A TEAM PROFESSIONAL ASSOCIATES, INC.

SURVEY REPORT MANUAL FOR DAGGS WASH ADMP CONTRACT FCD: 2004C039

SITUATED IN OR NEAR SECTIONS 25, 26, 35, 36
TOWNSHIP 6 NORTH, RANGE 5 WEST,
SECTIONS 27-34 TOWNSHIP 6 NORTH, RANCH 4 WEST,
SECTIONS 1-4, 9-16, 22-26 TOWNSHIP 5 NORTH, RANGE 5 WEST,
SECTIONS 3-10, 15-22, 28-30 TOWNSHIP 5 NORTH, RANGE 4 WEST,
MARICOPA COUNTY, ARIZONA

PREPARED FOR CH2MHILL

SEPTEMBER, 2005

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   EACH MONUMENT IS ORGANIZED AS FOLLOWS:
   - GPS LOG SHEETS
   - SUPPORTING PICTURES

SECTION 1

SURVEYORS SUMMARY/CERTIFICATION

SURVEYORS SUMMARY AND CERTIFICATION

BACKGROUND

The Global Positioning System (GPS) is a highly-accurate, satellite-based, spatial positioning technology. It is capable of providing sub-centimeter horizontal positions (coordinates) over large distances.

Because of the nature of the GPS satellite configuration and other considerations it is not able to provide equally accurate vertical positions (elevations). Generally speaking, the accuracy of GPS-derived elevations is only one-half to one-third as accurate as GPS-derived horizontal positions (latitude and longitude), and achieving this vertical accuracy requires a greater effort than that required for horizontal accuracies.

The plan of this network was to develop a methodology to achieve the maximum vertical accuracy in a reasonable and practical manner.

SURVEY SUMMARY

CH2MHILL was the prime consultant for mapping this project for the Daggs wash ADMP contract FCD 2004C039. Each handled their specific survey tasks. A Team performed the primary control network consisting of 21 control targets, while Flood Control District surveyors all other survey related tasks.

Great care was taken in preparing a Global Positioning Systems (GPS) Primary Control Network of the various horizontal and vertical control stations available in the immediate and outer surrounding area. The following is a summary of the control found and utilized for the "Primary Control Network":

Control Stations assessed in this network are 7 National Geodetic Survey (NGS) stations, with Horizontal B Order and Vertical Ellipsoid Third Order, Class II classifications.

None of the Monuments surveyed were in bedrock. The values derived for the non-constrained NGS points were compared to the published values for quality control checks. See Section 2.1.3 of Survey Report Manual for differences and quality control checks on the horizontal and vertical values of this network.

- Total Horizontal Control Stations used to constrain the network are 4. (4II2, 4KG2, 4KI2, 4KJ2,)
- Total Horizontal Control Stations used to assess network are 7 including the 4 controls used to constrain and adjust the network.
- Total Vertical Control Stations used to constrain the network are 4. (4II2, 4KG2, 4KI2, 4KJ2,)
- Total Vertical Control Stations used to assess network are 7 including the 4 controls used to constrain and adjust the network.

Static Procedures

Where the static survey method was used we designed procedures to eliminate errors and have confidence in our results. A GPS observation schedule was made to ensure strong geometric figures and redundant measurements. Each point was occupied for a minimum of 30 minutes and simultaneously with four other GPS receivers on four different points. Fixed height tripods were used on every occupation to eliminate antenna height errors. Observation logs were filled out for each session and each point (see Section 5 and Section 6 of the Survey Manual Report for observation log sheets). Each log sheet includes the height of the antenna, the type of antenna, the start and end time of the point being observed, the receiver serial number, the julian day, the beginning and ending latitude, longitude and ellipsoid height, the beginning and ending satellites and the name of personnel who observed the point.

A Team used 5 Trimble 4000SSE receivers and performed Static GPS observations on the 21 aerial targets and 7 published NGS control stations. Each static session was observing for a minimum of 30 minutes. The results of these direct observations and vectors from the control were then analyzed, and confidence was derived from those control stations that were in agreement. (See Section 3.1.2, Survey Report Manual for more information on session diagram) All of the GPS data collected for the primary control network was post-processed and ran through network adjustments in Trimble Geomatics Office Ver. 1.60 and output to various NGS programs for quality checks. The network was constrained and adjusted in geographic coordinates. Lattitudes, longitudes and ellipsoid

heights of the known point were used in the adjustment. The grid coordinates and elevations shown within this Survey Report Manual for the "Primary Control Network" are derived from Trimble Geomatics Office Ver. 1.60, the Maricopa County Dept. of Transportations "GDAC's" coordinate system site projection and geoid with inclined plane was used for deriving the final coordinates.

SURVEYORS CERTIFICATION

I, STONE E. WAHL, AN ARIZONA REGISTERED LAND SURVEYOR, CERTIFY THAT THE FIELD SURVEYS, DOCUMENTED HEREIN, ALONG WITH ALL FIELD, AND OFFICE PROCESS PROCEDURES, USED DURING THE COURSE OF SURVEY, WERE PERFORMED UNDER MY DIRECT SUPERVISION, AND THAT THESE SURVEYS, ARE RETRACEABLE, AND REPEATABLE. FURTHER, I CERTIFY THAT THIS SURVEY REPORT WAS PREPARED UNDER MY DIRECT SUPERVISION; AND THAT THE FINAL COORDINATE VALUES, AS SHOWN AS THE RESULTS OF THE "FINAL NETWORK ADJUSTMENT", REPRESENT VERTICAL ACCURACIES WITHIN, (PLUS OR MINUS, +/-), THREE (3) CENTIMETERS (+/- 3CM), OR LESS, AS QUALIFIED BY THE EVALUATIONS OF THE GPS DERIVED, ORTHOMETRIC ELEVATION DIFFERENCES.

STONE E. WAHL
AZ RLS #28237

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
28237
STONE E.
WAHL
Date Signed 8/1/06
ARIZONA, U.S.A.

Stone E. Wahl

SECTION 2

COORDINATE LISTS REPORTS WITH CERTIFICATION

SECTION 2.1.1

COORDINATE REPORT

STATION NAME	NAD83(92) GEOGRAPHIC COORDINATES		GRS 80	NAD83(92) AZ SPC 0202 METERS		NAVD88	NAD83(92) AZ SPC 0202 IFT		NAVD88	GEOID 03					
	LATITUDE	LONGITUDE	ELLIP. HT.	NORTHING(Y)	EASTING(X)	ELEVATION	NORTHING(Y)	EASTING(X)	ELEVATION	GEOID HT	ZONE	CONVERGENCE	SCALE	HEIGHT	COMBINED
	(NORTH)	(WEST)	METER	METER	METER	METER	IFT	IFT	IFT	METER		D M S	FACTOR	FACTOR	FACTOR
PROJECT CONTROL															
4II2	33°43'17.06273"	112°43'58.58041"	464.200	302054.537	137710.138	494.392	990992.575	451804.915	1621.916	-30.192	AZ C	-0°27'11"	0.99997053	0.99992713	0.99989767
4KG2	33°48'41.63085"	112°37'56.10679"	532.380	311984.721	147111.159	562.242	1023571.919	482648.159	1844.528	-29.862	AZ C	-0°23'54"	0.99995409	0.99991643	0.99987053
4KI2	33°48'13.38125"	112°43'28.30379"	544.560	311177.587	138561.131	574.534	1020923.842	454596.886	1884.856	-29.974	AZ C	-0°26'58"	0.99996895	0.99991452	0.99988348
4KJ2	33°49'23.36060"	112°46'00.72916"	581.520	313365.146	134658.589	611.461	1028100.873	441793.271	2006.007	-29.941	AZ C	-0°28'24"	0.99997634	0.99990872	0.99988506
PROJECT CONTROL POINT QUALITY CONTROL CHECKS															
4JJ2	33°46'03.88726"	112°46'36.97121"	505.202	307227.315	133675.331	535.327	1007963.632	438567.359	1756.224	-30.125	AZ C	-0°28'41"	0.99997826	0.99992070	0.99989895
4KH3	33°50'27.92180"	112°41'24.55550"	577.252	315298.193	141775.047	607.089	1034442.890	465141.230	1991.663	-29.837	AZ C	-0°25'51"	0.99996316	0.99990939	0.99987255
4JH5	33°46'08.44055"	112°39'49.77138"	490.443	307285.899	144153.793	520.449	1008155.837	472945.515	1707.408	-30.006	AZ C	-0°24'55"	0.99995903	0.99992301	0.99988204
PROJECT PANEL POINTS															
PP01	33°44'59.99359"	112°39'36.88625"	482.634	305174.754	144470.118	512.676	1001229.508	473983.327	1681.906	-30.042	AZ C	-0°24'47"	0.99995849	0.99992424	0.99988273
PP02	33°44'34.89378"	112°42'20.70592"	480.597	304432.795	140248.189	510.713	998795.259	460131.854	1675.466	-30.116	AZ C	-0°26'18"	0.99996588	0.99992456	0.99989044
PP03	33°44'32.30835"	112°43'29.31289"	476.707	304366.814	138481.769	506.847	998578.786	454336.512	1662.779	-30.140	AZ C	-0°26'56"	0.99996910	0.99992517	0.99989427
PP04	33°44'34.13438"	112°44'56.78737"	478.056	304440.977	136230.795	508.220	998822.103	446951.427	1667.287	-30.164	AZ C	-0°27'45"	0.99997332	0.99992496	0.99989828
PP05	33°45'02.22825"	112°46'37.41711"	486.219	305327.769	133648.004	516.394	1001731.526	438477.703	1694.104	-30.175	AZ C	-0°28'41"	0.99997831	0.99992368	0.99990199
PP06	33°45'31.67149"	112°43'41.88877"	492.071	306198.253	138172.485	522.176	1004587.444	453321.801	1713.074	-30.105	AZ C	-0°27'04"	0.99996967	0.99992276	0.99989243
PP07	33°46'13.38913"	112°41'12.39734"	462.158	307454.005	142028.967	492.189	1008707.365	465974.301	1614.692	-30.031	AZ C	-0°25'41"	0.99996271	0.99992745	0.99989016
PP08	33°46'16.98204"	112°45'13.12701"	508.272	307612.988	135835.968	538.367	1009228.963	445656.063	1766.194	-30.095	AZ C	-0°27'55"	0.99997407	0.99992021	0.99989429
PP09	33°47'09.02489"	112°46'41.90609"	528.886	309235.196	133565.134	558.955	1014551.168	438205.820	1833.740	-30.069	AZ C	-0°28'45"	0.99997847	0.99991698	0.99989545
PP10	33°47'59.46012"	112°45'13.80161"	544.073	310770.364	135844.265	574.082	1019587.808	445683.284	1883.369	-30.009	AZ C	-0°27'57"	0.99997405	0.99991460	0.99988865
PP11	33°47'15.13868"	112°44'20.22989"	523.697	309393.769	137211.279	553.733	1015071.421	450168.238	1816.608	-30.036	AZ C	-0°27'26"	0.99997146	0.99991779	0.99988926
PP12	33°47'23.28997"	112°42'50.38483"	525.514	309626.733	139524.449	555.520	1015835.738	457757.379	1822.474	-30.006	AZ C	-0°26'36"	0.99996719	0.99991751	0.99988470
PP13	33°47'56.64126"	112°40'46.37798"	516.093	310630.087	142721.989	546.042	1019127.582	468247.995	1791.378	-29.949	AZ C	-0°25'28"	0.99996150	0.99991899	0.99988049
PP14	33°47'21.75843"	112°39'40.24167"	478.439	309542.945	144415.312	508.393	1015560.843	473803.517	1667.858	-29.954	AZ C	-0°24'51"	0.99995858	0.99992490	0.99988348
PP15	33°48'39.18505"	112°41'11.91470"	532.521	311945.698	142074.959	562.444	1023443.891	466125.194	1845.190	-29.923	AZ C	-0°25'43"	0.99996263	0.99991641	0.99987904
PP16	33°48'59.03103"	112°43'29.80131"	564.640	312584.310	138533.656	594.574	1025539.075	454506.745	1950.607	-29.934	AZ C	-0°26'59"	0.99996900	0.99991137	0.99988037
PP17A	33°48'51.08370"	112°46'33.04730"	572.172	312377.625	133819.259	602.148	1024860.974	439039.564	1975.453	-29.976	AZ C	-0°28'41"	0.99997797	0.99991019	0.99988816
PP18	33°50'02.09802"	112°44'54.83037"	595.223	314544.764	136362.757	625.118	1031971.010	447384.373	2050.817	-29.895	AZ C	-0°27'48"	0.99997307	0.99990657	0.99987964
PP19	33°49'59.00645"	112°43'00.98322"	587.165	314426.301	139289.107	617.042	1031582.352	456985.259	2024.318	-29.877	AZ C	-0°26'44"	0.99996762	0.99990783	0.99987545
PP20	33°49'35.57048"	112°41'30.85380"	557.932	313686.524	141600.975	587.812	1029155.262	464570.128	1928.422	-29.880	AZ C	-0°25'54"	0.99996346	0.99991242	0.99987589
PP21	33°49'40.90093"	112°39'43.10955"	503.489	313830.283	144372.569	533.342	1029626.913	473663.284	1749.715	-29.853	AZ C	-0°24'54"	0.99995866	0.99992097	0.99987962

SURVEYORS CERTIFICATION

I, STONE E. WAHL, AN ARIZONA REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT THE VALUES/COORDINATES SHOWN HEREON WERE DEVELOPED BY GPS OBSERVATIONS AND POST PROCESSED, ALL UNDER MY DIRECT SUPERVISION, AND ARE TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE.

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
28237
STONE E.
WAHL
Date Signed 9/1/05
ARIZONA, U.S.A.

STONE E. WAHL ARIZONA RLS #28237

NOTE: IF THIS DOCUMENT DOES NOT BEAR THE SIGNATURE OF THIS REGISTRANT THE DOCUMENT IS NOT VALID AND SHOULD BE USED WITH EXTREME CAUTION AND DISCRETION.

SECTION 2.1.2

COORDINATE REPORT MCFCD HIS FORMAT

TYP_LID	HOR_LID	VER_LID	XNAD27	YNAD27	XNAD83	YNAD83	NGVD29	NAVD88	MNT_LID	PNTNUM	DESC
6	20	21	0.000	0.000	451804.91	990992.58	0.000	1621.9	27	4II2	NGS MONUMENT FOUND AS NOTED IN NGS RECOVERY SHEET
6	20	21	0.000	0.000	482648.16	1023571.92	0.000	1844.5	27	4KG2	NGS MONUMENT FOUND AS NOTED IN NGS RECOVERY SHEET
6	20	21	0.000	0.000	454596.89	1020923.84	0.000	1884.9	27	4KI2	NGS MONUMENT FOUND AS NOTED IN NGS RECOVERY SHEET
6	20	21	0.000	0.000	441793.27	1028100.87	0.000	2006.0	27	4KJ2	NGS MONUMENT FOUND AS NOTED IN NGS RECOVERY SHEET
6	20	21	0.000	0.000	438567.36	1007963.63	0.000	1756.2	27	4JJ2	NGS MONUMENT FOUND AS NOTED IN NGS RECOVERY SHEET
6	20	21	0.000	0.000	465141.23	1034442.89	0.000	1991.7	27	4KH3	NGS MONUMENT FOUND AS NOTED IN NGS RECOVERY SHEET
6	20	21	0.000	0.000	472945.52	1008155.84	0.000	1707.4	27	4JH5	NGS MONUMENT FOUND AS NOTED IN NGS RECOVERY SHEET
6	20	21	0.000	0.000	473983.33	1001229.51	0.000	1681.9	32	PP01	SET 1/2" REBAR W/ 2 1/2" ALUM. CAP STAMPED 2004C039 MCFCD PP01 2005 LS28237
6	20	21	0.000	0.000	460131.85	998795.26	0.000	1675.5	32	PP02	SET 1/2" REBAR W/ 2 1/2" ALUM. CAP STAMPED 2004C039 MCFCD PP02 2005 LS28237
6	20	21	0.000	0.000	454336.51	998578.79	0.000	1662.8	32	PP03	SET 1/2" REBAR W/ 2 1/2" ALUM. CAP STAMPED 2004C039 MCFCD PP03 2005 LS28237
6	20	21	0.000	0.000	446951.43	998822.10	0.000	1667.3	32	PP04	SET 1/2" REBAR W/ 2 1/2" ALUM. CAP STAMPED 2004C039 MCFCD PP04 2005 LS28237
6	20	21	0.000	0.000	438477.70	1001731.53	0.000	1694.1	32	PP05	SET 1/2" REBAR W/ 2 1/2" ALUM. CAP STAMPED 2004C039 MCFCD PP05 2005 LS28237
6	20	21	0.000	0.000	453321.80	1004587.44	0.000	1713.1	32	PP06	SET 1/2" REBAR W/ 2 1/2" ALUM. CAP STAMPED 2004C039 MCFCD PP06 2005 LS28237
6	20	21	0.000	0.000	465974.30	1008707.37	0.000	1614.7	32	PP07	SET 1/2" REBAR W/ 2 1/2" ALUM. CAP STAMPED 2004C039 MCFCD PP07 2005 LS28237
6	20	21	0.000	0.000	445656.06	1009228.96	0.000	1766.2	32	PP08	SET 1/2" REBAR W/ 2 1/2" ALUM. CAP STAMPED 2004C039 MCFCD PP08 2005 LS28237
6	20	21	0.000	0.000	438205.82	1014551.17	0.000	1833.7	32	PP09	SET 1/2" REBAR W/ 2 1/2" ALUM. CAP STAMPED 2004C039 MCFCD PP09 2005 LS28237
6	20	21	0.000	0.000	445683.28	1019587.81	0.000	1883.4	32	PP10	SET 1/2" REBAR W/ 2 1/2" ALUM. CAP STAMPED 2004C039 MCFCD PP10 2005 LS28237
6	20	21	0.000	0.000	450168.24	1015071.42	0.000	1816.6	32	PP11	SET 1/2" REBAR W/ 2 1/2" ALUM. CAP STAMPED 2004C039 MCFCD PP11 2005 LS28237
6	20	21	0.000	0.000	457757.38	1015835.74	0.000	1822.5	32	PP12	SET 1/2" REBAR W/ 2 1/2" ALUM. CAP STAMPED 2004C039 MCFCD PP12 2005 LS28237
6	20	21	0.000	0.000	468248.00	1019127.58	0.000	1791.4	32	PP13	SET 1/2" REBAR W/ 2 1/2" ALUM. CAP STAMPED 2004C039 MCFCD PP13 2005 LS28237
6	20	21	0.000	0.000	473803.52	1015560.84	0.000	1667.9	32	PP14	SET 1/2" REBAR W/ 2 1/2" ALUM. CAP STAMPED 2004C039 MCFCD PP14 2005 LS28237
6	20	21	0.000	0.000	466125.19	1023443.89	0.000	1845.2	32	PP15	SET 1/2" REBAR W/ 2 1/2" ALUM. CAP STAMPED 2004C039 MCFCD PP15 2005 LS28237
6	20	21	0.000	0.000	454506.75	1025539.07	0.000	1950.6	32	PP16	SET 1/2" REBAR W/ 2 1/2" ALUM. CAP STAMPED 2004C039 MCFCD PP16 2005 LS28237
6	20	21	0.000	0.000	439039.56	1024860.97	0.000	1975.5	32	PP17A	SET 1/2" REBAR W/ 2 1/2" ALUM. CAP STAMPED 2004C039 MCFCD PP17 2005 LS28237
6	20	21	0.000	0.000	447384.37	1031971.01	0.000	2050.8	32	PP18	SET 1/2" REBAR W/ 2 1/2" ALUM. CAP STAMPED 2004C039 MCFCD PP18 2005 LS28237
6	20	21	0.000	0.000	456985.26	1031582.35	0.000	2024.3	32	PP19	SET 1/2" REBAR W/ 2 1/2" ALUM. CAP STAMPED 2004C039 MCFCD PP19 2005 LS28237
6	20	21	0.000	0.000	464570.13	1029155.26	0.000	1928.4	32	PP20	SET 1/2" REBAR W/ 2 1/2" ALUM. CAP STAMPED 2004C039 MCFCD PP20 2005 LS28237
6	20	21	0.000	0.000	473663.28	1029626.91	0.000	1749.7	32	PP21	SET 1/2" REBAR W/ 2 1/2" ALUM. CAP STAMPED 2004C039 MCFCD PP21 2005 LS28237

SECTION 2.1.3

NGS QUALITY CONTROL DIFFERENCES REPORT

Point Number		NAD83 AZSPC Northing (M)	Easting (M)	Ortho Height (M)	Geoid Height (M)	Ellipsoid Height (M)	SCALE FACTOR
MEASURED VALUES FOR QUALITY CONTROL POINTS OF GPS NETWORK FROM THIS SURVEY							
4JJ2		307227.315	133675.331	535.327	-30.125	505.202	0.99997826
4KH3		315298.193	141775.047	607.089	-29.837	577.252	0.99996316
4JH5		307285.899	144153.793	520.449	-30.006	490.443	0.99995903
NGS PUBLISHED VALUES FOR QUALITY CONTROL POINTS OF GPS NETWORK							
4JJ2		307227.305	133675.329	535.36	-30.090	505.21	0.99997825
4KH3		315298.196	141775.047	607.11	-29.800	577.24	0.99996315
4JH5		307285.899	144153.801	520.46	-29.980	490.43	0.99995903
DIFFERENCES IN METERS BETWEEN GPS DERIVED NETWORK VALUES AND NGS PUBLISHED VALUES							
		0.010	0.002	-0.033	-0.035	-0.008	0.00000001
		-0.003	0.000	-0.021	-0.037	0.012	0.00000001
		0.000	-0.008	-0.011	-0.026	0.013	0.00000000

THIS SHEET REPRESENTS THE DIFFERENCES OF THE ADDITIONAL NGS PUBLISHED VERTICAL CONTROL STATIONS OF WHICH WERE OBSERVED IN THIS GPS NETWORK AND THE "FINAL NETWORK ADJUSTMENT" VALUES.

SECTION 3

GPS SESSION INFORMATION

SECTION 3.1.1

GPS SESSION TABLE

DAGGS WASH ADMP
FCD: 2004C039
REPORT NAME: GPS SESSION TABLE

SESSION 1 FOR DAY 146		
STATION	START	STOP
4JK2	15:44 UTC	16:38 UTC
PP18	16:00 UTC	16:38 UTC
PP16	16:05 UTC	16:41 UTC
4KI2	15:36 UTC	16:38 UTC
PP19	16:09 UTC	19:31 UTC

SESSION 2 FOR DAY 146		
STATION	START	STOP
PP20	18:04 UTC	19:01 UTC
PP21	18:31 UTC	19:07 UTC
4KH3	17:18 UTC	18:59 UTC
PP15	17:23 UTC	18:59 UTC
PP19	16:09 UTC	19:31 UTC

SESSION 1 FOR DAY 151		
STATION	START	STOP
PP09	15:53 UTC	17:06 UTC
4KJ2	16:32 UTC	17:05 UTC
PP11	15:54 UTC	17:05 UTC
PP10	16:04 UTC	17:25 UTC
PP17A	16:30 UTC	17:02 UTC

SESSION 1 FOR DAY 157		
STATION	START	STOP
4KG2	14:55 UTC	19:06 UTC
PP14	16:51 UTC	19:01 UTC
PP13	18:26 UTC	19:01 UTC
PP15	16:51 UTC	19:27 UTC
PP12	17:04 UTC	19:49 UTC

SESSION 1 FOR DAY 186		
STATION	START	STOP
4JJ2	15:26 UTC	16:10 UTC
PP09	15:34 UTC	16:10 UTC
PP04	15:38 UTC	18:31 UTC
PP05	15:12 UTC	18:47 UTC
PP08	15:33 UTC	16:16 UTC

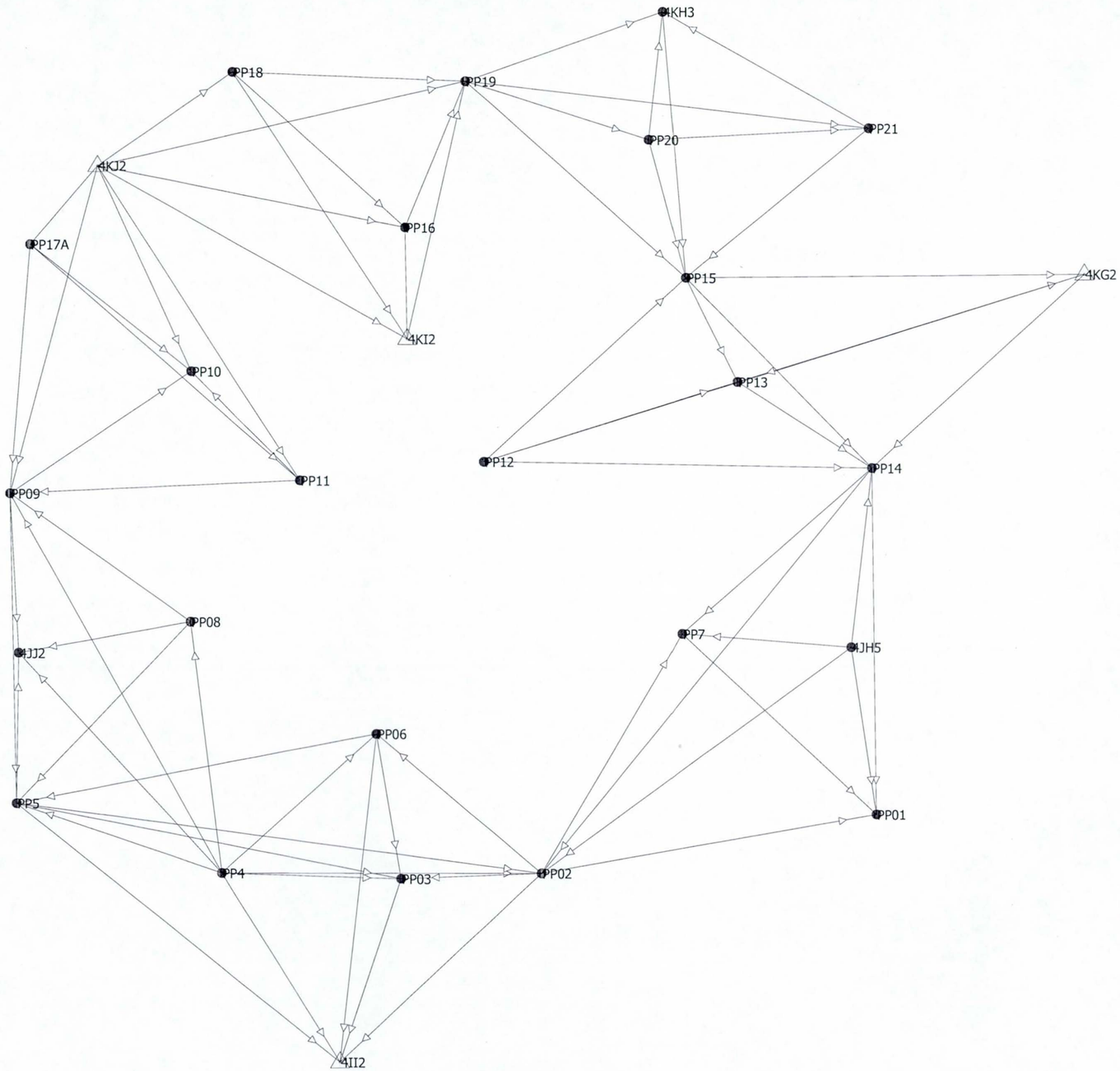
SESSION 2 FOR DAY 186		
STATION	START	STOP
PP03	17:17 UTC	18:51 UTC
PP06	17:01 UTC	18:31 UTC
PP04	15:38 UTC	18:31 UTC
PP05	15:12 UTC	18:47 UTC
PP02	17:41 UTC	18:33 UTC
4II2	18:05 UTC	18:30 UTC

SESSION 1 FOR DAY 157		
STATION	START	STOP
PP01	15:13 UTC	16:55 UTC
PP02	14:51 UTC	16:48 UTC
PP14	15:30 UTC	16:45 UTC
PP07	16:17 UTC	16:47 UTC
4JH5	15:06 UTC	17:04 UTC

SECTION 3.1.2

MAP OF GPS VECTORS

Field surveyor:
C.F-JOE.M-JIM.M-K.G.-P.G.-
Computer operator:
PAUL GERSTENBERGER
Reference:
WICKENBURG PROJECTS



Scale 1" to 5000 ft
0 2500 m
Meters

N
0°00'00"

Plot Scale: 1" to 5000 ft
Printed on 9/1/2005, at 10:50:47 AM

Printed from Trimble Geomatics Office

Site: GDAC METERS NAD 83 AZ SPC, System: Site
Zone: Zone from data collector, Datum: (WGS 84)

Project: DAGGS WASH
1583 MARACOPA FLOOD DISTRICT PROJECT

SECTION 4

TGO SURVEY REPORTS

SECTION 4.1.1

ADJUSTMENT SUMMARY

Network Adjustment Report

Project : TGO_1583_GDACS_METERS

User name	cfischer	**Date & Time**	6:14:21 AM 8/30/2005
Coordinate System	Site	**Zone**	Zone from data collector
Project Datum	(WGS 84)		
Vertical Datum	NAVD88	**Geoid Model**	GEOID99 (Conus)
Coordinate Units	Meters		
Distance Units	Meters		
Height Units	Meters		

Adjustment Style Settings - 95% Confidence Limits

Residual Tolerances

To End Iterations : 0.000010m
Final Convergence Cutoff : 0.005000m

Covariance Display

Horizontal
Propagated Linear Error [E] : U.S.
Constant Term [C] : 0.00000000m
Scale on Linear Error [S] : 1.96

Three-Dimensional
Propagated Linear Error [E] : U.S.
Constant Term [C] : 0.00000000m
Scale on Linear Error [S] : 1.96

Elevation Errors were used in the calculations.

Adjustment Controls

Compute Correlations for Geoid : False

Horizontal and Vertical adjustment performed

Set-up Errors

GPS
Error in Height of Antenna : 0.000m
Centering Error : 0.000m

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Statistical Summary

Successful Adjustment in 1 iteration(s)

Network Reference Factor : 1.00
Chi Square Test (α=95%) : PASS
Degrees of Freedom : 143.00

GPS Observation Statistics

Reference Factor : 1.00
Redundancy Number (r) : 143.00

Individual GPS Observation Statistics

Observation ID	Reference Factor	Redundancy Number
B1	1.51	1.65
B2	0.62	1.76
B3	0.43	1.81
B4	1.80	1.64
B5	0.69	1.88
B6	0.21	2.37
B7	1.82	1.32
B8	0.64	2.07
B9	0.30	2.03
B10	0.25	2.10
B11	1.06	2.49
B12	1.64	2.68
B13	0.47	1.79
B14	1.16	2.08
B15	0.09	2.15
B16	0.59	2.48
B17	0.61	2.27
B18	1.72	2.60
B19	0.50	1.88
B20	0.94	1.90
B21	0.97	1.83
B22	3.04	2.66
B23	0.84	1.77
B24	0.45	1.82
B25	0.76	1.75
B26	0.71	2.50
B27	1.11	2.38
B28	0.67	2.08
B29	0.43	1.90
B30	0.34	1.94

B32	0.82	1.90
B33	0.51	2.11
B34	0.60	1.68
B35	0.77	1.66
B36	1.16	2.13
B37	0.96	2.16
B38	1.39	2.06
B39	2.12	1.90
B40	0.57	1.63
B41	0.23	2.18
B42	0.77	1.75
B43	0.63	2.17
B44	0.28	1.75
B45	0.76	2.03
B46	0.84	1.69
B47	0.70	2.23
B48	0.54	2.48
B49	1.00	1.48
B50	0.10	1.74
B51	1.11	1.83
B52	0.50	1.22
B53	0.52	2.02
B54	0.62	1.59
B55	0.54	1.37
B56	1.74	1.73
B57	1.00	1.54
B58	0.26	1.58
B59	1.03	1.75
B60	0.91	2.55
B61	1.47	1.47
B62	0.17	2.01
B63	0.64	1.68

B64	1.15	2.23
B65	0.49	1.75
B66	0.04	1.80
B67	0.64	1.92
B68	0.16	1.18
B69	0.49	1.59
B70	1.21	2.46
B71	1.11	2.23
B72	1.06	2.40
B73	0.95	2.78
B74	1.21	2.04

Weighting Strategies

GPS Observations
User-defined Scalar Applied to All Observations

Scalar : 5.01

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Adjusted Coordinates

Adjustment performed in WGS-84

Number of Points : 28
Number of Constrained Points : 4
Horizontal and Height Only : 4

Adjusted Grid Coordinates

Errors are reported using 1.96σ.

Point Name	Northing	N error	Easting	E error	Elevation	e error	Fix
4KJ2	313365.146m	0.000m	134658.589m	0.000m	N/A	N/A	N E h
PP18	314544.764m	0.003m	136362.757m	0.002m	N/A	N/A	
PP20	313686.523m	0.004m	141600.975m	0.003m	N/A	N/A	
PP21	313830.283m	0.006m	144372.569m	0.004m	N/A	N/A	
PP17A	312377.625m	0.003m	133819.259m	0.002m	N/A	N/A	
PP12	309626.733m	0.003m	139524.449m	0.002m	N/A	N/A	
PP15	311945.698m	0.002m	142074.959m	0.002m	N/A	N/A	
PP4	304440.977m	0.002m	136230.795m	0.002m	N/A	N/A	
PP08	307612.988m	0.003m	135835.968m	0.002m	N/A	N/A	
PP02	304432.795m	0.002m	140248.189m	0.002m	N/A	N/A	
4JH5	307285.899m	0.002m	144153.793m	0.002m	N/A	N/A	
PP14	309542.945m	0.002m	144415.312m	0.001m	N/A	N/A	
PP16	312584.310m	0.003m	138533.656m	0.007m	N/A	N/A	
4KH3	315298.193m	0.005m	141775.047m	0.003m	N/A	N/A	
PP11	309393.769m	0.002m	137211.279m	0.002m	N/A	N/A	

4KG2	311984.721m	0.000m	147111.159m	0.000m	N/A	N/A	N E h
PP09	309235.196m	0.002m	133565.134m	0.002m	N/A	N/A	
PP06	306198.253m	0.002m	138172.485m	0.002m	N/A	N/A	
4KI2	311177.587m	0.000m	138561.131m	0.000m	N/A	N/A	N E h
PP13	310630.087m	0.003m	142721.989m	0.002m	N/A	N/A	
PP5	305327.769m	0.003m	133648.004m	0.002m	N/A	N/A	
PP7	307454.005m	0.003m	142028.967m	0.002m	N/A	N/A	
PP19	314426.301m	0.002m	139289.107m	0.002m	N/A	N/A	
4JJ2	307227.315m	0.003m	133675.331m	0.002m	N/A	N/A	
PP03	304366.814m	0.002m	138481.769m	0.002m	N/A	N/A	
PP01	305174.754m	0.003m	144470.118m	0.002m	N/A	N/A	
PP10	310770.364m	0.002m	135844.265m	0.002m	N/A	N/A	
4II2	302054.537m	0.000m	137710.138m	0.000m	N/A	N/A	N E h

Adjusted Geodetic Coordinates

Errors are reported using 1.96σ.

Point Name	Latitude	N error	Longitude	E error	Height	h error	Fix
4KJ2	33°49'23.36060"N	0.000m	112°46'00.72916"W	0.000m	581.520m	0.000m	Lat Long h
PP18	33°50'02.09802"N	0.003m	112°44'54.83037"W	0.002m	595.223m	0.006m	
PP20	33°49'35.57048"N	0.004m	112°41'30.85380"W	0.003m	557.932m	0.009m	
PP21	33°49'40.90093"N	0.006m	112°39'43.10955"W	0.004m	503.489m	0.014m	
PP17A	33°48'51.08370"N	0.003m	112°46'33.04730"W	0.002m	572.172m	0.006m	
PP12	33°47'23.28997"N	0.003m	112°42'50.38483"W	0.002m	525.514m	0.008m	
PP15	33°48'39.18505"N	0.002m	112°41'11.91470"W	0.002m	532.521m	0.007m	
PP4	33°44'34.13438"N	0.002m	112°44'56.78737"W	0.002m	478.056m	0.006m	
PP08	33°46'16.98204"N	0.003m	112°45'13.12701"W	0.002m	508.272m	0.006m	
PP02	33°44'34.89378"N	0.002m	112°42'20.70592"W	0.002m	480.597m	0.006m	
4JH5	33°46'08.44055"N	0.002m	112°39'49.77138"W	0.002m	490.443m	0.007m	
PP14	33°47'21.75843"N	0.002m	112°39'40.24167"W	0.001m	478.439m	0.007m	
PP16	33°48'59.03103"N	0.003m	112°43'29.80131"W	0.007m	564.640m	0.011m	
4KH3	33°50'27.92180"N	0.005m	112°41'24.55550"W	0.003m	577.252m	0.009m	
PP11	33°47'15.13868"N	0.002m	112°44'20.22989"W	0.002m	523.697m	0.005m	
4KG2	33°48'41.63085"N	0.000m	112°37'56.10679"W	0.000m	532.380m	0.000m	Lat Long h
PP09	33°47'09.02489"N	0.002m	112°46'41.90609"W	0.002m	528.886m	0.005m	
PP06	33°45'31.67149"N	0.002m	112°43'41.88877"W	0.002m	492.071m	0.006m	
4KI2	33°48'13.38125"N	0.000m	112°43'28.30379"W	0.000m	544.560m	0.000m	Lat Long h
PP13	33°47'56.64126"N	0.003m	112°40'46.37798"W	0.002m	516.093m	0.006m	
PP5	33°45'02.22825"N	0.003m	112°46'37.41711"W	0.002m	486.219m	0.007m	
PP7	33°46'13.38913"N	0.003m	112°41'12.39734"W	0.002m	462.158m	0.008m	
PP19	33°49'59.00645"N	0.002m	112°43'00.98322"W	0.002m	587.165m	0.006m	

4JJ2	33°46'03.88726"N	0.003m	112°46'36.97121"W	0.002m	505.202m	0.007m	
PP03	33°44'32.30835"N	0.002m	112°43'29.31289"W	0.002m	476.707m	0.006m	
PP01	33°44'59.99359"N	0.003m	112°39'36.88625"W	0.002m	482.634m	0.008m	
PP10	33°47'59.46012"N	0.002m	112°45'13.80161"W	0.002m	544.073m	0.005m	
4II2	33°43'17.06273"N	0.000m	112°43'58.58041"W	0.000m	464.200m	0.000m	Lat Long h

Coordinate Deltas

Point Name	ΔNorthing	ΔEasting	ΔElevation	ΔHeight	ΔGeoid Separation
4KJ2	0.000m	0.000m	N/A	0.000m	N/A
PP18	0.000m	0.000m	N/A	0.000m	N/A
PP20	0.000m	0.000m	N/A	0.000m	N/A
PP21	0.000m	0.000m	N/A	0.000m	N/A
PP17A	0.000m	0.000m	N/A	0.000m	N/A
PP12	0.000m	0.000m	N/A	0.000m	N/A
PP15	0.000m	0.000m	N/A	0.000m	N/A
PP4	0.000m	0.000m	N/A	0.000m	N/A
PP08	0.000m	0.000m	N/A	0.000m	N/A
PP02	0.000m	0.000m	N/A	0.000m	N/A
4JH5	0.000m	0.000m	N/A	0.000m	N/A
PP14	0.000m	0.000m	N/A	0.000m	N/A
PP16	0.000m	0.000m	N/A	0.000m	N/A
4KH3	0.000m	0.000m	N/A	0.000m	N/A
PP11	0.000m	0.000m	N/A	0.000m	N/A
4KG2	0.000m	0.000m	N/A	0.000m	N/A
PP09	0.000m	0.000m	N/A	0.000m	N/A
PP06	0.000m	0.000m	N/A	0.000m	N/A
4KI2	0.000m	0.000m	N/A	0.000m	N/A
PP13	0.000m	0.000m	N/A	0.000m	N/A
PP5	0.000m	0.000m	N/A	0.000m	N/A
PP7	0.000m	0.000m	N/A	0.000m	N/A
PP19	0.000m	0.000m	N/A	0.000m	N/A
4JJ2	0.000m	0.000m	N/A	0.000m	N/A
PP03	0.000m	0.000m	N/A	0.000m	N/A
PP01	0.000m	0.000m	N/A	0.000m	N/A
PP10	0.000m	0.000m	N/A	0.000m	N/A
4II2	0.000m	0.000m	N/A	0.000m	N/A

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Control Coordinate Comparisons

Values shown are control coord minus adjusted coord.

Point Name	ΔNorthing	ΔEasting	ΔElevation	ΔHeight
4KJ2	N/A	N/A	N/A	N/A
4KG2	N/A	N/A	N/A	N/A
4KI2	N/A	N/A	N/A	N/A
4II2	N/A	N/A	N/A	N/A

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Adjusted Observations

Adjustment performed in WGS-84

GPS Observations

GPS Transformation Group: <GPS Default>

Deflection in Longitude : 0°00'00.3532" **(1.96σ)** : 0°00'00.1739"
Deflection in Latitude : 0°00'00.1326" **(1.96σ)** : 0°00'00.1627"
Azimuth Rotation : -0°00'00.0795" **(1.96σ)** : 0°00'00.0402"
Network Scale : 0.99999976 **(1.96σ)** : 0.00000019
Number of Observations : 73
Number of Outliers : 0

Observation Adjustment (Critical Tau = 3.61). Any outliers are in red.

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B22	4KJ2	4KI2	**Az.**	118°47'58.2514"	0°00'00.0402"	0°00'00.1727"	2.24
			ΔHt.	-36.968m	0.003m	0.005m	1.35
			Dist.	4473.962m	0.001m	-0.005m	-3.52
B39	4KJ2	PP19	**Az.**	76°37'09.5061"	0°00'00.1072"	-0°00'00.1483"	-1.74
			ΔHt.	5.638m	0.006m	0.005m	1.30
			Dist.	4750.684m	0.002m	-0.004m	-3.14
B4	PP12	PP15	**Az.**	47°16'43.6674"	0°00'00.1089"	0°00'00.1434"	2.93
			ΔHt.	7.004m	0.008m	-0.004m	-0.57
			Dist.	3447.249m	0.002m	0.001m	0.99
B56	4KG2	PP14	**Az.**	227°25'58.8855"	0°00'00.0995"	-0°00'00.0855"	-1.89
			ΔHt.	-53.938m	0.009m	-0.002m	-0.23
			Dist.	3637.445m	0.002m	0.003m	2.83
B18	PP12	4KG2	**Az.**	72°17'27.2371"	0°00'00.0638"	-0°00'00.0673"	-0.91
			ΔHt.	6.855m	0.010m	0.018m	0.79

			Dist.	7945.013m	0.002m	-0.006m	-2.79
B7	4JH5	PP14	**Az.**	6°11'37.7339"	0°00'00.1165"	0°00'00.0766"	1.48
			ΔHt.	-12.003m	0.004m	0.000m	-0.12
			Dist.	2272.239m	0.002m	0.002m	2.78
B12	PP4	PP09	**Az.**	330°27'45.1651"	0°00'00.0777"	0°00'00.0181"	0.15
			ΔHt.	50.838m	0.005m	-0.005m	-0.66
			Dist.	5485.592m	0.002m	-0.008m	-2.48
B61	PP19	PP15	**Az.**	131°14'14.3024"	0°00'00.1123"	0°00'00.0046"	0.08
			ΔHt.	-54.650m	0.005m	-0.001m	-0.32
			Dist.	3730.326m	0.002m	-0.003m	-2.35
B38	PP02	PP7	**Az.**	30°04'39.6192"	0°00'00.1159"	- 0°00'00.0172"	-0.19
			ΔHt.	-18.440m	0.005m	-0.001m	-0.33
			Dist.	3507.101m	0.003m	0.004m	2.19
B74	PP03	4II2	**Az.**	198°00'20.1302"	0°00'00.1911"	- 0°00'00.0878"	-0.60
			ΔHt.	-12.508m	0.007m	0.004m	0.95
			Dist.	2437.703m	0.003m	0.004m	1.98
B70	PP4	4II2	**Az.**	147°44'35.2155"	0°00'00.1741"	0°00'00.3963"	1.79
			ΔHt.	-13.860m	0.007m	0.008m	1.12
			Dist.	2807.845m	0.002m	0.003m	1.15
B72	PP06	4II2	**Az.**	185°54'56.7364"	0°00'00.1163"	- 0°00'00.0056"	-0.04
			ΔHt.	-27.873m	0.007m	0.007m	0.97
			Dist.	4169.554m	0.003m	0.005m	1.77
B51	PP02	PP03	**Az.**	267°25'20.9264"	0°00'00.2828"	- 0°00'00.1484"	-0.77
			ΔHt.	-3.886m	0.006m	0.000m	-0.02
			Dist.	1767.709m	0.002m	0.002m	1.76
B27	PP18	4KI2	**Az.**	146°23'49.5487"	0°00'00.1167"	0°00'00.1955"	1.71
			ΔHt.	-50.669m	0.006m	0.004m	0.57
			Dist.	4021.400m	0.003m	-0.001m	-0.19
B71	PP02	4II2	**Az.**	226°25'24.1650"	0°00'00.1406"	-	-1.11

						0°00'00.1549"	
			ΔHt.	-16.394m	0.007m	0.003m	0.55
			Dist.	3478.301m	0.002m	0.004m	1.69
B64	PP5	PP03	**Az.**	100°45'56.9610"	0°00'00.0942"	-0°00'00.0113"	-0.13
			ΔHt.	-9.521m	0.005m	0.003m	0.60
			Dist.	4928.487m	0.002m	0.003m	1.67
B1	4KJ2	PP18	**Az.**	54°50'08.9870"	0°00'00.2792"	-0°00'00.2307"	-1.40
			ΔHt.	13.701m	0.006m	0.003m	0.81
			Dist.	2072.656m	0.002m	-0.002m	-1.65
B21	4JH5	PP02	**Az.**	233°26'09.9443"	0°00'00.0719"	-0°00'00.0319"	-0.70
			ΔHt.	-9.841m	0.004m	0.000m	0.16
			Dist.	4836.909m	0.002m	0.002m	1.64
B20	PP02	PP06	**Az.**	309°56'37.8962"	0°00'00.1767"	-0°00'00.1906"	-1.54
			ΔHt.	11.479m	0.006m	0.001m	0.34
			Dist.	2725.044m	0.002m	0.000m	0.03
B11	PP15	4KG2	**Az.**	89°07'39.1930"	0°00'00.0888"	-0°00'00.1375"	-1.52
			ΔHt.	-0.150m	0.009m	0.014m	0.81
			Dist.	5036.560m	0.002m	0.000m	0.17
B57	PP09	4JJ2	**Az.**	176°22'46.3112"	0°00'00.1848"	-0°00'00.0465"	-0.47
			ΔHt.	-23.685m	0.005m	0.000m	-0.08
			Dist.	2010.945m	0.002m	0.002m	1.47
B73	PP5	4II2	**Az.**	128°23'01.2688"	0°00'00.1017"	0°00'00.3042"	1.46
			ΔHt.	-22.028m	0.007m	0.002m	0.17
			Dist.	5216.930m	0.002m	-0.002m	-0.43
B14	PP14	PP02	**Az.**	218°46'55.3165"	0°00'00.0506"	0°00'00.0174"	0.44
			ΔHt.	2.162m	0.004m	-0.004m	-1.35
			Dist.	6594.074m	0.002m	-0.002m	-1.46

B25	PP4	PP5	**Az.**	288°29'14.0670"	0°00'00.1278"	0°00'00.0883"	1.45
			ΔHt.	8.169m	0.005m	-0.003m	-0.48
			Dist.	2730.854m	0.001m	0.000m	0.31
B36	PP09	PP5	**Az.**	178°18'21.7614"	0°00'00.0926"	-0°00'00.0720"	-0.93
			ΔHt.	-42.669m	0.005m	0.002m	0.46
			Dist.	3908.389m	0.002m	0.003m	1.45
B37	PP06	PP5	**Az.**	258°39'31.2142"	0°00'00.1029"	0°00'00.0207"	0.23
			ΔHt.	-5.845m	0.005m	-0.002m	-0.56
			Dist.	4607.577m	0.002m	0.002m	1.43
B59	PP02	PP01	**Az.**	79°35'39.3635"	0°00'00.0937"	-0°00'00.0796"	-1.40
			ΔHt.	2.031m	0.004m	0.000m	-0.20
			Dist.	4286.790m	0.001m	0.001m	1.37
B46	PP18	PP19	**Az.**	91°51'17.7417"	0°00'00.2217"	-0°00'00.1331"	-0.96
			ΔHt.	-8.063m	0.007m	0.002m	0.45
			Dist.	2928.833m	0.002m	-0.002m	-1.25
B26	PP14	PP7	**Az.**	228°23'16.8580"	0°00'00.1519"	-0°00'00.0807"	-0.45
			ΔHt.	-16.278m	0.005m	0.002m	0.33
			Dist.	3171.608m	0.002m	0.003m	1.11
B49	PP12	PP14	**Az.**	90°32'16.7918"	0°00'00.0904"	-0°00'00.0517"	-0.96
			ΔHt.	-47.084m	0.006m	0.000m	-0.17
			Dist.	4891.762m	0.002m	-0.001m	-1.10
B35	4KG2	PP13	**Az.**	252°26'59.9502"	0°00'00.1354"	-0°00'00.1127"	-1.07
			ΔHt.	-16.280m	0.008m	0.001m	0.40
			Dist.	4593.650m	0.002m	0.001m	0.44
B23	PP20	PP15	**Az.**	164°20'14.9470"	0°00'00.3150"	0°00'00.2201"	1.05
			ΔHt.	-25.412m	0.007m	0.003m	0.66
			Dist.	1804.266m	0.003m	-0.001m	-0.78

B60	4KI2	PP19	**Az.**	12°10'50.1935"	0°00'00.1082"	0°00'00.0871"	0.67
			ΔHt.	42.606m	0.005m	-0.002m	-0.27
			Dist.	3329.382m	0.002m	0.003m	1.04
B8	4KJ2	PP16	**Az.**	100°55'10.0021"	0°00'00.1859"	0°00'00.0643"	0.40
			ΔHt.	-16.887m	0.011m	0.007m	0.75
			Dist.	3953.062m	0.007m	-0.006m	-1.04
B67	4KJ2	PP10	**Az.**	154°58'08.3427"	0°00'00.1245"	-0°00'00.0068"	-0.08
			ΔHt.	-37.450m	0.005m	0.001m	0.28
			Dist.	2852.915m	0.002m	0.002m	1.02
B45	PP14	PP01	**Az.**	178°52'02.2588"	0°00'00.0680"	0°00'00.0496"	1.00
			ΔHt.	4.193m	0.004m	0.001m	0.20
			Dist.	4368.715m	0.002m	0.002m	0.97
B32	4JH5	PP7	**Az.**	274°06'29.5226"	0°00'00.2497"	-0°00'00.0866"	-0.51
			ΔHt.	-28.281m	0.005m	0.003m	0.78
			Dist.	2131.548m	0.002m	0.001m	1.00
B42	PP15	PP14	**Az.**	135°19'31.2615"	0°00'00.1029"	0°00'00.0307"	0.60
			ΔHt.	-54.088m	0.007m	-0.008m	-0.97
			Dist.	3354.304m	0.002m	0.000m	0.36
B17	4KJ2	PP11	**Az.**	146°47'42.5187"	0°00'00.0795"	-0°00'00.0080"	-0.11
			ΔHt.	-57.829m	0.005m	0.001m	0.21
			Dist.	4721.146m	0.002m	0.002m	0.95
B28	PP21	PP15	**Az.**	230°13'30.9228"	0°00'00.3066"	0°00'00.1878"	0.89
			ΔHt.	29.035m	0.012m	-0.010m	-0.71
			Dist.	2971.761m	0.005m	-0.003m	-0.74
B5	PP4	PP08	**Az.**	352°26'31.7360"	0°00'00.1182"	-0°00'00.0246"	-0.30
			ΔHt.	30.219m	0.005m	0.002m	0.55
			Dist.	3196.572m	0.002m	0.001m	0.89
B2	PP20	PP21	**Az.**	86°35'57.0689"	0°00'00.4085"	0°00'00.0553"	0.20
			ΔHt.	-54.447m	0.012m	-0.003m	-0.49

			Dist.	2775.427m	0.004m	0.002m	0.88
B19	PP08	PP09	**Az.**	305°04'31.2443"	0°00'00.1867"	0°00'00.0271"	0.21
			ΔHt.	20.619m	0.005m	-0.001m	-0.19
			Dist.	2790.808m	0.002m	0.001m	0.85
B40	PP19	PP20	**Az.**	107°17'55.0747"	0°00'00.2846"	-0°00'00.0770"	-0.47
			ΔHt.	-29.237m	0.007m	0.000m	0.04
			Dist.	2427.429m	0.003m	-0.001m	-0.85
B16	PP21	4KH3	**Az.**	299°03'23.8064"	0°00'00.4542"	-0°00'00.5172"	-0.67
			ΔHt.	73.769m	0.012m	0.010m	0.57
			Dist.	2983.718m	0.004m	-0.003m	-0.82
B48	4KJ2	PP09	**Az.**	194°21'23.1746"	0°00'00.0919"	-0°00'00.0757"	-0.69
			ΔHt.	-52.635m	0.005m	0.000m	-0.04
			Dist.	4272.348m	0.002m	0.002m	0.80
B47	PP19	PP21	**Az.**	96°14'29.8030"	0°00'00.2222"	-0°00'00.1526"	-0.73
			ΔHt.	-83.684m	0.012m	0.005m	0.50
			Dist.	5118.471m	0.004m	-0.003m	-0.78
B43	PP4	4JJ2	**Az.**	317°00'43.9526"	0°00'00.1202"	0°00'00.0653"	0.60
			ΔHt.	27.153m	0.005m	0.002m	0.61
			Dist.	3780.841m	0.002m	0.001m	0.78
B55	PP11	PP09	**Az.**	267°03'08.6841"	0°00'00.1085"	-0°00'00.0391"	-0.75
			ΔHt.	5.195m	0.004m	0.000m	0.19
			Dist.	3649.683m	0.001m	0.000m	-0.47
B52	4JH5	PP01	**Az.**	171°03'47.5240"	0°00'00.1214"	0°00'00.0033"	0.06
			ΔHt.	-7.810m	0.003m	0.000m	-0.34
			Dist.	2134.799m	0.002m	0.001m	0.74
B69	PP09	PP10	**Az.**	55°33'26.8268"	0°00'00.1436"	-0°00'00.0589"	-0.74
			ΔHt.	15.184m	0.004m	0.000m	-0.05

			Dist.	2748.007m	0.001m	0.000m	-0.12
B3	4KJ2	PP17A	**Az.**	219°53'20.9142"	0°00'00.4069"	-0°00'00.1909"	-0.72
			ΔHt.	-9.347m	0.006m	0.000m	0.02
			Dist.	1296.051m	0.002m	0.000m	0.19
B63	PP5	4JJ2	**Az.**	0°20'45.6861"	0°00'00.1794"	-0°00'00.0556"	-0.51
			ΔHt.	18.984m	0.005m	-0.001m	-0.59
			Dist.	1899.783m	0.002m	0.001m	0.72
B34	4KH3	PP15	**Az.**	174°27'26.4336"	0°00'00.1484"	0°00'00.0567"	0.69
			ΔHt.	-44.734m	0.006m	0.001m	0.18
			Dist.	3366.008m	0.005m	-0.002m	-0.58
B65	PP7	PP01	**Az.**	132°36'27.5219"	0°00'00.1394"	-0°00'00.0326"	-0.38
			ΔHt.	20.471m	0.005m	0.002m	0.68
			Dist.	3339.922m	0.002m	-0.001m	-0.58
B29	PP12	PP13	**Az.**	72°08'06.6251"	0°00'00.1864"	-0°00'00.0977"	-0.65
			ΔHt.	-9.426m	0.007m	0.001m	0.33
			Dist.	3351.385m	0.002m	0.000m	0.04
B54	PP19	4KH3	**Az.**	70°13'37.4352"	0°00'00.3549"	-0°00'00.1454"	-0.64
			ΔHt.	-9.916m	0.006m	0.000m	0.07
			Dist.	2634.496m	0.003m	0.000m	-0.33
B33	PP16	4KI2	**Az.**	178°25'52.6245"	0°00'01.0969"	0°00'01.0049"	0.64
			ΔHt.	-20.081m	0.011m	0.006m	0.52
			Dist.	1407.034m	0.003m	0.001m	0.23
B24	PP15	PP13	**Az.**	153°22'59.4124"	0°00'00.3053"	-0°00'00.1340"	-0.59
			ΔHt.	-16.430m	0.007m	-0.001m	-0.29
			Dist.	1466.165m	0.003m	-0.001m	-0.49
B13	PP4	PP06	**Az.**	47°23'29.8213"	0°00'00.1524"	0°00'00.0382"	0.38
			ΔHt.	14.014m	0.005m	-0.001m	-0.43

			Dist.	2618.886m	0.002m	-0.001m	-0.55
B53	PP16	PP19	**Az.**	21°50'59.6731"	0°00'00.7090"	-0°00'00.2730"	-0.51
			ΔHt.	22.525m	0.011m	0.003m	0.36
			Dist.	1990.951m	0.005m	0.001m	0.20
B30	PP08	PP5	**Az.**	223°17'21.4748"	0°00'00.1210"	0°00'00.0162"	0.19
			ΔHt.	-22.050m	0.005m	0.001m	0.49
			Dist.	3163.839m	0.002m	0.000m	-0.28
B44	PP4	PP03	**Az.**	91°25'28.5893"	0°00'00.1878"	0°00'00.0522"	0.45
			ΔHt.	-1.352m	0.005m	0.001m	0.21
			Dist.	2252.260m	0.002m	0.000m	-0.10
B9	PP20	4KH3	**Az.**	5°43'57.9272"	0°00'00.3545"	-0°00'00.0646"	-0.27
			ΔHt.	19.322m	0.008m	0.000m	0.09
			Dist.	1621.102m	0.005m	0.002m	0.39
B41	PP17A	PP09	**Az.**	184°08'43.4411"	0°00'00.1268"	-0°00'00.0158"	-0.15
			ΔHt.	-43.288m	0.005m	-0.001m	-0.16
			Dist.	3152.756m	0.002m	0.001m	0.39
B10	PP17A	PP11	**Az.**	130°51'32.6772"	0°00'00.0902"	-0°00'00.0084"	-0.12
			ΔHt.	-48.483m	0.005m	0.001m	0.16
			Dist.	4517.767m	0.002m	0.001m	0.32
B6	PP4	PP02	**Az.**	89°39'15.3100"	0°00'00.1263"	-0°00'00.0400"	-0.32
			ΔHt.	2.535m	0.006m	-0.001m	-0.20
			Dist.	4017.524m	0.002m	0.000m	-0.05
B58	PP06	PP03	**Az.**	169°57'49.0837"	0°00'00.1877"	-0°00'00.0015"	-0.02
			ΔHt.	-15.366m	0.005m	-0.001m	-0.30
			Dist.	1857.427m	0.002m	0.000m	0.29
B68	PP11	PP10	**Az.**	314°44'33.6573"	0°00'00.1482"	0°00'00.0165"	0.27
			ΔHt.	20.379m	0.004m	0.000m	-0.06

			Dist.	1940.089m	0.002m	0.000m	0.03
B62	PP13	PP14	**Az.**	122°16'36.3963"	0°00'00.2725"	0°00'00.0283"	0.13
			ΔHt.	-37.658m	0.007m	0.001m	0.17
			Dist.	2012.348m	0.002m	0.000m	-0.13
B50	PP08	4JJ2	**Az.**	259°24'50.5321"	0°00'00.2228"	-0°00'00.0016"	-0.01
			ΔHt.	-3.066m	0.005m	0.000m	0.16
			Dist.	2194.840m	0.002m	0.000m	0.06
B15	PP18	PP16	**Az.**	131°37'15.0200"	0°00'00.4308"	-0°00'00.0327"	-0.08
			ΔHt.	-30.588m	0.011m	-0.001m	-0.13
			Dist.	2925.179m	0.006m	0.001m	0.14
B66	PP17A	PP10	**Az.**	127°57'40.1959"	0°00'00.1555"	0°00'00.0009"	0.01
			ΔHt.	-28.104m	0.005m	0.000m	0.01
			Dist.	2585.392m	0.002m	0.000m	0.07

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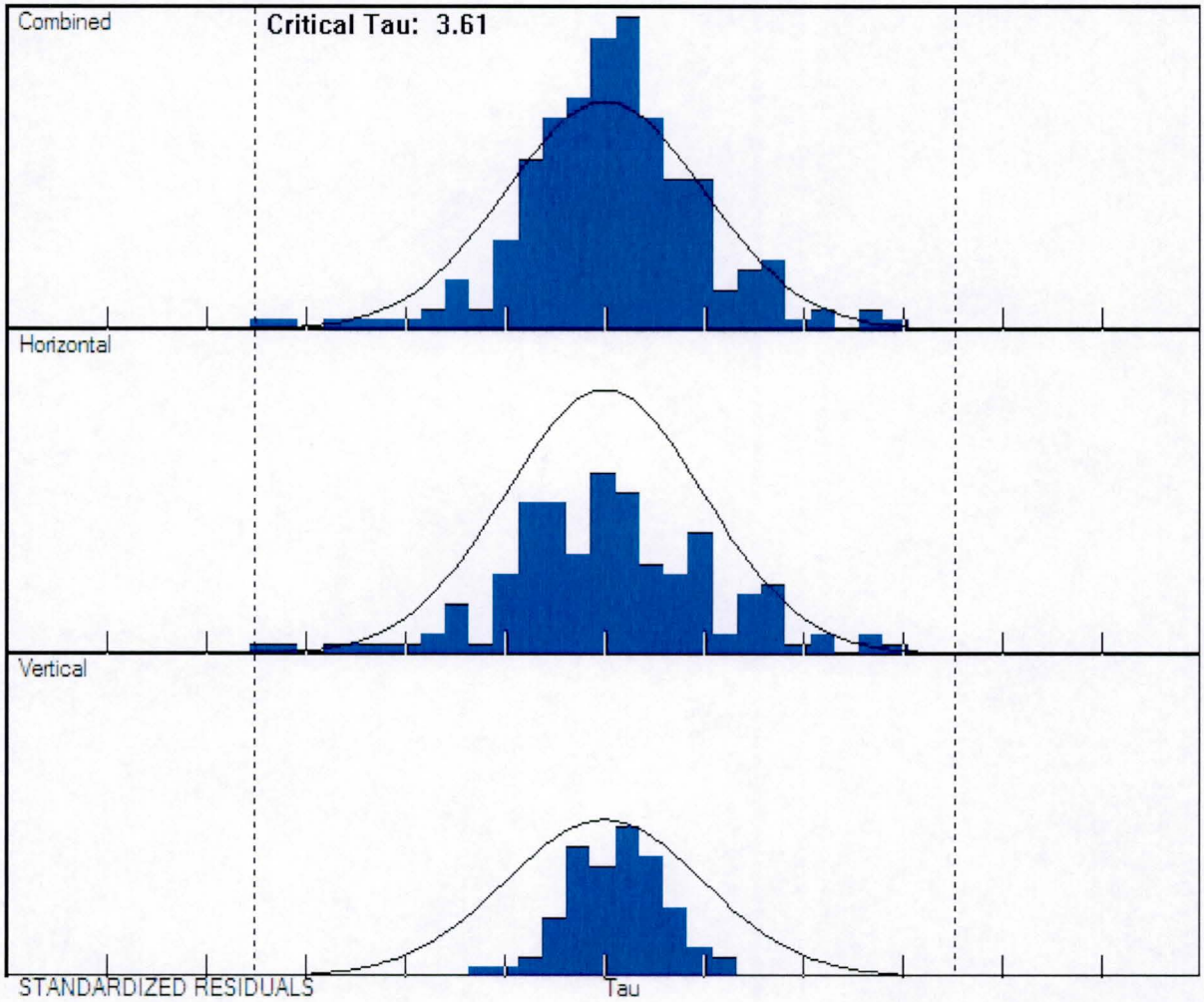
EXPLANATION OF HISTOGRAMS

Each histogram is a plot of the frequency distribution of standardized residuals of observations as generated by the most recent adjustment. There are three such histograms: one for all (combined) observations one for horizontal observations, and one for vertical (delta height) observations.

The standardized residual is the quotient of the residual of the observation divided by the posteriori standard error of the residual. Both of these values are computed as part of the adjustment and are displayed as part of the observation adjustment display. The central vertical line of each histogram is the 'zero' residual and the very smallest residuals are clustered around this line. As the residuals get larger they are placed farther and farther away from the zero line. The size of the residual is measured in multiples of one- sigma.

Superimposed over the plot of the frequency distribution of the standardized residuals are two other lines: the curved line showing the normal distribution curve and the two straight lines demarcating the Tau value for the network. If the adjustment residuals are randomly distributed it is expected that their frequency distribution plot (Histogram) will approximate the normal distribution curve. Any standardized residuals plotted to the left or right of the Tau lines are observations which are flagged as outliers and which may be individually identified.

Histograms of Standardized Residuals



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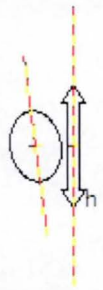
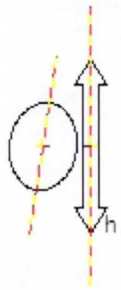
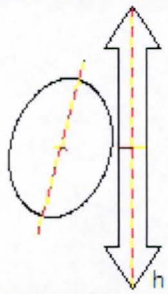
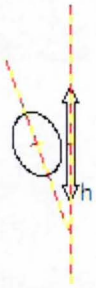
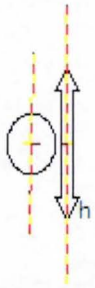
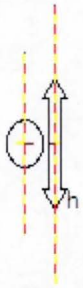
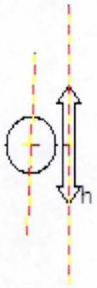
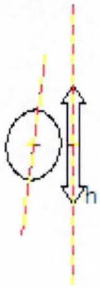
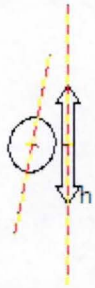
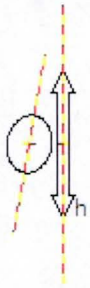
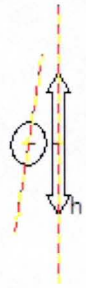
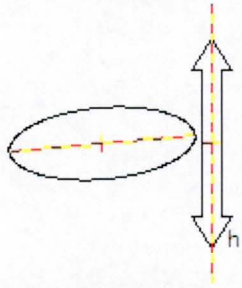
EXPLANATION OF ERROR ELLIPSES

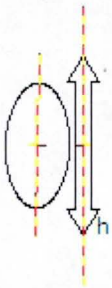
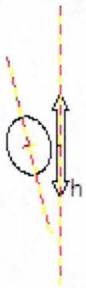
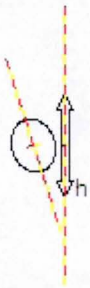
The ellipses are graphical representations of an adjusted point's horizontal coordinate standard errors and the covariant term between them. The standard error for ellipsoid and / or orthometric heights is shown by the arrows to the right of the ellipse. The scale of these plots is indicated by the tick marks running through the ellipses and arrows, and shown in block below the ellipse along with the horizontal and vertical scalars.
The point name is located in the block above the ellipses and arrows. The angle made by the major axis of the ellipse is shown on the lower left side of the ellipse.

Point Error Ellipses

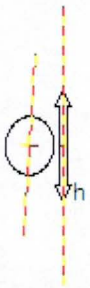
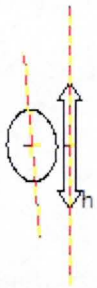
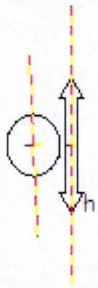
PP18	PP20	PP21
 -82°	 81°	 75°
Tick Size: 0.0010m Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
PP17A	**PP12**	**PP15**
 -69°	 89°	 90°
Tick Size: 0.0010m Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
PP4	**PP08**	**PP02**
 87°	 82°	 78°
Tick Size: 0.0010m Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		

4JH5	PP14	PP16
 79°	 81°	 5°

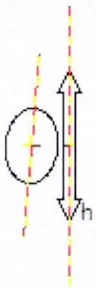
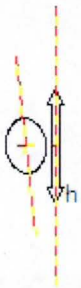
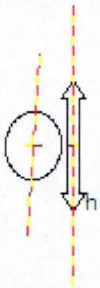
Tick Size: 0.0010m Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ

4KH3	PP11	PP09
 88°	 -75°	 -72°

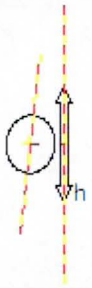
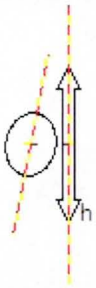
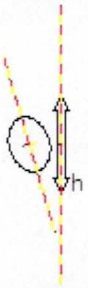
Tick Size: 0.0010m Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ

PP06	PP13	PP5
 86°	 -85°	 -87°

Tick Size: 0.0010m Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ

PP7	PP19	4JJ2
 85°	 -84°	 85°

Tick Size: 0.0010m Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ

PP03	PP01	PP10
 84°	 79°	 -73°
Tick Size: 0.0010m Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		

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Covariant Terms

Adjustment performed in WGS-84

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
4KJ2	PP18	**Az.**	54°50'09.0665"	0°00'00.2773"	1:895104	1:895104
		ΔHt.	13.703m	0.006m		
		ΔElev.	?	?		
		Dist.	2072.656m	0.002m		
4KJ2	PP17A	**Az.**	219°53'20.9938"	0°00'00.4075"	1:602273	1:602273
		ΔHt.	-9.348m	0.006m		
		ΔElev.	?	?		
		Dist.	1296.052m	0.002m		
4KJ2	PP16	**Az.**	100°55'10.0816"	0°00'00.1832"	1:545288	1:545288
		ΔHt.	-16.880m	0.011m		
		ΔElev.	?	?		
		Dist.	3953.063m	0.007m		
4KJ2	PP11	**Az.**	146°47'42.5983"	0°00'00.0822"	1:1988397	1:1988397
		ΔHt.	-57.823m	0.005m		
		ΔElev.	?	?		
		Dist.	4721.147m	0.002m		
4KJ2	PP09	**Az.**	194°21'23.2543"	0°00'00.0939"	1:1998968	1:1998968
		ΔHt.	-52.634m	0.005m		
		ΔElev.	?	?		
		Dist.	4272.349m	0.002m		
4KJ2	4KI2	**Az.**	118°47'58.3310"	0°00'00.0000"	1:0	1:0
		ΔHt.	-36.960m	0.000m		
		ΔElev.	?	?		
		Dist.	4473.963m	0.000m		

4KJ2	PP19	**Az.**	76°37'09.5856"	0°00'00.0996"	1:2754821	1:2754821
		ΔHt.	5.645m	0.006m		
		ΔElev.	?	?		
		Dist.	4750.685m	0.002m		
4KJ2	PP10	**Az.**	154°58'08.4223"	0°00'00.1236"	1:1233801	1:1233801
		ΔHt.	-37.447m	0.005m		
		ΔElev.	?	?		
		Dist.	2852.915m	0.002m		
PP18	PP16	**Az.**	131°37'15.0996"	0°00'00.4322"	1:502258	1:502258
		ΔHt.	-30.583m	0.012m		
		ΔElev.	?	?		
		Dist.	2925.180m	0.006m		
PP18	4KI2	**Az.**	146°23'49.6283"	0°00'00.1178"	1:1435293	1:1435293
		ΔHt.	-50.663m	0.006m		
		ΔElev.	?	?		
		Dist.	4021.401m	0.003m		
PP18	PP19	**Az.**	91°51'17.8212"	0°00'00.2195"	1:1281879	1:1281879
		ΔHt.	-8.058m	0.007m		
		ΔElev.	?	?		
		Dist.	2928.833m	0.002m		
PP20	PP21	**Az.**	86°35'57.1484"	0°00'00.4103"	1:671138	1:671138
		ΔHt.	-54.442m	0.012m		
		ΔElev.	?	?		
		Dist.	2775.427m	0.004m		
PP20	PP15	**Az.**	164°20'15.0266"	0°00'00.3158"	1:572712	1:572712
		ΔHt.	-25.411m	0.007m		
		ΔElev.	?	?		
		Dist.	1804.266m	0.003m		
PP20	4KH3	**Az.**	5°43'58.0067"	0°00'00.3566"	1:308207	1:308207
		ΔHt.	19.321m	0.008m		
		ΔElev.	?	?		

		Dist.	1621.103m	0.005m		
PP20	PP19	**Az.**	287°18'45.3318"	0°00'00.2835"	1:968673	1:968673
		ΔHt.	29.233m	0.007m		
		ΔElev.	?	?		
		Dist.	2427.429m	0.003m		
PP21	PP15	**Az.**	230°13'31.0024"	0°00'00.3106"	1:586547	1:586547
		ΔHt.	29.032m	0.012m		
		ΔElev.	?	?		
		Dist.	2971.762m	0.005m		
PP21	4KH3	**Az.**	299°03'23.8860"	0°00'00.4557"	1:680226	1:680226
		ΔHt.	73.763m	0.013m		
		ΔElev.	?	?		
		Dist.	2983.719m	0.004m		
PP21	PP19	**Az.**	276°16'20.0464"	0°00'00.2232"	1:1303434	1:1303434
		ΔHt.	83.675m	0.012m		
		ΔElev.	?	?		
		Dist.	5118.472m	0.004m		
PP17A	PP11	**Az.**	130°51'32.7568"	0°00'00.0977"	1:1798208	1:1798208
		ΔHt.	-48.475m	0.006m		
		ΔElev.	?	?		
		Dist.	4517.768m	0.003m		
PP17A	PP09	**Az.**	184°08'43.5207"	0°00'00.1300"	1:1274457	1:1274457
		ΔHt.	-43.286m	0.006m		
		ΔElev.	?	?		
		Dist.	3152.756m	0.002m		
PP17A	PP10	**Az.**	127°57'40.2755"	0°00'00.1597"	1:1108259	1:1108259
		ΔHt.	-28.099m	0.005m		
		ΔElev.	?	?		
		Dist.	2585.393m	0.002m		
PP12	PP15	**Az.**	47°16'43.7468"	0°00'00.1179"	1:1710706	1:1710706
		ΔHt.	7.007m	0.009m		

		ΔElev.	?	?		
		Dist.	3447.250m	0.002m		
PP12	PP14	**Az.**	90°32'16.8713"	0°00'00.0991"	1:2481016	1:2481016
		ΔHt.	-47.075m	0.008m		
		ΔElev.	?	?		
		Dist.	4891.763m	0.002m		
PP12	4KG2	**Az.**	72°17'27.3165"	0°00'00.0644"	1:3806804	1:3806804
		ΔHt.	6.866m	0.008m		
		ΔElev.	?	?		
		Dist.	7945.015m	0.002m		
PP12	PP13	**Az.**	72°08'06.7045"	0°00'00.1891"	1:1487293	1:1487293
		ΔHt.	-9.421m	0.007m		
		ΔElev.	?	?		
		Dist.	3351.385m	0.002m		
PP15	PP14	**Az.**	135°19'31.3411"	0°00'00.1060"	1:2085646	1:2085646
		ΔHt.	-54.082m	0.007m		
		ΔElev.	?	?		
		Dist.	3354.305m	0.002m		
PP15	4KH3	**Az.**	354°27'33.5500"	0°00'00.1522"	1:702521	1:702521
		ΔHt.	44.731m	0.007m		
		ΔElev.	?	?		
		Dist.	3366.009m	0.005m		
PP15	4KG2	**Az.**	89°07'39.2725"	0°00'00.0816"	1:3248912	1:3248912
		ΔHt.	-0.141m	0.007m		
		ΔElev.	?	?		
		Dist.	5036.561m	0.002m		
PP15	PP13	**Az.**	153°22'59.4920"	0°00'00.3053"	1:521234	1:521234
		ΔHt.	-16.428m	0.007m		
		ΔElev.	?	?		
		Dist.	1466.166m	0.003m		
PP15	PP19	**Az.**	311°15'15.0910"	0°00'00.1090"	1:1893703	1:1893703

		ΔHt.	54.644m	0.005m		
		ΔElev.	?	?		
		Dist.	3730.326m	0.002m		
PP4	PP08	**Az.**	352°26'31.8155"	0°00'00.1207"	1:1339815	1:1339815
		ΔHt.	30.217m	0.005m		
		ΔElev.	?	?		
		Dist.	3196.573m	0.002m		
PP4	PP02	**Az.**	89°39'15.3896"	0°00'00.1239"	1:2095861	1:2095861
		ΔHt.	2.541m	0.006m		
		ΔElev.	?	?		
		Dist.	4017.525m	0.002m		
PP4	PP09	**Az.**	330°27'45.2446"	0°00'00.0756"	1:2530406	1:2530406
		ΔHt.	50.830m	0.005m		
		ΔElev.	?	?		
		Dist.	5485.593m	0.002m		
PP4	PP06	**Az.**	47°23'29.9007"	0°00'00.1572"	1:1374077	1:1374077
		ΔHt.	14.016m	0.005m		
		ΔElev.	?	?		
		Dist.	2618.887m	0.002m		
PP4	PP5	**Az.**	288°29'14.1465"	0°00'00.1320"	1:2002807	1:2002807
		ΔHt.	8.164m	0.005m		
		ΔElev.	?	?		
		Dist.	2730.855m	0.001m		
PP4	4JJ2	**Az.**	317°00'44.0321"	0°00'00.1217"	1:1913168	1:1913168
		ΔHt.	27.147m	0.005m		
		ΔElev.	?	?		
		Dist.	3780.842m	0.002m		
PP4	PP03	**Az.**	91°25'28.6688"	0°00'00.1900"	1:1369822	1:1369822
		ΔHt.	-1.348m	0.005m		
		ΔElev.	?	?		
		Dist.	2252.261m	0.002m		

PP4	4II2	**Az.**	147°44'35.2951"	0°00'00.1596"	1:1235791	1:1235791
		ΔHt.	-13.856m	0.006m		
		ΔElev.	?	?		
		Dist.	2807.845m	0.002m		
PP08	PP09	**Az.**	305°04'31.3238"	0°00'00.1845"	1:1450699	1:1450699
		ΔHt.	20.614m	0.005m		
		ΔElev.	?	?		
		Dist.	2790.809m	0.002m		
PP08	PP5	**Az.**	223°17'21.5544"	0°00'00.1274"	1:1363945	1:1363945
		ΔHt.	-22.053m	0.005m		
		ΔElev.	?	?		
		Dist.	3163.840m	0.002m		
PP08	4JJ2	**Az.**	259°24'50.6117"	0°00'00.2261"	1:1114639	1:1114639
		ΔHt.	-3.070m	0.005m		
		ΔElev.	?	?		
		Dist.	2194.840m	0.002m		
PP02	4JH5	**Az.**	53°24'46.1561"	0°00'00.0762"	1:2716327	1:2716327
		ΔHt.	9.846m	0.005m		
		ΔElev.	?	?		
		Dist.	4836.910m	0.002m		
PP02	PP14	**Az.**	38°45'26.2094"	0°00'00.0542"	1:3354208	1:3354208
		ΔHt.	-2.158m	0.006m		
		ΔElev.	?	?		
		Dist.	6594.076m	0.002m		
PP02	PP06	**Az.**	309°56'37.9757"	0°00'00.1778"	1:1261570	1:1261570
		ΔHt.	11.474m	0.006m		
		ΔElev.	?	?		
		Dist.	2725.045m	0.002m		
PP02	PP7	**Az.**	30°04'39.6987"	0°00'00.1186"	1:1352817	1:1352817
		ΔHt.	-18.439m	0.006m		
		ΔElev.	?	?		

		Dist.	3507.101m	0.003m		
PP02	PP03	**Az.**	267°25'21.0059"	0°00'00.2781"	1:936232	1:936232
		ΔHt.	-3.889m	0.005m		
		ΔElev.	?	?		
		Dist.	1767.709m	0.002m		
PP02	PP01	**Az.**	79°35'39.4429"	0°00'00.0974"	1:2686096	1:2686096
		ΔHt.	2.037m	0.005m		
		ΔElev.	?	?		
		Dist.	4286.791m	0.002m		
PP02	4II2	**Az.**	226°25'24.2446"	0°00'00.1210"	1:1602202	1:1602202
		ΔHt.	-16.397m	0.006m		
		ΔElev.	?	?		
		Dist.	3478.302m	0.002m		
4JH5	PP14	**Az.**	6°11'37.8134"	0°00'00.1191"	1:1208987	1:1208987
		ΔHt.	-12.004m	0.004m		
		ΔElev.	?	?		
		Dist.	2272.240m	0.002m		
4JH5	PP7	**Az.**	274°06'29.6022"	0°00'00.2524"	1:1272461	1:1272461
		ΔHt.	-28.285m	0.005m		
		ΔElev.	?	?		
		Dist.	2131.549m	0.002m		
4JH5	PP01	**Az.**	171°03'47.6036"	0°00'00.1274"	1:1250011	1:1250011
		ΔHt.	-7.808m	0.004m		
		ΔElev.	?	?		
		Dist.	2134.800m	0.002m		
PP14	4KG2	**Az.**	47°25'01.0346"	0°00'00.0904"	1:2166534	1:2166534
		ΔHt.	53.941m	0.007m		
		ΔElev.	?	?		
		Dist.	3637.446m	0.002m		
PP14	PP13	**Az.**	302°17'13.2617"	0°00'00.2763"	1:844751	1:844751
		ΔHt.	37.654m	0.007m		

		ΔElev.	?	?		
		Dist.	2012.348m	0.002m		
PP14	PP7	**Az.**	228°23'16.9377"	0°00'00.1524"	1:1333522	1:1333522
		ΔHt.	-16.281m	0.006m		
		ΔElev.	?	?		
		Dist.	3171.609m	0.002m		
PP14	PP01	**Az.**	178°52'02.3384"	0°00'00.0758"	1:2055116	1:2055116
		ΔHt.	4.195m	0.005m		
		ΔElev.	?	?		
		Dist.	4368.716m	0.002m		
PP16	4KI2	**Az.**	178°25'52.7041"	0°00'01.0966"	1:470544	1:470544
		ΔHt.	-20.080m	0.011m		
		ΔElev.	?	?		
		Dist.	1407.034m	0.003m		
PP16	PP19	**Az.**	21°50'59.7526"	0°00'00.7093"	1:437080	1:437080
		ΔHt.	22.525m	0.011m		
		ΔElev.	?	?		
		Dist.	1990.952m	0.005m		
4KH3	PP19	**Az.**	250°14'31.2089"	0°00'00.3549"	1:945589	1:945589
		ΔHt.	9.912m	0.007m		
		ΔElev.	?	?		
		Dist.	2634.497m	0.003m		
PP11	PP09	**Az.**	267°03'08.7637"	0°00'00.1171"	1:2311907	1:2311907
		ΔHt.	5.189m	0.005m		
		ΔElev.	?	?		
		Dist.	3649.684m	0.002m		
PP11	PP10	**Az.**	314°44'33.7368"	0°00'00.1530"	1:1099653	1:1099653
		ΔHt.	20.376m	0.004m		
		ΔElev.	?	?		
		Dist.	1940.089m	0.002m		
4KG2	PP13	**Az.**	252°27'00.0299"	0°00'00.1332"	1:2173588	1:2173588

		ΔHt.	-16.287m	0.006m		
		ΔElev.	?	?		
		Dist.	4593.651m	0.002m		
PP09	PP5	**Az.**	178°18'21.8411"	0°00'00.0918"	1:1696584	1:1696584
		ΔHt.	-42.667m	0.005m		
		ΔElev.	?	?		
		Dist.	3908.390m	0.002m		
PP09	4JJ2	**Az.**	176°22'46.3908"	0°00'00.1829"	1:856486	1:856486
		ΔHt.	-23.684m	0.005m		
		ΔElev.	?	?		
		Dist.	2010.945m	0.002m		
PP09	PP10	**Az.**	55°33'26.9063"	0°00'00.1492"	1:1837375	1:1837375
		ΔHt.	15.187m	0.005m		
		ΔElev.	?	?		
		Dist.	2748.007m	0.001m		
PP06	PP5	**Az.**	258°39'31.2938"	0°00'00.1080"	1:2368796	1:2368796
		ΔHt.	-5.852m	0.007m		
		ΔElev.	?	?		
		Dist.	4607.578m	0.002m		
PP06	PP03	**Az.**	169°57'49.1633"	0°00'00.1908"	1:866066	1:866066
		ΔHt.	-15.364m	0.005m		
		ΔElev.	?	?		
		Dist.	1857.427m	0.002m		
PP06	4II2	**Az.**	185°54'56.8161"	0°00'00.1009"	1:1701090	1:1701090
		ΔHt.	-27.871m	0.006m		
		ΔElev.	?	?		
		Dist.	4169.555m	0.002m		
4KI2	PP19	**Az.**	12°10'50.2729"	0°00'00.1104"	1:1479962	1:1479962
		ΔHt.	42.605m	0.006m		
		ΔElev.	?	?		
		Dist.	3329.383m	0.002m		

PP5	4JJ2	**Az.**	0°20'45.7656"	0°00'00.1805"	1:850215	1:850215
		ΔHt.	18.983m	0.005m		
		ΔElev.	?	?		
		Dist.	1899.784m	0.002m		
PP5	PP03	**Az.**	100°45'57.0406"	0°00'00.0990"	1:2558234	1:2558234
		ΔHt.	-9.512m	0.006m		
		ΔElev.	?	?		
		Dist.	4928.488m	0.002m		
PP5	4II2	**Az.**	128°23'01.3483"	0°00'00.0957"	1:2197641	1:2197641
		ΔHt.	-22.019m	0.007m		
		ΔElev.	?	?		
		Dist.	5216.931m	0.002m		
PP7	PP01	**Az.**	132°36'27.6014"	0°00'00.1451"	1:1547497	1:1547497
		ΔHt.	20.476m	0.006m		
		ΔElev.	?	?		
		Dist.	3339.922m	0.002m		
PP03	4II2	**Az.**	198°00'20.2098"	0°00'00.1737"	1:1010325	1:1010325
		ΔHt.	-12.507m	0.006m		
		ΔElev.	?	?		
		Dist.	2437.704m	0.002m		

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SECTION 4.1.2

GPS BASELINE PROCESSING SUMMARY

Baseline Processing Report

Project : TGO_1583_GDACS_METERS

User name	cfischer	**Date & Time**	5:41:21 AM 8/30/2005
Coordinate System	Site	**Zone**	Zone from data collector
Project Datum	(WGS 84)		
Vertical Datum	NAVD88	**Geoid Model**	GEOID99 (Conus)
Coordinate Units	Meters		
Distance Units	Meters		
Height Units	Meters		

Processing Summary

ID	From	To	Baseline Length	Solution Type	Ratio	Reference Variance	RMS
B16	PP21	4KH3	2984.886m	L1 fixed	25.2	3.068	0.006m
B9	PP20	4KH3	1621.360m	L1 fixed	26.3	1.877	0.004m
B2	PP20	PP21	2776.189m	L1 fixed	26.6	3.815	0.007m
B53	PP16	PP19	1991.258m	L1 fixed	35.9	1.493	0.004m
B54	PP19	4KH3	2634.756m	L1 fixed	86.5	1.924	0.004m
B40	PP19	PP20	2427.824m	L1 fixed	282.1	2.568	0.005m
B46	PP18	PP19	2929.117m	L1 fixed	54.7	1.065	0.003m
B15	PP18	PP16	2925.605m	L1 fixed	25.0	2.018	0.005m
B47	PP19	PP21	5119.595m	Iono free fixed	24.0	0.710	0.009m
B1	4KJ2	PP18	2072.895m	L1 fixed	22.4	1.280	0.004m
B39	4KJ2	PP19	4751.126m	L1 fixed	55.0	0.860	0.003m
B8	4KJ2	PP16	3953.458m	L1 fixed	35.9	1.459	0.005m
B35	4KG2	PP13	4594.055m	L1 fixed	65.2	1.271	0.004m
B23	PP20	PP15	1804.601m	L1 fixed	26.0	1.753	0.004m
B24	PP15	PP13	1466.379m	L1 fixed	77.8	1.508	0.004m
B28	PP21	PP15	2972.148m	L1 fixed	34.8	2.408	0.005m
B62	PP13	PP14	2012.857m	L1 fixed	59.3	1.060	0.003m
B56	4KG2	PP14	3638.130m	L1 fixed	178.0	1.085	0.003m
B42	PP15	PP14	3355.006m	L1 fixed	234.0	0.828	0.003m
B34	4KH3	PP15	3366.601m	L1 fixed	66.5	1.984	0.004m
B11	PP15	4KG2	5036.979m	Iono free fixed	88.8	0.411	0.007m

B61	PP19	PP15	3731.056m	L1 fixed	87.6	1.322	0.004m
B60	4KI2	PP19	3329.948m	L1 fixed	28.1	1.487	0.004m
B33	PP16	4KI2	1407.300m	L1 fixed	43.7	0.937	0.003m
B27	PP18	4KI2	4022.079m	L1 fixed	13.1	2.341	0.005m
B4	PP12	PP15	3447.538m	L1 fixed	22.3	2.007	0.005m
B68	PP11	PP10	1940.358m	L1 fixed	176.8	0.564	0.003m
B49	PP12	PP14	4892.369m	L1 fixed	119.0	1.449	0.004m
B29	PP12	PP13	3351.668m	L1 fixed	53.9	1.771	0.005m
B7	4JH5	PP14	2272.442m	L1 fixed	172.8	0.767	0.003m
B32	4JH5	PP7	2131.894m	L1 fixed	102.2	0.808	0.003m
B26	PP14	PP7	3171.881m	L1 fixed	59.9	2.022	0.005m
B52	4JH5	PP01	2134.977m	L1 fixed	14.0	0.968	0.003m
B65	PP7	PP01	3340.233m	L1 fixed	92.0	0.711	0.003m
B59	PP2	PP01	4287.113m	L1 fixed	14.6	1.633	0.004m
B38	PP2	PP7	3507.404m	L1 fixed	60.9	1.075	0.003m
B21	4JH5	PP2	4837.286m	L1 fixed	26.4	1.854	0.005m
B45	PP14	PP01	4369.045m	L1 fixed	81.4	1.590	0.004m
B14	PP14	PP2	6594.573m	Iono free fixed	64.9	0.176	0.005m
B58	PP06	PP03	1857.632m	L1 fixed	11.1	1.534	0.004m
B51	PP02	PP03	1767.843m	L1 fixed	50.3	1.835	0.004m
B20	PP02	PP06	2725.276m	L1 fixed	21.2	1.774	0.005m
B44	PP4	PP03	2252.428m	L1 fixed	15.6	1.665	0.004m
B13	PP4	PP06	2619.122m	L1 fixed	32.0	2.190	0.005m
B5	PP4	PP8	3196.959m	L1 fixed	48.1	1.015	0.003m
B6	PP4	PP02	4017.824m	L1 fixed	13.4	3.135	0.006m
B18	PP12	4KG2	7945.672m	Iono free fixed	45.9	0.599	0.009m
B74	PP03	4ii2	2437.912m	L1 fixed	25.5	1.072	0.005m
B71	PP02	4ii2	3478.594m	L1 fixed	15.2	1.453	0.005m
B70	PP4	4ii2	2808.082m	L1 fixed	18.9	1.663	0.006m
B72	PP06	4ii2	4169.956m	L1 fixed	21.5	1.574	0.005m
B3	4KJ2	PP17A	1296.202m	L1 fixed	109.7	1.008	0.003m
B67	4KJ2	PP10	2853.411m	L1 fixed	18.9	0.986	0.003m
B66	PP17A	PP10	2585.771m	L1 fixed	106.0	0.852	0.003m
B69	PP09	PP10	2748.280m	L1 fixed	11.5	0.861	0.003m
B55	PP11	PP09	3649.988m	L1 fixed	118.6	0.818	0.003m
B41	PP17A	PP09	3153.325m	L1 fixed	71.1	1.352	0.004m
B10	PP17A	PP11	4518.415m	L1 fixed	72.7	1.199	0.004m
B48	4KJ2	PP09	4273.043m	L1 fixed	274.0	2.120	0.005m
B22	4KJ2	4KI2	4474.514m	L1 fixed	36.5	1.219	0.004m
B17	4KJ2	PP11	4721.908m	L1 fixed	230.7	1.537	0.004m

B63	PP5	4JJ2	1900.026m	L1 fixed	97.5	0.803	0.003m
B57	PP09	4JJ2	2011.246m	L1 fixed	97.5	0.685	0.003m
B50	PP8	4JJ2	2195.015m	L1 fixed	97.9	0.851	0.003m
B36	PP09	PP5	3908.931m	L1 fixed	41.3	1.204	0.003m
B30	PP8	PP5	3164.162m	L1 fixed	43.5	1.112	0.003m
B19	PP8	PP09	2791.109m	L1 fixed	81.7	1.054	0.003m
B43	PP4	4JJ2	3781.227m	L1 fixed	53.9	1.126	0.004m
B25	PP4	PP5	2731.071m	L1 fixed	40.3	1.723	0.005m
B64	PP5	PP03	4928.865m	L1 fixed	282.2	3.951	0.007m
B37	PP06	PP5	4607.931m	L1 fixed	15.7	3.923	0.007m
B12	PP4	PP09	5486.266m	Iono free fixed	29.7	0.329	0.006m
B73	PP5	4ii2	5217.367m	Iono free fixed	15.7	0.469	0.010m

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SECTION 4.1.3

GPS CLOSURE LOG REPORT

Loop Closure Report

Project : TGO_1583_GDACS_METERS

User name	cfischer	**Date & Time**	4:10:38 PM 8/30/2005
Coordinate System	Site	**Zone**	Zone from data collector
Project Datum	(WGS 84)		
Vertical Datum	NAVD88	**Geoid Model**	GEOID99 (Conus)
Coordinate Units	Meters		
Distance Units	Meters		
Height Units	Meters		

Contents

Summary

Failed Loops

Observations In Failed Loops

Occupations In Failed Loops

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Summary

Report includes both active and inactive solutions (if any).
Report applies to whole database.

Legs in loop: 3
Number of Loops: 76
Number Passed: 75
Number Failed: 1

	Length	ΔHoriz	ΔVert	PPM
Pass/Fail Criteria		0.015m	0.020m	
Best		0.000m	0.000m	0.049
Worst		0.011m	-0.021m	2.484
Average Loop	9931.269m	0.003m	-0.002m	0.540
Standard Deviation	2312.435m	0.003m	0.006m	0.510

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Failed Loops

GPS Loop 26:
PP21: 4KH3: PP15: PP21

Observations:

Baseline ID	Solution ID	From	To	Solution Type	Start Time
B16	S94	PP21	4KH3	L1 fixed	11:31:02 26 May 2005
B34	S96	4KH3	PP15	L1 fixed	10:23:47 26 May 2005
B28	S95	PP21	PP15	L1 fixed	11:31:02 26 May 2005

Failed combinations for loop 26:

	Length	ΔHoriz	ΔVert	PPM
S94 - S96 - S95	**9323.634m**	**0.011m**	**-0.021m**	**2.484**

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Observations In Failed Loops

Baseline ID	Solution ID	From	To	Solution Type	Ratio	Ref var	RMS	# of Occurrences
B16	S94	PP21	4KH3	L1 fixed	25.2	3.068	0.006m	1
B28	S95	PP21	PP15	L1 fixed	34.8	2.408	0.005m	1
B34	S96	4KH3	PP15	L1 fixed	66.5	1.984	0.004m	1

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Occupations In Failed Loops

Occupation ID	Point	Start Time	# of Occurrences
Oc23	PP15	10:23:47 26 May 2005	2
Oc16	4KH3	10:18:02 26 May 2005	2
Oc8	PP21	11:31:02 26 May 2005	2

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SECTION 5

METADATA FOR CONTROL STATIONS

- NGS RECOVERY STATIONS
- GPS LOG SHEETS
- "GO TO" SHEETS BY "GDACS"
- "SKY" PLOT SHEETS BY "GDACS
- SUPPORTING PICTURES

4i2

The NGS Data Sheet

See file dsdata.txt for more information about the datasheet.

```
DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 7.23
1         National Geodetic Survey,   Retrieval Date = AUGUST 31, 2005
 AJ3864 ***********************************************************************
 AJ3864  HT_MOD       -  This is a Height Modernization Survey Station.
 AJ3864  DESIGNATION -  4II2
 AJ3864  PID          -  AJ3864
 AJ3864  STATE/COUNTY-  AZ/MARICOPA
 AJ3864  USGS QUAD    -  DAGGS TANK (1988)
 AJ3864
 AJ3864                          *CURRENT SURVEY CONTROL
 AJ3864  ______________________________________________________________________
 AJ3864* NAD 83(1992)-  33 43 17.06273(N)    112 43 58.58041(W)     ADJUSTED
 AJ3864* NAVD 88      -       494.41   (meters)    1622.1    (feet)  GPS OBS
 AJ3864  ______________________________________________________________________
 AJ3864  X            -  -2,052,310.083 (meters)                     COMP
 AJ3864  Y            -  -4,898,293.453 (meters)                     COMP
 AJ3864  Z            -   3,521,043.789 (meters)                     COMP
 AJ3864  LAPLACE CORR-            1.82  (seconds)                    DEFLEC99
 AJ3864  ELLIP HEIGHT-          464.20  (meters)          (04/12/01) GPS OBS
 AJ3864  GEOID HEIGHT-          -30.17  (meters)                     GEOID03
 AJ3864
 AJ3864  HORZ ORDER   -  B
 AJ3864  ELLP ORDER   -  THIRD      CLASS II
 AJ3864
 AJ3864.The horizontal coordinates were established by GPS observations
 AJ3864.and adjusted by the National Geodetic Survey in April 2001.
 AJ3864
 AJ3864.The orthometric height was determined by GPS observations and a
 AJ3864.high-resolution geoid model using precise GPS observation and
 AJ3864.processing techniques.
 AJ3864
 AJ3864.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 AJ3864
 AJ3864.The Laplace correction was computed from DEFLEC99 derived deflections.
 AJ3864
 AJ3864.The ellipsoidal height was determined by GPS observations
 AJ3864.and is referenced to NAD 83.
 AJ3864
 AJ3864.The geoid height was determined by GEOID03.
 AJ3864
 AJ3864;                    North         East     Units Scale Factor Converg.
 AJ3864;SPC AZ C      -   302,054.537   137,710.138   MT  0.99997053   -0 27 11.4
 AJ3864;UTM  12       - 3,732,615.013   339,436.826   MT  0.99991783   -0 57 44.1
 AJ3864
 AJ3864!              -  Elev Factor  x  Scale Factor =   Combined Factor
 AJ3864!SPC AZ C      -   0.99992713  x   0.99997053  =   0.99989766
 AJ3864!UTM  12       -   0.99992713  x   0.99991783  =   0.99984497
 AJ3864
 AJ3864                          SUPERSEDED SURVEY CONTROL
 AJ3864
 AJ3864.No superseded survey control is available for this station.
 AJ3864
 AJ3864_U.S. NATIONAL GRID SPATIAL ADDRESS: 12SUC3943732615(NAD 83)
```

```
AJ3864_MARKER: I = METAL ROD
AJ3864_SETTING: 15 = METAL ROD DRIVEN INTO GROUND. SEE TEXT FOR ADDITIONAL
AJ3864+WITH SETTING: INFORMATION.
AJ3864_STAMPING: 4II2 1999
AJ3864_MARK LOGO: MCDOT
AJ3864_PROJECTION: FLUSH
AJ3864_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3864_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3864+STABILITY: POSITION/ELEVATION WELL
AJ3864_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3864+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3864_ROD/PIPE-DEPTH:  0.9 meters
AJ3864_SLEEVE-DEPTH  :  0.8 meters
AJ3864
AJ3864  HISTORY     - Date     Condition        Report By
AJ3864  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3864
AJ3864                          STATION DESCRIPTION
AJ3864
AJ3864'DESCRIBED BY MARICOPA CO DOT 1999 (JJR)
AJ3864'THE STATION IS LOCATED ABOUT 23 MI (37.0 KM) WEST-NORTHWEST OF SUN
AJ3864'CITY WEST, TOWNSHIP 4 NORTH, RANGE 5 WEST, SECTION 2
AJ3864'OWNERSHIP - STATE LAND DEPARTMENT
AJ3864'TO REACH THE STATION FROM THE JUNCTION OF U.S.  60 (GRAND AVENUE) AND
AJ3864'PATTON ROAD DRIVE WEST ON PATTON ROAD 13.1 MI (21.1 KM) TO THE
AJ3864'INTERSECTION OF 299TH AVENUE AND PATTON ROAD, THENCE TURN LEFT ONTO
AJ3864'299TH AVENUE (DIRT ROAD) AND DRIVE SOUTHWESTERLY 1.4 MI (2.3 KM) PAST
AJ3864'SEVERAL RESIDENTIAL HOUSES TO A GATE IN A BARBED WIRE FENCE, THENCE
AJ3864'DRIVE THROUGH THE DATE AND CONTINUE DRIVING ON THE DIRT ROAD
AJ3864'SOUTHEASTERLY 0.6 MI (1.0 KM) TO A WASH, THENCE CROSS THE WASH AND
AJ3864'DRIVE EASTERLY 0.2 MI (0.3 KM) TO A GATE IN A BARBED WIRE FENCE,
AJ3864'THENCE DRIVE THROUGH THE GATE 13.5 FT (4.1 M) TO THE STATION 45 FT
AJ3864'(13.7 M) ON THE RIGHT
AJ3864'THE STATION IS MARKED BY AN ALUMINUM CAP COMPRESSED ON A 3.0 FOOT (0.9
AJ3864'M) STAINLESS STEEL ROD DRIVEN TO REFUSAL, ENCASED IN A 1 INCH GREASED
AJ3864'PVC SLEEVE ENCLOSED IN A 5 INCH PVC PIPE WITH A COUNTY LOGO ACCESS
AJ3864'COVER STAMPED 4II2 1999, SURROUNDED WITH A CONCRETE COLLAR FLUSH WITH
AJ3864'THE GROUND, WITNESSED BY A WHITE CARSONITE MARKER
AJ3864'STATION TIES -
AJ3864'13.5 FT (4.1 M) WEST OF A BARBED WIRE FENCE
AJ3864'45 FT (13.7 M) NORTH OF THE CENTERLINE OF THE DIRT ROAD
AJ3864'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3864'VISIT-WWW.MCDOT.MARICOPA.GOV       SEARCH KEYWORD  GDACS

*** retrieval complete.
Elapsed Time = 00:00:06
```

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: 4112
Receiver No: 6492
Day of Year: 186 2005
Session No:

Project Name: DAGGS WASH ADMP
Job number: 1583
Local Date: mo. July day 5th year 2005
Operator: C FISCHER

C/A CODE POSITION
Beg:
Lat: : 33 ° 43 ' 17.06 " N
Long: 112 ° 43 ' 58. " W
Ellip. Height: 464 M PDOP:
Ending:
Lat: 33 ° 43 ' 17.06 " N
Long: 112 ° 43 ' 58.58 " W
Ellip. Height: 462 M PDOP:

DC FILENAME: 1583-2744
TSC1 # 2744 & GPS FILENAME 2744 1860
Receiver Model: 5800
Antenna Type: 5800
Fixed Height Pole No:
Local-UTC Time Offset: MST= -7:00
Type of Survey: Fast Static
Actual= Start 18 : 05 . Stop: 18 : 30 . UTC
Beg. SV's Used: 1, 3, 11, 14, 15, 18, 19, 22, 25.
End SV's Used: 1, 11, 14, 15, 18, 19, 22, 25.

Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:
☐ ~~1.5625M(5.126~~SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)
ANT. S.N. 6492 1.791 Ant Phase Center

Weather Conditions: (Clear) P. Cloudy Overcast (Hot) Warm Cool (Calm) Breezy °F +/-

N

SEE GDACS Recovery sheets For the Area Map.

Type of Monument: NGS 3D MONUMENT Stamping:
Top of marker: ( ) flush .10 M (✓) above: ( ) below: Nat. Ground Detail Notes:

Rubbing Performed ( )Yes ( )No

Maricopa County Department of Transportation

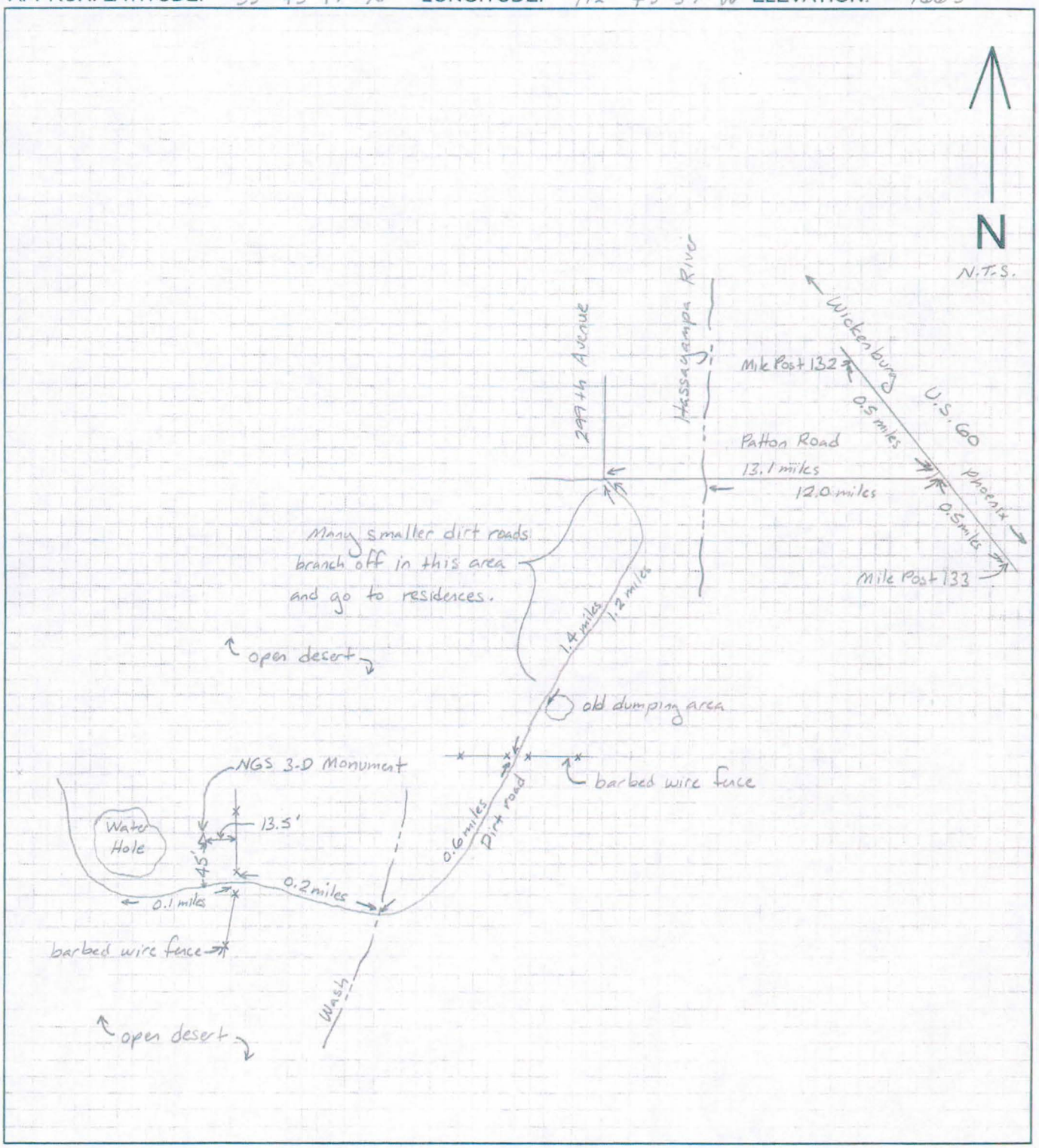
MONUMENT RECORD

STATION NAME: 4II2 4 LETTER ID: 4II2

APPROX. LOCATION: T 4N R 5W S 2 GILA AND SALT RIVER MERIDIAN AND BASELINE

AGENCY/FIRM: Wood / Patel SKETCH BY: Scott Nelson DATE: 10/5/99

APPROX. LATITUDE: 33° 43' 17" N LONGITUDE: 112° 43' 59" W ELEVATION: 1665



DESCRIPTION OF MONUMENT: NGS 3-D Monument - Type II

Rod depth = 3.0'

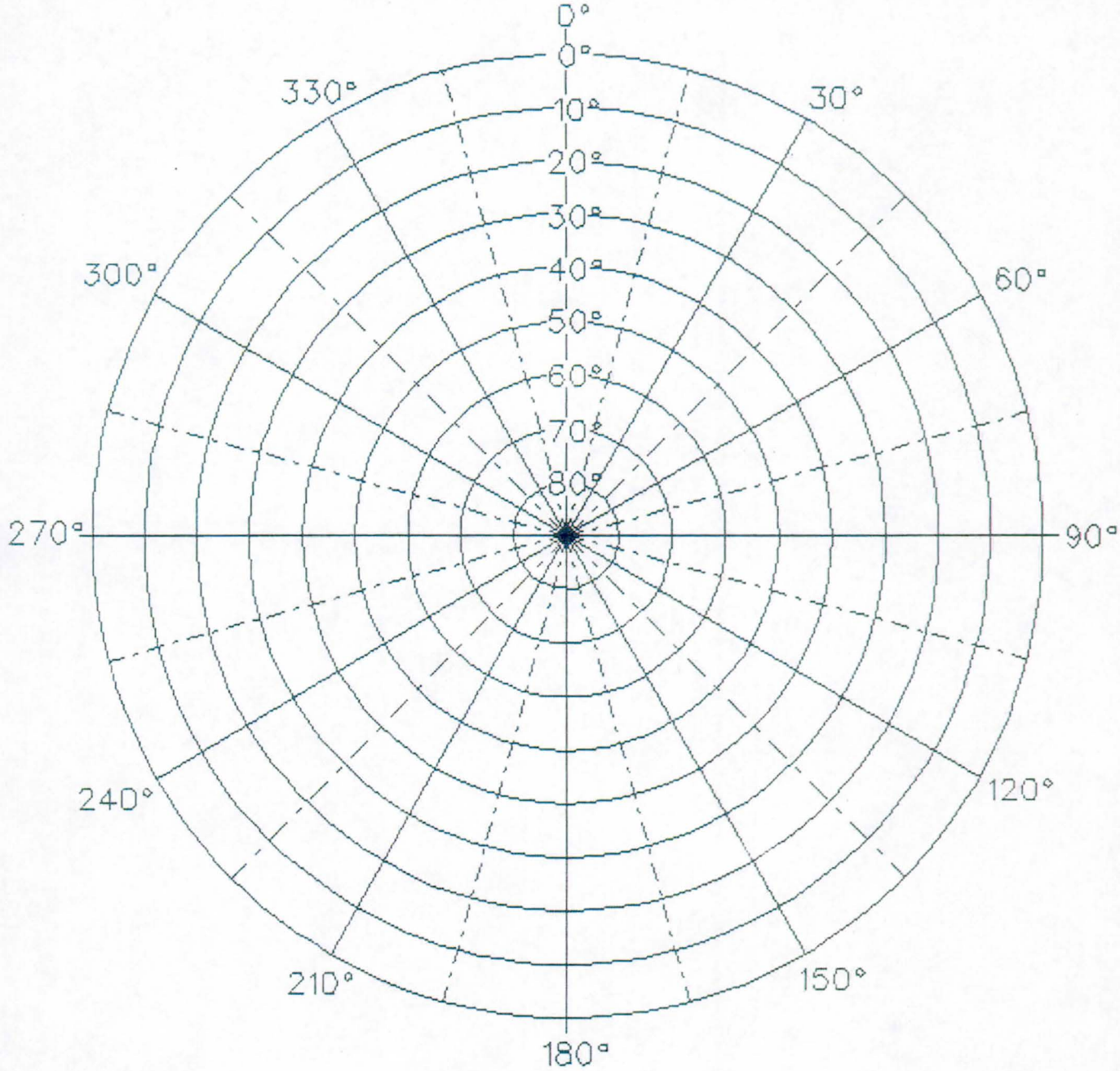
STATION VISIBILITY DIAGRAM

STATION NAME: 4II2 4 LETTER ID: 4II2

APPROXIMATE LOCATION: T 4N R 5W S 2 GILA AND SALT RIVER BASELINE AND MERIDIAN

AGENCY/FIRM: Wood / Patel DESCRIBED BY: Scott Nelson DATE: 10/5/99

LATITUDE: 33° 43' 17" N LONGITUDE: 112° 43' 59" W

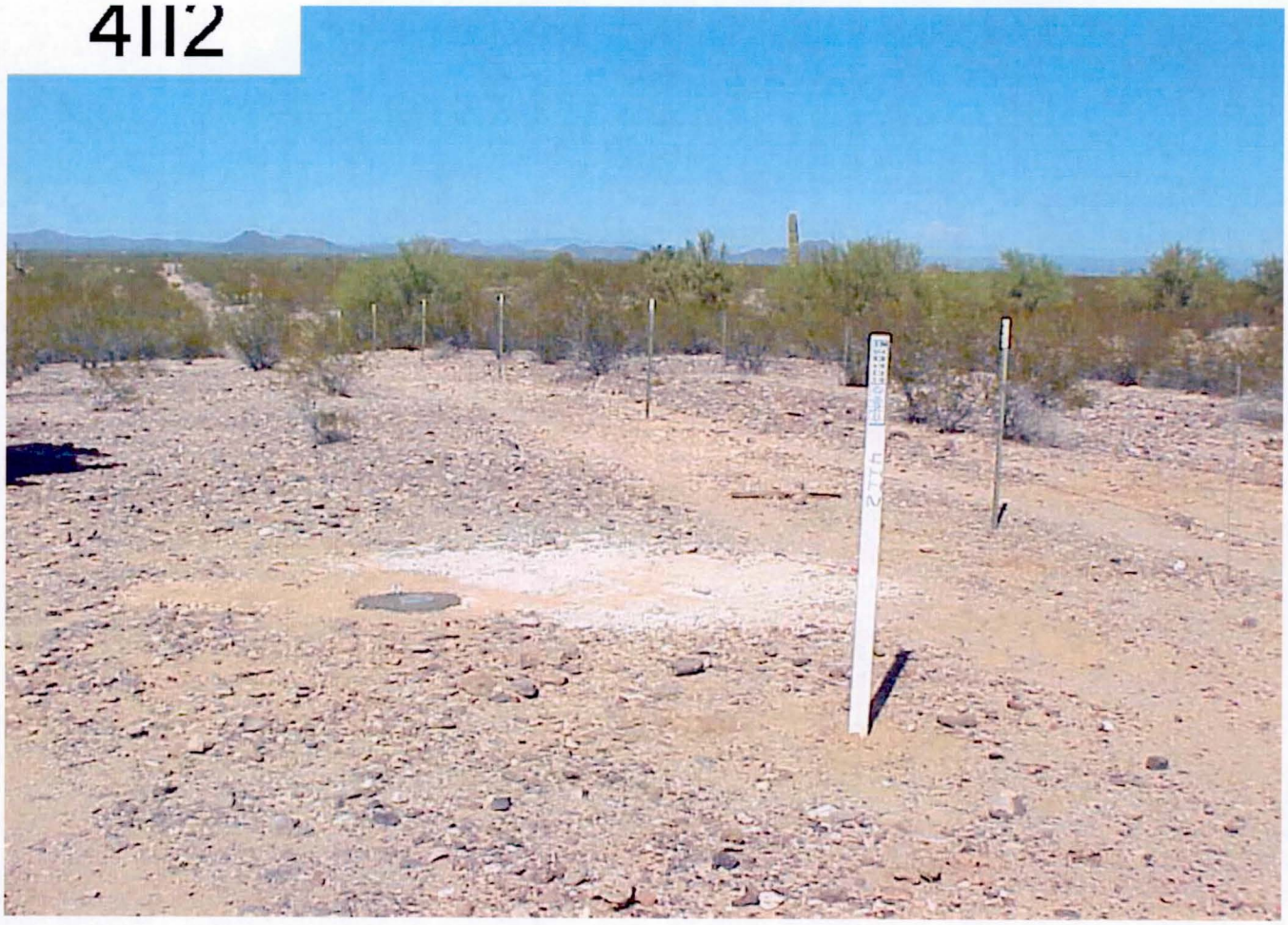


MONUMENT DESCRIPTION / COMMENTS: NGS 3-D Monument - Type II

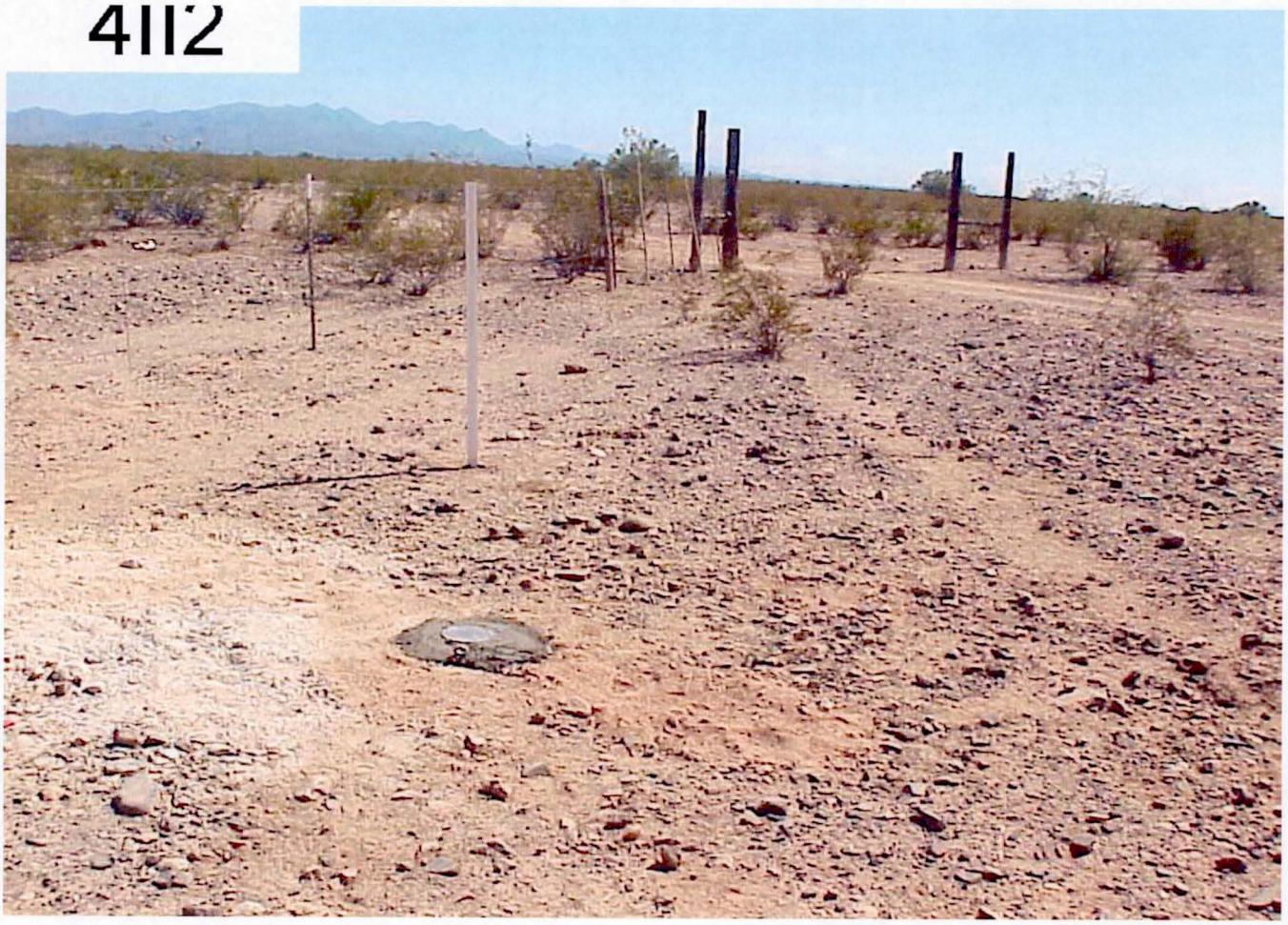
No visibility obstructions - open desert

http://www.mcdot.maricopa.gov/Construction/Construction Admin/Survey/CONSULTANT FILES/Station Visibilty Diagram.xls

4112



4112



4KG2

The NGS Data Sheet

See file dsdata.txt for more information about the datasheet.

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DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 7.23
1        National Geodetic Survey,   Retrieval Date = AUGUST 31, 2005
 AJ3877 ***********************************************************************
 AJ3877  HT_MOD       -  This is a Height Modernization Survey Station.
 AJ3877  DESIGNATION -  4KG2
 AJ3877  PID          -  AJ3877
 AJ3877  STATE/COUNTY-  AZ/MARICOPA
 AJ3877  USGS QUAD    -  WICKENBURG SW (1965)
 AJ3877
 AJ3877                          *CURRENT SURVEY CONTROL
 AJ3877  ___________________________________________________________________
 AJ3877* NAD 83(1992)-  33 48 41.63085(N)    112 37 56.10679(W)     ADJUSTED
 AJ3877* NAVD 88      -       562.26   (meters)    1844.7    (feet)  GPS OBS
 AJ3877  ___________________________________________________________________
 AJ3877  X            -  -2,041,581.817 (meters)                     COMP
 AJ3877  Y            -  -4,896,814.211 (meters)                     COMP
 AJ3877  Z            -   3,529,395.549 (meters)                     COMP
 AJ3877  LAPLACE CORR-           2.05  (seconds)                    DEFLEC99
 AJ3877  ELLIP HEIGHT-         532.38  (meters)          (04/12/01) GPS OBS
 AJ3877  GEOID HEIGHT-         -29.84  (meters)                     GEOID03
 AJ3877
 AJ3877  HORZ ORDER   -  B
 AJ3877  ELLP ORDER   -  THIRD      CLASS II
 AJ3877
 AJ3877.The horizontal coordinates were established by GPS observations
 AJ3877.and adjusted by the National Geodetic Survey in April 2001.
 AJ3877
 AJ3877.The orthometric height was determined by GPS observations and a
 AJ3877.high-resolution geoid model using precise GPS observation and
 AJ3877.processing techniques.
 AJ3877
 AJ3877.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 AJ3877
 AJ3877.The Laplace correction was computed from DEFLEC99 derived deflections.
 AJ3877
 AJ3877.The ellipsoidal height was determined by GPS observations
 AJ3877.and is referenced to NAD 83.
 AJ3877
 AJ3877.The geoid height was determined by GEOID03.
 AJ3877
 AJ3877;                     North         East     Units Scale Factor Converg.
 AJ3877;SPC AZ C      -   311,984.720   147,111.159   MT  0.99995409   -0 23 53.6
 AJ3877;UTM  12       - 3,742,460.562   348,925.211   MT  0.99988137   -0 54 30.5
 AJ3877
 AJ3877!              -  Elev Factor  x  Scale Factor =   Combined Factor
 AJ3877!SPC AZ C      -   0.99991643  x   0.99995409  =   0.99987052
 AJ3877!UTM  12       -   0.99991643  x   0.99988137  =   0.99979781
 AJ3877
 AJ3877                          SUPERSEDED SURVEY CONTROL
 AJ3877
 AJ3877.No superseded survey control is available for this station.
 AJ3877
 AJ3877_U.S. NATIONAL GRID SPATIAL ADDRESS: 12SUC4892542461(NAD 83)
```

```
AJ3877_MARKER: I = METAL ROD
AJ3877_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AJ3877_STAMPING: 4KG2 12/99
AJ3877_MARK LOGO: MCDOT
AJ3877_PROJECTION: FLUSH
AJ3877_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3877_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3877+STABILITY: POSITION/ELEVATION WELL
AJ3877_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3877+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3877_ROD/PIPE-DEPTH:  6.1 meters
AJ3877_SLEEVE-DEPTH  :  0.8 meters
AJ3877
AJ3877  HISTORY     - Date     Condition        Report By
AJ3877  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3877
AJ3877                          STATION DESCRIPTION
AJ3877
AJ3877'DESCRIBED BY MARICOPA CO DOT 1999 (JJR)
AJ3877'THE STATION IS LOCATED ABOUT 12.0 MI (19.3 KM) SOUTH-SOUTHEAST OF THE
AJ3877'TOWN OF WICKENBURG, TOWNSHIP 6 NORTH, RANGE 4 WEST, SECTION 36
AJ3877'OWNERSHIP - STATE LAND
AJ3877'TO REACH THE STATION FROM THE JUNCTION OF U.S.  60 AND CASTLE HOT
AJ3877'SPRINGS ROAD, DRIVE SOUTHWESTERLY ON CASTLE HOT SPRINGS ROAD 0.2 MI
AJ3877'(0.3 KM) TO THE INTERSECTION OF OGDEN ROAD AND CASTLE HOT SPRINGS
AJ3877'ROAD, THENCE TURN LEFT (SOUTH) ONTO OGDEN ROAD AND DRIVE SOUTHWESTERLY
AJ3877'3.4 MI (5.5 KM) TO A BARBED WIRE FENCE WITH A CATTLE GUARD, THE
AJ3877'STATION IS 50 FT (15.2 M) WEST OF THE CATTLE GUARD AND 75 FT (22.9 M)
AJ3877'NORTH OF THE BARBED WIRE FENCE
AJ3877'THE STATION IS MARKED BY AN ALUMINUM CAP COMPRESSED ON A 20.0 FOOT
AJ3877'(6.1 M) STAINLESS STEEL ROD DRIVEN TO REFUSAL, ENCASED IN A 1 INCH
AJ3877'GREASED PVC SLEEVE ENCLOSED IN A 5 INCH PVC PIPE WITH A COUNTY LOGO
AJ3877'ACCESS COVER STAMPED 4KG2 12/99, SURROUNDED WITH A CONCRETE COLLAR
AJ3877'FLUSH WITH THE GROUND, WITNESSED BY A WHITE CARSONITE MARKER
AJ3877'STATION TIES -
AJ3877'50 FT (15.2 M) WEST OF A CATTLE GUARD
AJ3877'75 FT (22.9 M) NORTH OF A BARBED WIRE FENCE
AJ3877'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3877'VISIT-WWW.MCDOT.MARICOPA.GOV       SEARCH KEYWORD  GDACS

*** retrieval complete.
Elapsed Time = 00:00:06
```

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: 4KG2
Receiver No: 5678
Day of Year: 157 2005
Session No:

Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. 06 day 06 year 05
Operator: J. Maerrla

C/A CODE POSITION

Beg:
Lat: : 33 ° 48 ' 41.67 " N
Long: 112 ° 37 ' 56.17 " W
Ellip. Height: 531.260 M PDOP: 1.7

Ending:
Lat: 33 ° 48 ' 41.64 " N
Long: 112 ° 37 ' 56.26 " W
Ellip. Height: 528.785 M PDOP: 1.9

DC FILENAME: 1583-1501
TSC1 # 1501 **& GPS FILENAME** 15011570
Receiver Model:
Antenna Type:
Fixed Height Pole No:
Local-UTC Time Offset: MST= -7:00
Type of Survey: Fast Static
Actual= Start 14 :55 Stop: 19 :06 UTC
Beg. SV's Used: 6 10 15 16 18 21 26 29 30
End SV's Used: 3 9 14 15 16 19 21 22

Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:

☒ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)

ANT. S.N. 04449

Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Calm Breezy °F +/-

Type of Monument: Stamping:
Top of marker: ( ) flush M ( ) above: ( ) below: Nat. Ground Detail Notes:

Rubbing Performed ( )Yes ( )No

Maricopa County Department of Transportation

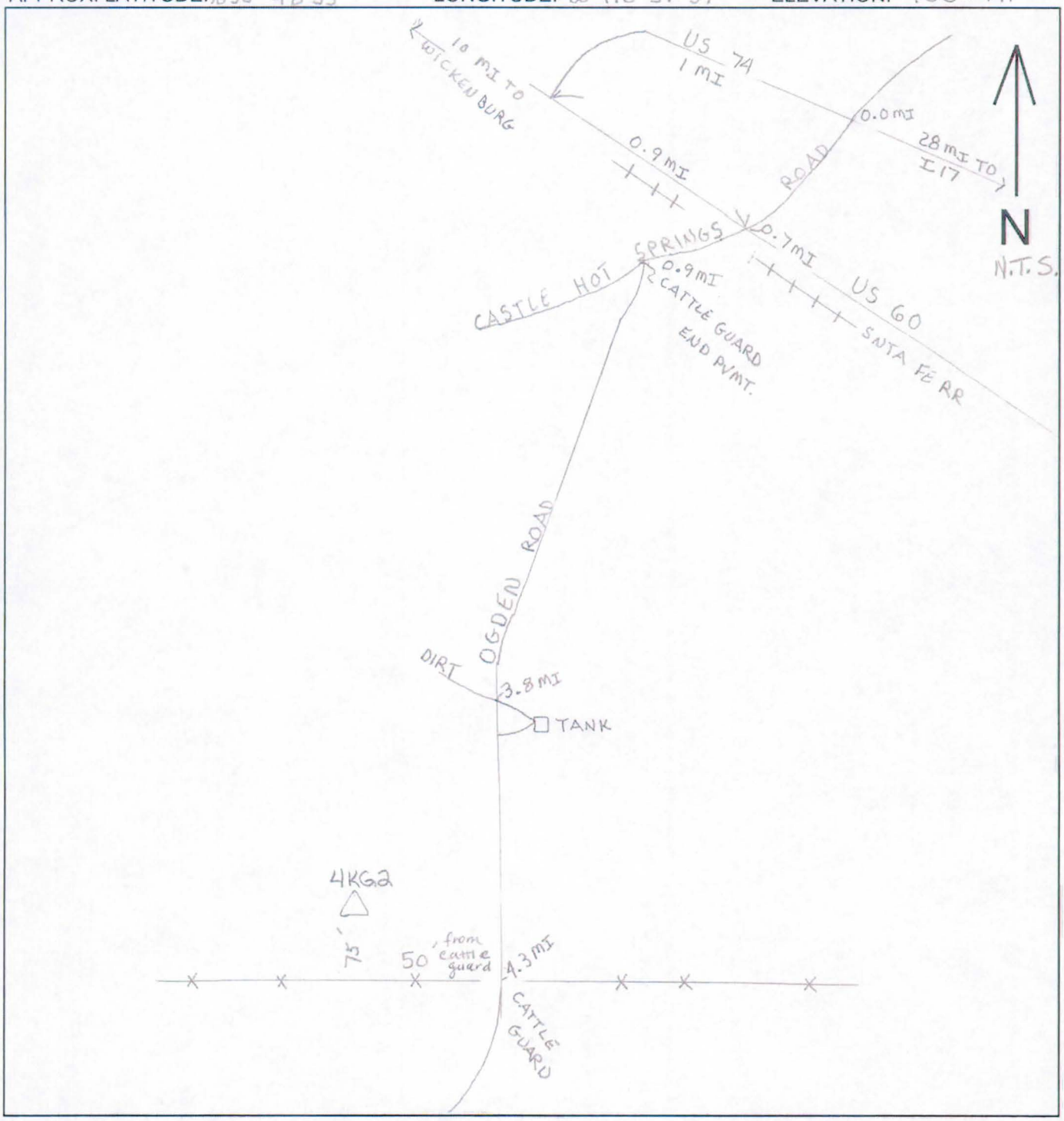
MONUMENT RECORD

STATION NAME: 4KG2 4 LETTER ID: 4KG2

APPROX. LOCATION: T 6N R 4W S 36 GILA AND SALT RIVER MERIDIAN AND BASELINE

AGENCY/FIRM: A-TEAM SKETCH BY: C. STUART DATE: 12/22/99

APPROX. LATITUDE: N33°48'33 LONGITUDE: W 112°37'57" ELEVATION: 1830 FT.



DESCRIPTION OF MONUMENT: STD NGS 3D MONUMENT - DRIVEN 20' TO REFUSAL

StationS.xls

Sheet 1 of 1

866

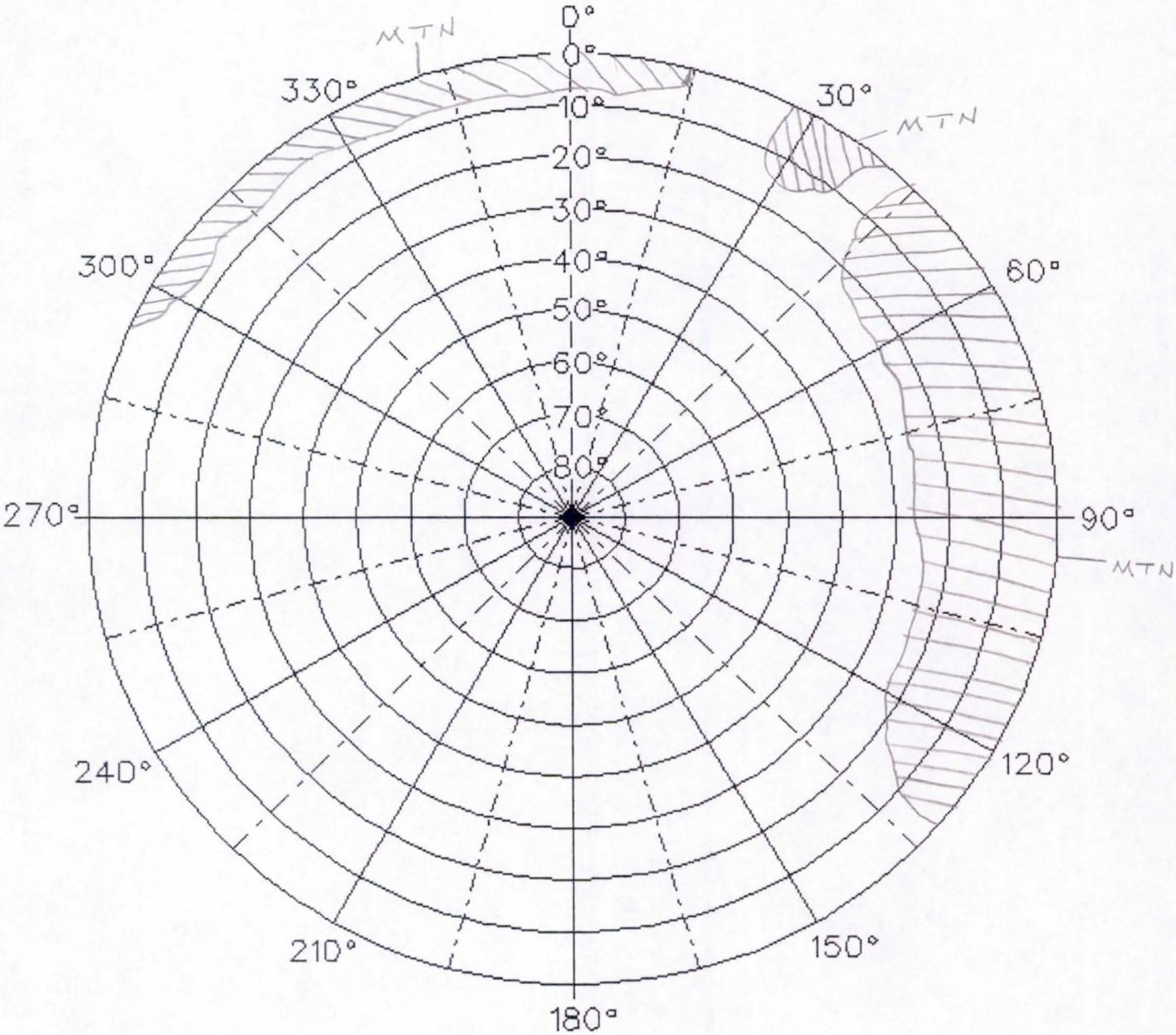
STATION VISIBILITY DIAGRAM

STATION NAME: 4KG2 4 LETTER ID: 4KG2

APPROXIMATE LOCATION: T 6N R 4W S 36 GILA AND SALT RIVER BASELINE AND MERIDIAN

AGENCY/FIRM: A-TEAM DESCRIBED BY: R. Schindler DATE: 1-20-00

LATITUDE: 33° 48' 33" N LONGITUDE: 112° 37' 57" W

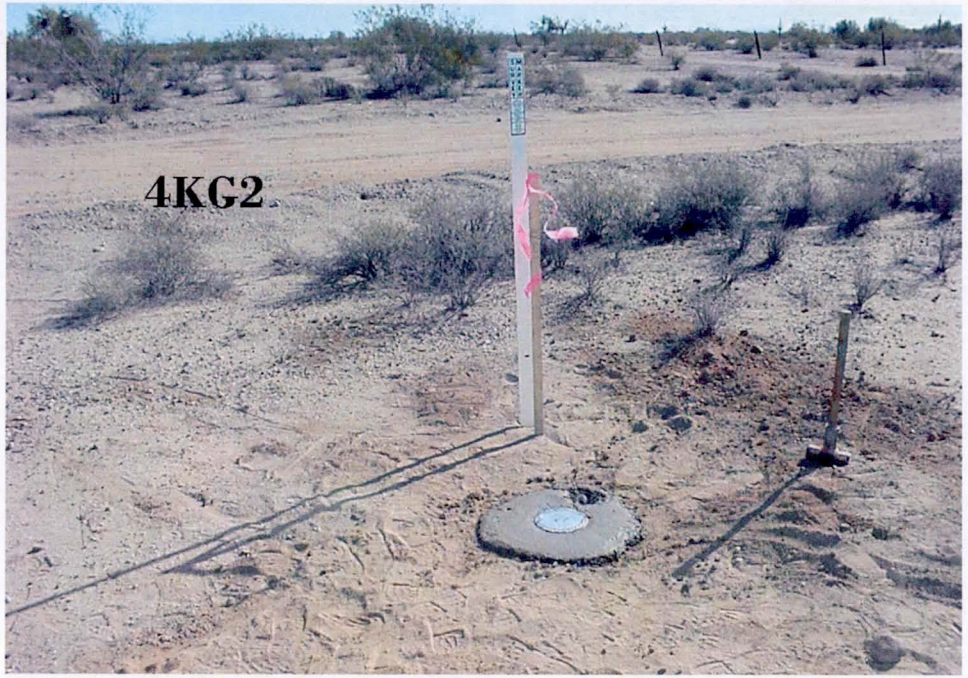


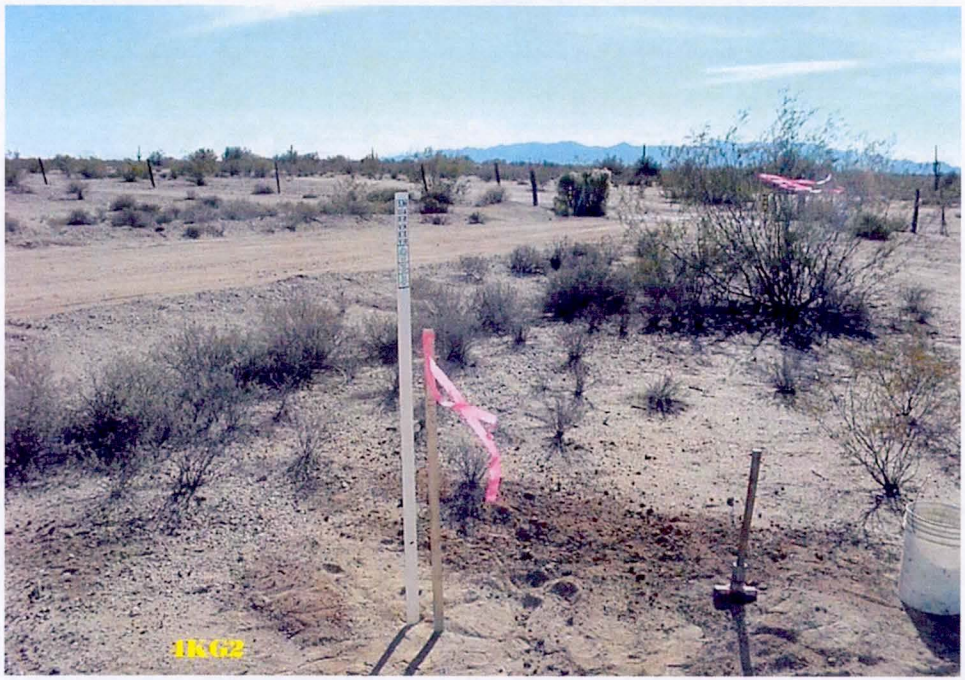
MONUMENT DESCRIPTION / COMMENTS:

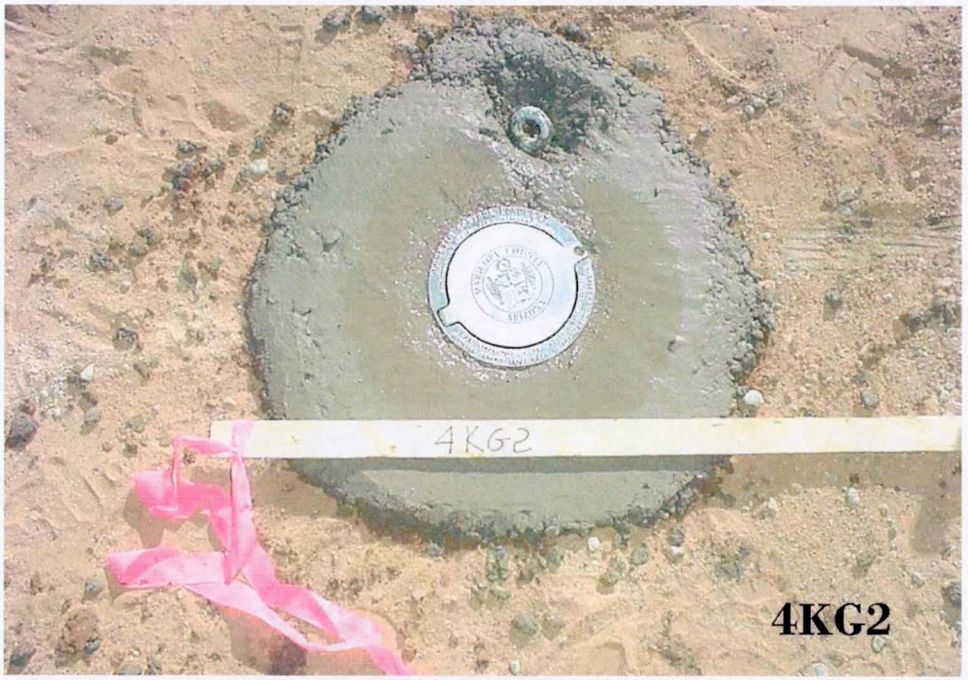
NGS STD 3D MONUMENT DRIVEN 20' TO REFUSAL (10 RODS)

station%.xls

4KG2


4KG2


4KG2


4KG2
4KG2

4Ki2

The NGS Data Sheet

See file dsdata.txt for more information about the datasheet.

```
DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 7.23
1        National Geodetic Survey,   Retrieval Date = AUGUST 31, 2005
 AJ3876 ***********************************************************************
 AJ3876  HT_MOD       -  This is a Height Modernization Survey Station.
 AJ3876  DESIGNATION -  4KI2
 AJ3876  PID          -  AJ3876
 AJ3876  STATE/COUNTY-  AZ/MARICOPA
 AJ3876  USGS QUAD    -  WICKENBURG SW (1965)
 AJ3876
 AJ3876                         *CURRENT SURVEY CONTROL
 AJ3876  ___________________________________________________________________
 AJ3876* NAD 83(1992)-  33 48 13.38125(N)    112 43 28.30379(W)     ADJUSTED
 AJ3876* NAVD 88      -       574.55   (meters)    1885.0    (feet)  GPS OBS
 AJ3876  ___________________________________________________________________
 AJ3876  X            -  -2,049,656.672 (meters)                     COMP
 AJ3876  Y            -  -4,893,975.890 (meters)                     COMP
 AJ3876  Z            -   3,528,679.046 (meters)                     COMP
 AJ3876  LAPLACE CORR-            1.20  (seconds)                    DEFLEC99
 AJ3876  ELLIP HEIGHT-          544.56  (meters)          (04/12/01) GPS OBS
 AJ3876  GEOID HEIGHT-          -29.94  (meters)                     GEOID03
 AJ3876
 AJ3876  HORZ ORDER   -  B
 AJ3876  ELLP ORDER   -  THIRD     CLASS II
 AJ3876
 AJ3876.The horizontal coordinates were established by GPS observations
 AJ3876.and adjusted by the National Geodetic Survey in April 2001.
 AJ3876
 AJ3876.The orthometric height was determined by GPS observations and a
 AJ3876.high-resolution geoid model using precise GPS observation and
 AJ3876.processing techniques.
 AJ3876
 AJ3876.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 AJ3876
 AJ3876.The Laplace correction was computed from DEFLEC99 derived deflections.
 AJ3876
 AJ3876.The ellipsoidal height was determined by GPS observations
 AJ3876.and is referenced to NAD 83.
 AJ3876
 AJ3876.The geoid height was determined by GEOID03.
 AJ3876
 AJ3876;                     North         East     Units Scale Factor Converg.
 AJ3876;SPC AZ C      -   311,177.587   138,561.131   MT  0.99996895   -0 26 58.1
 AJ3876;UTM  12       - 3,741,729.643   340,368.880   MT  0.99991414   -0 57 34.7
 AJ3876
 AJ3876!              -  Elev Factor  x  Scale Factor =   Combined Factor
 AJ3876!SPC AZ C      -   0.99991452  x   0.99996895  =   0.99988347
 AJ3876!UTM  12       -   0.99991452  x   0.99991414  =   0.99982867
 AJ3876
 AJ3876                         SUPERSEDED SURVEY CONTROL
 AJ3876
 AJ3876.No superseded survey control is available for this station.
 AJ3876
 AJ3876_U.S. NATIONAL GRID SPATIAL ADDRESS: 12SUC4036941730(NAD 83)
```

```
AJ3876_MARKER: I = METAL ROD
AJ3876_SETTING: 15 = METAL ROD DRIVEN INTO GROUND. SEE TEXT FOR ADDITIONAL
AJ3876+WITH SETTING: INFORMATION.
AJ3876_STAMPING: 4KI2 12/99
AJ3876_MARK LOGO: MCDOT
AJ3876_PROJECTION: FLUSH
AJ3876_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3876_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3876+STABILITY: POSITION/ELEVATION WELL
AJ3876_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3876+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3876_ROD/PIPE-DEPTH:  2.4 meters
AJ3876_SLEEVE-DEPTH  :  0.8 meters
AJ3876
AJ3876  HISTORY     - Date     Condition        Report By
AJ3876  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3876
AJ3876                          STATION DESCRIPTION
AJ3876
AJ3876'DESCRIBED BY MARICOPA CO DOT 1999 (JJR)
AJ3876'THE STATION IS LOCATED ABOUT 11.5 MI (18.5 KM) SOUTH OF THE TOWN OF
AJ3876'WICKENBURG, TOWNSHIP 5 NORTH, RANGE 4 WEST, SECTION 6
AJ3876'OWNERSHIP - PRIVATE
AJ3876'TO REACH THE STATION FROM THE JUNCTION OF U.S.  60 AND VULTURE MINE
AJ3876'ROAD, DRIVE SOUTHWESTERLY ON VULTURE MINE ROAD 11.7 MI (18.8 KM) TO AN
AJ3876'UNMARKED DIRT ROAD ON THE LEFT BEING 0.5 MI (0.8 KM) SOUTHWEST OF
AJ3876'MILEPOST 25, THENCE TURN LEFT (SOUTHEAST) ONTO THE DIRT ROAD AND DRIVE
AJ3876'0.1 MI (0.2 KM) TO A Y IN THE ROAD, THENCE STAY TO THE RIGHT AND
AJ3876'CONTINUE DRIVING 0N THE DIRT ROAD 0.9 MI (1.4 KM) TO A GATE IN A
AJ3876'BARBED WIRE FENCE WITH A CATTLE GUARD, THENCE DRIVE THROUGH THE GATE
AJ3876'AND STAY TO THE RIGHT OF A Y IN THE ROAD AND CONTINUE DRIVING ON THE
AJ3876'DIRT ROAD 1.2 MI (1.9 KM) TO A BEND IN THE ROAD TO THE LEFT (EAST) ,
AJ3876'THENCE CONTINUE DRIVING EAST ON THE ROAD 2.2 MI (3.5 KM) TO 331ST
AJ3876'AVENUE (NORTH-SOUTH DIRT ROAD) , THENCE TURN (RIGHT) SOUTH ONTO 331ST
AJ3876'AVENUE AND DRIVE 1.0 MI (1.6 KM) TO THE INTERSECTION OF AN EAST-WEST
AJ3876'DIRT ROAD, THENCE TURN LEFT (EAST) ONTO THE DIRT ROAD AND DRIVE EAST
AJ3876'3.0 MI (4.8 KM) TO 307TH AVENUE (NORTH-SOUTH DIRT ROAD) , THENCE TURN
AJ3876'LEFT (NORTH) ONTO 307TH AVENUE AND DRIVE 2.2 MI (3.5 KM) TO THE
AJ3876'INTERSECTION OF GAVIN WAY AND 307TH AVENUE, THENCE TURN RIGHT (EAST)
AJ3876'AND DRIVE TO A Y IN THE ROAD, THE STATION IS ABOUT 30 FT (9.1 M)
AJ3876'SOUTHEAST OF THE Y
AJ3876'THE STATION IS MARKED BY AN ALUMINUM CAP COMPRESSED ON AN 8.0 FT (2.4
AJ3876'M) STAINLESS STEEL ROD DRIVEN TO REFUSAL, ENCASED IN A 1 INCH GREASED
AJ3876'PVC SLEEVE ENCLOSED IN A 5 INCH PVC PIPE WITH A COUNTY LOGO ACCESS
AJ3876'COVER STAMPED 4KI2 12/99, SURROUNDED WITH A CONCRETE COLLAR FLUSH WITH
AJ3876'THE GROUND, WITNESSED BY A WHITE CARSONITE MARKER
AJ3876'STATION TIES -
AJ3876'30 FT (9.1 M) SOUTHEAST OF A Y IN THE ROAD AT AN UNMARKED DIRT ROAD
AJ3876'AND GAVIN WAY
AJ3876'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3876'VISIT-WWW.MCDOT.MARICOPA.GOV       SEARCH KEYWORD  GDACS

*** retrieval complete.
Elapsed Time = 00:00:06
```

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: ~~A~~ 4KIZ
Receiver No: 7662
Day of Year: 146 2005
Session No: 1

Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. 5 day 26 year 05
Operator: REED

C/A CODE POSITION

Beg:
Lat: : 33 ° 48 ' 13.40 " N
Long: 112 ° 43 ' 28.32 " W
Ellip. Height: 545.2 M PDOP: 1.8

Ending:
Lat: 33 ° 48 ' 13.42 " N
Long: 112 ° 43 ' 28.36 " W
Ellip. Height: 544.5 M PDOP: 2.4

DC FILENAME: 1583-0772
TSC1 # 0772 **& GPS FILENAME** 1583
Receiver Model: 4000 SSE
Antenna Type: COMP L1/L2
Fixed Height Pole No: A-TEAM #2
Local-UTC Time Offset: MST= -7:00
Type of Survey: Fast Static
Actual= Start 15 : 36 Stop: 16 : 38 UTC
Beg. SV's Used: 26, 29, 6, 10, 15, 16, 18, 21, 30
End SV's Used: 26, 29, 6, 22, 15, 16, 18, 21

Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:

☑ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)

ANT. S.N. 53509

Weather Conditions: (Clear) P. Cloudy Overcast Hot (Warm) Cool (Calm) Breezy °F +/- 85°

N

Type of Monument: _____ Stamping: _____
Top of marker: ( ) flush M ( ) above: ( ) below: Nat. Ground Detail Notes: _____

Rubbing Performed ( )Yes ( )No _____

Maricopa County Department of Transportation

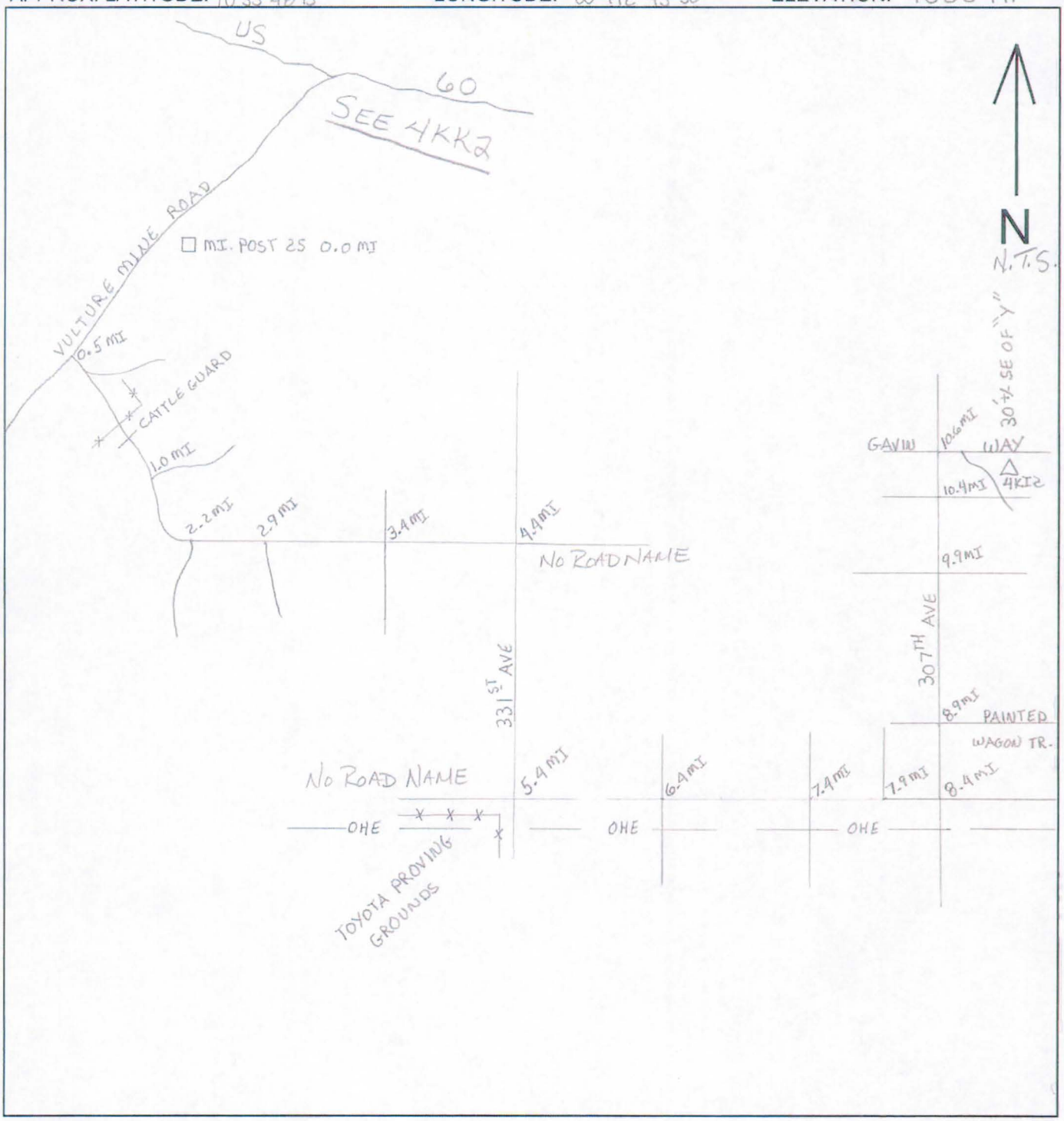
MONUMENT RECORD

STATION NAME: 4KI2 4 LETTER ID: 4KI2

APPROX. LOCATION: T 5N R 4W S 6 GILA AND SALT RIVER MERIDIAN AND BASELINE

AGENCY/FIRM: A-TEAM SKETCH BY: C. STUART DATE: 12/27/99

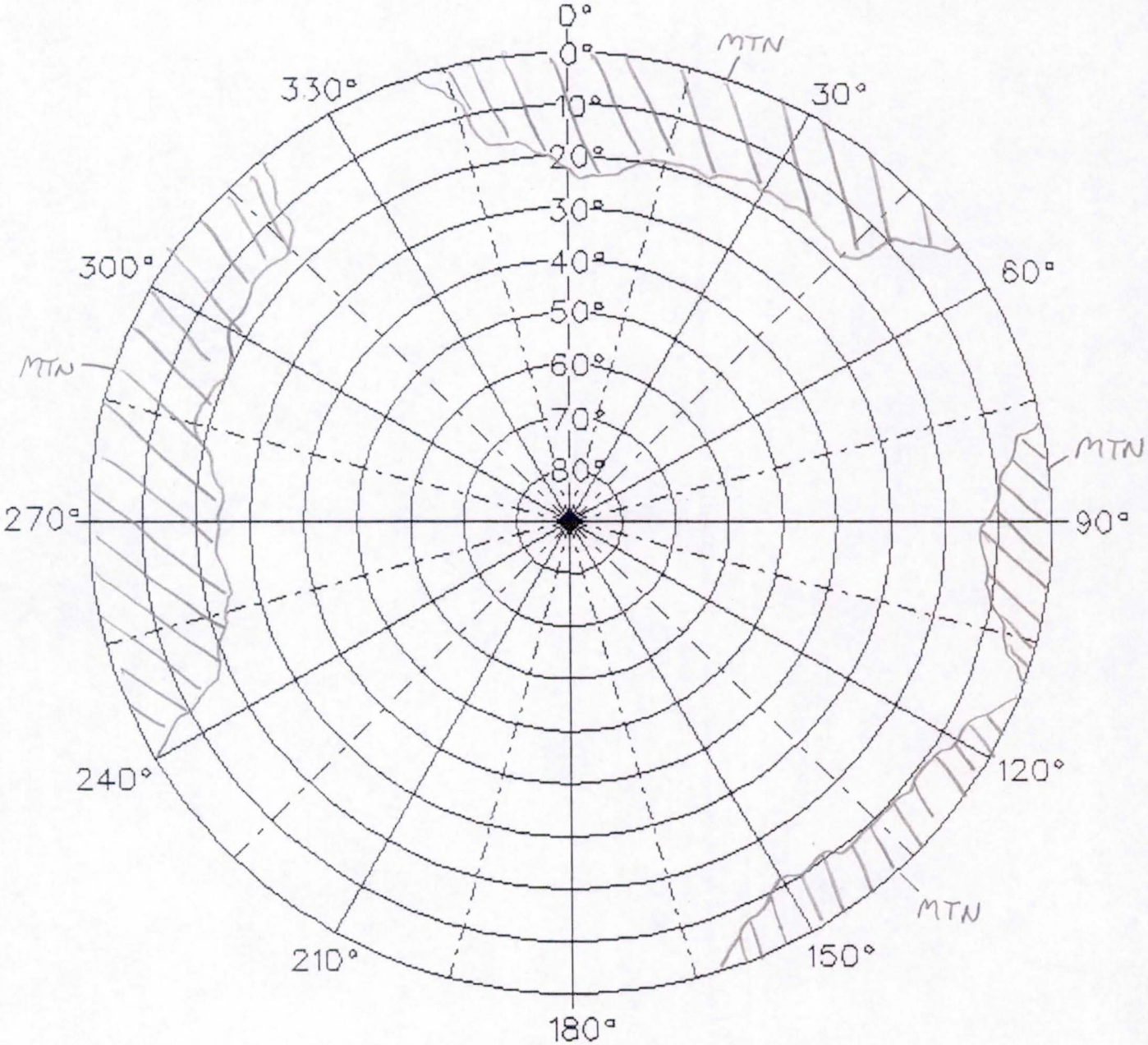
APPROX. LATITUDE: N 33°48'15 LONGITUDE: W 112°43'30" ELEVATION: 1880 FT.



DESCRIPTION OF MONUMENT: SET NGS STD. 3D MONUMENT DRIVEN 8' TO REFUSAL.

STATION VISIBILITY DIAGRAM

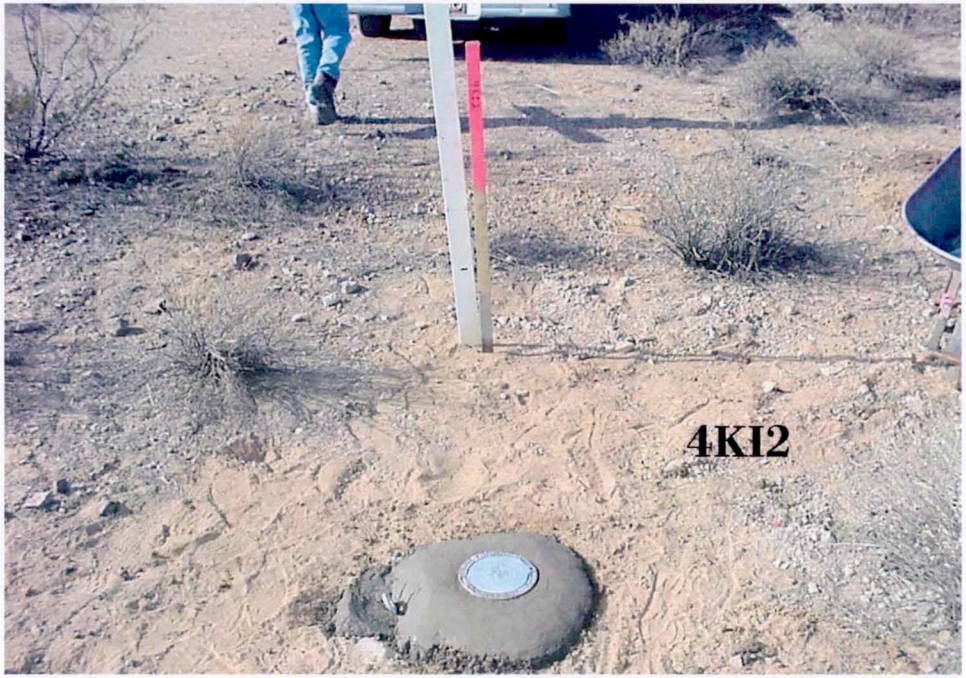
STATION NAME: 4KI2 4 LETTER ID: 4KI2
APPROXIMATE LOCATION: T 5N R 4W S 5 GILA AND SALT RIVER BASELINE AND MERIDIAN
AGENCY/FIRM: A-TEAM DESCRIBED BY: C. CLARK DATE: 1-24-00
LATITUDE: 33°48' 15" LONGITUDE: 112°43' 30"

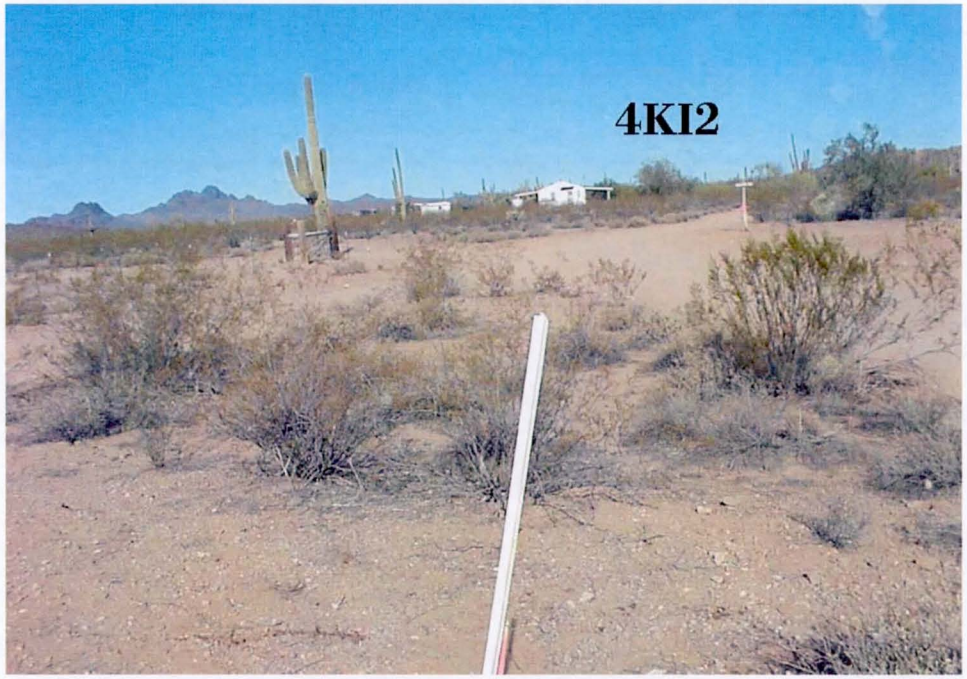


MONUMENT DESCRIPTION / COMMENTS:
NGS TYPE II MONUMENT DRILLED 9' TO REFUSAL

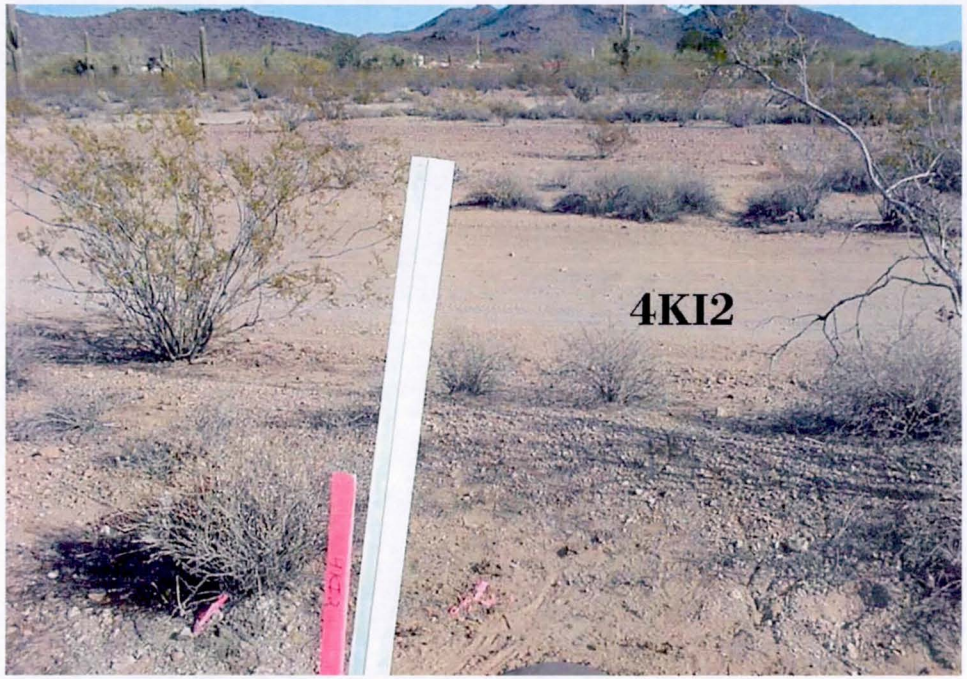
station%.xls

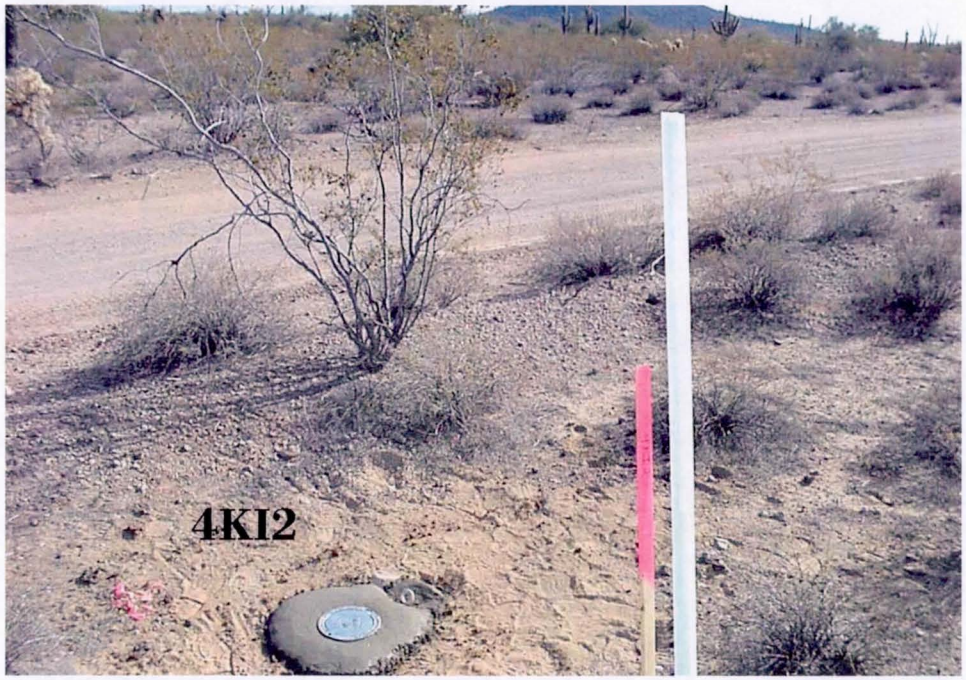
4KI2
4KI2


4KI2


4KI2

4KI2


4KI2


4KI2

4KJ2

The NGS Data Sheet

See file dsdata.txt for more information about the datasheet.

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DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 7.23
1        National Geodetic Survey,   Retrieval Date = AUGUST 31, 2005
 AJ3890 ***********************************************************************
 AJ3890  HT_MOD       -  This is a Height Modernization Survey Station.
 AJ3890  DESIGNATION -  4KJ2
 AJ3890  PID          -  AJ3890
 AJ3890  STATE/COUNTY-  AZ/MARICOPA
 AJ3890  USGS QUAD    -  VULTURE MINE (1990)
 AJ3890
 AJ3890                         *CURRENT SURVEY CONTROL
 AJ3890  ___________________________________________________________________
 AJ3890* NAD 83(1992)-  33 49 23.36060(N)    112 46 00.72916(W)     ADJUSTED
 AJ3890* NAVD 88      -       611.49   (meters)    2006.2    (feet)  GPS OBS
 AJ3890  ___________________________________________________________________
 AJ3890  X            -  -2,052,820.175 (meters)                     COMP
 AJ3890  Y            -  -4,891,381.742 (meters)                     COMP
 AJ3890  Z            -   3,530,491.196 (meters)                     COMP
 AJ3890  LAPLACE CORR-           0.90  (seconds)                    DEFLEC99
 AJ3890  ELLIP HEIGHT-         581.52  (meters)          (04/12/01) GPS OBS
 AJ3890  GEOID HEIGHT-         -29.90  (meters)                     GEOID03
 AJ3890
 AJ3890  HORZ ORDER   -  B
 AJ3890  ELLP ORDER   -  THIRD     CLASS II
 AJ3890
 AJ3890.The horizontal coordinates were established by GPS observations
 AJ3890.and adjusted by the National Geodetic Survey in April 2001.
 AJ3890
 AJ3890.The orthometric height was determined by GPS observations and a
 AJ3890.high-resolution geoid model using precise GPS observation and
 AJ3890.processing techniques.
 AJ3890
 AJ3890.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 AJ3890
 AJ3890.The Laplace correction was computed from DEFLEC99 derived deflections.
 AJ3890
 AJ3890.The ellipsoidal height was determined by GPS observations
 AJ3890.and is referenced to NAD 83.
 AJ3890
 AJ3890.The geoid height was determined by GEOID03.
 AJ3890
 AJ3890;                     North         East     Units Scale Factor Converg.
 AJ3890;SPC AZ C      -   313,365.146   134,658.589   MT  0.99997633   -0 28 23.8
 AJ3890;UTM  12       - 3,743,951.760   336,486.173   MT  0.99992961   -0 59 01.4
 AJ3890
 AJ3890!              -  Elev Factor  x  Scale Factor =   Combined Factor
 AJ3890!SPC AZ C      -   0.99990872  x   0.99997633  =   0.99988505
 AJ3890!UTM  12       -   0.99990872  x   0.99992961  =   0.99983833
 AJ3890
 AJ3890                           SUPERSEDED SURVEY CONTROL
 AJ3890
 AJ3890.No superseded survey control is available for this station.
 AJ3890
 AJ3890_U.S. NATIONAL GRID SPATIAL ADDRESS: 12SUC3648643952(NAD 83)
```

```
AJ3890_MARKER: I = METAL ROD
AJ3890_SETTING: 15 = METAL ROD DRIVEN INTO GROUND. SEE TEXT FOR ADDITIONAL
AJ3890+WITH SETTING: INFORMATION.
AJ3890_STAMPING: 4KJ2 1/00
AJ3890_MARK LOGO: MCDOT
AJ3890_PROJECTION: FLUSH
AJ3890_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3890_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3890+STABILITY: POSITION/ELEVATION WELL
AJ3890_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3890+SATELLITE: SATELLITE OBSERVATIONS - 2000
AJ3890_ROD/PIPE-DEPTH:  2.4 meters
AJ3890_SLEEVE-DEPTH  :  0.8 meters
AJ3890
AJ3890  HISTORY     - Date     Condition        Report By
AJ3890  HISTORY     - 2000     MONUMENTED       MCDOT
AJ3890
AJ3890                          STATION DESCRIPTION
AJ3890
AJ3890'DESCRIBED BY MARICOPA CO DOT 2000 (JJR)
AJ3890'THE STATION IS LOCATED ABOUT 10.0 MI (16.1 KM) SOUTH-SOUTHWEST OF THE
AJ3890'TOWN OF WICKENBURG, TOWNSHIP 6 NORTH, RANGE 5 WEST, SECTION 14
AJ3890'OWNERSHIP - BLM
AJ3890'TO REACH THE STATION FROM THE JUNCTION OF US 60 AND VULTURE MINE ROAD,
AJ3890'DRIVE SOUTHERLY ON VULTURE MINE ROAD 12.4 MI (20.0 KM) TO A DIRT ROAD
AJ3890'ON THE LEFT (EAST) BEING 0.6 MI (1.0 KM) SOUTH OF MILEPOST 25, THENCE
AJ3890'TURN LEFT (EAST) AND DRIVE EASTERLY 0.2 MI (0.3 KM) TO A Y IN THE
AJ3890'ROAD, THENCE STAY TO THE RIGHT AT THE Y AND CONTINUE DRIVING
AJ3890'NORTHEASTERLY 0.6 MI (1.0 KM) TO ANOTHER Y IN THE ROAD, THENCE STAY TO
AJ3890'THE RIGHT AT THE Y AND CONTINUE DRIVING NORTHEASTERLY 0.3 MI (0.5 KM)
AJ3890'TO ANOTHER Y IN THE ROAD, THENCE STAY TO THE LEFT AT THE Y AND
AJ3890'CONTINUE DRIVING NORTHEASTERLY 0.6 MI (1.0 KM) TO A FENCE ENCLOSED
AJ3890'TANK ON THE LEFT, THENCE CONTINUE DRIVING NORTHEASTERLY 0.2 MI (0.3
AJ3890'KM) TO THE CENTER OF A WASH, THENCE CROSS THE WASH AND CONTINUE
AJ3890'DRIVING NORTHEASTERLY 0.3 MI (0.5 KM) TO A Y IN THE ROAD, THENCE STAY
AJ3890'TO THE RIGHT AT THE Y AND CONTINUE DRIVING NORTHEAST 0.2 MI (0.3 KM)
AJ3890'TO A GATE IN A FENCE, THENCE DRIVE THROUGH THE GATE AND STAY TO THE
AJ3890'LEFT OF A Y AND DRIVE 0.4 MI (0.6 KM) TO THE CENTER OF A WASH, THENCE
AJ3890'CONTINUE DRIVING NORTHEASTERLY 0.3 MI (0.5 KM) TO A Y IN THE ROAD,
AJ3890'THENCE STAY TO THE LEFT OF THE Y AND CONTINUE DRIVING NORTHEASTERLY
AJ3890'0.2 MI (0.3 KM) TO A Y IN THE ROAD, THENCE STAY TO THE RIGHT OF THE Y
AJ3890'AND CONTINUE DRIVING 0.4 MI (0.6 KM) TO THE CENTER OF A WASH, THENCE
AJ3890'CONTINUE DRIVING NORTHEAST 0.2 MI (0.3 KM) TO THE STATION ON THE LEFT
AJ3890'SIDE OF THE ROAD AT A BEND TO THE NORTH
AJ3890'THE STATION IS MARKED BY AN ALUMINUM CAP COMPRESSED ON A 8.0 FOOT (2.4
AJ3890'M) STAINLESS STEEL ROD DRIVEN TO REFUSAL, ENCASED IN A 1 INCH GREASED
AJ3890'PVC SLEEVE ENCLOSED IN A 5 INCH PVC PIPE WITH A COUNTY LOGO ACCESS
AJ3890'COVER STAMPED 4KJ2 1/00, SURROUNDED WITH A CONCRETE COLLAR FLUSH WITH
AJ3890'THE GROUND, WITNESSED BY A WHITE CARSONITE MARKER
AJ3890'STATION TIES -
AJ3890'50 FT (15.2 M) WEST OF THE CENTERLINE OF A DIRT ROAD HEADED NORTH
AJ3890'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3890'VISIT-WWW.MCDOT.MARICOPA.GOV       SEARCH KEYWORD  GDACS

*** retrieval complete.
Elapsed Time = 00:00:04
```

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: 4KJ2
Receiver No: 5678
Day of Year: 146 2005
Session No:

Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. 5 day 26 year 2005
Operator: C Fischer

C/A CODE POSITION

Beg:
Lat: : 33° 49' 23.39" N
Long: 112° 46' 00.76" W
Ellip. Height: 580 M PDOP: 1.7

Ending:
Lat: 33° 49' 23.40" N
Long: 112° 46' 00.78" W
Ellip. Height: 579 M PDOP: 2.4

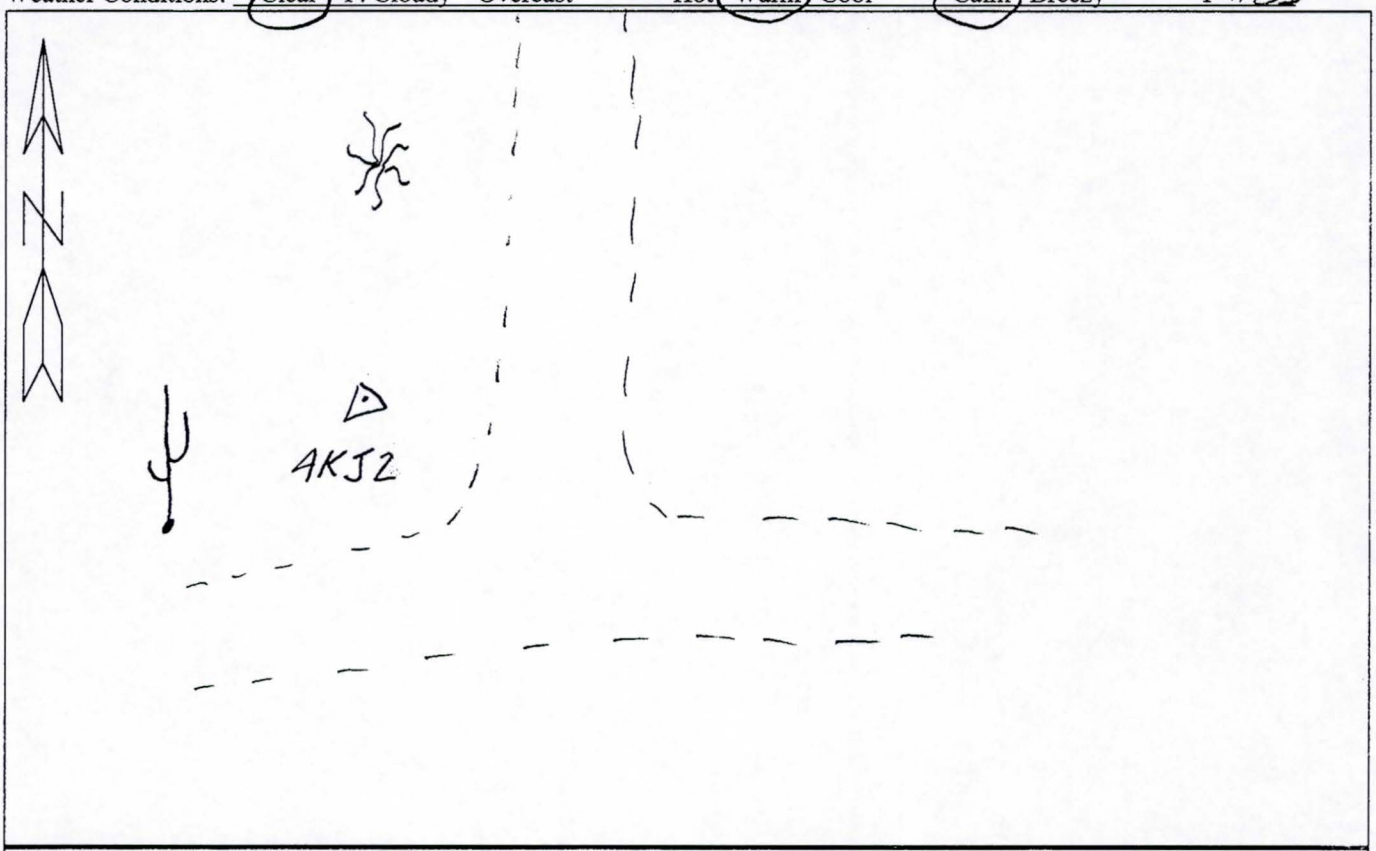
DC FILENAME: 1583-0319
TSC1 # 0319 **& GPS FILENAME** 0319146O
Receiver Model: 4000 SSE
Antenna Type: Compact L1/L2 w/GP
Fixed Height Pole No: A TEAM 6
Local-UTC Time Offset: MST= -7:00
Type of Survey: Fast Static
Actual= Start 15 : 44 Stop: 16 : 38 UTC
Beg. SV's Used: 6, 10, 15, 16, 18, 21, 26, 29
End SV's Used: 6, 15, 16, 18, 21, 22, 26, 29

Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:

☒ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)

ANT. S.N. 98220

Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Calm Breezy °F +/- 85



Type of Monument: NGS 3D Stamping:
Top of marker: ( ) flush .111 M ( ) above: (X) below: Nat. Ground Detail Notes:

Rubbing Performed ( )Yes ( )No

Maricopa County Department of Transportation

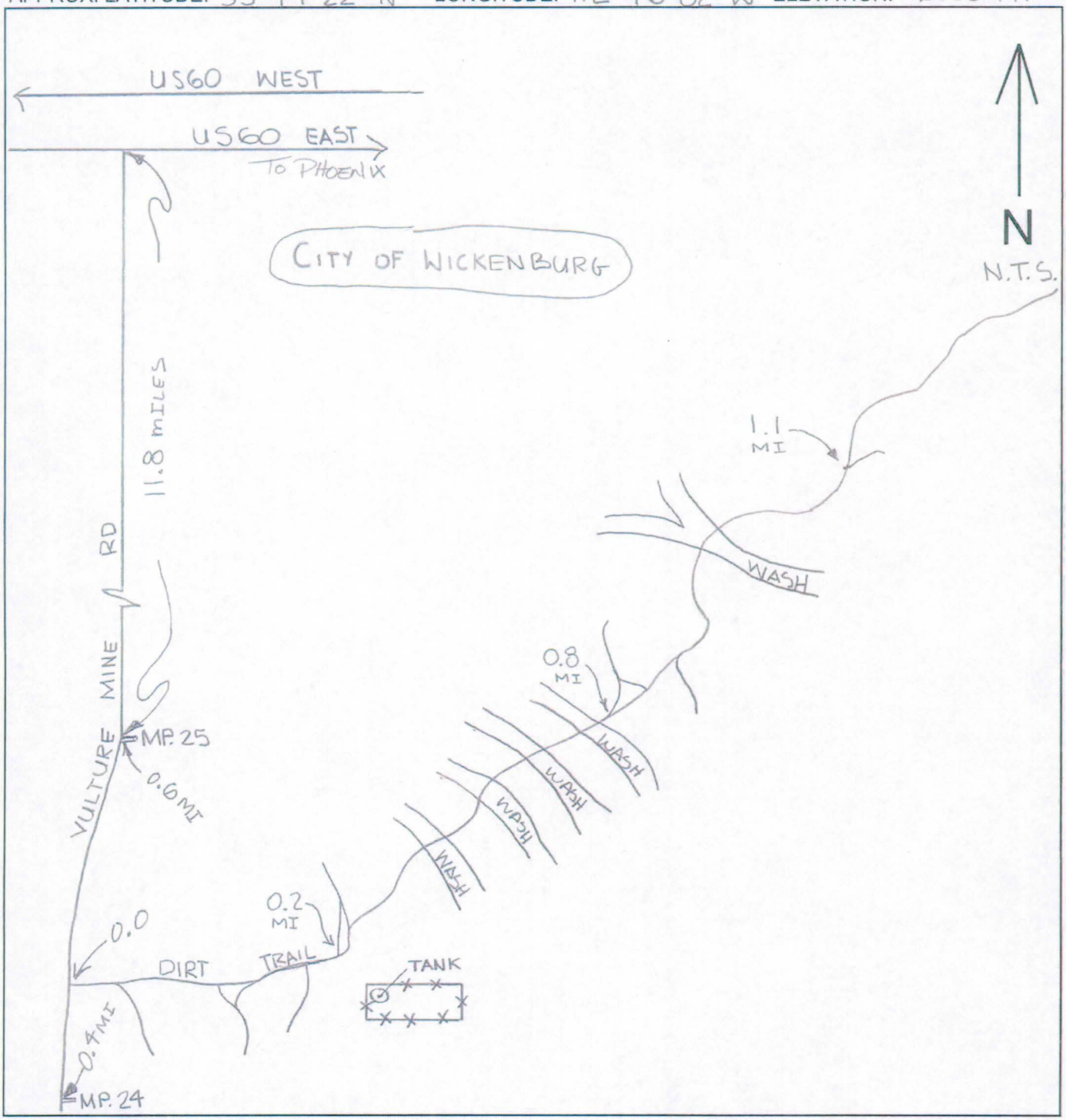
MONUMENT RECORD

STATION NAME: 4KJ2 4 LETTER ID: 4KJ2

APPROX. LOCATION: T 6N R 5WS 14 GILA AND SALT RIVER MERIDIAN AND BASELINE

AGENCY/FIRM: A-TEAM SKETCH BY: JOE BONILLAS DATE: 1-12-00

APPROX. LATITUDE: 33°49'22" N LONGITUDE: 112°46'02" W ELEVATION: 2000 FT.



DESCRIPTION OF MONUMENT: SET STD NGS 3-D MONUMENT DRIVEN 8' TO REFUSAL.

Maricopa County Department of Transportation

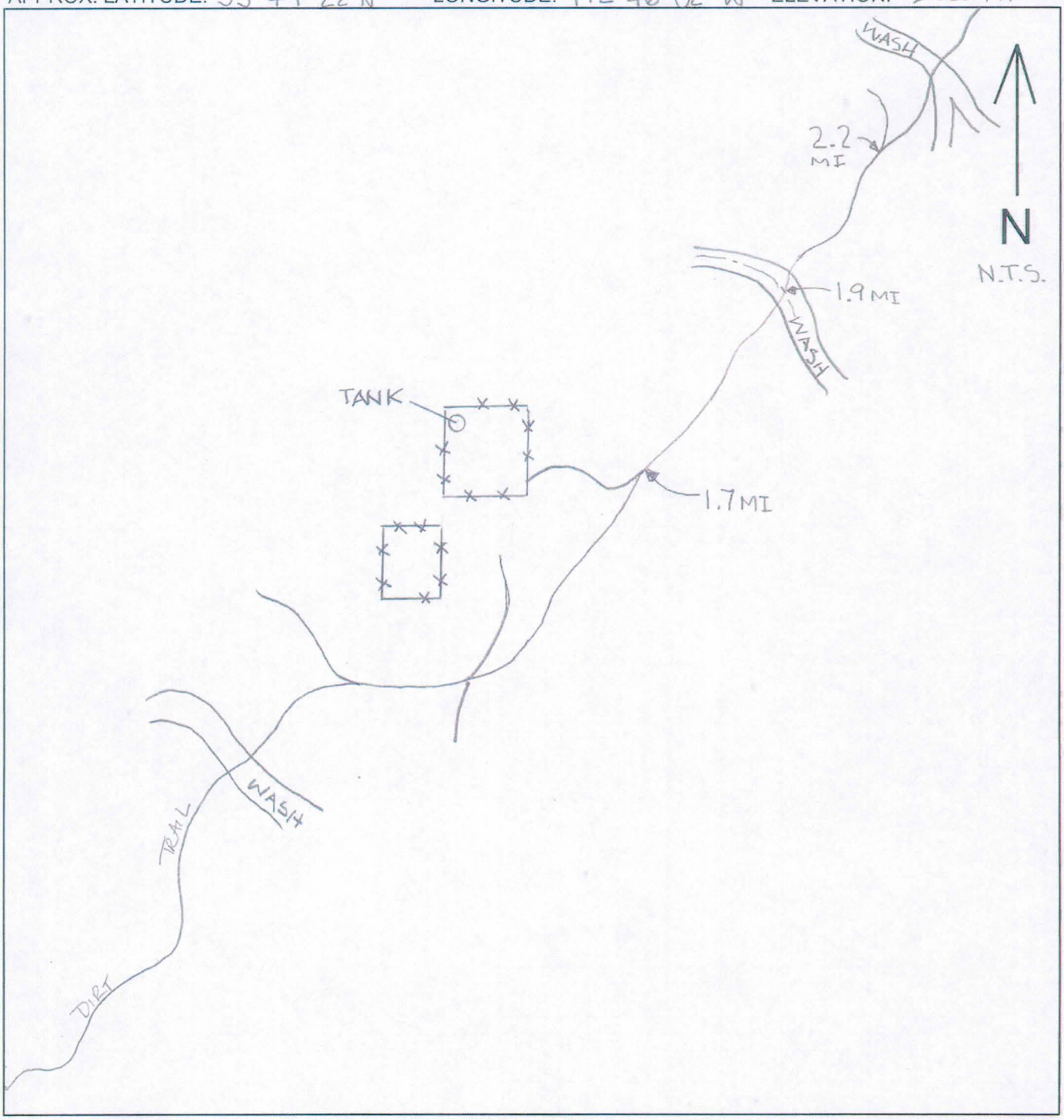
MONUMENT RECORD

STATION NAME: 4KJ2 4 LETTER ID: 4KJ2

APPROX. LOCATION: T 6N R 5WS 14 GILA AND SALT RIVER MERIDIAN AND BASELINE

AGENCY/FIRM: A-TEAM SKETCH BY: JOE BONILLAS DATE: 1-12-00

APPROX. LATITUDE: 33° 49' 22" N LONGITUDE: 112° 46' 02" W ELEVATION: 2000 FT.



DESCRIPTION OF MONUMENT: SET STD NGS 3D MONUMENT DRIVEN 8' TO REFUSAL.

Maricopa County Department of Transportation

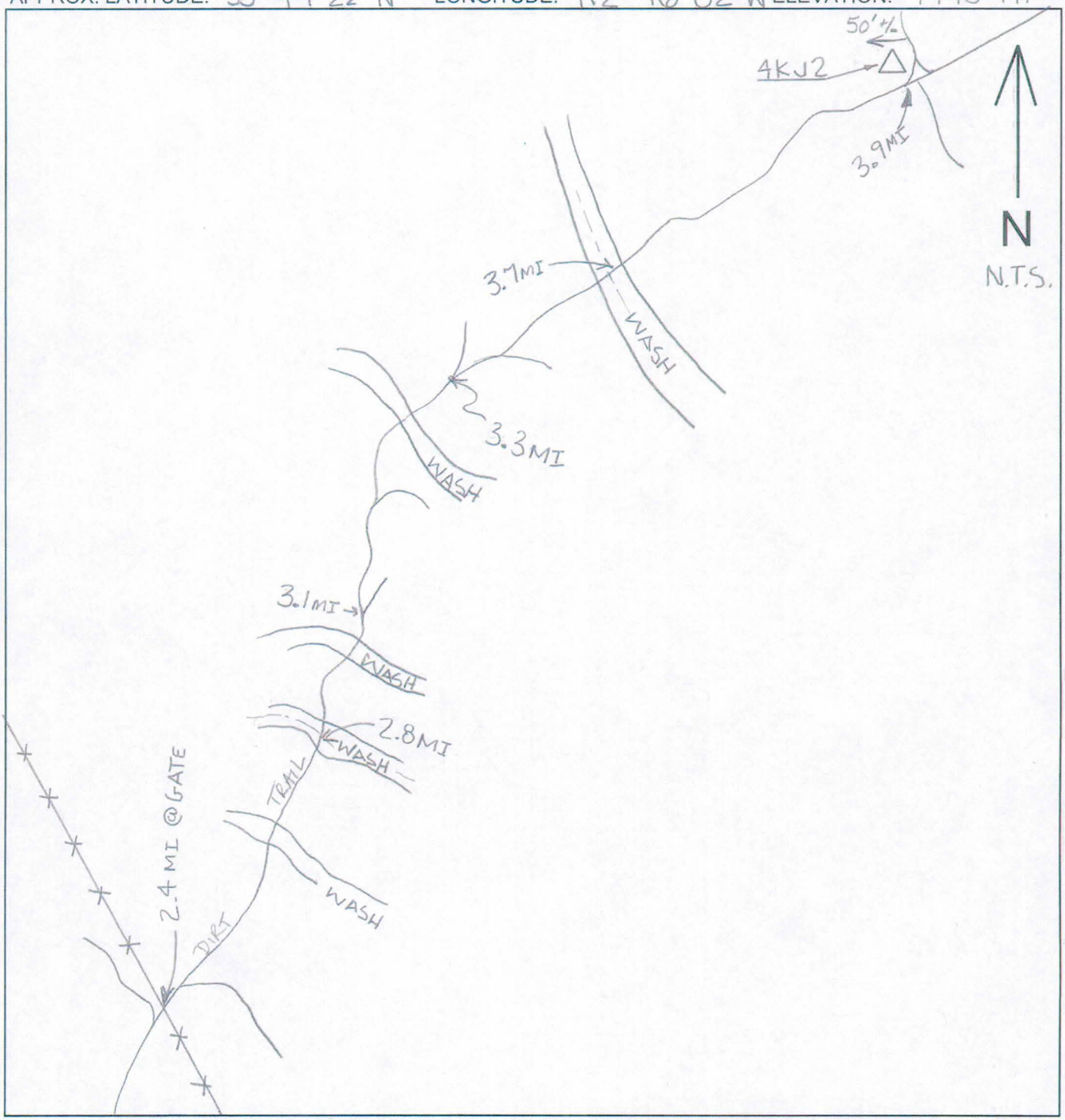
MONUMENT RECORD

STATION NAME: 4KJ2 4 LETTER ID: 4KJ2

APPROX. LOCATION: T 6N R 5WS 14 GILA AND SALT RIVER MERIDIAN AND BASELINE

AGENCY/FIRM: A-TEAM SKETCH BY: JOE BONILLAS DATE: 1-12-00

APPROX. LATITUDE: 33° 49' 22" N LONGITUDE: 112° 46' 02" W ELEVATION: 1990 FT.



DESCRIPTION OF MONUMENT: SET STD NGS 3-D MONUMENT DRIVEN 8' TO REFUSAL.

4KJ2

12/60

GEODETIC CONTROL MONUMENT
4KJ2

4KJ2

4JJ2

The NGS Data Sheet

See file dsdata.txt for more information about the datasheet.

```
DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 7.23
1        National Geodetic Survey,   Retrieval Date = AUGUST 31, 2005
 AJ3875 ***********************************************************************
 AJ3875  HT_MOD       -  This is a Height Modernization Survey Station.
 AJ3875  DESIGNATION  -  4JJ2
 AJ3875  PID          -  AJ3875
 AJ3875  STATE/COUNTY-   AZ/MARICOPA
 AJ3875  USGS QUAD    -  VULTURE MINE (1990)
 AJ3875
 AJ3875                          *CURRENT SURVEY CONTROL
 AJ3875  ___________________________________________________________________
 AJ3875* NAD 83(1992)-  33 46 03.88694(N)    112 46 36.97130(W)     ADJUSTED
 AJ3875* NAVD 88      -       535.36   (meters)    1756.4    (feet)  GPS OBS
 AJ3875  ___________________________________________________________________
 AJ3875  X            -  -2,054,978.627 (meters)                     COMP
 AJ3875  Y            -  -4,894,114.739 (meters)                     COMP
 AJ3875  Z            -   3,525,340.867 (meters)                     COMP
 AJ3875  LAPLACE CORR-            1.23  (seconds)                    DEFLEC99
 AJ3875  ELLIP HEIGHT-          505.21  (meters)          (04/12/01) GPS OBS
 AJ3875  GEOID HEIGHT-          -30.09  (meters)                     GEOID03
 AJ3875
 AJ3875  HORZ ORDER   -  B
 AJ3875  ELLP ORDER   -  THIRD     CLASS II
 AJ3875
 AJ3875.The horizontal coordinates were established by GPS observations
 AJ3875.and adjusted by the National Geodetic Survey in April 2001.
 AJ3875
 AJ3875.The orthometric height was determined by GPS observations and a
 AJ3875.high-resolution geoid model using precise GPS observation and
 AJ3875.processing techniques.
 AJ3875
 AJ3875.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 AJ3875
 AJ3875.The Laplace correction was computed from DEFLEC99 derived deflections.
 AJ3875
 AJ3875.The ellipsoidal height was determined by GPS observations
 AJ3875.and is referenced to NAD 83.
 AJ3875
 AJ3875.The geoid height was determined by GEOID03.
 AJ3875
 AJ3875;                    North         East     Units Scale Factor Converg.
 AJ3875;SPC AZ C      -   307,227.305   133,675.329   MT  0.99997825   -0 28 41.5
 AJ3875;UTM  12       - 3,737,823.195   335,448.358   MT  0.99993381   -0 59 16.4
 AJ3875
 AJ3875!              -  Elev Factor  x  Scale Factor =   Combined Factor
 AJ3875!SPC AZ C      -   0.99992069  x   0.99997825  =   0.99989895
 AJ3875!UTM  12       -   0.99992069  x   0.99993381  =   0.99985451
 AJ3875
 AJ3875                           SUPERSEDED SURVEY CONTROL
 AJ3875
 AJ3875.No superseded survey control is available for this station.
 AJ3875
 AJ3875_U.S. NATIONAL GRID SPATIAL ADDRESS: 12SUC3544837823(NAD 83)
```

```
AJ3875_MARKER: I = METAL ROD
AJ3875_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AJ3875_STAMPING: 4JJ2 12/99
AJ3875_MARK LOGO: MCDOT
AJ3875_PROJECTION: FLUSH
AJ3875_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3875_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3875+STABILITY: POSITION/ELEVATION WELL
AJ3875_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3875+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3875_ROD/PIPE-DEPTH:  3.0 meters
AJ3875_SLEEVE-DEPTH  :  0.8 meters
AJ3875
AJ3875  HISTORY     - Date     Condition        Report By
AJ3875  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3875
AJ3875                          STATION DESCRIPTION
AJ3875
AJ3875'DESCRIBED BY MARICOPA CO DOT 1999 (JJR)
AJ3875'THE STATION IS LOCATED ABOUT 14.0 MI (22.5 KM) SOUTH-SOUTHWEST OF THE
AJ3875'TOWN OF WICKENBURG, TOWNSHIP 5 NORTH, RANGE 5 WEST, SECTION 22
AJ3875'OWNERSHIP - PRIVATE
AJ3875'TO REACH THE STATION FROM THE JUNCTION OF U.S.  60 AND VULTURE MINE
AJ3875'ROAD, DRIVE SOUTHWESTERLY ON VULTURE MINE ROAD 11.7 MI (18.8 KM) TO AN
AJ3875'UNMARKED DIRT ROAD ON THE LEFT BEING 0.5 MI (0.8 KM) SOUTHWEST OF
AJ3875'MILEPOST 25, THENCE TURN LEFT (SOUTHEAST) ONTO THE DIRT ROAD AND DRIVE
AJ3875'0.1 MI (0.2 KM) TO A Y IN THE ROAD, THENCE STAY TO THE RIGHT AND
AJ3875'CONTINUE DRIVING 0N THE DIRT ROAD 0.9 MI (1.4 KM) TO A GATE IN A
AJ3875'BARBED WIRE FENCE WITH A CATTLE GUARD, THENCE DRIVE THROUGH THE GATE
AJ3875'AND STAY TO THE RIGHT OF A Y IN THE ROAD AND CONTINUE DRIVING ON THE
AJ3875'DIRT ROAD 1.2 MI (1.9 KM) TO A BEND IN THE ROAD TO THE LEFT (EAST) ,
AJ3875'THENCE CONTINUE DRIVING EAST ON THE ROAD 2.2 MI (3.5 KM) TO 331ST
AJ3875'AVENUE (NORTH-SOUTH DIRT ROAD) , THENCE TURN SOUTH ONTO 331ST AVENUE
AJ3875'AND DRIVE 2.0 MI (3.2 KM) TO THE STATION ON THE RIGHT 30 FT (9.1 M)
AJ3875'THE STATION IS MARKED BY AN ALUMINUM CAP COMPRESSED ON A 10.0 FOOT
AJ3875'(3.0 M) STAINLESS STEEL ROD DRIVEN TO REFUSAL, ENCASED IN A 1 INCH
AJ3875'GREASED PVC SLEEVE ENCLOSED IN A 5 INCH PVC PIPE WITH A COUNTY LOGO
AJ3875'ACCESS COVER STAMPED 4JJ2 1999, SURROUNDED WITH A CONCRETE COLLAR
AJ3875'FLUSH WITH THE GROUND, WITNESSED BY A WHITE CARSONITE MARKER
AJ3875'STATION TIES -
AJ3875'30 FT (9.1 M) WEST OF 331ST AVE (DIRT ROAD) 50 FT (15.2 M) NORTH OF A
AJ3875'DIRT ROAD HEADING EAST
AJ3875'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3875'VISIT-WWW.MCDOT.MARICOPA.GOV       SEARCH KEYWORD  GDACS

*** retrieval complete.
Elapsed Time = 00:00:05
```

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: 4JJ2
Receiver No: 6083
Day of Year: 186 2005
Session No: 6

Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. JULY day 5 year 2005
Operator: C. FISCHER

C/A CODE POSITION

Beg:
Lat: : 33 ° 46 ' 03.91 " N
Long: 112 ° 46 ' 37.03 " W
Ellip. Height: 508 M PDOP: 2.4

Ending:
Lat: 33 ° 46 ' 03.92 " N
Long: 112 ° 46 ' 36.99 " W
Ellip. Height: 507 M PDOP: ____

DC FILENAME: 1583-9782
TSC1 # 9782 **& GPS FILENAME** 97821860
Receiver Model: 4000SSE
Antenna Type: Compact L1/L2 W GP
Fixed Height Pole No: #1
Local-UTC Time Offset: MST= -7:00
Type of Survey: Fast Static
Actual= Start 15 : 26 . Stop: 16 : 10 . UTC
Beg. SV's Used: 3, 6, 9, 14, 15, 18
End SV's Used: 3, 9, 14, 15, 18, 19, 21, 22

Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:
☒ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)
ANT. S.N. 98246

Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Calm Breezy °F +/- ____

N

Type of Monument: NGS 3D Monument Stamping: 4JJ2
Top of marker: ( ) flush .10 M ( ) above: (X) below: Nat. Ground Detail Notes: ____

Rubbing Performed ( )Yes (X)No

Maricopa County Department of Transportation

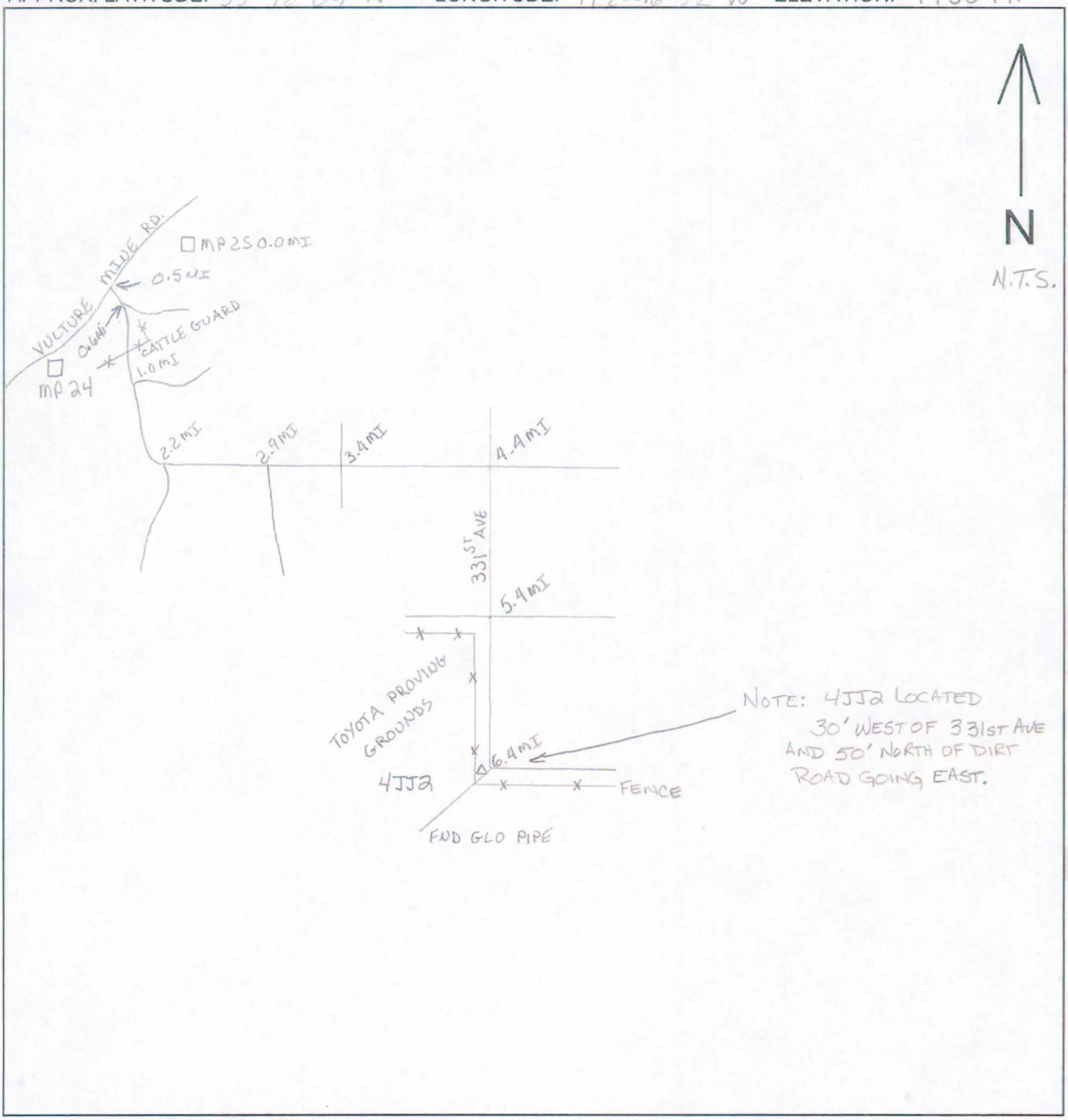
MONUMENT RECORD

STATION NAME: 4JJ2 4 LETTER ID: 4JJ2

APPROX. LOCATION: T 5N R 5W S 22 GILA AND SALT RIVER MERIDIAN AND BASELINE

AGENCY/FIRM: A tram SKETCH BY: Joe Bonillas DATE: 12-20-99

APPROX. LATITUDE: 33-46-04 N LONGITUDE: 112-46-32 W ELEVATION: 1760 FT.



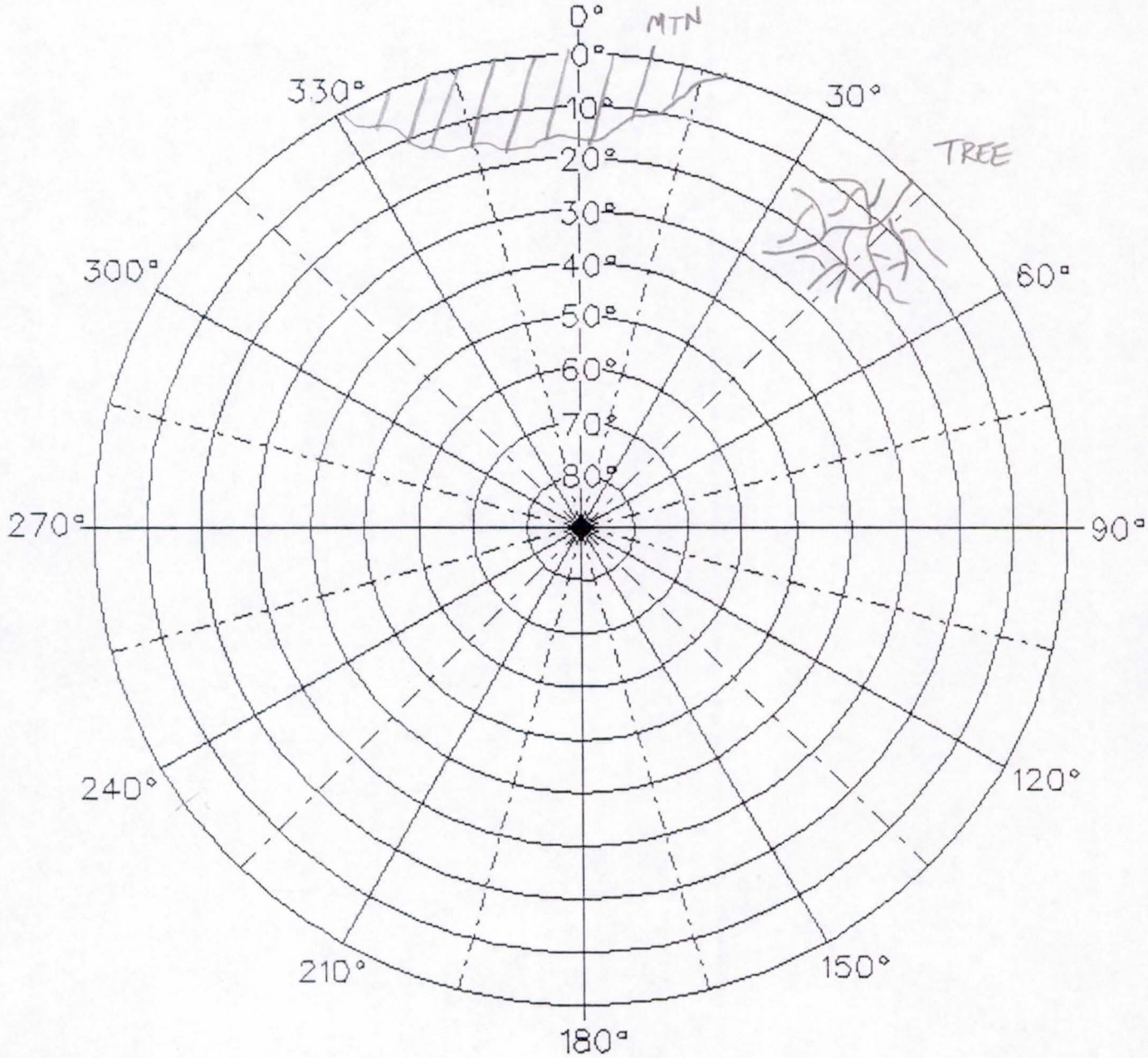
DESCRIPTION OF MONUMENT: SET STD NGS 3-D MONUMENT DRIVEN 10' to REFUSAL

StationS.xls

Sheet 1 of 1

STATION VISIBILITY DIAGRAM

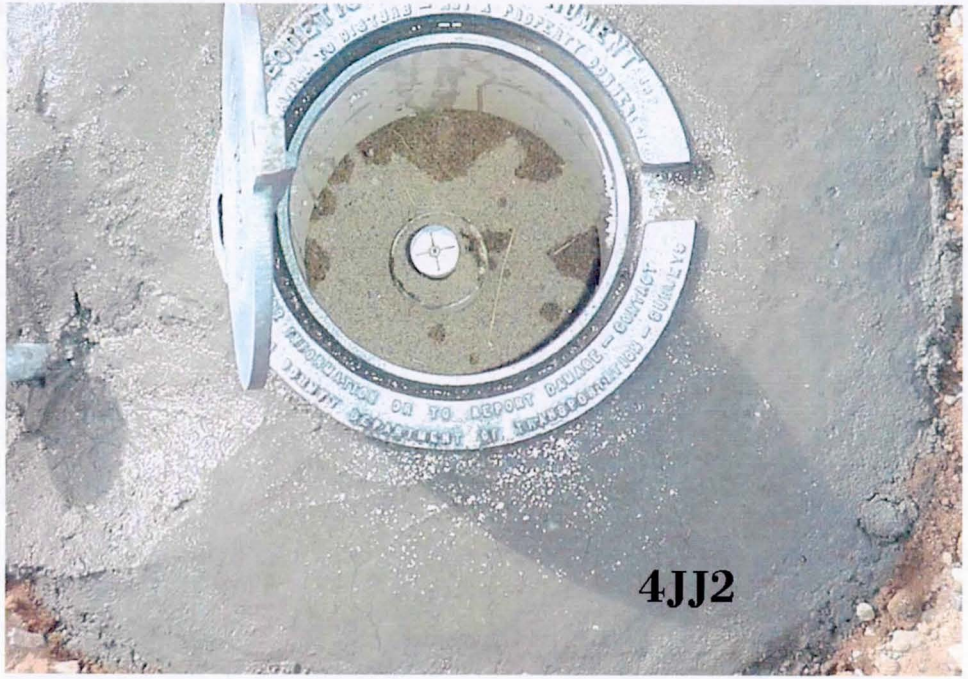
STATION NAME: 4JJ2 4 LETTER ID: 4JJ2
APPROXIMATE LOCATION: T 5N R 5W S 22 GILA AND SALT RIVER BASELINE AND MERIDIAN
AGENCY/FIRM: A-TEAM DESCRIBED BY: C. CLARK DATE: 1-24-00
LATITUDE: 33° 46' 04" LONGITUDE: 112° 46' 32"

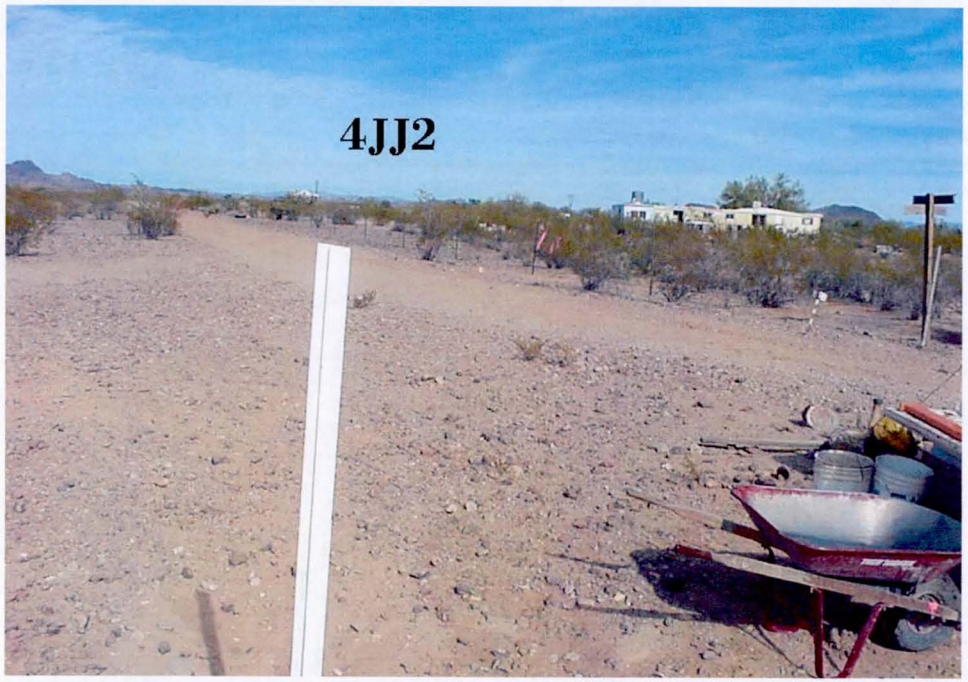


MONUMENT DESCRIPTION / COMMENTS:
NGS TYPE II MONUMENT DRIVEN 10' TO REFUSALE

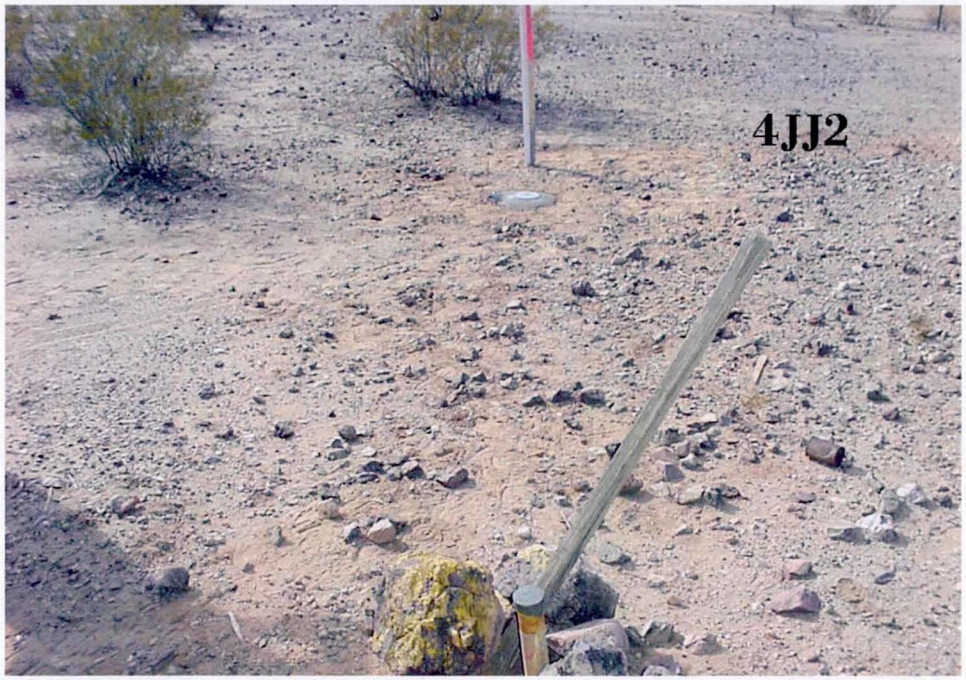
station%.xls

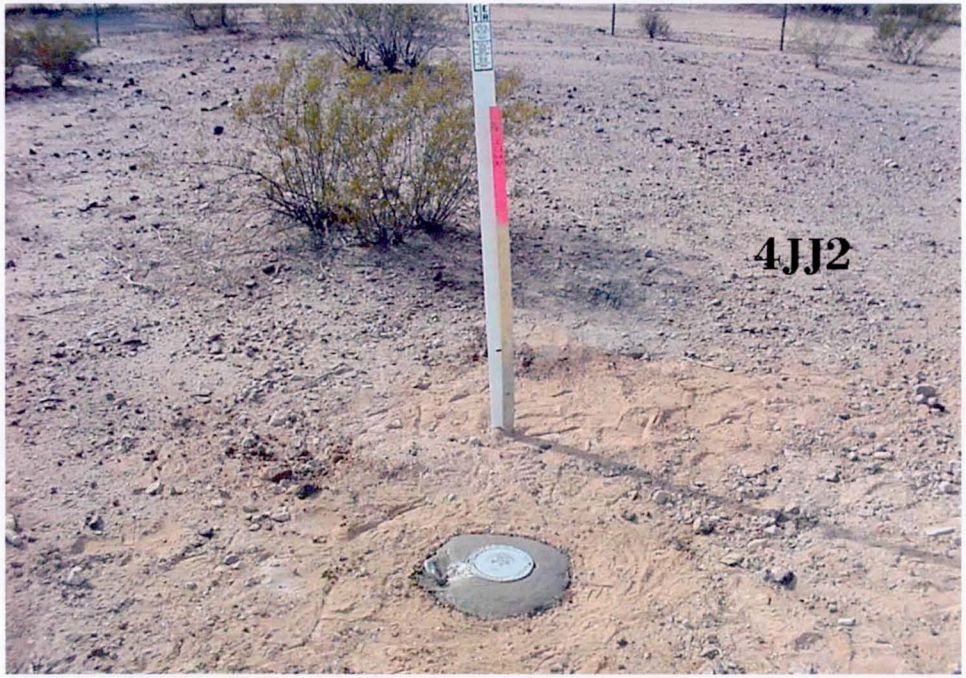
4JJ2

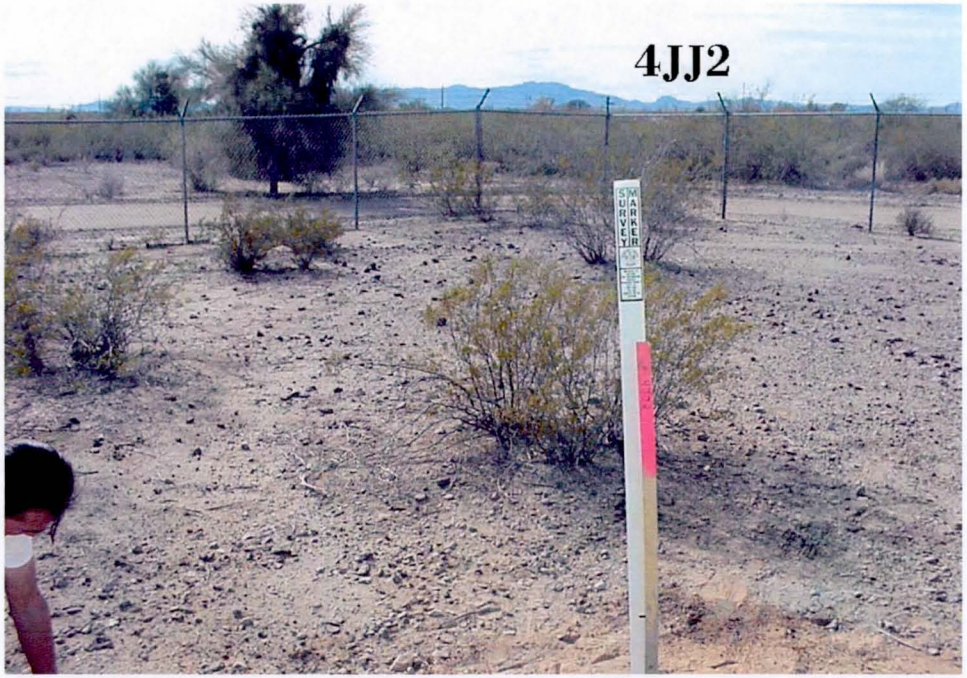

4JJ2


4JJ2

4JJ2
MARICOPA COUNTY
ARIZONA
4JJ2


4JJ2


4JJ2


4JJ2
SURVEY MARKER

4KH3

The NGS Data Sheet

See file dsdata.txt for more information about the datasheet.

```
DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 7.23
1        National Geodetic Survey,   Retrieval Date = AUGUST 31, 2005
 AJ3889 ***********************************************************************
 AJ3889  HT_MOD       -  This is a Height Modernization Survey Station.
 AJ3889  DESIGNATION -  4KH3
 AJ3889  PID          -  AJ3889
 AJ3889  STATE/COUNTY-  AZ/MARICOPA
 AJ3889  USGS QUAD    -  WICKENBURG SW (1965)
 AJ3889
 AJ3889                         *CURRENT SURVEY CONTROL
 AJ3889  ___________________________________________________________________
 AJ3889* NAD 83(1992)-  33 50 27.92188(N)     112 41 24.55547(W)     ADJUSTED
 AJ3889* NAVD 88      -       607.11   (meters)    1991.8    (feet)  GPS OBS
 AJ3889  ___________________________________________________________________
 AJ3889  X            -  -2,045,840.501 (meters)                     COMP
 AJ3889  Y            -  -4,893,100.771 (meters)                     COMP
 AJ3889  Z            -   3,532,141.332 (meters)                     COMP
 AJ3889  LAPLACE CORR-            0.62  (seconds)                    DEFLEC99
 AJ3889  ELLIP HEIGHT-          577.24  (meters)          (04/12/01) GPS OBS
 AJ3889  GEOID HEIGHT-          -29.80  (meters)                     GEOID03
 AJ3889
 AJ3889  HORZ ORDER   -  B
 AJ3889  ELLP ORDER   -  THIRD     CLASS II
 AJ3889
 AJ3889.The horizontal coordinates were established by GPS observations
 AJ3889.and adjusted by the National Geodetic Survey in April 2001.
 AJ3889
 AJ3889.The orthometric height was determined by GPS observations and a
 AJ3889.high-resolution geoid model using precise GPS observation and
 AJ3889.processing techniques.
 AJ3889
 AJ3889.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 AJ3889
 AJ3889.The Laplace correction was computed from DEFLEC99 derived deflections.
 AJ3889
 AJ3889.The ellipsoidal height was determined by GPS observations
 AJ3889.and is referenced to NAD 83.
 AJ3889
 AJ3889.The geoid height was determined by GEOID03.
 AJ3889
 AJ3889;                     North         East     Units Scale Factor Converg.
 AJ3889;SPC AZ C      -   315,298.196   141,775.047   MT  0.99996315   -0 25 50.8
 AJ3889;UTM  12       - 3,745,821.219   343,619.187   MT  0.99990148   -0 56 29.1
 AJ3889
 AJ3889!              -  Elev Factor  x  Scale Factor =   Combined Factor
 AJ3889!SPC AZ C      -   0.99990939  x   0.99996315  =   0.99987254
 AJ3889!UTM  12       -   0.99990939  x   0.99990148  =   0.99981088
 AJ3889
 AJ3889                           SUPERSEDED SURVEY CONTROL
 AJ3889
 AJ3889.No superseded survey control is available for this station.
 AJ3889
 AJ3889_U.S. NATIONAL GRID SPATIAL ADDRESS: 12SUC4361945821(NAD 83)
```

```
AJ3889_MARKER: DD = SURVEY DISK
AJ3889_SETTING: 66 = SET IN ROCK OUTCROP
AJ3889_STAMPING: 4KH3
AJ3889_MARK LOGO: MCDOT
AJ3889_MAGNETIC: A = STEEL ROD ADJACENT TO MONUMENT
AJ3889_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3889+STABILITY: POSITION/ELEVATION WELL
AJ3889_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3889+SATELLITE: SATELLITE OBSERVATIONS - June 29, 2004
AJ3889
AJ3889  HISTORY     - Date     Condition        Report By
AJ3889  HISTORY     - 2000     MONUMENTED       MCDOT
AJ3889  HISTORY     - 20040629 GOOD             EVANS
AJ3889
AJ3889                          STATION DESCRIPTION
AJ3889
AJ3889'DESCRIBED BY MARICOPA CO DOT 2000 (JJR)
AJ3889'THE STATION IS LOCATED ABOUT 9.0 MI (14.5 KM) SOUTH-SOUTHEAST OF THE
AJ3889'TOWN OF WICKENBURG, TOWNSHIP 6 NORTH, RANGE 4 WEST, SECTION 20
AJ3889'OWNERSHIP - PRIVATE
AJ3889'TO REACH THE STATION FROM THE JUNCTION OF US 60 AND CASTLE HOT SPRINGS
AJ3889'ROAD, DRIVE SOUTHWESTERLY ON CASTLE HOT SPRINGS ROAD 0.14 MI (0.23 KM)
AJ3889'TO A CATTLE GUARD AND THE END OF PAVEMENT, THENCE CONTINUE
AJ3889'SOUTHWESTERLY OVER THE CATTLE GUARD AND DRIVE WESTERLY AND NORTHERLY
AJ3889'ON GATES ROAD (DIRT) 2.1 MI (3.4 KM) TO THE HASSAYAMPA RIVER, ENTER
AJ3889'THE HASSAYAMPA RIVER BED AND CONTINUE SOUTHWESTERLY IN THE RIVER BED
AJ3889'0.8 MI (1.3 KM) TO A GATE IN A FENCE RUNNING EAST-WEST, THENCE
AJ3889'CONTINUE THROUGH THE GATE AND DRIVE SOUTHERLY AND WESTERLY 0.2 MI (0.3
AJ3889'KM) TO A GATE AT THE WEST BANK OF THE RIVER BED, THENCE CONTINUE
AJ3889'THROUGH THE GATE AND DRIVE WESTERLY ON AN UNMARKED DIRT ROAD 0.7 MI
AJ3889'(1.1 KM) TO A WASH, THENCE ENTER WASH AND DRIVE NORTHERLY 0.2 MI (0.3
AJ3889'KM) AND EXIT WASH ON THE LEFT (WEST) , THENCE CONTINUE DRIVING
AJ3889'WESTERLY 0.5 MI (0.8 KM) TO A DIRT TRAIL AND TURN RIGHT (NORTHWEST) ,
AJ3889'THENCE CONTINUE WESTERLY AND SOUTHWESTERLY 0.3 MI (0.5 KM) TO A Y IN
AJ3889'THE TRAIL AND STAY TO THE LEFT, THENCE CONTINUE DRIVING SOUTHERLY 0.1
AJ3889'MI (0.2 KM) TO THE STATION ON YOUR LEFT (EAST) 30 FT (9.1 M) FROM THE
AJ3889'CENTERLINE OF THE DIRT ROAD
AJ3889'THE STATION IS MARKED BY A 3 1/4 INCH MARICOPA COUNTY D.O.T.  BRASS
AJ3889'DISK, STAMPED 4KH3, SET IN BEDROCK, WITNESSED BY A WHITE CARSONITE
AJ3889'MARKER
AJ3889'STATION TIES -
AJ3889'30 FT (9.1 M) WEST OF THE CENTERLINE OF THE DIRT ROAD
AJ3889'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3889'VISIT-WWW.MCDOT.MARICOPA.GOV       SEARCH KEYWORD  GDACS
AJ3889
AJ3889                          STATION RECOVERY (2004)
AJ3889
AJ3889'RECOVERY NOTE BY DAVID EVANS + ASSOC 2004 (LDF)
AJ3889'RECOVERED IN GOOD CONDITION.

*** retrieval complete.
Elapsed Time = 00:00:05
```

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: 4KH3
Receiver No: 6081
Day of Year: 146 2005
Session No: 1

Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. 5 day 26 year 05
Operator: Morzella

C/A CODE POSITION

Beg:
Lat: : 33 ° 50 '27.98 " N
Long: 112 ° 41 '24.60 " W
Ellip. Height: 576.905 M PDOP: 1.7

Ending:
Lat: 33 ° 50 '27.96 " N
Long: 112 ° 41 '24.61 " W
Ellip. Height: 581.07 M PDOP: 2.2

DC FILENAME: 1583-1501
TSC1 # 1501 **& GPS FILENAME** 1501461
Receiver Model:
Antenna Type:
Fixed Height Pole No:
Local-UTC Time Offset: MST= -7:00
Type of Survey: Fast Static
Actual= Start 17 : 17 . Stop: 19 : 00 . UTC
Beg. SV's Used: 6 15 16 18 21 22
End SV's Used: 3 9 14 15 18 19 21 22

Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:

☒ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)

ANT. S.N. 02406

Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Calm Breezy °F +/-

N

Type of Monument: Stamping:
Top of marker: ( ) flush M ( ) above: ( ) below: Nat. Ground Detail Notes:

Rubbing Performed ( )Yes ( )No

Maricopa County Department of Transportation

MONUMENT RECORD

STATION NAME: HKH3 4 LETTER ID: HKH3

APPROX. LOCATION: T 6N R 4W S 20 GILA AND SALT RIVER MERIDIAN AND BASELINE

AGENCY/FIRM: A-TEAM SKETCH BY: M. JONES DATE: 2-01-00

APPROX. LATITUDE: N 33° 50' 26" LONGITUDE: W 112° 41' 26" ELEVATION: 2010 ft.

DESCRIPTION OF MONUMENT: Set 3/4" Maricopa County Brass Cap in Bedrock.

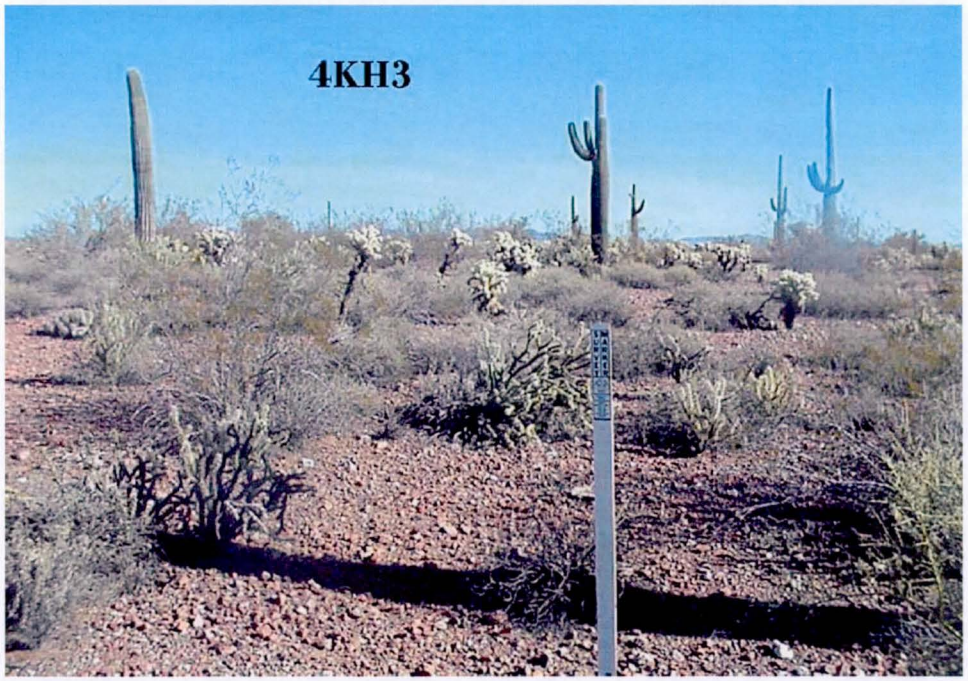
Station Sketch.xls

Sheet 1 of 1

4KH3

4KH3
SURVEY
MARKER

4KH3
GEODETIC CONTROL MONUMENT
UNLAWFUL TO DISTURB
MARICOPA COUNTY D.O.T.


4KH3

4JH5

The NGS Data Sheet

See file dsdata.txt for more information about the datasheet.

```
DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 7.23
1        National Geodetic Survey,   Retrieval Date = AUGUST 31, 2005
 AJ3874 ***********************************************************************
 AJ3874  HT_MOD       -  This is a Height Modernization Survey Station.
 AJ3874  DESIGNATION -  4JH5
 AJ3874  PID          -  AJ3874
 AJ3874  STATE/COUNTY-  AZ/MARICOPA
 AJ3874  USGS QUAD    -  WICKENBURG SW (1965)
 AJ3874
 AJ3874                         *CURRENT SURVEY CONTROL
 AJ3874  ___________________________________________________________________
 AJ3874* NAD 83(1992)-  33 46 08.44057(N)    112 39 49.77108(W)     ADJUSTED
 AJ3874* NAVD 88      -       520.46   (meters)    1707.5    (feet)  GPS OBS
 AJ3874  ___________________________________________________________________
 AJ3874  X            -  -2,045,278.066 (meters)                     COMP
 AJ3874  Y            -  -4,898,078.755 (meters)                     COMP
 AJ3874  Z            -   3,525,449.291 (meters)                     COMP
 AJ3874  LAPLACE CORR-           2.01  (seconds)                    DEFLEC99
 AJ3874  ELLIP HEIGHT-         490.43  (meters)          (04/12/01) GPS OBS
 AJ3874  GEOID HEIGHT-         -29.98  (meters)                     GEOID03
 AJ3874
 AJ3874  HORZ ORDER   -  B
 AJ3874  ELLP ORDER   -  THIRD     CLASS II
 AJ3874
 AJ3874.The horizontal coordinates were established by GPS observations
 AJ3874.and adjusted by the National Geodetic Survey in April 2001.
 AJ3874
 AJ3874.The orthometric height was determined by GPS observations and a
 AJ3874.high-resolution geoid model using precise GPS observation and
 AJ3874.processing techniques.
 AJ3874
 AJ3874.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 AJ3874
 AJ3874.The Laplace correction was computed from DEFLEC99 derived deflections.
 AJ3874
 AJ3874.The ellipsoidal height was determined by GPS observations
 AJ3874.and is referenced to NAD 83.
 AJ3874
 AJ3874.The geoid height was determined by GEOID03.
 AJ3874
 AJ3874;                     North         East     Units Scale Factor Converg.
 AJ3874;SPC AZ C      -   307,285.899   144,153.801   MT  0.99995903   -0 24 55.2
 AJ3874;UTM  12       - 3,737,788.574   345,926.356   MT  0.99989265   -0 55 30.0
 AJ3874
 AJ3874!              -  Elev Factor  x  Scale Factor =   Combined Factor
 AJ3874!SPC AZ C      -   0.99992301  x   0.99995903  =   0.99988205
 AJ3874!UTM  12       -   0.99992301  x   0.99989265  =   0.99981567
 AJ3874
 AJ3874                         SUPERSEDED SURVEY CONTROL
 AJ3874
 AJ3874.No superseded survey control is available for this station.
 AJ3874
 AJ3874_U.S. NATIONAL GRID SPATIAL ADDRESS: 12SUC4592637789(NAD 83)
```

```
AJ3874_MARKER: I = METAL ROD
AJ3874_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AJ3874_STAMPING: 4JH5 1999
AJ3874_MARK LOGO: MCDOT
AJ3874_PROJECTION: FLUSH
AJ3874_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3874_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3874+STABILITY: POSITION/ELEVATION WELL
AJ3874_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3874+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3874_ROD/PIPE-DEPTH: 29.3 meters
AJ3874_SLEEVE-DEPTH  :  0.8 meters
AJ3874
AJ3874  HISTORY     - Date     Condition        Report By
AJ3874  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3874
AJ3874                          STATION DESCRIPTION
AJ3874
AJ3874'DESCRIBED BY MARICOPA CO DOT 1999 (JJR)
AJ3874'THE STATION IS LOCATED ABOUT 8.0 MI (12.9 KM) WEST OF THE TOWN OF
AJ3874'WITTMANN, TOWNSHIP 5 NORTH, RANGE 4 WEST, SECTION 15
AJ3874'OWNERSHIP - STATE LAND DEPARTMENT
AJ3874'TO REACH THE STATION FROM THE JUNCTION OF U.S.  60 (GRAND AVENUE) AND
AJ3874'PATTON ROAD, DRIVE WEST ON PATTON ROAD 11.2 MI (18.0 KM) TO THE
AJ3874'INTERSECTION OF OGDEN ROAD AND PATTON ROAD, THENCE TURN RIGHT (NORTH)
AJ3874'ONTO OGDEN ROAD AND DRIVE NORTHEASTERLY 2.0 MI (3.2 KM) TO A Y IN THE
AJ3874'ROAD, THENCE STAY TO THE LEFT OF THE Y AND DRIVE 0.5 MI (0.8 KM) AND
AJ3874'PARK, THENCE HIKE ABOUT 30 YARDS NORTH UP ON TOP OF A KNOLL TO THE
AJ3874'STATION
AJ3874'THE STATION IS MARKED BY AN ALUMINUM CAP COMPRESSED ON A 96.0 FOOT
AJ3874'(29.3 M) STAINLESS STEEL ROD DRIVEN TO REFUSAL, ENCASED IN A 1 INCH
AJ3874'GREASED PVC SLEEVE ENCLOSED IN A 5 INCH PVC PIPE WITH A COUNTY LOGO
AJ3874'ACCESS COVER STAMPED 4JH5 1999, SURROUNDED WITH A CONCRETE COLLAR
AJ3874'FLUSH WITH THE GROUND, WITNESSED BY A WHITE CARSONITE MARKER
AJ3874'STATION TIES -
AJ3874'NO TIES
AJ3874'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3874'VISIT-WWW.MCDOT.MARICOPA.GOV       SEARCH KEYWORD  GDACS

*** retrieval complete.
Elapsed Time = 00:00:06
```

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: 4JH5
Receiver No: 6082
Day of Year: 187 2005
Session No: 0

Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. 7 day 6 year 2005
Operator: Paul Hartenberger

C/A CODE POSITION

Beg:
Lat: : 33 ° 46 ' 08.38 " N
Long: 112 ° 39 ' 49.86 " W
Ellip. Height: 496.4 M PDOP: 2.1

Ending:
Lat: 33 ° 46 ' 08.47 " N
Long: 112 ° 39 ' 49.77 " W
Ellip. Height: 491 M PDOP: 1.9

DC FILENAME: 1583-0820
TSC1 # 0820 & GPS FILENAME 08201870
Receiver Model: 4600
Antenna Type: L1/L2 W/GP
Fixed Height Pole No: ATEAM 2
Local-UTC Time Offset: MST= -7:00
Type of Survey: Fast Static
Actual= Start 15 :05 Stop: 17 :04 UTC
Beg. SV's Used: 3, 6, 9, 14, 15, 18, 21, 22, 26
End SV's Used: 3, 9, 14, 15, 18, 19, 21, 22

Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:
☒ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)
ANT. S.N. 98246

Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Calm Breezy °F +/- 90°

N

Type of Monument: GDAC
Top of marker: ( ) flush M ( ) above: ( ) below: Nat. Ground
Stamping:
Detail Notes:

Rubbing Performed ( )Yes ( )No

Maricopa County Department of Transportation

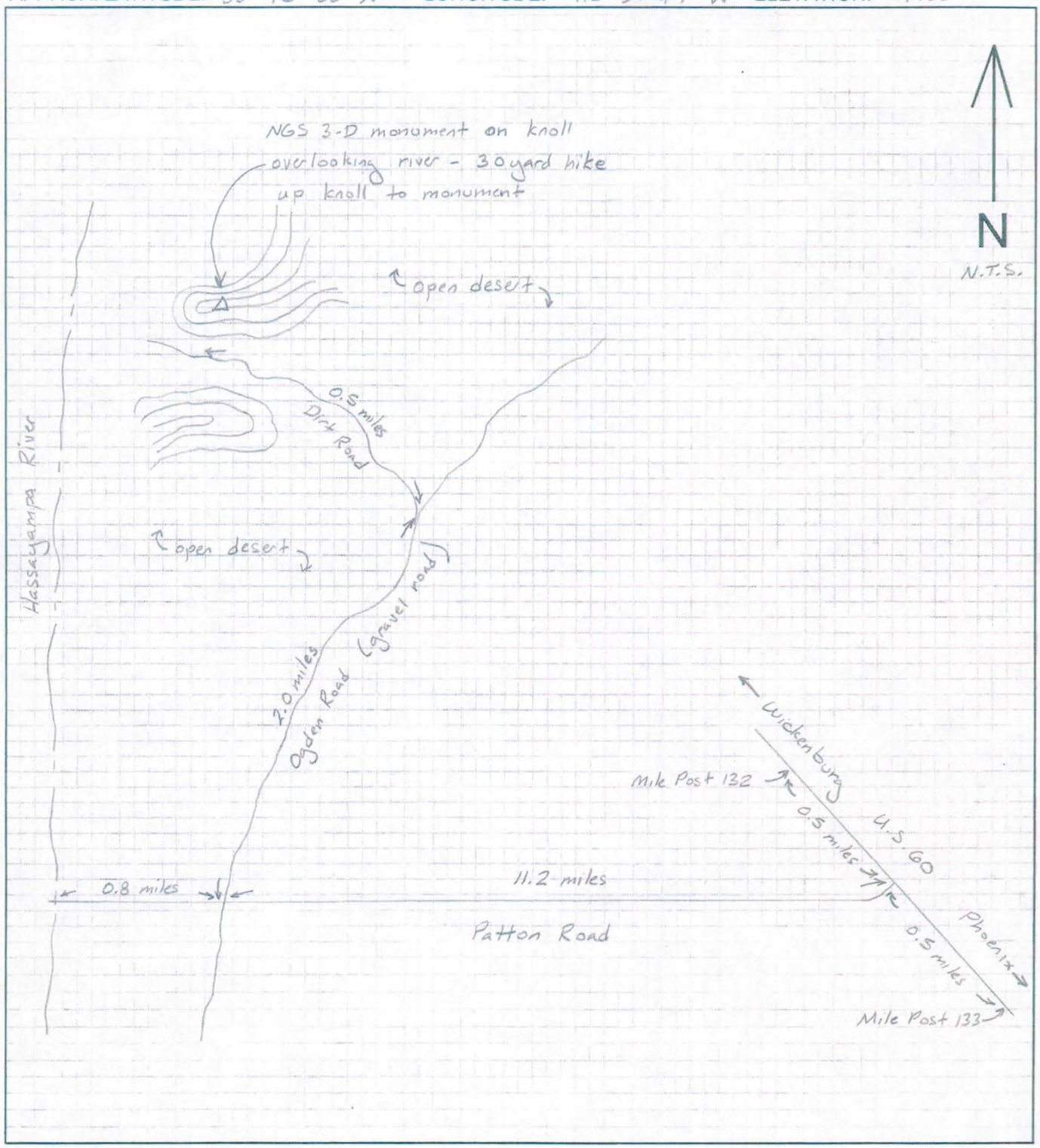
MONUMENT RECORD

STATION NAME: 4JH5 4 LETTER ID: 4JH5

APPROX. LOCATION: T 5N R 4W S 15 GILA AND SALT RIVER MERIDIAN AND BASELINE

AGENCY/FIRM: Wood / Patel SKETCH BY: Scott Nelson DATE: 10/4/99

APPROX. LATITUDE: 33° 46' 08" N LONGITUDE: 112° 39' 49" W ELEVATION: 1700



DESCRIPTION OF MONUMENT: NGS 3-D Monument - Type II

Rod depth = 96.0'

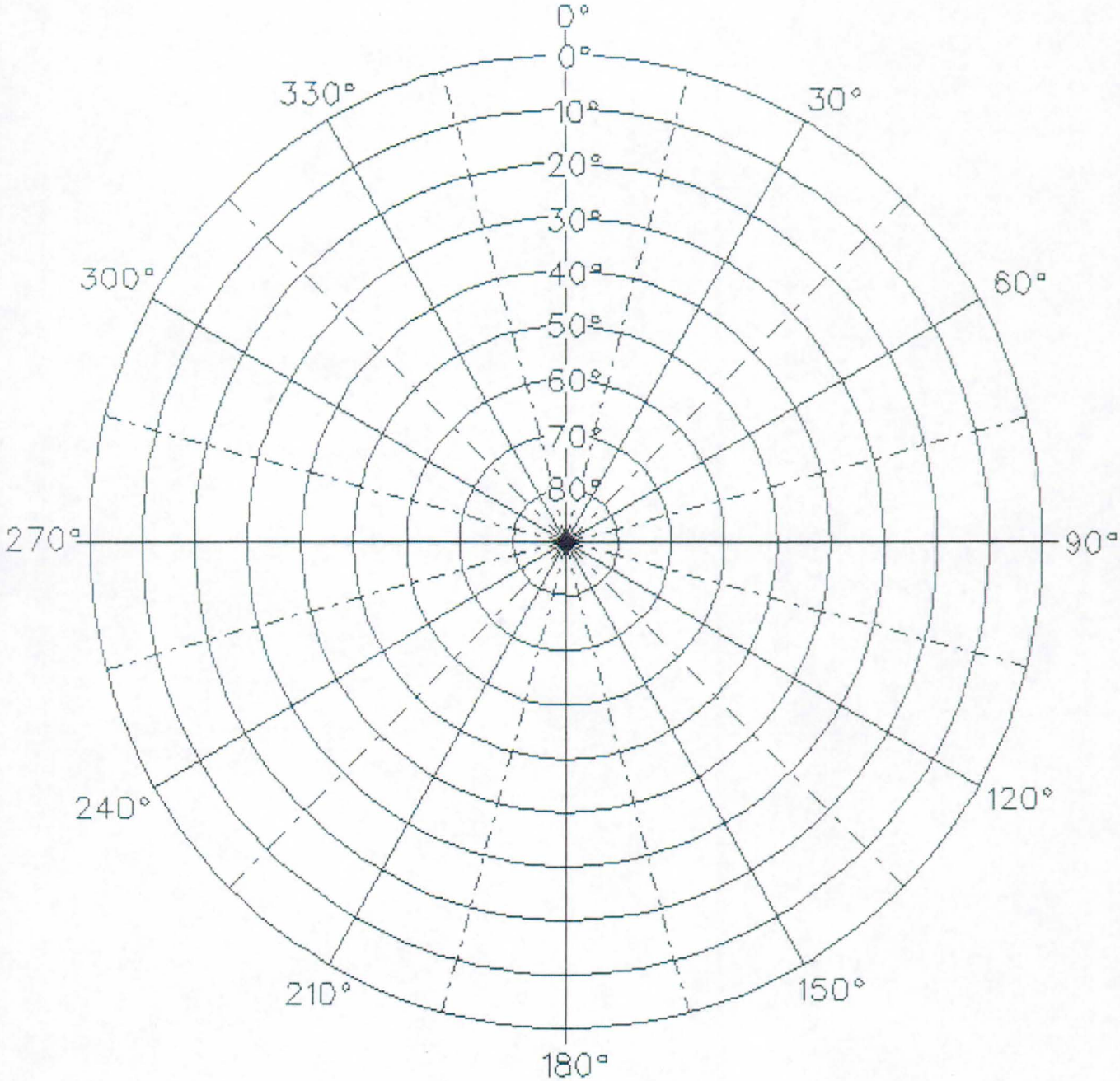
STATION VISIBILITY DIAGRAM

STATION NAME: 4JH 4 LETTER ID: 4JH

APPROXIMATE LOCATION: T 5N R 4W S 15 GILA AND SALT RIVER BASELINE AND MERIDIAN

AGENCY/FIRM: Wood / Patel DESCRIBED BY: Scott Nelson DATE: 10/4/99

LATITUDE: 33° 46' 08" N LONGITUDE: 112° 39' 49" W

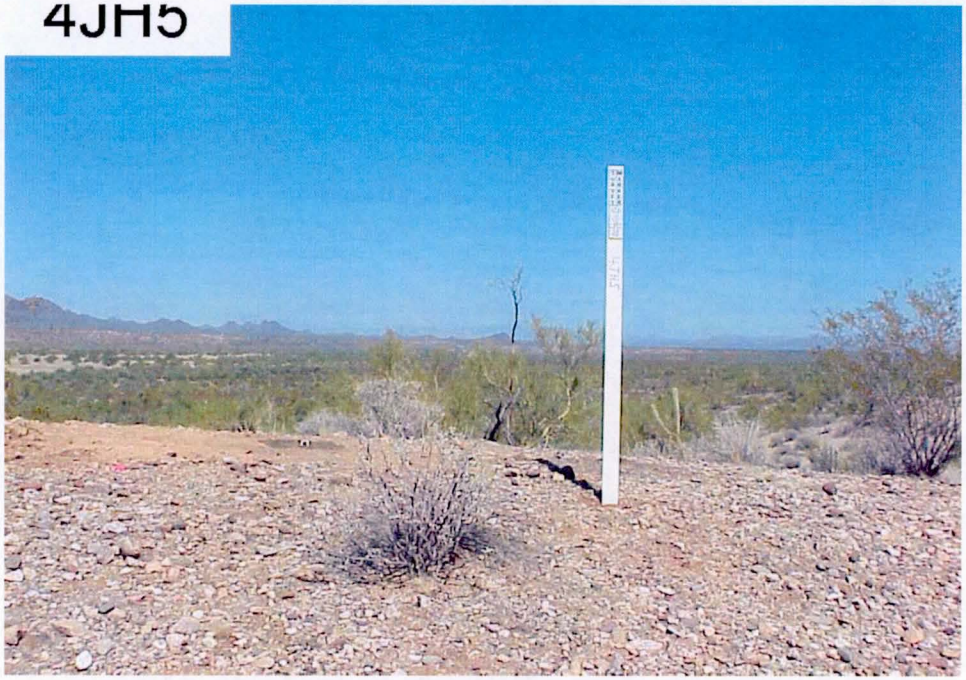


MONUMENT DESCRIPTION / COMMENTS: NGS 3-D Monument - Type II

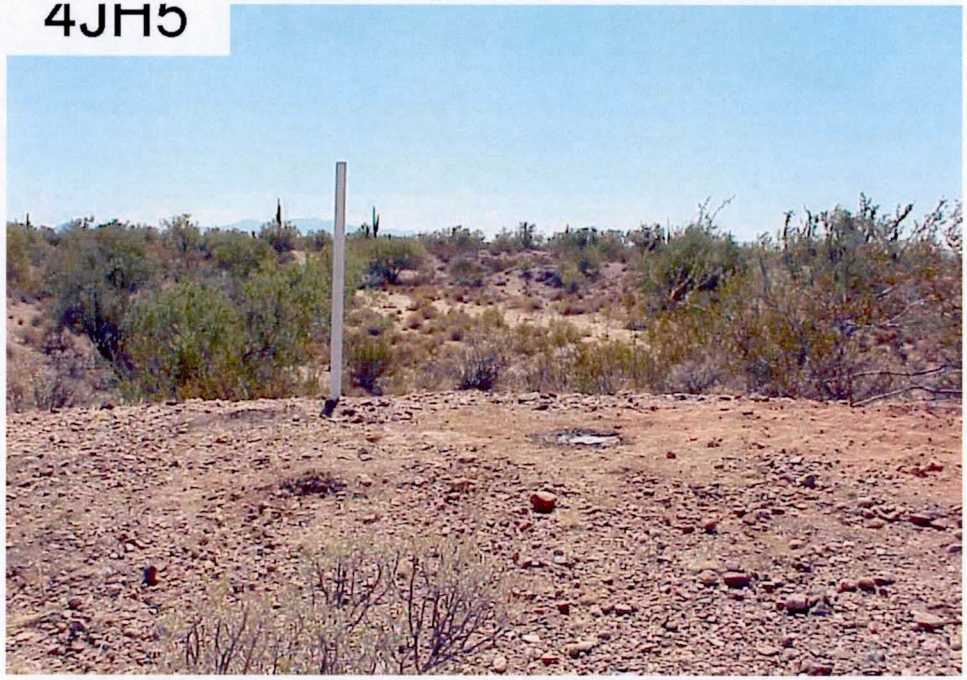
No visibility obstructions - open desert

http://www.mcdot.maricopa.gov/Construction/Construction Admin/Survey/CONSULTANT FILES/Station Visibilty Diagram.xls

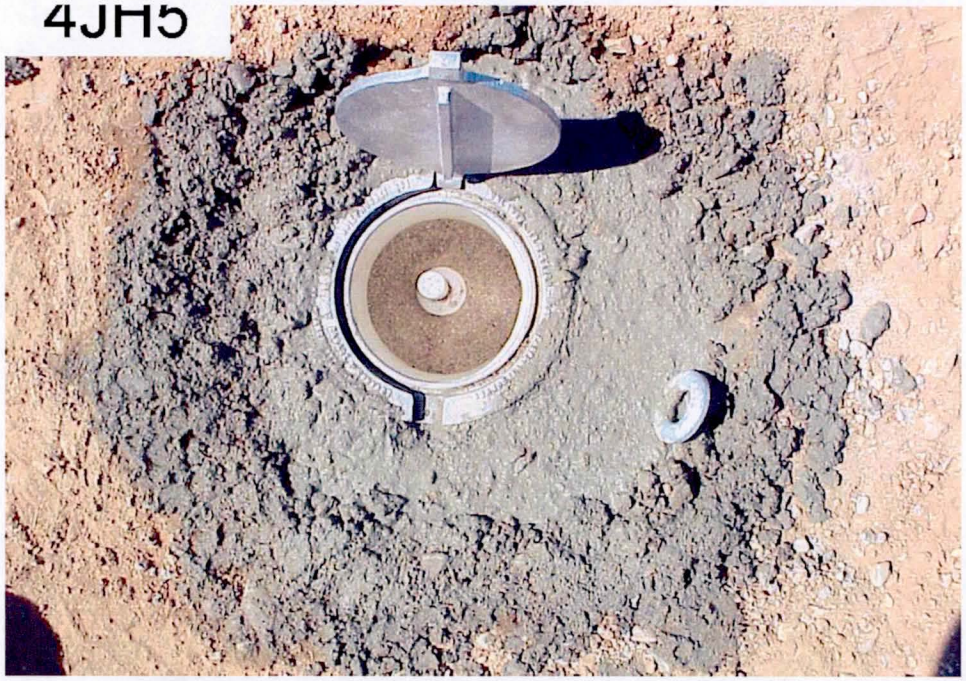
4JH5



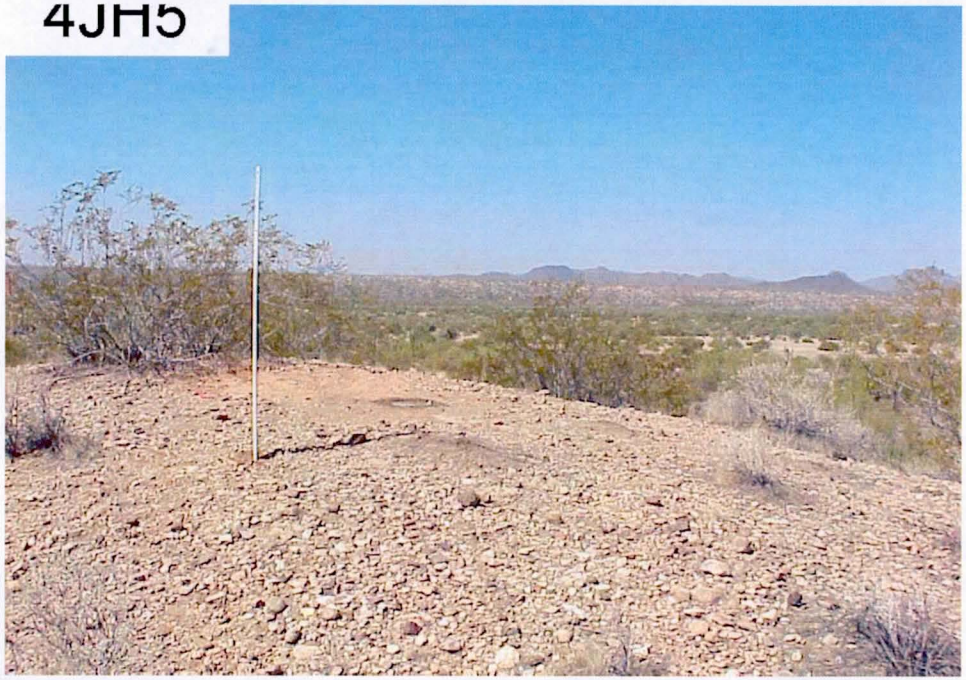
4JH5



4JH5



4JH5



SECTION 6

METADATA FOR CONTROL POINTS, PANEL POINTS, AND BLIND PANELS

- GPS LOG SHEETS
- SUPPORTING PICTURES

PP01

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: PP01
Receiver No: 6083
Day of Year: 187 2005
Session No: Ø

Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. 7 day 6 year 05
Operator: K. GEUTNER

C/A CODE POSITION

Beg:
Lat: : 33 ° 45 ' 00.02605" N
Long: 112 ° 39 ' 36.90542" W
Ellip. Height: 481.686 M PDOP: 1.7

Ending:
Lat: 33 ° 45 ' 00.01237" N
Long: 112 ° 39 ' 36.89367" W
Ellip. Height: 483.008 M PDOP: 1.9

DC FILENAME: 1583-9782
TSC1 # 9782 **& GPS FILENAME** 97821870
Receiver Model: 4000 SSE
Antenna Type: L1/L2 w/ GP
Fixed Height Pole No: 6
Local-UTC Time Offset: MST= -7:00
Type of Survey: Fast Static
Actual= Start 15 : 11.52 Stop: 16 : 15.08 UTC
Beg. SV's Used: 3, 6, 9, 14, 15, 18, 21, 22, 26
End SV's Used: 1, 3, 9, 14, 15, 18, 19, 21, 22

Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:
☑ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)

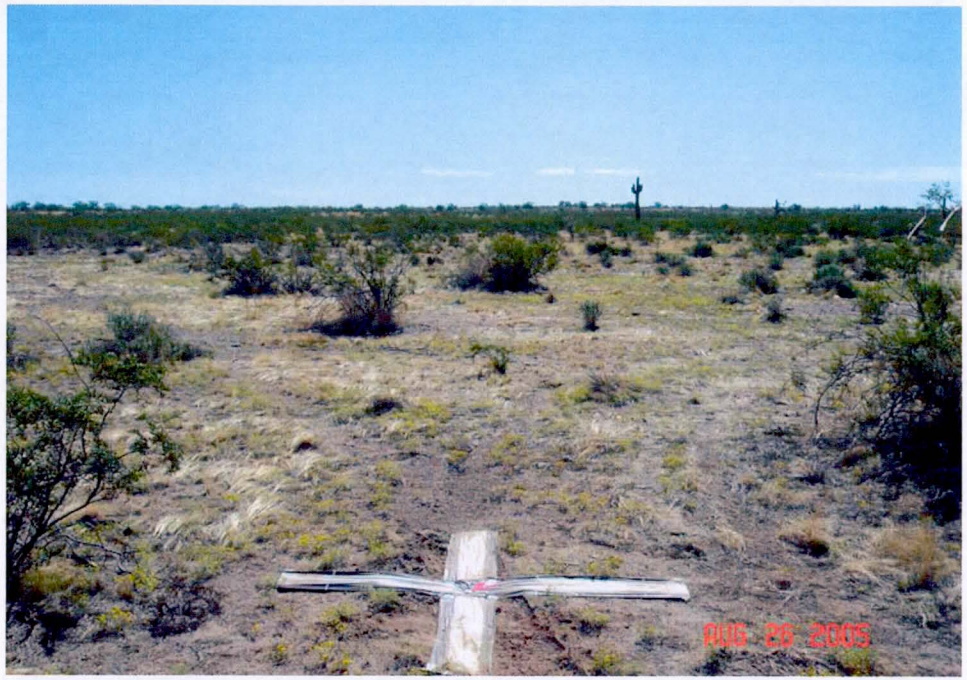
ANT. S.N. 04449

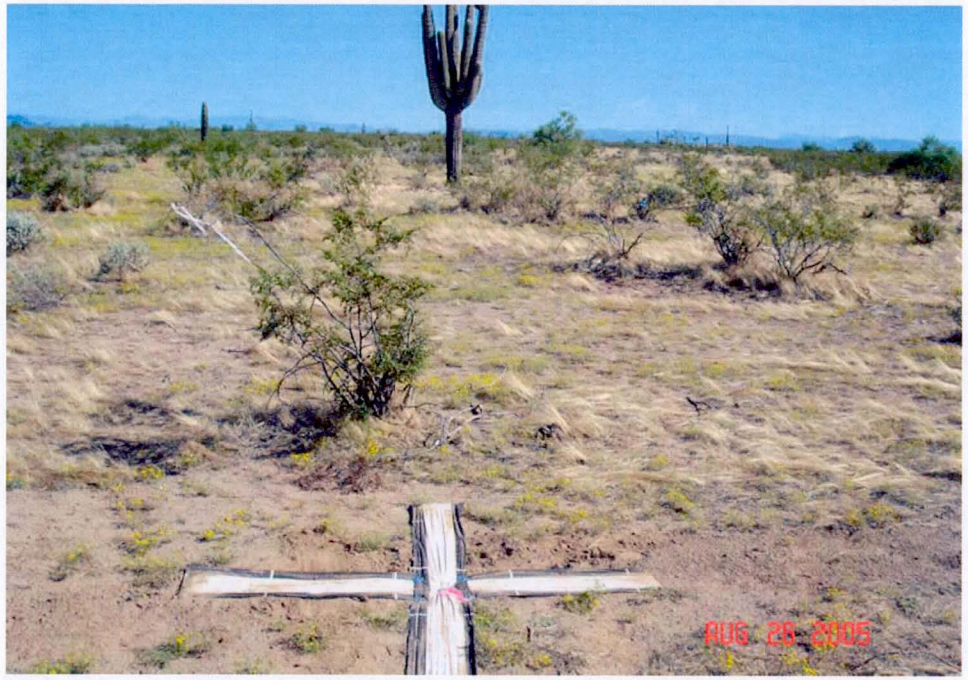
Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Calm Breezy 95 °F +/-

Type of Monument: Stamping:
Top of marker: ( ) flush M ( ) above: ( ) below: Nat. Ground Detail Notes:

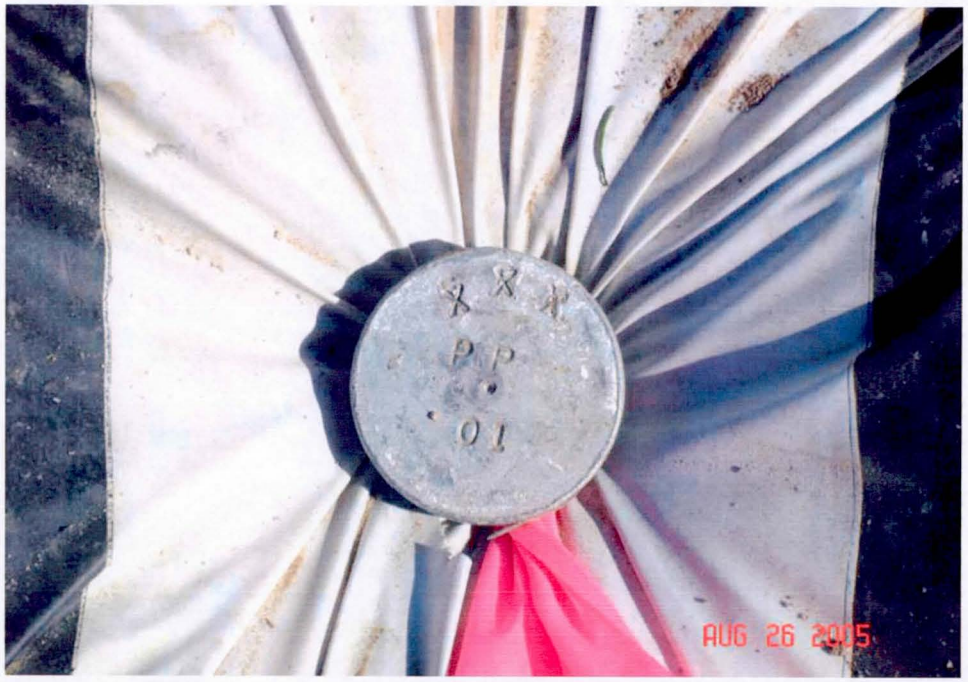
Rubbing Performed ( )Yes ( )No

AUG 26 2005


AUG 26 2005


AUG 26 2005

AUG 26 2005


P P
01
AUG 26 2005

PP02

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: PP02
Receiver No: 6082
Day of Year: 186 2005
Session No: 1

Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. 7 day 5 year 2005
Operator: Paul [illegible]

C/A CODE POSITION

Beg:
Lat: : 33 ° 44 ' 35.0192" N
Long: 112 ° 42 ' 20.695" W
Ellip. Height: 483.94 M PDOP: 1.7

Ending:
Lat: 33 ° 44 ' 35.010898 N
Long: 112 ° 42 ' 20.71477" W
Ellip. Height: 478.220 M PDOP: 1.8

DC FILENAME: 1583-0820
TSC1 # 0820 & GPS FILENAME 08201861.DAT
Receiver Model: 4000
Antenna Type: L1/L2 W/GP
Fixed Height Pole No: ATEAM 2
Local-UTC Time Offset: MST= -7:00
Type of Survey: Fast Static
Actual= Start 17 : 41 Stop: 18 : 33:46 UTC
Beg. SV's Used: 1, 3, 9, 14, 15, 18, 19, 22, 25
End SV's Used: 1, 11, 14, 15, 18, 19, 22, 25

Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:

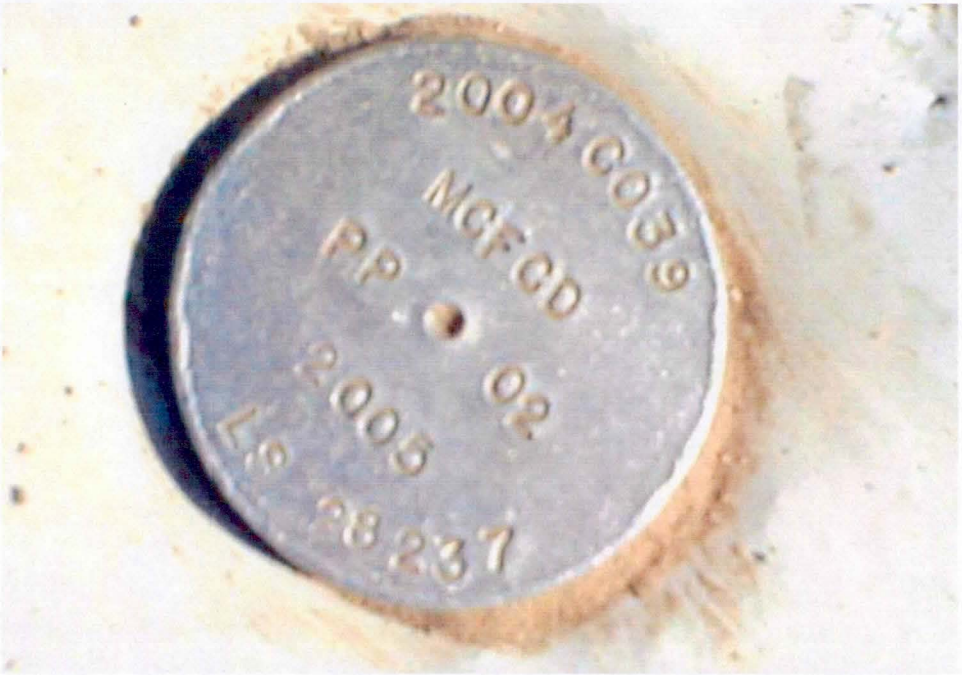
☑ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)

ANT. S.N. 0220002406

Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Calm Breezy °F +/- 95°F

Type of Monument: Aluminum CAP Stamping: SEE RUB
Top of marker: (X) flush M ( ) above: ( ) below: Nat. Ground Detail Notes:

Rubbing Performed (X) Yes ( ) No


2004 C039
MCFCD
PP 02
2005
LS 28237

PP03

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: PP03
Receiver No: 6083
Day of Year: 186 2005
Session No:

Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. July day 5 year 2005
Operator: C FISCHER

C/A CODE POSITION

Beg:
Lat: : 32 ° 44 ' 32.34 " N
Long: 112 ° 43 ' 29.29 " W
Ellip. Height: 477 M PDOP: 1.8

Ending:
Lat: 33 ° 44 ' 32.43 " N
Long: 112 ° 43 ' 29.33 " W
Ellip. Height: 475 M PDOP: 2.3

DC FILENAME: 1583-9782
TSC1 # 9782 **& GPS FILENAME** 97821861
Receiver Model: 4000SSE
Antenna Type: Compact L1/L2 w/GP
Fixed Height Pole No: #5
Local-UTC Time Offset: MST= -7:00
Type of Survey: Fast Static
Actual= Start 17 : 16 Stop: 18 : 51 UTC
Beg. SV's Used: 1, 3, 9, 14, 15, 18, 19, 21
End SV's Used: 1, 11, 14, 15, 19, 22, 25

Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:

☒ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)

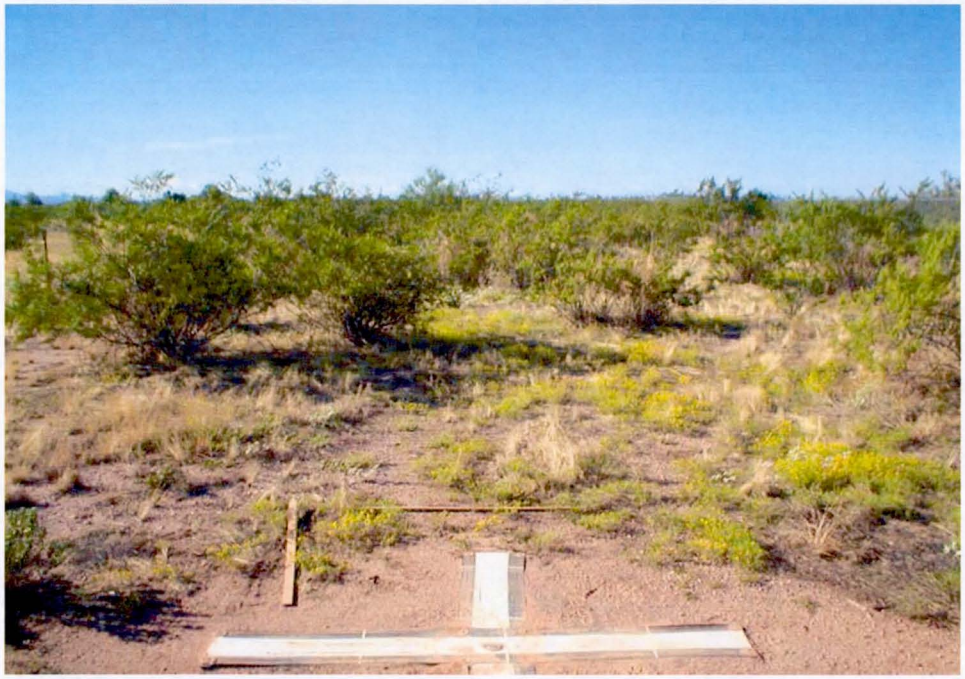
ANT. S.N. 98246

Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Calm Breezy °F +/-

N

Type of Monument: 2" ALF Stamping:
Top of marker: (X) flush M ( ) above: ( ) below: Nat. Ground Detail Notes:

Rubbing Performed ( )Yes (X)No



2004COOS
MCFCD
PP
LS 28237

PP04

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: PP4
Receiver No: 7662
Day of Year: 186 2005
Session No: 0

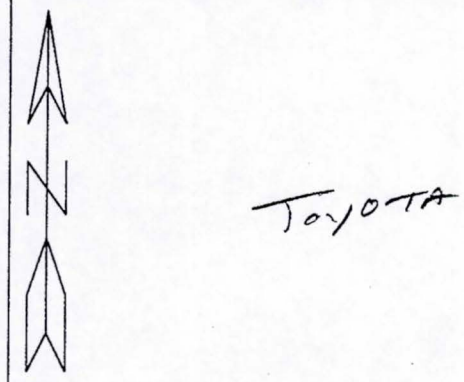
Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. 7 day 5 year 2005
Operator: J. MALEK

C/A CODE POSITION
Beg:
Lat: : 33 ° 44 ' 34.18 " N
Long: 112 ° 44 ' 56.80 " W
Ellip. Height: 478.884 M PDOP: 1.6
Ending:
Lat: 33 ° 44 ' 34.25 " N
Long: 112 ° 44 ' 56.78 " W
Ellip. Height: 474.19 M PDOP: 2.1

DC FILENAME:
TSC1 # 089 & GPS FILENAME 1583-039
Receiver Model: 5000 SSE
Antenna Type: COMPACT L1/L2
Fixed Height Pole No: ATEAM #4
Local-UTC Time Offset: MST= -7:00
Type of Survey: Fast Static
Actual= Start 15 : 38 Stop: 18 : 51 UTC
Beg. SV's Used: 3 9 14 15 18 19 21 22 26
End SV's Used: 11 14 15 18 19 22 25

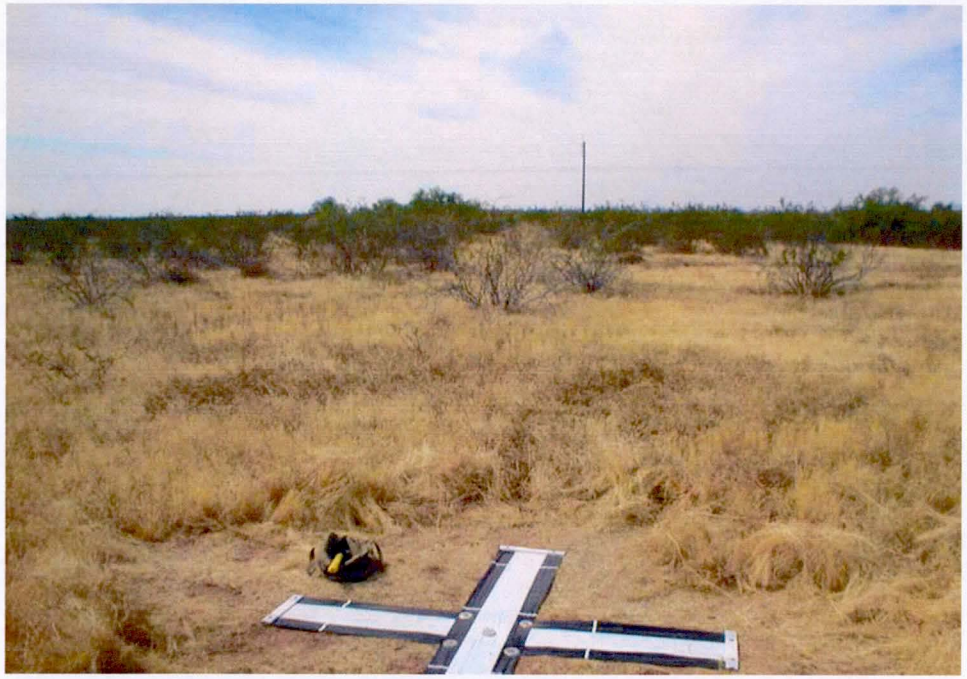
Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:
☒ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)
ANT. S.N. 14399

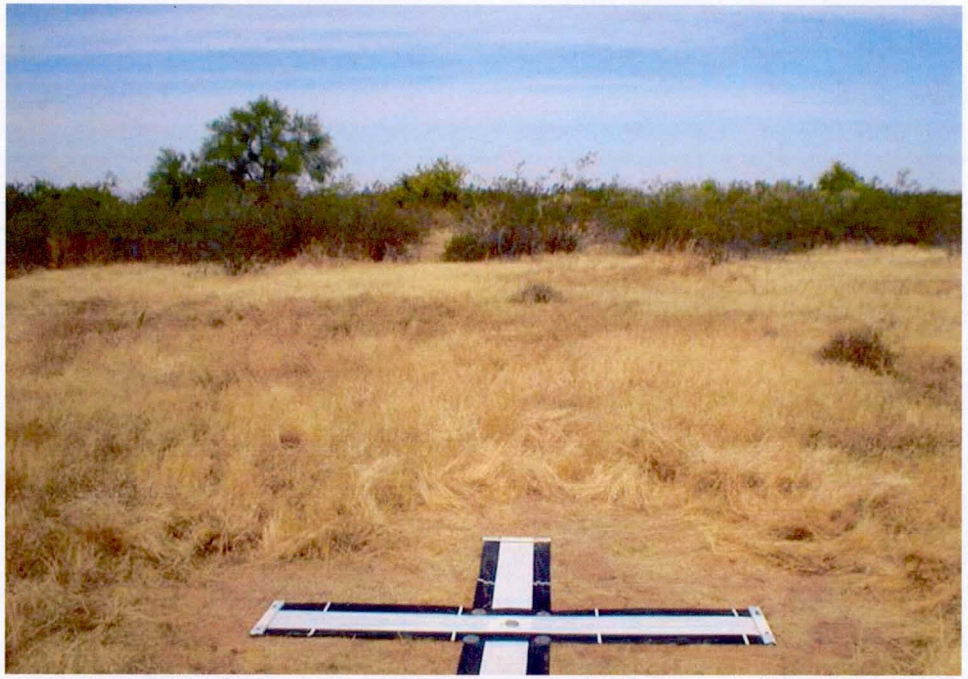
Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Calm Breezy °F +/-



Type of Monument: Stamping:
Top of marker: ( ) flush M ( ) above: ( ) below: Nat. Ground Detail Notes:

Rubbing Performed ( )Yes ( )No





PP05

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: PP5
Receiver No: 60716
Day of Year: 186 2005
Session No: 0

Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. 7 day 5 year 2005
Operator: J. MALEK

C/A CODE POSITION

Beg:
Lat: : 33 ° 45 ' 02.32 " N
Long: 112 ° 46 ' 37.48 " W
Ellip. Height: 487.059 M PDOP: 1.7

Ending:
Lat: 33 ° 45 ' 02.34 " N
Long: 112 ° 46 ' 37.41 " W
Ellip. Height: 487.552 M PDOP: 2.7

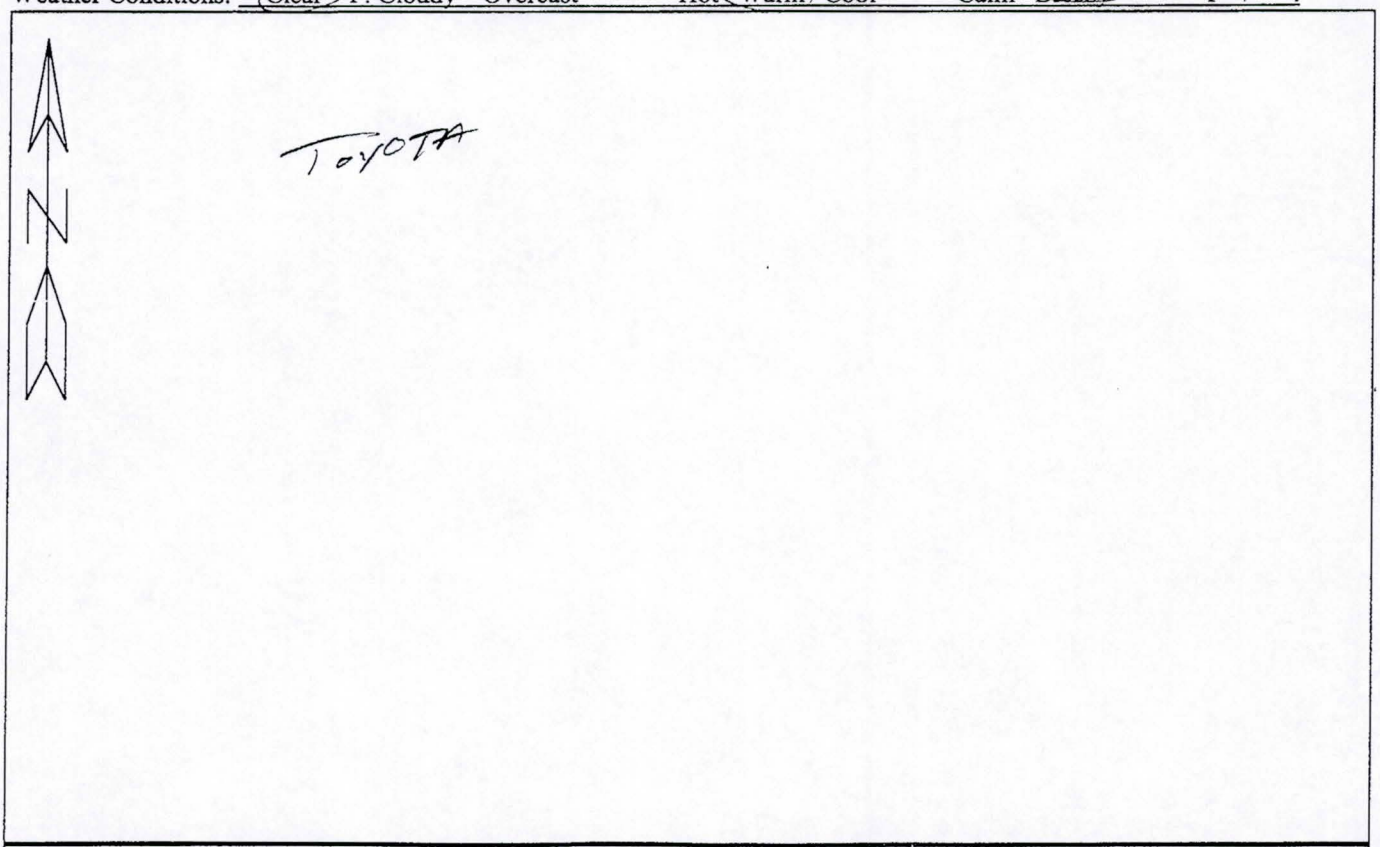
DC FILENAME: 1583-0772
TSC1 # 0772 **& GPS FILENAME**
Receiver Model: 4000 SSE
Antenna Type: COMPACT L1/L2
Fixed Height Pole No: ATEAM 3
Local-UTC Time Offset: MST= -7:00
Type of Survey: Fast Static
Actual= Start 15 : 12 Stop: 18 : 47 UTC
Beg. SV's Used: 3 6 9 14 15 22 18 26 21
End SV's Used: 11 14 15 19 22 25

Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:

☒ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)

ANT. S.N. 04449

Weather Conditions: (Clear) P. Cloudy Overcast Hot (Warm) Cool Calm (Breezy) °F +/-



Type of Monument: Stamping:
Top of marker: ( ) flush M ( ) above: ( ) below: Nat. Ground Detail Notes:

Rubbing Performed ( )Yes ( )No

2003C039
MOFCD
2005
28237

PP06

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: PP06
Receiver No: 6081
Day of Year: 186 2005
Session No: 1

Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. 7 day 5 year 05
Operator: K. GENTNER

C/A CODE POSITION

Beg:
Lat: : 33 ° 45 ' 31.75260 " N
Long: 112 ° 43 ' 41.84124 " W
Ellip. Height: 493.007 M PDOP: 2.0

Ending:
Lat: 33 ° 45 ' 31.79070 " N
Long: 112 ° 43 ' 41.89125 " W
Ellip. Height: 488.573 M PDOP: 2.1

DC FILENAME: 1583-1501
TSC1 # 1501 **& GPS FILENAME** 15011861
Receiver Model: 4000 SSE
Antenna Type: L1/L2 w/ GP
Fixed Height Pole No: 6
Local-UTC Time Offset: MST= -7:00
Type of Survey: Fast Static
Actual= Start 17 : 01.25 Stop: 18 : 31.40 UTC
Beg. SV's Used: 3, 9, 14, 15, 18, 19, 21, 22
End SV's Used: 11, 14, 15, 18, 19, 22, 25

Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:
☑ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)

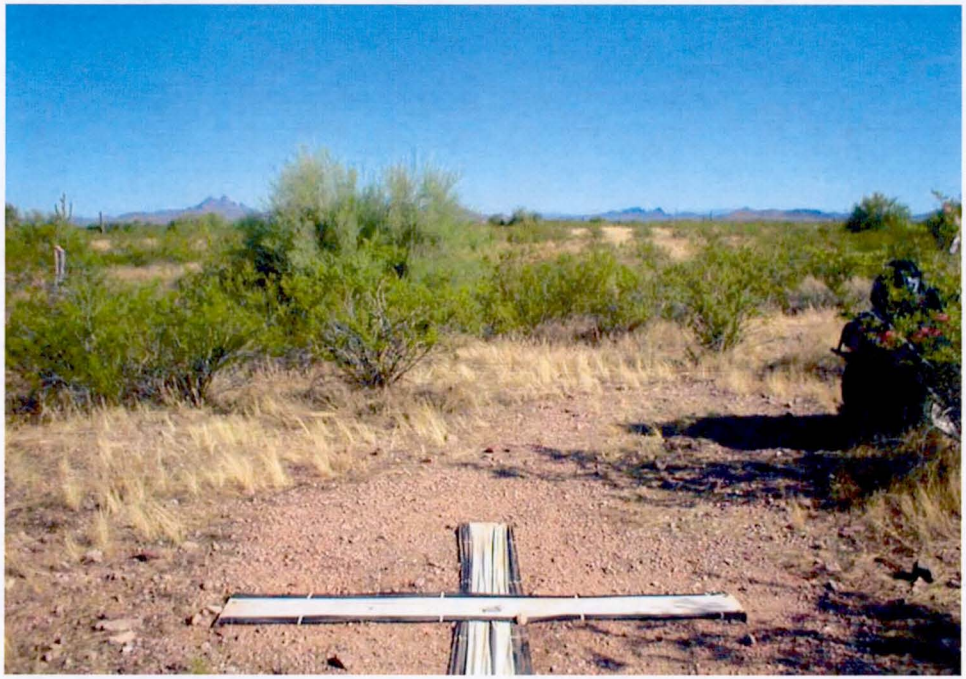
ANT. S.N. 98228

Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Calm Breezy 100 °F +/-

N

Type of Monument: Stamping:
Top of marker: ( ) flush M ( ) above: ( ) below: Nat. Ground Detail Notes:

Rubbing Performed ( )Yes ( )No



2004005
MCFCD
PP 06
2005
LS 28237

PP07

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: PP7
Receiver No: 6076
Day of Year: 187 2005
Session No:

Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. 7 day 6 year 2005
Operator: J. MALEK

C/A CODE POSITION

Beg:
Lat: : 33 ° 46 ' 13.39 " N
Long: 112 ° 41 ' 12.42 " W
Ellip. Height: 462.618 M PDOP: 2.2

Ending:
Lat: 33 ° 46 ' 13.42 " N
Long: 112 ° 41 ' 12.40 " W
Ellip. Height: 463.075 M PDOP: 2.1

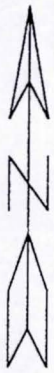
DC FILENAME:
TSC1 # 0772 **& GPS FILENAME**
Receiver Model: 4000 SSE
Antenna Type: COMPACT L1/L2
Fixed Height Pole No: ATEAM # 2
Local-UTC Time Offset: MST= -7:00
Type of Survey: Fast Static
Actual= Start 16 : 16 . Stop: 16 : 47 . UTC
Beg. SV's Used: 3 9 14 15 18 19 21 22
End SV's Used: 3 9 14 15 18 19 21 22

Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:

☒ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)

ANT. S.N. 02406

Weather Conditions: (Clear) P. Cloudy Overcast Hot (Warm) Cool (Calm) Breezy °F +/-



Type of Monument: Stamping:
Top of marker: ( ) flush M ( ) above: ( ) below: Nat. Ground Detail Notes:

Rubbing Performed ( )Yes ( )No

PP08

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: PP #8
Receiver No: 6082
Day of Year: 186 2005
Session No: 0

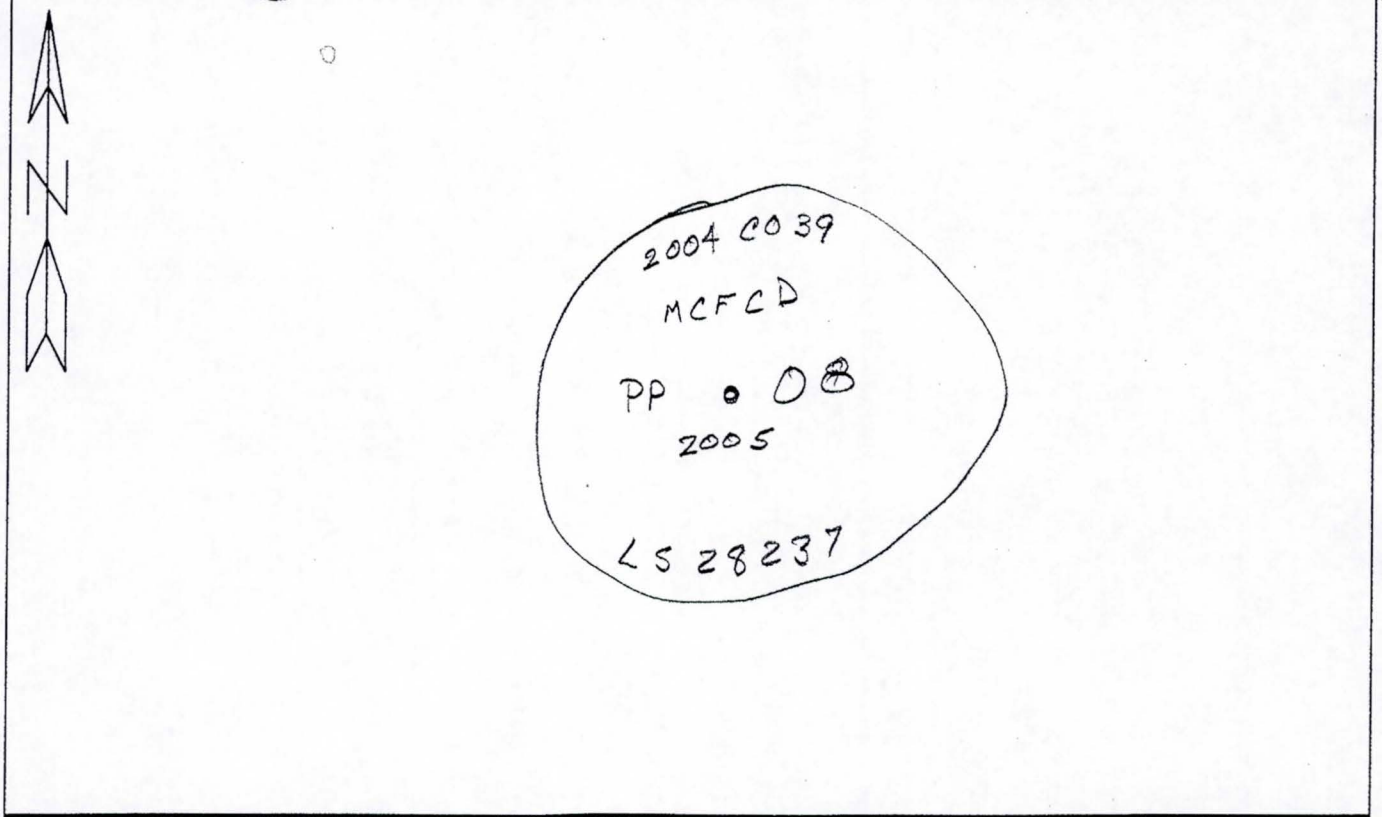
Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. 7 day 5 year 2005
Operator: Paul Gerstenburger

C/A CODE POSITION
Beg:
Lat: : 33 ° 46 ' 17.068" N
Long: 112 ° 45 ' 13.171" W
Ellip. Height: 508.679 M PDOP: 1.7
Ending:
Lat: 33 ° 46 ' 16.9935" N
Long: 112 ° 45 ' 13.15009" W
Ellip. Height: 508.456 M PDOP: 1.8

DC FILENAME: 1583-0820
TSC1 # 0820 & GPS FILENAME 08201860.DAT
Receiver Model: 4000
Antenna Type: L1/L2 W/GP
Fixed Height Pole No: ATEAM #2
Local-UTC Time Offset: MST= -7:00
Type of Survey: Fast Static
Actual= Start 15 :33 Stop: 16 : 16 UTC
Beg. SV's Used: 3,6,9,14,15,18,21,22
End SV's Used: 1,2,9,14,15,18,19,21,22

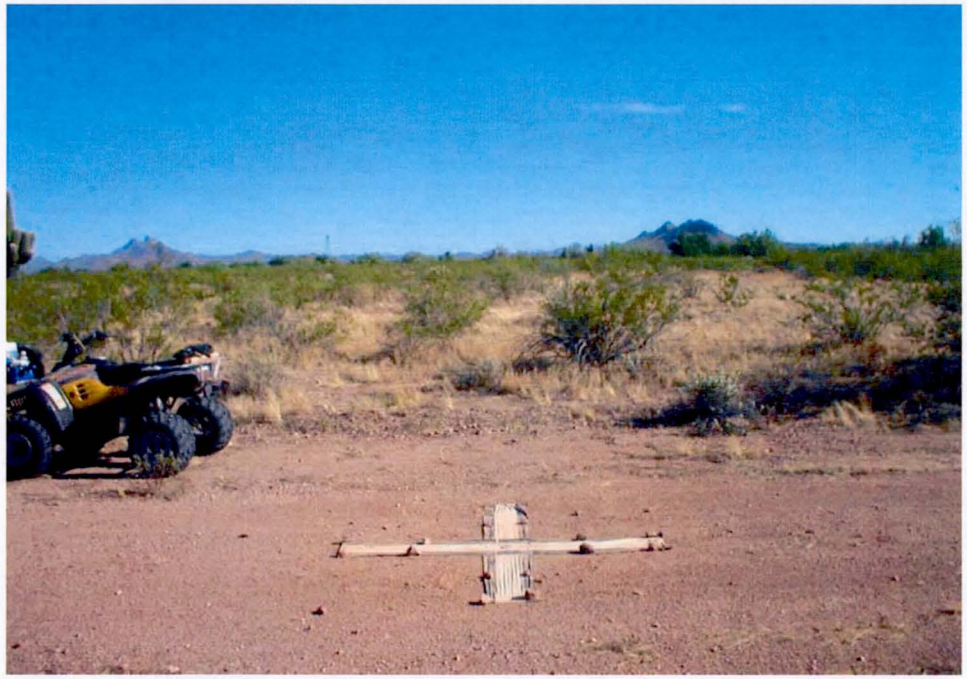
Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:
☒ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)
ANT. S.N. 0220002406

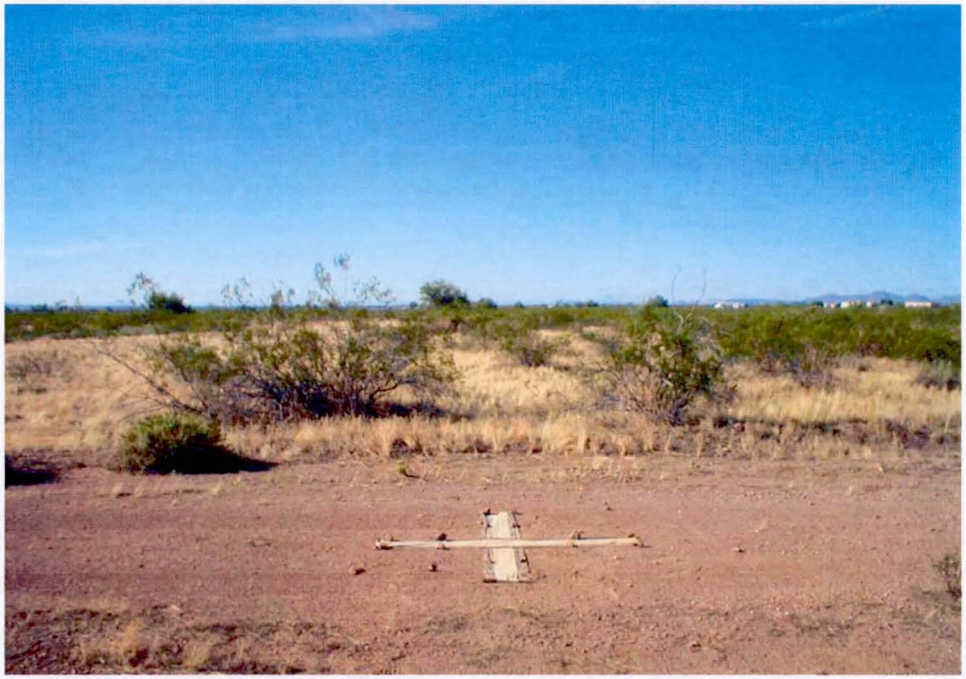
Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Calm Breezy °F +/- 90°F



Type of Monument: Alum CAP Stamping:
Top of marker: (X) flush M ( ) above: ( ) below: Nat. Ground Detail Notes:

Rubbing Performed (X)Yes ( )No PREVIOUS session





2004 C039
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2005
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PP09

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: PP09
Receiver No: 5678
Day of Year: 151 2005
Session No: Ø

Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. 5 day 31 year 05
Operator: K. GENTNER

C/A CODE POSITION

Beg:
Lat: : 33 ° 47 ' 09.11510 " N
Long: 112 ° 46 ' 41.92018 " W
Ellip. Height: 528.828 M M PDOP: 1.8

Ending:
Lat: 33 ° 47 ' 09.12052 " N
Long: 112 ° 46 ' 41.91370 " W
Ellip. Height: 527.144 M M PDOP: 1.7

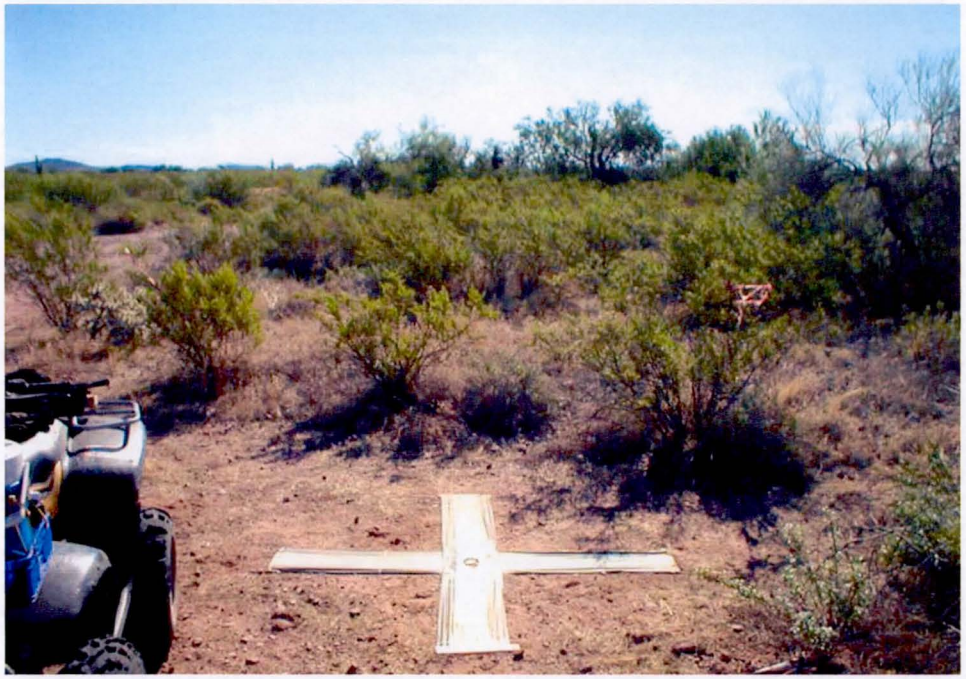
DC FILENAME: 1583-9782
TSC1 # 9782 **& GPS FILENAME** 97821510
Receiver Model: 4000SSE
Antenna Type: L1/L2 w/ GP
Fixed Height Pole No: 4
Local-UTC Time Offset: MST= -7:00
Type of Survey: Fast Static
Actual= Start 15 :52.41 . Stop: 17 :06.08 . UTC
Beg. SV's Used: 6, 15, 16, 18, 21, 22, 26, 29, 30
End SV's Used: 6, 15, 16, 18, 21, 22, 26, 29, 3

Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:
☑ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)
ANT. S.N. 98228

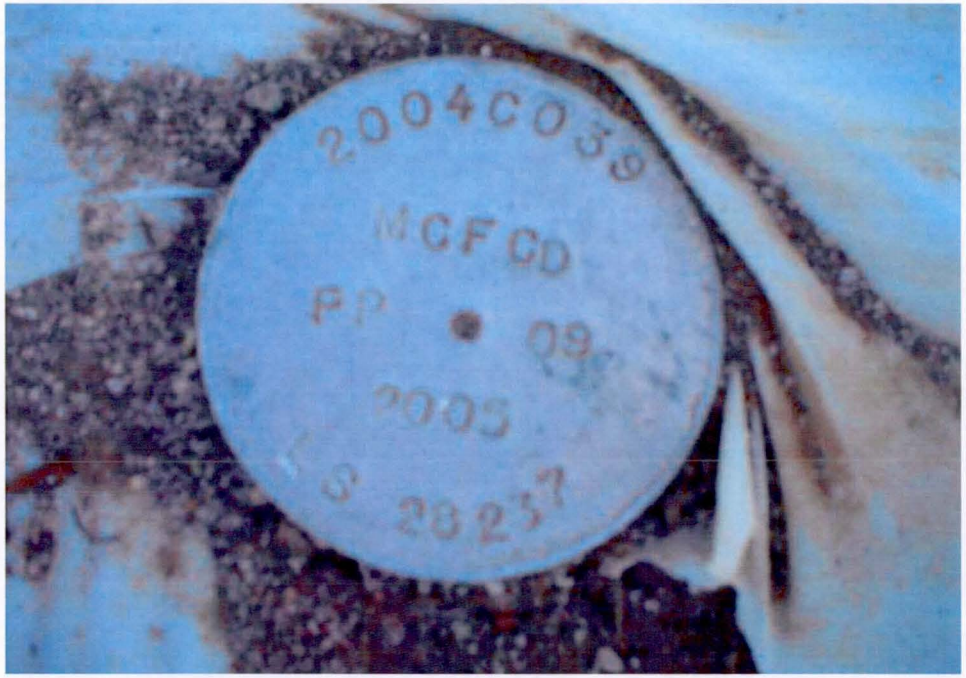
Weather Conditions: (Clear) P. Cloudy Overcast Hot (Warm) Cool (Calm) Breezy 90 °F +/-

Type of Monument: Stamping:
Top of marker: ( ) flush M ( ) above: ( ) below: Nat. Ground Detail Notes:

Rubbing Performed ( )Yes ( )No



POLARIS


2004C038
MCFCD
PP 09
2005
S 28237

PP10

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: PP10
Receiver No: 6076
Day of Year: 151 2005
Session No: ~~1537-2~~

Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. 5 day 31 year 2005
Operator: J. MALEK

C/A CODE POSITION

Beg:
Lat: : 33 ° 47 ' 59.50 " N
Long: 112 ° 45 ' 13.[illegible] " W
Ellip. Height: 540.480 M PDOP: 2.3

Ending:
Lat: 33 ° 47 ' 59.55 " N
Long: 112 ° 45 ' 13.91 " W
Ellip. Height: 541.160 M PDOP: 1.6

DC FILENAME: 1537-2-3526
TSC1 # 3526 **& GPS FILENAME** 35261510
Receiver Model: 4000 SSE
Antenna Type: COMPACT L1/L2 W/GP
Fixed Height Pole No: ↓
Local-UTC Time Offset: MST= -7:00
Type of Survey: Fast Static
Actual= Start 16 : 03 Stop: 17 : 25 UTC
Beg. SV's Used: 6 15 16 18 21 22 26 29
End SV's Used: 3 6 14 15 17 21 22 26

Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:

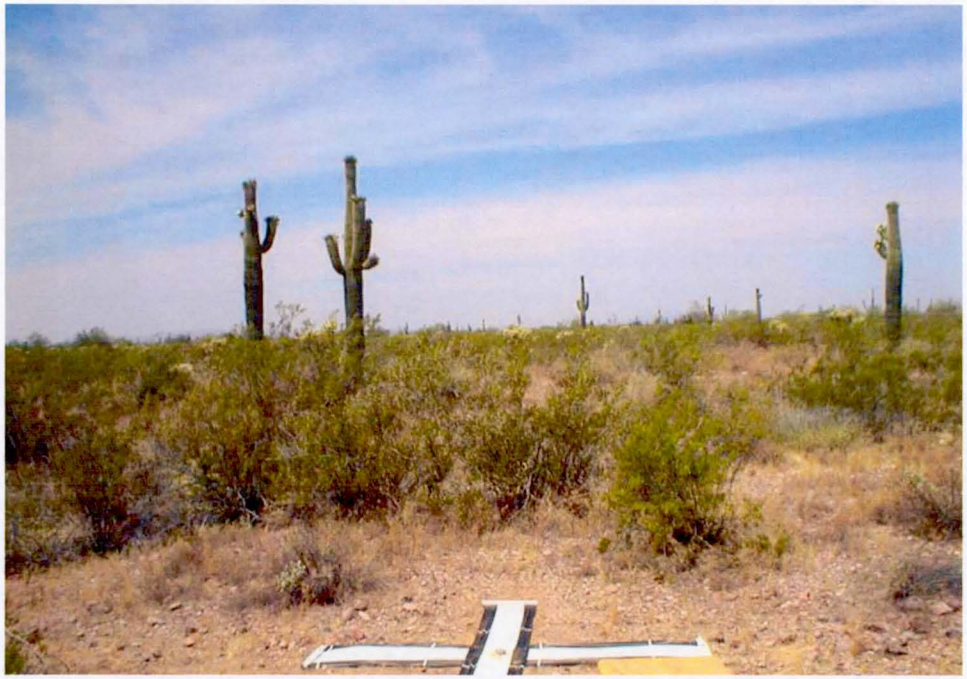
☒ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)

ANT. S.N. 04449

Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Calm Breezy °F +/-

Type of Monument: Stamping:
Top of marker: ( ) flush M ( ) above: ( ) below: Nat. Ground Detail Notes:

Rubbing Performed ( )Yes ( )No



PP11

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: PP11
Receiver No: 6081
Day of Year: 151 2005
Session No:

Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. 5 day 31 year 05
Operator: MORZELLA

C/A CODE POSITION

Beg:
Lat: : 33 ° 47 ' 15.235 " N
Long: 112 ° 44 ' 20.246 " W
Ellip. Height: 522.035 M PDOP: 1.8

Ending:
Lat: 33 ° 47 ' 15.230 " N
Long: 112 ° 44 ' 20.236 " W
Ellip. Height: 522.071 M PDOP: 1.7

DC FILENAME:
TSC1 # 1501 **& GPS FILENAME** 15011510
Receiver Model:
Antenna Type:
Fixed Height Pole No: #6
Local-UTC Time Offset: MST= -7:00
Type of Survey: Fast Static
Actual= Start 15 : 54 Stop: : UTC
Beg. SV's Used: 6 15 16 18 21 22 26 29 30
End SV's Used: 6 15 16 18 21 22 26 29 3

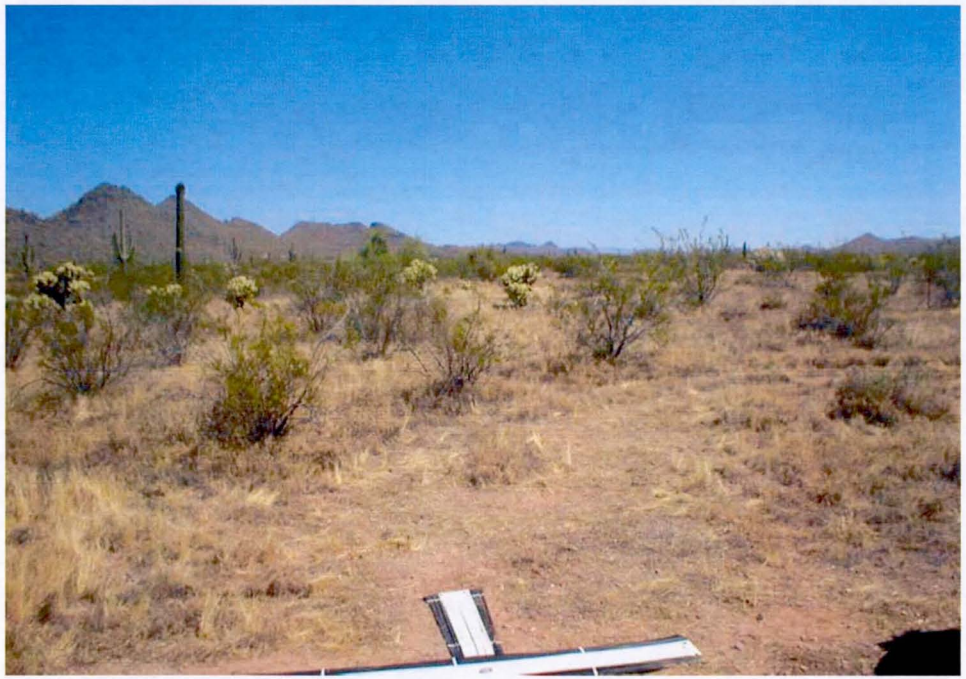
Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:
☑ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)
ANT. S.N. 98246

Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Calm Breezy 90 °F +/-

N

Type of Monument: Stamping:
Top of marker: ( ) flush M ( ) above: ( ) below: Nat. Ground Detail Notes:

Rubbing Performed ( )Yes ( )No



PP12

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: PP12
Receiver No: 6082
Day of Year: 157 2005
Session No: 3 0 0

Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. 6 day 6 year 05
Operator: Paul Hirstenberger

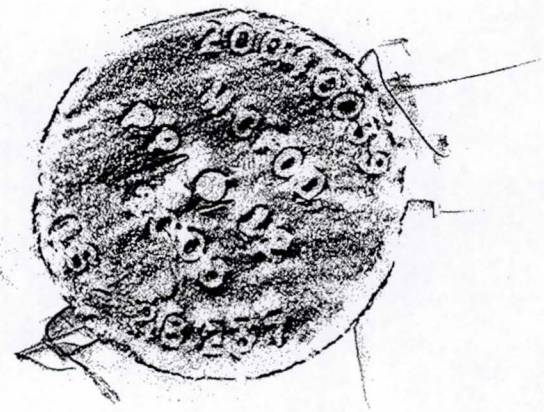
C/A CODE POSITION
Beg:
Lat: : 33 ° 47 ' 23 " N
Long: 112 ° 42 ' 50 " W
Ellip. Height: 524.5 M PDOP: 1.8
Ending:
Lat: 33 ° 47 ' 23.31081" N
Long: 112 ° 42 ' 50.40330" W
Ellip. Height: 519.184 M PDOP: 1.8

DC FILENAME: 1583-0820
TSC1 # 0820 **& GPS FILENAME** 08201570
Receiver Model: 4000
Antenna Type: L1/L2 W/GP
Fixed Height Pole No: ATEAM 3
Local-UTC Time Offset: 0 MST= -7:00
Type of Survey: Fast Static
Actual= Start 17 :04 Stop: 19 :49.47 UTC
Beg. SV's Used: 3, 6, 9, 14, 15, 18, 21, 22
End SV's Used: 1, 3, 11, 14, 15, 18, 19, 22, 25

Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:
☑ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)
ANT. S.N. 0220002406 #82
0220098228 #83

Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Calm Breezy °F +/-

N



Type of Monument: Stamping:
Top of marker: ( ) flush M ( ) above: ( ) below: Nat. Ground Detail Notes:

Rubbing Performed ( )Yes ( )No

2004C039
MCFCD
PP 12
2005
LS 28237
JUN 6 2005

PP13

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: PP 13
Receiver No: 7662
Day of Year: 157 2005
Session No: Ø

Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. 6 day 6 year 05
Operator: K. GENTNER

C/A CODE POSITION

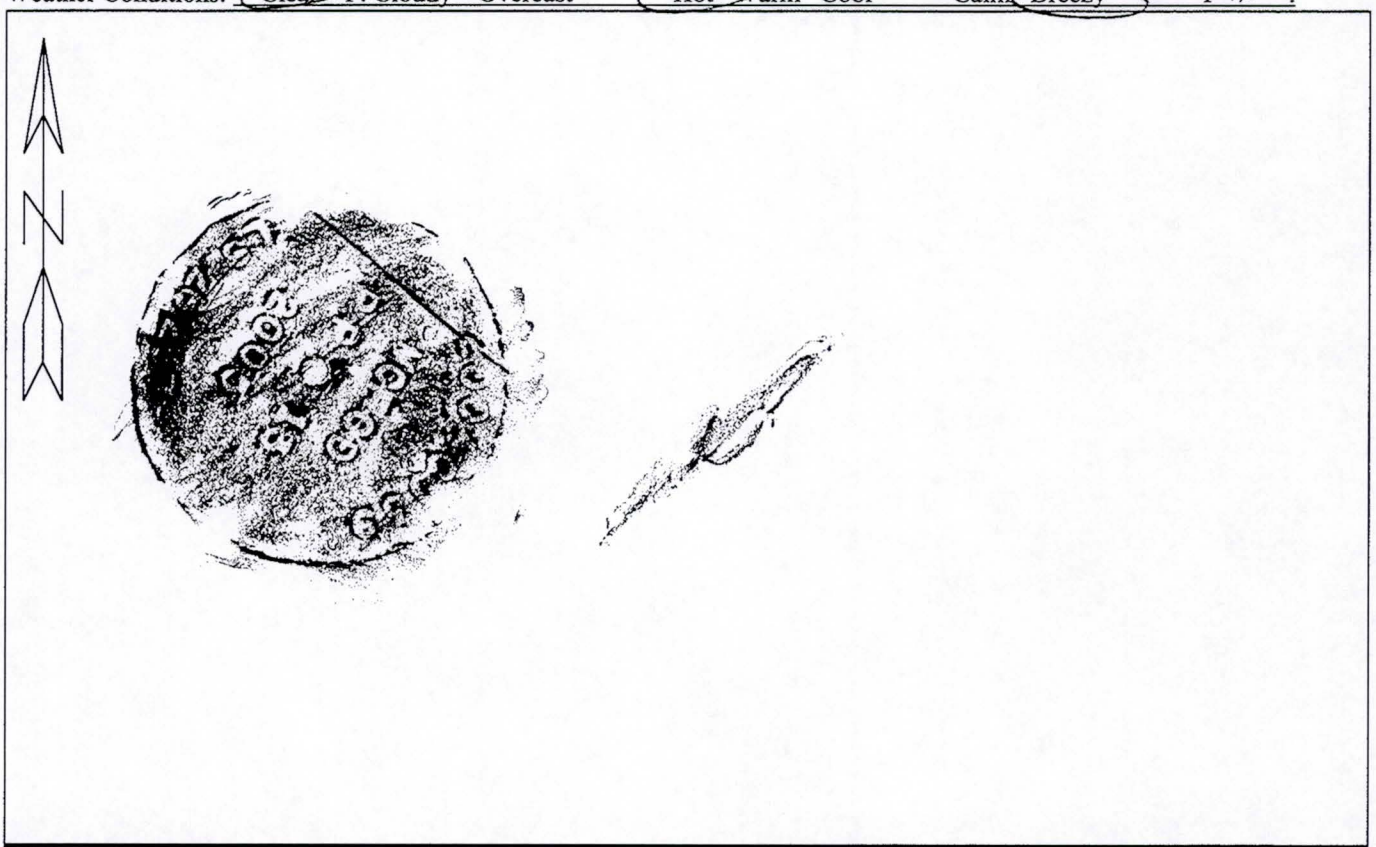
Beg:
Lat: : 33 ° 47 ' 56.655 " N
Long: 112 ° 40 ' 46.43149 " W
Ellip. Height: 513.843 M PDOP: 2.2

Ending:
Lat: 33 ° 47 ' 56.65363 " N
Long: 112 ° 40 ' 46.43408 " W
Ellip. Height: 512.428 M PDOP: 2.0

DC FILENAME:
TSC1 # 0772 **& GPS FILENAME** 07721570
Receiver Model: 4000 SSE
Antenna Type: L1/L2 w/ GP
Fixed Height Pole No: 4
Local-UTC Time Offset: MST= -7:00
Type of Survey: Fast Static
Actual= Start 18 :25.48 Stop: 19 :00.46 UTC
Beg. SV's Used: 3,9,14,15,18,19,21,22
End SV's Used: 3,9,14,15,18,19,21,22

Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:
☑ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)
ANT. S.N. 98228 #83

Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Calm Breezy 90 °F +/-



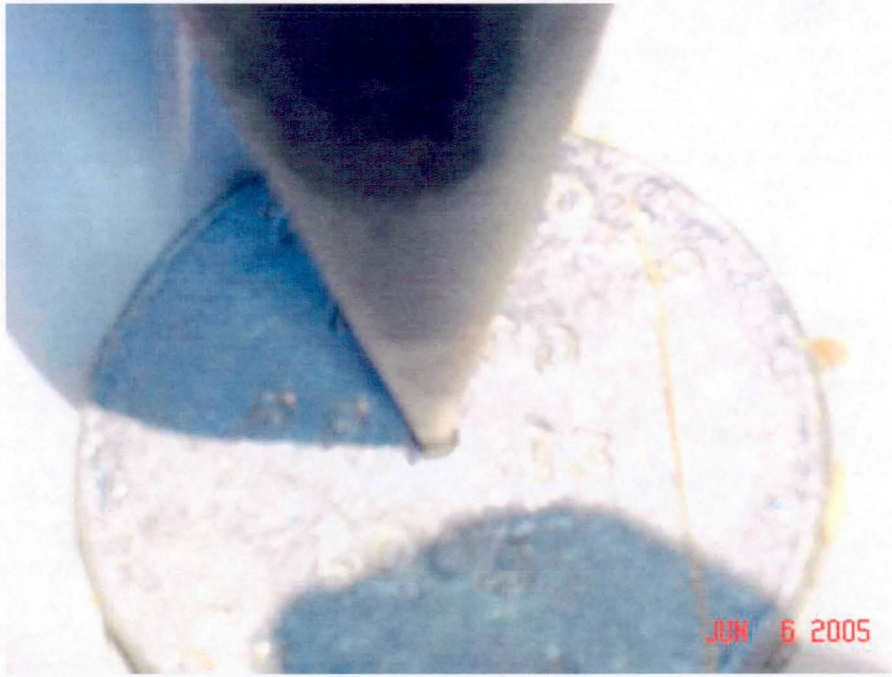
Type of Monument: Stamping:
Top of marker: ( ) flush M ( ) above: ( ) below: Nat. Ground Detail Notes:

Rubbing Performed ( )Yes ( )No

JUN 6 2005

JUN 6 2005

JUN 6 2005


JUN 6 2005

JUN 6 2005

PP14

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: PP14
Receiver No: 6081
Day of Year: 157 2005
Session No: 3

Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. 6 day 6 year 05
Operator: MORELLA

C/A CODE POSITION
Beg:
Lat: : 33 ° 47 ' 21.81 " N
Long: 112 ° 39 ' 40.25 " W
Ellip. Height: 475. M PDOP: 1.6
Ending:
Lat: 33 ° 47 ' 21.77 " N
Long: 112 ° 39 ' 40.30 " W
Ellip. Height: 474 M PDOP: 2.0

DC FILENAME: 1583-9782
TSC1 # 9782 **& GPS FILENAME** 97821570
Receiver Model: 4000 SSE
Antenna Type: Compact L1/L2 w/ GP
Fixed Height Pole No: #1
Local-UTC Time Offset: MST= -7:00
Type of Survey: Fast Static
Actual= Start 16 : 50 . Stop: 19 : 00 . UTC
Beg. SV's Used: 3 6 15 18 21 22 26
End SV's Used: 3, 9, 14, 15, 18, 19, 21, 22.

Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:
☒ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)
ANT. S.N. 14399

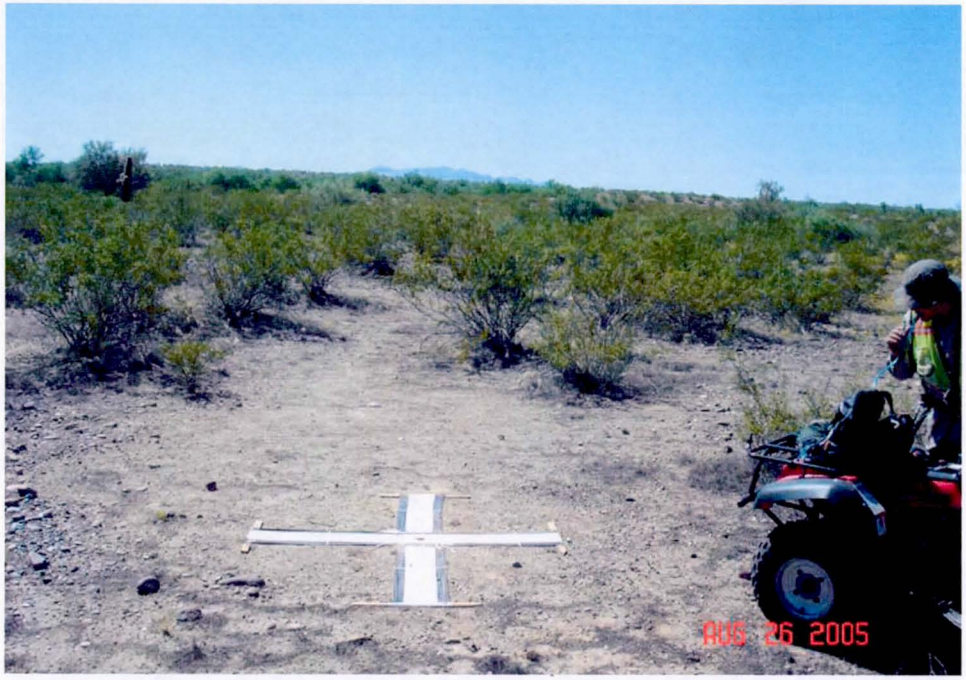
Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Calm Breezy °F +/-

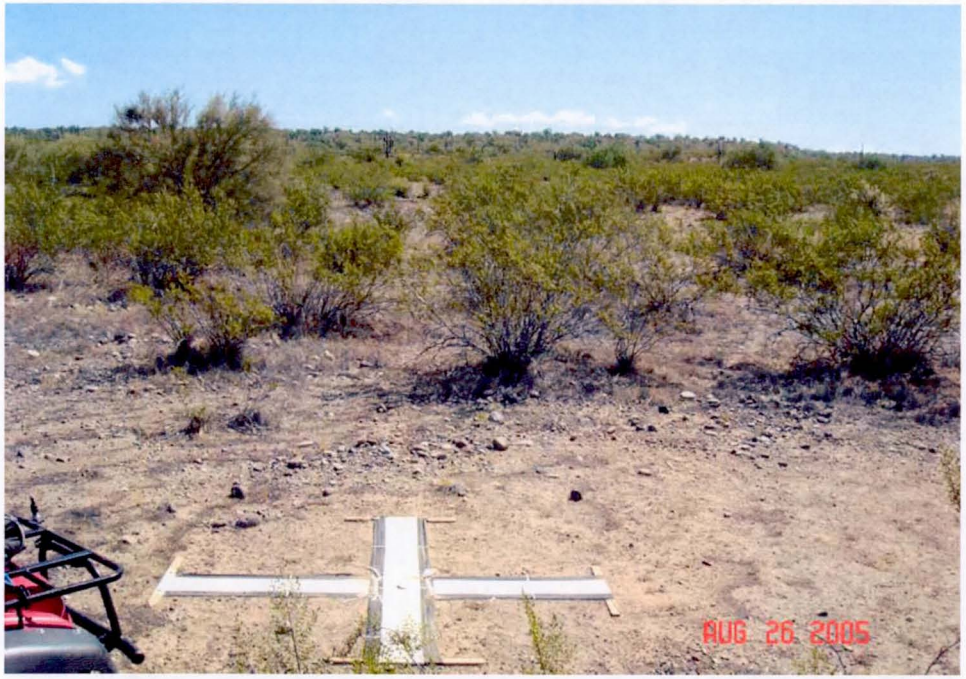
N

Type of Monument: 2" ACF Stamping:
Top of marker: ( ) flush M ( ) above: ( ) below: Nat. Ground Detail Notes:

Rubbing Performed ( )Yes ( )No

2004 CO26
MCFCD
PP 14
2005
TS 28837
AUG 26 2005


AUG 26 2005


AUG 26 2005

AUG 26 2005

AUG 26 2005

PP15

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: PP15
Receiver No: 7662
Day of Year: 146 2005
Session No: 2

Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. 5 day 26 year 05
Operator: REED

C/A CODE POSITION
Beg:
Lat: : 33 ° 48 ' 39.24 " N
Long: 112 ° 41 ' 11.97 " W
Ellip. Height: 534.2 M PDOP: 1.7
Ending:
Lat: 33 ° 48 ' 39.23 " N
Long: 112 ° 41 ' 11.97 " W
Ellip. Height: 538.0 M PDOP: 2.2

DC FILENAME: 1583-0772
TSC1 # 0772 **& GPS FILENAME** 1583
Receiver Model: 4000 SSE
Antenna Type: COMP L1/L2
Fixed Height Pole No: A-TEAM #2
Local-UTC Time Offset: MST= -7:00
Type of Survey: Fast Static
Actual= Start 17 : 24 Stop: 19 : 00 UTC
Beg. SV's Used: 3, 6, 26, 29, 15, 16, 18, 21, 22
End SV's Used: 3, 19, 9, 5, 14, 18, 21, 22

Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:
☑ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)
ANT. S.N. 53509

Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Calm Breezy °F +/- 92°

N

PHOTOS
1. DOWN
2. N.
3. E.
4. S.
5. W.

Type of Monument: Stamping:
Top of marker: ( ) flush M ( ) above: ( ) below: Nat. Ground Detail Notes:

Rubbing Performed ( )Yes ( )No

2004C039
MCFCD
PP 15
2005
LS 28237
2005 8 26

2005 8 26

2005 8 26

2005 8 26

2005 8 26

PP16

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: PP16
Receiver No: 6081
Day of Year: 146 2005
Session No: 0

Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. 5 day 26 year 05
Operator: MORZELLA

C/A CODE POSITION
Beg:
Lat: : 33 ° 48 '59.07 " N
Long: 112 ° 43 '29.86 " W
Ellip. Height: 563.492 M PDOP: 2.1
Ending:
Lat: 33 ° 48 '59.07 " N
Long: 112 ° 43 '29.86 " W
Ellip. Height: 563.00 M PDOP: 2.4

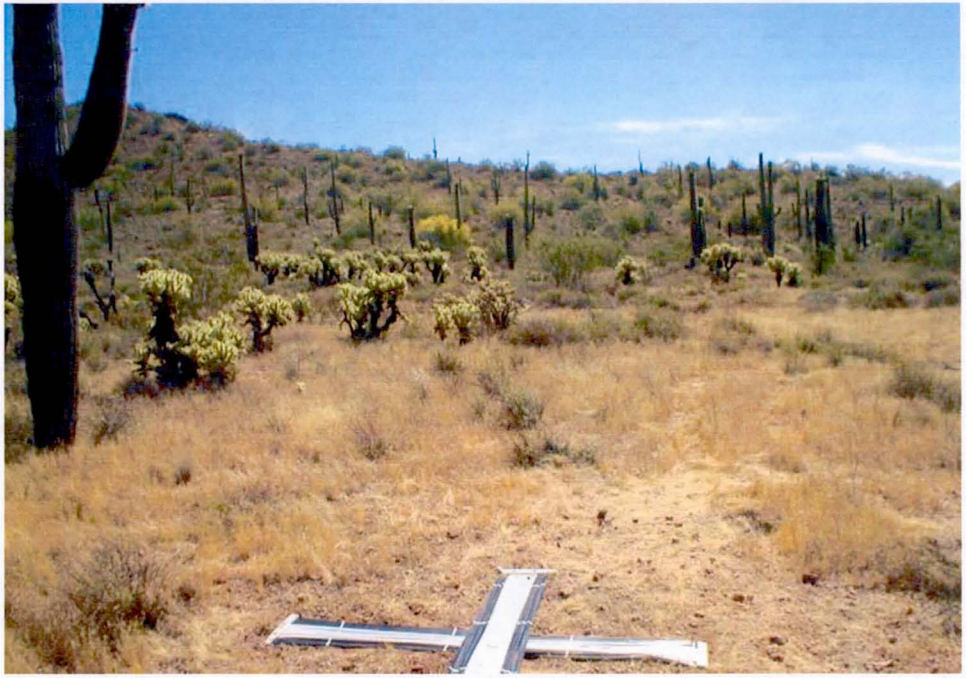
DC FILENAME: 1583-1501
TSC1 # 1501 **& GPS FILENAME** 1501146D
Receiver Model:
Antenna Type:
Fixed Height Pole No:
Local-UTC Time Offset: MST= -7:00
Type of Survey: Fast Static
Actual= Start 16 :04.28 Stop: 16 :41 UTC
Beg. SV's Used: 6 15 16 18 21 22 26 29
End SV's Used: 6 15 16 18 21 22 26 29

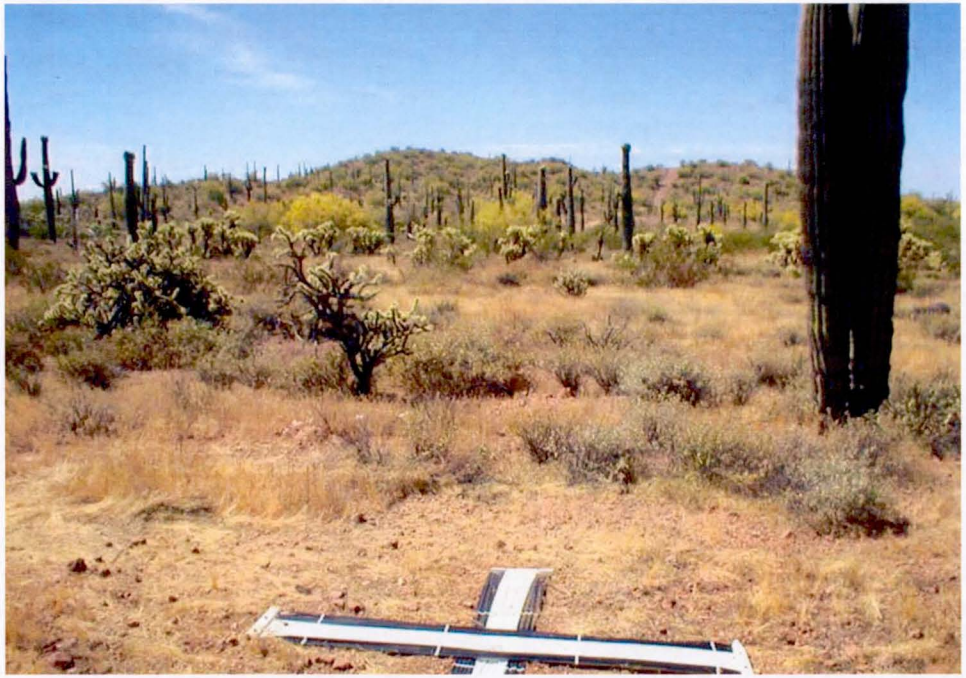
Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:
☒ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)
ANT. S.N. 02406

Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Calm Breezy 85 °F +/-

Type of Monument: Stamping:
Top of marker: ( ) flush M ( ) above: ( ) below: Nat. Ground Detail Notes:

Rubbing Performed ( )Yes ( )No





PP17A

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: PP17A
Receiver No: 6126
Day of Year: 151 2005
Session No:

Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. 5 day 31 year 2005
Operator: C FISCHER

C/A CODE POSITION

Beg:
Lat: : 33 ° 48 ' 51.15 " N
Long: 112 ° 46 ' 33.06 " W
Ellip. Height: 569 M PDOP: 2.3

Ending:
Lat: 33 ° 48 ' 51.17 " N
Long: 112 ° 46 ' 33.05 " W
Ellip. Height: 570 M PDOP: 1.7

DC FILENAME: 0319-1583
TSC1 # 0319 **& GPS FILENAME** 03191510
Receiver Model: 4000 SSE
Antenna Type: Compact L1/L2 w/GP
Fixed Height Pole No: ATEM #5
Local-UTC Time Offset: MST= -7:00
Type of Survey: Fast Static
Actual= Start 16 : 29 Stop: 17 : 03 UTC
Beg. SV's Used: 6, 15, 16, 18, 21, 22, 26, 29
End SV's Used: 3, 6, 15, 16, 18, 21, 22, 26,

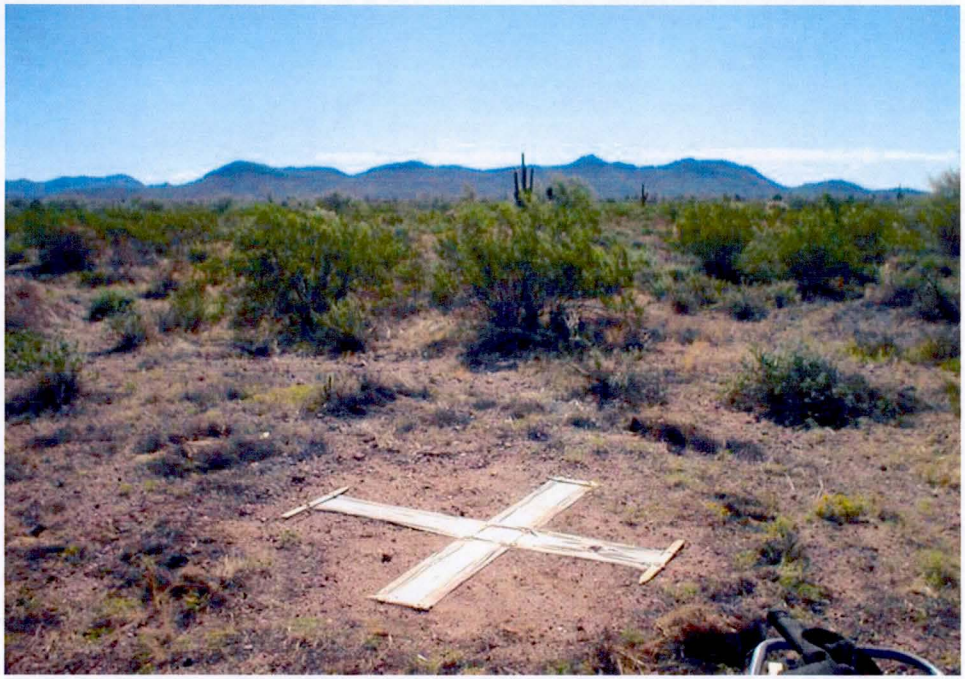
Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:
☒ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)
ANT. S.N. 98220

Weather Conditions: (Clear) P. Cloudy Overcast (Hot) Warm Cool (Calm) Breezy 90 °F +/-

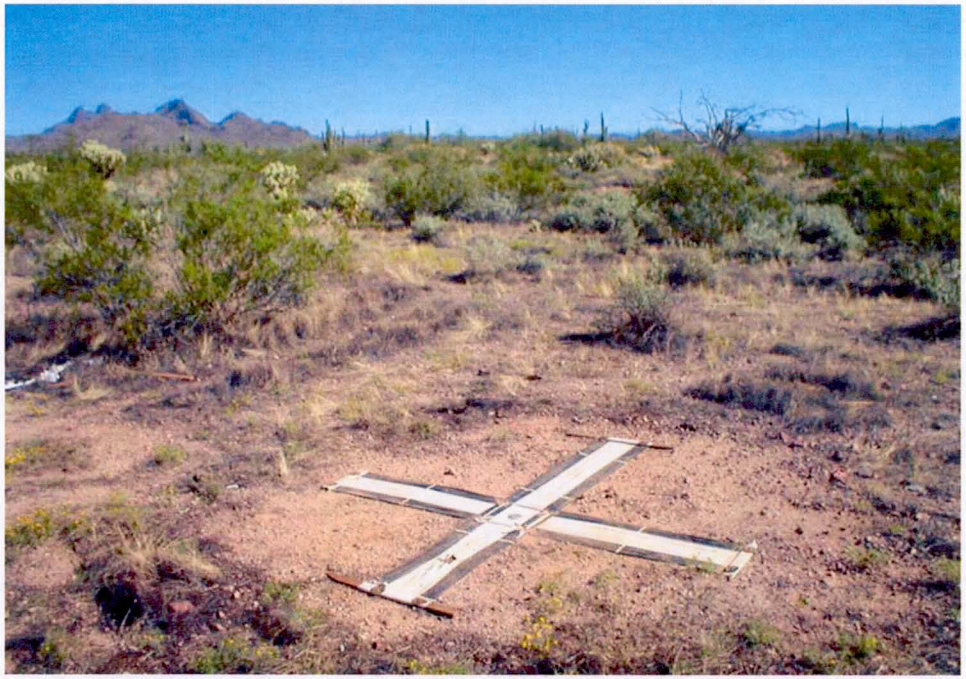
N

Type of Monument: SET 2" ACF
Top of marker: (X) flush M ( ) above: ( ) below: Nat. Ground
Stamping: 2004C039
Detail Notes: MCFCD
PP-17
2005
L5 28237

Rubbing Performed ( )Yes (X)No



2004 COJS
LCFCD
PP • 17
2003
LS 28,237



PP18

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: PP18
Receiver No: 6083
Day of Year: 146 2005
Session No: 0

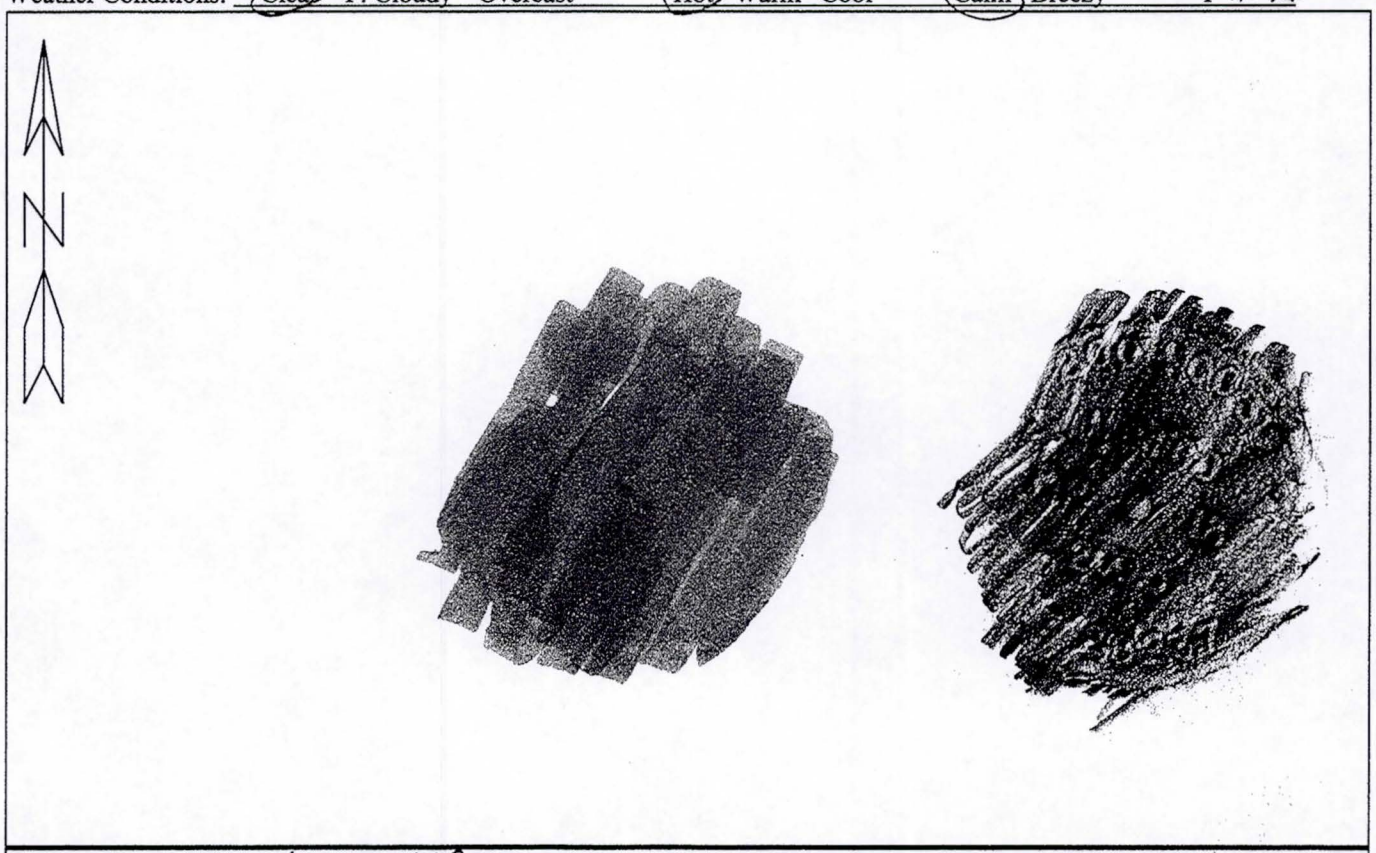
Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. 5 day 26 year 2005
Operator: Paul Gerstenberger

C/A CODE POSITION
Beg:
Lat: : 33 ° 50 '02.16 " N
Long: 112 ° 44 '54.88 " W
Ellip. Height: 595.682 M PDOP: 1.8
Ending:
Lat: 33 ° 50 '02.13 " N
Long: 112 ° 44 '54.88 " W
Ellip. Height: 593.441 M PDOP: 2.4

DC FILENAME: 1583-0820
TSC1 # 0820 **& GPS FILENAME** 08201460
Receiver Model: 4000
Antenna Type: L1/L2 W/GP
Fixed Height Pole No: ATEAM #3
Local-UTC Time Offset: MST= -7:00
Type of Survey: Fast Static
Actual= Start 15:59:14 Stop: 16 :38:55 UTC
Beg. SV's Used: 6, 15, 16, 18, 21, 22, 26, 29
End SV's Used: 6, 15, 16, 18 21, 22, 26, 29

Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:
☒ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)
ANT. S.N. 0080114399 (C3)

Weather Conditions: (Clear) P. Cloudy Overcast (Hot) Warm Cool (Calm) Breezy °F +/- 92°F



Type of Monument: Alum. CAP Stamping:
Top of marker: (X) flush M ( ) above: ( ) below: Nat. Ground Detail Notes:

Rubbing Performed ( )Yes ( )No

2004C039
RECD
PP 10
2004

PP19

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: PP 19
Receiver No: 6076
Day of Year: 146 2005
Session No: 0

Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. 5 day 26 year 2005
Operator: J. MALEK

C/A CODE POSITION
Beg:
Lat: : 33 ° 49 '59.02461" N
Long: 112 ° 43 '01.02289" W
Ellip. Height: 585.173 M PDOP: 1.8
Ending:
Lat: 33 ° 49 '59.02 " N
Long: 112 ° 43 '01.61 " W
Ellip. Height: 590.35 M PDOP: 2.1

DC FILENAME: 1583-9782
TSC1 # 9782 **& GPS FILENAME** 9782-146-0
Receiver Model: 4000 SSE
Antenna Type: COMPACT L1/L2
Fixed Height Pole No: ~~1.50m~~ 1.562
Local-UTC Time Offset: MST= -7:00
Type of Survey: Fast Static
Actual= Start 16 : 08 Stop: 19 : 31 UTC
Beg. SV's Used: 6 15 18 21 16 22 26 29
End SV's Used: 3 9 14 15 18 19 21 22

Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:
☒ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)
ANT. S.N. 98246

Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Calm Breezy °F +/-

N

Type of Monument: Stamping:
Top of marker: ( ) flush M ( ) above: ( ) below: Nat. Ground Detail Notes:

Rubbing Performed ( )Yes ( )No

PP20

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: PP 20
Receiver No: 5678
Day of Year: 146 2005
Session No: 2

Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. MAY day 26 year 2005
Operator: C Fischer

C/A CODE POSITION

Beg:
Lat: : 33 ° 49 ' 35.63 " N
Long: 112 ° 41 ' 30.92 " W
Ellip. Height: 557 M PDOP: 1.9

Ending:
Lat: 33 ° 49 ' 35.62 " N
Long: 112 ° 41 ' 30.90 " W
Ellip. Height: 561 M PDOP: 2.2

DC FILENAME: 1583-0319
TSC1 # 0319 **& GPS FILENAME** 0319 1462
Receiver Model: 4000 SSE
Antenna Type: Compact L1/L2 w/ GP
Fixed Height Pole No: A TEAM 6
Local-UTC Time Offset: MST= -7:00
Type of Survey: Fast Static
Actual= Start 18 : 03 Stop: : UTC
Beg. SV's Used: 3, 6, 9, 14, 15, 18, 21, 22
End SV's Used: 3, 9, 14, 15, 18, 19, 21, 22

Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:
☒ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)
ANT. S.N. 98220

Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Calm Breezy °F +/-

N

Type of Monument: SET 2½" ALUM CAP Stamping: 2004 4039
Top of marker: (X) flush M ( ) above: ( ) below: Nat. Ground Detail Notes: MCFCD
PP • 20
2004
LS 28237

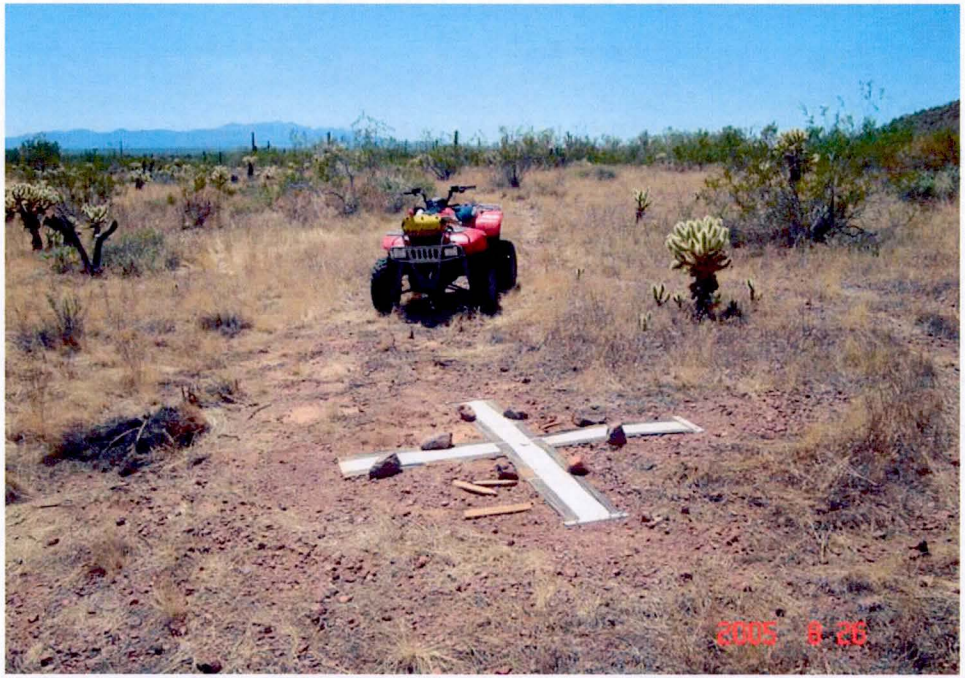
Rubbing Performed ( )Yes (X)No

2004C039
MCFCD
PP 20
2005
LS 28237
2005 8 26

2005 8 26

2005 8 26

2005 8 26


2005 8 26

PP21

A TEAM Professional Associates, INC.
GPS STATION LOG

1920 W. Peoria Avenue, Phoenix, Arizona - 85029 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: PP 21
Receiver No: 6083
Day of Year: 146 2005
Session No: 1

Project Name: DAGGS WASH ADMP PRIMARY NETWORK
Job number: 1583
Local Date: mo. 5 day 26 year 2005
Operator: [illegible]

C/A CODE POSITION

Beg:
Lat: : 33 ° 49 ' 40 " N
Long: 112 ° 39 ' 43 " W
Ellip. Height: 507. M PDOP: 5.4

Ending:
Lat: 33 ° 49 ' 40.94463 " N
Long: 112 ° 39 ' 43.15675 " W
Ellip. Height: 507.488 M PDOP: 2.2

DC FILENAME: 1583-0820
TSC1 # 0820 **& GPS FILENAME** 08201461
Receiver Model: 4000
Antenna Type: L1/L2 w/GP
Fixed Height Pole No: ATEAM #3
Local-UTC Time Offset: 0 MST= -7:00
Type of Survey: Fast Static
Actual= Start 18 :28 Stop: 19 :07:35 UTC
Beg. SV's Used: 3, 9, 14, 15, 18, 19, 21, 22.
End SV's Used: 3, 9, 14, 15, 18, 19, 21, 22.

Antenna Height (M) using fixed height pole and measured to of Antenna Phase Center:
☒ 1.5625M(5.126SFT) ☐ 1.8625M(6.110SFT) ☐ 2.0625M(6.767SFT)
ANT. S.N. 0080114399(C3)

Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Calm Breezy °F +/- 101°F

Type of Monument: Stamping:
Top of marker: ( ) flush M ( ) above: ( ) below: Nat. Ground Detail Notes:

Rubbing Performed ( )Yes ( )No

AUG 26 2005

AUG 26 2005

2004C039
MCFCD
PP 21
2005
LS 28231
AUG 26 2005

AUG 26 2005

AUG 26 2005