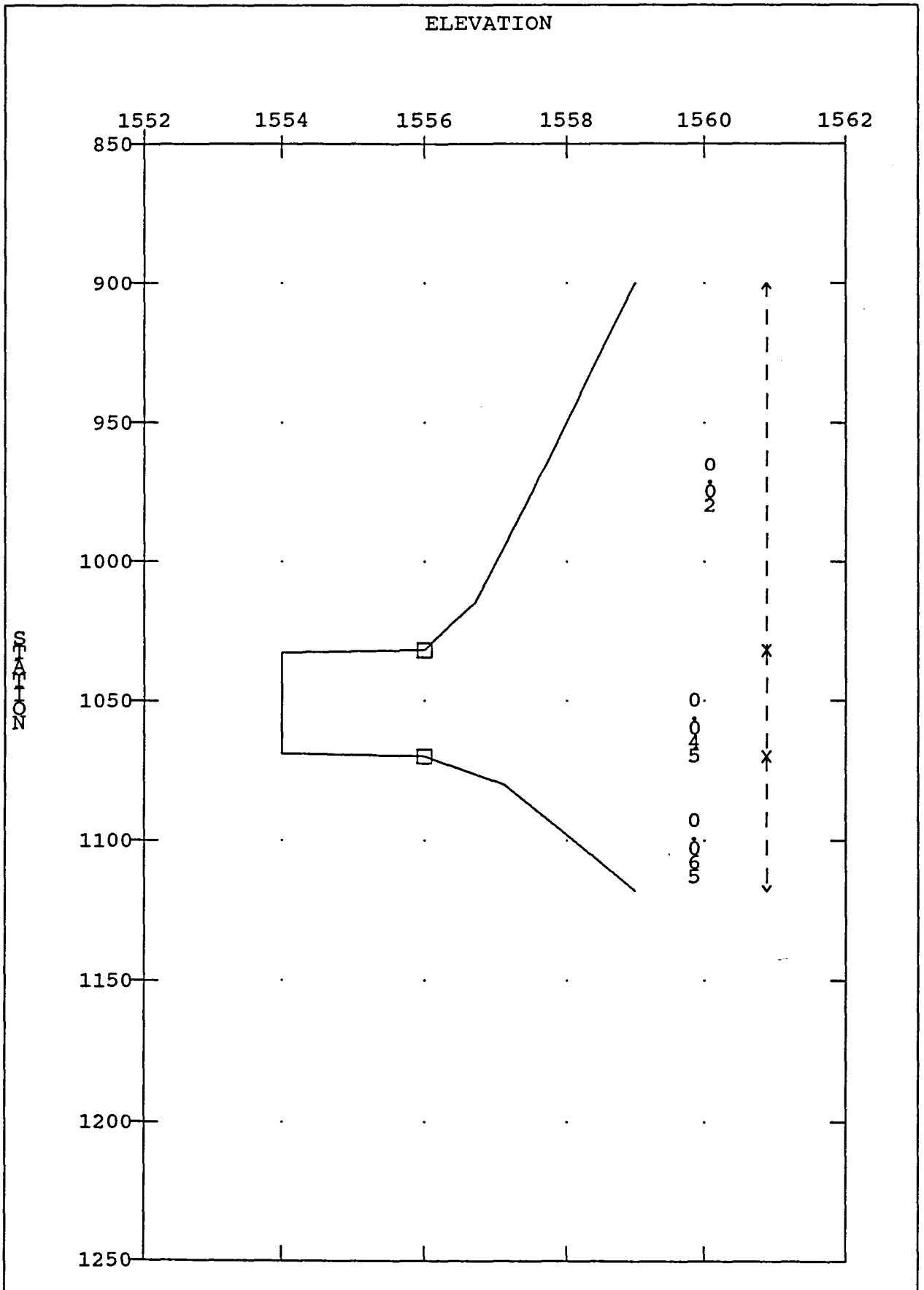


SECTION : 571572

Rio Verde South FIS



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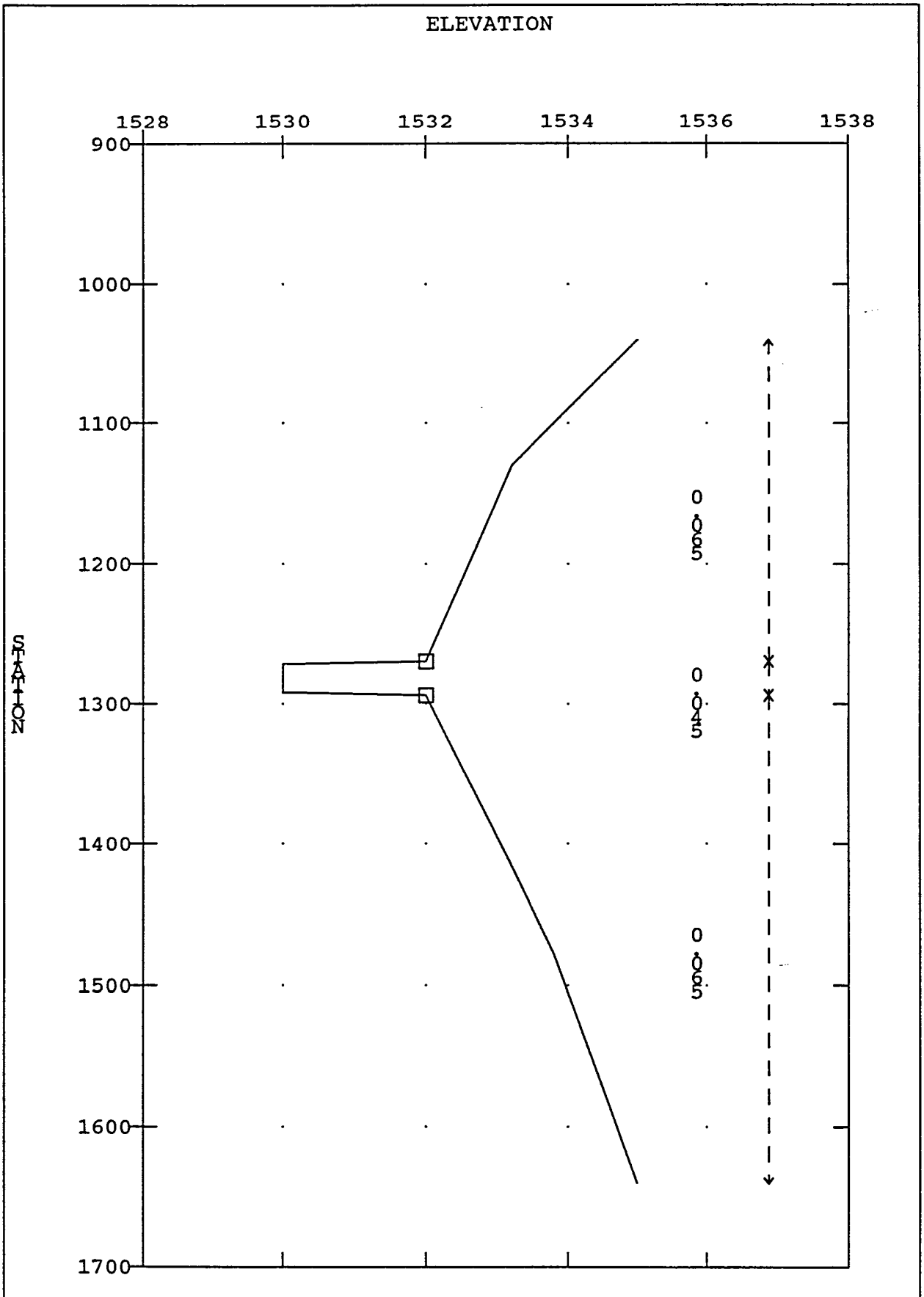
Rio Verde South FIS



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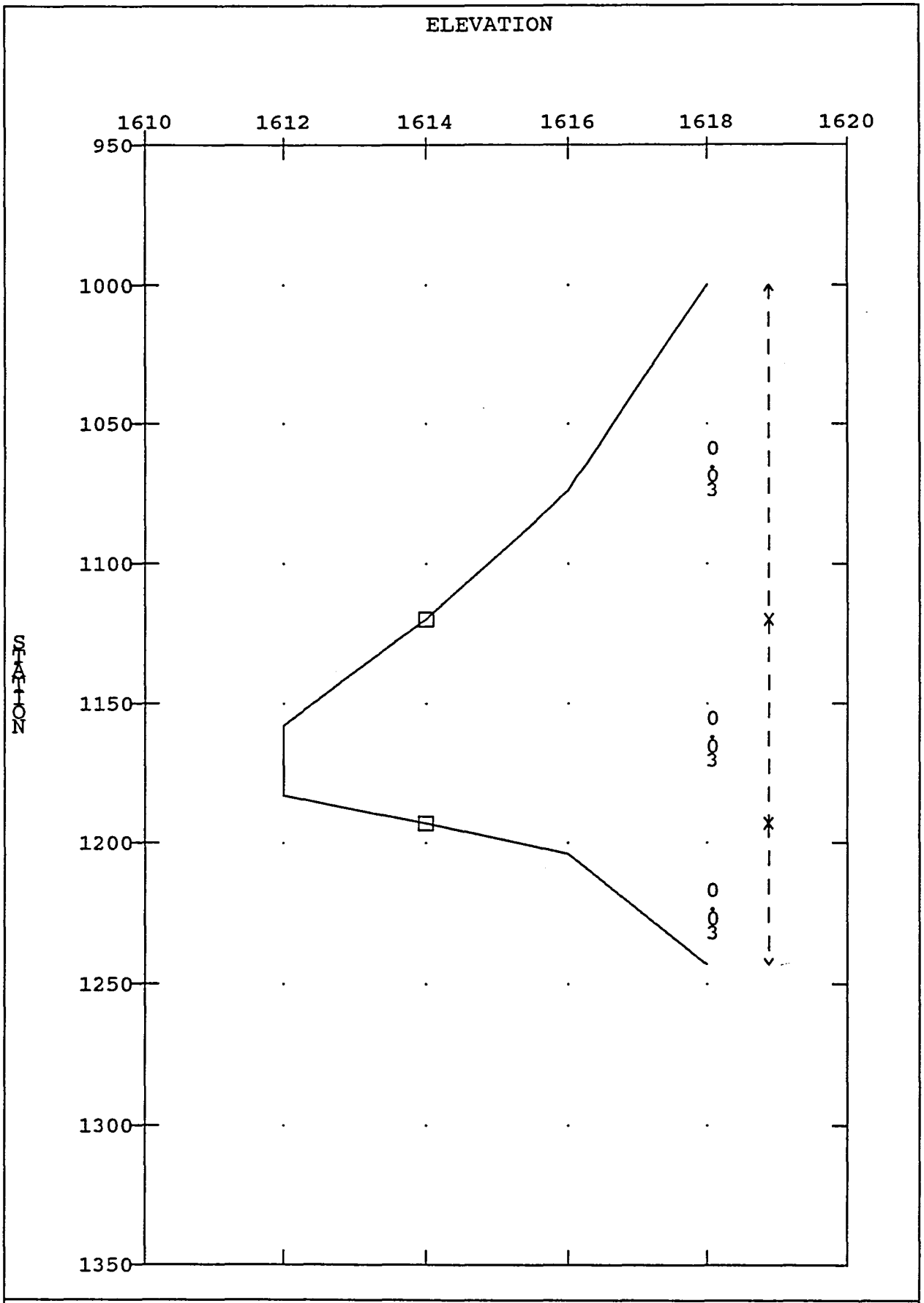

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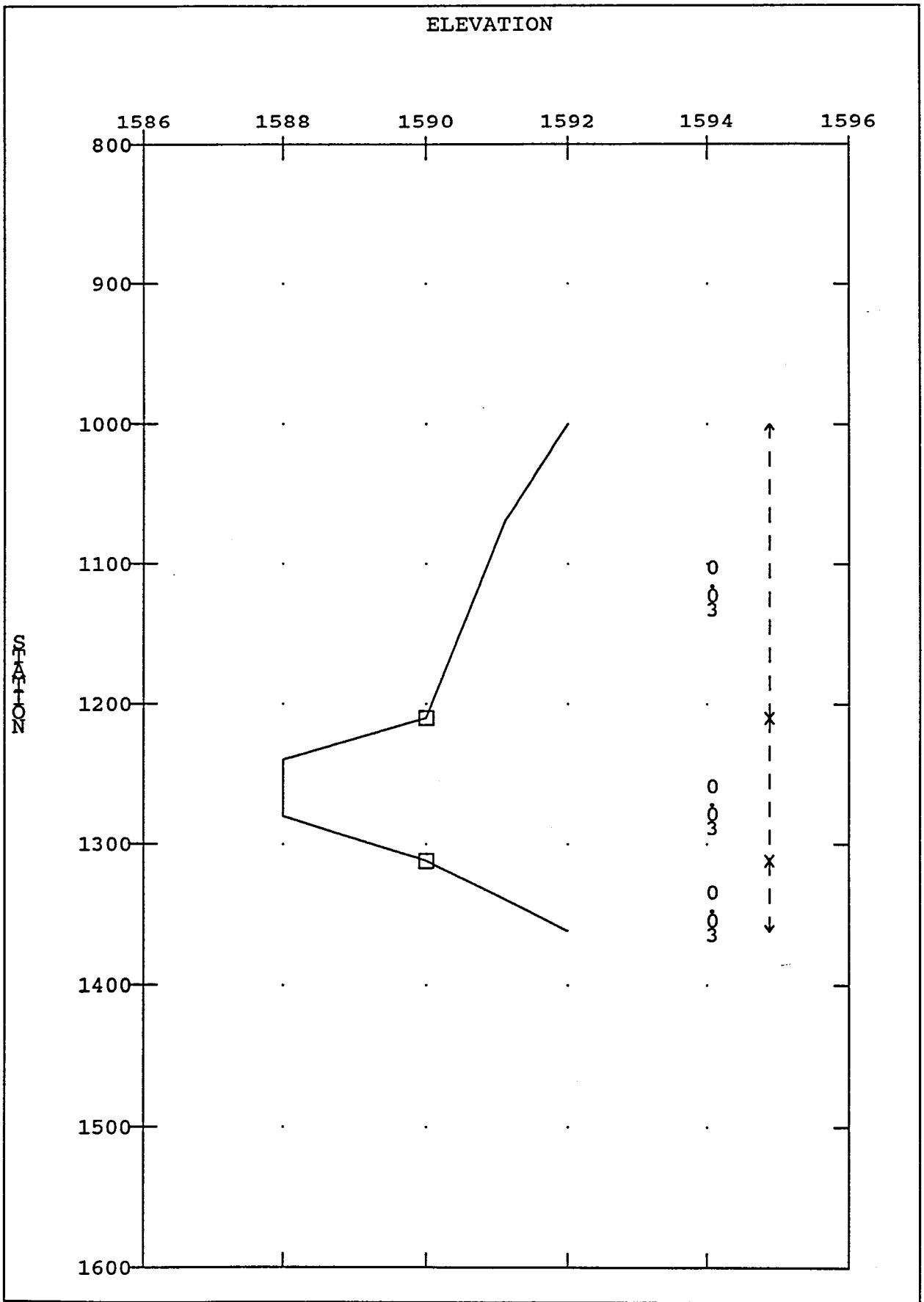

SECTION : 566567

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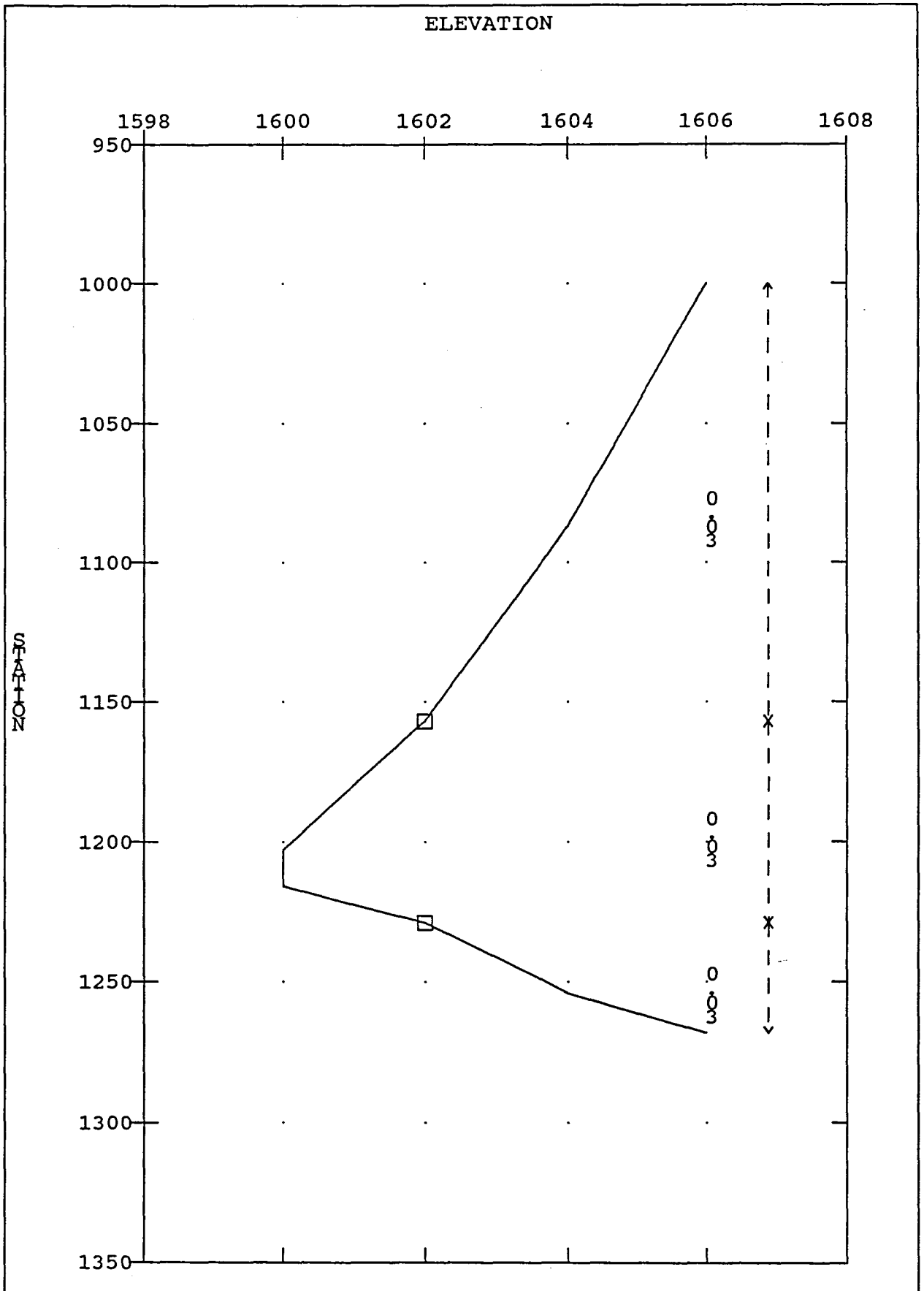

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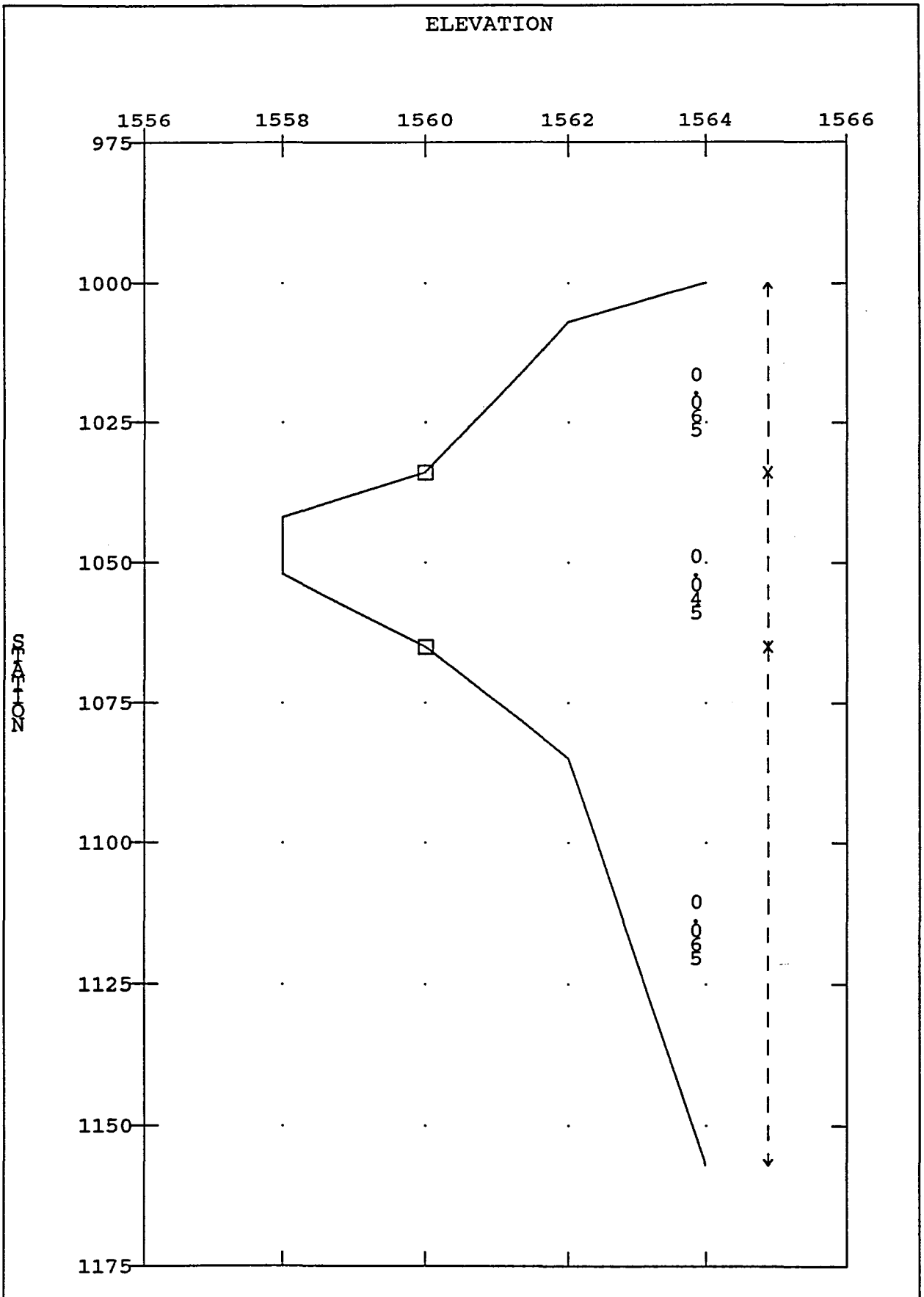

SECTION : 564570

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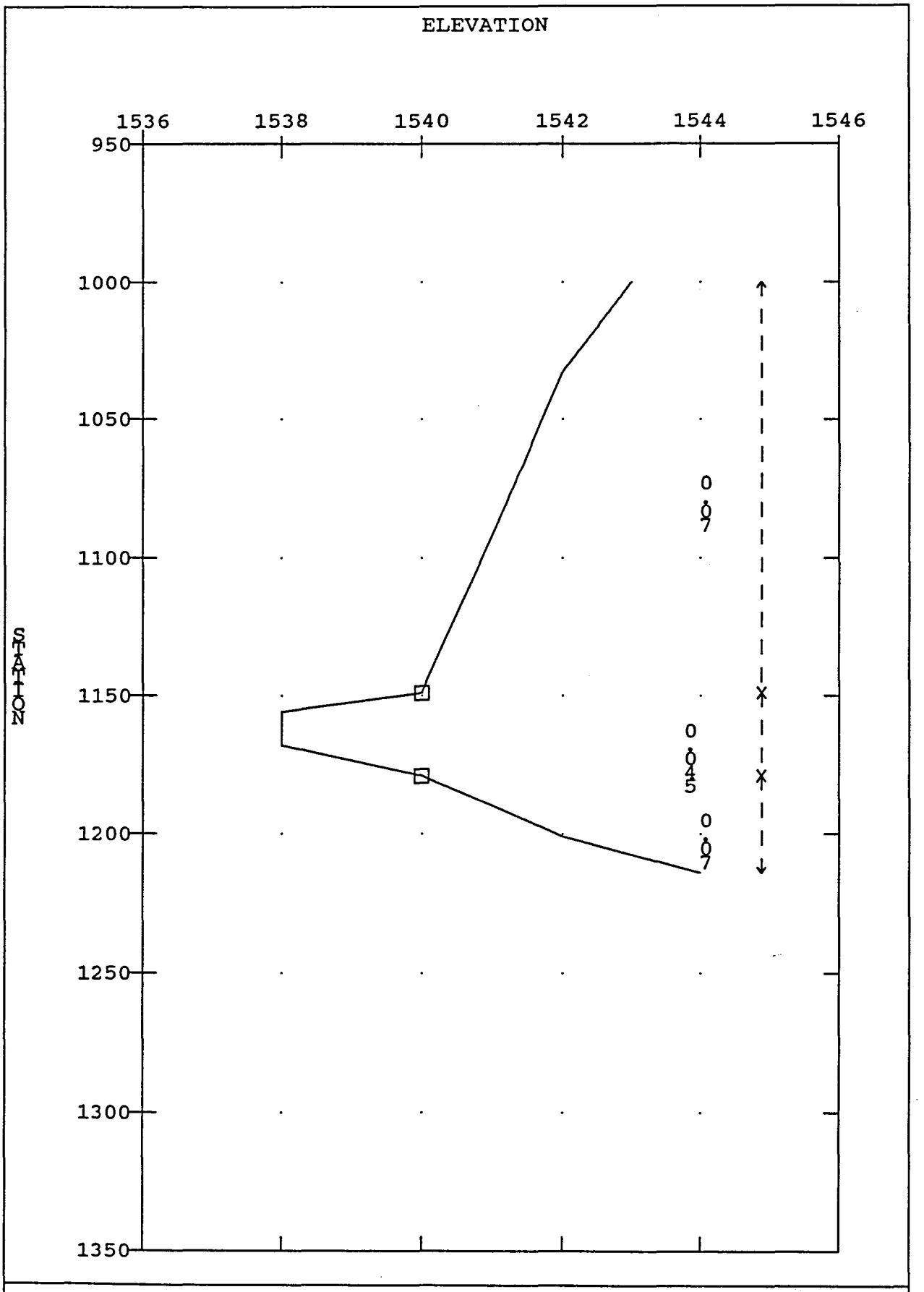

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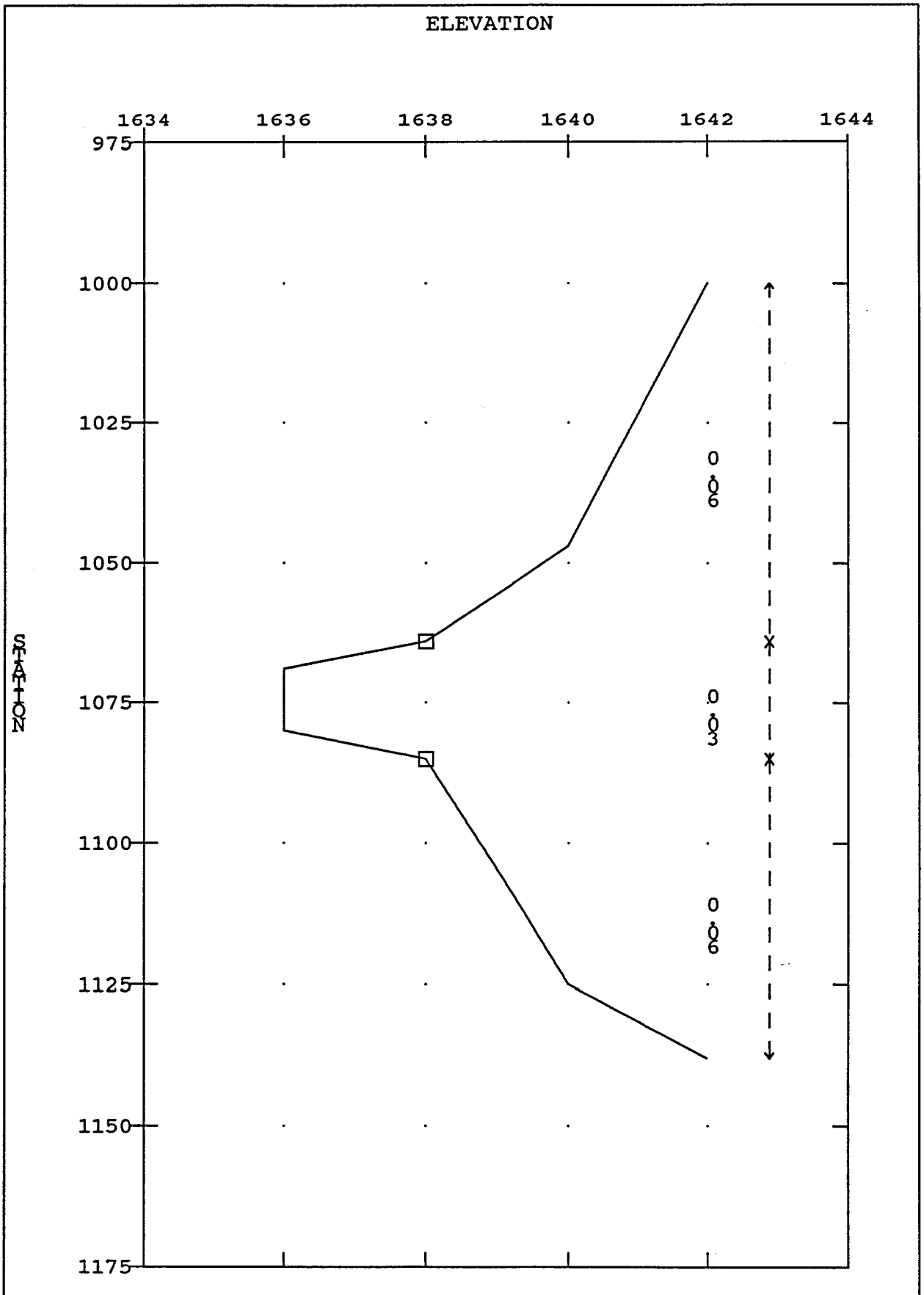

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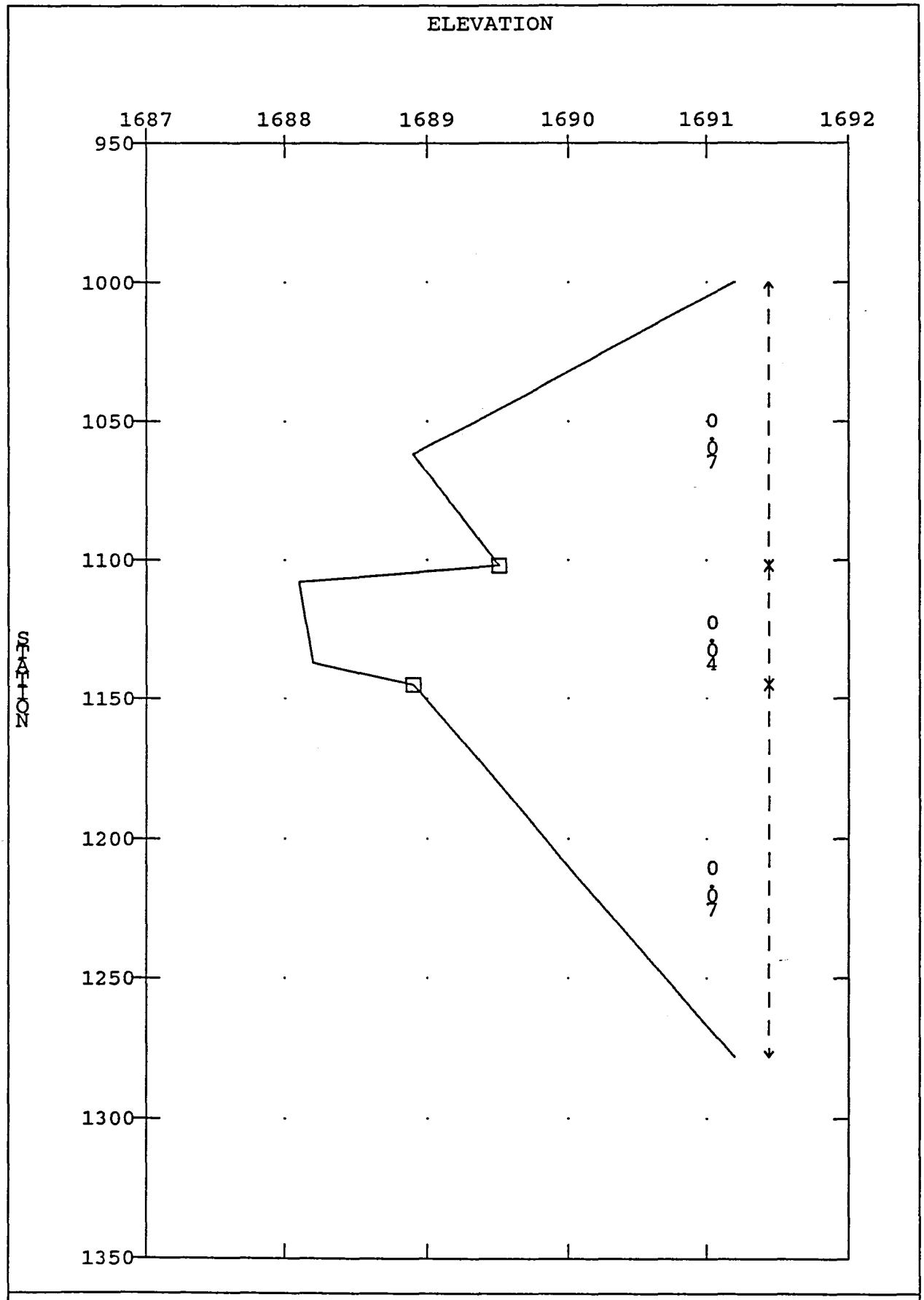

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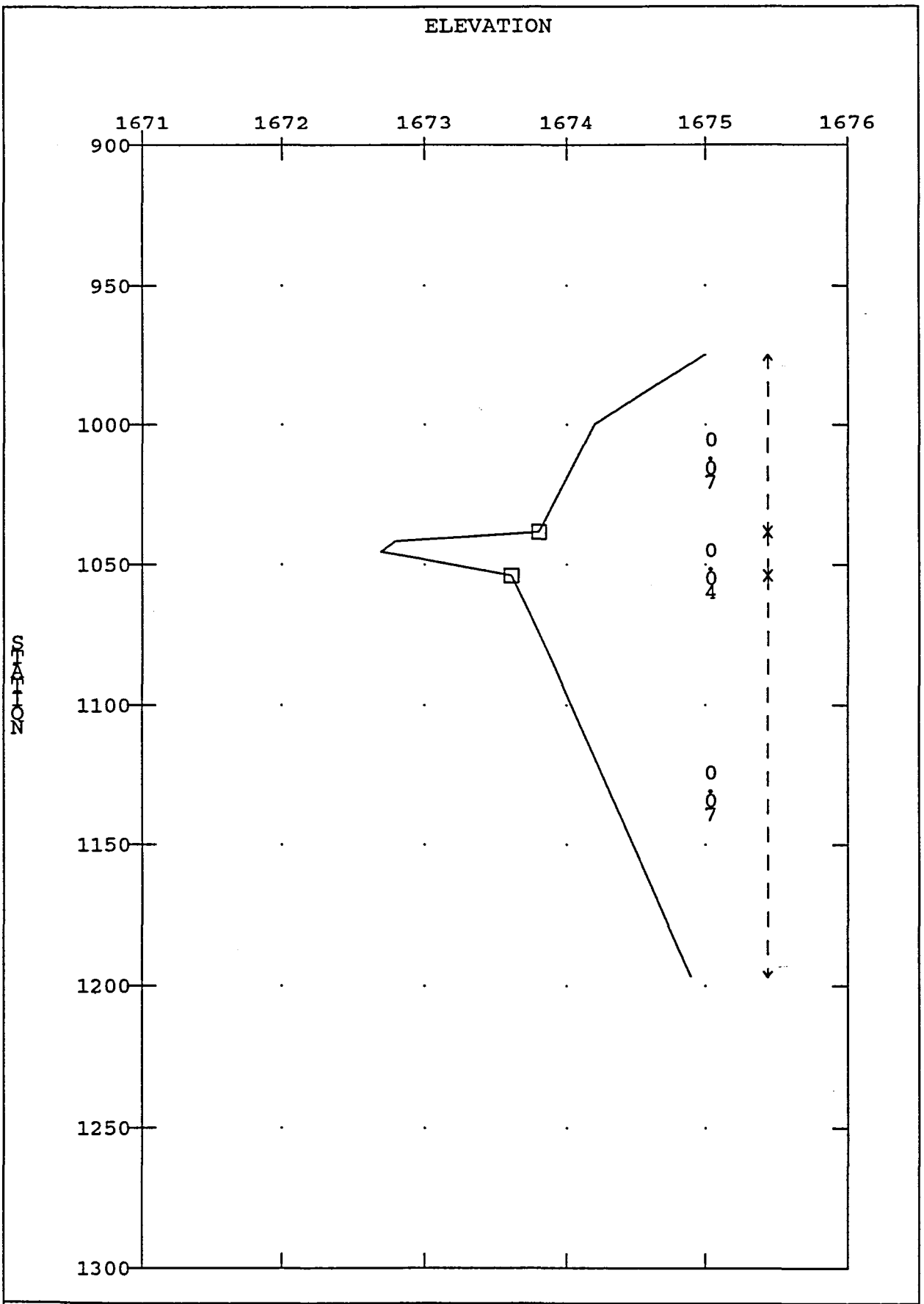

SECTION : 560561

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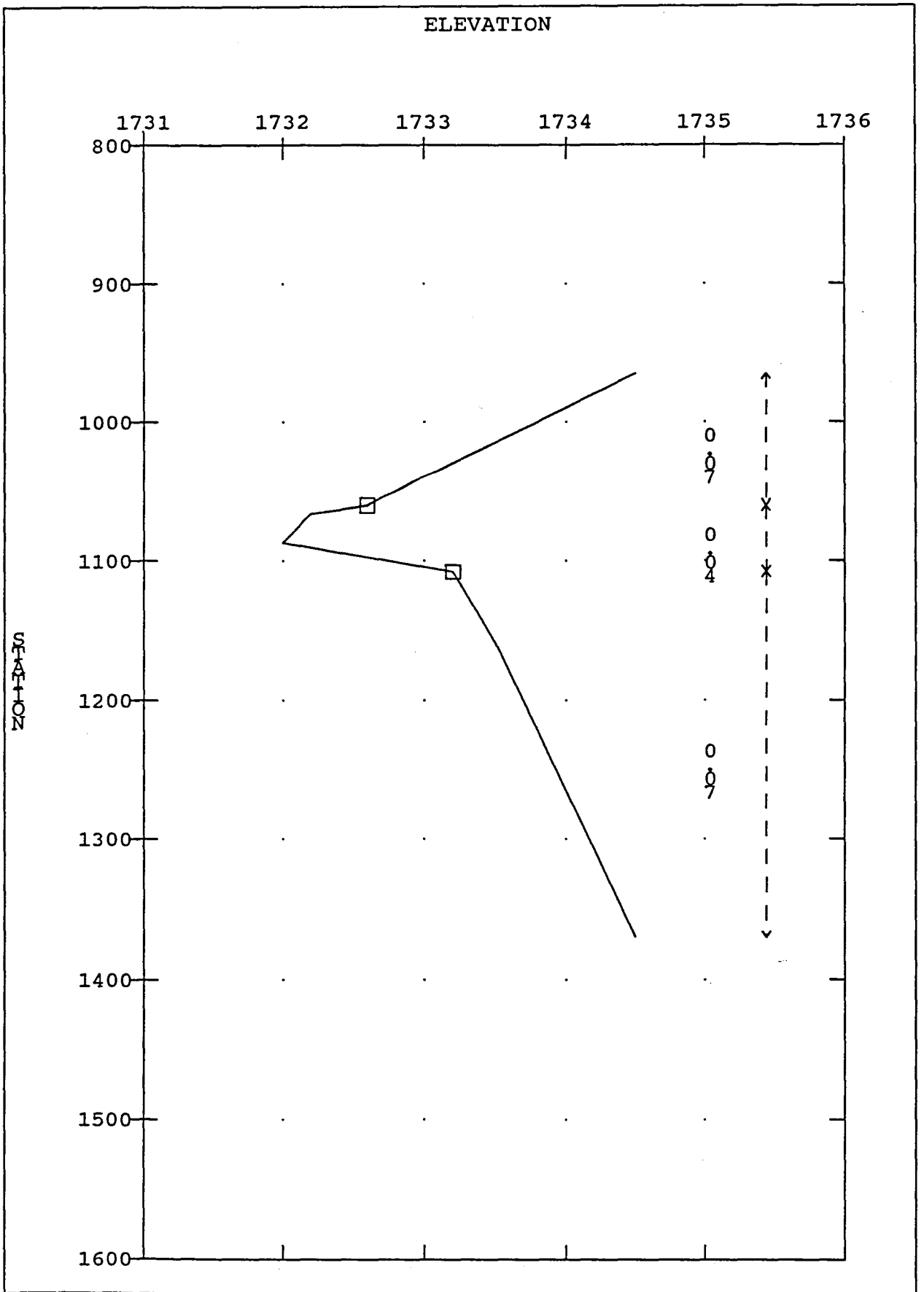

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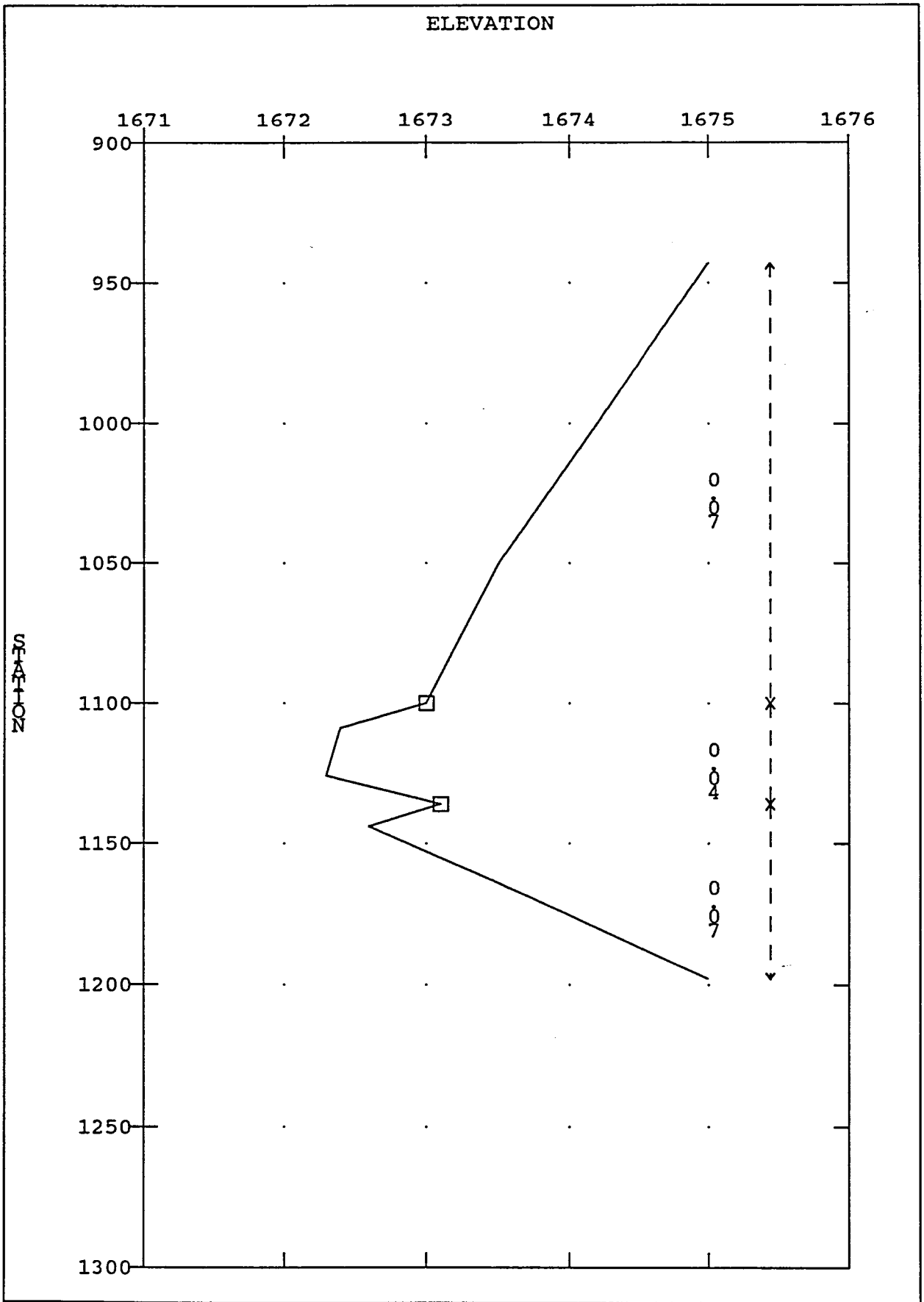
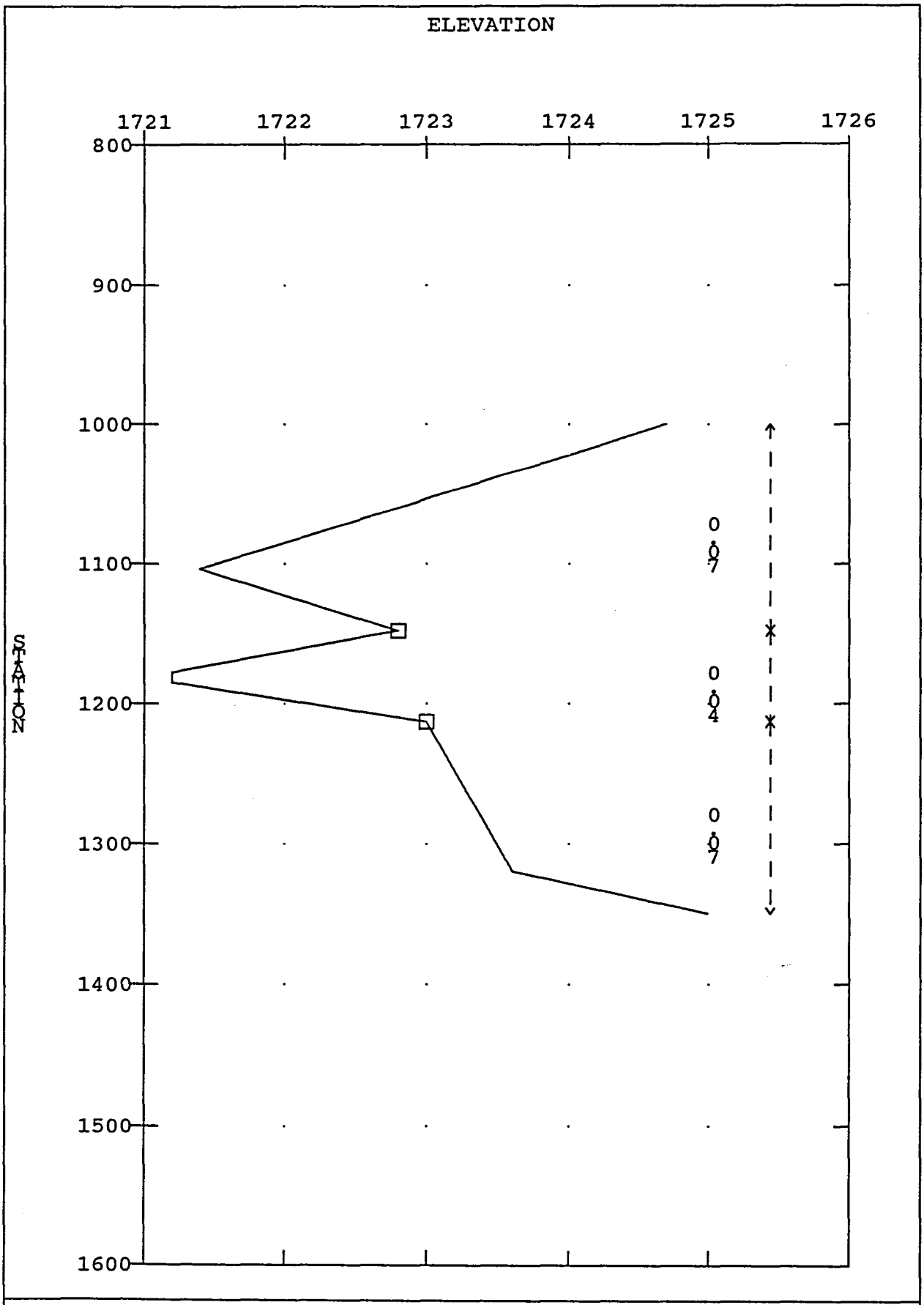


SECTION : 559560

Rio Verde South FIS



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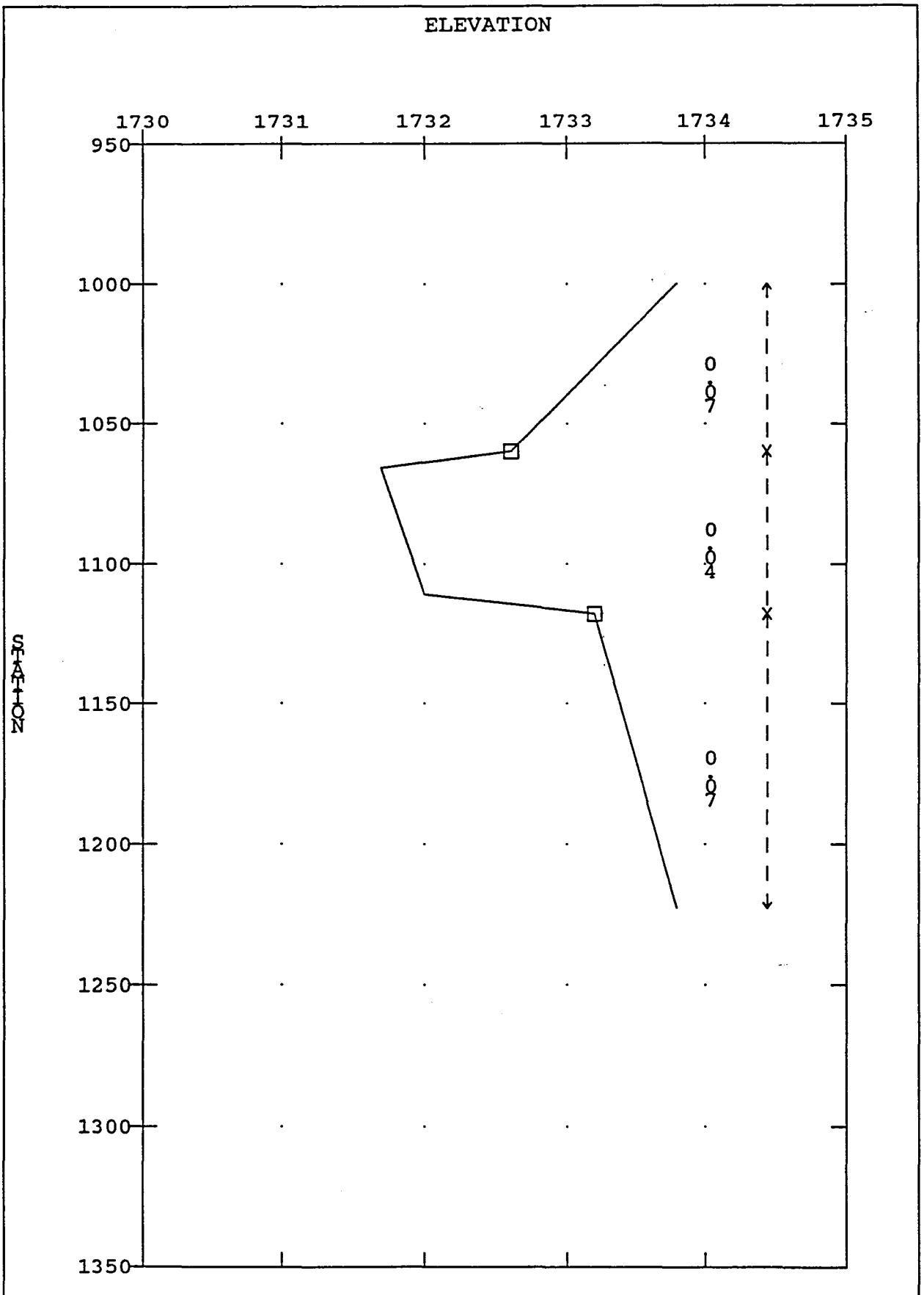
Rio Verde South FIS



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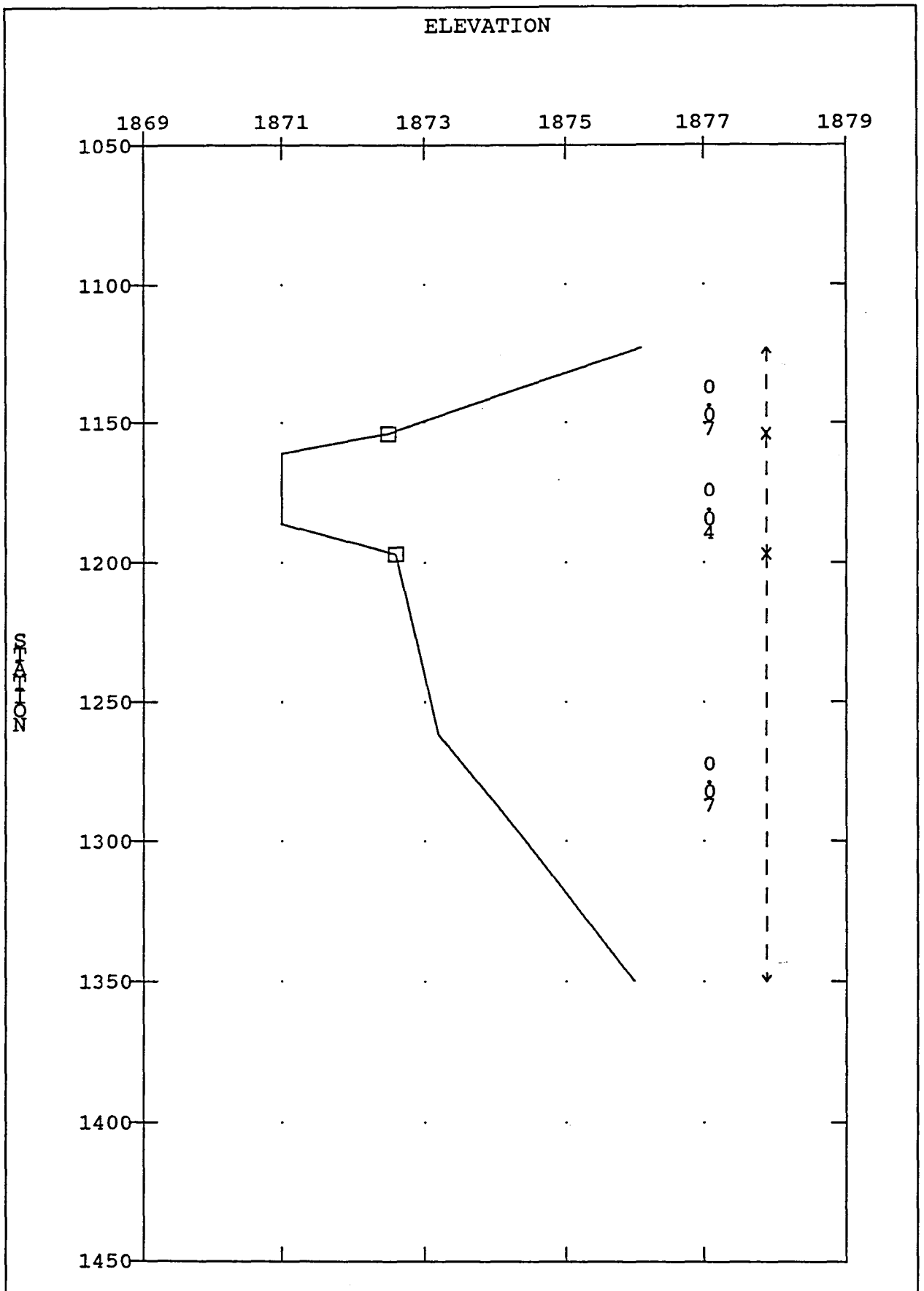

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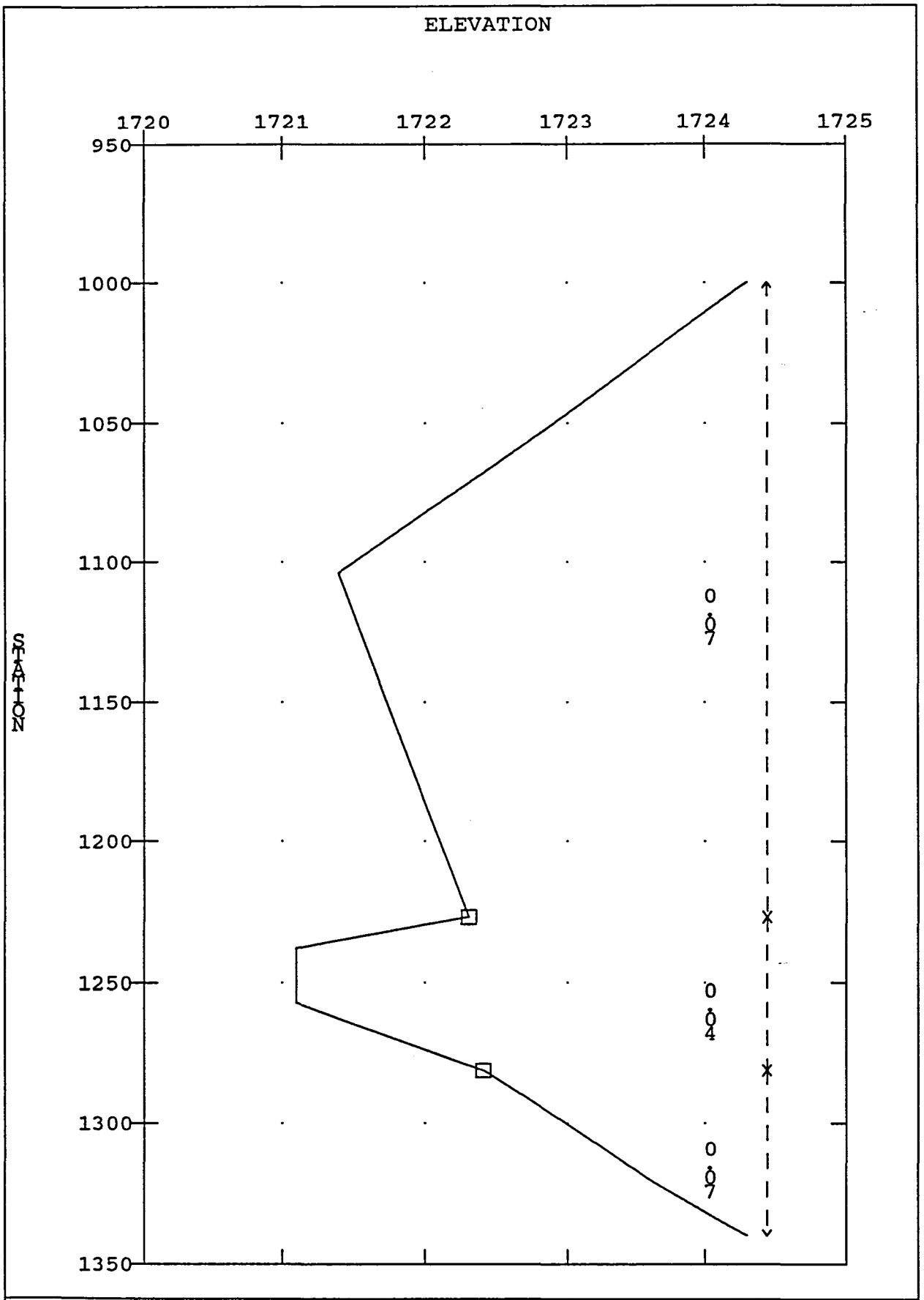

SECTION : 557559

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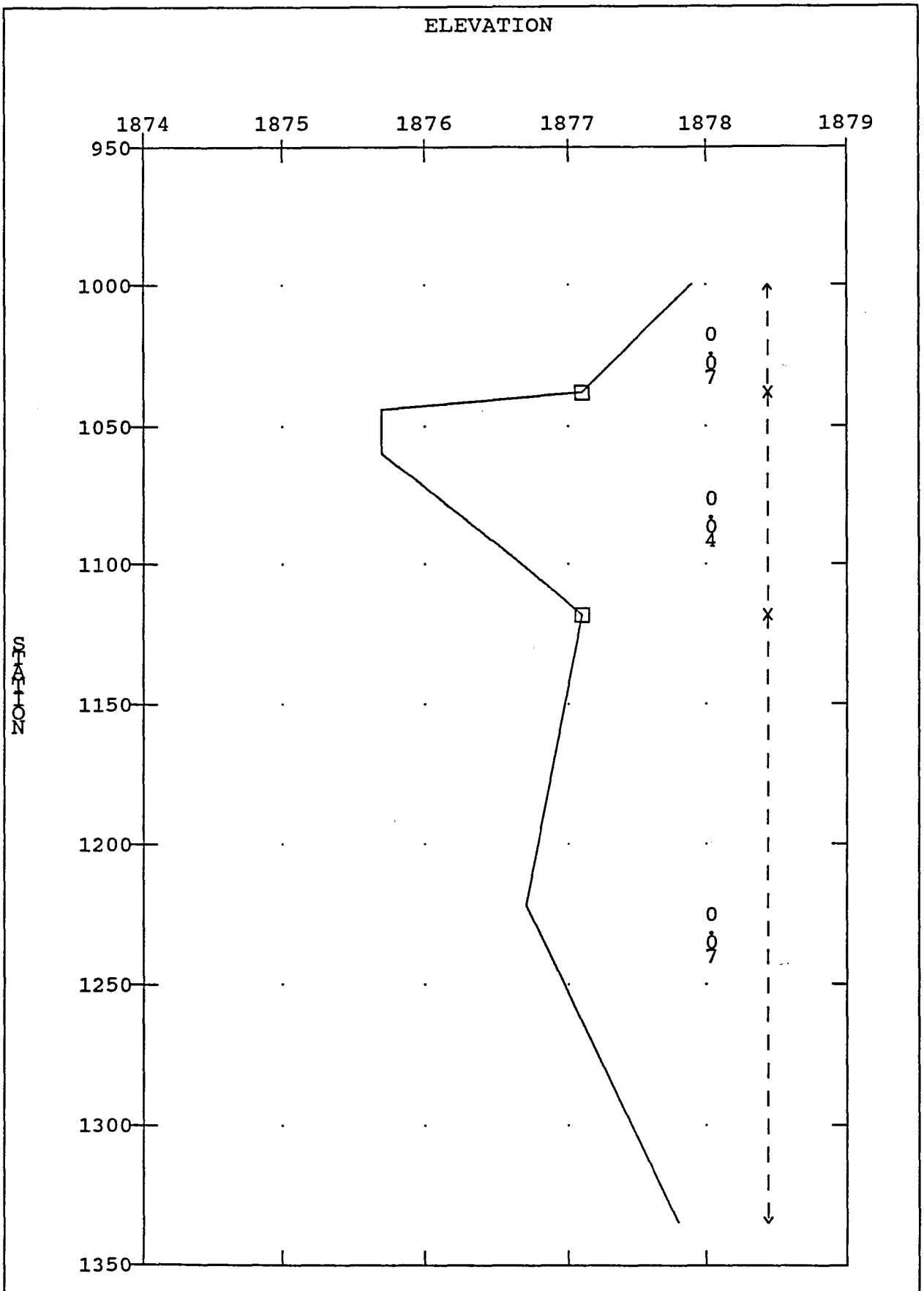

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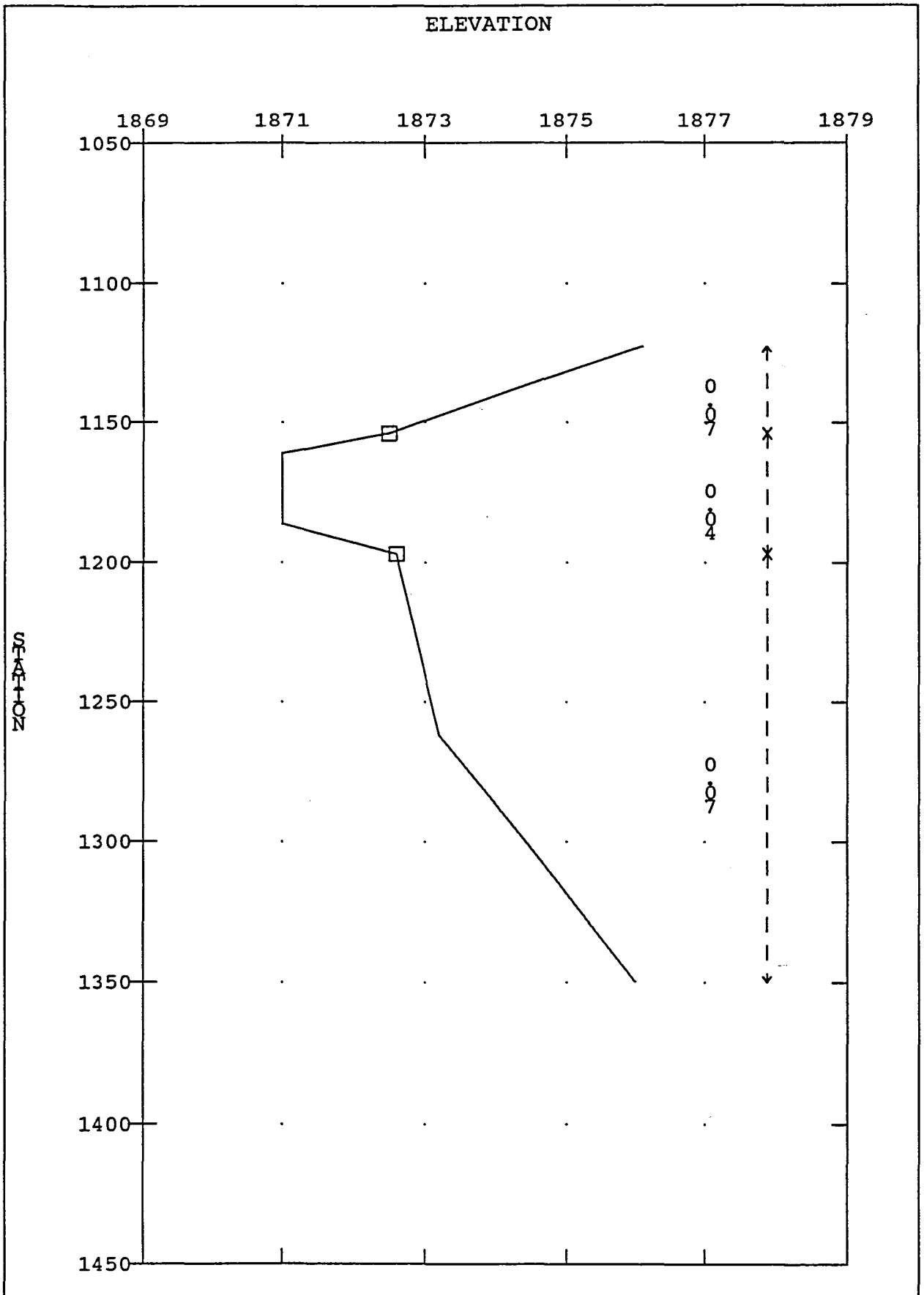

SECTION : 555557

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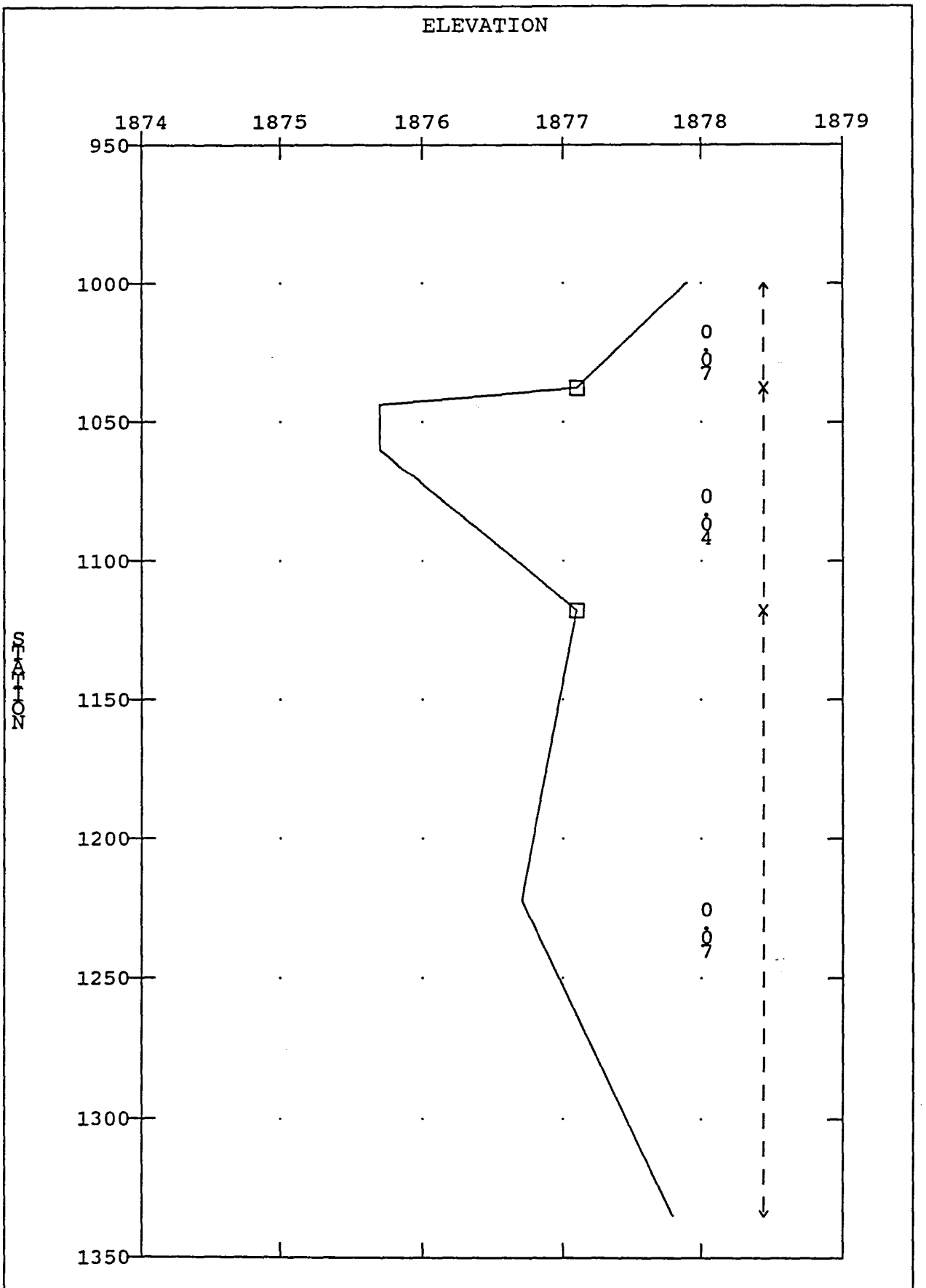

SECTION : 553554

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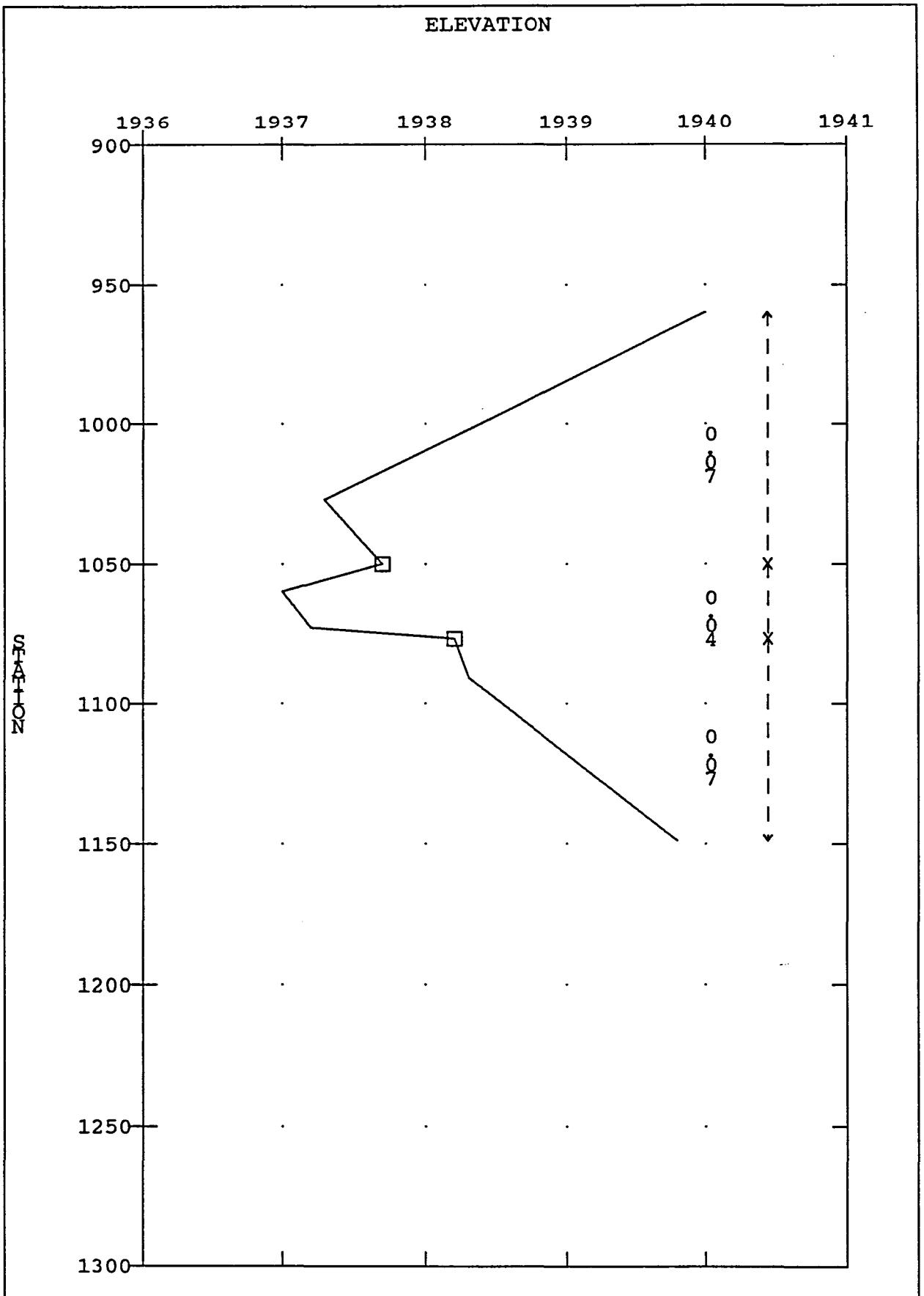

SECTION : 553556

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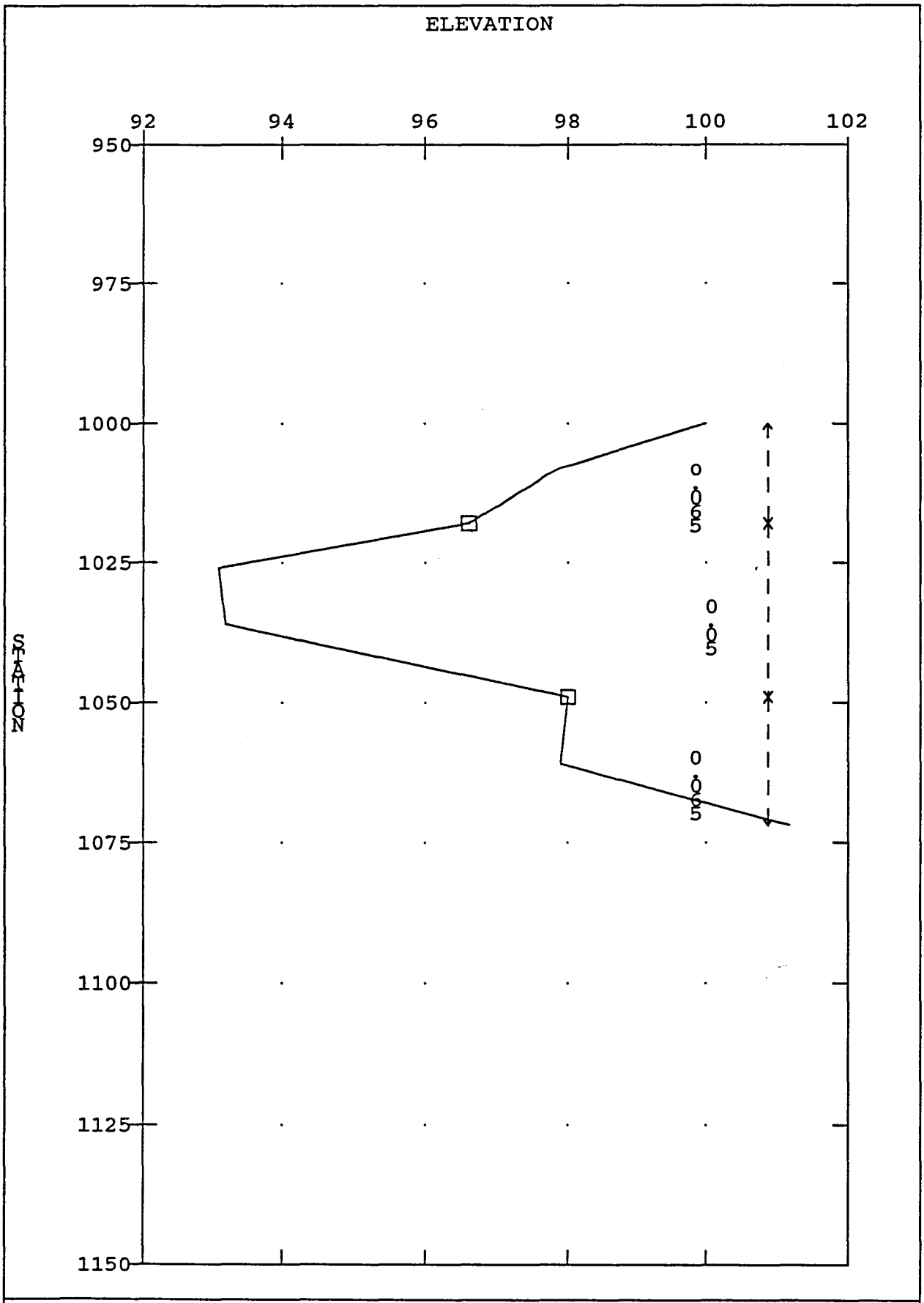

SECTION : 549550

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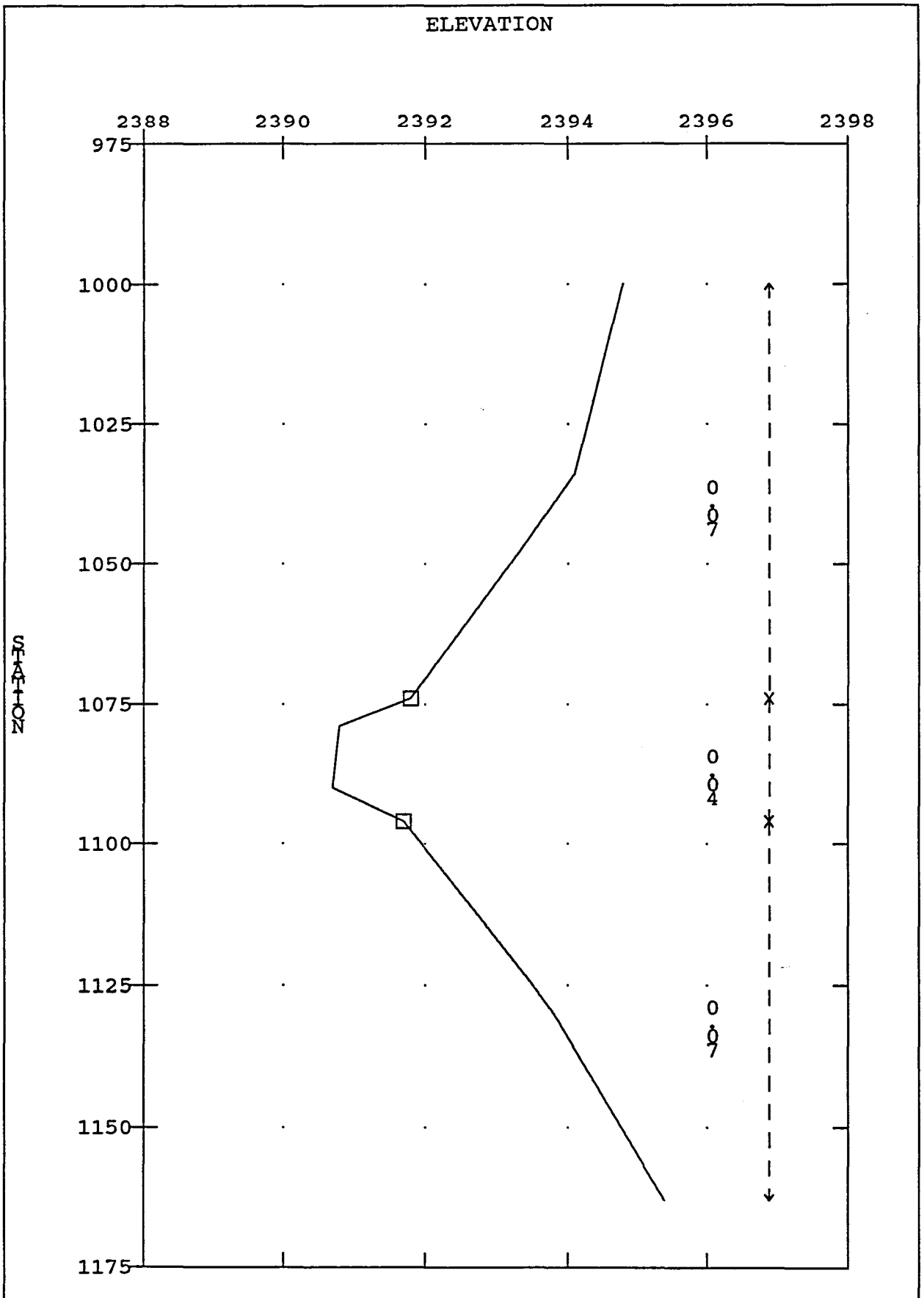

SECTION : 552553

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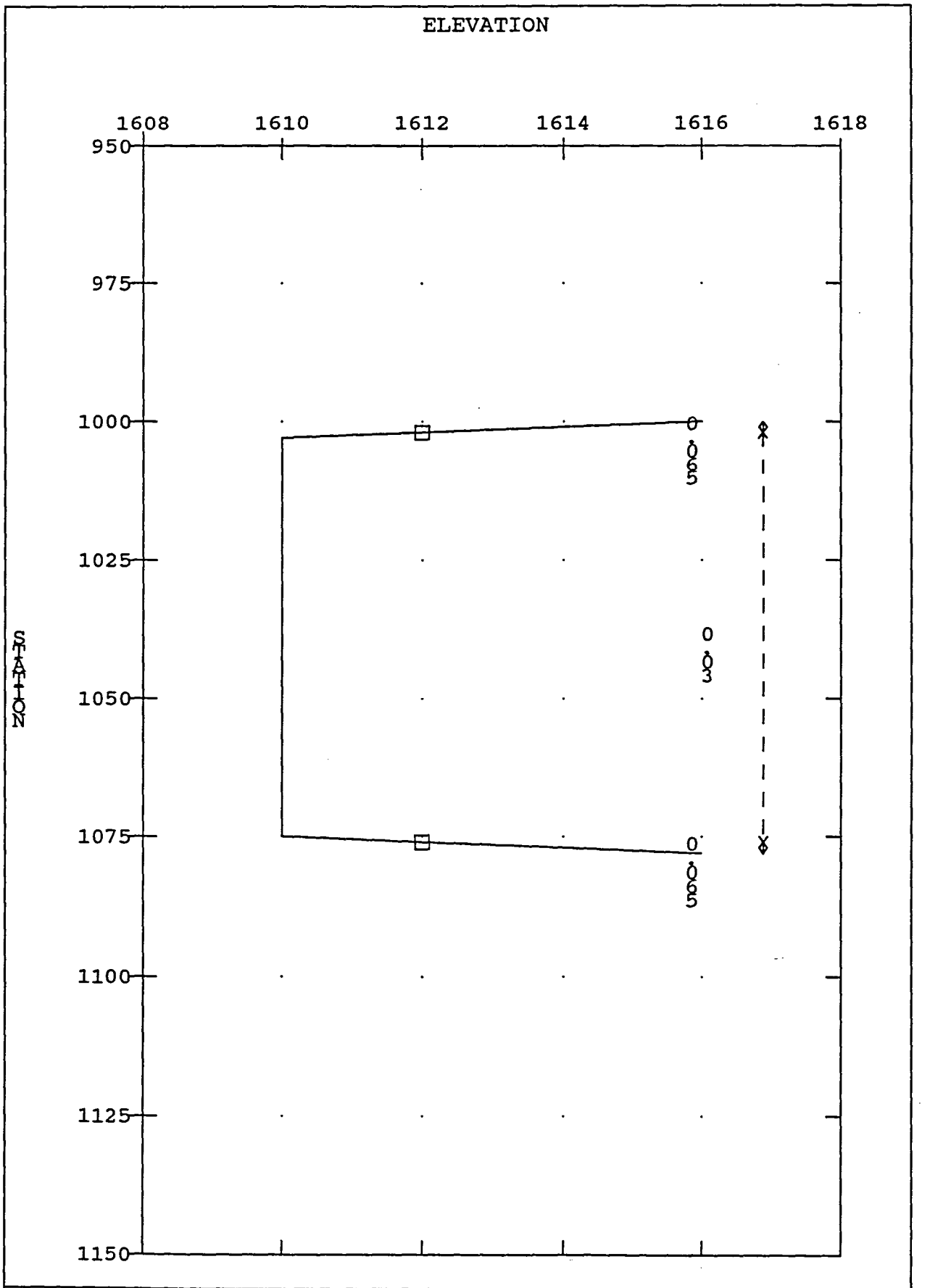

SECTION : 543545

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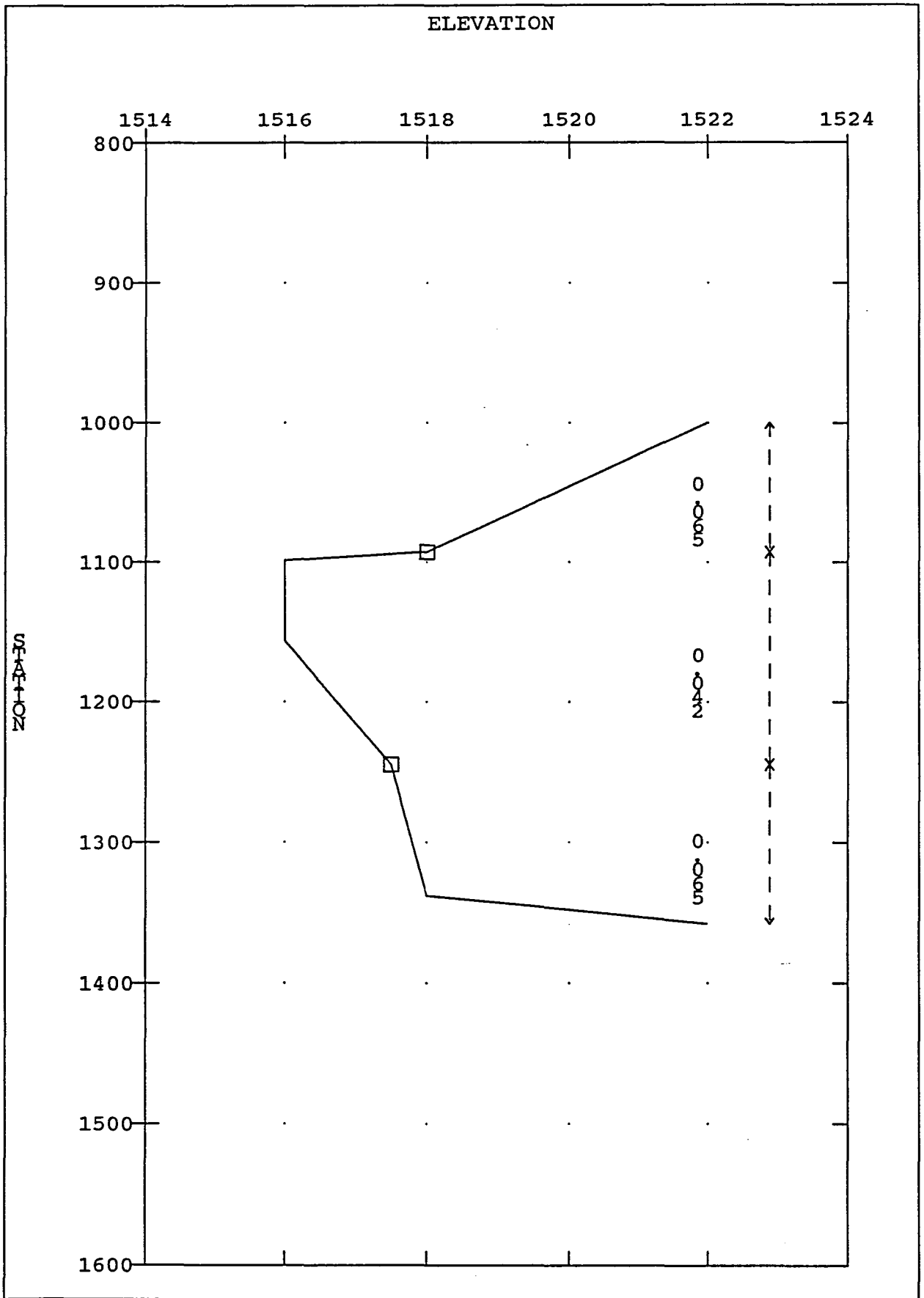

SECTION : 545546

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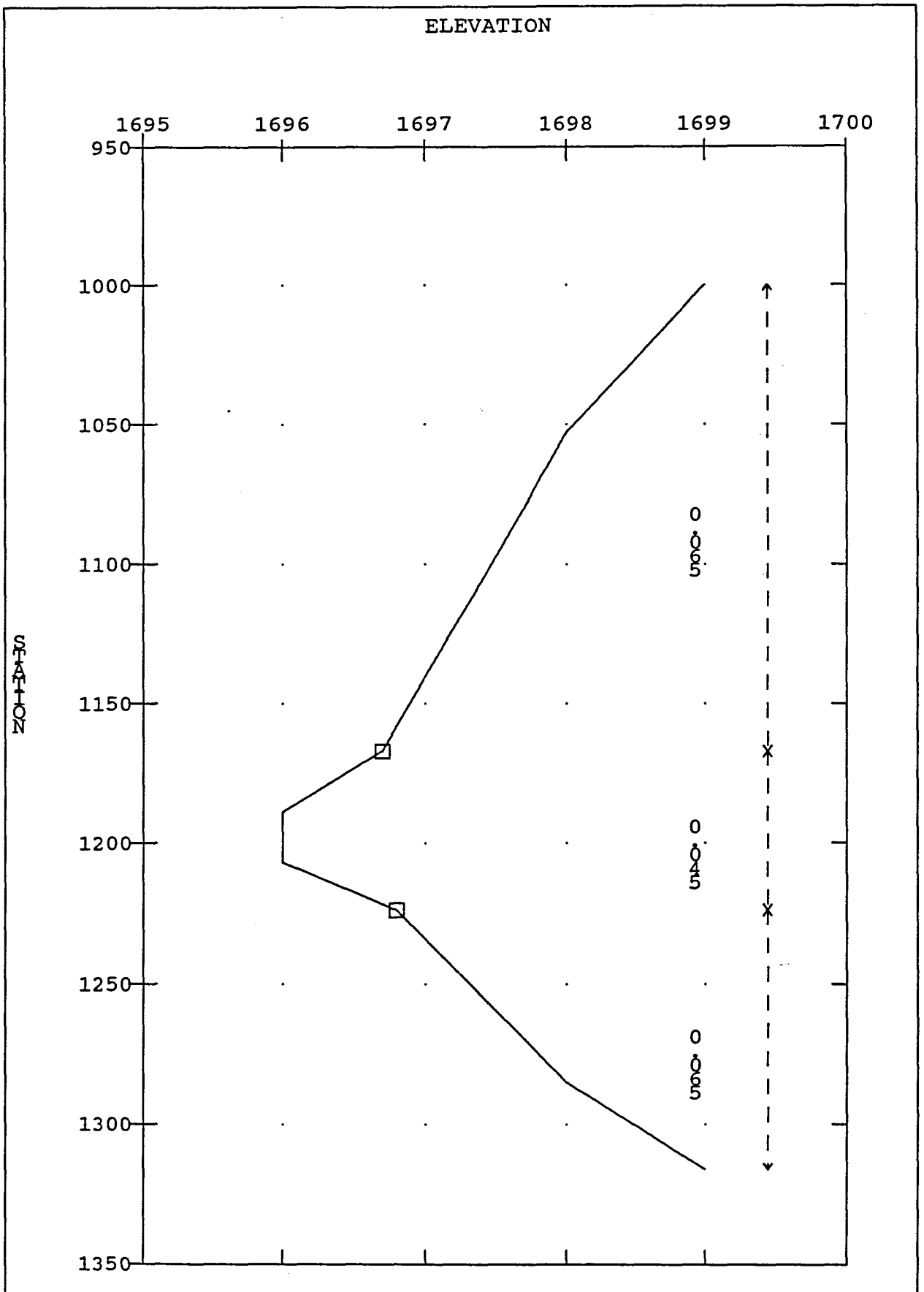

SECTION : 541543

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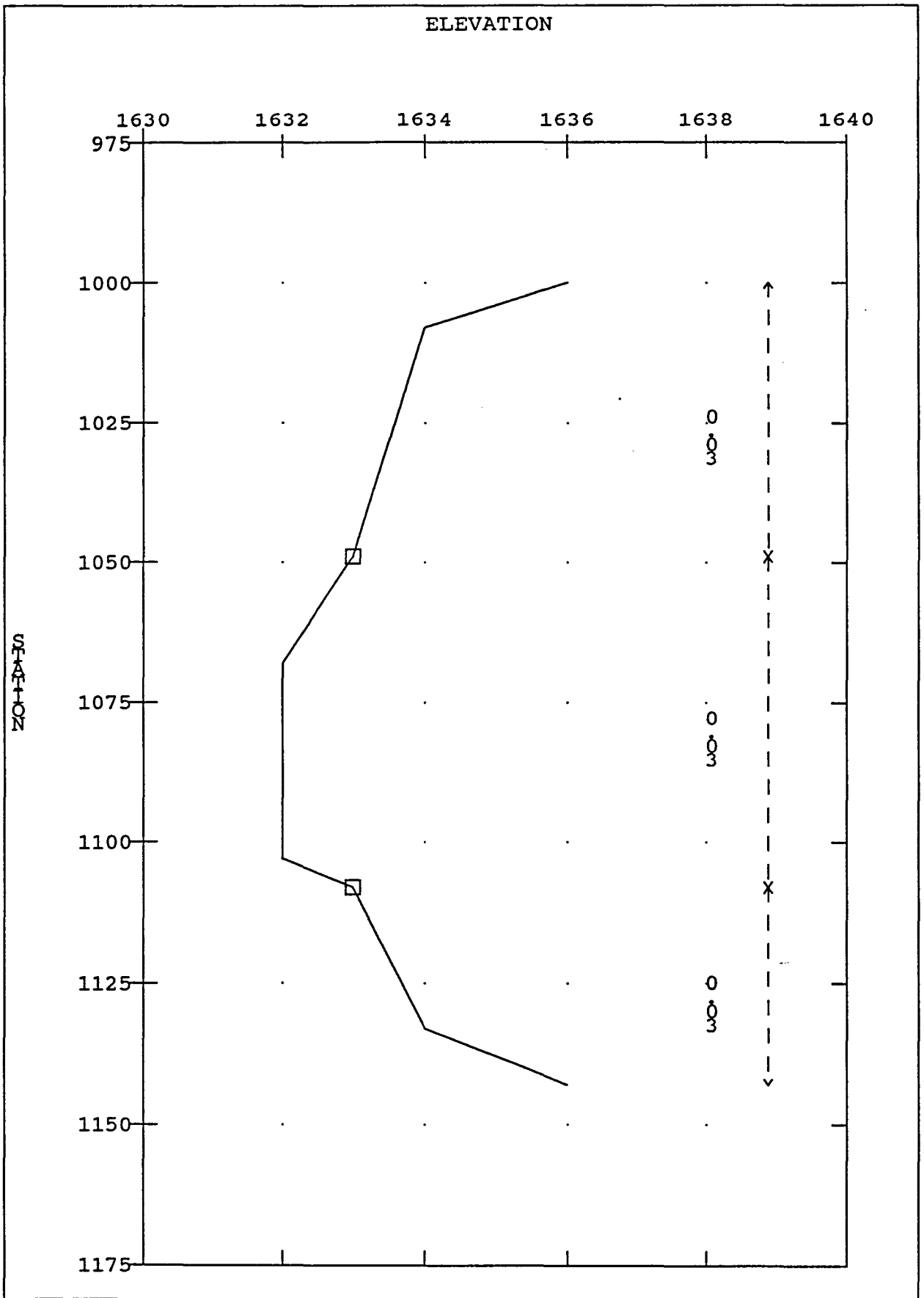

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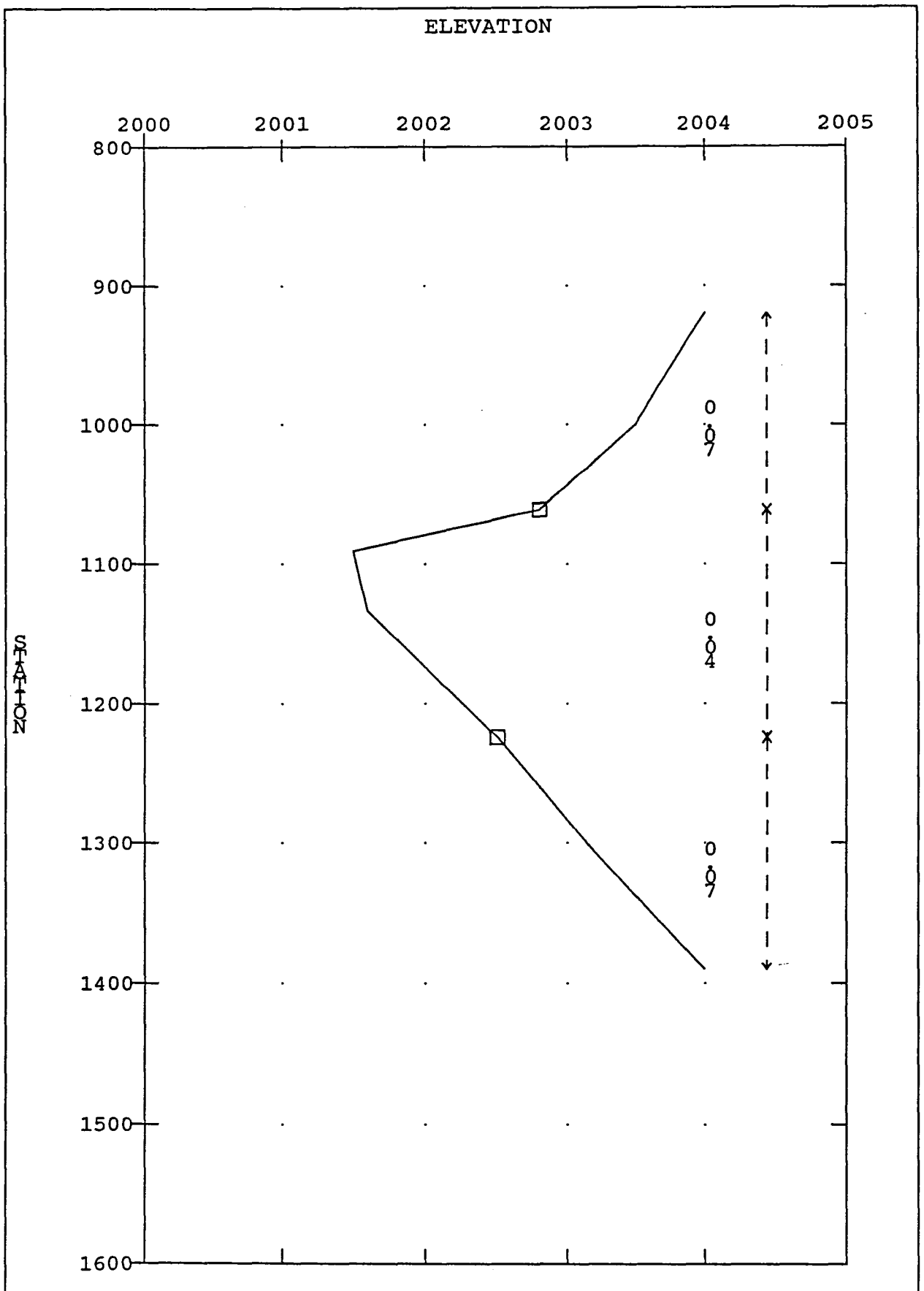

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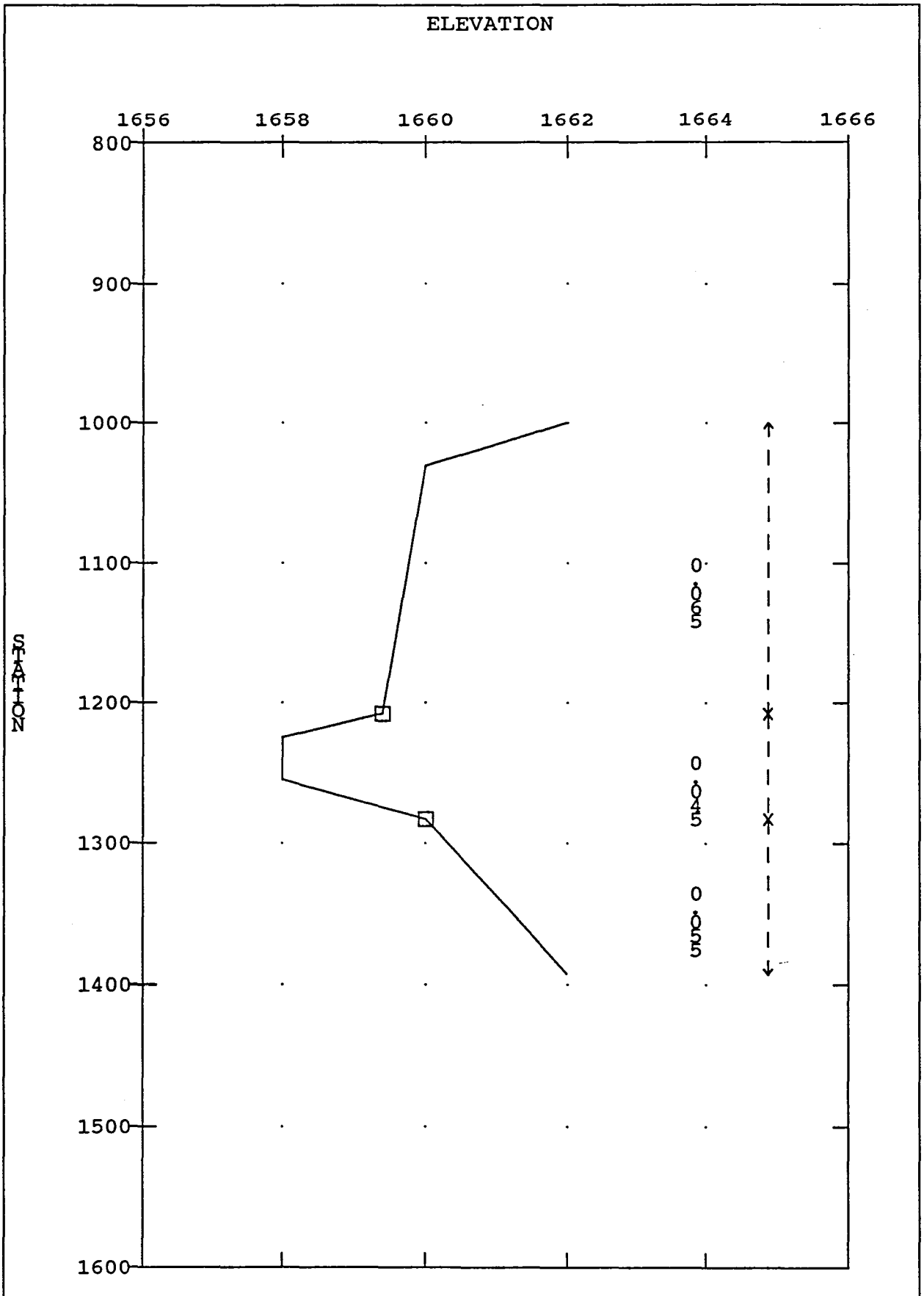

SECTION : 540542

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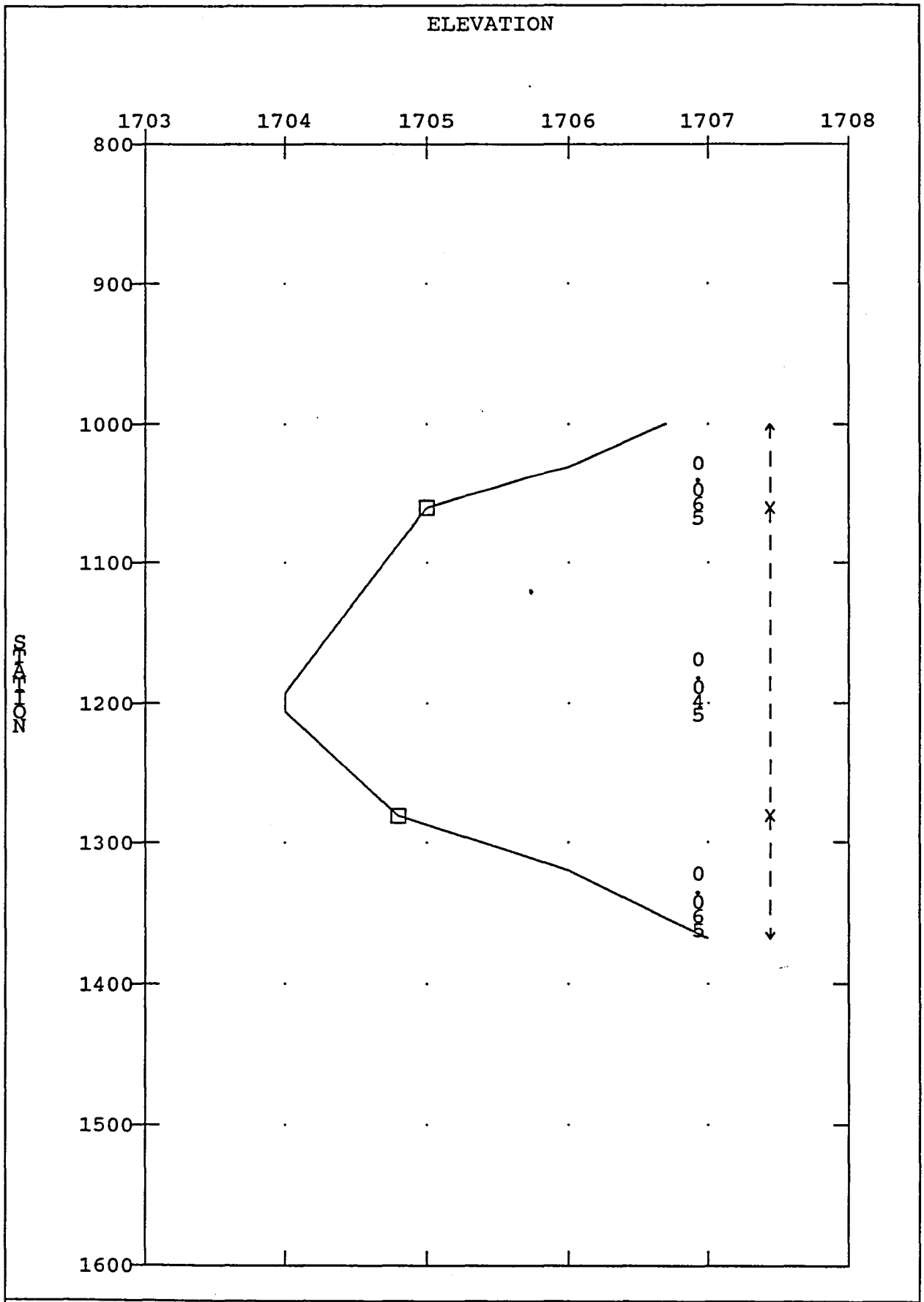

SECTION : 515517

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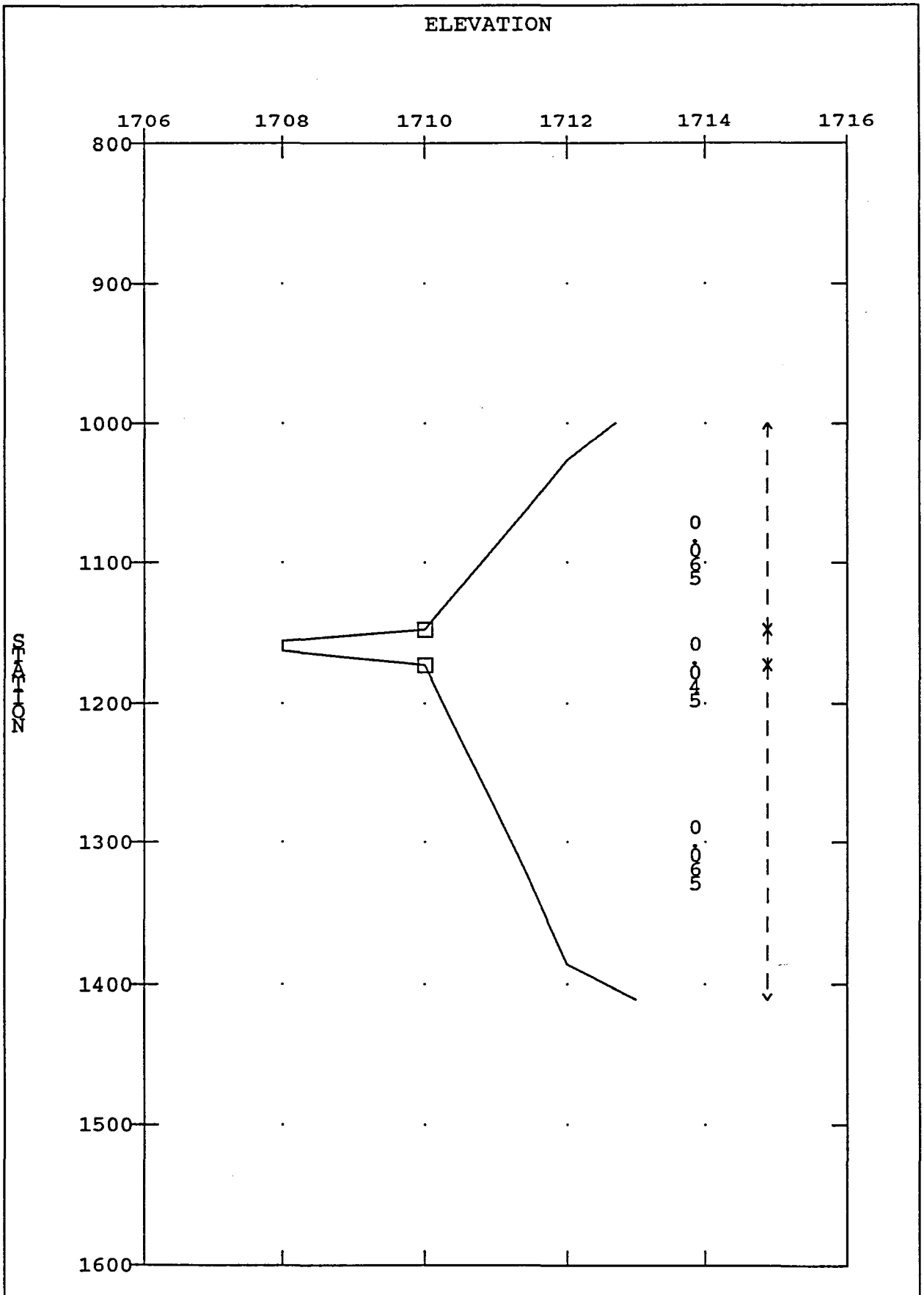

SECTION : 515575

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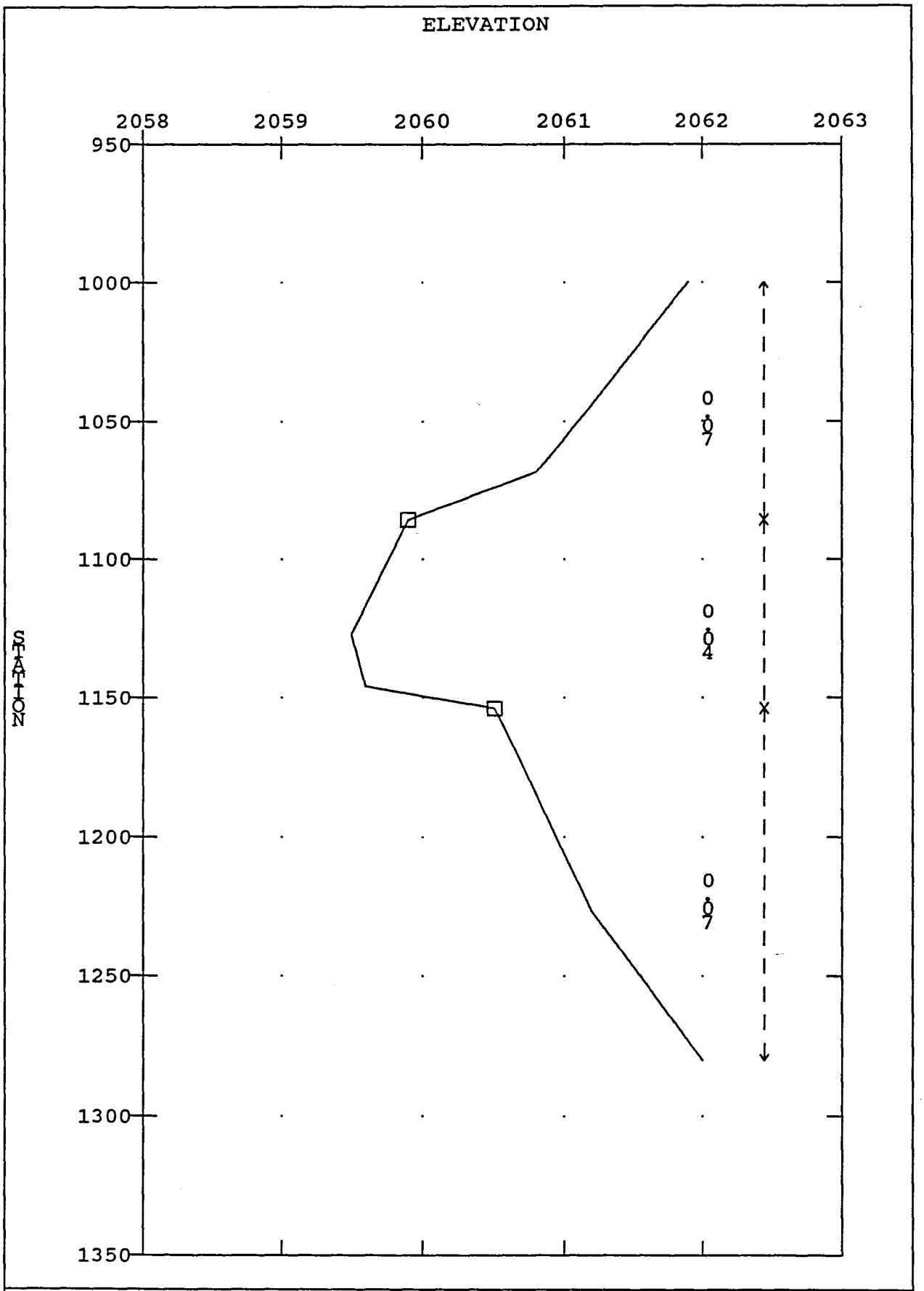
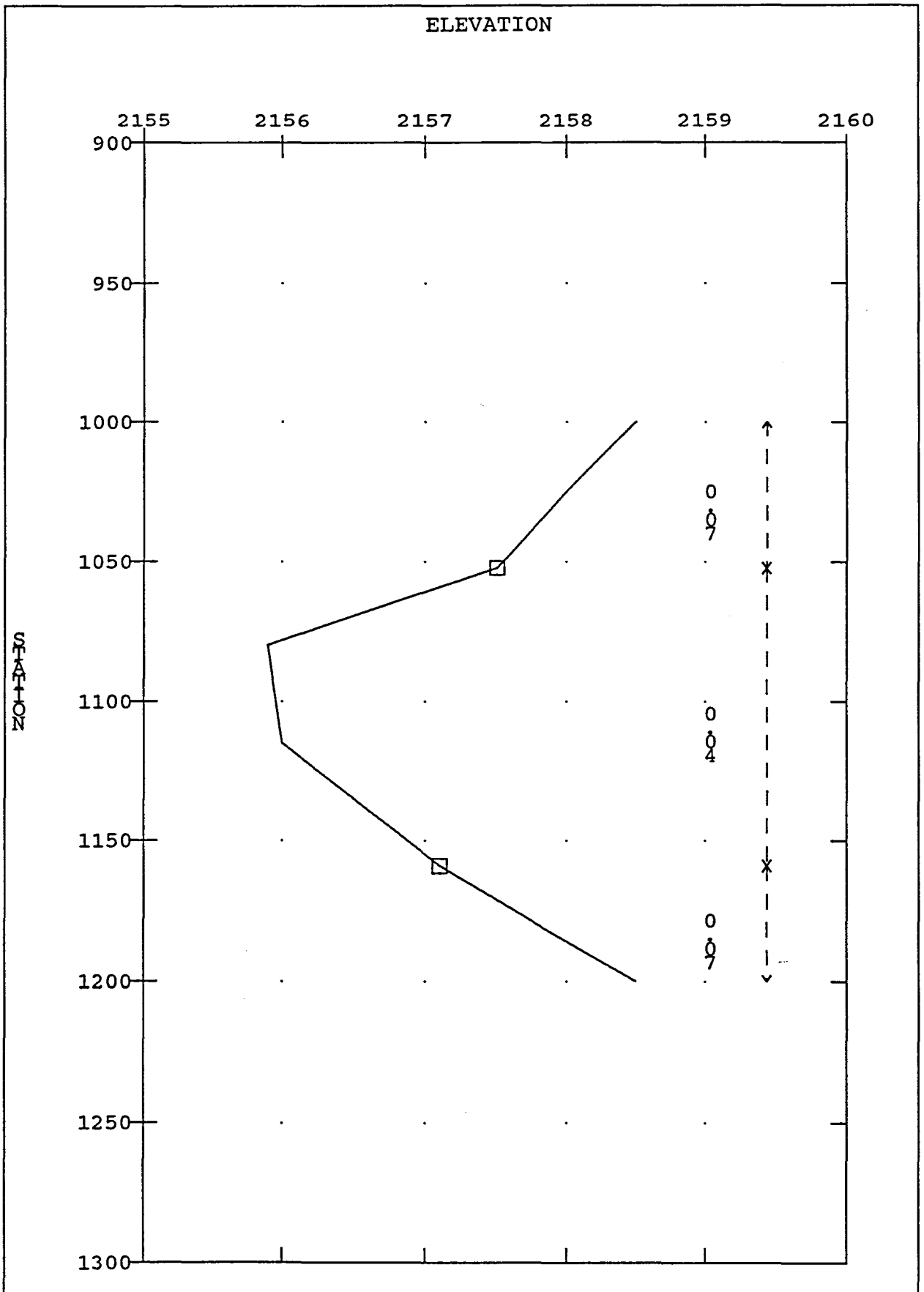


SECTION : 532538

Rio Verde South FIS



SECTION : 533579

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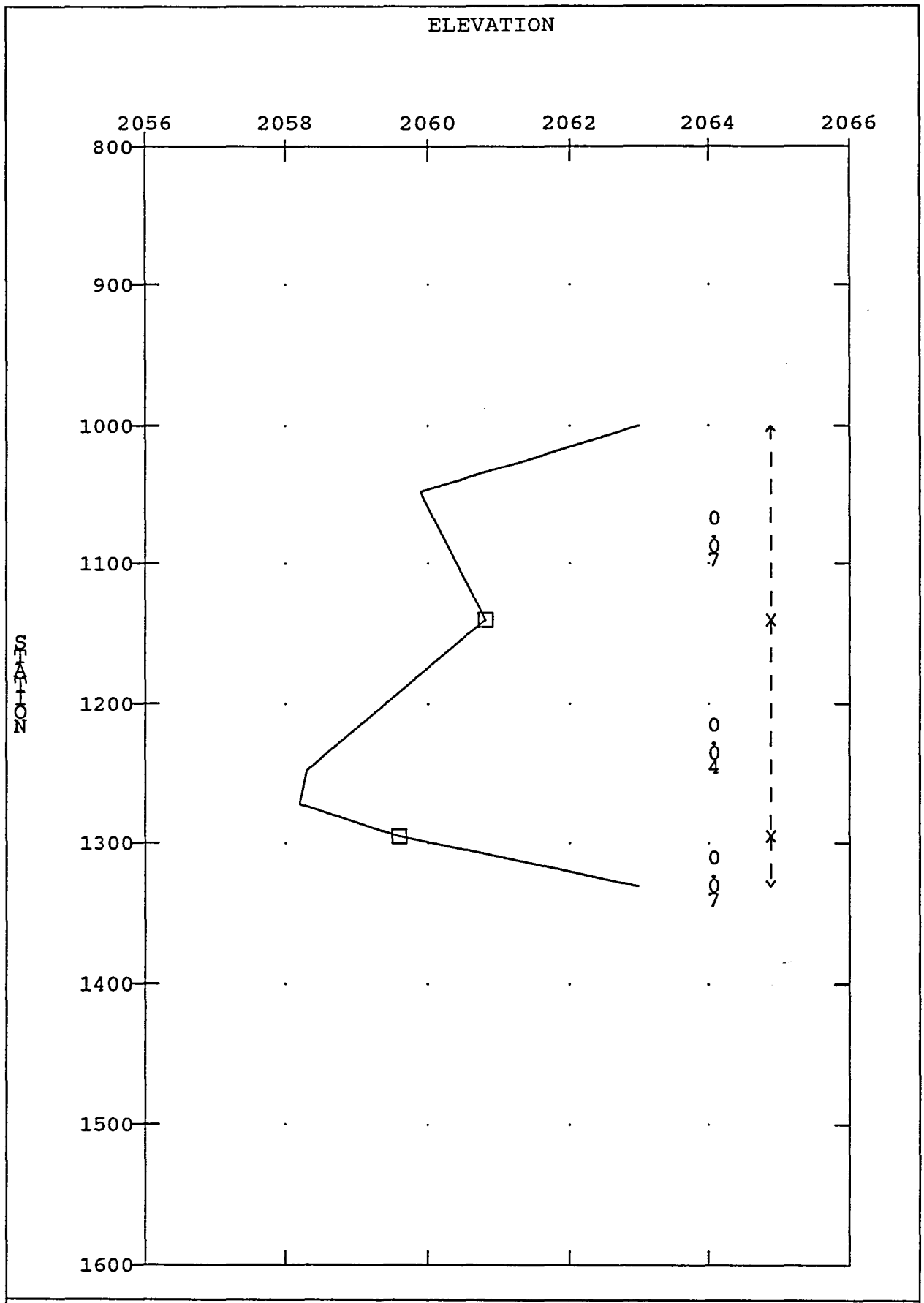

SECTION : 537538

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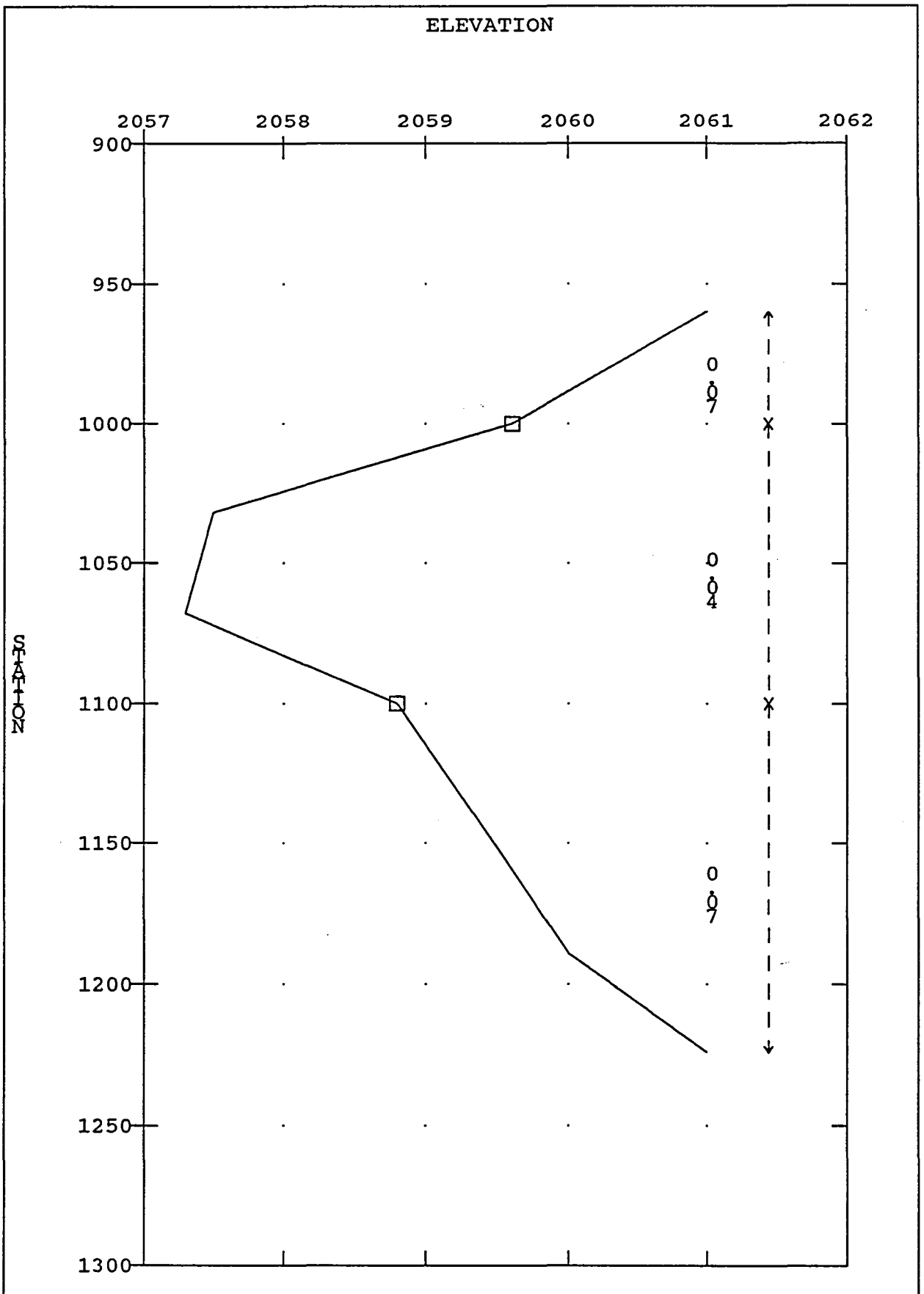

SECTION : 537577

Rio Verde South FIS

APPENDIX D

100-Year, 6-Hour Storm Existing Condition HEC-1 Output, with Levee

```
1*************************************                    *************************************
*                                   *                    *                                   *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                    *   U.S. ARMY CORPS OF ENGINEERS    *
*            MAY   1991             *                    *   HYDROLOGIC ENGINEERING CENTER   *
*          VERSION 4.0.1E           *                    *         609 SECOND STREET         *
*                                   *                    *      DAVIS, CALIFORNIA 95616      *
*  RUN DATE  08/07/95  TIME  10:33:53 *                    *          (916) 551-1748           *
*                                   *                    *                                   *
*************************************                    *************************************

X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X               X
XXXXXXX  XXXX     X        XXXXX  X
X     X  X        X               X
X     X  X        X     X         X
X     X  XXXXXXX   XXXXX         XXX

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL   LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1                                          HEC-1 INPUT                                                    PAGE  1

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID    RIO VERDE SOUTH FIS - Existing Condition Model        File:  EX100-6.IH1
  2           ID    by  GVSCE for MKE:   MCFCD #93-07                 Original: 07-22-94     dtp
  3           ID        Project:  46                                   Revised: 10-17-94     trl
  4           ID        100-year  6-Hr Rainfall
  5           ID        Green & Ampt Rainfall Losses
              *
  6           IT       1                    1150
  7           IO       5
  8           IN      15
              *DIAGRAM
              *
  9           JD    3.40    0.01
 10           PC   0.000   0.008   0.016   0.025   0.033   0.041   0.050   0.058   0.066   0.074
 11           PC   0.087   0.099   0.118   0.138   0.216   0.377   0.834   0.911   0.931   0.950
 12           PC   0.962   0.972   0.983   0.991   1.000
 13           JD    3.38    0.50
 14           JD    3.33    2.80
 15           PC   0.000   0.009   0.016   0.025   0.034   0.042   0.051   0.059   0.067   0.076
 16           PC   0.087   0.100   0.120   0.163   0.252   0.451   0.694   0.837   0.900   0.938
 17           PC   0.950   0.963   0.975   0.988   1.000
 18           JD    3.13    16.0
 19           PC   0.000   0.015   0.020   0.030   0.048   0.063   0.076   0.090   0.105   0.119
 20           PC   0.135   0.152   0.175   0.222   0.304   0.472   0.670   0.796   0.868   0.912
 21           PC   0.946   0.960   0.973   0.987   1.000
 22           JD    2.75    90.0
 23           PC   0.000   0.021   0.035   0.051   0.071   0.087   0.105   0.125   0.143   0.160
 24           PC   0.179   0.201   0.232   0.281   0.364   0.500   0.658   0.773   0.841   0.888
 25           PC   0.927   0.945   0.964   0.982   1.000
 26           JD    1.94   500.0
 27           PC   0.000   0.024   0.043   0.059   0.078   0.098   0.119   0.141   0.162   0.186
 28           PC   0.212   0.239   0.271   0.321   0.408   0.515   0.627   0.735   0.814   0.864
 29           PC   0.907   0.930   0.954   0.977   1.000
              *
 30           IN       5
              *
              *    The Wood Patel input hydrographs are being written out to a tape 21 file
              *      in order to populate the index hydrographs with the input hydrograph.
              *
              *

 31           KK   WP504
 32           KO                                  21
 33           KM      Runoff hydrograph from Rio Verde North watershed, provided by Wood Patel
 34           KM        and Associates.  The hydrograph was computed using 300 ordinates and
 35           KM        a time interval of 5 minutes.  This hydrograph enters the Rio Verde
 36           KM        South watershed at concentration point 504.
 37           BA   0.260
 38           QI       0       0       0       0       0       0       0       0       0       0
 39           QI       0       0       0       0       0       0       0       0       0       0
 40           QI       0       0       0       0       0       0       0       0       0       0
 41           QI       0       0       0       0       0       0       0       0       0       0
 42           QI       0       1       2       6      10      16      26      37      52      68
 43           QI      86     104     123     139     151     159     162     159     150     140
 44           QI     127     111      97      83      69      57      46      37      30      24
 45           QI      18      14      11       9       7       5       4       2       2       1
1                                          HEC-1 INPUT                                                    PAGE  2

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 46           QI       1       1       0       0       0       0       0       0       0       0
 47           QI       0       0       0       0       0       0       0       0       0       0
 48           QI       0       0       0       0       0       0       0       0       0       0
 49           QI       0       0       0       0       0       0       0       0       0       0
 50           QI       0       0       0       0       0       0       0       0       0       0
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 57           QI       0       0       0       0       0       0       0       0       0       0
 58           QI       0       0       0       0       0       0       0       0       0       0
 59           QI       0       0       0       0       0       0       0       0       0       0
 60           QI       0       0       0       0       0       0       0       0       0       0
 61           QI       0       0       0       0       0       0       0       0       0       0
```

```
 62          QI      0      0      0      0      0      0      0      0      0      0
 63          QI      0      0      0      0      0      0      0      0      0      0
 64          QI      0      0      0      0      0      0      0      0      0      0
 65          QI      0      0      0      0      0      0      0      0      0      0
 66          QI      0      0      0      0      0      0      0      0      0      0
 67          QI      0      0      0      0      0      0      0      0      0      0
             *

 68          KK   WP581
 69          KO                                  21
 70          KM      Runoff hydrograph from Rio Verde North watershed, provided by Wood Patel
 71          KM        and Associates.  The hydrograph was computed using 300 ordinates and
 72          KM        a time interval of 5 minutes.  This hydrograph enters the Rio Verde
 73          KM        South watershed at concentration point 581.
 74          BA    3.92
 75          QI      0      0      0      0      0      0      0      0      0      0
 76          QI      0      0      0      0      0      0      0      0      0      0
 77          QI      0      0      0      0      0      0      0      0      0      0
 78          QI      0      0      0      0      0      0      0      0      0      0
 79          QI      0      0      0      0      0      0      1      2      5      9
 80          QI     15     20     23     26     31     37     45     57     72     95
 81          QI    113    128    140    148    152    153    153    153    152    151
 82          QI    151    154    159    166    173    181    188    195    201    205
 83          QI    207    208    206    204    200    195    189    183    177    170
 84          QI    164    156    148    139    132    125    115    105     94     85
 85          QI     77     70     65     59     52     45     38     31     24     14
 86          QI      9      7      6      6      5      5      5      5      4      4
 87          QI      4      3      3      3      3      3      3      2      2      2
 88          QI      2      2      2      2      2      2      2      2      2      2
 89          QI      1      1      1      1      1      1      1      1      1      1
 90          QI      1      1      1      1      0      0      0      0      0      0
 91          QI      0      0      0      0      0      0      0      0      0      0
 92          QI      0      0      0      0      0      0      0      0      0      0
 93          QI      0      0      0      0      0      0      0      0      0      0
 94          QI      0      0      0      0      0      0      0      0      0      0
 95          QI      0      0      0      0      0      0      0      0      0      0
 96          QI      0      0      0      0      0      0      0      0      0      0
 97          QI      0      0      0      0      0      0      0      0      0      0
 98          QI      0      0      0      0      0      0      0      0      0      0
```



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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 99          QI      0      0      0      0      0      0      0      0      0      0
100          QI      0      0      0      0      0      0      0      0      0      0
101          QI      0      0      0      0      0      0      0      0      0      0
102          QI      0      0      0      0      0      0      0      0      0      0
103          QI      0      0      0      0      0      0      0      0      0      0
104          QI      0      0      0      0      0      0      0      0      0      0
             *
105          IN     15
             *

106          KK   CLEAR
107          KM     Clear hydrograph stack from memory.
108          HC      2
             *

109          KK    511A
110          KM   Sub-Basin   511A
111          KM
112          KM      The Phoenix Mountain S-Graph is used for this basin.
113          KM          Lag Used =  28.3 minutes
114          KM
115          BA   0.649
116          LG    0.35   0.39   6.20   0.21   0.00
117          UI      77     77     77     77     77     77    149    222    239    296
118          UI     327    366    444    467    491    519    553    576    598    623
119          UI     668    746    819    909    967    773    614    569    532    500
120          UI     474    459    449    435    418    404    386    375    365    355
121          UI     331    322    311    299    294    265    260    240    237    204
122          UI     204    195    189    189    178    178    175    161    161    161
123          UI     127    127    127    125     99     99     99     99     99     85
124          UI      85     85     85     85     84     59     59     59     59     59
125          UI      59     59     59     48     38     38     38     38     38     38
126          UI      38     38     38     38     38     38     32     15     15     15
127          UI      15     15     15     15     15     15     15     15     15     15
128          UI      15     15     15     15     15     15     15     15     15     15
129          UI      15     15     15     15     15     15     15     15     15     15
130          UI       0      0      0      0      0      0      0      0      0      0
131          UI       0      0      0      0      0      0      0      0      0      0
             *

132          KK  524526
133          KM   Normal depth channel route from C524 to C526
134          KM      Source:  Hydrology Field Reconnaissance, page 24
135          RS      28    FLOW     -1
136          RC   0.070   0.040   0.070    5989  0.0182
137          RX   900.0  1000.0  1035.0  1038.0  1048.0  1054.0  1120.0  1330.0
138          RY   101.2   100.0    99.5    99.0    99.0    99.6    99.7   101.2
139          RL                   0.07    99.0
             *
```



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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

140          KK    511B
141          KM   Sub-Basin   511B
142          KM
143          KM      The Phoenix Mountain S-Graph is used for this basin.
144          KM          Lag Used =  56.7 minutes
145          KM
146          BA   1.100
147          LG    0.32   0.37   6.60   0.17   4.40
148          UI      65     65     65     65     65     65     65     65     65     65
149          UI      65     65     65    182    188    188    188    214    250    250
150          UI     251    300    300    313    375    375    393    395    412    417
151          UI     434    442    463    469    484    488    500    509    518    534
152          UI     547    577    616    637    661    715    748    782    857    783
153          UI     708    627    536    508    498    469    462    442    433    417
154          UI     410    395    394    385    385    376    375    364    357    353
155          UI     341    341    330    326    324    313    313    307    300    300
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 156          UI     287     278     278     270     263     263     259     250     250     250
 157          UI     226     224     224     222     203     203     203     203     175     173
 158          UI     173     173     173     160     160     160     160     160     154     150
 159          UI     150     150     150     150     137     136     136     136     136     136
 160          UI     115     107     107     107     107     107     107     107      88      83
 161          UI      83      83      83      83      83      83      83      83      77      71
 162          UI      71      71      71      71      71      71      71      71      71      71
 163          UI      57      50      50      50      50      50      50      50      50      50
 164          UI      50      50      50      50      50      50      50      38      32      32
 165          UI      32      32      32      32      32      32      32      32      32      32
 166          UI      32      32      32      32      32      32      32      32      32      32
 167          UI      32      32      32      32      13      13      13      13      13      13
 168          UI      13      13      13      13      13      13      13      13      13      13
 169          UI      13      13      13      13      13      13      13      13      13      13
 170          UI      13      13      13      13      13      13      13      13      13      13
 171          UI      13      13      13      13      13      13      13      13      13      13
 172          UI      13      13      13      13      13      13      13      13      13      13
 173          UI      13      13      13      13      13      13      13      13      13      13
 174          UI      13      13       0       0       0       0       0       0       0       0
 175          UI       0       0       0       0       0       0       0       0       0       0
              *

 176          KK  525526
 177          KM   Normal depth channel route from C525 to C526
 178          KM       Source:  Hydrology Field Reconnaissance, page 24
 179          RS       5    FLOW     -1
 180          RC   0.070   0.040   0.070    1012  0.0208
 181          RX   900.0  1000.0  1035.0  1038.0  1048.0  1054.0  1120.0  1330.0
 182          RY   101.2   100.0    99.5    99.0    99.0    99.6    99.7   101.2
 183          RL                    0.07    99.0
              *

 184          KK    511D
 185          KM   Sub-Basin   511D
 186          KM
 187          KM      The Phoenix Mountain S-Graph is used for this basin.
 188          KM          Lag Used =  30.5 minutes
 189          KM
1                                        HEC-1 INPUT                                                PAGE  5

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 190          BA   0.128
 191          LG    0.35    0.36    6.80    0.17    0.00
 192          UI      14      14      14      14      14      14      14      40      41      48
 193          UI      54      62      68      81      85      89      94     100     104     108
 194          UI     112     117     128     139     155     169     176     140     113     105
 195          UI      99      93      88      85      83      81      78      76      73      71
 196          UI      68      67      65      61      60      57      56      54      51      49
 197          UI      46      44      42      37      37      36      35      35      33      33
 198          UI      33      30      30      30      27      23      23      23      23      18
 199          UI      18      18      18      18      16      15      15      15      15      15
 200          UI      14      11      11      11      11      11      11      11      11      11
 201          UI       7       7       7       7       7       7       7       7       7       7
 202          UI       7       7       7       7       4       3       3       3       3       3
 203          UI       3       3       3       3       3       3       3       3       3       3
 204          UI       3       3       3       3       3       3       3       3       3       3
 205          UI       3       3       3       3       3       3       3       3       3       3
 206          UI       0       0       0       0       0       0       0       0       0       0
 207          UI       0       0       0       0       0       0       0       0       0       0
              *

 208          KK    C526
 209          KM     Combine routed hydrographs from C524 and C526 with runoff from 511D at C526
 210          HC       3
              *

 211          KK  526527
 212          KM   Normal depth channel route from C526 to C527
 213          KM       Source:  Hydrology Field Reconnaissance, page 24
 214          RS      12    FLOW     -1
 215          RC   0.070   0.040   0.070    3129  0.0189
 216          RX   780.0  1000.0  1035.0  1038.0  1048.0  1054.0  1120.0  1504.0
 217          RY   102.5   100.0    99.5    99.0    99.0    99.6    99.7   102.5
 218          RL                    0.07    99.0
              *

 219          KK    511E
 220          KM   Sub-Basin   511E
 221          KM
 222          KM      The Phoenix Mountain S-Graph is used for this basin.
 223          KM          Lag Used =  50.4 minutes
 224          KM
 225          BA   0.568
 226          LG    0.34    0.37    6.40    0.19    1.20
 227          UI      38      38      38      38      38      38      38      38      38      38
 228          UI      38      66     109     109     109     122     145     145     155     175
 229          UI     175     210     218     227     230     241     243     257     262     273
 230          UI     279     283     291     297     303     312     330     349     368     383
 231          UI     416     437     463     497     428     388     312     297     288     273
 232          UI     264     257     245     242     230     229     224     223     218     217
 233          UI     208     208     198     198     192     190     186     182     181     175
 234          UI     175     168     162     162     155     153     153     146     145     145
 235          UI     132     130     130     124     118     118     118     104     100     100
 236          UI     100      97      93      93      93      93      89      87      87      87
 237          UI      87      82      79      79      79      79      78      62      62      62
 238          UI      62      62      62      62      48      48      48      48      48      48
1                                        HEC-1 INPUT                                                PAGE  6

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 239          UI      48      48      48      42      42      42      42      42      42      42
 240          UI      42      42      42      37      29      29      29      29      29      29
 241          UI      29      29      29      29      29      29      29      29      27      19
 242          UI      19      19      19      19      19      19      19      19      19      19
 243          UI      19      19      19      19      19      19      19      19      19      19
 244          UI      19      19      13       7       7       7       7       7       7       7
 245          UI       7       7       7       7       7       7       7       7       7       7
 246          UI       7       7       7       7       7       7       7       7       7       7
 247          UI       7       7       7       7       7       7       7       7       7       7
 248          UI       7       7       7       7       7       7       7       7       7       7
 249          UI       7       7       7       7       7       7       7       7       7       7
 250          UI       7       7       7       0       0       0       0       0       0       0
```

```
 251          UI       0       0       0       0       0       0       0       0       0       0
              *

 252          KK    511F
 253          KM   Sub-Basin   511F
 254          KM
 255          KM      The Phoenix Mountain S-Graph is used for this basin.
 256          KM          Lag Used =  16.6 minutes
 257          KM
 258          BA   0.154
 259          LG    0.34    0.38    6.20    0.20    1.00
 260          UI      31      31      31      41      89     115     140     182     197     218
 261          UI     235     252     292     347     371     259     221     199     186     177
 262          UI     166     157     148     139     129     122     112     102      93      82
 263          UI      77      75      72      68      65      55      51      47      40      40
 264          UI      38      34      34      34      25      24      24      24      24      16
 265          UI      15      15      15      15      15      15      14       6       6       6
 266          UI       6       6       6       6       6       6       6       6       6       6
 267          UI       6       6       6       6       6       6       0       0       0       0
 268          UI       0       0       0       0       0       0       0       0       0       0
              *

 269          KK    C527
 270          KM     Combine Hydrograph from C526 with runoff from 511E & 511F at C527
 271          HC       3
              *

 272          KK  527528
 273          KM   Normal depth channel route from C527 to C528
 274          KM      Source:  Hydrology Field Reconnaissance, page 24
 275          RS       6    FLOW      -1
 276          RC   0.070   0.040   0.070    1420  0.0183
 277          RX   780.0  1000.0  1035.0  1038.0  1048.0  1054.0  1120.0  1504.0
 278          RY   102.5   100.0    99.5    99.0    99.0    99.6    99.7   102.5
 279          RL                    0.62    99.0
              *

 280          KK    511C
 281          KM   Sub-Basin   511C
 282          KM
 283          KM      The Phoenix Mountain S-Graph is used for this basin.
 284          KM          Lag Used =  62.3 minutes
 285          KM
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 286          BA   1.196
 287          LG    0.34    0.39    6.20    0.21    0.90
 288          UI      65      65      65      65      65      65      65      65      65      65
 289          UI      65      65      65      65     146     186     186     186     186     228
 290          UI     248     248     248     295     297     297     359     372     378     391
 291          UI     391     412     413     431     437     454     465     474     480     491
 292          UI     496     510     513     531     542     572     603     624     646     691
 293          UI     723     750     782     873     753     698     631     531     511     496
 294          UI     474     465     445     437     423     413     406     391     391     381
 295          UI     381     376     372     371     354     354     347     338     338     328
 296          UI     323     323     312     310     310     299     297     297     281     275
 297          UI     275     270     261     261     261     250     248     248     246     222
 298          UI     222     222     222     203     201     201     201     192     171     171
 299          UI     171     171     171     160     158     158     158     158     158     149
 300          UI     149     149     149     149     149     138     135     135     135     135
 301          UI     135     135     108     106     106     106     106     106     106     106
 302          UI     101      83      83      83      83      83      83      83      83      83
 303          UI      83      83      71      71      71      71      71      71      71      71
 304          UI      71      71      71      71      71      52      50      50      50      50
 305          UI      50      50      50      50      50      50      50      50      50      50
 306          UI      50      50      50      46      32      32      32      32      32      32
 307          UI      32      32      32      32      32      32      32      32      32      32
 308          UI      32      32      32      32      32      32      32      32      32      32
 309          UI      32      32      32      14      12      12      12      12      12      12
 310          UI      12      12      12      12      12      12      12      12      12      12
 311          UI      12      12      12      12      12      12      12      12      12      12
 312          UI      12      12      12      12      12      12      12      12      12      12
 313          UI      12      12      12      12      12      12      12      12      12      12
 314          UI      12      12      12      12      12      12      12      12      12      12
 315          UI      12      12      12      12      12      12      12      12      12      12
 316          UI      12      12      12      12      12      12      12       0       0       0
 317          UI       0       0       0       0       0       0       0       0       0       0
              *

 318          KK    C528
 319          KM     Combine routed hydrograph from C527 with runoff from 511C at C528
 320          HC       2
              *

 321          KK  528529
 322          KM   Normal depth channel route from C528 to C529
 323          KM      Source:  Hydrology Field Reconnaissance, page 16
 324          RS      14    FLOW      -1
 325          RC   0.070   0.040   0.070    6398  0.0148
 326          RX   950.0  1053.0  1139.0  1150.0  1177.0  1255.0  1302.0  1352.0
 327          RY  2360.0  2357.0  2357.4  2356.4  2356.3  2357.8  2359.6  2360.0
 328          RL                    0.62  2356.3
              *

 329          KK    511H
 330          KM   Sub-Basin   511H
 331          KM
 332          KM      The Phoenix Mountain S-Graph is used for this basin.
 333          KM          Lag Used =  25.5 minutes
 334          KM
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 335          BA   0.310
 336          LG    0.35    0.35    4.45    0.44    0.40
 337          UI      41      41      41      41      41      51     118     121     157     174
 338          UI     201     238     251     267     285     300     314     329     354     399
 339          UI     447     506     467     354     307     285     267     251     243     237
 340          UI     227     217     209     201     195     188     176     170     165     157
 341          UI     149     140     130     127     110     108     103     100      98      94
```

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342          UI      94      88      85      85      69      67      67      62      52      52
343          UI      52      52      47      45      45      45      45      39      31      31
344          UI      31      31      31      31      31      23      20      20      20      20
345          UI      20      20      20      20      20      20      20      11       8       8
346          UI       8       8       8       8       8       8       8       8       8       8
347          UI       8       8       8       8       8       8       8       8       8       8
348          UI       8       8       8       8       8       8       8       0       0       0
349          UI       0       0       0       0       0       0       0       0       0       0
             *

350          KK    C529
351          KM     Combine routed hydrograph from C528 with runoff from 511H at C529
352          HC       2
             *
             * *
             * *       Routing Reach  529-530 is too short to route.
             * *
             *

353          KK    511G
354          KM   Sub-Basin   511G
355          KM
356          KM      The Phoenix Mountain S-Graph is used for this basin.
357          KM          Lag Used =  36.8 minutes
358          KM
359          BA   0.868
360          LG    0.33    0.36    5.10    0.30    2.90
361          UI      79      79      79      79      79      79      79      79     160     228
362          UI     228     274     305     328     365     416     459     481     499     518
363          UI     541     571     588     605     623     644     682     740     786     868
364          UI     932    1029     886     738     631     594     564     537     509     491
365          UI     478     469     459     450     435     420     412     397     389     381
366          UI     370     365     342     338     323     321     308     305     286     273
367          UI     270     247     247     233     210     210     207     194     194     194
368          UI     186     183     183     182     166     166     166     166     131     131
369          UI     131     131     131     106     102     102     102     102     102      98
370          UI      87      87      87      87      87      87      87      74      61      61
371          UI      61      61      61      61      61      61      61      61      51      39
372          UI      39      39      39      39      39      39      39      39      39      39
373          UI      39      39      39      39      39      35      15      15      15      15
374          UI      15      15      15      15      15      15      15      15      15      15
375          UI      15      15      15      15      15      15      15      15      15      15
376          UI      15      15      15      15      15      15      15      15      15      15
377          UI      15      15      15      15      15      15      15      15      15       0
378          UI       0       0       0       0       0       0       0       0       0       0
379          UI       0       0       0       0       0       0       0       0       0       0
             *
             *
```



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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

380          KK    C530
381          KM      Combine hydrograph from C529 with runoff from 511G at C530
382          HC       2
             *

383          KK  530531
384          KM   Normal depth channel route from C530 to C531
385          KM       Source:  Hydrology Field Reconnaissance, page 11
386          RS      15    FLOW      -1
387          RC   0.070   0.040   0.070    5786  0.0211
388          RX   972.0  1052.4  1161.2  1208.0  1275.3  1311.8  1436.0  1612.0
389          RY  2159.0  2157.5  2157.0  2155.9  2156.0  2157.1  2157.8  2159.0
390          RL                    0.43  2155.9
             *

391          KK    511I
392          KM   Sub-Basin   511I
393          KM
394          KM      The Phoenix Mountain S-Graph is used for this basin.
395          KM          Lag Used =  17.5 minutes
396          KM
397          BA   0.211
398          LG    0.35    0.35    4.00    0.57    0.00
399          UI      41      41      41      41     116     140     173     218     250     272
400          UI     297     317     346     408     485     447     318     283     256     242
401          UI     231     217     205     194     183     170     161     151     138     126
402          UI     111     105     100      96      94      86      85      67      67      58
403          UI      52      52      49      45      45      45      34      31      31      31
404          UI      31      25      20      20      20      20      20      20      20      16
405          UI       8       8       8       8       8       8       8       8       8       8
406          UI       8       8       8       8       8       8       8       8       8       8
407          UI       0       0       0       0       0       0       0       0       0       0
408          UI       0       0       0       0       0       0       0       0       0       0
             *
             *

409          KK    C531
410          KM     Combine routed hydrograph from C530 with runoff from 511I at C531
411          HC       2
             *
             *

412          KK   D531R
413          KM       Hydrograph diversion at C531
414          KM      Main flow continues on in right branch.
415          KM      Diverted flow is in the left branch, coded on DQ Card.
416          DT   D531L
417          DI       0      52     390     850    1565    2660    3870    4690    5550    6390
418          DQ       0      12      80     200     390     620     910    1090    1250    1440
             *
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

419          KK  531532
420          KM   Normal depth channel route from C531 to C532
421          KM       Source:  Hydrology Field Reconnaissance, page 11
422          RS       4    FLOW      -1
423          RC   0.070   0.040   0.070    1524  0.0243
```

```
424          RX  1000.0  1125.0  1240.0  1250.0  1312.0  1348.0  1395.0  1420.0
425          RY  2158.5  2157.5  2157.0  2155.9  2156.0  2157.1  2156.9  2158.5
426          RL                    0.62  2155.9
             *

427          KK   D532L
428          KM        Hydrograph diversion at C532
429          KM      Main flow continues on in right branch (Center Split at C532).
430          KM      Diverted flow is in the left branch, coded on DQ card.
431          DT   D532R
432          DI       0      58     235     405     685    1075    1535    2190    2570    2950
433          DQ       0      40     125     205     335     550     800    1140    1320    1500
             *
             *

434          KK  D532AR
435          KM        Hydrograph diversion at C532A
436          KM      Main flow continues on in right branch (center split channel at C532).
437          KM      Diverted flow is in the left branch, coded on DQ card.
438          DT  D532AL
439          DI       0      50     210     445     650     930    1300    1680    1890    2160
440          DQ       0      25     100     230     360     550     820    1090    1250    1470
             *
             *

441          KK  532580
442          KM   Normal depth channel route from C532 to C580
443          KM       Source:  Hydrology Field Reconnaissance, page 7
444          RS       9    FLOW      -1
445          RC   0.070   0.040   0.070    4121  0.0279
446          RX  1000.0  1034.5  1069.0  1086.0  1146.0  1154.0  1227.0  1285.0
447          RY  2061.9  2061.4  2060.8  2059.9  2059.6  2060.5  2061.2  2061.9
448          RL                    0.07  2059.6
             *

449          KK  B532AL
450          KM        Retrieve split hydrograph D532AL
451          DR  D532AL
             *
             *
             * *
             * *  Routing Reach 532-578 is too short to route
             * *
             *
             *
```



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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

452          KK   D578R
453          KM        Hydrograph diversion at C578
454          KM      Main flow continues on in right branch.
455          KM      Diverted flow is in the left branch, coded on DQ card.
456          DT   D578L
457          DI       0      40     100     170     280     450     820    1090    1250    1470
458          DQ       0      20      50      85     140     225     410     545     625     735
             *

459          KK  578573
460          KM   Normal depth channel route from C578 to C573
461          KM       Source:  Hydrology Field Reconnaissance, page 22
462          RS       5    FLOW      -1
463          RC   0.070   0.040   0.070    1857  0.0269
464          RX   980.0  1000.0  1035.0  1039.0  1060.0  1080.0  1100.0  1112.0
465          RY   100.8   100.0    99.6    98.4    98.3    99.5    99.3   100.6
466          RL                    0.62    98.3
             *

467          KK   D573R
468          KM        Hydrograph diversion at C573
469          KM      Main flow continues on in right branch.
470          KM      Diverted flow is in the left branch, coded on DQ card.
471          DT   D573L
472          DI       0      48     195     590    1000    1365    1845    2315    2585    2875
473          DQ       0       0      35     210     400     590     830    1100    1230    1360
             *

474          KK  573580
475          KM   Normal depth channel route from C573 to C580
476          KM       Source:  Hydrology Field Reconnaissance, page 22
477          RS       4    FLOW      -1
478          RC   0.070   0.040   0.070    1455  0.0261
479          RX   980.0  1000.0  1035.0  1039.0  1060.0  1080.0  1100.0  1112.0
480          RY   100.8   100.0    99.6    98.4    98.3    99.5    99.3   100.6
481          RL                    0.62    98.3
             *

482          KK    C580
483          KM     Combine hydrograph from C573R with routed hydrograph from C532L at C580
484          HC       2    5.18
             *

485          KK  580535
486          KM   Normal depth channel route from C580 to C535
487          KM       Source:  Hydrology Field Reconnaissance, page 22
488          RS      24    FLOW      -1
489          RC   0.070   0.040   0.070    9537  0.0254
490          RX  1025.0  1089.0  1132.0  1152.0  1180.0  1182.0  1184.0  1202.0
491          RY   102.0   100.3   100.3    99.6    99.5   100.3   101.0   102.0
492          RL                    0.07    99.5
             *
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

493          KK   B531L
494          KM        Retrieve split hydrograph D531L
495          DR   D531L
             *

496          KK  531533
```

```
497          KM   Normal depth channel route from C531 to C533
498          KM       Source:  Hydrology Field Reconnaissance, page 11
499          RS       6    FLOW      -1
500          RC   0.070   0.040   0.070    3188  0.0270
501          RX  1000.0  1025.0  1052.4  1080.0  1115.0  1159.0  1180.0  1200.0
502          RY  2158.5  2158.0  2157.5  2155.9  2156.0  2157.1  2157.8  2158.5
503          RL                    0.62  2155.9
             *

504          KK   B578L
505          KM        Retrieve split hydrograph D578L
506          DR   D578L
             *
             * *
             * *       Routing Reach  578-533 is too short to route.
             * *
             *

507          KK    C533
508          KM     Combine routed hydrograph from C531L with hydrograph  from C578L at C533
509          HC       2    5.18
             *

510          KK  533579
511          KM   Normal depth channel route from C533 to C579
512          KM       Source:  Hydrology Field Reconnaissance, page 11
513          RS       3    FLOW      -1
514          RC   0.070   0.040   0.070    1524  0.0256
515          RX  1000.0  1025.0  1052.4  1080.0  1115.0  1159.0  1180.0  1200.0
516          RY  2158.5  2158.0  2157.5  2155.9  2156.0  2157.1  2157.8  2158.5
517          RL                    0.62  2155.9
             *

518          KK   B573L
519          KM        Retrieve split hydrograph D573L
520          DR   D573L
             *
             * *
             * *       Routing Reach  573-579 is too short to route.
             * *
             *

521          KK    C579
522          KM     Combine routed hydrograph from C533 with hydrograph from C573L at C579
523          HC       2    5.18
             *
1                                        HEC-1 INPUT                                          PAGE 13

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

524          KK  579534
525          KM   Normal depth channel route from C579 to C534
526          KM       Source:  Hydrology Field Reconnaissance, page 11
527          RS       4    FLOW      -1
528          RC   0.070   0.040   0.070    1310  0.0260
529          RX  1000.0  1052.4  1161.2  1208.0  1225.3  1291.8  1416.0  1519.0
530          RY  2158.5  2157.5  2157.0  2155.9  2156.0  2157.1  2157.8  2158.5
531          RL                    0.62  2155.9
             *

532          KK    511J
533          KM   Sub-Basin   511J
534          KM
535          KM      The Phoenix Mountain S-Graph is used for this basin.
536          KM          Lag Used =  14.3 minutes
537          KM
538          BA   0.119
539          LG    0.35    0.35    3.81    0.65    0.00
540          UI      28      28      28      65      96     123     164     182     203     220
541          UI     251     306     332     222     192     172     163     151     141     132
542          UI     122     113     105      94      84      74      69      66      63      59
543          UI      51      46      40      36      36      31      31      30      22      22
544          UI      22      22      16      14      14      14      14      14      14       5
545          UI       5       5       5       5       5       5       5       5       5       5
546          UI       5       5       5       5       5       5       0       0       0       0
547          UI       0       0       0       0       0       0       0       0       0       0
             *
             *

548          KK    C534
549          KM     Combine routed hydrograph from C579 with runoff from 511J at C534
550          HC       2    5.30
             *
             *

551          KK   D534R
552          KM        Hydrograph diversion at C534
553          KM      Main flow continues on in right branch.
554          KM      Diverted flow is in the left branch, coded on DQ card.
555          DT   D534L
556          DI       0     100     200     600    1000    1500    2000
557          DQ       0      30      60     180     300     450     600
             *

558          KK  534535
559          KM   Normal depth channel route from C534 to C535
560          KM       Source:  Hydrology Field Reconnaissance, page 18
561          RS      17    FLOW      -1
562          RC   0.070   0.040   0.070    9570  0.0246
563          RX   960.0  1040.0  1075.0  1101.0  1136.0  1150.0  1190.0  1278.0
564          RY  2161.0  2160.1  2159.8  2157.5  2158.1  2159.4  2159.9  2160.4
565          RL                    0.39  2157.5
             *
1                                        HEC-1 INPUT                                          PAGE 14

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

566          KK    511K
567          KM   Sub-Basin   511K
568          KM
569          KM      The Phoenix Mountain S-Graph is used for this basin.
```

```
570          KM          Lag Used =  34.2 minutes
571          KM
572          BA   0.791
573          LG    0.33    0.37    6.60    0.18    0.00
574          UI      78      78      78      78      78      78      78      96     224     224
575          UI     252     298     318     358     413     453     471     496     518     545
576          UI     568     585     604     625     660     719     769     855     919     993
577          UI     847     667     602     565     534     509     488     470     459     451
578          UI     440     426     408     399     389     376     370     358     345     331
579          UI     320     314     303     298     279     267     259     242     242     213
580          UI     206     206     193     190     190     184     179     179     176     163
581          UI     163     163     148     128     128     128     128     110      99      99
582          UI      99      99      99      93      85      85      85      85      85      85
583          UI      78      60      60      60      60      60      60      60      60      60
584          UI      60      38      38      38      38      38      38      38      38      38
585          UI      38      38      38      38      38      38      38      17      15      15
586          UI      15      15      15      15      15      15      15      15      15      15
587          UI      15      15      15      15      15      15      15      15      15      15
588          UI      15      15      15      15      15      15      15      15      15      15
589          UI      15      15      15      15      15      15      15      15       0       0
590          UI       0       0       0       0       0       0       0       0       0       0
             *

591          KK    C535
592          KM    Combine routed hydrographs from C534R and C580 with runoff from 511K at C535
593          HC       3    6.09
             *
             *

594          KK   D535L
595          KM       Hydrograph diversion at C535
596          KM      Main flow continues on in left branch.
597          KM      Diverted flow is in the right branch, coded on DQ card.
598          DT   D535R
599          DI       0     100     200     600    1000    1500
600          DQ       0      85     170     510     850    1275
             *

601          KK  535515
602          KM   Normal depth channel route from C535 to C515
603          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
604          RS       7    FLOW      -1
605          RC   0.065   0.045   0.065    2814  0.0237
606          RX  1000.0  1015.0  1095.0  1105.0  1145.0  1165.0  1375.0  1415.0
607          RY  1707.0  1706.0  1704.0  1702.0  1702.0  1704.0  1706.0  1707.0
608          RL                    0.33  1702.0
             *
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

609          KK    511L
610          KM   Sub-Basin   511L
611          KM
612          KM      The Phoenix Mountain S-Graph is used for this basin.
613          KM          Lag Used =  20.3 minutes
614          KM
615          BA   0.193
616          LG    0.35    0.35    4.35    0.44    0.00
617          UI      32      32      32      32      52      92     114     135     165     191
618          UI     206     223     238     251     272     311     362     395     295     240
619          UI     220     201     191     185     175     166     158     152     144     135
620          UI     129     123     112     105      99      85      83      78      77      74
621          UI      72      67      67      53      53      50      41      41      41      38
622          UI      35      35      35      32      25      25      25      25      25      23
623          UI      16      16      16      16      16      16      16      16      16       9
624          UI       6       6       6       6       6       6       6       6       6       6
625          UI       6       6       6       6       6       6       6       6       6       6
626          UI       6       6       6       0       0       0       0       0       0       0
627          UI       0       0       0       0       0       0       0       0       0       0
             *
             *

628          KK    C515
629          KM     Combine routed hydrograph from C535L with runoff from 511L at C515
630          HC       2    6.28
             *
             *

631          KK   D515R
632          KM       Hydrograph diversion at C515
633          KM      Main flow continues on in right branch.
634          KM      Diverted flow is in the left branch, coded on DQ card.
635          DT   D515L
636          DI       0      30     125     242     450     898    1110    1320    1570    1795
637          DQ       0      20     105     180     425     660     810     970    1160    1330
             *

638          KK  515575
639          KM   Normal depth channel route from C515 to C575
640          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
641          RS       4    FLOW      -1
642          RC   0.065   0.045   0.065    2236  0.0242
643          RX  1000.0  1027.0  1148.0  1156.0  1163.0  1173.0  1386.0  1411.0
644          RY  1712.7  1712.0  1710.0  1708.0  1708.0  1710.0  1712.0  1713.0
645          RL                    0.14  1708.0
             *

646          KK    511M
647          KM   Sub-Basin   511M
648          KM
649          KM      The Phoenix Mountain S-Graph is used for this basin.
650          KM          Lag Used =  15.5 minutes
651          KM
652          BA   0.083
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

653          LG    0.35    0.37    5.20    0.30    0.00
654          UI      18      18      18      32      55      73      93     110     121     133
655          UI     143     164     197     216     150     127     114     107     101      94
```

```
656          UI      88      84      76      72      67      60      55      48      45      43
657          UI      42      39      37      30      30      24      23      23      20      20
658          UI      20      15      14      14      14      13       9       9       9       9
659          UI       9       9       9       4       3       3       3       3       3       3
660          UI       3       3       3       3       3       3       3       3       3       3
661          UI       3       0       0       0       0       0       0       0       0       0
662          UI       0       0       0       0       0       0       0       0       0       0
             *
             *

663          KK   B535R
664          KM        Retrieve split hydrograph D535R
665          DR   D535R
             *
             *

666          KK   D574L
667          KM        Hydrograph diversion at C574
668          KM      Main flow continues on in left branch.
669          KM      Diverted flow is in the right branch, coded on DQ card.
670          DT   D574R
671          DI       0      25     135     430     860    1550    1960    2525    3100    3740
672          DQ       0       0      25      80     200     400     490     700     900    1140
             *

673          KK  574575
674          KM   Normal depth channel route from C574 to C575
675          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
676          RS       8    FLOW      -1
677          RC   0.065   0.045   0.065    4351  0.0242
678          RX  1000.0  1040.0  1095.0  1110.0  1170.0  1190.0  1225.0  1260.0
679          RY  1750.0  1748.0  1748.0  1746.0  1746.0  1748.0  1749.0  1750.0
680          RL                    0.39  1746.0
             *

681          KK    C575
682          KM   Combine routed hydrographs from C515R and C574L with runoff from 511M at C575
683          HC       3    6.36
             *

684          KK  575536
685          KM   Normal depth channel route from C575 to C536
686          KM       Source:  200 Scale 2' CI Mapping, Sheet 5
687          RS       6    FLOW      -1
688          RC   0.040   0.030   0.040    4398  0.0215
689          RX  1000.0  1033.0  1045.0  1072.0  1093.0  1103.0  1117.0  1135.0
690          RY  1644.0  1642.0  1640.0  1638.0  1638.0  1640.0  1642.0  1644.0
691          RL                    0.07  1638.0
             *
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

692          KK    511Q
693          KM   Sub-Basin   511Q
694          KM
695          KM      The Clark Unit Hydrograph is used for this basin.
696          KM          The Urban time-area relation is used for this basin.
697          KM
698          KM      Time of Concentration for this sub-basin is based on the following:
699          KM          6-Hour Rainfall, Pattern No.  1.00
700          KM          An rainfall areal reduction factor of 0.999
701          KM
702          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
703          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
704          KM   .49 .49 .49 .18 .14 .14 .06 .06 .06 .05 .05 .05 .00 .00 .00 .00 .00 .00
705          KM
706          KM          L=   0.959 miles, S=  121 feet/mile, Kb= .06
707          KM
708          BA   0.086
709          LG    0.15    0.16    7.30    0.13   17.50
710          UC   0.313   0.398
711          UA       0       5      16      30      65      77      84      90      94      97
712          UA     100
             *

713          KK    511N
714          KM   Sub-Basin   511N
715          KM
716          KM      The Clark Unit Hydrograph is used for this basin.
717          KM          The Urban time-area relation is used for this basin.
718          KM
719          KM      Time of Concentration for this sub-basin is based on the following:
720          KM          6-Hour Rainfall, Pattern No.  1.00
721          KM          An rainfall areal reduction factor of 0.999
722          KM
723          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
724          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
725          KM   .49 .48 .48 .17 .14 .13 .06 .06 .05 .04 .04 .03 .00 .00 .00 .00 .00 .00
726          KM
727          KM          L=   0.836 miles, S=  114 feet/mile, Kb= .06
728          KM
729          BA   0.069
730          LG    0.18    0.18    7.00    0.15   12.90
731          UC   0.296   0.382
732          UA       0       5      16      30      65      77      84      90      94      97
733          UA     100
             *

734          KK    C536
735          KM     Combine runoff from 511Q and 511N with routed hydrograph from C575 at C536
736          HC       3
             *
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

737          KK  536545
738          KM   Normal depth channel route from C536 to C545
739          KM       Source:  200 Scale 2' CI Mapping, Sheet 5
740          RS      11    FLOW      -1
```

```
741          RC   0.070   0.045   0.070    3241  0.0162
742          RX  1000.0  1112.0  1196.0  1241.0  1256.0  1317.0  1406.0  1548.0
743          RY  1579.5  1576.9  1576.5  1576.0  1576.0  1576.8  1578.0  1579.5
744          RL                    0.24  1576.0
             *

745          KK    5110
746          KM   Sub-Basin   5110
747          KM
748          KM      The Clark Unit Hydrograph is used for this basin.
749          KM          The Natural time-area relation is used for this basin.
750          KM
751          KM      Time of Concentration for this sub-basin is based on the following:
752          KM          6-Hour Rainfall, Pattern No.  1.00
753          KM          An rainfall areal reduction factor of 0.999
754          KM
755          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
756          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
757          KM   .46 .45 .44 .12 .08 .06 .03 .03 .02 .00 .00 .00 .00 .00 .00 .00 .00 .00
758          KM
759          KM          L=   0.628 miles, S=   89 feet/mile, Kb= .06
760          KM
761          BA   0.045
762          LG    0.35    0.39    6.20    0.20    0.30
763          UC   0.283   0.366
764          UA      0       3       5       8      12      20      43      75      90      96
765          UA    100
             *

766          KK   C545L
767          KM     Combine routed hydrograph from C536 with runoff from 5110 at C545L
768          HC       2
             *

769          KK   B532R
770          KM        Retrieve split hydrograph D532R
771          DR   D532R
             *

772          KK  532538
773          KM   Normal depth channel route from C532 to C538
774          KM       Source:  Hydrology Field Reconnaissance, page 7
775          RS      18    FLOW      -1
776          RC   0.070   0.040   0.070    7389  0.0267
777          RX  1000.0  1069.0  1086.0  1127.0  1146.0  1154.0  1227.0  1280.0
778          RY  2061.9  2060.8  2059.9  2059.5  2059.6  2060.5  2061.2  2062.0
779          RL                    0.12  2059.5
             *
             * ******************************************************************************
             * ****************************     Major Basin 510     ************************
             * ******************************************************************************
             *
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

780          KK    510A
781          KM   Sub-Basin   510A
782          KM
783          KM      The Phoenix Mountain S-Graph is used for this basin.
784          KM          Lag Used =  39.2 minutes
785          KM
786          BA   0.913
787          LG    0.35    0.39    6.20    0.20    0.00
788          UI      78      78      78      78      78      78      78      78      78     224
789          UI     225     225     290     301     331     361     410     451     474     487
790          UI     503     530     555     573     587     603     622     643     687     743
791          UI     782     867     921    1023     886     759     633     598     564     536
792          UI     516     499     475     467     462     451     440     429     413     408
793          UI     392     387     376     369     361     348     334     328     316     314
794          UI     301     301     276     269     265     244     244     234     207     207
795          UI     207     194     192     192     190     180     180     180     176     164
796          UI     164     164     164     131     129     129     129     129     116     100
797          UI     100     100     100     100     100      94      86      86      86      86
798          UI      86      86      86      81      60      60      60      60      60      60
799          UI      60      60      60      60      60      51      38      38      38      38
800          UI      38      38      38      38      38      38      38      38      38      38
801          UI      38      38      38      38      15      15      15      15      15      15
802          UI      15      15      15      15      15      15      15      15      15      15
803          UI      15      15      15      15      15      15      15      15      15      15
804          UI      15      15      15      15      15      15      15      15      15      15
805          UI      15      15      15      15      15      15      15      15      15      15
806          UI      15       0       0       0       0       0       0       0       0       0
807          UI       0       0       0       0       0       0       0       0       0       0
             *
             *

808          KK   D537L
809          KM        Hydrograph diversion at C537
810          KM      Main flow continues on in left branch.
811          KM      Diverted flow is in the right branch, coded on DQ card.
812          DT   D537R
813          DI       0      40     180     350     600     930    1155    1375    1630    1955
814          DQ       0      40     180     320     500     710     845     965    1110    1315
             *

815          KK  537538
816          KM   Normal depth channel route from C537 to C538
817          KM       Source:  Hydrology Field Reconnaissance, page 9
818          RS      14    FLOW      -1
819          RC   0.070   0.040   0.070    5132  0.0273
820          RX  1000.0  1049.0  1140.0  1248.0  1272.0  1295.0  1313.0  1331.0
821          RY  2063.0  2059.9  2060.8  2058.3  2058.2  2059.6  2061.3  2063.0
822          RL                    0.08  2058.2
             *
1                                          HEC-1 INPUT                                          PAGE 20

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

823          KK    510B
824          KM   Sub-Basin   510B
```

```
825          KM
826          KM      The Phoenix Mountain S-Graph is used for this basin.
827          KM          Lag Used =  33.9 minutes
828          KM
829          BA   0.359
830          LG    0.35    0.35    7.00    0.15    0.00
831          UI      36      36      36      36      36      36      36      50     103     103
832          UI     120     137     149     164     196     210     217     228     240     253
833          UI     262     270     279     289     308     336     363     400     437     439
834          UI     361     288     270     254     241     228     219     213     209     205
835          UI     197     192     186     179     176     171     166     164     152     150
836          UI     144     142     137     134     122     122     111     111     104      94
837          UI      94      91      87      87      86      82      82      82      75      75
838          UI      75      71      59      59      59      59      53      46      46      46
839          UI      46      46      43      39      39      39      39      39      39      36
840          UI      27      27      27      27      27      27      27      27      27      27
841          UI      17      17      17      17      17      17      17      17      17      17
842          UI      17      17      17      17      17      16       7       7       7       7
843          UI       7       7       7       7       7       7       7       7       7       7
844          UI       7       7       7       7       7       7       7       7       7       7
845          UI       7       7       7       7       7       7       7       7       7       7
846          UI       7       7       7       7       7       7       0       0       0       0
847          UI       0       0       0       0       0       0       0       0       0       0
             *

848          KK    C538
849          KM   Combine routed hydrographs from C532R and C537L with runoff from 510B at C538
850          HC       3    5.18
             *

851          KK  538540
852          KM   Normal depth channel route from C538 to C540
853          KM       Source:  Hydrology Field Reconnaissance, page 19
854          RS      37    FLOW      -1
855          RC   0.070   0.040   0.070   11259  0.0264
856          RX  1000.0  1037.0  1107.0  1108.0  1116.0  1120.0  1145.0  1375.0
857          RY   100.5    97.9    97.9    97.4    97.5    98.2    98.7   100.5
858          RL                    0.10    97.4
             *

859          KK   B537R
860          KM        Retrieve split hydrograph D537R
861          DR   D537R
             *

862          KK  537577
863          KM   Normal depth channel route from C537 to C577
864          KM       Source:  Hydrology Field Reconnaissance,  page 9
865          RS       9    FLOW      -1
866          RC   0.070   0.040   0.070    4714  0.0278
867          RX   960.0   980.0  1000.0  1032.0  1068.0  1100.0  1189.0  1224.0
868          RY  2061.0  2060.3  2059.6  2057.5  2057.3  2058.8  2060.0  2061.0
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

869          RL                    0.23  2057.3
             *

870          KK    509D
871          KM   Sub-Basin   509D
872          KM
873          KM      The Phoenix Mountain S-Graph is used for this basin.
874          KM          Lag Used =  33.8 minutes
875          KM
876          BA   0.337
877          LG    0.35    0.40    6.00    0.22    0.00
878          UI      34      34      34      34      34      34      34      47      97      97
879          UI     113     129     141     154     185     197     205     214     226     238
880          UI     247     254     263     272     291     317     343     377     413     411
881          UI     337     271     253     239     227     214     206     201     197     193
882          UI     185     180     175     168     165     161     156     154     143     141
883          UI     135     133     129     125     115     115     104     104      97      89
884          UI      89      85      82      82      80      77      77      77      70      70
885          UI      70      66      55      55      55      55      49      43      43      43
886          UI      43      43      40      37      37      37      37      37      37      33
887          UI      26      26      26      26      26      26      26      26      26      24
888          UI      16      16      16      16      16      16      16      16      16      16
889          UI      16      16      16      16      16      14       6       6       6       6
890          UI       6       6       6       6       6       6       6       6       6       6
891          UI       6       6       6       6       6       6       6       6       6       6
892          UI       6       6       6       6       6       6       6       6       6       6
893          UI       6       6       6       6       6       6       0       0       0       0
894          UI       0       0       0       0       0       0       0       0       0       0
             *
             *

895          KK   D539L
896          KM        Hydrograph diversion at C539
897          KM      Main flow continues on in left branch.
898          KM      Diverted flow is in the right branch, coded on DQ card.
899          DT   D539R
900          DI       0      16     135     293     487     603     720     855
901          DQ       0       8      50     102     170     203     240     280
             *

902          KK  539577
903          KM   Normal depth channel route from C539 to C577
904          KM       Source:  Hydrology Field Reconnaissance, page 5
905          RS       4    FLOW      -1
906          RC   0.070   0.040   0.070    1292  0.0302
907          RX   920.0  1000.0  1061.0  1091.0  1134.0  1224.0  1307.0  1390.0
908          RY  2004.0  2003.5  2002.8  2001.5  2001.6  2002.5  2003.2  2004.0
909          RL                    0.07  2001.5
             *
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

910          KK    C577
911          KM    Combine routed hydrographs from C537R and C539L at C577
912          HC       2    1.25
```

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                 *
 913             KK  577540
 914             KM   Normal depth channel route from C577 to C540
 915             KM       Source:  Hydrology Field Reconnaissance,  page 9
 916             RS       23    FLOW      -1
 917             RC   0.070   0.040   0.070   11694  0.0262
 918             RX   960.0   980.0  1000.0  1032.0  1068.0  1100.0  1189.0  1224.0
 919             RY  2061.0  2060.3  2059.6  2057.5  2057.3  2058.8  2060.0  2061.0
 920             RL                    0.13  2057.3
                 *

 921             KK    510C
 922             KM   Sub-Basin   510C
 923             KM
 924             KM      The Phoenix Mountain S-Graph is used for this basin.
 925             KM          Lag Used =  46.9 minutes
 926             KM
 927             BA   0.851
 928             LG    0.30    0.39    6.20    0.19    0.00
 929             UI      61      61      61      61      61      61      61      61      61      61
 930             UI      86     176     176     176     203     234     234     265     281     303
 931             UI     351     360     370     384     391     413     423     439     452     460
 932             UI     469     485     496     516     547     586     611     665     701     750
 933             UI     788     679     591     501     469     450     436     413     401     391
 934             UI     373     369     360     358     351     345     335     329     320     315
 935             UI     306     303     293     293     282     281     269     260     260     247
 936             UI     247     242     234     234     220     210     210     201     190     190
 937             UI     190     163     162     162     162     151     150     150     150     145
 938             UI     141     141     141     141     130     128     128     128     128     110
 939             UI     100     100     100     100     100      99      78      78      78      78
 940             UI      78      78      78      78      71      67      67      67      67      67
 941             UI      67      67      67      67      51      47      47      47      47      47
 942             UI      47      47      47      47      47      47      47      47      34      30
 943             UI      30      30      30      30      30      30      30      30      30      30
 944             UI      30      30      30      30      30      30      30      30      30      30
 945             UI      17      12      12      12      12      12      12      12      12      12
 946             UI      12      12      12      12      12      12      12      12      12      12
 947             UI      12      12      12      12      12      12      12      12      12      12
 948             UI      12      12      12      12      12      12      12      12      12      12
 949             UI      12      12      12      12      12      12      12      12      12      12
 950             UI      12      12      12      12      12      12       0       0       0       0
 951             UI       0       0       0       0       0       0       0       0       0       0
                 *

 952             KK    C540
 953             KM     Combine hydrographs  from C538, C539L and runoff from 510C at C540
 954             HC       3
                 *
1                                          HEC-1 INPUT                                          PAGE 23

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 955             KK  540542
 956             KM   Normal depth channel route from C540 to C542
 957             KM       Source:  200 Scale 2' CI Mapping, Sheet 5
 958             RS       4    FLOW      -1
 959             RC   0.065   0.045   0.055    1205  0.0172
 960             RX  1000.0  1031.0  1208.0  1225.0  1255.0  1283.0  1338.0  1393.0
 961             RY  1662.0  1660.0  1659.4  1658.0  1658.0  1660.0  1661.0  1662.0
 962             RL                    0.15  1658.0
                 *

 963             KK    510F
 964             KM   Sub-Basin   510F
 965             KM
 966             KM      The Clark Unit Hydrograph is used for this basin.
 967             KM          The HEC-1 time-area relation is used for this basin.
 968             KM
 969             KM      Time of Concentration for this sub-basin is based on the following:
 970             KM          6-Hour Rainfall, Pattern No.  1.00
 971             KM          An rainfall areal reduction factor of 0.999
 972             KM
 973             KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
 974             KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
 975             KM   .46 .46 .45 .14 .10 .09 .04 .04 .03 .01 .01 .01 .00 .00 .00 .00 .00 .00
 976             KM
 977             KM          L=   0.783 miles, S=  127 feet/mile, Kb= .08
 978             KM
 979             BA   0.115
 980             LG    0.26    0.36    6.00    0.20    6.00
 981             UC   0.342   0.317
                 *
                 *

 982             KK    C542
 983             KM     Combine routed hydrograph from C540 with runoff from 510F at C542
 984             HC       2
                 *

 985             KK  542543
 986             KM   Normal depth channel route from C542 to C543
 987             KM       Source:  200 Scale 2' CI Mapping, Sheet 5
 988             RS       2    FLOW      -1
 989             RC   0.030   0.030   0.030    1600  0.0165
 990             RX  1000.0  1008.0  1049.0  1068.0  1103.0  1108.0  1133.0  1143.0
 991             RY  1636.0  1634.0  1633.0  1632.0  1632.0  1633.0  1634.0  1636.0
 992             RL                    0.07  1632.0
                 *
                 *

 993             KK   B574R
 994             KM        Retrieve split hydrograph D574R
 995             DR   D574R
                 *
1                                          HEC-1 INPUT                                          PAGE 24

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 996             KK  574541
 997             KM   Normal depth channel route from C574 to C541
```

```
 998          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
 999          RS       6    FLOW      -1
1000          RC   0.065   0.045   0.065    1821  0.0220
1001          RX  1000.0  1040.0  1067.0  1112.0  1190.0  1245.0  1329.0  1357.0
1002          RY  1773.0  1772.0  1771.0  1770.0  1770.0  1771.0  1772.0  1773.0
1003          RL                     0.39  1770.0
              *

1004          KK    510D
1005          KM   Sub-Basin   510D
1006          KM
1007          KM      The Clark Unit Hydrograph is used for this basin.
1008          KM          The Natural time-area relation is used for this basin.
1009          KM
1010          KM      Time of Concentration for this sub-basin is based on the following:
1011          KM          6-Hour Rainfall, Pattern No.  1.00
1012          KM          An rainfall areal reduction factor of 0.999
1013          KM
1014          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1015          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1016          KM   .46 .45 .45 .13 .10 .08 .04 .03 .03 .00 .00 .00 .00 .00 .00 .00 .00 .00
1017          KM
1018          KM          L=   0.595 miles, S=  305 feet/mile, Kb= .11
1019          KM
1020          BA   0.059
1021          LG    0.21    0.38    5.40    0.22    0.00
1022          UC   0.250   0.264
1023          UA       0       3       5       8      12      20      43      75      90      96
1024          UA     100
              *
              *

1025          KK    C541
1026          KM     Combine routed hydrograph from C574R with runoff from 510D at C541
1027          HC       2    6.15
              *

1028          KK  541543
1029          KM   Normal depth channel route from C541 to C543
1030          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
1031          RS      21    FLOW      -1
1032          RC   0.065   0.045   0.065    5727  0.0224
1033          RX  1000.0  1053.0  1167.0  1189.0  1207.0  1224.0  1285.0  1316.0
1034          RY  1699.0  1698.0  1696.7  1696.0  1696.0  1696.8  1698.0  1699.0
1035          RL                     0.07  1696.0
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1036          KK    510E
1037          KM   Sub-Basin   510E
1038          KM
1039          KM      The Clark Unit Hydrograph is used for this basin.
1040          KM          The HEC-1 time-area relation is used for this basin.
1041          KM
1042          KM      Time of Concentration for this sub-basin is based on the following:
1043          KM          6-Hour Rainfall, Pattern No.  1.00
1044          KM          An rainfall areal reduction factor of 0.998
1045          KM
1046          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1047          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1048          KM   .48 .48 .48 .16 .13 .12 .06 .05 .05 .03 .03 .01 .00 .00 .00 .00 .00 .00
1049          KM
1050          KM          L=   1.276 miles, S=  123 feet/mile, Kb= .07
1051          KM
1052          BA   0.182
1053          LG    0.23    0.25    7.00    0.14   10.00
1054          UC   0.425   0.459
              *

1055          KK    C543
1056          KM     Combine routed hydrographs from C542 and C541 with runoff from 510E at C543
1057          HC       3
              *

1058          KK  543545
1059          KM   Normal depth channel route from C543 to C545
1060          KM       Source:  200 Scale 2' CI Mapping, Sheet 5
1061          RS       7    FLOW      -1
1062          RC   0.065   0.030   0.065    5179  0.0162
1063          RX  1000.0  1001.0  1002.0  1003.0  1075.0  1076.0  1077.0  1078.0
1064          RY  1616.0  1614.0  1612.0  1610.0  1610.0  1612.0  1614.0  1616.0
1065          RL                     0.33  1610.0
              *

1066          KK    510G
1067          KM   Sub-Basin   510G
1068          KM
1069          KM      The Clark Unit Hydrograph is used for this basin.
1070          KM          The HEC-1 time-area relation is used for this basin.
1071          KM
1072          KM      Time of Concentration for this sub-basin is based on the following:
1073          KM          6-Hour Rainfall, Pattern No.  1.00
1074          KM          An rainfall areal reduction factor of 0.998
1075          KM
1076          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1077          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1078          KM   .47 .46 .46 .14 .11 .10 .04 .04 .04 .01 .01 .01 .00 .00 .00 .00 .00 .00
1079          KM
1080          KM          L=   1.094 miles, S=   87 feet/mile, Kb= .05
1081          KM
1082          BA   0.179
1083          LG    0.23    0.33    5.70    0.22   12.90
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1084          UC   0.358   0.339
              *

1085          KK   C545R
```

```
1086        KM     Combine routed hydrograph from C543 with runoff from 510G at C545R
1087        HC       2
            *

1088        KK    C545
1089        KM     Combine hyrographs C545L and C545R at C545
1090        KM                Confluence of washes 10 and 11
1091        HC       2
            *

1092        KK  545546
1093        KM   Normal depth channel route from C545 to C546
1094        KM       Source:  200 Scale 2' CI Mapping, Sheet 6
1095        RS       7    FLOW      -1
1096        RC   0.065   0.042   0.065    3093  0.0120
1097        RX  1000.0  1046.0  1093.0  1099.0  1156.0  1245.0  1338.0  1358.0
1098        RY  1522.0  1520.0  1518.0  1516.0  1516.0  1517.5  1518.0  1522.0
1099        RL                    0.04  1516.0
            *

1100        KK    511P
1101        KM   Sub-Basin   511P
1102        KM
1103        KM      The Clark Unit Hydrograph is used for this basin.
1104        KM          The HEC-1 time-area relation is used for this basin.
1105        KM
1106        KM      Time of Concentration for this sub-basin is based on the following:
1107        KM          6-Hour Rainfall, Pattern No.  1.00
1108        KM          An rainfall areal reduction factor of 0.996
1109        KM
1110        KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1111        KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1112        KM   .49 .48 .48 .17 .13 .12 .06 .06 .05 .04 .03 .01 .00 .00 .00 .00 .00 .00
1113        KM
1114        KM          L=   1.650 miles, S=   86 feet/mile, Kb= .05
1115        KM
1116        BA   0.314
1117        LG    0.31    0.25    8.80    0.08    3.40
1118        UC   0.458   0.450
            *

1119        KK    502A
1120        KM   Sub-Basin   502A
1121        KM
1122        KM      The Clark Unit Hydrograph is used for this basin.
1123        KM          The Natural time-area relation is used for this basin.
1124        KM
1125        KM      Time of Concentration for this sub-basin is based on the following:
1126        KM          6-Hour Rainfall, Pattern No.  1.00
1127        KM          An rainfall areal reduction factor of 0.999
1128        KM
```



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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1129        KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1130        KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1131        KM   .49 .49 .48 .17 .13 .13 .06 .06 .06 .04 .03 .01 .00 .00 .00 .00 .00 .00
1132        KM
1133        KM          L=   0.393 miles, S=  114 feet/mile, Kb= .06
1134        KM
1135        BA   0.040
1136        LG    0.35    0.25    9.70    0.06    0.00
1137        UC   0.196   0.179
1138        UA       0       3       5       8      12      20      43      75      90      96
1139        UA     100
            *

1140        KK    C546
1141        KM     Combine routed hydrograph from C545 with runoff from 511P and 502A at C546
1142        HC       3
            *
            *
            *
            * ******************************************************************************
            * ******************************      Major Basin 509     ************************
            * ******************************************************************************
            *

1143        KK    509A
1144        KM   Sub-Basin   509A
1145        KM
1146        KM      The Phoenix Mountain S-Graph is used for this basin.
1147        KM          Lag Used =  43.8 minutes
1148        KM
1149        BA   0.573
1150        LG    0.30    0.35    6.40    0.18    4.60
1151        UI      44      44      44      44      44      44      44      44      44      44
1152        UI     119     126     126     144     169     169     195     202     232     253
1153        UI     264     269     281     291     299     316     323     330     337     349
1154        UI     358     376     401     427     453     491     520     575     508     450
1155        UI     361     340     326     313     298     287     280     266     263     259
1156        UI     255     253     241     240     230     228     220     218     211     210
1157        UI     202     202     189     187     182     177     177     169     169     162
1158        UI     151     151     145     137     137     133     116     116     116     113
1159        UI     108     108     108     106     101     101     101     101      93      92
1160        UI      92      92      91      72      72      72      72      72      72      58
1161        UI      56      56      56      56      56      56      56      48      48      48
1162        UI      48      48      48      48      48      48      37      34      34      34
1163        UI      34      34      34      34      34      34      34      34      34      26
1164        UI      22      22      22      22      22      22      22      22      22      22
1165        UI      22      22      22      22      22      22      22      22      22      21
1166        UI       8       8       8       8       8       8       8       8       8       8
1167        UI       8       8       8       8       8       8       8       8       8       8
1168        UI       8       8       8       8       8       8       8       8       8       8
1169        UI       8       8       8       8       8       8       8       8       8       8
1170        UI       8       8       8       8       8       8       8       8       8       8
1171        UI       8       8       0       0       0       0       0       0       0       0
1172        UI       0       0       0       0       0       0       0       0       0       0
            *
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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```
1173          KK  552553
1174          KM   Normal depth channel route from C552 to C553
1175          KM       Source:  Hydrology Field Reconnaissance, page 15
1176          RS      40    FLOW      -1
1177          RC   0.070   0.040   0.070   17590  0.0238
1178          RX  1000.0  1034.0  1074.0  1079.0  1090.0  1096.0  1130.0  1163.0
1179          RY  2394.8  2394.1  2391.8  2390.8  2390.7  2391.7  2393.8  2395.4
1180          RL                    0.18  2390.7
              *

1181          KK    509B
1182          KM   Sub-Basin   509B
1183          KM
1184          KM      The Phoenix Mountain S-Graph is used for this basin.
1185          KM          Lag Used =  44.6 minutes
1186          KM
1187          BA   0.637
1188          LG    0.35    0.36    5.10    0.31    0.00
1189          UI      48      48      48      48      48      48      48      48      48      48
1190          UI     115     138     138     147     184     184     203     221     236     277
1191          UI     284     291     304     311     326     339     349     357     367     376
1192          UI     385     395     425     455     476     515     548     583     622     533
1193          UI     458     391     369     350     338     326     309     303     291     287
1194          UI     284     278     276     264     261     252     249     241     239     231
1195          UI     230     221     221     208     205     201     194     194     186     184
1196          UI     181     165     165     162     150     150     150     129     127     127
1197          UI     127     118     118     118     118     112     111     111     111     107
1198          UI     101     101     101     101      91      79      79      79      79      79
1199          UI      75      61      61      61      61      61      61      61      60      53
1200          UI      53      53      53      53      53      53      53      53      39      37
1201          UI      37      37      37      37      37      37      37      37      37      37
1202          UI      37      31      24      24      24      24      24      24      24      24
1203          UI      24      24      24      24      24      24      24      24      24      24
1204          UI      24      24      16       9       9       9       9       9       9       9
1205          UI       9       9       9       9       9       9       9       9       9       9
1206          UI       9       9       9       9       9       9       9       9       9       9
1207          UI       9       9       9       9       9       9       9       9       9       9
1208          UI       9       9       9       9       9       9       9       9       9       9
1209          UI       9       9       9       9       9       9       0       0       0       0
1210          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

1211          KK    C553
1212          KM     Combine routed hydrograph from C552 with runoff from 509B at C553
1213          HC       2
              *
              *
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1214          KK   D553L
1215          KM        Hydrograph diversion at C553
1216          KM      Main flow continues on in left branch.
1217          KM      Diverted flow is in the right branch, coded on DQ card.
1218          DT   D553R
1219          DI       0      37     145     393     650     970    1370    1815    2120    2290
1220          DQ       0      20      75     193     305     460     660     885    1070    1210
              *

1221          KK  553554
1222          KM   Normal depth channel route from C553 to C554
1223          KM       Source:  Hydrology Field Reconnaissance, page 2
1224          RS       9    FLOW      -1
1225          RC   0.070   0.040   0.070    2350  0.0264
1226          RX  1000.0  1019.0  1038.0  1044.0  1060.0  1118.0  1222.0  1335.0
1227          RY  1877.9  1877.5  1877.1  1875.7  1875.7  1877.1  1876.7  1877.8
1228          RL                    0.07  1875.7
              *

1229          KK    509C
1230          KM   Sub-Basin   509C
1231          KM
1232          KM      The Phoenix Mountain S-Graph is used for this basin.
1233          KM          Lag Used =  21.1 minutes
1234          KM
1235          BA   0.147
1236          LG    0.35    0.38    6.40    0.19    0.00
1237          UI      23      23      23      23      29      67      77      93     110     136
1238          UI     145     155     169     177     188     208     237     272     280     202
1239          UI     173     158     146     139     135     128     122     116     111     107
1240          UI      99      95      91      86      80      73      68      62      59      57
1241          UI      55      54      51      49      47      38      38      37      30      30
1242          UI      30      28      26      26      26      26      18      18      18      18
1243          UI      18      18      14      11      11      11      11      11      11      11
1244          UI      11      11       7       4       4       4       4       4       4       4
1245          UI       4       4       4       4       4       4       4       4       4       4
1246          UI       4       4       4       4       4       4       4       0       0       0
1247          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

1248          KK    C554
1249          KM     Combine routed hydrograph from C553L with runoff from 509C at C554
1250          HC       2    1.36
              *
              *

1251          KK   D554L
1252          KM        Hydrograph diversion at C554
1253          KM      Main flow continues on in left branch.
1254          KM      Diverted flow is in the right branch, coded on DQ card.
1255          DT   D554R
1256          DI       0      30     144     316     500     854    1290    1840    2150    2500
1257          DQ       0      20     104     210     310     534     810    1120    1310    1520
              *
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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```
1258          KK  554555
1259          KM   Normal depth channel route from C554 to C555
1260          KM       Source:  Hydrology Field Reconnaissance, page 2
1261          RS       3    FLOW      -1
1262          RC   0.070   0.040   0.070    1086  0.0267
1263          RX  1000.0  1019.0  1038.0  1044.0  1060.0  1118.0  1222.0  1335.0
1264          RY  1877.9  1877.5  1877.1  1875.7  1875.7  1877.1  1876.7  1877.8
1265          RL                    0.07  1875.7
              *

1266          KK    509E
1267          KM   Sub-Basin   509E
1268          KM
1269          KM      The Phoenix Mountain S-Graph is used for this basin.
1270          KM          Lag Used =  24.6 minutes
1271          KM
1272          BA   0.190
1273          LG    0.35    0.35    7.00    0.15    0.00
1274          UI      26      26      26      26      26      42      75      84      99     117
1275          UI     139     154     163     174     188     195     204     218     243     272
1276          UI     307     315     237     198     182     170     160     154     150     144
1277          UI     137     132     127     123     118     110     106     103      99      90
1278          UI      87      81      76      69      67      63      63      60      60      57
1279          UI      54      54      45      43      43      40      33      33      33      33
1280          UI      29      28      28      28      28      22      20      20      20      20
1281          UI      20      20      18      13      13      13      13      13      13      13
1282          UI      13      13      13      13       7       5       5       5       5       5
1283          UI       5       5       5       5       5       5       5       5       5       5
1284          UI       5       5       5       5       5       5       5       5       5       5
1285          UI       5       5       5       0       0       0       0       0       0       0
1286          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

1287          KK   B539R
1288          KM        Retrieve split hydrograph D539R
1289          DR   D539R
              *

1290          KK  539555
1291          KM   Normal depth channel route from C539 to C555
1292          KM       Source:  Hydrology Field Reconnaissance, page 5
1293          RS      16    FLOW      -1
1294          RC   0.070   0.040   0.070    4876  0.0285
1295          RX  1034.0  1046.0  1082.0  1091.0  1116.0  1165.0  1203.0  1250.0
1296          RY  2003.4  2002.9  2002.3  2001.6  2001.6  2002.4  2002.9  2003.4
1297          RL                    0.07  2001.6
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1298          KK    C555
1299          KM     Combine hydrographs from C554L and C539R with runoff from 509E at C555
1300          HC       3    1.88
              *

1301          KK  555557
1302          KM   Normal depth channel route from C555 to C557
1303          KM       Source:  Hydrology Field Reconnaissance,  page 5
1304          RS       9    FLOW      -1
1305          RC   0.070   0.040   0.070    5621  0.0258
1306          RX  1123.0  1138.0  1154.0  1161.0  1186.0  1197.0  1262.0  1350.0
1307          RY  1876.1  1874.3  1872.5  1871.0  1871.0  1872.6  1873.2  1876.0
1308          RL                    0.07  1871.0
              *

1309          KK   B553R
1310          KM        Retrieve split hydrograph D553R
1311          DR   D553R
              *

1312          KK  553556
1313          KM   Normal depth channel route from C553 to C556
1314          KM       Source:  Hydrology Field Reconnaissance,  page 2
1315          RS       8    FLOW      -1
1316          RC   0.070   0.040   0.070    2769  0.0289
1317          RX   960.0  1027.0  1050.0  1060.0  1073.0  1077.0  1091.0  1149.0
1318          RY  1940.0  1937.3  1937.7  1937.0  1937.2  1938.2  1938.3  1939.8
1319          RL                    0.07  1937.0
              *

1320          KK   B554R
1321          KM        Retrieve split hydrograph D554R
1322          DR   D554R
              *
              * *
              * *       Routing Reach  554-556 is too short to route.
              * *
              *

1323          KK    C556
1324          KM     Combine routed hydrograph from C553R with hydrograph from C554R at C556
1325          HC       2    1.36
              *

1326          KK  556558
1327          KM   Normal depth channel route from C556 to C558
1328          KM       Source:  Hydrology Field Reconnaissance,  page 4
1329          RS      11    FLOW      -1
1330          RC   0.070   0.040   0.070    4703  0.0215
1331          RX  1123.0  1138.0  1154.0  1161.0  1186.0  1197.0  1262.0  1350.0
1332          RY  1876.1  1874.3  1872.5  1871.0  1871.0  1872.6  1873.2  1876.0
1333          RL                    0.15  1871.0
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1334          KK    509F
```

```
1335        KM   Sub-Basin   509F
1336        KM
1337        KM      The Phoenix Mountain S-Graph is used for this basin.
1338        KM          Lag Used =  22.8 minutes
1339        KM
1340        BA   0.201
1341        LG    0.35    0.37    6.60    0.18    0.00
1342        UI      30      30      30      30      30      71      85     111     126     150
1343        UI     175     185     198     215     224     236     254     289     330     371
1344        UI     304     234     212     196     183     176     171     163     155     148
1345        UI     143     137     130     123     119     113     105     100      92      85
1346        UI      78      75      72      71      68      67      62      62      54      49
1347        UI      49      44      38      38      38      36      32      32      32      32
1348        UI      28      23      23      23      23      23      23      18      14      14
1349        UI      14      14      14      14      14      14      14      14       7       6
1350        UI       6       6       6       6       6       6       6       6       6       6
1351        UI       6       6       6       6       6       6       6       6       6       6
1352        UI       6       6       6       6       6       0       0       0       0       0
1353        UI       0       0       0       0       0       0       0       0       0       0
            *
            *

1354        KK    C558
1355        KM     Combine routed hydrograph from C556 with runoff from 509F at C558
1356        HC       2
            *
            *

1357        KK   D558L
1358        KM        Hydrograph diversion at C558
1359        KM      Main flow continues on in left branch.
1360        KM      Diverted flow is in the right branch, coded on DQ card.
1361        DT   D558R
1362        DI       0      26     160     304     475     835    1318    1900    2260    2625
1363        DQ       0      10      70     126     195     375     638     960    1160    1345
            *

1364        KK  558557
1365        KM   Normal depth channel route from C558 to C557
1366        KM       Source:  Hydrology Field Reconnaissance,  page 4
1367        RS       3    FLOW      -1
1368        RC   0.070   0.040   0.070    1564  0.0352
1369        RX  1000.0  1030.0  1060.0  1066.0  1111.0  1118.0  1170.0  1223.0
1370        RY  1733.8  1733.2  1732.6  1731.7  1732.0  1733.2  1733.5  1733.8
1371        RL                    0.15  1731.7
            *

1372        KK    509G
1373        KM   Sub-Basin   509G
1374        KM
1375        KM      The Phoenix Mountain S-Graph is used for this basin.
1376        KM          Lag Used =  19.0 minutes
1377        KM
```



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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1378        BA   0.094
1379        LG    0.35    0.36    6.80    0.16    0.00
1380        UI      17      17      17      17      36      49      63      76      96     103
1381        UI     112     121     129     139     159     187     202     147     122     110
1382        UI     102      97      93      88      84      80      76      70      67      64
1383        UI      58      54      51      44      42      40      39      38      36      35
1384        UI      30      27      27      21      21      21      20      18      18      18
1385        UI      15      13      13      13      13      13       9       8       8       8
1386        UI       8       8       8       8       8       4       3       3       3       3
1387        UI       3       3       3       3       3       3       3       3       3       3
1388        UI       3       3       3       3       3       3       3       0       0       0
1389        UI       0       0       0       0       0       0       0       0       0       0
            *

1390        KK    C557
1391        KM    Combine routed hydrographs from C555 and C558L with runoff from 509G at C557
1392        HC       3    2.18
            *
            *

1393        KK   D557R
1394        KM        Hydrograph diversion at C557
1395        KM      Main flow continues on in right branch.
1396        KM      Diverted flow is in the left branch, coded on DQ card.
1397        DT   D557L
1398        DI       0      19     120     225     412     735    1280    1840    2190    2620
1399        DQ       0       0       0       0      32     135     380     680     870    1120
            *

1400        KK  557565
1401        KM   Normal depth channel route from C557 to C565
1402        KM       Source:  Hydrology Field Reconnaissance,  page 5
1403        RS      13    FLOW      -1
1404        RC   0.070   0.040   0.070    3901  0.0217
1405        RX  1000.0  1104.0  1148.0  1178.0  1185.0  1213.0  1320.0  1350.0
1406        RY  1724.7  1721.4  1722.8  1721.2  1721.2  1723.0  1723.6  1725.0
1407        RL                    0.07  1721.2
            *

1408        KK    509M
1409        KM   Sub-Basin   509M
1410        KM
1411        KM      The Clark Unit Hydrograph is used for this basin.
1412        KM          The HEC-1 time-area relation is used for this basin.
1413        KM
1414        KM      Time of Concentration for this sub-basin is based on the following:
1415        KM          6-Hour Rainfall, Pattern No.  1.00
1416        KM          An rainfall areal reduction factor of 0.999
1417        KM
1418        KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1419        KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1420        KM   .45 .44 .44 .12 .08 .06 .03 .03 .02 .00 .00 .00 .00 .00 .00 .00 .00 .00
1421        KM
1422        KM          L=   0.857 miles, S=  120 feet/mile, Kb= .08
1423        KM
```

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1424          BA   0.104
1425          LG    0.33    0.38    5.70    0.24    1.70
1426          UC   0.383   0.410
              *
              *

1427          KK    C565
1428          KM     Combine routed hydrograph from C557R with runoff from 509M at C565
1429          HC       2    2.28
              *

1430          KK  565566
1431          KM   Normal depth channel route from C565 to C566
1432          KM       Source:  200 Scale 2' CI Mapping, Sheet 3
1433          RS       2    FLOW      -1
1434          RC   0.030   0.030   0.030    1757  0.0197
1435          RX  1000.0  1074.0  1120.0  1158.0  1183.0  1193.0  1204.0  1243.0
1436          RY  1618.0  1616.0  1614.0  1612.0  1612.0  1614.0  1616.0  1618.0
1437          RL                    0.15  1612.0
              *
              *

1438          KK   B557L
1439          KM        Retrieve split hydrograph D557L
1440          DR   D557L
              *

1441          KK  557559
1442          KM   Normal depth channel route from C557 to C559
1443          KM       Source:  Hydrology Field Reconnaissance,  page 5
1444          RS       8    FLOW      -1
1445          RC   0.070   0.040   0.070    1207  0.0215
1446          RX  1000.0  1104.0  1227.0  1238.0  1257.0  1281.0  1320.0  1340.0
1447          RY  1724.3  1721.4  1722.3  1721.1  1721.1  1722.4  1723.6  1724.3
1448          RL                    0.07  1721.1
              *

1449          KK    509H
1450          KM   Sub-Basin   509H
1451          KM
1452          KM      The Clark Unit Hydrograph is used for this basin.
1453          KM          The Natural time-area relation is used for this basin.
1454          KM
1455          KM      Time of Concentration for this sub-basin is based on the following:
1456          KM          6-Hour Rainfall, Pattern No.  1.00
1457          KM          An rainfall areal reduction factor of 0.999
1458          KM
1459          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1460          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1461          KM   .47 .46 .46 .14 .10 .09 .04 .04 .03 .00 .00 .00 .00 .00 .00 .00 .00 .00
1462          KM
1463          KM          L=   0.813 miles, S=  132 feet/mile, Kb= .08
1464          KM
1465          BA   0.069
1466          LG    0.34    0.35    7.00    0.15    0.00
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1467          UC   0.346   0.443
1468          UA       0       3       5       8      12      20      43      75      90      96
1469          UA     100
              *

1470          KK    C559
1471          KM     Combine routed hydrograph from C557L with runoff from 509H at C559
1472          HC       2    2.25
              *

1473          KK   D559R
1474          KM        Hydrograph diversion at C559
1475          KM      Main flow continues on in right branch.
1476          KM      Diverted flow is in the left branch, coded on DQ card.
1477          DT   D559L
1478          DI       0      29     205     400     695    1080    1549    2105    2455    2805
1479          DQ       0      14      80     180     340     560     824    1135    1330    1525
              *

1480          KK  559560
1481          KM   Normal depth channel route from C559 to C560
1482          KM       Source:  Hydrology Field Reconnaissance,  page 6
1483          RS       4    FLOW      -1
1484          RC   0.070   0.040   0.070    1062  0.0198
1485          RX   943.0  1050.0  1100.0  1109.0  1126.0  1136.0  1144.0  1198.0
1486          RY  1675.0  1673.5  1673.0  1672.4  1672.3  1673.1  1672.6  1675.0
1487          RL                    0.07  1672.3
              *

1488          KK    509I
1489          KM   Sub-Basin   509I
1490          KM
1491          KM      The Clark Unit Hydrograph is used for this basin.
1492          KM          The Natural time-area relation is used for this basin.
1493          KM
1494          KM      Time of Concentration for this sub-basin is based on the following:
1495          KM          6-Hour Rainfall, Pattern No.  1.00
1496          KM          An rainfall areal reduction factor of 1.000
1497          KM
1498          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1499          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1500          KM   .45 .44 .43 .11 .07 .04 .02 .02 .02 .00 .00 .00 .00 .00 .00 .00 .00 .00
1501          KM
1502          KM          L=   0.375 miles, S=  115 feet/mile, Kb= .09
1503          KM
1504          BA   0.030
1505          LG    0.35    0.38    5.60    0.26    0.00
1506          UC   0.242   0.259
1507          UA       0       3       5       8      12      20      43      75      90      96
1508          UA     100
              *
```

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1509          KK    C560
1510          KM     Combine routed hydrograph from C559R with runoff from 509I at C560
1511          HC       2    2.28
              *

1512          KK   D560R
1513          KM        Hydrograph diversion at C560
1514          KM      Main flow continues on in right branch.
1515          KM      Diverted flow is in the left branch, coded on DQ card.
1516          DT   D560L
1517          DI       0      22      80     355     690    1145    1435    1730    2130    2500
1518          DQ       0      12      30      90     190     345     435     530     650     780
              *

1519          KK  560566
1520          KM   Normal depth channel route from C560 to C566
1521          KM       Source:  200 Scale 2' CI Mapping, Sheet 3
1522          RS      10    FLOW      -1
1523          RC   0.070   0.045   0.070    3583  0.0201
1524          RX  1000.0  1033.0  1149.0  1156.0  1168.0  1179.0  1201.0  1214.0
1525          RY  1543.0  1542.0  1540.0  1538.0  1538.0  1540.0  1542.0  1544.0
1526          RL                    0.15  1538.0
              *

1527          KK    509L
1528          KM   Sub-Basin   509L
1529          KM
1530          KM      The Clark Unit Hydrograph is used for this basin.
1531          KM          The Urban time-area relation is used for this basin.
1532          KM
1533          KM      Time of Concentration for this sub-basin is based on the following:
1534          KM          6-Hour Rainfall, Pattern No.  1.00
1535          KM          An rainfall areal reduction factor of 0.999
1536          KM
1537          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1538          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1539          KM   .49 .48 .48 .16 .13 .13 .06 .06 .05 .04 .03 .02 .00 .00 .00 .00 .00 .00
1540          KM
1541          KM          L=   0.789 miles, S=  108 feet/mile, Kb= .03
1542          KM
1543          BA   0.080
1544          LG    0.16    0.25    6.40    0.16   16.80
1545          UC   0.196   0.212
1546          UA       0       5      16      30      65      77      84      90      94      97
1547          UA     100
              *

1548          KK    C566
1549          KM    Combine routed hydrographs from C565 and C560R with runoff from 509L at C566
1550          HC       3    2.36
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1551          KK  566567
1552          KM   Normal depth channel route from C566 to C567
1553          KM       Source:  200 Scale 2' CI Mapping, Sheet 3
1554          RS       3    FLOW      -1
1555          RC   0.030   0.030   0.030    2359  0.0185
1556          RX  1000.0  1070.0  1210.0  1240.0  1280.0  1312.0  1337.0  1362.0
1557          RY  1592.0  1591.1  1590.0  1588.0  1588.0  1590.0  1591.0  1592.0
1558          RL                    0.07  1588.0
              *

1559          KK   B559L
1560          KM        Retrieve split hydrograph D559L
1561          DR   D559L
              *

1562          KK  559561
1563          KM   Normal depth channel route from C559 to C561
1564          KM       Source:  Hydrology Field Reconnaissance,  page 6
1565          RS       7    FLOW      -1
1566          RC   0.070   0.040   0.070    2023  0.0228
1567          RX  1000.0  1062.0  1102.0  1108.0  1137.0  1145.0  1210.0  1278.0
1568          RY  1691.2  1688.9  1689.5  1688.1  1688.2  1688.9  1690.0  1691.2
1569          RL                    0.15  1688.1
              *

1570          KK   B560L
1571          KM        Retrieve split hydrograph D560L
1572          DR   D560L
              *

1573          KK  560561
1574          KM   Normal depth channel route from C560 to C561
1575          KM       Source:  Hydrology Field Reconnaissance,  page 6
1576          RS       4    FLOW      -1
1577          RC   0.070   0.040   0.070    1065  0.0236
1578          RX   975.0  1000.0  1038.3  1041.6  1045.4  1054.0  1085.0  1197.0
1579          RY  1675.0  1674.2  1673.8  1672.8  1672.7  1673.6  1673.9  1674.9
1580          RL                    0.07  1672.7
              *

1581          KK    509K
1582          KM   Sub-Basin   509K
1583          KM
1584          KM      The Clark Unit Hydrograph is used for this basin.
1585          KM          The Natural time-area relation is used for this basin.
1586          KM
1587          KM      Time of Concentration for this sub-basin is based on the following:
1588          KM          6-Hour Rainfall, Pattern No.  1.00
1589          KM          An rainfall areal reduction factor of 1.000
1590          KM
1591          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1592          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1593          KM   .46 .45 .45 .13 .09 .08 .04 .03 .03 .00 .00 .00 .00 .00 .00 .00 .00 .00
1594          KM
```

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1595          KM          L=   0.437 miles, S=  260 feet/mile, Kb= .12
1596          KM
1597          BA   0.029
1598          LG    0.28    0.39    6.20    0.19    0.10
1599          UC   0.233   0.284
1600          UA       0       3       5       8      12      20      43      75      90      96
1601          UA     100
              *

1602          KK    C561
1603          KM   Combine routed hydrographs from C559L and C560L with runoff from 509K at C561
1604          HC       3    2.31
              *

1605          KK  561562
1606          KM   Normal depth channel route from C561 to C562
1607          KM       Source:  200 Scale 2' CI Mapping, Sheet 5
1608          RS       3    FLOW      -1
1609          RC   0.060   0.030   0.060    1843  0.0197
1610          RX  1000.0  1047.0  1064.0  1069.0  1080.0  1085.0  1125.0  1138.0
1611          RY  1642.0  1640.0  1638.0  1636.0  1636.0  1638.0  1640.0  1642.0
1612          RL                    0.07  1636.0
              *

1613          KK    509J
1614          KM   Sub-Basin   509J
1615          KM
1616          KM      The Clark Unit Hydrograph is used for this basin.
1617          KM          The HEC-1 time-area relation is used for this basin.
1618          KM
1619          KM      Time of Concentration for this sub-basin is based on the following:
1620          KM          6-Hour Rainfall, Pattern No.  1.00
1621          KM          An rainfall areal reduction factor of 0.999
1622          KM
1623          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1624          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1625          KM   .46 .45 .45 .13 .10 .09 .04 .03 .03 .01 .01 .01 .00 .00 .00 .00 .00 .00
1626          KM
1627          KM          L=   0.878 miles, S=  188 feet/mile, Kb= .10
1628          KM
1629          BA   0.103
1630          LG    0.21    0.32    5.10    0.28    9.00
1631          UC   0.367   0.399
              *

1632          KK    C562
1633          KM     Combine routed hydrograph from C561 with runoff from 509J at C562
1634          HC       2
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1635          KK  562567
1636          KM   Normal depth channel route from C562 to C567
1637          KM       Source:  200 Scale 2' CI Mapping, Sheet 3
1638          RS       7    FLOW      -1
1639          RC   0.030   0.030   0.030    3314  0.0164
1640          RX  1000.0  1087.0  1157.0  1203.0  1216.0  1229.0  1254.0  1268.0
1641          RY  1606.0  1604.0  1602.0  1600.0  1600.0  1602.0  1604.0  1606.0
1642          RL                    0.15  1600.0
              *

1643          KK    509P
1644          KM   Sub-Basin   509P
1645          KM
1646          KM      The Clark Unit Hydrograph is used for this basin.
1647          KM          The Urban time-area relation is used for this basin.
1648          KM
1649          KM      Time of Concentration for this sub-basin is based on the following:
1650          KM          6-Hour Rainfall, Pattern No.  1.00
1651          KM          An rainfall areal reduction factor of 0.999
1652          KM
1653          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1654          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1655          KM   .50 .49 .49 .18 .14 .14 .07 .07 .06 .06 .05 .05 .01 .01 .01 .01 .01 .01
1656          KM
1657          KM          L=   0.765 miles, S=  107 feet/mile, Kb= .03
1658          KM
1659          BA   0.110
1660          LG    0.10    0.19    6.60    0.15   29.40
1661          UC   0.192   0.168
1662          UA       0       5      16      30      65      77      84      90      94      97
1663          UA     100
              *

1664          KK    C567
1665          KM     Combine routed hydrographs from C562 and C566 with runoff from 509P at C567
1666          HC       3
              *

1667          KK  567568
1668          KM   Normal depth channel route from C567 to C568
1669          KM       Source:  200 Scale 2' CI Mapping, Sheet 2
1670          RS       3    FLOW      -1
1671          RC   0.020   0.045   0.065    1527  0.0136
1672          RX   900.0  1015.0  1032.0  1033.0  1069.0  1070.0  1080.0  1118.0
1673          RY  1559.0  1556.7  1556.0  1554.0  1554.0  1556.0  1557.1  1559.0
1674          RL                    0.10  1554.0
              *

1675          KK    509Q
1676          KM   Sub-Basin   509Q
1677          KM
1678          KM      The Clark Unit Hydrograph is used for this basin.
1679          KM          The Urban time-area relation is used for this basin.
1680          KM
```

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1681          KM      Time of Concentration for this sub-basin is based on the following:
1682          KM          6-Hour Rainfall, Pattern No.  1.00
1683          KM          An rainfall areal reduction factor of 0.999
1684          KM
1685          KM        EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1686          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1687          KM   .49 .48 .48 .17 .14 .13 .06 .06 .05 .05 .04 .04 .00 .00 .00 .00 .00 .00
1688          KM
1689          KM          L=   1.091 miles, S=   98 feet/mile, Kb= .03
1690          KM
1691          BA   0.107
1692          LG    0.12    0.22    6.40    0.16   19.50
1693          UC   0.238   0.287
1694          UA       0       5      16      30      65      77      84      90      94      97
1695          UA     100
              *

1696          KK    C568
1697          KM     Combine routed hydrograph from C567 with runoff from 509Q at C568
1698          HC       2
              *

1699          KK  568569
1700          KM   Normal depth channel route from C568 to C569
1701          KM       Source:  200 Scale 2' CI Mapping, Sheet 2
1702          RS       8    FLOW      -1
1703          RC   0.065   0.045   0.065    1820  0.0167
1704          RX  1040.0  1130.0  1270.0  1272.0  1292.0  1294.0  1478.0  1640.0
1705          RY  1535.0  1533.2  1532.0  1530.0  1530.0  1532.0  1533.8  1535.0
1706          RL                    0.26  1530.0
              *

1707          KK    509R
1708          KM   Sub-Basin   509R
1709          KM
1710          KM      The Clark Unit Hydrograph is used for this basin.
1711          KM          The HEC-1 time-area relation is used for this basin.
1712          KM
1713          KM      Time of Concentration for this sub-basin is based on the following:
1714          KM          6-Hour Rainfall, Pattern No.  1.00
1715          KM          An rainfall areal reduction factor of 0.999
1716          KM
1717          KM        EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1718          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1719          KM   .47 .47 .46 .15 .11 .10 .05 .04 .04 .00 .00 .00 .00 .00 .00 .00 .00 .00
1720          KM
1721          KM          L=   0.646 miles, S=   90 feet/mile, Kb= .04
1722          KM
1723          BA   0.097
1724          LG    0.32    0.32    7.00    0.15    3.80
1725          UC   0.221   0.184
              *
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1726          KK    C569
1727          KM    Combine routed hydrograph  from C568 with runoff from 509R at C569
1728          HC       2
              *

1729          KK  569570
1730          KM   Normal depth channel route from C569 to C570
1731          KM       Source:  200 Scale 2' CI Mapping, Sheet 2
1732          RS       4    FLOW      -1
1733          RC   0.065   0.050   0.065    1501  0.0125
1734          RX  1000.0  1033.0  1066.0  1094.0  1154.0  1225.0  1343.0  1434.0
1735          RY  1508.0  1507.5  1507.0  1504.0  1504.0  1506.0  1507.0  1508.0
1736          RL                    0.07  1504.0
              *

1737          KK    509O
1738          KM   Sub-Basin   509O
1739          KM
1740          KM      The Clark Unit Hydrograph is used for this basin.
1741          KM          The Urban time-area relation is used for this basin.
1742          KM
1743          KM      Time of Concentration for this sub-basin is based on the following:
1744          KM          6-Hour Rainfall, Pattern No.  1.00
1745          KM          An rainfall areal reduction factor of 1.000
1746          KM
1747          KM        EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1748          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1749          KM   .50 .49 .49 .18 .15 .14 .07 .07 .06 .06 .05 .05 .01 .01 .01 .01 .01 .01
1750          KM
1751          KM          L=   0.578 miles, S=   96 feet/mile, Kb= .03
1752          KM
1753          BA   0.037
1754          LG    0.07    0.25    5.00    0.26   53.50
1755          UC   0.171   0.220
1756          UA       0       5      16      30      65      77      84      90      94      97
1757          UA     100
              *
              * *
              * *       Routing Reach  563-564 is too short to route.
              * *
              *

1758          KK    509N
1759          KM   Sub-Basin   509N
1760          KM
1761          KM      The Clark Unit Hydrograph is used for this basin.
1762          KM          The Urban time-area relation is used for this basin.
1763          KM
1764          KM      Time of Concentration for this sub-basin is based on the following:
1765          KM          6-Hour Rainfall, Pattern No.  1.00
1766          KM          An rainfall areal reduction factor of 0.999
1767          KM
1768          KM        EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1769          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
```

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1770          KM   .48 .48 .48 .16 .13 .12 .05 .05 .05 .04 .03 .03 .01 .01 .01 .01 .01 .01
1771          KM
1772          KM          L=   1.124 miles, S=   92 feet/mile, Kb= .03
1773          KM
1774          BA   0.114
1775          LG    0.11    0.26    5.40    0.24   28.10
1776          UC   0.246   0.295
1777          UA       0       5      16      30      65      77      84      90      94      97
1778          UA     100
              *
              *

1779          KK    C564
1780          KM     Combine hydrograph from C563  with runoff from 509N at C564
1781          HC       2
              *

1782          KK  564570
1783          KM   Normal depth channel route from C564 to C570
1784          KM       Source:  200 Scale 2' CI Mapping, Sheet 2
1785          RS      12    FLOW      -1
1786          RC   0.065   0.045   0.065    5346  0.0149
1787          RX  1000.0  1007.0  1034.0  1042.0  1052.0  1065.0  1085.0  1157.0
1788          RY  1564.0  1562.0  1560.0  1558.0  1558.0  1560.0  1562.0  1564.0
1789          RL                    0.12  1558.0
              *

1790          KK    509S
1791          KM   Sub-Basin   509S
1792          KM
1793          KM      The Clark Unit Hydrograph is used for this basin.
1794          KM          The HEC-1 time-area relation is used for this basin.
1795          KM
1796          KM      Time of Concentration for this sub-basin is based on the following:
1797          KM          6-Hour Rainfall, Pattern No.  1.00
1798          KM          An rainfall areal reduction factor of 0.997
1799          KM
1800          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1801          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1802          KM   .48 .48 .47 .16 .12 .12 .05 .05 .05 .03 .02 .01 .00 .00 .00 .00 .00 .00
1803          KM
1804          KM          L=   1.030 miles, S=   81 feet/mile, Kb= .04
1805          KM
1806          BA   0.195
1807          LG    0.27    0.27    7.30    0.13    8.10
1808          UC   0.296   0.249
              *

1809          KK    C570
1810          KM     Combine routed hydrographs from C564 and C569 with runoff from 509S at C570
1811          HC       3
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1812          KK   CLEAR
1813          KM     Clear hydrographs from memory.
1814          HC       3
              *
              * ***************************************************************************
              * ****************************      Major Basin 505     ************************
              * ***************************************************************************
              *

1815          KK   B558R
1816          KM        Retrieve split hydrograph D558R
1817          DR   D558R
              *

1818          KK  558571
1819          KM   Normal depth channel route from C558 to C571
1820          KM       Source:  Hydrology Field Reconnaissance,  page 4
1821          RS      15    FLOW      -1
1822          RC   0.070   0.040   0.070    5068  0.0267
1823          RX   965.0  1030.0  1060.0  1066.0  1087.0  1108.0  1160.0  1370.0
1824          RY  1734.5  1733.2  1732.6  1732.2  1732.0  1733.2  1733.5  1734.5
1825          RL                    0.15  1732.0
              *

1826          KK    505A
1827          KM   Sub-Basin   505A
1828          KM
1829          KM      The Phoenix Mountain S-Graph is used for this basin.
1830          KM          Lag Used =  21.7 minutes
1831          KM
1832          BA   0.180
1833          LG    0.34    0.37    6.60    0.18    0.50
1834          UI      28      28      28      28      28      80      87     107     127     157
1835          UI     170     182     196     209     219     236     268     306     348     284
1836          UI     219     197     183     171     164     158     150     143     137     132
1837          UI     126     118     112     108     101      95      87      81      74      71
1838          UI      68      66      64      62      58      58      46      46      46      36
1839          UI      36      36      35      31      31      31      31      26      21      21
1840          UI      21      21      21      21      14      14      14      14      14      14
1841          UI      14      14      14      14       7       5       5       5       5       5
1842          UI       5       5       5       5       5       5       5       5       5       5
1843          UI       5       5       5       5       5       5       5       5       5       5
1844          UI       0       0       0       0       0       0       0       0       0       0
1845          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

1846          KK    C571
1847          KM     Combine routed hydrograph from C558R with runoff from 505A at C571
1848          HC       2    2.13
              *
```

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1849          KK  571572
1850          KM   Normal depth channel route from C571 to C572
1851          KM       Source:  200 Scale 2' CI Mapping, Sheet 3
1852          RS       9    FLOW      -1
1853          RC   0.030   0.030   0.030    4644  0.0179
1854          RX  1000.0  1017.0  1078.0  1096.0  1138.0  1164.0  1205.0  1269.0
1855          RY  1629.0  1628.0  1626.0  1624.0  1624.0  1626.0  1628.0  1629.0
1856          RL                    0.10  1624.0
              *

1857          KK    505B
1858          KM   Sub-Basin   505B
1859          KM
1860          KM      The Clark Unit Hydrograph is used for this basin.
1861          KM          The Urban time-area relation is used for this basin.
1862          KM
1863          KM      Time of Concentration for this sub-basin is based on the following:
1864          KM          6-Hour Rainfall, Pattern No.  1.00
1865          KM          An rainfall areal reduction factor of 0.998
1866          KM
1867          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1868          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1869          KM   .49 .49 .49 .17 .14 .14 .06 .06 .06 .05 .05 .05 .00 .00 .00 .00 .00 .00
1870          KM
1871          KM          L=   1.034 miles, S=   97 feet/mile, Kb= .03
1872          KM
1873          BA   0.145
1874          LG    0.13    0.16    7.00    0.14   17.70
1875          UC   0.229   0.223
1876          UA       0       5      16      30      65      77      84      90      94      97
1877          UA     100
              *

1878          KK    C572
1879          KM     Combine routed hydrograph from C571 with runoff from 505B at C572
1880          HC       2
              *
              * ******************************************************************************
              * ******************************      Major Basin 500     ************************
              * ******************************************************************************
              *

1881          KK    500A
1882          KM   Sub-Basin   500A
1883          KM
1884          KM      The Phoenix Mountain S-Graph is used for this basin.
1885          KM          Lag Used =  18.8 minutes
1886          KM
1887          BA   0.214
1888          LG    0.35    0.37    5.30    0.28    0.00
1889          UI      38      38      38      87     117     148     181     225     241
1890          UI     264     284     300     328     382     444     454     317     276     252
1891          UI     233     224     213     201     190     182     172     160     153     145
1892          UI     132     121     110     101      95      93      88      87      80      78
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1893          UI      63      63      56      49      49      48      42      42      42      40
1894          UI      29      29      29      29      29      24      19      19      19      19
1895          UI      19      19      19      19      11       7       7       7       7       7
1896          UI       7       7       7       7       7       7       7       7       7       7
1897          UI       7       7       7       7       7       7       0       0       0       0
1898          UI       0       0       0       0       0       0       0       0       0       0
              *

1899          KK  501502
1900          KM   Normal depth channel route from C501 to C502
1901          KM       Source:  Hydrology Field Reconnaissance, page 10
1902          RS      36    FLOW      -1
1903          RC   0.070   0.040   0.070    6289  0.0223
1904          RX   822.0  1013.0  1035.0  1045.0  1049.0  1053.0  1076.0  1573.0
1905          RY  2161.0  2159.2  2158.9  2156.6  2156.8  2158.9  2159.0  2161.0
1906          RL                    0.12  2156.6
              *

1907          KK    500B
1908          KM   Sub-Basin   500B
1909          KM
1910          KM      The Phoenix Mountain S-Graph is used for this basin.
1911          KM          Lag Used =  26.0 minutes
1912          KM
1913          BA   0.205
1914          LG    0.35    0.38    5.40    0.27    0.00
1915          UI      27      27      27      27      27      28      76      76     100     110
1916          UI     125     153     161     171     182     193     201     210     224     248
1917          UI     277     310     331     259     209     193     178     168     160     156
1918          UI     152     145     139     133     129     125     121     113     108     106
1919          UI     102      94      91      83      82      70      70      66      65      64
1920          UI      61      61      57      56      56      45      44      44      41      34
1921          UI      34      34      34      31      29      29      29      29      28      20
1922          UI      20      20      20      20      20      20      18      13      13      13
1923          UI      13      13      13      13      13      13      13      13      12       5
1924          UI       5       5       5       5       5       5       5       5       5       5
1925          UI       5       5       5       5       5       5       5       5       5       5
1926          UI       5       5       5       5       5       5       5       5       5       5
1927          UI       0       0       0       0       0       0       0       0       0       0
1928          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

1929          KK    C502
1930          KM     Combine routed hydrograph from C501 with runoff from 500B at C502
1931          HC       2
              *
              *

1932          KK   D502R
1933          KM        Hydrograph diversion at C502
1934          KM      Main flow continues on in right branch.
```

```
1935          KM      Diverted flow is in the left branch, coded on DQ card.
1936          DT   D502L
1937          DI       0      30     131     435     762    1035    1158    1300    1493    1722
1                                          HEC-1 INPUT                                                PAGE 46

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1938          DQ       0       0      44     260     488     679     760     850     980    1134
              *

1939          KK  502506
1940          KM   Normal depth channel route from C502 to C506
1941          KM       Source:  Hydrology Field Reconnaissance, page 10
1942          RS      13    FLOW      -1
1943          RC   0.070   0.040   0.070    6884  0.0266
1944          RX   985.0  1000.0  1015.0  1020.0  1030.0  1035.0  1055.0  1075.0
1945          RY  2160.4  2159.2  2158.3  2156.7  2156.7  2158.5  2159.3  2160.4
1946          RL                    0.33  2156.7
              *

1947          KK   B534L
1948          KM        Retrieve split hydrograph D534L
1949          DR   D534L
              *

1950          KK  534506
1951          KM   Normal depth channel route from C534 to C506
1952          KM       Source:  Hydrology Field Reconnaissance, page 10
1953          RS       2    FLOW      -1
1954          RC   0.070   0.040   0.070    1113  0.0278
1955          RX   985.0  1000.0  1015.0  1020.0  1030.0  1035.0  1055.0  1075.0
1956          RY  2160.4  2159.2  2158.3  2156.7  2156.7  2158.5  2159.3  2160.4
1957          RL                    0.62  2156.7
              *

1958          KK    C506
1959          KM     Combine routed hydrograph from C502R with hydrograph from C534L at C506
1960          HC       2    5.72
              *

1961          KK  506507
1962          KM   Normal depth channel route from C506 to C507
1963          KM       Source:  Hydrology Field Reconnaissance, page 10
1964          RS       2    FLOW      -1
1965          RC   0.070   0.040   0.070    1485  0.0269
1966          RX   985.0  1000.0  1015.0  1020.0  1030.0  1035.0  1055.0  1075.0
1967          RY  2160.4  2159.2  2158.3  2156.7  2156.7  2158.5  2159.3  2160.4
1968          RL                    0.62  2156.7
              *

1969          KK    500H
1970          KM   Sub-Basin   500H
1971          KM
1972          KM      The Phoenix Mountain S-Graph is used for this basin.
1973          KM          Lag Used =  22.4 minutes
1974          KM
1975          BA   0.211
1976          LG    0.35    0.35    4.30    0.46    0.00
1977          UI      32      32      32      32      32      82      93     122     139     167
1978          UI     189     201     218     232     244     256     287     323     368     387
1979          UI     288     238     220     204     191     186     179     170     162     156
1980          UI     150     143     135     128     123     116     109      99      95      84
1                                          HEC-1 INPUT                                                PAGE 47

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1981          UI      82      78      77      73      73      66      66      59      52      52
1982          UI      48      41      41      41      39      35      35      35      35      28
1983          UI      24      24      24      24      24      24      16      16      16      16
1984          UI      16      16      16      16      16      16      12       6       6       6
1985          UI       6       6       6       6       6       6       6       6       6       6
1986          UI       6       6       6       6       6       6       6       6       6       6
1987          UI       6       6       6       0       0       0       0       0       0       0
1988          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

1989          KK    C507
1990          KM     Combine routed hydrograph from C506 with runoff from 500H at C507
1991          HC       2
              *

1992          KK  507508
1993          KM   Normal depth channel route from C507 to C508
1994          KM       Source:  Hydrology Field Reconnaissance, page 12
1995          RS      16    FLOW      -1
1996          RC   0.070   0.045   0.070    3461  0.0269
1997          RX   920.0  1106.0  1137.0  1152.0  1166.0  1170.0  1202.0  1275.0
1998          RY  1847.5  1846.2  1846.3  1845.1  1845.1  1846.4  1846.8  1847.5
1999          RL                    0.56  1845.1
              *
              *

2000          KK   B502L
2001          KM        Retrieve split hydrograph D502L
2002          DR   D502L
              *

2003          KK  502503
2004          KM   Normal depth channel route from C502 to C503
2005          KM       Source:  Hydrology Field Reconnaissance, page 10
2006          RS      11    FLOW      -1
2007          RC   0.070   0.040   0.070    4578  0.0266
2008          RX  1000.0  1040.0  1075.0  1101.0  1136.0  1150.0  1190.0  1230.0
2009          RY  2160.4  2160.1  2159.8  2157.5  2158.1  2159.4  2159.9  2160.4
2010          RL                    0.33  2157.5
              *

2011          KK    500C
2012          KM   Sub-Basin   500C
2013          KM
2014          KM      The Phoenix Mountain S-Graph is used for this basin.
2015          KM          Lag Used =  17.1 minutes
```

```
2016        KM
2017        BA   0.123
2018        LG    0.35    0.35    4.65    0.37    0.00
2019        UI      24      24      24      28      70      86     106     136     151     166
2020        UI     180     192     216     254     298     232     180     161     148     141
2021        UI     134     125     119     113     105      98      93      84      77      70
2022        UI      64      59      58      56      52      51      42      40      36      31
2023        UI      31      29      27      27      27      20      19      19      19      19
1                                        HEC-1 INPUT                                                PAGE 48

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2024        UI      14      12      12      12      12      12      12      12       7       5
2025        UI       5       5       5       5       5       5       5       5       5       5
2026        UI       5       5       5       5       5       5       5       5       0       0
2027        UI       0       0       0       0       0       0       0       0       0       0
            *
            *

2028        KK    C503
2029        KM     Combine routed hydrograph from C502L with runoff from 500C at C503
2030        HC       2    0.54
            *
2031        KM      The culvert at C503 is filled with sediment and is assumed to be
2032        KM        completely plugged.  Channel hydraulics on the right side of the
2033        KM        road were checked and it was determined that no flow overtopped the
2034        KM        road to the north for the 100-year storm event.
            *

2035        KK  503508
2036        KM   Normal depth channel route from C503 to C508
2037        KM       Source:  Hydrology Field Reconnaissance, page 10
2038        RS      33    FLOW      -1
2039        RC   0.070   0.040   0.070    7224  0.0269
2040        RX   869.0  1105.0  1137.0  1149.0  1163.0  1172.0  1200.0  1451.0
2041        RY  1848.0  1846.2  1846.3  1845.5  1845.1  1846.5  1846.8  1848.0
2042        RL                   0.33  1845.1
            *

2043        KK    500I
2044        KM   Sub-Basin   500I
2045        KM
2046        KM      The Phoenix Mountain S-Graph is used for this basin.
2047        KM          Lag Used =  22.9 minutes
2048        KM
2049        BA   0.409
2050        LG    0.35    0.35    4.25    0.47    0.00
2051        UI      60      60      60      60      60     142     173     224     254     302
2052        UI     354     375     401     435     454     477     514     583     663     754
2053        UI     631     477     435     400     374     358     348     332     317     303
2054        UI     291     280     266     252     242     231     216     205     187     176
2055        UI     159     154     147     145     138     138     126     126     115      99
2056        UI      99      94      77      77      77      76      66      66      66      66
2057        UI      61      46      46      46      46      46      46      40      29      29
2058        UI      29      29      29      29      29      29      29      29      18      12
2059        UI      12      12      12      12      12      12      12      12      12      12
2060        UI      12      12      12      12      12      12      12      12      12      12
2061        UI      12      12      12      12      12       0       0       0       0       0
2062        UI       0       0       0       0       0       0       0       0       0       0
            *

2063        KK    C508
2064        KM    Combine routed hydrographs from C503 and C507 with runoff from 500I at C508
2065        HC       3
            *
1                                        HEC-1 INPUT                                                PAGE 49

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2066        KK   D508R
2067        KM        Hydrograph diversion at  C508
2068        KM      Main flow continues on in right branch.
2069        KM      Diverted flow is in the left branch, coded on DQ card.
2070        DT   D508L
2071        DI       0      11      45     160     352     698     913    1160    1439    1853
2072        DQ       0       0      10      45     160     390     520     670     839    1130
            *

2073        KK  508517
2074        KM   Normal depth channel route from C508 to C517
2075        KM       Source:  200 Scale 2' CI Mapping, Sheet 8
2076        RS      45    FLOW      -1
2077        RC   0.070   0.040   0.070    7904  0.0252
2078        RX   960.0   980.0  1000.0  1010.0  1030.0  1034.0  1092.0  1112.0
2079        RY  1848.0  1847.2  1846.4  1845.6  1845.2  1846.5  1847.1  1848.0
2080        RL                   0.33  1845.2
            *

2081        KK   B515L
2082        KM        Retrieve split hydrograph D515L
2083        DR   D515L
            *

2084        KK  515517
2085        KM   Normal depth channel route from C515 to C517
2086        KM       Source:  200 Scale 2' CI Mapping, Sheet 8
2087        RS      15    FLOW      -1
2088        RC   0.065   0.045   0.065    2653  0.0231
2089        RX  1000.0  1031.0  1061.0  1193.0  1206.0  1281.0  1320.0  1368.0
2090        RY  1706.7  1706.0  1705.0  1704.0  1704.0  1704.8  1706.0  1707.0
2091        RL                   0.33  1704.0
            *

2092        KK    500L
2093        KM   Sub-Basin   500L
2094        KM
2095        KM      The Phoenix Mountain S-Graph is used for this basin.
2096        KM          Lag Used =  19.1 minutes
2097        KM
2098        BA   0.161
2099        LG    0.35    0.35    4.35    0.44    0.20
2100        UI      28      28      28      28      61      84     109     129     164     176
```

```
2101        UI     192     207     220     237     271     318     347     254     210     190
2102        UI     175     167     160     151     143     137     131     121     115     109
2103        UI     101      93      88      75      73      69      67      65      61      59
2104        UI      52      47      47      37      36      36      34      31      31      31
2105        UI      27      22      22      22      22      22      16      14      14      14
2106        UI      14      14      14      14      14       8       5       5       5       5
2107        UI       5       5       5       5       5       5       5       5       5       5
2108        UI       5       5       5       5       5       5       5       5       0       0
2109        UI       0       0       0       0       0       0       0       0       0       0
            *
1                                          HEC-1 INPUT                                          PAGE 50

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2110        KK    C517
2111        KM   Combine routed hydrographs from C515L and C508R with runoff from 500L at C517
2112        HC       3    7.60
            *

2113        KK  517518
2114        KM   Normal depth channel route from C517 to C518
2115        KM       Source:  200 Scale 2' CI Mapping, Sheet 7
2116        RS       3    FLOW      -1
2117        RC   0.065   0.045   0.065    1745  0.0209
2118        RX  1000.0  1060.0  1117.0  1127.0  1172.0  1192.0  1272.0  1350.0
2119        RY  1712.0  1711.5  1710.0  1708.0  1708.0  1710.0  1711.0  1712.0
2120        RL                    0.33  1708.0
            *

2121        KK    500J
2122        KM   Sub-Basin   500J
2123        KM
2124        KM      The Phoenix Mountain S-Graph is used for this basin.
2125        KM          Lag Used =  13.8 minutes
2126        KM
2127        BA   0.090
2128        LG    0.34    0.35    4.45    0.41    1.10
2129        UI      22      22      22      56      78     104     132     147     163     177
2130        UI     211     264     215     160     141     130     123     113     106      98
2131        UI      90      84      75      67      58      54      52      50      46      39
2132        UI      36      30      28      27      24      24      21      17      17      17
2133        UI      15      11      11      11      11      11      11       6       4       4
2134        UI       4       4       4       4       4       4       4       4       4       4
2135        UI       4       4       4       0       0       0       0       0       0       0
2136        UI       0       0       0       0       0       0       0       0       0       0
            *

2137        KK  514518
2138        KM   Normal depth channel route from C514 to C518
2139        KM       Source:  200 Scale 2' CI Mapping, Sheet 7
2140        RS       4    FLOW      -1
2141        RC   0.065   0.045   0.065    1322  0.0216
2142        RX  1000.0  1034.0  1056.0  1087.0  1108.0  1135.0  1142.5  1150.0
2143        RY  1646.8  1646.0  1646.0  1644.0  1644.0  1646.0  1646.5  1647.0
2144        RL                    0.33  1644.0
            *

2145        KK    C518
2146        KM     Combine routed hydrographs from C517 and  C514 at C518
2147        HC       2
            *

2148        KK  518519
2149        KM   Normal depth channel route from C518 to C519
2150        KM       Source:  200 Scale 2' CI Mapping, Sheet 7
2151        RS      12    FLOW      -1
2152        RC   0.070   0.050   0.070    3094  0.0215
2153        RX  1000.0  1062.0  1115.0  1134.0  1161.0  1176.0  1251.0  1326.0
1                                          HEC-1 INPUT                                          PAGE 51

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2154        RY  1612.0  1610.0  1608.5  1608.0  1608.0  1608.3  1610.0  1612.0
2155        RL                    0.33  1608.0
            *

2156        KK    500M
2157        KM   Sub-Basin   500M
2158        KM
2159        KM      The Clark Unit Hydrograph is used for this basin.
2160        KM          The Urban time-area relation is used for this basin.
2161        KM
2162        KM      Time of Concentration for this sub-basin is based on the following:
2163        KM          6-Hour Rainfall, Pattern No.  1.00
2164        KM          An rainfall areal reduction factor of 0.998
2165        KM
2166        KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2167        KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2168        KM   .47 .46 .46 .14 .11 .10 .04 .04 .03 .02 .02 .02 .00 .00 .00 .00 .00 .00
2169        KM
2170        KM          L=   1.051 miles, S=  117 feet/mile, Kb= .05
2171        KM
2172        BA   0.123
2173        LG    0.15    0.26    4.65    0.36   19.80
2174        UC   0.308   0.344
2175        UA       0       5      16      30      65      77      84      90      94      97
2176        UA     100
            *
            *

2177        KK    C519
2178        KM     Combine routed hydrograph from C518 with runoff from 500M at C519
2179        HC       2
            *
            * *
            * *       Routing Reach  519-520 is too short to route.
            * *
            *

2180        KK    C504
2181        KM     Bring back tape 21 file Rio Verde North runoff hydrograph WP504
2182        BI   WP504      21
```

```
                 *
2183             KK  504509
2184             KM   Normal depth channel route from C504 to C509
2185             KM       Source:  Hydrology Field Reconnaissance, page 21
2186             RS      26    FLOW      -1
2187             RC   0.065   0.040   0.030    9180  0.0273
2188             RX  1000.0  1026.0  1040.0  1048.0  1072.0  1083.0  1117.0  1152.0
2189             RY   100.4    99.0    99.3    98.4    98.4    98.8    98.9   100.4
2190             RL                   0.33    98.4
                 *
1                                          HEC-1 INPUT                                                    PAGE 52

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2191             KK    500D
2192             KM   Sub-Basin   500D
2193             KM
2194             KM      The Phoenix Mountain S-Graph is used for this basin.
2195             KM          Lag Used =  23.2 minutes
2196             KM
2197             BA   0.234
2198             LG    0.35    0.35    4.35    0.44    0.00
2199             UI      34      34      34      34      34      76      98     124     141     166
2200             UI     199     211     225     242     255     266     286     322     364     418
2201             UI     385     282     251     232     215     204     198     191     182     174
2202             UI     167     161     154     145     138     133     128     116     110     105
2203             UI      91      90      84      83      79      78      75      71      71      58
2204             UI      56      56      48      43      43      43      41      37      37      37
2205             UI      37      31      26      26      26      26      26      26      20      17
2206             UI      17      17      17      17      17      17      17      17      17      10
2207             UI       7       7       7       7       7       7       7       7       7       7
2208             UI       7       7       7       7       7       7       7       7       7       7
2209             UI       7       7       7       7       7       7       7       0       0       0
2210             UI       0       0       0       0       0       0       0       0       0       0
                 *

2211             KK   TEMP1
2212             KO                                  21
2213             KM     Combine routed hydrograph from C504 with runoff from 500D at C509
2214             HC       2   0.494
                 *
                 *    The combined hydrograph at C509 is written out to tape 21 file to correct
                 *      corrupted pointers.
                 *

2215             KK    C509
2216             KM     Bring back tape 21 of combined hydrograph at C509
2217             BI   TEMP1      21
                 *

2218             KK  509510
2219             KM   Normal depth channel route from C509 to C510
2220             KM       Source:  200 Scale 2' CI Mapping, Sheet 8
2221             RS      10    FLOW      -1
2222             RC   0.065   0.040   0.040    5926  0.0267
2223             RX   950.0  1025.0  1031.0  1040.0  1050.0  1054.0  1072.0  1090.0
2224             RY  1777.5  1776.9  1776.0  1774.0  1774.0  1776.0  1777.3  1777.5
2225             RL                   0.33  1774.0
                 *

2226             KK    500E
2227             KM   Sub-Basin   500E
2228             KM
2229             KM      The Phoenix Mountain S-Graph is used for this basin.
2230             KM          Lag Used =  15.5 minutes
2231             KM
2232             BA   0.106
2233             LG    0.35    0.35    4.35    0.44    0.00
1                                          HEC-1 INPUT                                                    PAGE 53

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2234             UI      23      23      23      42      70      93     119     140     155     170
2235             UI     183     211     253     273     188     160     144     135     128     119
2236             UI     112     106      97      91      84      76      69      61      57      55
2237             UI      53      49      46      38      38      29      29      29      25      25
2238             UI      25      18      18      18      18      16      11      11      11      11
2239             UI      11      11      11       4       4       4       4       4       4       4
2240             UI       4       4       4       4       4       4       4       4       4       4
2241             UI       4       0       0       0       0       0       0       0       0       0
2242             UI       0       0       0       0       0       0       0       0       0       0
                 *

2243             KK    C581
2244             KM    Bring back tape 21 file of Rio Verde North runoff hydrograph WP581
2245             BI   WP581      21
                 *

2246             KK  581510
2247             KM   Normal depth channel route from C581 to C510
2248             KM       Source:  200 Scale 2' CI Mapping, Sheet 8
2249             RS       7    FLOW      -1
2250             RC   0.065   0.040   0.065    3150  0.0254
2251             RX  1000.0  1040.0  1065.0  1070.0  1100.0  1105.0  1120.0  1145.0
2252             RY  1749.5  1749.0  1748.0  1747.0  1747.0  1748.0  1747.8  1749.5
2253             RL                   0.33  1747.0
                 *

2254             KK   TEMP2
2255             KO                                  21
2256             KM     Combine routed hydrograph from C509 and C581 with runoff from 500E at C510
2257             HC       3   0.494
                 *
                 *    The combined hydrograph at C510 is written out to tape 21 file to correct
                 *      corrupted pointers.
                 *

2258             KK    C510
2259             KM     Bring back tape 21 file of combined hydrograph at C510
2260             BI   TEMP2      21
                 *
```

```
2261          KK   D510R
2262          KM        Hydrograph diversion at C510
2263          KM      Main flow continues on in right branch.
2264          KM      Diverted flow is in the left branch (Rio Verde North Study), coded on DQ.
2265          DT   D510L
2266          DI       0      50     235     450     749    1016    1349    1541    1749    1972
2267          DQ       0      18      94     184     301     397     511     576     646     721
              *

2268          KK  510511
2269          KM   Normal depth channel route from C510 to C511
2270          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
2271          RS       4    FLOW      -1
2272          RC   0.070   0.050   0.070    1447  0.0289
2273          RX  1000.0  1060.0  1100.0  1125.0  1178.0  1189.0  1207.0  1320.0
1                                          HEC-1 INPUT                                          PAGE 54

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2274          RY  1700.0  1699.9  1699.1  1698.0  1698.0  1698.7  1699.5  1700.0
2275          RL                    0.33  1698.0
              *

2276          KK   B508L
2277          KM        Retrieve split hydrograph D508L
2278          DR   D508L
              *

2279          KK  508511
2280          KM   Normal depth channel route from C508 to C511
2281          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
2282          RS      46    FLOW      -1
2283          RC   0.070   0.040   0.070    7575  0.0255
2284          RX   986.0  1018.0  1050.0  1057.0  1082.0  1089.0  1105.0  1215.0
2285          RY  1848.5  1847.4  1846.8  1845.7  1845.7  1846.6  1846.3  1848.5
2286          RL                    0.31  1845.7
              *

2287          KK    500F
2288          KM   Sub-Basin   500F
2289          KM
2290          KM      The Phoenix Mountain S-Graph is used for this basin.
2291          KM          Lag Used =  25.7 minutes
2292          KM
2293          BA   0.437
2294          LG    0.35    0.35    4.40    0.43    0.00
2295          UI      57      57      57      57      57      66     165     166     219     241
2296          UI     276     332     350     371     397     419     436     458     490     549
2297          UI     612     688     686     522     440     405     379     357     342     333
2298          UI     322     308     296     285     274     265     253     242     231     223
2299          UI     216     197     188     178     164     151     148     140     140     133
2300          UI     132     128     120     120     108      94      94      94      76      73
2301          UI      73      73      71      63      63      63      63      63      47      44
2302          UI      44      44      44      44      44      42      28      28      28      28
2303          UI      28      28      28      28      28      28      28      27      11      11
2304          UI      11      11      11      11      11      11      11      11      11      11
2305          UI      11      11      11      11      11      11      11      11      11      11
2306          UI      11      11      11      11      11      11      11      11       0       0
2307          UI       0       0       0       0       0       0       0       0       0       0
              *

2308          KK    C511
2309          KM   Combine routed hydrographs from C508L and C510R with runoff from 500F at C511
2310          HC       3    7.49
              *

2311          KK  511512
2312          KM   Normal depth channel route from C511 to C512
2313          KM       Source:  200 Scale 2' CI Mapping, Sheet 7
2314          RS      31    FLOW      -1
2315          RC   0.070   0.050   0.070    5718  0.0199
2316          RX  1000.0  1037.0  1189.0  1195.0  1230.0  1236.0  1386.0  1646.0
2317          RY  1616.7  1616.0  1615.0  1614.0  1614.0  1615.0  1616.0  1617.0
2318          RL                    0.33  1614.0
              *
1                                          HEC-1 INPUT                                          PAGE 55

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2319          KK    500K
2320          KM   Sub-Basin   500K
2321          KM
2322          KM      The Phoenix Mountain S-Graph is used for this basin.
2323          KM          Lag Used =  16.6 minutes
2324          KM
2325          BA   0.096
2326          LG    0.23    0.32    5.60    0.25    9.50
2327          UI      19      19      19      26      56      72      88     114     123     136
2328          UI     147     158     183     218     231     160     137     124     116     110
2329          UI     104      97      92      86      80      76      70      63      58      51
2330          UI      48      47      45      42      41      34      32      28      25      25
2331          UI      23      21      21      21      15      15      15      15      15      10
2332          UI      10      10      10      10      10      10       8       4       4       4
2333          UI       4       4       4       4       4       4       4       4       4       4
2334          UI       4       4       4       4       4       4       0       0       0       0
2335          UI       0       0       0       0       0       0       0       0       0       0
              *

2336          KK  513512
2337          KM   Normal depth channel route from C513 to C512
2338          KM       Source:  200 Scale 2' CI Mapping, Sheet 7
2339          RS      16    FLOW      -1
2340          RC   0.065   0.045   0.065    3192  0.0180
2341          RX  1000.0  1039.0  1069.0  1229.0  1247.0  1310.0  1380.0  1406.0
2342          RY  1605.0  1604.0  1603.2  1602.0  1602.0  1603.1  1604.0  1605.1
2343          RL                    0.33  1602.0
              *

2344          KK    500G
2345          KM   Sub-Basin   500G
2346          KM
```

```
2347          KM      The Clark Unit Hydrograph is used for this basin.
2348          KM          The Urban time-area relation is used for this basin.
2349          KM
2350          KM      Time of Concentration for this sub-basin is based on the following:
2351          KM          6-Hour Rainfall, Pattern No.  1.00
2352          KM          An rainfall areal reduction factor of 0.997
2353          KM
2354          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2355          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2356          KM   .47 .46 .46 .14 .11 .10 .04 .04 .03 .02 .02 .02 .01 .01 .01 .01 .01 .01
2357          KM
2358          KM          L=   1.314 miles, S=  110 feet/mile, Kb= .05
2359          KM
2360          BA   0.202
2361          LG    0.16    0.27    4.70    0.35   22.30
2362          UC   0.367   0.376
2363          UA       0       5      16      30      65      77      84      90      94      97
2364          UA     100
              *
1                                          HEC-1 INPUT                                          PAGE 56

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2365          KK    C512
2366          KM     Combine routed hydrographs from C511 and C513 with runoff from 500G at C512
2367          HC       3
              *
              * *
              * *       Routing Reach  512-520 is too short to route.
              * *
              *

2368          KK    C520
2369          KM     Combine hydrographs C512 and C519 at C520
2370          HC       2
              *

2371          KK  520576
2372          KM   Normal depth channel route from C520 to C576
2373          KM       Source:  200 Scale 2' CI Mapping, Sheet 6
2374          RS       4    FLOW     -1
2375          RC   0.065   0.040   0.065    1203  0.0150
2376          RX  1000.0  1050.0  1245.0  1335.0  1410.0  1485.0  1565.0  1615.0
2377          RY  1546.6  1546.0  1546.0  1544.0  1544.0  1545.0  1546.0  1546.6
2378          RL                    0.04  1544.0
              *

2379          KK    5000
2380          KM   Sub-Basin   5000
2381          KM
2382          KM      The Clark Unit Hydrograph is used for this basin.
2383          KM          The Urban time-area relation is used for this basin.
2384          KM
2385          KM      Time of Concentration for this sub-basin is based on the following:
2386          KM          6-Hour Rainfall, Pattern No.  1.00
2387          KM          An rainfall areal reduction factor of 0.999
2388          KM
2389          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2390          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2391          KM   .49 .49 .49 .17 .14 .13 .06 .06 .06 .05 .04 .04 .00 .00 .00 .00 .00 .00
2392          KM
2393          KM          L=   1.037 miles, S=  115 feet/mile, Kb= .06
2394          KM
2395          BA   0.101
2396          LG    0.18    0.19    7.30    0.13   16.10
2397          UC   0.338   0.422
2398          UA       0       5      16      30      65      77      84      90      94      97
2399          UA     100
              *

2400          KK  521522
2401          KM   Normal depth channel route from C521 to C522
2402          KM       Source:  200 Scale 2' CI Mapping, Sheet 7
2403          RS      13    FLOW     -1
2404          RC   0.070   0.050   0.070    2928  0.0207
2405          RX  1000.0  1055.0  1110.0  1175.0  1198.0  1240.0  1417.0  1450.0
2406          RY  1576.0  1575.0  1574.0  1572.0  1572.0  1573.0  1574.0  1576.0
1                                          HEC-1 INPUT                                          PAGE 57

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2407          RL                    0.06  1572.0
              *

2408          KK    500P
2409          KM   Sub-Basin   500P
2410          KM
2411          KM      The Clark Unit Hydrograph is used for this basin.
2412          KM          The HEC-1 time-area relation is used for this basin.
2413          KM
2414          KM      Time of Concentration for this sub-basin is based on the following:
2415          KM          6-Hour Rainfall, Pattern No.  1.00
2416          KM          An rainfall areal reduction factor of 0.999
2417          KM
2418          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2419          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2420          KM   .49 .48 .48 .16 .13 .12 .06 .06 .05 .04 .03 .01 .00 .00 .00 .00 .00 .00
2421          KM
2422          KM          L=   0.642 miles, S=  119 feet/mile, Kb= .06
2423          KM
2424          BA   0.083
2425          LG    0.30    0.26    8.40    0.09    4.90
2426          UC   0.246   0.226
              *

2427          KK    C522
2428          KM     Combine routed hydrograph from C521 with runoff from 500P at C522
2429          HC       2
              *
              * *
              * *       Routing Reach  522-576 is too short to route.
              * *
```

```
                 *
2430             KK    C576
2431             KM     Combine routed hydrograph from C520 with hydrograph from C522 at C576
2432             HC       2
                 *

2433             KK  576523
2434             KM   Normal depth channel route from C576 to C523
2435             KM       Source:  200 Scale 2' CI Mapping, Sheet 6
2436             RS       2    FLOW      -1
2437             RC   0.065   0.040   0.065    1429  0.0262
2438             RX  1000.0  1061.0  1106.0  1115.0  1150.0  1155.0  1267.0  1330.0
2439             RY  1531.0  1530.0  1528.0  1526.0  1526.0  1528.0  1530.0  1531.0
2440             RL                    0.26  1526.0
                 *

2441             KK    500N
2442             KM   Sub-Basin   500N
2443             KM
2444             KM      The Clark Unit Hydrograph is used for this basin.
2445             KM          The Natural time-area relation is used for this basin.
2446             KM
2447             KM      Time of Concentration for this sub-basin is based on the following:
1                                          HEC-1 INPUT                                          PAGE 58

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2448             KM          6-Hour Rainfall, Pattern No.  1.00
2449             KM          An rainfall areal reduction factor of 0.999
2450             KM
2451             KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2452             KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2453             KM   .45 .45 .44 .12 .08 .06 .03 .03 .02 .00 .00 .00 .00 .00 .00 .00 .00 .00
2454             KM
2455             KM          L=   0.859 miles, S=  110 feet/mile, Kb= .05
2456             KM
2457             BA   0.113
2458             LG    0.34    0.39    6.20    0.20    0.00
2459             UC   0.279   0.275
2460             UA       0       3       5       8      12      20      43      75      90      96
2461             UA     100
                 *

2462             KK    C523
2463             KM     Combine routed hydrograph from C576 with runoff from 500N at C523
2464             HC       2
                 *
                 * ******************************************************************************
                 * ******************************     Major Basin 501    ************************
                 * ******************************************************************************
                 *

2465             KK    501A
2466             KM   Sub-Basin   501A
2467             KM
2468             KM      The Clark Unit Hydrograph is used for this basin.
2469             KM          The Urban time-area relation is used for this basin.
2470             KM
2471             KM      Time of Concentration for this sub-basin is based on the following:
2472             KM          6-Hour Rainfall, Pattern No.  1.00
2473             KM          An rainfall areal reduction factor of 0.999
2474             KM
2475             KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2476             KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2477             KM   .46 .46 .45 .13 .10 .08 .04 .04 .03 .01 .01 .01 .00 .00 .00 .00 .00 .00
2478             KM
2479             KM          L=   0.364 miles, S=  145 feet/mile, Kb= .06
2480             KM
2481             BA   0.040
2482             LG    0.36    0.28    4.70    0.28    7.30
2483             UC   0.179   0.153
2484             UA       0       5      16      30      65      77      84      90      94      97
2485             UA     100
                 *

2486             KK    501B
2487             KM   Sub-Basin   501B
2488             KM
2489             KM      The Clark Unit Hydrograph is used for this basin.
2490             KM          The HEC-1 time-area relation is used for this basin.
2491             KM
2492             KM      Time of Concentration for this sub-basin is based on the following:
1                                          HEC-1 INPUT                                          PAGE 59

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2493             KM          6-Hour Rainfall, Pattern No.  1.00
2494             KM          An rainfall areal reduction factor of 0.999
2495             KM
2496             KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2497             KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2498             KM   .45 .44 .43 .11 .07 .05 .02 .02 .02 .00 .00 .00 .00 .00 .00 .00 .00 .00
2499             KM
2500             KM          L=   0.610 miles, S=  116 feet/mile, Kb= .06
2501             KM
2502             BA   0.074
2503             LG    0.35    0.33    4.90    0.32    1.90
2504             UC   0.250   0.236
                 *

2505             KK   CLEAR
2506             KM        Clear Hydrograph stack from memory
2507             HC       5
                 *
                 * ******************************************************************************
                 * ******************************     Major Basin 502    ************************
                 * ******************************************************************************
                 *

2508             KK    502B
2509             KM   Sub-Basin   502B
2510             KM
```

```
2511          KM      The Clark Unit Hydrograph is used for this basin.
2512          KM          The Natural time-area relation is used for this basin.
2513          KM
2514          KM      Time of Concentration for this sub-basin is based on the following:
2515          KM          6-Hour Rainfall, Pattern No.  1.00
2516          KM          An rainfall areal reduction factor of 0.999
2517          KM
2518          KM        EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2519          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2520          KM   .49 .49 .48 .17 .13 .13 .06 .06 .06 .04 .03 .01 .00 .00 .00 .00 .00 .00
2521          KM
2522          KM          L=   0.506 miles, S=  115 feet/mile, Kb= .06
2523          KM
2524          BA   0.053
2525          LG    0.35    0.25    9.70    0.06    0.00
2526          UC   0.221   0.215
2527          UA       0       3       5       8      12      20      43      75      90      96
2528          UA     100
              *

2529          KK    502C
2530          KM   Sub-Basin   502C
2531          KM
2532          KM      The Clark Unit Hydrograph is used for this basin.
2533          KM          The Natural time-area relation is used for this basin.
2534          KM
2535          KM      Time of Concentration for this sub-basin is based on the following:
2536          KM          6-Hour Rainfall, Pattern No.  1.00
2537          KM          An rainfall areal reduction factor of 0.999
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2538          KM
2539          KM        EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2540          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2541          KM   .49 .49 .48 .17 .13 .13 .06 .06 .06 .04 .03 .01 .00 .00 .00 .00 .00 .00
2542          KM
2543          KM          L=   0.609 miles, S=  100 feet/mile, Kb= .06
2544          KM
2545          BA   0.046
2546          LG    0.35    0.25    9.70    0.06    0.00
2547          UC   0.254   0.315
2548          UA       0       3       5       8      12      20      43      75      90      96
2549          UA     100
              *
              * ******************************************************************************
              * ****************************      Major Basin 503     ************************
              * ******************************************************************************
              *

2550          KK    503A
2551          KM   Sub-Basin   503A
2552          KM
2553          KM      The Clark Unit Hydrograph is used for this basin.
2554          KM          The Urban time-area relation is used for this basin.
2555          KM
2556          KM      Time of Concentration for this sub-basin is based on the following:
2557          KM          6-Hour Rainfall, Pattern No.  1.00
2558          KM          An rainfall areal reduction factor of 0.997
2559          KM
2560          KM        EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2561          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2562          KM   .50 .49 .49 .18 .15 .14 .07 .07 .06 .06 .06 .05 .00 .00 .00 .00 .00 .00
2563          KM
2564          KM          L=   1.534 miles, S=   85 feet/mile, Kb= .03
2565          KM
2566          BA   0.216
2567          LG    0.14    0.17    7.60    0.11   19.50
2568          UC   0.304   0.333
2569          UA       0       5      16      30      65      77      84      90      94      97
2570          UA     100
              *

2571          KK  549550
2572          KM   Normal depth channel route from C549 to C550
2573          KM       Source:  Hydrology Field Reconnaissance, page 23
2574          RS       6    FLOW     -1
2575          RC   0.065   0.050   0.065    3454  0.0156
2576          RX  1000.0  1008.0  1018.0  1026.0  1036.0  1049.0  1061.0  1072.0
2577          RY   100.0    97.9    96.6    93.1    93.2    98.0    97.9   101.2
2578          RL                    0.09    93.1
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2579          KK    503C
2580          KM   Sub-Basin   503C
2581          KM
2582          KM      The Clark Unit Hydrograph is used for this basin.
2583          KM          The Natural time-area relation is used for this basin.
2584          KM
2585          KM      Time of Concentration for this sub-basin is based on the following:
2586          KM          6-Hour Rainfall, Pattern No.  1.00
2587          KM          An rainfall areal reduction factor of 0.998
2588          KM
2589          KM        EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2590          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2591          KM   .48 .48 .48 .16 .13 .12 .06 .06 .05 .03 .01 .00 .00 .00 .00 .00 .00 .00
2592          KM
2593          KM          L=   0.765 miles, S=   71 feet/mile, Kb= .05
2594          KM
2595          BA   0.121
2596          LG    0.35    0.27    8.80    0.08    0.00
2597          UC   0.300   0.262
2598          UA       0       3       5       8      12      20      43      75      90      96
2599          UA     100
              *

2600          KK   C550L
2601          KM    Combine routed hydrograph from C549 with runoff from 503C at C550L
```

```
2602          HC       2
              *

2603          KK    503B
2604          KM   Sub-Basin   503B
2605          KM
2606          KM      The Clark Unit Hydrograph is used for this basin.
2607          KM          The HEC-1 time-area relation is used for this basin.
2608          KM
2609          KM      Time of Concentration for this sub-basin is based on the following:
2610          KM          6-Hour Rainfall, Pattern No.  1.00
2611          KM          An rainfall areal reduction factor of 0.999
2612          KM
2613          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2614          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2615          KM   .49 .48 .48 .17 .13 .13 .06 .06 .06 .04 .03 .02 .00 .00 .00 .00 .00 .00
2616          KM
2617          KM          L=   1.398 miles, S=   85 feet/mile, Kb= .04
2618          KM
2619          BA   0.113
2620          LG    0.27    0.24    8.40    0.09    8.30
2621          UC   0.354   0.530
              *
1                                          HEC-1 INPUT                                                PAGE 62

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2622          KK    C550
2623          KM     Combine hydrograph from C550L with runoff from 503B at C550
2624          HC       2
              *
              * ***************************************************************************
              * ****************************     Major Basin 504     ************************
              * ***************************************************************************
              *

2625          KK    504A
2626          KM   Sub-Basin   504A
2627          KM
2628          KM      The Clark Unit Hydrograph is used for this basin.
2629          KM          The HEC-1 time-area relation is used for this basin.
2630          KM
2631          KM      Time of Concentration for this sub-basin is based on the following:
2632          KM          6-Hour Rainfall, Pattern No.  1.00
2633          KM          An rainfall areal reduction factor of 0.997
2634          KM
2635          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2636          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2637          KM   .48 .48 .48 .16 .13 .12 .06 .06 .05 .03 .02 .01 .00 .00 .00 .00 .00 .00
2638          KM
2639          KM          L=   1.474 miles, S=   83 feet/mile, Kb= .04
2640          KM
2641          BA   0.242
2642          LG    0.29    0.26    8.00    0.10    4.80
2643          UC   0.371   0.377
              *
2644          ZZ
1
              SCHEMATIC DIAGRAM OF STREAM NETWORK
INPUT
 LINE     (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

  NO.     (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

   31      WP504
              .
              .
   68         .       WP581
              .          .
              .          .
  106      CLEAR............
              .
              .
  109         .        511A
              .          V
              .          V
  132         .      524526
              .          .
              .          .
  140         .          .        511B
              .          .          V
              .          .          V
  176         .          .      525526
              .          .          .
              .          .          .
  184         .          .          .        511D
              .          .          .          .
              .          .          .          .
  208         .        C526.......................
              .          V
              .          V
  211         .      526527
              .          .
              .          .
  219         .          .        511E
              .          .          .
              .          .          .
  252         .          .          .        511F
              .          .          .          .
              .          .          .          .
  269         .        C527.......................
              .          V
              .          V
  272         .      527528
              .          .
              .          .
  280         .          .        511C
              .          .          .
              .          .          .
  318         .        C528............
              .          V
              .          V
```

```
321          .      528529
             .          .
329          .          .        511H
             .          .          .
             .          .          .
350          .       C529............
             .          .
             .          .
353          .          .        511G
             .          .          .
             .          .          .
380          .       C530............
             .          V
             .          V
383          .      530531
             .          .
             .          .
391          .          .        511I
             .          .          .
             .          .          .
409          .       C531............
             .          .
             .          .
416          .          .-------->   D531L
412          .      D531R
             .          V
             .          V
419          .      531532
             .          .
             .          .
431          .          .-------->   D532R
427          .      D532L
             .          .
             .          .
438          .          .-------->  D532AL
434          .     D532AR
             .          V
             .          V
441          .     532580
             .          .
             .          .
451          .          .           .<-------  D532AL
449          .          .     B532AL
             .          .          .
             .          .          .
456          .          .           .-------->   D578L
452          .          .      D578R
             .          .          V
             .          .          V
459          .          .     578573
             .          .          .
             .          .          .
471          .          .           .-------->   D573L
467          .          .      D573R
             .          .          V
             .          .          V
474          .          .     573580
             .          .          .
             .          .          .
482          .       C580............
             .          V
             .          V
485          .     580535
             .          .
             .          .
495          .          .           .<-------   D531L
493          .          .      B531L
             .          .          V
             .          .          V
496          .          .     531533
             .          .          .
             .          .          .
506          .          .          .          .<-------   D578L
504          .          .          .      B578L
             .          .          .          .
             .          .          .          .
507          .          .       C533............
             .          .          V
             .          .          V
510          .          .     533579
             .          .          .
             .          .          .
520          .          .          .          .<-------   D573L
518          .          .          .      B573L
             .          .          .          .
             .          .          .          .
521          .          .       C579............
             .          .          V
             .          .          V
524          .          .     579534
             .          .          .
             .          .          .
532          .          .          .       511J
             .          .          .          .
             .          .          .          .
548          .          .       C534............
             .          .          .
             .          .          .
555          .          .          .-------->   D534L
551          .          .      D534R
             .          .          V
             .          .          V
558          .          .     534535
             .          .          .
             .          .          .
566          .          .          .       511K
             .          .          .          .
             .          .          .          .
591          .       C535........................
             .          .
             .          .
598          .          .-------->   D535R
```

```
594          .      D535L
             .          V
             .          V
601          .     535515
             .          .
             .          .
609          .          .        511L
             .          .          .
             .          .          .
628          .      C515............
             .          .
             .          .
635          .          .-------> D515L
631          .      D515R
             .          V
             .          V
638          .     515575
             .          .
             .          .
646          .          .        511M
             .          .          .
             .          .          .
665          .          .          .          .<-------   D535R
663          .          .          .      B535R
             .          .          .          .
             .          .          .          .
670          .          .          .          .------->   D574R
666          .          .          .      D574L
             .          .          .          V
             .          .          .          V
673          .          .          .     574575
             .          .          .          .
             .          .          .          .
681          .      C575........................
             .          V
             .          V
684          .     575536
             .          .
             .          .
692          .          .        511Q
             .          .          .
             .          .          .
713          .          .          .       511N
             .          .          .          .
             .          .          .          .
734          .      C536........................
             .          V
             .          V
737          .     536545
             .          .
             .          .
745          .          .        511O
             .          .          .
             .          .          .
766          .     C545L............
             .          .
             .          .
771          .          .          .<-------   D532R
769          .          .      B532R
             .          .          V
             .          .          V
772          .          .     532538
             .          .          .
             .          .          .
780          .          .          .       510A
             .          .          .          .
             .          .          .          .
812          .          .          .          .------->   D537R
808          .          .          .      D537L
             .          .          .          V
             .          .          .          V
815          .          .          .     537538
             .          .          .          .
             .          .          .          .
823          .          .          .          .        510B
             .          .          .          .          .
             .          .          .          .          .
848          .          .       C538........................
             .          .          V
             .          .          V
851          .          .     538540
             .          .          .
             .          .          .
861          .          .          .          .<-------   D537R
859          .          .          .      B537R
             .          .          .          V
             .          .          .          V
862          .          .          .     537577
             .          .          .          .
             .          .          .          .
870          .          .          .          .        509D
             .          .          .          .          .
             .          .          .          .          .
899          .          .          .          .          .-------> D539R
895          .          .          .          .       D539L
             .          .          .          .          V
             .          .          .          .          V
902          .          .          .          .      539577
             .          .          .          .          .
             .          .          .          .          .
910          .          .          .       C577............
             .          .          .          V
             .          .          .          V
913          .          .          .     577540
             .          .          .          .
             .          .          .          .
921          .          .          .          .        510C
             .          .          .          .          .
             .          .          .          .          .
952          .          .       C540........................
             .          .          V
             .          .          V
955          .          .     540542
```

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                 .          .          .
                 .          .          .
  963            .          .          .        510F
                 .          .          .          .
                 .          .          .          .
  982            .          .       C542.........
                 .          .          V
                 .          .          V
  985            .          .     542543
                 .          .          .
                 .          .          .
  995            .          .          .        .<-------   D574R
  993            .          .          .     B574R
                 .          .          .          V
                 .          .          .          V
  996            .          .          .     574541
                 .          .          .          .
                 .          .          .          .
 1004            .          .          .          .        510D
                 .          .          .          .          .
                 .          .          .          .          .
 1025            .          .          .       C541.........
                 .          .          .          V
                 .          .          .          V
 1028            .          .          .     541543
                 .          .          .          .
                 .          .          .          .
 1036            .          .          .          .        510E
                 .          .          .          .          .
                 .          .          .          .          .
 1055            .          .       C543.......................
                 .          .          V
                 .          .          V
 1058            .          .     543545
                 .          .          .
                 .          .          .
 1066            .          .          .       510G
                 .          .          .          .
                 .          .          .          .
 1085            .          .      C545R.........
                 .          .          .
                 .          .          .
 1088            .       C545.........
                 .          V
                 .          V
 1092            .     545546
                 .          .
                 .          .
 1100            .          .       511P
                 .          .          .
                 .          .          .
 1119            .          .          .       502A
                 .          .          .          .
                 .          .          .          .
 1140            .       C546.......................
                 .          .
                 .          .
 1143            .          .       509A
                 .          .          V
                 .          .          V
 1173            .          .     552553
                 .          .          .
                 .          .          .
 1181            .          .          .       509B
                 .          .          .          .
                 .          .          .          .
 1211            .          .       C553.........
                 .          .          .
                 .          .          .
 1218            .          .          .------->   D553R
 1214            .          .      D553L
                 .          .          V
                 .          .          V
 1221            .          .     553554
                 .          .          .
                 .          .          .
 1229            .          .          .       509C
                 .          .          .          .
                 .          .          .          .
 1248            .          .       C554.........
                 .          .          .
                 .          .          .
 1255            .          .          .------->   D554R
 1251            .          .      D554L
                 .          .          V
                 .          .          V
 1258            .          .     554555
                 .          .          .
                 .          .          .
 1266            .          .          .       509E
                 .          .          .          .
                 .          .          .          .
 1289            .          .          .          .          .<-------   D539R
 1287            .          .          .          .       B539R
                 .          .          .          .          V
                 .          .          .          .          V
 1290            .          .          .          .     539555
                 .          .          .          .          .
                 .          .          .          .          .
 1298            .          .       C555.......................
                 .          .          V
                 .          .          V
 1301            .          .     555557
                 .          .          .
                 .          .          .
 1311            .          .          .        .<-------   D553R
 1309            .          .          .     B553R
                 .          .          .          V
                 .          .          .          V
 1312            .          .          .     553556
                 .          .          .          .
                 .          .          .          .
 1322            .          .          .          .          .<-------   D554R
```

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1320                                                  B554R
                                                        .
1323                                  C556............
                                         V
                                         V
1326                                556556
                                         .
1334                                     .          509F
                                         .            .
1354                                  C558............
                                         .
1361                                     .-------> D558R
1357                                D558L
                                         V
                                         V
1364                                558557
                                         .
1372                                     .          509G
                                         .            .
1390                            C557......................
                                         .
1397                                     .-------> D557L
1393                            D557R
                                         V
                                         V
1400                            557565
                                         .
1408                                  509M
                                         .
1427                            C565............
                                         V
                                         V
1430                            565566
                                         .
1440                                     .<------- D557L
1438                                B557L
                                         V
                                         V
1441                                557559
                                         .
1449                                     .          509H
                                         .            .
1470                                  C559............
                                         .
1477                                     .-------> D559L
1473                                D559R
                                         V
                                         V
1480                                559560
                                         .
1488                                     .          509I
                                         .            .
1509                                  C560............
                                         .
1516                                     .-------> D560L
1512                                D560R
                                         V
                                         V
1519                                560566
                                         .
1527                                     .          509L
                                         .            .
1548                            C566......................
                                         V
                                         V
1551                            566567
                                         .
1561                                     .<------- D559L
1559                                B559L
                                         V
                                         V
1562                                559561
                                         .
1572                                     .            .<------- D560L
1570                                     .        B560L
                                         .            V
                                         .            V
1573                                     .        560561
                                         .            .
1581                                     .            .        509K
                                         .            .          .
1602                                  C561......................
                                         V
                                         V
1605                                561562
                                         .
1613                                     .          509J
                                         .            .
1632                                  C562............
```

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                 .          .          .          V
                 .          .          .          V
1635             .          .          .     562567
                 .          .          .          .
1643             .          .          .          .        509P
                 .          .          .          .          .
1664             .          .      C567.......................
                 .          .          V
                 .          .          V
1667             .          .     567568
                 .          .          .
1675             .          .          .       509Q
                 .          .          .          .
1696             .          .      C568............
                 .          .          V
                 .          .          V
1699             .          .     568569
                 .          .          .
1707             .          .          .       509R
                 .          .          .          .
1726             .          .      C569............
                 .          .          V
                 .          .          V
1729             .          .     569570
                 .          .          .
1737             .          .          .       509O
                 .          .          .          .
1758             .          .          .          .        509N
                 .          .          .          .          .
1779             .          .          .      C564............
                 .          .          .          V
                 .          .          .          V
1782             .          .          .     564570
                 .          .          .          .
1790             .          .          .          .        509S
                 .          .          .          .          .
1809             .          .      C570.......................
                 .          .          .
1812        CLEAR........................
                 .
1817             .          .<-------   D558R
1815             .      B558R
                 .          V
                 .          V
1818             .     558571
                 .          .
1826             .          .      505A
                 .          .          .
1846             .      C571............
                 .          V
                 .          V
1849             .     571572
                 .          .
1857             .          .      505B
                 .          .          .
1878             .      C572............
                 .          .
1881             .          .      500A
                 .          .          V
                 .          .          V
1899             .          .     501502
                 .          .          .
1907             .          .          .       500B
                 .          .          .          .
1929             .          .      C502............
                 .          .          .
1936             .          .          .-------->  D502L
1932             .          .     D502R
                 .          .          V
                 .          .          V
1939             .          .     502506
                 .          .          .
1949             .          .          .          .<-------   D534L
1947             .          .          .      B534L
                 .          .          .          V
                 .          .          .          V
1950             .          .          .     534506
                 .          .          .          .
1958             .          .      C506............
                 .          .          V
                 .          .          V
1961             .          .     506507
                 .          .          .
1969             .          .          .       500H
                 .          .          .          .
1989             .          .      C507............
                 .          .          V
                 .          .          V
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1992                507508
                       .
2002                   .<-------   D502L
2000             B502L
                    V
                    V
2003             502503
                       .
2011                   .        500C
                       .          .
2028               C503.............
                    V
                    V
2035             503508
                       .
2043                   .        500I
                       .          .
2063           C508........................
                       .
2070                   .------->   D508L
2066           D508R
                    V
                    V
2073             508517
                       .
2083                   .<-------   D515L
2081             B515L
                    V
                    V
2084             515517
                       .
2092                   .        500L
                       .          .
2110           C517........................
                    V
                    V
2113             517518
                       .
2121               500J
                    V
                    V
2137             514518
                       .
2145           C518............
                    V
                    V
2148             518519
                       .
2156               500M
                       .
2177           C519............
                       .
2180               C504
                    V
                    V
2183             504509
                       .
2191                   .        500D
                       .          .
2211             TEMP1............
                       .
2215                   .        C509
                       .          V
                       .          V
2218                   .      509510
                       .          .
2226                   .          .        500E
                       .          .          .
2243                   .          .          .        C581
                       .          .          .          V
                       .          .          .          V
2246                   .          .          .      581510
                       .          .          .          .
2254                   .          .          .          .
                       .       TEMP2........................
                       .          .
2258                   .          .        C510
                       .          .          .
2265                   .          .          .-------->   D510L
2261                   .          .      D510R
                       .          .          V
                       .          .          V
2268                   .          .      510511
                       .          .          .
2278                   .          .          .
2276                   .          .          .<-------   D508L
                       .          .      B508L
                       .          .          V
                       .          .          V
2279                   .          .      508511
                       .          .          .
```

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2287                                                                  500F
2308                                                C511
2311                                                511512
2319                                                          500K
2336                                                          513512
2344                                                                  500G
2365                                                C512
2368                                      C520
2371                                      520576
2379                                                5000
2400                                                521522
2408                                                          500P
2427                                                C522
2430                                      C576
2433                                      576523
2441                                                500N
2462                                      C523
2465                                                501A
2486                                                          501B
2505                            CLEAR
2508                                  502B
2529                                      502C
2550                                                503A
2571                                                549550
2579                                                          503C
2600                                                C550L
2603                                                          503B
2622                                                C550
2625                                                          504A
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
1*************************************                    *************************************
*                                   *                    *                                   *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)*                    *   U.S. ARMY CORPS OF ENGINEERS    *
*             MAY   1991            *                    *   HYDROLOGIC ENGINEERING CENTER   *
*           VERSION 4.0.1E          *                    *         609 SECOND STREET         *
*                                   *                    *      DAVIS, CALIFORNIA 95616      *
*  RUN DATE  08/07/95  TIME  10:33:53*                    *          (916) 551-1748           *
*                                   *                    *                                   *
*************************************                    *************************************
```

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                    RIO VERDE SOUTH FIS - Existing Condition Model        File:  EX100-6.IH1
                    by  GVSCE for MKE:   MCFCD #93-07                  Original: 07-22-94     dtp
                        Project:  46                                    Revised: 10-17-94     trl
                        100-year  6-Hr Rainfall
                        Green & Ampt Rainfall Losses

  7 IO        OUTPUT CONTROL VARIABLES
                    IPRNT          5  PRINT CONTROL
                    IPLOT          0  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE

   IT         HYDROGRAPH TIME DATA
```

```
          NMIN          1  MINUTES IN COMPUTATION INTERVAL
         IDATE      1    0  STARTING DATE
         ITIME       0000  STARTING TIME
            NQ       1150  NUMBER OF HYDROGRAPH ORDINATES
        NDDATE      1    0  ENDING DATE
        NDTIME       1909  ENDING TIME
         ICENT         19  CENTURY MARK

     COMPUTATION INTERVAL    0.02 HOURS
          TOTAL TIME BASE   19.15 HOURS

ENGLISH UNITS
     DRAINAGE AREA          SQUARE MILES
     PRECIPITATION DEPTH    INCHES
     LENGTH, ELEVATION      FEET
     FLOW                   CUBIC FEET PER SECOND
     STORAGE VOLUME         ACRE-FEET
     SURFACE AREA           ACRES
     TEMPERATURE            DEGREES FAHRENHEIT

 9 JD      INDEX STORM NO. 1
              STRM       3.40  PRECIPITATION DEPTH
              TRDA       0.01  TRANSPOSITION DRAINAGE AREA

10 PI        PRECIPITATION PATTERN
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.03      0.03      0.03      0.03      0.03
                0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00

13 JD      INDEX STORM NO. 2
              STRM       3.38  PRECIPITATION DEPTH
              TRDA       0.50  TRANSPOSITION DRAINAGE AREA

 0 PI        PRECIPITATION PATTERN
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.03      0.03      0.03      0.03      0.03
                0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00

14 JD      INDEX STORM NO. 3
              STRM       3.33  PRECIPITATION DEPTH
              TRDA       2.80  TRANSPOSITION DRAINAGE AREA

15 PI        PRECIPITATION PATTERN
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
```

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                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.02      0.02      0.02      0.02      0.02
                0.02      0.02      0.02      0.02      0.02      0.02      0.02      0.02      0.02      0.02
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
18 JD         INDEX STORM NO. 4
                STRM        3.13  PRECIPITATION DEPTH
                TRDA       16.00  TRANSPOSITION DRAINAGE AREA

19 PI           PRECIPITATION PATTERN
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
22 JD         INDEX STORM NO. 5
                STRM        2.75  PRECIPITATION DEPTH
                TRDA       90.00  TRANSPOSITION DRAINAGE AREA

23 PI           PRECIPITATION PATTERN
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
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                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00

 26 JD        INDEX STORM NO. 6
                STRM        1.94  PRECIPITATION DEPTH
                TRDA      500.00  TRANSPOSITION DRAINAGE AREA

 27 PI         PRECIPITATION PATTERN
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00

*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

            **************
            *            *
 31 KK      *    WP504   *
            *            *
            **************

 32 KO        OUTPUT CONTROL VARIABLES
                IPRNT           5  PRINT CONTROL
                IPLOT           0  PLOT CONTROL
                QSCAL          0.  HYDROGRAPH PLOT SCALE
                IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                 IOUT          21  SAVE HYDROGRAPH ON THIS UNIT
                ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                ISAV2        1150  LAST ORDINATE PUNCHED OR SAVED
               TIMINT       0.017  TIME INTERVAL IN HOURS

*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

            **************
            *            *
 68 KK      *    WP581   *
            *            *
            **************

 69 KO        OUTPUT CONTROL VARIABLES
                IPRNT           5  PRINT CONTROL
                IPLOT           0  PLOT CONTROL
                QSCAL          0.  HYDROGRAPH PLOT SCALE
                IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                 IOUT          21  SAVE HYDROGRAPH ON THIS UNIT
                ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                ISAV2        1150  LAST ORDINATE PUNCHED OR SAVED
               TIMINT       0.017  TIME INTERVAL IN HOURS

      WARNING EXCESS AT PONDING LESS THAN ZERO FOR PERIOD. EXCESS SET TO ZERO
      WARNING EXCESS AT PONDING LESS THAN ZERO FOR PERIOD. EXCESS SET TO ZERO

2182 BI         READ STATION    WP504 HYDROGRAPH FROM UNIT 21

*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

            **************
            *            *
2211 KK     *    TEMP1   *
            *            *
            **************

2212 KO        OUTPUT CONTROL VARIABLES
                IPRNT           5  PRINT CONTROL
                IPLOT           0  PLOT CONTROL
                QSCAL          0.  HYDROGRAPH PLOT SCALE
                IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                 IOUT          21  SAVE HYDROGRAPH ON THIS UNIT
                ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                ISAV2        1150  LAST ORDINATE PUNCHED OR SAVED
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                    TIMINT       0.017  TIME INTERVAL IN HOURS

2217 BI          READ STATION    TEMP1 HYDROGRAPH FROM UNIT 21

2245 BI          READ STATION    WP581 HYDROGRAPH FROM UNIT 21

*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

            **************
            *            *
2254 KK     *     TEMP2  *
            *            *
            **************

2255 KO          OUTPUT CONTROL VARIABLES
                      IPRNT          5  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE
                      IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                       IOUT         21  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2       1150  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT      0.017  TIME INTERVAL IN HOURS

2260 BI          READ STATION    TEMP2 HYDROGRAPH FROM UNIT 21
1
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RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	WP504	162.	4.67	33.	10.	10.	0.26		
+	HYDROGRAPH AT	WP581	208.	6.75	103.	32.	32.	3.92		
+	2 COMBINED AT	CLEAR	240.	5.00	135.	43.	43.	4.18		
+	HYDROGRAPH AT	511A	941.	4.25	113.	35.	35.	0.65		
+	ROUTED TO	524526	871.	4.72	112.	35.	35.	0.65		
+	HYDROGRAPH AT	511B	948.	4.63	203.	64.	64.	1.10		
+	ROUTED TO	525526	943.	4.72	203.	64.	64.	1.10		
+	HYDROGRAPH AT	511D	195.	4.27	24.	8.	8.	0.13		
+	3 COMBINED AT	C526	1594.	4.73	314.	99.	99.	1.88		
+	ROUTED TO	526527	1562.	4.93	314.	99.	99.	1.88		
+	HYDROGRAPH AT	511E	579.	4.53	105.	33.	33.	0.57		
+	HYDROGRAPH AT	511F	340.	4.12	28.	9.	9.	0.15		
+	3 COMBINED AT	C527	1780.	4.92	417.	131.	131.	2.60		
+	ROUTED TO	527528	1764.	5.02	415.	130.	130.	2.60		
+	HYDROGRAPH AT	511C	878.	4.72	197.	62.	62.	1.20		
+	2 COMBINED AT	C528	2229.	5.00	566.	178.	178.	3.80		
+	ROUTED TO	528529	2180.	5.23	558.	175.	175.	3.80		
+	HYDROGRAPH AT	511H	458.	4.20	47.	15.	15.	0.31		
+	2 COMBINED AT	C529	2175.	5.23	585.	184.	184.	4.11		
+	HYDROGRAPH AT	511G	961.	4.37	143.	45.	45.	0.87		
+	2 COMBINED AT	C530	2274.	5.22	681.	214.	214.	4.97		
+	ROUTED TO	530531	2238.	5.47	674.	212.	212.	4.97		
+	HYDROGRAPH AT	511I	382.	4.12	29.	9.	9.	0.21		
+	2 COMBINED AT	C531	2232.	5.47	688.	216.	216.	5.18		
+	DIVERSION TO	D531L	528.	5.47	162.	51.	51.	5.18		

+	HYDROGRAPH AT	D531R	1694.	5.47	524.	165.	165.	5.18
+	ROUTED TO	531532	1687.	5.53	522.	164.	164.	5.18
+	DIVERSION TO	D532R	877.	5.53	270.	85.	85.	5.18
+	HYDROGRAPH AT	D532L	810.	5.53	252.	79.	79.	5.18
+	DIVERSION TO	D532AL	468.	5.52	135.	42.	42.	5.18
+	HYDROGRAPH AT	D532AR	341.	5.53	117.	37.	37.	5.18
+	ROUTED TO	532580	339.	5.68	116.	37.	37.	5.18
+	HYDROGRAPH AT	B532AL	468.	5.52	135.	42.	42.	5.18
+	DIVERSION TO	D578L	234.	5.52	67.	21.	21.	5.18
+	HYDROGRAPH AT	D578R	234.	5.52	67.	21.	21.	5.18
+	ROUTED TO	578573	232.	5.60	67.	21.	21.	5.18
+	DIVERSION TO	D573L	53.	5.60	10.	3.	3.	5.18
+	HYDROGRAPH AT	D573R	179.	5.62	57.	18.	18.	5.18
+	ROUTED TO	573580	179.	5.68	56.	18.	18.	5.18
+	2 COMBINED AT	C580	518.	5.68	173.	54.	54.	5.18
+	ROUTED TO	580535	511.	6.08	171.	54.	54.	5.18
+	HYDROGRAPH AT	B531L	528.	5.47	162.	51.	51.	5.18
+	ROUTED TO	531533	523.	5.57	160.	50.	50.	5.18
+	HYDROGRAPH AT	B578L	234.	5.52	67.	21.	21.	5.18
+	2 COMBINED AT	C533	757.	5.55	227.	71.	71.	5.18
+	ROUTED TO	533579	754.	5.60	226.	71.	71.	5.18
+	HYDROGRAPH AT	B573L	53.	5.60	10.	3.	3.	5.18
+	2 COMBINED AT	C579	807.	5.60	236.	74.	74.	5.18
+	ROUTED TO	579534	803.	5.67	235.	74.	74.	5.18
+	HYDROGRAPH AT	511J	238.	4.08	16.	5.	5.	0.12
+	2 COMBINED AT	C534	800.	5.67	242.	76.	76.	5.30
+	DIVERSION TO	D534L	240.	5.67	73.	23.	23.	5.30
+	HYDROGRAPH AT	D534R	560.	5.67	169.	53.	53.	5.30
+	ROUTED TO	534535	550.	5.95	166.	52.	52.	5.30
+	HYDROGRAPH AT	511K	1001.	4.32	142.	44.	44.	0.79
+	3 COMBINED AT	C535	1055.	6.00	437.	139.	139.	6.09
+	DIVERSION TO	D535R	896.	6.00	371.	118.	118.	6.09
+	HYDROGRAPH AT	D535L	158.	6.00	66.	21.	21.	6.09
+	ROUTED TO	535515	156.	6.12	64.	20.	20.	6.09
+	HYDROGRAPH AT	511L	336.	4.15	29.	9.	9.	0.19
+	2 COMBINED AT	C515	214.	4.27	82.	26.	26.	6.28
+	DIVERSION TO	D515L	166.	4.27	65.	21.	21.	6.28
+	HYDROGRAPH AT	D515R	49.	4.38	17.	5.	5.	6.28

+	ROUTED TO	515575	49.	4.45	17.	5.	5.	6.28
+	HYDROGRAPH AT	511M	182.	4.10	14.	4.	4.	0.08
+	HYDROGRAPH AT	B535R	896.	6.00	371.	118.	118.	6.09
+	DIVERSION TO	D574R	211.	6.00	77.	24.	24.	6.09
+	HYDROGRAPH AT	D574L	685.	6.00	295.	94.	94.	6.09
+	ROUTED TO	574575	680.	6.13	291.	93.	93.	6.09
+	3 COMBINED AT	C575	705.	6.13	314.	101.	101.	6.36
+	ROUTED TO	575536	702.	6.23	313.	101.	101.	6.36
+	HYDROGRAPH AT	511Q	164.	4.12	22.	7.	7.	0.09
+	HYDROGRAPH AT	511N	132.	4.12	17.	5.	5.	0.07
+	3 COMBINED AT	C536	703.	6.23	341.	111.	111.	6.52
+	ROUTED TO	536545	696.	6.42	339.	110.	110.	6.52
+	HYDROGRAPH AT	511O	78.	4.18	8.	3.	3.	0.05
+	2 COMBINED AT	C545L	695.	6.42	344.	112.	112.	6.56
+	HYDROGRAPH AT	B532R	877.	5.53	270.	85.	85.	5.18
+	ROUTED TO	532538	866.	5.83	268.	85.	85.	5.18
+	HYDROGRAPH AT	510A	994.	4.40	155.	49.	49.	0.91
+	DIVERSION TO	D537R	746.	4.40	131.	41.	41.	0.91
+	HYDROGRAPH AT	D537L	248.	4.40	24.	8.	8.	0.91
+	ROUTED TO	537538	237.	4.63	24.	8.	8.	0.91
+	HYDROGRAPH AT	510B	518.	4.32	70.	22.	22.	0.36
+	3 COMBINED AT	C538	895.	5.82	336.	107.	107.	5.18
+	ROUTED TO	538540	876.	6.43	331.	106.	106.	5.18
+	HYDROGRAPH AT	B537R	746.	4.40	131.	41.	41.	0.91
+	ROUTED TO	537577	735.	4.55	130.	41.	41.	0.91
+	HYDROGRAPH AT	509D	453.	4.32	59.	19.	19.	0.34
+	DIVERSION TO	D539R	158.	4.32	21.	7.	7.	0.34
+	HYDROGRAPH AT	D539L	295.	4.32	38.	12.	12.	0.34
+	ROUTED TO	539577	292.	4.38	38.	12.	12.	0.34
+	2 COMBINED AT	C577	908.	4.50	161.	50.	50.	1.25
+	ROUTED TO	577540	881.	4.88	159.	50.	50.	1.25
+	HYDROGRAPH AT	510C	850.	4.50	151.	47.	47.	0.85
+	3 COMBINED AT	C540	1288.	4.97	550.	177.	177.	7.28
+	ROUTED TO	540542	1282.	5.03	550.	177.	177.	7.28
+	HYDROGRAPH AT	510F	207.	4.18	23.	7.	7.	0.12
+	2 COMBINED AT	C542	1300.	5.03	564.	182.	182.	7.40
+	ROUTED TO	542543	1294.	5.07	564.	182.	182.	7.40
+	HYDROGRAPH AT	B574R	211.	6.00	77.	24.	24.	6.09

+	ROUTED TO	574541	208.	6.10	75.	24.	24.	6.09
+	HYDROGRAPH AT	510D	126.	4.15	11.	4.	4.	0.06
+	2 COMBINED AT	C541	208.	6.10	83.	26.	26.	6.15
+	ROUTED TO	541543	205.	6.45	82.	26.	26.	6.15
+	HYDROGRAPH AT	510E	282.	4.27	42.	13.	13.	0.18
+	3 COMBINED AT	C543	1323.	5.07	605.	196.	196.	13.73
+	ROUTED TO	543545	1311.	5.18	601.	194.	194.	13.73
+	HYDROGRAPH AT	510G	316.	4.20	38.	12.	12.	0.18
+	2 COMBINED AT	C545R	1336.	5.17	622.	202.	202.	13.91
+	2 COMBINED AT	C545	1592.	5.15	850.	277.	277.	20.47
+	ROUTED TO	545546	1581.	5.27	849.	277.	277.	20.47
+	HYDROGRAPH AT	511P	493.	4.28	72.	23.	23.	0.31
+	HYDROGRAPH AT	502A	113.	4.10	9.	3.	3.	0.04
+	3 COMBINED AT	C546	1666.	5.23	898.	295.	295.	20.82
+	HYDROGRAPH AT	509A	674.	4.45	113.	35.	35.	0.57
+	ROUTED TO	552553	626.	5.12	112.	35.	35.	0.57
+	HYDROGRAPH AT	509B	638.	4.47	103.	32.	32.	0.64
+	2 COMBINED AT	C553	779.	5.05	200.	63.	63.	1.21
+	DIVERSION TO	D553R	367.	5.05	97.	30.	30.	1.21
+	HYDROGRAPH AT	D553L	411.	5.05	103.	32.	32.	1.21
+	ROUTED TO	553554	408.	5.20	103.	32.	32.	1.21
+	HYDROGRAPH AT	509C	279.	4.15	27.	8.	8.	0.15
+	2 COMBINED AT	C554	410.	5.18	126.	39.	39.	1.36
+	DIVERSION TO	D554R	261.	5.18	83.	26.	26.	1.36
+	HYDROGRAPH AT	D554L	149.	5.18	42.	13.	13.	1.36
+	ROUTED TO	554555	148.	5.23	42.	13.	13.	1.36
+	HYDROGRAPH AT	509E	340.	4.20	37.	12.	12.	0.19
+	HYDROGRAPH AT	B539R	158.	4.32	21.	7.	7.	0.34
+	ROUTED TO	539555	152.	4.58	21.	7.	7.	0.34
+	3 COMBINED AT	C555	394.	4.43	92.	29.	29.	1.88
+	ROUTED TO	555557	392.	4.58	91.	29.	29.	1.88
+	HYDROGRAPH AT	B553R	367.	5.05	97.	30.	30.	1.21
+	ROUTED TO	553556	365.	5.18	97.	30.	30.	1.21
+	HYDROGRAPH AT	B554R	261.	5.18	83.	26.	26.	1.36
+	2 COMBINED AT	C556	618.	5.18	178.	56.	56.	1.36
+	ROUTED TO	556558	613.	5.37	178.	56.	56.	1.36
+	HYDROGRAPH AT	509F	367.	4.17	37.	12.	12.	0.20
+	2 COMBINED AT	C558	612.	5.35	209.	66.	66.	1.56

+	DIVERSION TO	D558R	263.	5.35	88.	28.	28.	1.56
+	HYDROGRAPH AT	D558L	348.	5.35	120.	38.	38.	1.56
+	ROUTED TO	558557	347.	5.40	120.	38.	38.	1.56
+	HYDROGRAPH AT	509G	196.	4.13	18.	6.	6.	0.09
+	3 COMBINED AT	C557	755.	4.52	222.	70.	70.	2.18
+	DIVERSION TO	D557L	144.	4.52	26.	8.	8.	2.18
+	HYDROGRAPH AT	D557R	610.	4.52	195.	61.	61.	2.18
+	ROUTED TO	557565	606.	4.73	195.	61.	61.	2.18
+	HYDROGRAPH AT	509M	150.	4.22	19.	6.	6.	0.10
+	2 COMBINED AT	C565	657.	4.70	209.	66.	66.	2.28
+	ROUTED TO	565566	655.	4.73	209.	66.	66.	2.28
+	HYDROGRAPH AT	B557L	144.	4.52	26.	8.	8.	2.18
+	ROUTED TO	557559	143.	4.65	26.	8.	8.	2.18
+	HYDROGRAPH AT	509H	109.	4.23	13.	4.	4.	0.07
+	2 COMBINED AT	C559	192.	4.60	38.	12.	12.	2.25
+	DIVERSION TO	D559L	76.	4.58	15.	5.	5.	2.25
+	HYDROGRAPH AT	D559R	116.	4.60	22.	7.	7.	2.25
+	ROUTED TO	559560	115.	4.67	22.	7.	7.	2.25
+	HYDROGRAPH AT	509I	61.	4.15	5.	2.	2.	0.03
+	2 COMBINED AT	C560	127.	4.63	26.	8.	8.	2.28
+	DIVERSION TO	D560L	40.	4.63	10.	3.	3.	2.28
+	HYDROGRAPH AT	D560R	86.	4.63	17.	5.	5.	2.28
+	ROUTED TO	560566	85.	4.80	16.	5.	5.	2.28
+	HYDROGRAPH AT	509L	209.	4.05	19.	6.	6.	0.08
+	3 COMBINED AT	C566	762.	4.73	241.	76.	76.	2.36
+	ROUTED TO	566567	760.	4.78	241.	76.	76.	2.36
+	HYDROGRAPH AT	B559L	76.	4.58	15.	5.	5.	2.25
+	ROUTED TO	559561	76.	4.70	15.	5.	5.	2.25
+	HYDROGRAPH AT	B560L	40.	4.63	10.	3.	3.	2.28
+	ROUTED TO	560561	40.	4.70	10.	3.	3.	2.28
+	HYDROGRAPH AT	509K	60.	4.13	5.	2.	2.	0.03
+	3 COMBINED AT	C561	128.	4.65	30.	9.	9.	2.31
+	ROUTED TO	561562	128.	4.70	30.	9.	9.	2.31
+	HYDROGRAPH AT	509J	161.	4.22	21.	6.	6.	0.10
+	2 COMBINED AT	C562	199.	4.52	47.	15.	15.	2.41
+	ROUTED TO	562567	198.	4.63	47.	15.	15.	2.41
+	HYDROGRAPH AT	509P	325.	4.05	30.	9.	9.	0.11
+	3 COMBINED AT	C567	876.	4.77	287.	91.	91.	4.88

+	ROUTED TO	567568	875.	4.82	286.	91.	91.	4.88
+	HYDROGRAPH AT	509Q	244.	4.08	27.	8.	8.	0.11
+	2 COMBINED AT	C568	915.	4.78	308.	98.	98.	4.99
+	ROUTED TO	568569	911.	4.92	308.	98.	98.	4.99
+	HYDROGRAPH AT	509R	245.	4.08	20.	6.	6.	0.10
+	2 COMBINED AT	C569	920.	4.90	323.	103.	103.	5.09
+	ROUTED TO	569570	918.	4.97	323.	103.	103.	5.09
+	HYDROGRAPH AT	509O	100.	4.05	11.	3.	3.	0.04
+	HYDROGRAPH AT	509N	250.	4.08	28.	9.	9.	0.11
+	2 COMBINED AT	C564	347.	4.07	39.	12.	12.	0.15
+	ROUTED TO	564570	326.	4.27	39.	12.	12.	0.15
+	HYDROGRAPH AT	509S	431.	4.13	44.	14.	14.	0.19
+	3 COMBINED AT	C570	1044.	4.87	388.	124.	124.	5.43
+	3 COMBINED AT	CLEAR	2387.	5.17	1234.	405.	405.	30.43
+	HYDROGRAPH AT	B558R	263.	5.35	88.	28.	28.	1.56
+	ROUTED TO	558571	260.	5.60	87.	27.	27.	1.56
+	HYDROGRAPH AT	505A	341.	4.15	34.	11.	11.	0.18
+	2 COMBINED AT	C571	315.	4.50	113.	36.	36.	2.13
+	ROUTED TO	571572	311.	4.65	112.	35.	35.	2.13
+	HYDROGRAPH AT	505B	378.	4.07	37.	12.	12.	0.14
+	2 COMBINED AT	C572	429.	4.37	145.	46.	46.	2.28
+	HYDROGRAPH AT	500A	421.	4.13	37.	11.	11.	0.21
+	ROUTED TO	501502	365.	4.73	36.	11.	11.	0.21
+	HYDROGRAPH AT	500B	325.	4.22	35.	11.	11.	0.20
+	2 COMBINED AT	C502	491.	4.22	71.	22.	22.	0.42
+	DIVERSION TO	D502L	299.	4.22	38.	12.	12.	0.42
+	HYDROGRAPH AT	D502R	192.	4.22	33.	10.	10.	0.42
+	ROUTED TO	502506	189.	4.43	33.	10.	10.	0.42
+	HYDROGRAPH AT	B534L	240.	5.67	73.	23.	23.	5.30
+	ROUTED TO	534506	239.	5.70	72.	23.	23.	5.30
+	2 COMBINED AT	C506	265.	5.63	98.	31.	31.	5.72
+	ROUTED TO	506507	264.	5.67	98.	31.	31.	5.72
+	HYDROGRAPH AT	500H	340.	4.17	31.	10.	10.	0.21
+	2 COMBINED AT	C507	279.	4.40	117.	37.	37.	5.93
+	ROUTED TO	507508	273.	4.67	116.	36.	36.	5.93
+	HYDROGRAPH AT	B502L	299.	4.22	38.	12.	12.	0.42
+	ROUTED TO	502503	294.	4.40	38.	12.	12.	0.42
+	HYDROGRAPH AT	500C	248.	4.12	20.	6.	6.	0.12

+	2 COMBINED AT	C503	395.	4.35	57.	18.	18.	0.54
+	ROUTED TO	503508	356.	4.90	56.	18.	18.	0.54
+	HYDROGRAPH AT	500I	644.	4.17	60.	19.	19.	0.41
+	3 COMBINED AT	C508	528.	4.52	185.	58.	58.	6.88
+	DIVERSION TO	D508L	277.	4.52	81.	25.	25.	6.88
+	HYDROGRAPH AT	D508R	251.	4.52	103.	33.	33.	6.88
+	ROUTED TO	508517	249.	5.27	102.	32.	32.	6.88
+	HYDROGRAPH AT	B515L	166.	4.27	65.	21.	21.	6.28
+	ROUTED TO	515517	159.	4.52	64.	20.	20.	6.28
+	HYDROGRAPH AT	500L	292.	4.13	24.	8.	8.	0.16
+	3 COMBINED AT	C517	424.	4.50	176.	56.	56.	7.60
+	ROUTED TO	517518	422.	4.57	175.	56.	56.	7.60
+	HYDROGRAPH AT	500J	204.	4.08	14.	4.	4.	0.09
+	ROUTED TO	514518	199.	4.15	14.	4.	4.	0.09
+	2 COMBINED AT	C518	462.	4.48	183.	58.	58.	7.69
+	ROUTED TO	518519	454.	4.68	181.	58.	58.	7.69
+	HYDROGRAPH AT	500M	228.	4.12	27.	8.	8.	0.12
+	2 COMBINED AT	C519	512.	4.65	198.	64.	64.	7.81
+	HYDROGRAPH AT	C504	162.	4.67	33.	10.	10.	0.26
+	ROUTED TO	504509	155.	5.10	31.	10.	10.	0.26
+	HYDROGRAPH AT	500D	371.	4.17	36.	11.	11.	0.23
+	2 COMBINED AT	TEMP1	371.	4.17	66.	21.	21.	0.49
+	HYDROGRAPH AT	C509	371.	4.17	66.	21.	21.	0.49
+	ROUTED TO	509510	361.	4.33	66.	21.	21.	0.49
+	HYDROGRAPH AT	500E	219.	4.10	16.	5.	5.	0.11
+	HYDROGRAPH AT	C581	208.	6.75	103.	32.	32.	3.92
+	ROUTED TO	581510	206.	6.87	102.	32.	32.	3.92
+	3 COMBINED AT	TEMP2	466.	4.28	183.	58.	58.	0.49
+	HYDROGRAPH AT	C510	466.	4.28	183.	58.	58.	0.49
+	DIVERSION TO	D510L	190.	4.28	73.	23.	23.	0.49
+	HYDROGRAPH AT	D510R	276.	4.28	110.	35.	35.	0.49
+	ROUTED TO	510511	272.	4.35	109.	34.	34.	0.49
+	HYDROGRAPH AT	B508L	277.	4.52	81.	25.	25.	6.88
+	ROUTED TO	508511	271.	5.28	80.	25.	25.	6.88
+	HYDROGRAPH AT	500F	647.	4.20	67.	21.	21.	0.44
+	3 COMBINED AT	C511	509.	4.52	216.	68.	68.	7.49
+	ROUTED TO	511512	492.	5.03	213.	67.	67.	7.49
+	HYDROGRAPH AT	500K	219.	4.12	20.	6.	6.	0.10

+	ROUTED TO	513512	201.	4.38	19.	6.	6.	0.10
+	HYDROGRAPH AT	500G	349.	4.13	45.	14.	14.	0.20
+	3 COMBINED AT	C512	579.	4.95	256.	82.	82.	7.79
+	2 COMBINED AT	C520	818.	5.10	416.	133.	133.	8.28
+	ROUTED TO	520576	817.	5.17	416.	132.	132.	8.28
+	HYDROGRAPH AT	500O	182.	4.13	25.	8.	8.	0.10
+	ROUTED TO	521522	175.	4.35	25.	8.	8.	0.10
+	HYDROGRAPH AT	500P	201.	4.10	19.	6.	6.	0.08
+	2 COMBINED AT	C522	307.	4.23	44.	14.	14.	0.18
+	2 COMBINED AT	C576	875.	5.12	450.	144.	144.	8.47
+	ROUTED TO	576523	874.	5.15	450.	144.	144.	8.47
+	HYDROGRAPH AT	500N	228.	4.17	20.	6.	6.	0.11
+	2 COMBINED AT	C523	949.	4.45	463.	148.	148.	8.58
+	HYDROGRAPH AT	501A	111.	4.05	8.	2.	2.	0.04
+	HYDROGRAPH AT	501B	151.	4.12	13.	4.	4.	0.07
+	5 COMBINED AT	CLEAR	1357.	4.63	658.	211.	211.	17.00
+	HYDROGRAPH AT	502B	139.	4.12	12.	4.	4.	0.05
+	HYDROGRAPH AT	502C	100.	4.15	11.	3.	3.	0.05
+	HYDROGRAPH AT	503A	458.	4.12	57.	18.	18.	0.22
+	ROUTED TO	549550	445.	4.22	57.	18.	18.	0.22
+	HYDROGRAPH AT	503C	278.	4.18	27.	8.	8.	0.12
+	2 COMBINED AT	C550L	717.	4.20	83.	26.	26.	0.34
+	HYDROGRAPH AT	503B	171.	4.22	27.	8.	8.	0.11
+	2 COMBINED AT	C550	886.	4.20	110.	34.	34.	0.45
+	HYDROGRAPH AT	504A	428.	4.22	55.	17.	17.	0.24

*** NORMAL END OF HEC-1 ***

APPENDIX E

100-Year, 24-Hour Storm Existing Condition HEC-1 Output, with Levee

```
1*************************************                                    *************************************
*                                   *                                    *                                   *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)*                                    *   U.S. ARMY CORPS OF ENGINEERS    *
*             MAY   1991            *                                    *   HYDROLOGIC ENGINEERING CENTER   *
*           VERSION 4.0.1E          *                                    *         609 SECOND STREET         *
*                                   *                                    *      DAVIS, CALIFORNIA 95616      *
*  RUN DATE  08/07/95  TIME  10:27:39*                                    *         (916) 551-1748            *
*                                   *                                    *                                   *
*************************************                                    *************************************

X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X              X
XXXXXXX  XXXX     X        XXXXX X
X     X  X        X              X
X     X  X        X     X        X
X     X  XXXXXXX   XXXXX         XXX

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL   LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1                                          HEC-1 INPUT                                                    PAGE  1

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID    RIO VERDE SOUTH FIS - Existing Condition Model        File: EX100-24.IH1
  2           ID    by  GVSCE for MKE:   MCFCD #93-07                 Original: 07-22-94     dtp
  3           ID        Project:  46                                   Revised: 10-17-94     trl
  4           ID        100-year 24-Hr Rainfall
  5           ID        Green & Ampt Rainfall Losses
              *
  6           IT       2                    1500
  7           IO       5
  8           IN      15
              *DIAGRAM
              *
              * Point precipitation values are are based on Hydro-40 DARF.
              *   0.01    5.00   10.00   50.00   80.00  100.00  200.00
              *  1.000   0.980   0.949   0.883   0.861   0.850   0.819
              *
  9           JD    4.40    0.01
              *  The following PC records are a 24-hour SCS Type II rainfall distribution.
 10           PC   0.000   0.002   0.005   0.008   0.011   0.013   0.016   0.019   0.022   0.025
 11           PC   0.028   0.032   0.035   0.038   0.041   0.044   0.048   0.053   0.056   0.060
 12           PC   0.063   0.067   0.071   0.075   0.080   0.084   0.089   0.093   0.098   0.103
 13           PC   0.109   0.114   0.120   0.127   0.133   0.140   0.147   0.155   0.163   0.172
 14           PC   0.181   0.192   0.204   0.220   0.235   0.259   0.283   0.473   0.663   0.699
 15           PC   0.735   0.754   0.772   0.785   0.799   0.810   0.820   0.829   0.838   0.846
 16           PC   0.854   0.861   0.868   0.874   0.880   0.885   0.891   0.900   0.902   0.910
 17           PC   0.912   0.920   0.921   0.926   0.929   0.930   0.937   0.941   0.945   0.950
 18           PC   0.952   0.957   0.959   0.962   0.965   0.970   0.972   0.973   0.978   0.981
 19           PC   0.984   0.987   0.989   0.992   0.995   0.998   1.000
 20           JD    4.31    5.00
 21           JD    4.18   10.00
 22           JD    3.89   50.00
 23           JD    3.79   80.00
              *
 24           IN       5
              *
              *     The Wood Patel input hydrographs are being written out to a tape 21 file
              *       in order to populate the index hydrographs with the input hydrograph.
              *

 25           KK   WP504
 26           KO                                   21
 27           KM      Runoff hydrograph from Rio Verde North watershed, provided by Wood Patel
 28           KM        and Associates.  The hydrograph was computed using 300 ordinates and
 29           KM        a time interval of 5 minutes.  This hydrograph enters the Rio Verde
 30           KM        South watershed at concentration point 504.
 31           BA   0.260
 32           QI       0       0       0       0       0       0       0       0       0       0
 33           QI       0       0       0       0       0       0       0       0       0       0
 34           QI       0       0       0       0       0       0       0       0       0       0
 35           QI       0       0       0       0       0       0       0       0       0       0
 36           QI       0       0       0       0       0       0       0       0       0       0
 37           QI       0       0       0       0       0       0       0       0       0       0
 38           QI       0       0       0       0       0       0       0       0       0       0
 39           QI       0       0       0       0       0       0       0       0       0       0
 40           QI       0       0       0       0       0       0       0       0       0       0
 41           QI       0       0       0       0       0       0       0       0       0       0
1                                          HEC-1 INPUT                                                    PAGE  2

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 42           QI       0       0       0       0       0       0       0       0       0       0
 43           QI       0       0       0       0       0       0       0       0       0       0
 44           QI       0       0       0       0       0       0       0       0       0       0
 45           QI       0       0       0       0       0       0       0       0       0       3
 46           QI       7      15      28      45      63      82     105     130     159     177
 47           QI     189     193     191     177     154     133     113      94      78      62
 48           QI      48      37      29      23      17      14      10       8       7       5
 49           QI       4       3       2       1       1       0       0       0       0       0
 50           QI       0       0       0       0       0       0       0       0       0       0
 51           QI       0       0       0       0       0       0       0       0       0       0
 52           QI       0       0       0       0       0       0       0       0       0       0
 53           QI       0       0       0       0       0       0       0       0       0       0
 54           QI       0       0       0       0       0       0       0       0       0       0
 55           QI       0       0       0       0       0       0       0       0       0       0
 56           QI       0       0       0       0       0       0       0       0       0       0
 57           QI       0       0       0       0       0       0       0       0       0       0
```

```
 58          QI       0       0       0       0       0       0       0       0       0       0
 59          QI       0       0       0       0       0       0       0       0       0       0
 60          QI       0       0       0       0       0       0       0       0       0       0
 61          QI       0       0       0       0       0       0       0       0       0       0
             *

 62          KK   WP581
 63          KO                                  21
 64          KM      Runoff hydrograph from Rio Verde North watershed, provided by Wood Patel
 65          KM        and Associates.  The hydrograph was computed using 300 ordinates and
 66          KM        a time interval of 5 minutes.  This hydrograph enters the Rio Verde
 67          KM        South watershed at concentration point 504.
 68          BA    3.92
 69          QI       0       0       0       0       0       0       0       0       0       0
 70          QI       0       0       0       0       0       0       0       0       0       0
 71          QI       0       0       0       0       0       0       0       0       0       0
 72          QI       0       0       0       0       0       0       0       0       0       0
 73          QI       0       0       0       0       0       0       0       0       0       0
 74          QI       0       0       0       0       0       0       0       0       0       0
 75          QI       0       0       0       0       0       0       0       0       0       0
 76          QI       0       0       0       0       0       0       0       0       0       0
 77          QI       0       0       0       0       0       0       0       0       0       0
 78          QI       0       0       0       0       0       0       0       0       0       0
 79          QI       0       0       0       0       0       0       0       0       0       0
 80          QI       0       0       0       0       0       0       0       0       0       0
 81          QI       0       0       0       0       0       0       0       0       0       0
 82          QI       0       0       0       0       0       0       0       0       0       0
 83          QI       0       1       1       4      10      17      22      25      30      37
 84          QI      45      56      72      96     121     145     165     177     181     181
 85          QI     178     174     171     168     168     171     178     188     201     215
 86          QI     232     248     260     265     267     265     261     253     244     235
 87          QI     225     217     208     198     188     178     168     159     149     139
 88          QI     130     121     110      99      88      78      70      63      56      48
 89          QI      40      32      25      15       9       7       6       6       5       5
 90          QI       5       5       4       4       4       4       3       3       3       3
 91          QI       3       3       2       2       2       2       2       2       2       2
 92          QI       2       2       2       2       1       1       1       1       1       1
 93          QI       1       1       1       1       1       1       1       0       0       0
 94          QI       0       0       0       0       0       0       0       0       0       0
1                                          HEC-1 INPUT                                          PAGE  3

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 95          QI       0       0       0       0       0       0       0       0       0       0
 96          QI       0       0       0       0       0       0       0       0       0       0
 97          QI       0       0       0       0       0       0       0       0       0       0
 98          QI       0       0       0       0       0       0       0       0       0       0
             *
 99          IN      15
             *

100          KK   CLEAR
101          KM      Clear hydrograph stack from memory
102          HC       2
             *

103          KK    511A
104          KM   Sub-Basin   511A
105          KM
106          KM      The Phoenix Mountain S-Graph is used for this basin.
107          KM          Lag Used =  28.3 minutes
108          KM
109          BA   0.649
110          LG    0.35    0.39    6.20    0.21    0.00
111          UI      77      77      77     185     267     347     455     505     564     610
112          UI     707     864     870     592     516     467     442     411     381     360
113          UI     327     305     279     250     220     199     189     178     168     161
114          UI     127     126      99      99      92      85      85      71      59      59
115          UI      59      53      38      38      38      38      38      38      23      15
116          UI      15      15      15      15      15      15      15      15      15      15
117          UI      15      15      15      15      15       0       0       0       0       0
118          UI       0       0       0       0       0       0       0       0       0       0
             *

119          KK  524526
120          KM   Normal depth channel route from C524 to C526
121          KM      Source:  Hydrology Field Reconnaissance, page 24
122          RS      16    FLOW      -1
123          RC   0.070   0.040   0.070    5989  0.0182
124          RX   900.0  1000.0  1035.0  1038.0  1048.0  1054.0  1120.0  1330.0
125          RY   101.2   100.0    99.5    99.0    99.0    99.6    99.7   101.2
126          RL                    0.07    99.0
             *

127          KK    511B
128          KM   Sub-Basin   511B
129          KM
130          KM      The Phoenix Mountain S-Graph is used for this basin.
131          KM          Lag Used =  56.7 minutes
132          KM
133          BA   1.100
134          LG    0.32    0.37    6.60    0.17    4.40
135          UI      65      65      65      65      65      65     124     188     201     250
136          UI     275     307     375     394     414     438     466     486     505     526
137          UI     562     626     688     765     820     668     522     483     452     425
138          UI     403     389     380     369     355     341     328     318     310     300
139          UI     282     274     263     255     250     225     223     203     203     174
140          UI     173     166     160     160     152     150     150     137     136     136
1                                          HEC-1 INPUT                                          PAGE  4

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

141          UI     111     107     107     107      86      83      83      83      83      74
142          UI      71      71      71      71      71      54      50      50      50      50
143          UI      50      50      50      44      32      32      32      32      32      32
144          UI      32      32      32      32      32      32      32      13      13      13
145          UI      13      13      13      13      13      13      13      13      13      13
146          UI      13      13      13      13      13      13      13      13      13      13
147          UI      13      13      13      13      13      13      13      13      13      13
148          UI      13       0       0       0       0       0       0       0       0       0
149          UI       0       0       0       0       0       0       0       0       0       0
             *
```

```
 150          KK  525526
 151          KM   Normal depth channel route from C525 to C526
 152          KM       Source:  Hydrology Field Reconnaissance, page 24
 153          RS       3    FLOW       -1
 154          RC   0.070   0.040   0.070    1012  0.0208
 155          RX   900.0  1000.0  1035.0  1038.0  1048.0  1054.0  1120.0  1330.0
 156          RY   101.2   100.0    99.5    99.0    99.0    99.6    99.7   101.2
 157          RL                    0.07    99.0
              *

 158          KK    511D
 159          KM   Sub-Basin   511D
 160          KM
 161          KM      The Phoenix Mountain S-Graph is used for this basin.
 162          KM          Lag Used =  30.5 minutes
 163          KM
 164          BA   0.128
 165          LG    0.35    0.36    6.80    0.17    0.00
 166          UI      14      14      14      27      44      58      75      87      97     106
 167          UI     114     134     162     158     109      96      87      82      77      72
 168          UI      68      63      58      55      50      45      40      36      35      33
 169          UI      31      30      25      23      20      18      18      16      15      15
 170          UI      13      11      11      11      11       7       7       7       7       7
 171          UI       7       7       3       3       3       3       3       3       3       3
 172          UI       3       3       3       3       3       3       3       3       3       3
 173          UI       0       0       0       0       0       0       0       0       0       0
 174          UI       0       0       0       0       0       0       0       0       0       0
              *

 175          KK    C526
 176          KM     Combine routed hydrographs from C524 and C526 with runoff from 511D at C526
 177          HC       3
              *

 178          KK  526527
 179          KM   Normal depth channel route from C526 to C527
 180          KM       Source:  Hydrology Field Reconnaissance, page 24
 181          RS       7    FLOW       -1
 182          RC   0.070   0.040   0.070    3129  0.0189
 183          RX   780.0  1000.0  1035.0  1038.0  1048.0  1054.0  1120.0  1504.0
 184          RY   102.5   100.0    99.5    99.0    99.0    99.6    99.7   102.5
 185          RL                    0.07    99.0
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 186          KK    511E
 187          KM   Sub-Basin   511E
 188          KM
 189          KM      The Phoenix Mountain S-Graph is used for this basin.
 190          KM          Lag Used =  50.4 minutes
 191          KM
 192          BA   0.568
 193          LG    0.34    0.37    6.40    0.19    1.20
 194          UI      38      38      38      38      38      52     109     116     145     165
 195          UI     192     223     235     250     267     281     294     307     340     375
 196          UI     427     480     408     305     280     260     243     229     223     218
 197          UI     208     198     191     184     178     171     162     154     150     145
 198          UI     131     127     118     111     100      99      93      93      88      87
 199          UI      85      79      79      70      62      62      62      48      48      48
 200          UI      48      45      42      42      42      42      39      29      29      29
 201          UI      29      29      29      29      23      19      19      19      19      19
 202          UI      19      19      19      19      19      19      10       7       7       7
 203          UI       7       7       7       7       7       7       7       7       7       7
 204          UI       7       7       7       7       7       7       7       7       7       7
 205          UI       7       7       7       7       7       7       0       0       0       0
 206          UI       0       0       0       0       0       0       0       0       0       0
              *

 207          KK    511F
 208          KM   Sub-Basin   511F
 209          KM
 210          KM      The Phoenix Mountain S-Graph is used for this basin.
 211          KM          Lag Used =  16.6 minutes
 212          KM
 213          BA   0.154
 214          LG    0.34    0.38    6.20    0.20    1.00
 215          UI      31      36     102     161     208     244     320     315     210     181
 216          UI     161     143     125     107      88      76      70      60      49      40
 217          UI      36      34      24      24      20      15      15      15      10       6
 218          UI       6       6       6       6       6       6       6       6       0       0
 219          UI       0       0       0       0       0       0       0       0       0       0
              *

 220          KK    C527
 221          KM     Combine Hydrograph from C526 with runoff from 511E & 511F at C527
 222          HC       3
              *

 223          KK  527528
 224          KM   Normal depth channel route from C527 to C528
 225          KM       Source:  Hydrology Field Reconnaissance, page 24
 226          RS       3    FLOW       -1
 227          RC   0.070   0.040   0.070    1420  0.0183
 228          RX   780.0  1000.0  1035.0  1038.0  1048.0  1054.0  1120.0  1504.0
 229          RY   102.5   100.0    99.5    99.0    99.0    99.6    99.7   102.5
 230          RL                    0.62    99.0
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 231          KK    511C
 232          KM   Sub-Basin   511C
 233          KM
 234          KM      The Phoenix Mountain S-Graph is used for this basin.
 235          KM          Lag Used =  62.3 minutes
 236          KM
 237          BA   1.196
 238          LG    0.34    0.39    6.20    0.21    0.90
```

```
 239          UI      65      65      65      65      65      65      65     166     186     207
 240          UI     248     271     297     365     385     402     422     446     469     485
 241          UI     503     522     557     613     669     736     828     725     581     503
 242          UI     469     441     418     398     386     379     371     354     342     333
 243          UI     323     311     305     297     278     273     261     256     248     234
 244          UI     222     213     201     197     171     171     165     158     158     153
 245          UI     149     149     143     135     135     135     107     106     106     106
 246          UI      92      83      83      83      83      83      71      71      71      71
 247          UI      71      71      61      50      50      50      50      50      50      50
 248          UI      50      48      32      32      32      32      32      32      32      32
 249          UI      32      32      32      32      32      32      23      12      12      12
 250          UI      12      12      12      12      12      12      12      12      12      12
 251          UI      12      12      12      12      12      12      12      12      12      12
 252          UI      12      12      12      12      12      12      12      12      12      12
 253          UI      12      12      12       0       0       0       0       0       0       0
 254          UI       0       0       0       0       0       0       0       0       0       0
              *

 255          KK    C528
 256          KM     Combine routed hydrograph from C527 with runoff from 511C at C528
 257          HC       2
              *

 258          KK  528529
 259          KM   Normal depth channel route from C528 to C529
 260          KM       Source:  Hydrology Field Reconnaissance, page 16
 261          RS       8    FLOW      -1
 262          RC   0.070   0.040   0.070    6398  0.0148
 263          RX   950.0  1053.0  1139.0  1150.0  1177.0  1255.0  1302.0  1352.0
 264          RY  2360.0  2357.0  2357.4  2356.4  2356.3  2357.8  2359.6  2360.0
 265          RL                    0.62  2356.3
              *

 266          KK    511H
 267          KM   Sub-Basin   511H
 268          KM
 269          KM      The Phoenix Mountain S-Graph is used for this basin.
 270          KM          Lag Used =  25.5 minutes
 271          KM
 272          BA   0.310
 273          LG    0.35    0.35    4.45    0.44    0.40
 274          UI      41      41      46     119     165     220     259     293     321     376
 275          UI     477     410     296     259     240     222     205     191     173     161
 276          UI     144     129     109     101      96      91      85      68      65      52
 277          UI      52      46      45      42      31      31      31      27      20      20
 278          UI      20      20      20      15       8       8       8       8       8       8
1                                          HEC-1 INPUT                                          PAGE  7

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 279          UI       8       8       8       8       8       8       8       8       0       0
 280          UI       0       0       0       0       0       0       0       0       0       0
              *

 281          KK    C529
 282          KM     Combine routed hydrograph from C528 with runoff from 511H at C529
 283          HC       2
              *
              * *
              * *       Routing Reach  529-530 is too short to route.
              * *
              *

 284          KK    511G
 285          KM   Sub-Basin   511G
 286          KM
 287          KM      The Phoenix Mountain S-Graph is used for this basin.
 288          KM          Lag Used =  36.8 minutes
 289          KM
 290          BA   0.868
 291          LG    0.33    0.36    5.10    0.30    2.90
 292          UI      79      79      79      79     194     251     316     390     470     509
 293          UI     556     596     634     711     827     981     812     613     551     500
 294          UI     473     454     427     405     385     368     340     322     306     279
 295          UI     258     240     210     201     194     184     182     166     166     131
 296          UI     131     118     102     102     100      87      87      87      80      61
 297          UI      61      61      61      61      45      39      39      39      39      39
 298          UI      39      39      37      15      15      15      15      15      15      15
 299          UI      15      15      15      15      15      15      15      15      15      15
 300          UI      15      15      15      15       0       0       0       0       0       0
 301          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

 302          KK    C530
 303          KM     Combine hydrograph from C529 with runoff from 511G at C530
 304          HC       2
              *

 305          KK  530531
 306          KM   Normal depth channel route from C530 to C531
 307          KM       Source:  Hydrology Field Reconnaissance, page 11
 308          RS       8    FLOW      -1
 309          RC   0.070   0.040   0.070    5786  0.0211
 310          RX   945.0  1052.4  1161.2  1208.0  1275.3  1311.8  1436.0  1686.0
 311          RY  2159.5  2157.5  2157.0  2155.9  2156.0  2157.1  2157.8  2159.5
 312          RL                    0.43  2155.9
              *

 313          KK    511I
 314          KM   Sub-Basin   511I
 315          KM
 316          KM      The Phoenix Mountain S-Graph is used for this basin.
 317          KM          Lag Used =  17.5 minutes
 318          KM
1                                          HEC-1 INPUT                                          PAGE  8

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 319          BA   0.211
 320          LG    0.35    0.35    4.00    0.57    0.00
 321          UI      41      41     128     196     261     307     377     466     300     249
 322          UI     224     200     177     156     132     108      98      90      76      63
```

```
 323          UI      52      47      45      33      31      28      20      20      20      18
 324          UI       8       8       8       8       8       8       8       8       8       8
 325          UI       0       0       0       0       0       0       0       0       0       0
 326          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

 327          KK    C531
 328          KM     Combine routed hydrograph from C530 with runoff from 511I at C531
 329          HC       2
              *
              *

 330          KK   D531R
 331          KM        Hydrograph diversion at C531
 332          KM      Main flow continues on in right branch.
 333          KM      Diverted flow is in the left branch, coded on DQ Card.
 334          DT   D531L
 335          DI       0      52     390     850    1565    2660    3870    4690    5550    6390
 336          DQ       0      12      80     200     390     620     910    1090    1250    1440
              *

 337          KK  531532
 338          KM   Normal depth channel route from C531 to C532
 339          KM       Source:  Hydrology Field Reconnaissance, page 11
 340          RS       2    FLOW      -1
 341          RC   0.070   0.040   0.070    1524  0.0243
 342          RX   937.0  1125.0  1240.0  1250.0  1312.0  1348.0  1395.0  1428.0
 343          RY  2159.0  2157.5  2157.0  2155.9  2156.0  2157.1  2156.9  2159.0
 344          RL                    0.62  2155.9
              *

 345          KK   D532L
 346          KM        Hydrograph diversion at C532
 347          KM      Main flow continues on in right branch (Center Split at C532).
 348          KM      Diverted flow is in the left branch, coded on DQ card.
 349          DT   D532R
 350          DI       0      58     235     405     685    1075    1535    2190    2570    2950
 351          DQ       0      40     125     205     335     550     800    1140    1320    1500
              *
              *

 352          KK  D532AR
 353          KM        Hydrograph diversion at C532A
 354          KM      Main flow continues on in right branch (center split channel at C532).
 355          KM      Diverted flow is in the left branch, coded on DQ card.
 356          DT  D532AL
 357          DI       0      50     210     445     650     930    1300    1680    1890    2160
 358          DQ       0      25     100     230     360     550     820    1090    1250    1470
              *
              *
1                                          HEC-1 INPUT                                          PAGE  9

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 359          KK  532580
 360          KM   Normal depth channel route from C532 to C580
 361          KM       Source:  Hydrology Field Reconnaissance, page 7
 362          RS       5    FLOW      -1
 363          RC   0.070   0.040   0.070    4121  0.0279
 364          RX  1000.0  1034.5  1069.0  1086.0  1146.0  1154.0  1227.0  1285.0
 365          RY  2061.9  2061.4  2060.8  2059.9  2059.6  2060.5  2061.2  2061.9
 366          RL                    0.07  2059.6
              *

 367          KK  B532AL
 368          KM        Retrieve split hydrograph D532AL
 369          DR  D532AL
              *
              *
              * *
              * *  Routing Reach 532-578 is too short to route
              * *
              *
              *

 370          KK   D578R
 371          KM        Hydrograph diversion at C578
 372          KM      Main flow continues on in right branch.
 373          KM      Diverted flow is in the left branch, coded on DQ card.
 374          DT   D578L
 375          DI       0      40     100     170     280     450     820    1090    1250    1470
 376          DQ       0      20      50      85     140     225     410     545     625     735
              *

 377          KK  578573
 378          KM   Normal depth channel route from C578 to C573
 379          KM       Source:  Hydrology Field Reconnaissance, page 22
 380          RS       2    FLOW      -1
 381          RC   0.070   0.040   0.070    1857  0.0269
 382          RX   980.0  1000.0  1035.0  1039.0  1060.0  1080.0  1100.0  1112.0
 383          RY   100.8   100.0    99.6    98.4    98.3    99.5    99.3   100.6
 384          RL                    0.62    98.3
              *

 385          KK   D573R
 386          KM        Hydrograph diversion at C573
 387          KM      Main flow continues on in right branch.
 388          KM      Diverted flow is in the left branch, coded on DQ card.
 389          DT   D573L
 390          DI       0      48     195     590    1000    1365    1845    2315    2585    2875
 391          DQ       0       0      35     210     400     590     830    1100    1230    1360
              *
1                                          HEC-1 INPUT                                          PAGE 10

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 392          KK  573580
 393          KM   Normal depth channel route from C573 to C580
 394          KM       Source:  Hydrology Field Reconnaissance, page 22
 395          RS       2    FLOW      -1
```

```
 396          RC   0.070   0.040   0.070    1455  0.0261
 397          RX   980.0  1000.0  1035.0  1039.0  1060.0  1080.0  1100.0  1112.0
 398          RY   100.8   100.0    99.6    98.4    98.3    99.5    99.3   100.6
 399          RL                    0.62    98.3
              *

 400          KK    C580
 401          KM     Combine hydrograph from C573R with routed hydrograph from C532L at C580
 402          HC       2    5.18
              *

 403          KK  580535
 404          KM   Normal depth channel route from C580 to C535
 405          KM       Source:  Hydrology Field Reconnaissance, page 22
 406          RS      12    FLOW      -1
 407          RC   0.070   0.040   0.070    9537  0.0254
 408          RX  1025.0  1089.0  1132.0  1152.0  1180.0  1182.0  1184.0  1202.0
 409          RY   102.0   100.3   100.3    99.6    99.5   100.3   101.0   102.0
 410          RL                    0.07    99.5
              *

 411          KK   B531L
 412          KM        Retrieve split hydrograph D531L
 413          DR   D531L
              *

 414          KK  531533
 415          KM   Normal depth channel route from C531 to C533
 416          KM       Source:  Hydrology Field Reconnaissance, page 11
 417          RS       3    FLOW      -1
 418          RC   0.070   0.040   0.070    3188  0.0270
 419          RX  1000.0  1025.0  1052.4  1080.0  1115.0  1159.0  1180.0  1200.0
 420          RY  2158.5  2158.0  2157.5  2155.9  2156.0  2157.1  2157.8  2158.5
 421          RL                    0.62  2155.9
              *

 422          KK   B578L
 423          KM        Retrieve split hydrograph D578L
 424          DR   D578L
              *
              * *
              * *       Routing Reach  578-533 is too short to route.
              * *
              *
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 425          KK    C533
 426          KM     Combine routed hydrograph from C531L with hydrograph  from C578L at C533
 427          HC       2    5.18
              *

 428          KK  533579
 429          KM   Normal depth channel route from C533 to C579
 430          KM       Source:  Hydrology Field Reconnaissance, page 11
 431          RS       2    FLOW      -1
 432          RC   0.070   0.040   0.070    1524  0.0256
 433          RX  1000.0  1025.0  1052.4  1080.0  1115.0  1159.0  1180.0  1200.0
 434          RY  2158.5  2158.0  2157.5  2155.9  2156.0  2157.1  2157.8  2158.5
 435          RL                    0.62  2155.9
              *

 436          KK   B573L
 437          KM        Retrieve split hydrograph D573L
 438          DR   D573L
              *
              * *
              * *       Routing Reach  573-579 is too short to route.
              * *
              *

 439          KK    C579
 440          KM     Combine routed hydrograph from C533 with hydrograph from C573L at C579
 441          HC       2    5.18
              *

 442          KK  579534
 443          KM   Normal depth channel route from C579 to C534
 444          KM       Source:  Hydrology Field Reconnaissance, page 11
 445          RS       2    FLOW      -1
 446          RC   0.070   0.040   0.070    1310  0.0260
 447          RX  1000.0  1052.4  1161.2  1208.0  1225.3  1269.8  1416.0  1519.0
 448          RY  2158.5  2157.5  2157.0  2155.9  2156.0  2157.1  2157.8  2158.5
 449          RL                    0.62  2155.9
              *

 450          KK    511J
 451          KM   Sub-Basin   511J
 452          KM
 453          KM      The Phoenix Mountain S-Graph is used for this basin.
 454          KM          Lag Used =  14.3 minutes
 455          KM
 456          BA   0.119
 457          LG    0.35    0.35    3.81    0.65    0.00
 458          UI      28      47     109     173     211     278     277     182     157     137
 459          UI     118      99      79      67      61      48      38      33      31      22
 460          UI      22      15      14      14       9       5       5       5       5       5
 461          UI       5       5       5       0       0       0       0       0       0       0
 462          UI       0       0       0       0       0       0       0       0       0       0
              *
              *
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 463          KK    C534
 464          KM     Combine routed hydrograph from C579 with runoff from 511J at C534
 465          HC       2    5.30
              *
              *
```

```
466          KK   D534R
467          KM        Hydrograph diversion at C534
468          KM      Main flow continues on in right branch.
469          KM      Diverted flow is in the left branch, coded on DQ card.
470          DT   D534L
471          DI       0     100     200     600    1000    1500    2000
472          DQ       0      30      60     180     300     450     600
             *

473          KK  534535
474          KM   Normal depth channel route from C534 to C535
475          KM       Source:  Hydrology Field Reconnaissance, page 18
476          RS       8    FLOW      -1
477          RC   0.070   0.040   0.070    9570  0.0246
478          RX   915.0  1040.0  1075.0  1101.0  1136.0  1150.0  1190.0    1318
479          RY  2161.5  2160.1  2159.8  2157.5  2158.1  2159.4  2159.9  2161.5
480          RL                    0.39  2157.5
             *

481          KK    511K
482          KM   Sub-Basin   511K
483          KM
484          KM      The Phoenix Mountain S-Graph is used for this basin.
485          KM          Lag Used =  34.2 minutes
486          KM
487          BA   0.791
488          LG    0.33    0.37    6.60    0.18    0.00
489          UI      78      78      78      87     224     275     338     433     483     531
490          UI     576     615     689     812     956     757     583     522     479     455
491          UI     433     404     382     364     338     317     301     273     250     227
492          UI     206     192     187     179     169     163     138     128     119      99
493          UI      99      96      85      85      85      69      60      60      60      60
494          UI      49      38      38      38      38      38      38      38      28      15
495          UI      15      15      15      15      15      15      15      15      15      15
496          UI      15      15      15      15      15      15      15      15      15       0
497          UI       0       0       0       0       0       0       0       0       0       0
498          UI       0       0       0       0       0       0       0       0       0       0
             *

499          KK    C535
500          KM    Combine routed hydrographs from C534R and C580 with runoff from 511K at C535
501          HC       3    6.09
             *
             *
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

502          KK   D535L
503          KM        Hydrograph diversion at C535
504          KM      Main flow continues on in left branch.
505          KM      Diverted flow is in the right branch, coded on DQ card.
506          DT   D535R
507          DI       0     100     200     600    1000    1500
508          DQ       0      85     170     510     850    1275
             *

509          KK  535515
510          KM   Normal depth channel route from C535 to C515
511          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
512          RS       3    FLOW      -1
513          RC   0.065   0.045   0.065    2814  0.0237
514          RX  1000.0  1015.0  1095.0  1105.0  1145.0  1165.0  1375.0  1415.0
515          RY  1707.0  1706.0  1704.0  1702.0  1702.0  1704.0  1706.0  1707.0
516          RL                    0.33  1702.0
             *

517          KK    511L
518          KM   Sub-Basin   511L
519          KM
520          KM      The Phoenix Mountain S-Graph is used for this basin.
521          KM          Lag Used =  20.3 minutes
522          KM
523          BA   0.193
524          LG    0.35    0.35    4.35    0.44    0.00
525          UI      32      32      72     124     178     214     244     291     378     267
526          UI     210     188     170     155     140     126     109      92      81      75
527          UI      69      60      51      41      39      35      34      25      25      24
528          UI      16      16      16      16      12       6       6       6       6       6
529          UI       6       6       6       6       6       6       0       0       0       0
530          UI       0       0       0       0       0       0       0       0       0       0
             *
             *

531          KK    C515
532          KM     Combine routed hydrograph from C535L with runoff from 511L at C515
533          HC       2    6.28
             *
             *

534          KK   D515R
535          KM        Hydrograph diversion at C515
536          KM      Main flow continues on in right branch.
537          KM      Diverted flow is in the left branch, coded on DQ card.
538          DT   D515L
539          DI       0      30     125     242     450     898    1110    1320    1570    1795
540          DQ       0      20     105     180     425     660     810     970    1160    1330
             *
```



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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

541          KK  515575
542          KM   Normal depth channel route from C515 to C575
543          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
544          RS       2    FLOW      -1
545          RC   0.065   0.045   0.065    2236  0.0242
546          RX  1000.0  1027.0  1148.0  1156.0  1163.0  1173.0  1386.0  1411.0
547          RY  1712.7  1712.0  1710.0  1708.0  1708.0  1710.0  1712.0  1713.0
548          RL                    0.14  1708.0
```

```
                *
549             KK    511M
550             KM   Sub-Basin   511M
551             KM
552             KM      The Phoenix Mountain S-Graph is used for this basin.
553             KM          Lag Used =  15.5 minutes
554             KM
555             BA   0.083
556             LG    0.35    0.37    5.20    0.30    0.00
557             UI      18      25      64     101     127     154     207     138     110      97
558             UI      86      74      64      51      44      40      33      27      23      20
559             UI      17      14      13       9       9       9       7       3       3       3
560             UI       3       3       3       3       3       0       0       0       0       0
561             UI       0       0       0       0       0       0       0       0       0       0
                *
                *

562             KK   B535R
563             KM       Retrieve split hydrograph D535R
564             DR   D535R
                *
                *

565             KK   D574L
566             KM       Hydrograph diversion at C574
567             KM      Main flow continues on in left branch.
568             KM      Diverted flow is in the right branch, coded on DQ card.
569             DT   D574R
570             DI       0      25     135     430     860    1550    1960    2525    3100    3740
571             DQ       0       0      25      80     200     400     490     700     900    1140
                *

572             KK  574575
573             KM   Normal depth channel route from C574 to C575
574             KM       Source:  200 Scale 2' CI Mapping, Sheet 8
575             RS       4    FLOW      -1
576             RC   0.065   0.045   0.065    4351  0.0242
577             RX  1000.0  1040.0  1095.0  1110.0  1170.0  1190.0  1225.0  1260.0
578             RY  1750.0  1748.0  1748.0  1746.0  1746.0  1748.0  1749.0  1750.0
579             RL                    0.39  1746.0
                *
1                                          HEC-1 INPUT                                          PAGE 15

LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

580             KK    C575
581             KM   Combine routed hydrographs from C515R and C574L with runoff from 511M at C575
582             HC       3    6.36
                *

583             KK  575536
584             KM   Normal depth channel route from C575 to C536
585             KM       Source:  200 Scale 2' CI Mapping, Sheet 5
586             RS       2    FLOW      -1
587             RC   0.040   0.030   0.040    4398  0.0215
588             RX  1000.0  1033.0  1045.0  1072.0  1093.0  1103.0  1117.0  1135.0
589             RY  1644.0  1642.0  1640.0  1638.0  1638.0  1640.0  1642.0  1644.0
590             RL                    0.07  1638.0
                *

591             KK    511Q
592             KM   Sub-Basin   511Q
593             KM
594             KM      The Clark Unit Hydrograph is used for this basin.
595             KM          The Urban time-area relation is used for this basin.
596             KM
597             KM      Time of Concentration for this sub-basin is based on the following:
598             KM          An rainfall areal reduction factor of 1.000
599             KM
600             KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
601             KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
602             KM   .29 .29 .29 .29 .29 .29 .04 .04 .04 .04 .04 .03 .02 .02 .02 .02 .01 .01
603             KM
604             KM          L=   0.959 miles, S=  121 feet/mile, Kb= .06
605             KM
606             BA   0.086
607             LG    0.15    0.16    7.30    0.13   17.50
608             UC   0.363   0.469
609             UA       0       5      16      30      65      77      84      90      94      97
610             UA     100
                *

611             KK    511N
612             KM   Sub-Basin   511N
613             KM
614             KM      The Clark Unit Hydrograph is used for this basin.
615             KM          The Urban time-area relation is used for this basin.
616             KM
617             KM      Time of Concentration for this sub-basin is based on the following:
618             KM          An rainfall areal reduction factor of 1.000
619             KM
620             KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
621             KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
622             KM   .29 .29 .28 .28 .28 .28 .03 .03 .03 .03 .03 .03 .01 .01 .01 .01 .01 .01
623             KM
624             KM          L=   0.836 miles, S=  114 feet/mile, Kb= .06
625             KM
626             BA   0.069
627             LG    0.18    0.18    7.00    0.15   12.90
1                                          HEC-1 INPUT                                          PAGE 16

LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

628             UC   0.346   0.454
629             UA       0       5      16      30      65      77      84      90      94      97
630             UA     100
                *

631             KK    C536
632             KM    Combine runoff from 511Q and 511N with routed hydrograph from C575 at C536
633             HC       3
```

```
                 *
 634             KK  536545
 635             KM   Normal depth channel route from C536 to C545
 636             KM       Source:  200 Scale 2' CI Mapping, Sheet 5
 637             RS       6    FLOW      -1
 638             RC   0.070   0.045   0.070    3241  0.0162
 639             RX  1000.0  1112.0  1196.0  1241.0  1256.0  1317.0  1406.0  1548.0
 640             RY  1579.5  1576.9  1576.5  1576.0  1576.0  1576.8  1578.0  1579.5
 641             RL                    0.24  1576.0
                 *

 642             KK    5110
 643             KM   Sub-Basin   5110
 644             KM
 645             KM      The Clark Unit Hydrograph is used for this basin.
 646             KM          The Natural time-area relation is used for this basin.
 647             KM
 648             KM      Time of Concentration for this sub-basin is based on the following:
 649             KM          An rainfall areal reduction factor of 1.000
 650             KM
 651             KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
 652             KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
 653             KM   .26 .26 .25 .25 .25 .25 .01 .01 .01 .01 .01 .00 .00 .00 .00 .00 .00 .00
 654             KM
 655             KM          L=   0.628 miles, S=   89 feet/mile, Kb= .06
 656             KM
 657             BA   0.045
 658             LG    0.35    0.39    6.20    0.20    0.30
 659             UC   0.338   0.445
 660             UA       0       3       5       8      12      20      43      75      90      96
 661             UA     100
                 *

 662             KK   C545L
 663             KM     Combine routed hydrograph from C536 with runoff from 5110 at C545L
 664             HC       2
                 *

 665             KK   B532R
 666             KM        Retrieve split hydrograph D532R
 667             DR   D532R
                 *
1                                          HEC-1 INPUT                                          PAGE 17

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 668             KK  532538
 669             KM   Normal depth channel route from C532 to C538
 670             KM       Source:  Hydrology Field Reconnaissance, page 7
 671             RS       9    FLOW      -1
 672             RC   0.070   0.040   0.070    7389  0.0267
 673             RX  1000.0  1069.0  1086.0  1127.0  1146.0  1154.0  1227.0  1280.0
 674             RY  2061.9  2060.8  2059.9  2059.5  2059.6  2060.5  2061.2  2062.0
 675             RL                    0.12  2059.5
                 *
                 * ***********************************************************************
                 * ****************************      Major Basin 510     ********************
                 * ***********************************************************************
                 *

 676             KK    510A
 677             KM   Sub-Basin   510A
 678             KM
 679             KM      The Phoenix Mountain S-Graph is used for this basin.
 680             KM          Lag Used =  39.2 minutes
 681             KM
 682             BA   0.913
 683             LG    0.35    0.39    6.20    0.20    0.00
 684             UI      78      78      78      78     151     225     295     346     430     481
 685             UI     517     564     595     633     715     824     972     823     616     550
 686             UI     508     471     456     435     410     389     372     354     331     315
 687             UI     301     273     254     239     207     201     192     185     180     170
 688             UI     164     147     129     129     108     100     100      97      86      86
 689             UI      86      84      60      60      60      60      60      56      38      38
 690             UI      38      38      38      38      38      38      38      15      15      15
 691             UI      15      15      15      15      15      15      15      15      15      15
 692             UI      15      15      15      15      15      15      15      15      15      15
 693             UI       0       0       0       0       0       0       0       0       0       0
 694             UI       0       0       0       0       0       0       0       0       0       0
                 *
                 *

 695             KK   D537L
 696             KM        Hydrograph diversion at C537
 697             KM      Main flow continues on in left branch.
 698             KM      Diverted flow is in the right branch, coded on DQ card.
 699             DT   D537R
 700             DI       0      40     180     350     600     930    1155    1375    1630    1955
 701             DQ       0      40     180     320     500     710     845     965    1110    1315
                 *

 702             KK  537538
 703             KM   Normal depth channel route from C537 to C538
 704             KM       Source:  Hydrology Field Reconnaissance, page 9
 705             RS       8    FLOW      -1
 706             RC   0.070   0.040   0.070    5132  0.0273
 707             RX  1000.0  1049.0  1140.0  1248.0  1272.0  1295.0  1313.0  1331.0
 708             RY  2063.0  2059.9  2060.8  2058.3  2058.2  2059.6  2061.3  2063.0
 709             RL                    0.08  2058.2
                 *
1                                          HEC-1 INPUT                                          PAGE 18

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 710             KK    510B
 711             KM   Sub-Basin   510B
 712             KM
 713             KM      The Phoenix Mountain S-Graph is used for this basin.
 714             KM          Lag Used =  33.9 minutes
 715             KM
```

```
716          BA   0.359
717          LG    0.35    0.35    7.00    0.15    0.00
718          UI      36      36      36      43     103     128     157     203     223     246
719          UI     266     284     322     382     438     325     262     235     216     207
720          UI     195     183     173     165     151     143     135     122     111      99
721          UI      93      87      84      82      75      73      59      59      49      46
722          UI      46      41      39      39      38      27      27      27      27      27
723          UI      17      17      17      17      17      17      17      17       7       7
724          UI       7       7       7       7       7       7       7       7       7       7
725          UI       7       7       7       7       7       7       7       7       0       0
726          UI       0       0       0       0       0       0       0       0       0       0
             *

727          KK    C538
728          KM   Combine routed hydrographs from C532R and C537L with runoff from 510B at C538
729          HC       3    5.18
             *

730          KK  538540
731          KM   Normal depth channel route from C538 to C540
732          KM       Source:  Hydrology Field Reconnaissance, page 19
733          RS      18    FLOW      -1
734          RC   0.070   0.040   0.070   11259  0.0264
735          RX  1000.0  1037.0  1107.0  1108.0  1116.0  1120.0  1145.0  1375.0
736          RY   100.5    97.9    97.9    97.4    97.5    98.2    98.7   100.5
737          RL                    0.10    97.4
             *

738          KK   B537R
739          KM       Retrieve split hydrograph D537R
740          DR   D537R
             *

741          KK  537577
742          KM   Normal depth channel route from C537 to C577
743          KM       Source:  Hydrology Field Reconnaissance,  page 9
744          RS       4    FLOW      -1
745          RC   0.070   0.040   0.070    4714  0.0278
746          RX   960.0   980.0  1000.0  1032.0  1068.0  1100.0  1189.0  1224.0
747          RY  2061.0  2060.3  2059.6  2057.5  2057.3  2058.8  2060.0  2061.0
748          RL                    0.23  2057.3
             *
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

749          KK    509D
750          KM   Sub-Basin   509D
751          KM
752          KM       The Phoenix Mountain S-Graph is used for this basin.
753          KM           Lag Used =  33.8 minutes
754          KM
755          BA   0.337
756          LG    0.35    0.40    6.00    0.22    0.00
757          UI      34      34      34      40      97     121     148     191     210     232
758          UI     251     268     304     360     412     304     246     221     203     195
759          UI     183     172     163     155     142     134     127     115     104      93
760          UI      87      82      79      77      70      68      55      55      46      43
761          UI      43      39      37      37      35      26      26      26      26      25
762          UI      16      16      16      16      16      16      16      15       6       6
763          UI       6       6       6       6       6       6       6       6       6       6
764          UI       6       6       6       6       6       6       6       6       0       0
765          UI       0       0       0       0       0       0       0       0       0       0
             *
             *

766          KK   D539L
767          KM       Hydrograph diversion at C539
768          KM      Main flow continues on in left branch.
769          KM      Diverted flow is in the right branch, coded on DQ card.
770          DT   D539R
771          DI       0      16     135     293     487     603     720     855
772          DQ       0       8      50     102     170     203     240     280
             *

773          KK  539577
774          KM   Normal depth channel route from C539 to C577
775          KM       Source:  Hydrology Field Reconnaissance, page 5
776          RS       2    FLOW      -1
777          RC   0.070   0.040   0.070    1292  0.0302
778          RX   920.0  1000.0  1061.0  1091.0  1134.0  1224.0  1307.0  1390.0
779          RY  2004.0  2003.5  2002.8  2001.5  2001.6  2002.5  2003.2  2004.0
780          RL                    0.07  2001.5
             *

781          KK    C577
782          KM    Combine routed hydrographs from C537R and C539L at C577
783          HC       2    1.25
             *

784          KK  577540
785          KM   Normal depth channel route from C577 to C540
786          KM       Source:  Hydrology Field Reconnaissance,  page 9
787          RS      12    FLOW      -1
788          RC   0.070   0.040   0.070   11694  0.0262
789          RX   960.0   980.0  1000.0  1032.0  1068.0  1100.0  1189.0  1224.0
790          RY  2061.0  2060.3  2059.6  2057.5  2057.3  2058.8  2060.0  2061.0
791          RL                    0.13  2057.3
             *
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

792          KK    510C
793          KM   Sub-Basin   510C
794          KM
795          KM       The Phoenix Mountain S-Graph is used for this basin.
796          KM           Lag Used =  46.9 minutes
797          KM
798          BA   0.851
799          LG    0.30    0.39    6.20    0.19    0.00
```

```
800          UI      61      61      61      61      61     131     176     219     250     292
801          UI     356     377     402     431     456     477     506     566     638     725
802          UI     733     546     459     425     396     371     359     348     332     317
803          UI     304     293     282     265     253     244     234     215     206     190
804          UI     176     162     156     150     147     141     141     129     128     119
805          UI     100     100     100      78      78      78      78      69      67      67
806          UI      67      67      49      47      47      47      47      47      47      32
807          UI      30      30      30      30      30      30      30      30      30      30
808          UI      14      12      12      12      12      12      12      12      12      12
809          UI      12      12      12      12      12      12      12      12      12      12
810          UI      12      12      12      12      12      12      12      12       0       0
811          UI       0       0       0       0       0       0       0       0       0       0
             *

812          KK    C540
813          KM     Combine hydrographs  from C538, C539L and runoff from 510C at C540
814          HC       3
             *

815          KK  540542
816          KM   Normal depth channel route from C540 to C542
817          KM       Source:  200 Scale 2' CI Mapping, Sheet 5
818          RS       2    FLOW      -1
819          RC   0.065   0.045   0.055    1205  0.0172
820          RX   992.0  1031.0  1208.0  1225.0  1255.0  1283.0  1338.0  1421.0
821          RY  1662.5  1660.0  1659.4  1658.0  1658.0  1660.0  1661.0  1662.0
822          RL                    0.15  1658.0
             *

823          KK    510F
824          KM   Sub-Basin   510F
825          KM
826          KM      The Clark Unit Hydrograph is used for this basin.
827          KM          The HEC-1 time-area relation is used for this basin.
828          KM
829          KM      Time of Concentration for this sub-basin is based on the following:
830          KM          An rainfall areal reduction factor of 1.000
831          KM
832          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
833          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
834          KM   .27 .26 .26 .26 .26 .26 .01 .01 .01 .01 .01 .01 .00 .00 .00 .00 .00 .00
835          KM
836          KM          L=   0.783 miles, S=  127 feet/mile, Kb= .08
837          KM
838          BA   0.115
839          LG    0.26    0.36    6.00    0.20    6.00
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

840          UC   0.392   0.369
             *
             *

841          KK    C542
842          KM     Combine routed hydrograph from C540 with runoff from 510F at C542
843          HC       2
             *

844          KK  542543
845          KM   Normal depth channel route from C542 to C543
846          KM       Source:  200 Scale 2' CI Mapping, Sheet 5
847          RS       1    FLOW      -1
848          RC   0.030   0.030   0.030    1600  0.0165
849          RX  1000.0  1008.0  1049.0  1068.0  1103.0  1108.0  1133.0  1143.0
850          RY  1636.0  1634.0  1633.0  1632.0  1632.0  1633.0  1634.0  1636.0
851          RL                    0.07  1632.0
             *
             *

852          KK   B574R
853          KM         Retrieve split hydrograph D574R
854          DR   D574R
             *

855          KK  574541
856          KM   Normal depth channel route from C574 to C541
857          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
858          RS       3    FLOW      -1
859          RC   0.065   0.045   0.065    1821  0.0220
860          RX  1000.0  1040.0  1067.0  1112.0  1190.0  1245.0  1329.0  1357.0
861          RY  1773.0  1772.0  1771.0  1770.0  1770.0  1771.0  1772.0  1773.0
862          RL                    0.39  1770.0
             *

863          KK    510D
864          KM   Sub-Basin   510D
865          KM
866          KM      The Clark Unit Hydrograph is used for this basin.
867          KM          The Natural time-area relation is used for this basin.
868          KM
869          KM      Time of Concentration for this sub-basin is based on the following:
870          KM          An rainfall areal reduction factor of 1.000
871          KM
872          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
873          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
874          KM   .26 .26 .26 .26 .26 .25 .01 .01 .01 .01 .01 .01 .00 .00 .00 .00 .00 .00
875          KM
876          KM          L=   0.595 miles, S=  305 feet/mile, Kb= .11
877          KM
878          BA   0.059
879          LG    0.21    0.38    5.40    0.22    0.00
880          UC   0.308   0.333
881          UA       0       3       5       8      12      20      43      75      90      96
882          UA     100
             *
             *
```



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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

883          KK    C541
```

```
884          KM     Combine routed hydrograph from C574R with runoff from 510D at C541
885          HC       2    6.15
             *

886          KK  541543
887          KM   Normal depth channel route from C541 to C543
888          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
889          RS      10    FLOW      -1
890          RC   0.065   0.045   0.065    5727  0.0224
891          RX  1000.0  1053.0  1167.0  1189.0  1207.0  1224.0  1285.0  1316.0
892          RY  1699.0  1698.0  1696.7  1696.0  1696.0  1696.8  1698.0  1699.0
893          RL                    0.07  1696.0
             *

894          KK    510E
895          KM   Sub-Basin   510E
896          KM
897          KM      The Clark Unit Hydrograph is used for this basin.
898          KM          The HEC-1 time-area relation is used for this basin.
899          KM
900          KM      Time of Concentration for this sub-basin is based on the following:
901          KM          An rainfall areal reduction factor of 1.000
902          KM
903          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
904          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
905          KM   .29 .28 .28 .28 .28 .28 .03 .03 .03 .03 .03 .03 .01 .01 .01 .00 .00 .00
906          KM
907          KM          L=   1.276 miles, S=  123 feet/mile, Kb= .07
908          KM
909          BA   0.182
910          LG    0.23    0.25    7.00    0.14   10.00
911          UC   0.458   0.499
             *

912          KK    C543
913          KM     Combine routed hydrographs from C542 and C541 with runoff from 510E at C543
914          HC       3
             *

915          KK  543545
916          KM   Normal depth channel route from C543 to C545
917          KM       Source:  200 Scale 2' CI Mapping, Sheet 5
918          RS       3    FLOW      -1
919          RC   0.065   0.030   0.065    5179  0.0162
920          RX  1000.0  1001.0  1002.0  1003.0  1075.0  1076.0  1077.0  1078.0
921          RY  1616.0  1614.0  1612.0  1610.0  1610.0  1612.0  1614.0  1616.0
922          RL                    0.33  1610.0
             *
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

923          KK    510G
924          KM   Sub-Basin   510G
925          KM
926          KM      The Clark Unit Hydrograph is used for this basin.
927          KM          The HEC-1 time-area relation is used for this basin.
928          KM
929          KM      Time of Concentration for this sub-basin is based on the following:
930          KM          An rainfall areal reduction factor of 1.000
931          KM
932          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
933          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
934          KM   .27 .27 .27 .27 .26 .26 .02 .02 .02 .02 .01 .01 .00 .00 .00 .00 .00 .00
935          KM
936          KM          L=   1.094 miles, S=   87 feet/mile, Kb= .05
937          KM
938          BA   0.179
939          LG    0.23    0.33    5.70    0.22   12.90
940          UC   0.404   0.387
             *

941          KK   C545R
942          KM     Combine routed hydrograph from C543 with runoff from 510G at C545R
943          HC       2
             *

944          KK    C545
945          KM     Combine hyrographs C545L and C545R at C545
946          KM                Confluence of washes 10 and 11
947          HC       2
             *

948          KK  545546
949          KM   Normal depth channel route from C545 to C546
950          KM       Source:  200 Scale 2' CI Mapping, Sheet 6
951          RS       4    FLOW      -1
952          RC   0.065   0.042   0.065    3093  0.0120
953          RX  1000.0  1046.0  1093.0  1099.0  1156.0  1245.0  1338.0  1358.0
954          RY  1522.0  1520.0  1518.0  1516.0  1516.0  1517.5  1518.0  1522.0
955          RL                    0.04  1516.0
             *

956          KK    511P
957          KM   Sub-Basin   511P
958          KM
959          KM      The Clark Unit Hydrograph is used for this basin.
960          KM          The HEC-1 time-area relation is used for this basin.
961          KM
962          KM      Time of Concentration for this sub-basin is based on the following:
963          KM          An rainfall areal reduction factor of 1.000
964          KM
965          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
966          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
967          KM   .29 .29 .29 .29 .29 .28 .03 .03 .03 .03 .03 .03 .01 .01 .01 .01 .01 .01
968          KM
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

969          KM          L=   1.650 miles, S=   86 feet/mile, Kb= .05
970          KM
```

```
 971          BA   0.314
 972          LG    0.31    0.25    8.80    0.08    3.40
 973          UC   0.483   0.477
              *

 974          KK    502A
 975          KM   Sub-Basin   502A
 976          KM
 977          KM      The Clark Unit Hydrograph is used for this basin.
 978          KM          The Natural time-area relation is used for this basin.
 979          KM
 980          KM      Time of Concentration for this sub-basin is based on the following:
 981          KM          An rainfall areal reduction factor of 1.000
 982          KM
 983          KM        EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
 984          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
 985          KM   .29 .29 .29 .29 .29 .29 .04 .04 .04 .04 .04 .03 .01 .01 .01 .01 .01 .01
 986          KM
 987          KM          L=   0.393 miles, S=  114 feet/mile, Kb= .06
 988          KM
 989          BA   0.040
 990          LG    0.35    0.25    9.70    0.06    0.00
 991          UC   0.238   0.222
 992          UA       0       3       5       8      12      20      43      75      90      96
 993          UA     100
              *

 994          KK    C546
 995          KM     Combine routed hydrograph from C545 with runoff from 511P and 502A at C546
 996          HC       3
              *
              *
              *
              * ******************************************************************************
              * ****************************     Major Basin 509     ************************
              * ******************************************************************************
              *

 997          KK    509A
 998          KM   Sub-Basin   509A
 999          KM
1000          KM      The Phoenix Mountain S-Graph is used for this basin.
1001          KM          Lag Used =  43.8 minutes
1002          KM
1003          BA   0.573
1004          LG    0.30    0.35    6.40    0.18    4.60
1005          UI      44      44      44      44      44     123     135     169     199     242
1006          UI     266     286     308     327     343     367     414     472     547     479
1007          UI     351     319     292     273     261     254     241     229     219     211
1008          UI     202     188     180     173     165     151     141     135     116     115
1009          UI     108     107     101     101      93      92      82      72      72      65
1010          UI      56      56      56      52      48      48      48      48      35      34
1011          UI      34      34      34      34      30      22      22      22      22      22
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1012          UI      22      22      22      22      21       8       8       8       8       8
1013          UI       8       8       8       8       8       8       8       8       8       8
1014          UI       8       8       8       8       8       8       8       8       8       8
1015          UI       8       0       0       0       0       0       0       0       0       0
1016          UI       0       0       0       0       0       0       0       0       0       0
              *

1017          KK  552553
1018          KM   Normal depth channel route from C552 to C553
1019          KM       Source:  Hydrology Field Reconnaissance, page 15
1020          RS      20    FLOW      -1
1021          RC   0.070   0.040   0.070   17590  0.0238
1022          RX  1000.0  1034.0  1074.0  1079.0  1090.0  1096.0  1130.0  1163.0
1023          RY  2394.8  2394.1  2391.8  2390.8  2390.7  2391.7  2393.8  2395.4
1024          RL                    0.18  2390.7
              *

1025          KK    509B
1026          KM   Sub-Basin   509B
1027          KM
1028          KM      The Phoenix Mountain S-Graph is used for this basin.
1029          KM          Lag Used =  44.6 minutes
1030          KM
1031          BA   0.637
1032          LG    0.35    0.36    5.10    0.31    0.00
1033          UI      48      48      48      48      48     127     142     184     212     257
1034          UI     288     308     332     353     372     390     440     496     566     578
1035          UI     424     359     332     306     289     281     270     256     245     235
1036          UI     226     215     203     194     185     173     164     150     139     127
1037          UI     122     118     115     111     109     101     101      85      79      79
1038          UI      68      61      61      61      56      53      53      53      53      38
1039          UI      37      37      37      37      37      34      24      24      24      24
1040          UI      24      24      24      24      24      24      13       9       9       9
1041          UI       9       9       9       9       9       9       9       9       9       9
1042          UI       9       9       9       9       9       9       9       9       9       9
1043          UI       9       9       9       0       0       0       0       0       0       0
1044          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

1045          KK    C553
1046          KM     Combine routed hydrograph from C552 with runoff from 509B at C553
1047          HC       2
              *
              *

1048          KK   D553L
1049          KM        Hydrograph diversion at C553
1050          KM      Main flow continues on in left branch.
1051          KM      Diverted flow is in the right branch, coded on DQ card.
1052          DT   D553R
1053          DI       0      37     145     393     650     970    1370    1815    2120    2290
1054          DQ       0      20      75     193     305     460     660     885    1070    1210
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1055          KK  553554
1056          KM   Normal depth channel route from C553 to C554
1057          KM       Source:  Hydrology Field Reconnaissance, page 2
1058          RS       5    FLOW      -1
1059          RC   0.070   0.040   0.070    2350  0.0264
1060          RX  1000.0  1019.0  1038.0  1044.0  1060.0  1118.0  1222.0  1335.0
1061          RY  1877.9  1877.5  1877.1  1875.7  1875.7  1877.1  1876.7  1877.8
1062          RL                    0.07  1875.7
              *

1063          KK    509C
1064          KM   Sub-Basin   509C
1065          KM
1066          KM      The Phoenix Mountain S-Graph is used for this basin.
1067          KM          Lag Used =  21.1 minutes
1068          KM
1069          BA   0.147
1070          LG    0.35    0.38    6.40    0.19    0.00
1071          UI      23      23      48      85     123     150     173     198     254     241
1072          UI     166     143     132     119     109      97      88      76      65      58
1073          UI      54      50      43      37      30      29      26      26      18      18
1074          UI      18      13      11      11      11      11       6       4       4       4
1075          UI       4       4       4       4       4       4       4       4       0       0
1076          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

1077          KK    C554
1078          KM     Combine routed hydrograph from C553L with runoff from 509C at C554
1079          HC       2    1.36
              *
              *

1080          KK   D554L
1081          KM        Hydrograph diversion at C554
1082          KM      Main flow continues on in left branch.
1083          KM      Diverted flow is in the right branch, coded on DQ card.
1084          DT   D554R
1085          DI       0      30     144     316     500     854    1290    1840    2150    2500
1086          DQ       0      20     104     210     310     534     810    1120    1310    1520
              *

1087          KK  554555
1088          KM   Normal depth channel route from C554 to C555
1089          KM       Source:  Hydrology Field Reconnaissance, page 2
1090          RS       2    FLOW      -1
1091          RC   0.070   0.040   0.070    1086  0.0267
1092          RX  1000.0  1019.0  1038.0  1044.0  1060.0  1118.0  1222.0  1335.0
1093          RY  1877.9  1877.5  1877.1  1875.7  1875.7  1877.1  1876.7  1877.8
1094          RL                    0.07  1875.7
              *
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1095          KK    509E
1096          KM   Sub-Basin   509E
1097          KM
1098          KM      The Phoenix Mountain S-Graph is used for this basin.
1099          KM          Lag Used =  24.6 minutes
1100          KM
1101          BA   0.190
1102          LG    0.35    0.35    7.00    0.15    0.00
1103          UI      26      26      34      79     108     146     169     191     211     257
1104          UI     311     218     176     157     147     135     125     114     104      95
1105          UI      84      72      65      62      58      54      44      41      33      33
1106          UI      29      28      25      20      20      20      15      13      13      13
1107          UI      13      13       6       5       5       5       5       5       5       5
1108          UI       5       5       5       5       5       5       0       0       0       0
1109          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

1110          KK   B539R
1111          KM        Retrieve split hydrograph D539R
1112          DR   D539R
              *

1113          KK  539555
1114          KM   Normal depth channel route from C539 to C555
1115          KM       Source:  Hydrology Field Reconnaissance, page 5
1116          RS       9    FLOW      -1
1117          RC   0.070   0.040   0.070    4876  0.0285
1118          RX  1034.0  1046.0  1082.0  1091.0  1116.0  1165.0  1203.0  1250.0
1119          RY  2003.4  2002.9  2002.3  2001.6  2001.6  2002.4  2002.9  2003.4
1120          RL                    0.07  2001.6
              *

1121          KK    C555
1122          KM     Combine hydrographs from C554L and C539R with runoff from 509E at C555
1123          HC       3    1.88
              *

1124          KK  555557
1125          KM   Normal depth channel route from C555 to C557
1126          KM       Source:  Hydrology Field Reconnaissance,  page 5
1127          RS       4    FLOW      -1
1128          RC   0.070   0.040   0.070    5621  0.0258
1129          RX  1123.0  1138.0  1154.0  1161.0  1186.0  1197.0  1262.0  1350.0
1130          RY  1876.1  1874.3  1872.5  1871.0  1871.0  1872.6  1873.2  1876.0
1131          RL                    0.07  1871.0
              *

1132          KK   B553R
1133          KM        Retrieve split hydrograph D553R
1134          DR   D553R
              *
```

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1135          KK  553556
1136          KM   Normal depth channel route from C553 to C556
1137          KM       Source:  Hydrology Field Reconnaissance,  page 2
1138          RS       4    FLOW      -1
1139          RC   0.070   0.040   0.070    2769  0.0289
1140          RX   960.0  1027.0  1050.0  1060.0  1073.0  1077.0  1091.0  1149.0
1141          RY  1940.0  1937.3  1937.7  1937.0  1937.2  1938.2  1938.3  1939.8
1142          RL                    0.07  1937.0
              *

1143          KK   B554R
1144          KM        Retrieve split hydrograph D554R
1145          DR   D554R
              *
              * *
              * *       Routing Reach  554-556 is too short to route.
              * *
              *

1146          KK    C556
1147          KM     Combine routed hydrograph from C553R with hydrograph from C554R at C556
1148          HC       2    1.36
              *

1149          KK  556558
1150          KM   Normal depth channel route from C556 to C558
1151          KM       Source:  Hydrology Field Reconnaissance,  page 4
1152          RS       6    FLOW      -1
1153          RC   0.070   0.040   0.070    4703  0.0215
1154          RX  1123.0  1138.0  1154.0  1161.0  1186.0  1197.0  1262.0  1350.0
1155          RY  1876.1  1874.3  1872.5  1871.0  1871.0  1872.6  1873.2  1876.0
1156          RL                    0.15  1871.0
              *

1157          KK    509F
1158          KM   Sub-Basin   509F
1159          KM
1160          KM      The Phoenix Mountain S-Graph is used for this basin.
1161          KM          Lag Used =  22.8 minutes
1162          KM
1163          BA   0.201
1164          LG    0.35    0.37    6.60    0.18    0.00
1165          UI      30      30      50      98     138     180     206     230     272     350
1166          UI     269     204     180     167     152     140     127     116     102      88
1167          UI      77      72      68      62      51      47      38      37      32      32
1168          UI      25      23      23      20      14      14      14      14      14       6
1169          UI       6       6       6       6       6       6       6       6       6       6
1170          UI       6       6       0       0       0       0       0       0       0       0
1171          UI       0       0       0       0       0       0       0       0       0       0
              *
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1172          KK    C558
1173          KM     Combine routed hydrograph from C556 with runoff from 509F at C558
1174          HC       2
              *
              *

1175          KK   D558L
1176          KM        Hydrograph diversion at C558
1177          KM      Main flow continues on in left branch.
1178          KM      Diverted flow is in the right branch, coded on DQ card.
1179          DT   D558R
1180          DI       0      26     160     304     475     835    1318    1900    2260    2625
1181          DQ       0      10      70     126     195     375     638     960    1160    1345
              *

1182          KK  558557
1183          KM   Normal depth channel route from C558 to C557
1184          KM       Source:  Hydrology Field Reconnaissance,  page 4
1185          RS       1    FLOW      -1
1186          RC   0.070   0.040   0.070    1564  0.0352
1187          RX  1000.0  1030.0  1060.0  1066.0  1111.0  1118.0  1170.0  1223.0
1188          RY  1733.8  1733.2  1732.6  1731.7  1732.0  1733.2  1733.5  1733.8
1189          RL                    0.15  1731.7
              *

1190          KK    509G
1191          KM   Sub-Basin   509G
1192          KM
1193          KM      The Phoenix Mountain S-Graph is used for this basin.
1194          KM          Lag Used =  19.0 minutes
1195          KM
1196          BA   0.094
1197          LG    0.35    0.36    6.80    0.16    0.00
1198          UI      17      17      42      70     100     117     134     173     174     116
1199          UI     100      91      82      73      65      56      47      41      39      35
1200          UI      29      24      21      19      18      14      13      13       8       8
1201          UI       8       8       6       3       3       3       3       3       3       3
1202          UI       3       3       3       0       0       0       0       0       0       0
1203          UI       0       0       0       0       0       0       0       0       0       0
              *

1204          KK    C557
1205          KM    Combine routed hydrographs from C555 and C558L with runoff from 509G at C557
1206          HC       3    2.18
              *
              *

1207          KK   D557R
1208          KM        Hydrograph diversion at C557
1209          KM      Main flow continues on in right branch.
1210          KM      Diverted flow is in the left branch, coded on DQ card.
1211          DT   D557L
1212          DI       0      19     120     225     412     735    1280    1840    2190    2620
1213          DQ       0       0       0       0      32     135     380     680     870    1120
```

```
                  *
LINE              ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1214              KK  557565
1215              KM   Normal depth channel route from C557 to C565
1216              KM       Source:  Hydrology Field Reconnaissance,  page 5
1217              RS       7    FLOW      -1
1218              RC   0.070   0.040   0.070    3901  0.0217
1219              RX  1000.0  1104.0  1148.0  1178.0  1185.0  1213.0  1320.0  1350.0
1220              RY  1724.7  1721.4  1722.8  1721.2  1721.2  1723.0  1723.6  1725.0
1221              RL                    0.07  1721.2
                  *

1222              KK    509M
1223              KM   Sub-Basin   509M
1224              KM
1225              KM      The Clark Unit Hydrograph is used for this basin.
1226              KM          The HEC-1 time-area relation is used for this basin.
1227              KM
1228              KM      Time of Concentration for this sub-basin is based on the following:
1229              KM          An rainfall areal reduction factor of 1.000
1230              KM
1231              KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1232              KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1233              KM   .26 .25 .25 .25 .25 .24 .01 .00 .00 .00 .00 .00 .00 .00 .00 .00 .00 .00
1234              KM
1235              KM          L=   0.857 miles, S=  120 feet/mile, Kb= .08
1236              KM
1237              BA   0.104
1238              LG    0.33    0.38    5.70    0.24    1.70
1239              UC   0.425   0.460
                  *
                  *

1240              KK    C565
1241              KM     Combine routed hydrograph from C557R with runoff from 509M at C565
1242              HC       2    2.28
                  *

1243              KK  565566
1244              KM   Normal depth channel route from C565 to C566
1245              KM       Source:  200 Scale 2' CI Mapping, Sheet 3
1246              RS       2    FLOW      -1
1247              RC   0.030   0.030   0.030    1757  0.0197
1248              RX  1000.0  1074.0  1120.0  1158.0  1183.0  1193.0  1204.0  1243.0
1249              RY  1618.0  1616.0  1614.0  1612.0  1612.0  1614.0  1616.0  1618.0
1250              RL                    0.15  1612.0
                  *
                  *

1251              KK   B557L
1252              KM       Retrieve split hydrograph D557L
1253              DR   D557L
                  *
```



```
LINE              ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1254              KK  557559
1255              KM   Normal depth channel route from C557 to C559
1256              KM       Source:  Hydrology Field Reconnaissance,  page 5
1257              RS       4    FLOW      -1
1258              RC   0.070   0.040   0.070    1207  0.0215
1259              RX  1000.0  1104.0  1227.0  1238.0  1257.0  1281.0  1320.0  1340.0
1260              RY  1724.3  1721.4  1722.3  1721.1  1721.1  1722.4  1723.6  1724.3
1261              RL                    0.07  1721.1
                  *

1262              KK    509H
1263              KM   Sub-Basin   509H
1264              KM
1265              KM      The Clark Unit Hydrograph is used for this basin.
1266              KM          The Natural time-area relation is used for this basin.
1267              KM
1268              KM      Time of Concentration for this sub-basin is based on the following:
1269              KM          An rainfall areal reduction factor of 1.000
1270              KM
1271              KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1272              KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1273              KM   .27 .27 .27 .27 .26 .26 .02 .02 .02 .02 .02 .01 .00 .00 .00 .00 .00 .00
1274              KM
1275              KM          L=   0.813 miles, S=  132 feet/mile, Kb= .08
1276              KM
1277              BA   0.069
1278              LG    0.34    0.35    7.00    0.15    0.00
1279              UC   0.392   0.508
1280              UA       0       3       5       8      12      20      43      75      90      96
1281              UA     100
                  *

1282              KK    C559
1283              KM     Combine routed hydrograph from C557L with runoff from 509H at C559
1284              HC       2    2.25
                  *

1285              KK   D559R
1286              KM        Hydrograph diversion at C559
1287              KM      Main flow continues on in right branch.
1288              KM      Diverted flow is in the left branch, coded on DQ card.
1289              DT   D559L
1290              DI       0      29     205     400     695    1080    1549    2105    2455    2805
1291              DQ       0      14      80     180     340     560     824    1135    1330    1525
                  *

1292              KK  559560
1293              KM   Normal depth channel route from C559 to C560
1294              KM       Source:  Hydrology Field Reconnaissance,  page 6
1295              RS       3    FLOW      -1
1296              RC   0.070   0.040   0.070    1062  0.0198
```

```
1297          RX   943.0  1050.0  1100.0  1109.0  1126.0  1136.0  1144.0  1198.0
1298          RY  1675.0  1673.5  1673.0  1672.4  1672.3  1673.1  1672.6  1675.0
1299          RL                    0.07  1672.3
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1300          KK    509I
1301          KM   Sub-Basin   509I
1302          KM
1303          KM      The Clark Unit Hydrograph is used for this basin.
1304          KM          The Natural time-area relation is used for this basin.
1305          KM
1306          KM      Time of Concentration for this sub-basin is based on the following:
1307          KM          An rainfall areal reduction factor of 1.000
1308          KM
1309          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1310          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1311          KM   .25 .25 .24 .24 .24 .24 .00 .00 .00 .00 .00 .00 .00 .00 .00 .00 .00 .00
1312          KM
1313          KM          L=   0.375 miles, S=  115 feet/mile, Kb= .09
1314          KM
1315          BA   0.030
1316          LG    0.35    0.38    5.60    0.26    0.00
1317          UC   0.304   0.334
1318          UA       0       3       5       8      12      20      43      75      90      96
1319          UA     100
              *

1320          KK    C560
1321          KM    Combine routed hydrograph from C559R with runoff from 509I at C560
1322          HC       2    2.28
              *

1323          KK   D560R
1324          KM       Hydrograph diversion at C560
1325          KM      Main flow continues on in right branch.
1326          KM      Diverted flow is in the left branch, coded on DQ card.
1327          DT   D560L
1328          DI       0      22      80     355     690    1145    1435    1730    2130    2500
1329          DQ       0      12      30      90     190     345     435     530     650     780
              *

1330          KK  560566
1331          KM   Normal depth channel route from C560 to C566
1332          KM       Source:  200 Scale 2' CI Mapping, Sheet 3
1333          RS       5    FLOW      -1
1334          RC   0.070   0.045   0.070    3583  0.0201
1335          RX  1000.0  1033.0  1149.0  1156.0  1168.0  1179.0  1201.0  1214.0
1336          RY  1543.0  1542.0  1540.0  1538.0  1538.0  1540.0  1542.0  1544.0
1337          RL                    0.15  1538.0
              *

1338          KK    509L
1339          KM   Sub-Basin   509L
1340          KM
1341          KM      The Clark Unit Hydrograph is used for this basin.
1342          KM          The Urban time-area relation is used for this basin.
1343          KM
1344          KM      Time of Concentration for this sub-basin is based on the following:
1345          KM          An rainfall areal reduction factor of 1.000
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1346          KM
1347          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1348          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1349          KM   .29 .28 .28 .28 .28 .28 .03 .03 .03 .03 .03 .03 .01 .01 .01 .01 .01 .01
1350          KM
1351          KM          L=   0.789 miles, S=  108 feet/mile, Kb= .03
1352          KM
1353          BA   0.080
1354          LG    0.16    0.25    6.40    0.16   16.80
1355          UC   0.242   0.267
1356          UA       0       5      16      30      65      77      84      90      94      97
1357          UA     100
              *

1358          KK    C566
1359          KM    Combine routed hydrographs from C565 and C560R with runoff from 509L at C566
1360          HC       3    2.36
              *

1361          KK  566567
1362          KM   Normal depth channel route from C566 to C567
1363          KM       Source:  200 Scale 2' CI Mapping, Sheet 3
1364          RS       2    FLOW      -1
1365          RC   0.030   0.030   0.030    2359  0.0185
1366          RX  1000.0  1070.0  1210.0  1240.0  1280.0  1312.0  1337.0  1362.0
1367          RY  1592.0  1591.1  1590.0  1588.0  1588.0  1590.0  1591.0  1592.0
1368          RL                    0.07  1588.0
              *

1369          KK   B559L
1370          KM       Retrieve split hydrograph D559L
1371          DR   D559L
              *

1372          KK  559561
1373          KM   Normal depth channel route from C559 to C561
1374          KM       Source:  Hydrology Field Reconnaissance,  page 6
1375          RS       4    FLOW      -1
1376          RC   0.070   0.040   0.070    2023  0.0228
1377          RX  1000.0  1062.0  1102.0  1108.0  1137.0  1145.0  1210.0  1278.0
1378          RY  1691.2  1688.9  1689.5  1688.1  1688.2  1688.9  1690.0  1691.2
1379          RL                    0.15  1688.1
              *

1380          KK   B560L
1381          KM       Retrieve split hydrograph D560L
```

```
1382          DR   D560L
              *

1383          KK  560561
1384          KM   Normal depth channel route from C560 to C561
1385          KM       Source:  Hydrology Field Reconnaissance,  page 6
1386          RS       2    FLOW      -1
1387          RC   0.070   0.040   0.070    1065  0.0236
1388          RX   975.0  1000.0  1038.3  1041.6  1045.4  1054.0  1085.0  1197.0
1                                          HEC-1 INPUT                                                    PAGE 34

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1389          RY  1675.0  1674.2  1673.8  1672.8  1672.7  1673.6  1673.9  1674.9
1390          RL                    0.07  1672.7
              *

1391          KK    509K
1392          KM   Sub-Basin   509K
1393          KM
1394          KM      The Clark Unit Hydrograph is used for this basin.
1395          KM          The Natural time-area relation is used for this basin.
1396          KM
1397          KM      Time of Concentration for this sub-basin is based on the following:
1398          KM          An rainfall areal reduction factor of 1.000
1399          KM
1400          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1401          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1402          KM   .26 .26 .26 .26 .26 .25 .01 .01 .01 .01 .01 .01 .00 .00 .00 .00 .00 .00
1403          KM
1404          KM          L=   0.437 miles, S=  260 feet/mile, Kb= .12
1405          KM
1406          BA   0.029
1407          LG    0.28    0.39    6.20    0.19    0.10
1408          UC   0.288   0.358
1409          UA       0       3       5       8      12      20      43      75      90      96
1410          UA     100
              *

1411          KK    C561
1412          KM   Combine routed hydrographs from C559L and C560L with runoff from 509K at C561
1413          HC       3    2.31
              *

1414          KK  561562
1415          KM   Normal depth channel route from C561 to C562
1416          KM       Source:  200 Scale 2' CI Mapping, Sheet 5
1417          RS       2    FLOW      -1
1418          RC   0.060   0.030   0.060    1843  0.0197
1419          RX  1000.0  1047.0  1064.0  1069.0  1080.0  1085.0  1125.0  1138.0
1420          RY  1642.0  1640.0  1638.0  1636.0  1636.0  1638.0  1640.0  1642.0
1421          RL                    0.07  1636.0
              *

1422          KK    509J
1423          KM   Sub-Basin   509J
1424          KM
1425          KM      The Clark Unit Hydrograph is used for this basin.
1426          KM          The HEC-1 time-area relation is used for this basin.
1427          KM
1428          KM      Time of Concentration for this sub-basin is based on the following:
1429          KM          An rainfall areal reduction factor of 1.000
1430          KM
1431          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1432          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1433          KM   .26 .26 .26 .26 .26 .25 .01 .01 .01 .01 .01 .01 .00 .00 .00 .00 .00 .00
1434          KM
1435          KM          L=   0.878 miles, S=  188 feet/mile, Kb= .10
1                                          HEC-1 INPUT                                                    PAGE 35

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1436          KM
1437          BA   0.103
1438          LG    0.21    0.32    5.10    0.28    9.00
1439          UC   0.413   0.455
              *

1440          KK    C562
1441          KM    Combine routed hydrograph from C561 with runoff from 509J at C562
1442          HC       2
              *

1443          KK  562567
1444          KM   Normal depth channel route from C562 to C567
1445          KM       Source:  200 Scale 2' CI Mapping, Sheet 3
1446          RS       4    FLOW      -1
1447          RC   0.030   0.030   0.030    3314  0.0164
1448          RX  1000.0  1087.0  1157.0  1203.0  1216.0  1229.0  1254.0  1268.0
1449          RY  1606.0  1604.0  1602.0  1600.0  1600.0  1602.0  1604.0  1606.0
1450          RL                    0.15  1600.0
              *

1451          KK    509P
1452          KM   Sub-Basin   509P
1453          KM
1454          KM      The Clark Unit Hydrograph is used for this basin.
1455          KM          The Urban time-area relation is used for this basin.
1456          KM
1457          KM      Time of Concentration for this sub-basin is based on the following:
1458          KM          An rainfall areal reduction factor of 1.000
1459          KM
1460          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1461          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1462          KM   .29 .29 .29 .29 .29 .29 .04 .04 .04 .04 .04 .04 .02 .02 .02 .02 .01 .01
1463          KM
1464          KM          L=   0.765 miles, S=  107 feet/mile, Kb= .03
1465          KM
1466          BA   0.110
1467          LG    0.10    0.19    6.60    0.15   29.40
1468          UC   0.233   0.209
1469          UA       0       5      16      30      65      77      84      90      94      97
1470          UA     100
```

```
                 *
1471             KK    C567
1472             KM     Combine routed hydrographs from C562 and C566 with runoff from 509P at C567
1473             HC       3
                 *

1474             KK  567568
1475             KM   Normal depth channel route from C567 to C568
1476             KM       Source:  200 Scale 2' CI Mapping, Sheet 2
1477             RS       2    FLOW      -1
1478             RC   0.020   0.045   0.065    1527  0.0136
1479             RX   900.0  1015.0  1032.0  1033.0  1069.0  1070.0  1080.0  1118.0
1480             RY  1559.0  1556.7  1556.0  1554.0  1554.0  1556.0  1557.1  1559.0
1                                              HEC-1 INPUT                                                    PAGE 36

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1481             RL                    0.10  1554.0
                 *

1482             KK    509Q
1483             KM   Sub-Basin   509Q
1484             KM
1485             KM      The Clark Unit Hydrograph is used for this basin.
1486             KM          The Urban time-area relation is used for this basin.
1487             KM
1488             KM      Time of Concentration for this sub-basin is based on the following:
1489             KM          An rainfall areal reduction factor of 1.000
1490             KM
1491             KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1492             KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1493             KM   .29 .29 .28 .28 .28 .28 .03 .03 .03 .03 .03 .03 .01 .01 .01 .01 .01 .01
1494             KM
1495             KM          L=   1.091 miles, S=   98 feet/mile, Kb= .03
1496             KM
1497             BA   0.107
1498             LG    0.12    0.22    6.40    0.16   19.50
1499             UC   0.292   0.361
1500             UA       0       5      16      30      65      77      84      90      94      97
1501             UA     100
                 *

1502             KK    C568
1503             KM     Combine routed hydrograph from C567 with runoff from 509Q at C568
1504             HC       2
                 *

1505             KK  568569
1506             KM   Normal depth channel route from C568 to C569
1507             KM       Source:  200 Scale 2' CI Mapping, Sheet 2
1508             RS       4    FLOW      -1
1509             RC   0.065   0.045   0.065    1820  0.0167
1510             RX  1040.0  1130.0  1270.0  1272.0  1292.0  1294.0  1478.0  1640.0
1511             RY  1535.0  1533.2  1532.0  1530.0  1530.0  1532.0  1533.8  1535.0
1512             RL                    0.26  1530.0
                 *

1513             KK    509R
1514             KM   Sub-Basin   509R
1515             KM
1516             KM      The Clark Unit Hydrograph is used for this basin.
1517             KM          The HEC-1 time-area relation is used for this basin.
1518             KM
1519             KM      Time of Concentration for this sub-basin is based on the following:
1520             KM          An rainfall areal reduction factor of 1.000
1521             KM
1522             KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1523             KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1524             KM   .28 .27 .27 .27 .27 .27 .02 .02 .02 .02 .02 .02 .00 .00 .00 .00 .00 .00
1525             KM
1526             KM          L=   0.646 miles, S=   90 feet/mile, Kb= .04
1527             KM
1                                              HEC-1 INPUT                                                    PAGE 37

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1528             BA   0.097
1529             LG    0.32    0.32    7.00    0.15    3.80
1530             UC   0.271   0.231
                 *

1531             KK    C569
1532             KM    Combine routed hydrograph  from C568 with runoff from 509R at C569
1533             HC       2
                 *

1534             KK  569570
1535             KM   Normal depth channel route from C569 to C570
1536             KM       Source:  200 Scale 2' CI Mapping, Sheet 2
1537             RS       2    FLOW      -1
1538             RC   0.065   0.050   0.065    1501  0.0125
1539             RX  1000.0  1033.0  1066.0  1094.0  1154.0  1225.0  1343.0  1434.0
1540             RY  1508.0  1507.5  1507.0  1504.0  1504.0  1506.0  1507.0  1508.0
1541             RL                    0.07  1504.0
                 *

1542             KK    509O
1543             KM   Sub-Basin   509O
1544             KM
1545             KM      The Clark Unit Hydrograph is used for this basin.
1546             KM          The Urban time-area relation is used for this basin.
1547             KM
1548             KM      Time of Concentration for this sub-basin is based on the following:
1549             KM          An rainfall areal reduction factor of 1.000
1550             KM
1551             KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1552             KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1553             KM   .29 .29 .29 .29 .29 .29 .04 .03 .03 .03 .03 .03 .02 .02 .02 .02 .02 .02
1554             KM
1555             KM          L=   0.578 miles, S=   96 feet/mile, Kb= .03
1556             KM
1557             BA   0.037
```

```
1558          LG    0.07    0.25    5.00    0.26   53.50
1559          UC   0.213   0.280
1560          UA       0       5      16      30      65      77      84      90      94      97
1561          UA     100
              *
              * *
              * *       Routing Reach  563-564 is too short to route.
              * *
              *

1562          KK    509N
1563          KM   Sub-Basin   509N
1564          KM
1565          KM      The Clark Unit Hydrograph is used for this basin.
1566          KM          The Urban time-area relation is used for this basin.
1567          KM
1568          KM      Time of Concentration for this sub-basin is based on the following:
1569          KM          An rainfall areal reduction factor of 1.000
1570          KM
1                                          HEC-1 INPUT                                                PAGE 38

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1571          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1572          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1573          KM   .28 .28 .28 .28 .28 .28 .03 .03 .03 .02 .02 .02 .01 .01 .01 .01 .01 .01
1574          KM
1575          KM          L=   1.124 miles, S=   92 feet/mile, Kb= .03
1576          KM
1577          BA   0.114
1578          LG    0.11    0.26    5.40    0.24   28.10
1579          UC   0.304   0.374
1580          UA       0       5      16      30      65      77      84      90      94      97
1581          UA     100
              *
              *

1582          KK    C564
1583          KM     Combine hydrograph from C563  with runoff from 509N at C564
1584          HC       2
              *

1585          KK  564570
1586          KM   Normal depth channel route from C564 to C570
1587          KM       Source:  200 Scale 2' CI Mapping, Sheet 2
1588          RS       6    FLOW      -1
1589          RC   0.065   0.045   0.065    5346  0.0149
1590          RX  1000.0  1007.0  1034.0  1042.0  1052.0  1065.0  1085.0  1157.0
1591          RY  1564.0  1562.0  1560.0  1558.0  1558.0  1560.0  1562.0  1564.0
1592          RL                     0.12  1558.0
              *

1593          KK    509S
1594          KM   Sub-Basin   509S
1595          KM
1596          KM      The Clark Unit Hydrograph is used for this basin.
1597          KM          The HEC-1 time-area relation is used for this basin.
1598          KM
1599          KM      Time of Concentration for this sub-basin is based on the following:
1600          KM          An rainfall areal reduction factor of 1.000
1601          KM
1602          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1603          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1604          KM   .28 .28 .28 .28 .28 .28 .03 .03 .03 .03 .03 .03 .01 .00 .00 .00 .00 .00
1605          KM
1606          KM          L=   1.030 miles, S=   81 feet/mile, Kb= .04
1607          KM
1608          BA   0.195
1609          LG    0.27    0.27    7.30    0.13    8.10
1610          UC   0.350   0.300
              *

1611          KK    C570
1612          KM     Combine routed hydrographs from C564 and C569 with runoff from 509S at C570
1613          HC       3
              *
1                                          HEC-1 INPUT                                                PAGE 39

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1614          KK   CLEAR
1615          KM     Clear hydrograph stack from memory
1616          HC       3
              *
              * ****************************************************************************
              * ******************************      Major Basin 505     ************************
              * ****************************************************************************
              *

1617          KK   B558R
1618          KM        Retrieve split hydrograph D558R
1619          DR   D558R
              *

1620          KK  558571
1621          KM   Normal depth channel route from C558 to C571
1622          KM       Source:  Hydrology Field Reconnaissance,  page 4
1623          RS       7    FLOW      -1
1624          RC   0.070   0.040   0.070    5068  0.0267
1625          RX   965.0  1030.0  1060.0  1066.0  1087.0  1108.0  1160.0  1370.0
1626          RY  1734.5  1733.2  1732.6  1732.2  1732.0  1733.2  1733.5  1734.5
1627          RL                     0.15  1732.0
              *

1628          KK    505A
1629          KM   Sub-Basin   505A
1630          KM
1631          KM      The Phoenix Mountain S-Graph is used for this basin.
1632          KM          Lag Used =  21.7 minutes
1633          KM
1634          BA   0.180
1635          LG    0.34    0.37    6.60    0.18    0.50
```

```
1636          UI      28      28      54      97     142     176     203     227     287     316
1637          UI     208     177     161     147     135     122     110      98      84      72
1638          UI      67      63      58      46      41      36      33      31      28      21
1639          UI      21      21      14      14      14      14      14       6       5       5
1640          UI       5       5       5       5       5       5       5       5       5       5
1641          UI       0       0       0       0       0       0       0       0       0       0
1642          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

1643          KK    C571
1644          KM     Combine routed hydrograph from C558R with runoff from 505A at C571
1645          HC       2    2.13
              *

1646          KK  571572
1647          KM   Normal depth channel route from C571 to C572
1648          KM       Source:  200 Scale 2' CI Mapping, Sheet 3
1649          RS       5    FLOW      -1
1650          RC   0.030   0.030   0.030    4644  0.0179
1651          RX  1000.0  1017.0  1078.0  1096.0  1138.0  1164.0  1205.0  1269.0
1652          RY  1629.0  1628.0  1626.0  1624.0  1624.0  1626.0  1628.0  1629.0
1                                          HEC-1 INPUT                                                    PAGE 40

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1653          RL                     0.10  1624.0
              *

1654          KK    505B
1655          KM   Sub-Basin   505B
1656          KM
1657          KM      The Clark Unit Hydrograph is used for this basin.
1658          KM          The Urban time-area relation is used for this basin.
1659          KM
1660          KM      Time of Concentration for this sub-basin is based on the following:
1661          KM          An rainfall areal reduction factor of 1.000
1662          KM
1663          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1664          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1665          KM   .29 .29 .29 .29 .29 .29 .03 .03 .03 .03 .03 .03 .02 .01 .01 .01 .01 .01
1666          KM
1667          KM          L=   1.034 miles, S=   97 feet/mile, Kb= .03
1668          KM
1669          BA   0.145
1670          LG    0.13    0.16    7.00    0.14   17.70
1671          UC   0.283   0.282
1672          UA       0       5      16      30      65      77      84      90      94      97
1673          UA     100
              *

1674          KK    C572
1675          KM     Combine routed hydrograph from C571 with runoff from 505B at C572
1676          HC       2
              *
              * ***************************************************************************
              * ****************************     Major Basin 500    ************************
              * ***************************************************************************
              *

1677          KK    500A
1678          KM   Sub-Basin   500A
1679          KM
1680          KM      The Phoenix Mountain S-Graph is used for this basin.
1681          KM          Lag Used =  18.8 minutes
1682          KM
1683          BA   0.214
1684          LG    0.35    0.37    5.30    0.28    0.00
1685          UI      38      38     102     165     233     274     314     413     385     264
1686          UI     228     207     186     166     149     126     106      94      87      79
1687          UI      63      52      49      42      41      29      29      27      19      19
1688          UI      19      19       9       7       7       7       7       7       7       7
1689          UI       7       7       7       0       0       0       0       0       0       0
1690          UI       0       0       0       0       0       0       0       0       0       0
              *
1                                          HEC-1 INPUT                                                    PAGE 41

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1691          KK  501502
1692          KM   Normal depth channel route from C501 to C502
1693          KM       Source:  Hydrology Field Reconnaissance, page 10
1694          RS      14    FLOW      -1
1695          RC   0.070   0.040   0.070    6289  0.0223
1696          RX   822.0  1013.0  1035.0  1045.0  1049.0  1053.0  1076.0  1573.0
1697          RY  2161.0  2159.2  2158.9  2156.6  2156.8  2158.9  2159.0  2161.0
1698          RL                     0.12  2156.6
              *

1699          KK    500B
1700          KM   Sub-Basin   500B
1701          KM
1702          KM      The Phoenix Mountain S-Graph is used for this basin.
1703          KM          Lag Used =  26.0 minutes
1704          KM
1705          BA   0.205
1706          LG    0.35    0.38    5.40    0.27    0.00
1707          UI      27      27      27      76     105     139     166     188     205     236
1708          UI     293     295     201     173     158     148     136     127     117     107
1709          UI      98      87      76      68      64      61      56      50      44      37
1710          UI      34      33      29      29      24      20      20      20      15      13
1711          UI      13      13      13      13       9       5       5       5       5       5
1712          UI       5       5       5       5       5       5       5       5       5       5
1713          UI       0       0       0       0       0       0       0       0       0       0
1714          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

1715          KK    C502
1716          KM     Combine routed hydrograph from C501 with runoff from 500B at C502
1717          HC       2
              *
```

```
                 *
1718             KK   D502R
1719             KM        Hydrograph diversion at C502
1720             KM      Main flow continues on in right branch.
1721             KM      Diverted flow is in the left branch, coded on DQ card.
1722             DT   D502L
1723             DI       0       30      131      435      762     1035     1158     1300     1493     1722
1724             DQ       0        0       44      260      488      679      760      850      980     1134
                 *

1725             KK  502506
1726             KM   Normal depth channel route from C502 to C506
1727             KM       Source:  Hydrology Field Reconnaissance, page 10
1728             RS       6    FLOW      -1
1729             RC   0.070   0.040   0.070    6884  0.0266
1730             RX   985.0  1000.0  1015.0  1020.0  1030.0  1035.0  1055.0  1075.0
1731             RY  2160.4  2159.2  2158.3  2156.7  2156.7  2158.5  2159.3  2160.4
1732             RL                    0.33  2156.7
                 *
1                                          HEC-1 INPUT                                                PAGE 42

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1733             KK   B534L
1734             KM        Retrieve split hydrograph D534L
1735             DR   D534L
                 *

1736             KK  534506
1737             KM   Normal depth channel route from C534 to C506
1738             KM       Source:  Hydrology Field Reconnaissance, page 10
1739             RS       1    FLOW      -1
1740             RC   0.070   0.040   0.070    1113  0.0278
1741             RX   985.0  1000.0  1015.0  1020.0  1030.0  1035.0  1055.0  1075.0
1742             RY  2160.4  2159.2  2158.3  2156.7  2156.7  2158.5  2159.3  2160.4
1743             RL                    0.62  2156.7
                 *

1744             KK    C506
1745             KM     Combine routed hydrograph from C502R with hydrograph from C534L at C506
1746             HC       2    5.72
                 *

1747             KK  506507
1748             KM   Normal depth channel route from C506 to C507
1749             KM       Source:  Hydrology Field Reconnaissance, page 10
1750             RS       1    FLOW      -1
1751             RC   0.070   0.040   0.070    1485  0.0269
1752             RX   985.0  1000.0  1015.0  1020.0  1030.0  1035.0  1055.0  1075.0
1753             RY  2160.4  2159.2  2158.3  2156.7  2156.7  2158.5  2159.3  2160.4
1754             RL                    0.62  2156.7
                 *

1755             KK    500H
1756             KM   Sub-Basin   500H
1757             KM
1758             KM      The Phoenix Mountain S-Graph is used for this basin.
1759             KM          Lag Used =  22.4 minutes
1760             KM
1761             BA   0.211
1762             LG    0.35    0.35    4.30    0.46    0.00
1763             UI      32      32      57     107     153     195     225     250     305     377
1764             UI     263     212     188     174     159     146     131     120     104      89
1765             UI      80      75      70      63      52      44      41      37      35      31
1766             UI      24      24      24      16      16      16      16      16       9       6
1767             UI       6       6       6       6       6       6       6       6       6       6
1768             UI       6       0       0       0       0       0       0       0       0       0
1769             UI       0       0       0       0       0       0       0       0       0       0
                 *
                 *

1770             KK    C507
1771             KM     Combine routed hydrograph from C506 with runoff from 500H at C507
1772             HC       2
                 *
1                                          HEC-1 INPUT                                                PAGE 43

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1773             KK  507508
1774             KM   Normal depth channel route from C507 to C508
1775             KM       Source:  Hydrology Field Reconnaissance, page 12
1776             RS       7    FLOW      -1
1777             RC   0.070   0.045   0.070    3461  0.0269
1778             RX   920.0  1106.0  1137.0  1152.0  1166.0  1170.0  1202.0  1275.0
1779             RY  1847.5  1846.2  1846.3  1845.1  1845.1  1846.4  1846.8  1847.5
1780             RL                    0.56  1845.1
                 *
                 *

1781             KK   B502L
1782             KM        Retrieve split hydrograph D502L
1783             DR   D502L
                 *

1784             KK  502503
1785             KM   Normal depth channel route from C502 to C503
1786             KM       Source:  Hydrology Field Reconnaissance, page 10
1787             RS       5    FLOW      -1
1788             RC   0.070   0.040   0.070    4578  0.0266
1789             RX  1000.0  1040.0  1075.0  1101.0  1136.0  1150.0  1190.0  1230.0
1790             RY  2160.4  2160.1  2159.8  2157.5  2158.1  2159.4  2159.9  2160.4
1791             RL                    0.33  2157.5
                 *

1792             KK    500C
1793             KM   Sub-Basin   500C
1794             KM
1795             KM      The Phoenix Mountain S-Graph is used for this basin.
1796             KM          Lag Used =  17.1 minutes
```

```
1797          KM
1798          BA   0.123
1799          LG    0.35    0.35    4.65    0.37    0.00
1800          UI      24      26      78     121     158     186     235     265     171     145
1801          UI     130     116     102      89      74      62      57      51      41      34
1802          UI      30      27      23      19      19      13      12      12      12       6
1803          UI       5       5       5       5       5       5       5       5       5       0
1804          UI       0       0       0       0       0       0       0       0       0       0
1805          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

1806          KK    C503
1807          KM     Combine routed hydrograph from C502L with runoff from 500C at C503
1808          HC       2    0.54
              *
1809          KM      The culvert at C503 is filled with sediment and is assumed to be
1810          KM        completely plugged.  Channel hydraulics on the right side of the
1811          KM        road were checked and it was determined that no flow overtopped the
1812          KM        road to the north for the 100-year storm event.
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1813          KK  503508
1814          KM   Normal depth channel route from C503 to C508
1815          KM       Source:  Hydrology Field Reconnaissance, page 10
1816          RS      16    FLOW      -1
1817          RC   0.070   0.040   0.070    7224  0.0269
1818          RX   869.0  1105.0  1137.0  1149.0  1163.0  1172.0  1200.0  1451.0
1819          RY  1848.0  1846.2  1846.3  1845.5  1845.1  1846.5  1846.8  1848.0
1820          RL                   0.33  1845.1
              *

1821          KK    500I
1822          KM   Sub-Basin   500I
1823          KM
1824          KM      The Phoenix Mountain S-Graph is used for this basin.
1825          KM          Lag Used =  22.9 minutes
1826          KM
1827          BA   0.409
1828          LG    0.35    0.35    4.25    0.47    0.00
1829          UI      60      60     101     198     278     365     418     466     549     709
1830          UI     554     417     366     340     310     285     259     237     210     182
1831          UI     157     146     138     126     107      97      77      76      66      66
1832          UI      53      46      46      43      29      29      29      29      29      15
1833          UI      12      12      12      12      12      12      12      12      12      12
1834          UI      12      12       0       0       0       0       0       0       0       0
1835          UI       0       0       0       0       0       0       0       0       0       0
              *

1836          KK    C508
1837          KM    Combine routed hydrographs from C503  and C507 with runoff from 500I at C508
1838          HC       3
              *

1839          KK   D508R
1840          KM        Hydrograph diversion at C508
1841          KM      Main flow continues on in right branch.
1842          KM      Diverted flow is in the left branch, coded on DQ card.
1843          DT   D508L
1844          DI       0      11      45     160     352     698     913    1160    1439    1853
1845          DQ       0       0      10      45     160     390     520     670     839    1130
              *

1846          KK  508517
1847          KM   Normal depth channel route from C508 to C517
1848          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
1849          RS      13    FLOW      -1
1850          RC   0.070   0.040   0.070    7904  0.0252
1851          RX   947.0   980.0  1000.0  1010.0  1030.0  1034.0  1092.0  1123.0
1852          RY  1848.5  1847.2  1846.4  1845.6  1845.2  1846.5  1847.1  1848.5
1853          RL                   0.33  1845.2
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1854          KK   B515L
1855          KM        Retrieve split hydrograph D515L
1856          DR   D515L
              *

1857          KK  515517
1858          KM   Normal depth channel route from C515 to C517
1859          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
1860          RS       6    FLOW      -1
1861          RC   0.065   0.045   0.065    2653  0.0231
1862          RX  1000.0  1031.0  1061.0  1193.0  1206.0  1281.0  1320.0  1368.0
1863          RY  1706.7  1706.0  1705.0  1704.0  1704.0  1704.8  1706.0  1707.0
1864          RL                   0.33  1704.0
              *

1865          KK    500L
1866          KM   Sub-Basin   500L
1867          KM
1868          KM      The Phoenix Mountain S-Graph is used for this basin.
1869          KM          Lag Used =  19.1 minutes
1870          KM
1871          BA   0.161
1872          LG    0.35    0.35    4.35    0.44    0.20
1873          UI      28      28      72     119     170     199     228     295     300     200
1874          UI     171     156     140     126     112      97      81      71      66      60
1875          UI      49      42      36      32      31      24      22      22      15      14
1876          UI      14      14      11       5       5       5       5       5       5       5
1877          UI       5       5       5       5       0       0       0       0       0       0
1878          UI       0       0       0       0       0       0       0       0       0       0
              *

1879          KK    C517
```

```
1880          KM   Combine routed hydrographs from C515L and C508R with runoff from 500L at C517
1881          HC       3    7.60
              *

1882          KK  517518
1883          KM   Normal depth channel route from C517 to C518
1884          KM       Source:  200 Scale 2' CI Mapping, Sheet 7
1885          RS       1    FLOW      -1
1886          RC   0.065   0.045   0.065    1745  0.0209
1887          RX  1000.0  1060.0  1117.0  1127.0  1172.0  1192.0  1272.0  1350.0
1888          RY  1712.0  1711.5  1710.0  1708.0  1708.0  1710.0  1711.0  1712.0
1889          RL                   0.33  1708.0
              *

1890          KK    500J
1891          KM   Sub-Basin   500J
1892          KM
1893          KM      The Phoenix Mountain S-Graph is used for this basin.
1894          KM          Lag Used =  13.8 minutes
1895          KM
1896          BA   0.090
1897          LG    0.34    0.35    4.45    0.41    1.10
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1898          UI      22      39      91     139     170     238     187     136     118     102
1899          UI      87      71      56      51      42      33      28      24      19      17
1900          UI      13      11      11       8       4       4       4       4       4       4
1901          UI       4       0       0       0       0       0       0       0       0       0
1902          UI       0       0       0       0       0       0       0       0       0       0
              *

1903          KK  514518
1904          KM   Normal depth channel route from C514 to C518
1905          KM       Source:  200 Scale 2' CI Mapping, Sheet 7
1906          RS       2    FLOW      -1
1907          RC   0.065   0.045   0.065    1322  0.0216
1908          RX  1000.0  1034.0  1056.0  1087.0  1108.0  1135.0  1142.5  1150.0
1909          RY  1646.8  1646.0  1646.0  1644.0  1644.0  1646.0  1646.5  1647.0
1910          RL                   0.33  1644.0
              *

1911          KK    C518
1912          KM     Combine routed hydrographs from C517 and  C514 at C518
1913          HC       2
              *

1914          KK  518519
1915          KM   Normal depth channel route from C518 to C519
1916          KM       Source:  200 Scale 2' CI Mapping, Sheet 7
1917          RS       6    FLOW      -1
1918          RC   0.070   0.050   0.070    3094  0.0215
1919          RX  1000.0  1062.0  1115.0  1134.0  1161.0  1176.0  1251.0  1326.0
1920          RY  1612.0  1610.0  1608.5  1608.0  1608.0  1608.3  1610.0  1612.0
1921          RL                   0.33  1608.0
              *

1922          KK    500M
1923          KM   Sub-Basin   500M
1924          KM
1925          KM      The Clark Unit Hydrograph is used for this basin.
1926          KM          The Urban time-area relation is used for this basin.
1927          KM
1928          KM      Time of Concentration for this sub-basin is based on the following:
1929          KM          An rainfall areal reduction factor of 1.000
1930          KM
1931          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1932          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1933          KM   .27 .26 .26 .26 .26 .26 .01 .01 .01 .01 .01 .01 .01 .01 .01 .01 .01 .01
1934          KM
1935          KM          L=   1.051 miles, S=  117 feet/mile, Kb= .05
1936          KM
1937          BA   0.123
1938          LG    0.15    0.26    4.65    0.36   19.80
1939          UC   0.363   0.412
1940          UA       0       5      16      30      65      77      84      90      94      97
1941          UA     100
              *
              *
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1942          KK    C519
1943          KM     Combine routed hydrograph from C518 with runoff from 500M at C519
1944          HC       2
              *
              * *
              * *       Routing Reach  519-520 is too short to route.
              * *
              *

1945          KK    C504
1946          KM     Bring back tape 21 file of Rio Verde North runoff hydrograph WP504
1947          BI   WP504      21
              *

1948          KK  504509
1949          KM   Normal depth channel route from C504 to C509
1950          KM        Source:  Hydrology Field Reconnaissance, page 21
1951          RS      13    FLOW      -1
1952          RC   0.065   0.040   0.030    9180  0.0273
1953          RX  1000.0  1026.0  1040.0  1048.0  1072.0  1083.0  1117.0  1152.0
1954          RY   100.4    99.0    99.3    98.4    98.4    98.8    98.9   100.4
1955          RL                   0.33    98.4
              *

1956          KK    500D
1957          KM   Sub-Basin   500D
1958          KM
1959          KM      The Phoenix Mountain S-Graph is used for this basin.
```

```
1960          KM          Lag Used =  23.2 minutes
1961          KM
1962          BA   0.234
1963          LG    0.35    0.35    4.35    0.44    0.00
1964          UI      34      34      55     111     154     205     233     260     304     391
1965          UI     333     242     209     194     178     164     149     135     122     108
1966          UI      90      83      79      73      65      56      46      43      39      37
1967          UI      34      26      26      26      19      17      17      17      17      13
1968          UI       7       7       7       7       7       7       7       7       7       7
1969          UI       7       7       7       0       0       0       0       0       0       0
1970          UI       0       0       0       0       0       0       0       0       0       0
              *

1971          KK   TEMP1
1972          KO                                    21
1973          KM     Combine routed hydrograph from C504 with runoff from 500D at C509
1974          HC       2   0.494
              *
              *    The combined hydrograph at C509 is written out to tape 21 file to correct
              *      corrupted pointers.
              *
1                                        HEC-1 INPUT                                          PAGE 48

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1975          KK    C509
1976          KM     Bring back tape 21 of combined hydrograph at C509
1977          BI   TEMP1      21
              *

1978          KK  509510
1979          KM   Normal depth channel route from C509 to C510
1980          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
1981          RS       4    FLOW      -1
1982          RC   0.065   0.040   0.040    5926  0.0267
1983          RX   950.0  1025.0  1031.0  1040.0  1050.0  1054.0  1072.0  1090.0
1984          RY  1777.5  1776.9  1776.0  1774.0  1774.0  1776.0  1777.3  1777.5
1985          RL                    0.33  1774.0
              *

1986          KK    500E
1987          KM   Sub-Basin   500E
1988          KM
1989          KM      The Phoenix Mountain S-Graph is used for this basin.
1990          KM          Lag Used =  15.5 minutes
1991          KM
1992          BA   0.106
1993          LG    0.35    0.35    4.35    0.44    0.00
1994          UI      23      32      82     130     163     197     263     174     139     124
1995          UI     109      94      80      65      56      51      42      34      29      25
1996          UI      22      18      17      11      11      11       8       4       4       4
1997          UI       4       4       4       4       4       0       0       0       0       0
1998          UI       0       0       0       0       0       0       0       0       0       0
              *

1999          KK    C581
2000          KM     Bring back tape 21 file of Rio Verde North runoff hydrograph WP581
2001          BI   WP581      21
              *

2002          KK  581510
2003          KM   Normal depth channel route from C581 to C510
2004          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
2005          RS       4    FLOW      -1
2006          RC   0.065   0.040   0.065    3150  0.0254
2007          RX  1000.0  1040.0  1065.0  1070.0  1100.0  1105.0  1120.0  1145.0
2008          RY  1749.5  1749.0  1748.0  1747.0  1747.0  1748.0  1747.8  1749.5
2009          RL                    0.33  1747.0
              *

2010          KK   TEMP2
2011          KO                                    21
2012          KM     Combine routed hydrograph from C509 and C581 with runoff from 500E at C510
2013          HC       3   0.494
              *
              *    The combined hydrograph at C510 is written out to tape 21 file to correct
              *      for corrupted pointers.
              *
1                                        HEC-1 INPUT                                          PAGE 49

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2014          KK    C510
2015          KM     Bring back tape 21 file of combined hydrograph at C510
2016          BI   TEMP2      21
              *

2017          KK   D510R
2018          KM        Hydrograph diversion at C510
2019          KM      Main flow continues on in right branch.
2020          KM      Diverted flow is in the left branch (Rio Verde North Study), coded on DQ.
2021          DT   D510L
2022          DI       0      50     235     450     749    1016    1349    1541    1749    1972
2023          DQ       0      18      94     184     301     397     511     576     646     721
              *

2024          KK  510511
2025          KM   Normal depth channel route from C510 to C511
2026          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
2027          RS       2    FLOW      -1
2028          RC   0.070   0.050   0.070    1447  0.0289
2029          RX   700.0  1060.0  1100.0  1125.0  1178.0  1189.0  1207.0  1442.0
2030          RY  1705.0  1699.9  1699.1  1698.0  1698.0  1698.7  1699.5  1700.5
2031          RL                    0.33  1698.0
              *

2032          KK   B508L
2033          KM         Retrieve split hydrograph D508L
2034          DR   D508L
              *
```

```
2035          KK  508511
2036          KM   Normal depth channel route from C508 to C511
2037          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
2038          RS      12    FLOW      -1
2039          RC   0.070   0.040   0.070    7575  0.0255
2040          RX   986.0  1018.0  1050.0  1057.0  1082.0  1089.0  1105.0  1215.0
2041          RY  1848.5  1847.4  1846.8  1845.7  1845.7  1846.6  1846.3  1848.5
2042          RL                    0.31  1845.7
              *

2043          KK    500F
2044          KM   Sub-Basin   500F
2045          KM
2046          KM       The Phoenix Mountain S-Graph is used for this basin.
2047          KM           Lag Used =  25.7 minutes
2048          KM
2049          BA   0.437
2050          LG    0.35    0.35    4.40    0.43    0.00
2051          UI      57      57      62     165     230     304     361     408     447     519
2052          UI     650     604     422     368     338     315     291     270     247     227
2053          UI     206     183     158     144     136     130     120     101      94      74
2054          UI      73      67      63      63      45      44      44      43      28      28
2055          UI      28      28      28      28      11      11      11      11      11      11
2056          UI      11      11      11      11      11      11      11      11      11       0
2057          UI       0       0       0       0       0       0       0       0       0       0
1                                          HEC-1 INPUT                                          PAGE 50

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2058          UI       0       0       0       0       0       0       0       0       0       0
              *

2059          KK    C511
2060          KM   Combine routed hydrographs from C508L and C510R with runoff from 500F at C511
2061          HC       3    7.49
              *

2062          KK  511512
2063          KM   Normal depth channel route from C511 to C512
2064          KM       Source:  200 Scale 2' CI Mapping, Sheet 7
2065          RS      16    FLOW      -1
2066          RC   0.070   0.050   0.070    5718  0.0199
2067          RX  1000.0  1037.0  1189.0  1195.0  1230.0  1236.0  1386.0  1646.0
2068          RY  1616.7  1616.0  1615.0  1614.0  1614.0  1615.0  1616.0  1617.0
2069          RL                    0.33  1614.0
              *

2070          KK    500K
2071          KM   Sub-Basin   500K
2072          KM
2073          KM       The Phoenix Mountain S-Graph is used for this basin.
2074          KM           Lag Used =  16.6 minutes
2075          KM
2076          BA   0.096
2077          LG    0.23    0.32    5.60    0.25    9.50
2078          UI      19      23      64     101     130     152     201     195     130     113
2079          UI     100      89      78      66      55      47      43      37      30      25
2080          UI      22      21      15      15      12      10      10      10       6       4
2081          UI       4       4       4       4       4       4       4       4       0       0
2082          UI       0       0       0       0       0       0       0       0       0       0
              *

2083          KK  513512
2084          KM   Normal depth channel route from C513 to C512
2085          KM       Source:  200 Scale 2' CI Mapping, Sheet 7
2086          RS       8    FLOW      -1
2087          RC   0.065   0.045   0.065    3192  0.0180
2088          RX  1000.0  1039.0  1069.0  1229.0  1247.0  1310.0  1380.0  1406.0
2089          RY  1605.0  1604.0  1603.2  1602.0  1602.0  1603.1  1604.0  1605.1
2090          RL                    0.33  1602.0
              *

2091          KK    500G
2092          KM   Sub-Basin   500G
2093          KM
2094          KM       The Clark Unit Hydrograph is used for this basin.
2095          KM           The Urban time-area relation is used for this basin.
2096          KM
2097          KM       Time of Concentration for this sub-basin is based on the following:
2098          KM           An rainfall areal reduction factor of 1.000
2099          KM
2100          KM        EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2101          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2102          KM   .27 .26 .26 .26 .26 .26 .01 .01 .01 .01 .01 .01 .01 .01 .01 .01 .01 .01
1                                          HEC-1 INPUT                                          PAGE 51

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2103          KM
2104          KM           L=   1.314 miles, S=  110 feet/mile, Kb= .05
2105          KM
2106          BA   0.202
2107          LG    0.16    0.27    4.70    0.35   22.30
2108          UC   0.413   0.428
2109          UA       0       5      16      30      65      77      84      90      94      97
2110          UA     100
              *

2111          KK    C512
2112          KM     Combine routed hydrographs from C511 and C513 with runoff from 500G at C512
2113          HC       3
              *
              * *
              * *       Routing Reach  512-520 is too short to route.
              * *
              *

2114          KK    C520
2115          KM     Combine hydrographs C512 and C519 at C520
2116          HC       2
              *

2117          KK  520576
```

```
2118          KM   Normal depth channel route from C520 to C576
2119          KM       Source:  200 Scale 2' CI Mapping, Sheet 6
2120          RS       1    FLOW      -1
2121          RC   0.065   0.040   0.065    1203  0.0150
2122          RX   925.0  1050.0  1245.0  1335.0  1410.0  1485.0  1565.0  1690.0
2123          RY  1547.5  1546.0  1546.0  1544.0  1544.0  1545.0  1546.0  1547.5
2124          RL                    0.04  1544.0
              *

2125          KK    5000
2126          KM   Sub-Basin   5000
2127          KM
2128          KM      The Clark Unit Hydrograph is used for this basin.
2129          KM          The Urban time-area relation is used for this basin.
2130          KM
2131          KM      Time of Concentration for this sub-basin is based on the following:
2132          KM          An rainfall areal reduction factor of 1.000
2133          KM
2134          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2135          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2136          KM   .29 .29 .29 .29 .29 .29 .03 .03 .03 .03 .03 .03 .01 .01 .01 .01 .01 .01
2137          KM
2138          KM          L=   1.037 miles, S=  115 feet/mile, Kb= .06
2139          KM
2140          BA   0.101
2141          LG    0.18    0.19    7.30    0.13   16.10
2142          UC   0.383   0.486
2143          UA       0       5      16      30      65      77      84      90      94      97
2144          UA     100
              *
1                                          HEC-1 INPUT                                          PAGE 52

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2145          KK  521522
2146          KM   Normal depth channel route from C521 to C522
2147          KM       Source:  200 Scale 2' CI Mapping, Sheet 7
2148          RS       7    FLOW      -1
2149          RC   0.070   0.050   0.070    2928  0.0207
2150          RX  1000.0  1055.0  1110.0  1175.0  1198.0  1240.0  1417.0  1450.0
2151          RY  1576.0  1575.0  1574.0  1572.0  1572.0  1573.0  1574.0  1576.0
2152          RL                    0.06  1572.0
              *

2153          KK    500P
2154          KM   Sub-Basin   500P
2155          KM
2156          KM      The Clark Unit Hydrograph is used for this basin.
2157          KM          The HEC-1 time-area relation is used for this basin.
2158          KM
2159          KM      Time of Concentration for this sub-basin is based on the following:
2160          KM          An rainfall areal reduction factor of 1.000
2161          KM
2162          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2163          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2164          KM   .29 .29 .28 .28 .28 .28 .03 .03 .03 .03 .03 .03 .01 .01 .01 .01 .01 .01
2165          KM
2166          KM          L=   0.642 miles, S=  119 feet/mile, Kb= .06
2167          KM
2168          BA   0.083
2169          LG    0.30    0.26    8.40    0.09    4.90
2170          UC   0.300   0.282
              *

2171          KK    C522
2172          KM     Combine routed hydrograph from C521 with runoff from 500P at C522
2173          HC       2
              *
              * *
              * *       Routing Reach  522-576 is too short to route.
              * *
              *

2174          KK    C576
2175          KM     Combine routed hydrograph from C520 with hydrograph from C522 at C576
2176          HC       2
              *

2177          KK  576523
2178          KM   Normal depth channel route from C576 to C523
2179          KM       Source:  200 Scale 2' CI Mapping, Sheet 6
2180          RS       1    FLOW      -1
2181          RC   0.065   0.040   0.065    1429  0.0262
2182          RX  1000.0  1061.0  1106.0  1115.0  1150.0  1155.0  1267.0  1330.0
2183          RY  1531.0  1530.0  1528.0  1526.0  1526.0  1528.0  1530.0  1531.0
2184          RL                    0.26  1526.0
              *
1                                          HEC-1 INPUT                                          PAGE 53

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2185          KK    500N
2186          KM   Sub-Basin   500N
2187          KM
2188          KM      The Clark Unit Hydrograph is used for this basin.
2189          KM          The Natural time-area relation is used for this basin.
2190          KM
2191          KM      Time of Concentration for this sub-basin is based on the following:
2192          KM          An rainfall areal reduction factor of 1.000
2193          KM
2194          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2195          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2196          KM   .26 .26 .25 .25 .25 .25 .01 .01 .01 .01 .01 .00 .00 .00 .00 .00 .00 .00
2197          KM
2198          KM          L=   0.859 miles, S=  110 feet/mile, Kb= .05
2199          KM
2200          BA   0.113
2201          LG    0.34    0.39    6.20    0.20    0.00
2202          UC   0.338   0.340
2203          UA       0       3       5       8      12      20      43      75      90      96
2204          UA     100
```

```
                 *
2205             KK    C523
2206             KM     Combine routed hydrograph from C576 with runoff from 500N at C523
2207             HC       2
                 *
                 * ***********************************************************************
                 * ****************************     Major Basin 501    ********************
                 * ***********************************************************************
                 *

2208             KK    501A
2209             KM   Sub-Basin   501A
2210             KM
2211             KM      The Clark Unit Hydrograph is used for this basin.
2212             KM          The Urban time-area relation is used for this basin.
2213             KM
2214             KM      Time of Concentration for this sub-basin is based on the following:
2215             KM          An rainfall areal reduction factor of 1.000
2216             KM
2217             KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2218             KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2219             KM   .26 .26 .26 .26 .26 .25 .01 .01 .01 .01 .01 .01 .00 .00 .00 .00 .00 .00
2220             KM
2221             KM          L=   0.364 miles, S=  145 feet/mile, Kb= .06
2222             KM
2223             BA   0.040
2224             LG    0.36    0.28    4.70    0.28    7.30
2225             UC   0.221   0.193
2226             UA      0       5      16      30      65      77      84      90      94      97
2227             UA    100
                 *
1                                                HEC-1 INPUT                                          PAGE 54

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2228             KK    501B
2229             KM   Sub-Basin   501B
2230             KM
2231             KM      The Clark Unit Hydrograph is used for this basin.
2232             KM          The HEC-1 time-area relation is used for this basin.
2233             KM
2234             KM      Time of Concentration for this sub-basin is based on the following:
2235             KM          An rainfall areal reduction factor of 1.000
2236             KM
2237             KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2238             KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2239             KM   .25 .25 .24 .24 .24 .24 .00 .00 .00 .00 .00 .00 .00 .00 .00 .00 .00 .00
2240             KM
2241             KM          L=   0.610 miles, S=  116 feet/mile, Kb= .06
2242             KM
2243             BA   0.074
2244             LG    0.35    0.33    4.90    0.32    1.90
2245             UC   0.313   0.302
                 *

2246             KK   CLEAR
2247             KM       Clear Hydrograph stack from memory
2248             HC       5
                 *
                 * ***********************************************************************
                 * ****************************     Major Basin 502    ********************
                 * ***********************************************************************
                 *

2249             KK    502B
2250             KM   Sub-Basin   502B
2251             KM
2252             KM      The Clark Unit Hydrograph is used for this basin.
2253             KM          The Natural time-area relation is used for this basin.
2254             KM
2255             KM      Time of Concentration for this sub-basin is based on the following:
2256             KM          An rainfall areal reduction factor of 1.000
2257             KM
2258             KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2259             KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2260             KM   .29 .29 .29 .29 .29 .29 .04 .04 .04 .04 .04 .03 .01 .01 .01 .01 .01 .01
2261             KM
2262             KM          L=   0.506 miles, S=  115 feet/mile, Kb= .06
2263             KM
2264             BA   0.053
2265             LG    0.35    0.25    9.70    0.06    0.00
2266             UC   0.267   0.265
2267             UA      0       3       5       8      12      20      43      75      90      96
2268             UA    100
                 *
1                                                HEC-1 INPUT                                          PAGE 55

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2269             KK    502C
2270             KM   Sub-Basin   502C
2271             KM
2272             KM      The Clark Unit Hydrograph is used for this basin.
2273             KM          The Natural time-area relation is used for this basin.
2274             KM
2275             KM      Time of Concentration for this sub-basin is based on the following:
2276             KM          An rainfall areal reduction factor of 1.000
2277             KM
2278             KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2279             KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2280             KM   .29 .29 .29 .29 .29 .29 .04 .04 .04 .04 .04 .03 .01 .01 .01 .01 .01 .01
2281             KM
2282             KM          L=   0.609 miles, S=  100 feet/mile, Kb= .06
2283             KM
2284             BA   0.046
2285             LG    0.35    0.25    9.70    0.06    0.00
2286             UC   0.308   0.390
2287             UA      0       3       5       8      12      20      43      75      90      96
2288             UA    100
                 *
```

```
                 * ***********************************************************************
                 * ****************************     Major Basin 503    ************************
                 * ***********************************************************************
                 *

2289             KK    503A
2290             KM   Sub-Basin   503A
2291             KM
2292             KM      The Clark Unit Hydrograph is used for this basin.
2293             KM          The Urban time-area relation is used for this basin.
2294             KM
2295             KM      Time of Concentration for this sub-basin is based on the following:
2296             KM          An rainfall areal reduction factor of 1.000
2297             KM
2298             KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2299             KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2300             KM   .30 .30 .29 .29 .29 .29 .04 .04 .04 .04 .04 .04 .02 .02 .02 .02 .02 .02
2301             KM
2302             KM          L=   1.534 miles, S=   85 feet/mile, Kb= .03
2303             KM
2304             BA   0.216
2305             LG    0.14    0.17    7.60    0.11   19.50
2306             UC   0.358   0.399
2307             UA      0       5      16      30      65      77      84      90      94      97
2308             UA    100
                 *

2309             KK  549550
2310             KM   Normal depth channel route from C549 to C550
2311             KM       Source:  Hydrology Field Reconnaissance, page 23
2312             RS       4    FLOW     -1
2313             RC   0.065   0.050   0.065    3454  0.0156
2314             RX  1000.0  1008.0  1018.0  1026.0  1036.0  1049.0  1061.0  1072.0
1                                              HEC-1 INPUT                                    PAGE 56

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2315             RY   100.0    97.9    96.6    93.1    93.2    98.0    97.9   101.2
2316             RL                    0.09    93.1
                 *

2317             KK    503C
2318             KM   Sub-Basin   503C
2319             KM
2320             KM      The Clark Unit Hydrograph is used for this basin.
2321             KM          The Natural time-area relation is used for this basin.
2322             KM
2323             KM      Time of Concentration for this sub-basin is based on the following:
2324             KM          An rainfall areal reduction factor of 1.000
2325             KM
2326             KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2327             KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2328             KM   .29 .29 .28 .28 .28 .28 .03 .03 .03 .03 .03 .03 .01 .01 .01 .01 .01 .01
2329             KM
2330             KM          L=   0.765 miles, S=   71 feet/mile, Kb= .05
2331             KM
2332             BA   0.121
2333             LG    0.35    0.27    8.80    0.08    0.00
2334             UC   0.350   0.311
2335             UA      0       3       5       8      12      20      43      75      90      96
2336             UA    100
                 *

2337             KK   C550L
2338             KM    Combine routed hydrograph from C549 with runoff from 503C at C550L
2339             HC       2
                 *

2340             KK    503B
2341             KM   Sub-Basin   503B
2342             KM
2343             KM      The Clark Unit Hydrograph is used for this basin.
2344             KM          The HEC-1 time-area relation is used for this basin.
2345             KM
2346             KM      Time of Concentration for this sub-basin is based on the following:
2347             KM          An rainfall areal reduction factor of 1.000
2348             KM
2349             KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2350             KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2351             KM   .29 .29 .29 .29 .29 .29 .03 .03 .03 .03 .03 .03 .01 .01 .01 .01 .01 .01
2352             KM
2353             KM          L=   1.398 miles, S=   85 feet/mile, Kb= .04
2354             KM
2355             BA   0.113
2356             LG    0.27    0.24    8.40    0.09    8.30
2357             UC   0.400   0.607
                 *
1                                              HEC-1 INPUT                                    PAGE 57

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2358             KK    C550
2359             KM     Combine hydrograph from C550L with runoff from 503B at C550
2360             HC       2
                 *
                 * ***********************************************************************
                 * ****************************     Major Basin 504    ************************
                 * ***********************************************************************
                 *

2361             KK    504A
2362             KM   Sub-Basin   504A
2363             KM
2364             KM      The Clark Unit Hydrograph is used for this basin.
2365             KM          The HEC-1 time-area relation is used for this basin.
2366             KM
2367             KM      Time of Concentration for this sub-basin is based on the following:
2368             KM          An rainfall areal reduction factor of 1.000
2369             KM
2370             KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2371             KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2372             KM   .29 .29 .28 .28 .28 .28 .03 .03 .03 .03 .03 .03 .01 .01 .01 .01 .01 .01
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2373          KM
2374          KM          L=   1.474 miles, S=   83 feet/mile, Kb= .04
2375          KM
2376          BA   0.242
2377          LG    0.29    0.26    8.00    0.10    4.80
2378          UC   0.413   0.424
              *
2379          ZZ
1
                SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW
   NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW
    25       WP504
                 .
                 .
    62           .       WP581
                 .           .
                 .           .
   100       CLEAR............
                 .
                 .
   103           .        511A
                 .           V
                 .           V
   119           .      524526
                 .           .
                 .           .
   127           .           .       511B
                 .           .          V
                 .           .          V
   150           .           .     525526
                 .           .           .
                 .           .           .
   158           .           .           .        511D
                 .           .           .          .
                 .           .           .          .
   175           .        C526.......................
                 .           V
                 .           V
   178           .      526527
                 .           .
                 .           .
   186           .           .       511E
                 .           .           .
                 .           .           .
   207           .           .           .        511F
                 .           .           .          .
                 .           .           .          .
   220           .        C527.......................
                 .           V
                 .           V
   223           .      527528
                 .           .
                 .           .
   231           .           .       511C
                 .           .           .
                 .           .           .
   255           .        C528............
                 .           V
                 .           V
   258           .      528529
                 .           .
                 .           .
   266           .           .       511H
                 .           .           .
                 .           .           .
   281           .        C529............
                 .           .
                 .           .
   284           .           .       511G
                 .           .           .
                 .           .           .
   302           .        C530............
                 .           V
                 .           V
   305           .      530531
                 .           .
                 .           .
   313           .           .       511I
                 .           .           .
                 .           .           .
   327           .        C531............
                 .           .
                 .           .
   334           .           .-------->   D531L
   330           .       D531R
                 .           V
                 .           V
   337           .      531532
                 .           .
                 .           .
   349           .           .-------->   D532R
   345           .       D532L
                 .           .
                 .           .
   356           .           .-------->  D532AL
   352           .      D532AR
                 .           V
                 .           V
   359           .      532580
                 .           .
                 .           .
   369           .           .         .<--------  D532AL
   367           .           .     B532AL
                 .           .           .
                 .           .           .
   374           .           .         .-------->   D578L
   370           .           .      D578R
                 .           .           V
                 .           .           V
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377          .          .      578573
             .          .          .
             .          .          .
389          .          .          .-------->   D573L
385          .          .      D573R
             .          .          V
             .          .          V
392          .          .      573580
             .          .          .
             .          .          .
400          .       C580............
             .          V
             .          V
403          .     580535
             .          .
             .          .
413          .          .          .<--------   D531L
411          .          .      B531L
             .          .          V
             .          .          V
414          .          .      531533
             .          .          .
             .          .          .
424          .          .          .           .<--------   D578L
422          .          .          .       B578L
             .          .          .           .
             .          .          .           .
425          .          .       C533............
             .          .          V
             .          .          V
428          .          .      533579
             .          .          .
             .          .          .
438          .          .          .           .<--------   D573L
436          .          .          .       B573L
             .          .          .           .
             .          .          .           .
439          .          .       C579............
             .          .          V
             .          .          V
442          .          .      579534
             .          .          .
             .          .          .
450          .          .          .        511J
             .          .          .           .
             .          .          .           .
463          .          .       C534............
             .          .          .
             .          .          .
470          .          .          .-------->   D534L
466          .          .      D534R
             .          .          V
             .          .          V
473          .          .      534535
             .          .          .
             .          .          .
481          .          .          .        511K
             .          .          .           .
             .          .          .           .
499          .       C535........................
             .          .
             .          .
506          .          .-------->   D535R
502          .     D535L
             .          V
             .          V
509          .     535515
             .          .
             .          .
517          .          .       511L
             .          .          .
             .          .          .
531          .       C515............
             .          .
             .          .
538          .          .-------->   D515L
534          .     D515R
             .          V
             .          V
541          .     515575
             .          .
             .          .
549          .          .       511M
             .          .          .
             .          .          .
564          .          .          .           .<--------   D535R
562          .          .          .       B535R
             .          .          .           .
             .          .          .           .
569          .          .          .           .-------->   D574R
565          .          .          .       D574L
             .          .          .           V
             .          .          .           V
572          .          .          .      574575
             .          .          .           .
             .          .          .           .
580          .       C575........................
             .          V
             .          V
583          .     575536
             .          .
             .          .
591          .          .       511Q
             .          .          .
             .          .          .
611          .          .          .        511N
             .          .          .           .
             .          .          .           .
631          .       C536........................
             .          V
             .          V
634          .     536545
             .          .
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642                 511O
                      .
662           C545L.........
                      .
667                   .<-------   D532R
665                B532R
                      V
                      V
668               532538
                      .
676                   .       510A
                      .         .
699                   .         .-------->   D537R
695                   .     D537L
                      .         V
                      .         V
702                   .     537538
                      .         .
710                   .         .       510B
                      .         .         .
727                C538........................
                      V
                      V
730               538540
                      .
740                   .         .<-------   D537R
738                   .     B537R
                      .         V
                      .         V
741                   .     537577
                      .         .
749                   .         .       509D
                      .         .         .
770                   .         .         .-------->   D539R
766                   .         .     D539L
                      .         .         V
                      .         .         V
773                   .         .    539577
                      .         .         .
781                   .       C577............
                      .         V
                      .         V
784                   .     577540
                      .         .
792                   .         .       510C
                      .         .         .
812                C540........................
                      V
                      V
815               540542
                      .
823                   .       510F
                      .         .
841                C542............
                      V
                      V
844               542543
                      .
854                   .         .<-------   D574R
852                   .     B574R
                      .         V
                      .         V
855                   .     574541
                      .         .
863                   .         .       510D
                      .         .         .
883                   .       C541............
                      .         V
                      .         V
886                   .     541543
                      .         .
894                   .         .       510E
                      .         .         .
912                C543........................
                      V
                      V
915               543545
                      .
923                   .       510G
                      .         .
941             C545R............
                      .
944           C545............
                V
                V
948         545546
                .
956             511P
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 974                                  502A
                                        .
 994                  C546.......................
                                        .
 997                          509A
                                 V
                                 V
1017                        552553
                                 .
1025                                     509B
                                        .
                                        .
1045                          C553............
                                 .
                                 .
1052                             .-------->   D553R
1048                         D553L
                                 V
                                 V
1055                        553554
                                 .
1063                                     509C
                                        .
                                        .
1077                          C554............
                                 .
                                 .
1084                             .-------->   D554R
1080                         D554L
                                 V
                                 V
1087                        554555
                                 .
1095                                     509E
                                        .
                                        .
1112                                    .                .<-------   D539R
1110                                    .            B539R
                                        .                V
                                        .                V
1113                                    .           539555
                                        .                .
                                        .                .
1121                          C555.......................
                                 V
                                 V
1124                        555557
                                 .
1134                             .            .<-------   D553R
1132                             .        B553R
                                 .            V
                                 .            V
1135                             .        553556
                                 .            .
                                 .            .
1145                             .            .                .<-------   D554R
1143                             .            .            B554R
                                 .            .                .
                                 .            .                .
1146                             .        C556............
                                 .            V
                                 .            V
1149                             .        556558
                                 .            .
                                 .            .
1157                             .            .            509F
                                 .            .                .
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1172                             .        C558............
                                 .            .
                                 .            .
1179                             .            .-------->   D558R
1175                             .        D558L
                                 .            V
                                 .            V
1182                             .        558557
                                 .            .
                                 .            .
1190                             .            .            509G
                                 .            .                .
                                 .            .                .
1204                          C557.......................
                                 .
                                 .
1211                             .-------->   D557L
1207                         D557R
                                 V
                                 V
1214                        557565
                                 .
1222                                     509M
                                        .
                                        .
1240                          C565............
                                 V
                                 V
1243                        565566
                                 .
1253                             .            .<-------   D557L
1251                             .        B557L
                                 .            V
                                 .            V
1254                             .        557559
                                 .            .
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1262                                                  509H
                                                        .
1282                                        C559.........
                                                        .
1289                                                    .-------> D559L
1285                                        D559R
                                                        V
                                                        V
1292                                        559560
                                                        .
1300                                                    .        509I
                                                        .
1320                                        C560.........
                                                        .
1327                                                    .-------> D560L
1323                                        D560R
                                                        V
                                                        V
1330                                        560566
                                                        .
1338                                                    .        509L
                                                        .
1358                                  C566...........................
                                        V
                                        V
1361                                  566567
                                        .
1371                                                    .<------- D559L
1369                                        B559L
                                                        V
                                                        V
1372                                        559561
                                                        .
1382                                                    .          .<------- D560L
1380                                                    .     B560L
                                                        .          V
                                                        .          V
1383                                                    .     560561
                                                        .          .
1391                                                    .          .        509K
                                                        .          .          .
1411                                        C561...........................
                                                        V
                                                        V
1414                                        561562
                                                        .
1422                                                    .        509J
                                                        .
1440                                        C562.........
                                                        V
                                                        V
1443                                        562567
                                                        .
1451                                                    .        509P
                                                        .
1471                                  C567...........................
                                        V
                                        V
1474                                  567568
                                        .
1482                                        509Q
                                        .
1502                                  C568.........
                                        V
                                        V
1505                                  568569
                                        .
1513                                        509R
                                        .
1531                                  C569.........
                                        V
                                        V
1534                                  569570
                                        .
1542                                        509O
                                        .
1562                                                    .        509N
                                                        .
1582                                        C564.........
                                                        V
                                                        V
1585                                        564570
                                                        .
1593                                                    .        509S
                                                        .
1611                                  C570...........................
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1614      CLEAR.......................
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               .
1619           .           .<-------   D558R
1617           .       B558R
               .           V
               .           V
1620           .      558571
               .           .
               .           .
1628           .           .        505A
               .           .           .
               .           .           .
1643           .        C571............
               .           V
               .           V
1646           .      571572
               .           .
               .           .
1654           .           .        505B
               .           .           .
               .           .           .
1674           .        C572............
               .           .
               .           .
1677           .           .        500A
               .           .           V
               .           .           V
1691           .           .      501502
               .           .           .
               .           .           .
1699           .           .           .        500B
               .           .           .           .
               .           .           .           .
1715           .           .        C502............
               .           .           .
               .           .           .
1722           .           .           .-------->   D502L
1718           .           .       D502R
               .           .           V
               .           .           V
1725           .           .      502506
               .           .           .
               .           .           .
1735           .           .           .           .<-------   D534L
1733           .           .           .       B534L
               .           .           .           V
               .           .           .           V
1736           .           .           .      534506
               .           .           .           .
               .           .           .           .
1744           .           .        C506............
               .           .           V
               .           .           V
1747           .           .      506507
               .           .           .
               .           .           .
1755           .           .           .        500H
               .           .           .           .
               .           .           .           .
1770           .           .        C507............
               .           .           V
               .           .           V
1773           .           .      507508
               .           .           .
               .           .           .
1783           .           .           .           .<-------   D502L
1781           .           .           .       B502L
               .           .           .           V
               .           .           .           V
1784           .           .           .      502503
               .           .           .           .
               .           .           .           .
1792           .           .           .           .        500C
               .           .           .           .           .
               .           .           .           .           .
1806           .           .           .        C503............
               .           .           .           V
               .           .           .           V
1813           .           .           .      503508
               .           .           .           .
               .           .           .           .
1821           .           .           .           .        500I
               .           .           .           .           .
               .           .           .           .           .
1836           .           .        C508........................
               .           .           .
               .           .           .
1843           .           .           .-------->   D508L
1839           .           .       D508R
               .           .           V
               .           .           V
1846           .           .      508517
               .           .           .
               .           .           .
1856           .           .           .           .<-------   D515L
1854           .           .           .       B515L
               .           .           .           V
               .           .           .           V
1857           .           .           .      515517
               .           .           .           .
               .           .           .           .
1865           .           .           .           .        500L
               .           .           .           .           .
               .           .           .           .           .
1879           .           .        C517........................
               .           .           V
               .           .           V
1882           .           .      517518
               .           .           .
               .           .           .
1890           .           .           .        500J
               .           .           .           V
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1903                    514518
1911                C518...........
                        V
                        V
1914                518519
1922                    500M
1942                C519...........
1945                    C504
                        V
                        V
1948                504509
1956                            500D
1971                    TEMP1...........
1975                            C509
                                V
                                V
1978                        509510
1986                                        500E
1999                                                C581
                                                    V
                                                    V
2002                                            581510
2010                        TEMP2........................
2014                                        C510
2021                                                -------> D510L
2017                                    D510R
                                            V
                                            V
2024                                    510511
2034                                                <------- D508L
2032                                            B508L
                                                    V
                                                    V
2035                                            508511
2043                                                        500F
2059                                        C511........................
                                            V
                                            V
2062                                    511512
2070                                                500K
                                                    V
                                                    V
2083                                            513512
2091                                                        500G
2111                                        C512........................
2114                            C520...........
                                V
                                V
2117                        520576
2125                                        500O
                                            V
                                            V
2145                                    521522
2153                                                500P
2171                                        C522...........
2174                            C576...........
                                V
                                V
2177                        576523
2185                                        500N
2205                            C523...........
```

```
2208                                                  501A
                                                        .
2228                                                    .        501B
                                                        .          .
2246                                  CLEAR.............................
                                                        .
2249                                          502B
                                                        .
2269                                                  502C
                                                        .
2289                                                    .        503A
                                                        .          V
                                                        .          V
2309                                                    .      549550
                                                        .
2317                                                    .        503C
                                                        .          .
2337                                                    .      C550L............
                                                        .
2340                                                    .        503B
                                                        .          .
2358                                                    .      C550............
                                                        .
2361                                                    .        504A
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
1*************************************                                    *************************************
*                                   *                                    *                                   *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)*                                    *   U.S. ARMY CORPS OF ENGINEERS    *
*              MAY  1991            *                                    *   HYDROLOGIC ENGINEERING CENTER   *
*            VERSION 4.0.1E         *                                    *         609 SECOND STREET         *
*                                   *                                    *      DAVIS, CALIFORNIA 95616      *
*  RUN DATE  08/07/95  TIME  10:27:39*                                    *         (916) 551-1748            *
*                                   *                                    *                                   *
*************************************                                    *************************************
```

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                          RIO VERDE SOUTH FIS - Existing Condition Model        File: EX100-24.IH1
                          by  GVSCE for MKE:   MCFCD #93-07                  Original: 07-22-94     dtp
                              Project:  46                                    Revised: 10-17-94     trl
                              100-year 24-Hr Rainfall
                              Green & Ampt Rainfall Losses

  7 IO          OUTPUT CONTROL VARIABLES
                      IPRNT          5  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE

    IT          HYDROGRAPH TIME DATA
                       NMIN          2  MINUTES IN COMPUTATION INTERVAL
                      IDATE      1    0  STARTING DATE
                      ITIME       0000  STARTING TIME
                         NQ       1500  NUMBER OF HYDROGRAPH ORDINATES
                     NDDATE      3    0  ENDING DATE
                     NDTIME       0158  ENDING TIME
                      ICENT         19  CENTURY MARK

                 COMPUTATION INTERVAL    0.03 HOURS
                      TOTAL TIME BASE   49.97 HOURS

          ENGLISH UNITS
               DRAINAGE AREA          SQUARE MILES
               PRECIPITATION DEPTH    INCHES
               LENGTH, ELEVATION      FEET
               FLOW                   CUBIC FEET PER SECOND
               STORAGE VOLUME         ACRE-FEET
               SURFACE AREA           ACRES
               TEMPERATURE            DEGREES FAHRENHEIT

  9 JD          INDEX STORM NO. 1
                       STRM       4.40  PRECIPITATION DEPTH
                       TRDA       0.01  TRANSPOSITION DRAINAGE AREA

 10 PI            PRECIPITATION PATTERN
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
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                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.03      0.03      0.03      0.03      0.03
                0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
20 JD         INDEX STORM NO. 2
                  STRM        4.31  PRECIPITATION DEPTH
                  TRDA        5.00  TRANSPOSITION DRAINAGE AREA

 0 PI          PRECIPITATION PATTERN
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.03      0.03      0.03      0.03      0.03
                0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
```

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

21 JD INDEX STORM NO. 3
STRM 4.18 PRECIPITATION DEPTH
TRDA 10.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.03	0.03	0.03
0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

22 JD INDEX STORM NO. 4
STRM 3.89 PRECIPITATION DEPTH
TRDA 50.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.03	0.03	0.03
0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

23 JD INDEX STORM NO. 5
STRM 3.79 PRECIPITATION DEPTH
TRDA 80.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.03	0.03	0.03
0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00

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            *            *
  25 KK     *     WP504  *
            *            *
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  26 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           5  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                      IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                       IOUT          21  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2        1500  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT       0.033  TIME INTERVAL IN HOURS


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

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            *            *
  62 KK     *     WP581  *
            *            *
            **************

  63 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           5  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                      IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                       IOUT          21  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2        1500  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT       0.033  TIME INTERVAL IN HOURS

        WARNING EXCESS AT PONDING LESS THAN ZERO FOR PERIOD. EXCESS SET TO ZERO
        WARNING EXCESS AT PONDING LESS THAN ZERO FOR PERIOD. EXCESS SET TO ZERO

1947 BI          READ STATION    WP504 HYDROGRAPH FROM UNIT 21


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            *            *
1971 KK     *     TEMP1  *
            *            *
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1972 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           5  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                      IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                       IOUT          21  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2        1500  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT       0.033  TIME INTERVAL IN HOURS

1977 BI          READ STATION    TEMP1 HYDROGRAPH FROM UNIT 21

2001 BI          READ STATION    WP581 HYDROGRAPH FROM UNIT 21


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            *            *
2010 KK     *     TEMP2  *
            *            *
            **************

2011 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           5  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                      IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                       IOUT          21  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
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                    ISAV2        1500  LAST ORDINATE PUNCHED OR SAVED
                   TIMINT       0.033  TIME INTERVAL IN HOURS

2016 BI          READ STATION    TEMP2 HYDROGRAPH FROM UNIT 21
        WARNING EXCESS AT PONDING LESS THAN ZERO FOR PERIOD. EXCESS SET TO ZERO
        WARNING EXCESS AT PONDING LESS THAN ZERO FOR PERIOD. EXCESS SET TO ZERO
        WARNING EXCESS AT PONDING LESS THAN ZERO FOR PERIOD. EXCESS SET TO ZERO
1
                                                  RUNOFF SUMMARY
                                             FLOW IN CUBIC FEET PER SECOND
                                          TIME IN HOURS,  AREA IN SQUARE MILES
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	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	WP504	193.	12.60	33.	8.	4.	0.26		
+	HYDROGRAPH AT	WP581	267.	14.50	119.	30.	14.	3.92		
+	2 COMBINED AT	CLEAR	278.	12.93	153.	38.	18.	4.18		
+	HYDROGRAPH AT	511A	704.	12.17	92.	23.	11.	0.65		
+	ROUTED TO	524526	638.	12.70	92.	23.	11.	0.65		
+	HYDROGRAPH AT	511B	792.	12.50	178.	46.	22.	1.10		
+	ROUTED TO	525526	788.	12.60	178.	46.	22.	1.10		
+	HYDROGRAPH AT	511D	140.	12.20	20.	5.	2.	0.13		
+	3 COMBINED AT	C526	1472.	12.63	288.	74.	35.	1.88		
+	ROUTED TO	526527	1432.	12.87	288.	74.	35.	1.88		
+	HYDROGRAPH AT	511E	430.	12.43	86.	22.	10.	0.57		
+	HYDROGRAPH AT	511F	225.	12.07	23.	6.	3.	0.15		
+	3 COMBINED AT	C527	1709.	12.83	395.	101.	48.	2.60		
+	ROUTED TO	527528	1686.	12.93	393.	100.	48.	2.60		
+	HYDROGRAPH AT	511C	747.	12.57	172.	43.	21.	1.20		
+	2 COMBINED AT	C528	2257.	12.83	563.	143.	69.	3.80		
+	ROUTED TO	528529	2188.	13.10	555.	139.	67.	3.80		
+	HYDROGRAPH AT	511H	312.	12.17	38.	10.	5.	0.31		
+	2 COMBINED AT	C529	2211.	13.10	592.	149.	71.	4.11		
+	HYDROGRAPH AT	511G	768.	12.27	121.	31.	15.	0.87		
+	2 COMBINED AT	C530	2387.	13.07	711.	179.	86.	4.97		
+	ROUTED TO	530531	2337.	13.33	704.	177.	85.	4.97		
+	HYDROGRAPH AT	511I	236.	12.07	23.	6.	3.	0.21		
+	2 COMBINED AT	C531	2337.	13.33	726.	182.	88.	5.18		
+	DIVERSION TO	D531L	551.	13.33	171.	43.	21.	5.18		
+	HYDROGRAPH AT	D531R	1779.	13.33	552.	139.	67.	5.18		
+	ROUTED TO	531532	1769.	13.40	550.	138.	66.	5.18		
+	DIVERSION TO	D532R	921.	13.40	285.	72.	34.	5.18		
+	HYDROGRAPH AT	D532L	848.	13.40	265.	66.	32.	5.18		
+	DIVERSION TO	D532AL	494.	13.40	143.	36.	17.	5.18		
+	HYDROGRAPH AT	D532AR	353.	13.40	123.	31.	15.	5.18		
+	ROUTED TO	532580	350.	13.57	122.	31.	15.	5.18		

+	HYDROGRAPH AT	B532AL	494.	13.40	143.	36.	17.	5.18
+	DIVERSION TO	D578L	247.	13.40	71.	18.	9.	5.18
+	HYDROGRAPH AT	D578R	247.	13.40	71.	18.	9.	5.18
+	ROUTED TO	578573	244.	13.47	71.	18.	8.	5.18
+	DIVERSION TO	D573L	57.	13.47	11.	3.	1.	5.18
+	HYDROGRAPH AT	D573R	188.	13.47	60.	15.	7.	5.18
+	ROUTED TO	573580	186.	13.53	59.	15.	7.	5.18
+	2 COMBINED AT	C580	536.	13.53	181.	46.	22.	5.18
+	ROUTED TO	580535	526.	13.93	180.	45.	22.	5.18
+	HYDROGRAPH AT	B531L	551.	13.33	171.	43.	21.	5.18
+	ROUTED TO	531533	544.	13.43	169.	42.	20.	5.18
+	HYDROGRAPH AT	B578L	247.	13.40	71.	18.	9.	5.18
+	2 COMBINED AT	C533	791.	13.40	240.	60.	29.	5.18
+	ROUTED TO	533579	788.	13.47	239.	60.	29.	5.18
+	HYDROGRAPH AT	B573L	57.	13.47	11.	3.	1.	5.18
+	2 COMBINED AT	C579	845.	13.47	249.	63.	30.	5.18
+	ROUTED TO	579534	839.	13.53	248.	62.	30.	5.18
+	HYDROGRAPH AT	511J	136.	12.07	13.	3.	2.	0.12
+	2 COMBINED AT	C534	839.	13.53	260.	65.	31.	5.30
+	DIVERSION TO	D534L	251.	13.53	78.	20.	9.	5.30
+	HYDROGRAPH AT	D534R	586.	13.53	181.	46.	22.	5.30
+	ROUTED TO	534535	571.	13.80	178.	45.	22.	5.30
+	HYDROGRAPH AT	511K	788.	12.23	119.	30.	14.	0.79
+	3 COMBINED AT	C535	1107.	13.87	466.	118.	57.	6.09
+	DIVERSION TO	D535R	941.	13.87	396.	101.	48.	6.09
+	HYDROGRAPH AT	D535L	166.	13.87	70.	18.	9.	6.09
+	ROUTED TO	535515	164.	13.97	69.	17.	8.	6.09
+	HYDROGRAPH AT	511L	221.	12.10	24.	6.	3.	0.19
+	2 COMBINED AT	C515	278.	12.20	91.	23.	11.	6.28
+	DIVERSION TO	D515L	223.	12.20	72.	18.	9.	6.28
+	HYDROGRAPH AT	D515R	61.	12.30	19.	5.	2.	6.28
+	ROUTED TO	515575	57.	12.37	19.	5.	2.	6.28
+	HYDROGRAPH AT	511M	116.	12.07	11.	3.	1.	0.08
+	HYDROGRAPH AT	B535R	941.	13.87	396.	101.	48.	6.09
+	DIVERSION TO	D574R	223.	13.87	83.	21.	10.	6.09
+	HYDROGRAPH AT	D574L	717.	13.87	313.	80.	38.	6.09
+	ROUTED TO	574575	710.	14.00	309.	79.	38.	6.09
+	3 COMBINED AT	C575	741.	14.00	336.	86.	41.	6.36

+	ROUTED TO	575536	737.	14.07	335.	86.	41.	6.36
+	HYDROGRAPH AT	511Q	106.	12.13	19.	5.	3.	0.09
+	HYDROGRAPH AT	511N	85.	12.10	14.	4.	2.	0.07
+	3 COMBINED AT	C536	743.	14.07	364.	94.	45.	6.52
+	ROUTED TO	536545	735.	14.27	361.	93.	45.	6.52
+	HYDROGRAPH AT	511O	49.	12.20	7.	2.	1.	0.05
+	2 COMBINED AT	C545L	735.	14.27	366.	95.	46.	6.56
+	HYDROGRAPH AT	B532R	921.	13.40	285.	72.	34.	5.18
+	ROUTED TO	532538	901.	13.70	283.	71.	34.	5.18
+	HYDROGRAPH AT	510A	806.	12.30	132.	33.	16.	0.91
+	DIVERSION TO	D537R	631.	12.30	114.	29.	14.	0.91
+	HYDROGRAPH AT	D537L	175.	12.30	18.	4.	2.	0.91
+	ROUTED TO	537538	165.	12.57	18.	4.	2.	0.91
+	HYDROGRAPH AT	510B	374.	12.23	57.	14.	7.	0.36
+	3 COMBINED AT	C538	930.	13.70	354.	90.	43.	5.18
+	ROUTED TO	538540	900.	14.30	349.	89.	43.	5.18
+	HYDROGRAPH AT	B537R	631.	12.30	114.	29.	14.	0.91
+	ROUTED TO	537577	619.	12.43	113.	28.	14.	0.91
+	HYDROGRAPH AT	509D	324.	12.23	47.	12.	6.	0.34
+	DIVERSION TO	D539R	113.	12.23	17.	4.	2.	0.34
+	HYDROGRAPH AT	D539L	211.	12.23	30.	8.	4.	0.34
+	ROUTED TO	539577	208.	12.30	30.	7.	4.	0.34
+	2 COMBINED AT	C577	812.	12.40	143.	36.	17.	1.25
+	ROUTED TO	577540	772.	12.80	142.	35.	17.	1.25
+	HYDROGRAPH AT	510C	675.	12.40	127.	32.	15.	0.85
+	3 COMBINED AT	C540	1415.	12.87	591.	152.	73.	7.28
+	ROUTED TO	540542	1407.	12.93	591.	152.	73.	7.28
+	HYDROGRAPH AT	510F	134.	12.17	19.	5.	2.	0.12
+	2 COMBINED AT	C542	1430.	12.93	607.	156.	75.	7.40
+	ROUTED TO	542543	1424.	12.97	607.	156.	75.	7.40
+	HYDROGRAPH AT	B574R	223.	13.87	83.	21.	10.	6.09
+	ROUTED TO	574541	220.	13.97	81.	20.	10.	6.09
+	HYDROGRAPH AT	510D	75.	12.17	9.	2.	1.	0.06
+	2 COMBINED AT	C541	220.	13.97	90.	23.	11.	6.15
+	ROUTED TO	541543	215.	14.30	89.	22.	11.	6.15
+	HYDROGRAPH AT	510E	195.	12.23	35.	9.	4.	0.18
+	3 COMBINED AT	C543	1543.	12.93	692.	178.	86.	13.73
+	ROUTED TO	543545	1530.	13.03	686.	177.	85.	13.73

+	HYDROGRAPH AT	510G	208.	12.17	31.	9.	4.	0.18
+	2 COMBINED AT	C545R	1562.	13.03	711.	184.	89.	13.91
+	2 COMBINED AT	C545	1996.	12.93	1027.	267.	128.	20.47
+	ROUTED TO	545546	1982.	13.07	1025.	266.	128.	20.47
+	HYDROGRAPH AT	511P	353.	12.23	63.	16.	8.	0.31
+	HYDROGRAPH AT	502A	69.	12.10	8.	2.	1.	0.04
+	3 COMBINED AT	C546	2085.	13.03	1079.	282.	136.	20.82
+	HYDROGRAPH AT	509A	498.	12.37	93.	24.	12.	0.57
+	ROUTED TO	552553	458.	13.03	92.	23.	11.	0.57
+	HYDROGRAPH AT	509B	479.	12.37	84.	21.	10.	0.64
+	2 COMBINED AT	C553	649.	12.97	176.	44.	21.	1.21
+	DIVERSION TO	D553R	305.	12.97	86.	22.	10.	1.21
+	HYDROGRAPH AT	D553L	344.	12.97	90.	23.	11.	1.21
+	ROUTED TO	553554	339.	13.13	90.	23.	11.	1.21
+	HYDROGRAPH AT	509C	193.	12.10	22.	5.	3.	0.15
+	2 COMBINED AT	C554	347.	13.10	111.	28.	13.	1.36
+	DIVERSION TO	D554R	227.	13.10	75.	19.	9.	1.36
+	HYDROGRAPH AT	D554L	120.	13.10	36.	9.	4.	1.36
+	ROUTED TO	554555	119.	13.17	36.	9.	4.	1.36
+	HYDROGRAPH AT	509E	241.	12.13	30.	8.	4.	0.19
+	HYDROGRAPH AT	B539R	113.	12.23	17.	4.	2.	0.34
+	ROUTED TO	539555	108.	12.53	17.	4.	2.	0.34
+	3 COMBINED AT	C555	387.	12.30	83.	21.	10.	1.88
+	ROUTED TO	555557	371.	12.43	83.	21.	10.	1.88
+	HYDROGRAPH AT	B553R	305.	12.97	86.	22.	10.	1.21
+	ROUTED TO	553556	301.	13.10	85.	22.	10.	1.21
+	HYDROGRAPH AT	B554R	227.	13.10	75.	19.	9.	1.36
+	2 COMBINED AT	C556	528.	13.10	160.	40.	19.	1.36
+	ROUTED TO	556558	521.	13.30	160.	40.	19.	1.36
+	HYDROGRAPH AT	509F	257.	12.13	30.	8.	4.	0.20
+	2 COMBINED AT	C558	531.	13.27	189.	48.	23.	1.56
+	DIVERSION TO	D558R	223.	13.27	79.	20.	10.	1.56
+	HYDROGRAPH AT	D558L	308.	13.27	110.	28.	13.	1.56
+	ROUTED TO	558557	307.	13.30	110.	28.	13.	1.56
+	HYDROGRAPH AT	509G	134.	12.10	15.	4.	2.	0.09
+	3 COMBINED AT	C557	722.	12.40	207.	52.	25.	2.18
+	DIVERSION TO	D557L	131.	12.40	23.	6.	3.	2.18
+	HYDROGRAPH AT	D557R	591.	12.40	185.	46.	22.	2.18

+	ROUTED TO	557565	584.	12.60	184.	46.	22.	2.18
+	HYDROGRAPH AT	509M	101.	12.20	15.	4.	2.	0.10
+	2 COMBINED AT	C565	637.	12.57	198.	50.	24.	2.28
+	ROUTED TO	565566	635.	12.63	198.	50.	24.	2.28
+	HYDROGRAPH AT	B557L	131.	12.40	23.	6.	3.	2.18
+	ROUTED TO	557559	129.	12.53	22.	6.	3.	2.18
+	HYDROGRAPH AT	509H	72.	12.23	11.	3.	1.	0.07
+	2 COMBINED AT	C559	178.	12.47	33.	8.	4.	2.25
+	DIVERSION TO	D559L	70.	12.47	14.	3.	2.	2.25
+	HYDROGRAPH AT	D559R	108.	12.47	20.	5.	2.	2.25
+	ROUTED TO	559560	107.	12.53	20.	5.	2.	2.25
+	HYDROGRAPH AT	509I	36.	12.17	4.	1.	0.	0.03
+	2 COMBINED AT	C560	121.	12.50	24.	6.	3.	2.28
+	DIVERSION TO	D560L	39.	12.50	9.	2.	1.	2.28
+	HYDROGRAPH AT	D560R	82.	12.50	15.	4.	2.	2.28
+	ROUTED TO	560566	80.	12.67	15.	4.	2.	2.28
+	HYDROGRAPH AT	509L	125.	12.07	16.	4.	2.	0.08
+	3 COMBINED AT	C566	746.	12.60	228.	58.	28.	2.36
+	ROUTED TO	566567	742.	12.67	227.	58.	28.	2.36
+	HYDROGRAPH AT	B559L	70.	12.47	14.	3.	2.	2.25
+	ROUTED TO	559561	69.	12.60	14.	3.	2.	2.25
+	HYDROGRAPH AT	B560L	39.	12.50	9.	2.	1.	2.28
+	ROUTED TO	560561	39.	12.57	9.	2.	1.	2.28
+	HYDROGRAPH AT	509K	36.	12.17	4.	1.	1.	0.03
+	3 COMBINED AT	C561	122.	12.53	27.	7.	3.	2.31
+	ROUTED TO	561562	121.	12.57	27.	7.	3.	2.31
+	HYDROGRAPH AT	509J	106.	12.20	17.	4.	2.	0.10
+	2 COMBINED AT	C562	189.	12.37	43.	11.	5.	2.41
+	ROUTED TO	562567	188.	12.50	43.	11.	5.	2.41
+	HYDROGRAPH AT	509P	193.	12.03	25.	7.	4.	0.11
+	3 COMBINED AT	C567	958.	12.63	293.	76.	36.	4.88
+	ROUTED TO	567568	955.	12.67	292.	76.	36.	4.88
+	HYDROGRAPH AT	509Q	148.	12.10	22.	6.	3.	0.11
+	2 COMBINED AT	C568	1005.	12.67	314.	82.	39.	4.99
+	ROUTED TO	568569	993.	12.80	313.	81.	39.	4.99
+	HYDROGRAPH AT	509R	147.	12.07	16.	4.	2.	0.10
+	2 COMBINED AT	C569	1008.	12.77	329.	85.	41.	5.09
+	ROUTED TO	569570	1001.	12.87	328.	85.	41.	5.09

+	HYDROGRAPH AT	509O	59.	12.03	9.	3.	1.	0.04
+	HYDROGRAPH AT	509N	151.	12.10	24.	7.	3.	0.11
+	2 COMBINED AT	C564	209.	12.07	33.	10.	5.	0.15
+	ROUTED TO	564570	195.	12.27	33.	10.	5.	0.15
+	HYDROGRAPH AT	509S	273.	12.13	36.	10.	5.	0.19
+	3 COMBINED AT	C570	1139.	12.80	394.	104.	50.	5.43
+	3 COMBINED AT	CLEAR	3216.	12.97	1549.	405.	195.	30.43
+	HYDROGRAPH AT	B558R	223.	13.27	79.	20.	10.	1.56
+	ROUTED TO	558571	219.	13.50	78.	20.	9.	1.56
+	HYDROGRAPH AT	505A	237.	12.10	27.	7.	3.	0.18
+	2 COMBINED AT	C571	302.	12.23	105.	26.	13.	2.13
+	ROUTED TO	571572	294.	12.40	104.	26.	13.	2.13
+	HYDROGRAPH AT	505B	228.	12.07	31.	9.	4.	0.14
+	2 COMBINED AT	C572	422.	12.27	134.	35.	17.	2.28
+	HYDROGRAPH AT	500A	280.	12.10	29.	7.	3.	0.21
+	ROUTED TO	501502	240.	12.57	29.	7.	3.	0.21
+	HYDROGRAPH AT	500B	227.	12.17	28.	7.	3.	0.20
+	2 COMBINED AT	C502	406.	12.23	57.	14.	7.	0.42
+	DIVERSION TO	D502L	239.	12.23	28.	7.	3.	0.42
+	HYDROGRAPH AT	D502R	166.	12.23	28.	7.	3.	0.42
+	ROUTED TO	502506	164.	12.43	28.	7.	3.	0.42
+	HYDROGRAPH AT	B534L	251.	13.53	78.	20.	9.	5.30
+	ROUTED TO	534506	250.	13.57	77.	19.	9.	5.30
+	2 COMBINED AT	C506	277.	13.50	104.	26.	13.	5.72
+	ROUTED TO	506507	275.	13.53	104.	26.	13.	5.72
+	HYDROGRAPH AT	500H	226.	12.13	25.	6.	3.	0.21
+	2 COMBINED AT	C507	346.	12.27	128.	32.	15.	5.93
+	ROUTED TO	507508	324.	12.50	127.	32.	15.	5.93
+	HYDROGRAPH AT	B502L	239.	12.23	28.	7.	3.	0.42
+	ROUTED TO	502503	233.	12.40	28.	7.	3.	0.42
+	HYDROGRAPH AT	500C	160.	12.07	16.	4.	2.	0.12
+	2 COMBINED AT	C503	297.	12.30	44.	11.	5.	0.54
+	ROUTED TO	503508	271.	12.83	43.	11.	5.	0.54
+	HYDROGRAPH AT	500I	430.	12.13	49.	12.	6.	0.41
+	3 COMBINED AT	C508	682.	12.27	214.	54.	26.	6.88
+	DIVERSION TO	D508L	380.	12.27	100.	25.	12.	6.88
+	HYDROGRAPH AT	D508R	303.	12.27	114.	29.	14.	6.88
+	ROUTED TO	508517	291.	12.70	112.	28.	14.	6.88

+	HYDROGRAPH AT	B515L	223.	12.20	72.	18.	9.	6.28
+	ROUTED TO	515517	204.	12.40	70.	18.	9.	6.28
+	HYDROGRAPH AT	500L	190.	12.10	20.	5.	2.	0.16
+	3 COMBINED AT	C517	517.	12.40	198.	50.	24.	7.60
+	ROUTED TO	517518	511.	12.43	197.	50.	24.	7.60
+	HYDROGRAPH AT	500J	124.	12.03	12.	3.	1.	0.09
+	ROUTED TO	514518	121.	12.10	11.	3.	1.	0.09
+	2 COMBINED AT	C518	550.	12.37	208.	53.	25.	7.69
+	ROUTED TO	518519	542.	12.57	206.	52.	25.	7.69
+	HYDROGRAPH AT	500M	142.	12.10	22.	6.	3.	0.12
+	2 COMBINED AT	C519	606.	12.50	225.	58.	28.	7.81
+	HYDROGRAPH AT	C504	193.	12.60	33.	8.	4.	0.26
+	ROUTED TO	504509	181.	13.03	32.	8.	4.	0.26
+	HYDROGRAPH AT	500D	250.	12.13	29.	7.	3.	0.23
+	2 COMBINED AT	TEMP1	249.	12.13	60.	15.	7.	0.49
+	HYDROGRAPH AT	C509	249.	12.13	60.	15.	7.	0.49
+	ROUTED TO	509510	236.	12.27	60.	15.	7.	0.49
+	HYDROGRAPH AT	500E	137.	12.07	13.	3.	2.	0.11
+	HYDROGRAPH AT	C581	267.	14.50	119.	30.	14.	3.92
+	ROUTED TO	581510	265.	14.63	118.	30.	14.	3.92
+	3 COMBINED AT	TEMP2	365.	13.23	191.	48.	23.	0.49
+	HYDROGRAPH AT	C510	365.	13.23	191.	48.	23.	0.49
+	DIVERSION TO	D510L	148.	13.23	76.	19.	9.	0.49
+	HYDROGRAPH AT	D510R	217.	13.23	114.	29.	14.	0.49
+	ROUTED TO	510511	215.	13.30	114.	29.	14.	0.49
+	HYDROGRAPH AT	B508L	380.	12.27	100.	25.	12.	6.88
+	ROUTED TO	508511	357.	12.67	98.	25.	12.	6.88
+	HYDROGRAPH AT	500F	442.	12.17	54.	13.	6.	0.44
+	3 COMBINED AT	C511	670.	12.33	261.	65.	31.	7.49
+	ROUTED TO	511512	647.	12.87	258.	65.	31.	7.49
+	HYDROGRAPH AT	500K	144.	12.07	16.	4.	2.	0.10
+	ROUTED TO	513512	130.	12.33	15.	4.	2.	0.10
+	HYDROGRAPH AT	500G	228.	12.13	37.	11.	5.	0.20
+	3 COMBINED AT	C512	754.	12.77	304.	78.	38.	7.79
+	2 COMBINED AT	C520	1007.	13.03	492.	126.	60.	8.28
+	ROUTED TO	520576	1004.	13.07	491.	125.	60.	8.28
+	HYDROGRAPH AT	500O	120.	12.13	21.	6.	3.	0.10
+	ROUTED TO	521522	114.	12.37	21.	6.	3.	0.10

+	HYDROGRAPH AT	500P	125.	12.10	16.	4.	2.	0.08
+	2 COMBINED AT	C522	209.	12.20	37.	10.	5.	0.18
+	2 COMBINED AT	C576	1063.	13.03	526.	135.	65.	8.47
+	ROUTED TO	576523	1061.	13.07	525.	134.	65.	8.47
+	HYDROGRAPH AT	500N	138.	12.20	17.	4.	2.	0.11
+	2 COMBINED AT	C523	1108.	12.37	540.	138.	66.	8.58
+	HYDROGRAPH AT	501A	63.	12.03	6.	2.	1.	0.04
+	HYDROGRAPH AT	501B	89.	12.10	10.	3.	1.	0.07
+	5 COMBINED AT	CLEAR	1772.	12.40	809.	208.	100.	17.00
+	HYDROGRAPH AT	502B	86.	12.13	11.	3.	1.	0.05
+	HYDROGRAPH AT	502C	63.	12.17	10.	2.	1.	0.05
+	HYDROGRAPH AT	503A	292.	12.10	49.	14.	7.	0.22
+	ROUTED TO	549550	283.	12.23	49.	14.	7.	0.22
+	HYDROGRAPH AT	503C	176.	12.20	23.	6.	3.	0.12
+	2 COMBINED AT	C550L	456.	12.20	72.	19.	9.	0.34
+	HYDROGRAPH AT	503B	115.	12.20	23.	6.	3.	0.11
+	2 COMBINED AT	C550	570.	12.20	95.	25.	12.	0.45
+	HYDROGRAPH AT	504A	290.	12.20	47.	12.	6.	0.24

*** NORMAL END OF HEC-1 ***

APPENDIX F

100-Year, 6-Hour Storm Existing condition HEC-1 Ouput, without Levee

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1*************************************                    *************************************
 *                                   *                    *                                   *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *                    *   U.S. ARMY CORPS OF ENGINEERS    *
 *              MAY   1991           *                    *   HYDROLOGIC ENGINEERING CENTER   *
 *            VERSION 4.0.1E         *                    *         609 SECOND STREET         *
 *                                   *                    *      DAVIS, CALIFORNIA 95616      *
 *  RUN DATE  08/07/95  TIME  10:40:24 *                    *          (916) 551-1748           *
 *                                   *                    *                                   *
 *************************************                    *************************************

X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X               X
XXXXXXX  XXXX     X        XXXXX  X
X     X  X        X               X
X     X  X        X     X         X
X     X  XXXXXXX   XXXXX         XXX

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL   LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1                                          HEC-1 INPUT                                                    PAGE  1

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID    RIO VERDE SOUTH FIS - Existing Condition Model        File:   L100-6.IH1
  2           ID    by  GVSCE for MKE:   MCFCD #93-07                  Original: 07-22-94     dtp
  3           ID        Project:  46                                    Revised: 10-17-94     trl
  4           ID        100-year  6-Hr Rainfall
  5           ID        Green & Ampt Rainfall Losses
  6           ID
  7           ID          This model does not include the effects of the existing levee
  8           ID            on the north boundary of subbasin 510E.
              *
  9           IT       1                    1150
 10           IO       5
 11           IN      15
              *DIAGRAM
              *
 12           JD    3.40    0.01
 13           PC   0.000   0.008   0.016   0.025   0.033   0.041   0.050   0.058   0.066   0.074
 14           PC   0.087   0.099   0.118   0.138   0.216   0.377   0.834   0.911   0.931   0.950
 15           PC   0.962   0.972   0.983   0.991   1.000
 16           JD    3.38    0.50
 17           JD    3.33    2.80
 18           PC   0.000   0.009   0.016   0.025   0.034   0.042   0.051   0.059   0.067   0.076
 19           PC   0.087   0.100   0.120   0.163   0.252   0.451   0.694   0.837   0.900   0.938
 20           PC   0.950   0.963   0.975   0.988   1.000
 21           JD    3.13    16.0
 22           PC   0.000   0.015   0.020   0.030   0.048   0.063   0.076   0.090   0.105   0.119
 23           PC   0.135   0.152   0.175   0.222   0.304   0.472   0.670   0.796   0.868   0.912
 24           PC   0.946   0.960   0.973   0.987   1.000
 25           JD    2.75    90.0
 26           PC   0.000   0.021   0.035   0.051   0.071   0.087   0.105   0.125   0.143   0.160
 27           PC   0.179   0.201   0.232   0.281   0.364   0.500   0.658   0.773   0.841   0.888
 28           PC   0.927   0.945   0.964   0.982   1.000
 29           JD    1.94   500.0
 30           PC   0.000   0.024   0.043   0.059   0.078   0.098   0.119   0.141   0.162   0.186
 31           PC   0.212   0.239   0.271   0.321   0.408   0.515   0.627   0.735   0.814   0.864
 32           PC   0.907   0.930   0.954   0.977   1.000
              *
 33           IN       5
              *
              *    The Wood Patel input hydrographs are being written out to a tape 21 file
              *      in order to populate the index hydrographs with the input hydrograph.
              *
              *

 34           KK   WP504
 35           KO                                   21
 36           KM      Runoff hydrograph from Rio Verde North watershed, provided by Wood Patel
 37           KM        and Associates.  The hydrograph was computed using 300 ordinates and
 38           KM        a time interval of 5 minutes.  This hydrograph enters the Rio Verde
 39           KM        South watershed at concentration point 504.
 40           BA   0.260
 41           QI       0       0       0       0       0       0       0       0       0       0
 42           QI       0       0       0       0       0       0       0       0       0       0
 43           QI       0       0       0       0       0       0       0       0       0       0
 44           QI       0       0       0       0       0       0       0       0       0       0
 45           QI       0       1       2       6      10      16      26      37      52      68
1                                          HEC-1 INPUT                                                    PAGE  2

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 46           QI      86     104     123     139     151     159     162     159     150     140
 47           QI     127     111      97      83      69      57      46      37      30      24
 48           QI      18      14      11       9       7       5       4       2       2       1
 49           QI       1       1       0       0       0       0       0       0       0       0
 50           QI       0       0       0       0       0       0       0       0       0       0
 51           QI       0       0       0       0       0       0       0       0       0       0
 52           QI       0       0       0       0       0       0       0       0       0       0
 53           QI       0       0       0       0       0       0       0       0       0       0
 54           QI       0       0       0       0       0       0       0       0       0       0
 55           QI       0       0       0       0       0       0       0       0       0       0
 56           QI       0       0       0       0       0       0       0       0       0       0
 57           QI       0       0       0       0       0       0       0       0       0       0
 58           QI       0       0       0       0       0       0       0       0       0       0
 59           QI       0       0       0       0       0       0       0       0       0       0
 60           QI       0       0       0       0       0       0       0       0       0       0
 61           QI       0       0       0       0       0       0       0       0       0       0
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 62          QI       0       0       0       0       0       0       0       0       0       0
 63          QI       0       0       0       0       0       0       0       0       0       0
 64          QI       0       0       0       0       0       0       0       0       0       0
 65          QI       0       0       0       0       0       0       0       0       0       0
 66          QI       0       0       0       0       0       0       0       0       0       0
 67          QI       0       0       0       0       0       0       0       0       0       0
 68          QI       0       0       0       0       0       0       0       0       0       0
 69          QI       0       0       0       0       0       0       0       0       0       0
 70          QI       0       0       0       0       0       0       0       0       0       0
             *

 71          KK   WP581
 72          KO                                      21
 73          KM      Runoff hydrograph from Rio Verde North watershed, provided by Wood Patel
 74          KM        and Associates.  The hydrograph was computed using 300 ordinates and
 75          KM        a time interval of 5 minutes.  This hydrograph enters the Rio Verde
 76          KM        South watershed at concentration point 581.
 77          BA    3.92
 78          QI       0       0       0       0       0       0       0       0       0       0
 79          QI       0       0       0       0       0       0       0       0       0       0
 80          QI       0       0       0       0       0       0       0       0       0       0
 81          QI       0       0       0       0       0       0       0       0       0       0
 82          QI       0       0       0       0       0       0       1       2       5       9
 83          QI      15      20      23      26      31      37      45      57      72      95
 84          QI     113     128     140     148     152     153     153     153     152     151
 85          QI     151     154     159     166     173     181     188     195     201     205
 86          QI     207     208     206     204     200     195     189     183     177     170
 87          QI     164     156     148     139     132     125     115     105      94      85
 88          QI      77      70      65      59      52      45      38      31      24      14
 89          QI       9       7       6       6       5       5       5       5       4       4
 90          QI       4       3       3       3       3       3       3       2       2       2
 91          QI       2       2       2       2       2       2       2       2       2       2
 92          QI       1       1       1       1       1       1       1       1       1       1
 93          QI       1       1       1       1       0       0       0       0       0       0
 94          QI       0       0       0       0       0       0       0       0       0       0
 95          QI       0       0       0       0       0       0       0       0       0       0
 96          QI       0       0       0       0       0       0       0       0       0       0
 97          QI       0       0       0       0       0       0       0       0       0       0
 98          QI       0       0       0       0       0       0       0       0       0       0
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 99          QI       0       0       0       0       0       0       0       0       0       0
100          QI       0       0       0       0       0       0       0       0       0       0
101          QI       0       0       0       0       0       0       0       0       0       0
102          QI       0       0       0       0       0       0       0       0       0       0
103          QI       0       0       0       0       0       0       0       0       0       0
104          QI       0       0       0       0       0       0       0       0       0       0
105          QI       0       0       0       0       0       0       0       0       0       0
106          QI       0       0       0       0       0       0       0       0       0       0
107          QI       0       0       0       0       0       0       0       0       0       0
             *
108          IN      15
             *

109          KK   CLEAR
110          KM     Clear hydrograph stack from memory.
111          HC      2
             *

112          KK    511A
113          KM   Sub-Basin   511A
114          KM
115          KM      The Phoenix Mountain S-Graph is used for this basin.
116          KM          Lag Used =  28.3 minutes
117          KM
118          BA   0.649
119          LG    0.35    0.39    6.20    0.21    0.00
120          UI      77      77      77      77      77      77     149     222     239     296
121          UI     327     366     444     467     491     519     553     576     598     623
122          UI     668     746     819     909     967     773     614     569     532     500
123          UI     474     459     449     435     418     404     386     375     365     355
124          UI     331     322     311     299     294     265     260     240     237     204
125          UI     204     195     189     189     178     178     175     161     161     161
126          UI     127     127     127     125      99      99      99      99      99      85
127          UI      85      85      85      85      84      59      59      59      59      59
128          UI      59      59      59      48      38      38      38      38      38      38
129          UI      38      38      38      38      38      38      32      15      15      15
130          UI      15      15      15      15      15      15      15      15      15      15
131          UI      15      15      15      15      15      15      15      15      15      15
132          UI      15      15      15      15      15      15      15      15      15      15
133          UI       0       0       0       0       0       0       0       0       0       0
134          UI       0       0       0       0       0       0       0       0       0       0
             *

135          KK  524526
136          KM   Normal depth channel route from C524 to C526
137          KM      Source:  Hydrology Field Reconnaissance, page 24
138          RS      28    FLOW      -1
139          RC   0.070   0.040   0.070    5989  0.0182
140          RX   900.0  1000.0  1035.0  1038.0  1048.0  1054.0  1120.0  1330.0
141          RY   101.2   100.0    99.5    99.0    99.0    99.6    99.7   101.2
142          RL                    0.07    99.0
             *
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

143          KK    511B
144          KM   Sub-Basin   511B
145          KM
146          KM      The Phoenix Mountain S-Graph is used for this basin.
147          KM          Lag Used =  56.7 minutes
148          KM
149          BA   1.100
150          LG    0.32    0.37    6.60    0.17    4.40
151          UI      65      65      65      65      65      65      65      65      65      65
152          UI      65      65      65     182     188     188     188     214     250     250
153          UI     251     300     300     313     375     375     393     395     412     417
154          UI     434     442     463     469     484     488     500     509     518     534
155          UI     547     577     616     637     661     715     748     782     857     783
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 156          UI     708     627     536     508     498     469     462     442     433     417
 157          UI     410     395     394     385     385     376     375     364     357     353
 158          UI     341     341     330     326     324     313     313     307     300     300
 159          UI     287     278     278     270     263     263     259     250     250     250
 160          UI     226     224     224     222     203     203     203     203     175     173
 161          UI     173     173     173     160     160     160     160     160     154     150
 162          UI     150     150     150     150     137     136     136     136     136     136
 163          UI     115     107     107     107     107     107     107     107      88      83
 164          UI      83      83      83      83      83      83      83      83      77      71
 165          UI      71      71      71      71      71      71      71      71      71      71
 166          UI      57      50      50      50      50      50      50      50      50      50
 167          UI      50      50      50      50      50      50      50      38      32      32
 168          UI      32      32      32      32      32      32      32      32      32      32
 169          UI      32      32      32      32      32      32      32      32      32      32
 170          UI      32      32      32      32      13      13      13      13      13      13
 171          UI      13      13      13      13      13      13      13      13      13      13
 172          UI      13      13      13      13      13      13      13      13      13      13
 173          UI      13      13      13      13      13      13      13      13      13      13
 174          UI      13      13      13      13      13      13      13      13      13      13
 175          UI      13      13      13      13      13      13      13      13      13      13
 176          UI      13      13      13      13      13      13      13      13      13      13
 177          UI      13      13       0       0       0       0       0       0       0       0
 178          UI       0       0       0       0       0       0       0       0       0       0
              *

 179          KK  525526
 180          KM   Normal depth channel route from C525 to C526
 181          KM       Source:  Hydrology Field Reconnaissance, page 24
 182          RS       5    FLOW      -1
 183          RC   0.070   0.040   0.070    1012  0.0208
 184          RX   900.0  1000.0  1035.0  1038.0  1048.0  1054.0  1120.0  1330.0
 185          RY   101.2   100.0    99.5    99.0    99.0    99.6    99.7   101.2
 186          RL                    0.07    99.0
              *

 187          KK    511D
 188          KM   Sub-Basin   511D
 189          KM
 190          KM      The Phoenix Mountain S-Graph is used for this basin.
 191          KM          Lag Used =  30.5 minutes
 192          KM
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 193          BA   0.128
 194          LG    0.35    0.36    6.80    0.17    0.00
 195          UI      14      14      14      14      14      14      14      40      41      48
 196          UI      54      62      68      81      85      89      94     100     104     108
 197          UI     112     117     128     139     155     169     176     140     113     105
 198          UI      99      93      88      85      83      81      78      76      73      71
 199          UI      68      67      65      61      60      57      56      54      51      49
 200          UI      46      44      42      37      37      36      35      35      33      33
 201          UI      33      30      30      30      27      23      23      23      23      18
 202          UI      18      18      18      18      16      15      15      15      15      15
 203          UI      14      11      11      11      11      11      11      11      11      11
 204          UI       7       7       7       7       7       7       7       7       7       7
 205          UI       7       7       7       7       4       3       3       3       3       3
 206          UI       3       3       3       3       3       3       3       3       3       3
 207          UI       3       3       3       3       3       3       3       3       3       3
 208          UI       3       3       3       3       3       3       3       3       3       3
 209          UI       0       0       0       0       0       0       0       0       0       0
 210          UI       0       0       0       0       0       0       0       0       0       0
              *

 211          KK    C526
 212          KM     Combine routed hydrographs from C524 and C526 with runoff from 511D at C526
 213          HC       3
              *

 214          KK  526527
 215          KM   Normal depth channel route from C526 to C527
 216          KM       Source:  Hydrology Field Reconnaissance, page 24
 217          RS      12    FLOW      -1
 218          RC   0.070   0.040   0.070    3129  0.0189
 219          RX   780.0  1000.0  1035.0  1038.0  1048.0  1054.0  1120.0  1504.0
 220          RY   102.5   100.0    99.5    99.0    99.0    99.6    99.7   102.5
 221          RL                    0.07    99.0
              *

 222          KK    511E
 223          KM   Sub-Basin   511E
 224          KM
 225          KM      The Phoenix Mountain S-Graph is used for this basin.
 226          KM          Lag Used =  50.4 minutes
 227          KM
 228          BA   0.568
 229          LG    0.34    0.37    6.40    0.19    1.20
 230          UI      38      38      38      38      38      38      38      38      38      38
 231          UI      38      66     109     109     109     122     145     145     155     175
 232          UI     175     210     218     227     230     241     243     257     262     273
 233          UI     279     283     291     297     303     312     330     349     368     383
 234          UI     416     437     463     497     428     388     312     297     288     273
 235          UI     264     257     245     242     230     229     224     223     218     217
 236          UI     208     208     198     198     192     190     186     182     181     175
 237          UI     175     168     162     162     155     153     153     146     145     145
 238          UI     132     130     130     124     118     118     118     104     100     100
 239          UI     100      97      93      93      93      93      89      87      87      87
 240          UI      87      82      79      79      79      79      78      62      62      62
 241          UI      62      62      62      62      48      48      48      48      48      48
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 242          UI      48      48      48      42      42      42      42      42      42      42
 243          UI      42      42      42      37      29      29      29      29      29      29
 244          UI      29      29      29      29      29      29      29      29      27      19
 245          UI      19      19      19      19      19      19      19      19      19      19
 246          UI      19      19      19      19      19      19      19      19      19      19
 247          UI      19      19      13       7       7       7       7       7       7       7
 248          UI       7       7       7       7       7       7       7       7       7       7
 249          UI       7       7       7       7       7       7       7       7       7       7
 250          UI       7       7       7       7       7       7       7       7       7       7
```

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251          UI       7       7       7       7       7       7       7       7       7       7
252          UI       7       7       7       7       7       7       7       7       7       7
253          UI       7       7       7       0       0       0       0       0       0       0
254          UI       0       0       0       0       0       0       0       0       0       0
             *

255          KK    511F
256          KM   Sub-Basin   511F
257          KM
258          KM      The Phoenix Mountain S-Graph is used for this basin.
259          KM          Lag Used =  16.6 minutes
260          KM
261          BA   0.154
262          LG    0.34    0.38    6.20    0.20    1.00
263          UI      31      31      31      41      89     115     140     182     197     218
264          UI     235     252     292     347     371     259     221     199     186     177
265          UI     166     157     148     139     129     122     112     102      93      82
266          UI      77      75      72      68      65      55      51      47      40      40
267          UI      38      34      34      34      25      24      24      24      24      16
268          UI      15      15      15      15      15      15      14       6       6       6
269          UI       6       6       6       6       6       6       6       6       6       6
270          UI       6       6       6       6       6       6       0       0       0       0
271          UI       0       0       0       0       0       0       0       0       0       0
             *

272          KK    C527
273          KM     Combine Hydrograph from C526 with runoff from 511E & 511F at C527
274          HC       3
             *

275          KK  527528
276          KM   Normal depth channel route from C527 to C528
277          KM       Source:  Hydrology Field Reconnaissance, page 24
278          RS       6    FLOW      -1
279          RC   0.070   0.040   0.070    1420  0.0183
280          RX   780.0  1000.0  1035.0  1038.0  1048.0  1054.0  1120.0  1504.0
281          RY   102.5   100.0    99.5    99.0    99.0    99.6    99.7   102.5
282          RL                    0.62    99.0
             *

283          KK    511C
284          KM   Sub-Basin   511C
285          KM
286          KM      The Phoenix Mountain S-Graph is used for this basin.
287          KM          Lag Used =  62.3 minutes
288          KM
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

289          BA   1.196
290          LG    0.34    0.39    6.20    0.21    0.90
291          UI      65      65      65      65      65      65      65      65      65      65
292          UI      65      65      65      65     146     186     186     186     186     228
293          UI     248     248     248     295     297     297     359     372     378     391
294          UI     391     412     413     431     437     454     465     474     480     491
295          UI     496     510     513     531     542     572     603     624     646     691
296          UI     723     750     782     873     753     698     631     531     511     496
297          UI     474     465     445     437     423     413     406     391     391     381
298          UI     381     376     372     371     354     354     347     338     338     328
299          UI     323     323     312     310     310     299     297     297     281     275
300          UI     275     270     261     261     261     250     248     248     246     222
301          UI     222     222     222     203     201     201     201     192     171     171
302          UI     171     171     171     160     158     158     158     158     158     149
303          UI     149     149     149     149     149     138     135     135     135     135
304          UI     135     135     108     106     106     106     106     106     106     106
305          UI     101      83      83      83      83      83      83      83      83      83
306          UI      83      83      71      71      71      71      71      71      71      71
307          UI      71      71      71      71      71      52      50      50      50      50
308          UI      50      50      50      50      50      50      50      50      50      50
309          UI      50      50      50      46      32      32      32      32      32      32
310          UI      32      32      32      32      32      32      32      32      32      32
311          UI      32      32      32      32      32      32      32      32      32      32
312          UI      32      32      32      14      12      12      12      12      12      12
313          UI      12      12      12      12      12      12      12      12      12      12
314          UI      12      12      12      12      12      12      12      12      12      12
315          UI      12      12      12      12      12      12      12      12      12      12
316          UI      12      12      12      12      12      12      12      12      12      12
317          UI      12      12      12      12      12      12      12      12      12      12
318          UI      12      12      12      12      12      12      12      12      12      12
319          UI      12      12      12      12      12      12      12       0       0       0
320          UI       0       0       0       0       0       0       0       0       0       0
             *

321          KK    C528
322          KM     Combine routed hydrograph from C527 with runoff from 511C at C528
323          HC       2
             *

324          KK  528529
325          KM   Normal depth channel route from C528 to C529
326          KM       Source:  Hydrology Field Reconnaissance, page 16
327          RS      14    FLOW      -1
328          RC   0.070   0.040   0.070    6398  0.0148
329          RX   950.0  1053.0  1139.0  1150.0  1177.0  1255.0  1302.0  1352.0
330          RY  2360.0  2357.0  2357.4  2356.4  2356.3  2357.8  2359.6  2360.0
331          RL                    0.62  2356.3
             *

332          KK    511H
333          KM   Sub-Basin   511H
334          KM
335          KM      The Phoenix Mountain S-Graph is used for this basin.
336          KM          Lag Used =  25.5 minutes
337          KM
```



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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

338          BA   0.310
339          LG    0.35    0.35    4.45    0.44    0.40
340          UI      41      41      41      41      41      51     118     121     157     174
341          UI     201     238     251     267     285     300     314     329     354     399
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342          UI     447     506     467     354     307     285     267     251     243     237
343          UI     227     217     209     201     195     188     176     170     165     157
344          UI     149     140     130     127     110     108     103     100      98      94
345          UI      94      88      85      85      69      67      67      62      52      52
346          UI      52      52      47      45      45      45      45      39      31      31
347          UI      31      31      31      31      31      23      20      20      20      20
348          UI      20      20      20      20      20      20      20      11       8       8
349          UI       8       8       8       8       8       8       8       8       8       8
350          UI       8       8       8       8       8       8       8       8       8       8
351          UI       8       8       8       8       8       8       8       0       0       0
352          UI       0       0       0       0       0       0       0       0       0       0
             *

353          KK    C529
354          KM     Combine routed hydrograph from C528 with runoff from 511H at C529
355          HC       2
             *
             * *
             * *       Routing Reach  529-530 is too short to route.
             * *
             *

356          KK    511G
357          KM   Sub-Basin   511G
358          KM
359          KM      The Phoenix Mountain S-Graph is used for this basin.
360          KM          Lag Used =  36.8 minutes
361          KM
362          BA   0.868
363          LG    0.33    0.36    5.10    0.30    2.90
364          UI      79      79      79      79      79      79      79      79     160     228
365          UI     228     274     305     328     365     416     459     481     499     518
366          UI     541     571     588     605     623     644     682     740     786     868
367          UI     932    1029     886     738     631     594     564     537     509     491
368          UI     478     469     459     450     435     420     412     397     389     381
369          UI     370     365     342     338     323     321     308     305     286     273
370          UI     270     247     247     233     210     210     207     194     194     194
371          UI     186     183     183     182     166     166     166     166     131     131
372          UI     131     131     131     106     102     102     102     102     102      98
373          UI      87      87      87      87      87      87      87      74      61      61
374          UI      61      61      61      61      61      61      61      61      51      39
375          UI      39      39      39      39      39      39      39      39      39      39
376          UI      39      39      39      39      39      35      15      15      15      15
377          UI      15      15      15      15      15      15      15      15      15      15
378          UI      15      15      15      15      15      15      15      15      15      15
379          UI      15      15      15      15      15      15      15      15      15      15
380          UI      15      15      15      15      15      15      15      15      15       0
381          UI       0       0       0       0       0       0       0       0       0       0
382          UI       0       0       0       0       0       0       0       0       0       0
             *
             *
1                                          HEC-1 INPUT                                          PAGE  9

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

383          KK    C530
384          KM      Combine hydrograph from C529 with runoff from 511G at C530
385          HC       2
             *

386          KK  530531
387          KM   Normal depth channel route from C530 to C531
388          KM       Source:  Hydrology Field Reconnaissance, page 11
389          RS      15    FLOW      -1
390          RC   0.070   0.040   0.070    5786  0.0211
391          RX   972.0  1052.4  1161.2  1208.0  1275.3  1311.8  1436.0  1612.0
392          RY  2159.0  2157.5  2157.0  2155.9  2156.0  2157.1  2157.8  2159.0
393          RL                     0.43  2155.9
             *

394          KK    511I
395          KM   Sub-Basin   511I
396          KM
397          KM      The Phoenix Mountain S-Graph is used for this basin.
398          KM          Lag Used =  17.5 minutes
399          KM
400          BA   0.211
401          LG    0.35    0.35    4.00    0.57    0.00
402          UI      41      41      41      41     116     140     173     218     250     272
403          UI     297     317     346     408     485     447     318     283     256     242
404          UI     231     217     205     194     183     170     161     151     138     126
405          UI     111     105     100      96      94      86      85      67      67      58
406          UI      52      52      49      45      45      45      34      31      31      31
407          UI      31      25      20      20      20      20      20      20      20      16
408          UI       8       8       8       8       8       8       8       8       8       8
409          UI       8       8       8       8       8       8       8       8       8       8
410          UI       0       0       0       0       0       0       0       0       0       0
411          UI       0       0       0       0       0       0       0       0       0       0
             *
             *

412          KK    C531
413          KM     Combine routed hydrograph from C530 with runoff from 511I at C531
414          HC       2
             *
             *

415          KK   D531R
416          KM        Hydrograph diversion at C531
417          KM      Main flow continues on in right branch.
418          KM      Diverted flow is in the left branch, coded on DQ Card.
419          DT   D531L
420          DI       0      52     390     850    1565    2660    3870    4690    5550    6390
421          DQ       0      12      80     200     390     620     910    1090    1250    1440
             *
1                                          HEC-1 INPUT                                          PAGE 10

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

422          KK  531532
423          KM   Normal depth channel route from C531 to C532
```

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424          KM       Source:  Hydrology Field Reconnaissance, page 11
425          RS       4    FLOW      -1
426          RC   0.070   0.040   0.070    1524  0.0243
427          RX  1000.0  1125.0  1240.0  1250.0  1312.0  1348.0  1395.0  1420.0
428          RY  2158.5  2157.5  2157.0  2155.9  2156.0  2157.1  2156.9  2158.5
429          RL                   0.62  2155.9
             *

430          KK   D532L
431          KM        Hydrograph diversion at C532
432          KM      Main flow continues on in right branch (Center Split at C532).
433          KM      Diverted flow is in the left branch, coded on DQ card.
434          DT   D532R
435          DI       0      58     235     405     685    1075    1535    2190    2570    2950
436          DQ       0      40     125     205     335     550     800    1140    1320    1500
             *
             *

437          KK  D532AR
438          KM        Hydrograph diversion at C532A
439          KM      Main flow continues on in right branch (center split channel at C532).
440          KM      Diverted flow is in the left branch, coded on DQ card.
441          DT  D532AL
442          DI       0      50     210     445     650     930    1300    1680    1890    2160
443          DQ       0      25     100     230     360     550     820    1090    1250    1470
             *
             *

444          KK  532580
445          KM   Normal depth channel route from C532 to C580
446          KM       Source:  Hydrology Field Reconnaissance, page 7
447          RS       9    FLOW      -1
448          RC   0.070   0.040   0.070    4121  0.0279
449          RX  1000.0  1034.5  1069.0  1086.0  1146.0  1154.0  1227.0  1285.0
450          RY  2061.9  2061.4  2060.8  2059.9  2059.6  2060.5  2061.2  2061.9
451          RL                   0.07  2059.6
             *

452          KK  B532AL
453          KM        Retrieve split hydrograph D532AL
454          DR  D532AL
             *
             *
             * *
             * *  Routing Reach 532-578 is too short to route
             * *
             *
             *
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

455          KK   D578R
456          KM        Hydrograph diversion at C578
457          KM      Main flow continues on in right branch.
458          KM      Diverted flow is in the left branch, coded on DQ card.
459          DT   D578L
460          DI       0      40     100     170     280     450     820    1090    1250    1470
461          DQ       0      20      50      85     140     225     410     545     625     735
             *

462          KK  578573
463          KM   Normal depth channel route from C578 to C573
464          KM       Source:  Hydrology Field Reconnaissance, page 22
465          RS       5    FLOW      -1
466          RC   0.070   0.040   0.070    1857  0.0269
467          RX   980.0  1000.0  1035.0  1039.0  1060.0  1080.0  1100.0  1112.0
468          RY   100.8   100.0    99.6    98.4    98.3    99.5    99.3   100.6
469          RL                   0.62    98.3
             *

470          KK   D573R
471          KM        Hydrograph diversion at C573
472          KM      Main flow continues on in right branch.
473          KM      Diverted flow is in the left branch, coded on DQ card.
474          DT   D573L
475          DI       0      48     195     590    1000    1365    1845    2315    2585    2875
476          DQ       0       0      35     210     400     590     830    1100    1230    1360
             *

477          KK  573580
478          KM   Normal depth channel route from C573 to C580
479          KM       Source:  Hydrology Field Reconnaissance, page 22
480          RS       4    FLOW      -1
481          RC   0.070   0.040   0.070    1455  0.0261
482          RX   980.0  1000.0  1035.0  1039.0  1060.0  1080.0  1100.0  1112.0
483          RY   100.8   100.0    99.6    98.4    98.3    99.5    99.3   100.6
484          RL                   0.62    98.3
             *

485          KK    C580
486          KM     Combine hydrograph from C573R with routed hydrograph from C532L at C580
487          HC       2    5.18
             *

488          KK  580535
489          KM   Normal depth channel route from C580 to C535
490          KM       Source:  Hydrology Field Reconnaissance, page 22
491          RS      24    FLOW      -1
492          RC   0.070   0.040   0.070    9537  0.0254
493          RX  1025.0  1089.0  1132.0  1152.0  1180.0  1182.0  1184.0  1202.0
494          RY   102.0   100.3   100.3    99.6    99.5   100.3   101.0   102.0
495          RL                   0.07    99.5
             *
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

496          KK   B531L
497          KM        Retrieve split hydrograph D531L
498          DR   D531L
```

```
                *
 499            KK  531533
 500            KM   Normal depth channel route from C531 to C533
 501            KM       Source:  Hydrology Field Reconnaissance, page 11
 502            RS       6    FLOW      -1
 503            RC   0.070   0.040   0.070    3188  0.0270
 504            RX  1000.0  1025.0  1052.4  1080.0  1115.0  1159.0  1180.0  1200.0
 505            RY  2158.5  2158.0  2157.5  2155.9  2156.0  2157.1  2157.8  2158.5
 506            RL                    0.62  2155.9
                *

 507            KK   B578L
 508            KM        Retrieve split hydrograph D578L
 509            DR   D578L
                *
                * *
                * *       Routing Reach  578-533 is too short to route.
                * *
                *

 510            KK    C533
 511            KM     Combine routed hydrograph from C531L with hydrograph  from C578L at C533
 512            HC       2    5.18
                *

 513            KK  533579
 514            KM   Normal depth channel route from C533 to C579
 515            KM       Source:  Hydrology Field Reconnaissance, page 11
 516            RS       3    FLOW      -1
 517            RC   0.070   0.040   0.070    1524  0.0256
 518            RX  1000.0  1025.0  1052.4  1080.0  1115.0  1159.0  1180.0  1200.0
 519            RY  2158.5  2158.0  2157.5  2155.9  2156.0  2157.1  2157.8  2158.5
 520            RL                    0.62  2155.9
                *

 521            KK   B573L
 522            KM        Retrieve split hydrograph D573L
 523            DR   D573L
                *
                * *
                * *       Routing Reach  573-579 is too short to route.
                * *
                *

 524            KK    C579
 525            KM     Combine routed hydrograph from C533 with hydrograph from C573L at C579
 526            HC       2    5.18
                *
1                                          HEC-1 INPUT                                          PAGE 13

LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 527            KK  579534
 528            KM   Normal depth channel route from C579 to C534
 529            KM       Source:  Hydrology Field Reconnaissance, page 11
 530            RS       4    FLOW      -1
 531            RC   0.070   0.040   0.070    1310  0.0260
 532            RX  1000.0  1052.4  1161.2  1208.0  1225.3  1291.8  1416.0  1519.0
 533            RY  2158.5  2157.5  2157.0  2155.9  2156.0  2157.1  2157.8  2158.5
 534            RL                    0.62  2155.9
                *

 535            KK    511J
 536            KM   Sub-Basin   511J
 537            KM
 538            KM      The Phoenix Mountain S-Graph is used for this basin.
 539            KM          Lag Used =  14.3 minutes
 540            KM
 541            BA   0.119
 542            LG    0.35    0.35    3.81    0.65    0.00
 543            UI      28      28      28      65      96     123     164     182     203     220
 544            UI     251     306     332     222     192     172     163     151     141     132
 545            UI     122     113     105      94      84      74      69      66      63      59
 546            UI      51      46      40      36      36      31      31      30      22      22
 547            UI      22      22      16      14      14      14      14      14      14       5
 548            UI       5       5       5       5       5       5       5       5       5       5
 549            UI       5       5       5       5       5       5       0       0       0       0
 550            UI       0       0       0       0       0       0       0       0       0       0
                *
                *

 551            KK    C534
 552            KM     Combine routed hydrograph from C579 with runoff from 511J at C534
 553            HC       2    5.30
                *
                *

 554            KK   D534R
 555            KM        Hydrograph diversion at C534
 556            KM      Main flow continues on in right branch.
 557            KM      Diverted flow is in the left branch, coded on DQ card.
 558            DT   D534L
 559            DI       0     100     200     600    1000    1500    2000
 560            DQ       0      30      60     180     300     450     600
                *

 561            KK  534535
 562            KM   Normal depth channel route from C534 to C535
 563            KM       Source:  Hydrology Field Reconnaissance, page 18
 564            RS      17    FLOW      -1
 565            RC   0.070   0.040   0.070    9570  0.0246
 566            RX   960.0  1040.0  1075.0  1101.0  1136.0  1150.0  1190.0  1278.0
 567            RY  2161.0  2160.1  2159.8  2157.5  2158.1  2159.4  2159.9  2160.4
 568            RL                    0.39  2157.5
                *
1                                          HEC-1 INPUT                                          PAGE 14

LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 569            KK    511K
```

```
570          KM   Sub-Basin   511K
571          KM
572          KM      The Phoenix Mountain S-Graph is used for this basin.
573          KM          Lag Used =  34.2 minutes
574          KM
575          BA   0.791
576          LG    0.33    0.37    6.60    0.18    0.00
577          UI      78      78      78      78      78      78      78      96     224     224
578          UI     252     298     318     358     413     453     471     496     518     545
579          UI     568     585     604     625     660     719     769     855     919     993
580          UI     847     667     602     565     534     509     488     470     459     451
581          UI     440     426     408     399     389     376     370     358     345     331
582          UI     320     314     303     298     279     267     259     242     242     213
583          UI     206     206     193     190     190     184     179     179     176     163
584          UI     163     163     148     128     128     128     128     110      99      99
585          UI      99      99      99      93      85      85      85      85      85      85
586          UI      78      60      60      60      60      60      60      60      60      60
587          UI      60      38      38      38      38      38      38      38      38      38
588          UI      38      38      38      38      38      38      38      17      15      15
589          UI      15      15      15      15      15      15      15      15      15      15
590          UI      15      15      15      15      15      15      15      15      15      15
591          UI      15      15      15      15      15      15      15      15      15      15
592          UI      15      15      15      15      15      15      15      15       0       0
593          UI       0       0       0       0       0       0       0       0       0       0
             *

594          KK    C535
595          KM    Combine routed hydrographs from C534R and C580 with runoff from 511K at C535
596          HC       3    6.09
             *
             *

597          KK   D535L
598          KM        Hydrograph diversion at C535
599          KM      Main flow continues on in left branch.
600          KM      Diverted flow is in the right branch, coded on DQ card.
601          DT   D535R
602          DI       0     100     200     600    1000    1500
603          DQ       0      85     170     510     850    1275
             *

604          KK  535515
605          KM   Normal depth channel route from C535 to C515
606          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
607          RS       7    FLOW      -1
608          RC   0.065   0.045   0.065    2814  0.0237
609          RX  1000.0  1015.0  1095.0  1105.0  1145.0  1165.0  1375.0  1415.0
610          RY  1707.0  1706.0  1704.0  1702.0  1702.0  1704.0  1706.0  1707.0
611          RL                    0.33  1702.0
             *
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

612          KK    511L
613          KM   Sub-Basin   511L
614          KM
615          KM      The Phoenix Mountain S-Graph is used for this basin.
616          KM          Lag Used =  20.3 minutes
617          KM
618          BA   0.193
619          LG    0.35    0.35    4.35    0.44    0.00
620          UI      32      32      32      32      52      92     114     135     165     191
621          UI     206     223     238     251     272     311     362     395     295     240
622          UI     220     201     191     185     175     166     158     152     144     135
623          UI     129     123     112     105      99      85      83      78      77      74
624          UI      72      67      67      53      53      50      41      41      41      38
625          UI      35      35      35      32      25      25      25      25      25      23
626          UI      16      16      16      16      16      16      16      16      16       9
627          UI       6       6       6       6       6       6       6       6       6       6
628          UI       6       6       6       6       6       6       6       6       6       6
629          UI       6       6       6       0       0       0       0       0       0       0
630          UI       0       0       0       0       0       0       0       0       0       0
             *
             *

631          KK    C515
632          KM     Combine routed hydrograph from C535L with runoff from 511L at C515
633          HC       2    6.28
             *
             *

634          KK   D515R
635          KM        Hydrograph diversion at C515
636          KM      Main flow continues on in right branch.
637          KM      Diverted flow is in the left branch, coded on DQ card.
638          DT   D515L
639          DI       0      30     125     242     450     898    1110    1320    1570    1795
640          DQ       0      20     105     180     425     660     810     970    1160    1330
             *

641          KK  515575
642          KM   Normal depth channel route from C515 to C575
643          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
644          RS       4    FLOW      -1
645          RC   0.065   0.045   0.065    2236  0.0242
646          RX  1000.0  1027.0  1148.0  1156.0  1163.0  1173.0  1386.0  1411.0
647          RY  1712.7  1712.0  1710.0  1708.0  1708.0  1710.0  1712.0  1713.0
648          RL                    0.14  1708.0
             *

649          KK    511M
650          KM   Sub-Basin   511M
651          KM
652          KM      The Phoenix Mountain S-Graph is used for this basin.
653          KM          Lag Used =  15.5 minutes
654          KM
655          BA   0.083
```



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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
```

```
656          LG    0.35    0.37    5.20    0.30    0.00
657          UI      18      18      18      32      55      73      93     110     121     133
658          UI     143     164     197     216     150     127     114     107     101      94
659          UI      88      84      76      72      67      60      55      48      45      43
660          UI      42      39      37      30      30      24      23      23      20      20
661          UI      20      15      14      14      14      13       9       9       9       9
662          UI       9       9       9       4       3       3       3       3       3       3
663          UI       3       3       3       3       3       3       3       3       3       3
664          UI       3       0       0       0       0       0       0       0       0       0
665          UI       0       0       0       0       0       0       0       0       0       0
             *
             *

666          KK    C575
667          KM   Combine routed hydrographs from C515R and C574L with runoff from 511M at C575
668          HC       2    6.36
             *
             *

669          KK  575536
670          KM   Normal depth channel route from C575 to C536
671          KM       Source:  200 Scale 2' CI Mapping, Sheet 5
672          RS       7    FLOW      -1
673          RC   0.040   0.030   0.040    4398  0.0215
674          RX  1000.0  1033.0  1045.0  1072.0  1093.0  1103.0  1117.0  1135.0
675          RY  1644.0  1642.0  1640.0  1638.0  1638.0  1640.0  1642.0  1644.0
676          RL                    0.07  1638.0
             *

677          KK    511Q
678          KM   Sub-Basin   511Q
679          KM
680          KM      The Clark Unit Hydrograph is used for this basin.
681          KM          The Urban time-area relation is used for this basin.
682          KM
683          KM      Time of Concentration for this sub-basin is based on the following:
684          KM          6-Hour Rainfall, Pattern No.  1.00
685          KM          An rainfall areal reduction factor of 0.999
686          KM
687          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
688          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
689          KM   .49 .49 .49 .18 .14 .14 .06 .06 .06 .05 .05 .05 .00 .00 .00 .00 .00 .00
690          KM
691          KM          L=   0.959 miles, S=  121 feet/mile, Kb= .06
692          KM
693          BA   0.086
694          LG    0.15    0.16    7.30    0.13   17.50
695          UC   0.313   0.398
696          UA       0       5      16      30      65      77      84      90      94      97
697          UA     100
             *
```



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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

698          KK    511N
699          KM   Sub-Basin   511N
700          KM
701          KM      The Clark Unit Hydrograph is used for this basin.
702          KM          The Urban time-area relation is used for this basin.
703          KM
704          KM      Time of Concentration for this sub-basin is based on the following:
705          KM          6-Hour Rainfall, Pattern No.  1.00
706          KM          An rainfall areal reduction factor of 0.999
707          KM
708          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
709          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
710          KM   .49 .48 .48 .17 .14 .13 .06 .06 .05 .04 .04 .03 .00 .00 .00 .00 .00 .00
711          KM
712          KM          L=   0.836 miles, S=  114 feet/mile, Kb= .06
713          KM
714          BA   0.069
715          LG    0.18    0.18    7.00    0.15   12.90
716          UC   0.296   0.382
717          UA       0       5      16      30      65      77      84      90      94      97
718          UA     100
             *

719          KK    C536
720          KM    Combine runoff from 511Q and 511N with routed hydrograph from C575 at C536
721          HC       3
             *

722          KK  536545
723          KM   Normal depth channel route from C536 to C545
724          KM       Source:  200 Scale 2' CI Mapping, Sheet 5
725          RS      15    FLOW      -1
726          RC   0.070   0.045   0.070    3241  0.0162
727          RX  1000.0  1112.0  1196.0  1241.0  1256.0  1317.0  1406.0  1548.0
728          RY  1579.5  1576.9  1576.5  1576.0  1576.0  1576.8  1578.0  1579.5
729          RL                    0.24  1576.0
             *

730          KK    511O
731          KM   Sub-Basin   511O
732          KM
733          KM      The Clark Unit Hydrograph is used for this basin.
734          KM          The Natural time-area relation is used for this basin.
735          KM
736          KM      Time of Concentration for this sub-basin is based on the following:
737          KM          6-Hour Rainfall, Pattern No.  1.00
738          KM          An rainfall areal reduction factor of 0.999
739          KM
740          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
741          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
742          KM   .46 .45 .44 .12 .08 .06 .03 .03 .02 .00 .00 .00 .00 .00 .00 .00 .00 .00
743          KM
744          KM          L=   0.628 miles, S=   89 feet/mile, Kb= .06
745          KM
```



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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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```
746          BA   0.045
747          LG    0.35    0.39    6.20    0.20    0.30
748          UC   0.283   0.366
749          UA       0       3       5       8      12      20      43      75      90      96
750          UA     100
             *

751          KK   C545L
752          KM     Combine routed hydrograph from C536 with runoff from 5110 at C545L
753          HC       2
             *

754          KK   B532R
755          KM        Retrieve split hydrograph D532R
756          DR   D532R
             *

757          KK  532538
758          KM   Normal depth channel route from C532 to C538
759          KM       Source:  Hydrology Field Reconnaissance, page 7
760          RS      18    FLOW      -1
761          RC   0.070   0.040   0.070    7389  0.0267
762          RX  1000.0  1069.0  1086.0  1127.0  1146.0  1154.0  1227.0  1280.0
763          RY  2061.9  2060.8  2059.9  2059.5  2059.6  2060.5  2061.2  2062.0
764          RL                    0.12  2059.5
             *
             * ******************************************************************************
             * ******************************     Major Basin 510    ************************
             * ******************************************************************************
             *

765          KK    510A
766          KM   Sub-Basin   510A
767          KM
768          KM      The Phoenix Mountain S-Graph is used for this basin.
769          KM          Lag Used =  39.2 minutes
770          KM
771          BA   0.913
772          LG    0.35    0.39    6.20    0.20    0.00
773          UI      78      78      78      78      78      78      78      78      78     224
774          UI     225     225     290     301     331     361     410     451     474     487
775          UI     503     530     555     573     587     603     622     643     687     743
776          UI     782     867     921    1023     886     759     633     598     564     536
777          UI     516     499     475     467     462     451     440     429     413     408
778          UI     392     387     376     369     361     348     334     328     316     314
779          UI     301     301     276     269     265     244     244     234     207     207
780          UI     207     194     192     192     190     180     180     180     176     164
781          UI     164     164     164     131     129     129     129     129     116     100
782          UI     100     100     100     100     100      94      86      86      86      86
783          UI      86      86      86      81      60      60      60      60      60      60
784          UI      60      60      60      60      60      51      38      38      38      38
785          UI      38      38      38      38      38      38      38      38      38      38
786          UI      38      38      38      38      15      15      15      15      15      15
787          UI      15      15      15      15      15      15      15      15      15      15
788          UI      15      15      15      15      15      15      15      15      15      15
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

789          UI      15      15      15      15      15      15      15      15      15      15
790          UI      15      15      15      15      15      15      15      15      15      15
791          UI      15       0       0       0       0       0       0       0       0       0
792          UI       0       0       0       0       0       0       0       0       0       0
             *
             *

793          KK   D537L
794          KM        Hydrograph diversion at C537
795          KM      Main flow continues on in left branch.
796          KM      Diverted flow is in the right branch, coded on DQ card.
797          DT   D537R
798          DI       0      40     180     350     600     930    1155    1375    1630    1955
799          DQ       0      40     180     320     500     710     845     965    1110    1315
             *

800          KK  537538
801          KM   Normal depth channel route from C537 to C538
802          KM       Source:  Hydrology Field Reconnaissance, page 9
803          RS      14    FLOW      -1
804          RC   0.070   0.040   0.070    5132  0.0273
805          RX  1000.0  1049.0  1140.0  1248.0  1272.0  1295.0  1313.0  1331.0
806          RY  2063.0  2059.9  2060.8  2058.3  2058.2  2059.6  2061.3  2063.0
807          RL                    0.08  2058.2
             *

808          KK    510B
809          KM   Sub-Basin   510B
810          KM
811          KM      The Phoenix Mountain S-Graph is used for this basin.
812          KM          Lag Used =  33.9 minutes
813          KM
814          BA   0.359
815          LG    0.35    0.35    7.00    0.15    0.00
816          UI      36      36      36      36      36      36      36      50     103     103
817          UI     120     137     149     164     196     210     217     228     240     253
818          UI     262     270     279     289     308     336     363     400     437     439
819          UI     361     288     270     254     241     228     219     213     209     205
820          UI     197     192     186     179     176     171     166     164     152     150
821          UI     144     142     137     134     122     122     111     111     104      94
822          UI      94      91      87      87      86      82      82      82      75      75
823          UI      75      71      59      59      59      59      53      46      46      46
824          UI      46      46      43      39      39      39      39      39      39      36
825          UI      27      27      27      27      27      27      27      27      27      27
826          UI      17      17      17      17      17      17      17      17      17      17
827          UI      17      17      17      17      17      16       7       7       7       7
828          UI       7       7       7       7       7       7       7       7       7       7
829          UI       7       7       7       7       7       7       7       7       7       7
830          UI       7       7       7       7       7       7       7       7       7       7
831          UI       7       7       7       7       7       7       0       0       0       0
832          UI       0       0       0       0       0       0       0       0       0       0
             *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 833          KK    C538
 834          KM   Combine routed hydrographs from C532R and C537L with runoff from 510B at C538
 835          HC       3    5.18
              *

 836          KK  538540
 837          KM   Normal depth channel route from C538 to C540
 838          KM       Source:  Hydrology Field Reconnaissance, page 19
 839          RS      37    FLOW      -1
 840          RC   0.070   0.040   0.070   11259  0.0264
 841          RX  1000.0  1037.0  1107.0  1108.0  1116.0  1120.0  1145.0  1375.0
 842          RY   100.5    97.9    97.9    97.4    97.5    98.2    98.7   100.5
 843          RL                    0.10    97.4
              *

 844          KK   B537R
 845          KM        Retrieve split hydrograph D537R
 846          DR   D537R
              *

 847          KK  537577
 848          KM   Normal depth channel route from C537 to C577
 849          KM       Source:  Hydrology Field Reconnaissance,  page 9
 850          RS       9    FLOW      -1
 851          RC   0.070   0.040   0.070    4714  0.0278
 852          RX   960.0   980.0  1000.0  1032.0  1068.0  1100.0  1189.0  1224.0
 853          RY  2061.0  2060.3  2059.6  2057.5  2057.3  2058.8  2060.0  2061.0
 854          RL                    0.23  2057.3
              *

 855          KK    509D
 856          KM   Sub-Basin   509D
 857          KM
 858          KM      The Phoenix Mountain S-Graph is used for this basin.
 859          KM          Lag Used =  33.8 minutes
 860          KM
 861          BA   0.337
 862          LG    0.35    0.40    6.00    0.22    0.00
 863          UI      34      34      34      34      34      34      34      47      97      97
 864          UI     113     129     141     154     185     197     205     214     226     238
 865          UI     247     254     263     272     291     317     343     377     413     411
 866          UI     337     271     253     239     227     214     206     201     197     193
 867          UI     185     180     175     168     165     161     156     154     143     141
 868          UI     135     133     129     125     115     115     104     104      97      89
 869          UI      89      85      82      82      80      77      77      77      70      70
 870          UI      70      66      55      55      55      55      49      43      43      43
 871          UI      43      43      40      37      37      37      37      37      37      33
 872          UI      26      26      26      26      26      26      26      26      26      24
 873          UI      16      16      16      16      16      16      16      16      16      16
 874          UI      16      16      16      16      16      14       6       6       6       6
 875          UI       6       6       6       6       6       6       6       6       6       6
 876          UI       6       6       6       6       6       6       6       6       6       6
 877          UI       6       6       6       6       6       6       6       6       6       6
 878          UI       6       6       6       6       6       6       0       0       0       0
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 879          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

 880          KK   D539L
 881          KM       Hydrograph diversion at C539
 882          KM      Main flow continues on in left branch.
 883          KM      Diverted flow is in the right branch, coded on DQ card.
 884          DT   D539R
 885          DI       0      16     135     293     487     603     720     855
 886          DQ       0       8      50     102     170     203     240     280
              *

 887          KK  539577
 888          KM   Normal depth channel route from C539 to C577
 889          KM       Source:  Hydrology Field Reconnaissance, page 5
 890          RS       4    FLOW      -1
 891          RC   0.070   0.040   0.070    1292  0.0302
 892          RX   920.0  1000.0  1061.0  1091.0  1134.0  1224.0  1307.0  1390.0
 893          RY  2004.0  2003.5  2002.8  2001.5  2001.6  2002.5  2003.2  2004.0
 894          RL                    0.07  2001.5
              *

 895          KK    C577
 896          KM    Combine routed hydrographs from C537R and C539L at C577
 897          HC       2    1.25
              *

 898          KK  577540
 899          KM   Normal depth channel route from C577 to C540
 900          KM       Source:  Hydrology Field Reconnaissance,  page 9
 901          RS      23    FLOW      -1
 902          RC   0.070   0.040   0.070   11694  0.0262
 903          RX   960.0   980.0  1000.0  1032.0  1068.0  1100.0  1189.0  1224.0
 904          RY  2061.0  2060.3  2059.6  2057.5  2057.3  2058.8  2060.0  2061.0
 905          RL                    0.13  2057.3
              *

 906          KK    510C
 907          KM   Sub-Basin   510C
 908          KM
 909          KM      The Phoenix Mountain S-Graph is used for this basin.
 910          KM          Lag Used =  46.9 minutes
 911          KM
 912          BA   0.851
 913          LG    0.30    0.39    6.20    0.19    0.00
 914          UI      61      61      61      61      61      61      61      61      61      61
 915          UI      86     176     176     176     203     234     234     265     281     303
 916          UI     351     360     370     384     391     413     423     439     452     460
 917          UI     469     485     496     516     547     586     611     665     701     750
 918          UI     788     679     591     501     469     450     436     413     401     391
 919          UI     373     369     360     358     351     345     335     329     320     315
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 920          UI     306     303     293     293     282     281     269     260     260     247
 921          UI     247     242     234     234     220     210     210     201     190     190
 922          UI     190     163     162     162     162     151     150     150     150     145
1                                          HEC-1 INPUT                                          PAGE 22

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 923          UI     141     141     141     141     130     128     128     128     128     110
 924          UI     100     100     100     100     100      99      78      78      78      78
 925          UI      78      78      78      78      71      67      67      67      67      67
 926          UI      67      67      67      67      51      47      47      47      47      47
 927          UI      47      47      47      47      47      47      47      47      34      30
 928          UI      30      30      30      30      30      30      30      30      30      30
 929          UI      30      30      30      30      30      30      30      30      30      30
 930          UI      17      12      12      12      12      12      12      12      12      12
 931          UI      12      12      12      12      12      12      12      12      12      12
 932          UI      12      12      12      12      12      12      12      12      12      12
 933          UI      12      12      12      12      12      12      12      12      12      12
 934          UI      12      12      12      12      12      12      12      12      12      12
 935          UI      12      12      12      12      12      12       0       0       0       0
 936          UI       0       0       0       0       0       0       0       0       0       0
              *

 937          KK    C540
 938          KM     Combine hydrographs  from C538, C539L and runoff from 510C at C540
 939          HC       3
              *

 940          KK  540542
 941          KM   Normal depth channel route from C540 to C542
 942          KM       Source:  200 Scale 2' CI Mapping, Sheet 5
 943          RS       4    FLOW      -1
 944          RC   0.065   0.045   0.055    1205  0.0172
 945          RX  1000.0  1031.0  1208.0  1225.0  1255.0  1283.0  1338.0  1393.0
 946          RY  1662.0  1660.0  1659.4  1658.0  1658.0  1660.0  1661.0  1662.0
 947          RL                    0.15  1658.0
              *

 948          KK    510F
 949          KM   Sub-Basin   510F
 950          KM
 951          KM      The Clark Unit Hydrograph is used for this basin.
 952          KM          The HEC-1 time-area relation is used for this basin.
 953          KM
 954          KM      Time of Concentration for this sub-basin is based on the following:
 955          KM          6-Hour Rainfall, Pattern No.   1.00
 956          KM          An rainfall areal reduction factor of 0.999
 957          KM
 958          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
 959          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
 960          KM   .46 .46 .45 .14 .10 .09 .04 .04 .03 .01 .01 .01 .00 .00 .00 .00 .00 .00
 961          KM
 962          KM          L=   0.783 miles, S=  127 feet/mile, Kb= .08
 963          KM
 964          BA   0.115
 965          LG    0.26    0.36    6.00    0.20    6.00
 966          UC   0.342   0.317
              *
              *
1                                          HEC-1 INPUT                                          PAGE 23

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 967          KK    C542
 968          KM     Combine routed hydrograph from C540 with runoff from 510F at C542
 969          HC       2
              *

 970          KK  542543
 971          KM   Normal depth channel route from C542 to C543
 972          KM       Source:  200 Scale 2' CI Mapping, Sheet 5
 973          RS       2    FLOW      -1
 974          RC   0.030   0.030   0.030    1600  0.0165
 975          RX  1000.0  1008.0  1049.0  1068.0  1103.0  1108.0  1133.0  1143.0
 976          RY  1636.0  1634.0  1633.0  1632.0  1632.0  1633.0  1634.0  1636.0
 977          RL                    0.07  1632.0
              *
              *

 978          KK   B535R
 979          KM        Retrieve split hydrograph D535R
 980          DR   D535R
              *
              *

 981          KK   D574L
 982          KM        Hydrograph diversion at C574
 983          KM      Main flow continues on in left branch.
 984          KM      Diverted flow is in the right branch, coded on DQ card.
 985          DT   D574R
 986          DI       0      25     135     430     860    1550    1960    2525    3100    3740
 987          DQ       0       0      25      80     200     400     490     700     900    1140
              *

 988          KK  574582
 989          KM   Normal depth channel route from C574 to C582
 990          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
 991          RS       6    FLOW      -1
 992          RC   0.065   0.045   0.065    3140  0.0245
 993          RX  1000.0  1040.0  1095.0  1110.0  1170.0  1190.0  1225.0  1260.0
 994          RY  1750.0  1748.0  1748.0  1746.0  1746.0  1748.0  1749.0  1750.0
 995          RL                    0.39  1746.0
              *

 996          KK   B574R
 997          KM        Retrieve split hydrograph D574R
 998          DR   D574R
              *
              *

 999          KK  574541
1000          KM   Normal depth channel route from C574 to C541
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1001          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
1002          RS       6    FLOW      -1
1003          RC   0.065   0.045   0.065    1821  0.0220
1004          RX  1000.0  1040.0  1067.0  1112.0  1190.0  1245.0  1329.0  1357.0
1005          RY  1773.0  1772.0  1771.0  1770.0  1770.0  1771.0  1772.0  1773.0
1                                          HEC-1 INPUT                                                          PAGE 24

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1006          RL                    0.39  1770.0
              *

1007          KK    510D
1008          KM   Sub-Basin   510D
1009          KM
1010          KM      The Clark Unit Hydrograph is used for this basin.
1011          KM          The Natural time-area relation is used for this basin.
1012          KM
1013          KM      Time of Concentration for this sub-basin is based on the following:
1014          KM          6-Hour Rainfall, Pattern No.  1.00
1015          KM          An rainfall areal reduction factor of 0.999
1016          KM
1017          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1018          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1019          KM   .46 .45 .45 .13 .10 .08 .04 .03 .03 .00 .00 .00 .00 .00 .00 .00 .00 .00
1020          KM
1021          KM          L=   0.595 miles, S=  305 feet/mile, Kb= .11
1022          KM
1023          BA   0.059
1024          LG    0.21    0.38    5.40    0.22    0.00
1025          UC   0.250   0.264
1026          UA       0       3       5       8      12      20      43      75      90      96
1027          UA     100
              *
              *

1028          KK    C541
1029          KM     Combine routed hydrograph from C574R with runoff from 510D at C541
1030          HC       2    6.15
              *

1031          KK  541582
1032          KM   Normal depth channel route from C541 to C582
1033          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
1034          RS       7    FLOW      -1
1035          RC   0.065   0.045   0.065    1707  0.0218
1036          RX  1000.0  1053.0  1167.0  1189.0  1207.0  1224.0  1285.0  1316.0
1037          RY  1699.0  1698.0  1696.7  1696.0  1696.0  1696.8  1698.0  1699.0
1038          RL                    0.07  1696.0
              *

1039          KK    C582
1040          KM     Combine routed hydrographs from C541 and C574L at C582
1041          HC       2    6.15
              *

1042          KK  582543
1043          KM   Normal depth channel route from C582 to C543
1044          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
1045          RS      13    FLOW      -1
1046          RC   0.065   0.045   0.065    4020  0.0226
1047          RX  1000.0  1053.0  1167.0  1189.0  1207.0  1224.0  1285.0  1316.0
1048          RY  1699.0  1698.0  1696.7  1696.0  1696.0  1696.8  1698.0  1699.0
1049          RL                    0.07  1696.0
              *
1                                          HEC-1 INPUT                                                          PAGE 25

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1050          KK    510E
1051          KM   Sub-Basin   510E
1052          KM
1053          KM      The Clark Unit Hydrograph is used for this basin.
1054          KM          The HEC-1 time-area relation is used for this basin.
1055          KM
1056          KM      Time of Concentration for this sub-basin is based on the following:
1057          KM          6-Hour Rainfall, Pattern No.  1.00
1058          KM          An rainfall areal reduction factor of 0.998
1059          KM
1060          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1061          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1062          KM   .48 .48 .48 .16 .13 .12 .06 .05 .05 .03 .03 .01 .00 .00 .00 .00 .00 .00
1063          KM
1064          KM          L=   1.276 miles, S=  123 feet/mile, Kb= .07
1065          KM
1066          BA   0.182
1067          LG    0.23    0.25    7.00    0.14   10.00
1068          UC   0.425   0.459
              *

1069          KK    C543
1070          KM     Combine routed hydrographs from C542 and C582 with runoff from 510E at C543
1071          HC       3
              *

1072          KK  543545
1073          KM   Normal depth channel route from C543 to C545
1074          KM       Source:  200 Scale 2' CI Mapping, Sheet 5
1075          RS      12    FLOW      -1
1076          RC   0.065   0.030   0.065    5179  0.0162
1077          RX  1000.0  1001.0  1002.0  1003.0  1075.0  1076.0  1077.0  1078.0
1078          RY  1616.0  1614.0  1612.0  1610.0  1610.0  1612.0  1614.0  1616.0
1079          RL                    0.33  1610.0
              *

1080          KK    510G
1081          KM   Sub-Basin   510G
1082          KM
1083          KM      The Clark Unit Hydrograph is used for this basin.
1084          KM          The HEC-1 time-area relation is used for this basin.
1085          KM
1086          KM      Time of Concentration for this sub-basin is based on the following:
```

```
1087          KM          6-Hour Rainfall, Pattern No.  1.00
1088          KM          An rainfall areal reduction factor of 0.998
1089          KM
1090          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1091          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1092          KM   .47 .46 .46 .14 .11 .10 .04 .04 .04 .01 .01 .01 .00 .00 .00 .00 .00 .00
1093          KM
1094          KM          L=   1.094 miles, S=   87 feet/mile, Kb= .05
1095          KM
1096          BA   0.179
1097          LG    0.23    0.33    5.70    0.22   12.90
1                                        HEC-1 INPUT                                                    PAGE 26

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1098          UC   0.358   0.339
              *

1099          KK   C545R
1100          KM     Combine routed hydrograph from C543 with runoff from 510G at C545R
1101          HC       2
              *

1102          KK    C545
1103          KM     Combine hyrographs C545L and C545R at C545
1104          KM                Confluence of washes 10 and 11
1105          HC       2
              *

1106          KK  545546
1107          KM   Normal depth channel route from C545 to C546
1108          KM       Source:  200 Scale 2' CI Mapping, Sheet 6
1109          RS       6    FLOW      -1
1110          RC   0.065   0.042   0.065    3093  0.0120
1111          RX  1000.0  1046.0  1093.0  1099.0  1156.0  1245.0  1338.0  1358.0
1112          RY  1522.0  1520.0  1518.0  1516.0  1516.0  1517.5  1518.0  1522.0
1113          RL                    0.04  1516.0
              *

1114          KK    511P
1115          KM   Sub-Basin   511P
1116          KM
1117          KM      The Clark Unit Hydrograph is used for this basin.
1118          KM          The HEC-1 time-area relation is used for this basin.
1119          KM
1120          KM      Time of Concentration for this sub-basin is based on the following:
1121          KM          6-Hour Rainfall, Pattern No.  1.00
1122          KM          An rainfall areal reduction factor of 0.996
1123          KM
1124          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1125          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1126          KM   .49 .48 .48 .17 .13 .12 .06 .06 .05 .04 .03 .01 .00 .00 .00 .00 .00 .00
1127          KM
1128          KM          L=   1.650 miles, S=   86 feet/mile, Kb= .05
1129          KM
1130          BA   0.314
1131          LG    0.31    0.25    8.80    0.08    3.40
1132          UC   0.458   0.450
              *

1133          KK    502A
1134          KM   Sub-Basin   502A
1135          KM
1136          KM      The Clark Unit Hydrograph is used for this basin.
1137          KM          The Natural time-area relation is used for this basin.
1138          KM
1139          KM      Time of Concentration for this sub-basin is based on the following:
1140          KM          6-Hour Rainfall, Pattern No.  1.00
1141          KM          An rainfall areal reduction factor of 0.999
1142          KM
1                                        HEC-1 INPUT                                                    PAGE 27

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1143          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1144          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1145          KM   .49 .49 .48 .17 .13 .13 .06 .06 .06 .04 .03 .01 .00 .00 .00 .00 .00 .00
1146          KM
1147          KM          L=   0.393 miles, S=  114 feet/mile, Kb= .06
1148          KM
1149          BA   0.040
1150          LG    0.35    0.25    9.70    0.06    0.00
1151          UC   0.196   0.179
1152          UA       0       3       5       8      12      20      43      75      90      96
1153          UA     100
              *

1154          KK    C546
1155          KM     Combine routed hydrograph from C545 with runoff from 511P and 502A at C546
1156          HC       3
              *
              *
              *
              * ******************************************************************************
              * ******************************     Major Basin 509    ************************
              * ******************************************************************************
              *

1157          KK    509A
1158          KM   Sub-Basin   509A
1159          KM
1160          KM      The Phoenix Mountain S-Graph is used for this basin.
1161          KM          Lag Used =  43.8 minutes
1162          KM
1163          BA   0.573
1164          LG    0.30    0.35    6.40    0.18    4.60
1165          UI      44      44      44      44      44      44      44      44      44      44
1166          UI     119     126     126     144     169     169     195     202     232     253
1167          UI     264     269     281     291     299     316     323     330     337     349
1168          UI     358     376     401     427     453     491     520     575     508     450
1169          UI     361     340     326     313     298     287     280     266     263     259
1170          UI     255     253     241     240     230     228     220     218     211     210
1171          UI     202     202     189     187     182     177     177     169     169     162
```

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1172        UI     151     151     145     137     137     133     116     116     116     113
1173        UI     108     108     108     106     101     101     101     101      93      92
1174        UI      92      92      91      72      72      72      72      72      72      58
1175        UI      56      56      56      56      56      56      56      48      48      48
1176        UI      48      48      48      48      48      48      37      34      34      34
1177        UI      34      34      34      34      34      34      34      34      34      26
1178        UI      22      22      22      22      22      22      22      22      22      22
1179        UI      22      22      22      22      22      22      22      22      22      21
1180        UI       8       8       8       8       8       8       8       8       8       8
1181        UI       8       8       8       8       8       8       8       8       8       8
1182        UI       8       8       8       8       8       8       8       8       8       8
1183        UI       8       8       8       8       8       8       8       8       8       8
1184        UI       8       8       8       8       8       8       8       8       8       8
1185        UI       8       8       0       0       0       0       0       0       0       0
1186        UI       0       0       0       0       0       0       0       0       0       0
            *
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1187        KK  552553
1188        KM   Normal depth channel route from C552 to C553
1189        KM       Source:  Hydrology Field Reconnaissance, page 15
1190        RS      40    FLOW      -1
1191        RC   0.070   0.040   0.070   17590  0.0238
1192        RX  1000.0  1034.0  1074.0  1079.0  1090.0  1096.0  1130.0  1163.0
1193        RY  2394.8  2394.1  2391.8  2390.8  2390.7  2391.7  2393.8  2395.4
1194        RL                   0.18  2390.7
            *

1195        KK    509B
1196        KM   Sub-Basin   509B
1197        KM
1198        KM      The Phoenix Mountain S-Graph is used for this basin.
1199        KM          Lag Used =  44.6 minutes
1200        KM
1201        BA   0.637
1202        LG    0.35    0.36    5.10    0.31    0.00
1203        UI      48      48      48      48      48      48      48      48      48      48
1204        UI     115     138     138     147     184     184     203     221     236     277
1205        UI     284     291     304     311     326     339     349     357     367     376
1206        UI     385     395     425     455     476     515     548     583     622     533
1207        UI     458     391     369     350     338     326     309     303     291     287
1208        UI     284     278     276     264     261     252     249     241     239     231
1209        UI     230     221     221     208     205     201     194     194     186     184
1210        UI     181     165     165     162     150     150     150     129     127     127
1211        UI     127     118     118     118     118     112     111     111     111     107
1212        UI     101     101     101     101      91      79      79      79      79      79
1213        UI      75      61      61      61      61      61      61      61      60      53
1214        UI      53      53      53      53      53      53      53      53      39      37
1215        UI      37      37      37      37      37      37      37      37      37      37
1216        UI      37      31      24      24      24      24      24      24      24      24
1217        UI      24      24      24      24      24      24      24      24      24      24
1218        UI      24      24      16       9       9       9       9       9       9       9
1219        UI       9       9       9       9       9       9       9       9       9       9
1220        UI       9       9       9       9       9       9       9       9       9       9
1221        UI       9       9       9       9       9       9       9       9       9       9
1222        UI       9       9       9       9       9       9       9       9       9       9
1223        UI       9       9       9       9       9       9       0       0       0       0
1224        UI       0       0       0       0       0       0       0       0       0       0
            *
            *

1225        KK    C553
1226        KM     Combine routed hydrograph from C552 with runoff from 509B at C553
1227        HC       2
            *
            *
```



```
LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1228        KK   D553L
1229        KM        Hydrograph diversion at C553
1230        KM      Main flow continues on in left branch.
1231        KM      Diverted flow is in the right branch, coded on DQ card.
1232        DT   D553R
1233        DI       0      37     145     393     650     970    1370    1815    2120    2290
1234        DQ       0      20      75     193     305     460     660     885    1070    1210
            *

1235        KK  553554
1236        KM   Normal depth channel route from C553 to C554
1237        KM       Source:  Hydrology Field Reconnaissance, page 2
1238        RS       9    FLOW      -1
1239        RC   0.070   0.040   0.070    2350  0.0264
1240        RX  1000.0  1019.0  1038.0  1044.0  1060.0  1118.0  1222.0  1335.0
1241        RY  1877.9  1877.5  1877.1  1875.7  1875.7  1877.1  1876.7  1877.8
1242        RL                   0.07  1875.7
            *

1243        KK    509C
1244        KM   Sub-Basin   509C
1245        KM
1246        KM      The Phoenix Mountain S-Graph is used for this basin.
1247        KM          Lag Used =  21.1 minutes
1248        KM
1249        BA   0.147
1250        LG    0.35    0.38    6.40    0.19    0.00
1251        UI      23      23      23      23      29      67      77      93     110     136
1252        UI     145     155     169     177     188     208     237     272     280     202
1253        UI     173     158     146     139     135     128     122     116     111     107
1254        UI      99      95      91      86      80      73      68      62      59      57
1255        UI      55      54      51      49      47      38      38      37      30      30
1256        UI      30      28      26      26      26      26      18      18      18      18
1257        UI      18      18      14      11      11      11      11      11      11      11
1258        UI      11      11       7       4       4       4       4       4       4       4
1259        UI       4       4       4       4       4       4       4       4       4       4
1260        UI       4       4       4       4       4       4       4       0       0       0
1261        UI       0       0       0       0       0       0       0       0       0       0
            *
```

```
                 *
1262             KK    C554
1263             KM     Combine routed hydrograph from C553L with runoff from 509C at C554
1264             HC       2    1.36
                 *
                 *

1265             KK   D554L
1266             KM        Hydrograph diversion at C554
1267             KM      Main flow continues on in left branch.
1268             KM      Diverted flow is in the right branch, coded on DQ card.
1269             DT   D554R
1270             DI       0      30     144     316     500     854    1290    1840    2150    2500
1271             DQ       0      20     104     210     310     534     810    1120    1310    1520
                 *
1                                          HEC-1 INPUT                                          PAGE 30

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1272             KK  554555
1273             KM   Normal depth channel route from C554 to C555
1274             KM       Source:  Hydrology Field Reconnaissance, page 2
1275             RS       3    FLOW      -1
1276             RC   0.070   0.040   0.070    1086  0.0267
1277             RX  1000.0  1019.0  1038.0  1044.0  1060.0  1118.0  1222.0  1335.0
1278             RY  1877.9  1877.5  1877.1  1875.7  1875.7  1877.1  1876.7  1877.8
1279             RL                     0.07  1875.7
                 *

1280             KK    509E
1281             KM   Sub-Basin   509E
1282             KM
1283             KM      The Phoenix Mountain S-Graph is used for this basin.
1284             KM          Lag Used =  24.6 minutes
1285             KM
1286             BA   0.190
1287             LG    0.35    0.35    7.00    0.15    0.00
1288             UI      26      26      26      26      26      42      75      84      99     117
1289             UI     139     154     163     174     188     195     204     218     243     272
1290             UI     307     315     237     198     182     170     160     154     150     144
1291             UI     137     132     127     123     118     110     106     103      99      90
1292             UI      87      81      76      69      67      63      63      60      60      57
1293             UI      54      54      45      43      43      40      33      33      33      33
1294             UI      29      28      28      28      28      22      20      20      20      20
1295             UI      20      20      18      13      13      13      13      13      13      13
1296             UI      13      13      13      13       7       5       5       5       5       5
1297             UI       5       5       5       5       5       5       5       5       5       5
1298             UI       5       5       5       5       5       5       5       5       5       5
1299             UI       5       5       5       0       0       0       0       0       0       0
1300             UI       0       0       0       0       0       0       0       0       0       0
                 *
                 *

1301             KK   B539R
1302             KM        Retrieve split hydrograph D539R
1303             DR   D539R
                 *

1304             KK  539555
1305             KM   Normal depth channel route from C539 to C555
1306             KM       Source:  Hydrology Field Reconnaissance, page 5
1307             RS      16    FLOW      -1
1308             RC   0.070   0.040   0.070    4876  0.0285
1309             RX  1034.0  1046.0  1082.0  1091.0  1116.0  1165.0  1203.0  1250.0
1310             RY  2003.4  2002.9  2002.3  2001.6  2001.6  2002.4  2002.9  2003.4
1311             RL                     0.07  2001.6
                 *
1                                          HEC-1 INPUT                                          PAGE 31

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1312             KK    C555
1313             KM     Combine hydrographs from C554L and C539R with runoff from 509E at C555
1314             HC       3    1.88
                 *

1315             KK  555557
1316             KM   Normal depth channel route from C555 to C557
1317             KM       Source:  Hydrology Field Reconnaissance,  page 5
1318             RS       9    FLOW      -1
1319             RC   0.070   0.040   0.070    5621  0.0258
1320             RX  1123.0  1138.0  1154.0  1161.0  1186.0  1197.0  1262.0  1350.0
1321             RY  1876.1  1874.3  1872.5  1871.0  1871.0  1872.6  1873.2  1876.0
1322             RL                     0.07  1871.0
                 *

1323             KK   B553R
1324             KM        Retrieve split hydrograph D553R
1325             DR   D553R
                 *

1326             KK  553556
1327             KM   Normal depth channel route from C553 to C556
1328             KM       Source:  Hydrology Field Reconnaissance,  page 2
1329             RS       8    FLOW      -1
1330             RC   0.070   0.040   0.070    2769  0.0289
1331             RX   960.0  1027.0  1050.0  1060.0  1073.0  1077.0  1091.0  1149.0
1332             RY  1940.0  1937.3  1937.7  1937.0  1937.2  1938.2  1938.3  1939.8
1333             RL                     0.07  1937.0
                 *

1334             KK   B554R
1335             KM        Retrieve split hydrograph D554R
1336             DR   D554R
                 *
                 * *
                 * *       Routing Reach  554-556 is too short to route.
                 * *
                 *
```

```
1337          KK    C556
1338          KM     Combine routed hydrograph from C553R with hydrograph from C554R at C556
1339          HC       2    1.36
              *

1340          KK  556558
1341          KM   Normal depth channel route from C556 to C558
1342          KM       Source:  Hydrology Field Reconnaissance,  page 4
1343          RS      11    FLOW      -1
1344          RC   0.070   0.040   0.070    4703  0.0215
1345          RX  1123.0  1138.0  1154.0  1161.0  1186.0  1197.0  1262.0  1350.0
1346          RY  1876.1  1874.3  1872.5  1871.0  1871.0  1872.6  1873.2  1876.0
1347          RL                    0.15  1871.0
              *
1                                          HEC-1 INPUT                                                    PAGE 32

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1348          KK    509F
1349          KM   Sub-Basin   509F
1350          KM
1351          KM      The Phoenix Mountain S-Graph is used for this basin.
1352          KM          Lag Used =  22.8 minutes
1353          KM
1354          BA   0.201
1355          LG    0.35    0.37    6.60    0.18    0.00
1356          UI      30      30      30      30      30      71      85     111     126     150
1357          UI     175     185     198     215     224     236     254     289     330     371
1358          UI     304     234     212     196     183     176     171     163     155     148
1359          UI     143     137     130     123     119     113     105     100      92      85
1360          UI      78      75      72      71      68      67      62      62      54      49
1361          UI      49      44      38      38      38      36      32      32      32      32
1362          UI      28      23      23      23      23      23      23      18      14      14
1363          UI      14      14      14      14      14      14      14      14       7       6
1364          UI       6       6       6       6       6       6       6       6       6       6
1365          UI       6       6       6       6       6       6       6       6       6       6
1366          UI       6       6       6       6       6       0       0       0       0       0
1367          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

1368          KK    C558
1369          KM     Combine routed hydrograph from C556 with runoff from 509F at C558
1370          HC       2
              *
              *

1371          KK   D558L
1372          KM        Hydrograph diversion at C558
1373          KM      Main flow continues on in left branch.
1374          KM      Diverted flow is in the right branch, coded on DQ card.
1375          DT   D558R
1376          DI       0      26     160     304     475     835    1318    1900    2260    2625
1377          DQ       0      10      70     126     195     375     638     960    1160    1345
              *

1378          KK  558557
1379          KM   Normal depth channel route from C558 to C557
1380          KM       Source:  Hydrology Field Reconnaissance,  page 4
1381          RS       3    FLOW      -1
1382          RC   0.070   0.040   0.070    1564  0.0352
1383          RX  1000.0  1030.0  1060.0  1066.0  1111.0  1118.0  1170.0  1223.0
1384          RY  1733.8  1733.2  1732.6  1731.7  1732.0  1733.2  1733.5  1733.8
1385          RL                    0.15  1731.7
              *

1386          KK    509G
1387          KM   Sub-Basin   509G
1388          KM
1389          KM      The Phoenix Mountain S-Graph is used for this basin.
1390          KM          Lag Used =  19.0 minutes
1391          KM
1                                          HEC-1 INPUT                                                    PAGE 33

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1392          BA   0.094
1393          LG    0.35    0.36    6.80    0.16    0.00
1394          UI      17      17      17      17      36      49      63      76      96     103
1395          UI     112     121     129     139     159     187     202     147     122     110
1396          UI     102      97      93      88      84      80      76      70      67      64
1397          UI      58      54      51      44      42      40      39      38      36      35
1398          UI      30      27      27      21      21      21      20      18      18      18
1399          UI      15      13      13      13      13      13       9       8       8       8
1400          UI       8       8       8       8       8       4       3       3       3       3
1401          UI       3       3       3       3       3       3       3       3       3       3
1402          UI       3       3       3       3       3       3       3       0       0       0
1403          UI       0       0       0       0       0       0       0       0       0       0
              *

1404          KK    C557
1405          KM    Combine routed hydrographs from C555 and C558L with runoff from 509G at C557
1406          HC       3    2.18
              *
              *

1407          KK   D557R
1408          KM        Hydrograph diversion at C557
1409          KM      Main flow continues on in right branch.
1410          KM      Diverted flow is in the left branch, coded on DQ card.
1411          DT   D557L
1412          DI       0      19     120     225     412     735    1280    1840    2190    2620
1413          DQ       0       0       0       0      32     135     380     680     870    1120
              *

1414          KK  557565
1415          KM   Normal depth channel route from C557 to C565
1416          KM       Source:  Hydrology Field Reconnaissance,  page 5
1417          RS      13    FLOW      -1
1418          RC   0.070   0.040   0.070    3901  0.0217
1419          RX  1000.0  1104.0  1148.0  1178.0  1185.0  1213.0  1320.0  1350.0
1420          RY  1724.7  1721.4  1722.8  1721.2  1721.2  1723.0  1723.6  1725.0
```

```
1421          RL                    0.07  1721.2
              *

1422          KK    509M
1423          KM   Sub-Basin   509M
1424          KM
1425          KM      The Clark Unit Hydrograph is used for this basin.
1426          KM          The HEC-1 time-area relation is used for this basin.
1427          KM
1428          KM      Time of Concentration for this sub-basin is based on the following:
1429          KM          6-Hour Rainfall, Pattern No.   1.00
1430          KM          An rainfall areal reduction factor of 0.999
1431          KM
1432          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1433          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1434          KM   .45 .44 .44 .12 .08 .06 .03 .03 .02 .00 .00 .00 .00 .00 .00 .00 .00 .00
1435          KM
1436          KM          L=   0.857 miles, S=  120 feet/mile, Kb= .08
1437          KM
1                                        HEC-1 INPUT                                                    PAGE 34

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1438          BA   0.104
1439          LG    0.33    0.38    5.70    0.24    1.70
1440          UC   0.383   0.410
              *
              *

1441          KK    C565
1442          KM     Combine routed hydrograph from C557R with runoff from 509M at C565
1443          HC       2    2.28
              *

1444          KK  565566
1445          KM   Normal depth channel route from C565 to C566
1446          KM       Source:  200 Scale 2' CI Mapping, Sheet 3
1447          RS       2    FLOW      -1
1448          RC   0.030   0.030   0.030    1757  0.0197
1449          RX  1000.0  1074.0  1120.0  1158.0  1183.0  1193.0  1204.0  1243.0
1450          RY  1618.0  1616.0  1614.0  1612.0  1612.0  1614.0  1616.0  1618.0
1451          RL                    0.15  1612.0
              *
              *

1452          KK   B557L
1453          KM        Retrieve split hydrograph D557L
1454          DR   D557L
              *

1455          KK  557559
1456          KM   Normal depth channel route from C557 to C559
1457          KM       Source:  Hydrology Field Reconnaissance,  page 5
1458          RS       8    FLOW      -1
1459          RC   0.070   0.040   0.070    1207  0.0215
1460          RX  1000.0  1104.0  1227.0  1238.0  1257.0  1281.0  1320.0  1340.0
1461          RY  1724.3  1721.4  1722.3  1721.1  1721.1  1722.4  1723.6  1724.3
1462          RL                    0.07  1721.1
              *

1463          KK    509H
1464          KM   Sub-Basin   509H
1465          KM
1466          KM      The Clark Unit Hydrograph is used for this basin.
1467          KM          The Natural time-area relation is used for this basin.
1468          KM
1469          KM      Time of Concentration for this sub-basin is based on the following:
1470          KM          6-Hour Rainfall, Pattern No.  1.00
1471          KM          An rainfall areal reduction factor of 0.999
1472          KM
1473          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1474          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1475          KM   .47 .46 .46 .14 .10 .09 .04 .04 .03 .00 .00 .00 .00 .00 .00 .00 .00 .00
1476          KM
1477          KM          L=   0.813 miles, S=  132 feet/mile, Kb= .08
1478          KM
1479          BA   0.069
1480          LG    0.34    0.35    7.00    0.15    0.00
1                                        HEC-1 INPUT                                                    PAGE 35

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1481          UC   0.346   0.443
1482          UA       0       3       5       8      12      20      43      75      90      96
1483          UA     100
              *

1484          KK    C559
1485          KM     Combine routed hydrograph from C557L with runoff from 509H at C559
1486          HC       2    2.25
              *

1487          KK   D559R
1488          KM        Hydrograph diversion at C559
1489          KM      Main flow continues on in right branch.
1490          KM      Diverted flow is in the left branch, coded on DQ card.
1491          DT   D559L
1492          DI       0      29     205     400     695    1080    1549    2105    2455    2805
1493          DQ       0      14      80     180     340     560     824    1135    1330    1525
              *

1494          KK  559560
1495          KM   Normal depth channel route from C559 to C560
1496          KM       Source:  Hydrology Field Reconnaissance,  page 6
1497          RS       4    FLOW      -1
1498          RC   0.070   0.040   0.070    1062  0.0198
1499          RX   943.0  1050.0  1100.0  1109.0  1126.0  1136.0  1144.0  1198.0
1500          RY  1675.0  1673.5  1673.0  1672.4  1672.3  1673.1  1672.6  1675.0
1501          RL                    0.07  1672.3
              *

1502          KK    509I
1503          KM   Sub-Basin   509I
```

```
1504          KM
1505          KM      The Clark Unit Hydrograph is used for this basin.
1506          KM          The Natural time-area relation is used for this basin.
1507          KM
1508          KM      Time of Concentration for this sub-basin is based on the following:
1509          KM          6-Hour Rainfall, Pattern No.  1.00
1510          KM          An rainfall areal reduction factor of 1.000
1511          KM
1512          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1513          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1514          KM   .45 .44 .43 .11 .07 .04 .02 .02 .02 .00 .00 .00 .00 .00 .00 .00 .00 .00
1515          KM
1516          KM          L=   0.375 miles, S=  115 feet/mile, Kb= .09
1517          KM
1518          BA   0.030
1519          LG    0.35    0.38    5.60    0.26    0.00
1520          UC   0.242   0.259
1521          UA      0       3       5       8      12      20      43      75      90      96
1522          UA    100
              *
```

1 HEC-1 INPUT PAGE 36

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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1523          KK    C560
1524          KM     Combine routed hydrograph from C559R with runoff from 509I at C560
1525          HC       2    2.28
              *

1526          KK   D560R
1527          KM        Hydrograph diversion at C560
1528          KM      Main flow continues on in right branch.
1529          KM      Diverted flow is in the left branch, coded on DQ card.
1530          DT   D560L
1531          DI       0      22      80     355     690    1145    1435    1730    2130    2500
1532          DQ       0      12      30      90     190     345     435     530     650     780
              *

1533          KK  560566
1534          KM   Normal depth channel route from C560 to C566
1535          KM       Source:  200 Scale 2' CI Mapping, Sheet 3
1536          RS      10    FLOW      -1
1537          RC   0.070   0.045   0.070    3583  0.0201
1538          RX  1000.0  1033.0  1149.0  1156.0  1168.0  1179.0  1201.0  1214.0
1539          RY  1543.0  1542.0  1540.0  1538.0  1538.0  1540.0  1542.0  1544.0
1540          RL                     0.15  1538.0
              *

1541          KK    509L
1542          KM   Sub-Basin   509L
1543          KM
1544          KM      The Clark Unit Hydrograph is used for this basin.
1545          KM          The Urban time-area relation is used for this basin.
1546          KM
1547          KM      Time of Concentration for this sub-basin is based on the following:
1548          KM          6-Hour Rainfall, Pattern No.  1.00
1549          KM          An rainfall areal reduction factor of 0.999
1550          KM
1551          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1552          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1553          KM   .49 .48 .48 .16 .13 .13 .06 .06 .05 .04 .03 .02 .00 .00 .00 .00 .00 .00
1554          KM
1555          KM          L=   0.789 miles, S=  108 feet/mile, Kb= .03
1556          KM
1557          BA   0.080
1558          LG    0.16    0.25    6.40    0.16   16.80
1559          UC   0.196   0.212
1560          UA      0       5      16      30      65      77      84      90      94      97
1561          UA    100
              *

1562          KK    C566
1563          KM    Combine routed hydrographs from C565 and C560R with runoff from 509L at C566
1564          HC       3    2.36
              *
```

1 HEC-1 INPUT PAGE 37

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1565          KK  566567
1566          KM   Normal depth channel route from C566 to C567
1567          KM       Source:  200 Scale 2' CI Mapping, Sheet 3
1568          RS       3    FLOW      -1
1569          RC   0.030   0.030   0.030    2359  0.0185
1570          RX  1000.0  1070.0  1210.0  1240.0  1280.0  1312.0  1337.0  1362.0
1571          RY  1592.0  1591.1  1590.0  1588.0  1588.0  1590.0  1591.0  1592.0
1572          RL                     0.07  1588.0
              *

1573          KK   B559L
1574          KM        Retrieve split hydrograph D559L
1575          DR   D559L
              *

1576          KK  559561
1577          KM   Normal depth channel route from C559 to C561
1578          KM       Source:  Hydrology Field Reconnaissance,  page 6
1579          RS       7    FLOW      -1
1580          RC   0.070   0.040   0.070    2023  0.0228
1581          RX  1000.0  1062.0  1102.0  1108.0  1137.0  1145.0  1210.0  1278.0
1582          RY  1691.2  1688.9  1689.5  1688.1  1688.2  1688.9  1690.0  1691.2
1583          RL                     0.15  1688.1
              *

1584          KK   B560L
1585          KM        Retrieve split hydrograph D560L
1586          DR   D560L
              *

1587          KK  560561
1588          KM   Normal depth channel route from C560 to C561
```

```
1589          KM       Source:  Hydrology Field Reconnaissance,  page 6
1590          RS       4    FLOW      -1
1591          RC   0.070   0.040   0.070    1065  0.0236
1592          RX   975.0  1000.0  1038.3  1041.6  1045.4  1054.0  1085.0  1197.0
1593          RY  1675.0  1674.2  1673.8  1672.8  1672.7  1673.6  1673.9  1674.9
1594          RL                    0.07  1672.7
              *

1595          KK    509K
1596          KM   Sub-Basin   509K
1597          KM
1598          KM      The Clark Unit Hydrograph is used for this basin.
1599          KM          The Natural time-area relation is used for this basin.
1600          KM
1601          KM      Time of Concentration for this sub-basin is based on the following:
1602          KM          6-Hour Rainfall, Pattern No.  1.00
1603          KM          An rainfall areal reduction factor of 1.000
1604          KM
1605          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1606          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1607          KM   .46 .45 .45 .13 .09 .08 .04 .03 .03 .00 .00 .00 .00 .00 .00 .00 .00 .00
1608          KM
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1609          KM          L=   0.437 miles, S=  260 feet/mile, Kb= .12
1610          KM
1611          BA   0.029
1612          LG    0.28    0.39    6.20    0.19    0.10
1613          UC   0.233   0.284
1614          UA       0       3       5       8      12      20      43      75      90      96
1615          UA     100
              *

1616          KK    C561
1617          KM   Combine routed hydrographs from C559L and C560L with runoff from 509K at C561
1618          HC       3    2.31
              *

1619          KK  561562
1620          KM   Normal depth channel route from C561 to C562
1621          KM       Source:  200 Scale 2' CI Mapping, Sheet 5
1622          RS       3    FLOW      -1
1623          RC   0.060   0.030   0.060    1843  0.0197
1624          RX  1000.0  1047.0  1064.0  1069.0  1080.0  1085.0  1125.0  1138.0
1625          RY  1642.0  1640.0  1638.0  1636.0  1636.0  1638.0  1640.0  1642.0
1626          RL                    0.07  1636.0
              *

1627          KK    509J
1628          KM   Sub-Basin   509J
1629          KM
1630          KM      The Clark Unit Hydrograph is used for this basin.
1631          KM          The HEC-1 time-area relation is used for this basin.
1632          KM
1633          KM      Time of Concentration for this sub-basin is based on the following:
1634          KM          6-Hour Rainfall, Pattern No.  1.00
1635          KM          An rainfall areal reduction factor of 0.999
1636          KM
1637          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1638          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1639          KM   .46 .45 .45 .13 .10 .09 .04 .03 .03 .01 .01 .01 .00 .00 .00 .00 .00 .00
1640          KM
1641          KM          L=   0.878 miles, S=  188 feet/mile, Kb= .10
1642          KM
1643          BA   0.103
1644          LG    0.21    0.32    5.10    0.28    9.00
1645          UC   0.367   0.399
              *

1646          KK    C562
1647          KM    Combine routed hydrograph from C561 with runoff from 509J at C562
1648          HC       2
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1649          KK  562567
1650          KM   Normal depth channel route from C562 to C567
1651          KM       Source:  200 Scale 2' CI Mapping, Sheet 3
1652          RS       7    FLOW      -1
1653          RC   0.030   0.030   0.030    3314  0.0164
1654          RX  1000.0  1087.0  1157.0  1203.0  1216.0  1229.0  1254.0  1268.0
1655          RY  1606.0  1604.0  1602.0  1600.0  1600.0  1602.0  1604.0  1606.0
1656          RL                    0.15  1600.0
              *

1657          KK    509P
1658          KM   Sub-Basin   509P
1659          KM
1660          KM      The Clark Unit Hydrograph is used for this basin.
1661          KM          The Urban time-area relation is used for this basin.
1662          KM
1663          KM      Time of Concentration for this sub-basin is based on the following:
1664          KM          6-Hour Rainfall, Pattern No.  1.00
1665          KM          An rainfall areal reduction factor of 0.999
1666          KM
1667          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1668          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1669          KM   .50 .49 .49 .18 .14 .14 .07 .07 .06 .06 .05 .05 .01 .01 .01 .01 .01 .01
1670          KM
1671          KM          L=   0.765 miles, S=  107 feet/mile, Kb= .03
1672          KM
1673          BA   0.110
1674          LG    0.10    0.19    6.60    0.15   29.40
1675          UC   0.192   0.168
1676          UA       0       5      16      30      65      77      84      90      94      97
1677          UA     100
              *
```

```
1678          KK    C567
1679          KM     Combine routed hydrographs from C562 and C566 with runoff from 509P at C567
1680          HC       3
              *

1681          KK  567568
1682          KM   Normal depth channel route from C567 to C568
1683          KM       Source:  200 Scale 2' CI Mapping, Sheet 2
1684          RS       3    FLOW      -1
1685          RC   0.020   0.045   0.065    1527  0.0136
1686          RX   900.0  1015.0  1032.0  1033.0  1069.0  1070.0  1080.0  1118.0
1687          RY  1559.0  1556.7  1556.0  1554.0  1554.0  1556.0  1557.1  1559.0
1688          RL                    0.10  1554.0
              *

1689          KK    509Q
1690          KM   Sub-Basin   509Q
1691          KM
1692          KM      The Clark Unit Hydrograph is used for this basin.
1693          KM          The Urban time-area relation is used for this basin.
1694          KM
1                                          HEC-1 INPUT                                                PAGE 40

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1695          KM      Time of Concentration for this sub-basin is based on the following:
1696          KM          6-Hour Rainfall, Pattern No.  1.00
1697          KM          An rainfall areal reduction factor of 0.999
1698          KM
1699          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1700          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1701          KM   .49 .48 .48 .17 .14 .13 .06 .06 .05 .05 .04 .04 .00 .00 .00 .00 .00 .00
1702          KM
1703          KM          L=   1.091 miles, S=   98 feet/mile, Kb= .03
1704          KM
1705          BA   0.107
1706          LG    0.12    0.22    6.40    0.16   19.50
1707          UC   0.238   0.287
1708          UA       0       5      16      30      65      77      84      90      94      97
1709          UA     100
              *

1710          KK    C568
1711          KM     Combine routed hydrograph from C567 with runoff from 509Q at C568
1712          HC       2
              *

1713          KK  568569
1714          KM   Normal depth channel route from C568 to C569
1715          KM       Source:  200 Scale 2' CI Mapping, Sheet 2
1716          RS       8    FLOW      -1
1717          RC   0.065   0.045   0.065    1820  0.0167
1718          RX  1040.0  1130.0  1270.0  1272.0  1292.0  1294.0  1478.0  1640.0
1719          RY  1535.0  1533.2  1532.0  1530.0  1530.0  1532.0  1533.8  1535.0
1720          RL                    0.26  1530.0
              *

1721          KK    509R
1722          KM   Sub-Basin   509R
1723          KM
1724          KM      The Clark Unit Hydrograph is used for this basin.
1725          KM          The HEC-1 time-area relation is used for this basin.
1726          KM
1727          KM      Time of Concentration for this sub-basin is based on the following:
1728          KM          6-Hour Rainfall, Pattern No.  1.00
1729          KM          An rainfall areal reduction factor of 0.999
1730          KM
1731          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1732          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1733          KM   .47 .47 .46 .15 .11 .10 .05 .04 .04 .00 .00 .00 .00 .00 .00 .00 .00 .00
1734          KM
1735          KM          L=   0.646 miles, S=   90 feet/mile, Kb= .04
1736          KM
1737          BA   0.097
1738          LG    0.32    0.32    7.00    0.15    3.80
1739          UC   0.221   0.184
              *
1                                          HEC-1 INPUT                                                PAGE 41

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1740          KK    C569
1741          KM    Combine routed hydrograph  from C568 with runoff from 509R at C569
1742          HC       2
              *

1743          KK  569570
1744          KM   Normal depth channel route from C569 to C570
1745          KM       Source:  200 Scale 2' CI Mapping, Sheet 2
1746          RS       4    FLOW      -1
1747          RC   0.065   0.050   0.065    1501  0.0125
1748          RX  1000.0  1033.0  1066.0  1094.0  1154.0  1225.0  1343.0  1434.0
1749          RY  1508.0  1507.5  1507.0  1504.0  1504.0  1506.0  1507.0  1508.0
1750          RL                    0.07  1504.0
              *

1751          KK    509O
1752          KM   Sub-Basin   509O
1753          KM
1754          KM      The Clark Unit Hydrograph is used for this basin.
1755          KM          The Urban time-area relation is used for this basin.
1756          KM
1757          KM      Time of Concentration for this sub-basin is based on the following:
1758          KM          6-Hour Rainfall, Pattern No.  1.00
1759          KM          An rainfall areal reduction factor of 1.000
1760          KM
1761          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1762          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1763          KM   .50 .49 .49 .18 .15 .14 .07 .07 .06 .06 .05 .05 .01 .01 .01 .01 .01 .01
1764          KM
1765          KM          L=   0.578 miles, S=   96 feet/mile, Kb= .03
1766          KM
```

```
1767          BA   0.037
1768          LG    0.07    0.25    5.00    0.26   53.50
1769          UC   0.171   0.220
1770          UA       0       5      16      30      65      77      84      90      94      97
1771          UA     100
              *
              * *
              * *       Routing Reach  563-564 is too short to route.
              * *
              *

1772          KK    509N
1773          KM   Sub-Basin   509N
1774          KM
1775          KM      The Clark Unit Hydrograph is used for this basin.
1776          KM          The Urban time-area relation is used for this basin.
1777          KM
1778          KM      Time of Concentration for this sub-basin is based on the following:
1779          KM          6-Hour Rainfall, Pattern No.  1.00
1780          KM          An rainfall areal reduction factor of 0.999
1781          KM
1782          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1783          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1                                          HEC-1 INPUT                                          PAGE 42

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1784          KM   .48 .48 .48 .16 .13 .12 .05 .05 .05 .04 .03 .03 .01 .01 .01 .01 .01 .01
1785          KM
1786          KM          L=   1.124 miles, S=   92 feet/mile, Kb= .03
1787          KM
1788          BA   0.114
1789          LG    0.11    0.26    5.40    0.24   28.10
1790          UC   0.246   0.295
1791          UA       0       5      16      30      65      77      84      90      94      97
1792          UA     100
              *
              *

1793          KK    C564
1794          KM     Combine hydrograph from C563  with runoff from 509N at C564
1795          HC       2
              *

1796          KK  564570
1797          KM   Normal depth channel route from C564 to C570
1798          KM       Source:  200 Scale 2' CI Mapping, Sheet 2
1799          RS      12    FLOW      -1
1800          RC   0.065   0.045   0.065    5346  0.0149
1801          RX  1000.0  1007.0  1034.0  1042.0  1052.0  1065.0  1085.0  1157.0
1802          RY  1564.0  1562.0  1560.0  1558.0  1558.0  1560.0  1562.0  1564.0
1803          RL                    0.12  1558.0
              *

1804          KK    509S
1805          KM   Sub-Basin   509S
1806          KM
1807          KM      The Clark Unit Hydrograph is used for this basin.
1808          KM          The HEC-1 time-area relation is used for this basin.
1809          KM
1810          KM      Time of Concentration for this sub-basin is based on the following:
1811          KM          6-Hour Rainfall, Pattern No.  1.00
1812          KM          An rainfall areal reduction factor of 0.997
1813          KM
1814          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1815          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1816          KM   .48 .48 .47 .16 .12 .12 .05 .05 .05 .03 .02 .01 .00 .00 .00 .00 .00 .00
1817          KM
1818          KM          L=   1.030 miles, S=   81 feet/mile, Kb= .04
1819          KM
1820          BA   0.195
1821          LG    0.27    0.27    7.30    0.13    8.10
1822          UC   0.296   0.249
              *

1823          KK    C570
1824          KM     Combine routed hydrographs from C564 and C569 with runoff from 509S at C570
1825          HC       3
              *
1                                          HEC-1 INPUT                                          PAGE 43

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1826          KK   CLEAR
1827          KM     Clear hydrographs from memory.
1828          HC       3
              *
              * ***************************************************************************
              * ******************************     Major Basin 505    ************************
              * ***************************************************************************
              *

1829          KK   B558R
1830          KM        Retrieve split hydrograph D558R
1831          DR   D558R
              *

1832          KK  558571
1833          KM   Normal depth channel route from C558 to C571
1834          KM       Source:  Hydrology Field Reconnaissance,  page 4
1835          RS      15    FLOW      -1
1836          RC   0.070   0.040   0.070    5068  0.0267
1837          RX   965.0  1030.0  1060.0  1066.0  1087.0  1108.0  1160.0  1370.0
1838          RY  1734.5  1733.2  1732.6  1732.2  1732.0  1733.2  1733.5  1734.5
1839          RL                    0.15  1732.0
              *

1840          KK    505A
1841          KM   Sub-Basin   505A
1842          KM
1843          KM      The Phoenix Mountain S-Graph is used for this basin.
1844          KM          Lag Used =  21.7 minutes
```

```
1845        KM
1846        BA   0.180
1847        LG    0.34    0.37    6.60    0.18    0.50
1848        UI      28      28      28      28      28      80      87     107     127     157
1849        UI     170     182     196     209     219     236     268     306     348     284
1850        UI     219     197     183     171     164     158     150     143     137     132
1851        UI     126     118     112     108     101      95      87      81      74      71
1852        UI      68      66      64      62      58      58      46      46      46      36
1853        UI      36      36      35      31      31      31      31      26      21      21
1854        UI      21      21      21      21      14      14      14      14      14      14
1855        UI      14      14      14      14       7       5       5       5       5       5
1856        UI       5       5       5       5       5       5       5       5       5       5
1857        UI       5       5       5       5       5       5       5       5       5       5
1858        UI       0       0       0       0       0       0       0       0       0       0
1859        UI       0       0       0       0       0       0       0       0       0       0
            *
            *

1860        KK    C571
1861        KM     Combine routed hydrograph from C558R with runoff from 505A at C571
1862        HC       2    2.13
            *
1                                    HEC-1 INPUT                                                PAGE 44

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1863        KK  571572
1864        KM   Normal depth channel route from C571 to C572
1865        KM       Source:  200 Scale 2' CI Mapping, Sheet 3
1866        RS       9    FLOW      -1
1867        RC   0.030   0.030   0.030    4644  0.0179
1868        RX  1000.0  1017.0  1078.0  1096.0  1138.0  1164.0  1205.0  1269.0
1869        RY  1629.0  1628.0  1626.0  1624.0  1624.0  1626.0  1628.0  1629.0
1870        RL                      0.10  1624.0
            *

1871        KK    505B
1872        KM   Sub-Basin   505B
1873        KM
1874        KM      The Clark Unit Hydrograph is used for this basin.
1875        KM          The Urban time-area relation is used for this basin.
1876        KM
1877        KM      Time of Concentration for this sub-basin is based on the following:
1878        KM          6-Hour Rainfall, Pattern No.  1.00
1879        KM          An rainfall areal reduction factor of 0.998
1880        KM
1881        KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1882        KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1883        KM   .49 .49 .49 .17 .14 .14 .06 .06 .06 .05 .05 .05 .00 .00 .00 .00 .00 .00
1884        KM
1885        KM          L=   1.034 miles, S=   97 feet/mile, Kb= .03
1886        KM
1887        BA   0.145
1888        LG    0.13    0.16    7.00    0.14   17.70
1889        UC   0.229   0.223
1890        UA       0       5      16      30      65      77      84      90      94      97
1891        UA     100
            *

1892        KK    C572
1893        KM     Combine routed hydrograph from C571 with runoff from 505B at C572
1894        HC       2
            *
            * ******************************************************************************
            * ****************************     Major Basin 500    ************************
            * ******************************************************************************
            *

1895        KK    500A
1896        KM   Sub-Basin   500A
1897        KM
1898        KM      The Phoenix Mountain S-Graph is used for this basin.
1899        KM          Lag Used =  18.8 minutes
1900        KM
1901        BA   0.214
1902        LG    0.35    0.37    5.30    0.28    0.00
1903        UI      38      38      38      38      87     117     148     181     225     241
1904        UI     264     284     300     328     382     444     454     317     276     252
1905        UI     233     224     213     201     190     182     172     160     153     145
1906        UI     132     121     110     101      95      93      88      87      80      78
1                                    HEC-1 INPUT                                                PAGE 45

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1907        UI      63      63      56      49      49      48      42      42      42      40
1908        UI      29      29      29      29      29      24      19      19      19      19
1909        UI      19      19      19      19      11       7       7       7       7       7
1910        UI       7       7       7       7       7       7       7       7       7       7
1911        UI       7       7       7       7       7       7       0       0       0       0
1912        UI       0       0       0       0       0       0       0       0       0       0
            *

1913        KK  501502
1914        KM   Normal depth channel route from C501 to C502
1915        KM       Source:  Hydrology Field Reconnaissance, page 10
1916        RS      36    FLOW      -1
1917        RC   0.070   0.040   0.070    6289  0.0223
1918        RX   822.0  1013.0  1035.0  1045.0  1049.0  1053.0  1076.0  1573.0
1919        RY  2161.0  2159.2  2158.9  2156.6  2156.8  2158.9  2159.0  2161.0
1920        RL                      0.12  2156.6
            *

1921        KK    500B
1922        KM   Sub-Basin   500B
1923        KM
1924        KM      The Phoenix Mountain S-Graph is used for this basin.
1925        KM          Lag Used =  26.0 minutes
1926        KM
1927        BA   0.205
1928        LG    0.35    0.38    5.40    0.27    0.00
1929        UI      27      27      27      27      27      28      76      76     100     110
1930        UI     125     153     161     171     182     193     201     210     224     248
```

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1931          UI     277     310     331     259     209     193     178     168     160     156
1932          UI     152     145     139     133     129     125     121     113     108     106
1933          UI     102      94      91      83      82      70      70      66      65      64
1934          UI      61      61      57      56      56      45      44      44      41      34
1935          UI      34      34      34      31      29      29      29      29      28      20
1936          UI      20      20      20      20      20      20      18      13      13      13
1937          UI      13      13      13      13      13      13      13      13      12       5
1938          UI       5       5       5       5       5       5       5       5       5       5
1939          UI       5       5       5       5       5       5       5       5       5       5
1940          UI       5       5       5       5       5       5       5       5       5       5
1941          UI       0       0       0       0       0       0       0       0       0       0
1942          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

1943          KK    C502
1944          KM     Combine routed hydrograph from C501 with runoff from 500B at C502
1945          HC       2
              *
              *

1946          KK   D502R
1947          KM        Hydrograph diversion at C502
1948          KM      Main flow continues on in right branch.
1949          KM      Diverted flow is in the left branch, coded on DQ card.
1950          DT   D502L
1951          DI       0      30     131     435     762    1035    1158    1300    1493    1722
1                                          HEC-1 INPUT                                          PAGE 46

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1952          DQ       0       0      44     260     488     679     760     850     980    1134
              *

1953          KK  502506
1954          KM   Normal depth channel route from C502 to C506
1955          KM       Source:  Hydrology Field Reconnaissance, page 10
1956          RS      13    FLOW      -1
1957          RC   0.070   0.040   0.070    6884  0.0266
1958          RX   985.0  1000.0  1015.0  1020.0  1030.0  1035.0  1055.0  1075.0
1959          RY  2160.4  2159.2  2158.3  2156.7  2156.7  2158.5  2159.3  2160.4
1960          RL                    0.33  2156.7
              *

1961          KK   B534L
1962          KM        Retrieve split hydrograph D534L
1963          DR   D534L
              *

1964          KK  534506
1965          KM   Normal depth channel route from C534 to C506
1966          KM       Source:  Hydrology Field Reconnaissance, page 10
1967          RS       2    FLOW      -1
1968          RC   0.070   0.040   0.070    1113  0.0278
1969          RX   985.0  1000.0  1015.0  1020.0  1030.0  1035.0  1055.0  1075.0
1970          RY  2160.4  2159.2  2158.3  2156.7  2156.7  2158.5  2159.3  2160.4
1971          RL                    0.62  2156.7
              *

1972          KK    C506
1973          KM     Combine routed hydrograph from C502R with hydrograph from C534L at C506
1974          HC       2    5.72
              *

1975          KK  506507
1976          KM   Normal depth channel route from C506 to C507
1977          KM       Source:  Hydrology Field Reconnaissance, page 10
1978          RS       2    FLOW      -1
1979          RC   0.070   0.040   0.070    1485  0.0269
1980          RX   985.0  1000.0  1015.0  1020.0  1030.0  1035.0  1055.0  1075.0
1981          RY  2160.4  2159.2  2158.3  2156.7  2156.7  2158.5  2159.3  2160.4
1982          RL                    0.62  2156.7
              *

1983          KK    500H
1984          KM   Sub-Basin   500H
1985          KM
1986          KM      The Phoenix Mountain S-Graph is used for this basin.
1987          KM          Lag Used =  22.4 minutes
1988          KM
1989          BA   0.211
1990          LG    0.35    0.35    4.30    0.46    0.00
1991          UI      32      32      32      32      32      82      93     122     139     167
1992          UI     189     201     218     232     244     256     287     323     368     387
1993          UI     288     238     220     204     191     186     179     170     162     156
1994          UI     150     143     135     128     123     116     109      99      95      84
1                                          HEC-1 INPUT                                          PAGE 47

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1995          UI      82      78      77      73      73      66      66      59      52      52
1996          UI      48      41      41      41      39      35      35      35      35      28
1997          UI      24      24      24      24      24      24      16      16      16      16
1998          UI      16      16      16      16      16      16      12       6       6       6
1999          UI       6       6       6       6       6       6       6       6       6       6
2000          UI       6       6       6       6       6       6       6       6       6       6
2001          UI       6       6       6       0       0       0       0       0       0       0
2002          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

2003          KK    C507
2004          KM     Combine routed hydrograph from C506 with runoff from 500H at C507
2005          HC       2
              *

2006          KK  507508
2007          KM   Normal depth channel route from C507 to C508
2008          KM       Source:  Hydrology Field Reconnaissance, page 12
2009          RS      16    FLOW      -1
2010          RC   0.070   0.045   0.070    3461  0.0269
2011          RX   920.0  1106.0  1137.0  1152.0  1166.0  1170.0  1202.0  1275.0
2012          RY  1847.5  1846.2  1846.3  1845.1  1845.1  1846.4  1846.8  1847.5
```

```
2013          RL                    0.56  1845.1
              *
              *

2014          KK   B502L
2015          KM        Retrieve split hydrograph D502L
2016          DR   D502L
              *

2017          KK  502503
2018          KM   Normal depth channel route from C502 to C503
2019          KM       Source:  Hydrology Field Reconnaissance, page 10
2020          RS      11    FLOW      -1
2021          RC   0.070   0.040   0.070    4578  0.0266
2022          RX  1000.0  1040.0  1075.0  1101.0  1136.0  1150.0  1190.0  1230.0
2023          RY  2160.4  2160.1  2159.8  2157.5  2158.1  2159.4  2159.9  2160.4
2024          RL                    0.33  2157.5
              *

2025          KK    500C
2026          KM   Sub-Basin   500C
2027          KM
2028          KM      The Phoenix Mountain S-Graph is used for this basin.
2029          KM          Lag Used =  17.1 minutes
2030          KM
2031          BA   0.123
2032          LG    0.35    0.35    4.65    0.37    0.00
2033          UI      24      24      24      28      70      86     106     136     151     166
2034          UI     180     192     216     254     298     232     180     161     148     141
2035          UI     134     125     119     113     105      98      93      84      77      70
2036          UI      64      59      58      56      52      51      42      40      36      31
2037          UI      31      29      27      27      27      20      19      19      19      19
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2038          UI      14      12      12      12      12      12      12      12       7       5
2039          UI       5       5       5       5       5       5       5       5       5       5
2040          UI       5       5       5       5       5       5       5       5       0       0
2041          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

2042          KK    C503
2043          KM     Combine routed hydrograph from C502L with runoff from 500C at C503
2044          HC       2    0.54
              *
2045          KM      The culvert at C503 is filled with sediment and is assumed to be
2046          KM        completely plugged.  Channel hydraulics on the right side of the
2047          KM        road were checked and it was determined that no flow overtopped the
2048          KM        road to the north for the 100-year storm event.
              *

2049          KK  503508
2050          KM   Normal depth channel route from C503 to C508
2051          KM       Source:  Hydrology Field Reconnaissance, page 10
2052          RS      33    FLOW      -1
2053          RC   0.070   0.040   0.070    7224  0.0269
2054          RX   869.0  1105.0  1137.0  1149.0  1163.0  1172.0  1200.0  1451.0
2055          RY  1848.0  1846.2  1846.3  1845.5  1845.1  1846.5  1846.8  1848.0
2056          RL                    0.33  1845.1
              *

2057          KK    500I
2058          KM   Sub-Basin   500I
2059          KM
2060          KM      The Phoenix Mountain S-Graph is used for this basin.
2061          KM          Lag Used =  22.9 minutes
2062          KM
2063          BA   0.409
2064          LG    0.35    0.35    4.25    0.47    0.00
2065          UI      60      60      60      60      60     142     173     224     254     302
2066          UI     354     375     401     435     454     477     514     583     663     754
2067          UI     631     477     435     400     374     358     348     332     317     303
2068          UI     291     280     266     252     242     231     216     205     187     176
2069          UI     159     154     147     145     138     138     126     126     115      99
2070          UI      99      94      77      77      77      76      66      66      66      66
2071          UI      61      46      46      46      46      46      46      40      29      29
2072          UI      29      29      29      29      29      29      29      29      18      12
2073          UI      12      12      12      12      12      12      12      12      12      12
2074          UI      12      12      12      12      12      12      12      12      12      12
2075          UI      12      12      12      12      12       0       0       0       0       0
2076          UI       0       0       0       0       0       0       0       0       0       0
              *

2077          KK    C508
2078          KM    Combine routed hydrographs from C503 and C507 with runoff from 500I at C508
2079          HC       3
              *
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2080          KK   D508R
2081          KM        Hydrograph diversion at  C508
2082          KM      Main flow continues on in right branch.
2083          KM      Diverted flow is in the left branch, coded on DQ card.
2084          DT   D508L
2085          DI       0      11      45     160     352     698     913    1160    1439    1853
2086          DQ       0       0      10      45     160     390     520     670     839    1130
              *

2087          KK  508517
2088          KM   Normal depth channel route from C508 to C517
2089          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
2090          RS      45    FLOW      -1
2091          RC   0.070   0.040   0.070    7904  0.0252
2092          RX   960.0   980.0  1000.0  1010.0  1030.0  1034.0  1092.0  1112.0
2093          RY  1848.0  1847.2  1846.4  1845.6  1845.2  1846.5  1847.1  1848.0
2094          RL                    0.33  1845.2
              *
```

```
2095          KK   B515L
2096          KM        Retrieve split hydrograph D515L
2097          DR   D515L
              *

2098          KK  515517
2099          KM   Normal depth channel route from C515 to C517
2100          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
2101          RS      15    FLOW      -1
2102          RC   0.065   0.045   0.065    2653  0.0231
2103          RX  1000.0  1031.0  1061.0  1193.0  1206.0  1281.0  1320.0  1368.0
2104          RY  1706.7  1706.0  1705.0  1704.0  1704.0  1704.8  1706.0  1707.0
2105          RL                    0.33  1704.0
              *

2106          KK    500L
2107          KM   Sub-Basin   500L
2108          KM
2109          KM      The Phoenix Mountain S-Graph is used for this basin.
2110          KM          Lag Used =  19.1 minutes
2111          KM
2112          BA   0.161
2113          LG    0.35    0.35    4.35    0.44    0.20
2114          UI      28      28      28      28      61      84     109     129     164     176
2115          UI     192     207     220     237     271     318     347     254     210     190
2116          UI     175     167     160     151     143     137     131     121     115     109
2117          UI     101      93      88      75      73      69      67      65      61      59
2118          UI      52      47      47      37      36      36      34      31      31      31
2119          UI      27      22      22      22      22      22      16      14      14      14
2120          UI      14      14      14      14      14       8       5       5       5       5
2121          UI       5       5       5       5       5       5       5       5       5       5
2122          UI       5       5       5       5       5       5       5       5       0       0
2123          UI       0       0       0       0       0       0       0       0       0       0
              *
1                                          HEC-1 INPUT                                          PAGE 50

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2124          KK    C517
2125          KM   Combine routed hydrographs from C515L and C508R with runoff from 500L at C517
2126          HC       3    7.60
              *

2127          KK  517518
2128          KM   Normal depth channel route from C517 to C518
2129          KM       Source:  200 Scale 2' CI Mapping, Sheet 7
2130          RS       4    FLOW      -1
2131          RC   0.065   0.045   0.065    1745  0.0209
2132          RX  1000.0  1060.0  1117.0  1127.0  1172.0  1192.0  1272.0  1350.0
2133          RY  1712.0  1711.5  1710.0  1708.0  1708.0  1710.0  1711.0  1712.0
2134          RL                    0.33  1708.0
              *

2135          KK    500J
2136          KM   Sub-Basin   500J
2137          KM
2138          KM      The Phoenix Mountain S-Graph is used for this basin.
2139          KM          Lag Used =  13.8 minutes
2140          KM
2141          BA   0.090
2142          LG    0.34    0.35    4.45    0.41    1.10
2143          UI      22      22      22      56      78     104     132     147     163     177
2144          UI     211     264     215     160     141     130     123     113     106      98
2145          UI      90      84      75      67      58      54      52      50      46      39
2146          UI      36      30      28      27      24      24      21      17      17      17
2147          UI      15      11      11      11      11      11      11       6       4       4
2148          UI       4       4       4       4       4       4       4       4       4       4
2149          UI       4       4       4       0       0       0       0       0       0       0
2150          UI       0       0       0       0       0       0       0       0       0       0
              *

2151          KK  514518
2152          KM   Normal depth channel route from C514 to C518
2153          KM       Source:  200 Scale 2' CI Mapping, Sheet 7
2154          RS       4    FLOW      -1
2155          RC   0.065   0.045   0.065    1322  0.0216
2156          RX  1000.0  1034.0  1056.0  1087.0  1108.0  1135.0  1142.5  1150.0
2157          RY  1646.8  1646.0  1646.0  1644.0  1644.0  1646.0  1646.5  1647.0
2158          RL                    0.33  1644.0
              *

2159          KK    C518
2160          KM    Combine routed hydrographs from C517 and  C514 at C518
2161          HC       2
              *

2162          KK  518519
2163          KM   Normal depth channel route from C518 to C519
2164          KM       Source:  200 Scale 2' CI Mapping, Sheet 7
2165          RS      12    FLOW      -1
2166          RC   0.070   0.050   0.070    3094  0.0215
2167          RX  1000.0  1062.0  1115.0  1134.0  1161.0  1176.0  1251.0  1326.0
1                                          HEC-1 INPUT                                          PAGE 51

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2168          RY  1612.0  1610.0  1608.5  1608.0  1608.0  1608.3  1610.0  1612.0
2169          RL                    0.33  1608.0
              *

2170          KK    500M
2171          KM   Sub-Basin   500M
2172          KM
2173          KM      The Clark Unit Hydrograph is used for this basin.
2174          KM          The Urban time-area relation is used for this basin.
2175          KM
2176          KM      Time of Concentration for this sub-basin is based on the following:
2177          KM          6-Hour Rainfall, Pattern No.  1.00
2178          KM          An rainfall areal reduction factor of 0.998
2179          KM
2180          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2181          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
```

```
2182          KM   .47 .46 .46 .14 .11 .10 .04 .04 .03 .02 .02 .02 .00 .00 .00 .00 .00 .00
2183          KM
2184          KM          L=   1.051 miles, S=  117 feet/mile, Kb= .05
2185          KM
2186          BA   0.123
2187          LG    0.15    0.26    4.65    0.36   19.80
2188          UC   0.308   0.344
2189          UA       0       5      16      30      65      77      84      90      94      97
2190          UA     100
              *
              *

2191          KK    C519
2192          KM     Combine routed hydrograph from C518 with runoff from 500M at C519
2193          HC       2
              *
              * *
              * *       Routing Reach  519-520 is too short to route.
              * *
              *

2194          KK    C504
2195          KM     Bring back tape 21 file Rio Verde North runoff hydrograph WP504
2196          BI   WP504      21
              *

2197          KK  504509
2198          KM   Normal depth channel route from C504 to C509
2199          KM        Source:  Hydrology Field Reconnaissance, page 21
2200          RS      26    FLOW      -1
2201          RC   0.065   0.040   0.030    9180  0.0273
2202          RX  1000.0  1026.0  1040.0  1048.0  1072.0  1083.0  1117.0  1152.0
2203          RY   100.4    99.0    99.3    98.4    98.4    98.8    98.9   100.4
2204          RL                    0.33    98.4
              *
1                                          HEC-1 INPUT                                                    PAGE 52

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2205          KK    500D
2206          KM   Sub-Basin   500D
2207          KM
2208          KM      The Phoenix Mountain S-Graph is used for this basin.
2209          KM          Lag Used =  23.2 minutes
2210          KM
2211          BA   0.234
2212          LG    0.35    0.35    4.35    0.44    0.00
2213          UI      34      34      34      34      34      76      98     124     141     166
2214          UI     199     211     225     242     255     266     286     322     364     418
2215          UI     385     282     251     232     215     204     198     191     182     174
2216          UI     167     161     154     145     138     133     128     116     110     105
2217          UI      91      90      84      83      79      78      75      71      71      58
2218          UI      56      56      48      43      43      43      41      37      37      37
2219          UI      37      31      26      26      26      26      26      26      20      17
2220          UI      17      17      17      17      17      17      17      17      17      10
2221          UI       7       7       7       7       7       7       7       7       7       7
2222          UI       7       7       7       7       7       7       7       7       7       7
2223          UI       7       7       7       7       7       7       7       0       0       0
2224          UI       0       0       0       0       0       0       0       0       0       0
              *

2225          KK   TEMP1
2226          KO                                      21
2227          KM     Combine routed hydrograph from C504 with runoff from 500D at C509
2228          HC       2   0.494
              *
              *    The combined hydrograph at C509 is written out to tape 21 file to correct
              *      corrupted pointers.
              *

2229          KK    C509
2230          KM     Bring back tape 21 of combined hydrograph at C509
2231          BI   TEMP1      21
              *

2232          KK  509510
2233          KM   Normal depth channel route from C509 to C510
2234          KM        Source:  200 Scale 2' CI Mapping, Sheet 8
2235          RS      10    FLOW      -1
2236          RC   0.065   0.040   0.040    5926  0.0267
2237          RX   950.0  1025.0  1031.0  1040.0  1050.0  1054.0  1072.0  1090.0
2238          RY  1777.5  1776.9  1776.0  1774.0  1774.0  1776.0  1777.3  1777.5
2239          RL                    0.33  1774.0
              *

2240          KK    500E
2241          KM   Sub-Basin   500E
2242          KM
2243          KM      The Phoenix Mountain S-Graph is used for this basin.
2244          KM          Lag Used =  15.5 minutes
2245          KM
2246          BA   0.106
2247          LG    0.35    0.35    4.35    0.44    0.00
1                                          HEC-1 INPUT                                                    PAGE 53

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2248          UI      23      23      23      42      70      93     119     140     155     170
2249          UI     183     211     253     273     188     160     144     135     128     119
2250          UI     112     106      97      91      84      76      69      61      57      55
2251          UI      53      49      46      38      38      29      29      29      25      25
2252          UI      25      18      18      18      18      16      11      11      11      11
2253          UI      11      11      11       4       4       4       4       4       4       4
2254          UI       4       4       4       4       4       4       4       4       4       4
2255          UI       4       0       0       0       0       0       0       0       0       0
2256          UI       0       0       0       0       0       0       0       0       0       0
              *

2257          KK    C581
2258          KM     Bring back tape 21 file of Rio Verde North runoff hydrograph WP581
2259          BI   WP581      21
              *
```

```
2260          KK  581510
2261          KM    Normal depth channel route from C581 to C510
2262          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
2263          RS       7    FLOW      -1
2264          RC   0.065   0.040   0.065    3150  0.0254
2265          RX  1000.0  1040.0  1065.0  1070.0  1100.0  1105.0  1120.0  1145.0
2266          RY  1749.5  1749.0  1748.0  1747.0  1747.0  1748.0  1747.8  1749.5
2267          RL                    0.33  1747.0
              *

2268          KK   TEMP2
2269          KO                                    21
2270          KM     Combine routed hydrograph from C509 and C581 with runoff from 500E at C510
2271          HC       3   0.494
              *
              *    The combined hydrograph at C510 is written out to tape 21 file to correct
              *      corrupted pointers.
              *

2272          KK    C510
2273          KM     Bring back tape 21 file of combined hydrograph at C510
2274          BI   TEMP2      21
              *

2275          KK   D510R
2276          KM        Hydrograph diversion at C510
2277          KM      Main flow continues on in right branch.
2278          KM      Diverted flow is in the left branch (Rio Verde North Study), coded on DQ.
2279          DT   D510L
2280          DI       0      50     235     450     749    1016    1349    1541    1749    1972
2281          DQ       0      18      94     184     301     397     511     576     646     721
              *

2282          KK  510511
2283          KM   Normal depth channel route from C510 to C511
2284          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
2285          RS       4    FLOW      -1
2286          RC   0.070   0.050   0.070    1447  0.0289
2287          RX  1000.0  1060.0  1100.0  1125.0  1178.0  1189.0  1207.0  1320.0
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2288          RY  1700.0  1699.9  1699.1  1698.0  1698.0  1698.7  1699.5  1700.0
2289          RL                    0.33  1698.0
              *

2290          KK   B508L
2291          KM        Retrieve split hydrograph D508L
2292          DR   D508L
              *

2293          KK  508511
2294          KM   Normal depth channel route from C508 to C511
2295          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
2296          RS      46    FLOW      -1
2297          RC   0.070   0.040   0.070    7575  0.0255
2298          RX   986.0  1018.0  1050.0  1057.0  1082.0  1089.0  1105.0  1215.0
2299          RY  1848.5  1847.4  1846.8  1845.7  1845.7  1846.6  1846.3  1848.5
2300          RL                    0.31  1845.7
              *

2301          KK    500F
2302          KM   Sub-Basin   500F
2303          KM
2304          KM      The Phoenix Mountain S-Graph is used for this basin.
2305          KM          Lag Used =  25.7 minutes
2306          KM
2307          BA   0.437
2308          LG    0.35    0.35    4.40    0.43    0.00
2309          UI      57      57      57      57      57      66     165     166     219     241
2310          UI     276     332     350     371     397     419     436     458     490     549
2311          UI     612     688     686     522     440     405     379     357     342     333
2312          UI     322     308     296     285     274     265     253     242     231     223
2313          UI     216     197     188     178     164     151     148     140     140     133
2314          UI     132     128     120     120     108      94      94      94      76      73
2315          UI      73      73      71      63      63      63      63      63      47      44
2316          UI      44      44      44      44      44      42      28      28      28      28
2317          UI      28      28      28      28      28      28      28      27      11      11
2318          UI      11      11      11      11      11      11      11      11      11      11
2319          UI      11      11      11      11      11      11      11      11      11      11
2320          UI      11      11      11      11      11      11      11      11       0       0
2321          UI       0       0       0       0       0       0       0       0       0       0
              *

2322          KK    C511
2323          KM   Combine routed hydrographs from C508L and C510R with runoff from 500F at C511
2324          HC       3    7.49
              *

2325          KK  511512
2326          KM   Normal depth channel route from C511 to C512
2327          KM       Source:  200 Scale 2' CI Mapping, Sheet 7
2328          RS      31    FLOW      -1
2329          RC   0.070   0.050   0.070    5718  0.0199
2330          RX  1000.0  1037.0  1189.0  1195.0  1230.0  1236.0  1386.0  1646.0
2331          RY  1616.7  1616.0  1615.0  1614.0  1614.0  1615.0  1616.0  1617.0
2332          RL                    0.33  1614.0
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2333          KK    500K
2334          KM   Sub-Basin   500K
2335          KM
2336          KM      The Phoenix Mountain S-Graph is used for this basin.
2337          KM          Lag Used =  16.6 minutes
2338          KM
2339          BA   0.096
2340          LG    0.23    0.32    5.60    0.25    9.50
```

```
2341        UI      19      19      19      26      56      72      88     114     123     136
2342        UI     147     158     183     218     231     160     137     124     116     110
2343        UI     104      97      92      86      80      76      70      63      58      51
2344        UI      48      47      45      42      41      34      32      28      25      25
2345        UI      23      21      21      21      15      15      15      15      15      10
2346        UI      10      10      10      10      10      10       8       4       4       4
2347        UI       4       4       4       4       4       4       4       4       4       4
2348        UI       4       4       4       4       4       4       0       0       0       0
2349        UI       0       0       0       0       0       0       0       0       0       0
            *

2350        KK  513512
2351        KM   Normal depth channel route from C513 to C512
2352        KM       Source:  200 Scale 2' CI Mapping, Sheet 7
2353        RS      16    FLOW      -1
2354        RC   0.065   0.045   0.065    3192  0.0180
2355        RX  1000.0  1039.0  1069.0  1229.0  1247.0  1310.0  1380.0  1406.0
2356        RY  1605.0  1604.0  1603.2  1602.0  1602.0  1603.1  1604.0  1605.1
2357        RL                    0.33  1602.0
            *

2358        KK    500G
2359        KM   Sub-Basin   500G
2360        KM
2361        KM      The Clark Unit Hydrograph is used for this basin.
2362        KM          The Urban time-area relation is used for this basin.
2363        KM
2364        KM      Time of Concentration for this sub-basin is based on the following:
2365        KM          6-Hour Rainfall, Pattern No.  1.00
2366        KM          An rainfall areal reduction factor of 0.997
2367        KM
2368        KM        EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2369        KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2370        KM   .47 .46 .46 .14 .11 .10 .04 .04 .03 .02 .02 .02 .01 .01 .01 .01 .01 .01
2371        KM
2372        KM          L=   1.314 miles, S=  110 feet/mile, Kb= .05
2373        KM
2374        BA   0.202
2375        LG    0.16    0.27    4.70    0.35   22.30
2376        UC   0.367   0.376
2377        UA       0       5      16      30      65      77      84      90      94      97
2378        UA     100
            *
```



```
LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2379        KK    C512
2380        KM     Combine routed hydrographs from C511 and C513 with runoff from 500G at C512
2381        HC       3
            *
            * *
            * *       Routing Reach  512-520 is too short to route.
            * *
            *

2382        KK    C520
2383        KM     Combine hydrographs C512 and C519 at C520
2384        HC       2
            *

2385        KK  520576
2386        KM   Normal depth channel route from C520 to C576
2387        KM       Source:  200 Scale 2' CI Mapping, Sheet 6
2388        RS       4    FLOW      -1
2389        RC   0.065   0.040   0.065    1203  0.0150
2390        RX  1000.0  1050.0  1245.0  1335.0  1410.0  1485.0  1565.0  1615.0
2391        RY  1546.6  1546.0  1546.0  1544.0  1544.0  1545.0  1546.0  1546.6
2392        RL                    0.04  1544.0
            *

2393        KK    5000
2394        KM   Sub-Basin   5000
2395        KM
2396        KM      The Clark Unit Hydrograph is used for this basin.
2397        KM          The Urban time-area relation is used for this basin.
2398        KM
2399        KM      Time of Concentration for this sub-basin is based on the following:
2400        KM          6-Hour Rainfall, Pattern No.  1.00
2401        KM          An rainfall areal reduction factor of 0.999
2402        KM
2403        KM        EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2404        KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2405        KM   .49 .49 .49 .17 .14 .13 .06 .06 .06 .05 .04 .04 .00 .00 .00 .00 .00 .00
2406        KM
2407        KM          L=   1.037 miles, S=  115 feet/mile, Kb= .06
2408        KM
2409        BA   0.101
2410        LG    0.18    0.19    7.30    0.13   16.10
2411        UC   0.338   0.422
2412        UA       0       5      16      30      65      77      84      90      94      97
2413        UA     100
            *

2414        KK  521522
2415        KM   Normal depth channel route from C521 to C522
2416        KM       Source:  200 Scale 2' CI Mapping, Sheet 7
2417        RS      13    FLOW      -1
2418        RC   0.070   0.050   0.070    2928  0.0207
2419        RX  1000.0  1055.0  1110.0  1175.0  1198.0  1240.0  1417.0  1450.0
2420        RY  1576.0  1575.0  1574.0  1572.0  1572.0  1573.0  1574.0  1576.0
```



```
LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2421        RL                    0.06  1572.0
            *

2422        KK    500P
2423        KM   Sub-Basin   500P
2424        KM
2425        KM      The Clark Unit Hydrograph is used for this basin.
```

```
2426          KM          The HEC-1 time-area relation is used for this basin.
2427          KM
2428          KM      Time of Concentration for this sub-basin is based on the following:
2429          KM          6-Hour Rainfall, Pattern No.  1.00
2430          KM          An rainfall areal reduction factor of 0.999
2431          KM
2432          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2433          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2434          KM   .49 .48 .48 .16 .13 .12 .06 .06 .05 .04 .03 .01 .00 .00 .00 .00 .00 .00
2435          KM
2436          KM          L=   0.642 miles, S=  119 feet/mile, Kb= .06
2437          KM
2438          BA   0.083
2439          LG    0.30    0.26    8.40    0.09    4.90
2440          UC   0.246   0.226
              *

2441          KK    C522
2442          KM     Combine routed hydrograph from C521 with runoff from 500P at C522
2443          HC       2
              *
              * *
              * *       Routing Reach  522-576 is too short to route.
              * *
              *

2444          KK    C576
2445          KM     Combine routed hydrograph from C520 with hydrograph from C522 at C576
2446          HC       2
              *

2447          KK  576523
2448          KM   Normal depth channel route from C576 to C523
2449          KM       Source:  200 Scale 2' CI Mapping, Sheet 6
2450          RS       2    FLOW      -1
2451          RC   0.065   0.040   0.065    1429  0.0262
2452          RX  1000.0  1061.0  1106.0  1115.0  1150.0  1155.0  1267.0  1330.0
2453          RY  1531.0  1530.0  1528.0  1526.0  1526.0  1528.0  1530.0  1531.0
2454          RL                    0.26  1526.0
              *

2455          KK    500N
2456          KM   Sub-Basin   500N
2457          KM
2458          KM      The Clark Unit Hydrograph is used for this basin.
2459          KM          The Natural time-area relation is used for this basin.
2460          KM
2461          KM      Time of Concentration for this sub-basin is based on the following:
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2462          KM          6-Hour Rainfall, Pattern No.  1.00
2463          KM          An rainfall areal reduction factor of 0.999
2464          KM
2465          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2466          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2467          KM   .45 .45 .44 .12 .08 .06 .03 .03 .02 .00 .00 .00 .00 .00 .00 .00 .00 .00
2468          KM
2469          KM          L=   0.859 miles, S=  110 feet/mile, Kb= .05
2470          KM
2471          BA   0.113
2472          LG    0.34    0.39    6.20    0.20    0.00
2473          UC   0.279   0.275
2474          UA       0       3       5       8      12      20      43      75      90      96
2475          UA     100
              *

2476          KK    C523
2477          KM     Combine routed hydrograph from C576 with runoff from 500N at C523
2478          HC       2
              *
              * ***********************************************************************
              * ****************************     Major Basin 501    ***********************
              * ***********************************************************************
              *

2479          KK    501A
2480          KM   Sub-Basin   501A
2481          KM
2482          KM      The Clark Unit Hydrograph is used for this basin.
2483          KM          The Urban time-area relation is used for this basin.
2484          KM
2485          KM      Time of Concentration for this sub-basin is based on the following:
2486          KM          6-Hour Rainfall, Pattern No.  1.00
2487          KM          An rainfall areal reduction factor of 0.999
2488          KM
2489          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2490          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2491          KM   .46 .46 .45 .13 .10 .08 .04 .04 .03 .01 .01 .01 .00 .00 .00 .00 .00 .00
2492          KM
2493          KM          L=   0.364 miles, S=  145 feet/mile, Kb= .06
2494          KM
2495          BA   0.040
2496          LG    0.36    0.28    4.70    0.28    7.30
2497          UC   0.179   0.153
2498          UA       0       5      16      30      65      77      84      90      94      97
2499          UA     100
              *

2500          KK    501B
2501          KM   Sub-Basin   501B
2502          KM
2503          KM      The Clark Unit Hydrograph is used for this basin.
2504          KM          The HEC-1 time-area relation is used for this basin.
2505          KM
2506          KM      Time of Concentration for this sub-basin is based on the following:
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2507          KM          6-Hour Rainfall, Pattern No.  1.00
2508          KM          An rainfall areal reduction factor of 0.999
```

```
2509          KM
2510          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2511          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2512          KM   .45 .44 .43 .11 .07 .05 .02 .02 .02 .00 .00 .00 .00 .00 .00 .00 .00 .00
2513          KM
2514          KM          L=   0.610 miles, S=  116 feet/mile, Kb= .06
2515          KM
2516          BA   0.074
2517          LG    0.35    0.33    4.90    0.32    1.90
2518          UC   0.250   0.236
              *

2519          KK   CLEAR
2520          KM        Clear Hydrograph stack from memory
2521          HC       5
              *
              * ******************************************************************************
              * ******************************     Major Basin 502    ************************
              * ******************************************************************************
              *

2522          KK    502B
2523          KM   Sub-Basin   502B
2524          KM
2525          KM      The Clark Unit Hydrograph is used for this basin.
2526          KM          The Natural time-area relation is used for this basin.
2527          KM
2528          KM      Time of Concentration for this sub-basin is based on the following:
2529          KM          6-Hour Rainfall, Pattern No.  1.00
2530          KM          An rainfall areal reduction factor of 0.999
2531          KM
2532          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2533          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2534          KM   .49 .49 .48 .17 .13 .13 .06 .06 .06 .04 .03 .01 .00 .00 .00 .00 .00 .00
2535          KM
2536          KM          L=   0.506 miles, S=  115 feet/mile, Kb= .06
2537          KM
2538          BA   0.053
2539          LG    0.35    0.25    9.70    0.06    0.00
2540          UC   0.221   0.215
2541          UA       0       3       5       8      12      20      43      75      90      96
2542          UA     100
              *

2543          KK    502C
2544          KM   Sub-Basin   502C
2545          KM
2546          KM      The Clark Unit Hydrograph is used for this basin.
2547          KM          The Natural time-area relation is used for this basin.
2548          KM
2549          KM      Time of Concentration for this sub-basin is based on the following:
2550          KM          6-Hour Rainfall, Pattern No.  1.00
2551          KM          An rainfall areal reduction factor of 0.999
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2552          KM
2553          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2554          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2555          KM   .49 .49 .48 .17 .13 .13 .06 .06 .06 .04 .03 .01 .00 .00 .00 .00 .00 .00
2556          KM
2557          KM          L=   0.609 miles, S=  100 feet/mile, Kb= .06
2558          KM
2559          BA   0.046
2560          LG    0.35    0.25    9.70    0.06    0.00
2561          UC   0.254   0.315
2562          UA       0       3       5       8      12      20      43      75      90      96
2563          UA     100
              *
              * ******************************************************************************
              * ******************************     Major Basin 503    ************************
              * ******************************************************************************
              *

2564          KK    503A
2565          KM   Sub-Basin   503A
2566          KM
2567          KM      The Clark Unit Hydrograph is used for this basin.
2568          KM          The Urban time-area relation is used for this basin.
2569          KM
2570          KM      Time of Concentration for this sub-basin is based on the following:
2571          KM          6-Hour Rainfall, Pattern No.  1.00
2572          KM          An rainfall areal reduction factor of 0.997
2573          KM
2574          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2575          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2576          KM   .50 .49 .49 .18 .15 .14 .07 .07 .06 .06 .06 .05 .00 .00 .00 .00 .00 .00
2577          KM
2578          KM          L=   1.534 miles, S=   85 feet/mile, Kb= .03
2579          KM
2580          BA   0.216
2581          LG    0.14    0.17    7.60    0.11   19.50
2582          UC   0.304   0.333
2583          UA       0       5      16      30      65      77      84      90      94      97
2584          UA     100
              *

2585          KK  549550
2586          KM   Normal depth channel route from C549 to C550
2587          KM       Source:  Hydrology Field Reconnaissance, page 23
2588          RS       6    FLOW      -1
2589          RC   0.065   0.050   0.065    3454  0.0156
2590          RX  1000.0  1008.0  1018.0  1026.0  1036.0  1049.0  1061.0  1072.0
2591          RY   100.0    97.9    96.6    93.1    93.2    98.0    97.9   101.2
2592          RL                   0.09    93.1
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2593          KK    503C
```

```
2594          KM   Sub-Basin   503C
2595          KM
2596          KM      The Clark Unit Hydrograph is used for this basin.
2597          KM          The Natural time-area relation is used for this basin.
2598          KM
2599          KM      Time of Concentration for this sub-basin is based on the following:
2600          KM          6-Hour Rainfall, Pattern No.  1.00
2601          KM          An rainfall areal reduction factor of 0.998
2602          KM
2603          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2604          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2605          KM   .48 .48 .48 .16 .13 .12 .06 .06 .05 .03 .01 .00 .00 .00 .00 .00 .00 .00
2606          KM
2607          KM          L=   0.765 miles, S=   71 feet/mile, Kb= .05
2608          KM
2609          BA   0.121
2610          LG    0.35    0.27    8.80    0.08    0.00
2611          UC   0.300   0.262
2612          UA      0       3       5       8      12      20      43      75      90      96
2613          UA    100
              *

2614          KK   C550L
2615          KM    Combine routed hydrograph from C549 with runoff from 503C at C550L
2616          HC      2
              *

2617          KK    503B
2618          KM   Sub-Basin   503B
2619          KM
2620          KM      The Clark Unit Hydrograph is used for this basin.
2621          KM          The HEC-1 time-area relation is used for this basin.
2622          KM
2623          KM      Time of Concentration for this sub-basin is based on the following:
2624          KM          6-Hour Rainfall, Pattern No.  1.00
2625          KM          An rainfall areal reduction factor of 0.999
2626          KM
2627          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2628          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2629          KM   .49 .48 .48 .17 .13 .13 .06 .06 .06 .04 .03 .02 .00 .00 .00 .00 .00 .00
2630          KM
2631          KM          L=   1.398 miles, S=   85 feet/mile, Kb= .04
2632          KM
2633          BA   0.113
2634          LG    0.27    0.24    8.40    0.09    8.30
2635          UC   0.354   0.530
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2636          KK    C550
2637          KM     Combine hydrograph from C550L with runoff from 503B at C550
2638          HC      2
              *
              * ******************************************************************************
              * ******************************     Major Basin 504    ************************
              * ******************************************************************************
              *

2639          KK    504A
2640          KM   Sub-Basin   504A
2641          KM
2642          KM      The Clark Unit Hydrograph is used for this basin.
2643          KM          The HEC-1 time-area relation is used for this basin.
2644          KM
2645          KM      Time of Concentration for this sub-basin is based on the following:
2646          KM          6-Hour Rainfall, Pattern No.  1.00
2647          KM          An rainfall areal reduction factor of 0.997
2648          KM
2649          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2650          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2651          KM   .48 .48 .48 .16 .13 .12 .06 .06 .05 .03 .02 .01 .00 .00 .00 .00 .00 .00
2652          KM
2653          KM          L=   1.474 miles, S=   83 feet/mile, Kb= .04
2654          KM
2655          BA   0.242
2656          LG    0.29    0.26    8.00    0.10    4.80
2657          UC   0.371   0.377
              *
2658          ZZ
```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

```
 INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

  NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

   34       WP504
            .
            .
   71       .       WP581
            .           .
            .           .
  109      CLEAR...........
            .
            .
  112       .        511A
            .           V
            .           V
  135       .      524526
            .           .
            .           .
  143       .           .       511B
            .           .          V
            .           .          V
  179       .           .     525526
            .           .          .
            .           .          .
  187       .           .          .        511D
            .           .          .          .
            .           .          .          .
```

```
211          .        C526.......................
             .           V
             .           V
214          .      526527
             .           .
             .           .
222          .           .        511E
             .           .           .
             .           .           .
255          .           .           .        511F
             .           .           .           .
             .           .           .           .
272          .        C527.......................
             .           V
             .           V
275          .      527528
             .           .
             .           .
283          .           .        511C
             .           .           .
             .           .           .
321          .        C528............
             .           V
             .           V
324          .      528529
             .           .
             .           .
332          .           .        511H
             .           .           .
             .           .           .
353          .        C529............
             .           .
             .           .
356          .           .        511G
             .           .           .
             .           .           .
383          .        C530............
             .           V
             .           V
386          .      530531
             .           .
             .           .
394          .           .        511I
             .           .           .
             .           .           .
412          .        C531............
             .           .
             .           .
419          .           .-------->   D531L
415          .       D531R
             .           V
             .           V
422          .      531532
             .           .
             .           .
434          .           .-------->   D532R
430          .       D532L
             .           .
             .           .
441          .           .-------->  D532AL
437          .      D532AR
             .           V
             .           V
444          .      532580
             .           .
             .           .
454          .           .          .<-------  D532AL
452          .           .      B532AL
             .           .           .
             .           .           .
459          .           .          .-------->   D578L
455          .           .       D578R
             .           .           V
             .           .           V
462          .           .      578573
             .           .           .
             .           .           .
474          .           .          .-------->   D573L
470          .           .       D573R
             .           .           V
             .           .           V
477          .           .      573580
             .           .           .
             .           .           .
485          .        C580............
             .           V
             .           V
488          .      580535
             .           .
             .           .
498          .           .          .<-------   D531L
496          .           .       B531L
             .           .           V
             .           .           V
499          .           .      531533
             .           .           .
             .           .           .
509          .           .           .          .<-------   D578L
507          .           .           .       B578L
             .           .           .           .
             .           .           .           .
510          .           .        C533............
             .           .           V
             .           .           V
513          .           .      533579
             .           .           .
             .           .           .
523          .           .           .          .<-------   D573L
521          .           .           .       B573L
             .           .           .           .
             .           .           .           .
524          .           .        C579............
             .           .           V
```

```
                    .         .         V
527                 .         .     579534
                    .         .         .
                    .         .         .
535                 .         .         .        511J
                    .         .         .          .
                    .         .         .          .
551                 .         .       C534.........
                    .         .         .
                    .         .         .
558                 .         .         .-------> D534L
554                 .         .     D534R
                    .         .         V
                    .         .         V
561                 .         .     534535
                    .         .         .
                    .         .         .
569                 .         .         .        511K
                    .         .         .          .
                    .         .         .          .
594                 .       C535........................
                    .         .
                    .         .
601                 .         .-------> D535R
597                 .       D535L
                    .         V
                    .         V
604                 .     535515
                    .         .
                    .         .
612                 .         .       511L
                    .         .         .
                    .         .         .
631                 .       C515............
                    .         .
                    .         .
638                 .         .-------> D515L
634                 .       D515R
                    .         V
                    .         V
641                 .     515575
                    .         .
                    .         .
649                 .         .       511M
                    .         .         .
                    .         .         .
666                 .       C575............
                    .         V
                    .         V
669                 .     575536
                    .         .
                    .         .
677                 .         .       511Q
                    .         .         .
                    .         .         .
698                 .         .         .        511N
                    .         .         .          .
                    .         .         .          .
719                 .       C536........................
                    .         V
                    .         V
722                 .     536545
                    .         .
                    .         .
730                 .         .       511O
                    .         .         .
                    .         .         .
751                 .      C545L............
                    .         .
                    .         .
756                 .         .<-------  D532R
754                 .         .     B532R
                    .         .         V
                    .         .         V
757                 .         .     532538
                    .         .         .
                    .         .         .
765                 .         .         .        510A
                    .         .         .          .
                    .         .         .          .
797                 .         .         .          .-------> D537R
793                 .         .         .      D537L
                    .         .         .          V
                    .         .         .          V
800                 .         .         .     537538
                    .         .         .          .
                    .         .         .          .
808                 .         .         .          .        510B
                    .         .         .          .          .
                    .         .         .          .          .
833                 .         .       C538........................
                    .         .         V
                    .         .         V
836                 .         .     538540
                    .         .         .
                    .         .         .
846                 .         .         .          .<-------  D537R
844                 .         .         .      B537R
                    .         .         .          V
                    .         .         .          V
847                 .         .         .     537577
                    .         .         .          .
                    .         .         .          .
855                 .         .         .          .        509D
                    .         .         .          .          .
                    .         .         .          .          .
884                 .         .         .          .          .-------> D539R
880                 .         .         .          .       D539L
                    .         .         .          .          V
                    .         .         .          .          V
887                 .         .         .          .      539577
                    .         .         .          .          .
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895                                  C577............
                                        V
                                        V
898                                577540
                                        .
                                        .
906                                     .        510C
                                        .          .
                                        .          .
937                            C540.......................
                                  V
                                  V
940                            540542
                                  .
                                  .
948                                  .        510F
                                  .          .
                                  .          .
967                            C542............
                                  V
                                  V
970                            542543
                                  .
                                  .
980                                  .<-------   D535R
978                                .       B535R
                                  .          .
                                  .          .
985                                  .------->   D574R
981                                .       D574L
                                  .          V
                                  .          V
988                                .      574582
                                  .          .
                                  .          .
998                                  .          .<-------   D574R
996                                  .       B574R
                                  .          V
                                  .          V
999                                  .      574541
                                  .          .
                                  .          .
1007                                 .          .        510D
                                  .          .          .
                                  .          .          .
1028                                 .        C541............
                                  .          V
                                  .          V
1031                                 .      541582
                                  .          .
                                  .          .
1039                                 .        C582............
                                  .          V
                                  .          V
1042                               .      582543
                                  .          .
                                  .          .
1050                                 .        510E
                                  .          .
                                  .          .
1069                           C543.......................
                                  V
                                  V
1072                           543545
                                  .
                                  .
1080                                 .        510G
                                  .          .
                                  .          .
1099                           C545R...........
                                  .
                                  .
1102                       C545............
                              V
                              V
1106                       545546
                                  .
                                  .
1114                           511P
                                  .
                                  .
1133                                 .        502A
                                  .          .
                                  .          .
1154                       C546......................
                                  .
                                  .
1157                           509A
                                  V
                                  V
1187                           552553
                                  .
                                  .
1195                                 .        509B
                                  .          .
                                  .          .
1225                           C553............
                                  .
                                  .
1232                              .------->   D553R
1228                           D553L
                                  V
                                  V
1235                           553554
                                  .
                                  .
1243                                 .        509C
                                  .          .
                                  .          .
1262                           C554............
                                  .
                                  .
1269                              .------->   D554R
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1265          .          .      D554L
              .          .        V
              .          .        V
1272          .          .     554555
              .          .        .
1280          .          .        .        509E
              .          .        .          .
              .          .        .          .
1303          .          .        .          .          .<-------   D539R
1301          .          .        .          .      B539R
              .          .        .          .        V
              .          .        .          .        V
1304          .          .        .          .     539555
              .          .        .          .        .
              .          .        .          .        .
1312          .          .      C555.......................
              .          .        V
              .          .        V
1315          .          .     555557
              .          .        .
              .          .        .
1325          .          .        .          .<-------   D553R
1323          .          .        .      B553R
              .          .        .        V
              .          .        .        V
1326          .          .        .     553556
              .          .        .          .
              .          .        .          .
1336          .          .        .          .          .<-------   D554R
1334          .          .        .          .      B554R
              .          .        .          .        .
              .          .        .          .        .
1337          .          .        .       C556............
              .          .        .          V
              .          .        .          V
1340          .          .        .     556558
              .          .        .          .
              .          .        .          .
1348          .          .        .          .        509F
              .          .        .          .        .
              .          .        .          .        .
1368          .          .        .       C558............
              .          .        .          .
              .          .        .          .
1375          .          .        .          .-------->  D558R
1371          .          .        .      D558L
              .          .        .        V
              .          .        .        V
1378          .          .        .     558557
              .          .        .          .
              .          .        .          .
1386          .          .        .          .        509G
              .          .        .          .        .
              .          .        .          .        .
1404          .          .      C557.......................
              .          .        .
              .          .        .-------->  D557L
1411          .          .        .
1407          .          .      D557R
              .          .        V
              .          .        V
1414          .          .     557565
              .          .        .
              .          .        .
1422          .          .        .        509M
              .          .        .          .
              .          .        .          .
1441          .          .      C565............
              .          .        V
              .          .        V
1444          .          .     565566
              .          .        .
              .          .        .
1454          .          .        .          .<-------   D557L
1452          .          .        .      B557L
              .          .        .        V
              .          .        .        V
1455          .          .        .     557559
              .          .        .          .
              .          .        .          .
1463          .          .        .          .        509H
              .          .        .          .        .
              .          .        .          .        .
1484          .          .        .       C559............
              .          .        .          .
              .          .        .          .
1491          .          .        .          .-------->  D559L
1487          .          .        .      D559R
              .          .        .        V
              .          .        .        V
1494          .          .        .     559560
              .          .        .          .
              .          .        .          .
1502          .          .        .          .        509I
              .          .        .          .        .
              .          .        .          .        .
1523          .          .        .       C560............
              .          .        .          .
              .          .        .          .
1530          .          .        .          .-------->  D560L
1526          .          .        .      D560R
              .          .        .        V
              .          .        .        V
1533          .          .        .     560566
              .          .        .          .
              .          .        .          .
1541          .          .        .          .        509L
              .          .        .          .        .
              .          .        .          .        .
1562          .          .      C566.......................
              .          .        V
              .          .        V
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1565          .           .      566567
              .           .           .
1575          .           .           .<-------   D559L
1573          .           .       B559L
              .           .           V
              .           .           V
1576          .           .      559561
              .           .           .
              .           .           .
1586          .           .           .           .<-------   D560L
1584          .           .           .       B560L
              .           .           .           V
              .           .           .           V
1587          .           .           .      560561
              .           .           .           .
              .           .           .           .
1595          .           .           .           .        509K
              .           .           .           .           .
              .           .           .           .           .
1616          .           .       C561.......................
              .           .           V
              .           .           V
1619          .           .      561562
              .           .           .
              .           .           .
1627          .           .           .        509J
              .           .           .           .
              .           .           .           .
1646          .           .       C562............
              .           .           V
              .           .           V
1649          .           .      562567
              .           .           .
              .           .           .
1657          .           .           .        509P
              .           .           .           .
              .           .           .           .
1678          .           .     C567........................
              .           .        V
              .           .        V
1681          .           .     567568
              .           .           .
              .           .           .
1689          .           .           .       509Q
              .           .           .           .
              .           .           .           .
1710          .           .     C568............
              .           .        V
              .           .        V
1713          .           .     568569
              .           .           .
              .           .           .
1721          .           .           .       509R
              .           .           .           .
              .           .           .           .
1740          .           .     C569............
              .           .        V
              .           .        V
1743          .           .     569570
              .           .           .
              .           .           .
1751          .           .           .       509O
              .           .           .           .
              .           .           .           .
1772          .           .           .           .        509N
              .           .           .           .           .
              .           .           .           .           .
1793          .           .           .       C564............
              .           .           .           V
              .           .           .           V
1796          .           .           .      564570
              .           .           .           .
              .           .           .           .
1804          .           .           .           .        509S
              .           .           .           .           .
              .           .           .           .           .
1823          .           .     C570........................
              .           .           .
              .           .           .
1826      CLEAR........................
              .
              .
1831          .           .<-------   D558R
1829          .       B558R
              .           V
              .           V
1832          .      558571
              .           .
              .           .
1840          .           .     505A
              .           .        .
              .           .        .
1860          .       C571............
              .           V
              .           V
1863          .      571572
              .           .
              .           .
1871          .           .     505B
              .           .        .
              .           .        .
1892          .       C572............
              .           .
              .           .
1895          .           .     500A
              .           .        V
              .           .        V
1913          .           .     501502
              .           .        .
              .           .        .
1921          .           .        .       500B
              .           .        .          .
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1943                C502............
                       .
1950                   .-------->   D502L
1946             D502R
                     V
                     V
1953            502506
                       .
1963                   .          .<-------   D534L
1961                   .      B534L
                       .          V
                       .          V
1964                   .     534506
                       .          .
                       .          .
1972                C506............
                     V
                     V
1975            506507
                       .
1983                   .       500H
                       .          .
                       .          .
2003                C507............
                     V
                     V
2006            507508
                       .
2016                   .          .<-------   D502L
2014                   .      B502L
                       .          V
                       .          V
2017                   .     502503
                       .          .
2025                   .          .        500C
                       .          .          .
                       .          .          .
2042                   .       C503............
                       .          V
                       .          V
2049                   .     503508
                       .          .
2057                   .          .        500I
                       .          .          .
                       .          .          .
2077                C508......................
                       .
2084                   .-------->   D508L
2080             D508R
                     V
                     V
2087            508517
                       .
2097                   .          .<-------   D515L
2095                   .      B515L
                       .          V
                       .          V
2098                   .     515517
                       .          .
2106                   .          .        500L
                       .          .          .
                       .          .          .
2124                C517......................
                     V
                     V
2127            517518
                       .
2135                   .       500J
                       .          V
                       .          V
2151                   .     514518
                       .          .
2159                C518............
                     V
                     V
2162            518519
                       .
2170                   .       500M
                       .          .
                       .          .
2191                C519............
                       .
2194                   .       C504
                       .          V
                       .          V
2197                   .     504509
                       .          .
2205                   .          .        500D
                       .          .          .
                       .          .          .
2225                   .     TEMP1............
                       .          .
2229                   .          .       C509
                       .          .          V
                       .          .          V
2232                   .          .     509510
                       .          .          .
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2240                                                  500E
                                                        .
2257                                                    .        C581
                                                        .          V
2260                                                    .        581510
                                                        .          .
2268                                            TEMP2.......................
                                                        .
2272                                                  C510
                                                        .
2279                                                    .-------->   D510L
2275                                                  D510R
                                                        V
2282                                                  510511
                                                        .
2292                                                    .          .<-------   D508L
2290                                                    .        B508L
                                                        .          V
2293                                                    .        508511
                                                        .          .
2301                                                    .          .        500F
                                                        .          .          .
2322                                                  C511.......................
                                                        V
2325                                                  511512
                                                        .
2333                                                    .        500K
                                                        .          V
2350                                                    .        513512
                                                        .          .
2358                                                    .          .        500G
                                                        .          .          .
2379                                                  C512.......................
                                                        .
2382                                            C520............
                                                  V
2385                                            520576
                                                        .
2393                                                  500O
                                                        V
2414                                                  521522
                                                        .
2422                                                    .        500P
                                                        .          .
2441                                                  C522............
                                                        .
2444                                            C576............
                                                  V
2447                                            576523
                                                        .
2455                                                  500N
                                                        .
2476                                            C523............
                                                        .
2479                                                  501A
                                                        .
2500                                                    .        501B
                                                        .          .
2519                                    CLEAR...............................................
                                                        .
2522                                        502B
                                                        .
2543                                            502C
                                                        .
2564                                                  503A
                                                        V
2585                                                  549550
                                                        .
2593                                                    .        503C
                                                        .          .
2614                                                  C550L............
                                                        .
2617                                                    .        503B
                                                        .          .
2636                                                  C550............
                                                        .
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 2639          :          :          :          :          :          :          504A

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1*************************************                                    *************************************
*                                   *                                    *                                   *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)*                                    *   U.S. ARMY CORPS OF ENGINEERS    *
*             MAY   1991            *                                    *   HYDROLOGIC ENGINEERING CENTER   *
*           VERSION 4.0.1E          *                                    *         609 SECOND STREET         *
*                                   *                                    *      DAVIS, CALIFORNIA 95616      *
*  RUN DATE  08/07/95  TIME  10:40:24*                                    *         (916) 551-1748            *
*                                   *                                    *                                   *
*************************************                                    *************************************


                        RIO VERDE SOUTH FIS - Existing Condition Model        File:   L100-6.IH1
                        by  GVSCE for MKE:   MCFCD #93-07                 Original: 07-22-94     dtp
                            Project:  46                                   Revised: 10-17-94     trl
                            100-year  6-Hr Rainfall
                            Green & Ampt Rainfall Losses

                              This model does not include the effects of the existing levee
                                on the north boundary of subbasin 510E.

 10 IO          OUTPUT CONTROL VARIABLES
                      IPRNT           5  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE

    IT          HYDROGRAPH TIME DATA
                       NMIN           1  MINUTES IN COMPUTATION INTERVAL
                      IDATE      1    0  STARTING DATE
                      ITIME        0000  STARTING TIME
                         NQ        1150  NUMBER OF HYDROGRAPH ORDINATES
                     NDDATE      1    0  ENDING DATE
                     NDTIME        1909  ENDING TIME
                      ICENT          19  CENTURY MARK

                 COMPUTATION INTERVAL    0.02 HOURS
                      TOTAL TIME BASE   19.15 HOURS

          ENGLISH UNITS
               DRAINAGE AREA          SQUARE MILES
               PRECIPITATION DEPTH    INCHES
               LENGTH, ELEVATION      FEET
               FLOW                   CUBIC FEET PER SECOND
               STORAGE VOLUME         ACRE-FEET
               SURFACE AREA           ACRES
               TEMPERATURE            DEGREES FAHRENHEIT

 12 JD          INDEX STORM NO. 1
                       STRM        3.40  PRECIPITATION DEPTH
                       TRDA        0.01  TRANSPOSITION DRAINAGE AREA

 13 PI            PRECIPITATION PATTERN
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.01      0.01      0.01      0.01      0.01
                    0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                    0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                    0.01      0.01      0.01      0.01      0.01      0.03      0.03      0.03      0.03      0.03
                    0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03
                    0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                    0.01      0.01      0.01      0.01      0.01      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00

 16 JD          INDEX STORM NO. 2
                       STRM        3.38  PRECIPITATION DEPTH
                       TRDA        0.50  TRANSPOSITION DRAINAGE AREA

  0 PI            PRECIPITATION PATTERN
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                    0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
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```
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.03      0.03      0.03      0.03      0.03
                0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00

17 JD         INDEX STORM NO. 3
                STRM        3.33  PRECIPITATION DEPTH
                TRDA        2.80  TRANSPOSITION DRAINAGE AREA

18 PI         PRECIPITATION PATTERN
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.02      0.02      0.02      0.02      0.02
                0.02      0.02      0.02      0.02      0.02      0.02      0.02      0.02      0.02      0.02
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00

21 JD         INDEX STORM NO. 4
                STRM        3.13  PRECIPITATION DEPTH
                TRDA       16.00  TRANSPOSITION DRAINAGE AREA

22 PI         PRECIPITATION PATTERN
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00

25 JD         INDEX STORM NO. 5
                STRM        2.75  PRECIPITATION DEPTH
                TRDA       90.00  TRANSPOSITION DRAINAGE AREA

26 PI         PRECIPITATION PATTERN
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                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00

 29 JD        INDEX STORM NO. 6
                    STRM        1.94  PRECIPITATION DEPTH
                    TRDA      500.00  TRANSPOSITION DRAINAGE AREA

 30 PI          PRECIPITATION PATTERN
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00

*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

            **************
            *            *
 34 KK      *     WP504  *
            *            *
            **************

 35 KO        OUTPUT CONTROL VARIABLES
                IPRNT           5  PRINT CONTROL
                IPLOT           0  PLOT CONTROL
                QSCAL          0.  HYDROGRAPH PLOT SCALE
                IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                 IOUT          21  SAVE HYDROGRAPH ON THIS UNIT
                ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                ISAV2        1150  LAST ORDINATE PUNCHED OR SAVED
                TIMINT      0.017  TIME INTERVAL IN HOURS

*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

            **************
            *            *
 71 KK      *     WP581  *
            *            *
            **************

 72 KO        OUTPUT CONTROL VARIABLES
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                    IPRNT          5  PRINT CONTROL
                    IPLOT          0  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE
                    IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                     IOUT         21  SAVE HYDROGRAPH ON THIS UNIT
                    ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                    ISAV2       1150  LAST ORDINATE PUNCHED OR SAVED
                   TIMINT      0.017  TIME INTERVAL IN HOURS

        WARNING EXCESS AT PONDING LESS THAN ZERO FOR PERIOD. EXCESS SET TO ZERO
        WARNING EXCESS AT PONDING LESS THAN ZERO FOR PERIOD. EXCESS SET TO ZERO

 2196 BI          READ STATION    WP504 HYDROGRAPH FROM UNIT 21


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


            **************
            *            *
 2225 KK    *     TEMP1  *
            *            *
            **************

 2226 KO          OUTPUT CONTROL VARIABLES
                    IPRNT          5  PRINT CONTROL
                    IPLOT          0  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE
                    IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                     IOUT         21  SAVE HYDROGRAPH ON THIS UNIT
                    ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                    ISAV2       1150  LAST ORDINATE PUNCHED OR SAVED
                   TIMINT      0.017  TIME INTERVAL IN HOURS

 2231 BI          READ STATION    TEMP1 HYDROGRAPH FROM UNIT 21

 2259 BI          READ STATION    WP581 HYDROGRAPH FROM UNIT 21


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


            **************
            *            *
 2268 KK    *     TEMP2  *
            *            *
            **************

 2269 KO          OUTPUT CONTROL VARIABLES
                    IPRNT          5  PRINT CONTROL
                    IPLOT          0  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE
                    IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                     IOUT         21  SAVE HYDROGRAPH ON THIS UNIT
                    ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                    ISAV2       1150  LAST ORDINATE PUNCHED OR SAVED
                   TIMINT      0.017  TIME INTERVAL IN HOURS

 2274 BI          READ STATION    TEMP2 HYDROGRAPH FROM UNIT 21
1
                                          RUNOFF SUMMARY
                                     FLOW IN CUBIC FEET PER SECOND
                                  TIME IN HOURS,  AREA IN SQUARE MILES

                                 PEAK   TIME OF    AVERAGE FLOW FOR MAXIMUM PERIOD      BASIN     MAXIMUM     TIME OF
          OPERATION      STATION  FLOW    PEAK                                          AREA      STAGE     MAX STAGE
+                                                     6-HOUR     24-HOUR     72-HOUR
          HYDROGRAPH AT
+                          WP504   162.   4.67          33.         10.         10.      0.26
          HYDROGRAPH AT
+                          WP581   208.   6.75         103.         32.         32.      3.92
          2 COMBINED AT
+                          CLEAR   240.   5.00         135.         43.         43.      4.18
          HYDROGRAPH AT
+                           511A   941.   4.25         113.         35.         35.      0.65
          ROUTED TO
+                         524526   871.   4.72         112.         35.         35.      0.65
          HYDROGRAPH AT
+                           511B   948.   4.63         203.         64.         64.      1.10
          ROUTED TO
+                         525526   943.   4.72         203.         64.         64.      1.10
          HYDROGRAPH AT
+                           511D   195.   4.27          24.          8.          8.      0.13
          3 COMBINED AT
+                           C526  1594.   4.73         314.         99.         99.      1.88
          ROUTED TO
+                         526527  1562.   4.93         314.         99.         99.      1.88
          HYDROGRAPH AT
+                           511E   579.   4.53         105.         33.         33.      0.57
          HYDROGRAPH AT
+                           511F   340.   4.12          28.          9.          9.      0.15
          3 COMBINED AT
+                           C527  1780.   4.92         417.        131.        131.      2.60
          ROUTED TO
+                         527528  1764.   5.02         415.        130.        130.      2.60
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+	HYDROGRAPH AT	511C	878.	4.72	197.	62.	62.	1.20
+	2 COMBINED AT	C528	2229.	5.00	566.	178.	178.	3.80
+	ROUTED TO	528529	2180.	5.23	558.	175.	175.	3.80
+	HYDROGRAPH AT	511H	458.	4.20	47.	15.	15.	0.31
+	2 COMBINED AT	C529	2175.	5.23	585.	184.	184.	4.11
+	HYDROGRAPH AT	511G	961.	4.37	143.	45.	45.	0.87
+	2 COMBINED AT	C530	2274.	5.22	681.	214.	214.	4.97
+	ROUTED TO	530531	2238.	5.47	674.	212.	212.	4.97
+	HYDROGRAPH AT	511I	382.	4.12	29.	9.	9.	0.21
+	2 COMBINED AT	C531	2232.	5.47	688.	216.	216.	5.18
+	DIVERSION TO	D531L	528.	5.47	162.	51.	51.	5.18
+	HYDROGRAPH AT	D531R	1694.	5.47	524.	165.	165.	5.18
+	ROUTED TO	531532	1687.	5.53	522.	164.	164.	5.18
+	DIVERSION TO	D532R	877.	5.53	270.	85.	85.	5.18
+	HYDROGRAPH AT	D532L	810.	5.53	252.	79.	79.	5.18
+	DIVERSION TO	D532AL	468.	5.52	135.	42.	42.	5.18
+	HYDROGRAPH AT	D532AR	341.	5.53	117.	37.	37.	5.18
+	ROUTED TO	532580	339.	5.68	116.	37.	37.	5.18
+	HYDROGRAPH AT	B532AL	468.	5.52	135.	42.	42.	5.18
+	DIVERSION TO	D578L	234.	5.52	67.	21.	21.	5.18
+	HYDROGRAPH AT	D578R	234.	5.52	67.	21.	21.	5.18
+	ROUTED TO	578573	232.	5.60	67.	21.	21.	5.18
+	DIVERSION TO	D573L	53.	5.60	10.	3.	3.	5.18
+	HYDROGRAPH AT	D573R	179.	5.62	57.	18.	18.	5.18
+	ROUTED TO	573580	179.	5.68	56.	18.	18.	5.18
+	2 COMBINED AT	C580	518.	5.68	173.	54.	54.	5.18
+	ROUTED TO	580535	511.	6.08	171.	54.	54.	5.18
+	HYDROGRAPH AT	B531L	528.	5.47	162.	51.	51.	5.18
+	ROUTED TO	531533	523.	5.57	160.	50.	50.	5.18
+	HYDROGRAPH AT	B578L	234.	5.52	67.	21.	21.	5.18
+	2 COMBINED AT	C533	757.	5.55	227.	71.	71.	5.18
+	ROUTED TO	533579	754.	5.60	226.	71.	71.	5.18
+	HYDROGRAPH AT	B573L	53.	5.60	10.	3.	3.	5.18
+	2 COMBINED AT	C579	807.	5.60	236.	74.	74.	5.18
+	ROUTED TO	579534	803.	5.67	235.	74.	74.	5.18
+	HYDROGRAPH AT	511J	238.	4.08	16.	5.	5.	0.12
+	2 COMBINED AT	C534	800.	5.67	242.	76.	76.	5.30
+	DIVERSION TO	D534L	240.	5.67	73.	23.	23.	5.30

+	HYDROGRAPH AT	D534R	560.	5.67	169.	53.	53.	5.30
+	ROUTED TO	534535	550.	5.95	166.	52.	52.	5.30
+	HYDROGRAPH AT	511K	1001.	4.32	142.	44.	44.	0.79
+	3 COMBINED AT	C535	1055.	6.00	437.	139.	139.	6.09
+	DIVERSION TO	D535R	896.	6.00	371.	118.	118.	6.09
+	HYDROGRAPH AT	D535L	158.	6.00	66.	21.	21.	6.09
+	ROUTED TO	535515	156.	6.12	64.	20.	20.	6.09
+	HYDROGRAPH AT	511L	336.	4.15	29.	9.	9.	0.19
+	2 COMBINED AT	C515	214.	4.27	82.	26.	26.	6.28
+	DIVERSION TO	D515L	166.	4.27	65.	21.	21.	6.28
+	HYDROGRAPH AT	D515R	49.	4.38	17.	5.	5.	6.28
+	ROUTED TO	515575	49.	4.45	17.	5.	5.	6.28
+	HYDROGRAPH AT	511M	182.	4.10	14.	4.	4.	0.08
+	2 COMBINED AT	C575	111.	4.30	27.	8.	8.	6.36
+	ROUTED TO	575536	109.	4.42	26.	8.	8.	6.36
+	HYDROGRAPH AT	511Q	164.	4.12	22.	7.	7.	0.09
+	HYDROGRAPH AT	511N	132.	4.12	17.	5.	5.	0.07
+	3 COMBINED AT	C536	272.	4.30	59.	19.	19.	6.52
+	ROUTED TO	536545	266.	4.55	58.	19.	19.	6.52
+	HYDROGRAPH AT	511O	78.	4.18	8.	3.	3.	0.05
+	2 COMBINED AT	C545L	294.	4.53	63.	20.	20.	6.56
+	HYDROGRAPH AT	B532R	877.	5.53	270.	85.	85.	5.18
+	ROUTED TO	532538	866.	5.83	268.	85.	85.	5.18
+	HYDROGRAPH AT	510A	994.	4.40	155.	49.	49.	0.91
+	DIVERSION TO	D537R	746.	4.40	131.	41.	41.	0.91
+	HYDROGRAPH AT	D537L	248.	4.40	24.	8.	8.	0.91
+	ROUTED TO	537538	237.	4.63	24.	8.	8.	0.91
+	HYDROGRAPH AT	510B	518.	4.32	70.	22.	22.	0.36
+	3 COMBINED AT	C538	895.	5.82	336.	107.	107.	5.18
+	ROUTED TO	538540	876.	6.43	331.	106.	106.	5.18
+	HYDROGRAPH AT	B537R	746.	4.40	131.	41.	41.	0.91
+	ROUTED TO	537577	735.	4.55	130.	41.	41.	0.91
+	HYDROGRAPH AT	509D	453.	4.32	59.	19.	19.	0.34
+	DIVERSION TO	D539R	158.	4.32	21.	7.	7.	0.34
+	HYDROGRAPH AT	D539L	295.	4.32	38.	12.	12.	0.34
+	ROUTED TO	539577	292.	4.38	38.	12.	12.	0.34
+	2 COMBINED AT	C577	908.	4.50	161.	50.	50.	1.25
+	ROUTED TO	577540	881.	4.88	159.	50.	50.	1.25

+	HYDROGRAPH AT	510C	850.	4.50	151.	47.	47.	0.85
+	3 COMBINED AT	C540	1288.	4.97	550.	177.	177.	7.28
+	ROUTED TO	540542	1282.	5.03	550.	177.	177.	7.28
+	HYDROGRAPH AT	510F	207.	4.18	23.	7.	7.	0.12
+	2 COMBINED AT	C542	1300.	5.03	564.	182.	182.	7.40
+	ROUTED TO	542543	1294.	5.07	564.	182.	182.	7.40
+	HYDROGRAPH AT	B535R	896.	6.00	371.	118.	118.	6.09
+	DIVERSION TO	D574R	211.	6.00	77.	24.	24.	6.09
+	HYDROGRAPH AT	D574L	685.	6.00	295.	94.	94.	6.09
+	ROUTED TO	574582	681.	6.10	292.	93.	93.	6.09
+	HYDROGRAPH AT	B574R	211.	6.00	77.	24.	24.	6.09
+	ROUTED TO	574541	208.	6.10	75.	24.	24.	6.09
+	HYDROGRAPH AT	510D	126.	4.15	11.	4.	4.	0.06
+	2 COMBINED AT	C541	208.	6.10	83.	26.	26.	6.15
+	ROUTED TO	541582	207.	6.22	83.	26.	26.	6.15
+	2 COMBINED AT	C582	884.	6.12	374.	119.	119.	6.15
+	ROUTED TO	582543	879.	6.33	373.	119.	119.	6.15
+	HYDROGRAPH AT	510E	282.	4.27	42.	13.	13.	0.18
+	3 COMBINED AT	C543	1615.	5.05	860.	278.	278.	13.73
+	ROUTED TO	543545	1609.	6.52	856.	276.	276.	13.73
+	HYDROGRAPH AT	510G	316.	4.20	38.	12.	12.	0.18
+	2 COMBINED AT	C545R	1634.	5.13	874.	284.	284.	13.91
+	2 COMBINED AT	C545	1611.	5.13	853.	278.	278.	20.47
+	ROUTED TO	545546	1598.	5.23	852.	278.	278.	20.47
+	HYDROGRAPH AT	511P	493.	4.28	72.	23.	23.	0.31
+	HYDROGRAPH AT	502A	113.	4.10	9.	3.	3.	0.04
+	3 COMBINED AT	C546	1688.	5.22	902.	296.	296.	20.82
+	HYDROGRAPH AT	509A	674.	4.45	113.	35.	35.	0.57
+	ROUTED TO	552553	626.	5.12	112.	35.	35.	0.57
+	HYDROGRAPH AT	509B	638.	4.47	103.	32.	32.	0.64
+	2 COMBINED AT	C553	779.	5.05	200.	63.	63.	1.21
+	DIVERSION TO	D553R	367.	5.05	97.	30.	30.	1.21
+	HYDROGRAPH AT	D553L	411.	5.05	103.	32.	32.	1.21
+	ROUTED TO	553554	408.	5.20	103.	32.	32.	1.21
+	HYDROGRAPH AT	509C	279.	4.15	27.	8.	8.	0.15
+	2 COMBINED AT	C554	410.	5.18	126.	39.	39.	1.36
+	DIVERSION TO	D554R	261.	5.18	83.	26.	26.	1.36
+	HYDROGRAPH AT	D554L	149.	5.18	42.	13.	13.	1.36

+	ROUTED TO	554555	148.	5.23	42.	13.	13.	1.36
+	HYDROGRAPH AT	509E	340.	4.20	37.	12.	12.	0.19
+	HYDROGRAPH AT	B539R	158.	4.32	21.	7.	7.	0.34
+	ROUTED TO	539555	152.	4.58	21.	7.	7.	0.34
+	3 COMBINED AT	C555	394.	4.43	92.	29.	29.	1.88
+	ROUTED TO	555557	392.	4.58	91.	29.	29.	1.88
+	HYDROGRAPH AT	B553R	367.	5.05	97.	30.	30.	1.21
+	ROUTED TO	553556	365.	5.18	97.	30.	30.	1.21
+	HYDROGRAPH AT	B554R	261.	5.18	83.	26.	26.	1.36
+	2 COMBINED AT	C556	618.	5.18	178.	56.	56.	1.36
+	ROUTED TO	556558	613.	5.37	178.	56.	56.	1.36
+	HYDROGRAPH AT	509F	367.	4.17	37.	12.	12.	0.20
+	2 COMBINED AT	C558	612.	5.35	209.	66.	66.	1.56
+	DIVERSION TO	D558R	263.	5.35	88.	28.	28.	1.56
+	HYDROGRAPH AT	D558L	348.	5.35	120.	38.	38.	1.56
+	ROUTED TO	558557	347.	5.40	120.	38.	38.	1.56
+	HYDROGRAPH AT	509G	196.	4.13	18.	6.	6.	0.09
+	3 COMBINED AT	C557	755.	4.52	222.	70.	70.	2.18
+	DIVERSION TO	D557L	144.	4.52	26.	8.	8.	2.18
+	HYDROGRAPH AT	D557R	610.	4.52	195.	61.	61.	2.18
+	ROUTED TO	557565	606.	4.73	195.	61.	61.	2.18
+	HYDROGRAPH AT	509M	150.	4.22	19.	6.	6.	0.10
+	2 COMBINED AT	C565	657.	4.70	209.	66.	66.	2.28
+	ROUTED TO	565566	655.	4.73	209.	66.	66.	2.28
+	HYDROGRAPH AT	B557L	144.	4.52	26.	8.	8.	2.18
+	ROUTED TO	557559	143.	4.65	26.	8.	8.	2.18
+	HYDROGRAPH AT	509H	109.	4.23	13.	4.	4.	0.07
+	2 COMBINED AT	C559	192.	4.60	38.	12.	12.	2.25
+	DIVERSION TO	D559L	76.	4.58	15.	5.	5.	2.25
+	HYDROGRAPH AT	D559R	116.	4.60	22.	7.	7.	2.25
+	ROUTED TO	559560	115.	4.67	22.	7.	7.	2.25
+	HYDROGRAPH AT	509I	61.	4.15	5.	2.	2.	0.03
+	2 COMBINED AT	C560	127.	4.63	26.	8.	8.	2.28
+	DIVERSION TO	D560L	40.	4.63	10.	3.	3.	2.28
+	HYDROGRAPH AT	D560R	86.	4.63	17.	5.	5.	2.28
+	ROUTED TO	560566	85.	4.80	16.	5.	5.	2.28
+	HYDROGRAPH AT	509L	209.	4.05	19.	6.	6.	0.08
+	3 COMBINED AT	C566	762.	4.73	241.	76.	76.	2.36

+	ROUTED TO	566567	760.	4.78	241.	76.	76.	2.36
+	HYDROGRAPH AT	B559L	76.	4.58	15.	5.	5.	2.25
+	ROUTED TO	559561	76.	4.70	15.	5.	5.	2.25
+	HYDROGRAPH AT	B560L	40.	4.63	10.	3.	3.	2.28
+	ROUTED TO	560561	40.	4.70	10.	3.	3.	2.28
+	HYDROGRAPH AT	509K	60.	4.13	5.	2.	2.	0.03
+	3 COMBINED AT	C561	128.	4.65	30.	9.	9.	2.31
+	ROUTED TO	561562	128.	4.70	30.	9.	9.	2.31
+	HYDROGRAPH AT	509J	161.	4.22	21.	6.	6.	0.10
+	2 COMBINED AT	C562	199.	4.52	47.	15.	15.	2.41
+	ROUTED TO	562567	198.	4.63	47.	15.	15.	2.41
+	HYDROGRAPH AT	509P	325.	4.05	30.	9.	9.	0.11
+	3 COMBINED AT	C567	876.	4.77	287.	91.	91.	4.88
+	ROUTED TO	567568	875.	4.82	286.	91.	91.	4.88
+	HYDROGRAPH AT	509Q	244.	4.08	27.	8.	8.	0.11
+	2 COMBINED AT	C568	915.	4.78	308.	98.	98.	4.99
+	ROUTED TO	568569	911.	4.92	308.	98.	98.	4.99
+	HYDROGRAPH AT	509R	245.	4.08	20.	6.	6.	0.10
+	2 COMBINED AT	C569	920.	4.90	323.	103.	103.	5.09
+	ROUTED TO	569570	918.	4.97	323.	103.	103.	5.09
+	HYDROGRAPH AT	509O	100.	4.05	11.	3.	3.	0.04
+	HYDROGRAPH AT	509N	250.	4.08	28.	9.	9.	0.11
+	2 COMBINED AT	C564	347.	4.07	39.	12.	12.	0.15
+	ROUTED TO	564570	326.	4.27	39.	12.	12.	0.15
+	HYDROGRAPH AT	509S	431.	4.13	44.	14.	14.	0.19
+	3 COMBINED AT	C570	1044.	4.87	388.	124.	124.	5.43
+	3 COMBINED AT	CLEAR	2418.	5.13	1238.	405.	405.	30.43
+	HYDROGRAPH AT	B558R	263.	5.35	88.	28.	28.	1.56
+	ROUTED TO	558571	260.	5.60	87.	27.	27.	1.56
+	HYDROGRAPH AT	505A	341.	4.15	34.	11.	11.	0.18
+	2 COMBINED AT	C571	315.	4.50	113.	36.	36.	2.13
+	ROUTED TO	571572	311.	4.65	112.	35.	35.	2.13
+	HYDROGRAPH AT	505B	378.	4.07	37.	12.	12.	0.14
+	2 COMBINED AT	C572	429.	4.37	145.	46.	46.	2.28
+	HYDROGRAPH AT	500A	421.	4.13	37.	11.	11.	0.21
+	ROUTED TO	501502	365.	4.73	36.	11.	11.	0.21
+	HYDROGRAPH AT	500B	325.	4.22	35.	11.	11.	0.20
+	2 COMBINED AT	C502	491.	4.22	71.	22.	22.	0.42

+	DIVERSION TO						
		D502L	299.	4.22	38.	12.	12.	0.42
+	HYDROGRAPH AT						
		D502R	192.	4.22	33.	10.	10.	0.42
+	ROUTED TO						
		502506	189.	4.43	33.	10.	10.	0.42
+	HYDROGRAPH AT						
		B534L	240.	5.67	73.	23.	23.	5.30
+	ROUTED TO						
		534506	239.	5.70	72.	23.	23.	5.30
+	2 COMBINED AT						
		C506	265.	5.63	98.	31.	31.	5.72
+	ROUTED TO						
		506507	264.	5.67	98.	31.	31.	5.72
+	HYDROGRAPH AT						
		500H	340.	4.17	31.	10.	10.	0.21
+	2 COMBINED AT						
		C507	279.	4.40	117.	37.	37.	5.93
+	ROUTED TO						
		507508	273.	4.67	116.	36.	36.	5.93
+	HYDROGRAPH AT						
		B502L	299.	4.22	38.	12.	12.	0.42
+	ROUTED TO						
		502503	294.	4.40	38.	12.	12.	0.42
+	HYDROGRAPH AT						
		500C	248.	4.12	20.	6.	6.	0.12
+	2 COMBINED AT						
		C503	395.	4.35	57.	18.	18.	0.54
+	ROUTED TO						
		503508	356.	4.90	56.	18.	18.	0.54
+	HYDROGRAPH AT						
		500I	644.	4.17	60.	19.	19.	0.41
+	3 COMBINED AT						
		C508	528.	4.52	185.	58.	58.	6.88
+	DIVERSION TO						
		D508L	277.	4.52	81.	25.	25.	6.88
+	HYDROGRAPH AT						
		D508R	251.	4.52	103.	33.	33.	6.88
+	ROUTED TO						
		508517	249.	5.27	102.	32.	32.	6.88
+	HYDROGRAPH AT						
		B515L	166.	4.27	65.	21.	21.	6.28
+	ROUTED TO						
		515517	159.	4.52	64.	20.	20.	6.28
+	HYDROGRAPH AT						
		500L	292.	4.13	24.	8.	8.	0.16
+	3 COMBINED AT						
		C517	424.	4.50	176.	56.	56.	7.60
+	ROUTED TO						
		517518	423.	4.55	175.	56.	56.	7.60
+	HYDROGRAPH AT						
		500J	204.	4.08	14.	4.	4.	0.09
+	ROUTED TO						
		514518	199.	4.15	14.	4.	4.	0.09
+	2 COMBINED AT						
		C518	463.	4.48	183.	58.	58.	7.69
+	ROUTED TO						
		518519	455.	4.68	181.	58.	58.	7.69
+	HYDROGRAPH AT						
		500M	228.	4.12	27.	8.	8.	0.12
+	2 COMBINED AT						
		C519	513.	4.65	198.	64.	64.	7.81
+	HYDROGRAPH AT						
		C504	162.	4.67	33.	10.	10.	0.26
+	ROUTED TO						
		504509	155.	5.10	31.	10.	10.	0.26
+	HYDROGRAPH AT						
		500D	371.	4.17	36.	11.	11.	0.23
+	2 COMBINED AT						
		TEMP1	371.	4.17	66.	21.	21.	0.49
+	HYDROGRAPH AT						
		C509	371.	4.17	66.	21.	21.	0.49
+	ROUTED TO						
		509510	361.	4.33	66.	21.	21.	0.49
+	HYDROGRAPH AT						
		500E	219.	4.10	16.	5.	5.	0.11

+	HYDROGRAPH AT	C581	208.	6.75	103.	32.	32.	3.92
+	ROUTED TO	581510	206.	6.87	102.	32.	32.	3.92
+	3 COMBINED AT	TEMP2	466.	4.28	183.	58.	58.	0.49
+	HYDROGRAPH AT	C510	466.	4.28	183.	58.	58.	0.49
+	DIVERSION TO	D510L	190.	4.28	73.	23.	23.	0.49
+	HYDROGRAPH AT	D510R	276.	4.28	110.	35.	35.	0.49
+	ROUTED TO	510511	272.	4.35	109.	34.	34.	0.49
+	HYDROGRAPH AT	B508L	277.	4.52	81.	25.	25.	6.88
+	ROUTED TO	508511	271.	5.28	80.	25.	25.	6.88
+	HYDROGRAPH AT	500F	647.	4.20	67.	21.	21.	0.44
+	3 COMBINED AT	C511	509.	4.52	216.	68.	68.	7.49
+	ROUTED TO	511512	492.	5.03	213.	67.	67.	7.49
+	HYDROGRAPH AT	500K	219.	4.12	20.	6.	6.	0.10
+	ROUTED TO	513512	201.	4.38	19.	6.	6.	0.10
+	HYDROGRAPH AT	500G	349.	4.13	45.	14.	14.	0.20
+	3 COMBINED AT	C512	579.	4.95	256.	82.	82.	7.79
+	2 COMBINED AT	C520	818.	5.10	416.	133.	133.	8.28
+	ROUTED TO	520576	817.	5.17	416.	132.	132.	8.28
+	HYDROGRAPH AT	500O	182.	4.13	25.	8.	8.	0.10
+	ROUTED TO	521522	175.	4.35	25.	8.	8.	0.10
+	HYDROGRAPH AT	500P	201.	4.10	19.	6.	6.	0.08
+	2 COMBINED AT	C522	307.	4.23	44.	14.	14.	0.18
+	2 COMBINED AT	C576	875.	5.12	450.	144.	144.	8.47
+	ROUTED TO	576523	874.	5.15	450.	144.	144.	8.47
+	HYDROGRAPH AT	500N	228.	4.17	20.	6.	6.	0.11
+	2 COMBINED AT	C523	949.	4.45	463.	148.	148.	8.58
+	HYDROGRAPH AT	501A	111.	4.05	8.	2.	2.	0.04
+	HYDROGRAPH AT	501B	151.	4.12	13.	4.	4.	0.07
+	5 COMBINED AT	CLEAR	1358.	4.63	658.	211.	211.	17.00
+	HYDROGRAPH AT	502B	139.	4.12	12.	4.	4.	0.05
+	HYDROGRAPH AT	502C	100.	4.15	11.	3.	3.	0.05
+	HYDROGRAPH AT	503A	458.	4.12	57.	18.	18.	0.22
+	ROUTED TO	549550	445.	4.22	57.	18.	18.	0.22
+	HYDROGRAPH AT	503C	278.	4.18	27.	8.	8.	0.12
+	2 COMBINED AT	C550L	717.	4.20	83.	26.	26.	0.34
+	HYDROGRAPH AT	503B	171.	4.22	27.	8.	8.	0.11
+	2 COMBINED AT	C550	886.	4.20	110.	34.	34.	0.45
+	HYDROGRAPH AT	504A	428.	4.22	55.	17.	17.	0.24

*** NORMAL END OF HEC-1 ***

APPENDIX G

100-Year, 24 Hour Storm Exiting Condition HEC-1, Output without Levee

```
1*************************************
 *                                   *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
 *            MAY   1991             *
 *          VERSION 4.0.1E           *
 *                                   *
 *  RUN DATE  08/07/95  TIME  10:36:40  *
 *                                   *
 *************************************
```

```
*************************************
*                                   *
*    U.S. ARMY CORPS OF ENGINEERS   *
*   HYDROLOGIC ENGINEERING CENTER   *
*         609 SECOND STREET         *
*       DAVIS, CALIFORNIA 95616     *
*          (916) 551-1748           *
*                                   *
*************************************
```

```
X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X              X
XXXXXXX  XXXX     X        XXXXX  X
X     X  X        X              X
X     X  X        X     X        X
X     X  XXXXXXX   XXXXX         XXX
```

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

```
1                                    HEC-1 INPUT                                                    PAGE  1

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID    RIO VERDE SOUTH FIS - Existing Condition Model        File:  L100-24.IH1
  2           ID    by  GVSCE for MKE:   MCFCD #93-07                  Original: 07-22-94     dtp
  3           ID        Project:  46                                    Revised: 10-17-94     trl
  4           ID        100-year 24-Hr Rainfall
  5           ID        Green & Ampt Rainfall Losses
  6           ID
  7           ID          This model does not include the effects of the existing levee
  8           ID            on the north boundary of subbasin 510E.
              *
              *
  9           IT       2                    1500
 10           IO       5
 11           IN      15
              *DIAGRAM
              *
              * Point precipitation values are are based on Hydro-40 DARF.
              *   0.01    5.00   10.00   50.00   80.00  100.00  200.00
              *  1.000   0.980   0.949   0.883   0.861   0.850   0.819
              *
 12           JD    4.40    0.01
              *  The following PC records are a 24-hour SCS Type II rainfall distribution.
 13           PC   0.000   0.002   0.005   0.008   0.011   0.013   0.016   0.019   0.022   0.025
 14           PC   0.028   0.032   0.035   0.038   0.041   0.044   0.048   0.053   0.056   0.060
 15           PC   0.063   0.067   0.071   0.075   0.080   0.084   0.089   0.093   0.098   0.103
 16           PC   0.109   0.114   0.120   0.127   0.133   0.140   0.147   0.155   0.163   0.172
 17           PC   0.181   0.192   0.204   0.220   0.235   0.259   0.283   0.473   0.663   0.699
 18           PC   0.735   0.754   0.772   0.785   0.799   0.810   0.820   0.829   0.838   0.846
 19           PC   0.854   0.861   0.868   0.874   0.880   0.885   0.891   0.900   0.902   0.910
 20           PC   0.912   0.920   0.921   0.926   0.929   0.930   0.937   0.941   0.945   0.950
 21           PC   0.952   0.957   0.959   0.962   0.965   0.970   0.972   0.973   0.978   0.981
 22           PC   0.984   0.987   0.989   0.992   0.995   0.998   1.000
 23           JD    4.31    5.00
 24           JD    4.18   10.00
 25           JD    3.89   50.00
 26           JD    3.79   80.00
              *
 27           IN       5
              *
              *     The Wood Patel input hydrographs are being written out to a tape 21 file
              *       in order to populate the index hydrographs with the input hydrograph.
              *

 28           KK   WP504
 29           KO                                   21
 30           KM      Runoff hydrograph from Rio Verde North watershed, provided by Wood Patel
 31           KM        and Associates.  The hydrograph was computed using 300 ordinates and
 32           KM        a time interval of 5 minutes.  This hydrograph enters the Rio Verde
 33           KM        South watershed at concentration point 504.
 34           BA   0.260
 35           QI       0       0       0       0       0       0       0       0       0       0
 36           QI       0       0       0       0       0       0       0       0       0       0
 37           QI       0       0       0       0       0       0       0       0       0       0
 38           QI       0       0       0       0       0       0       0       0       0       0
 39           QI       0       0       0       0       0       0       0       0       0       0
 40           QI       0       0       0       0       0       0       0       0       0       0
1                                    HEC-1 INPUT                                                    PAGE  2

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 41           QI       0       0       0       0       0       0       0       0       0       0
 42           QI       0       0       0       0       0       0       0       0       0       0
 43           QI       0       0       0       0       0       0       0       0       0       0
 44           QI       0       0       0       0       0       0       0       0       0       0
 45           QI       0       0       0       0       0       0       0       0       0       0
 46           QI       0       0       0       0       0       0       0       0       0       0
 47           QI       0       0       0       0       0       0       0       0       0       0
 48           QI       0       0       0       0       0       0       0       0       0       3
 49           QI       7      15      28      45      63      82     105     130     159     177
 50           QI     189     193     191     177     154     133     113      94      78      62
 51           QI      48      37      29      23      17      14      10       8       7       5
 52           QI       4       3       2       1       1       0       0       0       0       0
 53           QI       0       0       0       0       0       0       0       0       0       0
 54           QI       0       0       0       0       0       0       0       0       0       0
 55           QI       0       0       0       0       0       0       0       0       0       0
 56           QI       0       0       0       0       0       0       0       0       0       0
```

```
 57          QI      0      0      0      0      0      0      0      0      0      0
 58          QI      0      0      0      0      0      0      0      0      0      0
 59          QI      0      0      0      0      0      0      0      0      0      0
 60          QI      0      0      0      0      0      0      0      0      0      0
 61          QI      0      0      0      0      0      0      0      0      0      0
 62          QI      0      0      0      0      0      0      0      0      0      0
 63          QI      0      0      0      0      0      0      0      0      0      0
 64          QI      0      0      0      0      0      0      0      0      0      0
             *

 65          KK   WP581
 66          KO                                  21
 67          KM      Runoff hydrograph from Rio Verde North watershed, provided by Wood Patel
 68          KM        and Associates.  The hydrograph was computed using 300 ordinates and
 69          KM        a time interval of 5 minutes.  This hydrograph enters the Rio Verde
 70          KM        South watershed at concentration point 504.
 71          BA    3.92
 72          QI      0      0      0      0      0      0      0      0      0      0
 73          QI      0      0      0      0      0      0      0      0      0      0
 74          QI      0      0      0      0      0      0      0      0      0      0
 75          QI      0      0      0      0      0      0      0      0      0      0
 76          QI      0      0      0      0      0      0      0      0      0      0
 77          QI      0      0      0      0      0      0      0      0      0      0
 78          QI      0      0      0      0      0      0      0      0      0      0
 79          QI      0      0      0      0      0      0      0      0      0      0
 80          QI      0      0      0      0      0      0      0      0      0      0
 81          QI      0      0      0      0      0      0      0      0      0      0
 82          QI      0      0      0      0      0      0      0      0      0      0
 83          QI      0      0      0      0      0      0      0      0      0      0
 84          QI      0      0      0      0      0      0      0      0      0      0
 85          QI      0      0      0      0      0      0      0      0      0      0
 86          QI      0      1      1      4     10     17     22     25     30     37
 87          QI     45     56     72     96    121    145    165    177    181    181
 88          QI    178    174    171    168    168    171    178    188    201    215
 89          QI    232    248    260    265    267    265    261    253    244    235
 90          QI    225    217    208    198    188    178    168    159    149    139
 91          QI    130    121    110     99     88     78     70     63     56     48
 92          QI     40     32     25     15      9      7      6      6      5      5
 93          QI      5      5      4      4      4      4      3      3      3      3
1                                        HEC-1 INPUT                                          PAGE  3

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 94          QI      3      3      2      2      2      2      2      2      2      2
 95          QI      2      2      2      2      1      1      1      1      1      1
 96          QI      1      1      1      1      1      1      1      0      0      0
 97          QI      0      0      0      0      0      0      0      0      0      0
 98          QI      0      0      0      0      0      0      0      0      0      0
 99          QI      0      0      0      0      0      0      0      0      0      0
100          QI      0      0      0      0      0      0      0      0      0      0
101          QI      0      0      0      0      0      0      0      0      0      0
             *
102          IN     15
             *

103          KK   CLEAR
104          KM     Clear hydrograph stack from memory.
105          HC      2
             *

106          KK    511A
107          KM   Sub-Basin   511A
108          KM
109          KM      The Phoenix Mountain S-Graph is used for this basin.
110          KM          Lag Used =  28.3 minutes
111          KM
112          BA   0.649
113          LG    0.35    0.39    6.20    0.21    0.00
114          UI      77      77     185     267     347     455     505     564     610
115          UI     707     864     870     592     516     467     442     411     381     360
116          UI     327     305     279     250     220     199     189     178     168     161
117          UI     127     126      99      99      92      85      85      71      59      59
118          UI      59      53      38      38      38      38      38      38      23      15
119          UI      15      15      15      15      15      15      15      15      15      15
120          UI      15      15      15      15      15       0       0       0       0       0
121          UI       0       0       0       0       0       0       0       0       0       0
             *

122          KK  524526
123          KM   Normal depth channel route from C524 to C526
124          KM      Source:  Hydrology Field Reconnaissance, page 24
125          RS      16    FLOW      -1
126          RC   0.070   0.040   0.070    5989  0.0182
127          RX   900.0  1000.0  1035.0  1038.0  1048.0  1054.0  1120.0  1330.0
128          RY   101.2   100.0    99.5    99.0    99.0    99.6    99.7   101.2
129          RL                    0.07    99.0
             *

130          KK    511B
131          KM   Sub-Basin   511B
132          KM
133          KM      The Phoenix Mountain S-Graph is used for this basin.
134          KM          Lag Used =  56.7 minutes
135          KM
136          BA   1.100
137          LG    0.32    0.37    6.60    0.17    4.40
138          UI      65      65      65      65      65      65     124     188     201     250
139          UI     275     307     375     394     414     438     466     486     505     526
1                                        HEC-1 INPUT                                          PAGE  4

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

140          UI     562     626     688     765     820     668     522     483     452     425
141          UI     403     389     380     369     355     341     328     318     310     300
142          UI     282     274     263     255     250     225     223     203     203     174
143          UI     173     166     160     160     152     150     150     137     136     136
144          UI     111     107     107     107      86      83      83      83      83      74
145          UI      71      71      71      71      71      54      50      50      50      50
146          UI      50      50      50      44      32      32      32      32      32      32
147          UI      32      32      32      32      32      32      32      13      13      13
148          UI      13      13      13      13      13      13      13      13      13      13
149          UI      13      13      13      13      13      13      13      13      13      13
150          UI      13      13      13      13      13      13      13      13      13      13
```

```
151          UI      13       0       0       0       0       0       0       0       0       0
152          UI       0       0       0       0       0       0       0       0       0       0
             *

153          KK  525526
154          KM   Normal depth channel route from C525 to C526
155          KM       Source:  Hydrology Field Reconnaissance, page 24
156          RS       3    FLOW      -1
157          RC   0.070   0.040   0.070    1012  0.0208
158          RX   900.0  1000.0  1035.0  1038.0  1048.0  1054.0  1120.0  1330.0
159          RY   101.2   100.0    99.5    99.0    99.0    99.6    99.7   101.2
160          RL                    0.07    99.0
             *

161          KK    511D
162          KM   Sub-Basin   511D
163          KM
164          KM      The Phoenix Mountain S-Graph is used for this basin.
165          KM          Lag Used =  30.5 minutes
166          KM
167          BA   0.128
168          LG    0.35    0.36    6.80    0.17    0.00
169          UI      14      14      14      27      44      58      75      87      97     106
170          UI     114     134     162     158     109      96      87      82      77      72
171          UI      68      63      58      55      50      45      40      36      35      33
172          UI      31      30      25      23      20      18      18      16      15      15
173          UI      13      11      11      11      11       7       7       7       7       7
174          UI       7       7       3       3       3       3       3       3       3       3
175          UI       3       3       3       3       3       3       3       3       3       3
176          UI       0       0       0       0       0       0       0       0       0       0
177          UI       0       0       0       0       0       0       0       0       0       0
             *

178          KK    C526
179          KM     Combine routed hydrographs from C524 and C526 with runoff from 511D at C526
180          HC       3
             *

181          KK  526527
182          KM   Normal depth channel route from C526 to C527
183          KM       Source:  Hydrology Field Reconnaissance, page 24
184          RS       7    FLOW      -1
185          RC   0.070   0.040   0.070    3129  0.0189
186          RX   780.0  1000.0  1035.0  1038.0  1048.0  1054.0  1120.0  1504.0
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

187          RY   102.5   100.0    99.5    99.0    99.0    99.6    99.7   102.5
188          RL                    0.07    99.0
             *

189          KK    511E
190          KM   Sub-Basin   511E
191          KM
192          KM      The Phoenix Mountain S-Graph is used for this basin.
193          KM          Lag Used =  50.4 minutes
194          KM
195          BA   0.568
196          LG    0.34    0.37    6.40    0.19    1.20
197          UI      38      38      38      38      38      52     109     116     145     165
198          UI     192     223     235     250     267     281     294     307     340     375
199          UI     427     480     408     305     280     260     243     229     223     218
200          UI     208     198     191     184     178     171     162     154     150     145
201          UI     131     127     118     111     100      99      93      93      88      87
202          UI      85      79      79      70      62      62      62      48      48      48
203          UI      48      45      42      42      42      42      39      29      29      29
204          UI      29      29      29      29      23      19      19      19      19      19
205          UI      19      19      19      19      19      19      10       7       7       7
206          UI       7       7       7       7       7       7       7       7       7       7
207          UI       7       7       7       7       7       7       7       7       7       7
208          UI       7       7       7       7       7       7       0       0       0       0
209          UI       0       0       0       0       0       0       0       0       0       0
             *

210          KK    511F
211          KM   Sub-Basin   511F
212          KM
213          KM      The Phoenix Mountain S-Graph is used for this basin.
214          KM          Lag Used =  16.6 minutes
215          KM
216          BA   0.154
217          LG    0.34    0.38    6.20    0.20    1.00
218          UI      31      36     102     161     208     244     320     315     210     181
219          UI     161     143     125     107      88      76      70      60      49      40
220          UI      36      34      24      24      20      15      15      15      10       6
221          UI       6       6       6       6       6       6       6       6       0       0
222          UI       0       0       0       0       0       0       0       0       0       0
             *

223          KK    C527
224          KM     Combine Hydrograph from C526 with runoff from 511E & 511F at C527
225          HC       3
             *

226          KK  527528
227          KM   Normal depth channel route from C527 to C528
228          KM       Source:  Hydrology Field Reconnaissance, page 24
229          RS       3    FLOW      -1
230          RC   0.070   0.040   0.070    1420  0.0183
231          RX   780.0  1000.0  1035.0  1038.0  1048.0  1054.0  1120.0  1504.0
232          RY   102.5   100.0    99.5    99.0    99.0    99.6    99.7   102.5
233          RL                    0.62    99.0
             *
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

234          KK    511C
235          KM   Sub-Basin   511C
236          KM
237          KM      The Phoenix Mountain S-Graph is used for this basin.
```

```
238          KM          Lag Used =  62.3 minutes
239          KM
240          BA   1.196
241          LG    0.34    0.39    6.20    0.21    0.90
242          UI      65      65      65      65      65      65      65     166     186     207
243          UI     248     271     297     365     385     402     422     446     469     485
244          UI     503     522     557     613     669     736     828     725     581     503
245          UI     469     441     418     398     386     379     371     354     342     333
246          UI     323     311     305     297     278     273     261     256     248     234
247          UI     222     213     201     197     171     171     165     158     158     153
248          UI     149     149     143     135     135     135     107     106     106     106
249          UI      92      83      83      83      83      83      71      71      71      71
250          UI      71      71      61      50      50      50      50      50      50      50
251          UI      50      48      32      32      32      32      32      32      32      32
252          UI      32      32      32      32      32      32      23      12      12      12
253          UI      12      12      12      12      12      12      12      12      12      12
254          UI      12      12      12      12      12      12      12      12      12      12
255          UI      12      12      12      12      12      12      12      12      12      12
256          UI      12      12      12       0       0       0       0       0       0       0
257          UI       0       0       0       0       0       0       0       0       0       0
             *

258          KK    C528
259          KM     Combine routed hydrograph from C527 with runoff from 511C at C528
260          HC       2
             *

261          KK  528529
262          KM   Normal depth channel route from C528 to C529
263          KM       Source:  Hydrology Field Reconnaissance, page 16
264          RS       8    FLOW      -1
265          RC   0.070   0.040   0.070    6398  0.0148
266          RX   950.0  1053.0  1139.0  1150.0  1177.0  1255.0  1302.0  1352.0
267          RY  2360.0  2357.0  2357.4  2356.4  2356.3  2357.8  2359.6  2360.0
268          RL                    0.62  2356.3
             *

269          KK    511H
270          KM   Sub-Basin   511H
271          KM
272          KM      The Phoenix Mountain S-Graph is used for this basin.
273          KM          Lag Used =  25.5 minutes
274          KM
275          BA   0.310
276          LG    0.35    0.35    4.45    0.44    0.40
277          UI      41      41      46     119     165     220     259     293     321     376
278          UI     477     410     296     259     240     222     205     191     173     161
279          UI     144     129     109     101      96      91      85      68      65      52
280          UI      52      46      45      42      31      31      31      27      20      20
281          UI      20      20      20      15       8       8       8       8       8       8
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

282          UI       8       8       8       8       8       8       8       8       0       0
283          UI       0       0       0       0       0       0       0       0       0       0
             *

284          KK    C529
285          KM     Combine routed hydrograph from C528 with runoff from 511H at C529
286          HC       2
             *
             * *
             * *       Routing Reach  529-530 is too short to route.
             * *
             *

287          KK    511G
288          KM   Sub-Basin   511G
289          KM
290          KM      The Phoenix Mountain S-Graph is used for this basin.
291          KM          Lag Used =  36.8 minutes
292          KM
293          BA   0.868
294          LG    0.33    0.36    5.10    0.30    2.90
295          UI      79      79      79      79     194     251     316     390     470     509
296          UI     556     596     634     711     827     981     812     613     551     500
297          UI     473     454     427     405     385     368     340     322     306     279
298          UI     258     240     210     201     194     184     182     166     166     131
299          UI     131     118     102     102     100      87      87      87      80      61
300          UI      61      61      61      61      45      39      39      39      39      39
301          UI      39      39      37      15      15      15      15      15      15      15
302          UI      15      15      15      15      15      15      15      15      15      15
303          UI      15      15      15      15       0       0       0       0       0       0
304          UI       0       0       0       0       0       0       0       0       0       0
             *
             *

305          KK    C530
306          KM      Combine hydrograph from C529 with runoff from 511G at C530
307          HC       2
             *

308          KK  530531
309          KM   Normal depth channel route from C530 to C531
310          KM       Source:  Hydrology Field Reconnaissance, page 11
311          RS       8    FLOW      -1
312          RC   0.070   0.040   0.070    5786  0.0211
313          RX   945.0  1052.4  1161.2  1208.0  1275.3  1311.8  1436.0  1686.0
314          RY  2159.5  2157.5  2157.0  2155.9  2156.0  2157.1  2157.8  2159.5
315          RL                    0.43  2155.9
             *

316          KK    511I
317          KM   Sub-Basin   511I
318          KM
319          KM      The Phoenix Mountain S-Graph is used for this basin.
320          KM          Lag Used =  17.5 minutes
321          KM
```



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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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```
 322          BA   0.211
 323          LG    0.35    0.35    4.00    0.57    0.00
 324          UI      41      41     128     196     261     307     377     466     300     249
 325          UI     224     200     177     156     132     108      98      90      76      63
 326          UI      52      47      45      33      31      28      20      20      20      18
 327          UI       8       8       8       8       8       8       8       8       8       8
 328          UI       0       0       0       0       0       0       0       0       0       0
 329          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

 330          KK    C531
 331          KM     Combine routed hydrograph from C530 with runoff from 511I at C531
 332          HC       2
              *
              *

 333          KK   D531R
 334          KM        Hydrograph diversion at C531
 335          KM      Main flow continues on in right branch.
 336          KM      Diverted flow is in the left branch, coded on DQ Card.
 337          DT   D531L
 338          DI       0      52     390     850    1565    2660    3870    4690    5550    6390
 339          DQ       0      12      80     200     390     620     910    1090    1250    1440
              *

 340          KK  531532
 341          KM   Normal depth channel route from C531 to C532
 342          KM       Source:  Hydrology Field Reconnaissance, page 11
 343          RS       2    FLOW      -1
 344          RC   0.070   0.040   0.070    1524  0.0243
 345          RX   937.0  1125.0  1240.0  1250.0  1312.0  1348.0  1395.0  1428.0
 346          RY  2159.0  2157.5  2157.0  2155.9  2156.0  2157.1  2156.9  2159.0
 347          RL                   0.62  2155.9
              *

 348          KK   D532L
 349          KM        Hydrograph diversion at C532
 350          KM      Main flow continues on in right branch (Center Split at C532).
 351          KM      Diverted flow is in the left branch, coded on DQ card.
 352          DT   D532R
 353          DI       0      58     235     405     685    1075    1535    2190    2570    2950
 354          DQ       0      40     125     205     335     550     800    1140    1320    1500
              *
              *

 355          KK  D532AR
 356          KM        Hydrograph diversion at C532A
 357          KM      Main flow continues on in right branch (center split channel at C532).
 358          KM      Diverted flow is in the left branch, coded on DQ card.
 359          DT  D532AL
 360          DI       0      50     210     445     650     930    1300    1680    1890    2160
 361          DQ       0      25     100     230     360     550     820    1090    1250    1470
              *
              *
```



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       LINE   ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 362          KK  532580
 363          KM   Normal depth channel route from C532 to C580
 364          KM       Source:  Hydrology Field Reconnaissance, page 7
 365          RS       5    FLOW      -1
 366          RC   0.070   0.040   0.070    4121  0.0279
 367          RX  1000.0  1034.5  1069.0  1086.0  1146.0  1154.0  1227.0  1285.0
 368          RY  2061.9  2061.4  2060.8  2059.9  2059.6  2060.5  2061.2  2061.9
 369          RL                   0.07  2059.6
              *

 370          KK  B532AL
 371          KM        Retrieve split hydrograph D532AL
 372          DR  D532AL
              *
              *
              * *
              * *  Routing Reach 532-578 is too short to route
              * *
              *
              *

 373          KK   D578R
 374          KM        Hydrograph diversion at C578
 375          KM      Main flow continues on in right branch.
 376          KM      Diverted flow is in the left branch, coded on DQ card.
 377          DT   D578L
 378          DI       0      40     100     170     280     450     820    1090    1250    1470
 379          DQ       0      20      50      85     140     225     410     545     625     735
              *

 380          KK  578573
 381          KM   Normal depth channel route from C578 to C573
 382          KM       Source:  Hydrology Field Reconnaissance, page 22
 383          RS       2    FLOW      -1
 384          RC   0.070   0.040   0.070    1857  0.0269
 385          RX   980.0  1000.0  1035.0  1039.0  1060.0  1080.0  1100.0  1112.0
 386          RY   100.8   100.0    99.6    98.4    98.3    99.5    99.3   100.6
 387          RL                   0.62    98.3
              *

 388          KK   D573R
 389          KM        Hydrograph diversion at C573
 390          KM      Main flow continues on in right branch.
 391          KM      Diverted flow is in the left branch, coded on DQ card.
 392          DT   D573L
 393          DI       0      48     195     590    1000    1365    1845    2315    2585    2875
 394          DQ       0       0      35     210     400     590     830    1100    1230    1360
              *
```



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       LINE   ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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```
395          KK  573580
396          KM   Normal depth channel route from C573 to C580
397          KM       Source:  Hydrology Field Reconnaissance, page 22
398          RS       2    FLOW      -1
399          RC   0.070   0.040   0.070    1455  0.0261
400          RX   980.0  1000.0  1035.0  1039.0  1060.0  1080.0  1100.0  1112.0
401          RY   100.8   100.0    99.6    98.4    98.3    99.5    99.3   100.6
402          RL                    0.62    98.3
             *

403          KK    C580
404          KM     Combine hydrograph from C573R with routed hydrograph from C532L at C580
405          HC       2    5.18
             *

406          KK  580535
407          KM   Normal depth channel route from C580 to C535
408          KM       Source:  Hydrology Field Reconnaissance, page 22
409          RS      12    FLOW      -1
410          RC   0.070   0.040   0.070    9537  0.0254
411          RX  1025.0  1089.0  1132.0  1152.0  1180.0  1182.0  1184.0  1202.0
412          RY   102.0   100.3   100.3    99.6    99.5   100.3   101.0   102.0
413          RL                    0.07    99.5
             *

414          KK   B531L
415          KM        Retrieve split hydrograph D531L
416          DR   D531L
             *

417          KK  531533
418          KM   Normal depth channel route from C531 to C533
419          KM       Source:  Hydrology Field Reconnaissance, page 11
420          RS       3    FLOW      -1
421          RC   0.070   0.040   0.070    3188  0.0270
422          RX  1000.0  1025.0  1052.4  1080.0  1115.0  1159.0  1180.0  1200.0
423          RY  2158.5  2158.0  2157.5  2155.9  2156.0  2157.1  2157.8  2158.5
424          RL                    0.62  2155.9
             *

425          KK   B578L
426          KM        Retrieve split hydrograph D578L
427          DR   D578L
             *
             * *
             * *       Routing Reach  578-533 is too short to route.
             * *
             *
```



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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

428          KK    C533
429          KM     Combine routed hydrograph from C531L with hydrograph  from C578L at C533
430          HC       2    5.18
             *

431          KK  533579
432          KM   Normal depth channel route from C533 to C579
433          KM       Source:  Hydrology Field Reconnaissance, page 11
434          RS       2    FLOW      -1
435          RC   0.070   0.040   0.070    1524  0.0256
436          RX  1000.0  1025.0  1052.4  1080.0  1115.0  1159.0  1180.0  1200.0
437          RY  2158.5  2158.0  2157.5  2155.9  2156.0  2157.1  2157.8  2158.5
438          RL                    0.62  2155.9
             *

439          KK   B573L
440          KM        Retrieve split hydrograph D573L
441          DR   D573L
             *
             * *
             * *       Routing Reach  573-579 is too short to route.
             * *
             *

442          KK    C579
443          KM     Combine routed hydrograph from C533 with hydrograph from C573L at C579
444          HC       2    5.18
             *

445          KK  579534
446          KM   Normal depth channel route from C579 to C534
447          KM       Source:  Hydrology Field Reconnaissance, page 11
448          RS       2    FLOW      -1
449          RC   0.070   0.040   0.070    1310  0.0260
450          RX  1000.0  1052.4  1161.2  1208.0  1225.3  1269.8  1416.0  1519.0
451          RY  2158.5  2157.5  2157.0  2155.9  2156.0  2157.1  2157.8  2158.5
452          RL                    0.62  2155.9
             *

453          KK    511J
454          KM   Sub-Basin   511J
455          KM
456          KM      The Phoenix Mountain S-Graph is used for this basin.
457          KM          Lag Used =  14.3 minutes
458          KM
459          BA   0.119
460          LG    0.35    0.35    3.81    0.65    0.00
461          UI      28      47     109     173     211     278     277     182     157     137
462          UI     118      99      79      67      61      48      38      33      31      22
463          UI      22      15      14      14       9       5       5       5       5       5
464          UI       5       5       5       0       0       0       0       0       0       0
465          UI       0       0       0       0       0       0       0       0       0       0
             *
             *
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

466          KK    C534
```

```
467          KM     Combine routed hydrograph from C579 with runoff from 511J at C534
468          HC       2    5.30
             *
             *

469          KK   D534R
470          KM       Hydrograph diversion at C534
471          KM     Main flow continues on in right branch.
472          KM     Diverted flow is in the left branch, coded on DQ card.
473          DT   D534L
474          DI       0     100     200     600    1000    1500    2000
475          DQ       0      30      60     180     300     450     600
             *

476          KK  534535
477          KM   Normal depth channel route from C534 to C535
478          KM      Source:  Hydrology Field Reconnaissance, page 18
479          RS       8    FLOW      -1
480          RC   0.070   0.040   0.070    9570  0.0246
481          RX   915.0  1040.0  1075.0  1101.0  1136.0  1150.0  1190.0    1318
482          RY  2161.5  2160.1  2159.8  2157.5  2158.1  2159.4  2159.9  2161.5
483          RL                    0.39  2157.5
             *

484          KK    511K
485          KM   Sub-Basin   511K
486          KM
487          KM      The Phoenix Mountain S-Graph is used for this basin.
488          KM          Lag Used =  34.2 minutes
489          KM
490          BA   0.791
491          LG    0.33    0.37    6.60    0.18    0.00
492          UI      78      78      78      87     224     275     338     433     483     531
493          UI     576     615     689     812     956     757     583     522     479     455
494          UI     433     404     382     364     338     317     301     273     250     227
495          UI     206     192     187     179     169     163     138     128     119      99
496          UI      99      96      85      85      85      69      60      60      60      60
497          UI      49      38      38      38      38      38      38      38      28      15
498          UI      15      15      15      15      15      15      15      15      15      15
499          UI      15      15      15      15      15      15      15      15      15       0
500          UI       0       0       0       0       0       0       0       0       0       0
501          UI       0       0       0       0       0       0       0       0       0       0
             *

502          KK    C535
503          KM    Combine routed hydrographs from C534R and C580 with runoff from 511K at C535
504          HC       3    6.09
             *
             *
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

505          KK   D535L
506          KM       Hydrograph diversion at C535
507          KM     Main flow continues on in left branch.
508          KM     Diverted flow is in the right branch, coded on DQ card.
509          DT   D535R
510          DI       0     100     200     600    1000    1500
511          DQ       0      85     170     510     850    1275
             *

512          KK  535515
513          KM   Normal depth channel route from C535 to C515
514          KM      Source:  200 Scale 2' CI Mapping, Sheet 8
515          RS       3    FLOW      -1
516          RC   0.065   0.045   0.065    2814  0.0237
517          RX  1000.0  1015.0  1095.0  1105.0  1145.0  1165.0  1375.0  1415.0
518          RY  1707.0  1706.0  1704.0  1702.0  1702.0  1704.0  1706.0  1707.0
519          RL                    0.33  1702.0
             *

520          KK    511L
521          KM   Sub-Basin   511L
522          KM
523          KM      The Phoenix Mountain S-Graph is used for this basin.
524          KM          Lag Used =  20.3 minutes
525          KM
526          BA   0.193
527          LG    0.35    0.35    4.35    0.44    0.00
528          UI      32      32      72     124     178     214     244     291     378     267
529          UI     210     188     170     155     140     126     109      92      81      75
530          UI      69      60      51      41      39      35      34      25      25      24
531          UI      16      16      16      16      12       6       6       6       6       6
532          UI       6       6       6       6       6       6       0       0       0       0
533          UI       0       0       0       0       0       0       0       0       0       0
             *
             *

534          KK    C515
535          KM     Combine routed hydrograph from C535L with runoff from 511L at C515
536          HC       2    6.28
             *
             *

537          KK   D515R
538          KM       Hydrograph diversion at C515
539          KM     Main flow continues on in right branch.
540          KM     Diverted flow is in the left branch, coded on DQ card.
541          DT   D515L
542          DI       0      30     125     242     450     898    1110    1320    1570    1795
543          DQ       0      20     105     180     425     660     810     970    1160    1330
             *
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

544          KK  515575
545          KM   Normal depth channel route from C515 to C575
546          KM      Source:  200 Scale 2' CI Mapping, Sheet 8
547          RS       2    FLOW      -1
```

```
548          RC   0.065   0.045   0.065    2236  0.0242
549          RX  1000.0  1027.0  1148.0  1156.0  1163.0  1173.0  1386.0  1411.0
550          RY  1712.7  1712.0  1710.0  1708.0  1708.0  1710.0  1712.0  1713.0
551          RL                   0.14  1708.0
             *

552          KK   511M
553          KM  Sub-Basin   511M
554          KM
555          KM     The Phoenix Mountain S-Graph is used for this basin.
556          KM         Lag Used =  15.5 minutes
557          KM
558          BA  0.083
559          LG   0.35    0.37    5.20    0.30    0.00
560          UI     18      25      64     101     127     154     207     138     110      97
561          UI     86      74      64      51      44      40      33      27      23      20
562          UI     17      14      13       9       9       9       7       3       3       3
563          UI      3       3       3       3       3       0       0       0       0       0
564          UI      0       0       0       0       0       0       0       0       0       0
             *

565          KK   C575
566          KM  Combine routed hydrographs from C515R and C574L with runoff from 511M at C575
567          HC      2    6.36
             *

568          KK  575536
569          KM  Normal depth channel route from C575 to C536
570          KM      Source:  200 Scale 2' CI Mapping, Sheet 5
571          RS      5    FLOW      -1
572          RC  0.040   0.030   0.040    4398  0.0215
573          RX  1000.0  1033.0  1045.0  1072.0  1093.0  1103.0  1117.0  1135.0
574          RY  1644.0  1642.0  1640.0  1638.0  1638.0  1640.0  1642.0  1644.0
575          RL                   0.07  1638.0
             *

576          KK   511Q
577          KM  Sub-Basin   511Q
578          KM
579          KM     The Clark Unit Hydrograph is used for this basin.
580          KM         The Urban time-area relation is used for this basin.
581          KM
582          KM     Time of Concentration for this sub-basin is based on the following:
583          KM         An rainfall areal reduction factor of 1.000
584          KM
585          KM      EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
586          KM    5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
587          KM  .29 .29 .29 .29 .29 .29 .04 .04 .04 .04 .04 .03 .02 .02 .02 .02 .01 .01
588          KM
589          KM         L=   0.959 miles, S=  121 feet/mile, Kb= .06
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

590          KM
591          BA  0.086
592          LG   0.15    0.16    7.30    0.13   17.50
593          UC  0.363   0.469
594          UA      0       5      16      30      65      77      84      90      94      97
595          UA    100
             *

596          KK   511N
597          KM  Sub-Basin   511N
598          KM
599          KM     The Clark Unit Hydrograph is used for this basin.
600          KM         The Urban time-area relation is used for this basin.
601          KM
602          KM     Time of Concentration for this sub-basin is based on the following:
603          KM         An rainfall areal reduction factor of 1.000
604          KM
605          KM      EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
606          KM    5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
607          KM  .29 .29 .28 .28 .28 .28 .03 .03 .03 .03 .03 .03 .01 .01 .01 .01 .01 .01
608          KM
609          KM         L=   0.836 miles, S=  114 feet/mile, Kb= .06
610          KM
611          BA  0.069
612          LG   0.18    0.18    7.00    0.15   12.90
613          UC  0.346   0.454
614          UA      0       5      16      30      65      77      84      90      94      97
615          UA    100
             *

616          KK   C536
617          KM   Combine runoff from 511Q and 511N with routed hydrograph from C575 at C536
618          HC      3
             *

619          KK  536545
620          KM  Normal depth channel route from C536 to C545
621          KM      Source:  200 Scale 2' CI Mapping, Sheet 5
622          RS      7    FLOW      -1
623          RC  0.070   0.045   0.070    3241  0.0162
624          RX  1000.0  1112.0  1196.0  1241.0  1256.0  1317.0  1406.0  1548.0
625          RY  1579.5  1576.9  1576.5  1576.0  1576.0  1576.8  1578.0  1579.5
626          RL                   0.24  1576.0
             *

627          KK   511O
628          KM  Sub-Basin   511O
629          KM
630          KM     The Clark Unit Hydrograph is used for this basin.
631          KM         The Natural time-area relation is used for this basin.
632          KM
633          KM     Time of Concentration for this sub-basin is based on the following:
634          KM         An rainfall areal reduction factor of 1.000
635          KM
636          KM      EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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```
637          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
638          KM   .26 .26 .25 .25 .25 .25 .01 .01 .01 .01 .01 .00 .00 .00 .00 .00 .00 .00
639          KM
640          KM          L=   0.628 miles, S=   89 feet/mile, Kb= .06
641          KM
642          BA   0.045
643          LG    0.35    0.39    6.20    0.20    0.30
644          UC   0.338   0.445
645          UA       0       3       5       8      12      20      43      75      90      96
646          UA     100
             *

647          KK   C545L
648          KM     Combine routed hydrograph from C536 with runoff from 511O at C545L
649          HC       2
             *

650          KK   B532R
651          KM        Retrieve split hydrograph D532R
652          DR   D532R
             *

653          KK  532538
654          KM   Normal depth channel route from C532 to C538
655          KM       Source:  Hydrology Field Reconnaissance, page 7
656          RS       9    FLOW      -1
657          RC   0.070   0.040   0.070    7389  0.0267
658          RX  1000.0  1069.0  1086.0  1127.0  1146.0  1154.0  1227.0  1280.0
659          RY  2061.9  2060.8  2059.9  2059.5  2059.6  2060.5  2061.2  2062.0
660          RL                    0.12  2059.5
             *
             * ******************************************************************************
             * ******************************     Major Basin 510     ************************
             * ******************************************************************************
             *

661          KK    510A
662          KM   Sub-Basin   510A
663          KM
664          KM      The Phoenix Mountain S-Graph is used for this basin.
665          KM          Lag Used =  39.2 minutes
666          KM
667          BA   0.913
668          LG    0.35    0.39    6.20    0.20    0.00
669          UI      78      78      78      78     151     225     295     346     430     481
670          UI     517     564     595     633     715     824     972     823     616     550
671          UI     508     471     456     435     410     389     372     354     331     315
672          UI     301     273     254     239     207     201     192     185     180     170
673          UI     164     147     129     129     108     100     100      97      86      86
674          UI      86      84      60      60      60      60      60      56      38      38
675          UI      38      38      38      38      38      38      38      15      15      15
676          UI      15      15      15      15      15      15      15      15      15      15
677          UI      15      15      15      15      15      15      15      15      15      15
678          UI       0       0       0       0       0       0       0       0       0       0
679          UI       0       0       0       0       0       0       0       0       0       0
             *
             *
```



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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

680          KK   D537L
681          KM        Hydrograph diversion at C537
682          KM      Main flow continues on in left branch.
683          KM      Diverted flow is in the right branch, coded on DQ card.
684          DT   D537R
685          DI       0      40     180     350     600     930    1155    1375    1630    1955
686          DQ       0      40     180     320     500     710     845     965    1110    1315
             *

687          KK  537538
688          KM   Normal depth channel route from C537 to C538
689          KM       Source:  Hydrology Field Reconnaissance, page 9
690          RS       8    FLOW      -1
691          RC   0.070   0.040   0.070    5132  0.0273
692          RX  1000.0  1049.0  1140.0  1248.0  1272.0  1295.0  1313.0  1331.0
693          RY  2063.0  2059.9  2060.8  2058.3  2058.2  2059.6  2061.3  2063.0
694          RL                    0.08  2058.2
             *

695          KK    510B
696          KM   Sub-Basin   510B
697          KM
698          KM      The Phoenix Mountain S-Graph is used for this basin.
699          KM          Lag Used =  33.9 minutes
700          KM
701          BA   0.359
702          LG    0.35    0.35    7.00    0.15    0.00
703          UI      36      36      36      43     103     128     157     203     223     246
704          UI     266     284     322     382     438     325     262     235     216     207
705          UI     195     183     173     165     151     143     135     122     111      99
706          UI      93      87      84      82      75      73      59      59      49      46
707          UI      46      41      39      39      38      27      27      27      27      27
708          UI      17      17      17      17      17      17      17      17       7       7
709          UI       7       7       7       7       7       7       7       7       7       7
710          UI       7       7       7       7       7       7       7       7       0       0
711          UI       0       0       0       0       0       0       0       0       0       0
             *

712          KK    C538
713          KM   Combine routed hydrographs from C532R and C537L with runoff from 510B at C538
714          HC       3    5.18
             *

715          KK  538540
716          KM   Normal depth channel route from C538 to C540
717          KM       Source:  Hydrology Field Reconnaissance, page 19
718          RS      18    FLOW      -1
719          RC   0.070   0.040   0.070   11259  0.0264
720          RX  1000.0  1037.0  1107.0  1108.0  1116.0  1120.0  1145.0  1375.0
721          RY   100.5    97.9    97.9    97.4    97.5    98.2    98.7   100.5
722          RL                    0.10    97.4
```

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                *
LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 723            KK   B537R
 724            KM         Retrieve split hydrograph D537R
 725            DR   D537R
                *

 726            KK  537577
 727            KM   Normal depth channel route from C537 to C577
 728            KM       Source:  Hydrology Field Reconnaissance,  page 9
 729            RS       4    FLOW      -1
 730            RC   0.070   0.040   0.070    4714  0.0278
 731            RX   960.0   980.0  1000.0  1032.0  1068.0  1100.0  1189.0  1224.0
 732            RY  2061.0  2060.3  2059.6  2057.5  2057.3  2058.8  2060.0  2061.0
 733            RL                    0.23  2057.3
                *

 734            KK    509D
 735            KM   Sub-Basin   509D
 736            KM
 737            KM      The Phoenix Mountain S-Graph is used for this basin.
 738            KM          Lag Used =  33.8 minutes
 739            KM
 740            BA   0.337
 741            LG    0.35    0.40    6.00    0.22    0.00
 742            UI      34      34      34      40      97     121     148     191     210     232
 743            UI     251     268     304     360     412     304     246     221     203     195
 744            UI     183     172     163     155     142     134     127     115     104      93
 745            UI      87      82      79      77      70      68      55      55      46      43
 746            UI      43      39      37      37      35      26      26      26      26      25
 747            UI      16      16      16      16      16      16      16      15       6       6
 748            UI       6       6       6       6       6       6       6       6       6       6
 749            UI       6       6       6       6       6       6       6       6       0       0
 750            UI       0       0       0       0       0       0       0       0       0       0
                *
                *

 751            KK   D539L
 752            KM        Hydrograph diversion at C539
 753            KM      Main flow continues on in left branch.
 754            KM      Diverted flow is in the right branch, coded on DQ card.
 755            DT   D539R
 756            DI       0      16     135     293     487     603     720     855
 757            DQ       0       8      50     102     170     203     240     280
                *

 758            KK  539577
 759            KM   Normal depth channel route from C539 to C577
 760            KM       Source:  Hydrology Field Reconnaissance, page 5
 761            RS       2    FLOW      -1
 762            RC   0.070   0.040   0.070    1292  0.0302
 763            RX   920.0  1000.0  1061.0  1091.0  1134.0  1224.0  1307.0  1390.0
 764            RY  2004.0  2003.5  2002.8  2001.5  2001.6  2002.5  2003.2  2004.0
 765            RL                    0.07  2001.5
                *
```



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LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 766            KK    C577
 767            KM    Combine routed hydrographs from C537R and C539L at C577
 768            HC       2    1.25
                *

 769            KK  577540
 770            KM   Normal depth channel route from C577 to C540
 771            KM       Source:  Hydrology Field Reconnaissance,  page 9
 772            RS      12    FLOW      -1
 773            RC   0.070   0.040   0.070   11694  0.0262
 774            RX   960.0   980.0  1000.0  1032.0  1068.0  1100.0  1189.0  1224.0
 775            RY  2061.0  2060.3  2059.6  2057.5  2057.3  2058.8  2060.0  2061.0
 776            RL                    0.13  2057.3
                *

 777            KK    510C
 778            KM   Sub-Basin   510C
 779            KM
 780            KM      The Phoenix Mountain S-Graph is used for this basin.
 781            KM          Lag Used =  46.9 minutes
 782            KM
 783            BA   0.851
 784            LG    0.30    0.39    6.20    0.19    0.00
 785            UI      61      61      61      61      61     131     176     219     250     292
 786            UI     356     377     402     431     456     477     506     566     638     725
 787            UI     733     546     459     425     396     371     359     348     332     317
 788            UI     304     293     282     265     253     244     234     215     206     190
 789            UI     176     162     156     150     147     141     141     129     128     119
 790            UI     100     100     100      78      78      78      78      69      67      67
 791            UI      67      67      49      47      47      47      47      47      47      32
 792            UI      30      30      30      30      30      30      30      30      30      30
 793            UI      14      12      12      12      12      12      12      12      12      12
 794            UI      12      12      12      12      12      12      12      12      12      12
 795            UI      12      12      12      12      12      12      12      12       0       0
 796            UI       0       0       0       0       0       0       0       0       0       0
                *

 797            KK    C540
 798            KM    Combine hydrographs  from C538, C539L and runoff from 510C at C540
 799            HC       3
                *

 800            KK  540542
 801            KM   Normal depth channel route from C540 to C542
 802            KM       Source:  200 Scale 2' CI Mapping, Sheet 5
 803            RS       2    FLOW      -1
 804            RC   0.065   0.045   0.055    1205  0.0172
 805            RX   992.0  1031.0  1208.0  1225.0  1255.0  1283.0  1338.0  1421.0
 806            RY  1662.5  1660.0  1659.4  1658.0  1658.0  1660.0  1661.0  1662.0
```

```
807          RL                    0.15  1658.0
             *
1                                   HEC-1 INPUT                                                    PAGE 20

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

808          KK    510F
809          KM   Sub-Basin   510F
810          KM
811          KM      The Clark Unit Hydrograph is used for this basin.
812          KM          The HEC-1 time-area relation is used for this basin.
813          KM
814          KM      Time of Concentration for this sub-basin is based on the following:
815          KM          An rainfall areal reduction factor of 1.000
816          KM
817          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
818          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
819          KM   .27 .26 .26 .26 .26 .26 .01 .01 .01 .01 .01 .01 .00 .00 .00 .00 .00 .00
820          KM
821          KM          L=   0.783 miles, S=  127 feet/mile, Kb= .08
822          KM
823          BA   0.115
824          LG    0.26    0.36    6.00    0.20    6.00
825          UC   0.392   0.369
             *
             *

826          KK    C542
827          KM     Combine routed hydrograph from C540 with runoff from 510F at C542
828          HC       2
             *

829          KK  542543
830          KM   Normal depth channel route from C542 to C543
831          KM       Source:  200 Scale 2' CI Mapping, Sheet 5
832          RS       1    FLOW      -1
833          RC   0.030   0.030   0.030    1600  0.0165
834          RX  1000.0  1008.0  1049.0  1068.0  1103.0  1108.0  1133.0  1143.0
835          RY  1636.0  1634.0  1633.0  1632.0  1632.0  1633.0  1634.0  1636.0
836          RL                    0.07  1632.0
             *
             *

837          KK   B535R
838          KM        Retrieve split hydrograph D535R
839          DR   D535R
             *
             *

840          KK   D574L
841          KM        Hydrograph diversion at C574
842          KM      Main flow continues on in left branch.
843          KM      Diverted flow is in the right branch, coded on DQ card.
844          DT   D574R
845          DI       0      25     135     430     860    1550    1960    2525    3100    3740
846          DQ       0       0      25      80     200     400     490     700     900    1140
             *
1                                   HEC-1 INPUT                                                    PAGE 21

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

847          KK  574582
848          KM   Normal depth channel route from C574 to C582
849          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
850          RS       2    FLOW      -1
851          RC   0.065   0.045   0.065    3140  0.0245
852          RX  1000.0  1040.0  1095.0  1110.0  1170.0  1190.0  1225.0  1260.0
853          RY  1750.0  1748.0  1748.0  1746.0  1746.0  1748.0  1749.0  1750.0
854          RL                    0.39  1746.0
             *
             *

855          KK   B574R
856          KM        Retrieve split hydrograph D574R
857          DR   D574R
             *

858          KK  574541
859          KM   Normal depth channel route from C574 to C541
860          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
861          RS       3    FLOW      -1
862          RC   0.065   0.045   0.065    1821  0.0220
863          RX  1000.0  1040.0  1067.0  1112.0  1190.0  1245.0  1329.0  1357.0
864          RY  1773.0  1772.0  1771.0  1770.0  1770.0  1771.0  1772.0  1773.0
865          RL                    0.39  1770.0
             *

866          KK    510D
867          KM   Sub-Basin   510D
868          KM
869          KM      The Clark Unit Hydrograph is used for this basin.
870          KM          The Natural time-area relation is used for this basin.
871          KM
872          KM      Time of Concentration for this sub-basin is based on the following:
873          KM          An rainfall areal reduction factor of 1.000
874          KM
875          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
876          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
877          KM   .26 .26 .26 .26 .26 .25 .01 .01 .01 .01 .01 .01 .00 .00 .00 .00 .00 .00
878          KM
879          KM          L=   0.595 miles, S=  305 feet/mile, Kb= .11
880          KM
881          BA   0.059
882          LG    0.21    0.38    5.40    0.22    0.00
883          UC   0.308   0.333
884          UA       0       3       5       8      12      20      43      75      90      96
885          UA     100
             *
             *
1                                   HEC-1 INPUT                                                    PAGE 22
```

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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 886          KK    C541
 887          KM     Combine routed hydrograph from C574R with runoff from 510D at C541
 888          HC       2    6.15
              *

 889          KK  541582
 890          KM   Normal depth channel route from C541 to C582
 891          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
 892          RS       3    FLOW      -1
 893          RC   0.065   0.045   0.065    1707  0.0218
 894          RX  1000.0  1053.0  1167.0  1189.0  1207.0  1224.0  1285.0  1316.0
 895          RY  1699.0  1698.0  1696.7  1696.0  1696.0  1696.8  1698.0  1699.0
 896          RL                    0.07  1696.0
              *

 897          KK    C582
 898          KM     Combine routed hydrographs from C541 and C574L at C582
 899          HC       2    6.15
              *

 900          KK  582543
 901          KM   Normal depth channel route from C582 to C543
 902          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
 903          RS       6    FLOW      -1
 904          RC   0.065   0.045   0.065    4020  0.0226
 905          RX   947.0  1053.0  1167.0  1189.0  1207.0  1224.0  1285.0  1341.0
 906          RY  1700.0  1698.0  1696.7  1696.0  1696.0  1696.8  1698.0  1700.0
 907          RL                    0.07  1696.0
              *

 908          KK    510E
 909          KM   Sub-Basin   510E
 910          KM
 911          KM      The Clark Unit Hydrograph is used for this basin.
 912          KM          The HEC-1 time-area relation is used for this basin.
 913          KM
 914          KM      Time of Concentration for this sub-basin is based on the following:
 915          KM          An rainfall areal reduction factor of 1.000
 916          KM
 917          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
 918          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
 919          KM   .29 .28 .28 .28 .28 .28 .03 .03 .03 .03 .03 .03 .01 .01 .01 .00 .00 .00
 920          KM
 921          KM          L=   1.276 miles, S=  123 feet/mile, Kb= .07
 922          KM
 923          BA   0.182
 924          LG    0.23    0.25    7.00    0.14   10.00
 925          UC   0.458   0.499
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 926          KK    C543
 927          KM     Combine routed hydrographs from C542 and C582 with runoff from 510E at C543
 928          HC       3
              *

 929          KK  543545
 930          KM   Normal depth channel route from C543 to C545
 931          KM       Source:  200 Scale 2' CI Mapping, Sheet 5
 932          RS       2    FLOW      -1
 933          RC   0.065   0.030   0.065    5179  0.0162
 934          RX  1000.0  1001.0  1002.0  1003.0  1075.0  1076.0  1077.0  1078.0
 935          RY  1616.0  1614.0  1612.0  1610.0  1610.0  1612.0  1614.0  1616.0
 936          RL                    0.33  1610.0
              *

 937          KK    510G
 938          KM   Sub-Basin   510G
 939          KM
 940          KM      The Clark Unit Hydrograph is used for this basin.
 941          KM          The HEC-1 time-area relation is used for this basin.
 942          KM
 943          KM      Time of Concentration for this sub-basin is based on the following:
 944          KM          An rainfall areal reduction factor of 1.000
 945          KM
 946          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
 947          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
 948          KM   .27 .27 .27 .27 .26 .26 .02 .02 .02 .02 .01 .01 .00 .00 .00 .00 .00 .00
 949          KM
 950          KM          L=   1.094 miles, S=   87 feet/mile, Kb= .05
 951          KM
 952          BA   0.179
 953          LG    0.23    0.33    5.70    0.22   12.90
 954          UC   0.404   0.387
              *

 955          KK   C545R
 956          KM     Combine routed hydrograph from C543 with runoff from 510G at C545R
 957          HC       2
              *

 958          KK    C545
 959          KM     Combine hyrographs C545L and C545R at C545
 960          KM                Confluence of washes 10 and 11
 961          HC       2
              *

 962          KK  545546
 963          KM   Normal depth channel route from C545 to C546
 964          KM       Source:  200 Scale 2' CI Mapping, Sheet 6
 965          RS       3    FLOW      -1
 966          RC   0.065   0.042   0.065    3093  0.0120
 967          RX  1000.0  1046.0  1093.0  1099.0  1156.0  1245.0  1338.0  1358.0
 968          RY  1522.0  1520.0  1518.0  1516.0  1516.0  1517.5  1518.0  1522.0
 969          RL                    0.04  1516.0
              *
```

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 970          KK    511P
 971          KM   Sub-Basin   511P
 972          KM
 973          KM      The Clark Unit Hydrograph is used for this basin.
 974          KM          The HEC-1 time-area relation is used for this basin.
 975          KM
 976          KM      Time of Concentration for this sub-basin is based on the following:
 977          KM          An rainfall areal reduction factor of 1.000
 978          KM
 979          KM        EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
 980          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
 981          KM   .29 .29 .29 .29 .29 .28 .03 .03 .03 .03 .03 .03 .01 .01 .01 .01 .01 .01
 982          KM
 983          KM          L=   1.650 miles, S=   86 feet/mile, Kb= .05
 984          KM
 985          BA   0.314
 986          LG    0.31    0.25    8.80    0.08    3.40
 987          UC   0.483   0.477
              *

 988          KK    502A
 989          KM   Sub-Basin   502A
 990          KM
 991          KM      The Clark Unit Hydrograph is used for this basin.
 992          KM          The Natural time-area relation is used for this basin.
 993          KM
 994          KM      Time of Concentration for this sub-basin is based on the following:
 995          KM          An rainfall areal reduction factor of 1.000
 996          KM
 997          KM        EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
 998          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
 999          KM   .29 .29 .29 .29 .29 .29 .04 .04 .04 .04 .04 .03 .01 .01 .01 .01 .01 .01
1000          KM
1001          KM          L=   0.393 miles, S=  114 feet/mile, Kb= .06
1002          KM
1003          BA   0.040
1004          LG    0.35    0.25    9.70    0.06    0.00
1005          UC   0.238   0.222
1006          UA      0       3       5       8      12      20      43      75      90      96
1007          UA    100
              *

1008          KK    C546
1009          KM     Combine routed hydrograph from C545 with runoff from 511P and 502A at C546
1010          HC       3
              *
              *
              *
              * ******************************************************************************
              * ****************************     Major Basin 509    ************************
              * ******************************************************************************
              *
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1011          KK    509A
1012          KM   Sub-Basin   509A
1013          KM
1014          KM      The Phoenix Mountain S-Graph is used for this basin.
1015          KM          Lag Used =  43.8 minutes
1016          KM
1017          BA   0.573
1018          LG    0.30    0.35    6.40    0.18    4.60
1019          UI      44      44      44      44      44     123     135     169     199     242
1020          UI     266     286     308     327     343     367     414     472     547     479
1021          UI     351     319     292     273     261     254     241     229     219     211
1022          UI     202     188     180     173     165     151     141     135     116     115
1023          UI     108     107     101     101      93      92      82      72      72      65
1024          UI      56      56      56      52      48      48      48      48      35      34
1025          UI      34      34      34      34      30      22      22      22      22      22
1026          UI      22      22      22      22      21       8       8       8       8       8
1027          UI       8       8       8       8       8       8       8       8       8       8
1028          UI       8       8       8       8       8       8       8       8       8       8
1029          UI       8       0       0       0       0       0       0       0       0       0
1030          UI       0       0       0       0       0       0       0       0       0       0
              *

1031          KK  552553
1032          KM   Normal depth channel route from C552 to C553
1033          KM       Source:  Hydrology Field Reconnaissance, page 15
1034          RS      20    FLOW      -1
1035          RC   0.070   0.040   0.070   17590  0.0238
1036          RX  1000.0  1034.0  1074.0  1079.0  1090.0  1096.0  1130.0  1163.0
1037          RY  2394.8  2394.1  2391.8  2390.8  2390.7  2391.7  2393.8  2395.4
1038          RL                    0.18  2390.7
              *

1039          KK    509B
1040          KM   Sub-Basin   509B
1041          KM
1042          KM      The Phoenix Mountain S-Graph is used for this basin.
1043          KM          Lag Used =  44.6 minutes
1044          KM
1045          BA   0.637
1046          LG    0.35    0.36    5.10    0.31    0.00
1047          UI      48      48      48      48      48     127     142     184     212     257
1048          UI     288     308     332     353     372     390     440     496     566     578
1049          UI     424     359     332     306     289     281     270     256     245     235
1050          UI     226     215     203     194     185     173     164     150     139     127
1051          UI     122     118     115     111     109     101     101      85      79      79
1052          UI      68      61      61      61      56      53      53      53      53      38
1053          UI      37      37      37      37      37      34      24      24      24      24
1054          UI      24      24      24      24      24      24      13       9       9       9
1055          UI       9       9       9       9       9       9       9       9       9       9
1056          UI       9       9       9       9       9       9       9       9       9       9
1057          UI       9       9       9       0       0       0       0       0       0       0
1058          UI       0       0       0       0       0       0       0       0       0       0
              *
```

```
                *
LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1059            KK    C553
1060            KM     Combine routed hydrograph from C552 with runoff from 509B at C553
1061            HC       2
                *
                *

1062            KK   D553L
1063            KM        Hydrograph diversion at C553
1064            KM      Main flow continues on in left branch.
1065            KM      Diverted flow is in the right branch, coded on DQ card.
1066            DT   D553R
1067            DI       0      37     145     393     650     970    1370    1815    2120    2290
1068            DQ       0      20      75     193     305     460     660     885    1070    1210
                *

1069            KK  553554
1070            KM   Normal depth channel route from C553 to C554
1071            KM       Source:  Hydrology Field Reconnaissance, page 2
1072            RS       5    FLOW      -1
1073            RC   0.070   0.040   0.070    2350  0.0264
1074            RX  1000.0  1019.0  1038.0  1044.0  1060.0  1118.0  1222.0  1335.0
1075            RY  1877.9  1877.5  1877.1  1875.7  1875.7  1877.1  1876.7  1877.8
1076            RL                    0.07  1875.7
                *

1077            KK    509C
1078            KM   Sub-Basin   509C
1079            KM
1080            KM      The Phoenix Mountain S-Graph is used for this basin.
1081            KM          Lag Used =  21.1 minutes
1082            KM
1083            BA   0.147
1084            LG    0.35    0.38    6.40    0.19    0.00
1085            UI      23      23      48      85     123     150     173     198     254     241
1086            UI     166     143     132     119     109      97      88      76      65      58
1087            UI      54      50      43      37      30      29      26      26      18      18
1088            UI      18      13      11      11      11      11       6       4       4       4
1089            UI       4       4       4       4       4       4       4       4       0       0
1090            UI       0       0       0       0       0       0       0       0       0       0
                *
                *

1091            KK    C554
1092            KM     Combine routed hydrograph from C553L with runoff from 509C at C554
1093            HC       2    1.36
                *
                *

1094            KK   D554L
1095            KM        Hydrograph diversion at C554
1096            KM      Main flow continues on in left branch.
1097            KM      Diverted flow is in the right branch, coded on DQ card.
1098            DT   D554R
1099            DI       0      30     144     316     500     854    1290    1840    2150    2500
```



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LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1100            DQ       0      20     104     210     310     534     810    1120    1310    1520
                *

1101            KK  554555
1102            KM   Normal depth channel route from C554 to C555
1103            KM       Source:  Hydrology Field Reconnaissance, page 2
1104            RS       2    FLOW      -1
1105            RC   0.070   0.040   0.070    1086  0.0267
1106            RX  1000.0  1019.0  1038.0  1044.0  1060.0  1118.0  1222.0  1335.0
1107            RY  1877.9  1877.5  1877.1  1875.7  1875.7  1877.1  1876.7  1877.8
1108            RL                    0.07  1875.7
                *

1109            KK    509E
1110            KM   Sub-Basin   509E
1111            KM
1112            KM      The Phoenix Mountain S-Graph is used for this basin.
1113            KM          Lag Used =  24.6 minutes
1114            KM
1115            BA   0.190
1116            LG    0.35    0.35    7.00    0.15    0.00
1117            UI      26      26      34      79     108     146     169     191     211     257
1118            UI     311     218     176     157     147     135     125     114     104      95
1119            UI      84      72      65      62      58      54      44      41      33      33
1120            UI      29      28      25      20      20      20      15      13      13      13
1121            UI      13      13       6       5       5       5       5       5       5       5
1122            UI       5       5       5       5       5       5       0       0       0       0
1123            UI       0       0       0       0       0       0       0       0       0       0
                *
                *

1124            KK   B539R
1125            KM        Retrieve split hydrograph D539R
1126            DR   D539R
                *

1127            KK  539555
1128            KM   Normal depth channel route from C539 to C555
1129            KM       Source:  Hydrology Field Reconnaissance, page 5
1130            RS       9    FLOW      -1
1131            RC   0.070   0.040   0.070    4876  0.0285
1132            RX  1034.0  1046.0  1082.0  1091.0  1116.0  1165.0  1203.0  1250.0
1133            RY  2003.4  2002.9  2002.3  2001.6  2001.6  2002.4  2002.9  2003.4
1134            RL                    0.07  2001.6
                *

1135            KK    C555
1136            KM     Combine hydrographs from C554L and C539R with runoff from 509E at C555
1137            HC       3    1.88
```

```
                *
LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1138            KK  555557
1139            KM   Normal depth channel route from C555 to C557
1140            KM       Source:  Hydrology Field Reconnaissance,  page 5
1141            RS       4    FLOW      -1
1142            RC   0.070   0.040   0.070    5621  0.0258
1143            RX  1123.0  1138.0  1154.0  1161.0  1186.0  1197.0  1262.0  1350.0
1144            RY  1876.1  1874.3  1872.5  1871.0  1871.0  1872.6  1873.2  1876.0
1145            RL                    0.07  1871.0
                *

1146            KK   B553R
1147            KM        Retrieve split hydrograph D553R
1148            DR   D553R
                *

1149            KK  553556
1150            KM   Normal depth channel route from C553 to C556
1151            KM       Source:  Hydrology Field Reconnaissance,  page 2
1152            RS       4    FLOW      -1
1153            RC   0.070   0.040   0.070    2769  0.0289
1154            RX   960.0  1027.0  1050.0  1060.0  1073.0  1077.0  1091.0  1149.0
1155            RY  1940.0  1937.3  1937.7  1937.0  1937.2  1938.2  1938.3  1939.8
1156            RL                    0.07  1937.0
                *

1157            KK   B554R
1158            KM        Retrieve split hydrograph D554R
1159            DR   D554R
                *
                * *
                * *       Routing Reach  554-556 is too short to route.
                * *
                *

1160            KK    C556
1161            KM     Combine routed hydrograph from C553R with hydrograph from C554R at C556
1162            HC       2    1.36
                *

1163            KK  556558
1164            KM   Normal depth channel route from C556 to C558
1165            KM       Source:  Hydrology Field Reconnaissance,  page 4
1166            RS       6    FLOW      -1
1167            RC   0.070   0.040   0.070    4703  0.0215
1168            RX  1123.0  1138.0  1154.0  1161.0  1186.0  1197.0  1262.0  1350.0
1169            RY  1876.1  1874.3  1872.5  1871.0  1871.0  1872.6  1873.2  1876.0
1170            RL                    0.15  1871.0
                *
```



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LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1171            KK    509F
1172            KM   Sub-Basin   509F
1173            KM
1174            KM      The Phoenix Mountain S-Graph is used for this basin.
1175            KM          Lag Used =  22.8 minutes
1176            KM
1177            BA   0.201
1178            LG    0.35    0.37    6.60    0.18    0.00
1179            UI      30      30      50      98     138     180     206     230     272     350
1180            UI     269     204     180     167     152     140     127     116     102      88
1181            UI      77      72      68      62      51      47      38      37      32      32
1182            UI      25      23      23      20      14      14      14      14      14       6
1183            UI       6       6       6       6       6       6       6       6       6       6
1184            UI       6       6       0       0       0       0       0       0       0       0
1185            UI       0       0       0       0       0       0       0       0       0       0
                *
                *

1186            KK    C558
1187            KM     Combine routed hydrograph from C556 with runoff from 509F at C558
1188            HC       2
                *
                *

1189            KK   D558L
1190            KM        Hydrograph diversion at C558
1191            KM      Main flow continues on in left branch.
1192            KM      Diverted flow is in the right branch, coded on DQ card.
1193            DT   D558R
1194            DI       0      26     160     304     475     835    1318    1900    2260    2625
1195            DQ       0      10      70     126     195     375     638     960    1160    1345
                *

1196            KK  558557
1197            KM   Normal depth channel route from C558 to C557
1198            KM       Source:  Hydrology Field Reconnaissance,  page 4
1199            RS       1    FLOW      -1
1200            RC   0.070   0.040   0.070    1564  0.0352
1201            RX  1000.0  1030.0  1060.0  1066.0  1111.0  1118.0  1170.0  1223.0
1202            RY  1733.8  1733.2  1732.6  1731.7  1732.0  1733.2  1733.5  1733.8
1203            RL                    0.15  1731.7
                *

1204            KK    509G
1205            KM   Sub-Basin   509G
1206            KM
1207            KM      The Phoenix Mountain S-Graph is used for this basin.
1208            KM          Lag Used =  19.0 minutes
1209            KM
1210            BA   0.094
1211            LG    0.35    0.36    6.80    0.16    0.00
1212            UI      17      17      42      70     100     117     134     173     174     116
1213            UI     100      91      82      73      65      56      47      41      39      35
1214            UI      29      24      21      19      18      14      13      13       8       8
```

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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1215          UI       8       8       6       3       3       3       3       3       3       3
1216          UI       3       3       3       0       0       0       0       0       0       0
1217          UI       0       0       0       0       0       0       0       0       0       0
              *

1218          KK    C557
1219          KM    Combine routed hydrographs from C555 and C558L with runoff from 509G at C557
1220          HC       3    2.18
              *
              *

1221          KK   D557R
1222          KM        Hydrograph diversion at C557
1223          KM      Main flow continues on in right branch.
1224          KM      Diverted flow is in the left branch, coded on DQ card.
1225          DT   D557L
1226          DI       0      19     120     225     412     735    1280    1840    2190    2620
1227          DQ       0       0       0       0      32     135     380     680     870    1120
              *

1228          KK  557565
1229          KM   Normal depth channel route from C557 to C565
1230          KM       Source:  Hydrology Field Reconnaissance,  page 5
1231          RS       6    FLOW      -1
1232          RC   0.070   0.040   0.070    3901  0.0217
1233          RX  1000.0  1104.0  1148.0  1178.0  1185.0  1213.0  1320.0  1350.0
1234          RY  1724.7  1721.4  1722.8  1721.2  1721.2  1723.0  1723.6  1725.0
1235          RL                    0.07  1721.2
              *

1236          KK    509M
1237          KM   Sub-Basin   509M
1238          KM
1239          KM      The Clark Unit Hydrograph is used for this basin.
1240          KM          The HEC-1 time-area relation is used for this basin.
1241          KM
1242          KM      Time of Concentration for this sub-basin is based on the following:
1243          KM          An rainfall areal reduction factor of 1.000
1244          KM
1245          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1246          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1247          KM   .26 .25 .25 .25 .25 .24 .01 .00 .00 .00 .00 .00 .00 .00 .00 .00 .00 .00
1248          KM
1249          KM          L=   0.857 miles, S=  120 feet/mile, Kb= .08
1250          KM
1251          BA   0.104
1252          LG    0.33    0.38    5.70    0.24    1.70
1253          UC   0.425   0.460
              *
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1254          KK    C565
1255          KM     Combine routed hydrograph from C557R with runoff from 509M at C565
1256          HC       2    2.28
              *

1257          KK  565566
1258          KM   Normal depth channel route from C565 to C566
1259          KM       Source:  200 Scale 2' CI Mapping, Sheet 3
1260          RS       2    FLOW      -1
1261          RC   0.030   0.030   0.030    1757  0.0197
1262          RX  1000.0  1074.0  1120.0  1158.0  1183.0  1193.0  1204.0  1243.0
1263          RY  1618.0  1616.0  1614.0  1612.0  1612.0  1614.0  1616.0  1618.0
1264          RL                    0.15  1612.0
              *
              *

1265          KK   B557L
1266          KM        Retrieve split hydrograph D557L
1267          DR   D557L
              *

1268          KK  557559
1269          KM   Normal depth channel route from C557 to C559
1270          KM       Source:  Hydrology Field Reconnaissance,  page 5
1271          RS       4    FLOW      -1
1272          RC   0.070   0.040   0.070    1207  0.0215
1273          RX  1000.0  1104.0  1227.0  1238.0  1257.0  1281.0  1320.0  1340.0
1274          RY  1724.3  1721.4  1722.3  1721.1  1721.1  1722.4  1723.6  1724.3
1275          RL                    0.07  1721.1
              *

1276          KK    509H
1277          KM   Sub-Basin   509H
1278          KM
1279          KM      The Clark Unit Hydrograph is used for this basin.
1280          KM          The Natural time-area relation is used for this basin.
1281          KM
1282          KM      Time of Concentration for this sub-basin is based on the following:
1283          KM          An rainfall areal reduction factor of 1.000
1284          KM
1285          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1286          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1287          KM   .27 .27 .27 .27 .26 .26 .02 .02 .02 .02 .02 .01 .00 .00 .00 .00 .00 .00
1288          KM
1289          KM          L=   0.813 miles, S=  132 feet/mile, Kb= .08
1290          KM
1291          BA   0.069
1292          LG    0.34    0.35    7.00    0.15    0.00
1293          UC   0.392   0.508
1294          UA       0       3       5       8      12      20      43      75      90      96
1295          UA     100
              *
```

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1296          KK    C559
1297          KM     Combine routed hydrograph from C557L with runoff from 509H at C559
1298          HC       2    2.25
              *

1299          KK   D559R
1300          KM        Hydrograph diversion at C559
1301          KM      Main flow continues on in right branch.
1302          KM      Diverted flow is in the left branch, coded on DQ card.
1303          DT   D559L
1304          DI       0      29     205     400     695    1080    1549    2105    2455    2805
1305          DQ       0      14      80     180     340     560     824    1135    1330    1525
              *

1306          KK  559560
1307          KM   Normal depth channel route from C559 to C560
1308          KM       Source:  Hydrology Field Reconnaissance,  page 6
1309          RS       2    FLOW      -1
1310          RC   0.070   0.040   0.070    1062  0.0198
1311          RX   943.0  1050.0  1100.0  1109.0  1126.0  1136.0  1144.0  1198.0
1312          RY  1675.0  1673.5  1673.0  1672.4  1672.3  1673.1  1672.6  1675.0
1313          RL                    0.07  1672.3
              *

1314          KK    509I
1315          KM   Sub-Basin   509I
1316          KM
1317          KM      The Clark Unit Hydrograph is used for this basin.
1318          KM          The Natural time-area relation is used for this basin.
1319          KM
1320          KM      Time of Concentration for this sub-basin is based on the following:
1321          KM          An rainfall areal reduction factor of 1.000
1322          KM
1323          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1324          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1325          KM   .25 .25 .24 .24 .24 .24 .00 .00 .00 .00 .00 .00 .00 .00 .00 .00 .00 .00
1326          KM
1327          KM          L=   0.375 miles, S=  115 feet/mile, Kb= .09
1328          KM
1329          BA   0.030
1330          LG    0.35    0.38    5.60    0.26    0.00
1331          UC   0.304   0.334
1332          UA       0       3       5       8      12      20      43      75      90      96
1333          UA     100
              *

1334          KK    C560
1335          KM     Combine routed hydrograph from C559R with runoff from 509I at C560
1336          HC       2    2.28
              *
1                                          HEC-1 INPUT                                          PAGE 33

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1337          KK   D560R
1338          KM        Hydrograph diversion at C560
1339          KM      Main flow continues on in right branch.
1340          KM      Diverted flow is in the left branch, coded on DQ card.
1341          DT   D560L
1342          DI       0      22      80     355     690    1145    1435    1730    2130    2500
1343          DQ       0      12      30      90     190     345     435     530     650     780
              *

1344          KK  560566
1345          KM   Normal depth channel route from C560 to C566
1346          KM       Source:  200 Scale 2' CI Mapping, Sheet 3
1347          RS       5    FLOW      -1
1348          RC   0.070   0.045   0.070    3583  0.0201
1349          RX  1000.0  1033.0  1149.0  1156.0  1168.0  1179.0  1201.0  1214.0
1350          RY  1543.0  1542.0  1540.0  1538.0  1538.0  1540.0  1542.0  1544.0
1351          RL                    0.15  1538.0
              *

1352          KK    509L
1353          KM   Sub-Basin   509L
1354          KM
1355          KM      The Clark Unit Hydrograph is used for this basin.
1356          KM          The Urban time-area relation is used for this basin.
1357          KM
1358          KM      Time of Concentration for this sub-basin is based on the following:
1359          KM          An rainfall areal reduction factor of 1.000
1360          KM
1361          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1362          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1363          KM   .29 .28 .28 .28 .28 .28 .03 .03 .03 .03 .03 .03 .01 .01 .01 .01 .01 .01
1364          KM
1365          KM          L=   0.789 miles, S=  108 feet/mile, Kb= .03
1366          KM
1367          BA   0.080
1368          LG    0.16    0.25    6.40    0.16   16.80
1369          UC   0.242   0.267
1370          UA       0       5      16      30      65      77      84      90      94      97
1371          UA     100
              *

1372          KK    C566
1373          KM    Combine routed hydrographs from C565 and C560R with runoff from 509L at C566
1374          HC       3    2.36
              *

1375          KK  566567
1376          KM   Normal depth channel route from C566 to C567
1377          KM       Source:  200 Scale 2' CI Mapping, Sheet 3
1378          RS       2    FLOW      -1
1379          RC   0.030   0.030   0.030    2359  0.0185
1380          RX  1000.0  1070.0  1210.0  1240.0  1280.0  1312.0  1337.0  1362.0
1381          RY  1592.0  1591.1  1590.0  1588.0  1588.0  1590.0  1591.0  1592.0
1382          RL                    0.07  1588.0
              *
```

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1383          KK   B559L
1384          KM        Retrieve split hydrograph D559L
1385          DR   D559L
              *

1386          KK  559561
1387          KM   Normal depth channel route from C559 to C561
1388          KM       Source:  Hydrology Field Reconnaissance,  page 6
1389          RS       4    FLOW      -1
1390          RC   0.070   0.040   0.070    2023  0.0228
1391          RX  1000.0  1062.0  1102.0  1108.0  1137.0  1145.0  1210.0  1278.0
1392          RY  1691.2  1688.9  1689.5  1688.1  1688.2  1688.9  1690.0  1691.2
1393          RL                    0.15  1688.1
              *

1394          KK   B560L
1395          KM        Retrieve split hydrograph D560L
1396          DR   D560L
              *

1397          KK  560561
1398          KM   Normal depth channel route from C560 to C561
1399          KM       Source:  Hydrology Field Reconnaissance,  page 6
1400          RS       2    FLOW      -1
1401          RC   0.070   0.040   0.070    1065  0.0236
1402          RX   975.0  1000.0  1038.3  1041.6  1045.4  1054.0  1085.0  1197.0
1403          RY  1675.0  1674.2  1673.8  1672.8  1672.7  1673.6  1673.9  1674.9
1404          RL                    0.07  1672.7
              *

1405          KK    509K
1406          KM   Sub-Basin   509K
1407          KM
1408          KM      The Clark Unit Hydrograph is used for this basin.
1409          KM          The Natural time-area relation is used for this basin.
1410          KM
1411          KM      Time of Concentration for this sub-basin is based on the following:
1412          KM          An rainfall areal reduction factor of 1.000
1413          KM
1414          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1415          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1416          KM   .26 .26 .26 .26 .26 .25 .01 .01 .01 .01 .01 .01 .00 .00 .00 .00 .00 .00
1417          KM
1418          KM          L=   0.437 miles, S=  260 feet/mile, Kb= .12
1419          KM
1420          BA   0.029
1421          LG    0.28    0.39    6.20    0.19    0.10
1422          UC   0.288   0.358
1423          UA       0       3       5       8      12      20      43      75      90      96
1424          UA     100
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1425          KK    C561
1426          KM   Combine routed hydrographs from C559L and C560L with runoff from 509K at C561
1427          HC       3    2.31
              *

1428          KK  561562
1429          KM   Normal depth channel route from C561 to C562
1430          KM       Source:  200 Scale 2' CI Mapping, Sheet 5
1431          RS       1    FLOW      -1
1432          RC   0.060   0.030   0.060    1843  0.0197
1433          RX  1000.0  1047.0  1064.0  1069.0  1080.0  1085.0  1125.0  1138.0
1434          RY  1642.0  1640.0  1638.0  1636.0  1636.0  1638.0  1640.0  1642.0
1435          RL                    0.07  1636.0
              *

1436          KK    509J
1437          KM   Sub-Basin   509J
1438          KM
1439          KM      The Clark Unit Hydrograph is used for this basin.
1440          KM          The HEC-1 time-area relation is used for this basin.
1441          KM
1442          KM      Time of Concentration for this sub-basin is based on the following:
1443          KM          An rainfall areal reduction factor of 1.000
1444          KM
1445          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1446          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1447          KM   .26 .26 .26 .26 .26 .25 .01 .01 .01 .01 .01 .01 .00 .00 .00 .00 .00 .00
1448          KM
1449          KM          L=   0.878 miles, S=  188 feet/mile, Kb= .10
1450          KM
1451          BA   0.103
1452          LG    0.21    0.32    5.10    0.28    9.00
1453          UC   0.413   0.455
              *

1454          KK    C562
1455          KM    Combine routed hydrograph from C561 with runoff from 509J at C562
1456          HC       2
              *

1457          KK  562567
1458          KM   Normal depth channel route from C562 to C567
1459          KM       Source:  200 Scale 2' CI Mapping, Sheet 3
1460          RS       4    FLOW      -1
1461          RC   0.030   0.030   0.030    3314  0.0164
1462          RX  1000.0  1087.0  1157.0  1203.0  1216.0  1229.0  1254.0  1268.0
1463          RY  1606.0  1604.0  1602.0  1600.0  1600.0  1602.0  1604.0  1606.0
1464          RL                    0.15  1600.0
              *
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
```

```
1465          KK    509P
1466          KM   Sub-Basin   509P
1467          KM
1468          KM      The Clark Unit Hydrograph is used for this basin.
1469          KM          The Urban time-area relation is used for this basin.
1470          KM
1471          KM      Time of Concentration for this sub-basin is based on the following:
1472          KM          An rainfall areal reduction factor of 1.000
1473          KM
1474          KM        EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1475          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1476          KM   .29 .29 .29 .29 .29 .29 .04 .04 .04 .04 .04 .04 .02 .02 .02 .02 .01 .01
1477          KM
1478          KM          L=   0.765 miles, S=  107 feet/mile, Kb= .03
1479          KM
1480          BA   0.110
1481          LG    0.10    0.19    6.60    0.15   29.40
1482          UC   0.233   0.209
1483          UA      0       5      16      30      65      77      84      90      94      97
1484          UA    100
              *

1485          KK    C567
1486          KM     Combine routed hydrographs from C562 and C566 with runoff from 509P at C567
1487          HC       3
              *

1488          KK  567568
1489          KM   Normal depth channel route from C567 to C568
1490          KM       Source:  200 Scale 2' CI Mapping, Sheet 2
1491          RS       1    FLOW      -1
1492          RC   0.020   0.045   0.065    1527  0.0136
1493          RX   900.0  1015.0  1032.0  1033.0  1069.0  1070.0  1080.0  1118.0
1494          RY  1559.0  1556.7  1556.0  1554.0  1554.0  1556.0  1557.1  1559.0
1495          RL                    0.10  1554.0
              *

1496          KK    509Q
1497          KM   Sub-Basin   509Q
1498          KM
1499          KM      The Clark Unit Hydrograph is used for this basin.
1500          KM          The Urban time-area relation is used for this basin.
1501          KM
1502          KM      Time of Concentration for this sub-basin is based on the following:
1503          KM          An rainfall areal reduction factor of 1.000
1504          KM
1505          KM        EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1506          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1507          KM   .29 .29 .28 .28 .28 .28 .03 .03 .03 .03 .03 .03 .01 .01 .01 .01 .01 .01
1508          KM
1509          KM          L=   1.091 miles, S=   98 feet/mile, Kb= .03
1510          KM
1511          BA   0.107
1512          LG    0.12    0.22    6.40    0.16   19.50
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1513          UC   0.292   0.361
1514          UA      0       5      16      30      65      77      84      90      94      97
1515          UA    100
              *

1516          KK    C568
1517          KM     Combine routed hydrograph from C567 with runoff from 509Q at C568
1518          HC       2
              *

1519          KK  568569
1520          KM   Normal depth channel route from C568 to C569
1521          KM       Source:  200 Scale 2' CI Mapping, Sheet 2
1522          RS       4    FLOW      -1
1523          RC   0.065   0.045   0.065    1820  0.0167
1524          RX  1040.0  1130.0  1270.0  1272.0  1292.0  1294.0  1478.0  1640.0
1525          RY  1535.0  1533.2  1532.0  1530.0  1530.0  1532.0  1533.8  1535.0
1526          RL                    0.26  1530.0
              *

1527          KK    509R
1528          KM   Sub-Basin   509R
1529          KM
1530          KM      The Clark Unit Hydrograph is used for this basin.
1531          KM          The HEC-1 time-area relation is used for this basin.
1532          KM
1533          KM      Time of Concentration for this sub-basin is based on the following:
1534          KM          An rainfall areal reduction factor of 1.000
1535          KM
1536          KM        EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1537          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1538          KM   .28 .27 .27 .27 .27 .27 .02 .02 .02 .02 .02 .02 .00 .00 .00 .00 .00 .00
1539          KM
1540          KM          L=   0.646 miles, S=   90 feet/mile, Kb= .04
1541          KM
1542          BA   0.097
1543          LG    0.32    0.32    7.00    0.15    3.80
1544          UC   0.271   0.231
              *

1545          KK    C569
1546          KM    Combine routed hydrograph  from C568 with runoff from 509R at C569
1547          HC       2
              *

1548          KK  569570
1549          KM   Normal depth channel route from C569 to C570
1550          KM       Source:  200 Scale 2' CI Mapping, Sheet 2
1551          RS       3    FLOW      -1
1552          RC   0.065   0.050   0.065    1501  0.0125
1553          RX  1000.0  1033.0  1066.0  1094.0  1154.0  1225.0  1343.0  1434.0
1554          RY  1508.0  1507.5  1507.0  1504.0  1504.0  1506.0  1507.0  1508.0
1555          RL                    0.07  1504.0
              *
```

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1556          KK    5090
1557          KM   Sub-Basin   5090
1558          KM
1559          KM      The Clark Unit Hydrograph is used for this basin.
1560          KM          The Urban time-area relation is used for this basin.
1561          KM
1562          KM      Time of Concentration for this sub-basin is based on the following:
1563          KM          An rainfall areal reduction factor of 1.000
1564          KM
1565          KM        EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1566          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1567          KM   .29 .29 .29 .29 .29 .29 .04 .03 .03 .03 .03 .03 .02 .02 .02 .02 .02 .02
1568          KM
1569          KM          L=   0.578 miles, S=   96 feet/mile, Kb= .03
1570          KM
1571          BA   0.037
1572          LG    0.07    0.25    5.00    0.26   53.50
1573          UC   0.213   0.280
1574          UA      0       5      16      30      65      77      84      90      94      97
1575          UA    100
              *
              * *
              * *       Routing Reach  563-564 is too short to route.
              * *
              *

1576          KK    509N
1577          KM   Sub-Basin   509N
1578          KM
1579          KM      The Clark Unit Hydrograph is used for this basin.
1580          KM          The Urban time-area relation is used for this basin.
1581          KM
1582          KM      Time of Concentration for this sub-basin is based on the following:
1583          KM          An rainfall areal reduction factor of 1.000
1584          KM
1585          KM        EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1586          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1587          KM   .28 .28 .28 .28 .28 .28 .03 .03 .03 .02 .02 .02 .01 .01 .01 .01 .01 .01
1588          KM
1589          KM          L=   1.124 miles, S=   92 feet/mile, Kb= .03
1590          KM
1591          BA   0.114
1592          LG    0.11    0.26    5.40    0.24   28.10
1593          UC   0.304   0.374
1594          UA      0       5      16      30      65      77      84      90      94      97
1595          UA    100
              *
              *
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1596          KK    C564
1597          KM     Combine hydrograph from C563  with runoff from 509N at C564
1598          HC       2
              *

1599          KK  564570
1600          KM   Normal depth channel route from C564 to C570
1601          KM       Source:  200 Scale 2' CI Mapping, Sheet 2
1602          RS      6    FLOW      -1
1603          RC   0.065   0.045   0.065    5346  0.0149
1604          RX  1000.0  1007.0  1034.0  1042.0  1052.0  1065.0  1085.0  1157.0
1605          RY  1564.0  1562.0  1560.0  1558.0  1558.0  1560.0  1562.0  1564.0
1606          RL                     0.12  1558.0
              *

1607          KK    509S
1608          KM   Sub-Basin   509S
1609          KM
1610          KM      The Clark Unit Hydrograph is used for this basin.
1611          KM          The HEC-1 time-area relation is used for this basin.
1612          KM
1613          KM      Time of Concentration for this sub-basin is based on the following:
1614          KM          An rainfall areal reduction factor of 1.000
1615          KM
1616          KM        EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1617          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1618          KM   .28 .28 .28 .28 .28 .28 .03 .03 .03 .03 .03 .03 .01 .00 .00 .00 .00 .00
1619          KM
1620          KM          L=   1.030 miles, S=   81 feet/mile, Kb= .04
1621          KM
1622          BA   0.195
1623          LG    0.27    0.27    7.30    0.13    8.10
1624          UC   0.350   0.300
              *

1625          KK    C570
1626          KM     Combine routed hydrographs from C564 and C569 with runoff from 509S at C570
1627          HC       3
              *

1628          KK   CLEAR
1629          KM     Clear hydrograph stack from memory.
1630          HC       3
              *
              * ******************************************************************************
              * ****************************     Major Basin 505    ************************
              * ******************************************************************************
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1631          KK   B558R
1632          KM        Retrieve split hydrograph D558R
```

```
1633          DR   D558R
              *

1634          KK  558571
1635          KM   Normal depth channel route from C558 to C571
1636          KM       Source:  Hydrology Field Reconnaissance,  page 4
1637          RS       7    FLOW      -1
1638          RC   0.070   0.040   0.070    5068  0.0267
1639          RX   965.0  1030.0  1060.0  1066.0  1087.0  1108.0  1160.0  1370.0
1640          RY  1734.5  1733.2  1732.6  1732.2  1732.0  1733.2  1733.5  1734.5
1641          RL                     0.15  1732.0
              *

1642          KK    505A
1643          KM   Sub-Basin   505A
1644          KM
1645          KM      The Phoenix Mountain S-Graph is used for this basin.
1646          KM          Lag Used =  21.7 minutes
1647          KM
1648          BA   0.180
1649          LG    0.34    0.37    6.60    0.18    0.50
1650          UI      28      28      54      97     142     176     203     227     287     316
1651          UI     208     177     161     147     135     122     110      98      84      72
1652          UI      67      63      58      46      41      36      33      31      28      21
1653          UI      21      21      14      14      14      14      14       6       5       5
1654          UI       5       5       5       5       5       5       5       5       5       5
1655          UI       0       0       0       0       0       0       0       0       0       0
1656          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

1657          KK    C571
1658          KM     Combine routed hydrograph from C558R with runoff from 505A at C571
1659          HC       2    2.13
              *

1660          KK  571572
1661          KM   Normal depth channel route from C571 to C572
1662          KM       Source:  200 Scale 2' CI Mapping, Sheet 3
1663          RS       5    FLOW      -1
1664          RC   0.030   0.030   0.030    4644  0.0179
1665          RX  1000.0  1017.0  1078.0  1096.0  1138.0  1164.0  1205.0  1269.0
1666          RY  1629.0  1628.0  1626.0  1624.0  1624.0  1626.0  1628.0  1629.0
1667          RL                     0.10  1624.0
              *

1668          KK    505B
1669          KM   Sub-Basin   505B
1670          KM
1671          KM      The Clark Unit Hydrograph is used for this basin.
1672          KM          The Urban time-area relation is used for this basin.
1673          KM
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1674          KM      Time of Concentration for this sub-basin is based on the following:
1675          KM          An rainfall areal reduction factor of 1.000
1676          KM
1677          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1678          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1679          KM   .29 .29 .29 .29 .29 .29 .03 .03 .03 .03 .03 .03 .02 .01 .01 .01 .01 .01
1680          KM
1681          KM          L=   1.034 miles, S=   97 feet/mile, Kb= .03
1682          KM
1683          BA   0.145
1684          LG    0.13    0.16    7.00    0.14   17.70
1685          UC   0.283   0.282
1686          UA       0       5      16      30      65      77      84      90      94      97
1687          UA     100
              *

1688          KK    C572
1689          KM     Combine routed hydrograph from C571 with runoff from 505B at C572
1690          HC       2
              *
              * ******************************************************************************
              * ****************************     Major Basin 500     ************************
              * ******************************************************************************
              *

1691          KK    500A
1692          KM   Sub-Basin   500A
1693          KM
1694          KM      The Phoenix Mountain S-Graph is used for this basin.
1695          KM          Lag Used =  18.8 minutes
1696          KM
1697          BA   0.214
1698          LG    0.35    0.37    5.30    0.28    0.00
1699          UI      38      38     102     165     233     274     314     413     385     264
1700          UI     228     207     186     166     149     126     106      94      87      79
1701          UI      63      52      49      42      41      29      29      27      19      19
1702          UI      19      19       9       7       7       7       7       7       7       7
1703          UI       7       7       7       0       0       0       0       0       0       0
1704          UI       0       0       0       0       0       0       0       0       0       0
              *

1705          KK  501502
1706          KM   Normal depth channel route from C501 to C502
1707          KM       Source:  Hydrology Field Reconnaissance, page 10
1708          RS      14    FLOW      -1
1709          RC   0.070   0.040   0.070    6289  0.0223
1710          RX   822.0  1013.0  1035.0  1045.0  1049.0  1053.0  1076.0  1573.0
1711          RY  2161.0  2159.2  2158.9  2156.6  2156.8  2158.9  2159.0  2161.0
1712          RL                     0.12  2156.6
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1713          KK    500B
1714          KM   Sub-Basin   500B
```

```
1715          KM
1716          KM      The Phoenix Mountain S-Graph is used for this basin.
1717          KM          Lag Used =  26.0 minutes
1718          KM
1719          BA   0.205
1720          LG    0.35    0.38    5.40    0.27    0.00
1721          UI      27      27      27      76     105     139     166     188     205     236
1722          UI     293     295     201     173     158     148     136     127     117     107
1723          UI      98      87      76      68      64      61      56      50      44      37
1724          UI      34      33      29      29      24      20      20      20      15      13
1725          UI      13      13      13      13       9       5       5       5       5       5
1726          UI       5       5       5       5       5       5       5       5       5       5
1727          UI       0       0       0       0       0       0       0       0       0       0
1728          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

1729          KK    C502
1730          KM     Combine routed hydrograph from C501 with runoff from 500B at C502
1731          HC       2
              *
              *

1732          KK   D502R
1733          KM       Hydrograph diversion at C502
1734          KM      Main flow continues on in right branch.
1735          KM      Diverted flow is in the left branch, coded on DQ card.
1736          DT   D502L
1737          DI       0      30     131     435     762    1035    1158    1300    1493    1722
1738          DQ       0       0      44     260     488     679     760     850     980    1134
              *

1739          KK  502506
1740          KM   Normal depth channel route from C502 to C506
1741          KM       Source:  Hydrology Field Reconnaissance, page 10
1742          RS       6    FLOW      -1
1743          RC   0.070   0.040   0.070    6884  0.0266
1744          RX   985.0  1000.0  1015.0  1020.0  1030.0  1035.0  1055.0  1075.0
1745          RY  2160.4  2159.2  2158.3  2156.7  2156.7  2158.5  2159.3  2160.4
1746          RL                    0.33  2156.7
              *

1747          KK   B534L
1748          KM       Retrieve split hydrograph D534L
1749          DR   D534L
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1750          KK  534506
1751          KM   Normal depth channel route from C534 to C506
1752          KM       Source:  Hydrology Field Reconnaissance, page 10
1753          RS       1    FLOW      -1
1754          RC   0.070   0.040   0.070    1113  0.0278
1755          RX   985.0  1000.0  1015.0  1020.0  1030.0  1035.0  1055.0  1075.0
1756          RY  2160.4  2159.2  2158.3  2156.7  2156.7  2158.5  2159.3  2160.4
1757          RL                    0.62  2156.7
              *

1758          KK    C506
1759          KM     Combine routed hydrograph from C502R with hydrograph from C534L at C506
1760          HC       2    5.72
              *

1761          KK  506507
1762          KM   Normal depth channel route from C506 to C507
1763          KM       Source:  Hydrology Field Reconnaissance, page 10
1764          RS       1    FLOW      -1
1765          RC   0.070   0.040   0.070    1485  0.0269
1766          RX   985.0  1000.0  1015.0  1020.0  1030.0  1035.0  1055.0  1075.0
1767          RY  2160.4  2159.2  2158.3  2156.7  2156.7  2158.5  2159.3  2160.4
1768          RL                    0.62  2156.7
              *

1769          KK    500H
1770          KM   Sub-Basin   500H
1771          KM
1772          KM      The Phoenix Mountain S-Graph is used for this basin.
1773          KM          Lag Used =  22.4 minutes
1774          KM
1775          BA   0.211
1776          LG    0.35    0.35    4.30    0.46    0.00
1777          UI      32      32      57     107     153     195     225     250     305     377
1778          UI     263     212     188     174     159     146     131     120     104      89
1779          UI      80      75      70      63      52      44      41      37      35      31
1780          UI      24      24      24      16      16      16      16      16       9       6
1781          UI       6       6       6       6       6       6       6       6       6       6
1782          UI       6       0       0       0       0       0       0       0       0       0
1783          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

1784          KK    C507
1785          KM     Combine routed hydrograph from C506 with runoff from 500H at C507
1786          HC       2
              *

1787          KK  507508
1788          KM   Normal depth channel route from C507 to C508
1789          KM       Source:  Hydrology Field Reconnaissance, page 12
1790          RS       7    FLOW      -1
1791          RC   0.070   0.045   0.070    3461  0.0269
1792          RX   920.0  1106.0  1137.0  1152.0  1166.0  1170.0  1202.0  1275.0
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1793          RY  1847.5  1846.2  1846.3  1845.1  1845.1  1846.4  1846.8  1847.5
1794          RL                    0.56  1845.1
              *
              *
```

```
1795          KK   B502L
1796          KM        Retrieve split hydrograph D502L
1797          DR   D502L
              *

1798          KK  502503
1799          KM   Normal depth channel route from C502 to C503
1800          KM       Source:  Hydrology Field Reconnaissance, page 10
1801          RS       5    FLOW      -1
1802          RC   0.070   0.040   0.070    4578  0.0266
1803          RX  1000.0  1040.0  1075.0  1101.0  1136.0  1150.0  1190.0  1230.0
1804          RY  2160.4  2160.1  2159.8  2157.5  2158.1  2159.4  2159.9  2160.4
1805          RL                    0.33  2157.5
              *

1806          KK    500C
1807          KM   Sub-Basin   500C
1808          KM
1809          KM      The Phoenix Mountain S-Graph is used for this basin.
1810          KM          Lag Used =  17.1 minutes
1811          KM
1812          BA   0.123
1813          LG    0.35    0.35    4.65    0.37    0.00
1814          UI      24      26      78     121     158     186     235     265     171     145
1815          UI     130     116     102      89      74      62      57      51      41      34
1816          UI      30      27      23      19      19      13      12      12      12       6
1817          UI       5       5       5       5       5       5       5       5       5       0
1818          UI       0       0       0       0       0       0       0       0       0       0
1819          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

1820          KK    C503
1821          KM     Combine routed hydrograph from C502L with runoff from 500C at C503
1822          HC       2    0.54
              *
1823          KM      The culvert at C503 is filled with sediment and is assumed to be
1824          KM        completely plugged.  Channel hydraulics on the right side of the
1825          KM        road were checked and it was determined that no flow overtopped the
1826          KM        road to the north for the 100-year storm event.
              *

1827          KK  503508
1828          KM   Normal depth channel route from C503 to C508
1829          KM       Source:  Hydrology Field Reconnaissance, page 10
1830          RS      16    FLOW      -1
1831          RC   0.070   0.040   0.070    7224  0.0269
1832          RX   869.0  1105.0  1137.0  1149.0  1163.0  1172.0  1200.0  1451.0
1833          RY  1848.0  1846.2  1846.3  1845.5  1845.1  1846.5  1846.8  1848.0
1834          RL                    0.33  1845.1
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1835          KK    500I
1836          KM   Sub-Basin   500I
1837          KM
1838          KM      The Phoenix Mountain S-Graph is used for this basin.
1839          KM          Lag Used =  22.9 minutes
1840          KM
1841          BA   0.409
1842          LG    0.35    0.35    4.25    0.47    0.00
1843          UI      60      60     101     198     278     365     418     466     549     709
1844          UI     554     417     366     340     310     285     259     237     210     182
1845          UI     157     146     138     126     107      97      77      76      66      66
1846          UI      53      46      46      43      29      29      29      29      29      15
1847          UI      12      12      12      12      12      12      12      12      12      12
1848          UI      12      12       0       0       0       0       0       0       0       0
1849          UI       0       0       0       0       0       0       0       0       0       0
              *

1850          KK    C508
1851          KM    Combine routed hydrographs from C503  and C507 with runoff from 500I at C508
1852          HC       3
              *

1853          KK   D508R
1854          KM        Hydrograph diversion at C508
1855          KM      Main flow continues on in right branch.
1856          KM      Diverted flow is in the left branch, coded on DQ card.
1857          DT   D508L
1858          DI       0      11      45     160     352     698     913    1160    1439    1853
1859          DQ       0       0      10      45     160     390     520     670     839    1130
              *

1860          KK  508517
1861          KM   Normal depth channel route from C508 to C517
1862          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
1863          RS      13    FLOW      -1
1864          RC   0.070   0.040   0.070    7904  0.0252
1865          RX   947.0   980.0  1000.0  1010.0  1030.0  1034.0  1092.0  1123.0
1866          RY  1848.5  1847.2  1846.4  1845.6  1845.2  1846.5  1847.1  1848.5
1867          RL                    0.33  1845.2
              *

1868          KK   B515L
1869          KM        Retrieve split hydrograph D515L
1870          DR   D515L
              *

1871          KK  515517
1872          KM   Normal depth channel route from C515 to C517
1873          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
1874          RS       6    FLOW      -1
1875          RC   0.065   0.045   0.065    2653  0.0231
1876          RX  1000.0  1031.0  1061.0  1193.0  1206.0  1281.0  1320.0  1368.0
1877          RY  1706.7  1706.0  1705.0  1704.0  1704.0  1704.8  1706.0  1707.0
1878          RL                    0.33  1704.0
              *
```

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1879          KK    500L
1880          KM   Sub-Basin   500L
1881          KM
1882          KM      The Phoenix Mountain S-Graph is used for this basin.
1883          KM          Lag Used =  19.1 minutes
1884          KM
1885          BA   0.161
1886          LG    0.35    0.35    4.35    0.44    0.20
1887          UI      28      28      72     119     170     199     228     295     300     200
1888          UI     171     156     140     126     112      97      81      71      66      60
1889          UI      49      42      36      32      31      24      22      22      15      14
1890          UI      14      14      11       5       5       5       5       5       5       5
1891          UI       5       5       5       5       0       0       0       0       0       0
1892          UI       0       0       0       0       0       0       0       0       0       0
              *

1893          KK    C517
1894          KM   Combine routed hydrographs from C515L and C508R with runoff from 500L at C517
1895          HC       3    7.60
              *

1896          KK  517518
1897          KM   Normal depth channel route from C517 to C518
1898          KM       Source:  200 Scale 2' CI Mapping, Sheet 7
1899          RS       1    FLOW      -1
1900          RC   0.065   0.045   0.065    1745  0.0209
1901          RX  1000.0  1060.0  1117.0  1127.0  1172.0  1192.0  1272.0  1350.0
1902          RY  1712.0  1711.5  1710.0  1708.0  1708.0  1710.0  1711.0  1712.0
1903          RL                    0.33  1708.0
              *

1904          KK    500J
1905          KM   Sub-Basin   500J
1906          KM
1907          KM      The Phoenix Mountain S-Graph is used for this basin.
1908          KM          Lag Used =  13.8 minutes
1909          KM
1910          BA   0.090
1911          LG    0.34    0.35    4.45    0.41    1.10
1912          UI      22      39      91     139     170     238     187     136     118     102
1913          UI      87      71      56      51      42      33      28      24      19      17
1914          UI      13      11      11       8       4       4       4       4       4       4
1915          UI       4       0       0       0       0       0       0       0       0       0
1916          UI       0       0       0       0       0       0       0       0       0       0
              *

1917          KK  514518
1918          KM   Normal depth channel route from C514 to C518
1919          KM       Source:  200 Scale 2' CI Mapping, Sheet 7
1920          RS       2    FLOW      -1
1921          RC   0.065   0.045   0.065    1322  0.0216
1922          RX  1000.0  1034.0  1056.0  1087.0  1108.0  1135.0  1142.5  1150.0
1923          RY  1646.8  1646.0  1646.0  1644.0  1644.0  1646.0  1646.5  1647.0
1924          RL                    0.33  1644.0
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1925          KK    C518
1926          KM     Combine routed hydrographs from C517 and  C514 at C518
1927          HC       2
              *

1928          KK  518519
1929          KM   Normal depth channel route from C518 to C519
1930          KM       Source:  200 Scale 2' CI Mapping, Sheet 7
1931          RS       6    FLOW      -1
1932          RC   0.070   0.050   0.070    3094  0.0215
1933          RX  1000.0  1062.0  1115.0  1134.0  1161.0  1176.0  1251.0  1326.0
1934          RY  1612.0  1610.0  1608.5  1608.0  1608.0  1608.3  1610.0  1612.0
1935          RL                    0.33  1608.0
              *

1936          KK    500M
1937          KM   Sub-Basin   500M
1938          KM
1939          KM      The Clark Unit Hydrograph is used for this basin.
1940          KM          The Urban time-area relation is used for this basin.
1941          KM
1942          KM      Time of Concentration for this sub-basin is based on the following:
1943          KM          An rainfall areal reduction factor of 1.000
1944          KM
1945          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1946          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
1947          KM   .27 .26 .26 .26 .26 .26 .01 .01 .01 .01 .01 .01 .01 .01 .01 .01 .01 .01
1948          KM
1949          KM          L=   1.051 miles, S=  117 feet/mile, Kb= .05
1950          KM
1951          BA   0.123
1952          LG    0.15    0.26    4.65    0.36   19.80
1953          UC   0.363   0.412
1954          UA       0       5      16      30      65      77      84      90      94      97
1955          UA     100
              *
              *

1956          KK    C519
1957          KM     Combine routed hydrograph from C518 with runoff from 500M at C519
1958          HC       2
              *
              * *
              * *       Routing Reach  519-520 is too short to route.
              * *
              *

1959          KK    C504
1960          KM     Bring back tape 21 file of Rio Verde North runoff hydrograph WP504
1961          BI   WP504      21
```

```
                *
LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1962            KK  504509
1963            KM   Normal depth channel route from C504 to C509
1964            KM        Source:  Hydrology Field Reconnaissance, page 21
1965            RS      13    FLOW      -1
1966            RC   0.065   0.040   0.030    9180  0.0273
1967            RX  1000.0  1026.0  1040.0  1048.0  1072.0  1083.0  1117.0  1152.0
1968            RY   100.4    99.0    99.3    98.4    98.4    98.8    98.9   100.4
1969            RL                   0.33    98.4
                *

1970            KK    500D
1971            KM   Sub-Basin   500D
1972            KM
1973            KM      The Phoenix Mountain S-Graph is used for this basin.
1974            KM          Lag Used =  23.2 minutes
1975            KM
1976            BA   0.234
1977            LG    0.35    0.35    4.35    0.44    0.00
1978            UI      34      34      55     111     154     205     233     260     304     391
1979            UI     333     242     209     194     178     164     149     135     122     108
1980            UI      90      83      79      73      65      56      46      43      39      37
1981            UI      34      26      26      26      19      17      17      17      17      13
1982            UI       7       7       7       7       7       7       7       7       7       7
1983            UI       7       7       7       0       0       0       0       0       0       0
1984            UI       0       0       0       0       0       0       0       0       0       0
                *

1985            KK   TEMP1
1986            KO                                  21
1987            KM     Combine routed hydrograph from C504 with runoff from 500D at C509
1988            HC       2   0.494
                *
                *    The combined hydrograph at C509 is written out to tape 21 file to correct
                *      corrupted pointers.
                *

1989            KK    C509
1990            KM     Bring back tape 21 of combined hydrograph at C509
1991            BI   TEMP1      21
                *

1992            KK  509510
1993            KM   Normal depth channel route from C509 to C510
1994            KM       Source:  200 Scale 2' CI Mapping, Sheet 8
1995            RS       4    FLOW      -1
1996            RC   0.065   0.040   0.040    5926  0.0267
1997            RX   950.0  1025.0  1031.0  1040.0  1050.0  1054.0  1072.0  1090.0
1998            RY  1777.5  1776.9  1776.0  1774.0  1774.0  1776.0  1777.3  1777.5
1999            RL                   0.33  1774.0
                *
```



```
LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2000            KK    500E
2001            KM   Sub-Basin   500E
2002            KM
2003            KM      The Phoenix Mountain S-Graph is used for this basin.
2004            KM          Lag Used =  15.5 minutes
2005            KM
2006            BA   0.106
2007            LG    0.35    0.35    4.35    0.44    0.00
2008            UI      23      32      82     130     163     197     263     174     139     124
2009            UI     109      94      80      65      56      51      42      34      29      25
2010            UI      22      18      17      11      11      11       8       4       4       4
2011            UI       4       4       4       4       4       0       0       0       0       0
2012            UI       0       0       0       0       0       0       0       0       0       0
                *

2013            KK    C581
2014            KM     Bring back tape 21 file of Rio Verde North runoff hydrograph WP581
2015            BI   WP581      21
                *

2016            KK  581510
2017            KM   Normal depth channel route from C581 to C510
2018            KM       Source:  200 Scale 2' CI Mapping, Sheet 8
2019            RS       4    FLOW      -1
2020            RC   0.065   0.040   0.065    3150  0.0254
2021            RX  1000.0  1040.0  1065.0  1070.0  1100.0  1105.0  1120.0  1145.0
2022            RY  1749.5  1749.0  1748.0  1747.0  1747.0  1748.0  1747.8  1749.5
2023            RL                   0.33  1747.0
                *

2024            KK   TEMP2
2025            KO                                  21
2026            KM     Combine routed hydrograph from C509 and C581 with runoff from 500E at C510
2027            HC       3   0.494
                *
                *    The combined hydrograph at C510 is written out to tape 21 file to correct
                *      for corrupted pointers.
                *

2028            KK    C510
2029            KM     Bring back tape 21 file of combined hydrograph at C510
2030            BI   TEMP2      21
                *

2031            KK   D510R
2032            KM       Hydrograph diversion at C510
2033            KM     Main flow continues on in right branch.
2034            KM     Diverted flow is in the left branch (Rio Verde North Study), coded on DQ.
2035            DT   D510L
2036            DI       0      50     235     450     749    1016    1349    1541    1749    1972
2037            DQ       0      18      94     184     301     397     511     576     646     721
                *
```

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2038          KK  510511
2039          KM   Normal depth channel route from C510 to C511
2040          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
2041          RS       2    FLOW      -1
2042          RC   0.070   0.050   0.070    1447  0.0289
2043          RX   700.0  1060.0  1100.0  1125.0  1178.0  1189.0  1207.0  1442.0
2044          RY  1705.0  1699.9  1699.1  1698.0  1698.0  1698.7  1699.5  1700.5
2045          RL                    0.33  1698.0
              *

2046          KK   B508L
2047          KM        Retrieve split hydrograph D508L
2048          DR   D508L
              *

2049          KK  508511
2050          KM   Normal depth channel route from C508 to C511
2051          KM       Source:  200 Scale 2' CI Mapping, Sheet 8
2052          RS      12    FLOW      -1
2053          RC   0.070   0.040   0.070    7575  0.0255
2054          RX   986.0  1018.0  1050.0  1057.0  1082.0  1089.0  1105.0  1215.0
2055          RY  1848.5  1847.4  1846.8  1845.7  1845.7  1846.6  1846.3  1848.5
2056          RL                    0.31  1845.7
              *

2057          KK    500F
2058          KM   Sub-Basin   500F
2059          KM
2060          KM       The Phoenix Mountain S-Graph is used for this basin.
2061          KM           Lag Used =  25.7 minutes
2062          KM
2063          BA   0.437
2064          LG    0.35    0.35    4.40    0.43    0.00
2065          UI      57      57      62     165     230     304     361     408     447     519
2066          UI     650     604     422     368     338     315     291     270     247     227
2067          UI     206     183     158     144     136     130     120     101      94      74
2068          UI      73      67      63      63      45      44      44      43      28      28
2069          UI      28      28      28      28      11      11      11      11      11      11
2070          UI      11      11      11      11      11      11      11      11      11       0
2071          UI       0       0       0       0       0       0       0       0       0       0
2072          UI       0       0       0       0       0       0       0       0       0       0
              *

2073          KK    C511
2074          KM   Combine routed hydrographs from C508L and C510R with runoff from 500F at C511
2075          HC       3    7.49
              *

2076          KK  511512
2077          KM   Normal depth channel route from C511 to C512
2078          KM       Source:  200 Scale 2' CI Mapping, Sheet 7
2079          RS      16    FLOW      -1
2080          RC   0.070   0.050   0.070    5718  0.0199
2081          RX  1000.0  1037.0  1189.0  1195.0  1230.0  1236.0  1386.0  1646.0
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2082          RY  1616.7  1616.0  1615.0  1614.0  1614.0  1615.0  1616.0  1617.0
2083          RL                    0.33  1614.0
              *

2084          KK    500K
2085          KM   Sub-Basin   500K
2086          KM
2087          KM       The Phoenix Mountain S-Graph is used for this basin.
2088          KM           Lag Used =  16.6 minutes
2089          KM
2090          BA   0.096
2091          LG    0.23    0.32    5.60    0.25    9.50
2092          UI      19      23      64     101     130     152     201     195     130     113
2093          UI     100      89      78      66      55      47      43      37      30      25
2094          UI      22      21      15      15      12      10      10      10       6       4
2095          UI       4       4       4       4       4       4       4       4       0       0
2096          UI       0       0       0       0       0       0       0       0       0       0
              *

2097          KK  513512
2098          KM   Normal depth channel route from C513 to C512
2099          KM       Source:  200 Scale 2' CI Mapping, Sheet 7
2100          RS       8    FLOW      -1
2101          RC   0.065   0.045   0.065    3192  0.0180
2102          RX  1000.0  1039.0  1069.0  1229.0  1247.0  1310.0  1380.0  1406.0
2103          RY  1605.0  1604.0  1603.2  1602.0  1602.0  1603.1  1604.0  1605.1
2104          RL                    0.33  1602.0
              *

2105          KK    500G
2106          KM   Sub-Basin   500G
2107          KM
2108          KM       The Clark Unit Hydrograph is used for this basin.
2109          KM           The Urban time-area relation is used for this basin.
2110          KM
2111          KM       Time of Concentration for this sub-basin is based on the following:
2112          KM           An rainfall areal reduction factor of 1.000
2113          KM
2114          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2115          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2116          KM   .27 .26 .26 .26 .26 .26 .01 .01 .01 .01 .01 .01 .01 .01 .01 .01 .01 .01
2117          KM
2118          KM           L=   1.314 miles, S=  110 feet/mile, Kb= .05
2119          KM
2120          BA   0.202
2121          LG    0.16    0.27    4.70    0.35   22.30
2122          UC   0.413   0.428
2123          UA       0       5      16      30      65      77      84      90      94      97
2124          UA     100
              *
```

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2125          KK    C512
2126          KM     Combine routed hydrographs from C511 and C513 with runoff from 500G at C512
2127          HC       3
              *
              * *
              * *       Routing Reach  512-520 is too short to route.
              * *
              *

2128          KK    C520
2129          KM     Combine hydrographs C512 and C519 at C520
2130          HC       2
              *

2131          KK  520576
2132          KM   Normal depth channel route from C520 to C576
2133          KM       Source:  200 Scale 2' CI Mapping, Sheet 6
2134          RS       1    FLOW     -1
2135          RC   0.065   0.040   0.065    1203  0.0150
2136          RX   925.0  1050.0  1245.0  1335.0  1410.0  1485.0  1565.0  1690.0
2137          RY  1547.5  1546.0  1546.0  1544.0  1544.0  1545.0  1546.0  1547.5
2138          RL                    0.04  1544.0
              *

2139          KK    5000
2140          KM   Sub-Basin   5000
2141          KM
2142          KM      The Clark Unit Hydrograph is used for this basin.
2143          KM          The Urban time-area relation is used for this basin.
2144          KM
2145          KM      Time of Concentration for this sub-basin is based on the following:
2146          KM          An rainfall areal reduction factor of 1.000
2147          KM
2148          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2149          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2150          KM   .29 .29 .29 .29 .29 .29 .03 .03 .03 .03 .03 .03 .01 .01 .01 .01 .01 .01
2151          KM
2152          KM          L=   1.037 miles, S=  115 feet/mile, Kb= .06
2153          KM
2154          BA   0.101
2155          LG    0.18    0.19    7.30    0.13   16.10
2156          UC   0.383   0.486
2157          UA       0       5      16      30      65      77      84      90      94      97
2158          UA     100
              *

2159          KK  521522
2160          KM   Normal depth channel route from C521 to C522
2161          KM       Source:  200 Scale 2' CI Mapping, Sheet 7
2162          RS       7    FLOW     -1
2163          RC   0.070   0.050   0.070    2928  0.0207
2164          RX  1000.0  1055.0  1110.0  1175.0  1198.0  1240.0  1417.0  1450.0
2165          RY  1576.0  1575.0  1574.0  1572.0  1572.0  1573.0  1574.0  1576.0
2166          RL                    0.06  1572.0
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2167          KK    500P
2168          KM   Sub-Basin   500P
2169          KM
2170          KM      The Clark Unit Hydrograph is used for this basin.
2171          KM          The HEC-1 time-area relation is used for this basin.
2172          KM
2173          KM      Time of Concentration for this sub-basin is based on the following:
2174          KM          An rainfall areal reduction factor of 1.000
2175          KM
2176          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2177          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2178          KM   .29 .29 .28 .28 .28 .28 .03 .03 .03 .03 .03 .03 .01 .01 .01 .01 .01 .01
2179          KM
2180          KM          L=   0.642 miles, S=  119 feet/mile, Kb= .06
2181          KM
2182          BA   0.083
2183          LG    0.30    0.26    8.40    0.09    4.90
2184          UC   0.300   0.282
              *

2185          KK    C522
2186          KM     Combine routed hydrograph from C521 with runoff from 500P at C522
2187          HC       2
              *
              * *
              * *       Routing Reach  522-576 is too short to route.
              * *
              *

2188          KK    C576
2189          KM     Combine routed hydrograph from C520 with hydrograph from C522 at C576
2190          HC       2
              *

2191          KK  576523
2192          KM   Normal depth channel route from C576 to C523
2193          KM       Source:  200 Scale 2' CI Mapping, Sheet 6
2194          RS       1    FLOW     -1
2195          RC   0.065   0.040   0.065    1429  0.0262
2196          RX  1000.0  1061.0  1106.0  1115.0  1150.0  1155.0  1267.0  1330.0
2197          RY  1531.0  1530.0  1528.0  1526.0  1526.0  1528.0  1530.0  1531.0
2198          RL                    0.26  1526.0
              *

2199          KK    500N
2200          KM   Sub-Basin   500N
2201          KM
2202          KM      The Clark Unit Hydrograph is used for this basin.
```

```
2203        KM          The Natural time-area relation is used for this basin.
2204        KM
2205        KM      Time of Concentration for this sub-basin is based on the following:
2206        KM          An rainfall areal reduction factor of 1.000
2207        KM
2208        KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
1                                   HEC-1 INPUT                                          PAGE 54

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2209        KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2210        KM   .26 .26 .25 .25 .25 .25 .01 .01 .01 .01 .01 .00 .00 .00 .00 .00 .00 .00
2211        KM
2212        KM          L=   0.859 miles, S=  110 feet/mile, Kb= .05
2213        KM
2214        BA   0.113
2215        LG    0.34    0.39    6.20    0.20    0.00
2216        UC   0.338   0.340
2217        UA       0       3       5       8      12      20      43      75      90      96
2218        UA     100
            *

2219        KK    C523
2220        KM     Combine routed hydrograph from C576 with runoff from 500N at C523
2221        HC       2
            *
            * ***************************************************************************
            * ******************************      Major Basin 501     ************************
            * ***************************************************************************
            *

2222        KK    501A
2223        KM   Sub-Basin   501A
2224        KM
2225        KM      The Clark Unit Hydrograph is used for this basin.
2226        KM          The Urban time-area relation is used for this basin.
2227        KM
2228        KM      Time of Concentration for this sub-basin is based on the following:
2229        KM          An rainfall areal reduction factor of 1.000
2230        KM
2231        KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2232        KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2233        KM   .26 .26 .26 .26 .26 .25 .01 .01 .01 .01 .01 .01 .00 .00 .00 .00 .00 .00
2234        KM
2235        KM          L=   0.364 miles, S=  145 feet/mile, Kb= .06
2236        KM
2237        BA   0.040
2238        LG    0.36    0.28    4.70    0.28    7.30
2239        UC   0.221   0.193
2240        UA       0       5      16      30      65      77      84      90      94      97
2241        UA     100
            *

2242        KK    501B
2243        KM   Sub-Basin   501B
2244        KM
2245        KM      The Clark Unit Hydrograph is used for this basin.
2246        KM          The HEC-1 time-area relation is used for this basin.
2247        KM
2248        KM      Time of Concentration for this sub-basin is based on the following:
2249        KM          An rainfall areal reduction factor of 1.000
2250        KM
2251        KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2252        KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2253        KM   .25 .25 .24 .24 .24 .24 .00 .00 .00 .00 .00 .00 .00 .00 .00 .00 .00 .00
1                                   HEC-1 INPUT                                          PAGE 55

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2254        KM
2255        KM          L=   0.610 miles, S=  116 feet/mile, Kb= .06
2256        KM
2257        BA   0.074
2258        LG    0.35    0.33    4.90    0.32    1.90
2259        UC   0.313   0.302
            *

2260        KK   CLEAR
2261        KM        Clear Hydrograph stack from memory
2262        HC       5
            *
            * ***************************************************************************
            * ******************************      Major Basin 502     ************************
            * ***************************************************************************
            *

2263        KK    502B
2264        KM   Sub-Basin   502B
2265        KM
2266        KM      The Clark Unit Hydrograph is used for this basin.
2267        KM          The Natural time-area relation is used for this basin.
2268        KM
2269        KM      Time of Concentration for this sub-basin is based on the following:
2270        KM          An rainfall areal reduction factor of 1.000
2271        KM
2272        KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2273        KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2274        KM   .29 .29 .29 .29 .29 .29 .04 .04 .04 .04 .04 .03 .01 .01 .01 .01 .01 .01
2275        KM
2276        KM          L=   0.506 miles, S=  115 feet/mile, Kb= .06
2277        KM
2278        BA   0.053
2279        LG    0.35    0.25    9.70    0.06    0.00
2280        UC   0.267   0.265
2281        UA       0       3       5       8      12      20      43      75      90      96
2282        UA     100
            *

2283        KK    502C
2284        KM   Sub-Basin   502C
2285        KM
2286        KM      The Clark Unit Hydrograph is used for this basin.
2287        KM          The Natural time-area relation is used for this basin.
```

```
2288          KM
2289          KM      Time of Concentration for this sub-basin is based on the following:
2290          KM          An rainfall areal reduction factor of 1.000
2291          KM
2292          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2293          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2294          KM   .29 .29 .29 .29 .29 .29 .04 .04 .04 .04 .04 .03 .01 .01 .01 .01 .01 .01
2295          KM
2296          KM          L=   0.609 miles, S=  100 feet/mile, Kb= .06
2297          KM
2298          BA   0.046
1                                          HEC-1 INPUT                                                    PAGE 56

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2299          LG    0.35    0.25    9.70    0.06    0.00
2300          UC   0.308   0.390
2301          UA       0       3       5       8      12      20      43      75      90      96
2302          UA     100
              *
              * ******************************************************************************
              * ****************************     Major Basin 503     ************************
              * ******************************************************************************
              *

2303          KK    503A
2304          KM   Sub-Basin   503A
2305          KM
2306          KM      The Clark Unit Hydrograph is used for this basin.
2307          KM          The Urban time-area relation is used for this basin.
2308          KM
2309          KM      Time of Concentration for this sub-basin is based on the following:
2310          KM          An rainfall areal reduction factor of 1.000
2311          KM
2312          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2313          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2314          KM   .30 .30 .29 .29 .29 .29 .04 .04 .04 .04 .04 .04 .02 .02 .02 .02 .02 .02
2315          KM
2316          KM          L=   1.534 miles, S=   85 feet/mile, Kb= .03
2317          KM
2318          BA   0.216
2319          LG    0.14    0.17    7.60    0.11   19.50
2320          UC   0.358   0.399
2321          UA       0       5      16      30      65      77      84      90      94      97
2322          UA     100
              *

2323          KK  549550
2324          KM   Normal depth channel route from C549 to C550
2325          KM       Source:  Hydrology Field Reconnaissance, page 23
2326          RS       4    FLOW      -1
2327          RC   0.065   0.050   0.065    3454  0.0156
2328          RX  1000.0  1008.0  1018.0  1026.0  1036.0  1049.0  1061.0  1072.0
2329          RY   100.0    97.9    96.6    93.1    93.2    98.0    97.9   101.2
2330          RL                    0.09    93.1
              *

2331          KK    503C
2332          KM   Sub-Basin   503C
2333          KM
2334          KM      The Clark Unit Hydrograph is used for this basin.
2335          KM          The Natural time-area relation is used for this basin.
2336          KM
2337          KM      Time of Concentration for this sub-basin is based on the following:
2338          KM          An rainfall areal reduction factor of 1.000
2339          KM
2340          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2341          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2342          KM   .29 .29 .28 .28 .28 .28 .03 .03 .03 .03 .03 .03 .01 .01 .01 .01 .01 .01
2343          KM
1                                          HEC-1 INPUT                                                    PAGE 57

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2344          KM          L=   0.765 miles, S=   71 feet/mile, Kb= .05
2345          KM
2346          BA   0.121
2347          LG    0.35    0.27    8.80    0.08    0.00
2348          UC   0.350   0.311
2349          UA       0       3       5       8      12      20      43      75      90      96
2350          UA     100
              *

2351          KK   C550L
2352          KM    Combine routed hydrograph from C549 with runoff from 503C at C550L
2353          HC       2
              *

2354          KK    503B
2355          KM   Sub-Basin   503B
2356          KM
2357          KM      The Clark Unit Hydrograph is used for this basin.
2358          KM          The HEC-1 time-area relation is used for this basin.
2359          KM
2360          KM      Time of Concentration for this sub-basin is based on the following:
2361          KM          An rainfall areal reduction factor of 1.000
2362          KM
2363          KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2364          KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2365          KM   .29 .29 .29 .29 .29 .29 .03 .03 .03 .03 .03 .03 .01 .01 .01 .01 .01 .01
2366          KM
2367          KM          L=   1.398 miles, S=   85 feet/mile, Kb= .04
2368          KM
2369          BA   0.113
2370          LG    0.27    0.24    8.40    0.09    8.30
2371          UC   0.400   0.607
              *

2372          KK    C550
2373          KM     Combine hydrograph from C550L with runoff from 503B at C550
2374          HC       2
              *
              * ******************************************************************************
```

```
                    * ****************************     Major Basin 504    ***********************
                    * ***********************************************************************
                    *

2375                KK   504A
2376                KM   Sub-Basin   504A
2377                KM
2378                KM      The Clark Unit Hydrograph is used for this basin.
2379                KM          The HEC-1 time-area relation is used for this basin.
2380                KM
2381                KM      Time of Concentration for this sub-basin is based on the following:
2382                KM          An rainfall areal reduction factor of 1.000
2383                KM
2384                KM       EXCESS RAINFALL VALUES EXCEEDED IN 5-MINUTE INTERVALS
2385                KM     5  10  15  20  25  30  35  40  45  50  55  60  65  70  75  80  85  90
2386                KM   .29 .29 .28 .28 .28 .28 .03 .03 .03 .03 .03 .03 .01 .01 .01 .01 .01 .01
1                                                HEC-1 INPUT                                          PAGE 58

LINE                ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2387                KM
2388                KM          L=   1.474 miles, S=   83 feet/mile, Kb= .04
2389                KM
2390                BA   0.242
2391                LG    0.29    0.26    8.00    0.10    4.80
2392                UC   0.413   0.424
                    *
2393                ZZ
1
          SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

  NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

   28       WP504
                .
                .
   65           .       WP581
                .          .
                .          .
  103       CLEAR............
                .
                .
  106           .        511A
                .          V
                .          V
  122           .      524526
                .          .
                .          .
  130           .          .       511B
                .          .          V
                .          .          V
  153           .          .      525526
                .          .          .
                .          .          .
  161           .          .          .        511D
                .          .          .          .
                .          .          .          .
  178           .        C526.......................
                .          V
                .          V
  181           .      526527
                .          .
                .          .
  189           .          .       511E
                .          .          .
                .          .          .
  210           .          .          .        511F
                .          .          .          .
                .          .          .          .
  223           .        C527.......................
                .          V
                .          V
  226           .      527528
                .          .
                .          .
  234           .          .       511C
                .          .          .
                .          .          .
  258           .        C528............
                .          V
                .          V
  261           .      528529
                .          .
                .          .
  269           .          .       511H
                .          .          .
                .          .          .
  284           .        C529............
                .          .
                .          .
  287           .          .       511G
                .          .          .
                .          .          .
  305           .        C530............
                .          V
                .          V
  308           .      530531
                .          .
                .          .
  316           .          .       511I
                .          .          .
                .          .          .
  330           .        C531............
                .          .
                .          .
  337           .          .-------->   D531L
  333           .       D531R
                .          V
                .          V
  340           .      531532
                .          .
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352          .          .-------->   D532R
348          .     D532L
             .          .
359          .          .-------->  D532AL
355          .    D532AR
             .         V
             .         V
362          .    532580
             .          .
372          .          .          .<-------  D532AL
370          .          .     B532AL
             .          .          .
             .          .          .
377          .          .          .-------->   D578L
373          .          .      D578R
             .          .          V
             .          .          V
380          .          .     578573
             .          .          .
             .          .          .
392          .          .          .-------->   D573L
388          .          .      D573R
             .          .          V
             .          .          V
395          .          .     573580
             .          .          .
             .          .          .
403          .      C580............
             .         V
             .         V
406          .    580535
             .          .
             .          .
416          .          .          .<-------   D531L
414          .          .      B531L
             .          .          V
             .          .          V
417          .          .     531533
             .          .          .
             .          .          .
427          .          .          .          .<-------   D578L
425          .          .          .       B578L
             .          .          .          .
             .          .          .          .
428          .          .      C533............
             .          .          V
             .          .          V
431          .          .     533579
             .          .          .
             .          .          .
441          .          .          .          .<-------   D573L
439          .          .          .       B573L
             .          .          .          .
             .          .          .          .
442          .          .      C579............
             .          .          V
             .          .          V
445          .          .     579534
             .          .          .
             .          .          .
453          .          .          .        511J
             .          .          .          .
             .          .          .          .
466          .          .      C534............
             .          .          .
             .          .          .
473          .          .          .-------->   D534L
469          .          .      D534R
             .          .          V
             .          .          V
476          .          .     534535
             .          .          .
             .          .          .
484          .          .          .        511K
             .          .          .          .
             .          .          .          .
502          .      C535........................
             .          .
             .          .
509          .          .-------->   D535R
505          .     D535L
             .         V
             .         V
512          .    535515
             .          .
             .          .
520          .          .      511L
             .          .          .
             .          .          .
534          .      C515............
             .          .
             .          .
541          .          .-------->   D515L
537          .     D515R
             .         V
             .         V
544          .    515575
             .          .
             .          .
552          .          .      511M
             .          .          .
             .          .          .
565          .      C575............
             .         V
             .         V
568          .    575536
             .          .
             .          .
576          .          .      511Q
             .          .          .
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596                                511N
                                     .
616                C536.......................
                      V
                      V
619              536545
                      .
627                       511O
                          .
647                C545L............
                      .
652                          .<-------   D532R
650                       B532R
                             V
                             V
653                      532538
                             .
661                          .        510A
                             .           .
684                          .           .-------->   D537R
680                          .      D537L
                             .          V
                             .          V
687                          .     537538
                             .           .
695                          .           .        510B
                             .           .          .
712                       C538.......................
                             V
                             V
715                      538540
                             .
725                          .           .<-------   D537R
723                          .      B537R
                             .          V
                             .          V
726                          .     537577
                             .           .
734                          .           .        509D
                             .           .          .
755                          .           .          .-------->   D539R
751                          .           .       D539L
                             .           .          V
                             .           .          V
758                          .           .     539577
                             .           .          .
766                          .        C577............
                             .           V
                             .           V
769                          .     577540
                             .           .
777                          .           .        510C
                             .           .          .
797                       C540.......................
                             V
                             V
800                      540542
                             .
808                          .        510F
                             .           .
826                       C542............
                             V
                             V
829                      542543
                             .
839                          .           .<-------   D535R
837                          .      B535R
                             .           .
844                          .           .-------->   D574R
840                          .      D574L
                             .          V
                             .          V
847                          .     574582
                             .           .
857                          .           .          .<-------   D574R
855                          .           .       B574R
                             .           .          V
                             .           .          V
858                          .           .     574541
                             .           .          .
866                          .           .          .        510D
                             .           .          .          .
886                          .           .        C541............
                             .           .          V
                             .           .          V
889                          .           .     541582
                             .           .          .
897                          .        C582............
                             .           V
                             .           V
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 900                          582543
                                 .
 908                                 510E
                                     .
 926                   C543.........................
                          V
                          V
 929                 543545
                          .
 937                          510G
                                 .
 955                 C545R............
                          .
 958            C545............
                   V
                   V
 962          545546
                   .
 970                   511P
                          .
 988                          502A
                                 .
1008            C546........................
                   .
1011                   509A
                          V
                          V
1031                552553
                          .
1039                         509B
                                 .
1059                   C553............
                          .
1066                      .-------->   D553R
1062                 D553L
                          V
                          V
1069                553554
                          .
1077                         509C
                                 .
1091                   C554............
                          .
1098                      .-------->   D554R
1094                 D554L
                          V
                          V
1101                554555
                          .
1109                         509E
                                 .
1126                                     .<-------   D539R
1124                                 B539R
                                         V
                                         V
1127                                539555
                                         .
1135                   C555........................
                          V
                          V
1138                555557
                          .
1148                                .<-------   D553R
1146                         B553R
                                 V
                                 V
1149                         553556
                                 .
1159                                     .<-------   D554R
1157                                 B554R
                                         .
1160                         C556............
                                 V
                                 V
1163                         556558
                                 .
1171                                     509F
                                         .
1186                         C558............
                                 .
1193                                .-------->   D558R
1189                         D558L
                                 V
                                 V
1196                         558557
                                 .
1204                                     509G
                                         .
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1218                C557.......................
                      .
1225                  .-------> D557L
1221              D557R
                      V
                      V
1228              557565
                      .
1236                  .       509M
                      .         .
                      .         .
1254                C565............
                      V
                      V
1257              565566
                      .
1267                  .         .<-------   D557L
1265                  .      B557L
                      .         V
                      .         V
1268                  .      557559
                      .         .
1276                  .         .        509H
                      .         .          .
                      .         .          .
1296                  .       C559............
                      .         .
1303                  .         .-------> D559L
1299                  .      D559R
                      .         V
                      .         V
1306                  .      559560
                      .         .
1314                  .         .        509I
                      .         .          .
                      .         .          .
1334                  .       C560............
                      .         .
1341                  .         .-------> D560L
1337                  .      D560R
                      .         V
                      .         V
1344                  .      560566
                      .         .
1352                  .         .        509L
                      .         .          .
                      .         .          .
1372                C566.......................
                      V
                      V
1375              566567
                      .
1385                  .         .<-------   D559L
1383                  .      B559L
                      .         V
                      .         V
1386                  .      559561
                      .         .
1396                  .         .          .<-------   D560L
1394                  .         .      B560L
                      .         .         V
                      .         .         V
1397                  .         .     560561
                      .         .          .
1405                  .         .          .        509K
                      .         .          .          .
                      .         .          .          .
1425                  .       C561.......................
                      .         V
                      .         V
1428                  .      561562
                      .         .
1436                  .         .        509J
                      .         .          .
                      .         .          .
1454                  .       C562............
                      .         V
                      .         V
1457                  .      562567
                      .         .
1465                  .         .        509P
                      .         .          .
                      .         .          .
1485                C567.......................
                      V
                      V
1488              567568
                      .
1496                  .       509Q
                      .         .
                      .         .
1516                C568............
                      V
                      V
1519              568569
                      .
1527                  .       509R
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                .          .          .          .
                .          .          .          .
1545            .          .       C569...........
                .          .          V
                .          .          V
1548            .          .     569570
                .          .          .
                .          .          .
1556            .          .          .       509O
                .          .          .          .
1576            .          .          .          .       509N
                .          .          .          .          .
                .          .          .          .          .
1596            .          .          .       C564...........
                .          .          .          V
                .          .          .          V
1599            .          .          .     564570
                .          .          .          .
1607            .          .          .          .       509S
                .          .          .          .          .
                .          .          .          .          .
1625            .          .       C570......................
                .          .          .
                .          .          .
1628       CLEAR......................
                .
                .
1633            .          .<-------   D558R
1631            .      B558R
                .          V
                .          V
1634            .     558571
                .          .
                .          .
1642            .          .       505A
                .          .          .
                .          .          .
1657            .       C571...........
                .          V
                .          V
1660            .     571572
                .          .
                .          .
1668            .          .       505B
                .          .          .
                .          .          .
1688            .       C572...........
                .          .
                .          .
1691            .          .       500A
                .          .          V
                .          .          V
1705            .          .     501502
                .          .          .
                .          .          .
1713            .          .          .       500B
                .          .          .          .
                .          .          .          .
1729            .          .       C502...........
                .          .          .
                .          .          .
1736            .          .          .------->   D502L
1732            .          .      D502R
                .          .          V
                .          .          V
1739            .          .     502506
                .          .          .
                .          .          .
1749            .          .          .          .<-------   D534L
1747            .          .          .      B534L
                .          .          .          V
                .          .          .          V
1750            .          .          .     534506
                .          .          .          .
                .          .          .          .
1758            .          .       C506...........
                .          .          V
                .          .          V
1761            .          .     506507
                .          .          .
                .          .          .
1769            .          .          .       500H
                .          .          .          .
                .          .          .          .
1784            .          .       C507...........
                .          .          V
                .          .          V
1787            .          .     507508
                .          .          .
                .          .          .
1797            .          .          .          .<-------   D502L
1795            .          .          .      B502L
                .          .          .          V
                .          .          .          V
1798            .          .          .     502503
                .          .          .          .
                .          .          .          .
1806            .          .          .          .       500C
                .          .          .          .          .
                .          .          .          .          .
1820            .          .          .       C503...........
                .          .          .          V
                .          .          .          V
1827            .          .          .     503508
                .          .          .          .
                .          .          .          .
1835            .          .          .          .       500I
                .          .          .          .          .
                .          .          .          .          .
1850            .          .       C508......................
                .          .          .
```

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1857                    .-------> D508L
1853                D508R
                        V
                        V
1860               508517

1870                            .<-------  D515L
1868                        B515L
                                V
                                V
1871                       515517

1879                                   500L

1893                C517........................
                        V
                        V
1896               517518

1904                        500J
                                V
                                V
1917                       514518

1925                C518............
                        V
                        V
1928               518519

1936                        500M

1956                C519............

1959                        C504
                                V
                                V
1962                       504509

1970                                   500D

1985                       TEMP1............

1989                                   C509
                                          V
                                          V
1992                                  509510

2000                                             500E

2013                                                     C581
                                                            V
                                                            V
2016                                                   581510

2024                                  TEMP2........................

2028                                             C510

2035                                             .-------> D510L
2031                                          D510R
                                                 V
                                                 V
2038                                         510511

2048                                                      .<-------  D508L
2046                                                   B508L
                                                          V
                                                          V
2049                                                   508511

2057                                                                  500F

2073                                             C511........................
                                                     V
                                                     V
2076                                         511512

2084                                                     500K
                                                            V
                                                            V
2097                                                   513512

2105                                                                  500G

2125                                             C512........................

2128                                  C520............
                                          V
                                          V
```

```
2131          .         .         .         .     520576
              .         .         .         .        .
2139          .         .         .         .        .        5000
              .         .         .         .        .           V
              .         .         .         .        .           V
2159          .         .         .         .        .      521522
              .         .         .         .        .           .
2167          .         .         .         .        .           .        500P
              .         .         .         .        .           .          .
2185          .         .         .         .        .        C522...........
              .         .         .         .        .           .
2188          .         .         .         .      C576...........
              .         .         .         .        V
              .         .         .         .        V
2191          .         .         .         .     576523
              .         .         .         .        .
2199          .         .         .         .        .        500N
              .         .         .         .        .           .
2219          .         .         .         .      C523...........
              .         .         .         .        .
2222          .         .         .         .        .        501A
              .         .         .         .        .           .
2242          .         .         .         .        .           .        501B
              .         .         .         .        .           .          .
2260          .         .      CLEAR.......................................
              .         .         .
2263          .         .         .      502B
              .         .         .        .
2283          .         .         .        .      502C
              .         .         .        .        .
2303          .         .         .        .        .        503A
              .         .         .        .        .           V
              .         .         .        .        .           V
2323          .         .         .        .        .      549550
              .         .         .        .        .           .
2331          .         .         .        .        .           .        503C
              .         .         .        .        .           .          .
2351          .         .         .        .        .       C550L...........
              .         .         .        .        .           .
2354          .         .         .        .        .           .        503B
              .         .         .        .        .           .          .
2372          .         .         .        .        .        C550...........
              .         .         .        .        .           .
2375          .         .         .        .        .           .        504A
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
1*************************************
*                                   *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)*
*              MAY   1991           *
*            VERSION 4.0.1E         *
*                                   *
*  RUN DATE  08/07/95  TIME  10:36:40*
*                                   *
*************************************
```

```
*************************************
*                                   *
*   U.S. ARMY CORPS OF ENGINEERS    *
*   HYDROLOGIC ENGINEERING CENTER   *
*         609 SECOND STREET         *
*      DAVIS, CALIFORNIA 95616      *
*          (916) 551-1748           *
*                                   *
*************************************
```

```
                    RIO VERDE SOUTH FIS - Existing Condition Model        File:  L100-24.IH1
                    by  GVSCE for MKE:   MCFCD #93-07                  Original: 07-22-94     dtp
                        Project:  46                                    Revised: 10-17-94     trl
                        100-year 24-Hr Rainfall
                        Green & Ampt Rainfall Losses

                          This model does not include the effects of the existing levee
                            on the north boundary of subbasin 510E.

  10 IO          OUTPUT CONTROL VARIABLES
                       IPRNT          5  PRINT CONTROL
                       IPLOT          0  PLOT CONTROL
                       QSCAL         0.  HYDROGRAPH PLOT SCALE

     IT          HYDROGRAPH TIME DATA
                        NMIN          2  MINUTES IN COMPUTATION INTERVAL
                       IDATE      1    0  STARTING DATE
                       ITIME       0000  STARTING TIME
                          NQ       1500  NUMBER OF HYDROGRAPH ORDINATES
                      NDDATE      3    0  ENDING DATE
                      NDTIME       0158  ENDING TIME
                       ICENT         19  CENTURY MARK

                 COMPUTATION INTERVAL    0.03 HOURS
                      TOTAL TIME BASE   49.97 HOURS

          ENGLISH UNITS
               DRAINAGE AREA          SQUARE MILES
               PRECIPITATION DEPTH    INCHES
               LENGTH, ELEVATION      FEET
               FLOW                   CUBIC FEET PER SECOND
               STORAGE VOLUME         ACRE-FEET
               SURFACE AREA           ACRES
               TEMPERATURE            DEGREES FAHRENHEIT

  12 JD          INDEX STORM NO. 1
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```
                STRM        4.40  PRECIPITATION DEPTH
                TRDA        0.01  TRANSPOSITION DRAINAGE AREA

13 PI         PRECIPITATION PATTERN
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.03        0.03        0.03        0.03        0.03
                0.03        0.03        0.03        0.03        0.03        0.03        0.03        0.03        0.03        0.03
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00

23 JD         INDEX STORM NO. 2
                STRM        4.31  PRECIPITATION DEPTH
                TRDA        5.00  TRANSPOSITION DRAINAGE AREA

 0 PI         PRECIPITATION PATTERN
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
                0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00        0.00
```

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.03	0.03	0.03
0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

24 JD INDEX STORM NO. 3

STRM 4.18 PRECIPITATION DEPTH

TRDA 10.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.03	0.03	0.03
0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00

25 JD         INDEX STORM NO. 4
                STRM        3.89  PRECIPITATION DEPTH
                TRDA       50.00  TRANSPOSITION DRAINAGE AREA

 0 PI          PRECIPITATION PATTERN
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.03      0.03      0.03      0.03      0.03
                0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00

26 JD         INDEX STORM NO. 5
                STRM        3.79  PRECIPITATION DEPTH
                TRDA       80.00  TRANSPOSITION DRAINAGE AREA

 0 PI          PRECIPITATION PATTERN
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
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                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.03      0.03      0.03      0.03      0.03
                0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03      0.03
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00

*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

            **************
            *            *
 28 KK      *    WP504   *
            *            *
            **************

 29 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           5  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                      IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                       IOUT          21  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2        1500  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT       0.033  TIME INTERVAL IN HOURS


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

            **************
            *            *
 65 KK      *    WP581   *
            *            *
            **************

 66 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           5  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                      IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                       IOUT          21  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2        1500  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT       0.033  TIME INTERVAL IN HOURS

        WARNING EXCESS AT PONDING LESS THAN ZERO FOR PERIOD. EXCESS SET TO ZERO
        WARNING EXCESS AT PONDING LESS THAN ZERO FOR PERIOD. EXCESS SET TO ZERO

1961 BI         READ STATION    WP504 HYDROGRAPH FROM UNIT 21


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

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            *            *
1985 KK     *    TEMP1   *
            *            *
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1986 KO         OUTPUT CONTROL VARIABLES
                      IPRNT           5  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
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                    IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                     IOUT         21  SAVE HYDROGRAPH ON THIS UNIT
                    ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                    ISAV2       1500  LAST ORDINATE PUNCHED OR SAVED
                   TIMINT      0.033  TIME INTERVAL IN HOURS

1991 BI          READ STATION    TEMP1 HYDROGRAPH FROM UNIT 21

2015 BI          READ STATION    WP581 HYDROGRAPH FROM UNIT 21

*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

            **************
            *            *
2024 KK     *    TEMP2   *
            *            *
            **************

2025 KO          OUTPUT CONTROL VARIABLES
                    IPRNT          5  PRINT CONTROL
                    IPLOT          0  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE
                    IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                     IOUT         21  SAVE HYDROGRAPH ON THIS UNIT
                    ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                    ISAV2       1500  LAST ORDINATE PUNCHED OR SAVED
                   TIMINT      0.033  TIME INTERVAL IN HOURS

2030 BI          READ STATION    TEMP2 HYDROGRAPH FROM UNIT 21
        WARNING EXCESS AT PONDING LESS THAN ZERO FOR PERIOD. EXCESS SET TO ZERO
        WARNING EXCESS AT PONDING LESS THAN ZERO FOR PERIOD. EXCESS SET TO ZERO
        WARNING EXCESS AT PONDING LESS THAN ZERO FOR PERIOD. EXCESS SET TO ZERO
1
                                          RUNOFF SUMMARY
                                     FLOW IN CUBIC FEET PER SECOND
                                  TIME IN HOURS,  AREA IN SQUARE MILES
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	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	WP504	193.	12.60	33.	8.	4.	0.26		
+	HYDROGRAPH AT	WP581	267.	14.50	119.	30.	14.	3.92		
+	2 COMBINED AT	CLEAR	278.	12.93	153.	38.	18.	4.18		
+	HYDROGRAPH AT	511A	704.	12.17	92.	23.	11.	0.65		
+	ROUTED TO	524526	638.	12.70	92.	23.	11.	0.65		
+	HYDROGRAPH AT	511B	792.	12.50	178.	46.	22.	1.10		
+	ROUTED TO	525526	788.	12.60	178.	46.	22.	1.10		
+	HYDROGRAPH AT	511D	140.	12.20	20.	5.	2.	0.13		
+	3 COMBINED AT	C526	1472.	12.63	288.	74.	35.	1.88		
+	ROUTED TO	526527	1432.	12.87	288.	74.	35.	1.88		
+	HYDROGRAPH AT	511E	430.	12.43	86.	22.	10.	0.57		
+	HYDROGRAPH AT	511F	225.	12.07	23.	6.	3.	0.15		
+	3 COMBINED AT	C527	1709.	12.83	395.	101.	48.	2.60		
+	ROUTED TO	527528	1686.	12.93	393.	100.	48.	2.60		
+	HYDROGRAPH AT	511C	747.	12.57	172.	43.	21.	1.20		
+	2 COMBINED AT	C528	2257.	12.83	563.	143.	69.	3.80		
+	ROUTED TO	528529	2188.	13.10	555.	139.	67.	3.80		
+	HYDROGRAPH AT	511H	312.	12.17	38.	10.	5.	0.31		
+	2 COMBINED AT	C529	2211.	13.10	592.	149.	71.	4.11		
+	HYDROGRAPH AT	511G	768.	12.27	121.	31.	15.	0.87		
+	2 COMBINED AT	C530	2387.	13.07	711.	179.	86.	4.97		
+	ROUTED TO	530531	2337.	13.33	704.	177.	85.	4.97		
	HYDROGRAPH AT									

+		511I	236.	12.07	23.	6.	3.	0.21
+	2 COMBINED AT	C531	2337.	13.33	726.	182.	88.	5.18
+	DIVERSION TO	D531L	551.	13.33	171.	43.	21.	5.18
+	HYDROGRAPH AT	D531R	1779.	13.33	552.	139.	67.	5.18
+	ROUTED TO	531532	1769.	13.40	550.	138.	66.	5.18
+	DIVERSION TO	D532R	921.	13.40	285.	72.	34.	5.18
+	HYDROGRAPH AT	D532L	848.	13.40	265.	66.	32.	5.18
+	DIVERSION TO	D532AL	494.	13.40	143.	36.	17.	5.18
+	HYDROGRAPH AT	D532AR	353.	13.40	123.	31.	15.	5.18
+	ROUTED TO	532580	350.	13.57	122.	31.	15.	5.18
+	HYDROGRAPH AT	B532AL	494.	13.40	143.	36.	17.	5.18
+	DIVERSION TO	D578L	247.	13.40	71.	18.	9.	5.18
+	HYDROGRAPH AT	D578R	247.	13.40	71.	18.	9.	5.18
+	ROUTED TO	578573	244.	13.47	71.	18.	8.	5.18
+	DIVERSION TO	D573L	57.	13.47	11.	3.	1.	5.18
+	HYDROGRAPH AT	D573R	188.	13.47	60.	15.	7.	5.18
+	ROUTED TO	573580	186.	13.53	59.	15.	7.	5.18
+	2 COMBINED AT	C580	536.	13.53	181.	46.	22.	5.18
+	ROUTED TO	580535	526.	13.93	180.	45.	22.	5.18
+	HYDROGRAPH AT	B531L	551.	13.33	171.	43.	21.	5.18
+	ROUTED TO	531533	544.	13.43	169.	42.	20.	5.18
+	HYDROGRAPH AT	B578L	247.	13.40	71.	18.	9.	5.18
+	2 COMBINED AT	C533	791.	13.40	240.	60.	29.	5.18
+	ROUTED TO	533579	788.	13.47	239.	60.	29.	5.18
+	HYDROGRAPH AT	B573L	57.	13.47	11.	3.	1.	5.18
+	2 COMBINED AT	C579	845.	13.47	249.	63.	30.	5.18
+	ROUTED TO	579534	839.	13.53	248.	62.	30.	5.18
+	HYDROGRAPH AT	511J	136.	12.07	13.	3.	2.	0.12
+	2 COMBINED AT	C534	839.	13.53	260.	65.	31.	5.30
+	DIVERSION TO	D534L	251.	13.53	78.	20.	9.	5.30
+	HYDROGRAPH AT	D534R	586.	13.53	181.	46.	22.	5.30
+	ROUTED TO	534535	571.	13.80	178.	45.	22.	5.30
+	HYDROGRAPH AT	511K	788.	12.23	119.	30.	14.	0.79
+	3 COMBINED AT	C535	1107.	13.87	466.	118.	57.	6.09
+	DIVERSION TO	D535R	941.	13.87	396.	101.	48.	6.09
+	HYDROGRAPH AT	D535L	166.	13.87	70.	18.	9.	6.09
+	ROUTED TO	535515	164.	13.97	69.	17.	8.	6.09
+	HYDROGRAPH AT	511L	221.	12.10	24.	6.	3.	0.19

+	2 COMBINED AT	C515	278.	12.20	91.	23.	11.	6.28
+	DIVERSION TO	D515L	223.	12.20	72.	18.	9.	6.28
+	HYDROGRAPH AT	D515R	61.	12.30	19.	5.	2.	6.28
+	ROUTED TO	515575	57.	12.37	19.	5.	2.	6.28
+	HYDROGRAPH AT	511M	116.	12.07	11.	3.	1.	0.08
+	2 COMBINED AT	C575	157.	12.10	29.	7.	4.	6.36
+	ROUTED TO	575536	148.	12.27	29.	7.	4.	6.36
+	HYDROGRAPH AT	511Q	106.	12.13	19.	5.	3.	0.09
+	HYDROGRAPH AT	511N	85.	12.10	14.	4.	2.	0.07
+	3 COMBINED AT	C536	319.	12.20	60.	16.	8.	6.52
+	ROUTED TO	536545	301.	12.43	59.	15.	7.	6.52
+	HYDROGRAPH AT	511O	49.	12.20	7.	2.	1.	0.05
+	2 COMBINED AT	C545L	331.	12.43	65.	17.	8.	6.56
+	HYDROGRAPH AT	B532R	921.	13.40	285.	72.	34.	5.18
+	ROUTED TO	532538	901.	13.70	283.	71.	34.	5.18
+	HYDROGRAPH AT	510A	806.	12.30	132.	33.	16.	0.91
+	DIVERSION TO	D537R	631.	12.30	114.	29.	14.	0.91
+	HYDROGRAPH AT	D537L	175.	12.30	18.	4.	2.	0.91
+	ROUTED TO	537538	165.	12.57	18.	4.	2.	0.91
+	HYDROGRAPH AT	510B	374.	12.23	57.	14.	7.	0.36
+	3 COMBINED AT	C538	930.	13.70	354.	90.	43.	5.18
+	ROUTED TO	538540	900.	14.30	349.	89.	43.	5.18
+	HYDROGRAPH AT	B537R	631.	12.30	114.	29.	14.	0.91
+	ROUTED TO	537577	619.	12.43	113.	28.	14.	0.91
+	HYDROGRAPH AT	509D	324.	12.23	47.	12.	6.	0.34
+	DIVERSION TO	D539R	113.	12.23	17.	4.	2.	0.34
+	HYDROGRAPH AT	D539L	211.	12.23	30.	8.	4.	0.34
+	ROUTED TO	539577	208.	12.30	30.	7.	4.	0.34
+	2 COMBINED AT	C577	812.	12.40	143.	36.	17.	1.25
+	ROUTED TO	577540	772.	12.80	142.	35.	17.	1.25
+	HYDROGRAPH AT	510C	675.	12.40	127.	32.	15.	0.85
+	3 COMBINED AT	C540	1415.	12.87	591.	152.	73.	7.28
+	ROUTED TO	540542	1407.	12.93	591.	152.	73.	7.28
+	HYDROGRAPH AT	510F	134.	12.17	19.	5.	2.	0.12
+	2 COMBINED AT	C542	1430.	12.93	607.	156.	75.	7.40
+	ROUTED TO	542543	1424.	12.97	607.	156.	75.	7.40
+	HYDROGRAPH AT	B535R	941.	13.87	396.	101.	48.	6.09
+	DIVERSION TO	D574R	223.	13.87	83.	21.	10.	6.09

+	HYDROGRAPH AT	D574L	717.	13.87	313.	80.	38.	6.09
+	ROUTED TO	574582	711.	13.93	310.	79.	38.	6.09
+	HYDROGRAPH AT	B574R	223.	13.87	83.	21.	10.	6.09
+	ROUTED TO	574541	220.	13.97	81.	20.	10.	6.09
+	HYDROGRAPH AT	510D	75.	12.17	9.	2.	1.	0.06
+	2 COMBINED AT	C541	220.	13.97	90.	23.	11.	6.15
+	ROUTED TO	541582	218.	14.07	90.	22.	11.	6.15
+	2 COMBINED AT	C582	925.	14.00	399.	101.	49.	6.15
+	ROUTED TO	582543	917.	14.20	398.	101.	49.	6.15
+	HYDROGRAPH AT	510E	195.	12.23	35.	9.	4.	0.18
+	3 COMBINED AT	C543	1891.	12.90	982.	253.	122.	13.73
+	ROUTED TO	543545	1876.	12.97	976.	251.	121.	13.73
+	HYDROGRAPH AT	510G	208.	12.17	31.	9.	4.	0.18
+	2 COMBINED AT	C545R	1914.	12.97	1000.	259.	124.	13.91
+	2 COMBINED AT	C545	2010.	12.93	1031.	267.	128.	20.47
+	ROUTED TO	545546	1996.	13.03	1029.	267.	128.	20.47
+	HYDROGRAPH AT	511P	353.	12.23	63.	16.	8.	0.31
+	HYDROGRAPH AT	502A	69.	12.10	8.	2.	1.	0.04
+	3 COMBINED AT	C546	2104.	13.00	1083.	283.	136.	20.82
+	HYDROGRAPH AT	509A	498.	12.37	93.	24.	12.	0.57
+	ROUTED TO	552553	458.	13.03	92.	23.	11.	0.57
+	HYDROGRAPH AT	509B	479.	12.37	84.	21.	10.	0.64
+	2 COMBINED AT	C553	649.	12.97	176.	44.	21.	1.21
+	DIVERSION TO	D553R	305.	12.97	86.	22.	10.	1.21
+	HYDROGRAPH AT	D553L	344.	12.97	90.	23.	11.	1.21
+	ROUTED TO	553554	339.	13.13	90.	23.	11.	1.21
+	HYDROGRAPH AT	509C	193.	12.10	22.	5.	3.	0.15
+	2 COMBINED AT	C554	347.	13.10	111.	28.	13.	1.36
+	DIVERSION TO	D554R	227.	13.10	75.	19.	9.	1.36
+	HYDROGRAPH AT	D554L	120.	13.10	36.	9.	4.	1.36
+	ROUTED TO	554555	119.	13.17	36.	9.	4.	1.36
+	HYDROGRAPH AT	509E	241.	12.13	30.	8.	4.	0.19
+	HYDROGRAPH AT	B539R	113.	12.23	17.	4.	2.	0.34
+	ROUTED TO	539555	108.	12.53	17.	4.	2.	0.34
+	3 COMBINED AT	C555	387.	12.30	83.	21.	10.	1.88
+	ROUTED TO	555557	371.	12.43	83.	21.	10.	1.88
+	HYDROGRAPH AT	B553R	305.	12.97	86.	22.	10.	1.21
+	ROUTED TO	553556	301.	13.10	85.	22.	10.	1.21

+	HYDROGRAPH AT						
		B554R	227.	13.10	75.	19.	9.	1.36
+	2 COMBINED AT						
		C556	528.	13.10	160.	40.	19.	1.36
+	ROUTED TO						
		556558	521.	13.30	160.	40.	19.	1.36
+	HYDROGRAPH AT						
		509F	257.	12.13	30.	8.	4.	0.20
+	2 COMBINED AT						
		C558	531.	13.27	189.	48.	23.	1.56
+	DIVERSION TO						
		D558R	223.	13.27	79.	20.	10.	1.56
+	HYDROGRAPH AT						
		D558L	308.	13.27	110.	28.	13.	1.56
+	ROUTED TO						
		558557	307.	13.30	110.	28.	13.	1.56
+	HYDROGRAPH AT						
		509G	134.	12.10	15.	4.	2.	0.09
+	3 COMBINED AT						
		C557	722.	12.40	207.	52.	25.	2.18
+	DIVERSION TO						
		D557L	131.	12.40	23.	6.	3.	2.18
+	HYDROGRAPH AT						
		D557R	591.	12.40	185.	46.	22.	2.18
+	ROUTED TO						
		557565	583.	12.63	184.	46.	22.	2.18
+	HYDROGRAPH AT						
		509M	101.	12.20	15.	4.	2.	0.10
+	2 COMBINED AT						
		C565	635.	12.57	198.	50.	24.	2.28
+	ROUTED TO						
		565566	634.	12.63	198.	50.	24.	2.28
+	HYDROGRAPH AT						
		B557L	131.	12.40	23.	6.	3.	2.18
+	ROUTED TO						
		557559	129.	12.53	22.	6.	3.	2.18
+	HYDROGRAPH AT						
		509H	72.	12.23	11.	3.	1.	0.07
+	2 COMBINED AT						
		C559	178.	12.47	33.	8.	4.	2.25
+	DIVERSION TO						
		D559L	70.	12.47	14.	3.	2.	2.25
+	HYDROGRAPH AT						
		D559R	108.	12.47	20.	5.	2.	2.25
+	ROUTED TO						
		559560	107.	12.57	20.	5.	2.	2.25
+	HYDROGRAPH AT						
		509I	36.	12.17	4.	1.	0.	0.03
+	2 COMBINED AT						
		C560	121.	12.50	24.	6.	3.	2.28
+	DIVERSION TO						
		D560L	39.	12.50	9.	2.	1.	2.28
+	HYDROGRAPH AT						
		D560R	82.	12.50	15.	4.	2.	2.28
+	ROUTED TO						
		560566	80.	12.67	15.	4.	2.	2.28
+	HYDROGRAPH AT						
		509L	125.	12.07	16.	4.	2.	0.08
+	3 COMBINED AT						
		C566	744.	12.60	228.	58.	28.	2.36
+	ROUTED TO						
		566567	740.	12.67	227.	58.	28.	2.36
+	HYDROGRAPH AT						
		B559L	70.	12.47	14.	3.	2.	2.25
+	ROUTED TO						
		559561	69.	12.60	14.	3.	2.	2.25
+	HYDROGRAPH AT						
		B560L	39.	12.50	9.	2.	1.	2.28
+	ROUTED TO						
		560561	39.	12.57	9.	2.	1.	2.28
+	HYDROGRAPH AT						
		509K	36.	12.17	4.	1.	1.	0.03
+	3 COMBINED AT						
		C561	122.	12.53	27.	7.	3.	2.31
+	ROUTED TO						
		561562	121.	12.60	27.	7.	3.	2.31

+	HYDROGRAPH AT	509J	106.	12.20	17.	4.	2.	0.10
+	2 COMBINED AT	C562	190.	12.37	43.	11.	5.	2.41
+	ROUTED TO	562567	188.	12.50	43.	11.	5.	2.41
+	HYDROGRAPH AT	509P	193.	12.03	25.	7.	4.	0.11
+	3 COMBINED AT	C567	955.	12.63	293.	76.	36.	4.88
+	ROUTED TO	567568	948.	12.70	292.	76.	36.	4.88
+	HYDROGRAPH AT	509Q	148.	12.10	22.	6.	3.	0.11
+	2 COMBINED AT	C568	998.	12.67	314.	82.	39.	4.99
+	ROUTED TO	568569	987.	12.80	313.	81.	39.	4.99
+	HYDROGRAPH AT	509R	147.	12.07	16.	4.	2.	0.10
+	2 COMBINED AT	C569	1001.	12.80	329.	85.	41.	5.09
+	ROUTED TO	569570	997.	12.87	328.	85.	41.	5.09
+	HYDROGRAPH AT	509O	59.	12.03	9.	3.	1.	0.04
+	HYDROGRAPH AT	509N	151.	12.10	24.	7.	3.	0.11
+	2 COMBINED AT	C564	209.	12.07	33.	10.	5.	0.15
+	ROUTED TO	564570	195.	12.27	33.	10.	5.	0.15
+	HYDROGRAPH AT	509S	273.	12.13	36.	10.	5.	0.19
+	3 COMBINED AT	C570	1134.	12.80	394.	104.	50.	5.43
+	3 COMBINED AT	CLEAR	3249.	12.93	1553.	406.	195.	30.43
+	HYDROGRAPH AT	B558R	223.	13.27	79.	20.	10.	1.56
+	ROUTED TO	558571	219.	13.50	78.	20.	9.	1.56
+	HYDROGRAPH AT	505A	237.	12.10	27.	7.	3.	0.18
+	2 COMBINED AT	C571	302.	12.23	105.	26.	13.	2.13
+	ROUTED TO	571572	294.	12.40	104.	26.	13.	2.13
+	HYDROGRAPH AT	505B	228.	12.07	31.	9.	4.	0.14
+	2 COMBINED AT	C572	422.	12.27	134.	35.	17.	2.28
+	HYDROGRAPH AT	500A	280.	12.10	29.	7.	3.	0.21
+	ROUTED TO	501502	240.	12.57	29.	7.	3.	0.21
+	HYDROGRAPH AT	500B	227.	12.17	28.	7.	3.	0.20
+	2 COMBINED AT	C502	406.	12.23	57.	14.	7.	0.42
+	DIVERSION TO	D502L	239.	12.23	28.	7.	3.	0.42
+	HYDROGRAPH AT	D502R	166.	12.23	28.	7.	3.	0.42
+	ROUTED TO	502506	164.	12.43	28.	7.	3.	0.42
+	HYDROGRAPH AT	B534L	251.	13.53	78.	20.	9.	5.30
+	ROUTED TO	534506	250.	13.57	77.	19.	9.	5.30
+	2 COMBINED AT	C506	277.	13.50	104.	26.	13.	5.72
+	ROUTED TO	506507	275.	13.53	104.	26.	13.	5.72
+	HYDROGRAPH AT	500H	226.	12.13	25.	6.	3.	0.21

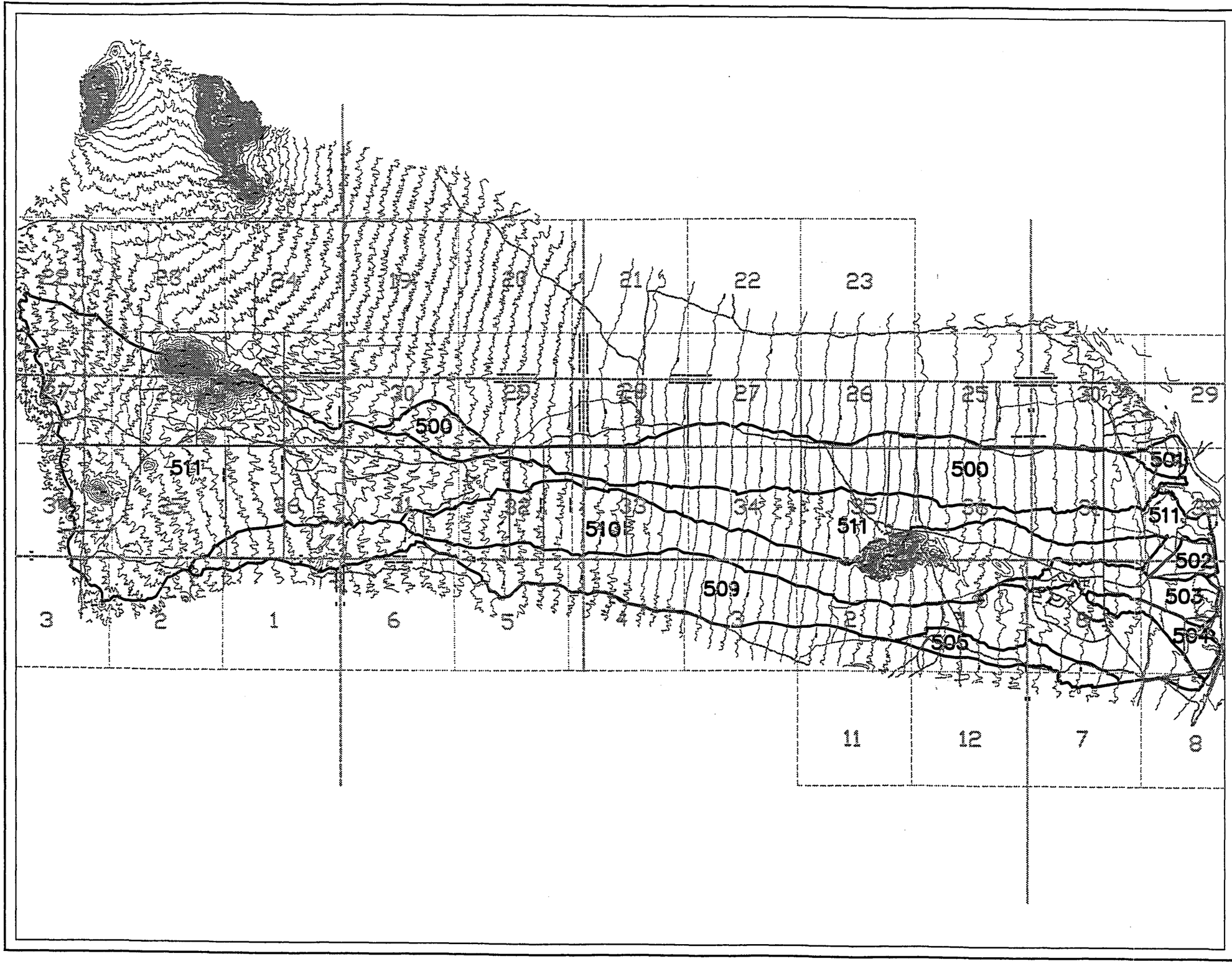
+	2 COMBINED AT	C507	346.	12.27	128.	32.	15.	5.93
+	ROUTED TO	507508	324.	12.50	127.	32.	15.	5.93
+	HYDROGRAPH AT	B502L	239.	12.23	28.	7.	3.	0.42
+	ROUTED TO	502503	233.	12.40	28.	7.	3.	0.42
+	HYDROGRAPH AT	500C	160.	12.07	16.	4.	2.	0.12
+	2 COMBINED AT	C503	297.	12.30	44.	11.	5.	0.54
+	ROUTED TO	503508	271.	12.83	43.	11.	5.	0.54
+	HYDROGRAPH AT	500I	430.	12.13	49.	12.	6.	0.41
+	3 COMBINED AT	C508	682.	12.27	214.	54.	26.	6.88
+	DIVERSION TO	D508L	380.	12.27	100.	25.	12.	6.88
+	HYDROGRAPH AT	D508R	303.	12.27	114.	29.	14.	6.88
+	ROUTED TO	508517	291.	12.70	112.	28.	14.	6.88
+	HYDROGRAPH AT	B515L	223.	12.20	72.	18.	9.	6.28
+	ROUTED TO	515517	204.	12.40	70.	18.	9.	6.28
+	HYDROGRAPH AT	500L	190.	12.10	20.	5.	2.	0.16
+	3 COMBINED AT	C517	517.	12.40	198.	50.	24.	7.60
+	ROUTED TO	517518	511.	12.43	197.	50.	24.	7.60
+	HYDROGRAPH AT	500J	124.	12.03	12.	3.	1.	0.09
+	ROUTED TO	514518	121.	12.10	11.	3.	1.	0.09
+	2 COMBINED AT	C518	550.	12.37	208.	53.	25.	7.69
+	ROUTED TO	518519	542.	12.57	206.	52.	25.	7.69
+	HYDROGRAPH AT	500M	142.	12.10	22.	6.	3.	0.12
+	2 COMBINED AT	C519	606.	12.50	225.	58.	28.	7.81
+	HYDROGRAPH AT	C504	193.	12.60	33.	8.	4.	0.26
+	ROUTED TO	504509	181.	13.03	32.	8.	4.	0.26
+	HYDROGRAPH AT	500D	250.	12.13	29.	7.	3.	0.23
+	2 COMBINED AT	TEMP1	249.	12.13	60.	15.	7.	0.49
+	HYDROGRAPH AT	C509	249.	12.13	60.	15.	7.	0.49
+	ROUTED TO	509510	236.	12.27	60.	15.	7.	0.49
+	HYDROGRAPH AT	500E	137.	12.07	13.	3.	2.	0.11
+	HYDROGRAPH AT	C581	267.	14.50	119.	30.	14.	3.92
+	ROUTED TO	581510	265.	14.63	118.	30.	14.	3.92
+	3 COMBINED AT	TEMP2	365.	13.23	191.	48.	23.	0.49
+	HYDROGRAPH AT	C510	365.	13.23	191.	48.	23.	0.49
+	DIVERSION TO	D510L	148.	13.23	76.	19.	9.	0.49
+	HYDROGRAPH AT	D510R	217.	13.23	114.	29.	14.	0.49
+	ROUTED TO	510511	215.	13.30	114.	29.	14.	0.49
+	HYDROGRAPH AT	B508L	380.	12.27	100.	25.	12.	6.88

+	ROUTED TO	508511	357.	12.67	98.	25.	12.	6.88
+	HYDROGRAPH AT	500F	442.	12.17	54.	13.	6.	0.44
+	3 COMBINED AT	C511	670.	12.33	261.	65.	31.	7.49
+	ROUTED TO	511512	647.	12.87	258.	65.	31.	7.49
+	HYDROGRAPH AT	500K	144.	12.07	16.	4.	2.	0.10
+	ROUTED TO	513512	130.	12.33	15.	4.	2.	0.10
+	HYDROGRAPH AT	500G	228.	12.13	37.	11.	5.	0.20
+	3 COMBINED AT	C512	754.	12.77	304.	78.	38.	7.79
+	2 COMBINED AT	C520	1007.	13.03	492.	126.	60.	8.28
+	ROUTED TO	520576	1004.	13.07	491.	125.	60.	8.28
+	HYDROGRAPH AT	500O	120.	12.13	21.	6.	3.	0.10
+	ROUTED TO	521522	114.	12.37	21.	6.	3.	0.10
+	HYDROGRAPH AT	500P	125.	12.10	16.	4.	2.	0.08
+	2 COMBINED AT	C522	209.	12.20	37.	10.	5.	0.18
+	2 COMBINED AT	C576	1063.	13.03	526.	135.	65.	8.47
+	ROUTED TO	576523	1061.	13.07	525.	134.	65.	8.47
+	HYDROGRAPH AT	500N	138.	12.20	17.	4.	2.	0.11
+	2 COMBINED AT	C523	1108.	12.37	540.	138.	66.	8.58
+	HYDROGRAPH AT	501A	63.	12.03	6.	2.	1.	0.04
+	HYDROGRAPH AT	501B	89.	12.10	10.	3.	1.	0.07
+	5 COMBINED AT	CLEAR	1772.	12.40	809.	208.	100.	17.00
+	HYDROGRAPH AT	502B	86.	12.13	11.	3.	1.	0.05
+	HYDROGRAPH AT	502C	63.	12.17	10.	2.	1.	0.05
+	HYDROGRAPH AT	503A	292.	12.10	49.	14.	7.	0.22
+	ROUTED TO	549550	283.	12.23	49.	14.	7.	0.22
+	HYDROGRAPH AT	503C	176.	12.20	23.	6.	3.	0.12
+	2 COMBINED AT	C550L	456.	12.20	72.	19.	9.	0.34
+	HYDROGRAPH AT	503B	115.	12.20	23.	6.	3.	0.11
+	2 COMBINED AT	C550	570.	12.20	95.	25.	12.	0.45
+	HYDROGRAPH AT	504A	290.	12.20	47.	12.	6.	0.24

*** NORMAL END OF HEC-1 ***

APPENDIX H

Exhibits A-E (reduced scale)



FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOOD DELINEATION STUDY OF

RIO VERDE SOUTH

F.C.D. CONTRACT NO. 93-07

NOTES

LEGEND

Basin Identifier	501
Drainage Basin Boundary	
Section Line	
Township and Range Line	
Basin Identifier	29

2000 0' 2000 4000

SCALE: 1"= 2000'

HYDROLOGY EXHIBIT "A"

DRAINAGE BASIN MAP

McLAUGHLIN KMETTY ENGINEERS, LTD.

	BY	DATE
DESIGN	F.C.D.M.C.	1993
DESIGN CHK.	TRL	6/94
PLANS	BKE	7/94
PLANS CHK.	TRL	7/94

SUBMITTED BY: DATE:

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 1 OF 1

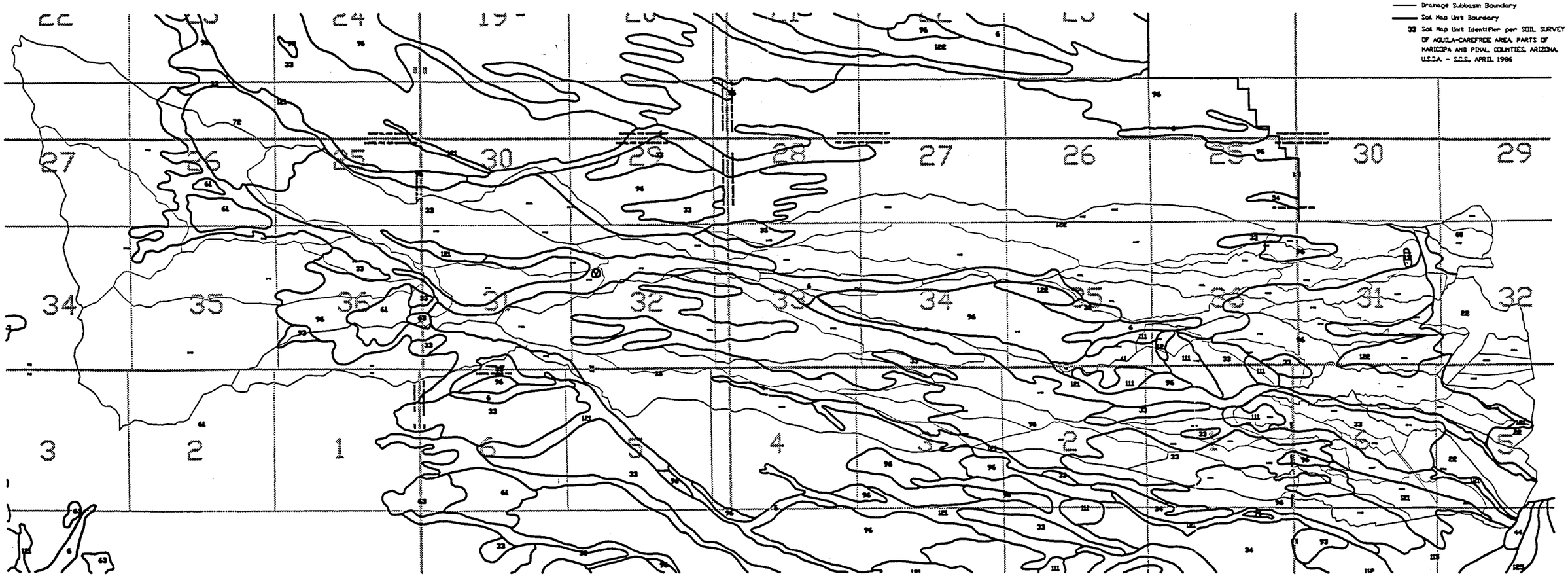
Dwg. Name: \P\RIOVERDE\ACAD\VEW-RIO.dwg

Date: REV. DEC. 7, 1994 09:00am

FLOOD CONTROL DISTRICT
OF MARICOPA COUNTY
FLOOD DELINEATION STUDY OF
RIO VERDE SOUTH
F.C.D. CONTRACT NO. 93-07
NOTES

LEGEND

- 5008 Subbasin Identifier
- Drainage Basin Boundary
- Drainage Subbasin Boundary
- Soil Map Unit Boundary
- 33 Soil Map Unit Identifier per SOIL SURVEY OF AGUILA-CAREFREE AREA, PARTS OF MARICOPA AND PINAL COUNTIES, ARIZONA, U.S.D.A. - S.C.S., APRIL 1986



N

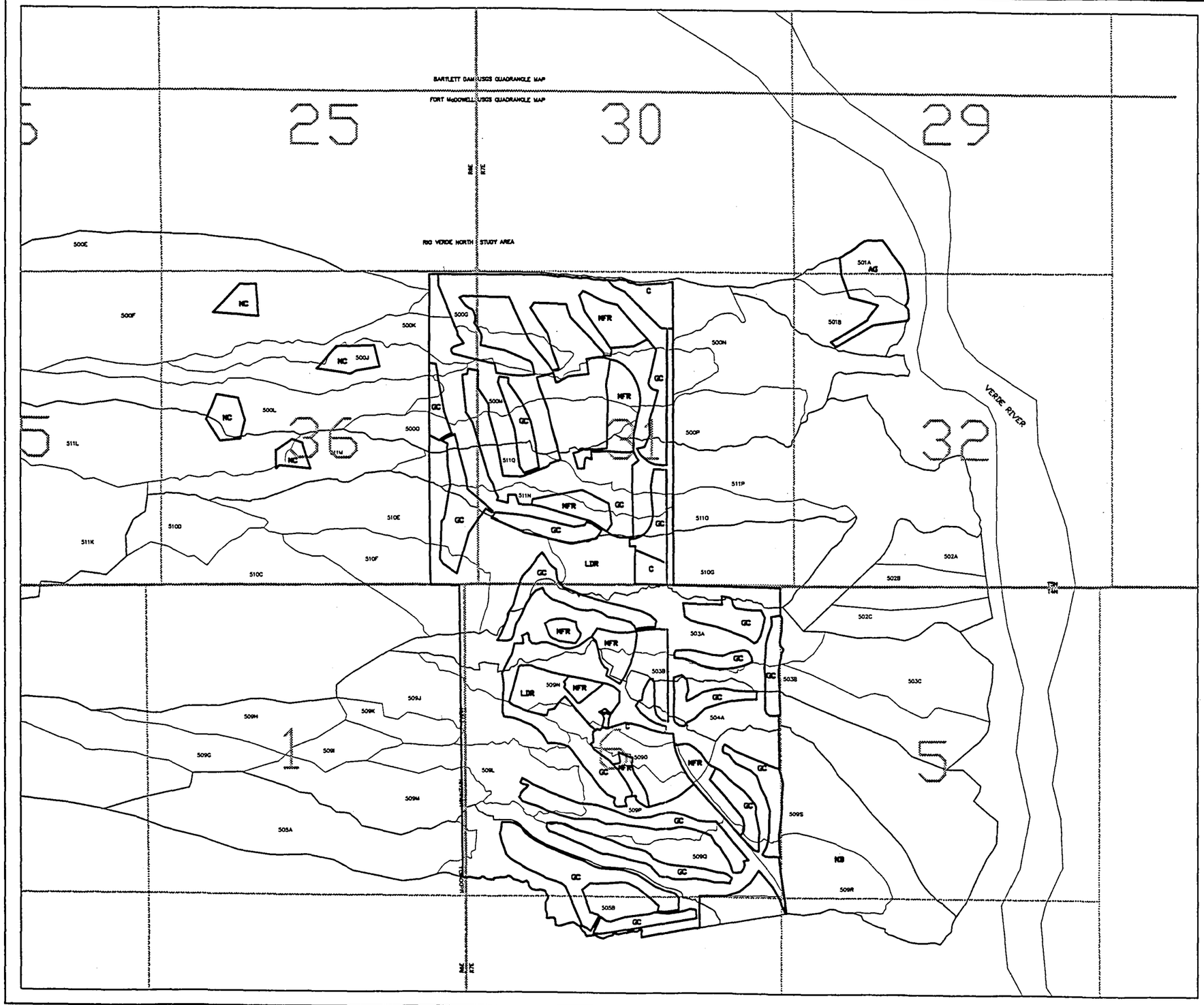
1000 0' 1000 2000
SCALE: 1" = 1000'

HYDROLOGY EXHIBIT "B"
DRAINAGE SUB-BASIN SOILS MAP

McLAUGHLIN KMETTY ENGINEERS, LTD.

DESIGNED	F.C.D.M.C.	MAR 1993	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY	
DESIGN CHK.	WL	6/94	RECOMMENDED FOR	
PLANS	BHE	7/94	APPROVED FOR	DATE
PLANS CHK.	WL	7/94		DATE
SUBMITTED BY:		DATE	DIST. ENGINEER AND DIRECTOR, FCDMC	
			SHEET 1 OF 1	

Dwg. Name: V:\ROUTE\VERDE\Verde01.dwg (1000)
Date: 9/8/1994 8:28am



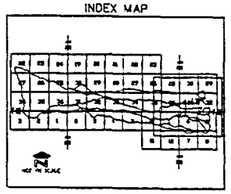
FLOOD CONTROL DISTRICT
OF MARICOPA COUNTY
FLOOD DELINEATION STUDY OF
RIO VERDE SOUTH
F.C.D. CONTRACT NO. 93-07

NOTES

LEGEND

Subbasin Identifier	500B
Drainage Basin Boundary	
Drainage Subbasin Boundary	
Land-Use Boundary	
AG	Agricultural
C	Commercial
NC	Non-Contributing
ND	Natural Desert
GC	Golf Course
LDR	Low-Density Residential
MFR	Multi-Family Residential

INDEX MAP



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SCALE: 1" = 500'

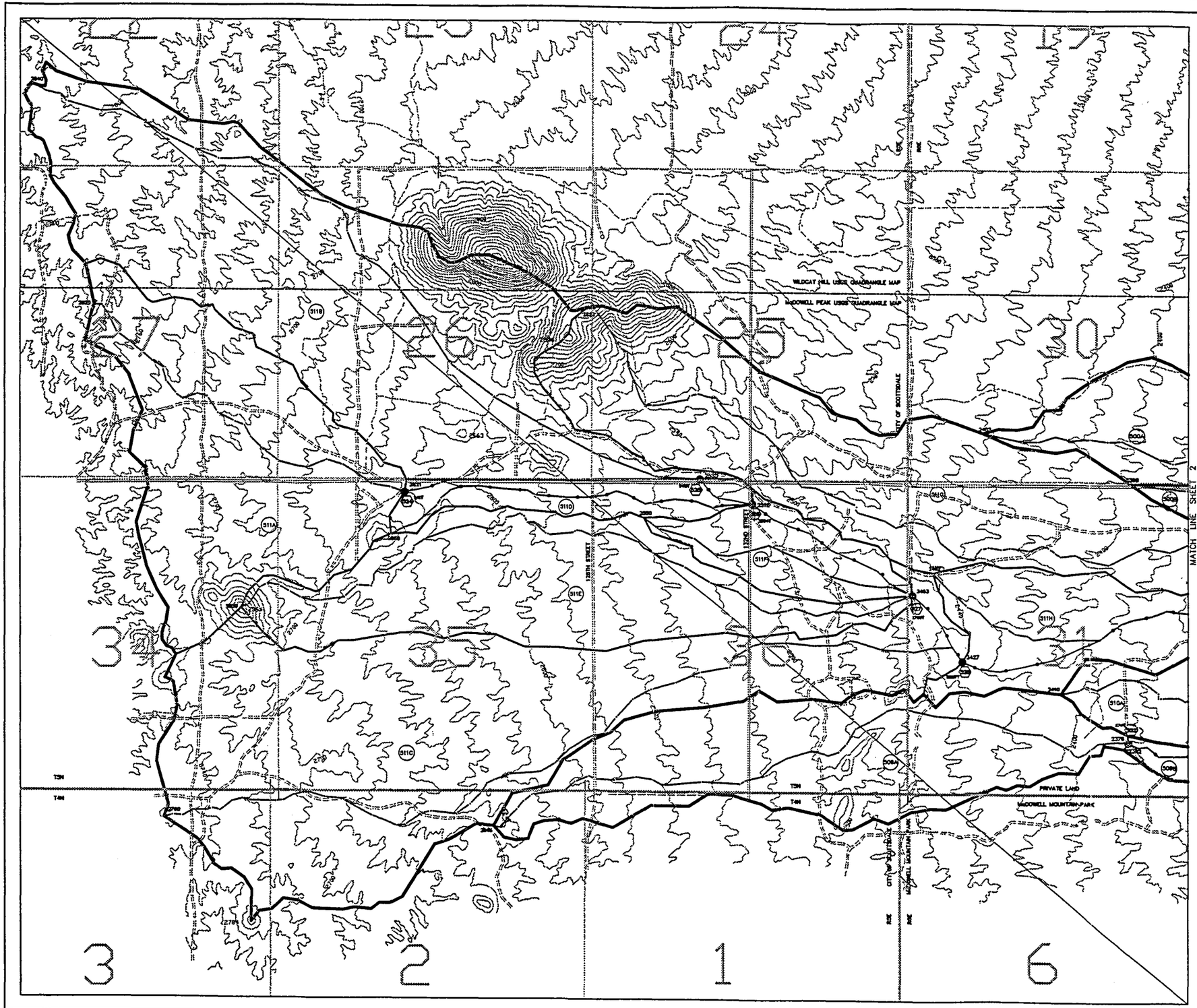
HYDROLOGY EXHIBIT "C"
LAND USE MAP

McLAUGHLIN KMETTY ENGINEERS, LTD.

DESIGN	P.C.D.A.C.	MAY 1993	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	WL	6/94	DESIGNED BY DATE
PLANS	GMC	7/94	APPROVED BY DATE
PLANS CHK.	WL	7/94	CHIEF ENGINEER AND GENERAL MANAGER
SUBMITTED BY		DATE	SHEET 1 OF 1

Dwg. Name: V:\RVDEV\CAD\RV0003.dwg
Date: 10, DEC 7, 1993, 09:00am

THE TOPOGRAPHY ON THIS MAP IS BASED ON USGS QUADRANGLE MAPS, AS NOTED ON EACH SHEET.



FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOOD DELINEATION STUDY OF

RIO VERDE SOUTH

F.C.D. CONTRACT NO. 93-07

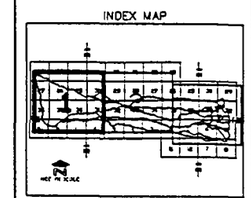
NOTES

1. Flowrates are the 100-yr, 6-hr or 24-hr storm, whichever is greatest.

LEGEND

- Subbasin Identifier
- Subbasin Concentration Point
- Intermediate Concentration Point
- Concentration Point Number
- Flow Split Conc. Point Number
- Elevation
- Drainage Basin Boundary
- Drainage Subbasin Boundary
- Hydrograph Flood Routing Path
- Time of Concentration Flow Path
- Section Line
- Township and Range Line
- USGS Quadrangle Map Boundary

INDEX MAP



SCALE: 1" = 500'

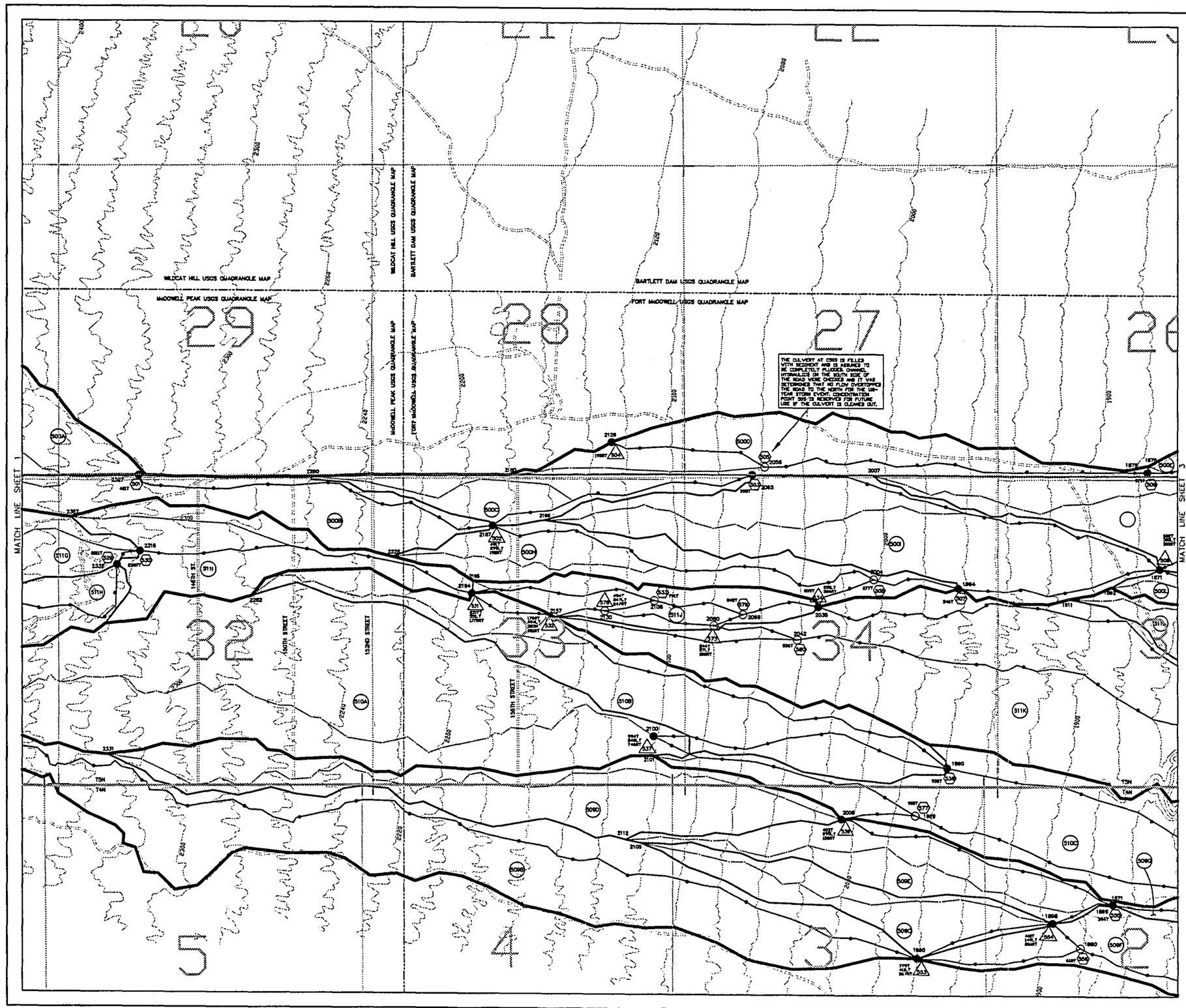
HYDROLOGY EXHIBIT "D"

WATERSHED MAP OF ENTIRE STUDY AREA

McLAUGHLIN KMETTY ENGINEERS, LTD.

DESIGN	BY F.C.D.M.C.	DATE 1993	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	RL	6/94	DESIGNED BY DATE
PLANS	BHE	7/94	DRAWN BY DATE
PLANS CHK.	RL	7/94	APPROVED BY DATE
SUBMITTED BY	DATE		CHIEF ENGINEER AND GENERAL MANAGER
			SHEET 1 OF 3

File Name: V:\PROJECT\CADVER\RIO.dwg
Date: REV NOV 13, 1996 09:00am



THE TOPOGRAPHY ON THIS MAP IS BASED ON USGS QUADRANGLE MAPS, AS NOTED ON EACH SHEET.

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOOD DELINEATION STUDY OF

RIO VERDE SOUTH

F.C.D. CONTRACT NO. 93-07

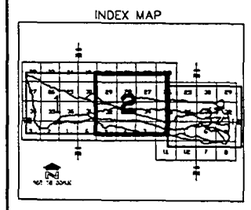
NOTES

1. Flowrates are the 100-yr, 6-hr or 24-hr storm, whichever is greater.

LEGEND

- Subbasin Identifier (5008)
- Subbasin Concentration Point
- Intermediate Concentration Point
- Concentration Point Number (Peak discharge in 1994 CFS) (13947 / 5028)
- Flow Split Conc. Point Number (Peak discharge 688 CFS 388 CFS RT, & 303 CFS LT) (688RT / 388LT / 303RT / 5008)
- Elevation (at concentration point or top of TC path)
- Drainage Basin Boundary
- Drainage Subbasin Boundary
- Hydrograph Flood Routing Path (Triangle denotes a HEC-1 study reach)
- Time of Concentration Flow Path
- Section Line
- Township and Range Line
- USGS Quadrangle Map Boundary

INDEX MAP



N

500 0' 500 1000

SCALE: 1" = 500'

HYDROLOGY EXHIBIT "D"

WATERSHED MAP OF ENTIRE STUDY AREA

McLAUGHLIN KMETTY ENGINEERS, LTD.
in association with
George V. Sabol Consulting Engineers, Inc.

DESIGN	BY F.C.D.M.C.	DATE 1993	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	TRL	8/94	RECOMMENDED BY: DATE
PLANS	BKE	7/94	APPROVED BY: DATE
PLANS CHK.	TRL	7/94	CHIEF ENGINEER AND GENERAL MANAGER
SUBMITTED BY: DATE			SHEET 2 of 3

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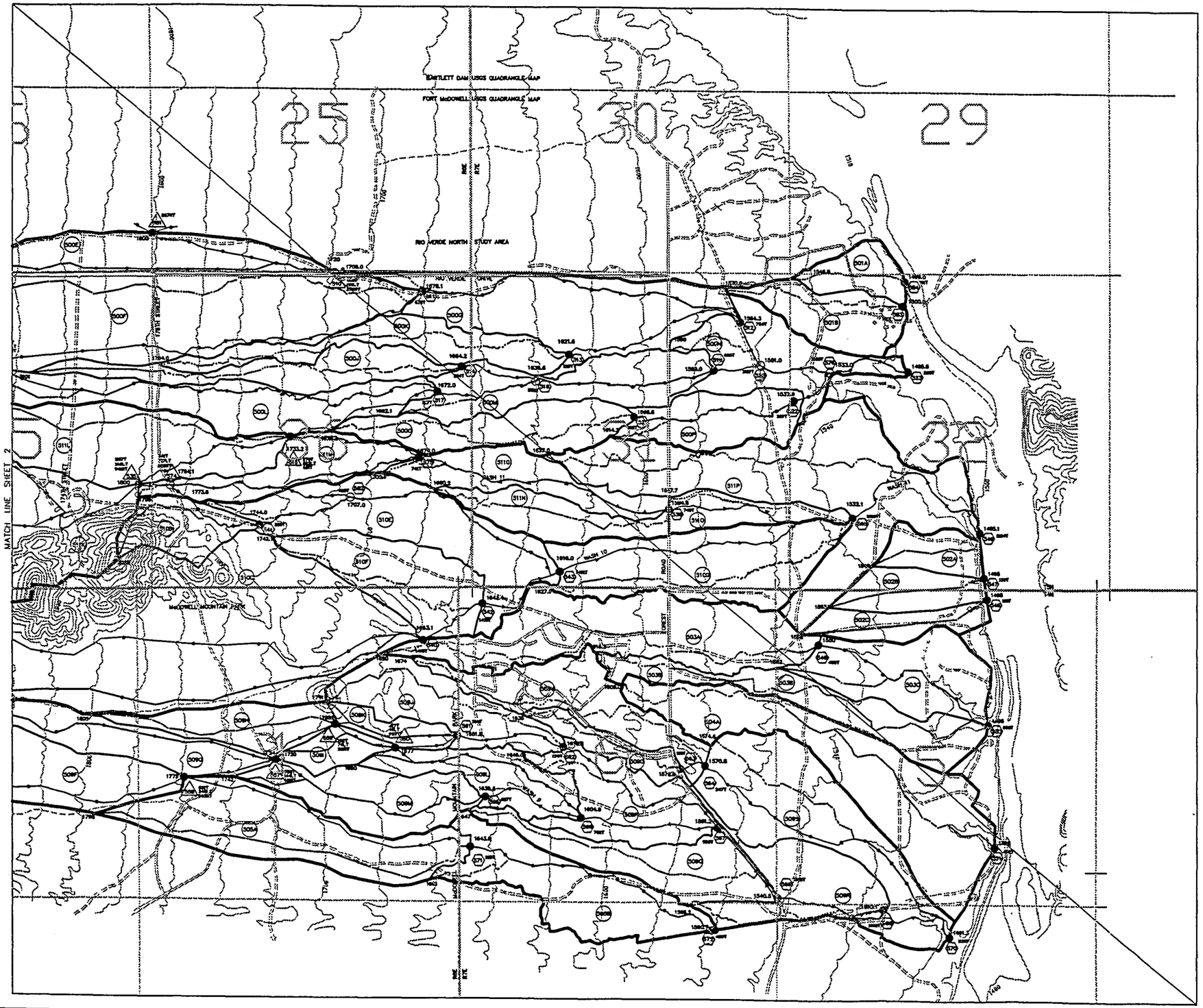


FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOOD DELINEATION STUDY OF

RIO VERDE SOUTH

F.C.D. CONTRACT NO. 93-07

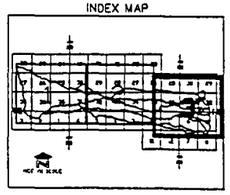
NOTES

1. Flowrates are the 100-yr, 6-hr or 24-hr storm, whichever is greater.

LEGEND

- Subbasin Identifier
- Subbasin Concentration Point
- Intermediate Concentration Point
- Concentration Point Number
- Flow Split Conc. Point Number
- Elevation
- Drainage Basin Boundary
- Drainage Subbasin Boundary
- Hydrograph Flood Routing Path
- Time of Concentration Flow Path
- Section Line
- Township and Range Line
- USGS Quadrangle Map Boundary

INDEX MAP



NOT TO SCALE

500 0' 500 1000

SCALE: 1" = 500'

HYDROLOGY EXHIBIT "D"

WATERSHED MAP OF ENTIRE STUDY AREA

McLAUGHLIN KMETTY ENGINEERS, LTD.

DESIGN	F.C.D.M.C.	1993	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	BIL	6/94	RECOMMENDED BY: DATE
PLANS	BHE	7/94	APPROVED BY: DATE
PLANS CHK.	BIL	7/94	CHIEF ENGINEER AND GENERAL MANAGER
SUBMITTED BY: DATE			SHEET 3 of 3

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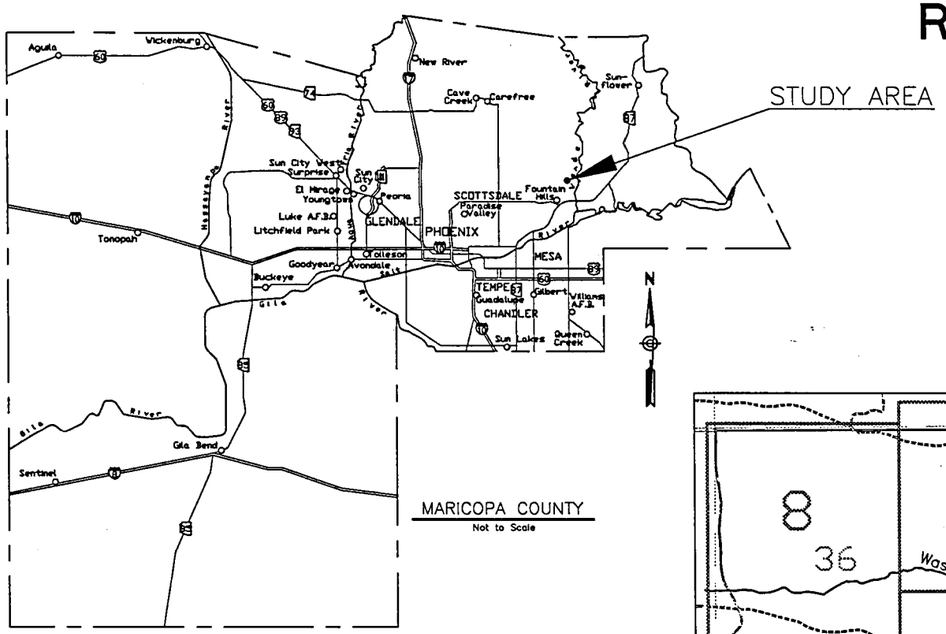
Date: REV. APRIL 12, 1994 09:50am

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RIO VERDE SOUTH

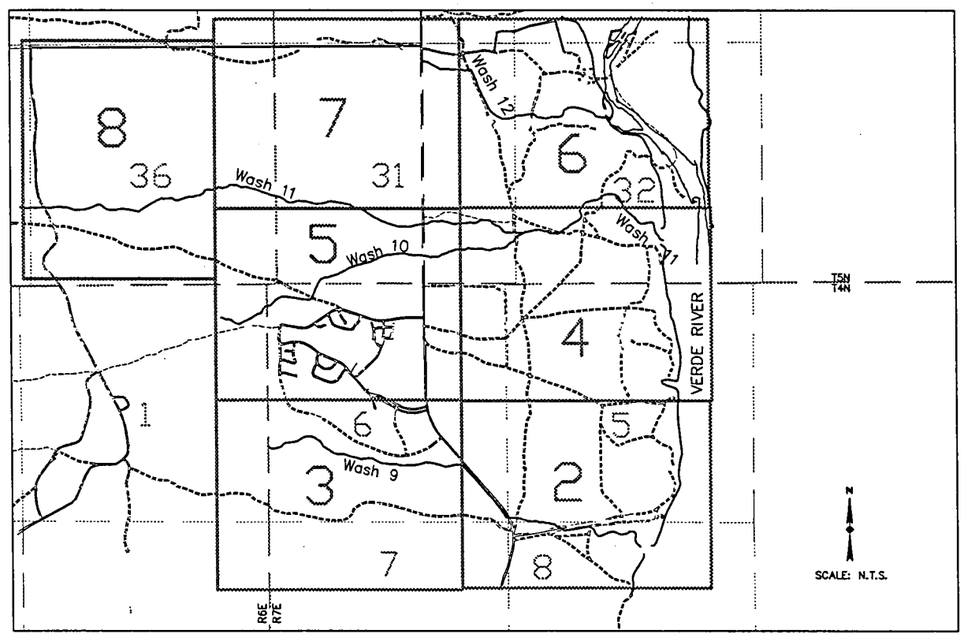
Flood Delineation Study

FCD 93-07



MARICOPA COUNTY
Not to Scale

LOCATION MAP



STUDY AREA MAP
AND SHEET INDEX

DATUM

HORIZONTAL: North American Datum of 1983
VERTICAL: National Geodetic Vertical Datum of 1929

AERIAL MAPPING

Aerial Mapping Company, Inc.
3141 W. Clarendon Avenue
Phoenix, Arizona 85017 (602) 263-5728

Flight Date: December 22, 1993
Contour Interval: 2 Feet

GROUND CONTROL

Burgess & Niple, Inc.
5025 E. Washington Street
Phoenix, Arizona 85034 (602) 244-8100

ADDITIONAL SURVEY

Alcocer Land Surveyors
3501 N. 16th Street, Suite C
Phoenix, Arizona 85016 (602) 263-7846

HYDROLOGY

George V. Sabol Consulting Engineers, Inc.
7950 E. Acoma Drive, Suite 211
Scottsdale, Arizona 85260-6962 (602) 483-3368

HYDRAULICS

McLaughlin Kmetty Engineers, Ltd.
3501 N. 16th Street
Phoenix, Arizona 85016 (602) 248-7702

LEGEND

Section Line
Section Label 31
Sheet Limits
Sheet Number 8
Study Wash

SHEET INDEX

Sheet 2-8 Hydrology Exhibit E
Watershed Map of Detailed Study Area

HYDROLOGY EXHIBIT "E"
COVER SHEET

McLAUGHLIN KMETTY ENGINEERS, LTD.

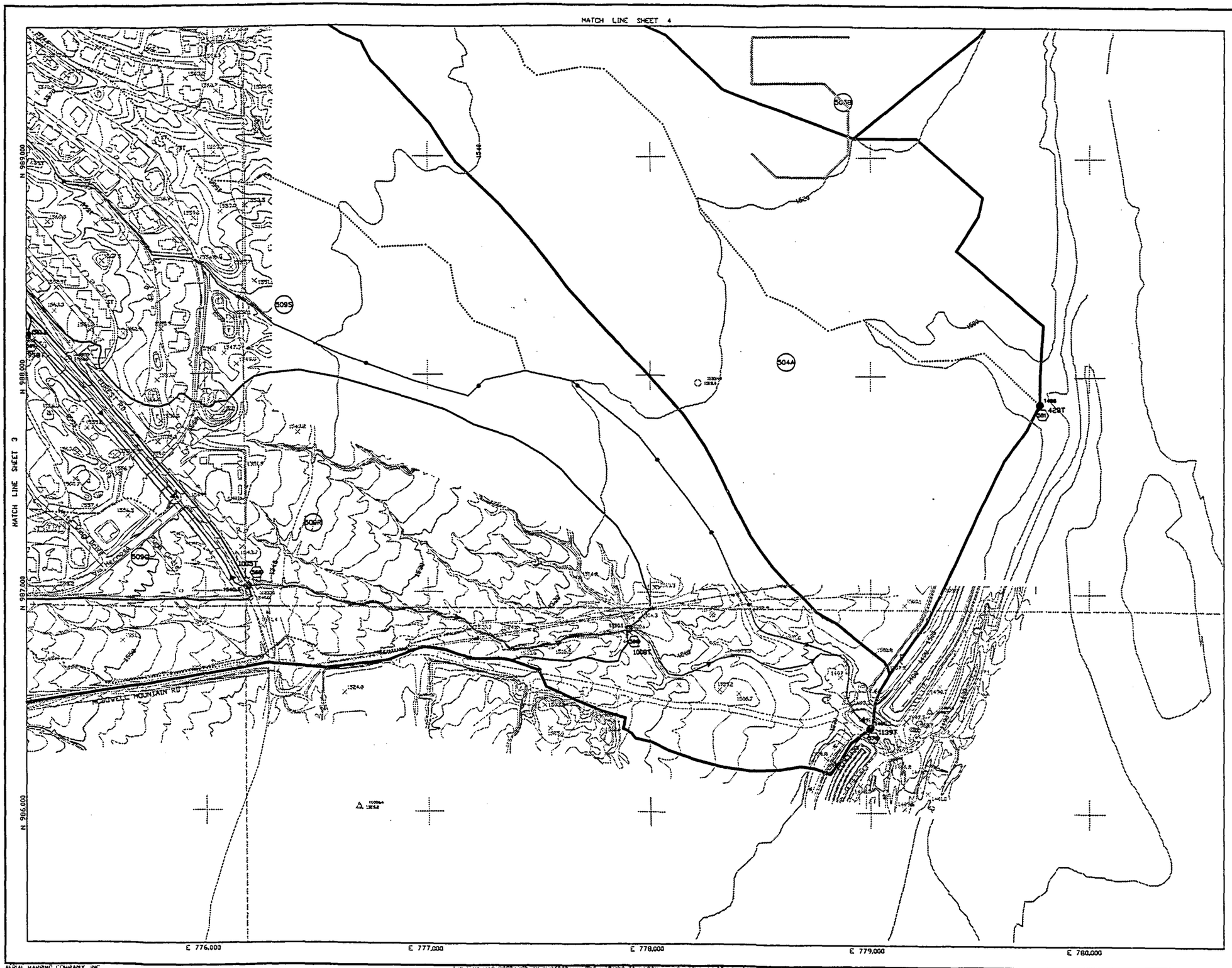
	BY	DATE
DESIGN	FEB	9/94
DESIGN CHK.	CLJ	9/94
PLANS	PJK,RLP	8/95
PLANS CHK.	FEB	8/95

SUBMITTED BY: DATE:

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
RECOMMENDED BY: DATE
APPROVED BY: DATE
CHIEF ENGINEER AND GENERAL MANAGER

SHEET 1 OF 8

Dwg. Name: \P\8940703\ACAD\RVEXECVR.dwg
Date: REV. AUG. 10, 1995 10:20 am



FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOOD DELINEATION STUDY OF

RIO VERDE SOUTH

F.C.D. CONTRACT NO. 93-07

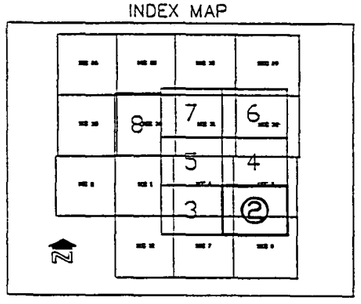
NOTES

1. Sheet No. 1 was intentionally omitted HYDROLOGY EXHIBIT "E".
2. Flowrates are the 100-yr, 6-hr or 24-hr storm, whichever is greater.

LEGEND

Subbasin Identifier	500P
Subbasin Concentration Point	●
Intermediate Concentration Point	○
Concentration Point Number Peak discharge is 1430 cfs.	1430T
Flow Split Conc. Point Number Peak discharge 941 cfs: 223 cfs RT. & 717 cfs LT	941T 717LT 223RT 67A
Elevation (at concentration point or top of Tc path)	1598.6
Drainage Basin Boundary	
Drainage Subbasin Boundary	
Hydrograph Flood Routing Path (Triangles denote a Hec-2 study reach)	
Time of Concentration Flow Path	
Section Line	
Township and Range Line	
USGS Quadrangle Map Boundary	

INDEX MAP



N

200 0' 200 400

SCALE: 1"= 200'

HYDROLOGY EXHIBIT "E"

WATERSHED MAP OF DETAILED STUDY AREA

McLAUGHLIN KMETTY ENGINEERS, LTD.

	BY	DATE
DESIGN	F.C.D.M.C.	1993
DESIGN CHK.	TRL	6/94
PLANS	BKE	7/94
PLANS CHK.	TRL	7/94
SUBMITTED BY:		DATE:

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

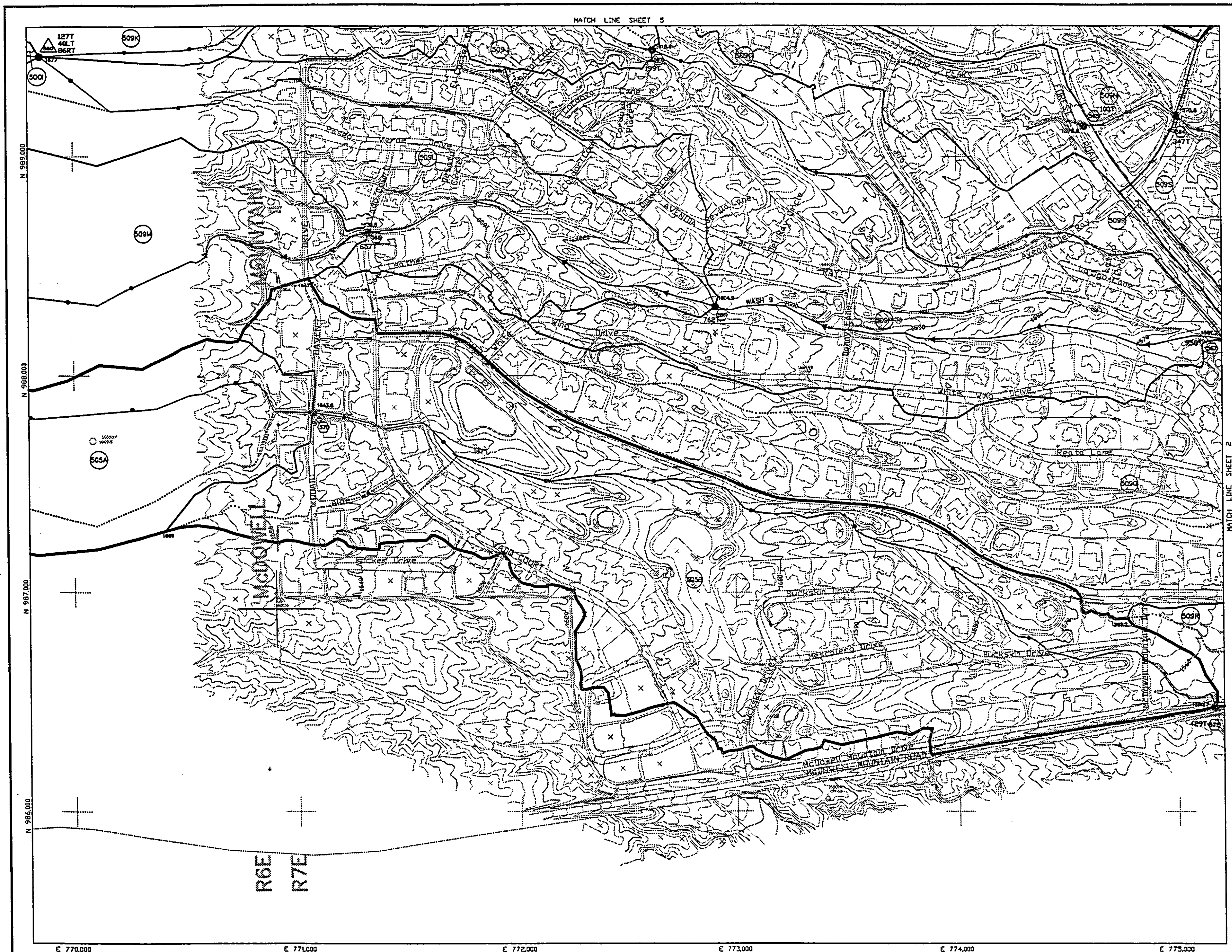
CHIEF ENGINEER AND GENERAL MANAGER

SHEET 2 OF 8

Dwg Name: \P\RIOVERDE\ACAD\VIEW-RIO.dwg
Date: REV. NOV. 17, 1994 09:00am

AERIAL MAPPING COMPANY, INC.
SURVEYING AND PHOTOGRAMMETRY
FLIGHT DATE: 12-22-1993

THIS MAP WAS PREPARED BY PHOTOGRAMMETRIC METHODS TO NATIONAL MAP ACCURACY STANDARDS
1"= 200' HORIZONTAL SCALE AND 2' CONTOUR INTERVALS AND BASED ON GROUND CONTROL SURVEY
DATA PROVIDED BY BURGESS & NIPLE



FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOOD DELINEATION STUDY OF

RIO VERDE SOUTH

F.C.D. CONTRACT NO. 93-07

NOTES

1. Sheet No. 1 was intentionally omitted HYDROLOGY EXHIBIT "E".
2. Flowrates are the 100-yr, 6-hr or 24-hr storm, whichever is greater.

LEGEND

Subbasin Identifier — 500P

Subbasin Concentration Point

Intermediate Concentration Point

Concentration Point Number — 1430T, 542
Peak discharge is 1430 cfs.

Flow Split Conc. Point Number — 941T, 717LT, 223RT, 574
Peak discharge 941 cfs 223 cfs RT, & 717 cfs LT

Elevation — 1598.6
(at concentration point or top of Tc path)

Drainage Basin Boundary

Drainage Subbasin Boundary

Hydrograph Flood Routing Path
(Triangles denote a Hec-2 study reach)

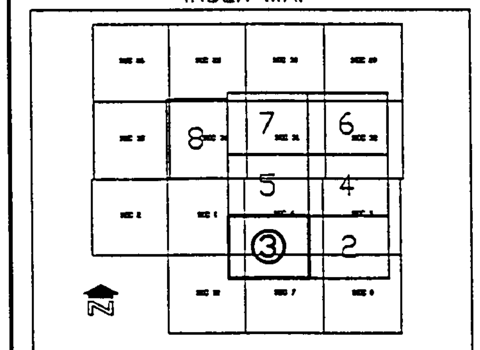
Time of Concentration Flow Path

Section Line

Township and Range Line

USGS Quadrangle Map Boundary

INDEX MAP



200 0' 200 400
SCALE: 1"= 200'

HYDROLOGY EXHIBIT "E"

WATERSHED MAP OF DETAILED STUDY AREA

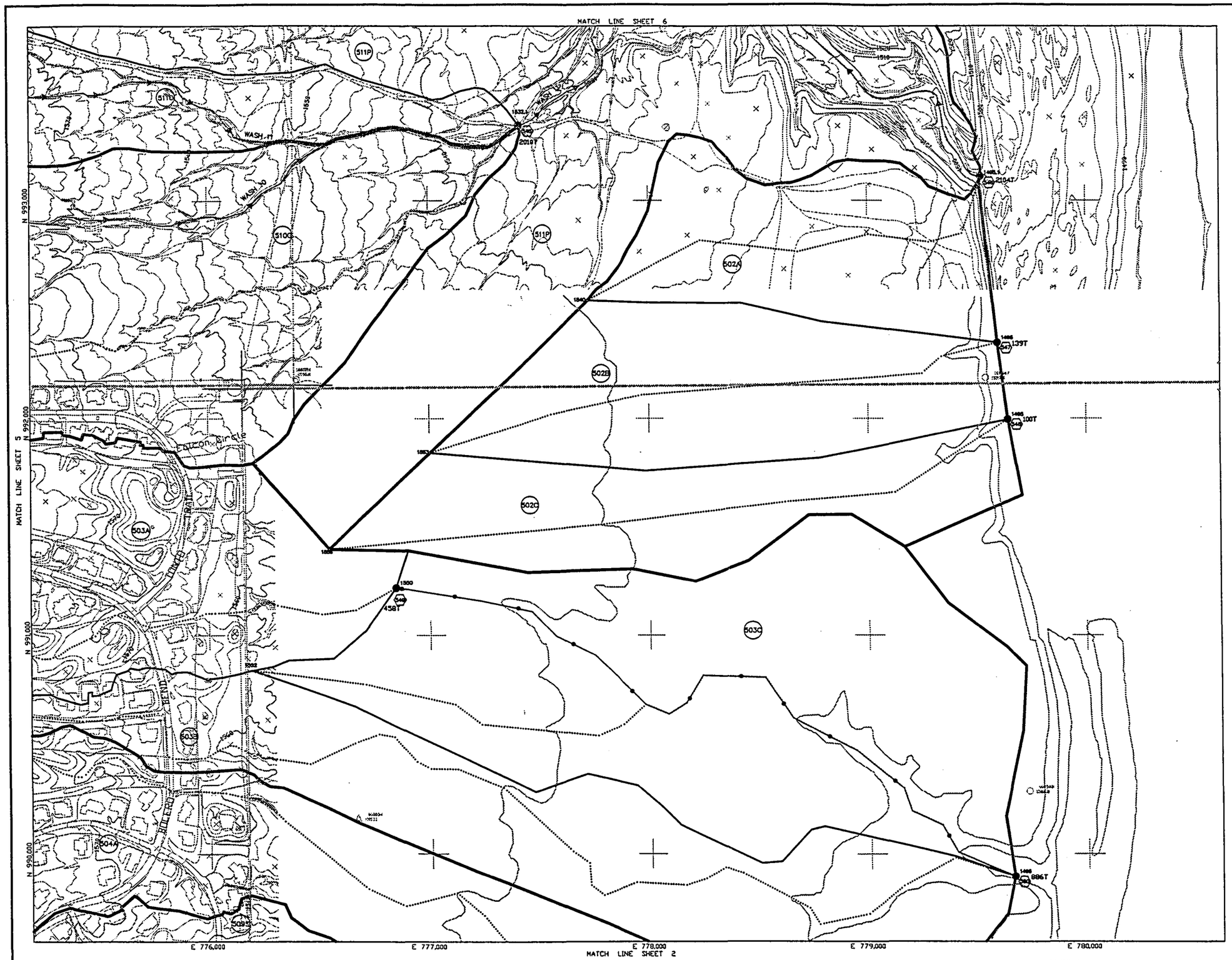
McLAUGHLIN KMETTY ENGINEERS, LTD.

	BY	DATE	
DESIGN	F.C.D.M.C.	1993	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	TRL	6/94	RECOMMENDED BY: DATE
PLANS	BKE	7/94	APPROVED BY: DATE
PLANS CHK.	TRL	7/94	CHIEF ENGINEER AND GENERAL MANAGER
SUBMITTED BY:		DATE:	SHEET 3 of 8

Dwg. Name: V:\RIOVERDE\ACAD\VIEW-RIO.dwg
Date: REV. NOV. 17, 1994 09:00am

AERIAL MAPPING COMPANY, INC.
SURVEYING AND PHOTOGRAMMETRY
FLIGHT DATE: 12-22-1993

THIS MAP WAS PREPARED BY PHOTOGRAMMETRIC METHODS TO NATIONAL MAP ACCURACY STANDARDS
1"= 200' HORIZONTAL SCALE AND 2' CONTOUR INTERVALS AND BASED ON GROUND CONTROL SURVEY
DATA PROVIDED BY BURGESS & NIPLE



FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOOD DELINEATION STUDY OF

RIO VERDE SOUTH

F.C.D. CONTRACT NO. 93-07

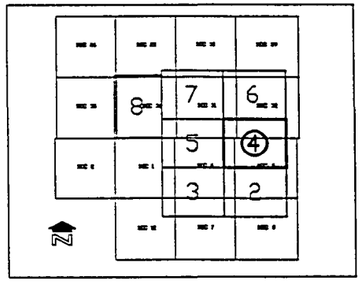
NOTES

1. Sheet No. 1 was intentionally omitted HYDROLOGY EXHIBIT 'E'.
2. Flowrates are the 100-yr, 6-hr or 24-hr storm, whichever is greater.

LEGEND

- Subbasin Identifier (500P)
- Subbasin Concentration Point
- Intermediate Concentration Point
- Concentration Point Number — 1430T (542) — Peak discharge is 1430 cfs.
- Flow Split Conc. Point Number — 941T, 717LT, 223RT (574) — Peak discharge 941 cfs: 223 cfs RT. & 717 cfs LT
- Elevation (at concentration point or top of Tc path)
- Drainage Basin Boundary
- Drainage Subbasin Boundary
- Hydrograph Flood Routing Path (Triangles denote a Hec-2 study reach)
- Time of Concentration Flow Path
- Section Line
- Township and Range Line
- USGS Quadrangle Map Boundary

INDEX MAP



N

200 0' 200 400

SCALE: 1" = 200'

HYDROLOGY EXHIBIT "E"

WATERSHED MAP OF DETAILED STUDY AREA

McLAUGHLIN KMETTY ENGINEERS, LTD.

	BY	DATE
DESIGN	F.C.D.M.C.	1993
DESIGN CHK.	TRL	6/94
PLANS	BKE	7/94
PLANS CHK.	TRL	7/94
SUBMITTED BY:		DATE:

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

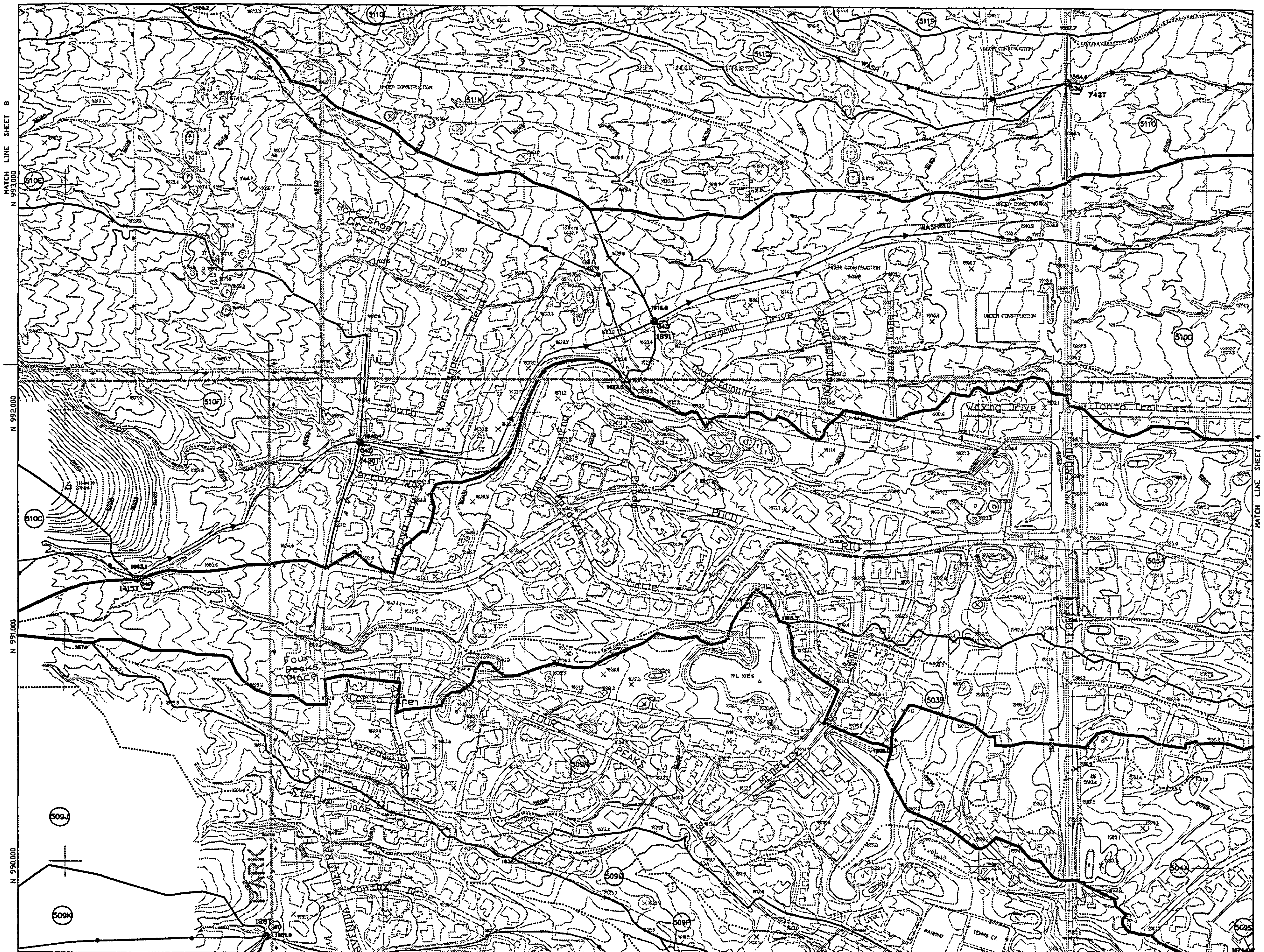
CHIEF ENGINEER AND GENERAL MANAGER

SHEET 4 OF 8

Dwg. Name: \P\RIOVERDE\ACAD\NEW-RIO.dwg
Date: REV. NOV. 17, 1994 09:00am

AERIAL MAPPING COMPANY, INC.
SURVEYING AND PHOTOGRAMMETRY
FLIGHT DATE: 12-22-1993

THIS MAP WAS PREPARED BY PHOTOGRAMMETRIC METHODS TO NATIONAL MAP ACCURACY STANDARDS
1" = 200' HORIZONTAL SCALE AND 2' CONTOUR INTERVALS AND BASED ON GROUND CONTROL SURVEY
DATA PROVIDED BY BURGESS & NIPLE.



AERIAL MAPPING COMPANY, INC.
SURVEYING AND PHOTOGRAMMETRY
FLIGHT DATE: 12-22-1993

THIS MAP WAS PREPARED BY PHOTOGRAMMETRIC METHODS TO NATIONAL MAP ACCURACY STANDARDS
1" = 200' HORIZONTAL SCALE AND 2' CONTOUR INTERVALS AND BASED ON GROUND CONTROL SURVEY
DATA PROVIDED BY BURGESS & NIPLE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOOD DELINEATION STUDY OF RIO VERDE SOUTH

F.C.D. CONTRACT NO. 93-07

NOTES

1. Sheet No. 1 was intentionally omitted HYDROLOGY EXHIBIT "E".
2. Flowrates are the 100-yr, 6-hr or 24-hr storm, whichever is greater.

LEGEND

Subbasin Identifier — 500P

Subbasin Concentration Point

Intermediate Concentration Point

Concentration Point Number — 1430T
Peak discharge is 1430 cfs.

Flow Split Conc. Point Number — 941T 717LT 223RT
Peak discharge 941 cfs, 223 cfs RT, & 717 cfs LT

Elevation
(at concentration point or top of Tc path)

Drainage Basin Boundary

Drainage Subbasin Boundary

Hydrograph Flood Routing Path
(Triangles denote a Hec-2 study reach)

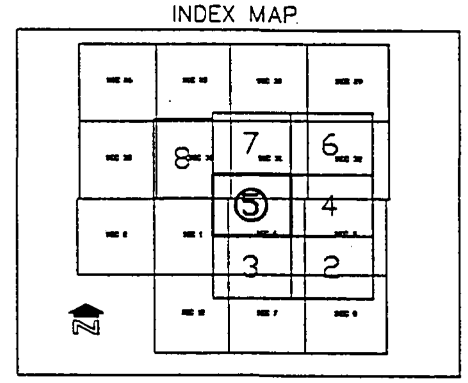
Time of Concentration Flow Path

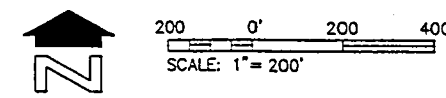
Section Line

Township and Range Line

USGS Quadrangle Map Boundary

INDEX MAP





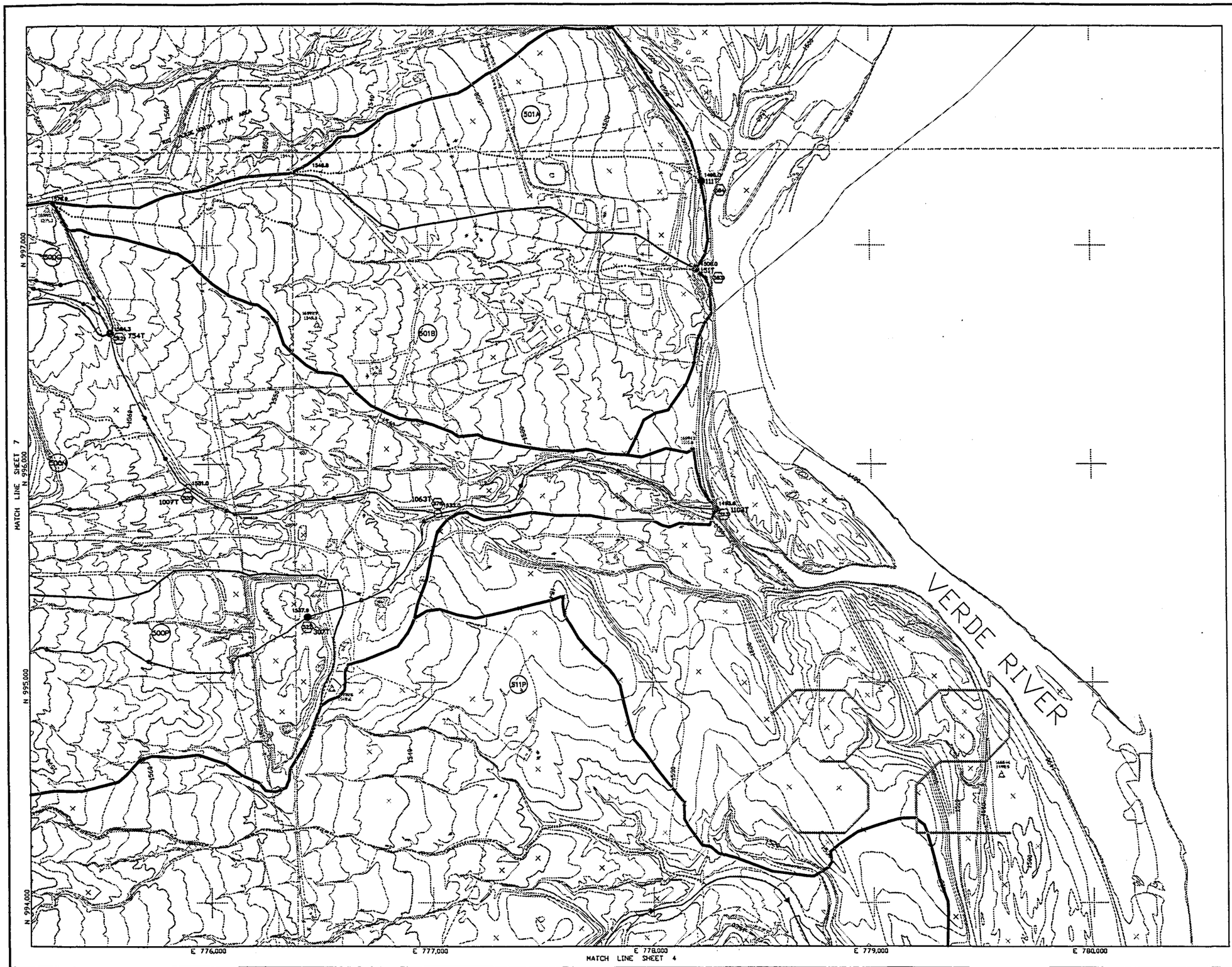
HYDROLOGY EXHIBIT "E"

WATERSHED MAP OF DETAILED STUDY AREA

McLAUGHLIN KMETTY ENGINEERS, LTD.

	BY	DATE	
DESIGN	F.C.D.M.C.	1993	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	TRL	6/94	RECOMMENDED BY:
PLANS	BKE	7/94	APPROVED BY: DATE
PLANS CHK.	TRL	7/94	CHIEF ENGINEER AND GENERAL MANAGER DATE
SUBMITTED BY:		DATE:	SHEET 5 OF 8

Dwg. Name: \P\RIOVERDE\ACAD\NEW-RIO.dwg
Date: REV. NOV. 17, 1994 09:00am



AERIAL MAPPING COMPANY, INC.
SURVEYING AND PHOTOGRAMMETRY
FLIGHT DATE: 12-22-1993

THIS MAP WAS PREPARED BY PHOTOGRAMMETRIC METHODS TO NATIONAL MAP ACCURACY STANDARDS
1" = 200' HORIZONTAL SCALE AND 2' CONTOUR INTERVALS AND BASED ON GROUND CONTROL SURVEY
DATA PROVIDED BY BURGESS & NIPLE.

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOOD DELINEATION STUDY OF

RIO VERDE SOUTH

F.C.D. CONTRACT NO. 93-07

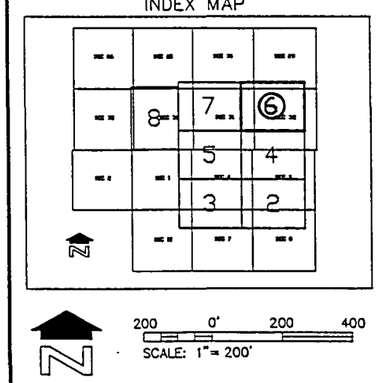
NOTES

1. Sheet No. 1 was intentionally omitted HYDROLOGY EXHIBIT "E".
2. Flowrates are the 100-yr, 6-hr or 24-hr storm, whichever is greater.

LEGEND

Subbasin Identifier	500P
Subbasin Concentration Point	●
Intermediate Concentration Point	○
Concentration Point Number Peak discharge is 1430 cfs.	1430T
Flow Split Conc. Point Number Peak discharge 941 cfs; 223 cfs RT. & 717 cfs LT	941T 717LT 223RT
Elevation (at concentration point or top of Tc path)	1598.6
Drainage Basin Boundary	
Drainage Subbasin Boundary	
Hydrograph Flood Routing Path (Triangles denote a Hec-2 study reach)	
Time of Concentration Flow Path	
Section Line	
Township and Range Line	
USGS Quadrangle Map Boundary	

INDEX MAP



HYDROLOGY EXHIBIT "E"

WATERSHED MAP OF DETAILED STUDY AREA

McLAUGHLIN KMETTY ENGINEERS, LTD.

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SUBMITTED BY:		DATE:

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

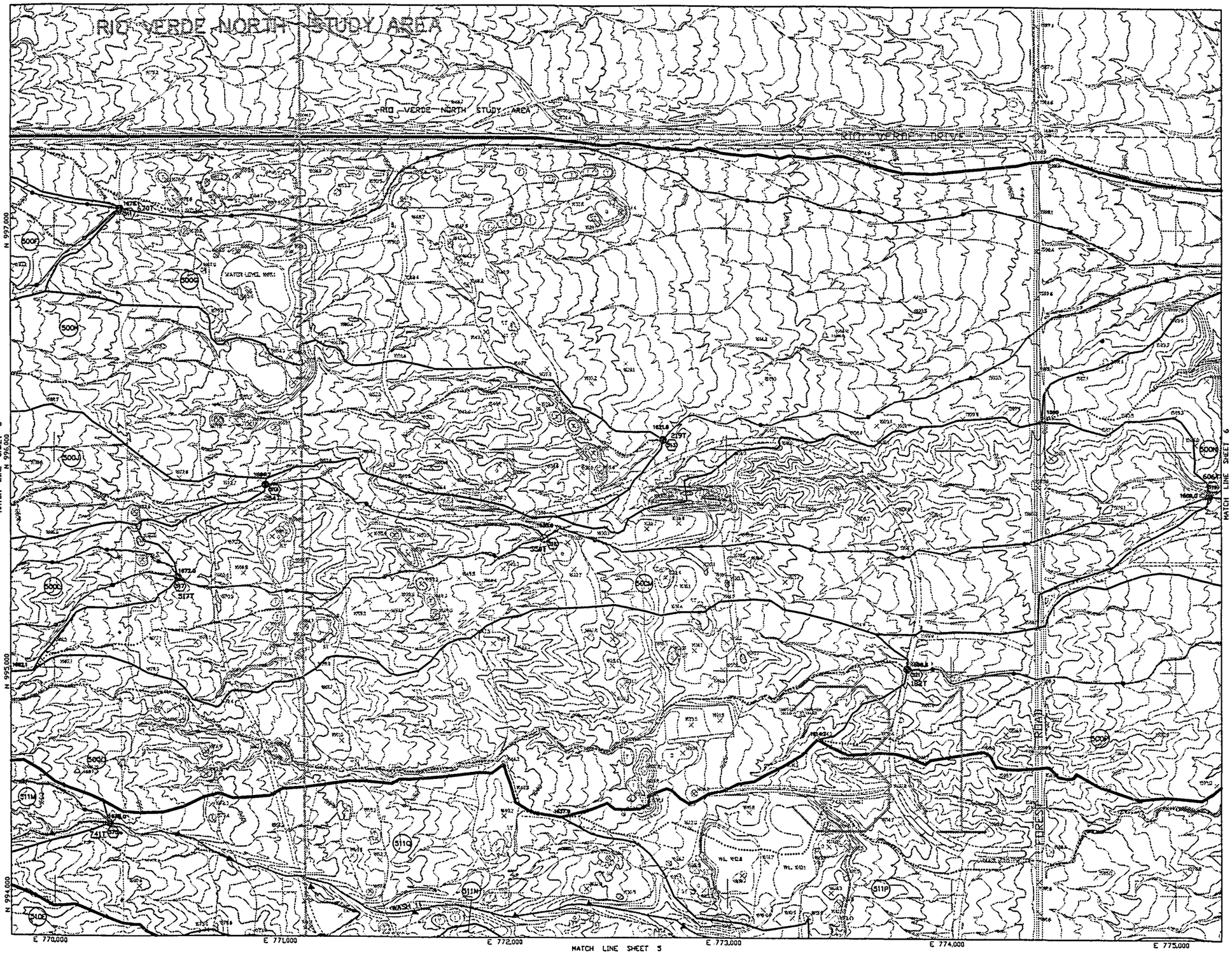
RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 6 OF 8

Dwg. Name: \P\RIOVERDE\ACAD\VIEW-RIO.dwg
Date: REV. NOV. 17, 1994 09:00am



FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOOD DELINEATION STUDY OF

RIO VERDE SOUTH

F.C.D. CONTRACT NO. 93-07

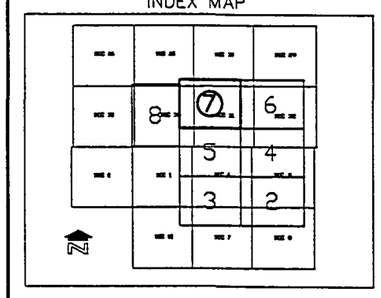
NOTES

1. Sheet No. 1 was intentionally omitted HYDROLOGY EXHIBIT 'E'.
2. Flowrates are the 100-yr, 6-hr or 24-hr storm, whichever is greater.

LEGEND

- Subbasin Identifier (500P)
- Subbasin Concentration Point
- Intermediate Concentration Point
- Concentration Point Number — 1430T (542) — Peak discharge is 1430 cfs.
- Flow Split Conc. Point Number — 941T 717LT 223RT (674) — Peak discharge 941 cfs; 223 cfs RT, & 717 cfs LT
- Elevation (at concentration point or top of Tc path)
- Drainage Basin Boundary
- Drainage Subbasin Boundary
- Hydrograph Flood Routing Path (Triangles denote a Hec-2 study reach)
- Time of Concentration Flow Path
- Section Line
- Township and Range Line
- USGS Quadrangle Map Boundary

INDEX MAP



N

200 0' 200 400

SCALE: 1" = 200'

HYDROLOGY EXHIBIT "E"

WATERSHED MAP OF DETAILED STUDY AREA

McLAUGHLIN KMETTY ENGINEERS, LTD.

DESIGN	BY F.C.D.M.C.	DATE 1993	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	TRL	6/94	RECOMMENDED BY: DATE
PLANS	BKE	7/94	APPROVED BY: DATE
PLANS CHK.	TRL	7/94	CHIEF ENGINEER AND GENERAL MANAGER
SUBMITTED BY:		DATE:	SHEET 7 OF 8

Drg. Name: \P\RIOVERDE\ACAD\NEW-RIO.dwg
Date: REV. NOV. 17, 1994 09:00am

AERIAL MAPPING COMPANY, INC.
SURVEYING AND PHOTOGRAMMETRY
FLIGHT DATE: 12-22-1993

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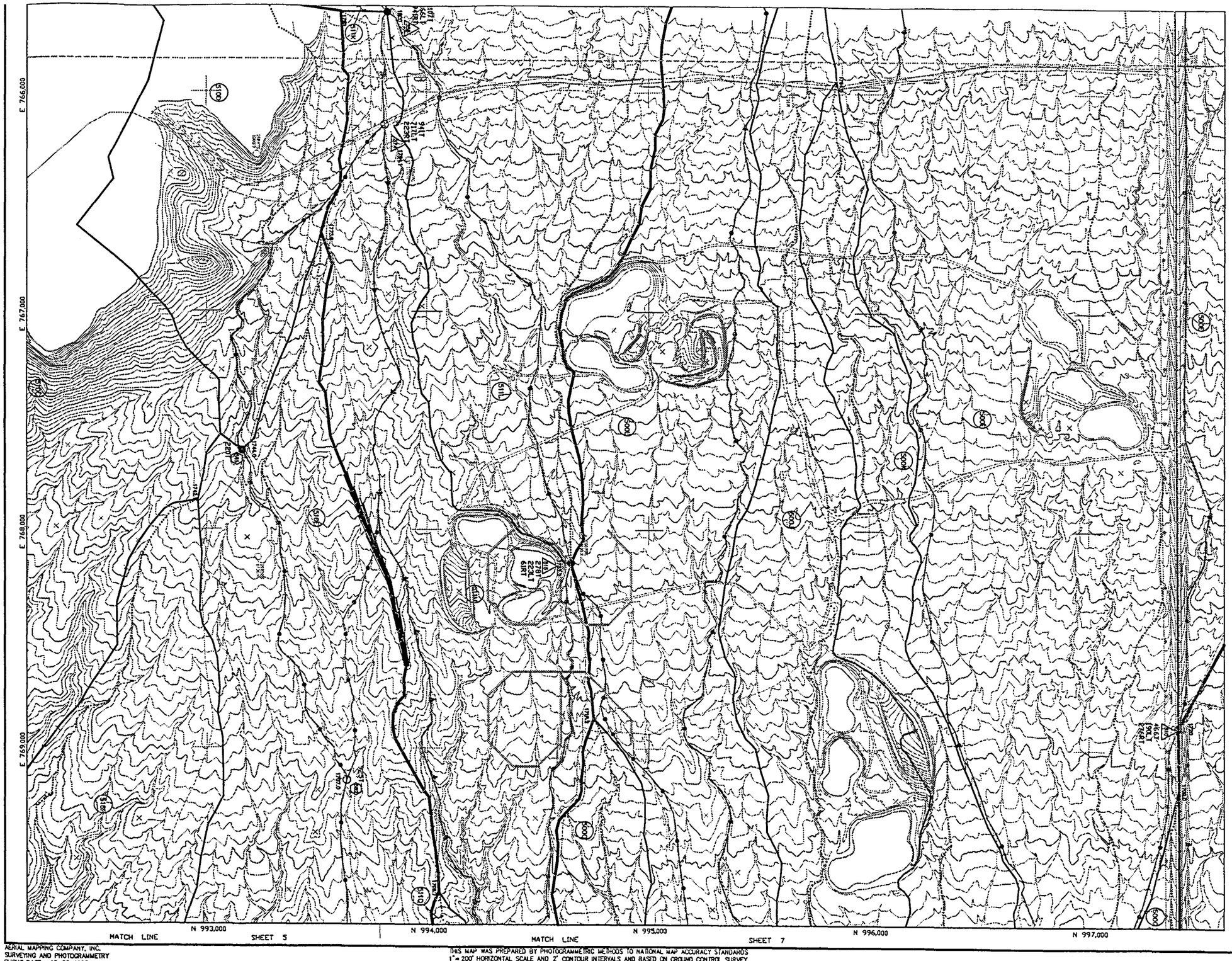
DATA PROVIDED BY BURGESS & NIPLE



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OF MARICOPA COUNTY
FLOOD DELINEATION STUDY OF
RIO VERDE SOUTH
F.C.D. CONTRACT NO. 93-07

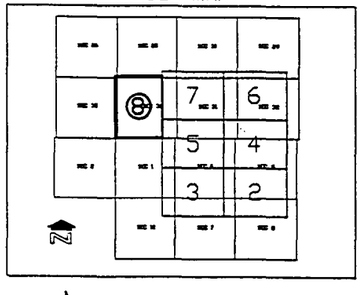
NOTES

1. Sheet No. 1 was intentionally omitted HYDROLOGY EXHIBIT 'E'.
2. Flowrates are the 100-yr, 6-hr or 24-hr storm, whichever is greater.
3. Solid contours are 'as-built' per mappping prepared by Brooks, Hersey and Associates, Inc. Dated _____ Job No. 519-01fp.

LEGEND

- Subbasin Identifier — 500P
- Subbasin Concentration Point
- Intermediate Concentration Point
- Concentration Point Number — 1430T 942 — Peak discharge is 1430 cfs.
- Flow Split Conc. Point Number — 941T 717LT 223RT 07A — Peak discharge 941 cfs; 223 cfs Rt. & 717 cfs Lt
- Elevation — 1598.6 — (at concentration point or top of Tc path)
- Drainage Basin Boundary
- Drainage Subbasin Boundary
- Hydrograph Flood Routing Path (Triangles denote a Hec-2 study reach)
- Time of Concentration Flow Path
- Section Line
- Township and Range Line
- USGS Quadrangle Map Boundary

INDEX MAP



N

200 0' 200 400
SCALE: 1" = 200'

HYDROLOGY EXHIBIT "E"
WATERSHED MAP OF DETAILED STUDY AREA

McLAUGHLIN KMETTY ENGINEERS, LTD.

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
RECOMMENDED BY: DATE
APPROVED BY: DATE
CHIEF ENGINEER AND GENERAL MANAGER
SHEET 8 OF 8

Dwg. Name: \P\RIOVERDE\ACAD\NEW-RIO.dwg
Date: REV. NOV. 17, 1994 09:00am