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FLOOD STUDY
TECHNICAL DATA NOTEBOOK

for

WHITE TANKS/AGUA FRIA
AREA DRAINAGE MASTER STUDY

APPENDIX B
VOLUME 1 OF 15

FIELD SURVEY DATA

Prepared for:
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

Prepared by:
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May 28, 1992

APPENDIX B

Field Survey Data

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B9 Field Notes to Establish Elevation Reference Marks for Existing White Tanks Mapping (Book 4, Surv Net, Inc.)

B1 EXPLANATION OF FIELD SURVEY NOTES

Appendix B is a copy of all of the field survey data and notes used to provide mapping control for the White Tanks/Agua Fria ADMS. The attached Index of Stereo Photography shows the control point numbers used in the survey.

The enclosed field notes are separated into horizontal control and vertical control. They are also organized by surveying company. The survey effort was so large (200 square miles of mapping) that The WLB Group subcontracted some of the field surveying to two other companies. Namely, Surv Net, Inc. and MRT Surveying Company, Inc.

INDEX OF STEREO PHOTOGRAPHY
WHITE TANKS/AGUA FRIA
AREA DRAINAGE MASTER STUDY

WESTERN AIR MAPS, INC.

COOPER AERIAL SURVEY COMPANY

LEGEND

- DRAINAGE AREA BOUNDARY
- FLIGHT PATTERN NO. 2
- HORIZONTAL & VERTICAL CONTROL POINT
- VERTICAL CONTROL POINT

R3W R2W R1W

T4N T3N T2N T1N T1S

DEER VALLEY ROAD
BEARDSLEY ROAD
UNION HILLS DRIVE
BELL ROAD
GREENWAY ROAD
WADDELL ROAD
CACTUS ROAD
PEORIA AVENUE
OLIVE AVENUE
NORTHERN AVENUE
GLENDALE AVENUE
BETHANY HOME ROAD
CAMELBACK ROAD
INDIAN SCHOOL ROAD
THOMAS ROAD
McDOWELL ROAD
VAN BUREN STREET
YUMA ROAD
LOWER BUCKEYE ROAD
BROADWAY ROAD
SOUTHERN AVENUE
BASE LINE

GRAND AVENUE (U.S. 60 & U.S. 89)
ATCHISON TOPEKA & SANTA FE RAILROAD
DRAINAGE AREA BOUNDARY
SURPRISE
LUKE AUXILIARY FIELD NO. 3
EL MIRAGE
LUKE AIR FORCE BASE
LITCHFIELD PARK
GOODYEAR
AVONDALE
PHOENIX - LITCHFIELD MUNICIPAL AIRPORT
BUCKEYE
GILA
SIERRA ESTRELLA MOUNTAINS

WHITE TANK MOUNTAINS

WHITE TANKS MAPPING

MCMICKEN DAM
MCMICKEN CANAL
BEARDSLEY CANAL
CANAL
AIRLINE
RAILROAD
SANTA FE
ATCHISON
TOPEKA
&
SOUTHERN PACIFIC
ROUTE 85
STATE ROUTE 85
INTERSTATE 10
ROOSEVELT
BUCKEYE CANAL
AGUA FRIA RIVER
GILA RIVER
GILA AND SALT RIVER MERIDIAN
MONUMENT HILL

PHASE 1
PHASE 2

GEMETERY ROAD
WATSON ROAD
RAINBOW ROAD
BELOAT ROAD
DEAN ROAD
AIRPORT ROAD
TUTHILL ROAD
JACKRABBIT TRAIL
PERRYVILLE ROAD
CITRUS ROAD
COTTON LANE
SARIVAL AVENUE
REEMS ROAD
BULLARD AVENUE
LITCHFIELD ROAD
DYSART ROAD
EL MIRAGE ROAD
115TH AVENUE

0' 1000' 2000' 4000' 6000'

The WLB Group WLB

B2 ELEVATION REFERENCE MARKS

The following is a complete list of elevation reference marks for the White Tanks/Agua Fria ADMS.

WHITE TANKS/AGUA FRIA AREA DRAINAGE MASTER STUDY
ELEVATION REFERENCE MARKS

Ref. Mark No.	Elev.	State Plane Coordinates Northing	Easting	Description	Location
109	1103.31	928,514.16	354,933.89	Brass Cap in Hand Hole, Reems Rd. and Nothern Ave.	Southeast Corner Section 31 Township 3 North, Range 1 West
110	1095.12	928,423.90	360,217.01	Brass Cap in Hand Hole, Bullard Ave. and Northern Ave.	Southeast Corner Section 32 Township 3 North, Range 1 West
112	1085.43	928,355.95	365,478.56	Maricopa County Highway Department Brass Cap in Hand Hole, Litchfield Rd. and Northern Ave.	Southeast Corner Section 33 Township 3 North, Range 1 West
113	1078.59	928,287.47	370,731.04	Maricopa County Highway Department Brass Cap in Hand Hole, Dysart Rd. and Northern Ave.	Southeast Corner Section 34 Township 3 North, Range 1 West
114	1078.58			Brass Cap in Hand Hole on Northern Av. 1/2 mile East of Dysart Rd.	South Quarter Corner Section 35 Township 3 North, Range 1 West
118	1182.66	923,356.14	334,242.59	1 1/2" Iron Pin in Pothole, Perryville Rd. and Glendale Ave.	Southeast Corner Section 4 Township 2 North, Range 2 West
119	1159.69	923,359.59	339,487.48	1/2" Iron Pipe in Pothole, Citrus Rd. and Glendale Ave.	Southeast Corner Section 3 Township 2 North, Range 2 West
120	1128.63	923,350.23	344,769.82	Maricopa County Highway Department Brass Cap in Hand Hole, Cotton Ln. and Glendale Ave.	Southeast Corner Section 2 Township 2 North, Range 2 West
121	1101.08	923,282.76	350,019.10	1/2" Iron Pin in Hand Hole, Sarival Ave. and Glendale Ave.	Southeast Corner Section 1 Township 2 North, Range 2 West
122	1083.96			Bolt on Top of Tee of Discharge Pipes 20'± North of Pump, at the Northeast corner of Intersection of Reems Rd. and Glendale Ave.	Near Southeast Corner Section 6 Township 2 North, Range 1 West
125	1076.94	923,110.98	365,377.64	Maricopa County Highway Department Brass Cap in Hand Hole, Litchfield Rd. and Glendale Ave.	Southeast Corner Section 4 Township 2 North, Range 1 West
127	1082.90	923,024.41	370,916.89	1/2" Iron Pin in Hand Hole, Dysart Rd. and Glendale Ave.	Southeast Corner Section 3 Township 2 North, Range 1 West
128	1064.23			Chiseled Square in Curb at Storm Drain inlet on North side of Glendale Ave. ±950 feet East of El Mirage Rd.	Near Southeast Corner Section 2 Township 2 North, Range 1 West

WHITE TANKS/AGUA FRIA AREA DRAINAGE MASTER STUDY
ELEVATION REFERENCE MARKS

Ref. Mark No.	Elev.	State Plane Coordinates Northing	Easting	Description	Location
132	1153.06	918,084.09	334,206.12	1" Iron Pipe Flush with Pavement, Perryville Rd. and Bethany Home Rd.	Southeast Corner Section 9 Township 2 North, Range 2 West
133	1129.09	918,076.47	339,460.67	1 1/2" Open Pipe in Pothole, Citrus Rd. and Bethany Home Rd.	Southeast Corner Section 10 Township 2 North, Range 2 West
134	1104.82	918,052.60	344,737.32	Maricopa County Highway Department Brass Cap in Hand Hole, Cotton Ln. and Bethany Home Rd.	Southeast Corner Section 11 Township 2 North, Range 2 West
135	1080.11	918,006.80	350,002.27	1/2" Iron Pin in Hand Hole, Sarival Ave. and Bethany Home Rd.	Southeast Corner Section 12 Township 2 North, Range 2 West
140	1077.50	917,884.63	365,671.66	Maricopa County Highway Department Brass Cap in Hand Hole, Litchfield Rd. and Bethany Home Rd.	Southeast Corner Section 9 Township 2 North, Range 1 West
141	1086.73	917,774.16	370,902.02	Maricopa County Highway Department Brass Cap Flush with Pavement, Dysart Rd. and Bethany Home Rd.	Southeast Corner Section 10 Township 2 North, Range 1 West
143	1036.44	917,664.34	376,107.02	1/2" Iron Pipe in Pothole, El Mirage Rd. and Bethany Home Rd.	Southeast Corner Section 11 Township 2 North, Range 1 West
147	1185.68			40d Nail in West Face of Power Pole on East side of Jackrabbit Tr. Approx. 1000 feet South of Medlock Dr.	Near Southeast Corner Section 17 Township 2 North, Range 2 West
148	1132.41	912,795.59	334,205.96	Iron Rod Flush with Pavement, Perryville Rd. and Camelback Rd.	Southeast Corner Section 16 Township 2 North, Range 2 West
149	1108.90			Chiseled Square in Top Concrete Headwall Northeast Corner of Intersection of Citrus Rd. and Camelback Rd.	Near Southeast Corner Section 15 Township 2 North, Range 2 West
150	1083.57	912,754.02	344,706.04	Maricopa County Highway Department Brass Cap in Hand Hole, Cotton Ln. and Camelback Rd.	Southeast Corner Section 14 Township 2 North, Range 2 West
151	1061.00	912,721.58	349,985.73	City of Phoenix Brass Cap in Hand Hole, Sarival Ave. and Camelback Rd.	Southeast Corner Section 13 Township 2 North, Range 2 West
152	1052.84	912,718.18	355,222.04	City of Phoenix Brass Cap in Hand Hole, Reems Rd. and Camelback Rd.	Southeast Corner Section 18 Township 2 North, Range 1 West

WHITE TANKS/AGUA FRIA AREA DRAINAGE MASTER STUDY
ELEVATION REFERENCE MARKS

Ref. Mark No.	Elev.	State Plane Coordinates Northing	Easting	Description	Location
154	1052.80	912,689.01	360,516.60	Brass Cap in Hand Hole, Bullard Ave. and Camelback Rd.	Southeast Corner Section 17 Township 2 North, Range 1 West
155	1063.89	912,699.07	365,663.68	Maricopa County Highway Department Brass Cap in Hand Hole, Litchfield Rd. and Camelback Rd.	Southeast Corner Section 16 Townsip 2 North, Range 1 West
157	1043.92	912,507.51	370,888.16	Maricopa County Highway Department Brass Cap Flush with Pavement, Dysart Rd. and Camelback Rd.	Southeast Corner Section 15 Township 2 North, Range 1 West
158	1023.89			"X" Chiseled in Gunite Headwall on West side of driveway entrance North of Camelback Rd. approx. 1320 feet East of El Mirage Rd.	Approximately 1320' East of Southeast Corner Section 14, Township 2 North, Range 1 West
160	1160.26	907,574.87	328,832.79	Brass Cap in Hand Hole, Jackrabbit Tr. and Indian School Rd.	Southeast Corner Section 20 Township 2 North, Range 2 West
161	1111.78			"X" Chiseled Top of Concrete Irrigation Box at Southeast Corner of Intersection of Perryville Rd. and Indian School Rd.	Near Southeast Corner Section 21 Township 2 North, Range 2 West
162	1083.97	907,511.25	339,406.50	Iron Rod in Pothole, Citrus Rd. and Indian School Rd.	Southeast Corner Section 22 Township 2 North, Range 2 West
163	1064.65	907,510.71	344,685.64	Iron Rod in Pothole, Cotton Ln. and Indian School Rd.	Southeast Corner Section 23 Township 2 North, Range 2 West
164	1044.52	907,451.35	349,964.54	Iron Pipe in Hand Hole, Sarival Ave. and Indian School Rd.	Southeast Corner Section 24 Township 2 North, Range 2 West
166	1031.75	907,390.45	355,172.27	Maricopa County Highway Department Brass Cap in Hand Hole, Reems Rd. and Indian School Rd.	Southeast Corner Section 19 Township 2 North, Range 1 West
167	1029.71	907,332.37	360,401.57	Maricopa County Highway Department Brass Cap in Hand Hole, Bullard Ave. and Indian School Rd.	Southeast Corner Section 20 Township 2 North, Range 1 West
168	1027.01			5/8" Iron Pipe in Pothole on Indian School Road 1/2 Mile East of Bullard Ave.	South Quarter Corner Section 21 Township 2 North, Range 1 West

WHITE TANKS/AGUA FRIA AREA DRAINAGE MASTER STUDY
ELEVATION REFERENCE MARKS

Ref. Mark No.	Elev.	State Plane Coordinates Northing	Easting	Description	Location
170	1023.11	907,231.10	370,870.13	Maricopa County Highway Department Brass Cap in Hand Hole, Dysart Rd. and Indian School Rd.	Southeast Corner Section 22 Township 2 North, Range 1 West
172	1017.40	907,150.48	377,417.41	Maricopa County Highway Department Brass Cap Flush with Pavement 1/4 Mile East of Intersection of El Mirage Rd. and Indian School Rd.	Approx. 1/4 Mile East of Southeast Corner Section 23, Township 2 North Range 1 West
176	1125.07			40d Nail in Southwest Face of Power Pole (PS 177171) at Northeast Corner of Intersection of Jackrabbit Tr. and Thomas Rd.	Near Southeast Corner Section 29 Township 2 North, Range 2 West
177	1082.47	902,259.91	344,099.29	Iron Pipe in Pothole, Perryville Rd. and Thomas Rd.	Southeast Corner Section 28 Township 2 North, Range 2 West
178	1057.49			Chiseled Square in Top Centerline of Concrete Headwall on West Side of Citrus Rd. at Thomas Rd.	Near Southeast Corner Section 27 Township 2 North, Range 2 West
179	1042.14	902,229.73	344,660.29	Iron Pipe in Pothole, Cotton Ln. and Thomas Rd.	Southeast Corner Section 26 Township 2 North, Range 2 West
180	1028.98			Chiseled Square on Top Concrete Head-wall at Northwest Corner Intersection of Sarival Ave. and Thomas Rd.	Near Southeast Corner Section 25 Township 2 North, Range 2 West
181	1014.46	902,107.59	355,149.50	Maricopa County Highway Department Brass Cap in Hand Hole, Reems Rd. and Thomas Rd.	Southeast Corner Section 30 Township 2 North, Range 1 West
183	1015.69			Brass Cap in Southeast Corner of Bridge on Bullard Ave. over the R.I.D. Canal Stamped, 1983 LS 6450 (R.I.D.-2-33-14)	Near Southeast Corner Section 29 Township 2 North, Range 1 West
184	1003.37	902,001.36	365,613.82	1/2" Iron Pipe in Pothole, Lithchfield Rd. and Thomas Rd.	Southeast Corner Section 28 Township 2 North, Range 1 West
186	1011.83	901,951.29	370,850.67	Maricopa County Highway Department Brass Cap Flush with Pavement, Dysart Rd. and Thomas Rd.	Southeast Corner Section 27 Township 2 North, Range 1 West

WHITE TANKS/AGUA FRIA AREA DRAINAGE MASTER STUDY
ELEVATION REFERENCE MARKS

Ref. Mark No.	Elev.	State Plane Coordinates Northing	Easting	Description	Location
189	1185.75	897,040.41	313,028.53	1/2" Rebar on McDowell Rd. 1/2 mile East of Rainbow Rd.	Southeast Corner, Section 35 Township 2 North, Range 3 West
190	1138.12	897,049.45	315,559.40	3/4" Open Pipe, Dean Rd. and McDowell Rd.	South Quarter Corner, Section 36 Township 2 North, Range 3 West
191	1051.34	896,982.65	334,058.98	Brass Cap in Hand Hole, Perryville Rd. and McDowell Rd.	Southeast Corner, Section 33 Township 2 North, Range 2 West
192	1028.06	896,945.20	339,351.93	Brass Cap in Hand Hole, Citrus Rd. and McDowell Rd.	Southeast Corner, Section 34 Township 2 North, Range 2 West
193	1016.79	896,914.63	344,643.13	Brass Cap in Hand Hole, Cotton Lane and McDowell Rd.	Southeast Corner, Section 35 Township 2 North, Range 2 West
194	1012.43			"X" Chiseled on Top of Concrete Headwall at Southeast Corner of Intersection of Sarival Ave. and McDowell Rd.	Near Southeast Corner Section 36 Township 2 North, Range 1 West
196	1002.53			Brass Cap in Hand Hole ± 45' South of Intersection of Reems Rd. and McDowell Rd.	Southeast Corner, Section 31 Township 2 North, Range 1 West
197	998.52			"X" Chiseled on Top Concrete Headwall wing Southeast corner of Intersection of Bullard Ave. and McDowell Rd.	Near Southeast Corner Section 32 Township 2 North, Range 1 West
199	990.74	896,721.18	365,590.64	Maricopa County Highway Department Brass Cap in Hand Hole, Litchfield Rd. and McDowell Rd.	Southeast Corner, Section 33 Township 2 North, Range 1 West
200	994.34	896,667.40	370,825.68	Maricopa County Highway Department Brass Cap in Hand Hole, Dysart Rd. and McDowell Rd.	Southeast Corner, Section 34 Township 2 North, Range 1 West
206	1098.20			Top of "T" Post Next to Section Corner ± 2' Above Ground, Dean Rd. and Van Buren St.	Near Southwest Corner Section 2 Township 1 North, Range 3 West
207	1055.81	891,798.51	320,980.69	Stone at the Southeast Corner of Section 1	Southeast Corner, Section 1 Township 1 North, Range 3 West
208	1044.61			Cotton Picker Spindle in Power Pole Southeast Corner of Intersection of Tuthill Rd. and Van Buren St.	Near Southeast Corner Section 6 Township 1 North, Range 2 West

WHITE TANKS/AGUA FRIA AREA DRAINAGE MASTER STUDY
ELEVATION REFERENCE MARKS

Ref. Mark No.	Elev.	State Plane Coordinates Northing	Easting	Description	Location
209	1030.91	891,747.14	328,756.32	1/2" Open Pipe in Hand Hole, Jackrabbit Trail and Van Buren St.	Southeast Corner, Section 5 Township 1 North, Range 2 West
210	1012.47	891,716.68	334,039.12	Brass Cap in Hand Hole, Perryville Rd. and Van Buren St.	Southeast Corner, Section 4 Township 1 North, Range 2 West
211	999.47	891,685.23	339,325.77	Brass Cap in Hand Hole, Citrus Rd. and Van Buren St.	Southeast Corner, Section 3 Township 1 North, Range 2 West
212	989.45	891,658.26	344,613.21	Maricopa County Highway Department Brass Cap in Hand Hole, Cotton Ln. and Van Buren St.	Southeast Corner, Section 2 Township 1 North, Range 2 West
213	994.44	891,597.08	349,894.34	Maricopa County Highway Deparment Brass Cap in Hand Hole, Sarival Ave. and Van Buren St.	Southeast Corner, Section 1 Township 1 North, Range 1 West
214	989.49	891,546.69	355,076.72	Maricopa County Highway Department Brass Cap in Hand Hole, Estrella Parkway (Reems Rd.) and Van Buren St.	Southeast Corner, Section 6 Township 1 North, Range 1 West
216	987.78	891,495.88	360,285.81	1/2" Iron Pin in Hand Hole, Bullard Ave. and Van Buren St.	Southeast Corner, Section 5 Township 1 North, Range 1 West
217	979.88	891,428.90	365,539.90	Maricopa County Highway Department Brass Cap in Hand Hole, Litchfield Rd. and Van Buren St.	Southeast Corner, Section 4 Township 1 North, Range 1 West
218	979.99			Maricopa County Highway Department Brass Cap in Hand Hole, Central Ave. and Van Buren St.	South Quarter Corner, Section 3 Township 1 North, Range 1 West
219	992.37	891,351.79	373,391.67	Brass Cap Flush with Pavement at Van Buren St. ± 1/2 Mile East of Dysart Rd.	Near South Quarter Corner, Section 2 Township 1 North, Range 1 West
224	1037.75			Top of AT&T Warning Pole ±75' Southeast of Intersection of Dean Rd. and Yuma Rd.	Near Southeast Corner, Section 11 Township 1 North, Range 3 West
226	1006.24	886,484.05	323,444.39	3/8" Iron Pin in Pothole, Tuthill Rd. and Yuma Rd.	Southeast Corner, Section 7 Township 1 North, Range 2 West
227	989.03	886,459.30	328,724.13	3/4" Rod In Hand Hole, Jackrabbit Trail and Yuma Rd.	Southeast Corner, Section 8 Township 1 North, Range 2 West

WHITE TANKS/AGUA FRIA AREA DRAINAGE MASTER STUDY
ELEVATION REFERENCE MARKS

Ref. Mark No.	Elev.	State Plane Coordinates Northing	Easting	Description	Location
228	977.97	886,444.61	334,014.08	Brass Cap in Hand Hole, Perryville Rd. and Yuma Rd.	Southeast Corner, Section 9 Township 1 North, Range 2 West
229	973.87	886,339.52	339,304.17	Brass Cap in Hand Hole, Citrus Rd. and Yuma Rd.	Southeast Corner, Section 10 Township 1 North, Range 2 West
230	965.16			Railroad Spike in Power Pole, Southeast Corner of Intersection, Cotton Ln. and Yuma Rd.	Near Southeast Corner Section 11 Township 1 North, Range 2 West
231	971.25	886,345.95	349,889.64	Maricopa County Highway Department Brass Cap in Hand Hole, Sarival Ave. and Yuma Rd.	Southeast Corner Section 12 Township 1 North, Range 2 West
233	971.85	886,270.43	355,035.97	Brass Cap in Hand Hole, Reems Rd. and Yuma Rd.	Southeast Corner Section 7 Township 1 North, Range 1 West
234	977.19	886,219.97	360,209.62	Rod in Concrete in Hand Hole, Bullard Ave. and Yuma Rd.	Southeast Corner Section 8 Township 1 North, Range 1 West
236	963.39	886,160.83	365,502.27	Brass Cap Flush with Pavement, Litchfield Rd. and Yuma Rd.	Southeast Corner Section 9 Township 1 North, Range 1 West
242	990.31	881,332.83	315,622.38	Brass Cap in Hand Hole, Dean Rd. and Lower Buckeye Rd.	Southwest Corner Section 13 Township 1 North, Range 3 West
243	974.19	881,223.95	320,939.76	Brass Cap in Hand Hole, Airport Rd. and Lower Buckeye Rd.	Southeast Corner Section 13 Township 1 North, Range 3 West
244	965.70	886,136.35	370,753.68	Nail in Concrete in Hand Hole, Dysart Rd. and Yuma Rd.	Southeast corner, Section 10 Township 1 North, Range 1 West
245	955.76	881,173.59	328,699.57	Rod in Concrete in Hand Hole, Jackrabbit Trail and Lower Buckeye Rd.	Southeast Corner, Section 17 Township 1 North, Range 2 West
246	942.68			Nail in Concrete Headwall at Southwest Corner, Intersection of Perryville Rd. and Lower Buckeye Rd.	Near Southeast Corner, Section 16 Township 1 North, Range 2 West
247	937.84			"X" Chiseled in Concrete Irrigation Junction Box at Southwest Corner, Intersection of Citrus Rd. and Lower Buckeye Rd.	Near Southeast Corner, Section 15 Township 1 North, Range 2 West

WHITE TANKS/AGUA FRIA AREA DRAINAGE MASTER STUDY
ELEVATION REFERENCE MARKS

Ref. Mark No.	Elev.	State Plane Coordinates Northing	Easting	Description	Location
248	936.59	881,080.77	344,565.66	Maricopa County Highway Department Brass Cap in Hand Hole, Cotton Ln. and Lower Buckeye Rd.	Southeast Corner, Section 14 Township 1 North, Range 2 West
249	947.64	880,967.01	349,867.41	Maricopa County Highway Department Brass Cap in Hand Hole, Sarival Ave. and Lower Buckeye Rd.	Southeast Corner, Section 13 Township 1 North, Range 2 West
250	952.11	880,970.62	355,113.42	Maricopa County Highway Department Brass Cap in Hand Hole, Estrella Pkwy. and Lower Buckeye Rd.	Southeast Corner, Section 18 Township 1 North, Range 1 West
252	945.62			Rebar in Headwall 90'± Northwest of Intersection of Bullard Ave. and Lower Buckeye Rd.	Approx. 850' East of Southeast Corner, Section 17 Township 1 North, Range 1 West
253	964.31	880,878.61	365,618.48	Maricopa County Highway Department Brass Cap in Hand Hole, Litchfield Rd. and Lower Buckeye Rd.	Southeast Corner, Section 16 Township 1 North, Range 1 West
255	952.46	880,857.50	370,887.31	Maricopa County Highway Deparment Brass Cap Flush with Pavement, Dysart Rd. and Lower Buckeye Rd.	Southeast Corner, Section 15 Township 1 North, Range 1 West
260	940.96	876,030.56	315,634.00	Rod in Concrete in Hand Hole, Dean Rd. and Broadway Rd.	Southwest Corner, Section 24 Township 1 North, Range 3 West
261	930.65			1/2" Rebar in Hand Hole, Airport Rd. and Broadway Rd.	Southeast Corner, Section 24 Township 1 North, Range 3 West
262	925.51	875,911.76	323,388.92	Rod in Concrete in Hand Hole, Tuthill Rd. and Broadway Rd.	Southeast Corner, Section 19 Township 1 North, Range 2 West
263	916.67	875,881.18	328,676.01	Rod in Concrete in Hand Hole, Jackrabbit Trail and Broadway Rd.	Southeast Corner, Section 20 Township 1 North, Range 2 West
264	910.10			"X" Chiseled in Concrete Headwall at Southwest Corner, Intersection of Perryville Rd. and Broadway Rd.	Near Southeast Corner, Section 21 Township 1 North, Range 2 West
265	902.30	875,826.27	339,250.64	1/2" Iron Pin in Pothole, Citrus Rd. and Broadway Rd.	Southeast Corner, Section 22 Township 1 North, Range 2 West
266	912.90	875,792.22	344,548.06	1" Open Pipe in Pothole, Cotton Ln. and Broadway Rd.	Southeast Corner, Section 23 Township 1 North, Range 2 West

WHITE TANKS/AGUA FRIA AREA DRAINAGE MASTER STUDY
ELEVATION REFERENCE MARKS

Ref. Mark No.	Elev.	State Plane Coordinates Northing	Easting	Description	Location
267	910.17			"X" Chiseled on Concrete Base Power Pole at Northeast Corner, Intersection of Sarival Ave. and Broadway Rd.	Near Southeast Corner, Section 24 Township 1 North, Range 2 West
269	913.18	875,698.03	355,085.15	Brass Cap in Hand Hole, Estrella Pkwy. (Reems Rd.) and Broadway Rd.	Southeast Corner, Section 19 Township 1 North, Range 1 West
270	922.00	875,694.41	360,308.50	Maricopa County Highway Department Brass Cap in Hand Hole, Bullard Ave. and Broadway Rd.	Southeast Corner, Section 20 Township 1 North, Range 1 West
272	931.73			Concrete Nail in Southwest Corner, Headwall at Northeast Corner, Intersection Litchfield Rd. and Broadway Rd.	Near Southeast Corner, Section 21 Township 1 North, Range 1 West
278	899.24			Chiseled Square in Northeast Corner of Well Pad East of Intersection of Dean Rd. and Southern Ave.	Near Southwest Corner Section 25 Township 1 North, Range 3 West
279	889.56	870,651.21	320,888.16	1/2" Iron Pin in Concrete in Hand Hole, Airport Rd. and Southern Ave. (Extended)	Southeast Corner, Section 25 Township 1 North, Range 3 West
281	883.99	870,596.34	328,802.16	1" Open Pipe Flush with Pavement, Jackrabbit Trail and Southern Ave.	Southeast Corner, Section 29 Township 1 North, Range 2 West
282	886.26	870,517.22	334,084.63	Maricopa County Highway Department Brass Cap Flush with Pavement, Perryville Rd. and Southern Ave.	Southeast Corner, Section 28 Township 1 North, Range 2 West
283	895.46			Railroad Spike in Power Pole 23'± South of Intersection of Citrus Rd. (Extended) and Southern Ave.	Near Southeast Corner, Section 27 Township 1 North, Range 2 West
284	891.25			"X" Chiseled in Headwall West side of Cotton Ln. at Southern Ave.	Near Southeast Corner, Section 26 Township 1 North, Range 2 West
285	890.64	870,434.06	349,846.67	Brass Cap #LS13554, Sarival Ave. and Southern Ave.	Southeast Corner, Section 25 Township 1 North, Range 2 West
287	927.70			"X" Chiseled on Concrete Bridge Rail West side of Estrella Pkwy. Approx. 1100' South of Buckeye Canal	Near Southeast Corner, Section 30 Township 1 North, Range 1 West

WHITE TANKS/AGUA FRIA AREA DRAINAGE MASTER STUDY
ELEVATION REFERENCE MARKS

Ref. Mark No.	Elev.	State Plane Coordinates Northing	Easting	Description	Location
289	923.96	870,630.14	360,255.91	Maricopa County Highway Deparment Brass Cap in Hand Hole, Bullard Ave. and Southern Ave.	Southeast Corner, Section 29 Township 1 North, Range 1 West
296	911.99	867,327.29	349,714.03	1/2" Iron Pin, Sarival Ave. (Extended) South of Gila River	Near East Quarter Corner, Section 36 Township 1 North, Range 2 West
298	921.51	868,398.05	359,864.73	Brass Cap in Hand Hole, Bullard Ave. and Vineyard Ave.	Near East Quarter, Section 32 Township 1 North, Range 1 West
299	863.27			"X" Chiseled on Headwall at Northwest Corner of Intersection of S.R. 85 and Dean Rd.	Near Southwest Corner, Section 36 Township 1 North, Range 3 West
300	871.74			Nail in Power Pole Southeast corner of Intersection of S.R. 85 and 207th Ave.	Near Southeast Corner, Section 31 Township 1 North, Range 2 West
301	879.45			Southeast Bolt on Base of Signal Light Northwest Corner of Intersection of S.R. 85 and Jackrabbit Trail	Near Southeast Corner, Section 32 Township 1 North, Range 2 West
302	886.37	865,230.12	334,063.27	2" Open Iron Pipe Approx. 100' South of S.R. 85, S.R. 85 and Perryville Rd.	Southeast Corner, Section 33 Township 1 North, Range 2 West
308	882.36			Spike in Pothole, Jackrabbit Trail 1/2 mile South of Base Line Rd.	Center, Section 5 Township 1 South, Range 2 West
311	860.12	860,075.25	315,565.09	Brass Cap in Hand Hole, Dean Rd. and Beloat Rd.	Southwest Corner, Section 1 Township 1 South, Range 3 West
312	868.26	860,061.47	320,853.84	Brass Cap in Hand Hole, Airport Rd. And Beloat Rd.	Southeast Corner, Section 1 Township 1 South, Range 3 West
313	869.83			Brass Cap in Hand Hole, 207th Ave. and Beloat Rd.	South Quarter Corner, Section 6 Township 1 South, Range 2 West

WHITE TANKS/AGUA FRIA AREA DRAINAGE MASTER STUDY
ELEVATION REFERENCE MARKS

Ref. Mark No.	Elev.	State Plane Coordinates Northing	Easting	Description	Location
500	1475.87			Chiseled "▪" at Northwest Corner of APS Trans Pad 33' Southerly & 33' Easterly from Centerline Intersection White Tanks Mountain Rd. and Ford Canyon Rd.	±1370' West of Southeast Corner, Section 18, Township 3 North, Range 2 West
501	1343.72			Chiseled "X" in Concrete Base of Fence Post on West Side of McMicken Dam, ±250' South of Section Line (Cactus Rd. Extended)	±1800' East and ±250' South of Northwest Corner, Section 21, Township 3 North, Range 2 West
503	1511.28			Chiseled "▪" at North End of Concrete Headwall at West side of White Tanks Mountain Road 0.55 miles Southerly from Intersection with Waterfall Canyon Rd.	±2150' West of Southeast Corner, Section 19, Township 3 North, Range 2 West
504	1344.93			Chiseled "X" on Concrete Base of Fence Post ±250' North of Peoria Ave. (Extended) at East Side of McMicken Dam, 0.33 miles North and East along the dam from Gate at South End of the Dam.	±750' West and ± 250' North of Southwest Corner Section 20, Township 3 North, Range 2 West
505	1404.33			Iron Pin in Hand Hole at Centerline Intersection of Tuthill Rd. and Olive Ave.	Northwest Corner, Section 32, Township 3 North, Range 2 West
506	1299.40			1" Pipe in Hand Hole at Centerline Intersection of Jackrabbit Tr. and Olive Ave.	Northwest Corner, Section 33, Township 3 North, Range 2 West
507	1474.15			National Geodetic Survey Bench Mark in Stone Stamped "N475 1981" 2.5 Miles West of Beardsley Canal along Northern Ave.	Near Northwest Corner, Section 6, Township 2 North, Range 2 West
508	1343.22			National Geodetic Survey Bench Mark - Stainless steel Rod Encased in Pipe and Stamped "M475 1981" 1.8 Miles West of Beardsley Canal along Northern Ave.	±1580 West of Northeast Corner, Section 6 Township 2 North, Range 2 West
509	1264.23			National Geodetic Survey Bench Mark - Stainless Steel Rod Encased in Pipe and Stamped "L475 1981" 0.7 Miles West of Beardsley Canal along Northern Ave.	±1050' West of Northeast Corner, Section 5 Township 2 North, Range 2 West
510	1304.52			3" Aluminum Cap at South Side of Dirt Road (Glendale Ave. Extended) 0.37 Miles West of Tuthill Rd. Extended	0.37 Miles West of Southwest Corner, Section 5, Township 2 North, Range 2 West

WHITE TANKS/AGUA FRIA AREA DRAINAGE MASTER STUDY
ELEVATION REFERENCE MARKS

Ref. Mark No.	Elev.	State Plane Coordinates Northing	Easting	Description	Location
511	1213.89			Iron Pin at Centerline Intersection of Glendale Ave. and Jackrabbit Tr.	Southeast Corner, Section 5, Township 2 North, Range 2 West
512	1441.96			3" Aluminum Cap at North Edge of East-West Gravel Rd. ±50' South and ±15' East of Northwest Corner Section 18	Southeast of Northwest Corner, Section 18, Township 2 North, Range 2 West
513	1274.71			Chiseled "X" in Boulder at West End of Barricade at North Side of Bethany Home Rd. Extended and West Side of Tuthill Rd. Extended	Near Northwest Corner, Section 17, Township 2 North, Range 2 West
515	1396.55			Chiseled "X" in Highest Boulder ±130' South of and 30' East of Southwest Corner, Section 18 in the Top of a Small Hill	Near Southwest Corner, Section 18, Township 2 North, Range 2 West
516	1262.08			Inverted Aluminum Cap at Southwest Corner of Section 17	Southwest Corner, Section 17, Township 2 North, Range 2 West
518	1308.77			Brass Cap at Southwest Corner of Section 19	Southwest Corner, Section 19, Township 2 North, Range 2 West
519	1218.28			3" Aluminum Cap at Southeast Corner of Intersection of Tuthill Rd. and Indian School Rd.	Near Southwest Corner, Section 20, Township 2 North, Range 2 West
520	1184.64			3" Aluminum Cap at West Side of dirt Rd. along West line of Section 31, at Intersection with Dirt Rd. to Northeast ±1200' South of the Northwest corner of Section 31.	±1200' South of Northwest Corner, Section 31, Township 2 North, Range 2 West
521	1176.94			3" Aluminum Cap in Top of Berm on West side of Tuthill Rd. at Intersection of Road to Southwest ±200' South of Northwest Corner Section 32	±200' South of Northwest Corner, Section 32, Township 2 North, Range 2 West
522	1114.76			Steel Pin 0.8' Below Surface at Southwest Corner of Section 31	Southwest Corner, Section 31, Township 2 North, Range 2 West
523	1100.43			3" Iron Pipe at Center of Pavement on McDowell Rd. ±25' East of Barricade at Flood Control Channel	Southeast Corner, Section 31, Township 2 North, Range 2 West
524	1079.43			Brass Cap in Hand Hole at Centerline Intersection of McDowell Rd. and Jackrabbit Tr.	Southwest Corner, Section 33, Township 2 North, Range 2 West

WHITE TANKS/AGUA FRIA AREA DRAINAGE MASTER STUDY
ELEVATION REFERENCE MARKS

Ref. Mark No.	Elev.	State Plane Coordinates Northing	Easting	Description	Location
92	1217.15			"X" Chiseled in Top Centerline Concrete Headwall at Southeast Corner of Intersection of Citrus Rd. and Olive Ave.	Near Southeast Corner Section 27 Township 3 North, Range 2 West
93	1182.40	933,882.57	344,800.13	Maricopa County Highway Department Brass Cap in Hand Hole, Cotton Ln. and Olive Ave.	Southeast Corner Section 26 Township 3 North, Range 2 West
94	1149.08	933,857.32	350,063.05	5/8" Iron Pipe in Pothole, Sarival Ave. and Olive Ave.	Southeast Corner Section 25 Township 3 North, Range 2 West
95	1124.83	933,775.76	354,938.20	Brass Cap in Hand Hole, Reems Rd. and Olive Ave.	Southeast Corner Section 30 Township 3 North, Range 1 West
97	1113.15			"X" Chiseled in Top Concrete Headwall Northeast Corner of Intersection of Bullard Ave. and Olive Ave.	Near Southeast Corner Section 29 Township 3 North, Range 1 West
98	1104.25	933,609.45	365,489.37	Iron Rod Flush with Pavement, Litchfield Rd. and Olive Ave.	Near Southeast Corner Section 28 Township 3 North, Range 1 West
100	1092.16	933,540.01	370,734.56	Maricopa County Highway Department Brass Cap in Hand Hole, Dysart Rd. and Olive Ave.	Southeast Corner Section 27 Township 3 North, Range 1 West
101	1096.46	933,466.18	375,996.90	Maricopa County Highway Department Brass Cap in Hand Hole, El Mirage Rd. and Olive Ave.	Southeast Corner Section 26 Townhip 3 North, Range 1 West
104	1218.83			Chiseled Square in Concrete Base Electrical Transformer W5C 363 at Southeast Corner of Intersection of Perryville Rd. and Northern Ave.	Near Southeast Corner Section 33 Township 3 North, Range 2 West
105	1189.26	928,606.43	339,473.04	1" Open Pipe in Pothole, Citrus Rd. and Northern Ave.	Southeast Corner Section 34 Township 3 North, Range 2 West
106	1149.86	928,587.20	344,774.01	Maricopa County Highway Department Brass Cap in Hand Hole, Cotton Ln. and Northern Ave.	Southeast Corner Section 35 Township 3 North, Range 2 West
107	1125.48	928,575.62	350,038.93	1/2" Iron Pipe in Pothole, Sarival Ave. and Northern Ave.	Southeast Corner Section 36 Township 3 North, Range 2 West

WHITE TANKS/AGUA FRIA AREA DRAINAGE MASTER STUDY
ELEVATION REFERENCE MARKS

Ref. Mark No.	Elev.	State Plane Coordinates Northing	Easting	Description	Location
4	1337.39	976,955.47	350,373.34	Railroad Spike Flush, at the South corner of the Intersection of Grand Ave. and the McMicken Dam Outlet Channel	Approximately 500' North of the Southeast Corner Section 13, Township 4 North, Range 2 West
7	1335.47			Nail in Power Pole at the Northeast corner of Beardsley Rd. and the Beardsley Canal	Approx. 1400' West of the Northeast Corner, Section 26, Township 4 North, Range 2 West
8	1305.27	970,857.96	350,356.27	5/8" Rebar on fence line along North side of Beardsley Rd. on line with power line along Sarival Ave. extended	Near Southeast Corner Section 24, Township 4 North, Range 2 West
10	1288.86	970,761.42	354,926.09	Brass Cap in Hand Hole Centerline Intersection Reems Rd. and Beardsley Rd.	Southeast Corner Section 19, Township 4 North, Range 1 West
13	1260.32	968,057.96	359,856.14	Railroad Spike Flush with Pavement, at Intersection of Grand Ave. and Beardsley Rd.	Near East Quarter Corner Section 29, Township 4 North, Range 1 West
15	1360.98			Maricopa Flood Control District Brass Cap #340 on top of McMicken Dam at Union Hills Dr. extended	Near North Quarter Corner Section 34, Township 4 North, Range 2 West
17	1311.78			Centerline Headwall Top Concrete at Northeast Corner of Intersection of Cotton Ln. and Union Hills Dr.	Near Southeast Corner Section 26 Township 4 North, Range 2 West
18	1289.02			PK Nail in Top Concrete Headwall at Northeast Corner of Intersection of Sarival Ave. and Union Hills Dr.	Near Southeast Corner Section 25 Township 4 North, Range 2 West
19	1264.34	965,485.49	354,938.73	Brass Cap in Hand Hole Centerline Intersection Reems Rd. and Union Hills Dr.	Southeast Corner Section 30, Township 4 North, Range 1 West
26	1307.73	960,316.51	339,647.30	Maricopa County Highway Dept. Brass Cap Flush with Pavement Centerline Intersection Citrus Rd. and Bell Rd.	Southeast Corner Section 34 Township 4 North, Range 2 West

WHITE TANKS/AGUA FRIA AREA DRAINAGE MASTER STUDY
ELEVATION REFERENCE MARKS

Ref. Mark No.	Elev.	State Plane Coordinates Northing	Easting	Description	Location
27	1286.92	960,313.78	344,981.61	Maricopa County Highway Dept. Brass Cap in Hand Hole Centerline Intersection Cotton Ln. and Bell Rd.	Southeast Corner Section 35 Township 4 North, Range 2 West
28	1263.58	960,258.72	350,255.44	Brass Cap in Hand Hole Centerline Intersection Sarival Ave. and Bell Rd.	Southeast Corner Section 36 Township 4 North, Range 2 West
30	1246.20	960,210.19	354,913.27	Brass Cap in Hand Hole Centerline Intersection Reems Rd. and Bell Rd.	Southeast Corner Section 31 Township 4 North, Range 1 West
31	1225.01	960,155.87	360,185.27	Brass Cap in Hand Hole Centerline Intersection Bullard Ave. and Bell Rd.	Southeast Corner Section 32 Township 4 North, Range 1 West
33	1202.73	960,136.66	365,462.11	Brass Cap in Hand Hole Centerline Intersection Litchfield Rd. and Bell Rd.	Southeast Corne Section 33 Township 4 North, Range 1 West
323	1190.22	960,122.03	370,731.94	Maricopa County Highway Department Brass Cap Flush with Pavement Centerline Intersection Dysart Rd. and Bell Rd.	Southeast Corner Section 34 Township 4 North, Range 1 West
325	1176.24	960,105.25	375,999.53	Maricopa County Highway Department Brass Cap in Hand Hole Centerline Intersection El Mirage Rd. and Bell Rd.	Southeast Corner Section 35 Township 4 North, Range 1 West
36	1291.75			PK Nail in Top Concrete Headwall at Northeast Corner of Intersection of Citrus Rd. and Greenway Rd.	Near Southeast Corner Section 3 Township 3 North, Range 2 West
37	1265.26			"X" Chiseled in Top Concrete Headwall at Southeast Corner of Intersection of Cotton Ln. and Greenway Rd.	Near Southeast Corner Section 2 Township 3 North, Range 2 West
38	1251.04	954,954.88	350,223.63	5/8" Rebar at Edge Concrete Ditch at Southeast Corner of Intersection of Sarival Ave. and Greenway Rd.	Near Southeast Corne Section 1 Township 3 North, Range 2 West

WHITE TANKS/AGUA FRIA AREA DRAINAGE MASTER STUDY
ELEVATION REFERENCE MARKS

Ref. Mark No.	Elev.	State Plane Coordinates Northing	Easting	Description	Location
39	1226.08	954,891.23	354,944.99	Brass Cap in Hand Hole Centerline Intersection Reems Rd. and Greenway Rd.	Southeast Corner Section 6 Township 3 North, Range 1 West
41	1203.33	954,761.98	360,220.17	Railroad Spike Flush with Pavement at Intersection of Bullard Ave. and Greenway Rd.	Southwest Corner Section 5 Township 3 North, Range 1 West
42	1184.57	954,712.40	365,479.21	Maricopa County Highway Department Brass Cap Flush with Pavement at Intersection of Litchfield Rd. and Greenway Rd.	Southeast Corner Section 4 Township 3 North, Range 1 West
44	1164.59	954,624.97	370,724.85	Maricopa County Highway Department Brass Cap in Hand Hole Centerline Intersection Dysart Rd. and Greenway Rd.	Southeast Corner Section 3 Township 3 North, Range 1 West
45	1149.13	954,575.86	375,987.19	Iron Pipe Centerline Intersection El Mirage Rd. and Greenway Rd.	Southeast Corner Section 2 Township 3 North, Range 1 West
49	1330.38	949,721.23	334,294.15	1" Iron Pin with Plastic Cap #LEMME PE 8315 at Intersection of Perryville Rd. and Waddell Rd.	Near Southeast Corner Section 9 Township 3 North, Range 2 West
50	1279.00	949,717.17	339,610.20	Maricopa County Highway Department Brass Cap in Hand Hole Centerline Intersection Citrus Rd. and Waddell Rd.	Southeast Corner Section 10 Township 3 North, Range 2 West
51	1246.77	949,714.81	344,897.35	Maricopa County Highway Department Brass Cap in Hand Hole Centerline Intersection Cotton Ln. and Waddell Rd.	Southeast Corner Section 11 Township 3 North, Range 2 West
52	1219.57	949,688.60	350,155.52	Brass Cap in Hand Hole Centerline Intersection Sarival Ave. and Waddell Rd.	Southeast Corner Section 12 Township 3 North, Range 2 West
54	1206.38			"X" Chiseled in Top Concrete Headwall Southeast Corner of Intersection of Reems Rd. and Waddell Rd.	Near Southeast Corner Section 7 Township 3 North, Range 1 West

WHITE TANKS/AGUA FRIA AREA DRAINAGE MASTER STUDY
ELEVATION REFERENCE MARKS

Ref. Mark No.	Elev.	State Plane Coordinates Northing	Easting	Description	Location
55	1181.98			1/2" Rebar in Top Concrete Headwall Northwest Corner of Intersection of Bullard Ave. and Waddell Rd.	Near Southeast Corner Section 8 Township 3 North, Range 1 West
57	1159.83	949,417.15	365,487.75	Maricopa County Highway Department Brass Cap Flush with Pavement Centerline Intersection Litchfield Rd. and Waddell Rd.	Southeast Corner Section 9 Township 3 North, Range 1 West
58	1148.19			Chiseled Square in Top Concrete Headwall Southeast Corner of Intersection of Dysart Rd. and Waddell Rd.	Near Southeast Corner Section 10 Township 3 North, Range 1 West
60	1135.50	949,295.95	375,983.48	City of El Mirage Brass Cap in Hand Hole at Intersection of El Mirage Rd. and Waddell Rd.	Southeast Corner Section 11 Township 3 North, Range 1 West
64	1259.91			Chiseled square in Concrete Base Electrical Transformer at Well 722 - Southwest Corner of Intersection of Citrus Rd. and Cactus Rd.	Near Southeast Corner Section 15 Township 3 North, Range 2 West
65	1220.43	944,435.69	344,862.43	Nail in Headwall at Northeast Corner of Intersection of Cotton Ln. and Cactus Rd.	Near Southeast Corner Section 14 Township 3 North, Range 2 West
66	1196.57	944,412.13	350,116.59	Brass Cap in Hand Hole Centerline Intersection Sarival Ave. and Cactus Rd.	Southeast Corner Section 13 Township 3 North, Range 2 West
67	1170.68			Chiseled square in Top Concrete Headwall Southwest Corner of Intersection of Reems Rd. and Cactus Rd.	Near Southeast Corner Section 18 Township 3 North, Range 1 West
69	1154.00	944,221.01	360,225.79	Iron Rod in Pot Hole Bullard Ave. and Cactus Rd.	Southeast Corner Section 17 Township 3 North, Range 1 West
70	1139.67	944,149.66	365,487.57	Maricopa County Highway Department Brass Cap Flush with Pavement Litchfield Rd. and Cactus Rd.	Southeast Corner Section 16 Township 3 North, Range 1 West

WHITE TANKS/AGUA FRIA AREA DRAINAGE MASTER STUDY
ELEVATION REFERENCE MARKS

Ref. Mark No.	Elev.	State Plane Coordinates Northing	Easting	Description	Location
72	1126.81			Chiseled Square in Top Concrete Headwall Northwest Corner of Intersection of Dysart Rd. and Cactus Rd.	Near Southeast Corner Section 15 Township 3 North, Range 1 West
73	1116.93	944,009.70	375,983.48	Maricopa County Highway Department Brass Cap in Hand Hole El Mirage Rd. and Cactus Rd.	Southeast Corner Section 14 Township 3 North, Range 1 West
76	1280.02			"X" on Top Concrete Ditch Southwest Corner of Intersection of Perryville Rd. and Peoria Ave.	Near Southeast Corner Section 21 Township 3 North, Range 2 West
77	1241.61			40d Nail in Southwest Face of Power Pole 60A/1 Northeast Corner of Intersection of Citrus Rd. and Peoria Ave.	Near Southeast Corner Section 22 Township 3 North, Range 2 West
78	1203.33	939,155.22	344,824.95	Maricopa County Highway Department Brass Cap in Hand Hole Cotton Ln. and Peoria Ave.	Southeast Corner Section 23 Township 3 North, Range 2 West
79	1165.82	939,133.90	350,087.83	Brass Cap in Hand Hole Sarival Ave. and Peoria Ave.	Southeast Corner Section 24 Township 3 North, Range 2 West
81	1143.93	939,045.77	354,937.50	Brass Cap in Hand Hole Reems Rd. and Peoria Ave.	Southeast Corner Section 19 Township 3 North, Range 1 West
82	1138.74	938,941.76	360,208.03	1 1/2" Open Pipe in Pot Hole Bullard Ave. and Peoria Ave.	Southeast Corner Section 20 Township 3 North, Range 1 West
84	1123.37	938,880.80	365,490.24	5/8" Iron Bar in Pot Hole Litchfield Rd. and Peoria Ave.	Southeast Corner Section 21 Township 3 North, Range 1 West
85	1108.95	938,807.04	370,744.16	Maricopa County Highway Department Brass Cap in Hand Hole Dysart Rd. and Peoria Ave.	Southeast Corner Section 22 Township 3 North, Range 1 West
87	1105.86	938,735.36	375,994.95	Brass Cap in Hand Hole, El Mirage Rd. and Peoria Ave.	Southeast Corner Section 23 Township 3 North, Range 1 West
91	1251.30	933,905.90	334,223.88	1" Open Pipe in Pothole on Olive Ave. ± 1/2 Mile East of Beardsley Canal	Near Northwest Corner Section 34 Township 3 North, Range 2 West

B3 HORIZONTAL CONTROL DATUM

The horizontal control is based on the NORTH AMERICAN 1927 DATUM. The following Coast and Geodetic Survey monuments were used to establish the horizontal control. See the attached USC&GS descriptions along with recovery notes by the Arizona Department of Transportation.

Name of Survey Monument	State Plane Coordinates X	Y
FRIA	323,802.12	962,668.81
LITCHFIELD	364,498.81	917,079.64
POK	325,284.48	909,915.67
BRADLEY	348,688.75	863,635.23

PRINTED AND PRINTED BY:
DEPARTMENT OF COMMERCE
AND GEODETIC SURVEY
WASHINGTON D.C.

HORIZONTAL CONTROL DATA

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

ARIZ
LATITUDE 33°30' TO 34°00'
LONGITUDE 112°00' TO 112°30'
DIAGRAM NI 12-7 PHOENIX

DESCRIPTION OF TRIANGULATION STATION

STATE: Arizona COUNTY: Maricopa
YEAR: 1947 LOCALITY: Marinette

NAME OF STATION: FRIA
CHIEF OF PARTY: D.M.Konichek

Station-station mark,	Rela.° 2
Underground station mark,	Rela.°
Reference mark, No. 1	Rela.° 12a
Reference mark, No. 2	Rela.° 12a
Azimuth mark,	Rela.° 12a
Witness mark,	Rela.°
Height of light above station mark	meters
Height of telescope above station mark	1.6 meters

DISTANCES AND DIRECTIONS TO INACCESSIBLE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND

OBJECT	NO.	DISTANCE	HORIZONTAL ANGLE	AZIMUTH
H POUR 1947		Meters	00 00 00.00	
R.M. No. 1	ESE	11.702	151 39 19.	
Luke Field Beacon (Alco Tank)	SE		169 06 00.2	
Az. Mk. approx. 0.6	S.	S	297 32 01.5	
R.M. No. 2	SW	11.976	266 54 01.	

Detailed description:

The station is located about 9.5 miles south-southeast of Wittman and 7.5 miles west of the Beardsley Anna Fria Canal, on a low round knoll at the northeast end of the White Tank Mountains. The station mark is a bronze disk set on highest point of knoll, projects 8 inches and is stamped: "FRIA 1947".

Reference mark No. 1 is a bronze disk set flush 30 inches lower than the station mark and is stamped: "FRIA NO 1 1947".

Reference mark No. 2 is a bronze disk projecting 14 inches, is 12 inches higher than the station mark and is stamped: "FRIA NO 2 1947".

The azimuth mark is a bronze disk set on the east end of an east-west ridge, 94 paces west of center line of road. It projects 6 inches and is stamped: "FRIA 1947".

To reach the station from the post office in Marinette, go west on highway 1.7 mile to an oiled road left at the Anna Fria Railroad Junction; turn left, go 4.7 miles to a road right; turn right, go 1.0 mile to a "T" road; turn left, go 1.9 mile to crossroad and a railroad crossing; continue straight ahead 1.85 mile to a crossroad at a canal; cross canal and continue straight ahead 1.1 mile to a fork; turn right, go 1.4 mile to a "T" road; turn right, go 0.7 mile to azimuth mark on left; continue 0.55 mile to a dim road right; turn right, go 0.25 mile to foot of knoll at the southeast side and end of truck travel. Walk northwesterly up steep ridge to highest point and station. A 5 minute pace.

RECOVERED 1-86
A NEW DESCRIPTION ON FOLLOWING PAGES. ALSO RM 3 & 4 SET TO REPLACE RM'S 1 & 2 WHICHWERE DESTROYED Howard Mehlig

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: FRIA YEAR: 1947
STATE: Ariz LOCALITY: Phoenix to Parker to Vicinity of Kingman
Second Order Triangulation SOURCE: G-8348 FIELD SHEETS: ARIZ 28, 29

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH @ FORE ANGLE	MARK
STATE: Ariz ZONE: C CODE: 0302	x [illegible] y 982,603.31	10°36'01" - 0 19 15	AZIMUTH MARK
STATE: ZONE: CODE:	x y		

GEODETIC DATA	POSITION		SECONDS IN METERS	ELEVATION
	LATITUDE: 33°38'41"587	NORTH		437.1 METERS
	LONGITUDE 112° [illegible] 4.274	WEST		1,299 FEET

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE: LOGARITHM (Meters)	DISTANCE: METERS
AZIMUTH MARK	THIRD-CREEK 10°16'45"9		

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: TARGET USBR YEAR: 1947
STATE: Ariz. LOCALITY: Phoenix to Parker to Vicinity of Kingman
Third Order Traverse SOURCE: G-8348 FIELD SHEETS: ARIZ 28, 29
(No check on this position)

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH @ FORE ANGLE	MARK
STATE: Ariz ZONE: C CODE: 0302	x [illegible] y [illegible]	- 0 19 15	
STATE: ZONE: CODE:	x y		

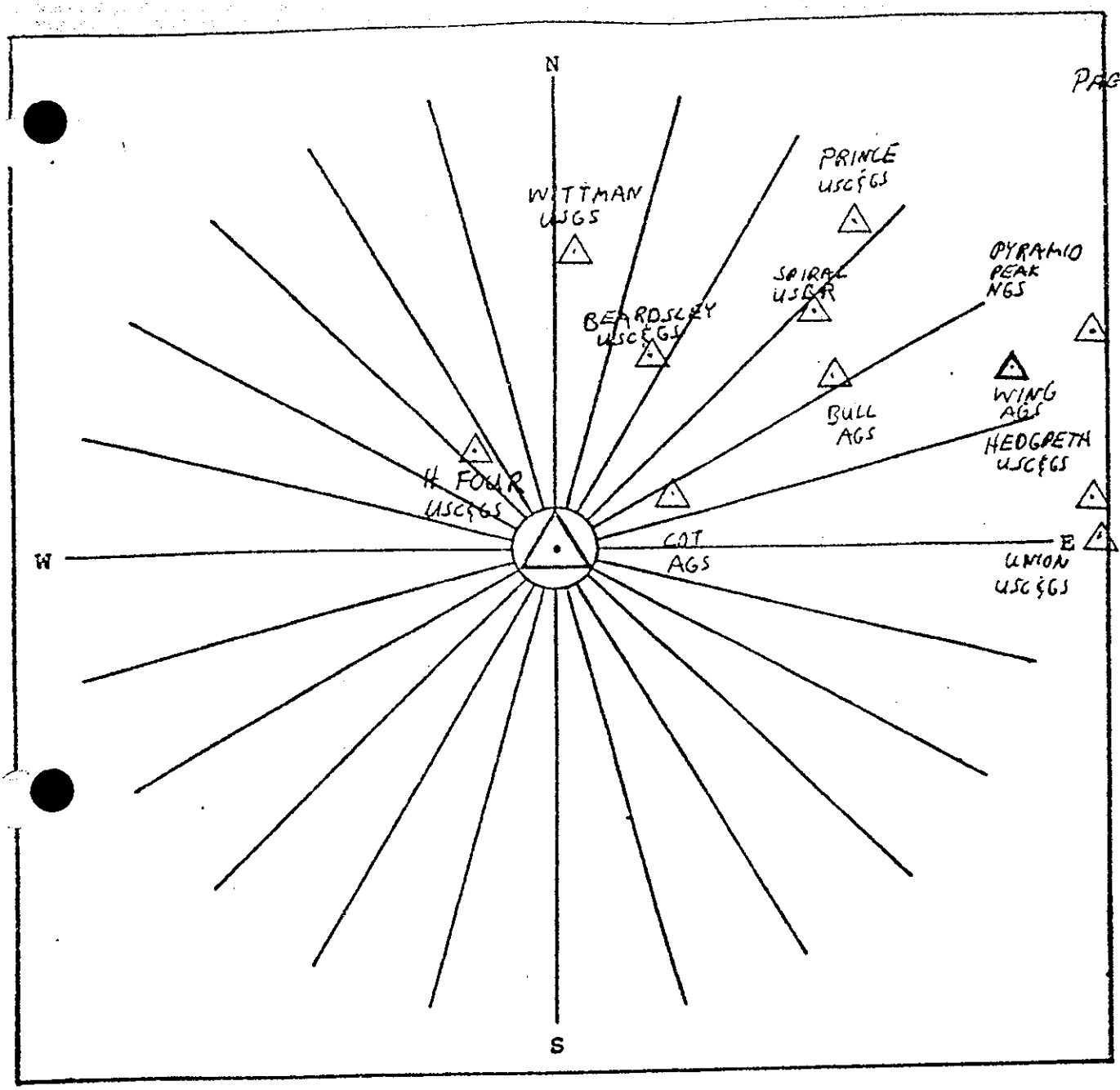
GEODETIC DATA	POSITION		SECONDS IN METERS	ELEVATION
	LATITUDE: 33°38'41"903	NORTH		METERS
	LONGITUDE: 112 29 44.765	WEST		FEET

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE: LOGARITHM (Meters)	DISTANCE: METERS
Computed from station FRIA			

USCOMM-NOAA-ASHEVILLE

Page 1 of 4

(47)



RECOVERY NOTE, TRIANGULATION STATION

Recovered Station FRIA H.I. 5.5 FT.

Comments RM's 1 & 2 WERE DESTROYED RM's 3 & 4 WERE SET 1/86

Howard Hetzler

RECOVERY NOTE, TRIANGULATION STATION

Name of Station: FRIA

Established by: D.H. KOLLICHER, year 1947

Recovered by: H. WHITLEY, date 1-86, Job.No. 1900

Location by county: MARICOPA. Location 30' quad 33/112

General Location: ABOUT 9.5 MILES SOUTH-SOUTHEAST OF LITTMAN & 2.5 MILES WEST OF THE BEARDSLEY AQUA FRIA CANAL.

Condition & Description:

Station Mark STD. USC&GS BC CEMENTED IN A DRILL HOLE IN BEDROCK.

Reference Mark No. 3 STD. A&S AL EPOXIED IN BEDROCK PROJ. 4" STAMPED: FRIA RM3 1947-1986 COND. GOOD.

Reference Mark No. 4 STD. A&S AL EPOXIED IN BEDROCK FLUSH - STAMPED: FRIA RM4 1947-1986 COND. GOOD.

Azimuth Mark STD. USC&GS AZ BC CEMENTED IN BEDROCK PROJ. 3" COND. GOOD.

To Reach FROM INTERSECTION OF GRAND AVE & BELL RD. PROCEED WEST ON BELL RD. FOR 2.8 MILES TURN LEFT (SOUTH) ON REEMS RD. AND CONTINUE FOR 1.0 MILE TO GREENWAY RD. TURN RIGHT WEST ON GREENWAY RD. AND CONTINUE FOR 4.25 MILE TO TOP OF FLOOD CONTROL DAM. CONTINUE WEST AND THEN NORTH ON BLADED RD FOR 1.7 MILE TO A CATTLE GUARD, CONTINUE NORTH FOR 0.80 MILE, TURN LEFT (WEST) ONTO A DIRT ROAD AND CONTINUE FOR 0.50 MILE TO A FORK. TAKE RIGHT FORK AND CONTINUE FOR 0.35 MILE TO A FORK. TAKE LEFT FORK AND CONTINUE FOR 0.20 MILE TO A FORK. TAKE LEFT FORK

OVER

TO REACH CONT.

AND CONTINUE FOR 0.05 MILE TO A FORK, TAKE LEFT FORK THROUGH A WASH AND CONTINUE FOR 0.15 MILE TO STA. ON TOP OF HILL. A DRIVE STA. WITH A 4X4.

TO REACH AZ MARK:

PROCEED SOUTH-SOUTH-WEST FROM STA. ON A NORTH & SOUTH ROAD FOR 0.65 MILE TO A GATE, PASS THROUGH GATE AND CONTINUE SOUTH FOR 0.25 MILE TO AZ MARK ON RIGHT (WEST). THE EAST END OF AN EAST-WEST RIDGE. 65 FT. WEST OF ℄ OF NORTH & SOUTH ROADWAY.

RM 3

23.35 FT. NE OF STA.

RM 4

38.73 FT SW OF STA.

JULY 1966
PUBLISHED AND ISSUED BY:
U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
WASHINGTON D.C.

HOR[illegible]L CONTROL DATA

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

QUAD 331121 STA[illegible]
ARIZ
LATITUDE 33°30' TO 34°00'
LONGITUDE 112°00' TO 112°30'
DIAGRAM NI 12-7 PHOENIX

Litchfield (Maricopa County, E. B. Latham, 1935; 1938).—About 0.1 mile southeast of the highest point of a low ridge just north of the Litchfield residence, near the north line of sec. 10, T. 2 N., R. 1 W. Marked by standard bronze disks as described in notes 1a and 7a. Reference mark No. 1, a standard bronze reference disk, note 11a, is 14.157 meters (46.45 feet) from station in azimuth 31°10'. Reference mark No. 2, a standard bronze reference disk, note 11a, is 18.207 meters (59.73 feet) from station in azimuth 126°23'. The azimuth mark, a standard bronze disk, note 11a, is reference mark No. 3, and is 0.3 mile from station in azimuth 329°51'02".

U.S. DEPARTMENT OF COMMERCE — COAST AND GEODETIC SURVEY
RECOVERY NOTE, TRIANGULATION STATION

R

Name of Station: LITCHFIELD 1935 State: Arizona County: Maricopa
Established by: E.B.L. Year: 1935 Location: Litchfield Park
Recovered by: D.H.Konichek Year: 1947

Detailed statement as to the items of the original description. The station and reference marks No. 1 and No. 2 were found in good condition as described with the exception of slight differences in direction and difference in distance to reference mark No. 2; the azimuth mark was not located; BM 1258 was used as azimuth; the correct distances and direction listed below.

OBJECT	NEW DISTANCE	DIRECTION
	Meters	
HELEN 1924		[illegible]
R.M. No. 1 1935 SW	14.160	215 [illegible]
R.M. No. 2 1935 NW	18.197	307 11 [illegible]
Az. Mk.(USC&GS BM 1258 1945) SE Approx. 0.3 mile airline.		141 13 14.0
Beacon Light(Top of Lake Pleasant water tank) N Approx. 0.7 mile airline		05 42 47.3

The station is located about 0.1 mile southeast of the highest point of a low ridge just north of the Litchfield residence, 10 feet north of and about the same elevation as center line of road, 18 feet northeast of the intersection of a road south, 8 feet south-southeast of a 4x4 white witness post, marked by a bronze disk as described in notes 1a and 7a, projects 6 inches and is stamped "LITCHFIELD 1934".

Reference mark No. 1 is approximately 40 inches lower than station, 10 feet east of the center line of road; a bronze disk as described in note 11a, projects ½ inches and is stamped "LITCHFIELD NO 1 1934".

Reference mark No. 2 is approximately 18 inches higher than the station, 8 feet north of center line of road, set in a concrete block which projects 4 inches. The mark is a bronze disk stamped: "LITCHFIELD NO 2 1934".

The azimuth mark is a cast iron U.S. C. & G. Survey Bench Mark, 33 feet east of the center line of road, 2 feet west of a north-south fence line, 1 foot north of a 4x4 white witness post, set in top of a concrete post which projects 3 inches and is stamped: "X 258 1945".

To reach from the flag pole at Litchfield Park which is located in center of street in central part of town; go north on the only highway for 1.6 miles to the azimuth mark on right as described above; continue straight ahead for 0.2 mile to a locked gate on left and sign: "Permission for entrance at Southwest Cotton Office, Litchfield Park, Arizona"; turn left (W) for 0.3 mile to intersection of a road south and station site as described above. A drive station.

Observations made from a 1.4 m tripod.

U.S. DEPARTMENT OF COMMERCE — COAST AND GEODETIC SURVEY
RECOVERY NOTE, TRIANGULATION STATION

R

Name of Station: LITCHFIELD State: Arizona County: Maricopa
Established by: E.B.Latham Year: 1935 Location: Phoenix
Recovered by: O. B. Grant Year: 1948

Detailed statement as to the items of the original description:

1947

Amend the last paragraph of the recovery card to read as follows..

To reach from - - - - - to a locked gate on the left and sign: "Private Property. Permission for use must be obtained from Goodyear Farms Litchfield Park, Ariz."; turn left (W) for 0.3 mile towards a stone picnic fireplace on a low ridge. Station is 330 feet SE of fireplace and 11 feet NE of center line of main trail. A standard Coast Survey disk set in a one foot square concrete post and projecting 6 inches above the surface of the ground.

Reference Marks 1 & 2 and the azimuth mark are as described by Mr. Konichek.

ADJUSTED HORIZONTAL CONTROL DATA

Name of Station: LITCHFIELD Year: 1935
State: Ariz Locality: Luna to Stewart Dam
First-order Triangulation Source: G-3022 Field Sheet: ARIZ 8-11.9

Basic Data	Coordinates (Feet)	Plane Azimuth from Grid Angle	Name
State: Ariz Zone: C Code: 0202	x 364,498.81 y 917,079.64	330°05'46" - 0 14 44	AZIMUTH MARK (RM NO 3)
State: Zone: Code:	x y		

Geodetic Data	Position	Reconcile in Meters	Elevation	
	Latitude: 33°31'12.929" North Longitude: 112 21 45.566 West		341.3 1,120	Meters Feet

To Station	Geodetic Azimuth (From South)	Distance: Logarithm (Meters)	Distance: Meters
AZIMUTH MARK (RM NO 3)	THIRD-ORDER 329°51'01"8		

U.S. DEPARTMENT OF COMMERCE - COAST AND GEODETIC SURVEY
RECOVERY NOTE, TRIANGULATION STATION

R

Name of Station: LITCHFIELD
Established by: E.B.L. Year: 1934 State: Arizona
Recovered by: A.H.S. Year: 1960 County: Maricopa

Detailed statement as to the items of the original description, including marks found, stampings, changes made, and other pertinent facts:

The station mark, reference marks, and azimuth mark were recovered as described in good condition.

STA RECOVERED AS PER 1982
AGS. DESCRIPTION.
STA RM 1 & 2 IN & GOOD 1/86

Page 1 of 3

(40)

(40A)

RECOVERY NOTE, TRIANGULATION STATION

Name of Station: LITCHFIELD

Established by: E.B. LATHAM USC&GS, year 1935

Recovered by: PEMBERTON PBM, date 10/62, Job.No. 1400

Location by county: MARICOPA. Location 30' quad 33112/

General Location: ABOUT 17 MILES NORTH WEST OF PHOENIX - 2 MILES NORTH OF LITCHFIELD PARK - 0.30 MILE WEST OF LITCHFIELD ROAD ON A PROMINENT LOW HILL.

Condition & Description:

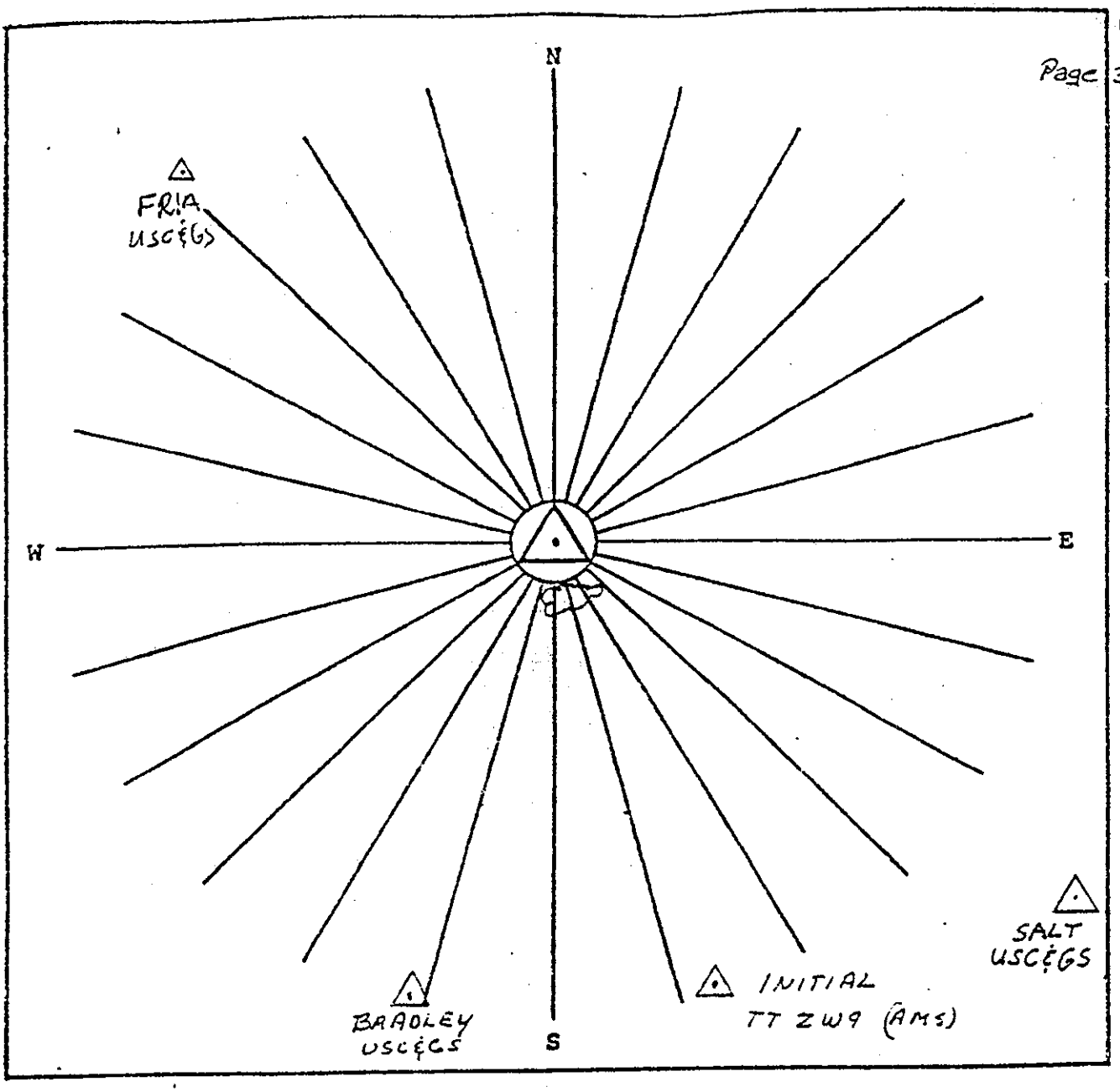
Station Mark STD. USC&GS BC SET IN A CONC. POST STAMPED LITCHFIELD 1934 COND. GOOD

Reference Mark No. 1 STD. USC&GS RM BC SET IN A CONC. POST STAMPED LITCHFIELD NO. 1 1934 46.5 FT SSE COND. GOOD

Reference Mark No. 2 STD. USC&GS RM BC SET IN A CONC. POST STAMPED LITCHFIELD NO 2 1934 59.7 FT. NW COND GOOD

Azimuth Mark DESTROYED

To Reach FROM THE INTERSECTION OF LITCHFIELD ROAD & CAMEL BACK ROAD IN LITCHFIELD PARK AZ. ABOUT 16½ MILES WNW OF PHOENIX TRAVEL NORTH LITCHFIELD RD. FOR 0.75 MILE TO A BLADED ROAD LEFT & LOCKED GATE - TURN LEFT & CONTINUE WEST & WESTERLY ON BLADED ROAD UP THE RIDGE FOR 0.30 MILE & THE STA. ON YOUR RIGHT - OBTAIN KEY FROM CLARK CORBETT. WIGWAM HOTEL IN LITCHFIELD PARK PHONE NO. 935-3811 EXT. 133.



RECOVERY NOTE, TRIANGULATION STATION

Recovered Station LITCHFIELD H.I. 5.5 FT. / 25 FT.

Comments 5.5 FT. HI HAS UNOBSTRUCTED VISIBILITY TO BRADLEY

25 FT. HI WOULD HAVE UNOBSTRUCTED VISIBILITY TO INITIAL

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COAST AND GEODETIC SURVEY
WASHINGTON D.C.

HORIZONTAL CONTROL DATA

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

QUAD 331121 STATION 1054
AriZ
LATITUDE 33°30' TO 34°00'
LONGITUDE 112°00' TO 112°30'
DIAGRAM NI 12-7 PHOENIX

Pok (Maricopa County, J. Bowie, Jr., 1936).—On the desert plains, 8 miles west and one half mile north of Litchfield. It is on the highest point of a small gravel ridge, 0.5 mile north and 1.0 mile west of the point where the main road running straight west from the Goodyear flag pole in Litchfield intersects the main north-south canal of the Maricopa County Municipal Water Conservation District No. 1; and about 0.1 mile southwest of a well-traveled desert road. Station and reference marks are standard disks welded to 3-foot pipes set in concrete. Reference mark No. 1 is 0.100 meters (2980 feet) from station in azimuth 197°49'. Reference mark No. 2, is 8.853 meters (28.98 feet) from station in azimuth 94°02'. The azimuth mark, a standard bronze disk, note 11n, is 25 feet south of center line of desert road leading to station and 0.15 mile from station in azimuth 295°(0)'05".

U. S. DEPARTMENT OF COMMERCE - COAST AND GEODETIC SURVEY
RECOVERY NOTE, TRIANGULATION STATION

R

Name of Station: POK
Recovered by (Name): J.B., Jr. Year: 1936 State: Arizona
Recovered by (Office): Year: 1960 County: Maricopa

Detailed description as to the charm of the original description, including marks found, stampings, changes made, and other pertinent facts:

The station mark, reference mark No. 2, and the azimuth mark were recovered in good condition.
Reference mark No. 1 has been destroyed.

SFNF 2/19/86
ASSUME DESTROYED
BY TRENCHING

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: POK — YEAR 1,950
STATE: Ariz — LOCALITY: Tapago Indian Reservation
Second Order Triangulation. SOURCE: 0-3083 — FIELD SHEET: AriZ 14

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH & CONVERGENCE ANGLE	MARK
STATE Ariz ZONE C CODE 0202	[illegible]	295°19'54" - 0 18 09	AZIMUTH MARK
STATE ZONE CODE			

GEODETIC DATA	POSITION	SECONDS IN METERS	ELEVATION
	LATITUDE 33° [illegible] NORTH LONGITUDE 112° [illegible] WEST		370.12 METERS 1,214.3 FEET

TO STATION	GRADE AZIMUTH OF COURSE	DISTANCE LOGARITHM (Meters)	DISTANCE METERS
AZIMUTH MARK	THIRD-ORDER 295°53'04"9		

45

JULY 1966
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U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
WASHINGTON D.C.

HORIZONTAL CONTROL DATA

By the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

QUAD 33112c STATION 1958
AREA
LATITUDE 33°00' TO 33°30'
LONGITUDE 112°00' TO 112°30'
DIAGRAM NI 12-7 PHOENIX

Bradley (Maricopa County, E. H. Latham, 1954; 1930).—About 10½ miles east of the village of Buckeye, in sec. 1, T. 1 S., R. 2 W., on the highest and most northerly one of a group of low hills lying just south of the Gila River and about 1 mile southeast of the J. L. Bradley ranch, near the south end of the summit, on ridge line, about 50 feet south-southeast of the high point. Marked by a standard bronze disk as described in note 2. Reference mark No. 1, a standard bronze reference disk, note 12a, is on high point of summit, in sharp rock outcrop, 12.2d2 meters (40.23 feet) from station in azimuth 171°19'. Reference mark No. 2, a standard bronze reference disk, note 12a, is down the west slope of the summit, in ledge, 9.758 meters (32.01 feet) from station in azimuth 60°38'. Station *Cotton* may be used as the azimuth mark.

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

R

RECOVERY NOTE, TRIANGULATION STATION

NAME OF STATION BRADLEY
ESTABLISHED BY E. H. L. YEAR 1954 STATE Arizona
RECOVERED BY* C. A. Annis YEAR 1962 COUNTY Maricopa

HEIGHT OF TELESCOPE ABOVE STATION MARK 1 METERS HEIGHT OF LIGHT ABOVE STATION MARK 1 METERS

DISTANCES AND DIRECTIONS TO AZIMUTH MARK, REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN From THE GROUND AT THE STATION

OBJECT	BEARING	DISTANCE FEET	DISTANCE METERS	DIRECTION
LINO				
R.M. No. 1	N	40.21	12.25	05 00 00.00
Goodyear, Goodyear Aircraft Corp.,				46 10 [illegible]
Water Tank				
R.M. No. 2	NE	approx. 6 miles		84 57 27.6
Azimuth Mark	SW	32.03	9.762	269 24 31
	E	approx. 0.5 mile		323 15 46.7

The station mark, reference mark number 1 and reference mark number 2 were recovered and found to be in good condition. The distance and directions to the reference marks checked. An azimuth mark was established at this time.

A new and complete description follows.

The station is located about 10 miles west of Buckeye, 6 miles southeast of Avondale and just south of the Gila River near the south end of a summit, about 50 feet south-southeast of the highest point of summit.

To reach the station from the Avondale City Hall, go west on Western Avenue for 0.05 mile to traffic light and crossroad in Goodyear, turn left and go south for 0.1 mile to U.S. Highway 80, turn right and go west-southwest on U.S. Highway 80 for 5.4 miles to Cotton Lane, turn left on Cotton Lane for 1.0 mile to house on right, continue south for 0.2 mile to fork, keep left fork for 0.1 mile to fork, keep right fork for 0.6 mile to a track crossroad, continue south between fences for 0.3 mile to three small yellow houses and fork, turn left and go east passing between the first and second house and continue east and northeast following track road to a reverse fork for 0.5 mile, keep right for 0.1 mile to a white iron gate on right, turn right through gate and go southerly on gas line road for 0.65 mile to a track road left, turn left off gas line road and go 0.1 mile to a dim fork, keep left fork and go east-northeast for 0.35 mile to the Azimuth Mark on the left end end of truck travel. From here pack easterly up trail to top of hill and station. This is about 20 minute pack.

Station mark, a standard triangulation station disk set in a drill hole in outcropping bedrock and is stamped BRADLEY 1954. The mark is 50 feet south-southeast of the highest part of hill.

Reference mark 1, a standard reference disk set in a drill hole in outcropping bedrock and is stamped BRADLEY NO 1 1954. The mark is on the highest point of hill and projects about 18 inches.

Reference mark 2, a standard reference disk set in a drill hole in outcropping bedrock which is about 12 feet lower in elevation than the station and is stamped BRADLEY NO 2 1954. The mark is on a ledge on the west side of hill.

Azimuth mark, a standard azimuth disk set in a drill hole in outcropping bedrock and is stamped BRADLEY 1954. The mark is 54 feet north of a track road, 10 feet northwest of a cairn and 5 feet northeast of a witness post.

B. P. Brunetti

*Name of chief of party should be inserted here. The officer who actually scanned the stations should sign his name in place of the secretary once.

NOTE - One of these forms must be used for every station recovered.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION BRADLEY YEAR 1934, 1950, 1962
STATE Arizona LOCALITY Yuma to Stewart Dam
First ORDER Triangulation SOURCE 0-3022, 0-3031 RECOMMENDATION Ariz. 8-II, 18, 49-II, [illegible]
0-12917
0-13120

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH FROM 3rd ANGLE	MARK
STATE Ariz	x 348,688.75	94° 41' 20"	AZIMUTH MARK 1962
ZONE C	y 863,635.23	- 0 16 21	
CODE 0202			
STATE	x		
ZONE	y		
CODE			

GEODETIC DATA	POSITION	SECONDS IN METERS	ELEVATION
	LATITUDE 33° 22' 23".4268 NORTH		370.6 METERS
	LONGITUDE 112 24 44.3019 WEST		1281 FEET

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE (Meters)
AZIMUTH MARK 1962	THIRD-ORDER 94° 24' 50".9	

RECOVERED AS PER A.G.S. DESCRIPTION 1982
STA, RM'S 1 & 2 AND AZ MARK RECOVERED AS DESCRIBED
COND GOOD 2/13/86

PAGE 1 of 6

...Y 1966
...BLISHED AND PRINTED BY:
U... DEPARTMENT OF COMMERCE
C... AND GEODETIC SURVEY
W... ...NGTON D.C.

HORIZONTAL ...DROL DATA

By the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

...ATION (Continued)

RECOVERY NOTE, TRIANGULATION STATION

NAME OF STATION BRADLEY
ESTABLISHED BY E.B.L. YEAR 1934 STATE Arizona BENCH MARK ALSO (1)
RECOVERED BY D.J. Florwick YEAR 1962 COUNTY Maricopa
AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN
HEIGHT OF TELESCOPE ABOVE STATION MARK 5 FEET HEIGHT OF LIGHT ABOVE STATION MARK 4 FEET

DISTANCES AND DIRECTIONS TO AZIMUTH MARK, REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND AT THE STATION

OBJECT	BEARING	DISTANCE FEET	DISTANCE METERS	DIRECTION
BRADLEY 1934				° ' " 00 00 00.00
Reference Mark No. 1	N	40.179	12.247	46 16 21
Reference Mark No. 2	SW	32.640	9.947	225 33 38
Azimuth Mark	W	(approx)	0.3 mi.	329 51 57.5

The station mark, reference mark No. 1, reference mark No. 2 and the azimuth mark were recovered and found to be in good condition. The directions to both reference marks and the azimuth mark were checked, but a slight discrepancy was noted in the distance to the reference marks. The measurement to reference mark No. 1 is 10 ft. greater than the 1962 measurement, and that to reference mark No. 2 is 1 ft. longer. A new and complete description follows:

The station is located on the summit of [illegible], 7 miles west of Buckeye, 1 mile southwest of Avondale and 1 mile south of the Gila River.

To reach the station from the City Hall in Avondale, go west on Western Avenue for 0.85 mile to Litchfield Road. Turn left and go south on Litchfield Road for 0.75 mile to U.S. Highway 80. Turn right and go westerly on U.S. Highway 80 for 4.4 miles to Cotton Lane. Turn left and go southerly on Cotton Lane for 1.2 miles to a fork. Take the left fork and continue south along a bladed road for 0.45 mile to an intersection of 5 bladed roads. Take the extreme left road and go northeast for 0.3 mile to the north end of a concrete irrigation ditch. Turn right and follow bladed road south for 0.35 mile to a "T" intersection. Turn left and go east for 0.15 mile to another "T" intersection and a white-painted metal gate on the right. Turn right, through gate, and go southerly for 0.65 mile to a track road on the left. Turn left and follow track road for 0.1 mile to a fork. Take the left fork and follow the track road for 0.25 mile to the azimuth mark on the left and the end of truck travel. Pack easterly up steep hill for about 0.3 mile to the summit and the station mark. Packing time is about 20 minutes.

The station mark is a standard disk, stamped BRADLEY 1934, cemented in a drill hole in outcropping bedrock. It is about 50 feet south of the highest point of the hill.

Reference mark No. 1 is a standard disk, stamped BRADLEY NO 1 1934, cemented in a drill hole in outcropping bedrock that projects 12 inches. It is on the highest point of the hill.

Reference mark No. 2 is a standard disk, stamped BRADLEY NO 2 1934, cemented in a drill hole in outcropping bedrock about 12 feet below the elevation of the station mark.

The azimuth mark is a standard disk, stamped BRADLEY 1934, cemented in a drill hole in outcropping bedrock. It is 54 feet north of the center of a track road, 10 feet northwest of a cairn and 5 feet northeast of a metal witness post.

...ATION (Continued)

...RADLEY

...ATION MARK

...ATION MARK 4 FEET

...ATION MARK

...ATION MARK

...ATION MARK

STATION DESCRIPTION
ARIZONA DEPARTMENT OF TRANSPORTATION
PHOTOGRAMMETRY AND MAPPING SERVICES
GEODETIC CONTROL SURVEY

STATION NAME--BRADLEY

204R *11*33112243001 *12*005
BRADLEY *15*AZ/MARICOPA
1/CGS *21*1934EBL *22*SX0020 *23*1.6
5/AZDT *25*1983GH *26*G
$
THE DRILL HOLE FOR THE STATION MARK WAS RECOVERED WITH THE DISK MISSING. A NEW STATION MARK STAMPED---BRADLEY 1934 1983---WAS SET ON THE ORIGINAL POSITION. THE REFERENCE MARKS AND THE AZIMUTH MARK WERE RECOVERED AS DESCRIBED. A NEW ROUTE TO THE STATION FOLLOWS.
$
TO REACH THE STATION FROM THE INTERSECTION OF U. S. HIGHWAY 80 AND LITCHFIELD ROAD IN AVONDALE TRAVEL WEST ALONG U. S. 80 FOR 1.2 MILES TO BULLARD ROAD. TURN LEFT AND TRAVEL SOUTH FOR 2.5 MILES TO VINEYARD AVENUE. TURN RIGHT AND TRAVEL WEST FOR 1.1 MILES TO REEMS ROAD. CONTINUE SOUTH ALONG THE WEST SIDE OF THE GOLF COURSE FOR 0.4 MILE TO A GATE. PASS THROUGH GATE AND TRAVEL WEST 0.25 MILE TO A BLADED ROAD ON THE LEFT. TURN LEFT AND TRAVEL SOUTH FOR 0.1 MILE TO A BLADED ROAD RIGHT. TURN RIGHT AND CONTINUE WEST FOR 0.7 MILE TO A BLADED ROAD. TURN LEFT FOR 0.25 MILE TO A FORK AT A POWER LINE. TAKE RIGHT FORK FOR 0.6 MILE TO A GAS LINE. TURN LEFT ALONG GAS LINE FOR 0.6 MILE TO A TRAIL LEFT. TURN LEFT FOR 0.1 MILE TO A FORK. TURN LEFT FOR 0.25 MILE TO THE AZIMUTH MARK. PACK TO THE LOW SADDLE TO THE NORTH AND THEN SOUTH TO THE STATION.

RECOVERED AS PER ABOVE DESCRIPTION
STA, RM's 1 & 2 AND AZ MARK RECOVERED
AS DESCRIBED COND GOOD 2/13/86

(7C)

Page 4 of 14

RECOVERY NOTE, TRIANGULATION STATION

Name of Station: BRADLEY

Established by: E.B.L. USC&GS, year 1934

Recovered by: PEMBERTON P&M, date 10/82, Job.No. 1400

Location by county: MARICOPA. Location 30' quad 331122

General Location: ABOUT 10 MILES EAST OF BUCKEYE, 8 MILES SOUTH-WEST OF AVONDALE & JUST SOUTH OF THE GILA RIVER NEAR THE SOUTH END OF A SUMMIT, ABOUT 50FT. SSE OF THE HIGHEST POINT

Condition & Description:

Station Mark SEE COMMENTS PAGE 2

Reference Mark No. 1 STD. USC&GS RM BC SET IN A ROCK OUTCROP - STAMPED BRADLEY NO1 1934 40.2FT. N, COND GOOD

Reference Mark No. 2 STD. USC&GS RM BC SET IN A ROCK OUTCROP STAMPED BRADLEY NO2 1934 32.0 FT. SW COND. GOOD

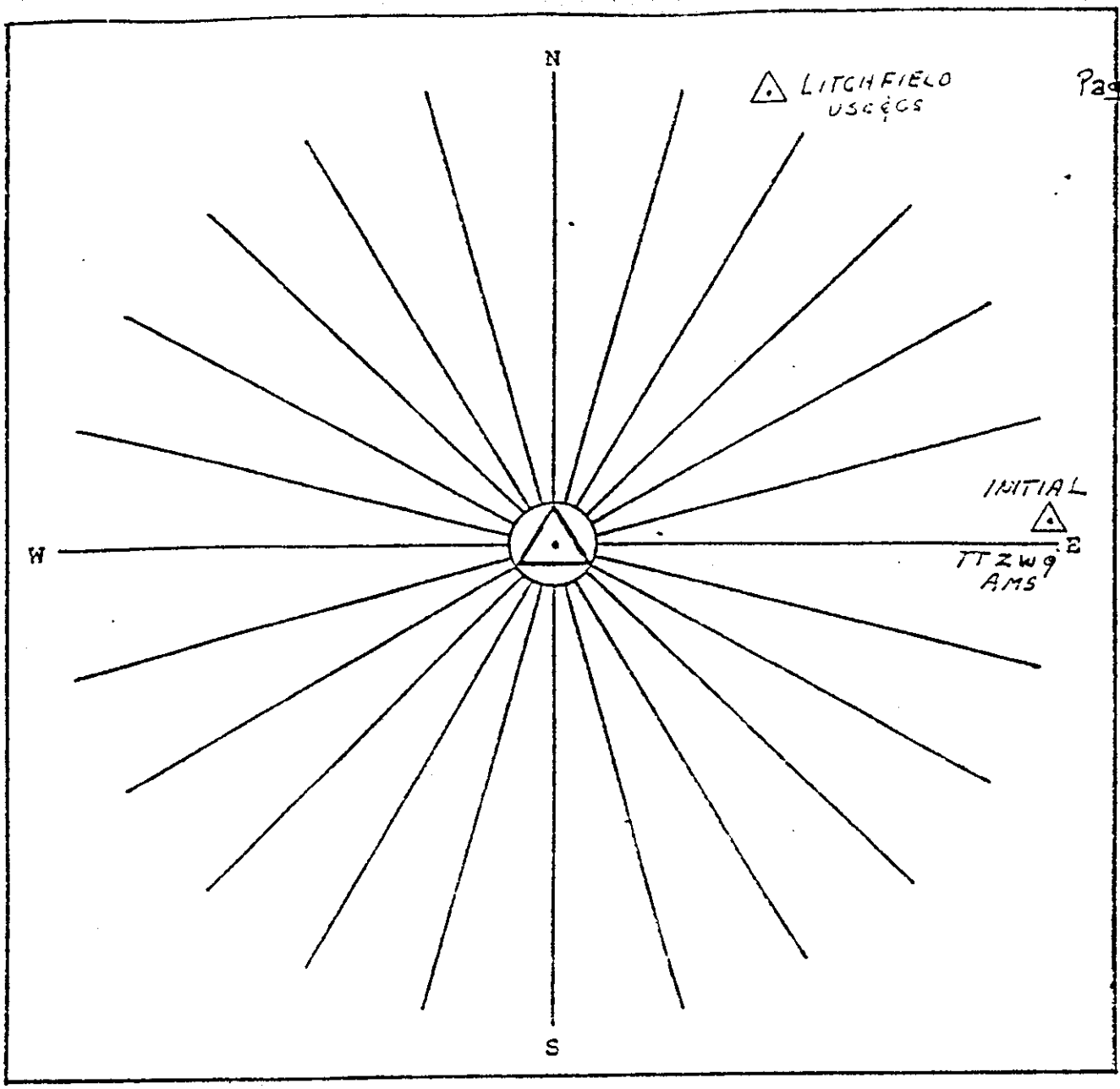
Azimuth Mark FOUND & IN GOOD COND. MARKED WITH WITNESS POST & SIGN.

To Reach FROM THE INTERSECTION OF SR85 & LITCHFIELD RD. 0.50 MILE SOUTH OF THE MAIN GATE OF THE GOODYEAR PLANT TRAVEL WEST ON SR 85 FOR 1.20 MILE TO BULLARD RD. - TURN LEFT & TRAVEL SOUTH ON BULLARD FOR 2.50 MILES (CROSSING THE GILA RIVER) TO VINEYARD AVE - TURN RIGHT ON VINEYARD & TRAVEL WEST FOR 1.10 TO REEMS RD. TURN LEFT ON REEMS RD. & CONTINUE SOUTH ON WEST SIDE OF GOLF COURSE FOR 0.40 MILE TO GATE AFTER MAKING RIGHT TURN - PASS THROUGH GATE & TRAVEL WEST FOR 0.25 MILE TO A BLADED ROAD ON LEFT - TURN LEFT (SOUTH) FOR 0.10 MILE TO BLADED RD. RIGHT

(ON BACK)

TURN RIGHT & CONTINUE WESTERLY FOR 0.70 MILE TO A BLADED RD. TURN LEET & CONTINUE FOR 0.25 MILE TO A FORK AT POWER LINE - TAKE RIGHT FORK FOR 0.60 MILE AROUND NORTH & WEST SIDE OF HILLS TO A GAS LINE - TURN LEFT ON GAS LINE & TRAVEL SOUTH FOR 0.60 MILE TO A TRAIL LEFT. TURN LEFT & CONTINUE EAST FOR 0.10 MILE TO A FORK - TURN LEFT & CONTINUE FOR 0.25 MILE & THE AZ. MARK FROM HERE YOU CAN CONTINUE UP THE HILL ABOUT 350 FT. TOWARD THE STA.; BUT MAY BE EASIER TO PACK TO THE LOW SADDLE TO THE NORTH THEN SOUTH EAST TO STA.

4X4 REQUIRED



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Page Ca16

RECOVERY NOTE, TRIANGULATION STATION

Recovered Station BRADLEY H.I. 5.5FT.

Comments CAP HAD BEEN REMOVED, BUT DRILL HOLE OK- STA. LOCATION ESTABLISHED BY INSTRUMENTATION- USING AZ MARK, RM1 & RM2 A NEW NGS BC STAMPED BRADLEY 1934-1982 SET, OLD DRILL HOL. BY INSTRUMENT & THOROUGHLY EPOXIED IN POSITION.

L. WAKEFIELD - M. PEMBERTON. 11/11/84

B4 VERTICAL CONTROL DATUM

The vertical control is based on the NATIONAL GEODETIC VERTICAL DATUM. The following National Geodetic Survey monuments were used to establish vertical control. See the following recovery notes by the Arizona Department of Transportation.

Name of Survey Monument	Location	Elevation
BEDROCK-1	Northern Avenue, 2.5 Miles West of Beardsley Canal	1514.92
N-475	Northern Avenue, 2.5 Miles West of Beardsley Canal	1474.15
M-475	Northern Avenue, 1.8 Miles West of Beardsley Canal	1343.22
L-475	Northern Avenue, 0.7 Miles West of Beardsley Canal	1264.23
P-475	Northern Avenue, 2.5 Miles West of Beardsley Canal	1443.02

Mark	Location	Elevations (Ft.)					Remarks
		Adjusted 1981	Published 1967	Published 1948	Diff. 67-81	Diff. 48-81	
K475	Beardsley Canal & Waddell Rd	1327.602					Set 1981
M265	Beardsley Canal & Cactus Rd	1326.204	1327.802	1329.508	-1.598	-3.304	Subsidence
L265	Beardsley Canal & Peoria Ave	1302.589	1305.102	1306.680	-2.513	-4.091	Subsidence
K265	Beardsley Canal & Olive Ave	1275.439	1276.520	1277.727	-1.081	-2.288	Subsidence
J265	Beardsley Canal & Northern Ave	1228.992	1230.296	1231.540	-1.304	-2.548	Subsidence
L475	Beardsley Canal & Northern Ave 0.7 mi W	1264.233					Set 1981
M475	Beardsley Canal & Northern Ave 1.8 mi W	1343.218					Set 1981
N475	Beardsley Canal & Northern Ave 2.5 mi W	1474.154					Rock-set 1981
BEDROCK 1 USGS	Beardsley Canal & Northern Ave 2.5 mi W	1514.916					Rock
P475 1976 77	Beardsley Canal & Northern Ave 2.5 mi W	1443.019					Rock-set 1981
Q475	Beardsley Canal & Northern Ave 2.5 mi W	1434.646					" " "
M366	Beardsley Canal & Northern 0.25 mi S	1212.557	1213.826		-1.269		Subsidence
H265	Beardsley Canal & Glendale Ave	1196.135	1197.324	1199.391	-1.189	-3.256	Subsidence
G265	Beardsley Canal & Bethany Home Rd	1166.550	1167.019	1168.452	-0.469	-1.902	Subsidence
F265	Beardsley Canal & Camelback Rd	1146.399	1147.032	1149.184	-0.633	-2.785	Subsidence
R475	Beardsley Canal & Camelback Rd	1149.617					Set 1981
E265	Beardsley Canal & Indian School Rd	1131.963	1132.544	1134.410	-0.581	-2.447	Subsidence
D265	Perryville Rd & Indian School Rd	1110.325	1110.644	1112.107	-0.319	-1.782	Subsidence
AZIMUTH MARK	Perryville Rd & Thomas Rd	1084.519	1084.752		-0.233		
E366	Perryville Rd & McDowell Rd	1050.662	1050.623		+0.039		

```
ACRN=          ********** BENCH MARK DESCRIPTION **********
DESIGNATION--BEDROCK 1 USGS                STATE--AZ  COUNTY--MARICOPA
QUAD--          QSN--          LINE--          AREA--
LOCATED FROM THE CITY OR TOWN OF--GOODYEAR
MONUMENT BY--USGS                YR--UNK   CP--      MARK TYPE--BM DISK
RECOVERY BY--NGS                 YR--1981  CP--BWM   CONDITION--GOOD
SPECIFIC SETTING--ROCK OUTCROP                          MONUMENTATION CODE--
STAMPING--BEDROCK 1 USGS                                OTHER CONTROL--X
LATITUDE = 333300N     LONGITUDE = 1123050W
          ********** RECOVERY DESCRIPTION **********
     9.6 KM (6.0 MI) WEST ALONG YUMA ROAD FROM THE POST OFFICE AT GOODYEAR,
     THENCE 6.5 KM (4.0 MI) NORTH ALONG PERRYVILLE ROAD, THENCE 0.8 KM
     (0.5 MI) WEST ALONG INDIAN SCHOOL ROAD, THENCE 6.5 KM (4.0 MI) NORTH
     ALONG CANAL ROAD, THENCE 1.1 KM (0.7 MI) WEST ALONG A DIRT ROAD
     PARALLELING A POWER LINE, THENCE 2.8 KM (1.75 MI) WEST ALONG THE SOUTH
     ONE OF TWO DIRT ROADS, THENCE 0.1 KM (0.05 MI) SOUTH ALONG A DIRT
     ROAD, ON THE NORTHEAST SLOPE OF A RIDGE TO THE NORTH, A 1-INCH SURVEY
     DISK CEMENTED IN TOP OF A ROCK OUTCROP, 66 METERS (216.7 FT) WEST OF
     THE CENTERLINE OF THE ROAD, 54.5 METERS (179 FT) WEST OF BENCH MARK
     N 475, 10.4 METERS (34 FT) SOUTH-SOUTHEAST OF THE NORTH END OF THE
     OUTCROP, 1 METER (3.5 FT) WEST OF THE EAST EDGE OF THE OUTCROP.
     10 METERS ABOVE THE ROAD.


ACRN=          ********** BENCH MARK DESCRIPTION **********
DESIGNATION--P 475.                        STATE--AZ  COUNTY--MARICOPA
QUAD--          QSN--          LINE--          AREA--
LOCATED FROM THE CITY OR TOWN OF--GOODYEAR
MONUMENT BY--NGS                 YR--1981  CP--BWM   MARK TYPE--BM DISK
SPECIFIC SETTING--ROCK OUTCROP                          MONUMENTATION CODE--
STAMPING--P 475 1981                                    OTHER CONTROL--
LATITUDE = 333254N     LONGITUDE = 1123048W
          ********** ORIGINAL DESCRIPTION **********
     9.6 KM (6.0 MI) WEST ALONG YUMA ROAD FROM THE POST OFFICE AT GOODYEAR,
     THENCE 6.5 KM (4.0 MI) NORTH ALONG PERRYVILLE ROAD, THENCE 0.8 KM
     (0.5 MI) WEST ALONG INDIAN SCHOOL ROAD, THENCE 6.5 KM (4.0 MI) NORTH
     ALONG CANAL ROAD, THENCE 1.1 KM (0.7 MI) WEST ALONG A DIRT ROAD
     PARALLELING A POWER LINE, THENCE 2.8 KM (1.75 MI) WEST ALONG THE SOUTH
     ONE OF TWO DIRT ROADS, THENCE 0.25 KM (0.15 MI) SOUTH ALONG A DIRT
     ROAD, AT THE BASE OF THE EAST SLOPE OF A RIDGE TO THE NORTH, IN TOP OF
     A GRANITE OUTCROP, 37.2 METERS (122 FT) WEST OF THE CENTERLINE OF THE
     ROAD, 32.9 METERS (108 FT) SOUTHWEST OF A 20 FOOT TALL SAGUARO CACTUS
     WITH 4 ARMS ON ITS SOUTH SIDE, 12.2 METERS (40 FT ) EAST OF A 6-INCH
     PALO VERDE TREE.
     ABOUT LEVEL WITH THE ROAD.
     3.5 METERS SOUTHEAST FROM A WITNESS POST.
```

```
ACRN=          ********** BENCH MARK DESCRIPTION **********
DESIGNATION--M 475                          STATE--AZ  COUNTY--MARICOPA
QUAD--          QSN--          LINE--          AREA--
LOCATED FROM THE CITY OR TOWN OF--GOODYEAR
MONUMENT BY--NGS                YR--1981  CP--BWM  MARK TYPE--FLANGE-ENCASED ROI
SPECIFIC SETTING--STAINLESS STEEL ROD                    MONUMENTATION CODE--(
STAMPING--M 475 1981                                      OTHER CONTROL--
LATITUDE = 333303N     LONGITUDE = 1123001W
          ********** ORIGINAL DESCRIPTION **********
     9.6 KM (6.0 MI) WEST ALONG YUMA ROAD FROM THE POST OFFICE AT GOODYEAR,
     THENCE 6.5 KM (4.0 MI) NORTH ALONG PERRYVILLE ROAD, THENCE 0.8 KM
     (0.5 MI) WEST ALONG INDIAN SCHOOL ROAD, THENCE 6.5 KM (4.0 MI) NORTH
     ALONG CANAL ROAD, THENCE 1.1 KM (0.7 MI) WEST ALONG A DIRT ROAD
     PARALLELING A POWER LINE, THENCE 1.8 KM (1.1 MI) WEST ALONG THE SOUTH
     ONE OF TWO DIRT ROADS, AT THE SOUTHWEST CORNER OF THE T JUNCTION OF A
     DIRT ROAD LEADING SOUTH, 20.7 METERS (68 FT) SOUTH OF THE CENTERLINE
     OF A DIRT ROAD, 14 METERS (46 FT) WEST OF THE CENTERLINE OF A DIRT
     ROAD, 1.5 METERS (5 FT) NORTH OF A SAGUARO CACTUS WITH ONE ARM ON
     ITS SOUTH SIDE, THE ROD WAS DRIVEN TO REFUSAL AT A DEPTH OF 4 FEET.
     A STAINLESS STEEL ROD SET TO THE DEPTH OF 1.2  METERS ENCASED IN A PIPE
     FLUSH WITH THE GROUND.
     ABOUT LEVEL WITH THE DIRT ROADS.
     0.55 METERS EAST FROM A WITNESS POST.

ACRN=          ********** BENCH MARK DESCRIPTION **********
DESIGNATION--N 475                          STATE--AZ  COUNTY--MARICOPA
QUAD--          QSN--          LINE--          AREA--
LOCATED FROM THE CITY OR TOWN OF--GOODYEAR
MONUMENT BY--NGS                YR--1981  CP--BWM  MARK TYPE--BM DISK
SPECIFIC SETTING--ROCK OUTCROP                           MONUMENTATION CODE--
STAMPING--N 475 1981                                      OTHER CONTROL--
LATITUDE = 333300N     LONGITUDE = 1123048W
          ********** ORIGINAL DESCRIPTION **********
     9.6 KM (6.0 MI) WEST ALONG YUMA ROAD FROM THE POST OFFICE AT GOODYEAR,
     THENCE 6.5 KM (4.0 MI) NORTH ALONG PERRYVILLE ROAD, THENCE 0.8 KM
     (0.5 MI) WEST ALONG INDIAN SCHOOL ROAD, THENCE 6.5 KM (4.0 MI) NORTH
     ALONG CANAL ROAD, THENCE 1.1 KM (0.7 MI) WEST ALONG A DIRT ROAD
     PARALLELING A POWER LINE, THENCE 2.8 KM (1.75 MI) WEST ALONG THE SOUTH
     ONE OF TWO DIRT ROADS, THENCE 0.1 KM (0.05 MI) SOUTH ALONG A DIRT
     ROAD, ON THE EAST SLOPE OF A RIDGE TO THE NORTH, IN TOP OF A QUARTZITE
     VEIN, 11.5 METERS (37.7 FT) WEST OF THE CENTERLINE OF THE ROAD, 28.6
     METERS (94 FT) SOUTH OF THE CENTER OF A DRY WASH.
     1.8 METERS ABOVE THE ROAD.
     0.3 METERS NORTH FROM A WITNESS POST.
```

ACRN= ********** BENCH MARK DESCRIPTION **********
DESIGNATION--L 475 STATE--AZ COUNTY--MARICOPA
QUAD-- QSN-- LINE-- AREA--
LOCATED FROM THE CITY OR TOWN OF--GOODYEAR
MONUMENT BY--NGS YR--1981 CP--BWP MARK TYPE--FLANGE-ENCASED RO
SPECIFIC SETTING--STAINLESS STEEL ROD MONUMENTATION CODE--
STAMPING--L 475 1981 OTHER CONTROL--
LATITUDE = 333306N LONGITUDE = 1122854W
********** ORIGINAL DESCRIPTION **********

9.6 KM (6.0 MI) WEST ALONG YUMA ROAD FROM THE POST OFFICE AT GOODYEAR, THENCE 6.5 KM (4.0 MI) NORTH ALONG PERRYVILE ROAD, THENCE 0.8 KM (0.5 MI) WEST ALONG INDIAN SCHOOL ROAD, THENCE 6.5 KM (4.0 MI) NORTH ALONG CANAL ROAD, THENCE 1.1 KM (0.7 MI) WEST ALONG A DIRT ROAD PARALLELING A POWER LINE, 0.3 KM (0.2 MI) WEST OF THE Y JUNCTION OF A DIRT ROAD LEADING TO THE CASE EQUIPMENT TESTING LAB, 4 METERS (13 FT) NORTH OF THE CENTERLINE OF THE DIRT ROAD, 33.2 METERS (109 FT) EAST OF THE CENTER OF THE CROSSING OF A DRY WASH, 3.4 METERS (11.2 FT) WEST OF THE FIRST POWER LINE POLE WEST OF THE JUNCTION POLE FOR A SPUR LINE TO THE CASE LAB, 3.7 METERS (12 FT) EAST OF THE ANCHOR FOR A POWER LINE POLE GUY WIRE, THE ROD WAS DRIVEN TO REFUSAL AT A DEPTH OF 13 FEET.
A STAINLESS STEEL ROD SET TO THE DEPTH OF 4.0 METERS ENCASED IN A PIPE FLUSH WITH THE GROUND.
0.3 METERS ABOVE THE ROAD.
0.3 METERS SOUTH FROM A WITNESS POST.

WHITE #1 Book

TANKS

PHASE 1

LIETZ
SINCE 1882

CROSS SECTION BOOK

No. 8152-75

289036

Book #1

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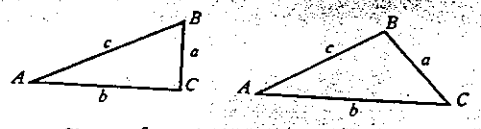
INDEX PAGE

JOB NO.	PROJECT	PAGE NUMBER
289036-	WHITE TANKS. AGC	1-

FORMULAE FOR SOLVING RIGHT TRIANGLES



$$\text{Sin } A = \frac{a}{c} = \text{Cos } B \qquad \text{Cot } A = \frac{b}{a} = \text{Tan } B$$

$$\text{Cos } A = \frac{b}{c} = \text{Sin } B \qquad \text{Sec } A = \frac{c}{b} = \text{Cosec } B$$

$$\text{Tan } A = \frac{a}{b} = \text{Cot } B \qquad \text{Cosec } A = \frac{c}{a} = \text{Sec } B$$

Given	Required	Solution
A, c	B, a, b	$B = 90° - A,\ a = C \sin A,\ b = C \cos A.$
A, b	B, a, c	$B = 90° - A,\ a = b \tan A,\ C = \frac{b}{\cos A}.$
A, a	B, b, c	$B = 90° - A,\ b = a \cot A,\ C = \frac{a}{\sin A}.$
a, c	A, B, b	$\sin A = \frac{a}{c}, \cos B = \frac{a}{c}, b = \sqrt{(c+a)\cdot(c-a)}$
a, b	A, B, c	$\tan A = \frac{a}{b}, \cot B = \frac{a}{b}, c = \sqrt{a^2 + b^2}$

FORMULAE FOR SOLVING OBLIQUE TRIANGLES

Given	Required	Solution
A, a, b	B, c	$\sin B = \frac{b \sin A}{a}, c = \frac{a \sin C}{\sin A}$
A, B, a	b	$b = \frac{a \sin B}{\sin A}$
a, b, C	A, c	$A + B = 180° - C, C = \frac{a \sin C}{\sin A}$
a, b, c	Area	side $\frac{a+b+c}{2}$, area $= \sqrt{s(s-a)\cdot(s-b)\cdot(s-c)}$
A, b, c	Area	area $= \frac{bc \sin A}{2}$
A, B, C, a	Area	area $= \frac{a^2 \sin B \sin C}{2 \sin A}$

289036 -110-01

C

D. SCHNAUFENSTOCKER

L. MITCHELL

WALD 72

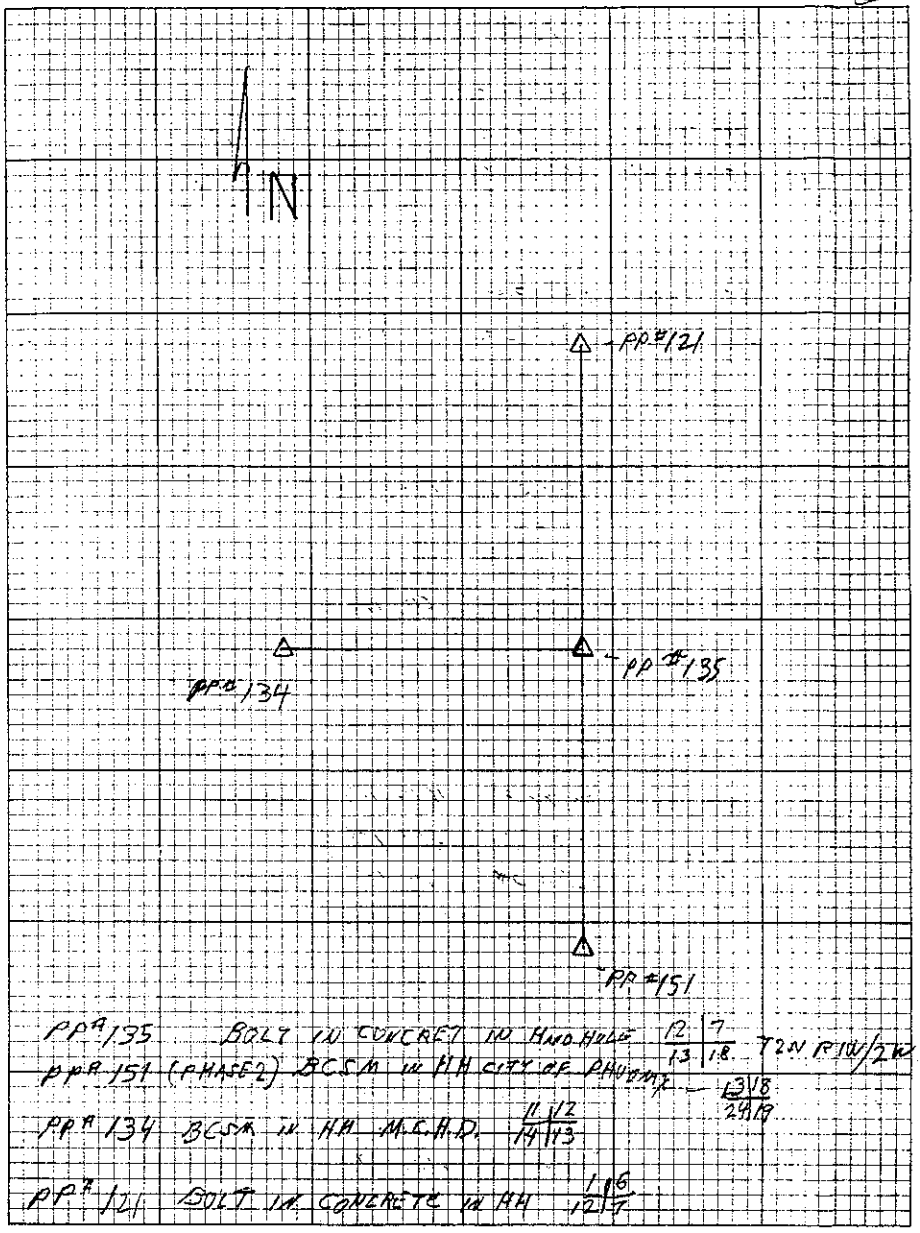
LIETZ REED 2A EDM

HORIZONTAL CONTROL PHASE 1

	D	R			
∡ @ PANEL PT 135			HI = 6.13	Elev = 6.80	
∡ PANEL PT 151	0-00-58	180-00-53	55.5		
PANEL PT 134	90-20-03	270-20-08	06.5	90-19-11	
PANEL PT 121	180-01-08	0-01-13	10.5	180-00-15	
∡	90-00-38	270-00-43	40.5	~~10.5~~	
	180-19-50	00-19-52	51	10.5	11
	270-00-49	90-00-52	50.56	10	12.5

TEMP 52°F

			Elev 0		
PP# 151	90-14-14	~~5285.79~~	1611.101		HT=
		5285.79			
	269-45-41	5285.78	1611.112		4.36
			1611.110		
			~~1611.111~~		
PP# 134	89-45-55	5265.52	1605.016		HT=
	270-14-37	5265.78	1605.014		
		5265.78	1605.012		4.59
		~~5265.78~~	1605.015		
PP# 121	89-48-10	5276.62	1608.300		HT=
	270-12-03	5276.62	1608.313		
		~~5276.62~~	1608.304		4.23
			~~1608.306~~		



PP# 135 BOLT IN CONCRET IN HAND HOLE 12/13 | 7/18 T2N R1W/2W

PP# 151 (PHASE 2) BCSM IN HH CITY OF PHOENIX 13/18 / 29/19

PP# 134 BCSM IN HH M.C.A.D. 11/14 | 12/13

PP# 121 BOLT IN CONCRETE IN HH 1/12 | 6/7

T@ PP#120 AT D 120 R HT = 5.67 EOM=6.34

1) PP 121 0-00-13 180-00-07 .10
PP 134 89-36-52 269-36-52 .52 87-36-42
PP 119 179-22-01 359-22-03 .02 179-21-52

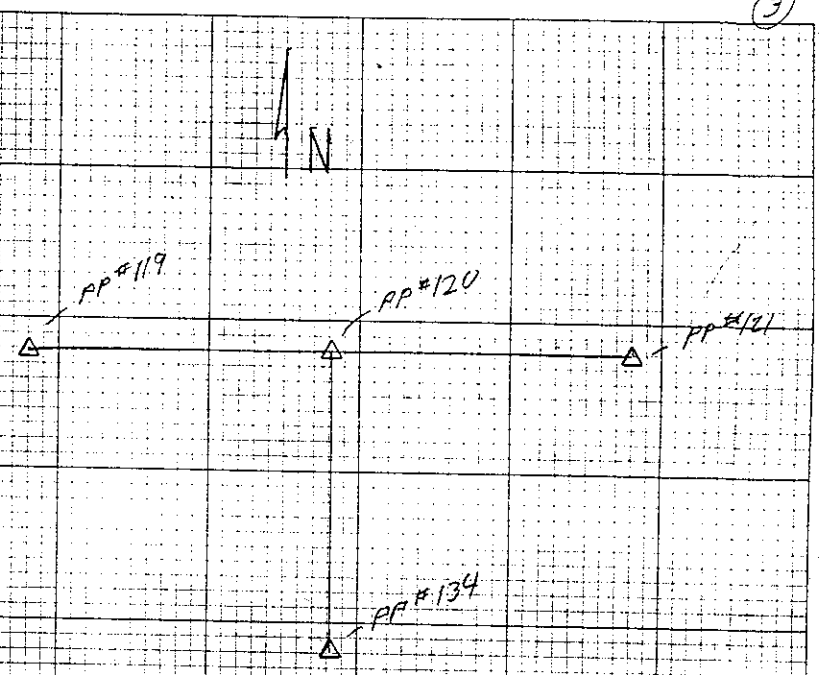
2) ~~90-08-11~~ ~~270-07-52~~
~~179-44-28~~ ~~359-44-39~~ .31
~~269-29-51~~ ~~89-29-52~~ .575
90-02-23 ~~89-29-15~~ 270-02-26 24.5 33
179-38-52 359-35-03 38575 / 33 37.5
269-24-16 ~~270-02-26~~ 89-24-15 15.5 / 51 51.5

PP 121 62°C PPM 2

			HT =
90-19-41	5250.71	1600.423	4.23
269-40-19	5250.72	1600.428	
	(5250.72)	1600.416	
		(1600.402)	

PP 134 90-16-52 5298.35 1614.942 HT = 4.59
269-43-15 5298.34 1614.936
(5298.34) 1614.947
(1614.942)

PP 119 89-38-57 5283.05 1610.267 HT = 8.36
270-20-35 (5283.07) 1610.242
5283.01 (1610.253)



PP# 120 BCSM IN HH N.E. HD. 2/11 1/12 T2N R2W

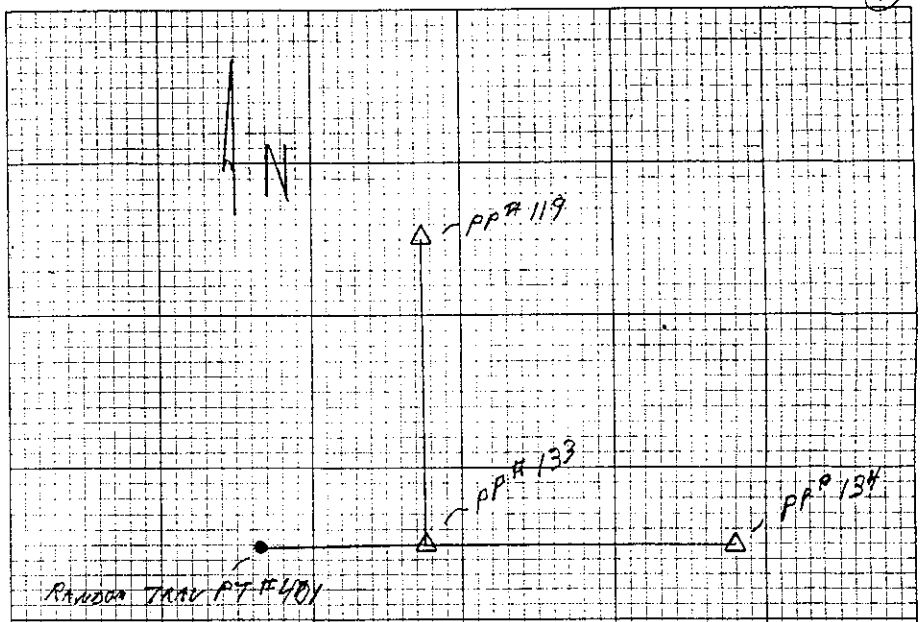
PP# 121 BOLT IN CONCRETE IN HH 1/12 6/7

PP# 134 BCSM IN HH N.E. HD. 11/14 12/13

PP# 119 1/2" I.P. BELOW PVMT 3/10 2/11

(4)

TAC @	RANDOM PT	133			141 = 6442	CHK 7.09
	D	R				
RANDOM PT #401	00-02-02	180-02-08		0.5		
PP 119	91-32-51	271-33-00		55.5	91-30-50.5	
PP 134	181-31-03	01-31-05		04	181-28-59	
2) 401	90-04-08	270-04-09		08.5		
119	181-35-01	01-34-53		56.5	48	49
134	271-33-03	91-33-06		04.5	56	57.5
RANDOM PT 401	89-46-42	2626.74		800.629		HT=
	270-13-31	2626.74		800.628		4.72
		2626.73		800.629		
PP #119	89-42-28	5283.91		1610.550		HT=
	270-17-29	5283.91		1610.541		4.36
		5283.90		1610.537		
				1610.548		
PP 134	90-15-15	5277.34		1608.541		HT=
	269-44-47	5277.31		1608.545		8.59
		5277.35		1608.540		
		5277.33		1608.542		



PP # 133 — 1½" O.I.P. BELOW PVMT. — 10/11 / 15/14 — TEN RZW

401 — HUB & TACK — RANDOM PT

PP # 119 — ½" I.P. BELOW PVMT — 3/2 / 10/11

PP # 134 — B.C.S.M. IN MH M.C.H.D. — 11/12 / 14/13

AT @ PARCEL PT D		118 X	HT = 5.48		ROD = 6.15
1) PP 104	0-03-08	180-03-07	07.5		
PP 119	90-35-00	270-34-55	34-57.5	90-31-50	
PP 132	181-01-04	01-01-01	02.5	180-57-55	
2) 104	90-02-06	270-02-08	07		
119	180-34-00	0-33-53	33-56.5	49.5	50
132	271-00-02	91-00-02	02	55	55

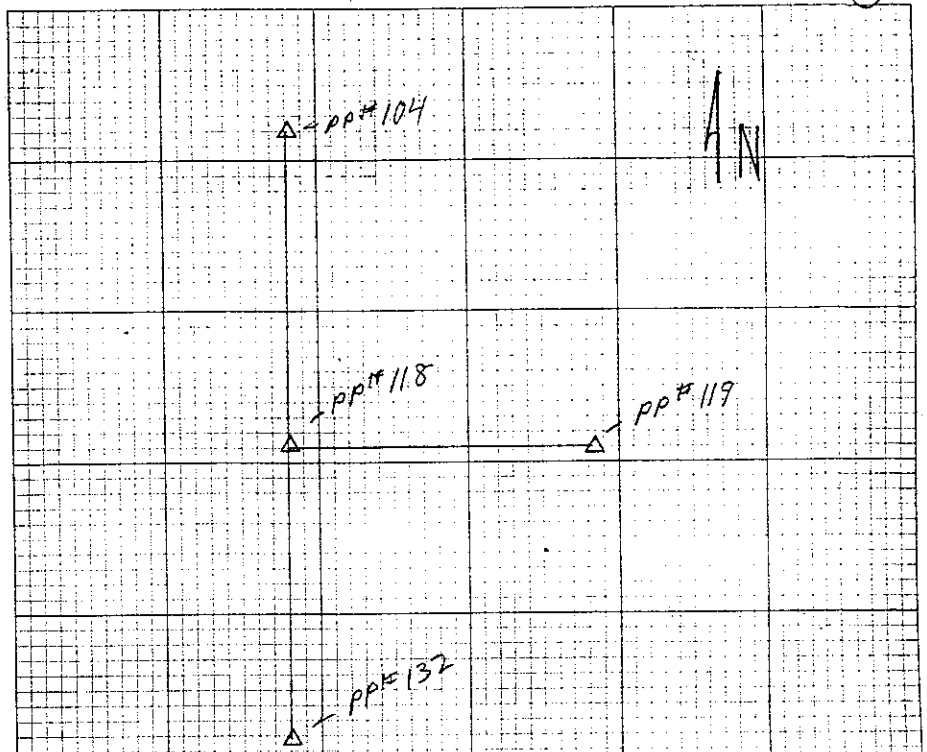
68°F

APA = 4

PP 104	89-38-13	5270.69	1606.521	HT =
	270-21-56	5270.71	1606.516	4.36
		5270.71	1606.523	
		(5270.70)	(1606.520)	

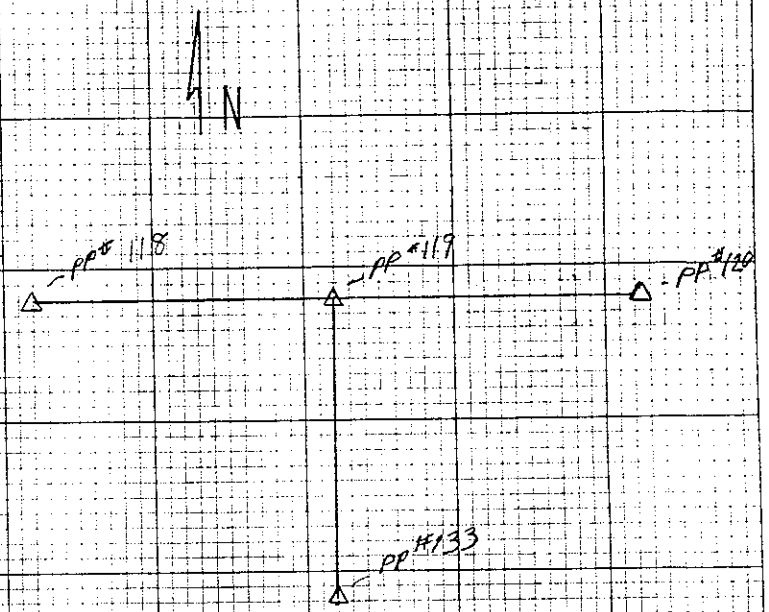
		SOIF	SOIM	
PP 119	90-16-42	5245.53	1598.817	HT =
	269-43-14	5245.49	1598.820	8.36
		5245.50	1598.822	
		(5245.51)	(1598.820)	

PP 132	90-20-48	5273.00	1607.209	HT =
	269-39-15	5273.00	1607.203	4.23
		(5273.00)	1607.209	
			(1607.207)	



PP# 118	1½" I.C.P. BELOW PUNT	4 | 3 / 9 | 10 T2N R2W
PP# 104	CROSSED OUT NAIL BELOW PUNT	33 | 34 / 4 | 3
PP# 119	½" I.P. BELOW PUNT	3 | 2 / 10 | 11
PP# 132	1" I.P. (BENT)	7.10 / 16.15

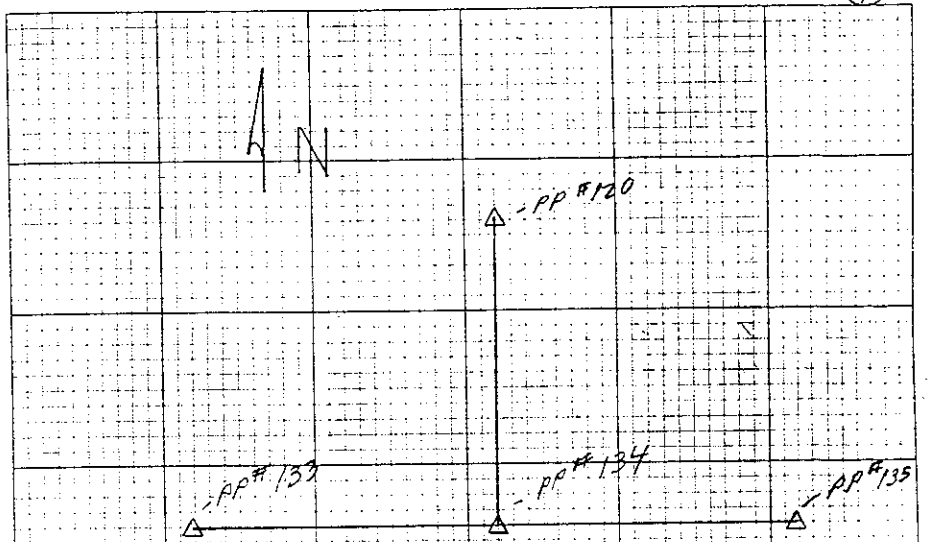
TO	FROM	AT		H1 =		
		D	B			
1) PP #120	00-02-01		180-02-00	00.5		
PP #133	90-13-14		270-13-20	17	90-11-16.5	
PP #118	179-53-36		359-53-39	37.5	179-51-37	
2) PP #120	90-01-16		270-01-19	17.5		
PP #133	180-12-33		00-12-38	35.5	+18	-17
PP #118	269-52-36		89-52-52	54	-36.5	-37



PP # 119	½" I.P. BELOW PVMT.	3/10	2/11 T.12N. R2W
PP # 120	BC SM 10 HH MC. HD.	2/11	1/12
PP # 133	1½" O.I.P. BELOW PVMT.	10/15	11/14
PP # 118	1½" I.C.P. BELOW PVMT.	4/9	3/10

T@ PANEC		PT 134			
	D	R			
1) PP 133	0-13-16	180-13-15	155		
PP 120	90-18-44	270-18-41	42.5	90-05-27	
PP 135	180-27-39	0-27-36	37.5	180-14-22	
2) PP 133	90-08-49	270-08-50	49.5		
PP 120	180-14-28	0-14-17	22.5	05-33	-30
PP 135	270-23-07	90-23-11	09	19.5	-21

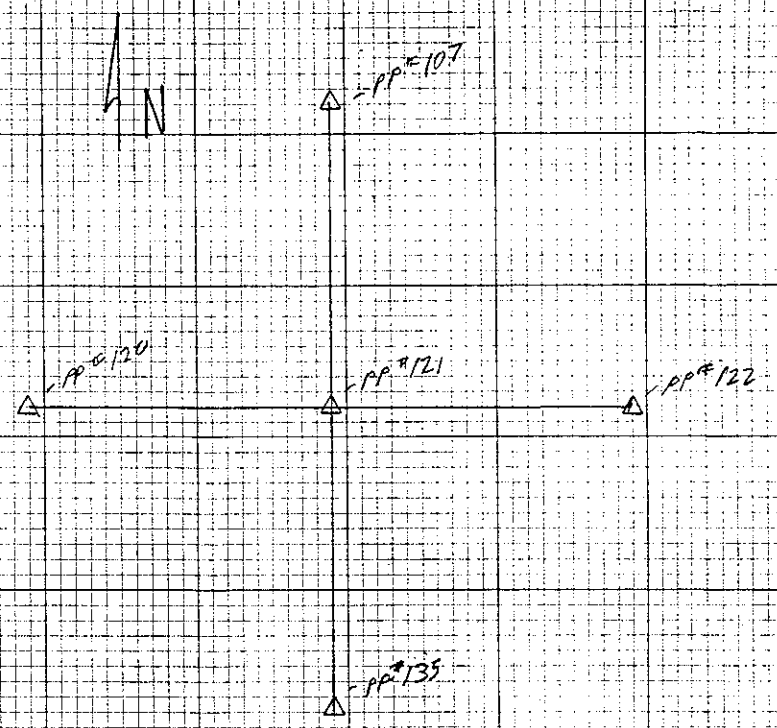
(7)



PP #134	BCSM in HH M.E.H.D.	14/12 / 14/13 T2N R2W
PP #133	1/2" O.I.P. Below Surf.	10/11 / 15/19
PP #120	BCSM in HH M.E.H.D.	24/1 / 11/12
PP #135	Bolt in Concrete in HH	12/1 / 19/18

12/22/89 (8)

A @ PP#107		PP #121		HI = 5.88		ELEV = 6.55
1) PP #135	0-03-01	180-03-09		05		
PP #120	90-36-11	270-36-11		11	90-33-06	
PP #107	180-05-04	0-05-02		03	180-01-58	
PP #122	269-38-03	89-38-06		04.5	269-34-59.5	
2) PP #135	90-08-36	270-08-28		32		
PP #120	180-41-41	0-41-33		37	-05	05.5
PP #107	270-10-28	90-10-20		24	-52	55
PP #122	359-43-35	179-43-39		34	35-02	35-01
		60°F	PPM = 2			
		SDIF	SDIM			
PP #107	89-46-10	5293.50	1613.458			HT =
	270-14-10	5293.50	1613.467			4.18
		5293.52	1613.469			
		.51	.463			
PP #122	90-08-57	5242.51	1597.944			HT =
	269-51-12	5242.57	1597.931			8.25
		5242.52	1597.927			
		.53	.934			



PP #121	BOLT IN CONC. IN HH	6 / 12 \ 6	T2N R2W/R1CW
PP #135	BOLT IN CONC. IN HH	12 / 13 \ 18	
PP #120	BESM IN HH MC. AA	2-1 / 11 \ 12	
PP #107	BOLT IN CONC. IN HH	36 / 1 \ 6	
PP #122	SET NAIL		

π @ 132 BS 118

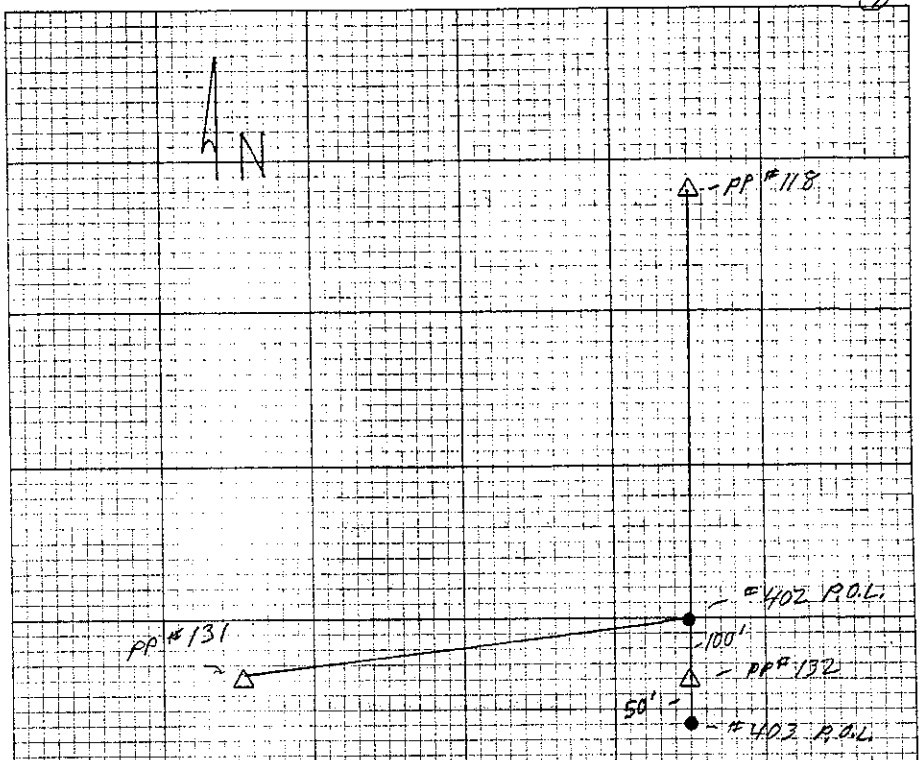
402 SET NAIL ON LINE @ 100.00

403 DOUBLE CENTERED TO SET NAIL ON LINE @ 50.00'

π @ 402 HI = 5.31 EDM = 5.98

	D	R			
1/4 131	00-02-59	180-02-53	56		
PP 118	91-48-31	271-48-27	29	91-45-33	
2/4 131	90-33-22	270-33-28	25	-37.5	-3.5
PP 118	182-19-01	02-19-04	02.5		

		JD/N		
PP 131	89-25-53	5237.46		HT =
	270-34-06	5237.45		20.35
		5237.55		
		(.149)		
		JD/N		
		1596.407		
		1596.403		
		1596.425		
		(.1412)		



PP #118	1 1/2" I.C.R. Bottom Punch	4 3/9	T-2 N AZM
PP #132	1" I.P. (CENT)	9 NO 16 15	
#402	SET NAIL P.O.L.		
#401	SET NAIL P.O.L.		
PP #131	SET NAIL		

@ 403 HI = 5.24

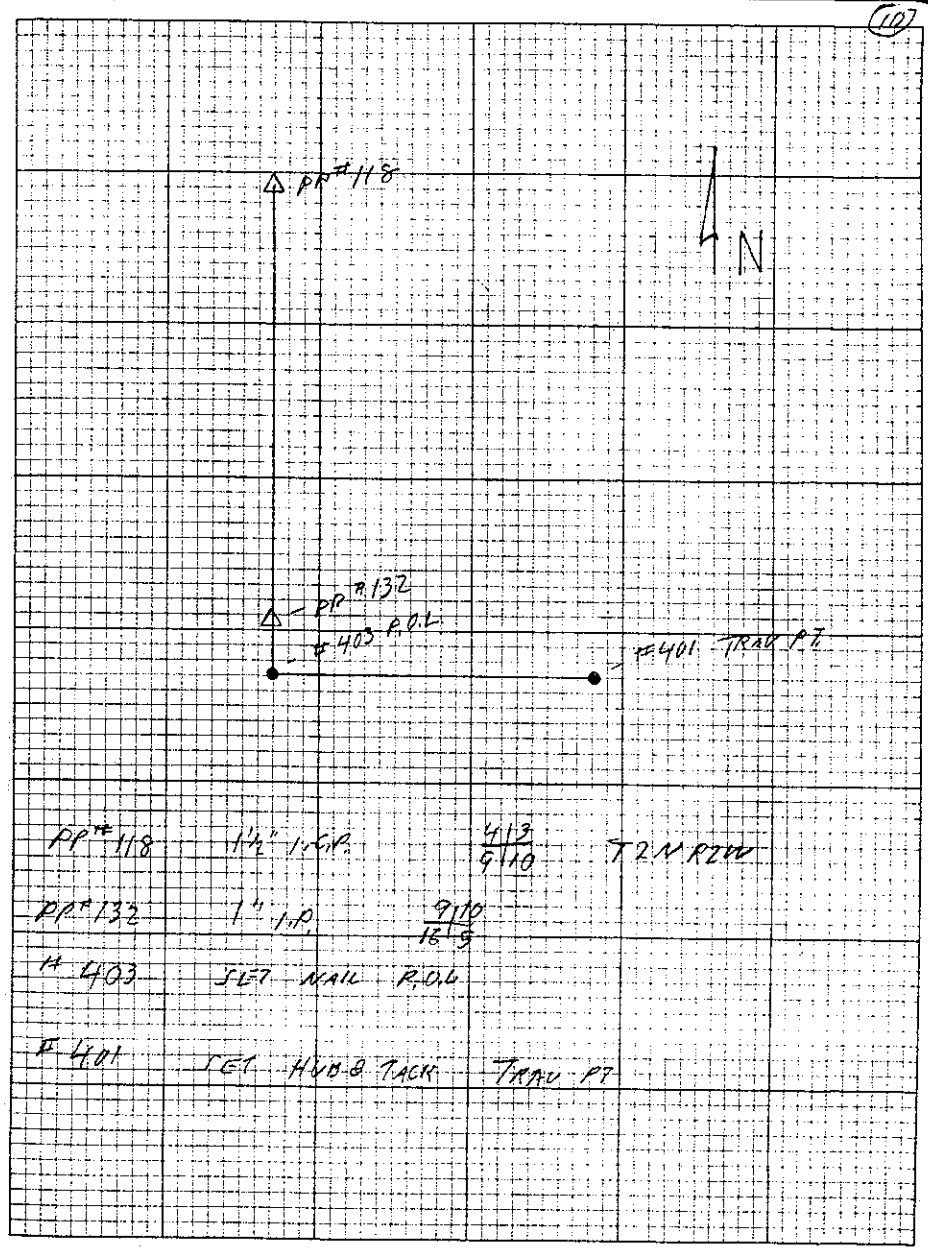
	D	R			
1) PP#118	00-07-40	180-07-38	3.9		
401	90-01-31	270-01-48	49.5	89-54-10.5	
2) 118	90-08-58	270-08-58	58	-06	-08
401	180-03-04	00-03-04	04		

Random @ 401

90-14-05	2629.42	801.446	HI =
268-45-38	2629.42	801.450	4.50
	2629.41	801.448	

@ 401

	D	R			
1) 403	00-06-18	180-06-25	21.5		
137	178-35-02	358-34-57	34.59.5	178-28-38	
2) 403	90-07-06	270-08-56	01		
137	268-37-41	88-37-41	-41	-41	-39

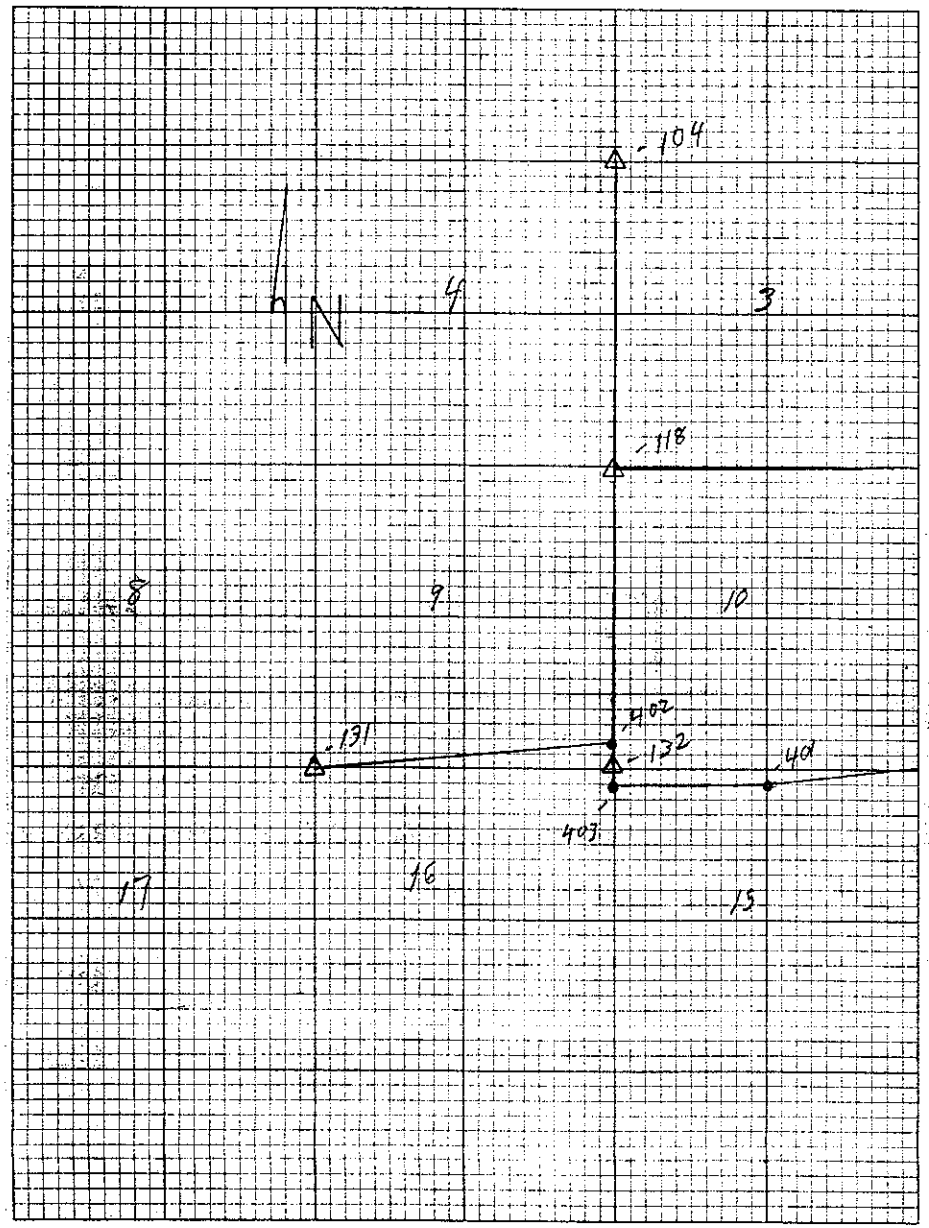


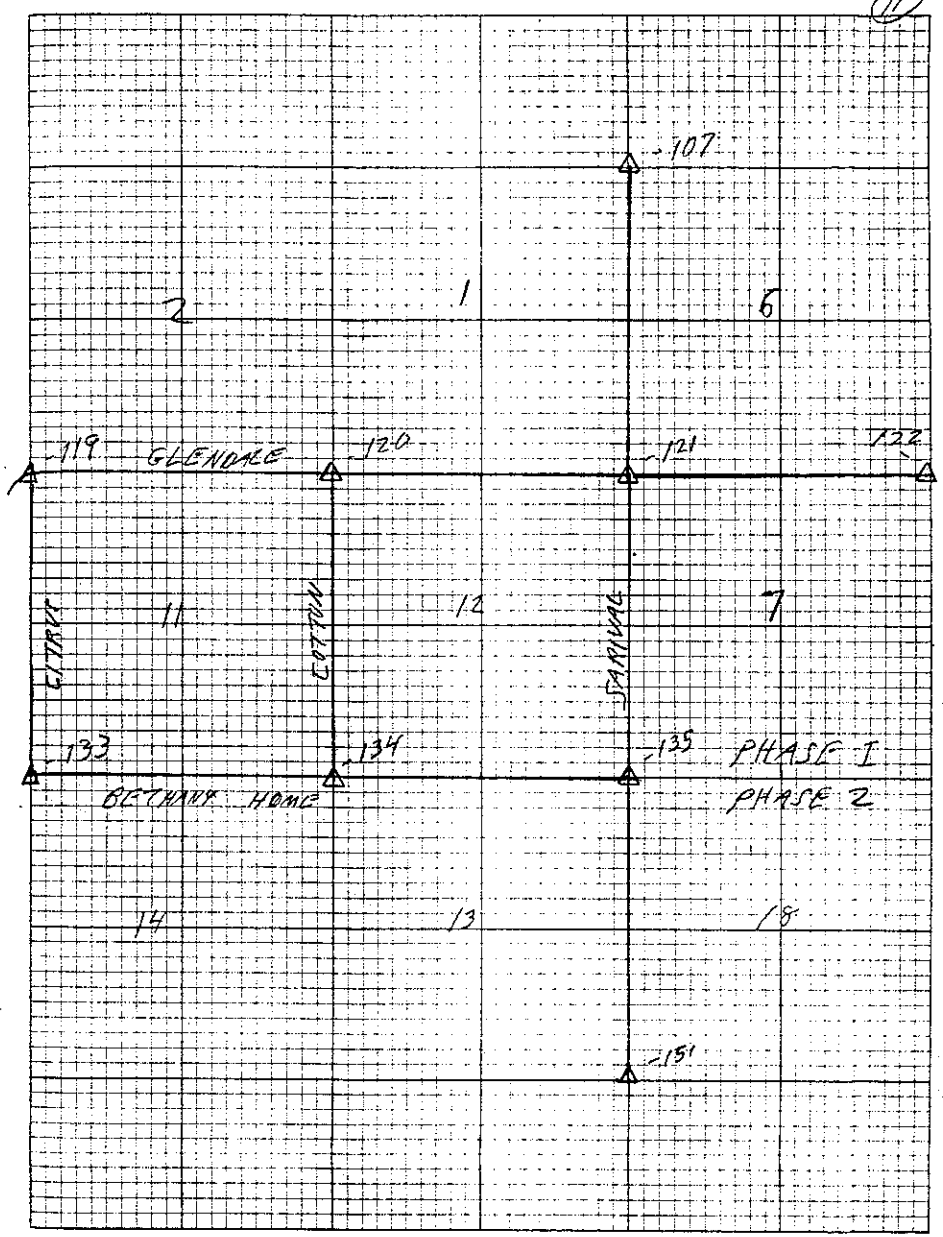
PP#118 1½" I.P. 4 1/2 3 / 9 1/2 10 T2N R2W

PP#132 1" I.P. 9 1/2 10 / 16 9

#403 SET NAIL P.O.L.

#401 SET HUB & TACK TRAV PT


104
N
4
3
118
8
9
10
131
402
132
40d
403
17
16
15

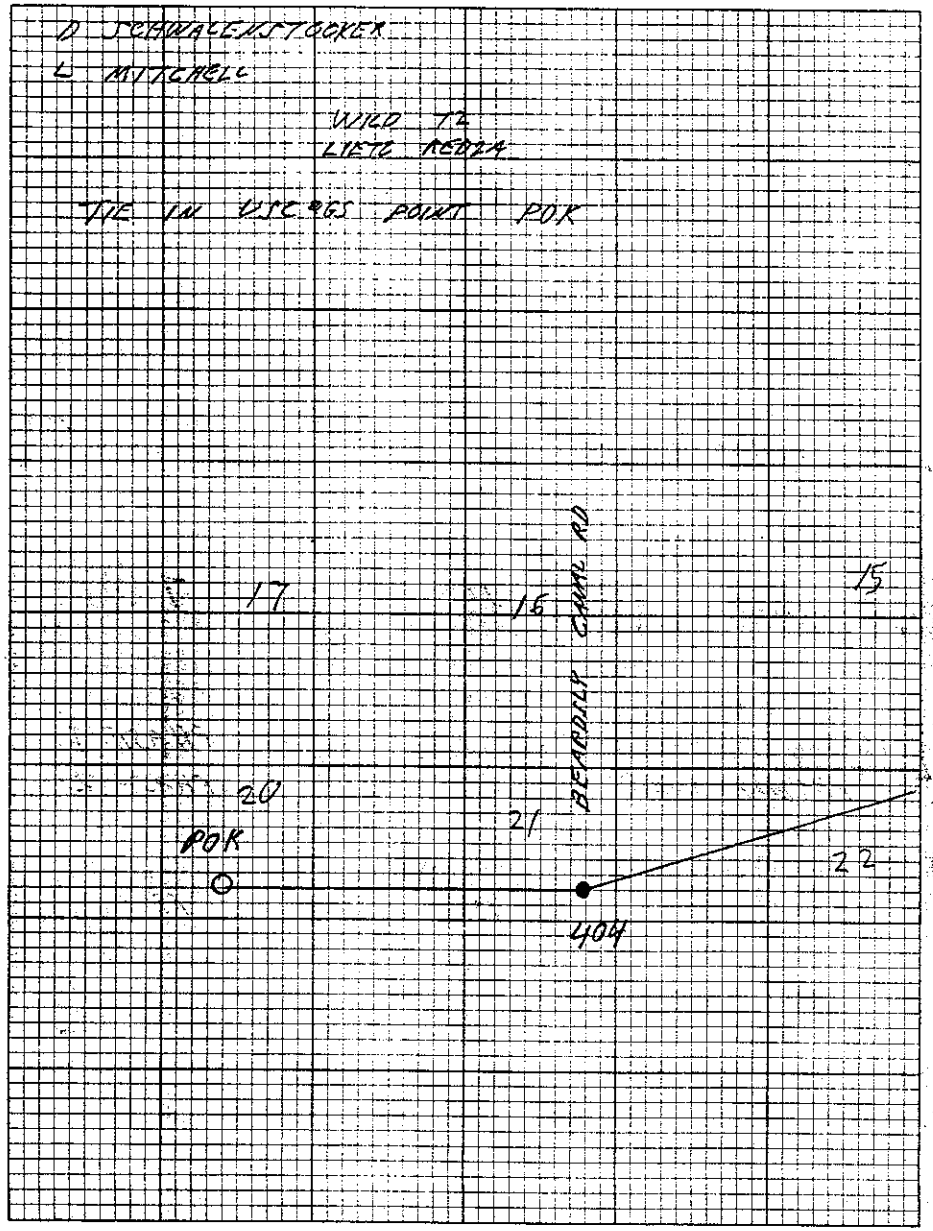

107
2
1
6
119
GLENOAKE
120
121
122
11
12
7
CITRUS
SANTIVAG
133
134
135
PHASE I
PHASE 2
BETHANY HOME
14
13
18
151

D SCHWALE/ASTOCKER

L MITCHELL

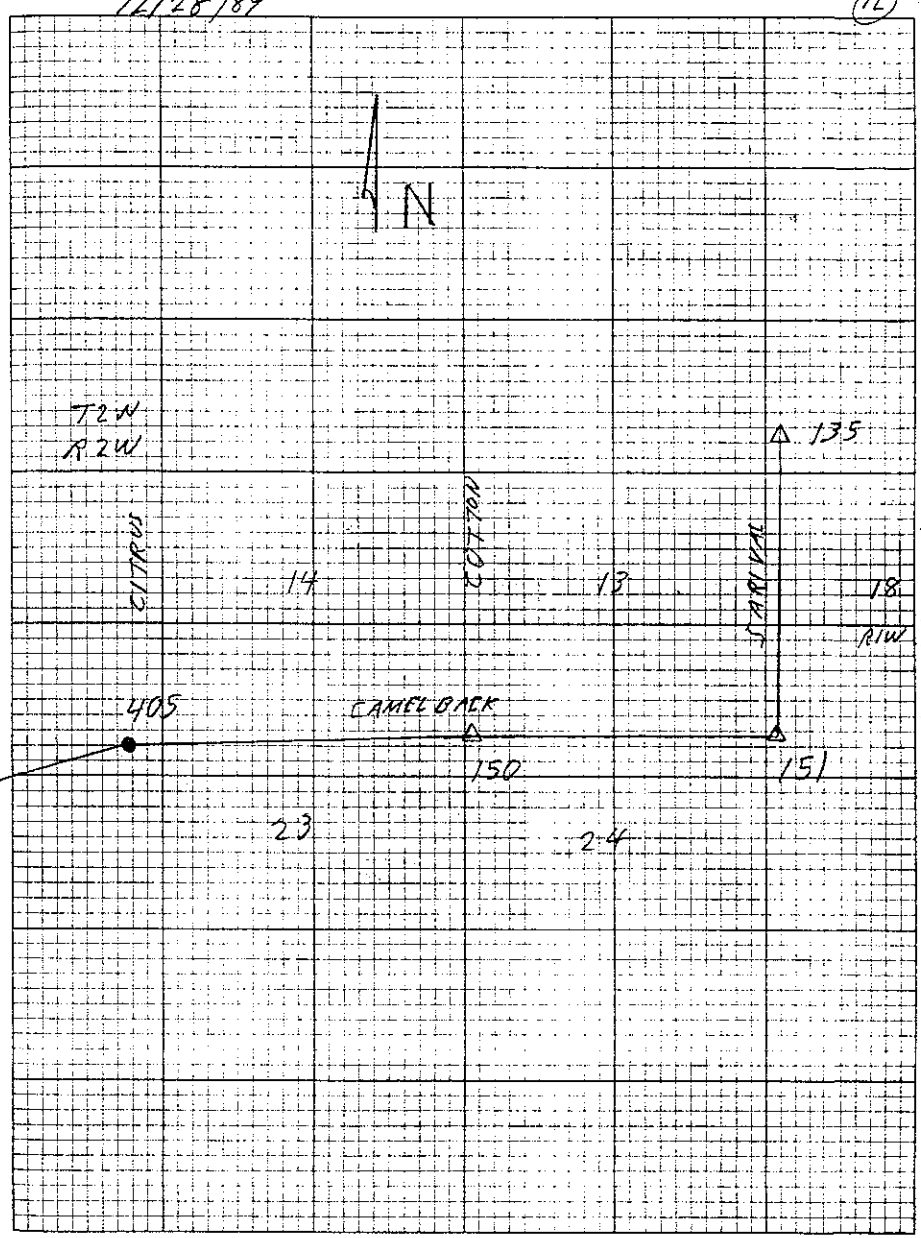
WIRD T2
LITE REDX4

TIE IN USC&GS POINT POK



12/28/89

(12)



12/28/89

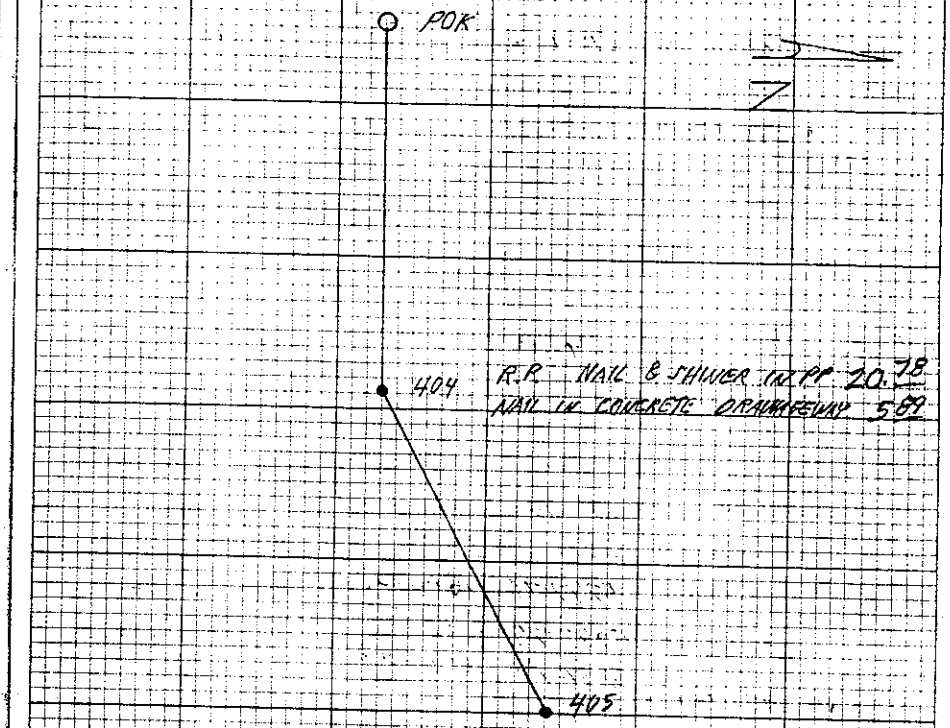
(13)

Δ @	404		HI = 5.23	EOM = 5.90	
	D	A			
POK	00-00-24	180-00-02	-03		
405	157-54-21	337-54-21	-21	157-54-18	
2) POK	90-07-28	270-07-24	26		
405	248-01-38	68-01-37	37.5	-12	-15

68°F 28.7" Hg 19 PPM

	Zn	SDHz	SD/m	
	89-18-33	6234.88	1900.392	HI = 861
POK	270-41-33	6234.88	1900.392	
		6234.87	1900.391	
"	89-18-30	.88		

		8441.49	2572.963	HI = 451
405	90-13-47	8441.51	2572.970	
	268-46-18	8441.42 (.50)	2572.966	
"	90-13-45			



R.R. NAIL & SHINER IN PP 20.78
NAIL IN CONCRETE ORANGE WAY 5.89

P.O.K USC&GS 3½" BRASS CAP (1936) IN CONCRETE 1' ABOVE GROUND

404 SET HUB & TACK TRAVERSE PT.

405 SET HUB & TACK TRAVERSE PT.

TO 405 D HI R = 5.16 EDM = 5.83

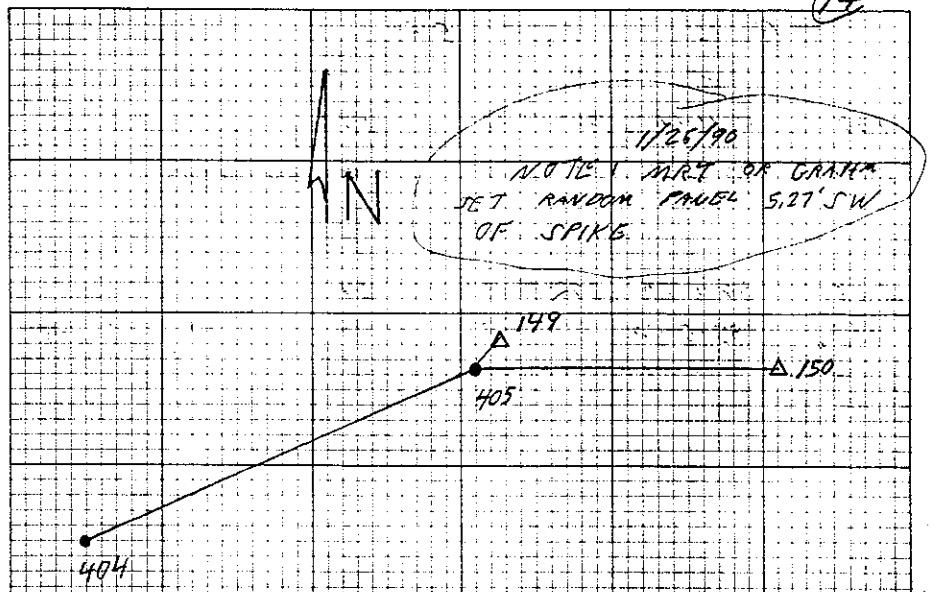
1) 404	0-04-39	180-04-35	37		
149	149-29-19	329-29-22	205	149-24-44	
150	200-55-35	20-55-35	35	200-50-58	
2) 404	90-06-44	270-06-40	42		
149	239-31-19	59-31-27	23	-41	425
150	270-57-34	110-57-37	35.5	-53.6	56

PP #149 CH. 41.00'

64° 28.7" HG PPM = 14

	~	30/F	50/M	
PP #150	90-17-22	5297.76	1614.759	
	269-42-40	5297.75	1614.758	HT=
		5297.76	1614.759	4.49
	M 90-17-21			

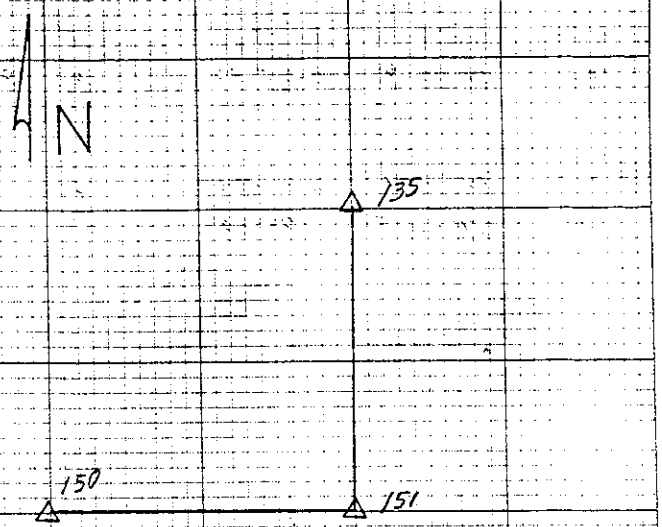
R.P. ON AW @ SW COR INT. 15.10'



405	SET HUB & TACK	TRAV. PC
404	SET HUB & TACK	TRAV. RT.
149	RR SPIKE IN PVMT.	15/22 | 14/23 T2NR2W
150	BCSM IN HH MC HR	14/23 | 13/24 T2N R2W

		Δ	R		
1) 150	151	0-11-12	180-11-07	09.5	
135		90-00-50	270-00-50	50	89-49-40.5
2) 150		90-10-25	270-10-23	24	
135		180-00-05	0-00-05	05	-41 -41

	Bearing	SO/F	SO/M	
#150	89-46-04	5280.45	1609.482	
		5280.44	1609.481	HT=4.49
	270-14-01	5280.45	1609.482	
M	89-46-02			

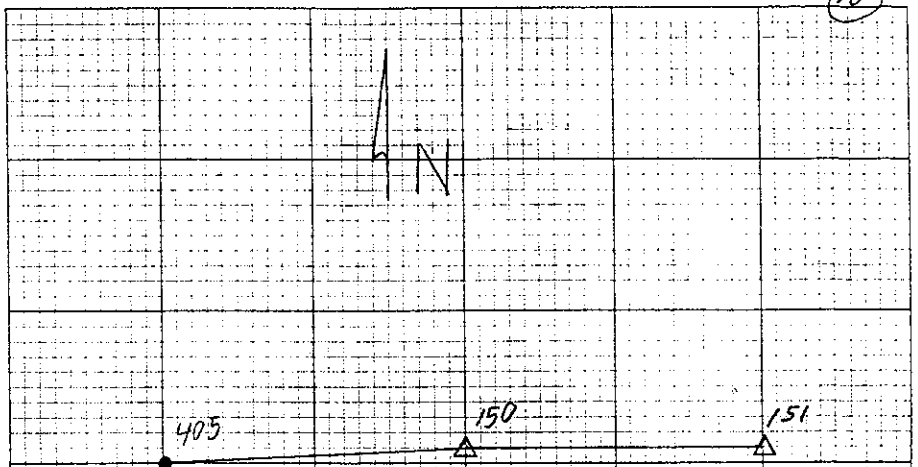


#151 BCSM IN HH CITY OF PHOENIX R2W R1W 13 | 18 / 24 | 19 T2N

#150 BCSM IN HH M.C.H.D. 14 | 13 / 23 | 24 T2N R2W

#135 BOLT IN CONCRETE IN HH 13 | 7 / 13 | 18 T2N R2W R1W

	∠ @ 150	D	R			
1)	405	0-07-18	180-07-22	20		
	151	180-25-37	0-25-37	37	180-16-17	
2)	405	90-06-47	270-06-47	47		
	151	270-22-59	90-22-59	59	12	14.5



150	BC.SM IN HH	MC. H.D.	14 | 13 / 23 | 24	T2N	R2W
151	BC.SM IN HH	C.O.R.	R2W R1W 13 | 18 / 24 | 19	T2N	
405	SET HUB & TACK	TRAV PT			

12/29/89

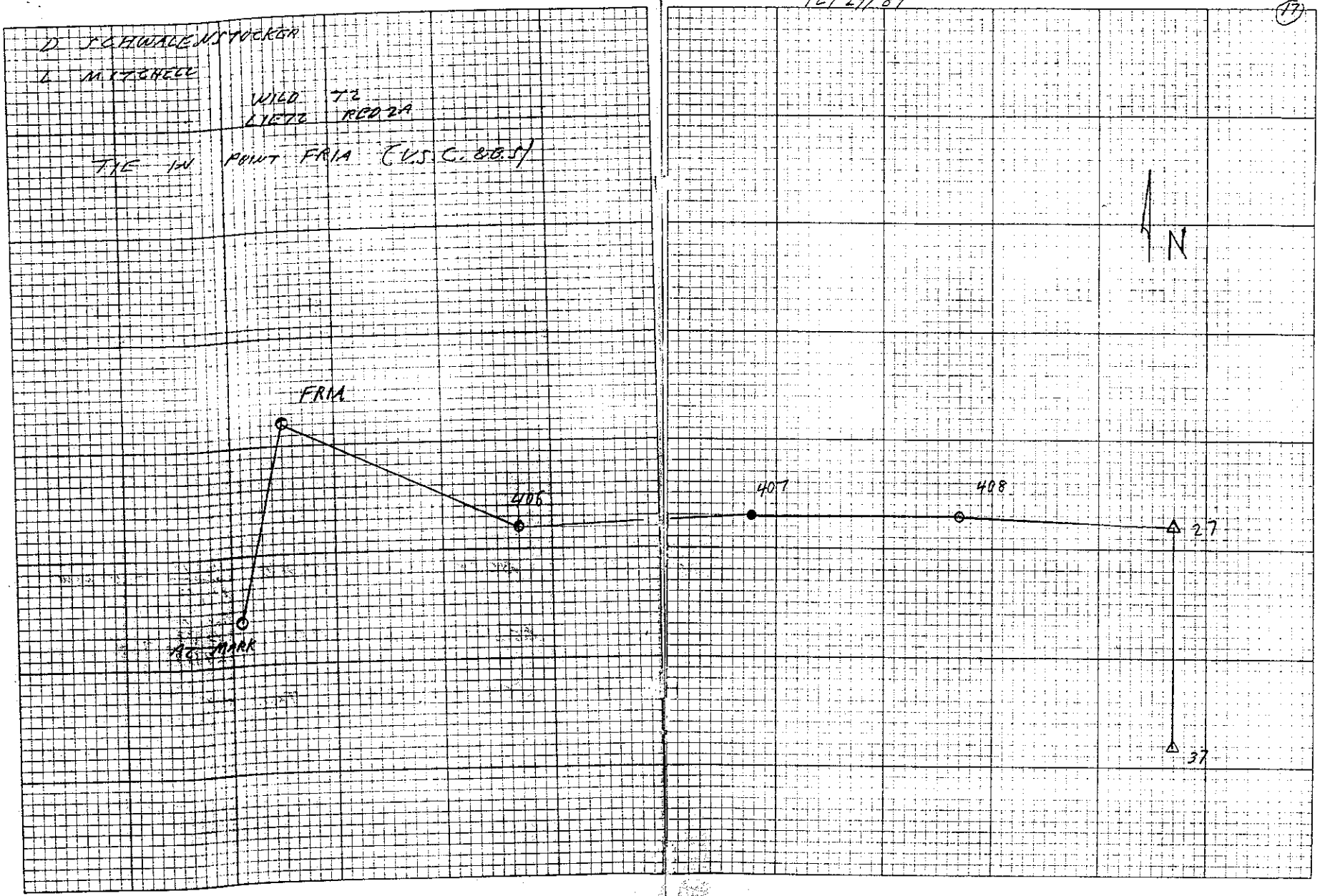
(17)

D SCHWAGERSTUCKER

L MITCHELL

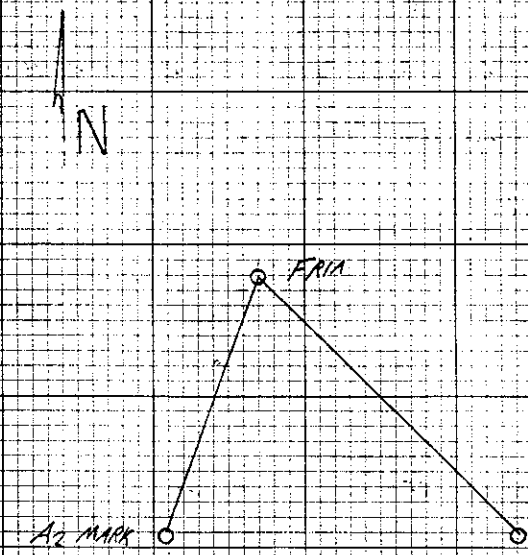
WILD LICOZ T2 RCD 2A

TIE IN POINT FRIA (VS.C. 8B.5)



	AT @	FRIA	HI = 4.89			
		D	R			
1)	1406	0-01-29	180-01-27		28	
	AZ MARK	76-00-36	256-00-36		36	75-59-08
2)	1406	90-11-50	270-01-46		48	
	AZ MARK	166-10-59	346-10-54		56.5	-0.85 .08

		60°F	28.3" HG	PPM = 14	
		zz	SD/F	SD/m	
	AZ MARK	90-54-38	4052.20	1235.109	HI =
		269-05-26	4052.19	1235.108	4.51
	M	90-54-36	4052.19	1235.109	
	1406	91-56-51	5899.93	1798.312	HI = 4.60
		268-03-10	5899.92	1798.309	
	M	91-56-51	5899.94	1798.304	



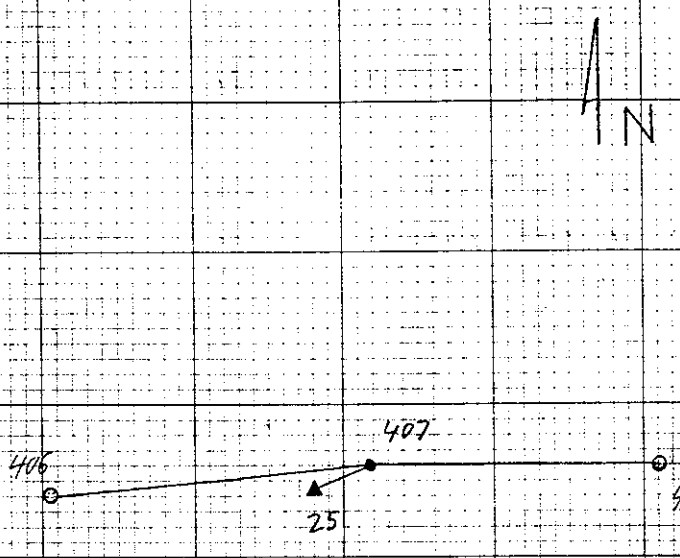
FRIA USC&GS BRASS DISC IN ROCK

1406 BC&M & BELL M.C.H.D.

AZ MARK USC&GS BRONZE DISC FLUSH W/ ROCK

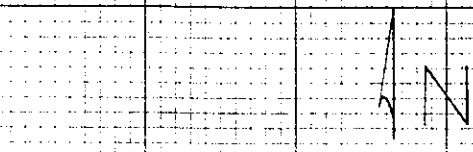
	407	HI = 5.35				
	D	A				
1) 408	00-09-12	180-04-03		07.5		
PP 25	173-16-33	353-16-39		-36	173-12-28.5	
406	181-07-25	181-07-21		-23	181-03-15.5	
2) 408	90-09-33	270-09-32		32.5		
25	263-21-49	83-22-09		-58	25.5	-27
406	271-12-36	91-12-41		-38.5	-06	-11
	65 °F	28.5 "HG		15 PPM		
	2 m	SD/F		SD/m		
408	90-36-01	5004.51		1525.381		HT=8.53
	269-24-03	5004.51		1525.381		
M	90-35-59	5004.51		1525.379		
		442.18		134.776		
	90-26-04	442.18		134.776	HI 4.43	
25	269-34-06	442.18		134.775		
M	90-25-59					
406	89-42-21	5482.96		1671.208		HT=4.47
	270-17-43	5482.95		1671.210		
M	89-42-19	5482.96		1671.09		

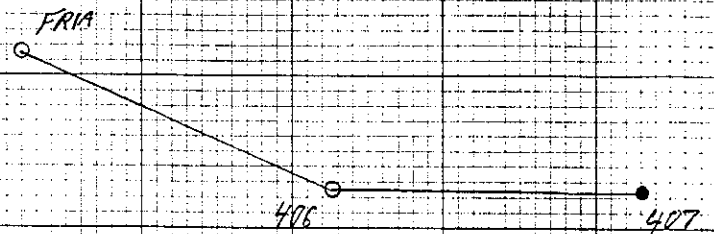
(19)



407	TRAV PT	SET NAIL & SHINER N. SHOULDER of BELL RD @ PIKE	
408	TRAV PT	FND P.K. & SHINER	
PP 25	RANDOM	PANEL	
406	TRAV PT	BCSM	M.C.H.D.

	AZ@ 406				
1)	FRIA	0-04-26	180-04-17	-21.5	
	407	155-08-21	335-08-21	-21	155-03-59.5
2)	FRIA	90-11-30	270-11-27	-28.5	
	407	245-15-32	65-15-32	-32	04-03.5 04-01.5





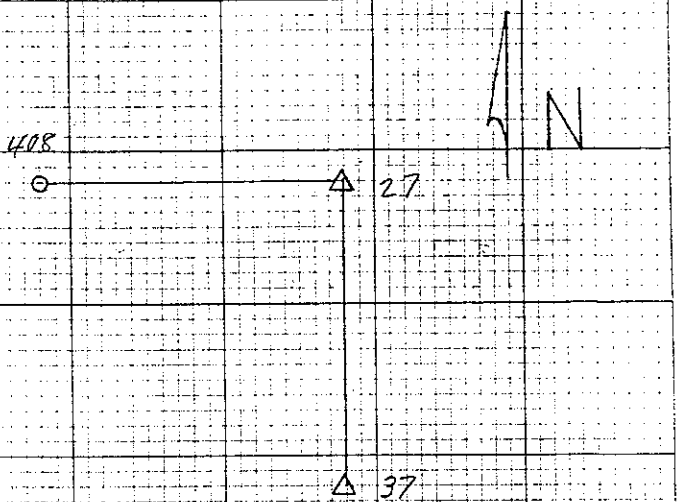
406 TRAV PT FND BCSM & BELL RD M.C.H.D.

FRIA USC&GS BRASS DISC IN ROCK

407 TRAV PT JCT NAIL & SHINER
N. SHOULDER BELL RD & DIKE

1 @	27	HI = 5.67				
	D	R				
1) 37	0-06-24	180-06-24		-24		
408	90-12-37	270-12-37		-37	90-06-13	
2) 37	90-10-21	270-10-21		-21		
408	180-16-36	0-16-34		-35	-14	135
	65°F	28.6"HG	PPM = 15			
	Zm	SO/F	SO/m			
AP # 37	90-15-22	5347.24	1629.843			HI=4.47
	269-44-23	5347.26	1629.842			
M	90-15-30	5347.25	1629.843			
408	89-46-04	5336.72	4626.633			HI=8.53
	270-14-01	5336.72	1626.634			
M	89-46-02	5336.73	1626.631			

(21)



AP 27 B.C.S.M. IN MH M.C.H.O. $\frac{35.36}{2}$ T4N R2W T3N

AP 37 F.N.D. P.K. & SHINER

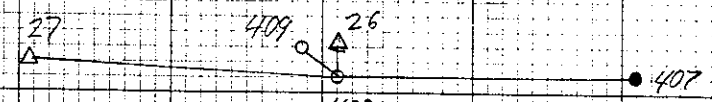
408 T.RAV P.T. F.N.D. P.K. & SHINER

∡@ 408	D	A			
1) 27	0-05-22	180-05-19	20.5		
409	44-05-42	224-05-44	41	44-00-20.5	
26	87-55-32	267-55-35	33.5	87-50-13	
407	178-11-44	358-11-41	42.5	178-06-22	
2) 27	90-09-20	270-09-18	19		
409	134-09-41	314-09-39	40	-21	-21
26	177-59-31	357-59-32	31.5	12.5	-13
407	268-15-38	88-15-37	37.5	178-06-18.5	-20

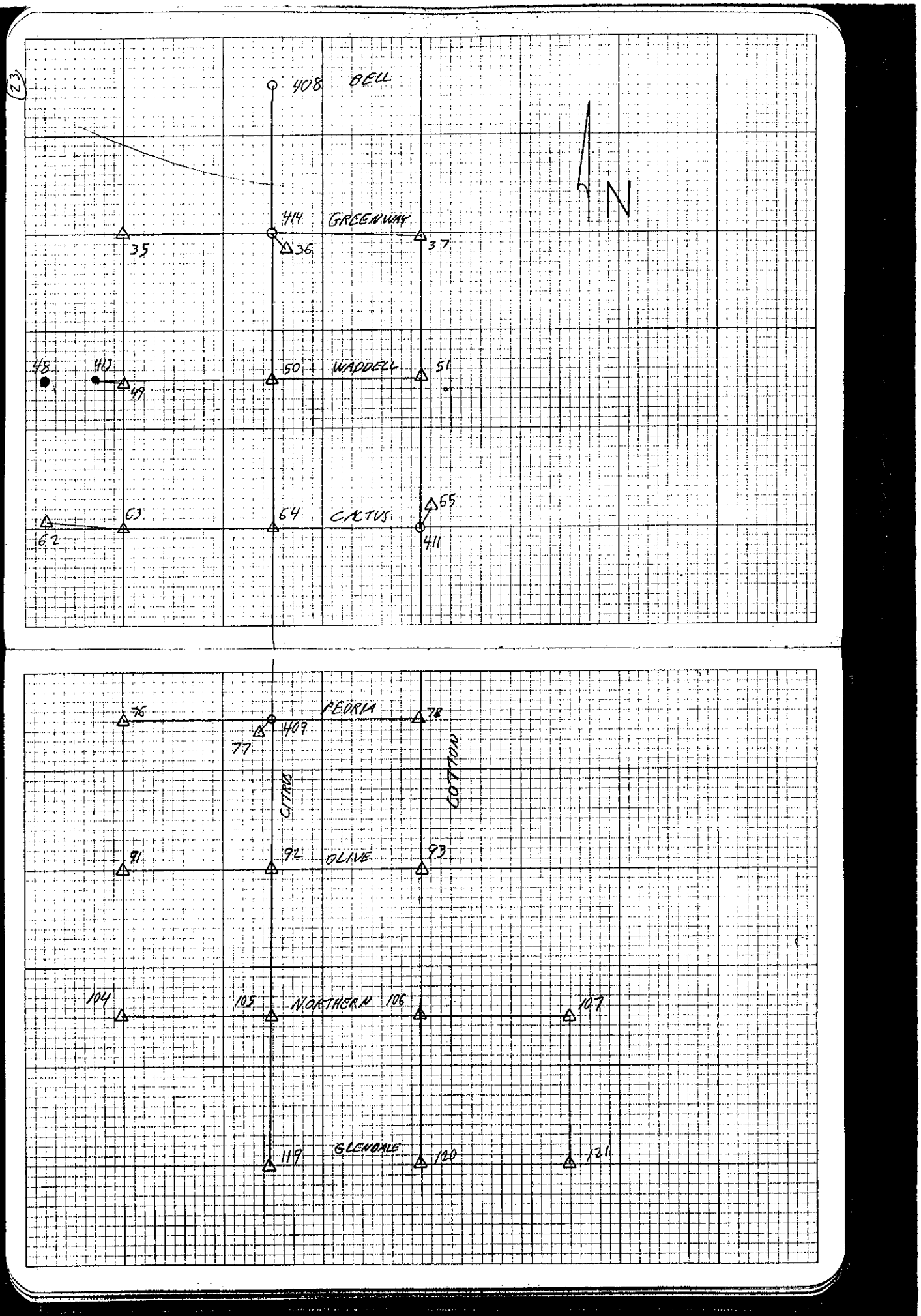
409 CH 66.35'

prf 26 CH 46.27'

(22)



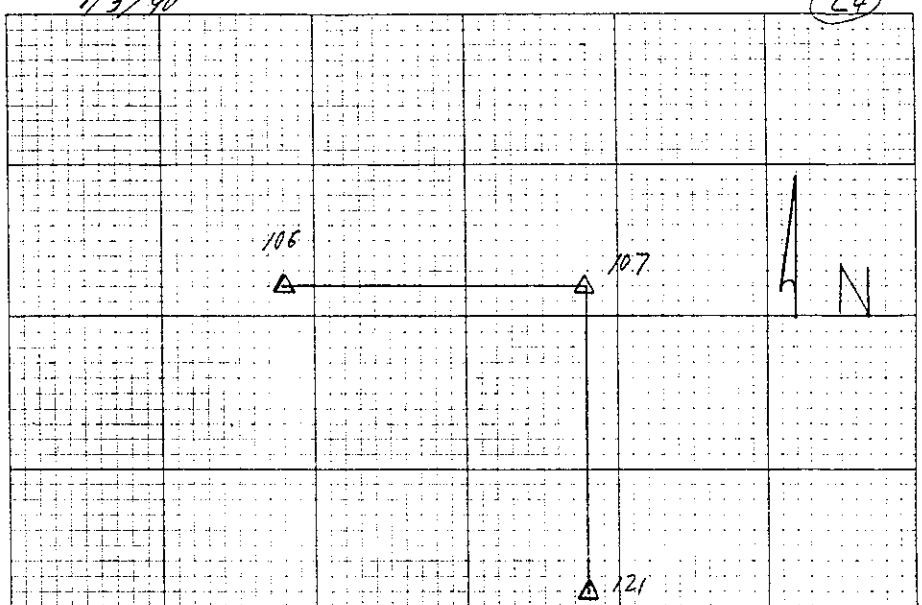
408	P.K. & SHINER
27	BCSM 1M HH M.C.H.D.
409	BCSM 1M HH M.C.H.D.
26	BCSM (PANEL) M.C.H.D.
407	SET NAIL & SHINER


(23)
408
BELL
N
414
GREENWAY
35
36
37
48
410
50
WADDELL
51
49
63
64
CACTUS
65
62
411
76
PEORIA
78
407
77
CITRUS
COTTON
91
92
OLIVE
93
104
105
NORTHERN
106
107
119
GLENDALE
120
121

1/3/90

(24)

	∡ @ 107		HI = 6.06			
1) 121	D 0-04-58		A 0-05-02	05-00		
106	89-59-39	269-59-41		-40	89-54-40	
2) 121	90-11-33	270-11-36		-34.5		
106	180-06-18	0-06-18		-18	-42.5	-42
	42 °F	29.16 IN HG	-2 PPM			
		5265.74	1604.997			HT = 4.68
PP #106	270-14-38	5265.73	1604.999			
	89-44-52	(5265.73)	1604.997			
M	89-45-07		(.998)			

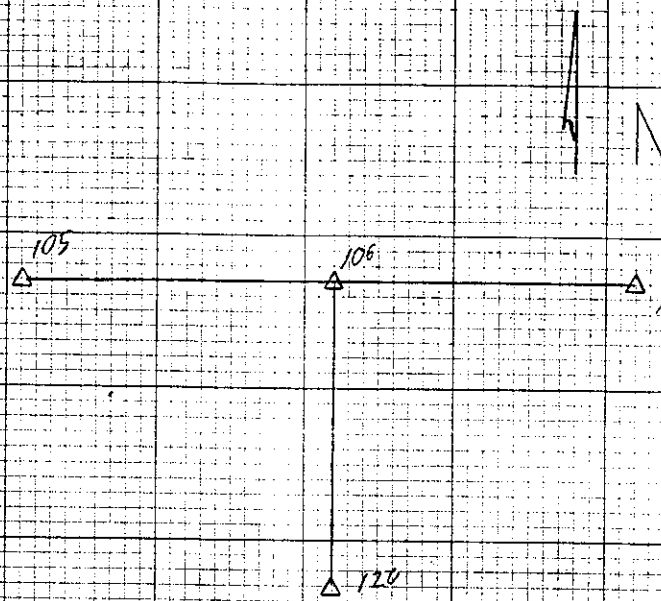


		RCW	RNW	
PP 107	BOLT IN CONCRETE IN HH	36 / 31		73N
		1 / 6		72N
PP 121	BOLT IN CONCRETE IN HH	1 / 6		
		12 / 7		
PP 106	BCSM IN HH N.C.H.O.	35 / 36		
		2 / 1		

At @ 106 HI = 5.65

		D	R			
@ 107		0-00-41	180-00-54	-47.5		
120		89-56-08	269-56-10	-09	89-55-21.5	
105		180-05-45	0-05-43	-44	180-04-58.5	
2) 107		90-06-25	270-06-32	28.5		
120		180-01-45	0-01-45	45	16.5	19
105		270-11-22	90-11-23	22.5	54	55

	54°F	29"HG	7 PPM		
	2W	50/F	50/4		
PP 120	90-15-21	5237.63	1596.432		HI=4.68
	269-44-55	5237.63	1596.437		
M	90-15-13	5237.61	1596.432		
		.162	.434		



PP 106 BCSM IN HH M.C.H.D.

R2W
35 | 36 T3N
2 | 1 T2N

PP 107 BOLT IN CONCRETE IN HH

R2W R1W
36 | 31 T3N
1 | 6 T2N

PP 120 BCSM IN HH M.C.H.D.

R2W R1W
2 | 1 T2N
11 | 12

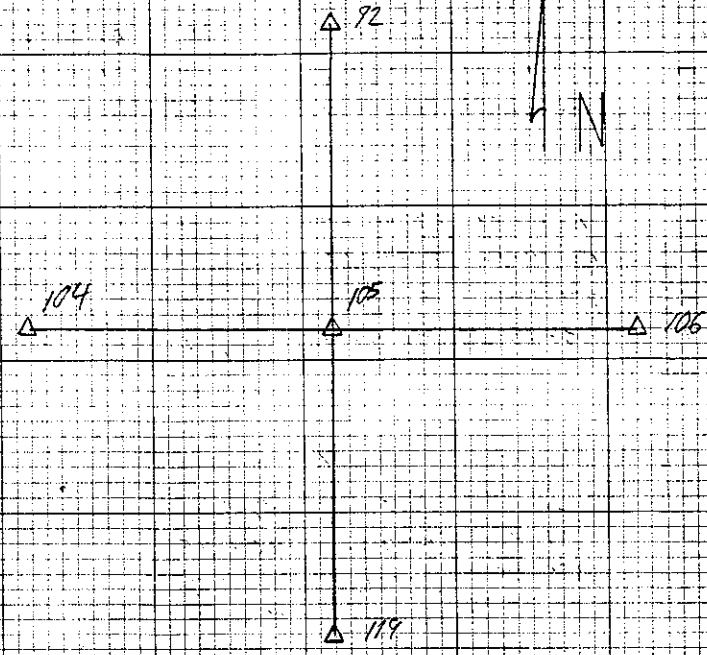
PP 105 1" O.I.P. BELOW PM7

R2W
34 | 35 T3N
3 | 2 T2N

T @ PP 105 HT = 6.33

0	106	0-08-17	180-08-24	20.5	
	119	89-46-37	269-46-35	-36	89-38-15.5
	104	180-08-33	0-08-31	-32	180-00-11.5
	92	270-14-21	90-14-23	-22	270-06-01.5
2)	106	90-01-40	270-01-47	43.5	
	119	179-39-51	359-39-51	51	-07.5 -11.5
	104	270-01-44	90-01-49	46.5	-03 -07
	92	0-07-37	180-07-34	35.5	-05-52 -05-37

		56°F	28.9" HG	8.19PM	
		2W	70°F	02/m	
PP	106	90-27-28	5301.93	1616.029	HT= 4.48
		269-32-42	5301.93	1616.029	
	M	90-27-23	5301.93	1616.029	
PP	119	90-21-29	5247.65	1599.488	HT=4.20
		269-38-50	5247.65	1599.488	
	M	90-21-20	5247.66	1599.489	
PP	104	89-43-20	5283.63	1610.453	HT=4.48
		270-16-41	5283.63	1610.453	
	M	89-43-20	5283.63	1610.453	
PP	92	89-44-21	5280.35	1609.451	HT=4.43
		270-15-56	5280.36	1609.4552	
	M	89-44-13	5280.35	1609.4553	



PP 105 1/4" I.P. 0.1F BELOW PVMT. 34|35 / 3|2 T3N R2W

PP 106 BCSM IN HH M.C.H.D. 35|36 / 2|11

PP 119 1/2" I.P. BELOW PVMT. 3|2 / 10|11

PP 104 CROSSED OUT NAIL BELOW PVMT. 33|34 / 4|3

PP 92 CROSSED OUT P.K. W/ PRINCE PVMT. 0.2 27|26 / 34|35

T@ PP 92 HI = 5.21

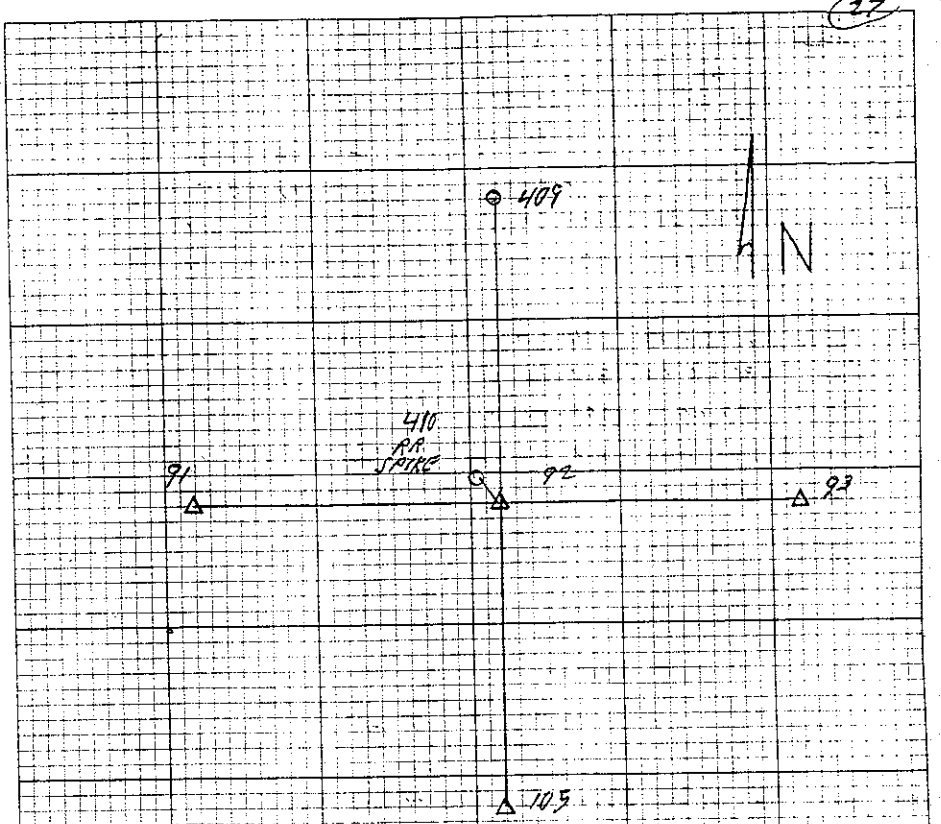
	D			
105	00-02-54	180-02-58	54	
91	89-57-29	269-57-27	28	89-54-32
410	133-17-43	313-18-05	54	133-14-58
409	180-08-06	00-07-59	08-03.5	180-05-07.5
93	269-46-45	89-46-39	43	269-43-47

105	90-05-58	270-05-46	52		
91	180-00-16	00-00-19	17.5	89-54-25.5	-29
409	270-10-57	90-10-56	56.5	180-05-04.5	-06
93	359-54-40	179-54-42	41	269-43-49	48

58 PP 29.000.46 6 mm

		E	N	
		30/E	80/N	
PP 91	89-35-44	5278.42	1608.858	HT = 8.49
	270-24-35	5278.40	1608.855	
M	89-35-35	5278.40	1608.857	
		(.19)	(.857)	
	89-42-09	5270.40	1606.428	
	270-18-03	5270.38	1606.417	HT = 8.51
M	89-42-03	5270.38	1606.417	
		(.38)	(.421)	
		5299.77	1615.371	
PP 93	90-22-55	5299.76	1615.369	HT = 4.68
M	90-22-49	(5299.77)	1615.368	
			(.369)	

410 RR SPIKE CM 4.65'



PP 92 CROSSED OUT P.K. W/SHINER 27/34 | 26/35 T3N R2W

PP 105 1" O.I.P. BELOW PUNT. 34/3 | 35/2

PP 91 1" O.I.P. BELOW PUNT. 28/33 | 27/34

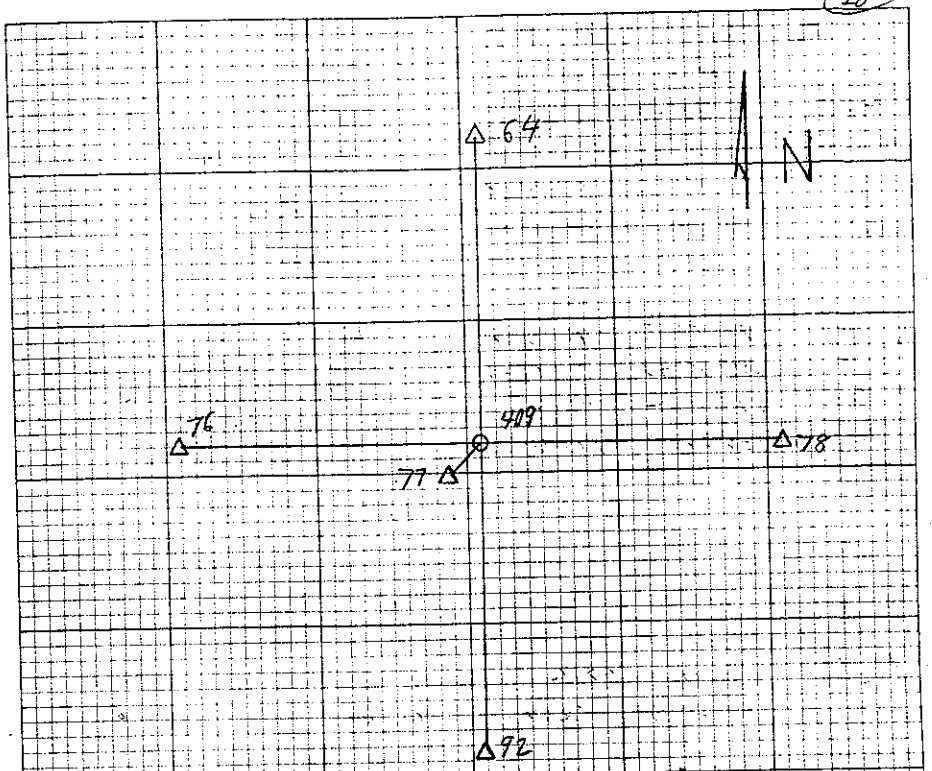
410 RR SPIKE IN PUNT

409 FND. 1" STEEL ROD IN INTERSECTION (OIRT) 22/27 | 23/26

PP 93 BCSM IN HH M.C.H.D. 26/35 | 25/36

	BC	409	HI = 5.47			
1)	@ 92	0-05-20	180-05-24	-22		
	PP 77	46-47-29	226-47-41	-35	46-42-13	
	PP 76	89-53-50	269-53-45	-42.5	89-48-25.5	
	PP 64	179-45-35	359-45-39	-37	179-40-13	
	PP 78	269-42-04	89-42-12	-08	269-36-46	
2)	92	90-07-35	270-01-40	-37.5		
	77	136-49-39	316-49-45	-42	045	-.09
	76	179-56-02	359-56-05	-03.5	.26	-.26
	64	269-47-49	89-47-50	-49.5	12	-1.35
	78	359-44-19	179-44-15	-17	39.5	-4.3

PP 77		CH. 25.92'			
		59 °F	28.911 HG	10 ppm	
		Zen	SD/C	SD/M	
PP 76		89-32-48	5265.89	1604.983	
		270-27-12	(5265.69)	1604.986	HT = 8.51
			5265.70	(1604.983)	
	M	89-32-48		(.984)	
PP 64		89-48-49	5250.10	1600.228	
		270-11-28	5250.12	1600.220	HT = 4.48
	M	89-48-40	5250.08	1600.226	
			(.10)	(.225)	
PP 78		90-25-44	5288.35	(1611.893)	
		269-34-19	5288.36	1611.894	HT = 4.68
			(5288.35)	1611.892	
	M	90-25-43			



409 1" STEEL ROD 22|23 / 27|26 = 73.4 NZ W

PP 92 CROSSED OUT PK W/ SHINER 27|26 / 34|35

PP 77 NAIL & SHINER (RANDOM PANEL)

PP 76 SET NAIL W/ SHINER RANDOM PANEL

PP 64 1/2" I.P. RANDOM PANEL

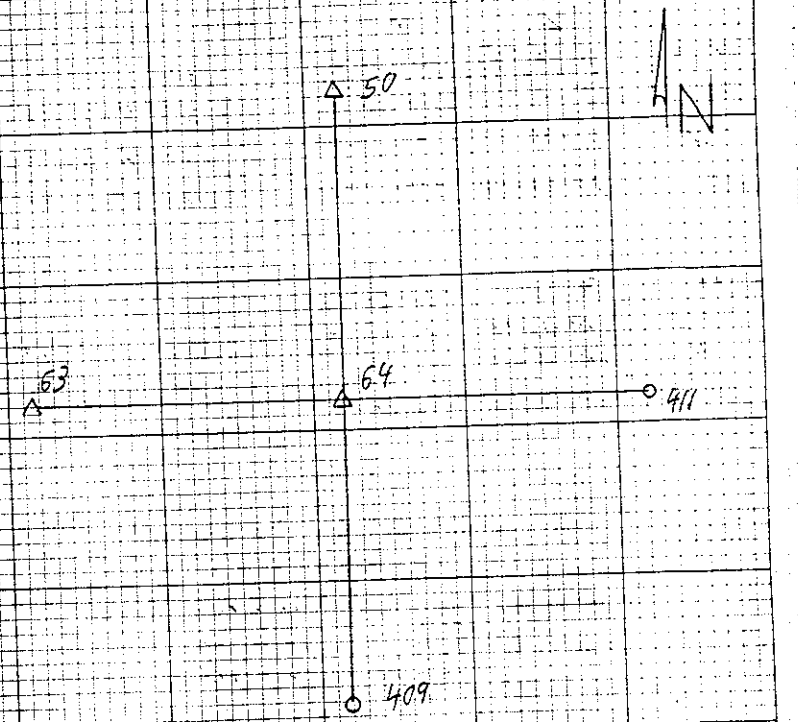
PP 78 BC 5M IN HH M.C.H.D 23|24 / 26|25

Sta 64 HT = 5.17

	D	R			
1) 409	00-02-34	180-02-36	-35		
PP 63	90-06-28	270-06-32	-30	90-03-55	
AA 50	180-41-58	0-41-56	-57	180-39-22	
411	269-54-04	89-54-04	-04	269-51-29	
2) 409	90-02-53	270-02-51	52		
63	180-06-43	0-06-42	47.5	-50.5	-53
50	270-42-12	90-42-11	11.5	-19.5	-21
411	359-54-17	179-54-17	17	-25	-27

55°F 28.9" HG 10 PPM

	89-27-49	5258.48	1602.786	
PP 63	270-32-18	5258.47	1602.786	HT = 8.51
n	89-27-46	5258.47	1602.786	
	89-48-24	5313.38	1619.525	
	270-11-28	5313.38	1619.521	HT = 4.48
PP 50 n	89-48-28	5313.38	1619.522	
			.527	
	90-25-24	5316.68	1620.537	
		5316.69	1620.536	
TRAV PT	269-34-33	5316.71	1620.536	HT = 4.68
411 n	90-25-26		.70	



PP 64 1/2" I.P. RANDOM PANEL

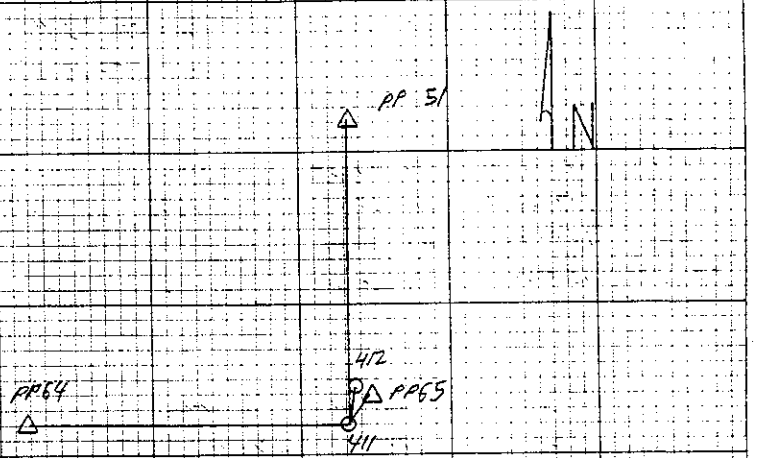
TRAV PT 409 1" STEEL ROD 22|23 / 27|26 T3N A2W

PP 63 SET NAIL & SHINER RANDOM PANEL 10|11

PP 50 M.C. H.D. BOSM LR H.C. 15|14

TRAV PT 411 GRAHM PK & SHINER MARKED #63

	At 411		411 = 5.30				
		D	R				
1)	PP 64	0-06-16	180-06-11		-13.5		
	PP 51	90-35-34	270-35-31		-32.5	90-29-19	
	412	91-39-23	271-39-24		-23.5	91-33-10	
	PP 63	97-58-09	277-58-12		-10.5	97-51-57	
2)	PP 64	90-08-42	270-08-38		-40		
	PP 51	180-37-56	0-37-55		-55.5	-15.5	-17
	412	181-41-43	01-41-45		-44	-04	-07
	PP 65	188-00-31	08-00-43		-37	-57	-57
		45 °F	29.05 "HG		0 PPM		
		Zw	30.11		30/m		
		89 44 54	5303.17		1616.410		
	PP 51	270-15-34	~~5303.17~~		~~1616.409~~		HT = 4.68
	M	89 44 40	5303.16		1616.410		
	412	EH	28.04				
	PP 65	EH	23.51				



411 GRAHAM TRAV PT P.K. & SPIKER MARKED #65

PP 64 1/2" I.P. RANDOM PANEL

PP 51 BCSM IN MH M.C.H.D. 11 12 / 14 13 T3N R2W

412 RR SPIKE IN INTERSECTION 14 13 / 23 24

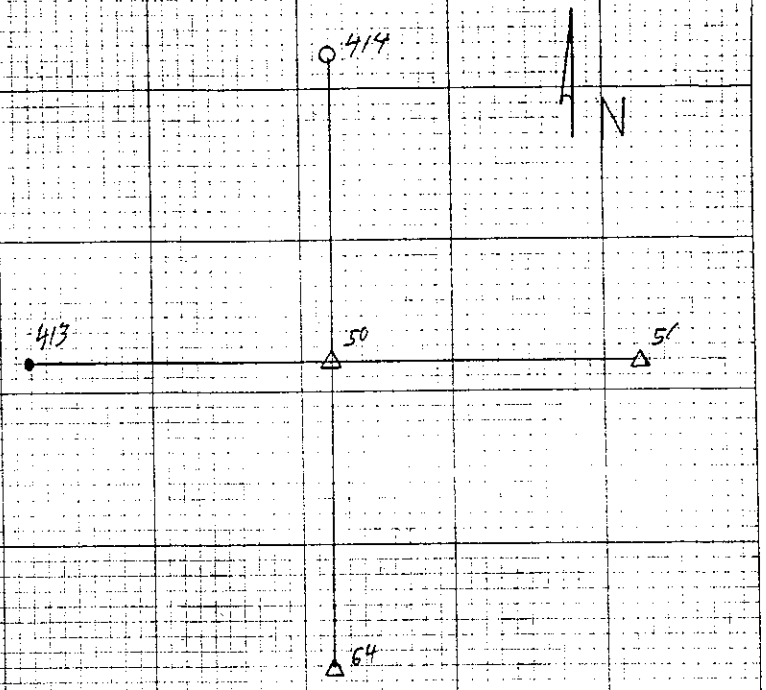
PP 65 PANEL LOCATION SET CONCRETE NAIL

A @ AP 50 41 = 5.72

	D	R		
1) PP 64	0-01-17	180-01-28	-22.5	
413	89-20-47	269-20-56	-51.5	89-19-29
414	179-44-38	359-44-35	-36.5	179-43-14
AP 51	269-19-44	89-19-47	-45.5	269-18-23
2) PP 64	90-07-41	270-07-39	-40	
413	179-27-16	359-27-13	-14.5	-34.5 -32
444	269-50-52	89-50-53	-52.5	-125 -13
PP 51	359-26-06	179-26-04	-05	-25 -24

52 °F 29.92 in 6 AM

		SQ/F	SQ/M	
	89-16-06	6134.11	1869.685	
TRAV PT 413	270-43-55	6134.09	1869.681	HT = 4.44
M	89-16-06	6134.13 (+2)	1869.686 (.684)	
TRAV PT 414	89-51-51	5300.56	1615.615	
	270-08-30	5300.56	1615.617	HT = 8.51
M	89-51-44	(5300.56)	1615.618 (.671)	
PP 51	90-22-02	5287.75	1611.711	
	269-37-55	5287.74	1611.710	HT = 4.68
M	90-22-04	(5287.75)	1611.712 (7.11)	



PP 50 M.C.H.O. BCSM in HH 10/15 11/14 T3N R2W

PP 64 1/2" I.P. RANDOM PANEL

413 S.C.T. MAG. TRAV PT. ON DIKE

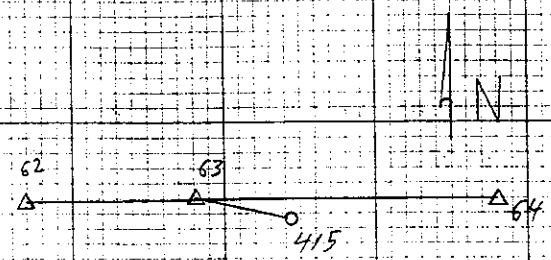
414 FND 1" O.I.P. IN INTERSECTION (DIRT) 3/2 10/11

PP 51 M.C.H.O. BCSM in HH 11/14 12/13

AT @ 63		141 - 5.23			
	D	R			
1) AP 64	00-09-47	180-09-47	47		
415	11-12-50	191-12-46	48	11-03-01	
AP 62	181-35-00	01-35-04	02	181-25-15	
2) AP 64	90-06-06	270-06-02	-04		
415	101-08-57	281-08-58	-57.5	02-325	02-57
AP 63	271-31-14	91-31-17	-15.5	115	-13

	39 DF	29646	8 ppm	
	ZN	SOH	SOH	
	89-00-00	3273.66	997.809	
PP 62	271-00-02	3273.65	997.808	HT = 8.48
N	89-00-01	3273.65	997.810	

GRAHM TRAV. PT
415 CH. 108.80



PP 63 NAIL & SHINER RANDOM PANEL

PP 64 ½" I.P. RANDOM PANEL

415 GRAHM TRAV. PT (HUB)

PP 62 RANDOM PANEL ON DIKE, NAIL & SHINER

@ 413 HT = 5.105

	D	R			
PP 50	00-05-02	180-04-55		04-58.5	
PP 49	00-06-14	180-06-16		15	0-01-16.5
PP 62	115-18-25	295-18-29		27	115-13-28.5
adj PP 50	90-07-57	270-07-57		-57	
PP 49	90-09-10	270-09-16		-13	-16 +1/6
PP 62	205-21-25	25-21-24		-24.5	-27.5 -2.8

68 DF 28.90" HG 14 RPM

		2W	SD/F	SD/M
PP 49	92-11-44		817.45	249.161
	267-48-18		817.45	249.161
M	92-11-43		817.45	249.161

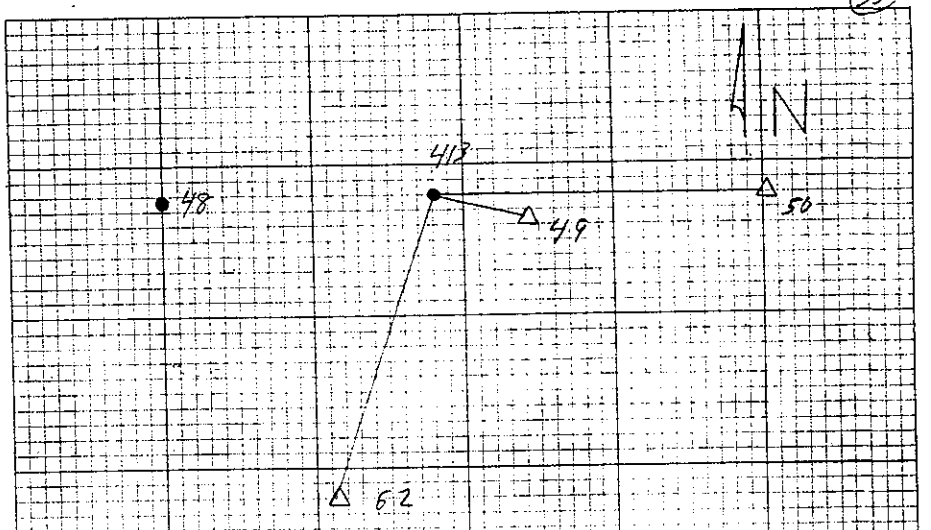
HT 4.44

PP 62	89-58-30		5770.22	1758.763
	270-01-30		5770.22	1758.766
M	89-58-30		5770.22	1758.769

HT 8.48

VERTICAL PP 48	89-51-56	1831.86		558.353
	270-08-02	1831.86		558.353
M	89-51-54	1831.86		558.353

HT 8.44



413 TRAV RT ON DIKE SET NAIL

PP 50 M.C.H.B. 2CSM IN HUB 19/11 15/14

PP 49 FND 1" I.P. PLUG CAP LEANING NE 83/5 9/10 16/15

PP 62 RANDOM PANEL ON DIKE, NAIL & SHINER

VERT. PP 48 RANDOM PANEL NAIL & SHINER

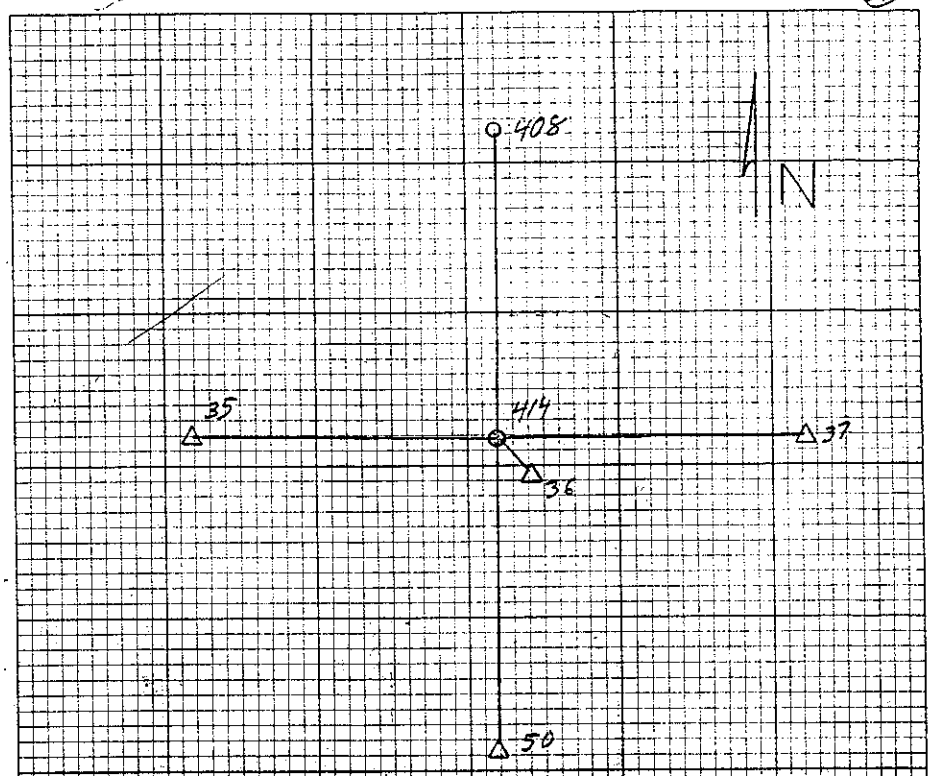
(34)

	D	R			
1) PP 50	00-03-30	180-03-35	32.5		
PP 35	89-09-31	269-09-31	31	89-05-58.5	
408	179-33-12	359-33-13	12.5	179-29-40	
PP 37	270-09-26	90-09-26	26	270-05-53.5	
PP 36	320-22-13	140-22-21	16.5	320-18-44	
2) PP 50	90-03-52	270-03-51	51.5		
PP 35	179-09-43	359-09-45	44	-52.5	-55.5
408	269-33-20	89-33-24	22	-30.5	-35
PP 37	00-09-43	180-09-43	4.5	-51.5	-52.5
PP 36	50-22-30	230-22-37	33.5	-47	-49

65° 2840 HG 1380m

PP 35	89-29-35	5301.18	1615.809	HT = 8.18
	270-30-24	5301.20	1615.809	
A	89-29-36	5301.18	1615.807	
		5345.75	1629.388	
408	89-47-45			HT = 8.51
	270-12-14	5345.75	1629.387	
M	89-47-46	5345.75	1629.389	
		5291.53	1614.870	
PP 37	60-12-03	5291.56	1612.872	HT = 12.43
	269-47-55	5294.55	1612.82	
M	90-12-04			

PP 36 EH. 57.16'



414 1" O.I.P. IN DIRT INTERSECTION 3/10 2/11 T3N R2W 10/15 11/14

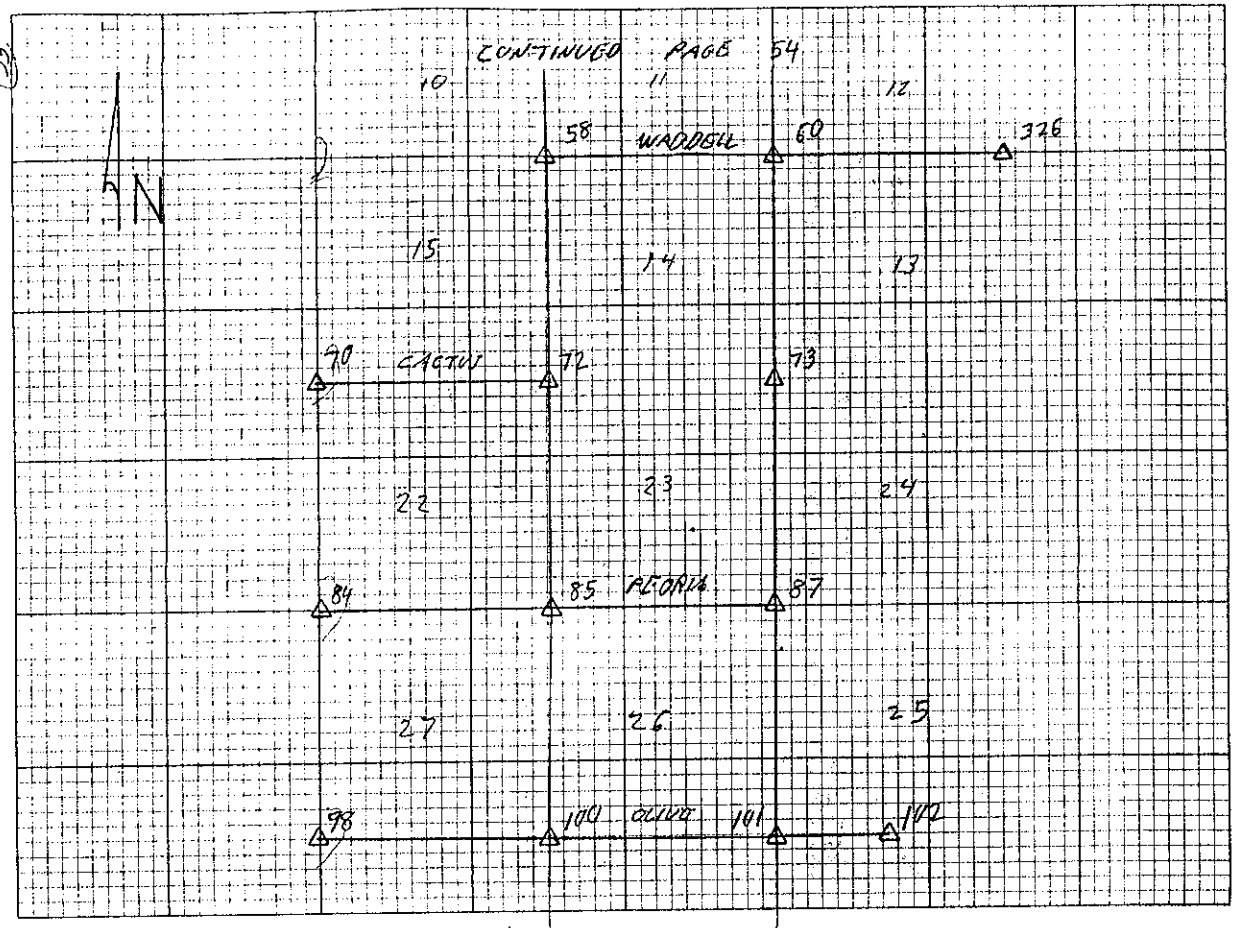
PP 50 M.C.H.O. BC&M IN HH

PP 35 NAIL & SHINER RANDOM PANEL

408 TRAV PT. P.K. & SHINER

PP 37 P.K. & SHINER RANDOM PANEL

PP 36 RANDOM PANEL NAIL & SHINER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WADDELL
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OLIVE
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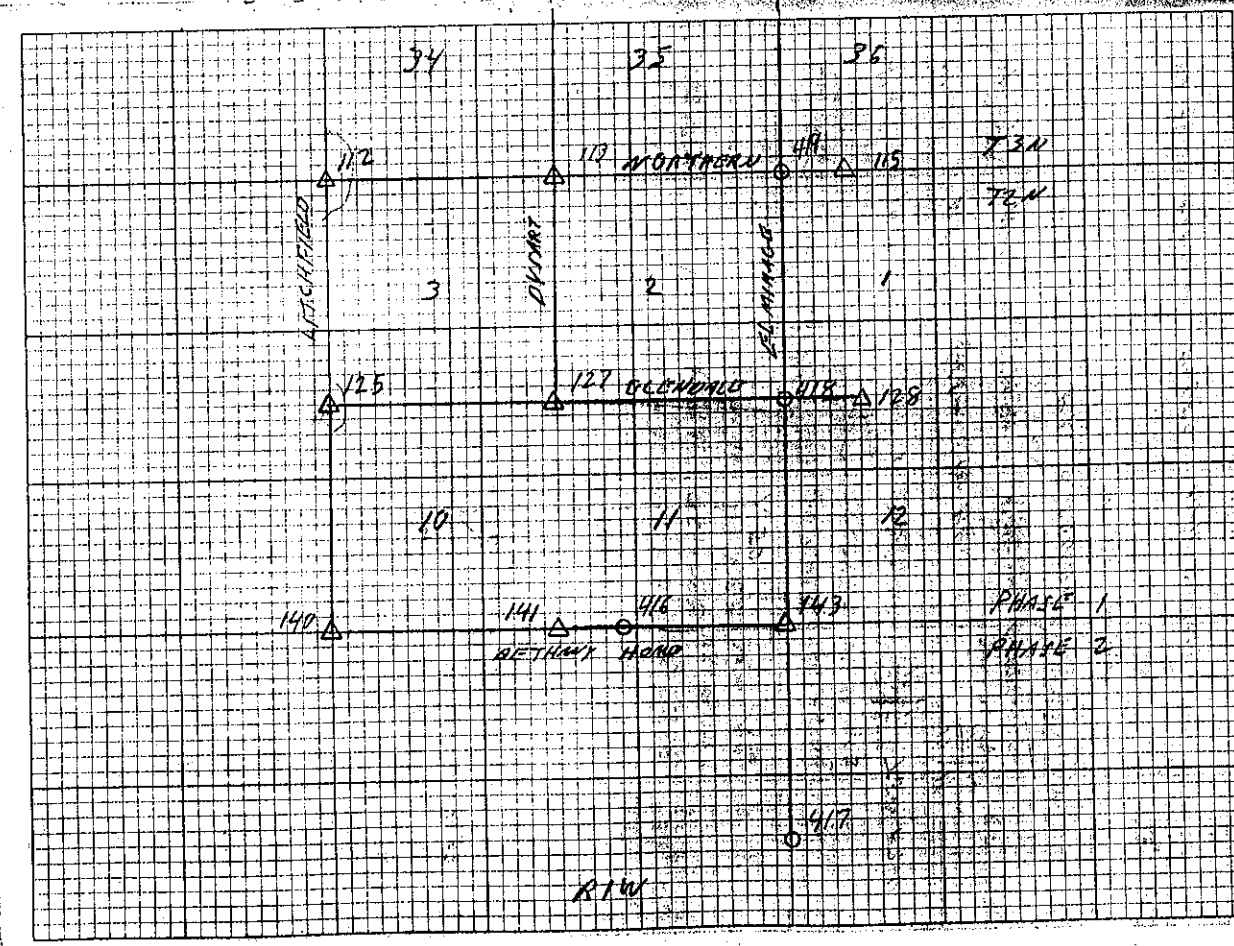
34
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113
MONTEBELLO
114
115
T3N
R2W
3
DUNLAP
2
1
ASHFIELD
25 MINUTE
125
127
OCOTILLO
128
10
11
12
140
141
416
143
PHASE 1
PHASE 2
BETHANY HOME
417
R1W

11/5/90 (36)

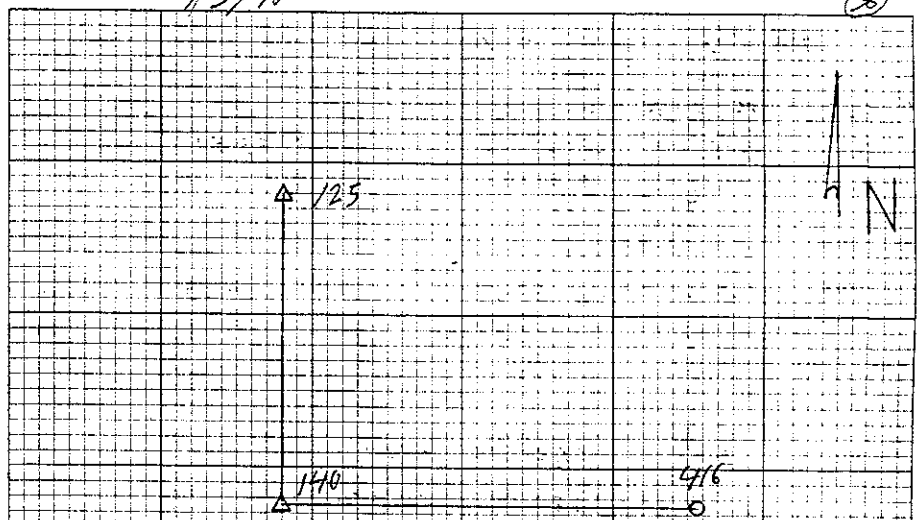
	∠ @ 140		HI = 5.09			
	D	R				
1) PP 125	00-04-16	180-04-23		18.5		
446	91-13-00	271-15-05		02.5	91-08-43	
2) 125	90-07-08	270-07-03		05.5		
446	181-15-51	01-15-45		50	44.5	44

50°F 29.20"Hg 2 PPM

E ___ SOft SOIm

	89-56-40	5227.14	1693.209	
PP 125		5222.73	1593.232	HT = 12.48
	270-03-37	5227.15	1593.234	
n	89-56-32	(.14)	(.032)	

TRAV PT	89-43-49	5883.50	1793.291		HT = 4.50
	270-16-19	5883.45	1793.274		
446		5883.46	1793.268		
n	89-43-45	(.47)	(.278)		



PP 140 M.C.H.D. BCSM in HH 9/16 10/15 T2W Alum

PP 125 M.C.H.D. BCSM in HH 4/9 3/10

TRAV PT 446 E/O P.K. & BETHANY HOME RD

AT @ 143 HI = 5.45

		D	M			
1)	417	0-05-58	180-06-00	59		
	416	91-00-00	270-59-55	525	89-53-58.5	
	418	180-02-13	0-02-07	10	179-56-11	
2)	417	90-03-25	270-03-18	21.5		
	416	180-57-27	0-57-22	34.5	54.03	.01
	418	269-59-40	89-59-34	37	15.5	.17

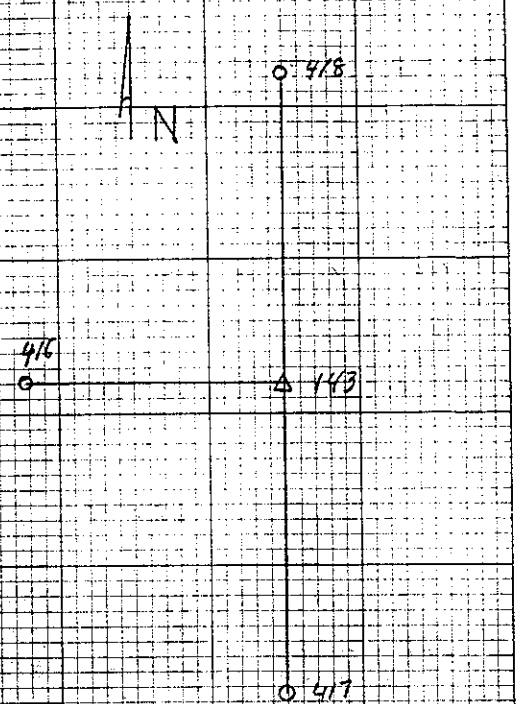
53°F — 29.20" HG — 4 PPM

		JOIN	JOIN
	90-04-56	5287.92	1611.754
417	269-55-16	5287.92	1611.762
		5287.92	1611.760
M	90-04-30	.192	.759

HT = 8.40

416	89-07-31	4556.20	1388.736	HT = 4.50
	270-52-41	4556.20	1388.734	
M	89-07-25	4556.19	1388.732	
		.120	.734	

418	89-43-01	5264.16	1604.917	HT = 4.58
	270-17-09	5264.16	1604.518	
M	89-42-56	5264.15	1604.515	
		.16	.517	



PT 143 2" I.C.P. BRASS PLUG 11 1/2 / 14 | 13 T2N R1W

TRAV PT 417 CITY OF PHOENIX BRASS IN HH 14 | 13 / 23 | 24

TRAV PT 416 C.L. ℄ ROAD

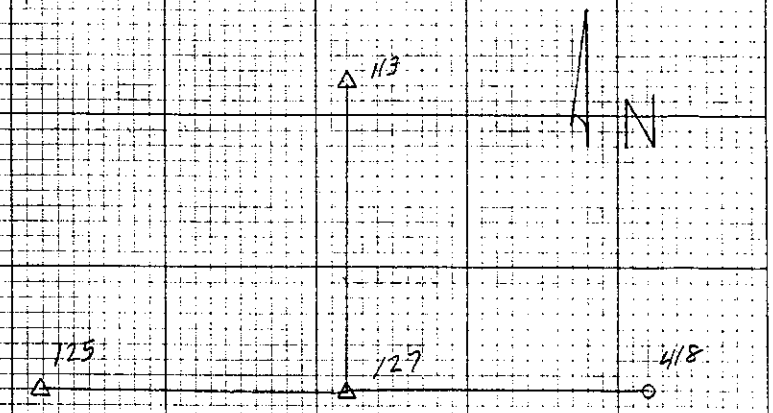
TRAV PT 418 C.L. ℄ INTERSECTION E/L MIRAGE & GLENDALE

AT PP 127 HI = 5.75

		D	R			
1) PP	125	00-10-18	180-10-04	H		
PP	113	87-12-18	267-11-55	06.5	87-01-55.5	
	418	180-17-11	0-17-07	07	180-06-56	
2)	125	90-02-06	270-01-51	58.5		
	113	177-03-50	357-03-37	43.5	87-01-45	-50
	418	270-08-44	90-08-46	45	46.5	-51

50°F 29.15" HG 8 PPM

	ZA	SDIF	SDIM	
	90-01-06	5240.51	1597.312	
PP 125	269-57-11	5240.53	1597.313	HT = 8.48
M	90-02-57	5240.51 (.02)	1597.315 (.313)	
	90-01-51	5267.01	1605.371	
PP 113	269-58-09	5266.93	1605.379	HT = 8.47
M	90-01-51	5266.89 (.98)	1605.373 (.374)	
	90-09-13	5214.25	1589.322	HT = 8.45
TRAV PT	269-51-13	5214.27	1589.317	
418 M	90-09-00	5214.28 (.127)	1589.308 (.316)	HT = 12.51
	90-12-56			
	269-47-12			
M	90-12-52			



RP 127 BOLT IN CONCRETE IN HH 3/2 10/11

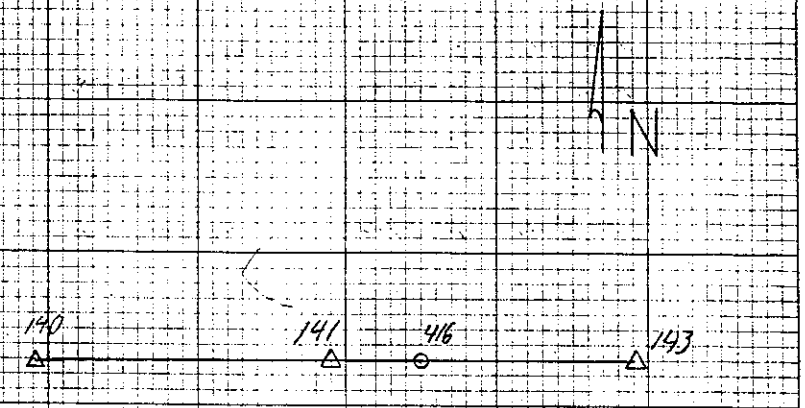
RP 125 M.C.H.D. BCSM IN HH 4/3 9/10

RP 113 BCSM IN HH 34/35 3/2

TRAV PT 418 P.K. @ INTERSECTION

	∡ @ 416		HI = 5.29			
	D		R			
1) 140	0-01-17		180-01-09		-13	
143	180-01-23		0-01-19		-21	180-00-08
141	0-00-49		180-00-49		-49	359-59-36
2)	90-05-32		270-05-24		-28	
	270-05-28		90-05-20		-23	179-59-55
	90-05-08		270-05-01		-04.5	-36.5
	61° °F		29.1 "Hg		8 PPM	
	T.V.		S.D./E		S.D./m	
PP 141	91-53-39		651.57		198.588	
	268-06-46		651.53		198.587	
m	91-53-27		651.55		198.588	

1.47 = 4.881

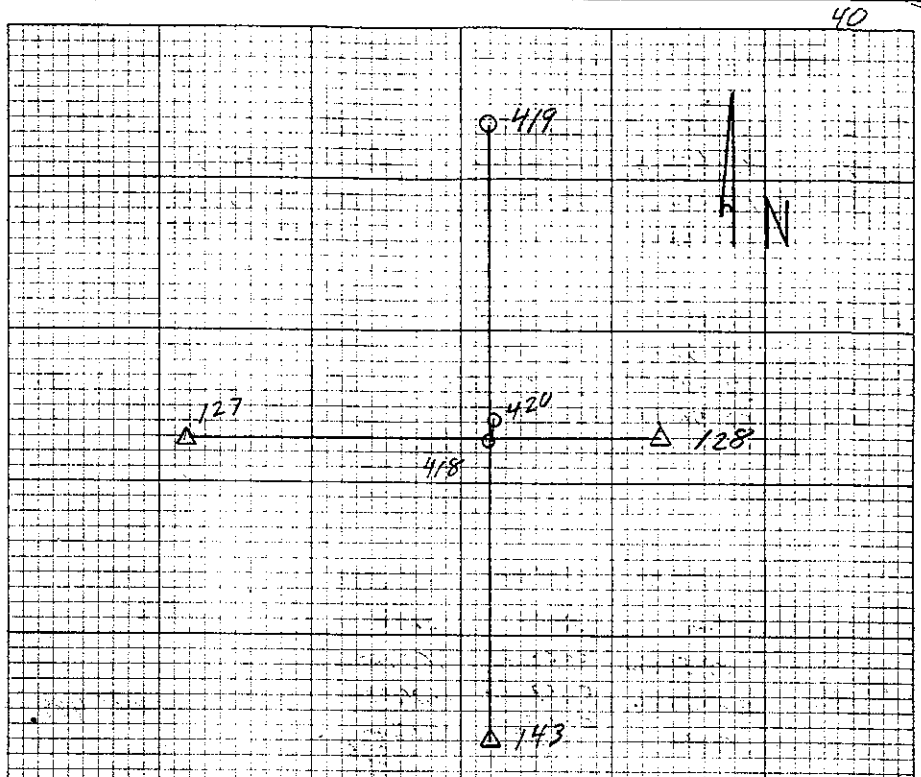


TRAN PT 416	F.H.D.	A.K. & R.D.			
PP 140	M.C.H.D.	BCSM	IN HH	9/16	10/15 T.V.'s R.W.
PP 143	2" I.C.P.	BELOW	PUNT	11/14	12/13
PP 141	M.C.H.D.	BCSM		10/15	11/14

	TA @ 418	HI = 5.31			
		L	R		
1	143	0-01-04	180-00-55	00-59.5	
	127	90-50-14	270-50-02	08	90-49-08.5
	419	178-24-02	358-23-59	24-00.5	178-23-01
	420	180-21-52	0-19-51	20-51.5	180-19-52
	128	270-09-42	90-09-40	42	270-08-42.5
2	143	90-05-08	270-05-13	10.5	
	127	180-54-17	0-54-14	15.5	90-49-05 -07
	419	268-28-08	88-28-04	-06	178-22-55.5 22-58
	128	0-13-51	180-13-57	-54	43.5 -43

	707	29.1' HK	14 PTS	
	2w	50/ft	50/ft	
	89-43-09	5284.19	1610.62.0	
1	270-16-57	5284.19	1610.616	HT: 8.99
	89-43-06	5284.17	1610.622	
		(18)	(619)	

420	CH.	10.03		
	90-05-10	936.12	285329	
PP 125	269-55-01	936.12	285.329	HT: 4.89
	90-05-05	936.12	285.329	



TRAV PT 418 P.K. @ INTERSECTION EC MIRAGE & GLENDALE

PP 143 2" I.C.P. $\frac{11}{14}\,\frac{12}{13}$ T2N R1W

PP 127 BOLT IN CONCRETE IN HH $\frac{3}{10}\,\frac{2}{11}$

TRAV PT 419 M.C.H.D. BCSM IN H.H $\frac{35}{2}\,\frac{36}{1}$

TRAV PT 420 M.C.H.D. BCSM IN H.H $\frac{2}{11}\,\frac{1}{12}$

PP 128 P.K & GLENDALE

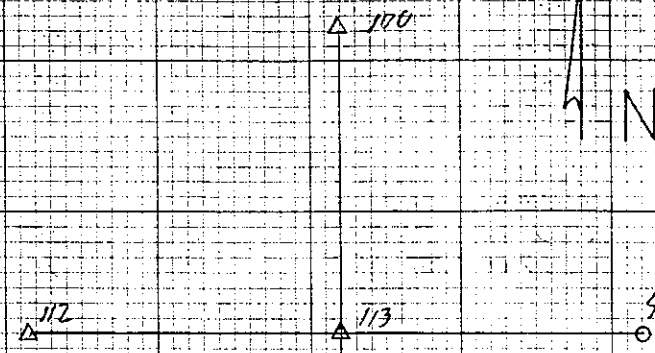
	AT @ 113		HI = 5.67			
		D	R			
1)	127	0-00-47	180-00-43	:45		
	112	92-47-06	272-46-54	47+00	92-46-15	
	100	182-04-25	02-04-16	20.5	182-03-355	
	419	272-53-02	92-52-57	52-595	272-52-145	
2)	127	90-04-24	270-04-26	25		15
	112	182-50-40	02-50-44	40.5	155	34
	100	272-07-55	92-07-59	57	32	15
	419	02-56-37	182-56-36	36.5	15	

72°F 29.05 HG 14 PSI

SOH=

2nd

	89-56-56	5253.60	1601.294	
PP 112	270-03-04	5253.58	1601.296	HT = 4.89
M	89-56-56	5253.58 (.59)	1601.294 (2.95)	
	89-52-29	5253.27	1601.207	
	270-07-06	5253.29	1601.206	HT = 4.41
PP 100				
M	89-52-42	5253.27 (.28)	1601.206 (2.06)	
	89-52-32	5273.10	1607.253	
TRAV PT 419	270-07-38	5273.10	1607.243	HT = 8.39
M	89-52-31	5273.11 (.10)	1607.245 (2.47)	



PP 113	M.C. H.O	BCSM IN HH	34/3 35/2 73N 72N RIW
PR 127	BOLT IN	CONCRETE IN H.H	3/70 2/11
PP 112	M.C. HO	BCSM IN HH	33/4 34/3
PP 100	M.C. HO	BCSM IN HH	27/34 26/35
TRAV PT 419	M.C. H.O.	BCSM IN HH	35/2 36/1

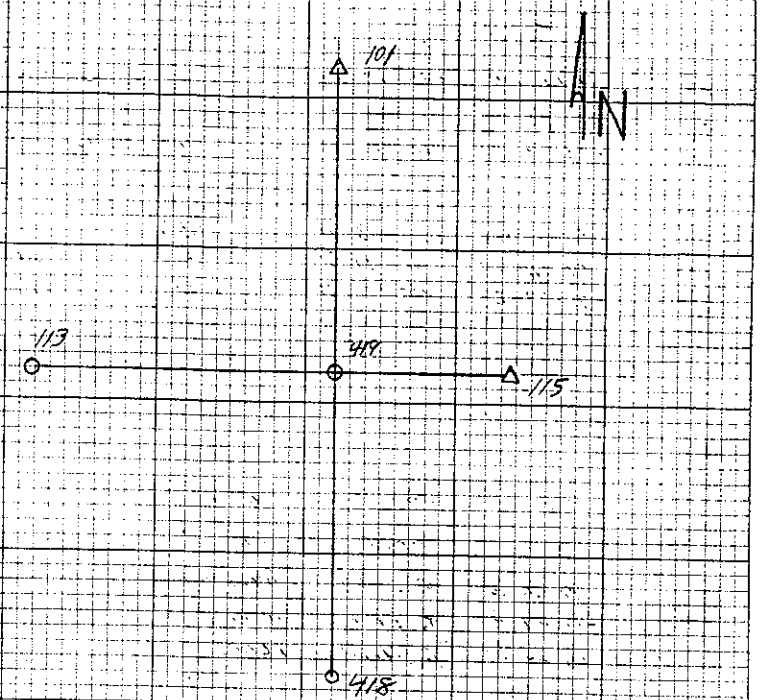
	AC@ 419					
	0					
		X				
1) 418	0-05-42	180-05-52		47		
113	92-19-07	272-19-08		-07.5	92-13-20.5	
101	181-24-19	01-24-19		-19	181-18-32	
115	272-25-33	92-25-29		-31	272-19-44	
2) 418	90-15-31	270-15-28		29.5		
113	182-28-41	02-28-42		41.5	12	16
101	271-33-57	91-33-55		56	26.5	29
115	02-35-06	182-35-11		08.5	39	41.5

	67 °F	29.05 "HG	12 PPM
	Zw	SDIE	SDIm
	89-55-09	52 57.36	1602.4419
PP 101	270-04-49	52 57.35	1602.4448
M	89-55-11	52 57.35	1602.4446
			4448

HT = 8.39

PP 115	90-46-44	11 59.97	353.560
	269-12-57	11 59.97	353 559
M	90-46-54	11 59.97	353.559

HT = 4.89



TRAV PT 419 M.C. H.O. BCSM IN HH 35/2 36/1 T3W R14W T2W

TRAV PT 418 P.K. @ INTERSECTION GLENDALE & EL MIRAGE

PP 113 M.C. H.O. BCSM IN HH 34/3 35/2

PP 101 M.C. H.O. BCSM IN HH 26/35 25/36

PP 115 P.K. & GLENDALE (3½" LEGS ON PANEL)

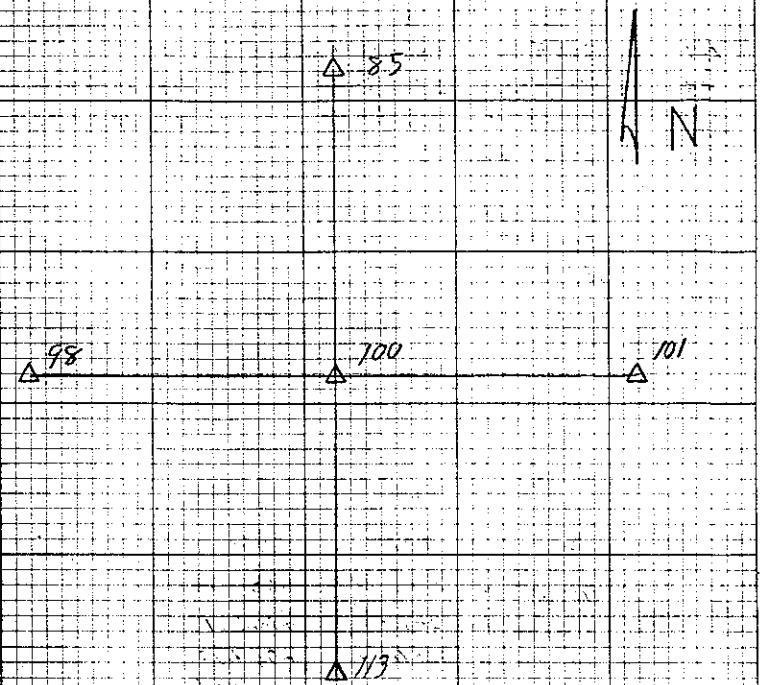
At @ 100 HI = 5.58

		093-42	A			
1)	113	0-54-31	180-03-40	41		
	98	90-47-09	270-47-13	11	90-43-30	
	85	180-08-02	0-07-58	08-00	180-04-19	
	101	270-49-49	90-49-54	51.5	270-46-10.5	
2)	113	90-03-04	270-03-07	03.5		
	98	180-46-35	0-46-39	34.5	31	30.5
	85	270-07-24	90-07-28	21	21.5	18
	101	0-49-08	180-49-14	11	07.5	09

44 °F 29.20 "HG 0 PPM

Z = 50/F 50/M

	89-50-57	5246.44	1599.120	
PP 98	270-09-05	5246.44	1599.118	HT=8.40
M	89-50-54	5246.44	1599.120	
			.119	
	89-50-27	5267.79	1605.633	
PP 85	270-09-42	5267.79	1605.625	HT=4.68
M	89-50-23	5267.79	1605.625	
			.628	
	89-55-28	5263.65	1604.359	
PP 101	270-04-38	5263.64	1604.362	HT=8.39
M	89-55-25	5263.64	1604.359	
			.360	



PP 100 M.C. H.D. BCSM IN HH 27|26 / 34|35 T3N R1W

PP 113 M.C. H.D. BCSM IN HH 34|35 / 3|2

PP 98 CROSSED OUT 1½" O.H.P. IN PVMT 28|27 / 33|34

PP 85 M.C. H.D BCSM IN HH 22|23 / 27|26

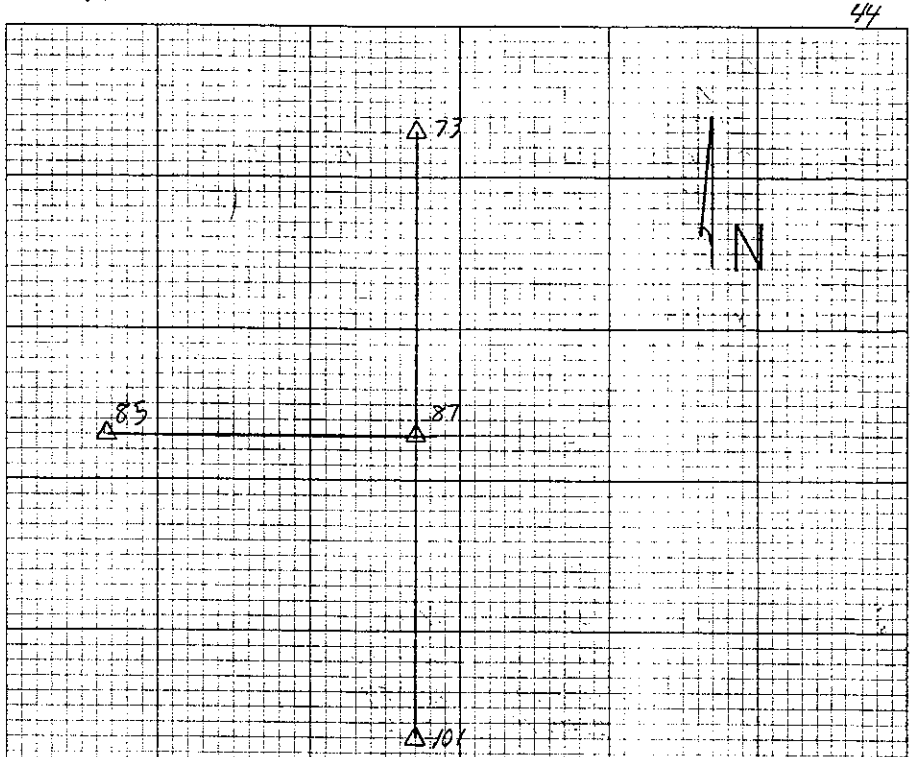
PP 101 M.C. H.D. BCSM IN HH 26|25 / 35|36

		D	R			
TK@	87	HI = 5.77				
1) 101		0-05-21	180-05-14	17.5		
85		90-53-31	270-53-30	39.5	90-48-13	
73		179-59-14	359-59-08	14	179-53-53.5	
~~88~~		NO PANEL				
2) 101		90-03-49	270-03-54	51.5		
85		180-52-06	0-52-08	07	15.5	14
73		269-57-41	89-57-44	42.5	51	52
~~88~~						

46°F 29.26 IN HG 0 PPM

			IN/FT	IN/M	
			5269.90	1606.265	
PP 101		90-05-09	5268.89	1606.267	HT = 8.39
	M	90-04-59	5269.90	1606.268	.267
			5252.06	1600.830	
PP 85		89-54-32	5252.06	1600.830	12.48
		270-09-46	5252.07	1600.833	HT = ~~4.68~~
	M	89-54-23	.06	.831	
			5275.02	1607.828	
PP 73		89-51-52	5275.03	1607.829	HT = 8.42
	M	270-08-22	5275.01	1607.832	
		89-51-45		.830	

~~PP 88~~



PP 87			BCSM	IN	HH	23|24 / 26|25 T3N R1W
PP 101	M.C. H.D.		BCSM	IN	HH	26|25 / 35|36
PP 85	M.C.H.D.		BCSM	IN	HH	22|23 / 27|26
PP 73	M.C.H.D.		BCSM	IN	HH	14|13 / 23|24
~~PP 88~~	NO PANEL					

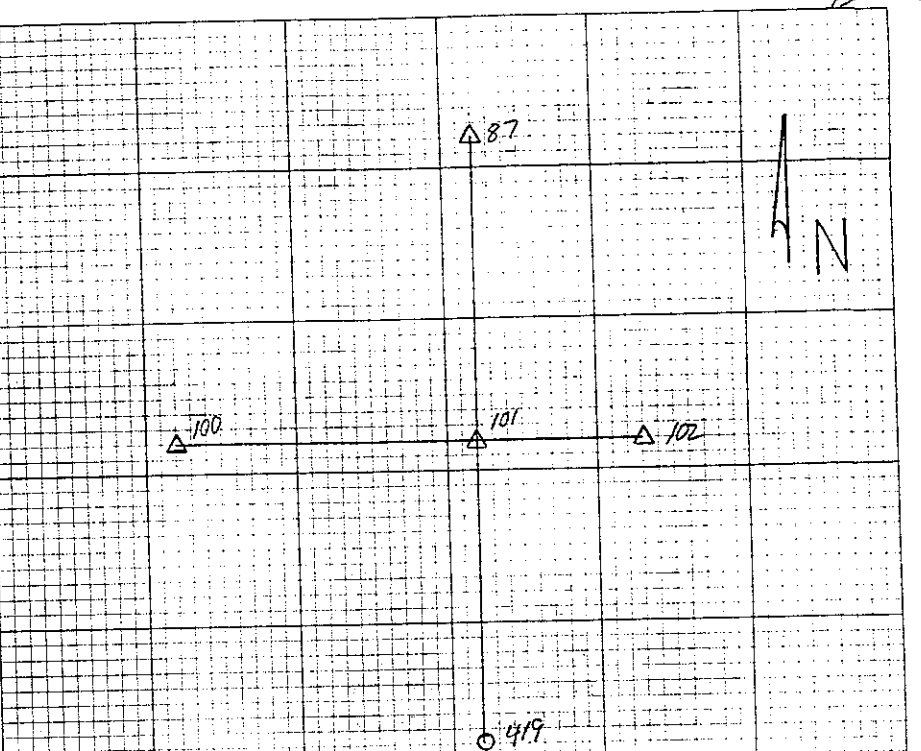
At @ 101 HI = 5.62

		D	A			
1)	419	0-03-56	180-04-05	04-00.5		
	100	90-56-22	270-56-12	17	90-52-16.5	
	87	180-06-42	0-06-34	38	180-02-37.5	
	102	270-45-56	90-45-53	54.5	270-41-54	
2)	419	90-02-59	270-02-55	57		
	100	180-55-14	0-55-06	10	13	15
	87	270-05-40	90-05-36	38	41	39
	100	0-44-53	180-44-51	52	55	545

70° °F 29.2 "HG 12 PPM

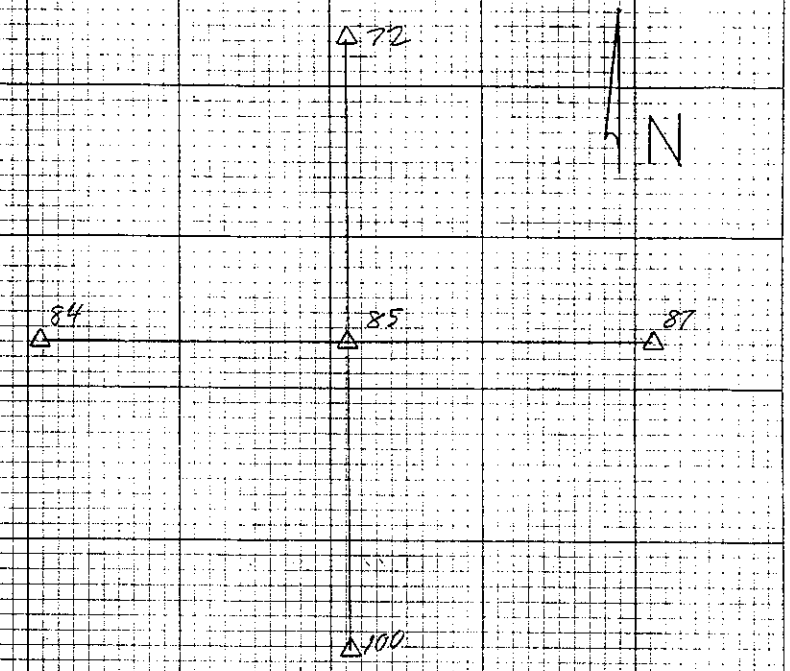
2" .50/FT .50/FT

	90-01-32	2645.13	806.238	
PP 102	269-58-38	2645.13	806.238	HI = 4.39
		2645.14	806.238	



PP 101	M.C. H.D.	BCSM	in	HH	26|25 / 35|36	T3N R1W
TRAV PT 419	M.C. H.D.	BCSM	in	HH	35|36 / 2|1	
PP 100	M.C. H.D.	BCSM	in	HH	27|26 / 34|33	
PP 87		BCSM	in	HH	23|24 / 26|25	
PP 102	NAIL & OLIVE AVE @ BRIDGE					

	TO 85	HI = 5.73				
	D	R				
1) 100	0-04-31	180-04-38		345		
84	90-46-34	270-46-36		35	90-42-00.5	
72	179-44-01	359-44-06		035	179-39-29	
87	270-45-22	90-45-08		75	270-40-40.5	
2) 100	90-01-24	270-01-28		26		
84	180-43-27	0-43-23		26	00	00
72	269-40-54	89-40-57		555	29.5	29
87	0-42-07	180-42-04		05.5	39.5	40
	73°F	29.20" Hg	15 ppm			
	zw	STD/F	STD/M			
	89-49-32	5255.22	1601.794			
	270-10-45	5255.23	1601.796			
PP 84	89-49-24	5255.22	1601.797			HT = 8.38
	89-46-58	5267.38	1605.501			
PP 72	270-13-13	5267.38	1605.502			
m	89-46-54	5267.39	1605.501			HT = 8.39



PP 85 M.C.H.D. BCSM IN HH 22|23 / 27|26 TSW RIW

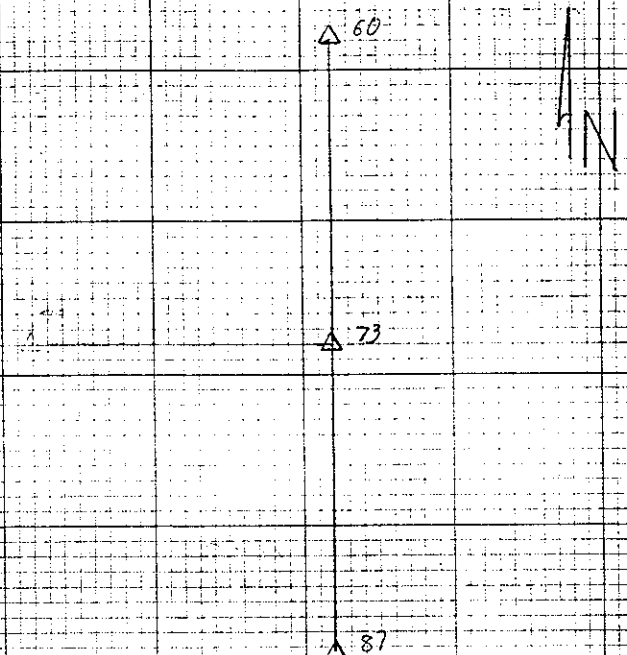
PP 100 M.C.H.D. BCSM IN HH 27|26 / 34|35

PP 84 5/8" I.P. BELOW PUNT 27|22 / 28|27

PP 72 NAIL IN PUNT (PATCH)

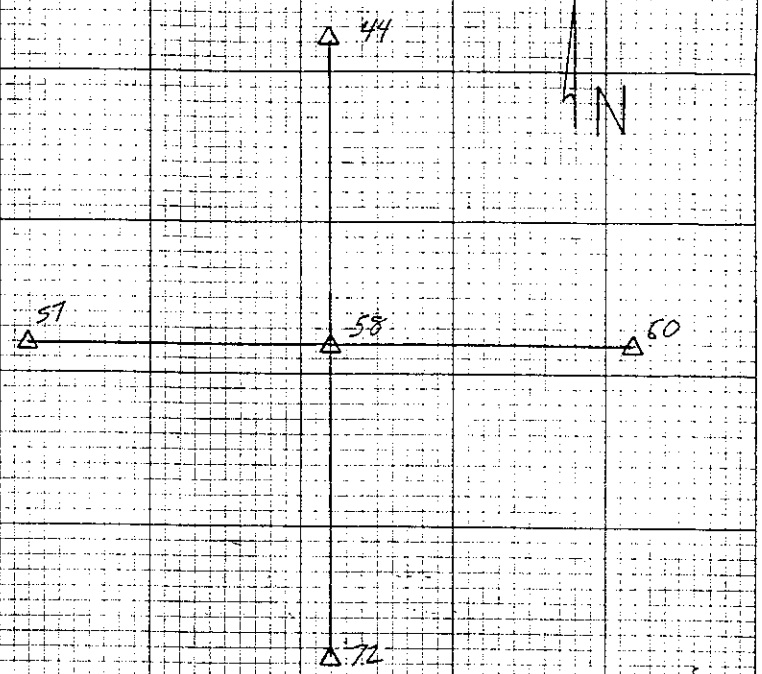
PP 87 BCSM IN HH 23|24 / 26|25

X@	73	HI = 5.76				
	D	R				
1/ 87	0-03-49	180-03-49		49		
~~72~~	WOT VIS					
60	180-11-14	0-11-09		11.5	180-07-22.5	
2/ 87	90-05-15	270-05-12		13.5		
~~72~~						
60	270-12-28	90-12-26		27	13.5	18.
~~AP 72~~						
	76°F	27.05" Hg	16 RPM			
	E/W	SD/FT	SD/M			
AP 60	89-46-52	5286.96	1611.463			HT= 8.39
	270-13-16	5286.98	1611.460			
m	89-46-48	5286.96	1611.456			
		.97	.460			



AP 73	M.C.H.D.	BCSM 1N	H.H	14/13 / 23/24	73N RTW
AP 87		BCSM 1N	H.H	23/24 / 26/25	
~~AP 72~~	~~MAC 1N PRM~~				
AP 60	EC MIRAGE	BCSM	1N H.H	11/12 / 14/13	

At @ 58	Ht. = 5.42					
	D	K				
1) 72	0-10-34	180-10-29		31.5		
57	90-47-03	270-47-01		02	90-36-30.5	
44	179-57-57	359-57-54		55.5	179-47-24	
60	270-39-02	90-39-01		01.5	270-28-30	
2) 72	90-08-04	270-08-06		05		
57	180-44-32	0-44-28		30	25	28
44	269-55-26	89-55-22		24	19	21.5
60	0-36-38	180-36-38		38	33	31.5
	78°F	29.91 HG	1.8 PPM			
	2 W	50/F	50/m			
	90-12-26	5277.68	1608.635			
PP 72	269-47-39	5277.68	1608.636			
m	90-12-24	5277.67	1608.637		Ht = 8.39	
		5246.60	1599.171			
	89-53-53	5246.60	1599.170			
PP 57	270-06-10	5246.61	1599.170		Ht = 4.68	
m	89-53-52					
	89-47-59	5275.25	1607.897			
PP 44	270-11-52	5275.24	1607.904			
m	89-48-04	5275.23	1607.900		Ht = 8.48	
			485			
	90-07-18	5250.~~83~~ 74	1600.~~458~~ 497			
PP 60	269-52-50	5250.81	1600.497			
m	90-07-14	5250.72	1600.483		Ht = 8.39	
			.488			



PP. 58 CROSSED OUT P.K. IN W DIRECTION WADDELL & DYCUS 10/11 15/14

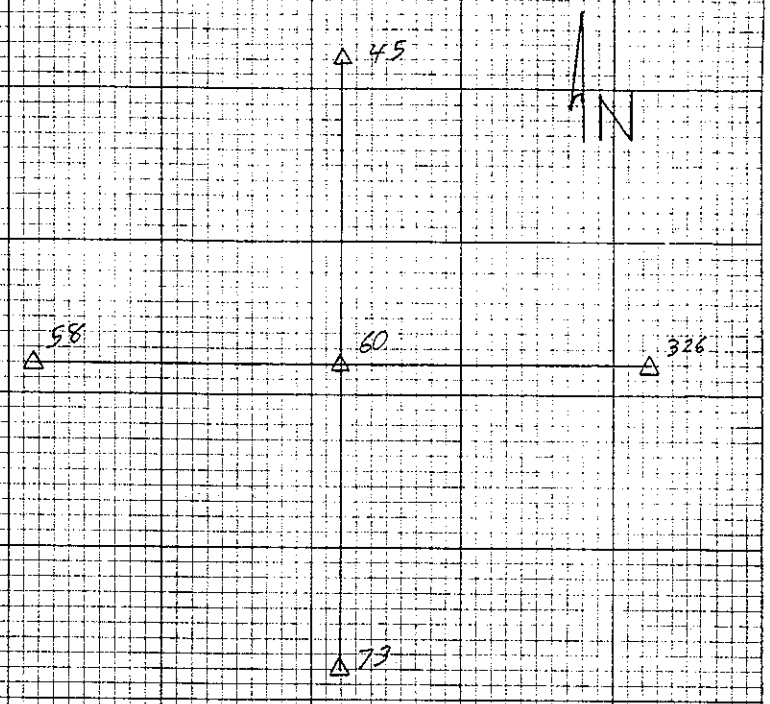
PP. 72 NAIL IN PVMT

PP. 57 M.C. H.P. B.C.S.M. 9/10 16/15

PP 44 M.C. H.P. B.C.S.M. W AH 3/2 10/11

PP. 60 EL. MIRAGE B.C.S.M. IN H.H. 11/12 14/13

	At @ 60	H.I. = 5.77				
	D	R				
1) 73	0-03-44	180-03-41		42.5		
58	90-39-45	270-39-41		43	90-36-00.5	
45	180-06-34	0-06-36		35	180-02-52.5	
326	270-35-44	90-35-44		44	270-32-01.5	
2) 73	90-06-58	270-06-55		56.5		
58	180-42-54	0-42-51		52.5	35-56	35-58
45	270-09-55	90-09-46		50.5	54	53
326	0-38-54	180-38-55		54.5	31-58	32-00
	58°F	29.10"HG	8 PPM			
	2W	SUNNY	SUNNY			
	89-47-15	5280.75	1609.568			
PP 45	270-13-00	5280.70	1609.565			HT = 12.38
M	89-47-08	5280.74 (.73)	1609.564 (.566)			
		5263.95	1604.459			
PP 326	90-05-49	5263.99	1604.460			
	269-54-39	5263.96 (.97)	1604.456 (.458)			HT = 10.40
M	90-05-35					



PP 60 EC MIRAGE B.C.S.M. 1" IN HH — 11|12 / 14|13 — T 3N R 1W

PP 73 M.C.H.D. B.C.S.M. IN HH — 14|13 / 23|24

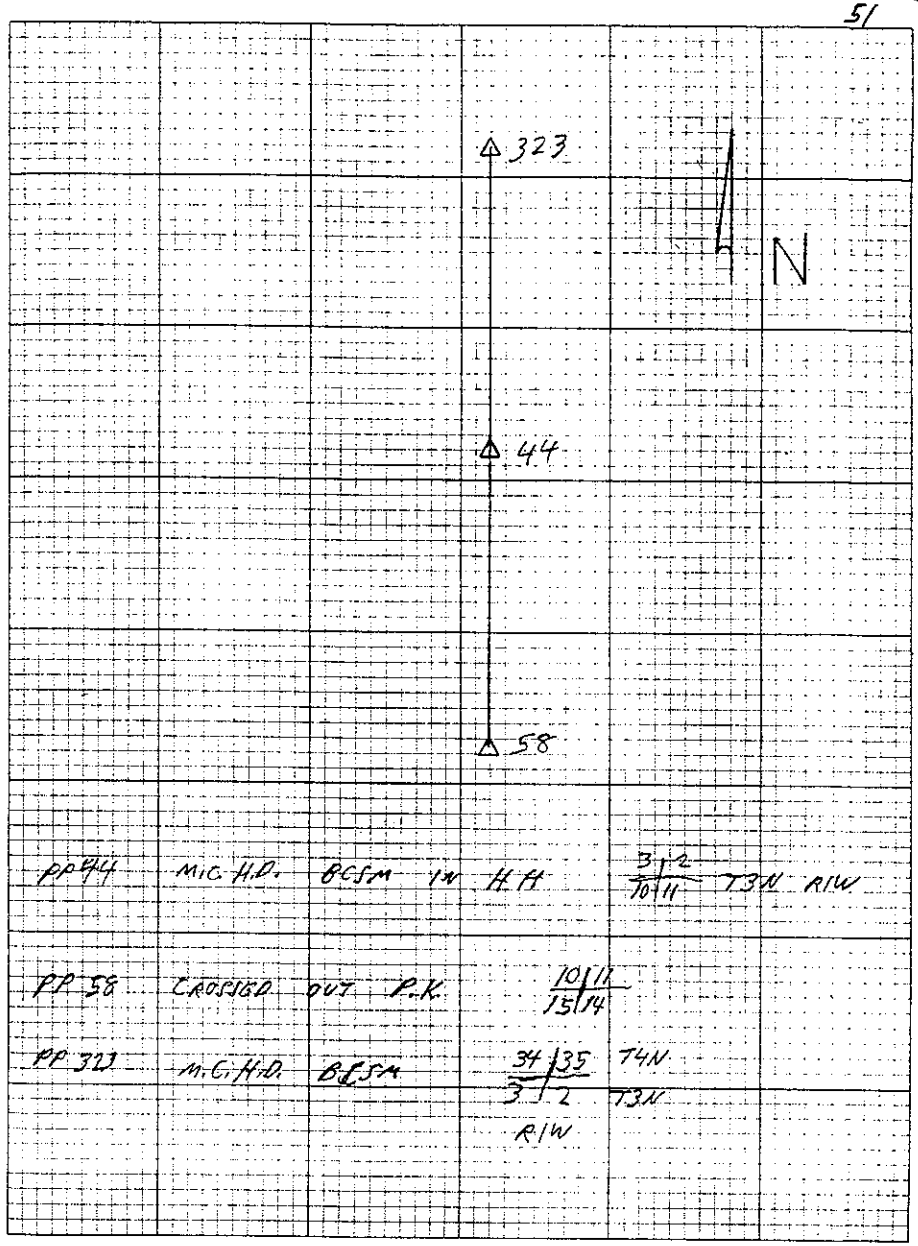
PP 58 CROSSED OUT P.K. IN PVMT. — 10|11 / 15|14

PP 45 1/2" O.I.P. BELOW PVMT — 2|1 / 11|12

PP 326 'X' IN CONCRETE — 12|7 / 13|18 — T 3N R 1W R 1E

	At@ 44	HI = 5.75				
	∠	R				
1) 58	0-06-30	180-06-33		-3.15		
323	180-16-28	0-16-18		+23	180-09-51.5	
3) 58	90-01-19	270-01-19		19		
323	270-11-17	90-11-13		15	56	54
	68°F	29.10" HG	12 PPM			
	2M	SO/F	corm			
PP 323	89-43-16	5497.92	1675.787			
	270-16-58	5498.00	1675.771			Hte 8.48
M	89-43-09	5497.96	1675.788			
			(.96)			
				(.782)		

51



PP 44 M.C. H.D. BCSM 1N H.H. 3/10 1/11 T3N R1W

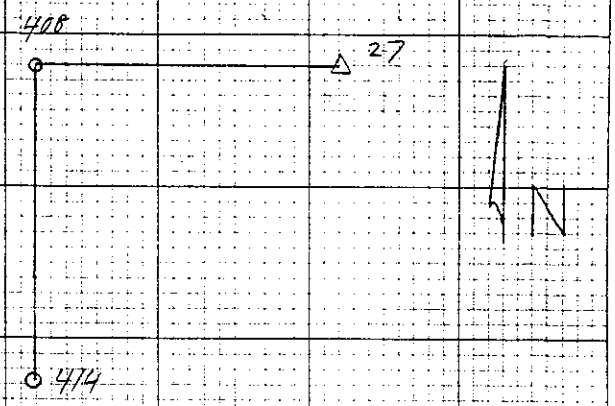
PP 58 CROSSED OUT P.K. 10/15 11/14

PP 323 M.C.H.D. BESM 34/3 35/2 T4N T3N R1W

ANGLES TO CLOSE PREVIOUS TRAVERSE

AT @ 408

		D	R			
1)	27	0-04-50	180-04-47	48.5		
	414	89-29-40	269-29-49	46	89-24-57.5	
2)	27	90-08-12	270-08-05	085		
	414	179-32-54	359-32-56	55	465	52

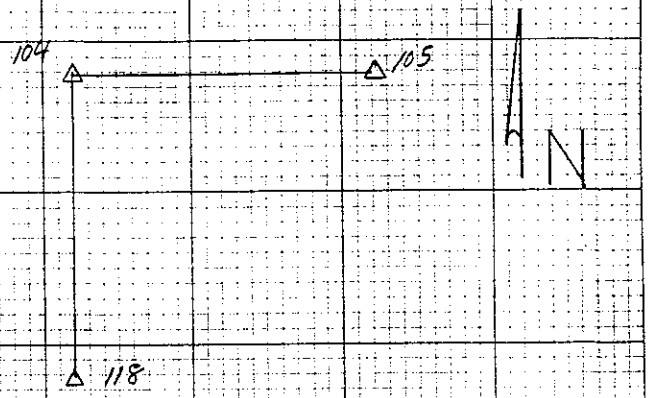


408 TRAV AT FND P.K. & SHINER

PP 27 M.C.S.R.O. BCSM IN HH 35|36 T.4N / 2|1 T.3N R2W

414 TRAV PT 1" O.I.P. 3|2 / 10|11

	∠@	104				
		∅	℄			
1)	105	0-09-42	180-09-44	43		
	118	89-23-04	269-23-01	02.5	89-13-19.5	
2)	105	90-12-25	270-12-20	22.5		
	118	179-23-45	359-25-44	44.5	22	21



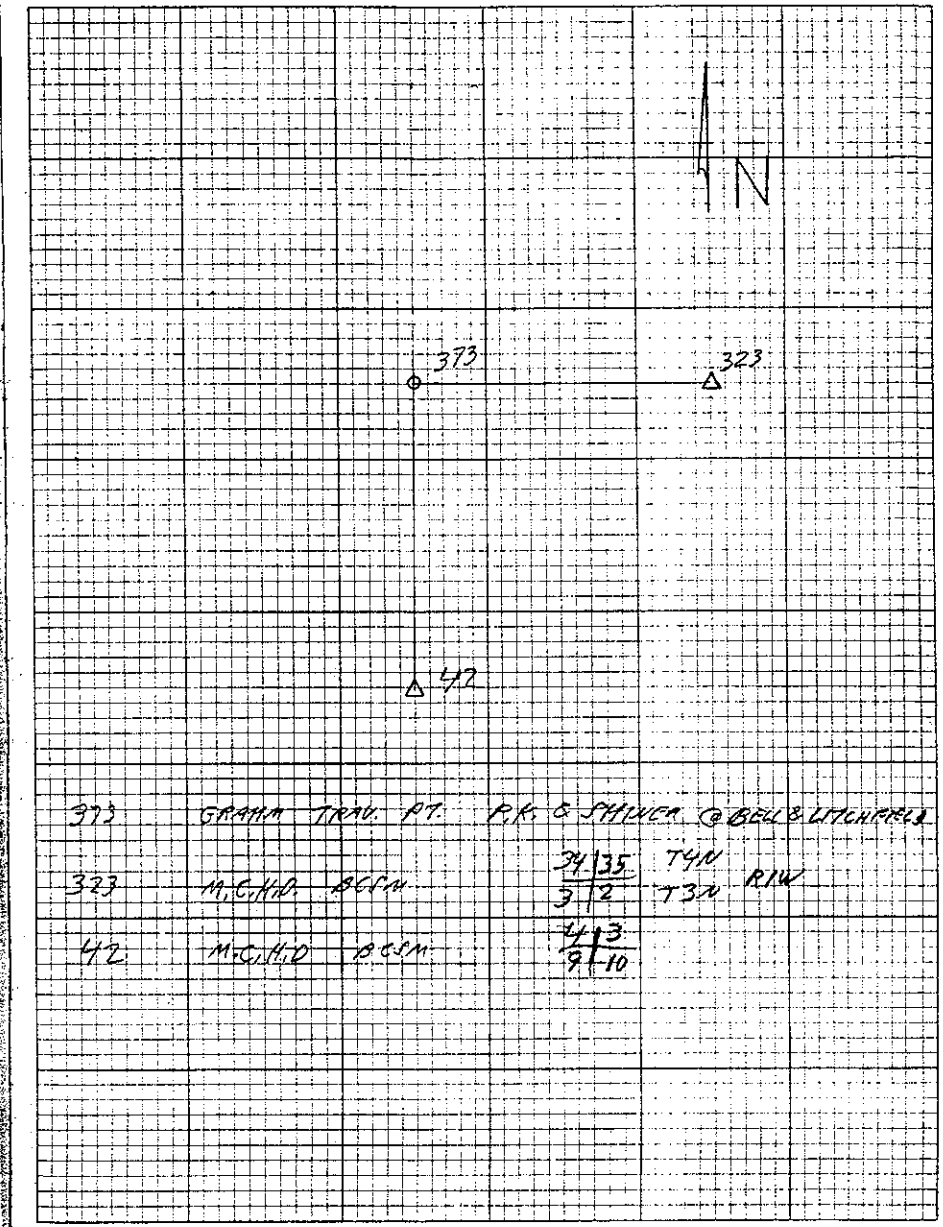
RP 104 — CROSSED OUT NAIL BELOW PUNT — 33/4 | 33/4 T.7N. R2W / 4/3 T2N

RP 105 — 1" O.H.P. BELOW PUNT — 34/3 1/2

RP 118 — 1 1/2" I.C.P BELOW PUNT — 4/3 / 9/10

		D	R			
	1@ 373		HI =	5.26		
1) 323		0-02-31	180-02-26		28.5	
42		90-15-20	270-15-31		255	90-12-57
2) 323		90-02-58	270-03-03		03-00.5	
42		180-16-02	0-16-04		03	13-02.5 90-13-00

	72°F	29.00" HG	15 MPH	
	2w	50%	50/m	
373 42	90-13-28	5370.88	1639.174	
	269-46-30	5377.88	1639.179	HT = 4.89
323	90-13-34	5377.91 (89)	1639.175 (176)	



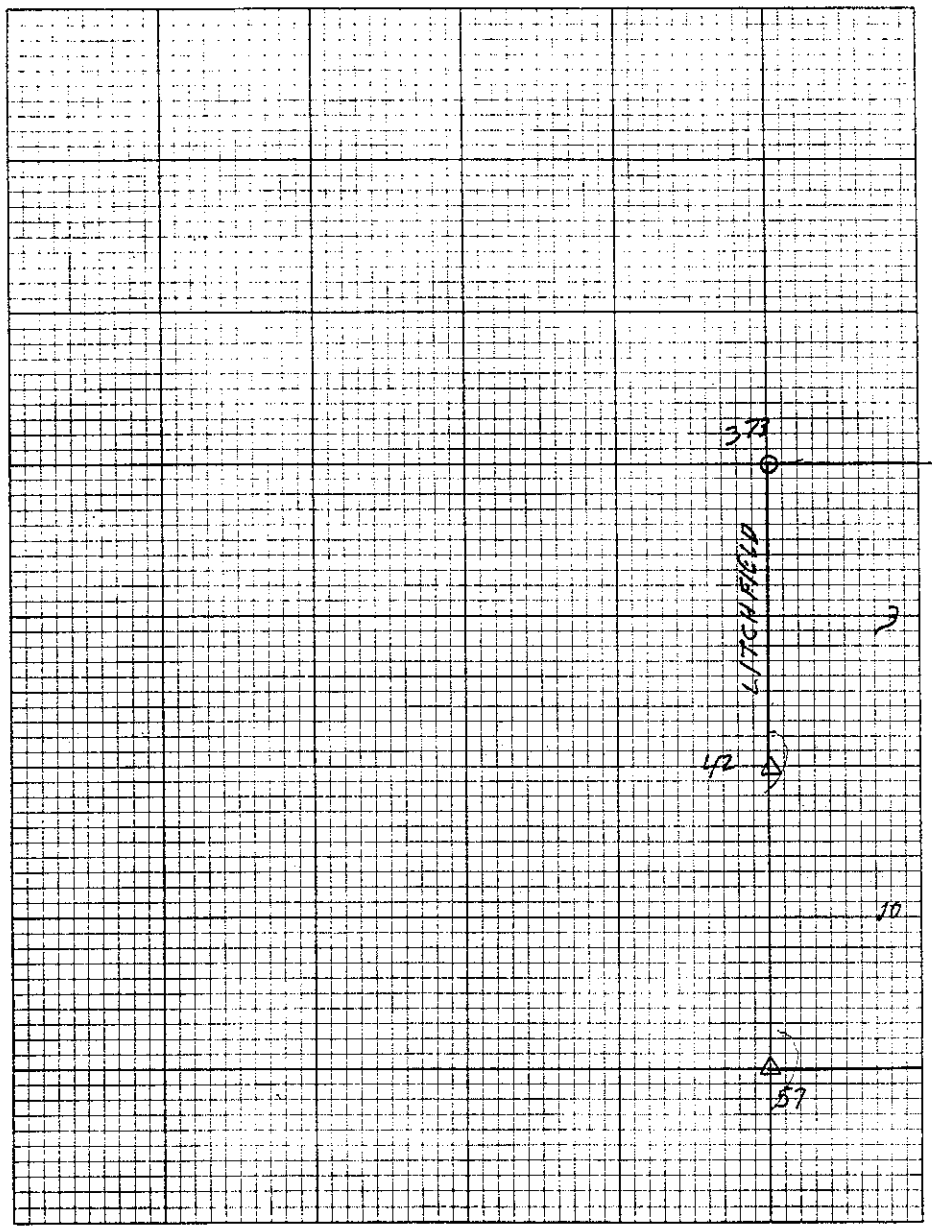
373 GRAHM TRAV. PT. R.R. & SHINER @ BELL & LITCHFIELD

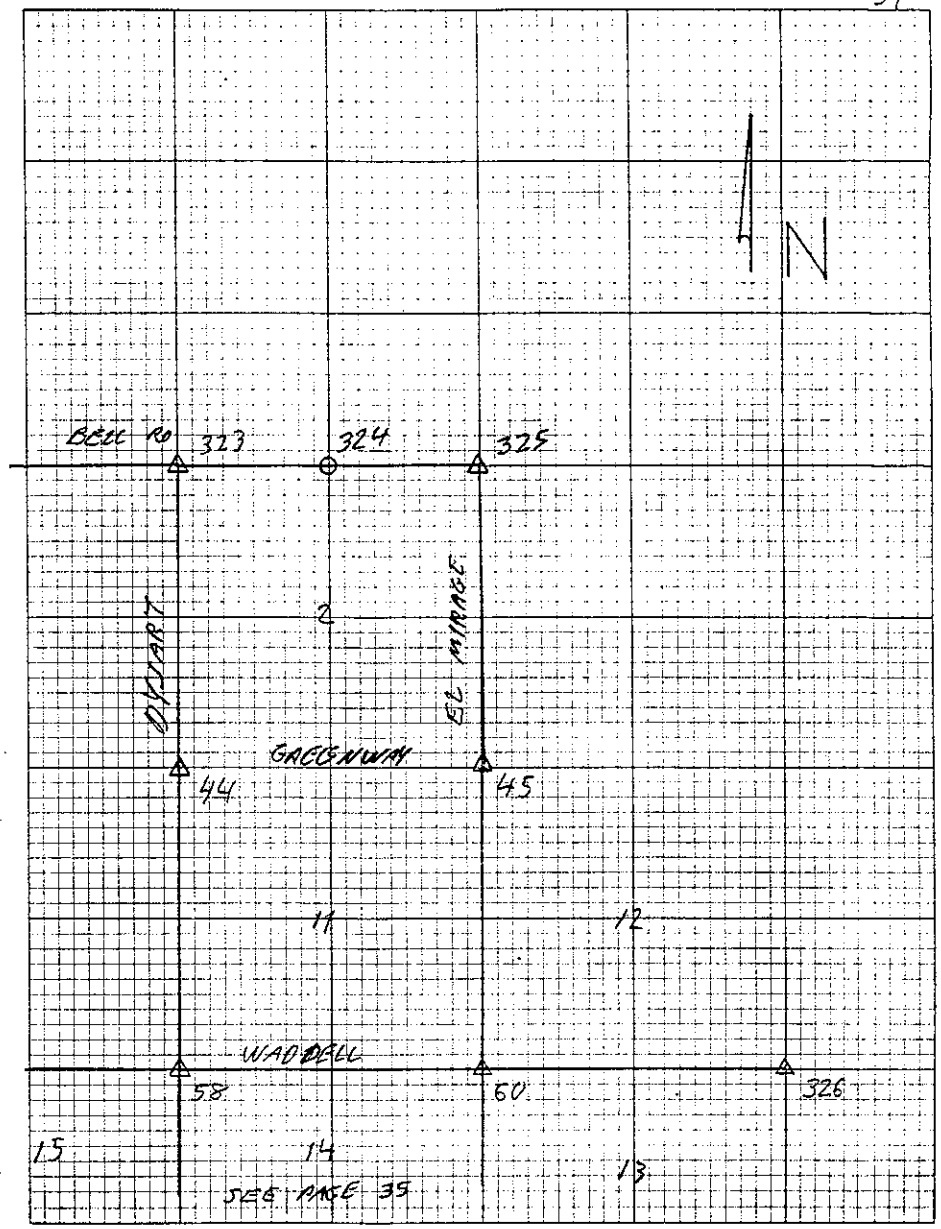
323 M.C.H.D. 8 CSM

42 M.C.H.D. 8 CSM

34 | 35 T4N
3 | 2 T3N R1W

4 | 3
9 | 10


323
CASTLEGATE
2
42
10
57


N
BELL RD
323
324
325
CLYDESDALE
2
EL MIRAGE
GREENWAY
44
45
11
12
WADDELL
58
60
326
15
14
13
SEE PAGE 35

	A @ 325		HI = 5.82			
	A		R			
1) 45	0-12-24	180-12-25		245		
324	89-11-40	269-11-44		42	88-59-17.5	
2) 45	90-07-30	270-07-28		29		
324	179-06-45	359-06-49		47	-18	18

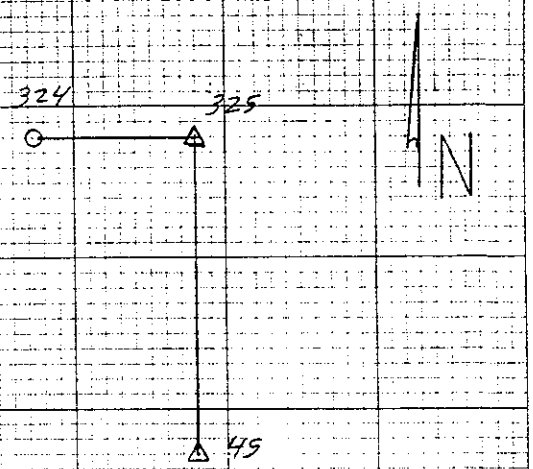
51° 29.10" 2 PTM

PP	90-15-20	5530.27	1685.630		
45	269-45-00	5530.27	1685.630		
m	90-15-20	5530.27	1685.628		HT = 8.39
			629		

PP 324	89-52-00	2963.76	903.355		
	270-08-08	2963.75	903.3561		
m	89-51-56	2963.76	903.357		HT = 7.50

1/11/90

55



PP 325 M.C.H.O. BEAR W 111° $\frac{35}{2}\frac{15}{1}$ T4N R1W T3N

PP 45 1" O.I.R. BELOW PUNT $\frac{2}{11}\frac{1}{12}$

PP 324 P.K. & SHINER TRAV. PT / VERTICAL PANEL

At @ 323 HI = 5.31

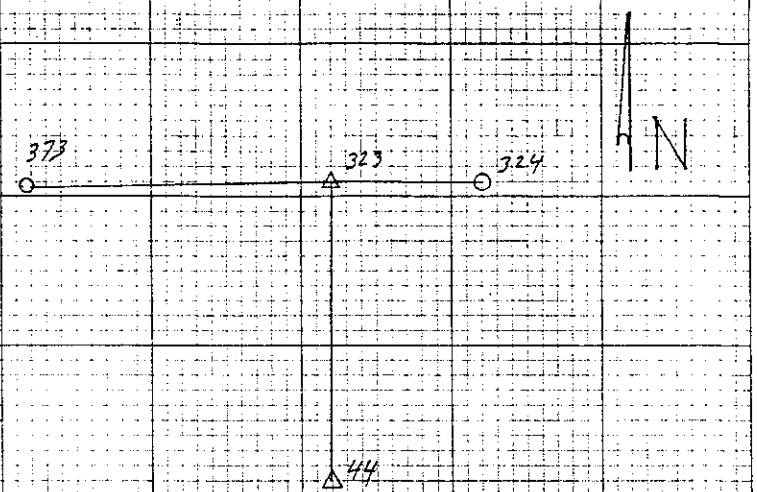
		D	A			
4]	44	0-08-32	180-08-38	35		
	373	89-42-51	269-42-46	48.5	89-34-135	
	324	271-37-21	91-37-19	20	271-28-45	
2]	44	90-03-43	270-03-45	44		
	373	179-38-08	359-37-58	38-03	20	17
	324	01-32-33	181-32-30	37.5	48.5	47

60°F 29.05" HG 8 PPM

2" SOTE 50.1m

	89-50-13	5266.44	1605.211	
	270-09-54	5266.42	1605.211	HT = 8.39
373				
M	89-50-10	5266.43	1605.212	

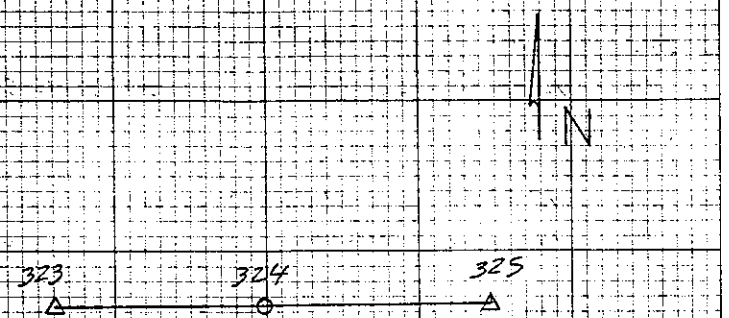
	90-09-37	2305.72	702.785	
PP 324	269-50-42	2305.69	702.787	HT = 7.50
		2305.72 (71)	702.787 (786)	



PP 323	M.C.H.O.	BCSM	34 | 35 / 3 | 2	T4N R1W T3N
PP 44	M.C.H.O.	BCSM IN HH		31 N | 2 11
373	GRAHAM TRACT PP @ INTERSECTION		P.R. & SHINER BELL & LITCHFIELD	

↑ @ 324

	D	R			
1) 325	0-14-05	180-14-19	085		
323	182-40-35	02-40-35	35	182-26-25.5	
2) 325	90-05-08	270-05-09	085		
323	272-31-26	92-31-24	25	16.5	21

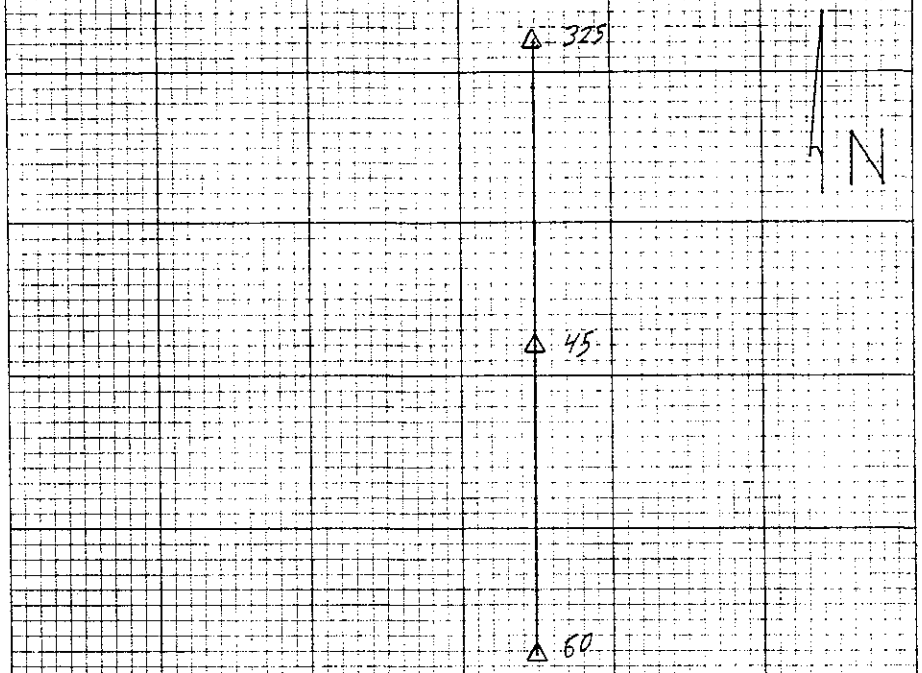


PP 324 VERTICAL ANGLE / TRAV PT P.R & FWDCK

PP 325 M.C.H.D. ACSM W HA $\frac{35}{2}\left|\frac{3}{1}\right.$ T4N T3W R4W

PP 303 M.C.H.D. ACSM $\frac{34}{3}\left|\frac{35}{2}\right.$

		A @ 45				
		D	B			
1)	60	0-02-08	180-02-06	07		
	325	180-07-15	0-07-10	12.5	180-05-05.5	
2)	60	90-09-01	270-09-04	02.5		
	325	270-14-07	90-14-08	07.5	05	05



PP 45 1" O.I.P. BELOW PUNT 2/11 T3N R1W 11/12

PP 60 EL MIRAGE BCSM IN HH 11/12 14/19

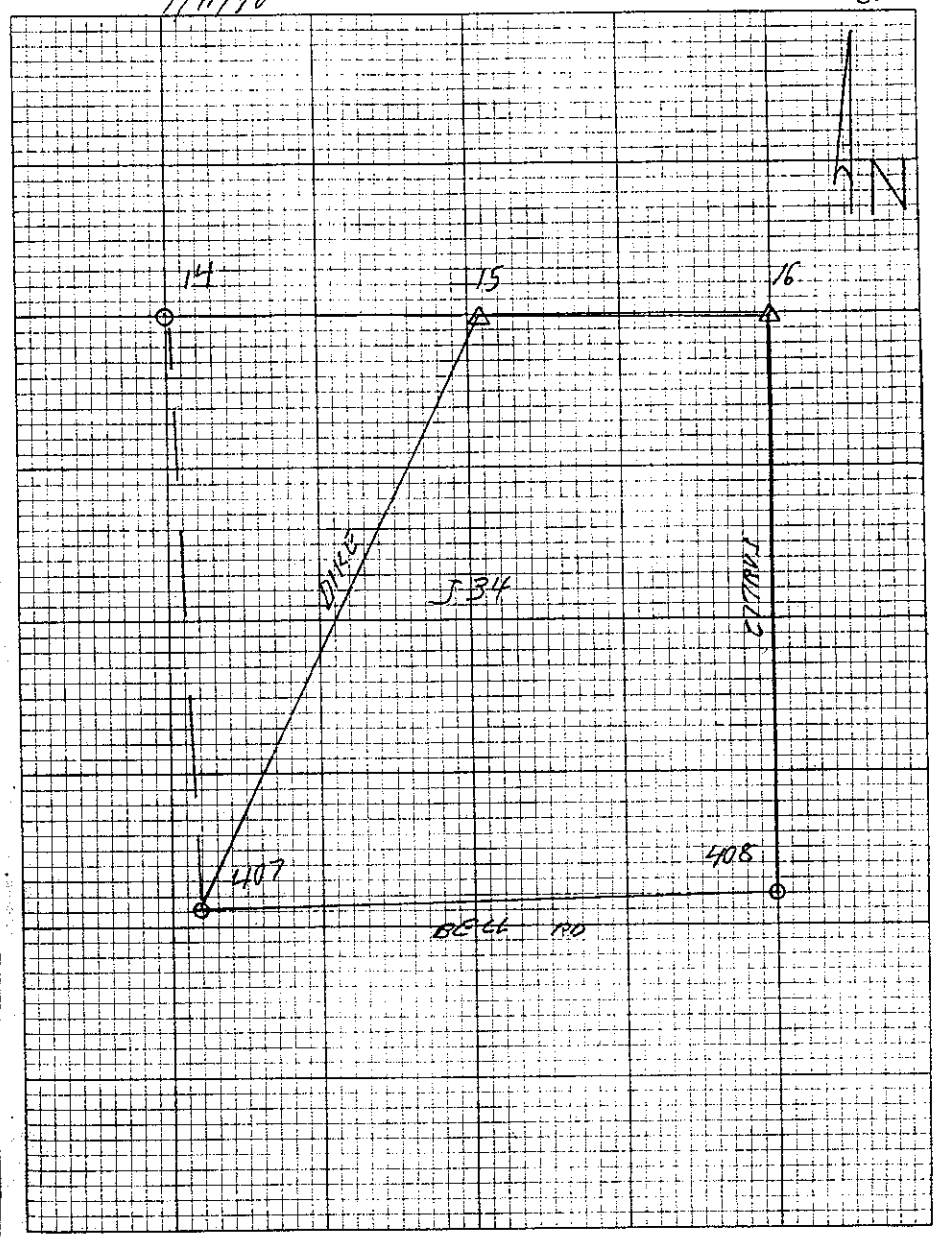
PP 325 M.C.H.D. BCSM IN HH 35/2 36/1

TRAVERSE AROUND SEC 34 T4N R2W

TRIG LEVEL TO AP 15 & AP 14

1/11/90

60

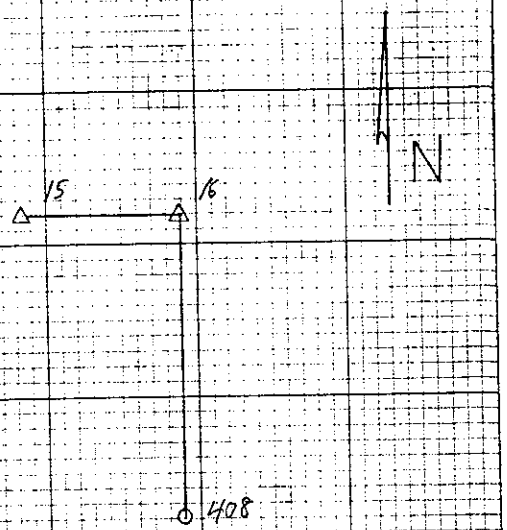


At @ 16 HT =

	D	R			
# 408	00-03-01	180-02-58	02-59.5		
15	89-19-10	269-19-11	10.5	89-16-11	
# 408	90-07-50	270-07-52	51		
15	179-24-03	359-24-54	03.5	12.5	12

85° 28.80 11 HR. 24 PPM

		2462.75	750.650	
PP 15	89-07-19	2462.76	750.648	HT = 8.38
	270-52-33	2462.75	750.649	
16	89-07-23			



℄@ 407		HI = 5.44			
	D	↗			
4 15	00-01-59	180-02-02	02-00.5		
408	62-23-50	242-23-54	52	62-21-51.5	
2 15	90-05-27	270-05-32	29.5		
408	152-27-19	332-27-22	20.5	51	51

84° 11 HG 23 PPM
28.80

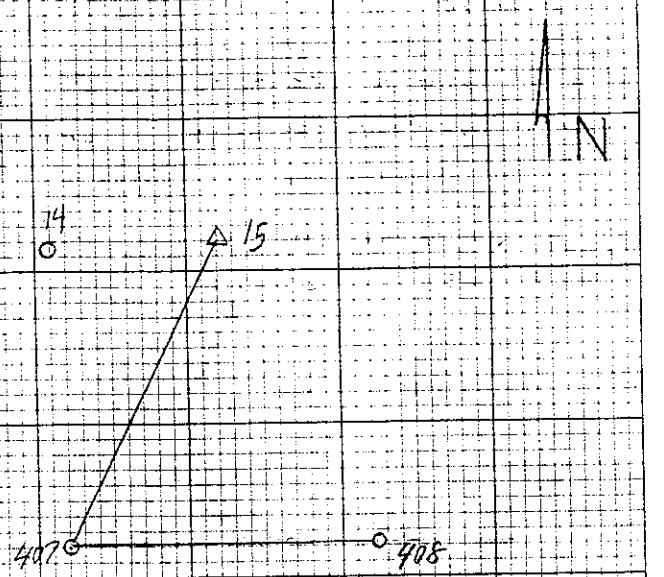
PP 15	89-58-57	5975.95	1821.468	
	270-01-00	5975.94	1821.472	HT = 8.93
m	89-58-58	5975.94	1821.470	

1/14/90 ℄@ 407 HI = 5.30

28.80 HG 65° F 14 PPM

	Zm	SDIST	SDIFm	
PP 14	90-03-20	5354.61	1632.088	12.48
	269-56-50	5354.64	1632.091	HT = 8.48
m	90-03-15	5354.61	1632.090	

62



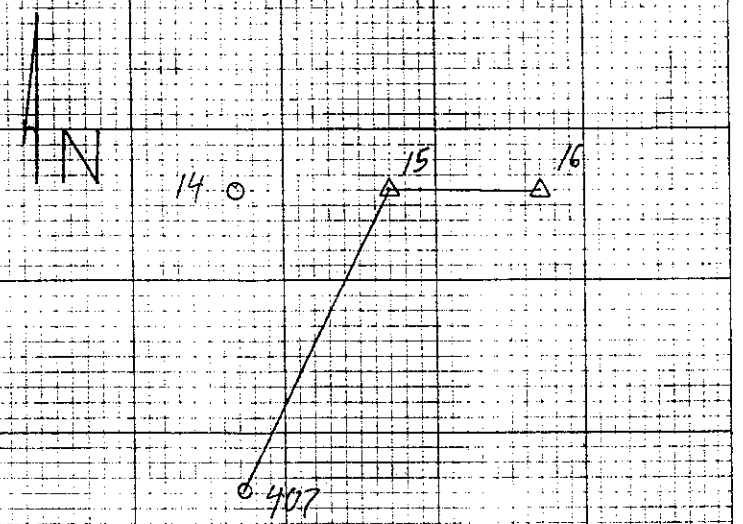
T @ 15 HI = 5.45

	D	R		
11 16	00-02-34	180-02-36	35	
407	115-53-45	295-53-44	44.5	115-57-09.5
21 16	90-05-51	270-05-50	50.5	
407	205-57-03	25-57-00	57-01.5	11 10.

79° 11 #6 28.80 21 PPM

	90-08-37	2788.56	849.957
		2788.56	849.955
90 14	269-51-24	2788.55	849.956
M	90-08-37		

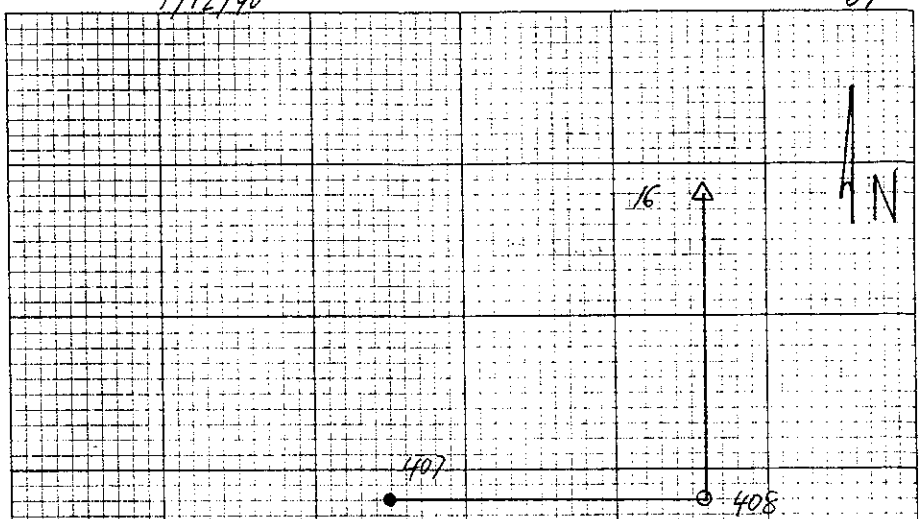
HT = 8.94



1/12/90

64

	@ 408		HI = 5.38		
		S	R		
1) 407		00-03-47	180-03-44	45.5	
	16	92-34-35	272-34-31	33	92-30-47.5
4) 407		90-06-48	270-06-48	48	
	16	182-37-32	02-37-30	31	43 45
		61°	2885.11 H6	9 PPM	
		Zu	SOFC	SDCm	
PP 16		89-46-07	5222.61	1591.847	HT = 8.45
		270-14-11	5222.61	1591.855	
	m	89-45-58	5222.60 (.61)	1591.856 (.853)	

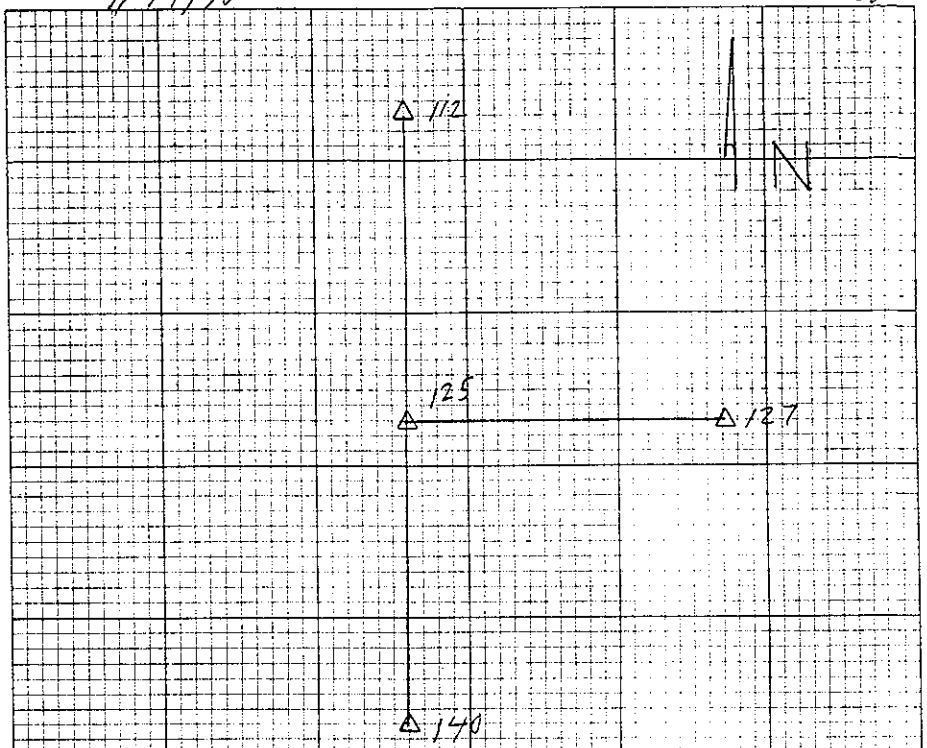


TRAV PT 408 — P.K. & SHINER @ BELL & CITRUS

TRAV PT 408	SET NAIL & SHINER @	BELL & DIKE		
PP-16	RADIAL	RADIAL	NAIL & SHINER	

STA	+	HI	—	ELEV	
PP 132				1153.06	1" I.R.
	5.44	1158.50			
TRAV PT 402			5.10	1153.40	400 MAR
	5.36	1158.76			
PP 132			5.70	1153.06	
PP 25					NAIL & SHINER
	2.48				
TRAV PT 407			5.05		NAIL & SHINER
	4.90				
PP 25			1.31		

		@ PP 125 D	R			
1)	PP 112	00-01-28	180-01-32	30		
	PP 127	93-08-41	273-08-37	39	93-07-09	
	PP 140	182-15-51	02-15-44	47.5	182-14-17.5	
2)	112	90-05-10	270-05-08	09		
	127	183-12-17	03-12-18	17.5	08.5	09
	140	272-19-26	92-19-26	26	17	17



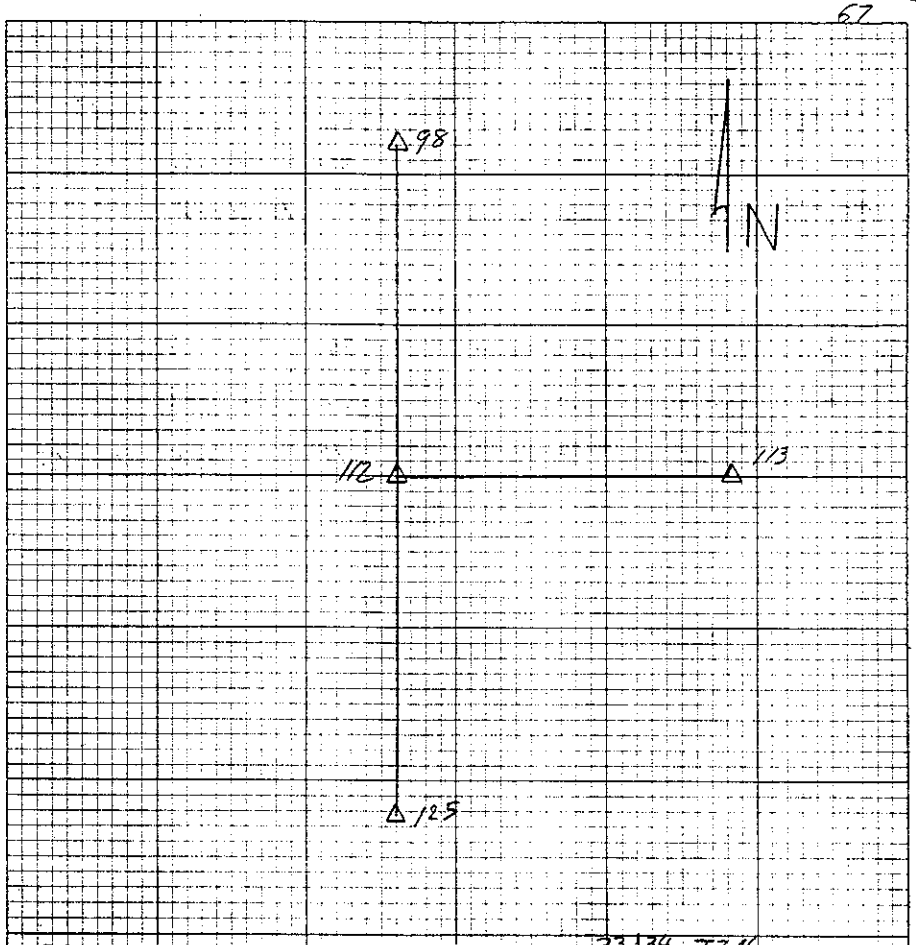
PP 125 M.C.H.D. BCSM IN HH $\frac{4B}{9|10}$ T2N R14W

PP 112 M.C.H.D. BCSM IN HH $\frac{33|34}{4|3}$

PP 127 BOLT IN CONCRETE IN HH $\frac{312}{10-11}$

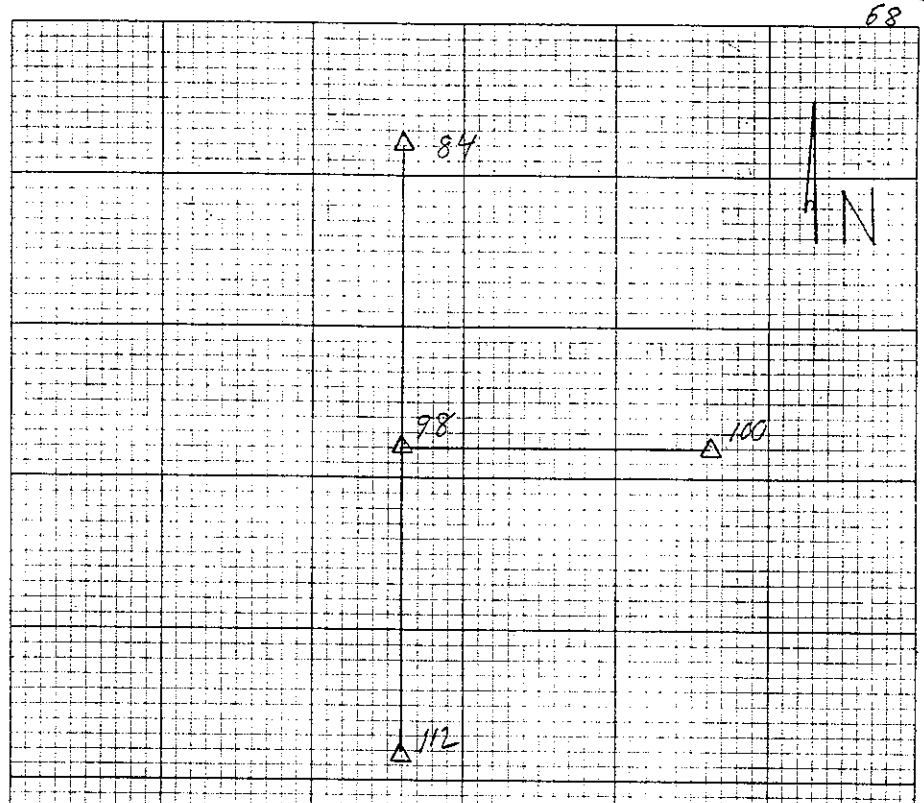
PP 140 M.C.H.D. BCSM IN HH $\frac{9|10}{16|15}$

		@ PP 112 D	R			
1)	PP 98	00-03-33	180-03-33	37		
	PP 113	90-41-42	270-41-34	38	90-38-05	
	PP 125	177-46-25	357-46-25	25	177-42-52	
2)	98	90-05-45	270-05-37	41		
	113	180-43-34	00-43-26	30	37-49	37-57
	125	267-48-31	87-48-29	30	49	50.5



PP 112	M.C. H.D.	BCSM IN HH	33/4 | 34/3	73.N T2.N RIW
PP 98	CROSSED-OUT 1½" O.I.P. IN PVMT		28/33 | 27/34	
PP 113	M.C.H.D.	BCSM IN HH	34/3 | 35/2	
PP 125	M.C.H.D.	BCSM IN H.H	4/9 | 3/10	

	∠@ D	PP 98 A			
1) PP 84	00-04-54	180-04-00	02		
PP 100	90-48-59	270-48-56	57.5	90-44-55.5	
PP 112	180-10-24	00-10-18	21	180-06-19	
2) 84	90-06-42	270-06-39	38		
100	180-51-36	00-51-35	35.5	52.5	56.5
112	270-12-53	90-12-56	54.5	16.5	18



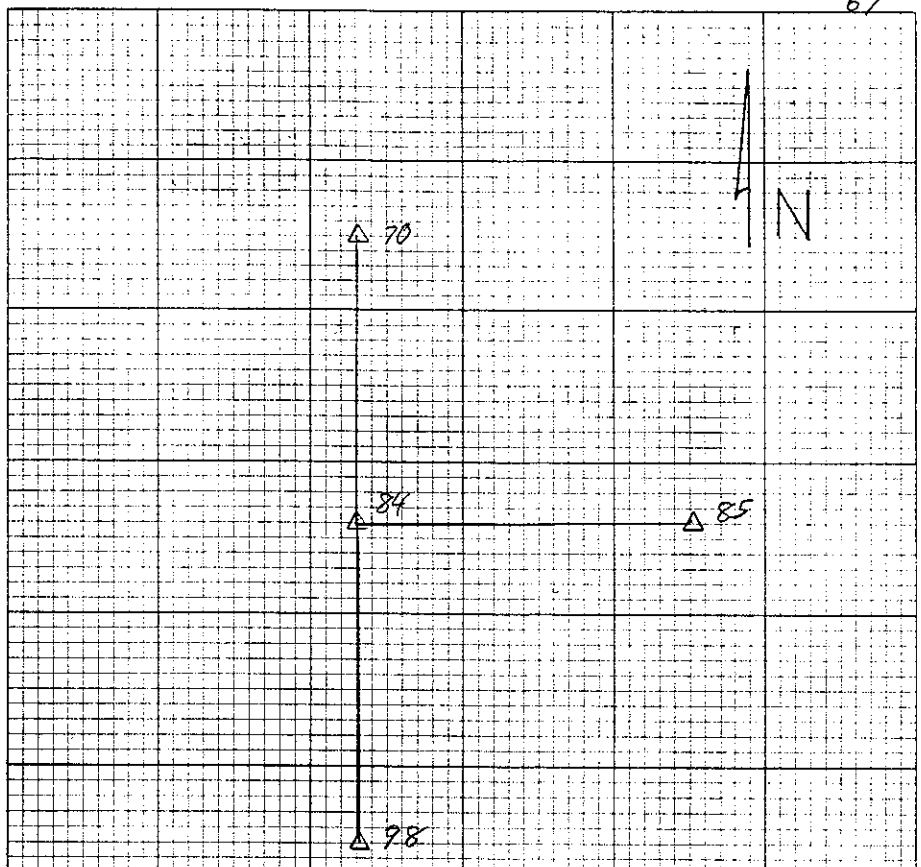
PP 98 CROSSED-OUT 1½" O.I.P. IN PVMT. 28|27 / 33|34 13M A.W.

PP 84 5/8" I.P. BELOW PVMT. 24|22 / 28|27

PP 100 M.C.H.D. BCSM IN H.H. 27|26 / 34|35

PP 112 M.C.H.D. BCSM IN H.H. 33|34 / 4|3

	∠ @ P	∠ P	84			
PP 70	00-02-10	180-02-09		09.5		
PP 85	90-52-10	270-52-07		08.5	90-49-59	
PP 98	180-04-22	00-04-25		23.5	180-02-14	
70	90-05-43	270-05-45		44		
85	180-55-45	00-55-45		45	90-50-01	50-00
98	270-08-02	90-08-02		02	18	16



PP 84 — 5/8" I.P. BELOW PUNT — 21|22 / 28|27 — T3N R1W

PP 70 — M.C.H.D. BCSM — 16|15 / 21|22

PP 85 — M.C.H.D. BCSM IN H.H — 22|23 / 27|26

PP 98 — CROSSED OUT 1½" O.I.P. IN PUNT — 28|27 / 33|34

	∡ @ PP 70 D	70 R			
PP 57	00-04-15	180-04-12	13.5		
PP 72	90-53-59	270-53-58	58.5	90-49-45	
PP 84	180-02-16	00-02-15	15.5	179-58-02	
57	90-06-36	270-06-30	33		
72	180-56-18	00-56-15	16.5	90-49-43.5	-44
84	270-04-33	90-04-34	33.5	179-58-00.5	-01

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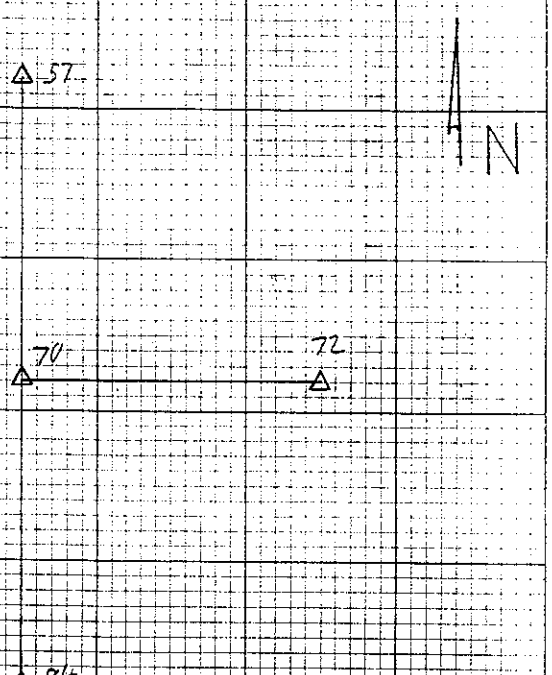

PP 70	M.C.H.O.	BCSM	16/15 / 21/22	T3N R4W
PP 57	M.C.H.O.	BCSM	9/10 / 16/15	
PP 72	NAIL	IN PVMT		
PP 84	5/8" I.R.	BELOW PVMT	21/22 / 28/27	

	At PP 57 D				
		ℓ			
1) PP 42	00 01 20	180 01 24	22		
PP 58	90 50 35	270 50 30	32.5	90-49-10.5	
PP 70	180 07 02	00 07 07	04.5	180-05-42.5	
	90 03 23	270 03 29	23.5		
2) 42	90 02 19				
58	180 52 36	00 52 36	36	12.5	11.5
70	270 09 14	90 09 09	11.5	48	45

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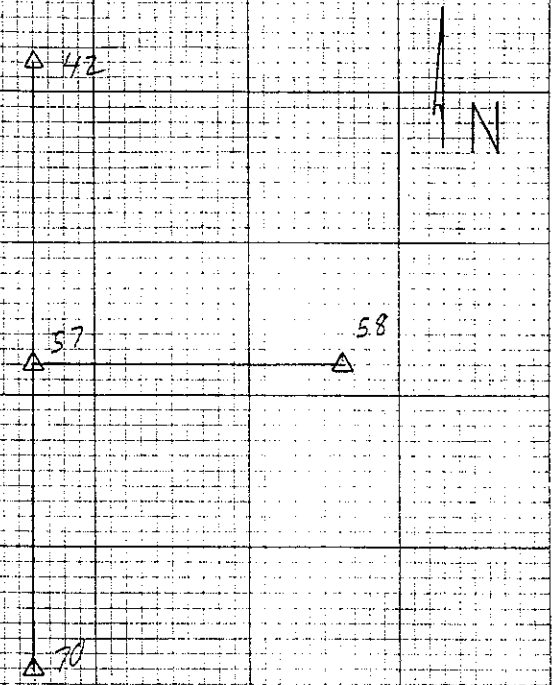

1/18

PP 57 M.C.H.D. BCSM $\frac{9}{16}\frac{10}{15}$ T.3N R.1W

PP 42 M.E.H.D. BCSM $\frac{4}{9}\frac{3}{16}$

PP 58 CROSSED OUT P.K. IN RD. $\frac{10}{15}\frac{11}{14}$

PP 70 M.C.H.D. BCSM $\frac{16}{21}\frac{15}{22}$

	T @ PP 42				
	D	R			
1) TRAV PT 373	00:04:42	180:04:38	40		
PP 57	180:07:32	00:07:32	32	180:02:52	
2) 373	90:06:41	270:06:35	38		
57	270:09:30	90:09:31	30.5	52.5	52

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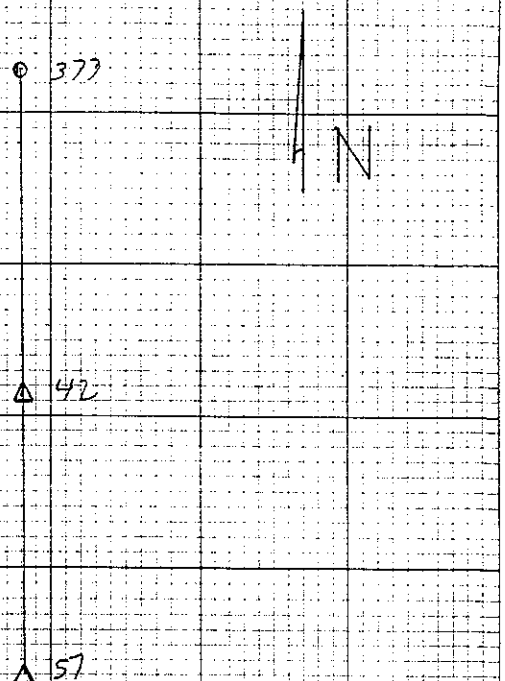

PP 42	M.C. H.D	BC/M	4/3 / 9/10	T3N	R1W
TRAV PT 373	GRANM	TRAV PT	A.K. & SPINNER		
PP 57	M.C. H.D	BC/M	9/10 / 16/15		

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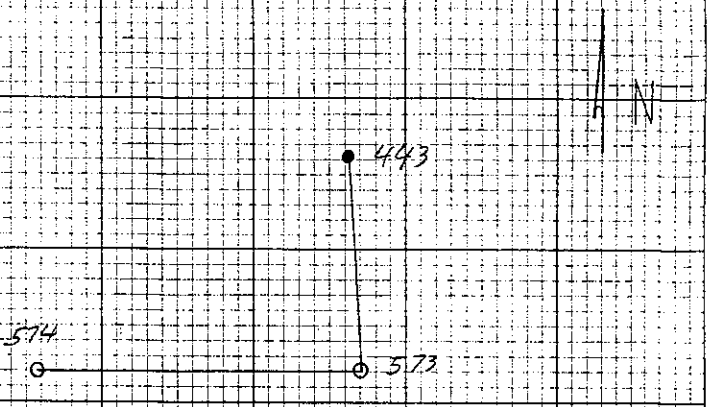
D. SCHWALEN TACKER

A. SMITH

PHOTO I.D. PT #444 @ LITCHFIELD & GRAND

	TO	573				
		D	R			
1)	574	00-03-39	180-03-48		42.5	
	TRAV PT 443	87-38-19	267-38-24		21.5	87-34-38
2)	574	90-05-41	270-05-48		44.5	
	443	177-40-25	357-40-28		26.5	42 40

	Dist	30/1st	30/2nd		
TRAV PT				HD=2689.77	HT=8.92
443	89-39-04	2689.82	8078.59		
	270-21-06	2689.82	8078.59	2689.41	
M	89-39-06	2689.83	8078.59		
				HD=5281.96	
574	189-45-30	5282.01	16091.955		
	270-14-43	5282.01	16091.959	5281.25	
M	89-45-24	5282.00	16091.959		



573 GRAHM TRAV PT P.K. & SHINER IN ROAD

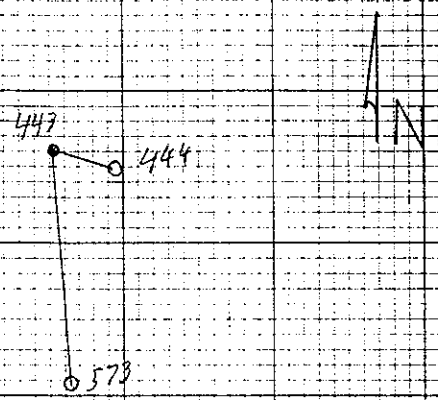
574 GRAHM TRAV PT P.K. & SHINER IN ROAD

443 TRAV PT SET HUB & TACK

	D	A			
1) 573	00:01:26	180:01:31	28.5		
~~PHOTO I.D 444~~	303:55:17	123:55:26	2A5	303 53 57	
2) 573	90:04:20	270:04:24	22		
444	33:58:06	213:58:17	1115	49.5	51

PHOTO I.D. PT. 444	90:15:17	~~153.78~~ 153,51	46,785	
	269:44:39	153,51	46,780	HD=153,51
	90:15:17	153.51	46,788	153.49

PT	N	E
444	962,695.92	365,513.20



443 TRAV PT HUB & TACK

573 GRAHM TRAV PT R.R. & SAUER

444 PHOTO I.D PT END OF CURB STONE ON GRAND AVE. EAST OF LITCHFIELD

WHITE TANKS PHASE 2

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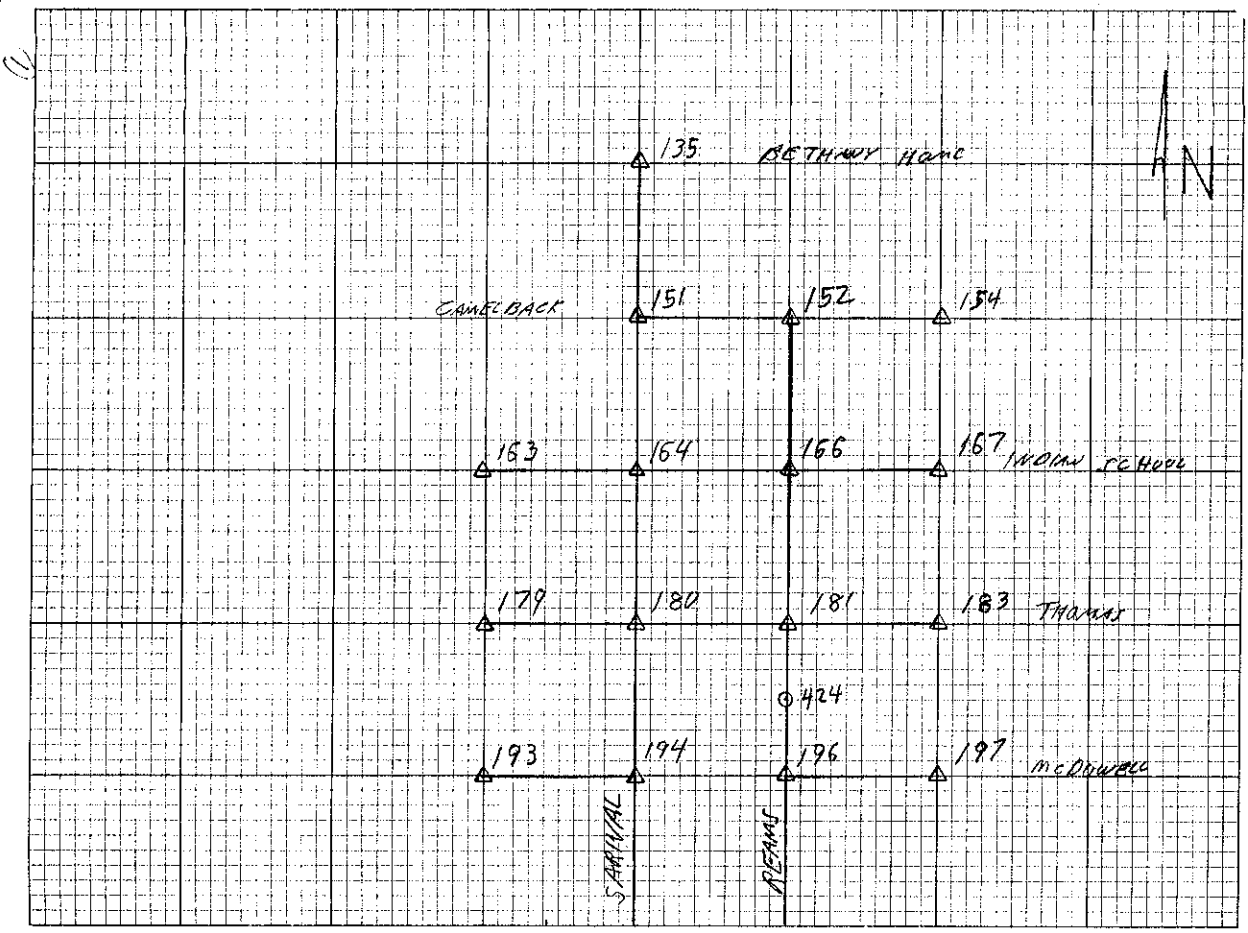
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THOMAS
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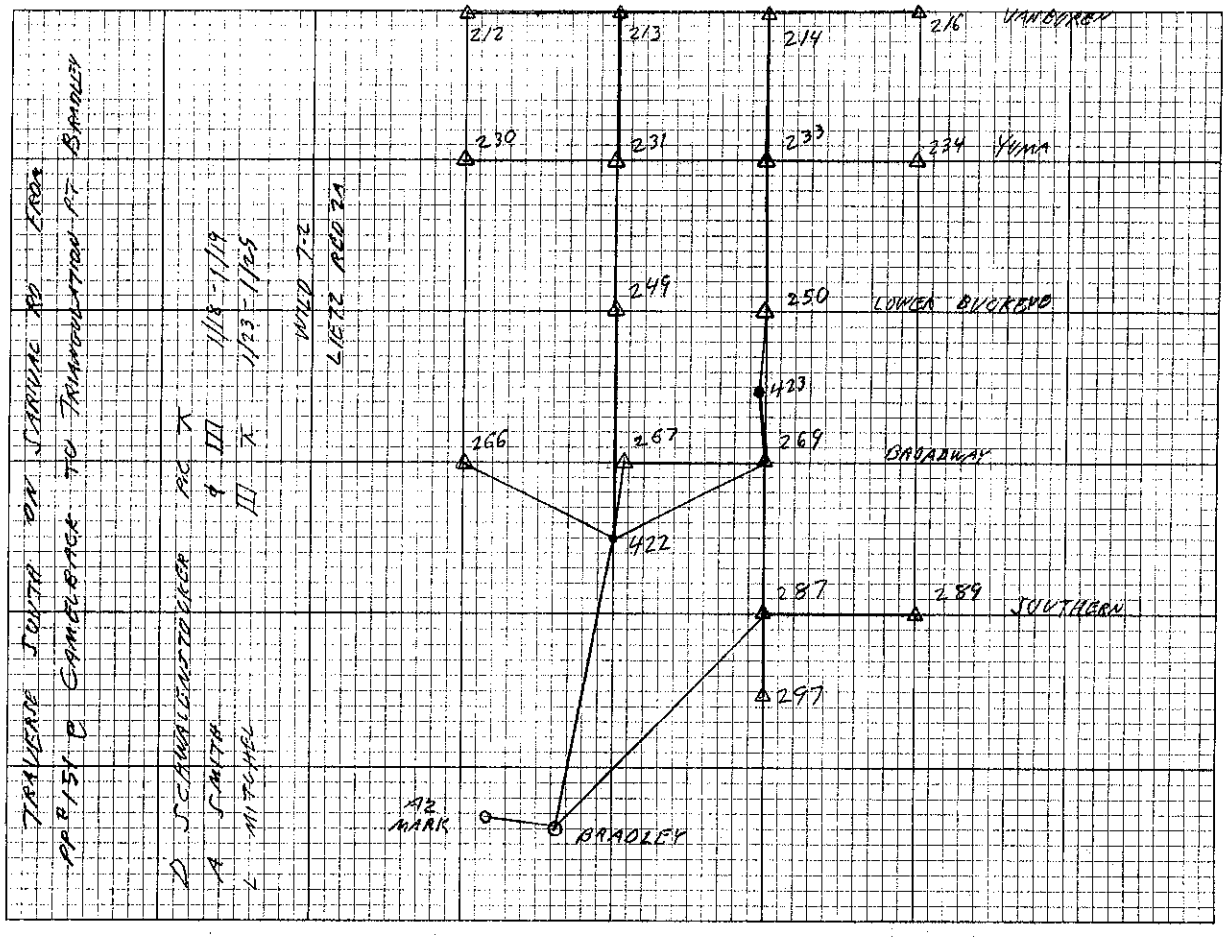
SARIVAL
ALFALFA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BRADLEY
TRAVERSE JOINTS ON SARIVAL AVE FROM
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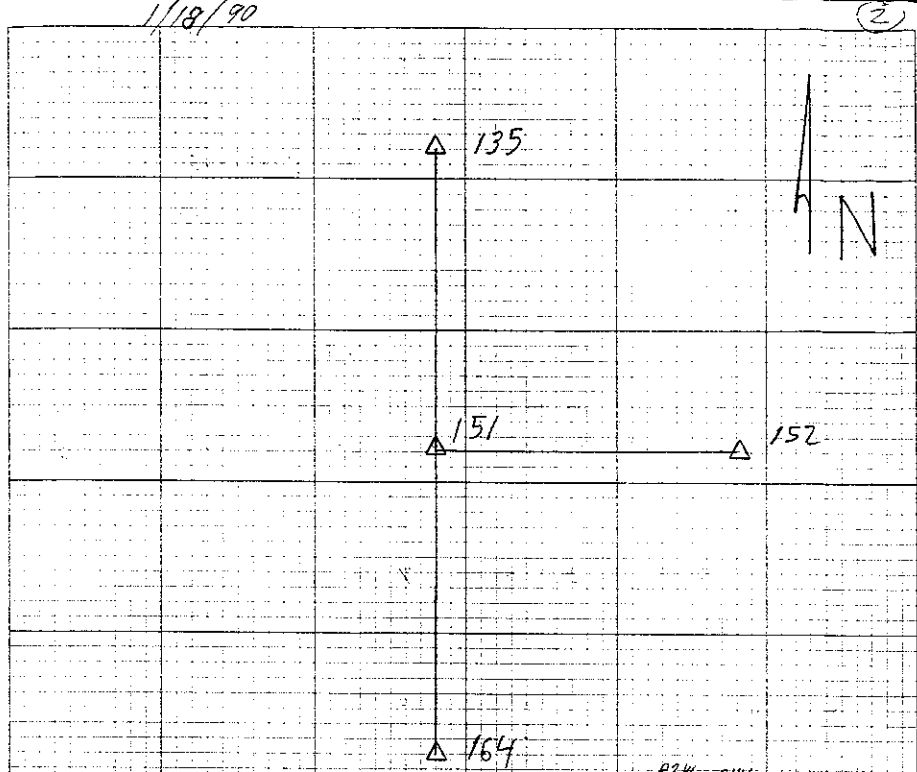
D SCHWALENBERG RLS #
A SMITH
J MITCHEL
II
4 III
II
1118-1119
1123-1125
WILD T-2
LEICA RED 2S

1/18/90 (2)

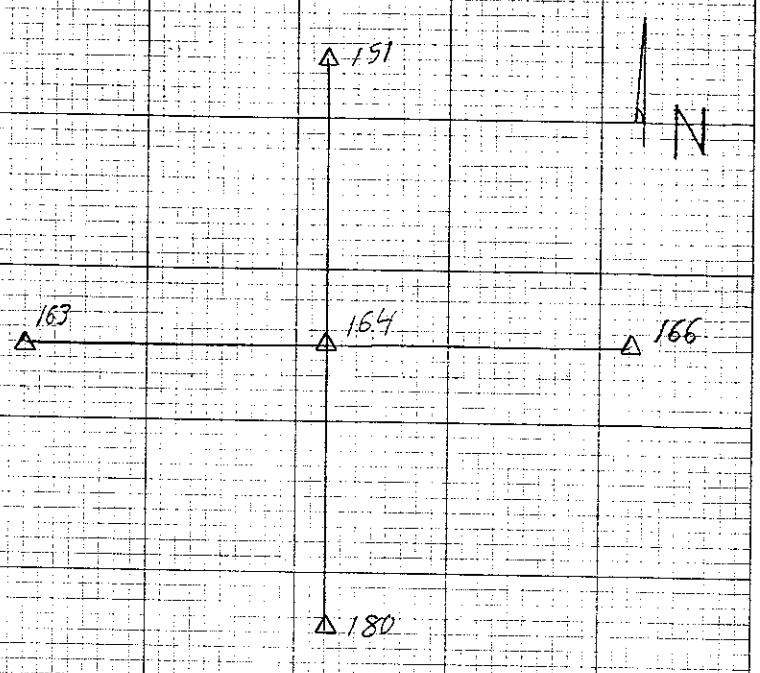
	A @ 151		HI = 5.72			
		D	R			
1)	PP 135	00-03-01	180-03-03	02		
	PP 152	89-54-41	269-54-43	42	89-51-40	
	PP 164	180-05-56	00-05-57	56.5	180-02-54.5	
2)	PP 135	90-05-20	270-05-20	20		
	PP 152	179-57-00	359-56-59	59.5	39.5	40
	PP 164	270-08-16	90-08-14	15	55	55
		55 °F	29 " HG	7 MPH		
		2w	SD/F	SD/m		
	PP 152	90-04-20	5237.13	1596.278		
		269-55-48	5231.12	1596.281		
			5237.13	1596.278		HT = 8.47
		M 90-04-16				
	PP 164	90-09-32	5271.00	1606.603		
		269-50-27	5271.01	1606.602		
			5270.99	1606.601		HT = 8.47
		M 90-09-33				



		R24 / R1W	
PP 151	CITY OF PHOENIX BCSM IN HH	13 / 18 / 24 / 19	T2N
PP 135	BOLT IN CONCRETE IN HH	12 / 7 / 13 / 18	
PP 152	CITY OF PHOENIX BCSM IN HH	18 / 17 / 19 / 20	
PP 164	2" O.I.P. IN HH	24 / 19 / 2.5 / 30	

	TA @ 164	HI = 6.03				
	D	R				
// PP 151	00-01-31	180-01-34	32.5			
PP 166	90-28-01	270-28-10	055	90-26-33		
PP 180	179-52-46	359-52-37	41.5	179-51-09		
PP 163	270-26-31	90-26-23	27	270-24-54.5		
// 151	90-03-03	270-03-00	01.5			
166	180-29-32	00-29-30	31	29.5		31
180	269-54-16	89-54-11	13.5	12		10.5
163	00-21-53	180-21-51	52	50.5		52.5
	56 °F	28.95" Hg	7 PPM			
	Zn	SD/H	SD/m			
PP 166	90-07-34	5208.70	1587.64		HT = 8.43	
m	269-52-35	5208.69	1587.612			
	90-07-30	5208.70	1587.615			
PP 180	90-09-52	5287.65	1611.679		HT = 8.47	
m	269-50-09	5287.66	1611.679			
	90-09-52	5287.65	1611.679			
PP 163	89-46-12	5279.77	1609.281		HT = 8.38	
m	270-14-20	5279.76	1609.275			
	89-45-56	5279.75	1609.284			

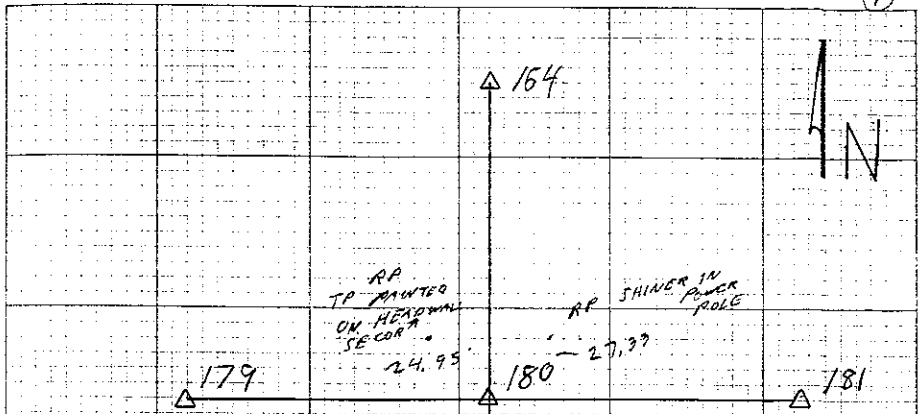
3



		RZW RHW	
PP 164	2" O.I.P. IN HH	24 | 19 / 25 | 30	TZN
PP 151	C.O.R. BCSM IN HH	13 | 18 / 24 | 19	
PP 166	M.C.H.D. BCSM IN HH	19 | 20 / 30 | 29	
PP 180	SET NAIL & SHINER in HUB @ P/RT INTERSECTION SARAVAL & THOMAS		
PP 163	1½" O.I.P IN HH	23 | 24 / 26 | 25	

	AZ @ 180	HI = 5.33			
	D	R			
1) PP 164	00-03-15	180-03-10	12.5		
PP 181	90-36-03	270-35-56	59.5	90-32-47	
PP 194	180-24-27	00-24-34	30.5	180-21-18	
PP 179	270-40-39	90-40-39	39	270-37-26.5	
2) 164	90-06-12	270-06-11	11.5		
181	180-38-58	00-38-58	58	46.5	47
194	270-27-24	90-27-24	24	12.5	15
179	00-45-36	180-43-37	36.5	25	26
	56 °F	29.00" HG	7 PPM		
	Zen	SD/F	SD/M		
PP 181	90-07-59	5193.53	1582.988		
	269-52-17	5193.53	1582.988		HT = 8.43
M	90-07-51	5193.52	1582.992		
PP 194	90-10-47	5224.76	1592.508		
	269-49-25	5224.76	1592.511		HT = 8.47
M	90-10-41	5224.75	1592.509		
PP 179	89-49-22	5297.47	1614.669		
	270-10-48	5297.45	1614.667		HT = 8.38
M	89-49-17	5297.46	1614.667		

(4)

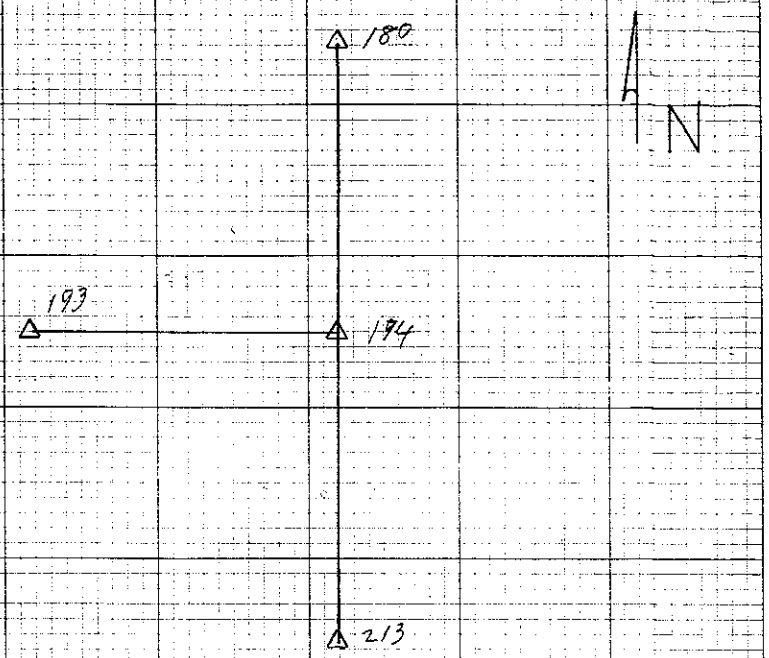


PP 180	SET NAIL & SHINER IN HUB (RANCHO PANEL)
PP 164	2" O.T.P IN HH — RW 24/25, RW 19/30 T2N
PP 181	M.C.H.D. BCSM IN HH — 30/37, 29/32
PP 194	SET CONCRETE NAIL @ INTERSECTION SARIVAL & McDOWELL
PP 179	1½" O.T.P IN HH — 26/35, 25/36

	AT @ 194	HI = 5.44				
	D	A				
1) PP 180	00-02-11	180-02-16		13.5		
PP 213	179-50-37	359-50-35		36	179-48-22.5	
PP 193	269-19-06	89-19-10		08	269-16-54.5	
2) 180	90-04-55	270-04-56		55.5		
213	269-53-20	89-53-20		20	24.5	23.5
193	359-21-51	179-21-55		51	57.5	56
	42 °F	29.10 HG	-1 PPM			
	ZA	SD/F	SD/M			
PP 213	90-08-06	5344.25	1628.933			
	269-51-54	5344.26	1628.929			HT = 8.47
	m 90-08-06	5344.24	1628.930			
PP 193	89-53-11	5274.42	1607.635			
	270-06-39	5274.43	1607.644			HT = 8.43
	m 89-53-16	5274.42	1607.641			

1/19/90

(5)



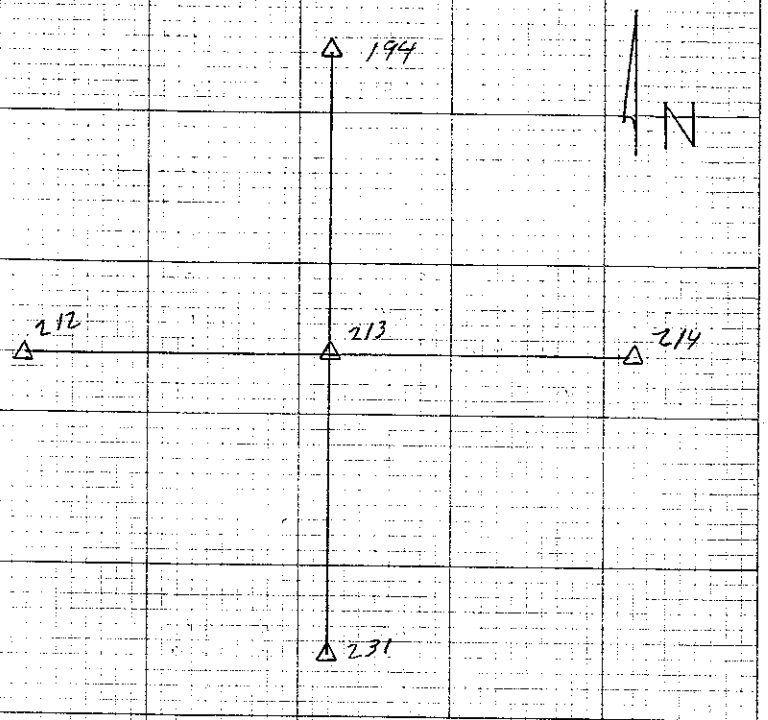
RA 194 RANDOM PANEL SET CONCRETE NAIL W. ROAD

PP 180 RANDOM PANEL SET NAIL & SHINER IN HUB RSW RIW

PP 213 BCSM IN HH 1/12 | 6/7 TIN

PP 193 BCSM IN HH 35/2 | 36/1

	T @ 213	HI = 6.01			
	D	A			
1) PP 194	00-03-24	180-03-21	22.5		
PP 214	90-22-04	270-22-05	04.5	90-18-42	
PP 231	179-51-38	359-51-40	39	179-48-16.5	
PP 212	270-28-42	90-28-39	40.5	270-25-18	
2) 194	90-06-10	270-06-07	08.5		
214	180-24-49	00-24-48	48.5	40	41
231	269-54-24	89-54-24	24	15.5	16
212	00-31-27	180-31-24	25.5	17	17.5
	54 °F	29.106 H	6 PPM		
	Zw	SD/F	SD/m		
PP 214	90-00-06	5183.32	1579.880		
	270-00-05	5183.30	1579.880		HT = 12.38
m	90-00-01	5183.31	1579.873		
PP 231	90-14-20	5252.03	1600.820		HT = 8.47
	269-45-48	5252.06	1600.838		
m	90-14-16	5252.01	1600.831		
PP 212	90-02-28	5281.92	1609.928		HT = 8.43
	269-57-49	5281.90	1609.933		
m	90-02-20	5281.91	1609.931		



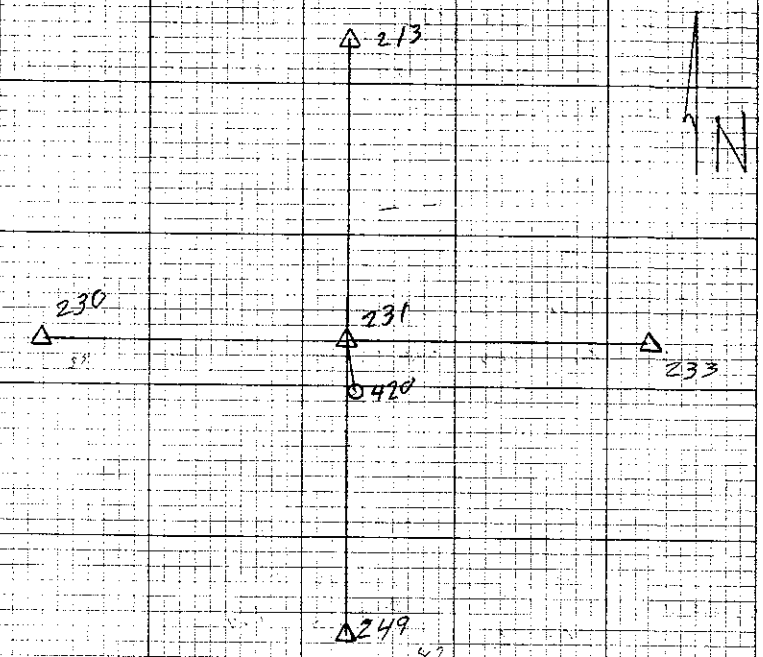
PP 217		BCSM IN HH	RZW RIW 1 | 6 / 12 | 7	T1N
PP 194	RANDOM	PANEL SET CONCRETE NAIL IN ROAD		
PP 214	M.C.H.D	BCSM IN HH	6 | 5 / 7 | 8	
PP 231	M.C.H.D	BCSM IN HH	12 | 7 / 13 | 18	
PP 212		BCSM IN HH	2 | 1 / 11 | 12	

1/23/90

(7)

D SCHWAGENSTUCKER
& MITCHELL

		Δ(@ PP 231		HI = 5.99		
		D	R			
1)	PP 213	00-03-33	180-03-28	-30.5		
	PP 233	90-50-59	270-50-50	-34.5	90-41-24	
	420	180-12-10	00-12-09	09.5	180-08-39	
	PP 249	180-14-36	00-14-33	-34.5	180-11-04	
	PP 230	270-15-21	90-15-18	-19.5	270-11-49	
2)	213	90-06-44	270-06-40	4.2		
	233	180-54-01	0-54-02	-.03	21	22.5
	249	270-17-46	90-17-43	-44.5	02.5	03
	230	0-18-31	180-18-33	-32	50	49.5
		61°	29.20 11" 46	PPM B		
		Zw	SD/K	SD/m		
	PP 233	89-58-46	5147.56	1568.978		
		270-01-25	5147.56	1568.981		HT=8.43
	M	89-58-40	5147.57	1568.984		
	42 RR SPIKE		CH 33.58			
	PP 249	90-14-25	5379.91	1639.802		
		269-45-48	5379.91	1639.804		HT=8.47
	M	90-14-18	5379.92	1639.801		
	PP 230	90-04-01	5306.47	1617.419		
		269-56-14	5306.47	1617.417		HT=8.38
	M	90-03-53	5306.48	1617.414		



PP 231 M.C.H.D. BCSM IN HH 12/13 TIN R2W

PP 233 CROSSED OUT HH (NO BRASS) 7/8 / 18/17 TIN R1W

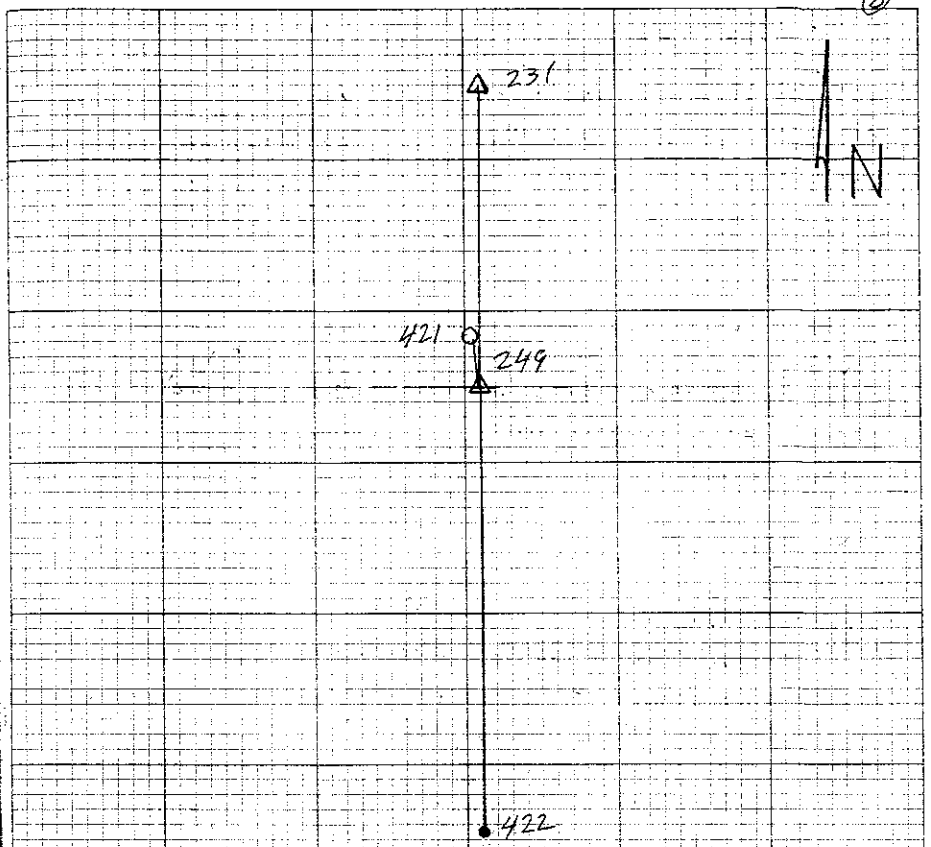
PP 249 M.C.H.D. BCSM IN HH 18/19

420 RR SPIKE IN INTERSECTION JARIVAL & YUMA 7/18

PP 230 1" STEEL SPIKE IN PVMT. (COTTON & YUMA) 11/12 / 14/13

PP 213 BCSM IN HH 16/17

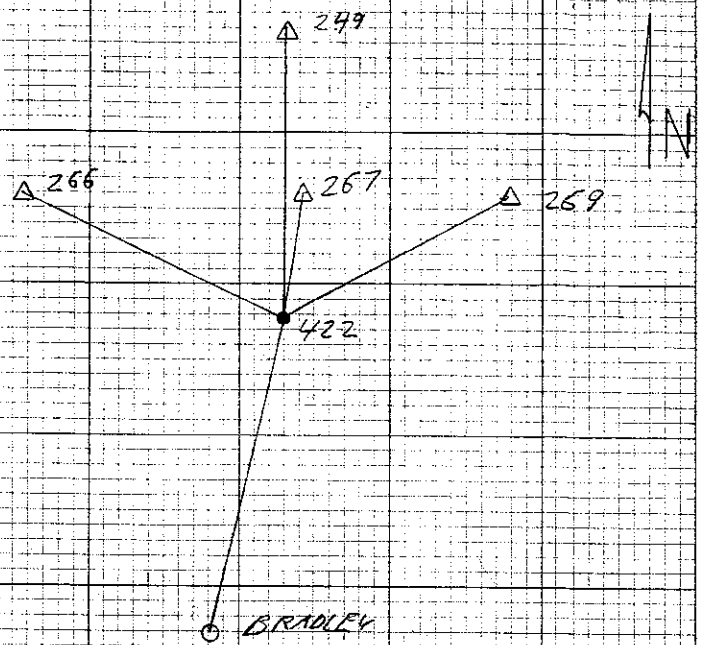
	@ 249	HI = 6.02				
	D	R				
1) PP 231	0-02-24	180-02-17		-20.5		
TRAV PT 422	179-33-50	359-33-48		49	179-31-28.5	
BCSM 421	359-54-17	179-54-17		17	359-51-56.5	
2) 231	90-04-51	270-04-51		51		
422	269-36-29	89-36-18		23.5	32.5	30.5
421	89-56-49	269-56-44		46.5	55.5	56
	75°	29.15" HG	16 PPM			
	CW	SC/F	SC/m			
	90-17-41	7922.24	2414.704			
TRAV PT		7922.23	2414.698			HT = 8.48
422	269-42-26					
M	90-17-37	7922.24	2414.700			
421	CH	93.20				



PP 231	MCHD	BCSM	IN	HH	12/13	T1N R2W
PP 249	M.C.HD.	BCSM	IN	HH	18/19	T1N R1W
TRAV PT 422	SET HUB W/ NAIL & SHINER (RADIAL PT)					
421	M.C.H.D	BCSM	IN	H.H	13/24	T1N R2W

	L@ 422	HI = 5.37			
	D	R			
PP 249	0-02-24	180-02-26	25		
PP 267	0-07-14	180-07-12	13	0-04-48	
PP 269	63-11-26	243-11-26	26	63-09-01	
BRADLEY	187-36-41	07-36-35	38	187-34-13	
PP 266	297-27-07	117-27-05	06	297-24-41	
249	90-04-16	270-04-10	13		
267	90-09-00	270-08-58	59	46	47
269	153-13-16	333-13-09	12.5	08-59.5	09-00
BRADLEY	277-38-28	97-38-21	24.5	11.5	12
266	27-28-52	207-28-51	51.5	38.5	40
	75°	29.10 1/46	16 ppm		
	L@	SD/F	SD/M		
	89-56-44	2798.03	852.839		
PP 267	270-03-26	2798.02	852.840		HT=8.38
M	89-56-39	2798.03	852.838		
	89-57-07	5824.43	1775.287		
PP 269	270-02-53	5824.44	1775.289		HT=4.47
M	89-57-07	5824.41	1775.292		
	87-43-47	9497.69	2894.902		
BRADLEY	272-16-07	9497.69	2894.898		HT=8.48
M	87-43-50	9497.68	2894.899		
	89-55-05	6016.73	1833.905		
PP 266	270-05-02	6016.73	1833.906		HT=8.43
M	89-55-01	6016.73	1833.905		

(9)

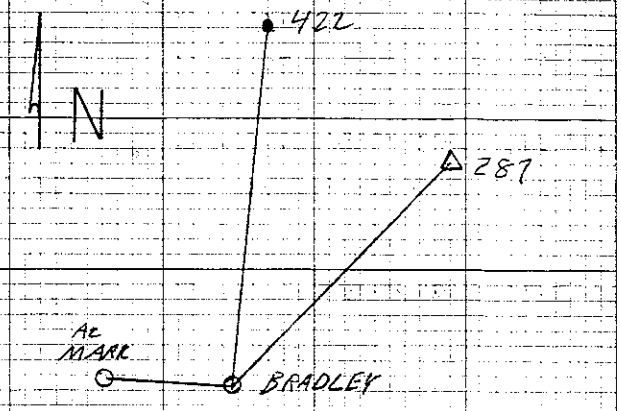


TRAV PT 422	SET HUB W/ TACK & SPIKER		
PP 249	M.C.H.O BCSM IN HH	18/19	TIN RLW
PP 267	RANDOM RANGE SET NAIL & SHINER		
PP 269	BCSM IN H.H	19/20 30/29	
BRADLEY	V.S.C&GS BRONZE MON IN ROCK		
PP 266	1" O.I.P BELOW PUNT	23/24 26/25	TIN RLW

1/24/90

(10)

	@ BRADLEY	HI = 5.45			
	D	R			
1) 422	0-03-26	180-03-25	25.5		
PP287	35-38-52	215-38-52	52	35-35-26.5	
Az MARK	267-24-43	87-24-44	43.5	267-21-18	
2) 422	90-05-44	270-05-40	42		
287	125-41-05	305-40-58	01.5	19.5	23
Az MARK	357-27-00	177-27-00	00	18	18
	58°F	28.95"HG	9 PPM		
	Dv	SD/E	SD/N		
		9327.02	2842.868		
	92-12-40	9326.98	2842.879		
PP 287	267-47-34	9327.00	2842.878		HT = 4.35
m	92-12-33				
	109-08-09	877.06	267.329		
Az MARK	230-52-08	877.06	267.327		
m	109-08-01	877.06	267.327		HT = 4.59



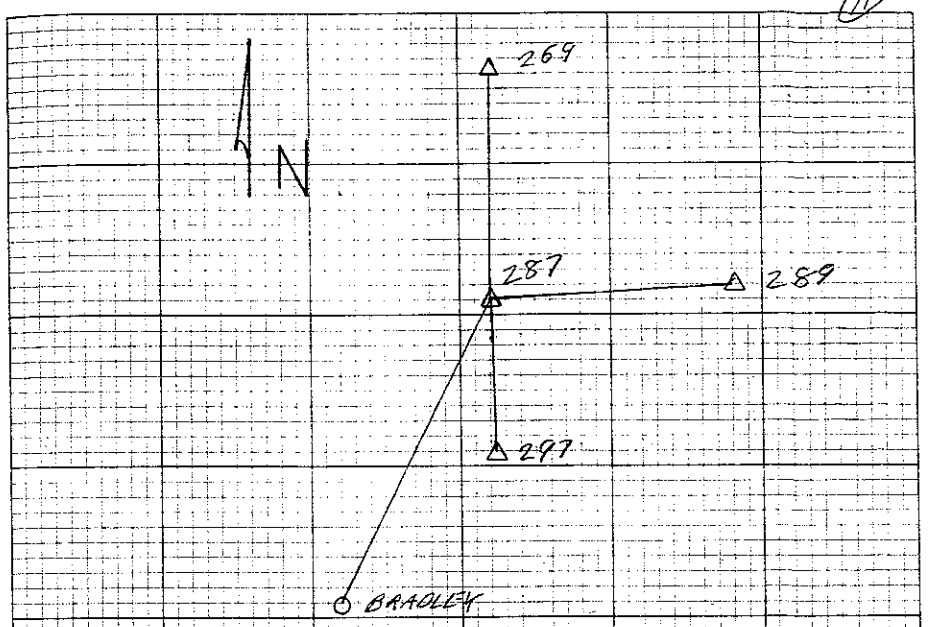
BRADLEY VSC&GS BRONZE MON IN ROCK

422 RANDOM TRAV PT SET NAIL & SHINER IN HUB

PP 287 SET RANDOM NAIL & SHINER ON BRIDGE

Az MARK VSC&GS BRONZE MON. IN ROCK

	A @	PP 287 D	HI = 5.30 R			
1)	BRADLEY	0-07-30	180-07-26	28		
	PP 269	137-44-55	317-44-46	50.5	137-37-22.5	
	PP 289	225-19-31	45-19-24	27.5	225-11-59.5	
	PP 297	318-21-45	138-21-45	45	318-14-17	
2)	BRADLEY	90-10-18	270-10-16	17		
	269	227-47-46	47-47-40	43	26	24
	289	315-22-18	135-22-14	16	59	59
	297	48-24-42	228-24-37	38.5	22.5	20
		69°F	29.2" Hg	13 PPM		
		2π	SD/F	SD/m		
		90-08-58	5240.00	1597.149		
			5239.98	1597.150		
	PP 269	269-51-25	5239.98	1597.146		HT=4.43
	m	269-51-14				
		89-59-04	5224.14	1592.321		
	PP 289	270-01-14	5224.13	1592.321		HT=8.47
	m	89-58-55	5224.14	1592.324		
		90-14-16	2598.28	791.959		
	PP 297	269-45-58	2598.29	791.958		HT=8.38
	m	90-14-09	2598.28	791.958		



PP 287 RANDOM PANEL SET NAIL & SHINER ON BRIDGE

BRADLEY VISC & GS BRONZE MON.

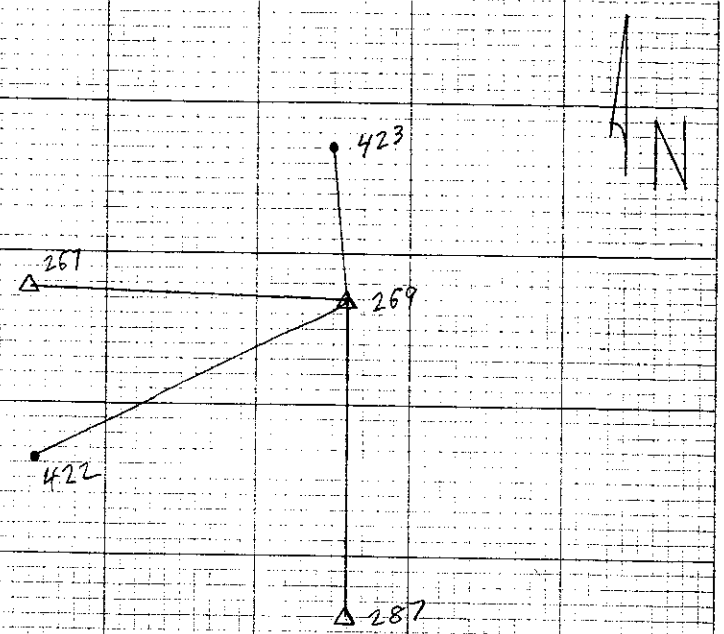
PP 269 BCSM 1N HT $\frac{19}{30}\frac{20}{29}$ TIN R1W

PP 289 M.C.H.D. BCSM $\frac{29}{32}\frac{28}{33}$

PP 297 RANDOM PANEL SET NAIL & SHINER IN ROAD

X@	PP 269		HI = 5.85			
	D	R				
1) PP 287	0-01-42	180-01-44		43		
422	62-23-48	242-23-50		49	62-22-06	
PP 267	91-05-34	271-05-34		34	91-03-51	
423	179-16-37	359-16-44		41.5	179-14-58.5	
2) 287	90-04-56	270-04-58		57		
422	152-26-58	332-27-01		59.5	025	04
267	181-08-47	01-08-46		46.5	49.5	50
423	269-19-51	89-19-52		51.5	54.5	56.5
	78°F	29.25"Hg	18 PPM			
	zw	SQ/F	sq/m			
	90-03-25	5195.36	1583.544			
PP 267	269 56 47	5195.36	1583.545			
m	90-03-19	5195.35	1583.546			HT = 8.20

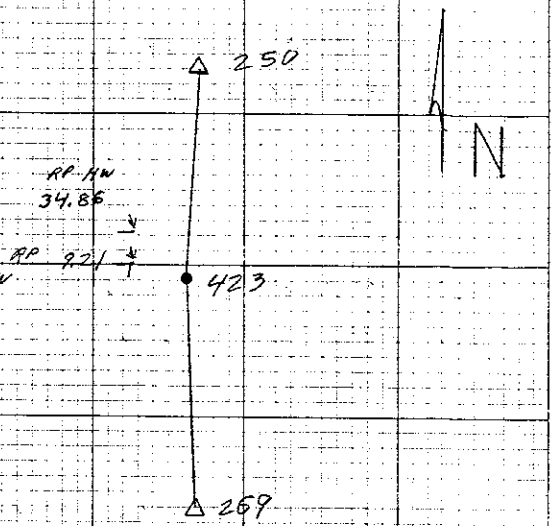
(12)



PP 269	BCSM IN HTH	19/20 30/29
PP 287	SET NAIL & SHINER ON BRIDGE	RANDOM PANEL
TRAV PT 422	SET NAIL & SHINER IN HUB	
PP 267	SET NAIL & SHINER	RANDOM PANEL
TRAV PT 423	SET NAIL	

	∠ @ 423		HI = 5.35		
	D	R			
1) PP 269	0-07-42	180-07-47	44.5		
PP 250	181-08-25	01-08-16	20.5	181-00-36	
2) 269	90-10-18	270-10-20	19		
250	271-10-56	91-10-54	55	36	36
	76°F	29.20" Hg	16 PPM		
	2W	SD/F	SD/M		
	90-24-11	2587.99	788.821		
PP 269	269-35-49	2587.98	788.820		HT = 8.43
M	90-24-11	2587.99	788.820		
	89-33-53	2685.79	818.629		
PP	270-26-22	2685.79	818.630		HT = 8.18
M	89-33-46	2685.79	818.632		

(13)

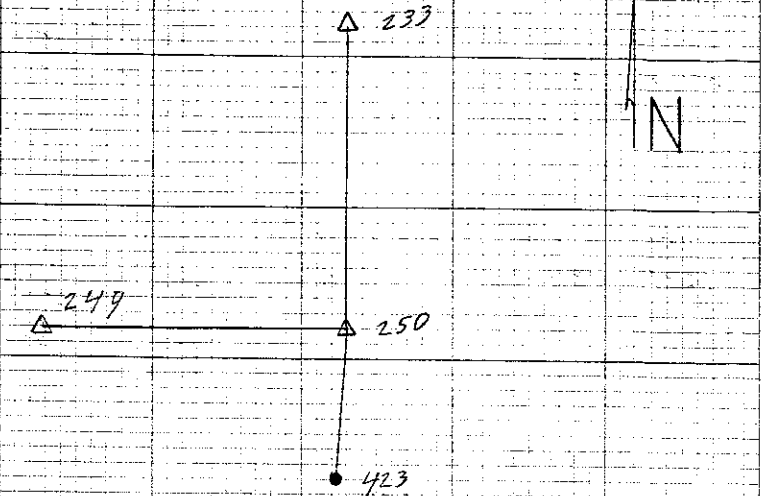


TRAV PT 423	SET	NAIL @ SIDE OF ROAD		
PP 269	BCSM	IN HH		19.20 / 20.29
PP 250	M.C.H.D.	BCSM IN HH		18.17 / 19.20

	AT @ 250	HI = 5.75			
	D	R			
1) 423	0-09-15	180-09-18	16.5		
PP 249	89-18-49	269-18-49	49	89-09-32.5	
PP 233	178-30-57	358-30-59	58	178-21-41.5	
2) 423	90-02-12	270-02-09	10.5		
249	179-11-47	359-11-41	44	33.5	33
233	268-23-55	88-23-54	54.5	44	43
	38°F	29.40" Hg	-6 PPM		
	Zd	SD/E	SD/m		
	89-58-20	5246.75	1599.212		
PP 249	270-01-51	5246.74	1599.213		
m	89-58-15	5246.75	1599.211		HT = 12.38
PP 233	89-43-56	5301.20	1615.809		
	270-15-50	5301.19	1615.811		
m	89-44-03	5301.20	1615.804		HT = 8.43

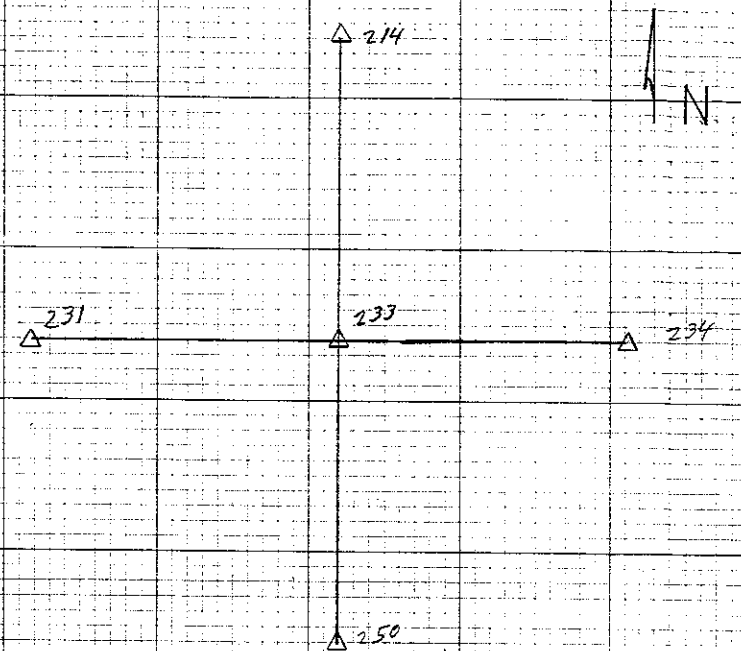
1/25/90

(14)



PP 250	M.C.H.D.	BCSM IN HH	18/19/20 17 TIN RIM
423	TRAV AT	SET NAIL	
PP 249		BCSM IN HH	18/19
PP 233		CROSSED OUT HH (NO BRASS)	7/18 8/17

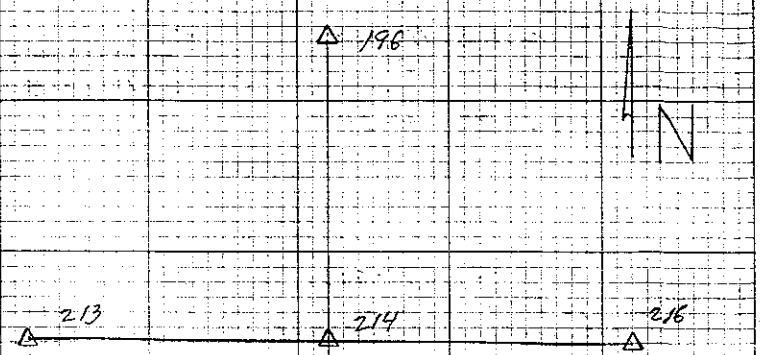
	∠@ 233	HI =	5.84			
	D	R				
1) PP 250	0-01-09	180-01-03	06			
PP 231	91-42-00	271-41-56	58	91-40-52		
PP 214	181-18-08	01-18-04	06	181-17-00		
PP 234	271-25-03	91-25-04	035	271-23-57.5		
2) 250	90-01-21	270-01-15	18			
231	181-42-11	01-42-04	07.5	49.5	51	
214	271-18-47	91-18-13	15	16-57	58.5	
234	01-25-13	181-25-14	13.5	55.5	56.5	
	44°F	29.40" HG	-3 PPM			
	zn	SOFT	SO/m			
	89-47-38	5277.15	1608.481			
PP 214	270-12-43	5277.15	1608.477			
		5277.14	1608.479			HT = 8.43
m	89-47-28					
	89-57-57	5174.60	1577.214			
PP 234	270-02-11	5174.57	1577.216			
m	89-57-50	5174.59	1577.211			HT = 4.38



PP 233	X-OUT	HH	7/18 | 8/17 TIN R/W
PP 250	M.C.H.O.	BCSM	IN HH 18/19 | 17/20
PP 231	M.C.H.O.	BCSM	IN HH 12.1/13 | R2W
PP 214	M.C.H.O.	BCSM	IN HH 6/7 | 5/8
PP 234	CROSSED	OUT TACK IN CONCRETE	IN HH 8/17 | 9/16

	At @ PP 214		HI = 5.89			
	D	R				
1) PP 233	0-02-38	180-02-34		36		
PP 213	90-10-01	270-09-49		55	90-07-19	
PP 196	180-03-22	0-03-21		21.5	180-00-45.5	
PP 216	270-10-01	90-10-03		02	270-07-26	
2) 233	90-05-08	270-05-03		05.5		
213	180-12-32	0-12-30		31	25.5	22
196	270-05-47	90-05-40		43.5	38	42
216	0-12-34	180-12-31		32.5	27	26.5

	62°F	24.35"Hg	6 PPM	
	2 M	SD/F	SD/M	
	89-50-43	5326.53	1623.535	
PP 196	270-09-20	5326.54	1623.523	HT = 8.43
		5326.55	1623.531	
M	89-50-42			
	90-02-49	5210.03	1588.020	
PP 216	269-57-24	5210.02	1588.023	HT = 4.35
M	90-02-43	5210.03	1588.019	



PP 214 M.C.H.D. BCSM in H.H. 6/5/8 TIN RIW

PP 233 X-OUT H.H. 2B 1817

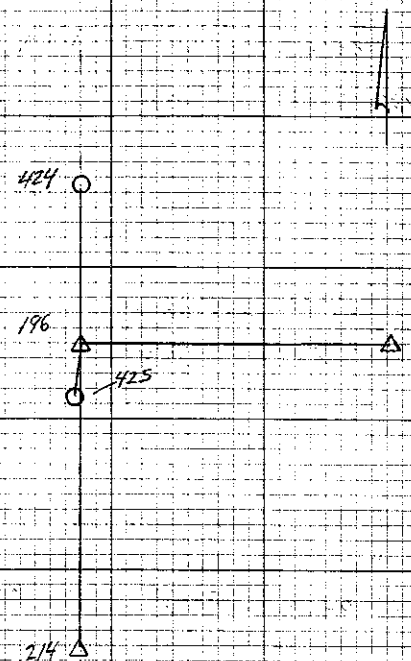
PP 213 BCSM 1.0 H.H. 1/12 6/7

PP 196 RANDOM RANGE P.K. & SHINER @ INT. REAMS & McDOUGAL

PP 216 CROSSED OUT 5/8" R.P. BELOW PVMT. 5/8 4/9

	At PP 196		HI = 5.21			
	D	R				
1) PP 214	0-06-47	180-06-48		47.5		
425	0-24-32	180-24-32		32	0-17-44.5	
TRAV PT 424	180-00-05	0-00-00		02.5	179-53-15	
PP 197	270-24-22	90-24-16		19	270-17-31.5	
2) 214	90-03-42	270-03-34		38		
425	90-21-17	270-21-19		18	40	42
424	269-56-51	89-56-48		49.5	11.5	13
197	0-21-09	180-21-06		02.5	29.5	30.5
	62°F	29.30	7 PPM			
	2M	IN/F	50/m			
	89-45-47	2594.86	790.914			
TRAV PT	270-14-18	2594.84	790.916			HT = 8.43
424		2594.85	790.916			
¼ COR M	89-45-45					
PP 197	90-02-01	5242.15	1597.808			
	269-58-14	5242.15	1597.810			HT = 8.38
M	90-01-56	5242.15	1597.810			
SEC COR 425	CH	46.43'				

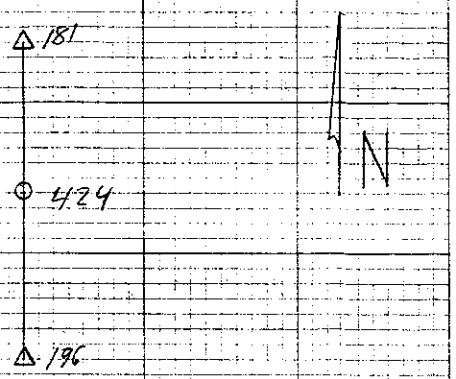
(1)



PP 196	RANDOM	PANEL	P.K. & SHINER		
PP 214	M.C.H.D.	BCSM	IN HH	6/5 / 7/8	TIN R/W
425	M.C.H.D.	BCSM	IN HH	31/32 / 6/5	T2N TIN R/W
424	TRAV PT	M.C.H.D.	BCSM	IN HH	¼ COR 31/32
PP 197	RANDOM	PANEL	P.K. & SHINER		

	∡ @ 424		HI = 5.65			
	D	R				
1) PP 196	0-06-47	180-06-46		46.5		
PP 181	180-07-25	0-07-24		245	180-00-38	
2) 196	90-08-05	270-08-03		04		
181	270-08-39	90-08-42		40.5	36.5	37
	67°F	29.25"HG	11 PPM			
	Hz	SD/F	SD/M			
	89-52-10	2641.31	805.067			
PP 181	270-07-58	2641.31	805.070			8.43
	M 89-52-06	2641.30	805.067			

(18)

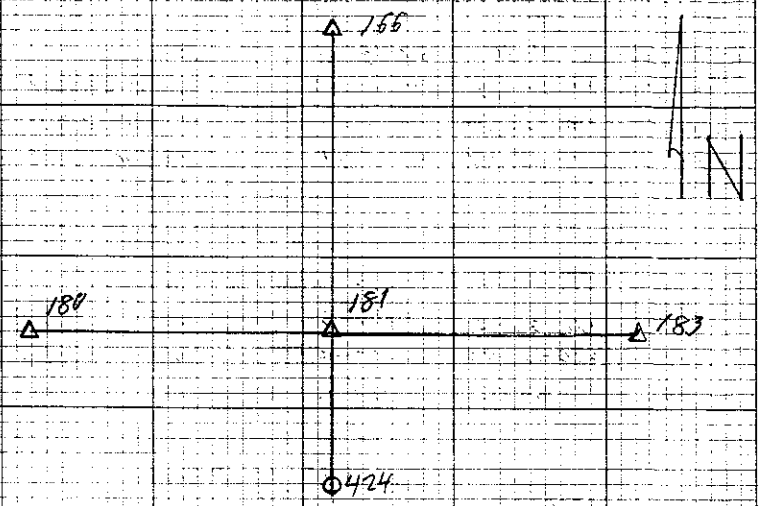


424 TRAV RT M.C.H.O. BCSM IN HH 1/4 COR 31/32

PP 196 RANDOM PANEL P.K. & SPIKER

PP 181 M.C.H.O. BCSM IN HH 30/31 29/32

	X @ 181	41 = 5.68			
	A	R			
1) 424	0-02-46	180-02-46	46		
PP 180	90-19-51	270-19-48	49.5	90-17-03.5	
PP 166	179-56-57	359-56-57	57	179-54-11	
PP 183	270-30-46	90-30-43	44.5	270-27-58.5	
2) 424	90-06-22	270-06-22	22		
180	180-23-26	0-23-20	23	01	02
166	270-00-33	90-00-25	29	07	09
183	0-34-10	180-34-12	11	49	54
	77°F	29.15" Hg	16 PPM		
	Zn	SD/F	SD/M		
	89-47-42	5283.68	1610.452		
PP 166	270-11-23	5283.65	1610.452		HT = 8.43
M	89-47-40	5283.66	1610.462		
	89-58-28	5229.92	1594.096		
PP 183	270-01-48	5229.96	1594.091		HT 8.38
M	89-58-20	5229.94	1594.088		



PP 181	M.C.H.O.	BCSM	IN	HH		30|29 / 31|32	T2N R1W
424	TRAV. PT.	M.C.H.O.	BCSM	IN	H.H.	¼ COR	31|32
PP 180	RANDOM	POINT	NAIL &	SHINER			
PP 166	M.C.H.O.	BCSM	IN	HH		19|20 / 30|29	
183	RANDOM	POINT	NAIL &	SHINER	IN	BRIDGE	

	∠ @ 166	HI = 5.68			
	V	R			
1) PP 181	0-05-16	180-05-10	13		
PP 164	90-30-45	270-30-39	42	90-25-29	
PP 152	180-22-38	0-22-34	36	180-17-23	
PP 167	270-28-49	90-28-47	48	270-23-35	
2) 181	90-10-39	270-10-39	39		
164	180-36-05	00-36-06	055	26.5	28
152	270-28-03	90-28-00	01.5	22.5	23
167	00-34-20	180-34-14	17	38	36.5

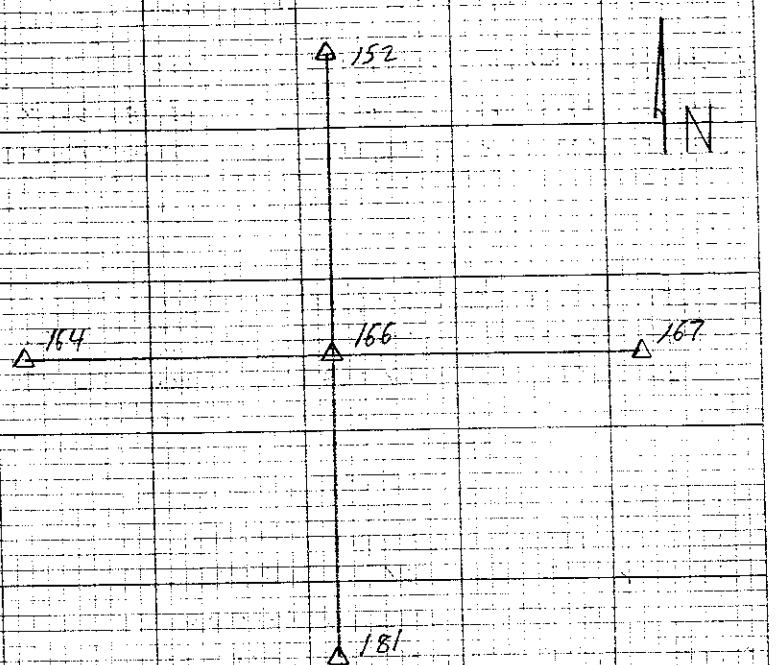
78° 29.10' HR 18 PPM

	∠	SD/F	SD/M
	89-45-06	5328.51	1624.133
PP 152	270-14-58	5328.51	1624.136
	89-45-04	5328.50	1624.137

117 = 8.43

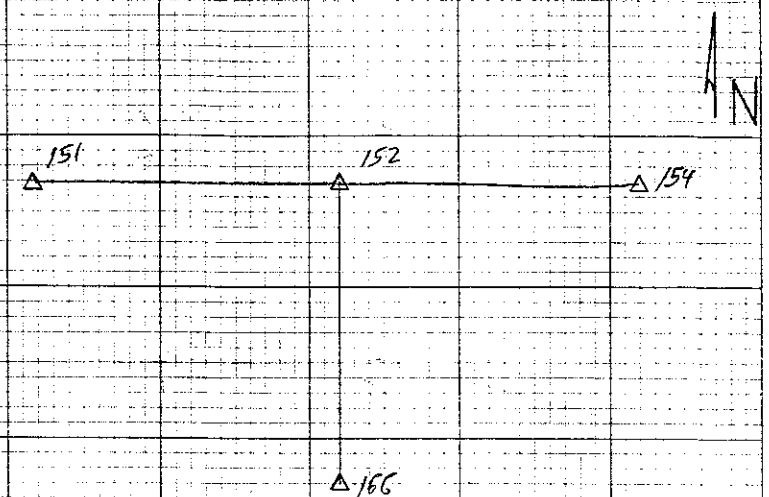
	90-00-00	52-30-25	1594.173
PP 167	270-00-00	5230.22	1594.167
	40-00-00	5230.24	1594.177

117 = 8.38

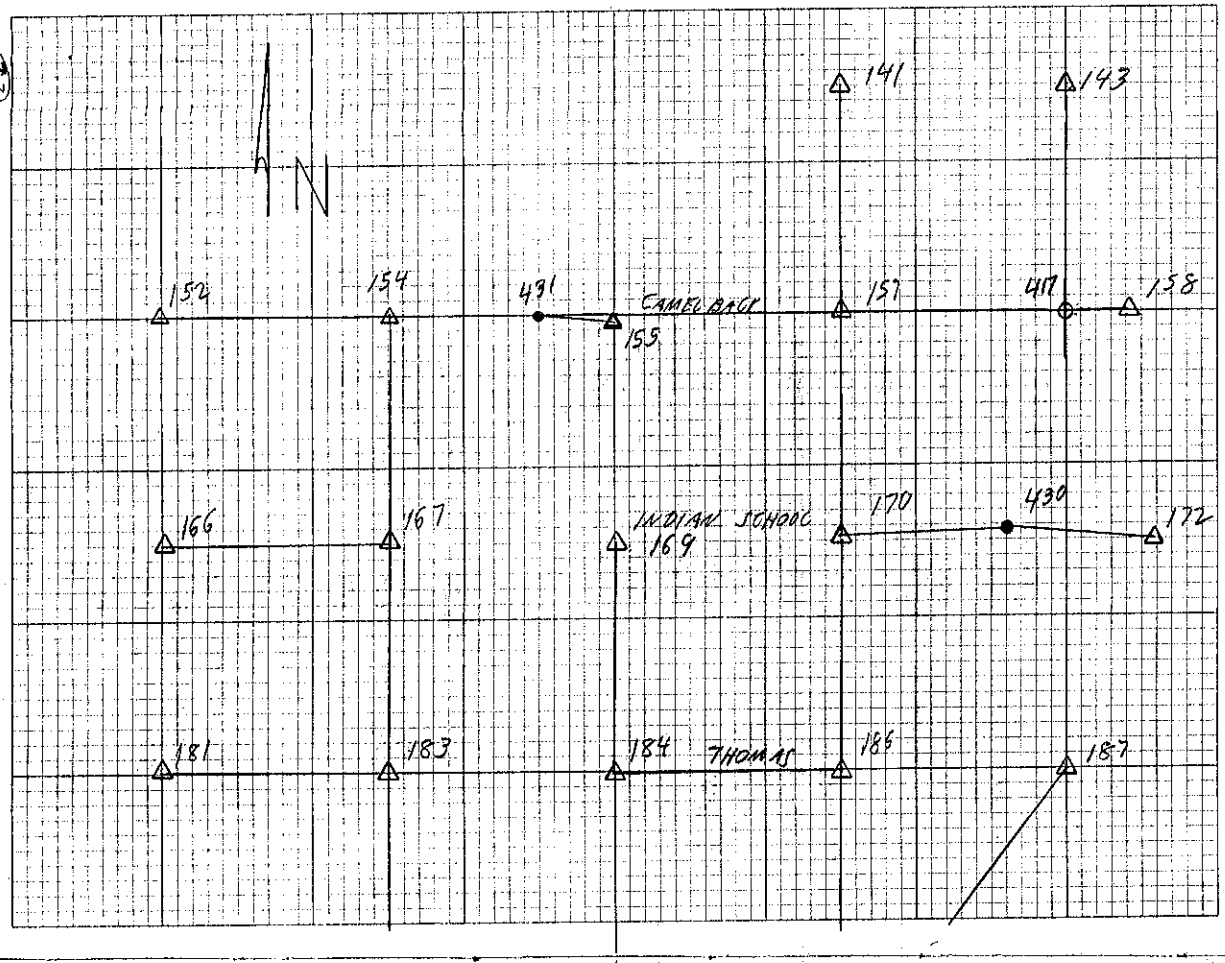


PP 166	M.C.H.D.	BCSM	IN HH	19/20 30/29 TZ IN RHW
PP 181	M.C.H.D.	BCSM	IN HH	30/29 31/32
PP 164	2" O.I.P.	IN HH	24/19 25/30	
PP 152	C.O.P.	BCSM	IN HH	18/17 19/20
PP 167	M.C.H.D.	BCSM	IN HH	30/21 29/28

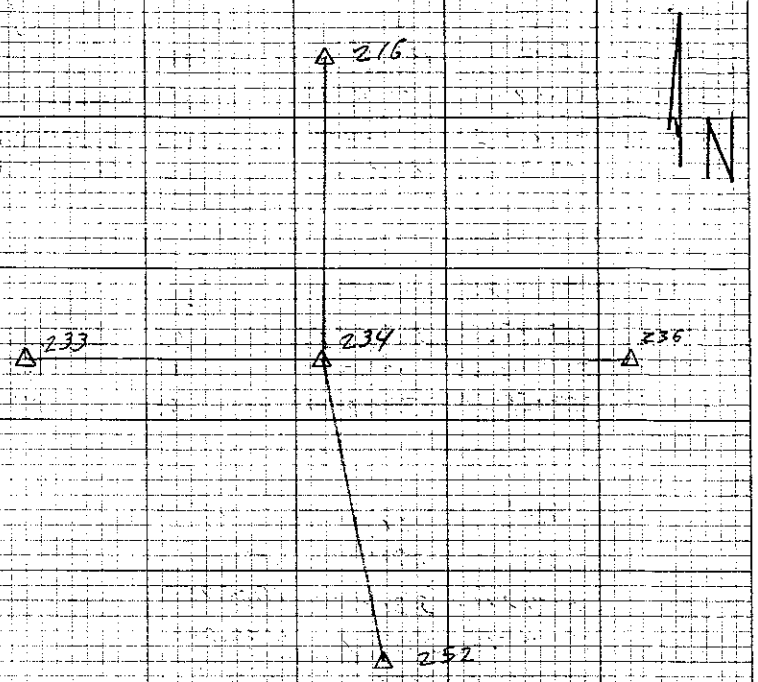
	∠ @ PP 152		HI = 5.68			
	D	R				
1) PP 166	0-01-37	180-01-42		39.5		
PP 151	89-31-44	269-31-47		45.5	89-30-06	
PP 154	269-48-45	89-48-41		43	269-47-07.5	
2) 166	90-02-08	270-02-06		07		
151	179-32-16	359-32-12		14	07	06.5
154	359-49-06	179-49-05		05.5	46.58.5	47-01
	73°F	29.10" HG	15 PPM			
	2M	SOIF	50 /m			
	89-58-09	5295.37	1611.030			
PP 154	270-01-44	5295.36	1614.031			HI = 8.38
M	89-58-13	5295.37	1614.029			



PP 152	C.O.P.	BCSM IN HH	18 | 17 / 19 | 20	TAN RIW
PP 166	M.C.H.O.	BCSM IN HH	19 | 20 / 30 | 29	
PP 151	C.O.P.	BCSM IN HH	13 | 18 / 24 | 19	
PP 154		BCSM IN HH	17 | 16 / 20 | 21	

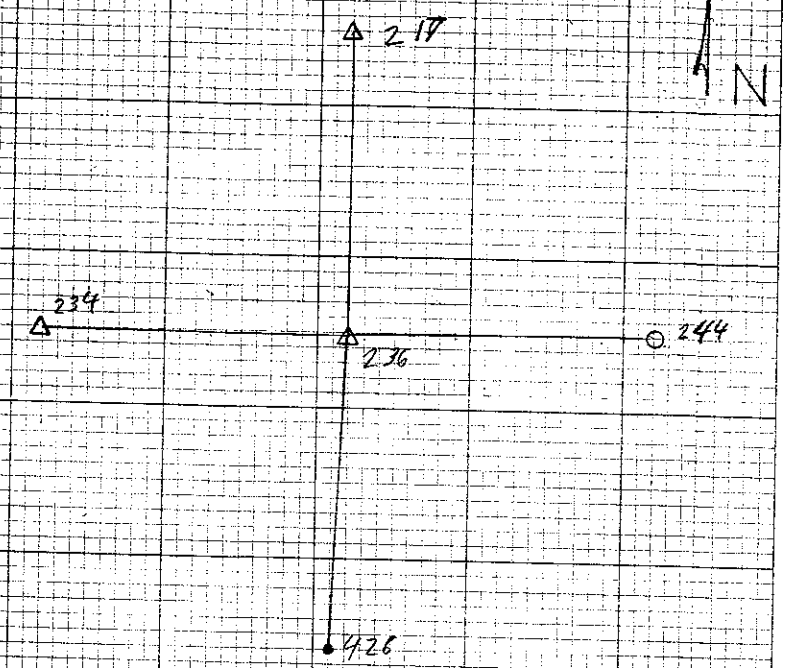

N
141
143
152
154
491
CAMELBACK
155
157
412
158
166
167
INDIAN SCHOOL
169
170
430
172
181
183
184
THOMAS
186
187
196
197
199
428
MCDOWELL
206
429
202
214
216
217
VAN BUREN
427
219
RIO SALADO
BULLARD
LATHAM
DIVISION
237
234
YUMA
236
BUCKEYE
244
252
426
LOWER BUCKEYE

	∠@ 234	141 ± 5.60				
	D	R				
1) PP 233	0-02-15	180-02-13	14			
PP 216	90-18-15	270-18-18	16.5	90-16-02.5		
PP 236	180-07-03	0-07-04	03.5	180-04-49.5		
PP 252	259-07-37	79-07-36	36.5	259-05-22.5		
2) 233	90-01-46	270-01-46	46			
216	180-18-00	0-17-54	57	11	07	
236	270-06-42	90-06-42	42	56	53	
252	349-07-27	169-07-24	255	39.5	31	
	60°F	29.10	9 PPM			
	ZU	SU/F	SD/M			
	89-52-18	5276.96	1608.420			
PP 216	270-07-59	5276.88	1608.421			
M	89-52-10	5276.95	1608.425		HT = 8.48	
			.425			
	90-05-02	5293.68	1613.519			
PP 236	269-54-43	5293.70	1613.514		HT = 12.47	
M	90-05-10	5293.69	1613.514			
			.516			
	90-22-10	5320.44	1621.686			
PP 252	269-38-00	5320.44	1621.689		HT = 6.58	
M	90-22-05	5320.44	1621.688			
		.445				



PP 234	X-OUT	TACK IN	CONCRETE	8/9 1/7/16 TIN RIW
PP 233	X-OUT	IN	7/8 7/8/17	
PP 216	X-OUT	5/8" I.P.	BELOW PUNT	5/14 8/9
PP 236	M.C.H.D.	BCSM	9/10 1/6/15	
PP 252	RANDOM	PANEL	SET NAIL & SHINER	

	∠@ 236	H.I = 5.08				
	∥	∡				
∥ PP 234	0-06-45	180-06-32		38.5		
PP 217	89-52-56	269-52-45		50.5	89-46-12	
PP 244	179-44-11	359-44-08		09.5	179-37-31	
426	268-31-26	88-31-23		24.5	268-24-46	
2) 234	90-00-52	270-00-56		54		
217	179-47-12	359-46-57		04.5	10.5	11
244	269-38-35	89-38-37		36	42	36.5
426	358-25-37	178-25-34		35.5	41.5	44
	65°	29.10" HG	11 PPM			
	∠w	SD/F	SD/M			
	89-45-14	5268.96	1605.958			
PP 217	270-14-53	5268.91	1605.953		HT = 12.43	
	89-45-13	5268.92	1605.955			
		(.93)				
	89-54-55	5252.11	1600.843			
PP 244	270-05-13	5252.08	1600.845		HT = 12.41	
m	89-54-51	5252.13	1600.844			
	89-57-55	5276.14	1608.170			
TRAV PT	270-02-01	5276.11	1608.165		HT = 8.38	
426 m	89-57-57	5276.14	1608.167			
		(.13)				



PP 236	M.C.H.D. BCSM IN ROAD	9/16	10/15
PP 234	X-CUT TACK IN CONCRETE BELOW PVMT.	8/17	9/16
PP 217	M.C.H.D. BCSM IN H/H	4/9	3/10
PP 244	FND NAIL BELOW PVMT (VERTICAL FACE	10/15	11/14
426	TRAV PT SET NAIL & SHINER		

T@ PP 244 141 =
D R

1) PP 236 ~~0 02 12~~
427

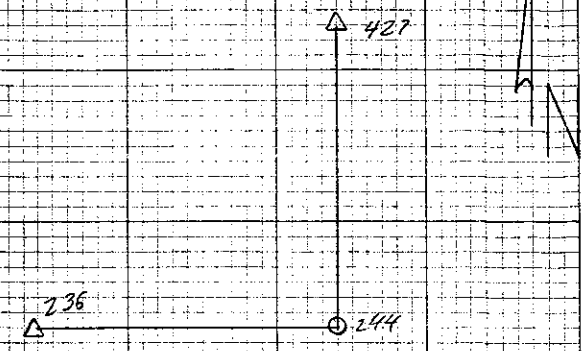
2) 236
427

PP 244 IS IN A DIP & TOO
DIFFICULT TO SEE SIGHTS IN
EITHER DIRECTION
I DECIDED NOT TO USE IT
FOR A TRAVERSE POINT

TRAV 7
427

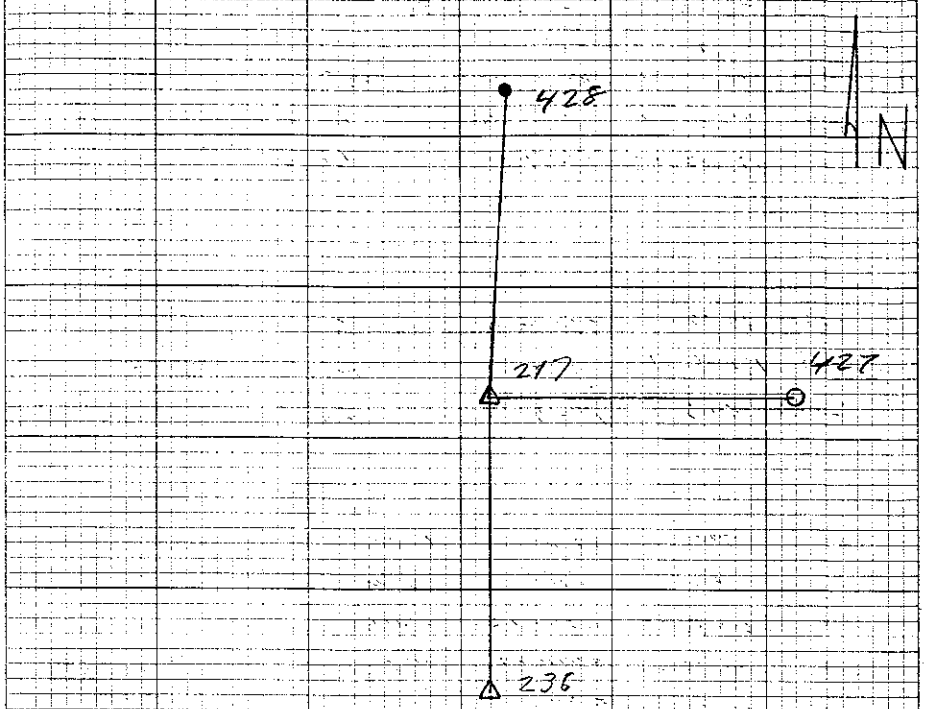
1/29/90

(29)



	At 217	Ht = 5.75				
	D	R				
1) PP 236	0-06-03	180-06-04		03.5		
428	180-44-47	0-44-41		44	180-38-40.5	
427	269-41-49	89-47-39		41	269-36-37.5	
2) 236	90-16-12	270-16-06		09		
428	270-54-58	90-59-56		57	48	44
427	359-52-47	179-52-48		475	385	38
	70° F	28.90" HG	157 RPM			
	2W	SCI/C	SDI/m			
	89-52-02	5262.28	1603.966			
TRAV PT	270-07-50	5262.34	1603.962			
428	m 89-52-06	5262.35	1603.968			
		(.32)	(.965)			
TRAV PT	89-57-17	5215.12	1589.576			
	270-02-45	(5215.14)	1589.576			
427	m 89-57-16	5215.16	1589.574			
			(.575)			

(26)



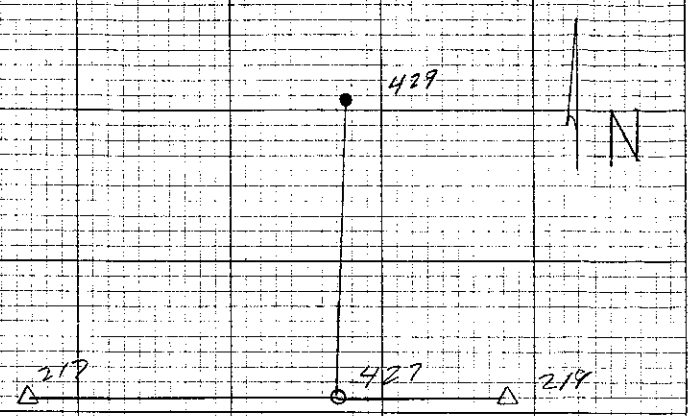
AP 217 BCSM IN HH 4/5 3/10 TIN RIW

AP 236 M.C.H.D. BCSM 9/16 10/15

428 TRAV PT SET NAIL & SHINER

427 TRAV PT ½" I.P. IN HH 3/16 2/11

	TA@ 427	HI = 6.36				
	D	R				
1) PP 217	0-02-35	180-02-30		32.5		
429	91-10-38	271-10-38		38	91-08-05.5	
219	181-39-22	01-39-21		21.5	181-36-49	
2) 217	90-08-26	270-08-26		26		
429	181-16-37	01-16-32		34.5	08.5	07
219	271-45-16	91-45-17		16.5	50.5	50
	58°F	28.90" HG	9 PPM			
	Za	SO/F	SO/m			
	89-51-20	5246.03	1598.995			
429	270-08-40	5246.03	1598.992			HT=8.44
m	89-51-20	5246.03	1598.993			
	89-49-17	2638.72	804.285			
PP 219	270-10-48	2638.72	804.285			HT=4.84
	89-49-14	2638.72	804.285			



427 TRAV PT ½" RA IN HH 3/10 2/11 TIN RTW

PP 217 BCSM IN HH 4/9 3/10

429 TRAV PT SET NAIL & SHINER

PP 219 M.C.A.D. BESM ON BRIDGE

2/1/90

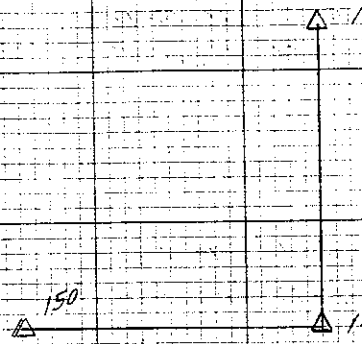
28

T @ PP 151 — HI = 5.54

		D	R			
1)	PP 150	0-03-21	180-03-17	19		
	PP 135	89-52-58	269-52-55	56.5	89-49-37.5	
2)	150	90-06-31	270-06-25	28		
	135	179-56-06	359-56-06	06	38	38

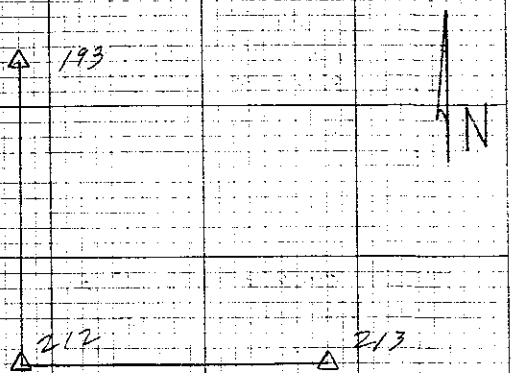
50°F — 28.80"Hg — 5 PPM
SAME — SAME

	89-43-38	5280.44	1609.481	
PP 150	270-16-00	5280.44	1609.481	HT = 8.38
	89-43-50	(5280.44)	1609.480	



PP 151	C.O.P.	BCSM	IN HH	19/18 24/19
PP 150	M.C.H.O.	BCSM	IN HH	14/13 23/24
PP 135	BOLT	IN CONCRETE	IN HH	12.7 13/18

	Ta @ PP 212				
	D	R			
1) PP 193	0-07-10	180-07-08	09		
PP 213	90-27-33	270-27-35	34	90-20-25	
2) 193	90-01-01	270-00-58	58.5		
213	180-21-22	0-21-24	23	23.5	24



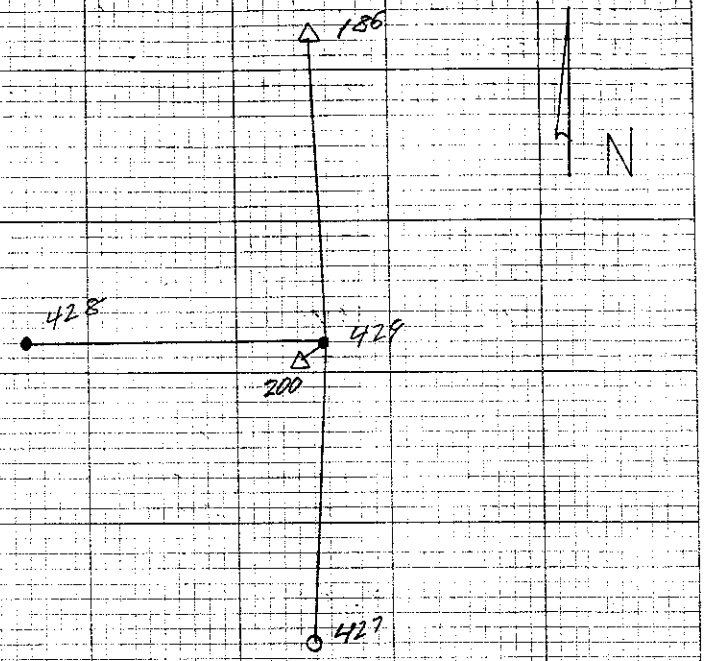
PP 212 M.C.H.D. BCSM 1W HH $\frac{2}{H}\left|\frac{1}{12}\right.$ T1N R2W

PP 193 BCSM 1W H.H $\frac{35}{2}\left|\frac{36}{1}\right.$ T2N / T1N R2W

PP 213 M.C.H.D BCSM 1W HH $\frac{1}{12}\left|\frac{6}{7}\right.$ T1N

R2W R1W

		TR@ 429	HI = 5.15			
		D	A			
1)	427	0-01-44	180-01-48	46		
pp	200	82-20-39	262-20-41	40	82-18-54	
	428	89-04-34	269-04-34	34	89-02-48	
pp	186	178-46-16	358-46-18	17	178-44-31	
2)	427	90-09-52	270-09-50	51		
	200	172-28-51	352-28-55	53	19-02	18.58
	428	179-12-43	359-12-39	41	.50	49
	186	268-54-26	88-54-24	25	34	32.5
		58°F	28.90"HG	9 PPM		
		Za	SO/F	SO/M		
pp	200	CA	34.64			
		90-03-17	5224.01	1592.282		
TRAV PT		269-56-51	5224.02	1592.282		HT=4.44
	428	90-03-13	5224.02	1592.281		
		89-49-51	5280.63	1609.539		
pp	186	270-10-24	5280.63	1609.537		HT=4.45
		89-49-44	5280.63	1609.538		



TRAV PT 429 SET NAIL & SHINER

427 TRAV PT 1/2" IRC LW HH 3/12 T11N R1W

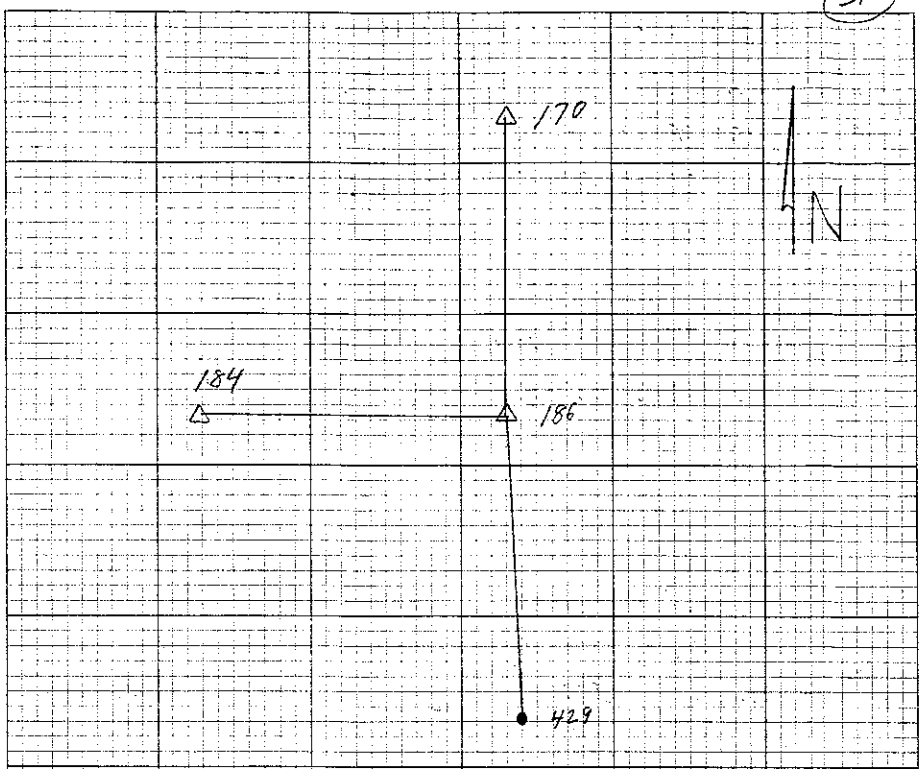
pp 200 M.C.H.D. BCSM LW HH 34/35 3/12 T2N T1N R1W

428 TRAV PT SET NAIL & SHINER

pp 186 M.C.H.D. BCSM 27.26/34/35

	K@ PP 186 HI = 5.21					
	D	R				
1) 429	0-02-29	180-02-23		26		
PP 184	90-41-39	270-41-35		37	90-39-11	
PP 170	180-21-17	0-21-13		15	180-18-49	
2) 429	90-07-12	270-07-06		09		
184	180-46-20	0-46-18		19	10	10.5
170	270-25-59	90-26-01		00	51	50
	58°F	28.98" Hg	9 PPM			
	2 c	SO/c	SO/c			
	90-06-51	5237.70	1596.456			
PP 184	269-53-09	5237.71	1596.457			117 = 4.18
M	90-06-51	5237.71	1596.457			
	89-51-28	5280.51	1609.502			
PP 170	270-08-35	5280.51	1609.505			117 = 8.36
		5280.51	1609.503			

(31)



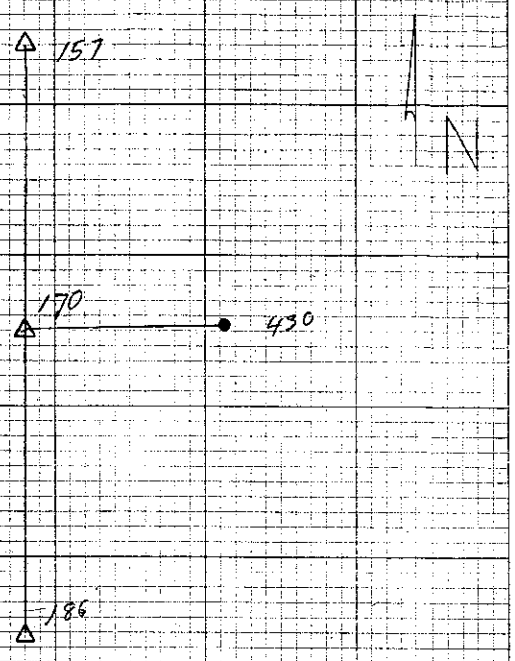
PP 186 M.C.H.D. BC SM $\frac{27}{34}\frac{26}{35}$ T 2N R1W

429 TRAV PT. SET NAIL & SHINER

PP 184 ½" I.P. IN H H $\frac{28}{33}\frac{27}{34}$

PP 170 M.C.H.D. BC SM IN H H $\frac{22}{27}\frac{23}{26}$

		D				
	Tan PP 170		HI = 5.59			
1) PP 186	0-01-42	180-01-38		40		
PP 157	180-08-41	0-00-43		42	179-59-02	
430	269-53-39	89-53-32		35.5	269-51-55.5	
2) 186	90-06-12	270-06-41		11.5		
157	270-05-19	90-05-17		18	06.5	04
43	359-58-10	179-58-10		10	58.5	57
	Az	SD/F	SD/M			
	89-45-00		14	1608.474		
PP 157	270-14-55	5277.14		1608.478		HT=8.38
		5277.14		1608.474 (478)		
	89-55-40	3780.13		1152.180		
TRAV P7	270-04-23	3780.12		1152.184		HT=4.20
430		3780.11		1152.184 (183)		



PP 170 M.C.H.D. BCSM W.H. 22/23 / 21/26 T2N R1W

PP 186 M.C.H.D. BCSM 27/26 / 34/35

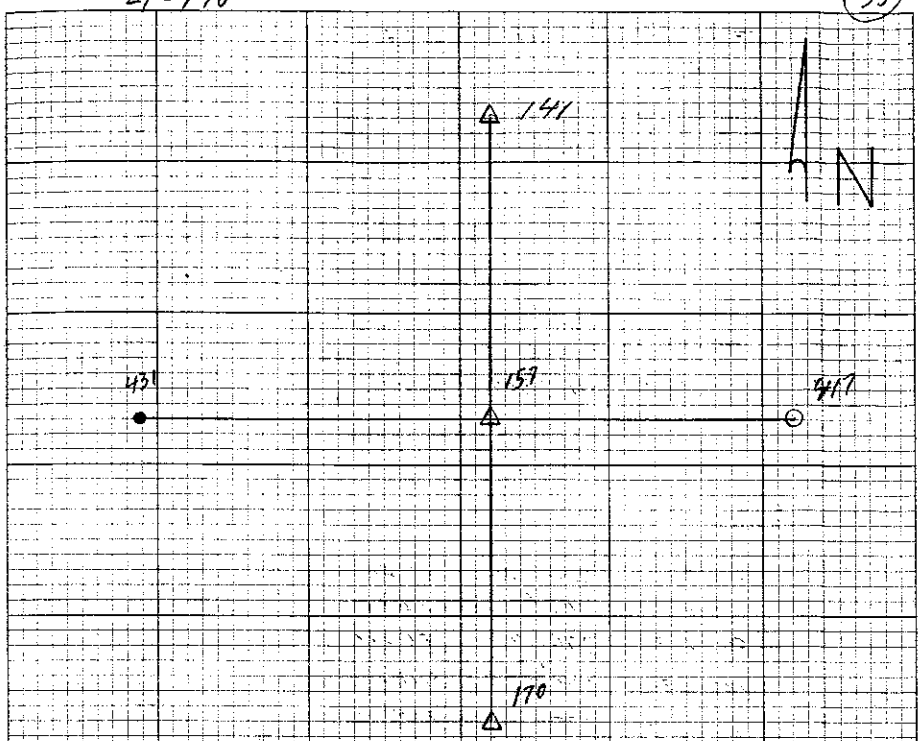
PP 157 BCSM 15/14 / 22/23

430 TRAV P7 SET NAIL & SHINER

	A @ PP 157	141 = 5.21				
	O	A				
1) PP 170	0-05-27	180-05-21		24		
431	91-52-07	271-51-58		02.5	91-46-38.5	
PP 141	180-02-41	0-02-31		36	179-57-12	
417	271-19-53	91-19-56		54.5	271-14-30.5	
2) 170	90-01-48	270-01-38		43		
431	181-48-25	01-48-21		23	40	39
141	269-59-04	89-58-56		00	17	14.5
417	01-16-16	181-16-16		16	33	32
	63°F	25.05 "Hg	9 PPM			
	SW	SD/E	SOUTH			
TRAV PT	89-42-37	5968.92	1819.320			
431	270-17-31	5968.89	1819.327			HT = 4.21
	M 89-42-33	5968.89	1819.321			
	89-33-27	5267.28	1605.476			
PP 141	270-26-40	5267.35	1605.484			HT = 4.43
	M 89-33-24	5267.29	1605.483			
	90-08-35	5193.08	1582.848			
TRAV PT	269-51-41	5193.06	1582.868			HT =
417	M 90-08-27	5193.10	1582.859			12.38

2/5/90

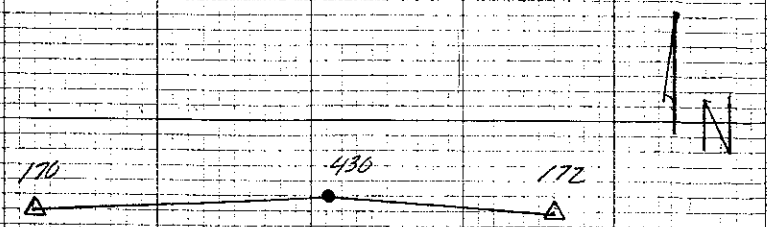
(33)



PP 157	M.C.H.O.	BCSM	15/22	14/23	T2N R1W
PP 170	M.C.H.O.	BCSM	IN HH	22/27	23/26
431	TRAV PT	SET	NAIL & SHINER		
PP 141	M.C.H.O.	BCSM	10/15	11/14	
417	C.O.R.	BCSM	IN HH	14/23	13/24

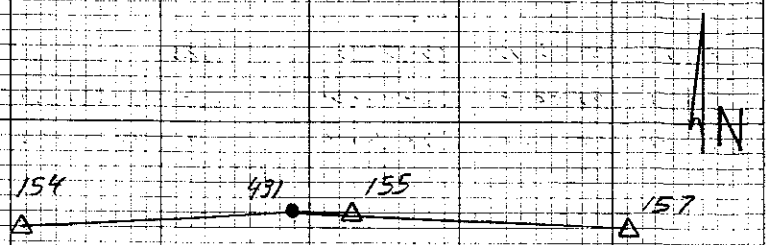
	X @ 430		HI = 5.25			
	D		R			
1) PP 170	0-01-33		180-01-30	31.5		
PP 172	181-30-42		01-30-42	42	181-29-10.5	
2) 170	90-09-47		270-09-41	44		
172	271-38-56		91-38-50	53	09	10
	68°F		29.10" HG	12 PPM		
	2M		SD/F	SD/m		
	90-16-36		2769.04	844.004		
PP 172	269-43-23		2769.03	844.004		HT = 4.38
M	90-16-37		2769.03	844.005		

(34)



430	TRAV PT	SET NAIL & SHINER		
PP 170	M.C.H.O.	BCSM IN HH	22/27 | 23/26	T2N R1W
PP 172	M.C.H.O.	BCSM		

	∠ @ 431	HT = 5.16				
	D	R				
1) PP 157	0-00-15	180-00-10		12.5		
PP 154	177-42-16	357-42-18		17	177-42-04.5	
PP 155	359-11-51	179-11-49		50	359-11-37.5	
2) 157	90-05-41	270-05-38		39.5		
154	267-47-54	87-47-41		47.5	08	06
155	89-17-22	269-17-15		18.5	39	38
	65°F	29.00" HG	12 PPM			
	2m	SDIF	SDFM			
	90-17-19	4407.40	1343.379			
PP 154	269-42-47	4407.39	1343.375			HT = 8.38
m	90-17-16	4407.39	1343.375			
	91-04-26	740.83	225.803			
PP 155	268-55-38	740.81	225.803			HT = 4.44
m	91-04-24	740.83	225.802			



431 TRAV PT SET NAIL & SHINER

PP 157 M.C.H.D. BC SM $\frac{15}{22}\left|\frac{14}{23}\right.$ T2N R1W

PP 154 BC SM IN H.H $\frac{17}{20}\left|\frac{16}{21}\right.$

PP 155 M.C.H.D. BC SM IN H.H $\frac{16}{21}\left|\frac{15}{22}\right.$

		D	R			
	At @ 417		Hi = 5.73			
1)	PP 157	0-03-52	180-03-45	48.5		
	PP 143	88-55-53	268-55-51	52	88-52-03.5	
	PP 158	178-55-41	358-55-41	4	178-51-52.5	
2)	157	90-00-08	269-59-58	03		
	143	178-52-02	358-51-58	00	51-57	52-00
	158	268-52-02	88-51-51	56.5	53.5	53

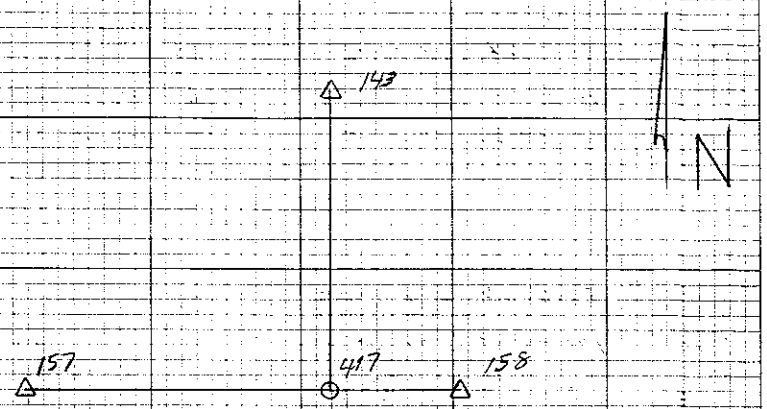
61°F
Za

29.05" Hg
50/F

12 PPM
50/m

	90-02-17	1622.93	494.674
PP 158	269-57-45	1622.93	494.675
m	90-02-16	1622.94	494.674

HI = 4.38



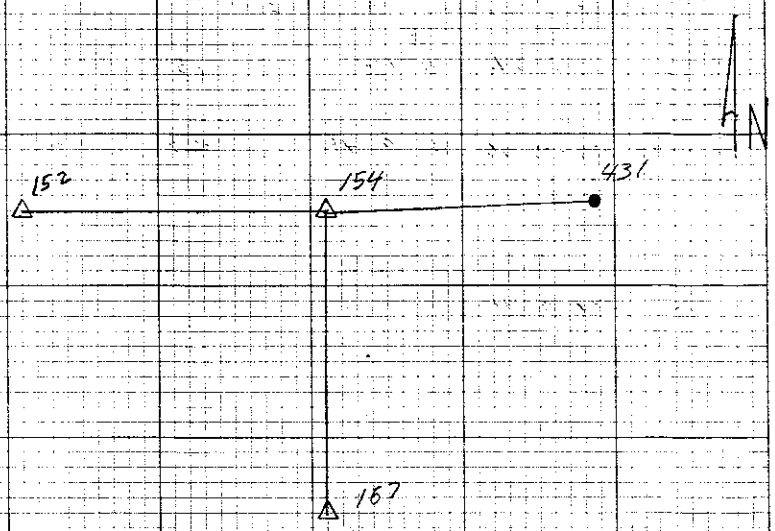
417 TRAV PT C.O.P. BCSM IN HH 14/13 23/24 TOK RIW

PP 157 M.C.-H.D. BCSM 15/14 22/23

PP 143 TRW SPIKE IN ROAD 4/12 14/13

PP 158 RANDOM PANEL NAIL & SHINER

A @ PP 154		HI = 5.83			
	G	R			
1) 431	0°01'26"	180°01'24"	25		
PP 167	91°34'41"	271°34'31"	36	91°33'11"	
PP 152	180°39'50"	0°39'43"	46.5	180°38'21.5	
2) 431	90°07'35"	270°07'37"	36		
167	181°46'49"	01°40'44"	46.5	10.5	11
152	270°46'01"	90°45'57"	59	23	22
	66°F	29.05" HG	12 PPM		
	2W	SO/C	SO/M		
	5358.41	1633.247			
	5358.41	1633.246			
PP 167	5358.41	1633.245			HT = 8.38



PP 154 BCSM IN HH $\frac{17|16}{20|21}$ T2W RIW

431 TRAV PT SET NAIL & SHINER

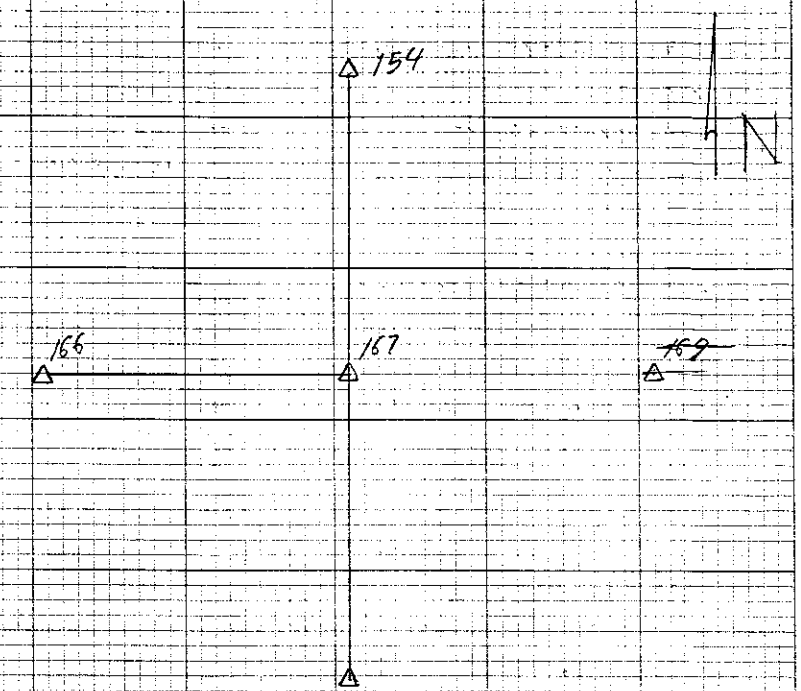
PP 167 M.C.H.D. BCSM IN HH $\frac{20|21}{29|28}$

PP 152 C.O.P. BCSM IN HH $\frac{18|17}{19|20}$

	T @ PP 167		HI = 5.65			
	D.	R.				
1) PP 154	0-01-32	180-01-43		37.5		
~~PP 169~~						
PP 183	179-02-40	359-02-45		42.5	179-01-05	
PP 166	269-26-06	89-26-07		06.5	269-24-29	
2) 154	90-05-29	270-05-32		30.5		
183	269-06-30	89-06-30		30	00-58.5	02
166	359-29-52	179-29-51		51.5	21	25
	2a	SD/F	SD/m			
~~PP 169~~						HT=10.38
	46°F	29.10"/16	1 ppm			
	90-08-19	5299.03	1615.148			
	269-52-14	5299.01	1615.144			
PP 183 m	90-08-03	5299.02	1615.146			HT=8.21

2/6/90

(38)



PP 167 M.C.H.O. BC SM IN HH 20/21 / 29/28 T2N RIW

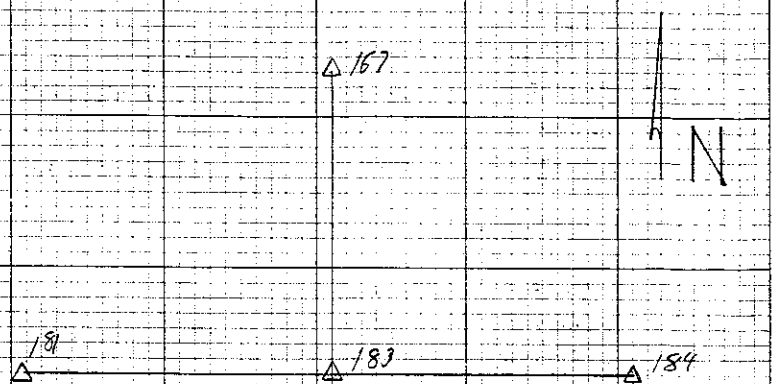
PP 154 BC SM IN HH 17/16 / 20/21

PP 169 RANDOM PANEL NAIL & SHINER

PP 183 RANDOM PANEL NAIL & SHINER

PP 166 M.C.H.O. BC SM IN HH 19/20 / 30/29

		D	R				
	X @ PP 183		HI = 5.21				
1)	PP 167	0-00-20	180-00-15		17.5		
	PP 184	90-06-40	270-06-43		41.5	90-06-24	
	PP 197	179-57-35	359-57-34		34.5	179-57-17	
	PP 181	270-33-53	90-33-51		52	270-33-34.5	
2)	167	90-09-21	270-09-18		19.5		
	184	180-15-43	0-15-39		41	21.5	23
	197	270-06-40	90-06-34		37	17.5	17
	181	0-43-00	180-42-57		58.5	39	37
		50°F	29.15" HG	3 PPM			
		Z =	SO/F	SO/M			
		90-06-28	5236.27	1596.011			
	PP 184	269-53-34	5236.23	1596.016			HT = 8.20
	m	90-06-27	5236.28	1595.999			
		90-10-24	5230.03	1594.131			
	PP 191	269-49-45	5230.07	1594.127			HT = 8.26
	m	90-10-20	5230.06	1594.124			



PP 183 RANDOM RANGE NAIL & SHINER

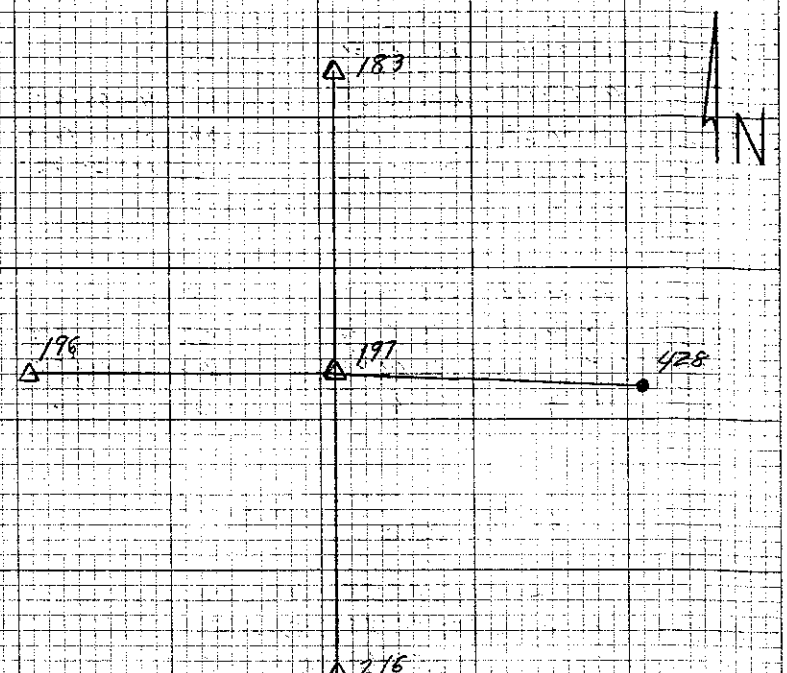
PP 167 M.C.H.O. BCSM IN HH $\frac{20|21}{29|28}$ T2M R1W

PP 184 ½" I.P IN HH $\frac{28|27}{33|34}$

PP 197 RANDOM RANGE RR & SHINER

PP 181 M.C.H.O. BCSM IN HH $\frac{30|29}{31|32}$

	T@ PP 197	HI = 5.25				
	L	R				
1) PP 183	0-03-00	180-03-01		00.5		
428	91-05-31	271-05-23		27	91-02-26.5	
PP 216	180-38-27	0-38-29		28	180-35-27.5	
PP 196	270-35-22	90-35-24		23	270-32-22.5	
2) 183	90-08-21	270-08-17		19		
428	181-10-39	01-10-46		42.5	23.5	25
216	270-43-49	90-43-36		42.5	23.5	25.5
196	0-40-33	180-40-31		32	13	18
	61°F	29.15" Hg	8 PPM			
	Z =	-1°/F	50 l/m			
	90-03-23	5279.15	1609.093			
TRAV PT	269-56-48	5279.13	1609.092			
428 M	90-03-18	5279.19	1609.097			HT = 8.20
	90-05-45	5310.18	1618.534			
PP 216	269-54-08	5310.19	1618.553			HT = 8.26
M	90-05-49	5310.20	1618.553			



PP 197 RANDOM PANEL P.K. & SHINER

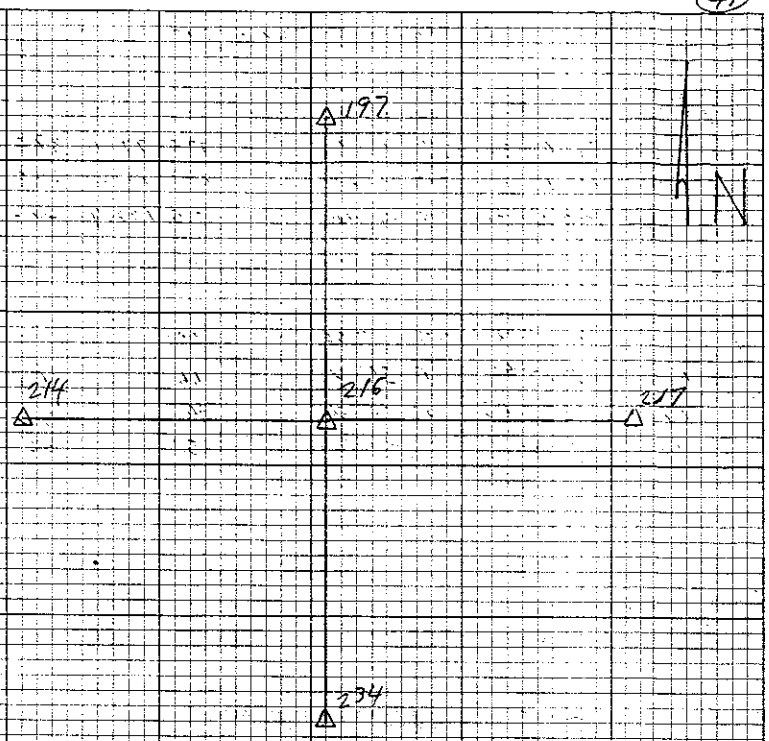
PP 183 RANDOM PANE NAIL & SHINER

428 TRAV PT NAIL & SHINER

PP 216 5/8" I.P. BELOW PUNT 5/8 4/9 TIN RIW

PP 196 RANDOM PANEL P.K. & SHINER

	Ta@ PP 216		HI = 5.48			
	D	R				
J PP 197	0-07-54	180-07-54	54			
PP 217	90-03-48	270-03-35	41.5	89-55-47.5		
PP 234	180-09-58	0-09-53	55.5	180-02-01.5		
PP 214	269-53-49	89-53-46	47.5	269-45-53.5		
2J 197	90-00-48	270-00-38	43			
217	179-56-35	359-56-27	26	43	45	
234	270-02-42	90-02-38	40	01-57	01-59	
214	358-46-31	179-46-31	31	48	57	
	66 °F	29.05 (14.0)	IN PPM			
		5255.25	1601.813			
PP 217	90-02-44	5255.20	1601.802			HI = 8.25
	269.57-10	5255.23	1601.807			
M	90-02-47					



PP 216 5/8" I.P. BELOW PVMT. 5/4/9 T.W. RIW

PP 197 RANDOM PAVEL P.K. & SPIKE

PP 217 BCSM IN MH 4/3/10

PP 234 X-OUT TACK IN CONCRETE IN MH

PP 214 M.C.H.D. BCSM IN MH 5/5/8

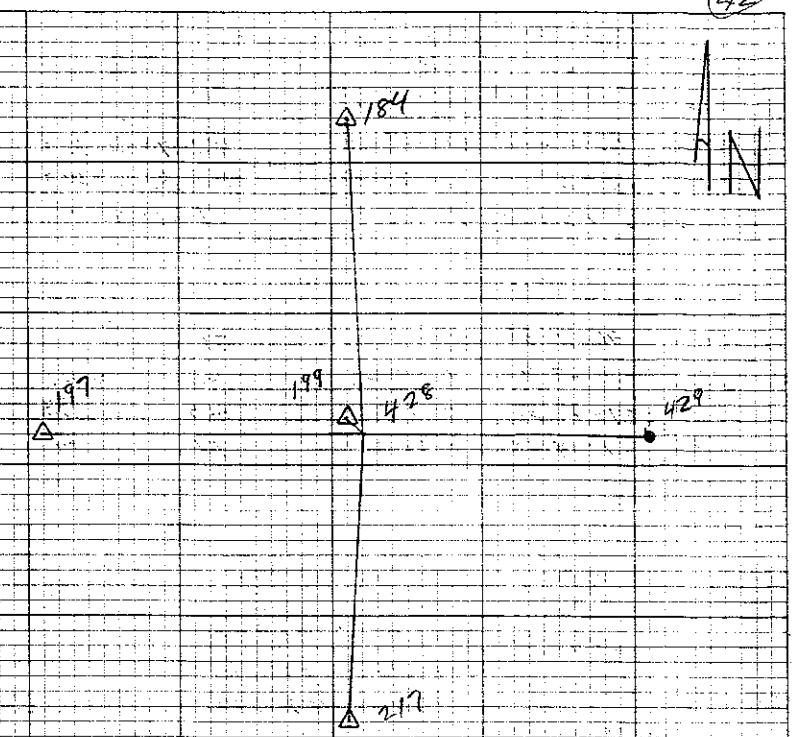
T @ 428 HI = 5.16

		D	A				
1)	PP 217	0-00-52	180-00-56	54			
	PP 197	90-12-32	270-12-35	33.5	90-11-39.5		
	PP 199	123-17-41	303-17-42	41.5	123-16-47.5		
	PP 184	178-42-43	358-42-44	43.5	178-41-49.5		
	429	269-09-44	89-09-47	45.5	269-08-51.5		
2)	217	90-13-13	270-13-06	09.5			
	197	180-24-46	0-24-46	46	36.5	38	
	199	213-29-55	33-29-54	54.5	45	46	
	184	268-54-57	88-54-54	55.5	46	48	
	429	359-22-02	179-21-51	56.5	47	49	

72°F 29.05" HG 15 PPM

		ZU	SDIC	SDIM	
		89-50-47	5312.45	1619.251	
PP 184		270-09-15	5312.49	1619.256	HT = 8.26
	m	89-50-46	5312.49	1619.251	

PP 199 CH. 55.93'



428 TRAV PT NAIL & SHINER

PP 217 BCSM IN HH 4/9 3/10 TIN RIW

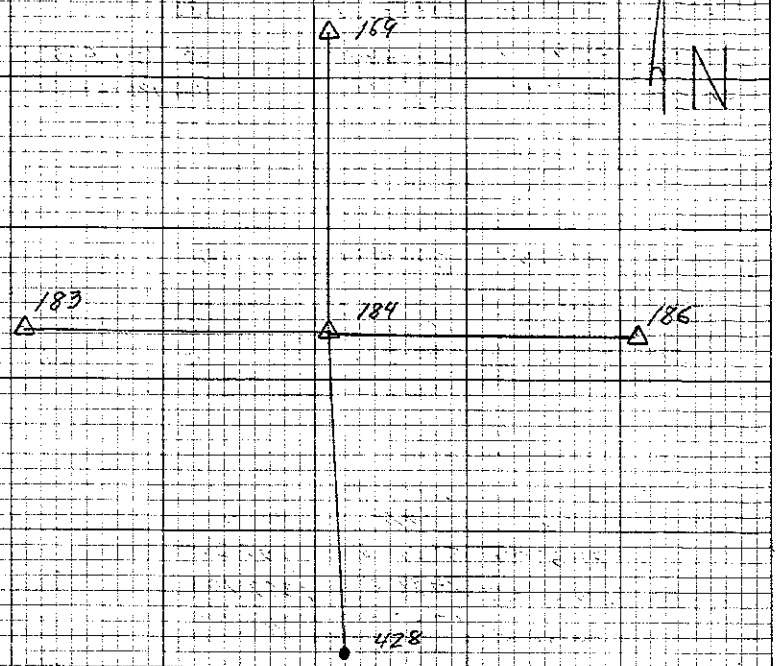
PP 197 RANDOM PANEL PK & SHINER

PP 199 M.C.H.D., BCSM IN HH 33/4 34/3

PP 184 1/2" I.P. BELOW PKNT 28/33 27/34

429 TRAV PT NAIL & SHINER

	∡@ PP 184		HI = 5.61			
	D	R				
1) 428	0-07-50	180-07-48		49		
PP 183	90-44-06	270-44-05		05.5	90-36-16.5	
PP 169	180-29-19	0-29-20		19.5	180-21-30.5	
PP 186	270-55-38	90-55-36		37	270-47-48	
2) 428	90-11-35	270-11-31		33		
183	180-47-42	0-47-42		42	09	13
169	270-32-57	90-32-56		56.5	23.5	27
186	0-59-18	180-59-16		17	44	46
	74°F	29.00" HG	17 PPM			
	Za	TOTE	SD/m			
	89-43-34	5233.06	1595.036			
PP 169	270-16-31	5233.05	1595.035			HT = 8.26
m	89-43-32	5233.04	1595.034			



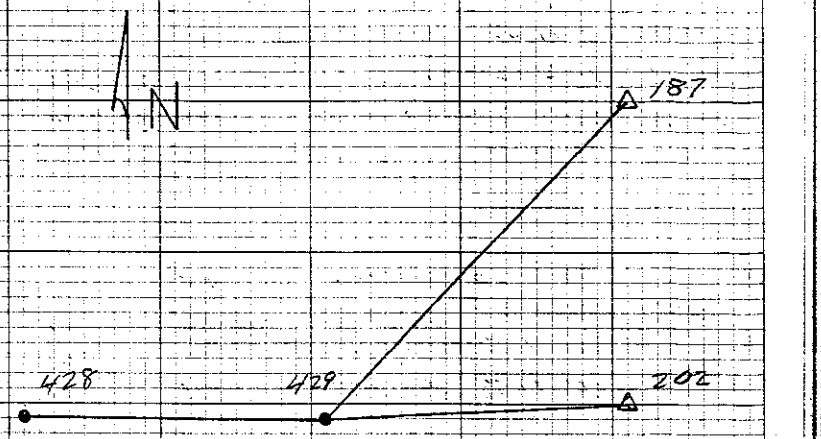
PP 184	½" I.P.	BRASS	PUNT	28/27 33/34 T2W R/W
428	TRAV P7	NAIL & SHINER		
PP 183	RANDOM PANEL	NAIL & SHINER		
PP 169	RANDOM PANEL	NAIL & SHINER		
PP 186	M.C.H.D.	BCSM		27/26 34/35

X @ 429 HI = 5.34

		V	R				
1)	428	0-05-40	180-06-37		38.5		
	PP 187	134-58-16	314-58-18		17	134-51-38.5	
	PP 202	180-31-06	0-31-09		07.5	180-24-29	
2)	428	90-05-18	270-05-17		17.5		
	187	224-56-59	44-57-02		00.5	43	41
	202	270-29-45	90-29-45		45	27.5	28

70°F 29.00" HG

		CW	SO/FT	SO/M	
		89-57-48	7438.32	2267.204	
PP 187		270-02-13	7438.32	2267.199	HT= 8.43
	m	89-57-48	7438.33	2267.200	
		90-00-07	5203.90	1586.146	
PP 202		269-59-56	5203.88	1586.147	
	m	90-00-06	5203.87	1586.144	HT= 20.26



429 TRAV PT, NAIL & SHINER

428 TRAV PT, NAIL & SHINER

PP 187 RANDOM PANEL SET NAIL & SHINER

PP 202 FND 5/8" I.P. 35/2 | 36/1 T2W T1W R1W

TO 426 HI =

		D	A			
1)	PP 236	0-05-05	180-05-00	02.5		
	PP 255	91-20-28	271-20-18	23	91-15-20.5	
	PP 253	105-20-48	25-20-50	49	105-15-46.5	
	432	179-22-31	359-22-30	30.5	179-17-28	
2)	236	90-01-35	270-01-26	30.5		
	255	181-16-55	01-16-45	50	19.5	20
	253	195-17-10	15-17-18	14	43.5	45
	432	269-18-58	89-18-57	57.5	27	27.5

50°F 29.10" 116 3PPM

2m SO/K SO/M

70-09-00 5298.57 1615.014

PP 255 259-51-16 5298.584 1615.007 HT=4.45

M 90-08-52 5298.571 1615.008

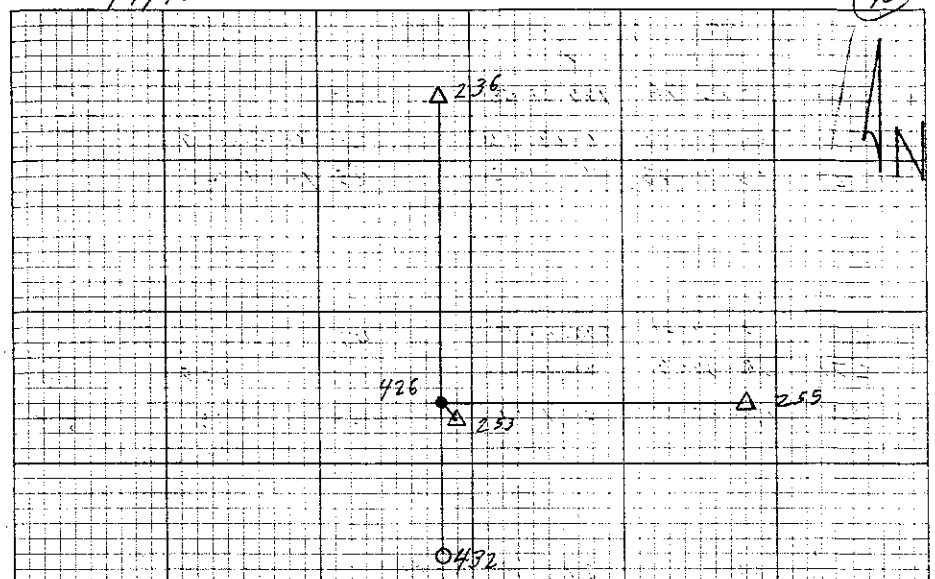
PP 253 CH 29.92

70-09-47 2613.10 796.476

TRAV PT 269-50-28 2613.10 796.475 HT=8.43

432 M 90-09-40 2613.10 796.475

2/7/90



426 TRAV PT. 1 MAIL 2 SHINER

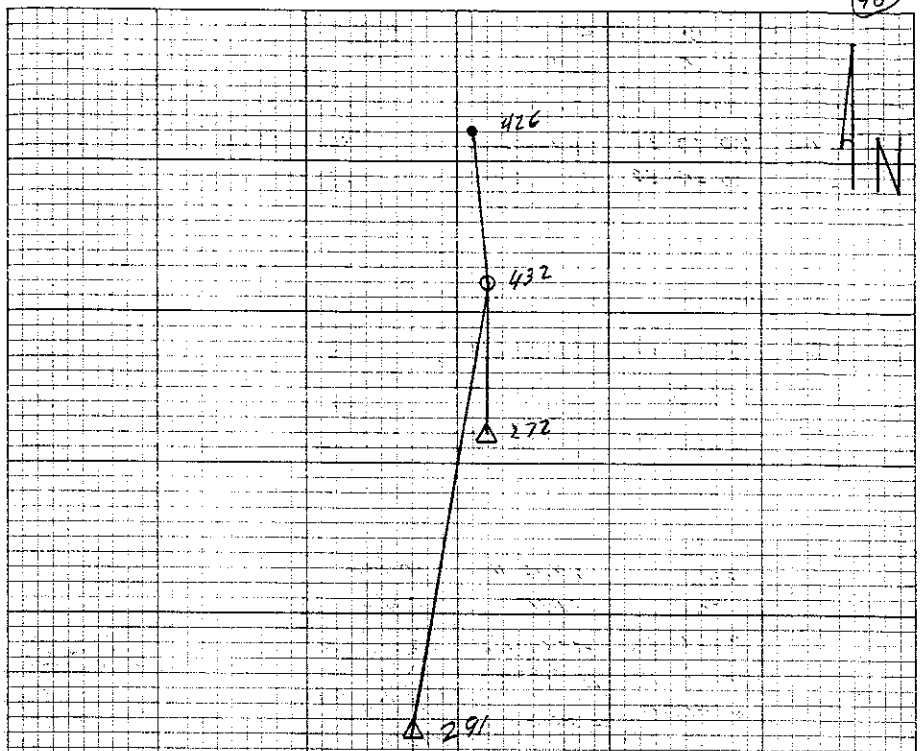
PP 236 M.C.H.D. BCSM 9/10 / 15/16 TIN RIM

PP 255 M.C.H.D. BCSM 15/14 / 22/23

PP 253 M.C.H.D. BCSM IN HH 16/15 / 21/22

432 TRAV PT. M.C.H.D. BCSM IN HH 21/22

	@ 432	HT = 5.66				
	∨	∧				
1) 426	0-03-56	180-03-58		57		
PP 272	180-23-24	0-23-24		24	180-19-27	
PP 291	186-20-28	06-20-22		25	186-16-28	
2) 426	90-10-51	270-10-43		47		
272	270-30-19	90-30-16		17.5	30.5	29
291	276-27-22	96-27-22		22	35	31.5
	56°F	29.10 "HG	6 PPM			
	∓ ~	JOB	JOB			
	90-27-02	2610-88	795.798			
PP 272	269-33-12	2610.88	795.799			HT = 8.43
m	90-26-55	2610.88	795.798			
	90-15-44	7541.60	2298.678			
	269-44-30	7541.60	2298.669			
PP 291 m	90-15-37	7541.54	2298.684			HT = 10.53



432 TRAV PT M.C.H.D. BCSA IN HH 21 | 22 TIN RODS

426 TRAV PT NAIL & SHINER

PP 272 RANDOM PANEL, NAIL & SHINER

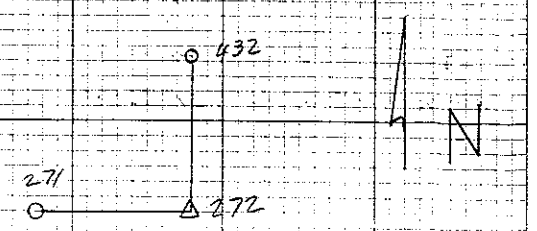
PP 291 RANDOM PANEL, NAIL & SHINER

T @ PP 272 HI = 5.36

	D	R			
1) 432	0-01-22	180-01-23	22.5		
PP 271	271-36-34	91-36-37	35.5	271-35-13	
2) 432	90-11-23	270-11-22	22.5		
271	01-46-32	181-46-35	33.5	11	12

74°F 11 HO 29.00 16 PPM

	Zn	SD/F	SD/M	
	89-55-58	2716.67	828.037	
VERTICAL	270-04-06	2716.66	828.039	HT = 8.45
PP 271 M	89-55-56	2716.66	828.038	

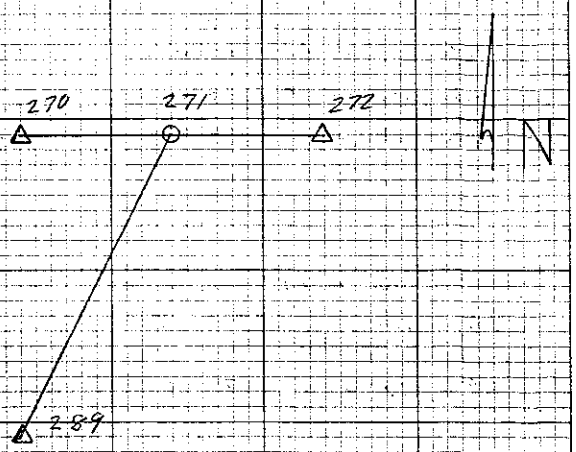


PP 272 RANDOM PANEL SET NAIL & SHINER

432 TRAV PT M.C.H.O BCSM ON HH 21/22 TIN RLW

PP 271 VERT. PANEL BCSM LS 11880 21/28

	X @ 271	H.I = 5.27				
	D	R				
1) PP 272	0-00-41	180-00-41		41		
PP 289	118-22-15	298-22-14		14.5	118-21-33.5	
PP 270	180-07-53	0-07-51		52	180-07-11	
2) 272	90-11-45	270-11-45		45		
289	208-33-23	28-33-20		21.5	36.5	35
270	270-18-56	90-18-57		56.5	11.5	11
	74°F	29.00" Hg	16 PPM			
	Zw	SD/F	SD/M			
	90-03-02	5749.46	1752.437			
PP 289	269-56-51	5749.46	1752.438			H.T = 8.43
m	90-03-06	5749.45	1752.436			
	90-08-33	2701.20	823.327			
PP 270	269-51-14	2701.20	823.327			H.T = 8.38
m	90-08-40	2701.20	823.326			



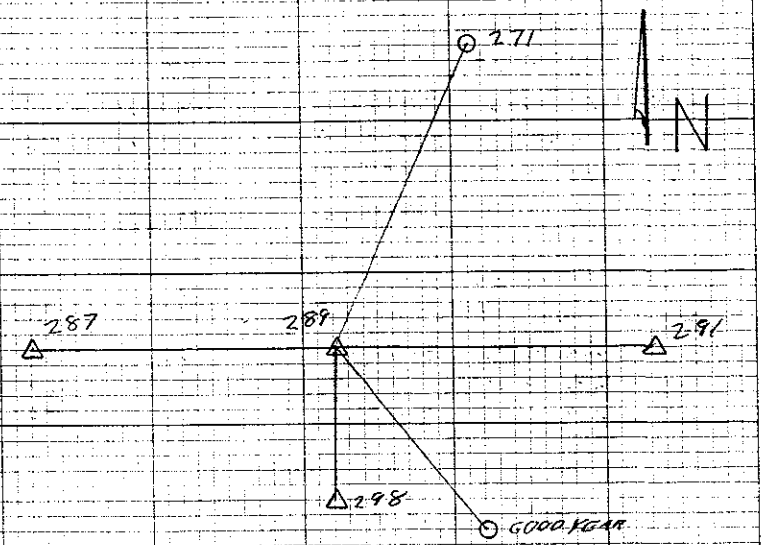
PP 271 VERT. PANEL BC5M CS11890 21/28 TIN RTW

PP 272 RANDOM PANEL, NAIL & SHINER

PP 289 M.C.H.D. BC5M 29|28 / 32|33

PP 270 M.C.H.D. BC5M " HH 20|21 / 29|28

	∠ @ PP	289	HT = 5.38			
	D	R				
1) 271	0-03-50	180-03-43		46.5		
PP 291	59-55-15	239-55-10		12.5	59-51-26	
GOODYEAR	114-08-01	294-06-00		00.5	114-02-14	
PP 298	161-23-12	341-23-09		10.5	161-19-24	
PP 287	239-34-08	59-34-05		06.5	239-30-20	
2) 271	90-12-85	270-12-05		05		
291	150-03-30	330-03-26		28	23	24.5
GOODYEAR	204-14-20	24-14-18		19	14	14
298	251-31-29	71-31-27		28	23	23.5
287	329-42-26	149-42-24		25	20	20
	70°F	29" HG	14 PPM			
	2W	50/F	50/M			
	90-05-28	4803.93	1464.242			
PP 291	269-54-24	4803.93	1464.243			HT = 4.
M	90-05-32	4803.93	1464.242			
	86-26-18	4406.51	1343.106			
GOODYEAR	273-33-35	4406.51	1343.106			HT = 4.25
M	86-26-22	4406.50	1343.106			
	89-53-07	2266.40	690.800			
PP 298	270-06-45	2266.40	690.799			HT = 12.45
M	89-53-14	2266.40	690.799			

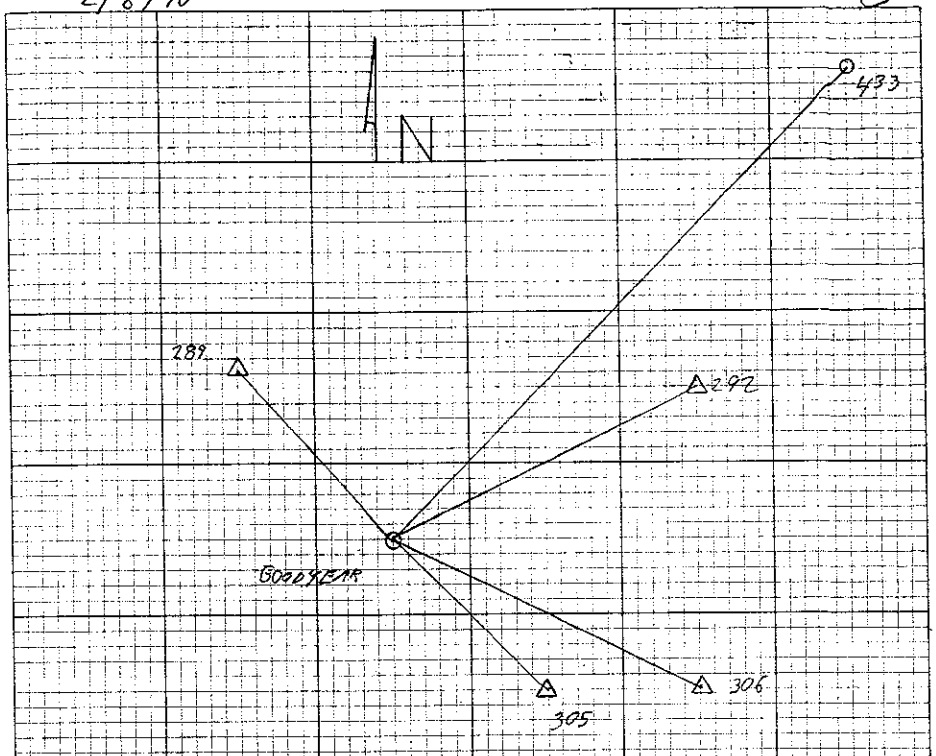


PP 289	M.C.HD	BCSM	29/32 28/33	T/N	R/W
PP 271	VERT. PANEL	BCSM	LS 11880	21/28	
PP 291	RANDOM PANEL, NAIL & SHINER				
GOODYEAR	FND DRILL HOLE IN ROCK @ HILLTOP				
PP 298	BCSM IN HH				
PP 287	RANDOM PANEL, NAIL & SHINER ON BRIDGE				

	A	@ GOODYEAR D	R				
1)	PP 289	00-02-58	180-02-53		55.5		
	TRAV PT 433	81-05-57	261-05-52		54.5	81-02-59	
	PP 292	95-49-08	275-49-07		07.5	95-46-12	
	PP 306	155-09-32	335-09-26		29	155-06-33.5	
	PP 305	174-15-35	354-15-33		34	174-12-38.5	
2)	289	90-03-34	270-03-32		33		
	433	171-06-38	351-06-33		35.5	03-02.5	03-01
	292	185-49-47	05-49-44		45.5	12.5	12
	306	245-10-10	65-10-06		08	35	34
	305	264-16-17	84-16-13		15	42	40
		54°	2880 11HB		10	1771	
		∠	SD/IP	SD/m			
	TRAV PT 433	91-19-45	11475.92	3497.862			
		268-40-14	11475.92	3497.866			
			11475.91	3497.866			HT=4.48
	PP 292	92-35-04	6174.86	1882.102			
		267-24-56	6174.86	1882.101			
			6174.86	1882.102			HT=4.26
	PP 306	92-36-01	5870.88	1789.446			
		267-23-52	5870.88	1789.449			
			5870.87	1789.447			HT=4.43
	PP 305	93-54-13	3781.17	1152.503			
		266-05-40	3781.17	1152.504			
			3781.17	1152.503			HT=4.38

2/8/90

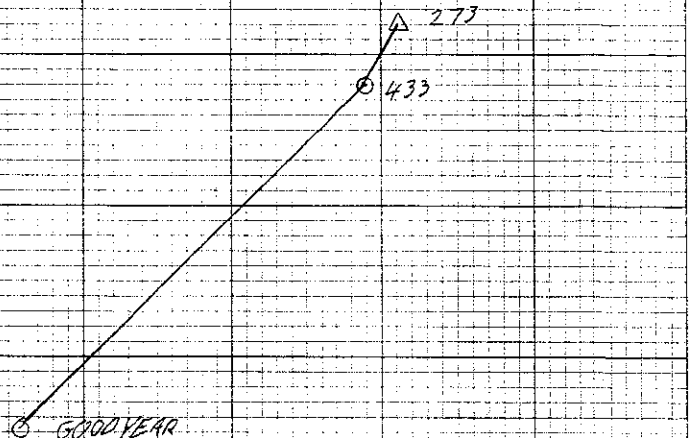
(51)



GOODYEAR	FND. DRILL HOLE IN ROCK @ HILL TOP		
PP 289	M.C.H.D. BCSM	29/28 / 32/33	TIN RING
433	TRAV. PT	A.D.O.T.	BCSM IN CONCRETE
PP 292	RANDOM PANEL	NAIL & SHINER	
PP 306	RANDOM PANEL	½" I.P. BELOW PUNT.	
PP 305	RANDOM PANEL	FND R.R. IN ROAD	

	∠	D	R			
@ 433						
1) GOODYEAR	0-02-13	180-02-12		125		
PP 273	164-40-39	344-40-43		41	164-38-28.5	
2) GOODYEAR	90-10-09	270-10-09		09		
PP 273	254-48-41	74-48-43		43	34	31

PP 273 CH 71.28



433 TRAV PT. A.D.O.T. 2"SQ.

GOODYEAR 1" DRILL HOLE IN ROCK @ HILLTOP

PP 273 BRASS IN HH

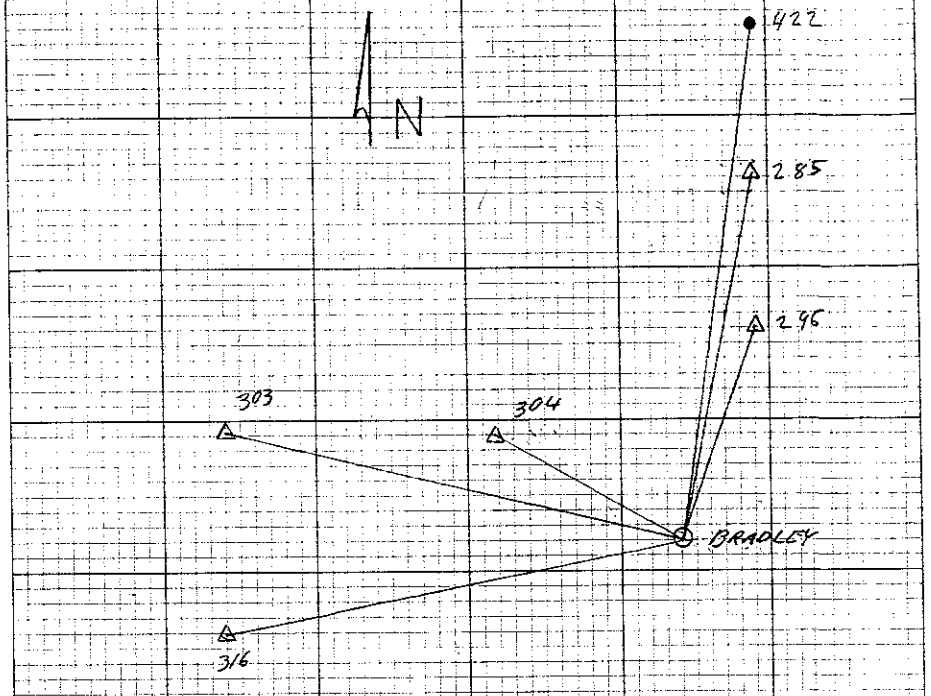
		AT @ BRADLEY		HI = 5.16		
		D	R			
1)	422	00-01-39	180-01-35	32		
	285	02-21-27	182-21-26	26.5	02-19-49.5	
	296	08-12-39	188-12-41	40	08-11-03	
	316	244-56-46	64-56-44	45	244-55-08	
	303	268-55-00	88-54-59	54.5	268-53-22.5	
	304	277-52-19	97-52-18	18.5	277-50-41.5	
2)	422	90-04-04	270-03-59	0401.5		
	285	92-23-54	272-23-49	51.5	50	50
	296	98-15-11	278-15-10	10.5	09	06
	316	334-59-44	154-59-13	13.5	12	10
	303	358-57-26	178-57-23	24.5	23	23
	304	07-54-46	187-54-45	45.5	44	43

62° 28.75" Hg 13 ppm

	N	E/P	E/M
PP 285	93-13-48	6908.53	2105.727
	266-46-26	6908.54	2105.724
	93-13-41	6908.52	2105.723
			.725

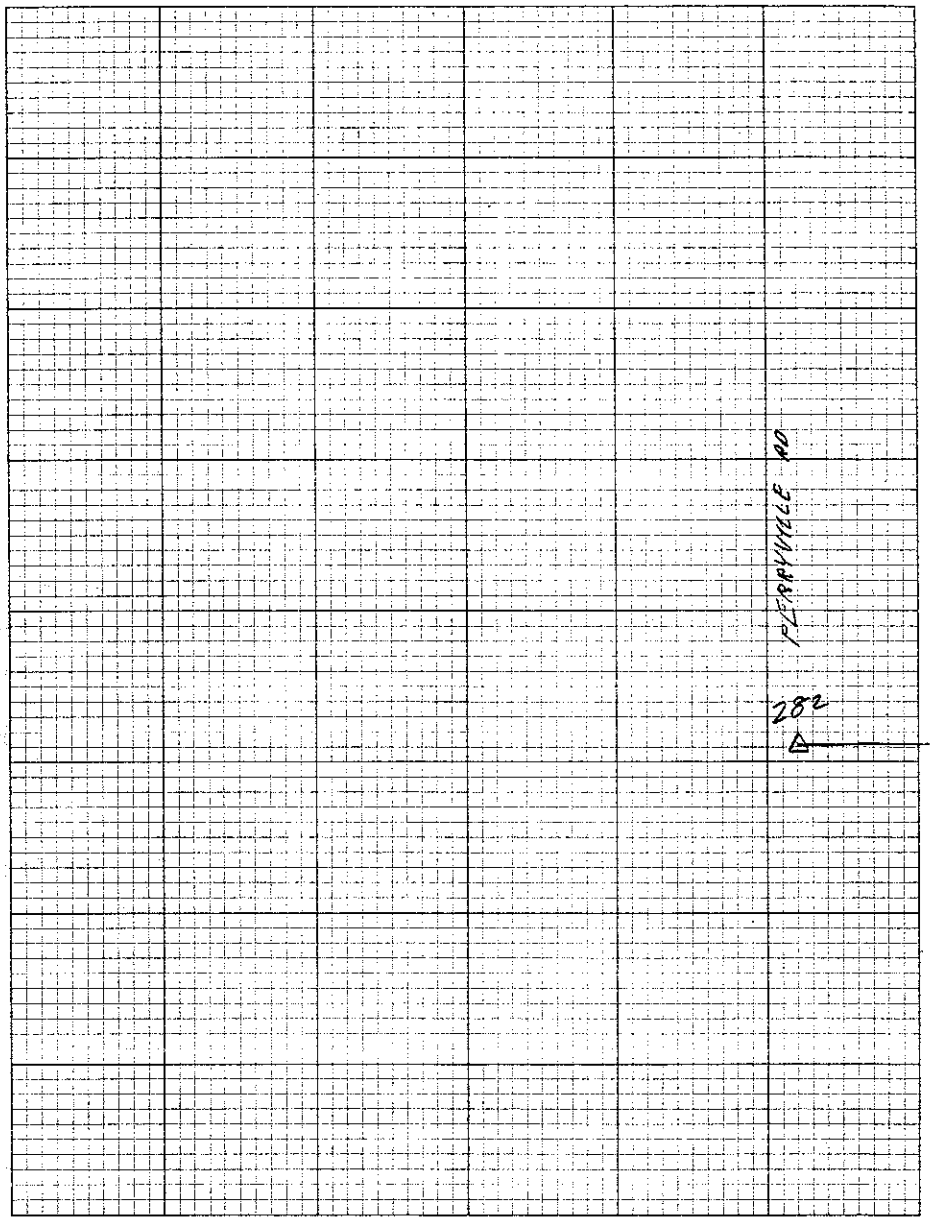
HT = 8.38

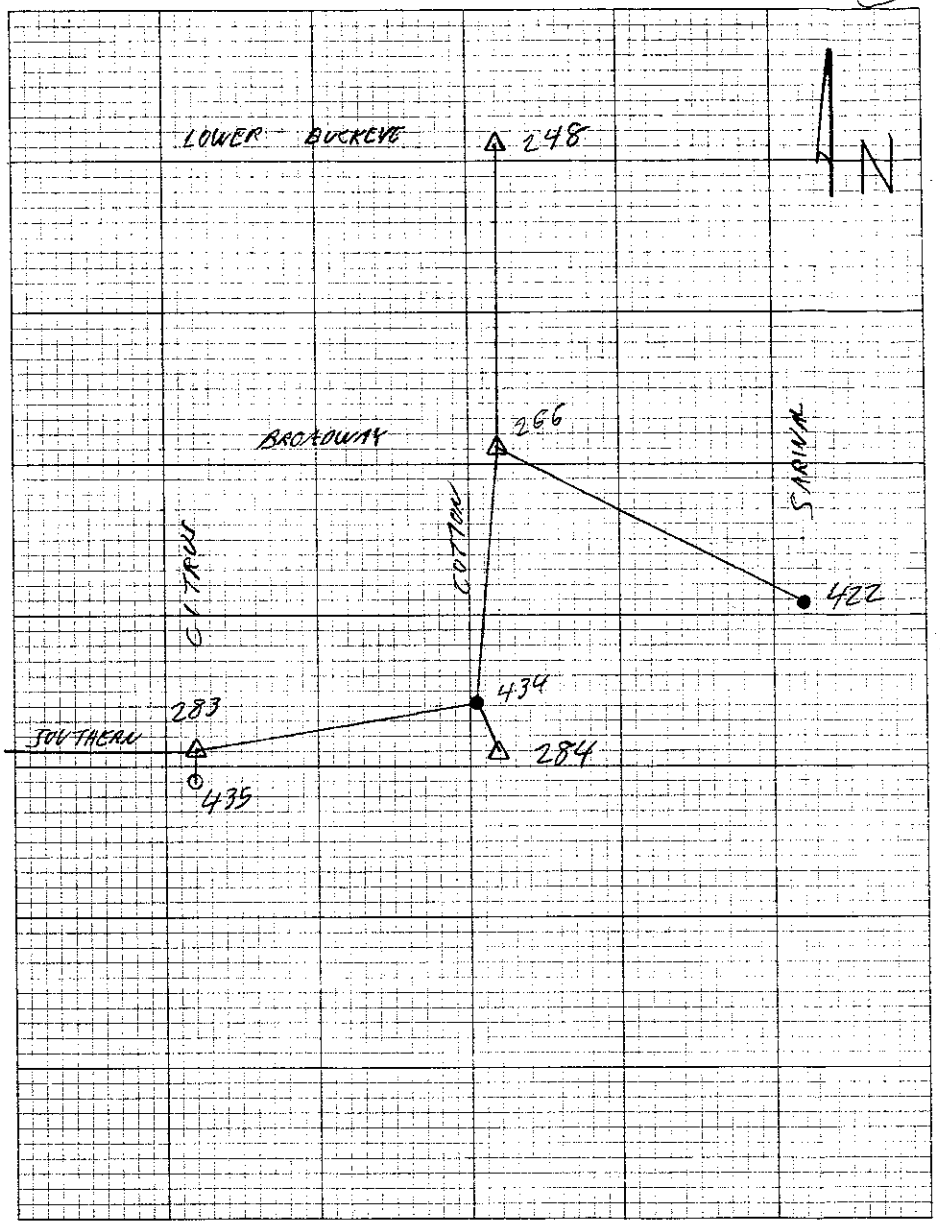
(53)



BRADLEY	NGS	BRONZE	DISC	IN	ROCK
PP 285	BCSM	IN	CONCRETE	LS	13554	30/31	T1N R1W
PP 296	FND ½" I.P.				
PP 316	RANDOM	PANEL		SET	NAIL & SHINER
PP 303	RANDOM	PANEL		SET	NAIL & SHINER
PP 304	RANDOM	PANEL		SET	NAIL & SHINER

	T@ BRADLEY	H/- 5.16		
	62°	28.75" HG	13 PPM	
	Zu	SD/C	SD/M	
	95-31-37	3850.14	1173.525	
PP 296	264-28-29	3850.14	1173.526	HT = 4.37
		3850.15	1173.525	
M	95-31-34			
	92-01-03	10354.34	3155.999	
PP 316	267-59-01	10354.33	3156.008	HT = 8.45
		10354.32	3156.016	
M	92-01-01			
	92-31-20	9059.93	2761.477	
PP 303	267-28-43	9059.96	2761.482	HT = 8.47
M	92-31-18	9059.93	2761.471	
		.94		
	95-17-47	4189.24	1276.881	
PP 304	264-42-22	4189.23	1276.882	HT = 4.85
		4189.23	1276.881	
M	95-17-42			

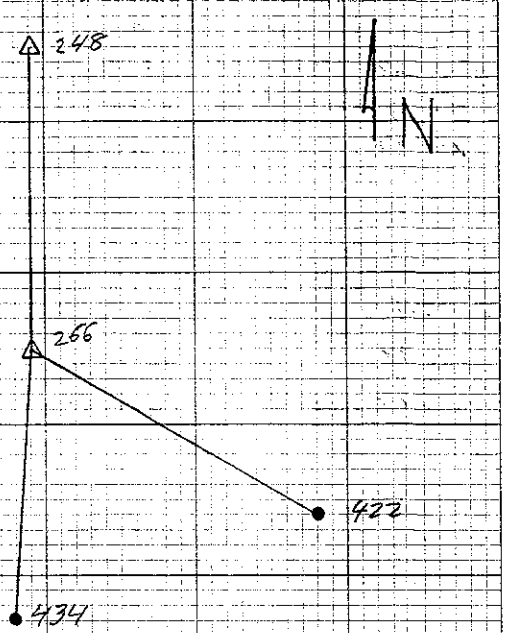

PENNSYLVANIA
282


LOWER BUCKEYE
248
N
BROADWAY
266
STADIUM
422
MARKET
COLFAX
434
283
SOUTHEAST
284
435

2/12/90

(56)

	∧ @ Ø	PP	266 R			
1) 422	0-03-29	180-03-26		27.5		
434	63-28-36	243-28-36		36	63-25-08.5	
PP 248	243-04-13	63-04-12		12.5	243-00-45	
2) 422	90-10-50	270-10-46		48		
434	153-35-56	333-35-58		57	09	09
248	333-11-35	153-11-32		33.5	45.5	45



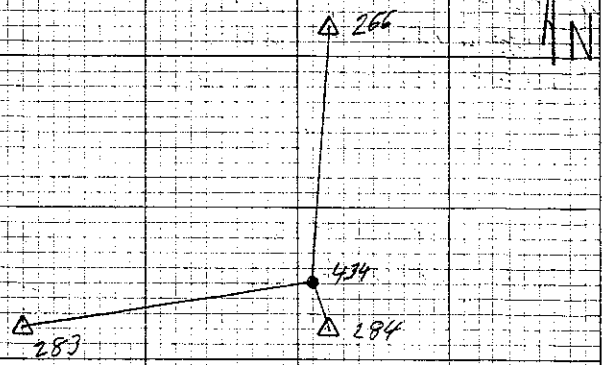
PP 266 1" O.I.P. BELOW POINT. $\frac{23|24}{26|25}$ TIN NAIL

422 TRAV PT SET NAIL & WASHER IN HUB

434 TRAV PT SET NAIL & WASHER

PP 248 M.C.H.O. BCSM $\frac{14|13}{23|24}$

	℄ @ 434		HI = 5.28			
	D		R			
1) PP 266	0-08-59	180-09-02		00.5		
PP 284	170-27-25	350-27-27		26	170-18-25.5	
PP 283	267-03-42	87-03-40		41	266-54-40.5	
2) 266	90-02-27	270-02-22		24.5		
284	260-20-54	80-20-45		48	23.5	24.5
283	356-57-01	176-57-01		01	36.5	38.5
	70°F	28.95" HG	15 PPM			
	2w	10 FT	50/M			
	89-43-23	5070.20	1545.399			
PP 266	270-16-53	5070.18	1545.398			HT = 8.45
M	89-43-15	5070.20	1545.398			
		(19)				
	90-02-54	216.53	65.999			
	269-57-20	216.53	65.999			
PP 284		(216.53)	(65.999)			HT = 4.38
M	90-02-50					
	89-55-58	5274.94	1607.787			
PP 283	270-04-18	5274.93	1607.781			HT = 8.47
M	89-55-50	(.92)	(1607.790)			
			(.786)			



434 TRAV AZ SET NAIL & SHINER

PP 266 1" O.I.P. BELOW PVMT. 23/24 / 26/25 TIN RZW

PP 284 RANDOM PANEL SET NAIL & SHINER

PP 283 TIN NAIL IN DIRT ROAD

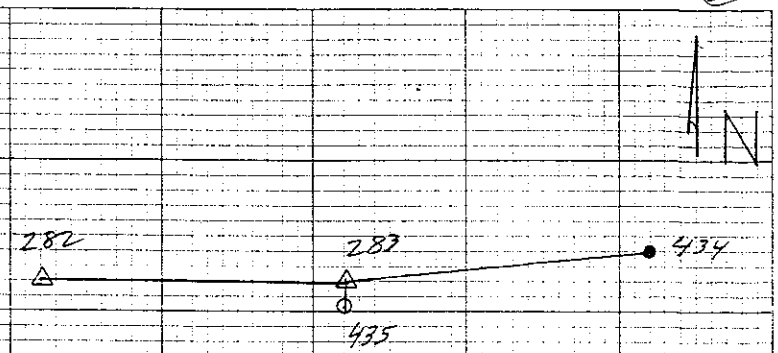
		TCO PP 283	HI = 5.27			
		D	∠			
1)	434	0-01-33	180-01-32	32.5		
	435	100-30-49	280-31-01	55	100-29-22.5	
	PP 282	182-46-56	02-46-55	55	5.182-45-23	
2)	434	90-09-39	270-09-31	35		
	435	190-38-53	10-38-58	55.5	20.5	21.5
	282	272-54-57	92-54-57	57	22	22.5

28.95" HG 74°F 1.7 PPM

TEMP 50/F 50/M

435 CH 12.64

	90-04-05	5142.24	1567.357	
PP 282	269-55-57	5142.24	1567.358	HT = 8.43
M	90-04-04	5142.23	1567.356	

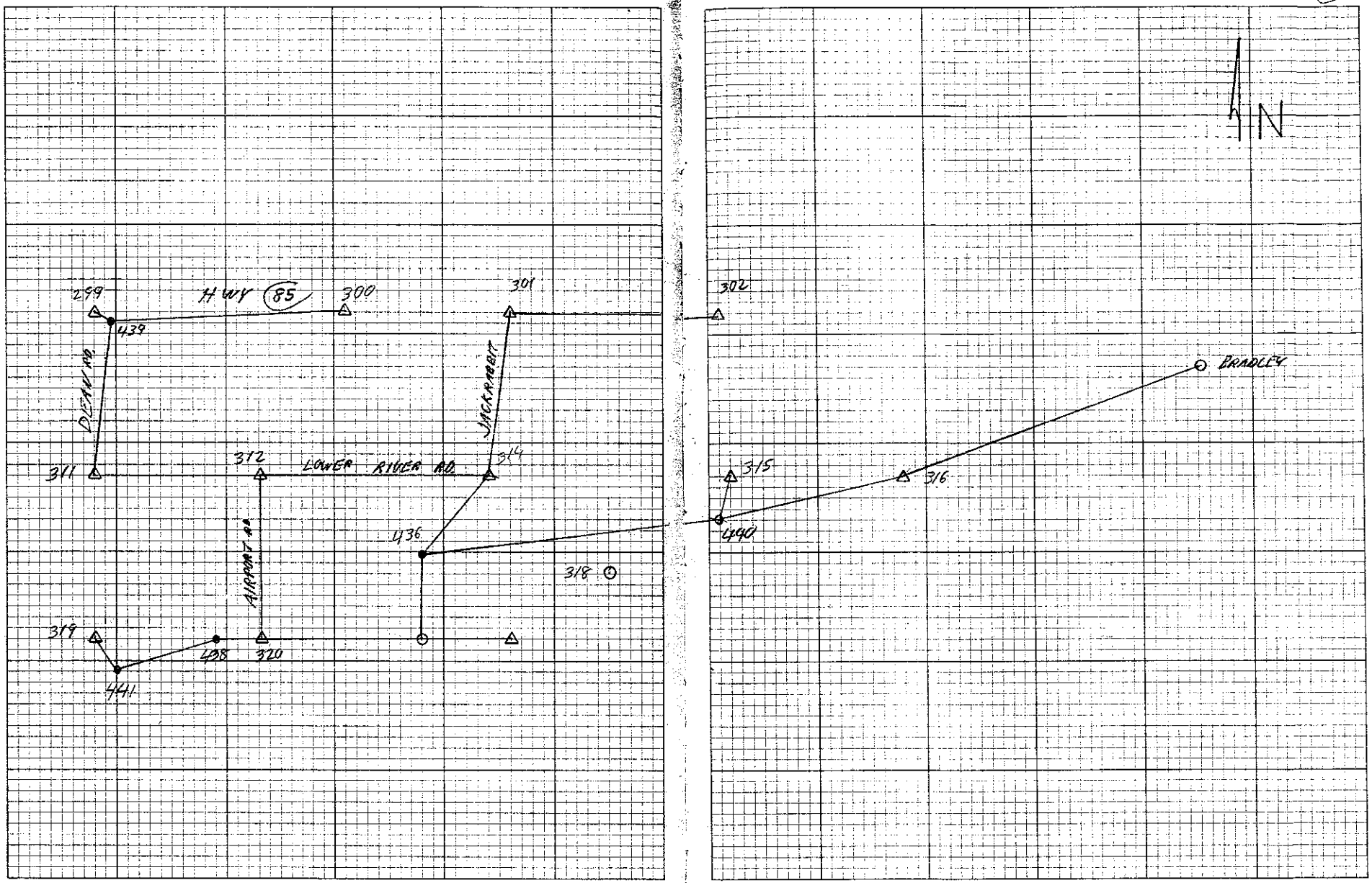


PP 283 FND NAIL IN DIRT ROAD

434 TRAV MT , NAIL & SHINER

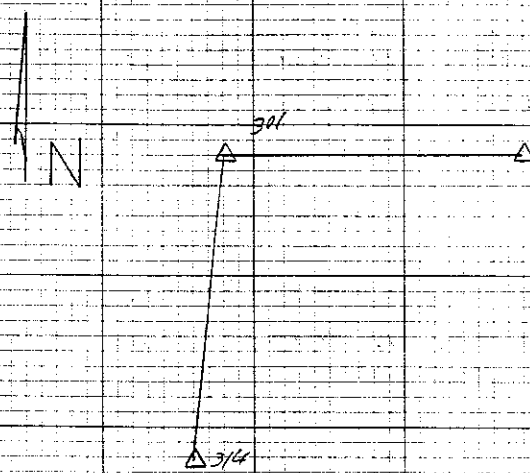
435 U.S. ARMY BCSM IN CONCRETE

PP 282 M.C. H.A. BCSM 28/33 | 27/34 T1N R2W


N
299
HWY 85
300
301
302
439
DEMING
JACKRABBIT
311
312
LOWER RIVER RD
314
315
316
BRADLEY
436
440
318
AIRPORT RD
319
320
498
441

	X @ PP 301		HI = 5.29			
		D	A			
1)	PP 302	0-05-18	180-05-15	16.5		
	PP 314	76-01-39	276-01-38	38.5	95-56-22	
2)	302	90 09-12	270-09-10	11		
	314	186 05-32	06-05-32	32	21	21.5

	72°F	29" HG	16 PPM	
	2W	SOL'N	SO/A	
	89-57-49	5365.33	1635.357	
	270-02-07	5365.33	1635.356	HT = 8.38
PP 314	89-57-51	5365.33	1635.360	

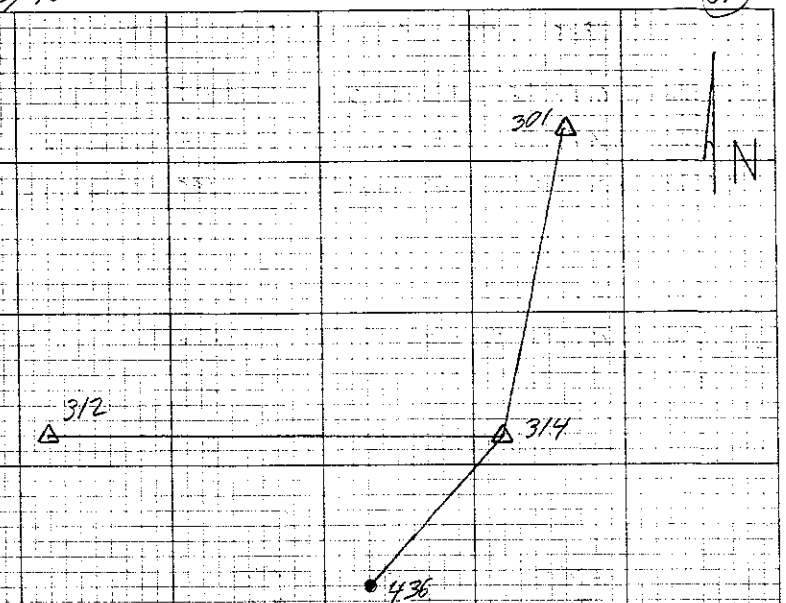


PP 301	RANDOM	PANEL	P.K. & SKINNER		
PP 302	2" O.I.P.	33/34	TIN	R2W	
		4	T1S		
PP 314	RANDOM	PANEL	FND	NAIL & SHINER	

	∠ @ D	PP 314 R	HI = 5.25			
1) PP 301	0-06-13	180-06-13		13		
436	216-06-17	36-06-16		16.5	216-00-035	
PP 312	263-24-17	83-24-10		13.5	263-18-00.5	
2) 301	90-00-15	270-00-14		14.5		
436	306-00-17	126-00-14		15.5	01	02
312	353-18-12	173-18-09		10.5	17-56	58
	54°18 E∠	29"46 SO/E	6 PPM SO/W			
	89-45-12	3174.39	967.556			
TRAV PT.	270-14-39	3174.39	967.554			HT = 8.36
436 m	89-45-17	3174.39	967.554 (.555)			
	90-04-17	7417.69	2260.913			
PP 312	269-55-34	7417.68	2260.913			HT = 8.58
m	90-04-22	7417.68	2260.915 (.914)			

2/13/90

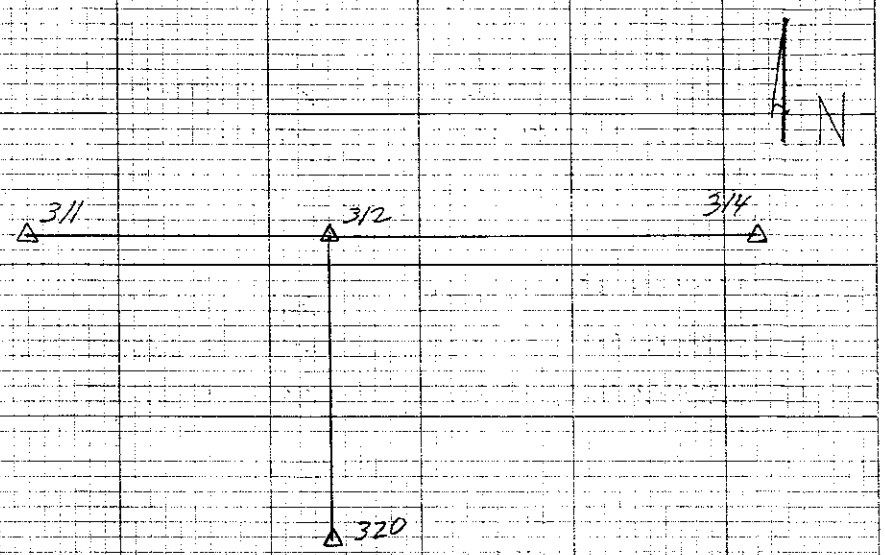
(61)



PP 314	RANDOM	RANEC	FND NAIL & SHINER
PP 301	RANDOM	RANEC	FD. & SHINER
436	TRAV PT.	MARKED CONCRETE ON BRIDGE	
PP 312	M.C. HD.	BCSM	IN HH 12 / 6 7 T15 R24 R24

	∠@ D	PP, R 312	HI =	5.83	
1) PP 314	0-01-03	180-00-57	01-00		
PP 320	91-15-19	271-15-15	17	91-14-17	
PP 311	179-46-09	359-46-08	085	179-45-085	
2) 314	90-12-51	270-12-48	49.5		
320	181-27-06	01-27-05	055	16	16.5
311	269-57-59	89-57-54	56.5	07	08
	57°F	29" HG	8 PPM		
	CLR	SDIF	SDIm		
	89-50-42	5303.60	1616.535		
PP 320	270-09-26	5303.60	1616.538		HT = 8.43
M	89-5038	5303.59	1616.538 (1537)		
	90-04-16	5289.44	1612.221		
PP 311	269-55-49	5289.43	1612.222		HT = 838
M	90-04-11	5287.42	1612.222		

62



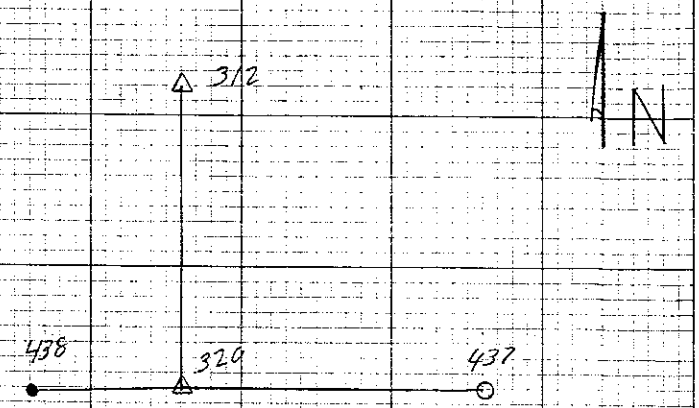
PP 312 M.C.H.O. BCSM IN HH $\frac{\sqrt{16}}{12|T}$ T1S R3W R2W

PP 314 RANDOM PANEL, FND NAIL & SHINER

PP 320 RANDOM PANEL, P.K.

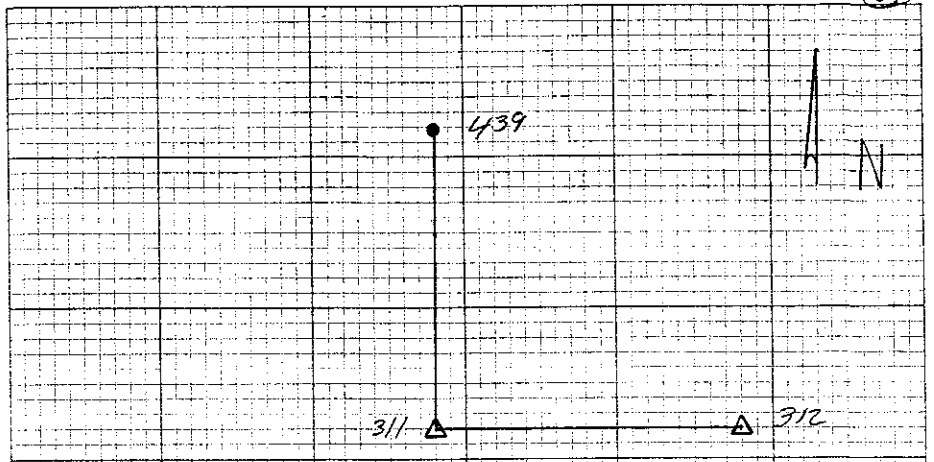
PP 311 M.C.H.O. BCSM IN HH $\frac{2}{11}\frac{1}{12}$ T1S R3W

		@ PP 320 D	R	HI = 5.24			
1)	PP 312	0-03-17	180-03-12	14.5			
	437	88-48-34	268-48-33	33.5	88-45-19		
	438	268-03-53	88-03-50	51.5	268-00-37		
2)	312	90-08-36	270-08-24	32.5			
	437	178-53-54	358-53-44	47.5	15	17	
	438	358-09-10	178-09-09	09.5	37	37	
		64°R	29" HG	11 PPM			
		2 sec	50/p	50/m			
TRAV P7		89-54-26	5250.46	1600.349			
		270-05-41	5250.46	1600.343			HT = 8.38
437	M	89-54-23	(5250.46)	1600.347 (.346)			
		89-47-13	(1384.54)	422.005			
TRAV P7		270-13-02	1384.54	422.008			
438	M	89-47-06	1384.53	(422.007)			HT = 4.67



PP 320	RANDOM	PANEL	P.R. IN ROAD	R3W R2W 1 | 6 / 12 | 7 TVS
PP 312	M.C.H.D.	BCSM	IN HH	
437	TRAV P7	M.C.H.D.	BCSM IN	HH 7 | 8 / 18 | 17
438	TRAV P7	SET NAIL & SHINER		

		TO PP 311 D	R			
1)	PP 312	0-04-51	180-04-52	51.5		
	439	272-11-31	92-11-26	28.5	272-06-37	
2)	312	90-06-15	270-06-14	14.5		
	439	02-12-53	182-12-52	52.5	38	37.5



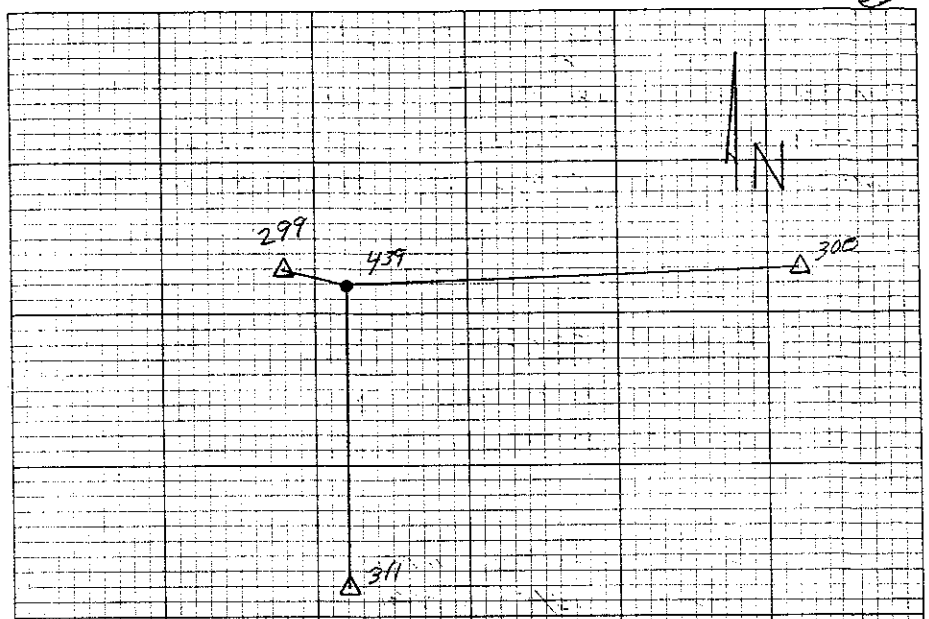
PP 311 M.C.H.D. BCSM 1/4 H.H. 2 11 | 1 12 T1S R3W

PP 312 M.C.H.D. BCSM 1/4 H.H. 1 12 | 6 7

439 TRAV PT, SET NAIL & SHINER

	D	R			
At 439			HI = 5.30		
1) PP 311	0-00-12	180-00-02	07		
PP 299	103-11-36	283-11-31	33.5	103-11-26.5	
PP 300	268-27-36	88-27-25	30.5	268-27-23.5	
2) 311	90-10-29	270-10-27	28		
299	193-21-54	13-21-48	51	23	25
300	358-37-40	178-37-37	38.5	10.5	17

	Z.A.	SD/I =	SD/m	
	67°=	29" HG	14 PPM	
	90-00-48	5338.80	1627.568	
PP 311	269-59-57	5339.78	1627.566	
m	90-00-11	5339.76	1627.564	HT = 8.38
	89-55-57	191.14	58.257	
	270-04-16	191.13	58.259	
PP 299		(191.13)	(58.258)	HT = 4.85
m	89-55-51			
	89-55-29	7883.65	2402.935	
	270-04-45	7883.68	2402.955	
PP 300		7883.68	2402.951	
m	89-55-22	(.67)	(.947)	HT = 8.58



439 TRAV PT. ; SET NAIL & SHINER

PP 311 M.C.M.A. BCSM NW HH 2 | 1 / 11 | 12 TIS R3W

PP 299 RANDOM PANEL ; R.K. & SHINER

PP 300 RANDOM PANEL ; R.K. & SHINER

T @ 437 HI = 5.42

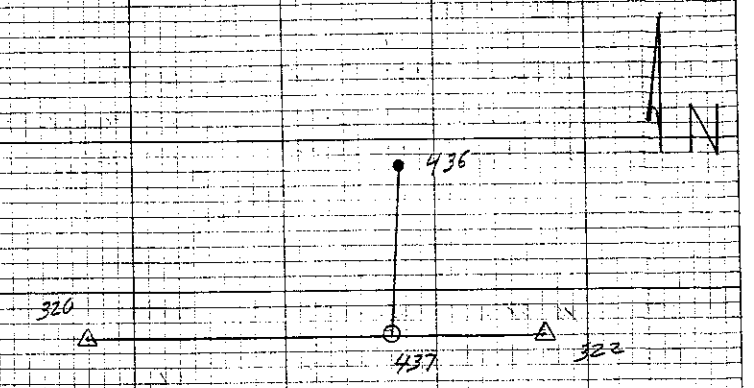
		D	R		
1)	PP 320	0-01-41	180-01-39	40	
	436	92-31-22	272-31-24	23	92-29-43
	PP 322	179-42-39	359-42-38	38.5	179-40-58.5
2)	320	90-06-38	270-06-31	34.5	
	436	182-36-21	02-36-22	21.5	
	322	269-47-32	89-47-34	33	

72°F 28.90" HG 16 PPM

2π 50/F 50/M

	89-52-35	2971.70	905.772	
TRAV PT	270-07-25	2971.69	905.774	HT = 8.38
436	m 89-52-35	2971.69	905.773	

	89-35-58	2666.30	812.688	
PP 322	270-23-57	2666.30	812.690	HT = 8.43
	m 89-36-01	2666.30	812.689	



437 TRAV PT, M.C.H.D. BCSM IN HH 7/18 8/17 TIS RCW

PP 320 RANDOM PANEL, P.K. IN ROAD

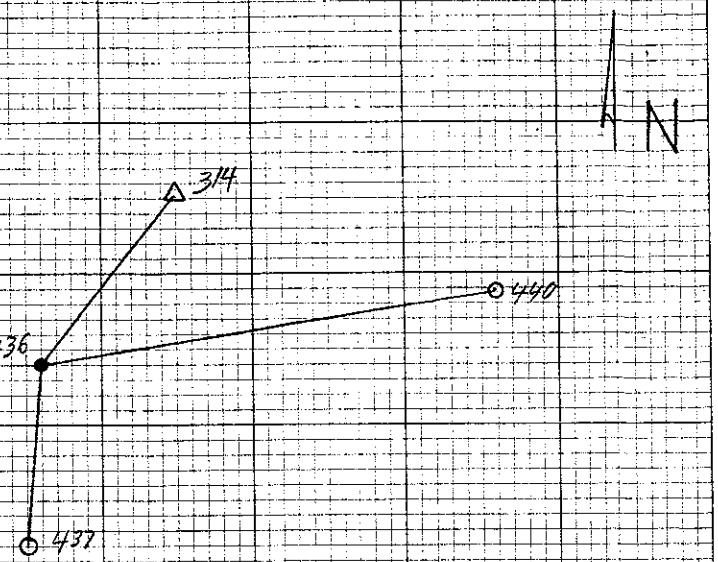
436 TRAV PT., MARK ON BRIDGE

PP 322 M.C.H.D. BCSM IN HH

2/14/90

(64)

		∠ @ 436 D.	A			
1)	PP 314	0-02-53	180-02-54	545		
	440	38-03-57	218-03-53	55	38-01-00.5	
	437	139-50-19	319-50-18	18.5	139-47-24	
2)	314	40-09-11	220-09-08	09.5		
	440	128-10-09	308-10-09	09	00-59.5	01-00
	437	229-56-34	49-56-38	31	26.5	-25



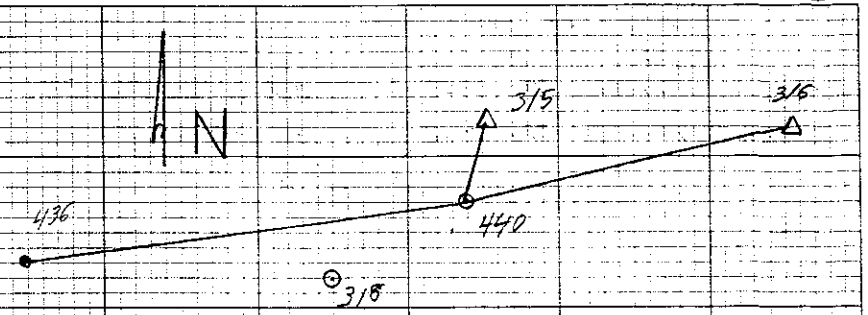
436 TAN PT ; MARK ON BRIDGE

PP 314 RANDOM PANEL , FND NAIL & SHINER

440 TRAV PT ; ACP L.S. 7146 @ HILL TOP

437 M.C.H.A. BCSM IN HH $\frac{7|8}{18|17}$ T1S R2W

		A @ 440	HI = 4.52			
		∠	∠			
1) 436	0-02-03	180-02-06	04.5			
PP 315	99-09-10	279-09-13	11.5	99-07-07		
PP 316	171-26-23	351-26-19	21	171-24-16.5		
2) 436	90-11-43	270-11-45	44			
315	189-18-52	09-18-53	52.5	08.5		08
316	261-36-01	86-36-03	02	18		17
	70°F	28.75" HG				
	∠	SD/F	SD/m			
	90-55-27	7807.23	2379.651			
TRAV PT	269-04-31	7807.22	2379.647			
436	m 90-55-28	(7807.23)	2379.659		HT = 8.38	
			(.652)			
	95-05-57	1587.79	483.962			
	264-54-02	1587.81	483.965			
PP 315	m 95-05-58	(1587.80)	(483.964)		HT = 8.45	
	91-05-02	5265.40	1604.900			
	268-54-58	5265.37	1604.893			
PP 316	m 91-05-02	(5265.38)	1604.901		HT = 8.43	
			(.898)			
	92-43-53	3014.13	918.708			
VERTICAL	267-16-01	3014.20	918.703			
PP 318	m 92-43-56	(3014.16)	(918.705)		HT = 8.45	



440 TRAV PT FND ACP US 7146 @ HILLTOP

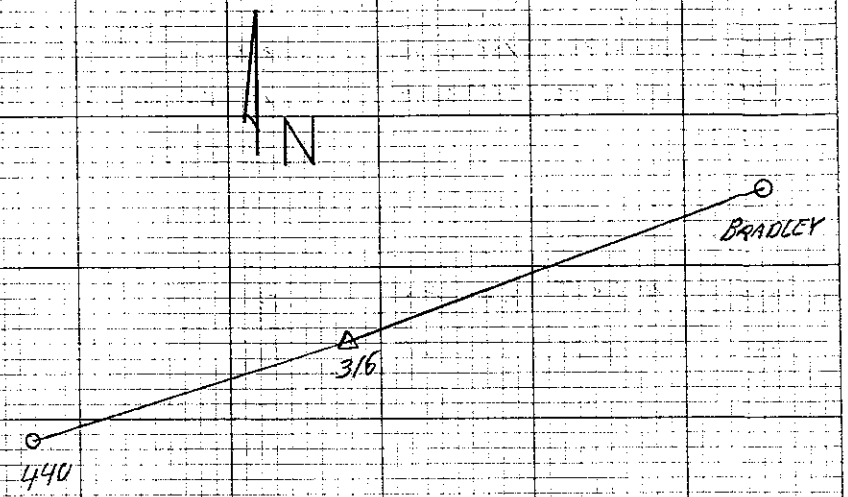
436 TRAV PT, MARK ON BRIDGE

PP 315 RANDOM PANEL, NAIL & SHINER

PP 316 RANDOM PANEL, NAIL & SHINER

VERT PP 318 RANDOM PANEL, NAIL & SHINER

	T @ PP 316					
	D	T				
1) 440	0-01-31	180-01-30	30.3			
BRADLEY	179-45-34	359-45-30	32	179-44-01.6		
2) 440	90-07-42	270-07-41	41.5			
BRADLEY	269-51-44	89-51-45	44.5	03	02	



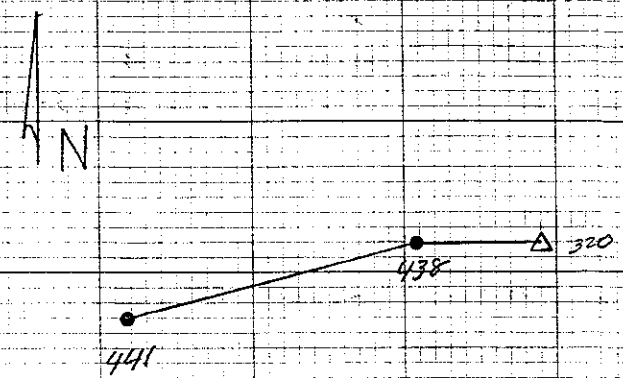
PP 316 RANDOM RANGE SET NAIL & SHINER

440 FND ACP @ HILLTOP LS 7146

BRADLEY NGS BRONZE DISC IN ROCK

	At 438				
	D	R			
1) PP320	0-02-31	180-02-30	30.5		
441	169-56-12	349-56-12	12	169-53-41.5	
2) 320	90-08-53	270-08-53	53		
441	260-02-35	80-02-36	35.5	42.5	42

2/15/90

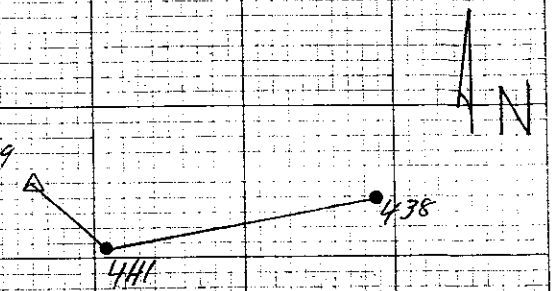


438	TRAV PT.	NAIL & SHINER
PP320	P.K. IN ROAD	
441	TRAV PT.	NAIL & SHINER

	A @ 441	HT =	5.18		
	0	↑			
1) 438	0-00-16	180-00-21	185		
319	238-16-21	58-16-27	84	238-16-05.5	
2) 438	90-08-16	270-08-26	18		
319	328-24-28	148-24-26	26	08	07
	37°F	29.28"HG	-4PPM		
	2x	SO/E	SO/M		
	89-45-25	3082.65	938.590		
438	270-14-49	3082.64	938.590		
m	89-45-18	3082.64	939.590		HT=4.68
	90-24-58	679.47	207.100		
PP 319	269-35-07	679.46	207.100		
m	90-24-56	679.43	207.099		HTE 12.38
		.45			

2/15/90

(71)

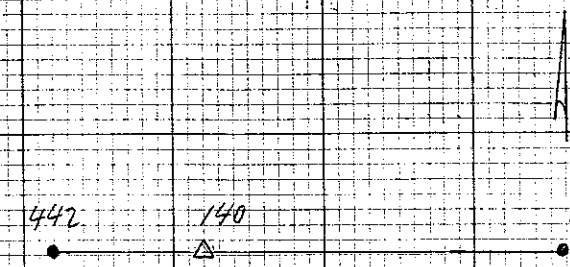


441	TRAV PT	SET NAIL & SHINER	
438	TRAV PT	NAIL & SHINER	
PP 319	RANDOM PANEL	SET NAIL & SHINER	

		Δ @ PP 140		HI = 6.17		
		D	R			
1)	416	0-01-12	180-01-04	08		
	442	180-18-34	0-18-31	32.5	180-17-24.5	
2)	416	90-03-18	270-03-12	15		
	442	270-20-44	90-20-40	42	27	26
		52°F	29.10" Hg	9 PPm		
		24	SO/K	SO/M	HD	
		89-37-59	1620.07	493.798		
	TRAV PT	270-22-20	1620.07	493.799		
	442 M	89-37-50	1620.08	493.798	1620.04	HT = 4.48

2/20/90

(72)

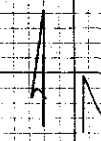


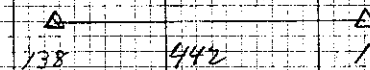
PP 140 M.C.H.D. OCSM NN HH 9/16 10/15 T2N R1W

416 TRAV PT FND P.K. ℄ ROAD

442 TRAV PT, SET NAIL

	AT @ 442		HI = 5.44			
	V		R			
1) PP 140	0-02-17	180-02-19		18		
PP 138	179-23-27	359-23-18		20	179-27-02	
2) 140	90-07-09	270-07-02		05.5		
138	269-28-06	89-08-05		05.5	00	01
	65°F	0.9995116	11 PPM			
	zw	SDIF	SD/m			
	90-20-41	2786.39	849.292			
PP 138	269-39-33	2786.38	849.291	2786.33	HT = 8.48	
m	90-20-34	2786.38	849.291			





442 TRAV PT , SET NAIL

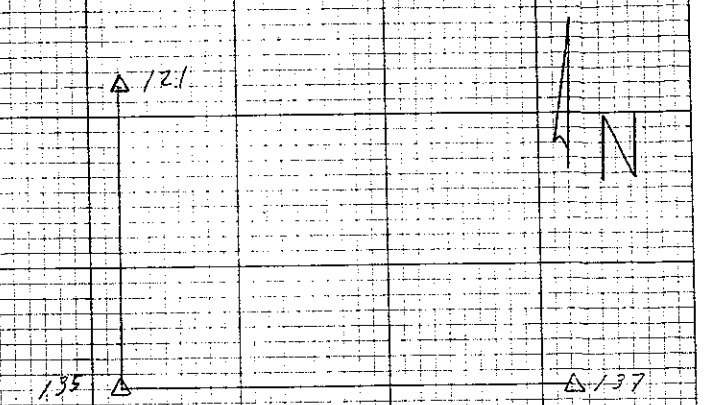
PP 140 M.C.I.P. BCSM IN TIE 9/16 | 10/15 - 72W RIW

PP 138 RANDOM PANEL , NAIL & SHINER

		D	R			
1) PP 121		0-02-09	180-02-02	05.5		
PP 137		90-05-28	270-05-26	27	90-03-21.5	
2) 121		90-06-26	270-06-26	26		
137		180-09-47	0-09-46	46.5	20.5	21

59°F 2905"Hg 7 RPM

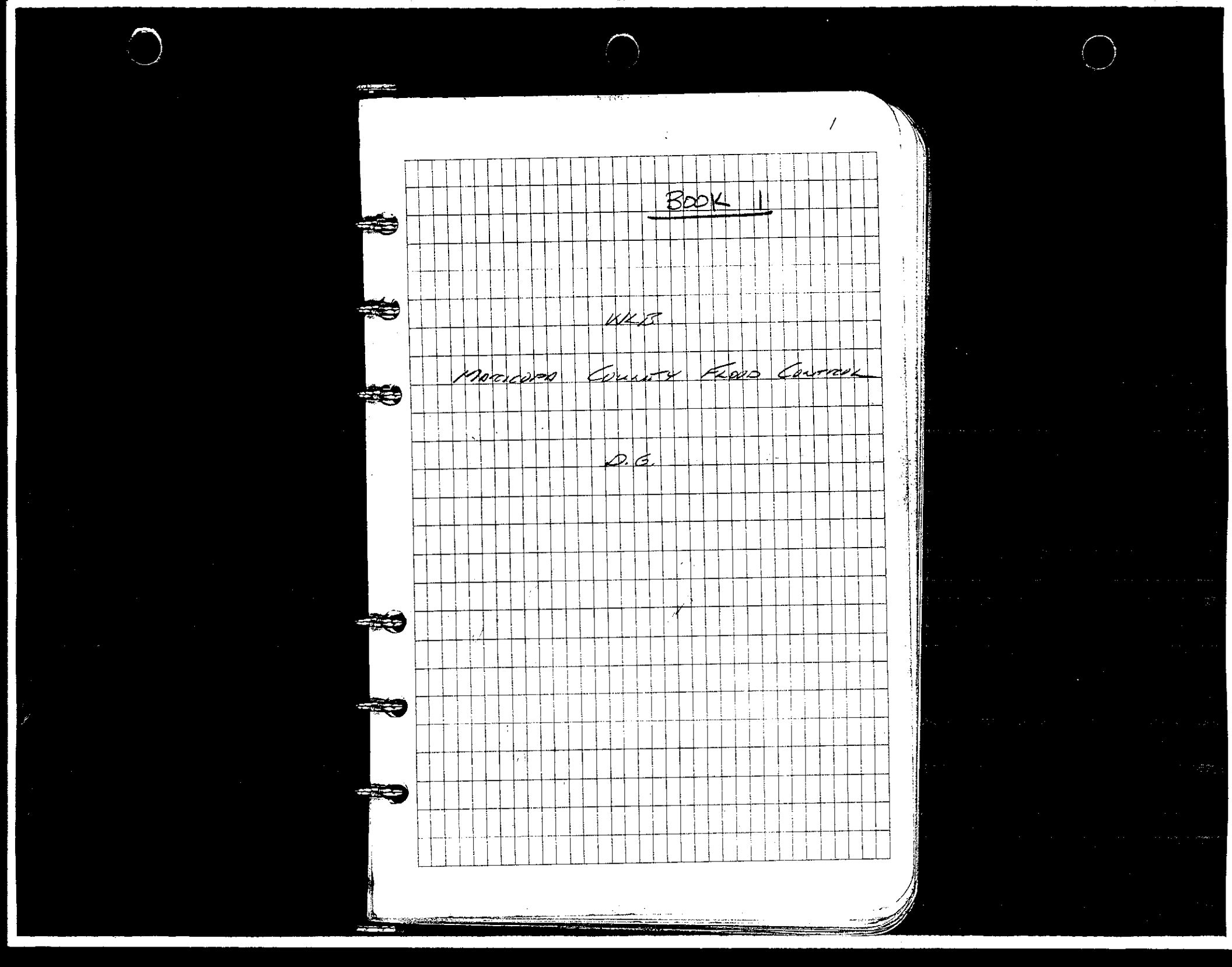
		SDIF	30/m		
	90-06-17	6198.67	1889.360		
PP 137	269-53-46	6198.66	1887.354	6198.65	HT=12.21
	90-06-16	6198.66	1889.353		



PP 121 BOLT IN CONCRETE IN MH 1/15 12.17

PP 135 BOLT IN CONCRETE IN MH 12.17 13.18

PP 137 RANDOM PAINT NAIL & SHINER


1
BOOK 1
WKB
MARICOPA COUNTY FLOOD CONTROL
D. G.

[redacted] SPITAL	USGS (#350)		
20-00-00			
ZJ-1G-0C Az			
AC(#351) to RP-30		5.25'	
F.S. #2		4.35	
32-05-45	20-04-58	2988.87	
20-05-46	262-55-20		
202-21-51 Az			
F.S. #1		8.00	
202-20-36 JJ	89-39-54	2470.01	
112-20-39	270-21-21	2469.63	
315-44-43			

.999865 = Comb. Factor

993,744.44
[redacted]

RP #30 MONUMENT DAM 970,953.72
= 7229.145' 750,712.44

SET #5 20.00

FD USGS B.C. (BM NO ED)
#1351

+12.63 78

135, #351		4.94
135-44-43	90-16-20	
	262-43-23	
TC #1		3.66 - 1.25
FI #352		4.74
242-40-16	82-46-03	5143.20
62-40-19	270-11-47	5142.55

-12.54

+17.22
37

I.S. #1		3.73
62-40-16	90-13-14	
162-40-16	269-46-43	
A.D. # 352		5.48
F.S. #3 30		4.28
104-01-26	91-06-46	1014.82
284-01-33	268-53-03	1014.49
I.S. # 353		4.76
164-01-05 N	90-07-33	3591.31
344-01-08	269-52-16	3490.03

-17.53 .37

SET SPA.

FD RECAP 14 | 13 / 27 | 24

-18.51

-6.44 .42

BS. #352		2.62
344-01-06	89-56-24	
	270-03-50	
TP #353		5.13
F.S. #3		3.80
0-28-34	90-15-14	3100.85
180-28-33	269-44-46	3100.40
F.S. #7		4.57
179-32-18	90-54-36	2207.32
359-32-16	269-05-24	2207.34
F.S. #17		4.33
180-23-32	90-23-57	918.59 + 2000
0-23-28	269-36-02	7480.39
		7479.20

+6.44

-12.39

ED ROAD (WIT AT ℄ INT)

-34.39

SET S℄T E/S ROAD BY DITCH

40.00

-58.46

BS "353		2.65
0-23-30	89-37-00	
	270-21-00	
TP #17		5.26
FS & TP		4.79 + 0.46
180-05-26	90-16-47	5225.35
0-05-16	269-43-41	5224.58
FS # 7		4.57
0-44-50	89-51-15	5272.93
180-44-50	270-08-57	5272.20

+49.60

-24.49

+14.84

12/01/09
VISIBILITY POLE

BS, #17		4.34
0-05-21	89-45-04	
	270-14-17	
TP #27		+5.55 - 5.10
FS. #37		5.02
180-25-39	90-15-17	5347.31
0-25-40	269-44-19	5346.53
FS #354		4.91
270-31-45	89-47-41	5336.66
90-31-49	270-14-40	5335.91

24.23
+ 23.98

23.98
- 23.96 FD BC. IN H.H.

SET PK & TIN E INT CUTOM
LOT. DITCH
- 21.91
- 22.95

SET PK/TIN + INT OF E OF
CITCUS & W/ CNER LINE OF REAL

+19.95

BS. #27		4.80
0-25-42	99-47-11	
	270-12-29	
AC #37		5.20
FS. #51		+5.27 - 4.92
180-29-43	90-12-36	5252.32
0-29-46	269-47-05	5252.58
FJ. #355		8.00
CAST	SEE	

+20.67 (21.81)

11.12 (11.12) FD EC. IN M.H.

-18.55 (18.55)

SET #5 REBAR E/S CORNER + 4 E/O

IRF BOX SS GOODWAY

VIS. FAIR

BS #37		4.42
0-29-43	89-59-09	
	270-10-27	
TP #51		5.62 - 5.20
FS. #65		4.95
180-25-40	90-17-20	5303.19
0-24-57	269-42-15	5302.24
FS. #356		4.09 - 4.55
270-02-15	89-50-00	5297.74
90-02-06	270-19-37	5296.94

+10.06 52

SET PK NAIL ON E EDGE OF CURB AT

E/E INTERSECTION DITCH

-25.20

10/11 FD BC IN MH

+31.62

BS #51		4.84
0-25-04	89-44-16	
	270-15-12	
TP #65		5.17
FS #357		4.55
89-05-56	90-15-28	2521.79
269-06-02	269-44-09	2521.42

25.20
+ 24.70

#358
Δ DELL (ABOVE) 344,452.456
347,380.676
4.45
42,212.46

2.07
352+356 47-55-10

-10.08

GS #65		1.00
89-05-50	89-51-47	
	270-08 DE	
TC # 357		5.36

+10.25

Solar
12/04/89
± 14:30

1) 268-49-16
2) 269-49-14
3) 268-49-10
4) 268-49-06
5) 269-49-12
± 0-16-39
269-05-50

V/S + 6000

BS # 357

09-05-50

TP #65 5.20

FS # 359 4.64

270-03-56 09-34-21 1358.37+2000

90-03-52 270-25-23 7920.12

7918.03

FS # 64 4.75

269-55-43 09-35-52 5316.56

09-55-41 270-24-11 5315.71

61.17

+ 60.65

+30.40

VIS-POINT	VIS POINT	
FS #65		4.48
90-02-54	90-22-01	
	269-32-15	
TO #359		5.02
FS #64		4.75
90-20-32 (31)	90-30-00	2603.56
270-20-30	269-29-21	2603.11
FS #360 = #501 WHITE TANKS		4.87
269-22-41 (39)	89-33-18	2548.28
89-27-35	270-26-01	2547.96

13
-61.61

+22.55

WHITE TANKS JOB

20.66
+ 19.87

	Vis Point	
BS #359	90-70-50	2.70
	269-24-50	
TC #501		5.24

VID-FAE			
ES. #65			
260-05-42			
AC #357			5.00
FS. #66			5.35-4.85
90-50-40		90-18-02	2232.08
270-50-38		260-41-50	2736.67

FO EG. 13/16 24 D

-14.68

BS. #357		4.34
270-50-40	89-43-37	
	270-16-12	
TP #66		5.58
FS #52		4.30 - 4.52
0-25-42	89-45-51	5277.27
180-25-42	270-13-52	5276.51

+14.37 (4.8)

FD BC. 12.7 13.78

+22.76 (.71)

IS #66		5.32
180-25-42	90-15-15	
	269-44-30	
IC #52		5.68
ES. #39		4.33
0-44-45	82-40-30	5267.41
180-44-57	270-19-05	5266.62

-22.69

SET REBAR AT
SE COR OF LOT

+ 31.48

VS. - Good
BS #51
0-25-04

TC #65 5.28

FS #78 4.82 4.45
180-22-53 00-12-24 5257.93
0-22-51 180-46-57 5257.10

=0 D.C. IN H.I. 23 | 24
22 | 25

-18.42
07

V.C. - F.R.			
L.S. #65			4.69
0-22-52	89-49-01		
	270-10-27		
T.C. #70		5.81	6.45
F.S. #93		4.86	4.51
180-16-41 42	90-14-40		5273.36
0-16-43	269-45-02		5772.60

+ 17.73 10.07

ED. B/C 1st N.W. 26 25
35 36

−21.55 08

V.S. - FAIR			
BS. #78			5.19
0-16-42	00-46-53		
	270-12-33		
TP #93		5.52	5.16
F.S. #92			4.42
270-02-50	00-38-58		5299.65
90-02-54	270-20-32		5238.84
269-46-08			

21.98
+20.60

FD PK + TIM lay/STRADDLERS: 27 | 26
34 | 35

+33.32

VIC. - ROUTE			
BS #93			5.08
270-07-50	90-22-22		
	269-32-06		
TE #92			5.26
FS #91 = #506	WHITE TANKS	5.42	4.58
90-13-33 91	89-37-29		5228.36
270-13-29	270-21-54		5277.53

33.92
- 34.12

FD. 1" L.R. Lal L.H. 26 | 27 / 33 | 34

35.40
+ 34.54

VIS. - Pool

B.J. # 92 — 4.78

270-13-31 — 90-24-12

90-13-31 — 260-35-26

I.C. #91 = 506 — 6.14 — 5.30

F.S. #360 = 521 White Tanks

90-15-13

270-15-09

270-15-11 Az

35.42
-36.33

This a closing angle on White Tanks Job between SOL & 521

V.S. - Pool		
B.S. # 52		5.19
190-44-51	90-20-34	
	269-38-40	
T.C. # 38		5.02
B.S. # 38		4.51
0-21-06	89-52-33	5311.92
180-21-08	270-07-01	5311.19

$-31.\frac{74}{94}$

FD B.C. on Surface $\frac{36|31}{1|6}$

13.39
+12.27

VIS. - Post		
BM #38		5.90
180-21-07	90-02-56	
	269-49-51	
AE #28		5.31
ES #361		
181-07-55		7.35
RS #18		1.34
0-24-01 (23.55)	89-46-08	5222.860
180-23-50	270-13-28	5222.14

15.79
-14.51

FD BC. IN H.K.

23.46
+22.70

190-20-46

B.S. #28		4.87
180-23-55	90-16-01	
	269-43-06	
TP #18		5.08
F.S. #362		4.22
0-35-43 +2	89-45-25	3324.90
180-35-41	270-14-06	3324.48

23.22
-24.55

SET POINT AT SW CORNER OF INTERSECTION

15.14
+14.96

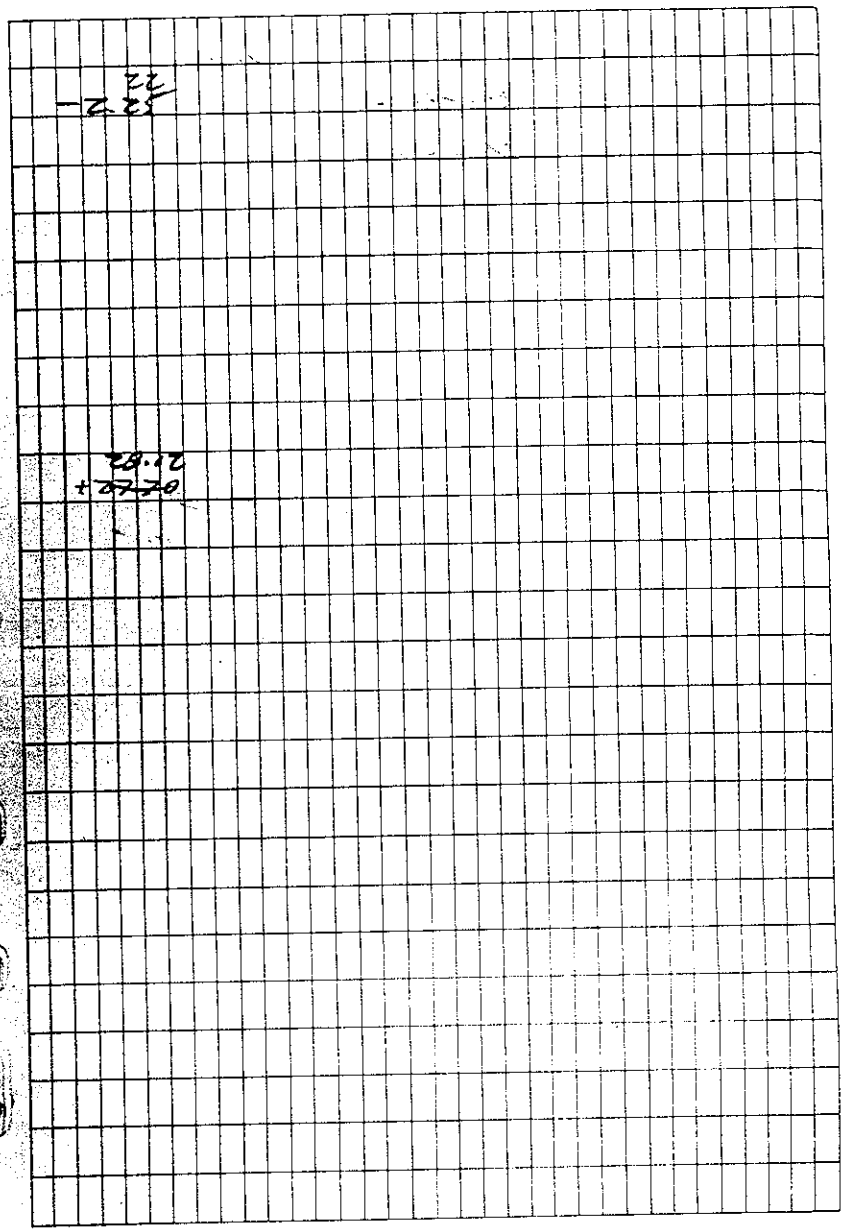
V.I. + 6000		
BS #18		3.95
180-35-42	90-17-01	
	269-42-18	
TP #362		5.23
FS +8		4.23
0-52-50	80-32-00	2045.91
180-07-52	270-01-34	2045.63

-15.14

FD ELEV UNDER E-W FENCE N/S OF TP ON LINE WITH N/S POLE LINE

+ 2.22

135 #362		5.00
180-52-50	90-03-34	
	270-55-53	
TA #8		4.95
ES #363		12.00
5-46-42	89-38-20	5490.05
185-46-42	270-21-04	54 89.20



B.J. #8		16.05
185-46-42	90-11-04	
	269-48-11	
TBM 363		5.15
FS #365 = BS 351		8.00
319-56-32	89-31-44	84.27
139-56-31	270-27-27	83.13

-28.54

+32

B.S. #363		8.00
139-56-32	00-04-14	
	269-55-23	
T.C #364		5.14
E.S. A SOIZAL		
23-16-48-50		
703-16-47		

-3.92

V.S. - Roof
BS. #357
270-50-40

TO. *.66 5.76

FS. # 79 4.78 4.48
180-18-58 90-21-12 5278.98
0-10-06 269-38-29 5279.17

FD. B.C. 4.44 24/25 | 19/30
30.77
-31.23

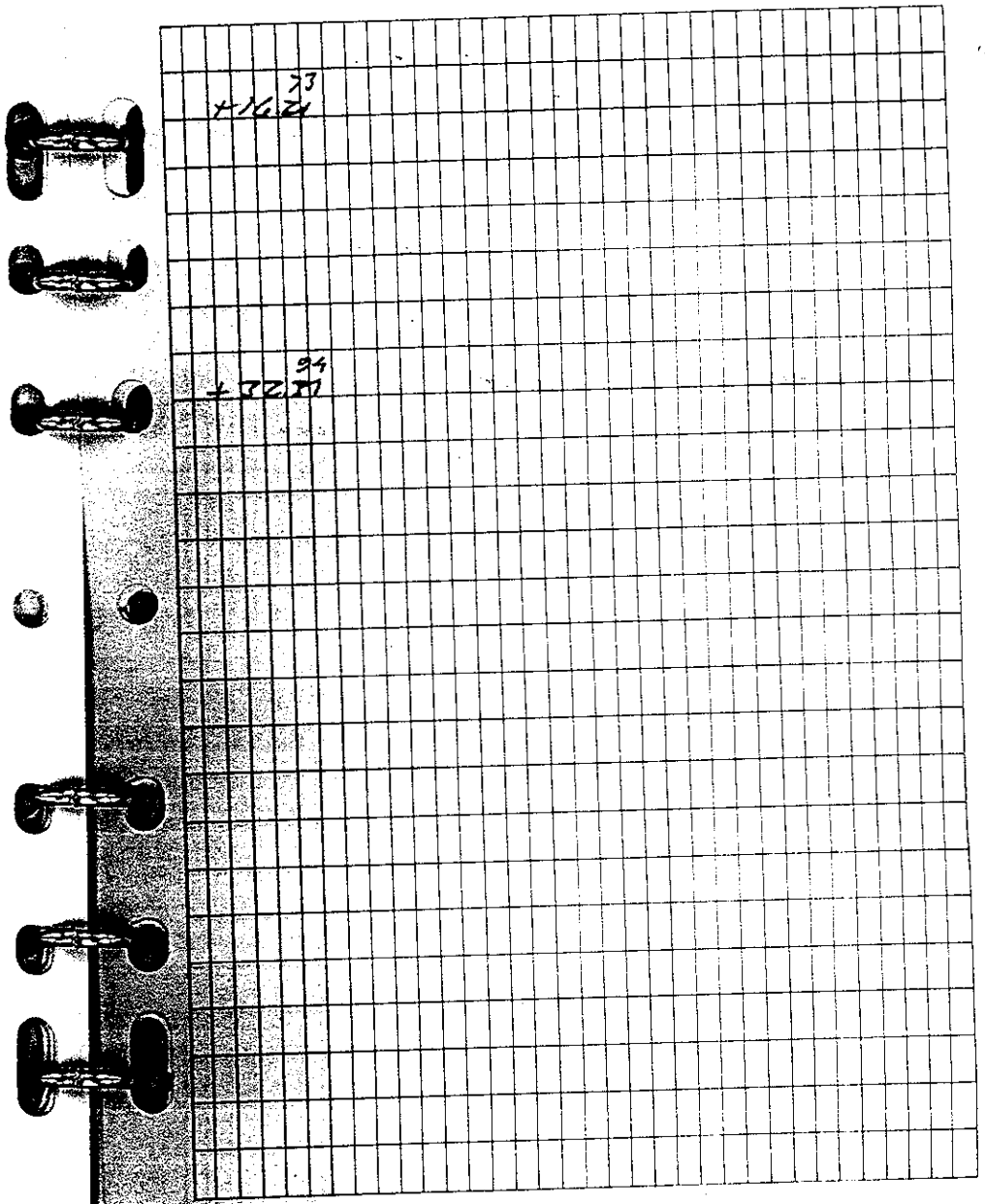
VO - Pool			
LBS #66			5.14
0-19-01	80-40-45		
	270-18-54		
TC # 79			5.59
FE #34		4.73	4.46
180-16-25	90-12-05		5227.25
0-16-23	269-47-43		5276.50

+ 30.37

- 17.26 (16.73)

FD 1P-W STAINLESS 25|30 / 36|37

V.S. - Roof			
B.S. #79			5.08
0-16-25	89-49-56		
	270-09-43		
I.S. #94			5.53
Es. #365 = #93		4.83	4.45
38			
270-16-33	89-39-30		5263.87
90-16-43	270-20-03		5263.07



BS #33 5.04
90-16-38 90-22-35
270-32-18

x@ #365 5.55

ES. #506
29
270-03-32
90-02-26

3294
-3859

351	315-44-43 (41)	2469.63
#1	252-50-16 (11)	5142.55
#352	165-01-06 (09-59)	3480.87
#353	180-23-30 (12)	7479.20
#17	180-05-12 (10)	5225.58
#27	180-25-22 (28)	5346.53
#37	180-22-13 (27)	5252.58
#57	180-25-04 (44-42)	5302.41
#205	180-22-22 (31)	5257.10
#278	180-10-42 (19)	5272.62
#433	020-22-50 (25)	5298.44
20#	236-13-34 (03)	5277.53
#101 = #506		
270-15-11 (14-41)		60,804.46
8360-521		1.04
		39-40 5-14-16

1:33,046

#65	
09-05-36	2521.42
#357	
00-50-30	2736.67
#669	
0-25-22	5226.51
#52	
0-44-34	5200.67
#58	
0-21-20	5311.19
#68	
0-22-39	11222.5
#18	
0-35-13	3324.48
#242	
0-52-17	2045.63
#9	
5-54-20	5409.20
#363	
22-56-55	831.13
#357	
23-16-20	38,025.96
1.00 max	
48-10	152-32-50
	1159,414

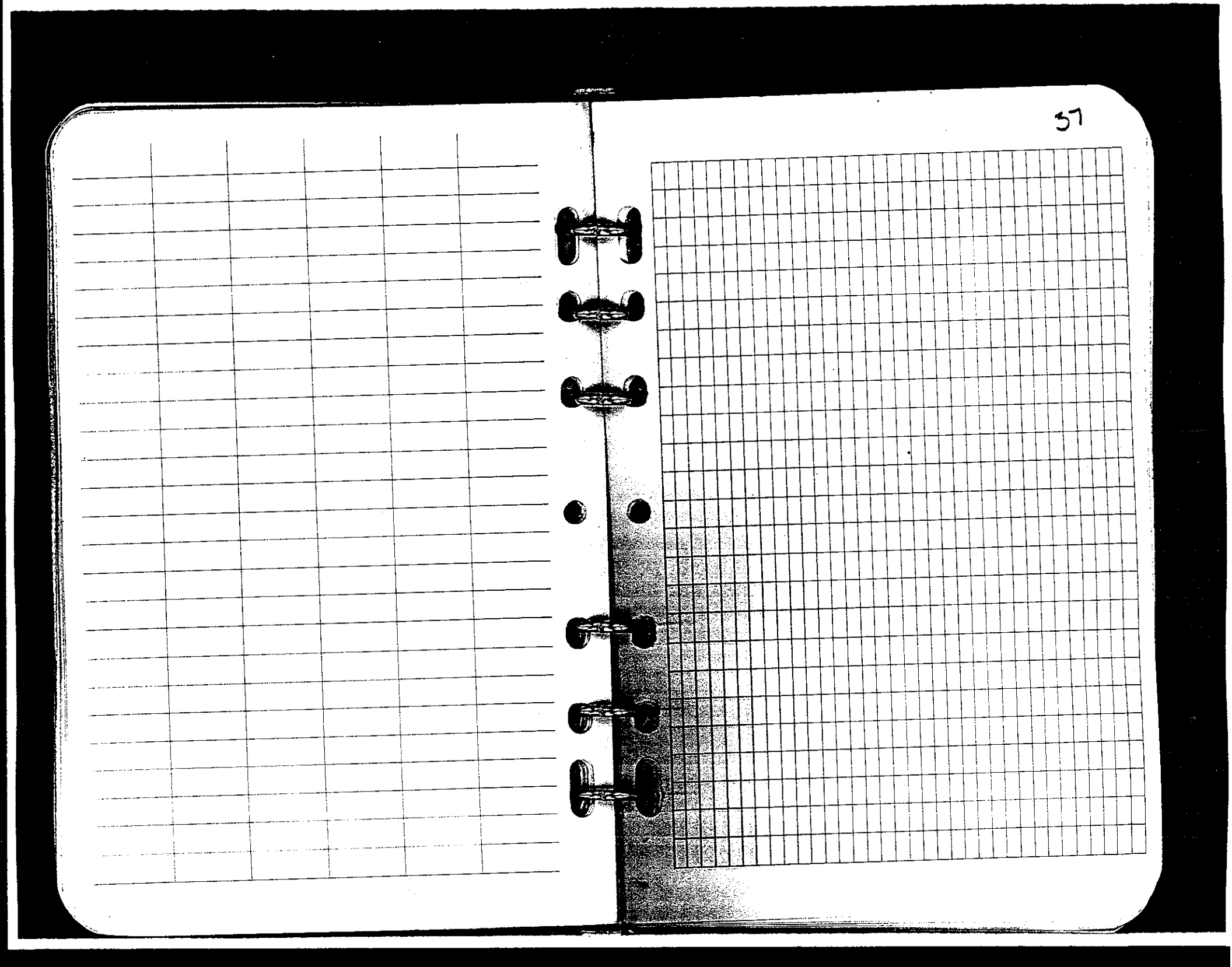
#66
100-10-56 5278.17

#79
100-16-23 5276.50

#94
270-16-38 5263.07

#365-392
270-02-31 15,812.74

#38
51-38 60-32-03
1:43.430.44



V.S. - Perf

B.S. #79

90-01-51 02 80-40-57

270-02-13 270-09-19

0-00-36

180-01-26 31

TA #94 5.57

FS. #107 5.06 - 4.30

270-01-35 90-16-15 528.38

90-01-49 37 269-43-01 528.62

180-00-02

359-59-59 00

179-59-32

FD AP. to HH 36 | 31 / C

23.62

-24.58

V.O. - Roof

B.J. #94 4.96

0-01-23 80-45-50

180-01-45 39 270-13-27

90-01-50 54

270-01-58

XC #107 5.97

ES. #171 4.80 - 4.23

179-58-45 44 90-12-16 $693.54

350-58-43 260-42-00 $292.77

262-59-12 14

89-59-16

179-57-10 X 12

23.42
18.22

FO 10 14 H.H. 1 1/16

23.51
- 25.39

Pool

B.S. #107 — 5.27

001-44 — 80-44-51

180-01-44 — 220-14-45

90-00-30

270-01-31

IC #121 — 5.74

E.D. #135 — 4.85 – 4.32

179-59-50 — 90-14-50 — 5276.60

350-50-53 — 269-44-73 — 5275.85

269-58-23

90-58-31

179-58-03

24.21
+ 23.65

E.D. LP. 14. 11.11. 15 7/16

24
-24.77

FOOT		
ES. #121		5.44
0-02-05 05	90-46-57	
180-02-05	270-12-23	
90-02-44		
270-11-56 06		
xc #35		5.67
ES. #157		4.55 - 4.25
180-01-40	90-13-59	5285.85
0-01-49 49	269-45-21	5295.11
270-01-58		
90-01-52 55		
179-59-47		

+ 20.02 (12.12)

FD ES. IN H.H. 13.19 / 24.19

19.59
-20.31

BS. #135			5.15
0-00-46 47	89-47-57		
180-00-48	270-11-26		
90-00-33			
270-00-28 30			
TC #151			5.40
FS #152		4.62	4.24
89-52-05 10	90-00-11		5232.11
269-52-14	269-53-00		5236.47
179-52-04 00			
359-51-55			
89-51-26			

+ 12.57 / 18.05

FD BC ⅓ HI 19.17 / 19.70

-8.61 70

V.O. - F.A.E

B.S. #151 — 4.95

0-00-28 — 90-55-20

180-00-47 — 270-03-55

90-00-24

270-00-42

33

T.C. #152 — 5.55

F.S. #154 — 4.90 - 4.37

180-12-12 — 90-00-33 — 5295.49

0-12-26 — 269-54-33 — 5294.75

19

270-12-09

90-12-09

14

180-16-41

e.16

+ 7.21

F.S. B.C. IN H.H. 17/16 / 20/21

15

-0.23

LS - Bad		
LS #152		4.92
0-00-36	22-00-2	
16-00-20 33	260-58-41	
90-0-22		
230-00-46 19		
TC #154		5.20
ES #366		3.98
120-55-06	89-43-50	4458.38
350-55-07 06	270-15-27	4457.75
260-54-54		
89-54-56 55		
179-54-34		

+0.15
-0.08

SET SPAT

23.05
+22.63

V.D. - Pool

E.S. #154		5.22
0-00-26	90-18-00	
180-00-26 (23)	270-41-13	
90-09-27		
270-00-28 (27)		
KC #366		5.18
F.S. #367		4.21
176-03-03 (05)	90-54-00	230.87
356-03-07	269-05-23	739.68
266-03-44 (09)		
86-03-05		
176-02-43		

-23.67 OK

-10.70 67

V.D. - FOR

B.S. # 366 — 4.10

0-00-22 — 32 — 90-14-55

180-00-18 — 270-44-28

90-00-26 — 28

270-00-31

TR #367 — 5.10

E.S. # 368 — 4.20

91-56-34 — 90-21-50 — 2225.71

271-56-24 — 34 — 270-37-18 — 2274.77

181-56-41

1-56-51 — 46

91-56-10

E.S. #155

340-52-04 — 52.80

160-52-18

160-51-50

340-52-00

+10.05 — 47

+25.96 — 26.05

FD SC in HH — 16/21 15/22

V.O. - Back

B.J. 367 3.97

0-00-32 90-40-15

180-00-43 48 260-19-01

90-00-34

220-00-35 34

IC 3.68 5.18

F.S. # 309 A LITCHFIELD USC/GS 5.00

183-XX-30 25 80-10-21 2378.70 SP.

333-06-29 26-30-52 2378.70

243-00-24 48

63-06-13

153-05-45

ES # 370 4.37

183-01-51 53 90-17-33 2902.60

3-01-55 262-41-49 2912.18

273-01-50

93-01-44 47

183-01-09

-21.12 UK

ϕ_A = -0-16-44 A_2 = 331-19-13

SC = .999721

CF = .999868

-14.10

		5.37
BS. #368		
0-00-40	88-43-40	
180-00-54 50	270-16-44	
90-00-30 45		
270-00-54		
Δ@ #370		5.22
FS. #369 Δ KITCHFIELD		5.00
54-42-01	88-21-05	1454.14 SP
234-42-00 00	271-38-41	1454.14
144-41-39 49		
324-41-58		
54-41-11		
FS. #140		34.10
21-40-22		
251-40-27		
161-40-04		
341-40-15		

150 B.C. to H.H. 9.10 / 16.15

TC & Littlefield #369		5.75
F.S. #370	21-40-40	5.11
	269-19-39	1454.92
		1454.10

33-31-12.022
112-21-40.526

SOLAR
12/12/09
T 13:51

1) 55-41-00
2) 55-41-01
3) 55-40-29
4) 55-40-31
Mean) 55-40-46
+0-14-44
55-55-30

14:15
1) 55-40-01
2) 55-40-04
3) 55-40-04
4) 55-40-05
55-40-04
+0-14-44
55-54-48

POR 909, 9.15.67
325, 204.48

50

#94	180-15-54	5281.62
#107	180-13-04	5092.77
#121	180-11-07	5275.85
#135	180-10-54	5285.11
#151	02-20-06	5236.41
#157	10-19-01	5294.75
#155	90-13-35	4457.75
#306	86-16-18	732.68
#367	358-12-28	2275.22
#368	1-13-36	2002.10
#370	235-54-47	1454.10
#369 E COM		43,495.02
		7.67

50U-369 97.28.35

92.2

B.S. #370

2-00-28 31

180-00-35

90-00-29 33

270-00-36

TP #369 Δ LITCHFIELD 4.73

F.S. #371 4.10

316-50-07 90-36-05 5452.21

136-59-20 13 270-33-10 5351.33

46-50-00

226-50-25 17

316-50-43

F.S. #94

263-22-39 35

97-22-33

-50 90 46

U.S. # 363		5.23
0-00-31	89-34-33	
180-00-38 34	270-24-50	
90-00-43		
270-00-36 19		
TO # 371		5.15
F.S. #125		4.64 - 4.73
163-57-14	90-11-50	218.95
343-57-15	269-47-33	
253-56-36		
73-57-03		
F.S. #112		4.89 - 4.93
164-48-47	89-56-43	5268.36
344-48-46 44	270-02-43	5267.52
254-48-40		
74-48-37 39		
164-48-14	164-48-14	

+40 54/41

FD BK. 14 HH. 43/39/40

FD BK. 14 HH. 33/34/43

+6-69/21

Post		
US #371		4.85
040-22	90-04-39	
180-00-40 33	180-24-45	
90-00-25		
270-00-28 26		
AC #112		5.56
ES #98		4.17
182-24-45	89-49-08	$254.27
2-24-50 47	270-10-09	$25356
272-24-40		
92-24-52 47		
182-24-17	192-24-15	

G.C.B
- 7.14

FD 1 1/2 P. 28 27 / 33 34

95
+10.02 = - - -

Pont

I.S. #112 5.00

0-00-32 90-13-01

180-00-37 JC 269-46-13

90-00-35

270-00-38 31

AC #96 5.22

ES #04 4.30 4.10

179-54-02 89-48-10 5272.10

359-54-07 04 270-10-48 5271.38

269-54-00

89-54-02 01

179-53-31 177-53-35

18.85
-19.66

FD. PEDAZ 21/22 20/27

19.23
+10.47

	Pool		
BD.	#98		4.665
100-58-01		90-13-39	
180-01-22-10		200-45-50	
90-00-31			
220-00-31-71			
IC	#84		5.39
ES.	#70		4.16
120-58-47		89-50-44	5269.60
350-58-49-47		220-08-33	5268.89
200-58-17			
89-58-14-15			
179-57-41		179-57-38	

15.23
− 20.00

FD. BK

16 | 15
21 | 22

16.37
+ 5.46

	Pool		
N.S. #94			4.76
0-00-38		90-11-410	
180-00-42	38	269-47-416	
90-00-38			
270-00-42	42		
TC #70			5.21
F.S. #57			4.30
180-02-33		90-48-00	$268.25
0-02-41	37	270-11-33	$267.52
270-02-26			
90-02-26	27		
180-01-52		180-01-58	

16.37
-17.26

FD BG

9 40
16 76

20.37
+19.53

Pool		
B.S. #70		4.58
0-00-37	90-14-29	
180-00-33	269-45-05	
90-00-30		
270-00-40		
Te #57		5.27
E.S. #372		4.17
179-48-04	89-45-03	5294.51
359-48-10	270-14-17	5293.76
269-48-06		
89-48-16		
179-57-35	177-47-51	

20.37
- 7.22

25.17
+ 29.29

Vis. Poor

LS, #57		4.48
0-00-37	90-17-36	
180-00-14 (23)	260-41-55	
90-00-28		
270-00-42 (28)		
AQ #372		5.22
FS, #42		
261-41-07		10.51
81-41-24 (15)		
351-41-17		
171-41-50 (33)		
FS, #373		4.57
180-10-52	89-50-00	5379.34
0-10-55 (53)	270-09-28	5378.61
270-11-14 (21)		
90-11-29		
180-10-41	180-10-36	

05.17
-26.44

FD B.C.

4	7
9	10

17.86
+16.48

135.6372		4.00
0-00-49	90-13-15	
180-00-49 [49]	270-46-20	
90-00-21		
180.00-16 [18]		
AC #373		5.22
F.S. #33		42.43
124-58-42		
354-58-37		
264-58-15		
84-58-24		
F.S. #374		4.45
90-41-42	89-46-25	5282.01
270-41-25 [35]	270-13-01	5291.77
180-41-08		
0-41-04 [06]		
90-40-47		

17.68
-19.27

FD B.C. IN H.H. 4/3

22.97
+21.78

RS. #373		4.44
0-00-24	90-15-35	
180-00-40 36	269-43-53	
90-00-32		
220-01-00 45		
T #374		5.24
FS. #31		
262-55-34		6.37
87-55-32		
357-55-44		
177-56-20		
FS. #375		5.25
179-30-07	89-47-30	5271.83
359-30-02 08	270-11-47	5271.10
269-30-10		
89-30-10 10		
179-29-29		

-22.37

FD BC. IN A.H. 32/33 / 5/4

20.74
+24.42

BS # 374		4.09
0-00-30	90-14-29	
180-01-00 58	269-44-35	
90-00-00 29		
270. 00. 39		
FS # 375		5.25
FS # 30		
268-30-20		47.55
88-30-53 20		
FS. # 361		4.61
181-03-01	89-47-43	4660.65
1-03-17 09	270-11-28	4660.01
271-02-35		
91-02-55 45		
181-02-18		

20.04
-21.28

FS BS # HI

+17.19 17

ROUTE	VIS.			
US #375			4.76	
0-00-12	90-14-15			
180-01-20 16	269-45-04			
90-00-22				
270-00-39 30				
TC #361			5.16	
F.S. #38				
89-09-51 59				
269-10-07				
179-09-54 02				
359-10-10				
89-09-42				

+19.38

BS. #12

0-00-20

180-00-20 23

90-00-40

270-00-40 41

TC #90 5.21

FS. #97 4.69

90-40-38 89-55-57 5254.77

270-40-44 41 270-03-36 5254.06

180-41-02

0-41-10 06

90-40-18

90-42-21 20

09-13-10 Δ RT TO #94

SET PK

185

B.S. #99			4.30
0-00-30	90-06-37		
180-00-33 31	269-53-11		
90-00-52			
270-01-02 57			
TC #97			5.22
FS #95			506 + 4.30
180-14-06	89-52-20		5298.46
0-14-04 05	270-07-00		5297.73
270-14-37			
90-14-34 35			
180-13-34			
180-13-36 36			

7.88
- 8.77

$\frac{30}{31}\left|\frac{29}{32}\right.$

POUR #45.

BS. #97		4.36
0-00-33	90-00-40	
180-00-43 (18)	269-59-50	
90-00-26		
270-00-44 (35)		
TP #95		5.25
F.S. #94		5.05
179-52-14	89-43-51	4876.22
359-57-10 (12)	270-15-35	4875.51
269-56-51		
89-57-07 (59)		
179-56-34 (33)		
179-56-33		

12.68
-13.30

24.21
+23.70

BS #95		4.89
000-35 40	90-18-04	
180-00-44	269-41-31	
90-00-15		
270-00-29 22		
TQ #94		5.57
ES #79		
269-17-06		
89-17-22 14		
359-18-43		
179-18-54 40		
269-18-24 30		
269-18-26		

-24.73 21

66, 67, 69, 70

	Pool			
BS #52				
0-00-24				
180-00-34	27			
90-00-27				
270-00-47	27			
TS #66			5.70	
FS #67			4.70 - 4.62	
90-33-20		90-20-41	4820.06	
270-33-28	24	269-38-48	4819.32	
180-33-25	32			
0-33-39				
90-32-51				
90-32-55	53			

FD BG IN HH. 17/20 16/24

- 27 05/52

	PROF		
B.S. #66			4.82
0-00-52	89-41-12		
180-00-56 54	270-17-55		
90-00-27			
220-00-40 33			
TP #67			5.15
FS #69		5.60	4.75
180-13-45	90-10-21		5291.28
0-13-58 51	270-17-07		5291.04
220-13-31			
90-13-43 37			
180-12-51			
180-13-04 57			

27.03
+26.55

SET SPIKE IN HOLE

15.07
-16.21

B.S. #67			4.55
0-00-22 JC	89-51-30		
180-00-42	270-07-08		
90-00-30 JC			
270-01-35			
T.P. #69			6.02
F.S. #70			4.65
179-36-00 JJ	90-11-11	5262.66	
359-36-18	269-48-19	5261.32	
269-36-41			
189-36-17 "			
179-35-37 JC			
179-35-39			

15.02
+13.85

14.67
-15.55

B.S. #69 5.22

0-00-260 89-51-09

180-00-43 35 270-08-21

90-00-37

270-00-47 39

XQ #70 5.18

E.S. #57

89-14-42 20

269-14-28

179-14-20

359-14-20 20

92-13-45

97-13-41 43

14.42
+13.70

BS #57			
0-00-22			
180-00-28 25			
90-00-36			
270-00-50 43			
IR #377		5.19	
FD. #41		4.19	
90-45-54	89-59-27	5292.61	
270-46-03 59	270-10-36	5248.07	
180-40-13			
0-46-22 17			
90-45-34			
90-45-34			

+10.50 46

FAIR			
BS, # 327			4.77
0-00-56	90-12-18		
180-01-04 00	269-47-01		
90-00-36			
270-00-55 45			
TC #41			5.08
ES #37		4.76	4.82
180-51-25	89-40-44		5271.49
0-51-44 35	270-13-29		5276.73
270-51-15			
90-51-25 20			
180-50-35			
180-50-35			

-19.42 AU

ED. D/C Tel. H/H

+72.20 70

	FAF		
B.D.	#4		3.92
0-00-20		90-46-28	
180-00-40	33	268-43-13	
90-00-34			
270-00-37	35		
XQ	#39		5.605
FD. # 38			4.42
179-22-20		93-43-16	4722.45
359-22-39	34	270-16-06	4721.76
269-22-28			
89-22-39	33		
179-22-01			
179-21-58			

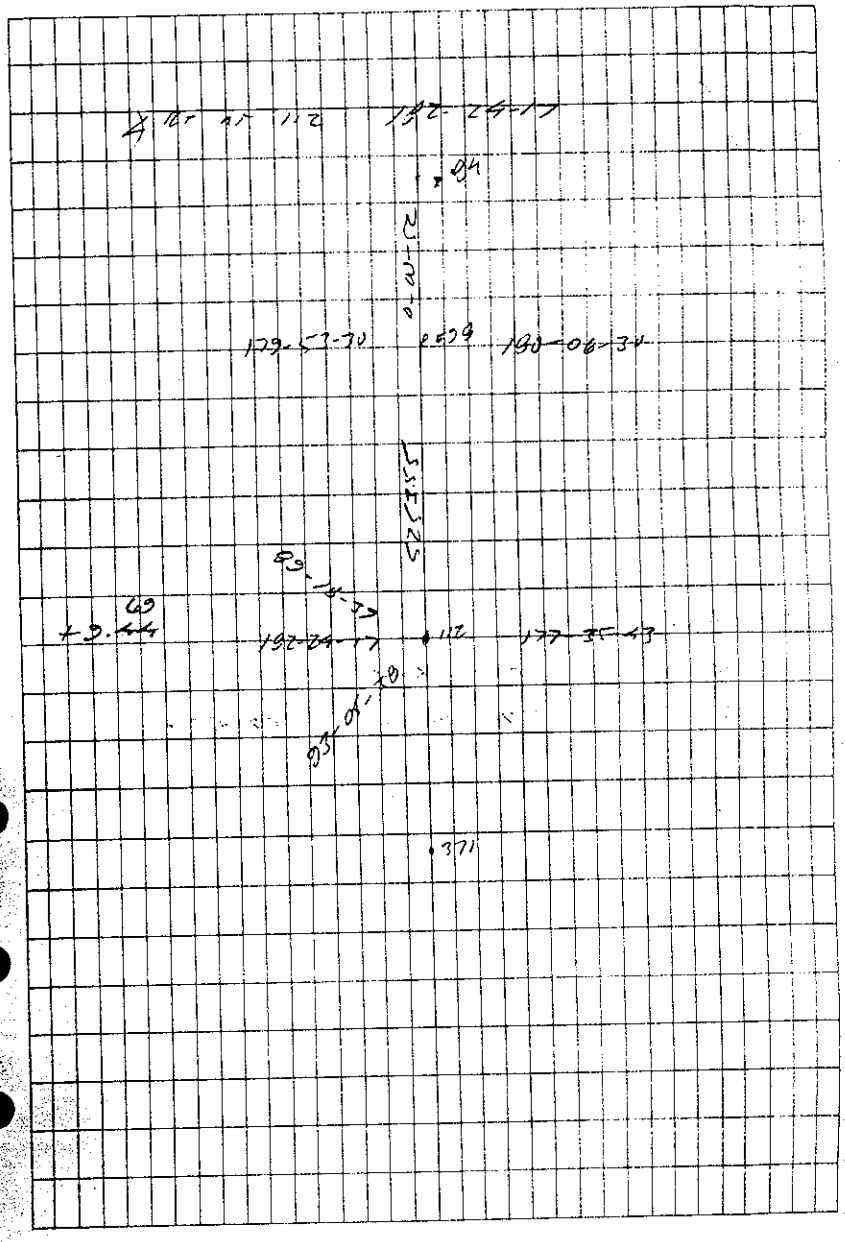
22.70
- 23.21

+ 24.27

Pool			
RS #39		5.76	
0-00-28	90-18-51		
180-00-32 30	270-40-44		
90-00-35			
270-01-40 37			
AC #30		4.00	
RS #57			
90-58-33			
269-58-35 34			
179-58-37			
359-58-43 41			
89-58-04			
89-58-04			

24.31
-25.57

	VIS. POOL			
BS # 371				
0-26-36				
180-26-35 36				
90-08-08				
270-08-02 05				
TP # 112			5.02	
FS # 376			4.42	
93-32-04		89-54-21	56.2925	
273-32-18 11		270-05-09	12.2725	
183-13-47				
3-13-47 AM				
93-05-42				
93-05-54 38				



VLC. FD.C			
BS, #112			5.90
0-03-50	90-06-02		
180-03-52 51	269-53-35		
90-27-33			
270-27-46 39			
AC #376			4.90
FS #109			5.21 - 4.33
180-10-29	89-54-49		5284.13
0-10-29 29	270-04-48		5283.41
270-34-24			
90-34-27 25			
~~180-46 28~~ ~~180-46-46 42~~			
FS #110			
86-47-01	LEVEL		5.95
166-47-05			

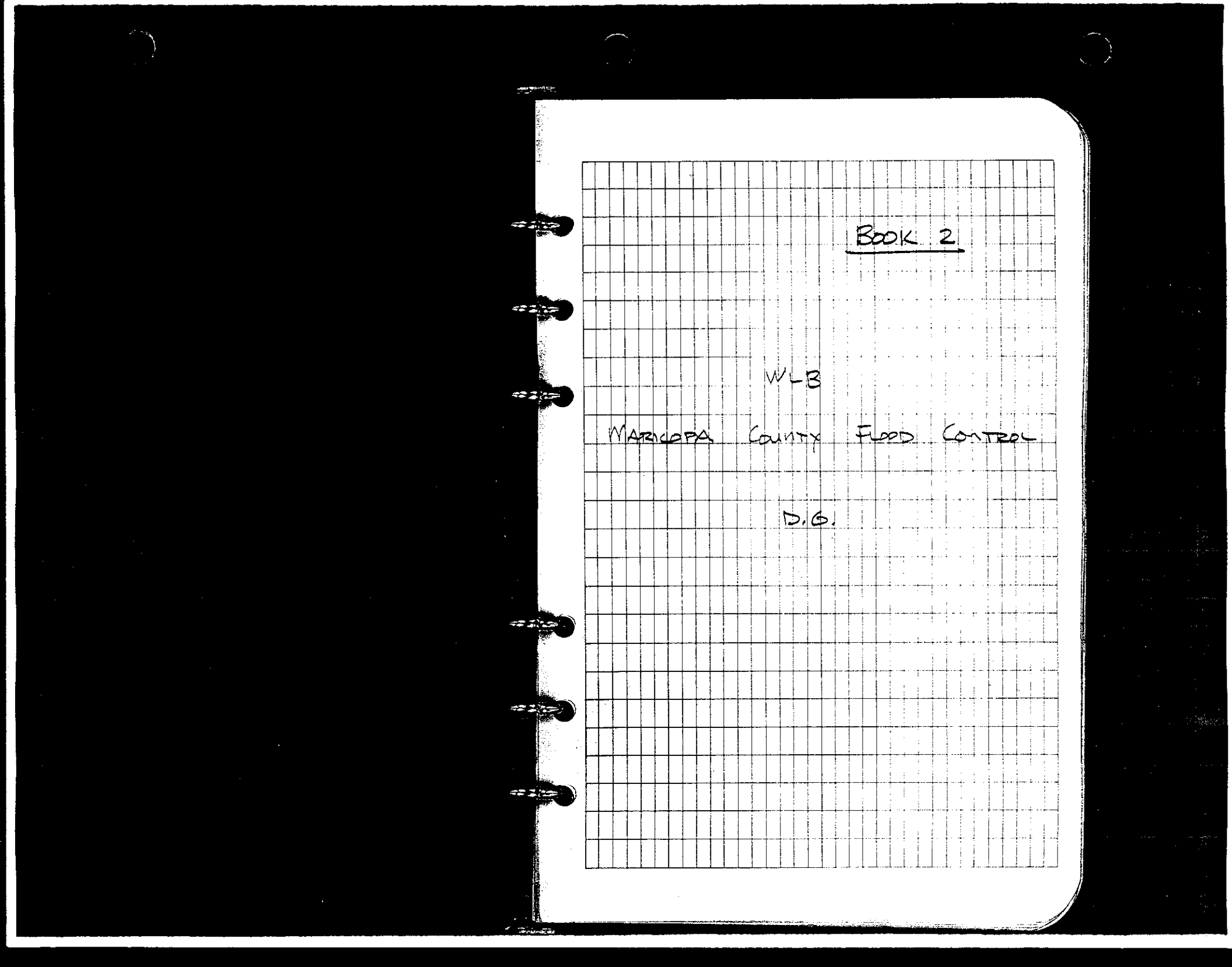
-0.24 99

FD BC IN H.H.

+7.01 93

FD BC IN H.H.

VIS. GOOD			-	
RS #376			5.52	
0-03-02	90-05-42			-0.03 27
180-03-22 12	262-53-58			
90-30-59				
270-31-08 04				
AC #107			5.02	
RS #107			5.08	
179-51-42	90-45-04		4095.95	
359-51-38 40	270-14-31		4095.24	+.22 .21
270-17-15				
90-19-40 27				
179-40-20				
179-49-23 25				


BOOK 2
WLB
MARICOPA COUNTY FLOOD CONTROL
D.G.

B.S. #103		5,12	
0-06-27			
180-06-23 25	269-43-12		
90-06-33			
270-06-59 49			
Tie #107			
P.S. # 94			
269-39-00			
89-39-00 00			
359-39-19			
179-39-30 25			
269-32-35			
269-32-26			

LS #36

0-00-35

180-00-46

90-00-24

270-00-50

TC #52

5.33

FS #54

4.26

90-10-51 90-10-52 4720.44

270-11-04 260-18-30

180-10-44

0-11-05

ES. 24

Poor

BS #52		4.97	
0-00-21	89-30-40		
180-00-27	270-08-21		
90-00-30			
270-00-39			
TP #54		5.15	
FS #55		1.85	4.19
180-33-57	90-12-17	5267.24	
0-33-57	269-41-50		
270-34-07			
90-33-56			

SET SPIKE IN W/M
SPIKE + TIN 1 VE

Vis. Point

B.S. #54		4.62
0-00-12	89-14-31	
180-00-50	270-14-28	
90-00-31		
270-00-52		
TP #55		5.81
F.S. #57		4.30
179-11-36	90-14-44	5278.52
359-11-32	269-44-13	
269-11-27		
89-11-32		

Vis. Point

B.S. #55

0-00-28

180-00-38

90-00-30

270-00-33

TP #57

F.S. #70

269-21-36

87-22-02

359-21-33

179-21-41

5.20

89-46-35

270-12-46

5.09

VIS. POINT

R.S. #70

0-00-27 32

180-00-32

90-00-39 46

270-00-54

N@ #04 5.25

F.S. #02 5.33 4.70

270-41-48 56 09-51-17 5282.03

90-42-04 270-09-12

0-42-03

180-42-20 11

EQ 1 1/2" I.P. IN H.H.

B.J. # 81 4.37

0-00-35 90-11-05

180-00-40 262-48-05

90-00-33

270-00-35

K C # 82 5.25

F3 # 01 5.22 - 4.55

180-28-50 89-57-07 5272.00

0-28-51 270-02-03

270-28-28

90-28-46

FO BL. IN H.H.

B.S. #82			4.90
0-00-27	35	90-04-28	
180-00-43		269-54-55	
90-00-33	36		
270-00-39			
XC #91			5.84
F.S. #79			5.05
179-55-10	13	89-45-17	4950.32
359-55-10		270-13-57	
269-55-11			
89-55-15	13		

B.S. #81 5.06

0-00-27 90-15-55

180-00-44 270-43-07

90-00-38

270-00-49

I.R. #79 5.54

F.S. #94

80-14-19

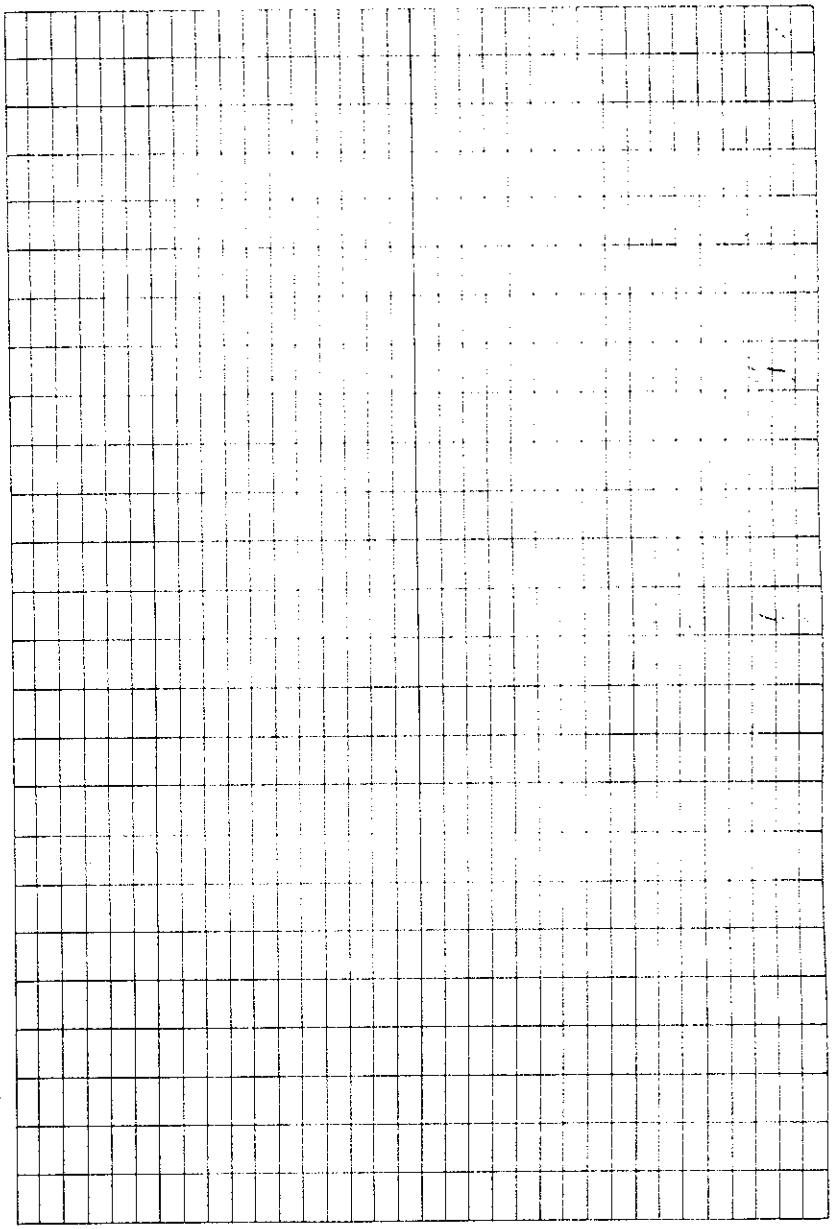
269-14-29

179-14-25

359-14-37

	Point		
BS. # 94			
0-00-33	40		
180-00-47			
90-00-30			
270-00-44	37		
TC # 93			5.40
FS. #106			5.64-5.25
90-01-07		90-22-03	5296.09
270-01-16	11	269-37-23	
180-01-06			
00-01-32	19		

B.S. #93		5.12
0-00-38	89-39-27	
180-00-38	270-19-48	
90-00-30		
270-00-20		
TP #106		5.54
F.S #120		4.602
179-46-41	90-14-51	
359-46-28	269-14-46	
269-46-29		
89-46-19		



BS #78
0-00-32
180-00-41

TP OLD #65

FS NEW #65
187-27-29 23.50
7-27-34

B.S. OLD #17		
0-00-40		
180-00-48		
90-00-23		
270-00-41		
T.C. OLD #2		503
F.D. NEW #2		4.32
91-02-42	89-46-42	132.82
271-02-44	270-12-34	
181-02-22		
1-02-34		

COPIED

BS. OLD #7

0-00-31

180-00-27

TC OLD #17 4.98

FS. NEW #17

242-27-14 39.71

62-27-21

#361 GOT PAINTED INSTEAD OF

#30 SO #361 IS NOW THE

PANEL POINT

BS #373

0-00-30

180-00-30

90-00-31

270-00-32

TC #374 5.14

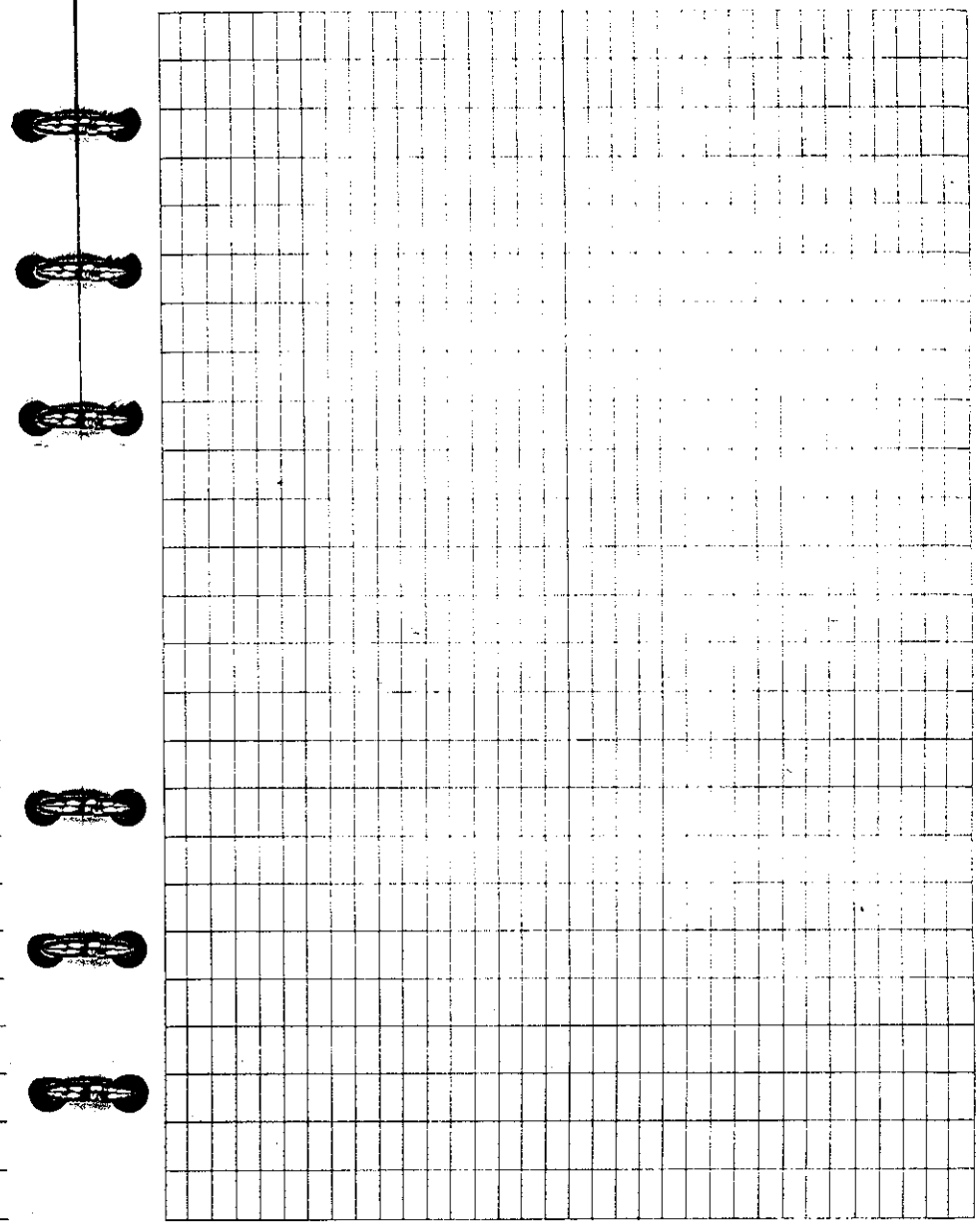
FS #21 4.44

209-08-32 89-47-42 5243.35

89-08-47 270-11-19

359-08-29

179-08-35



BS #374 5.86
C-00-23 90-12-36
180-00-38 270-46-28
90-00-56
270-01-14

TC #21 4.98

FS #377 (CC #13) 4.23
170-57-04 89-46-20 2424.66
359-59-19 270-12-40
269-59-43
90-00-02

FS #19 5.00 4.46
91-14-23 89-47-47 5228.84
271-14-42 270-11-28
181-14-58
1-15-10

FS BC. IN HH

35. #21			5.00
0-00-31	90-14-07		
180-00-47	269-45-04		
90-00-28			
270-00-46			
TQ #19			5.82
FD. #10		4.83	4.47
268-51-05	89-14-53		5276.64
88-51-22	270-14-18		
358-52-51			
178-51-14			

BS. #19		5.20
0-00-15	90-16-26	
180-00-26	269-42-48	
90-00-41		
270-01-00		
TO #10		5.63
FD. #378 (ELL dll)		8.00
270-49-13	89-58-50	1048.25
90-49-52	270-00-17	
0-50-03		
180-50-21		
FD. #379		8.00
158-14-12	80-36-37	4018.53
338-14-26	270-22-38	
248-14-40		
68-14-51		

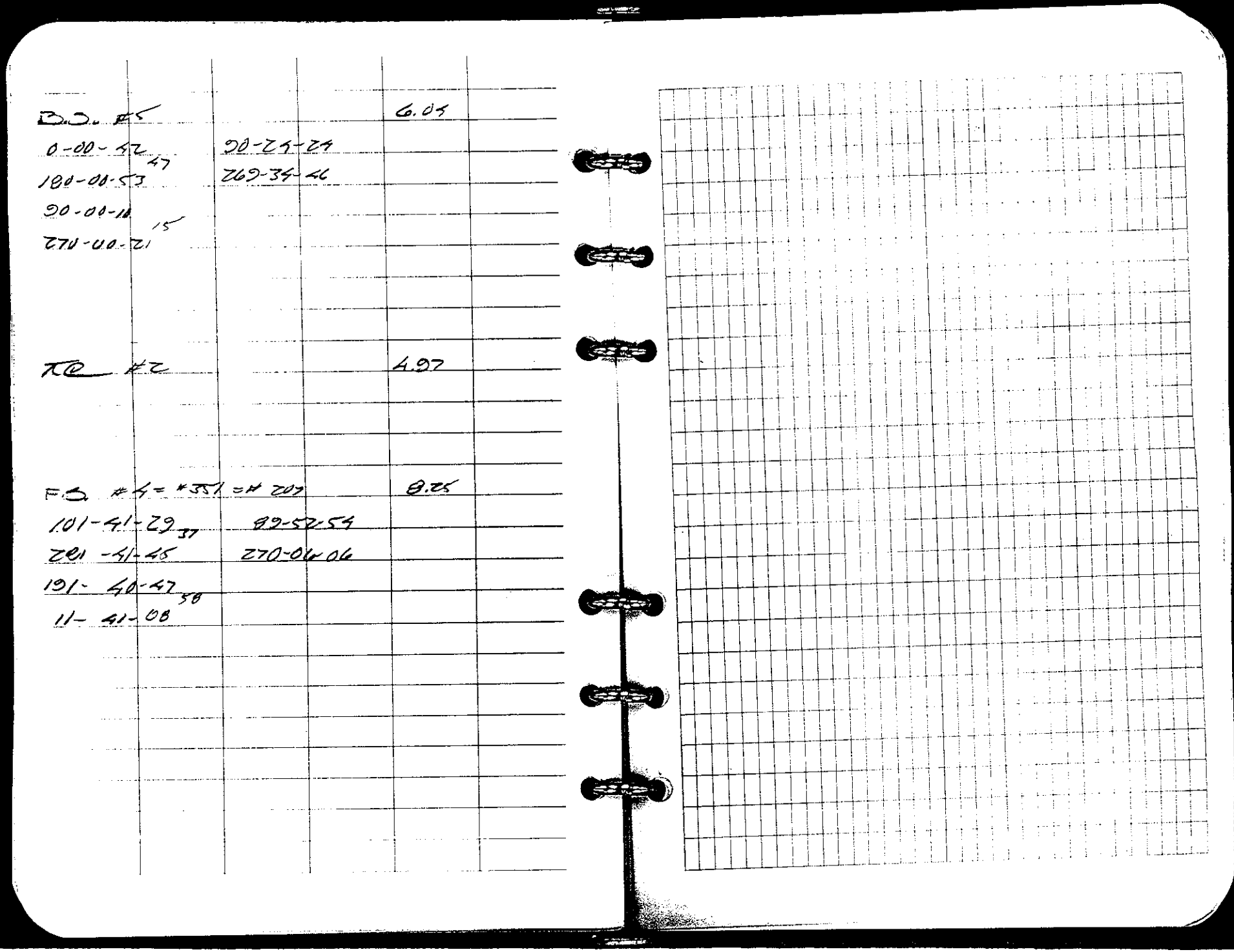
(SET SPK)

SET SPK

D.J. #10		8.25
0-00-20	90-19-10	
180-00-36	269-39-49	
90-00-42		
270-01-01		
KC #379		5.07
F.S. #5		4.45
245-43-36	90-04-14	214.12
65-43-55	269-54-53	
335-44-06		
155-44-10		

FD 1"I.P.

BS. #379		269
0-00-34	90-00-52	
180-00-48	270-00-28	
90-00-33		
270-00-54		
TP #5		534
FS. #2		445
96-52-35	80-35-00	2982.29
276-52-49	270-24-04	
186-52-34		
6-52-51		


B.O. #5
6.04
0-00-52 47
90-29-24
180-00-53
269-34-46
90-00-18
270-00-21 15
TR #2
4.97
F.O. #4 = #351 = #207
8.25
101-41-29 37
89-52-54
201-41-45
270-06-06
191-40-47 50
11-41-08

IPS #10		8.25
0-00-24	89-51-02	
180-00-37	270-08-07	
90-00-38		
220-00-43		
TC #378 (Ecc #11)		5.13
FS #11		4.38
220-59-00	90-25-44	4394.82
40-59-12	260-33-30	
310-59-16		
130-59-29		
FS #377 (Ecc #13)		
357-52-54		12a.94
177-53-03		
87-53-12		
267-53-07		

FD 491

B.S. #378		3.98
0-00-41	89-36-36	
180-00-44	270-22-35	
90-00-29		
270-00-38		
TR #377		5.15
F.S. #13		0.00
357-09-54	90-01-35	385.08
177-09-45	269-57-32	
87-10-17		
267-09-40		
F.S. #21		5.13
228-06-27	90-16-00	
48-06-28	269-43-24	
318-06-14		
138-06-11		

F.S. # 379 (Elec #22) 5.12

181-17-05 90-18-25 3443.23

1-17-10 209-10-19

271-46-53

91-16-50

Replaces # 23

Fo Not

B.S. #377

0-00-45

180-00-46

90-00-77

270-00-51

2.60

89-45-40

270-13-25

TC #379

5.13

F.S. #21

315-35-25

135-35-34

45-35-20

225-35-33

1.38

89-51-25

270-07-48

2505.32

F.S. #22

256-49-40

76-49-58

346-49-39

166-49-56

26.40

BD. # 379

0-00-31

180-00-25

90-00-38

270-00-5

90-12-58

269-46-14

268

TC 471

5.19

FD # 377

270-45-24

90-45-25

0-45-35

180-45-44

F.S. #32

0-00-41

180-00-51

90-00-39

270-00-51

TC #5

5.24

FS #58

4.85

90-56-36

90-07-27

5246.87

270-56-13

269-51-58

180-56-32

0-56-42

FD SPRINKLERS CUT PK

B.S. #57			4.40
0-00-41		89-54-49	
180-00-42		270-05-33	
90-00-24			
270-00-41			

B.S. #58		4.46
0-00-16	89-52-33	
180-00-08	270-07-05	
90-00-21		
270-00-21		
TC #60		5.87
F.I #326		4.81
179-52-25	90-09-53	3869.24
359-52-23	269-49-40	
269-52-25		
89-52-30		

ED RR SPIKE IN ISLAND

B.S. #60		4.92
0-00-32	89-51-38	
180-00-48	270-07-52	
90-00-20		
270-00-46		
TQ #30		5.24
F.S. #30		4.71
43-33-31	89-47-24	5370.16
223-33-42	270-12-07	
133-33-20		
313-33-41		

B.S. #326		4.40
0-00-40	90-44-89	
180-00-46	269-45-13	
90-00-24		
270-00-43		

B.C. #380		3.98
0-00-38	90-09-46	
180-00-51	269-49-40	
90-00-37		
270-00-37		
EC #45		5.83
F.S. #381		3.67
91-02-48	89-38-17	1710.20
271-03-03	270-21-21	
181-03-00		
1-02-57		
F.S. #382		1.38
180-12-18	89-38-07	1970.78
0-12-24	270-21-30	
270-12-14		
90-12-32		

B.J. #45			4.02
0-00-28	90-27-40		
180-00-12	269-32-05		
90-00-53			
270-00-47			
KC #381			4.68
FD. #44		5.24	4.82
179-27-30	89-57-22		3553.11
359-27-26	270-02-08		
269-27-36			
89-27-41			

FD. B.C. 44 #44

B.S. #381		2.62
0-00-30	90-05-20	
180-00-31	269-54-24	
90-00-31		
270-00-32		
XC #14		5.60
F.S. #383		4.31
269-59-45	89-40-31	3372.95
89-59-50	270-19-06	
359-59-43		
179-59-56		

VIS. - Good

BS #106 — 5.00

0-00-21 — 90-46-35

180-00-41 — 270-12-37

90-00-21

270-00-50

TC #120 — 5.00

FS. #134 — 4.68 — 4.20

180-18-22 — 90-16-14 — 5298.32

0-18-32 — 269-43-10

270-18-37

90-18-47

FD BC IH HA

Good

BS #26			ABI
0-00-36	89-45-16		
180-00-57	270-14-21		
90-00-25			
270-00-10			
XC #24			5.63
FS #50		4.80	4.40
180-00-06	90-14-25		5299.03
0-00-19	269-44-47		
270-00-00			
90-00-13			

FD. B/C INT. H/H

B.S. #134 4.05

0-00-20 80-46-3

180-00-3 270-12-31

90-00-33

270-00-46

K@ #150 5163

FD. #163 4.70 4.35

120-53-22 90-12-50 5244.09

360-53-30 260-46-18

260-53-20

80-53-41

2" L.P. W/ H/H

3.5. #150			5.03
0-00-33	82-48-01		
180-00-47	270-11-09		
90-00-31			
270-00-45			
TC #163			5.83
F.S. #170		506	4.45
180-03-44	90-14-58	52 81.61	
0-03-57	260-43-57		
270-03-42			
90-03-50			

SD 2" HP IW H/H

BJ #43 5.23
0-00-36 80-45-30
180-00-48 20-13-30
90-00-30
270-00-45

XC #20 5.92

F.D. #198 4.70 4.20
179-55-00 90-17-05 535.82
359-55-36 269-42-00
269-55-12
89-55-21

FD. B.C. IN 14/4

B.S. #20			5.22
0-00-31	89-43-57		
150-00-43	270-16-02		
90-00-39			
220-00-48			
AT #19			5.20
B.S. #212		8.00	2.50
180-00-00	90-16-35		5257.06
6-00-46	269-42-32		
220-00-21			
90-00-27			

FD. BE. 1/4 H/H

BS. #193			8.25
0-00-30	89-41-00		
180-01-01	270-18-05		
90-00-35			
270-00-56			
TP #212			5.24
FS. #211		8.00	263
269-58-40	89-52-40		5287.96
89-58-58	270-06-30		
359-58-40			
179-58-55			

	BAD		
BD. #212			825
0-00-37		90-05-52	
180-00-54		269-53-46	
90-00-24			
270-00-47			
TC #211			563
FD. #210		8.00	242
180-03-28		69-50-23	5287.20
0-03-46		276-08-45	
270-03-24			
90-03-45			

FD. BC #4

B.S. #211 6.25
0-00-50 90-02-13
180-01-04 269-52-41
90-00-24
270-00-43

P.O. #210 5.80

F.S. #200 4.85 4.40
180-00-25 89-40-05 5283.35
0-00-22 270-10-33
269-59-45
89-59-59

3/4" I.D. IWL H/H

POOR

B.S. #210		5.18	
0-00-31	90-12-34		
180-00-38	260-46-44		
90-00-28			
270-00-34			

D.D. #209		5.08
0-00-33	90-32-37	
180-00-44	269-26-58	
90-00-12		
270-00-08		
RC T.P.		5.25
F.D. #126		1.22
179-58-19	89-32-22	5282.34
359-58-28	270-27-17	
269-32-40		
89-57-54		

SET PK

	Peer		
B.S. TP.			5.62
0-00-28	90-20-38		
180-00-41	260-20-41		
90-00-28			
270-00-23			
TC #12			5.12
FS #100		4.57	4.07
120-40-24	80-37-30		5262.96
350-49-28	270-22-13		
260-49-16			
80-49-22			

FD BC. IN H/H

B.S. #76			4.58
0-00-28	90-24-48		
180-00-30	269-35-05		
90-00-31			
270-00-31			
TC #100			5.71
FS. #147			4.27
180-35-25	89-43-27	5362.98	
0-35-29	270-44-16		
270-35-30			
90-35-35			

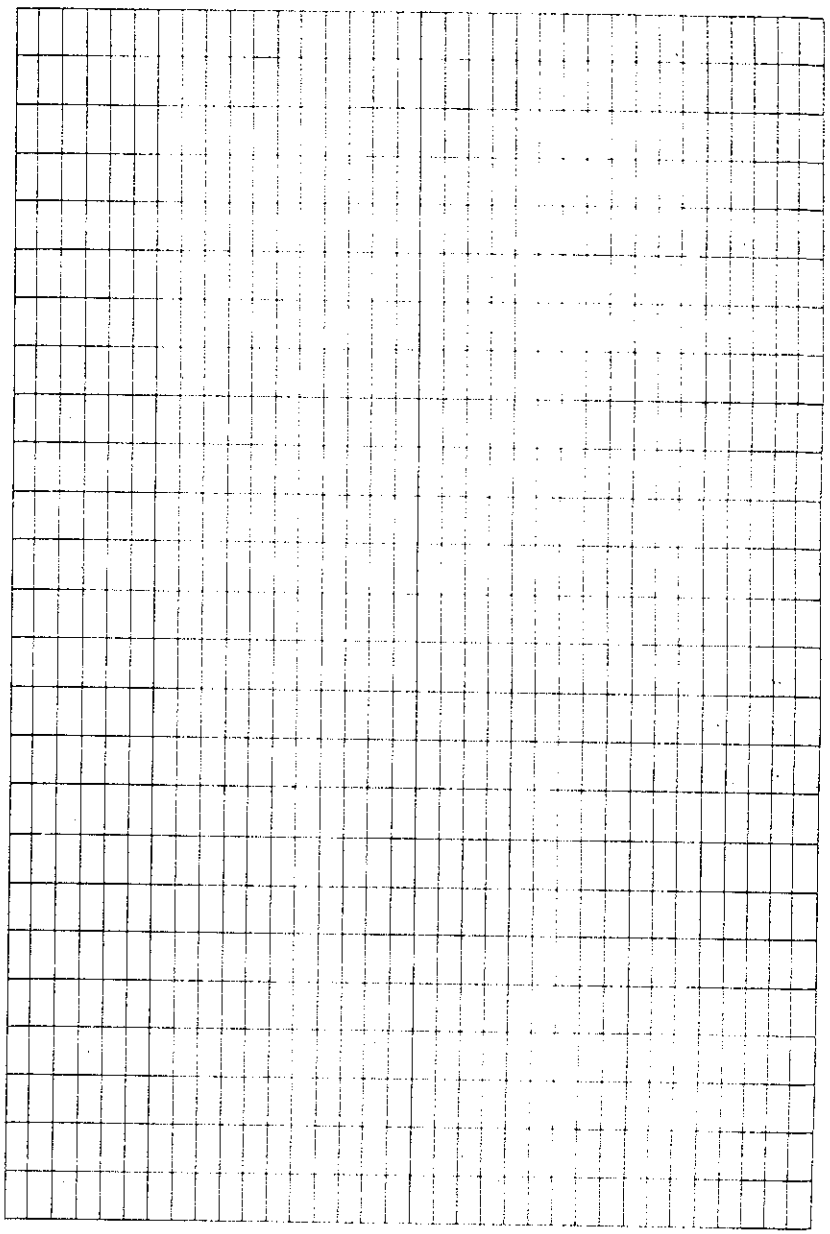
SET PK

3.5" 40		5.12
0-00-27	90-16-13	
180-00-18	260-43-33	
90-00-21		
270-00-10		
XC 7/47		5.10
F3. 7/48		4.07
270-51-31	90-35-04	5308.51
90-51-35	260-24-40	
0-51-32		
180-51-18		

B.D. #47		4.47
0-00-38	89-24-33	
180-00-37	270-33-15	
90-00-25		
270-00-16		
KC #48		4.01
FD, #32		4.40
88-26-01	89-47-35	5289.12
268-26-11	270-12-07	
178-25-50		
358-25-54		

LOT REAR

BS #148		2.35
0-00-35	90-16-27	
180-00-31	269-43-31	
90-00-28		
270-00-27		
XC #132		5.21
F.S. #118		
180-24-13		
0-24-11		
270-24-07		
90-24-06		



NEW TRAIL

B.S. #147		
0-00-35	89-26-25	
180-00-37	270-32-46	
90-00-50		
270-00-48		
TC #149		4.08
F.S. #161		4.38
269-13-02	90-14-49	2261.82
89-13-11	269-44-31	
359-13-02		
179-13-13		
F.S. #149		4.66
178-30-13	90-15-24	5228.42
358-30-20	269-44-00	
268-30-15		
88-30-22		

FD. COTTON S.

SET PK

B.J. #148			3.90
0-00-40	89-46-52		
180-00-44	270-12-24		
90-00-36			
270-00-40			
TC #161			5.28
FD. #177		4.85	4.17
179-35-56	90-19-02		5275.66
359-35-58	269-40-24		
269-35-48			
89-35-48			

FD. 2.80AT

B.S. #164

0-00-28 B0-43-11

180-00-30 270-16-06

90-00-32

270-00-46

4.74

XR #177

5.80

F.S. #191 4.78 4.35

180-04-08 90-22-18 5278.12

0-04-11 270-37-17

270-04-26

90-04-24

FD. B.C. Inst. H/H

B.J. #177			5.32
0-00-21	89-40-38		
180-00-37	270-18-42		
90-00-44			
270-01-07			
KC #101			5.54
F.J. #210			4.84
179-42-02	90-26-17		5266.70
359-42-12	269-33-09		
269-42-22			
89-42-41			
F.J. #102		5.58	5.80
89-58-37	90-15-33		5293.87
269-58-37	269-44-03		
179-58-52			
359-59-06			

FD. BC. IN H/4

BC #191		5.05
0-00-17	80-35-17	
180-00-18	220-24-08	
90-00-24		
220-00-35		
XC #240		5.00
EC #209		
220-07-02		
90-00-07		
0-07-27		
180-07-30		

3.5. #101			4.90
0-00-23	89-45-51		
180-00-10	270-13-42		
90-00-45			
270-00-53			
TC #102			5.75
FS. #178			4.32
89-54-02	89-42-48	5283.35	
269-54-01	270-16-37		
179-54-38			
359-54-38			

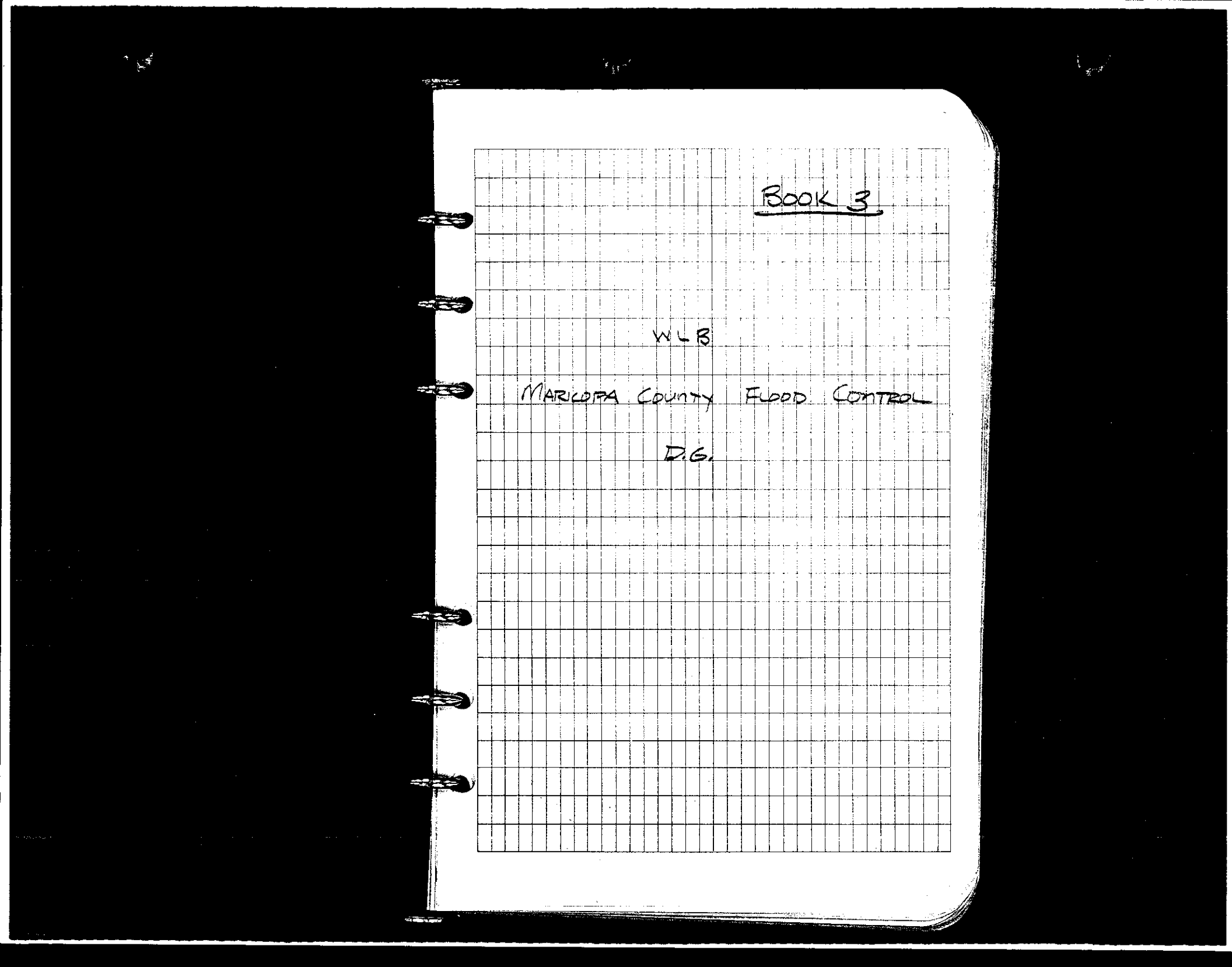
SET PK IN COLD PATCH.

B.S. #102			5.26
0-22-30	90-18-46		
180-00-23	270-40-46		
90-00-35			
270-00-50			
TC #108			5.17
F.S. #162		4.47	4.35
120-59-48	89-42-41		5284.10
300-09-35	270-16-47		
270-00-01			
90-00-13			

1" I.P. in hole

B.S. #178		4.23
0-00-25	90-18-36	
180-00-26	269-41-01	
90-00-25		
270-00-10		
TP #162		5.25
F.S. #140		4.28
180-00-46	89-44-14	5278.35
0-00-40	270-15-22	
270-00-40		
90-00-59		

COPIER			
D.S. #162			4.82
0-00-24		90-17-35	
180-00-20		240-42-11	
90-00-53			
270-00-44			
X-C #140			5.18
F2 #148			
90-42-15			
260-42-02			
120-42-11			
350-42-00			


BOOK 3
W.L.B.
MARICOPA COUNTY FLOOD CONTROL
D.G.

	Foot			
BS.	103			
0-00-26				
180-00-39				
90-00-20				
270-00-37				
IE	#212		5.24	
FS	#213		5.21	
90-20-53		89-57-24		
270-21-00		270-01-41		
180-20-54				
0-21-01				
FS	#230		4.26	
180-00-02		90-18-37	5290.87	
0-00-00		269-40-36		
270-00-08				
90-00-21				

FD. Spike

	Feet		
BS #212			5.14
0-00-28	80-14-28		
180-00-35	270-14-42		
90-00-34			
270-00-52			
IC #230			5.20
FS. #248		5.00	4.26
170-52-53	90-19-48		5288.35
309-53-05	260-10-30		
269-53-13			
80-53-16			

FD. DC HI H/H

Proof			
B.S. #230			4.605
0-00-28	89-43-31		
180-00-38	270-15-50		
90-00-33			
270-00-40			
TL #248			6.03
ES #266		4.50	4.25
179-59-13	90-17-09		589.11
359-59-49	269-41-57		
269-59-46			
89-59-46			

1" I.P. in Hole

	Pool		
BS #248			5.16
0-00-37		80-46-13	
180-00-35		270-14-16	
90-00-24			
270-00-36			
TC #266			5.51
FS. TP			4.15
207-56-44		90-00-43	1770.60
117-56-44		269-28-39	
27-56-27			
207-56-34			

B.S. #266			4.80
0-00-27	90-02-23		
180-00-34	269-57-06		
90-00-22			
270-00-44			
TR TR			5.15
F.D. #265		4.72	4.32
130-42-24	90-11-44		3814.44
310-42-27	269-48-26		
229-42-26			
49-42-37			

1" I.P. IN HOLE

B.J. TP			2.71
0-00-30	90-52-25		
180-20-46	270-26-54		
90-00-34			
270-00-50			
IP #265			5.70
P.I. #264		12.25	11.03
192-25-01	89-51-45		5166.04
12-25-24	270-02-54		
282-25-14			
102-25-25			

FD. CHISEL X IN NOE
W/S-TACKLEE3

3.3. #266		12.25
0-00-48	90-00-49	
180-00-43	269-58-50	
90-00-30		
270-00-23		
RC #264		5.58
FS. #282		4.22
89-47-13	90-16-02	5330.36
269-42-14	269-43-19	
179-46-51		
359-46-52		

B.L.

	Pack		
B.C. # 764			4.95
0-00-32		89-46-12	
180-00-45		270-13-04	
90-00-21			
270-00-34			
T.C. # 292			5.26
F.S. # 312			8.25
180-14-04		90-59-21	5287.62
0-14-10		270-59-46	
270-13-54			
90-14-00			

FD 1½" I.P. 96.5 S/O EP ON HWY @ ℄ 12.0 W/O DITCH BANK

BS. #202		4.65
0-00-33	90-01-34	
180-00-40	260-57-41	
90-00-30		
270-00-37		
TP #302		5.50
FS. #301		4.23
270-56-19	90-04-21	513.60'
90-56-25	260-52-58	
0-56-15		
180-56-17		

SET PK + 25' N. OF E OF
HWY. 85' + = E JACKRABBIT TR.

	Prof		
B.S. #302			5.10
0-00-16		80-55-18	
180-00-18		270-03-32	
90-00-24			
270-00-37			
TR #301			5.30
F.S. #300			4.65
178-36-34		90-04-40	527.32
358-36-47		269-52-45	
268-36-25			
88-36-58			

Set PK ±22' S of C
Hwy 85 + ± C of Tomlinson Rd.

B.S. #201		4.35
0-00-36	89-56-36	
180-00-36	270-03-08	
90-00-31		
270-00-40		
TE #300		5.27
F.S. #200		1.42
181-18-24	90-04-55	8068.56
1-18-28	269-54-21	
271-18-05		
91-18-24		

B.J. #300		4.22	
0-00-19	80-38-47		
180-00-18	200-00-47		
90-00-29			
200-00-47			
T C #200		5.24	
F.S. #225		4.61	
260-16-12	80-38-41	5260.45	FD C. WELL
80-16-23	200-20-52		
350-16-31			
170-16-47			

B.S. #200		4.37
0-00-37	90-23-10	
180-00-45	269-36-10	
90-00-32		
270-00-43		
TP #228		5.20
FD. #240	5.20	4.56
170-49-09	89-32-15	5311.18
359-49-12	270-27-20	
260-49-03		
80-49-08		

FD. I.P. IN HOLE

Vis. Good

B.S. # 270		4.56
0-00-35	90-29-08	
180-00-43	269-30-07	
90-00-39		
270-00-30		
TC 260		5.92
F.S. #242		491-482
120-44-50	89-29-44	5303.34
350-45-02	270-30-73	
269-45-04		
89-45-13		

FD. B.C. in H/H

B.S. #200		5.32
0-00-37	90-32-37	
180-00-44	269-26-33	
90-00-32		
270-00-41		
I.C. #247		6.12
F.S. #224		12.00
180-40-43	80-24-30	5202.30
0-40-53	220-34-42	
270-40-41		
90-40-40		

FD. SCREW

B.S. #242			12.00
0-00-41	90-22-55		
180-01-01	260-31-11		
90-00-19			
270-00-25			
TC #224			6.23
FS #226		4.52	4.26
269-50-24	90-15-00		7773.95
89-50-31	269-44-00		
359-40-43			
179-40-57			

FD. 226A2 IN HOLE

FAR		
B.O. #224		4.60
0-00-36	89-46-17	
180-00-36	270-12-48	
90-00-04		
270-00-12		
TR #226		5.61
FD. #208		4.23
89-46-48	89-36-03	5207.43
269-46-50	270-23-13	
179-46-22		
359-46-22		

SET REBAR
± 18' S. OF ARROW SIGNAL ±
± 9' W. " " "

B.S. #226		5.01
0-00-17	90-25-07	
180-00-26	269-34-14	
90-00-30		
270-00-38		
TR #208		5.00
FD. #200		4.75
270-13-29	90-00-17	5000.00
90-13-34	269-50-10	
0-13-41		
180-13-46		

B.S. #208		3.09
0-00-40	80-52-36	
180-00-57	260-00-36	
90-00-34		
270-00-43		
T.C. #209		5.83
E.S. #210		
170-58-37		
350-58-50		
260-58-13		
80-58-28		

Pool

B.S. #212

0-00-33

180-00-40

90-00-38

270-00-35

TC #211 5.56

F.S. #200 12.00 11.52

80-56-56 90-13-02 5286.54

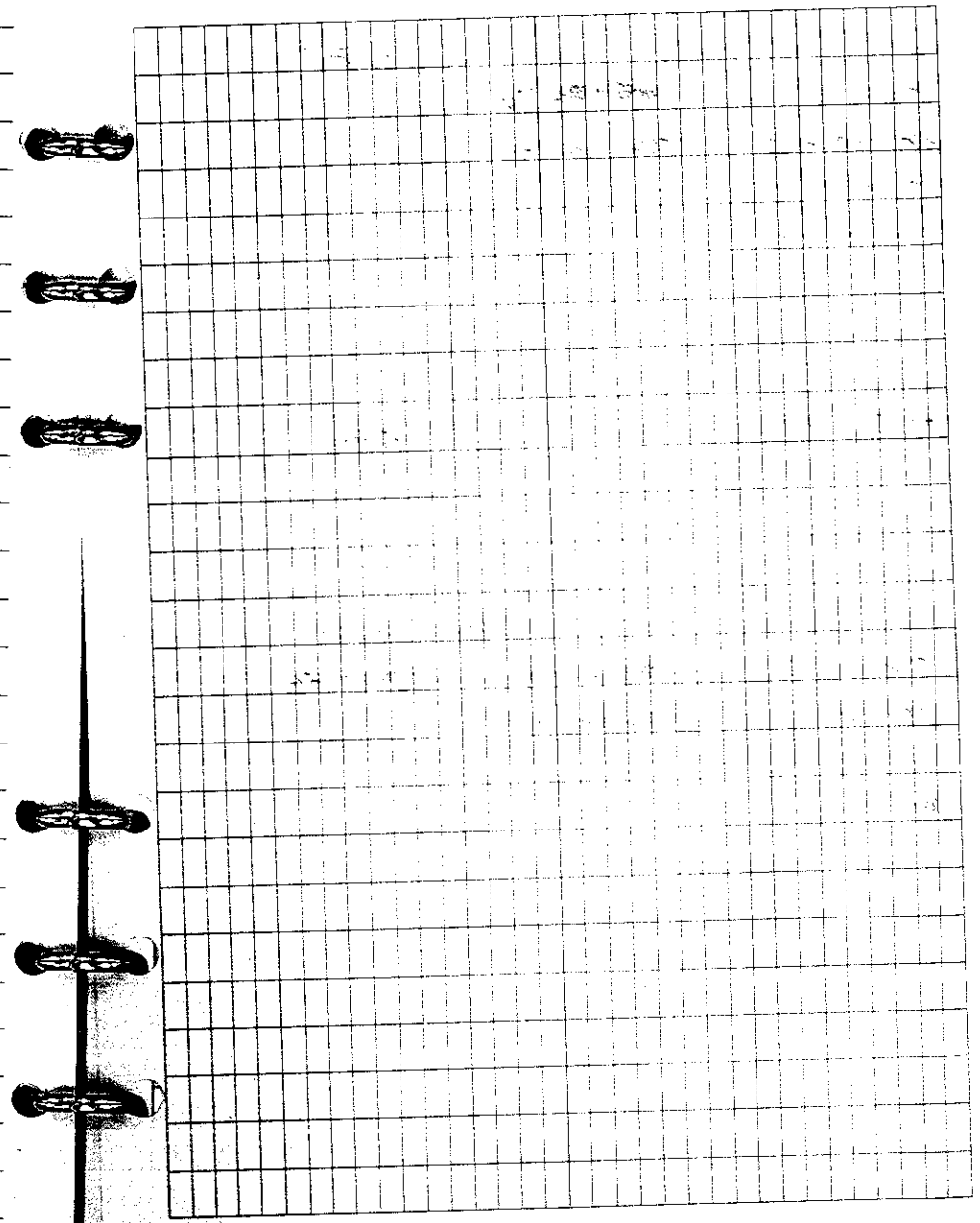
260-56-56 270-46-14

179-56-59

359-52-01

B.C 1+41 H/H

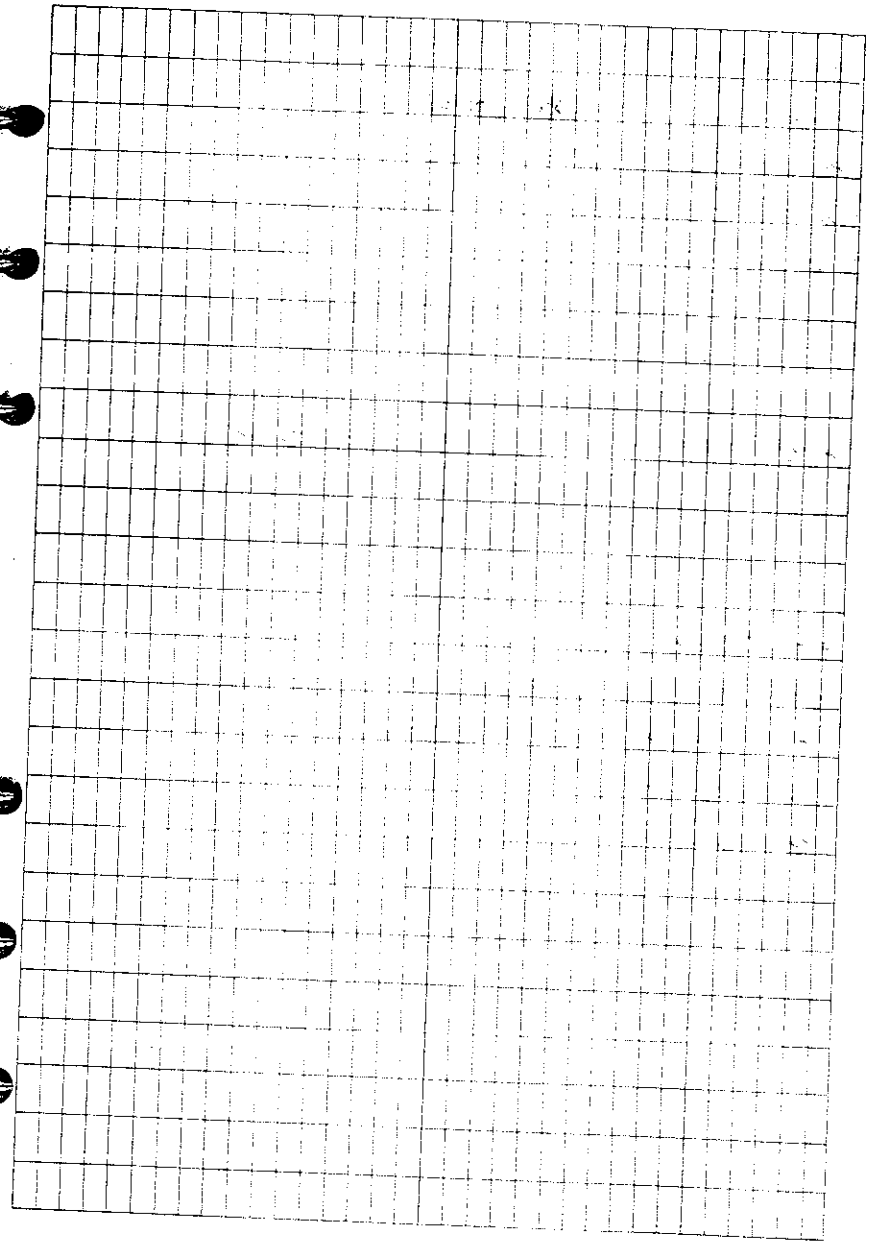
D.S. #21			4.85
0-00-21	89-44-25		
180-00-36	270-14-35		
90-00-24			
270-00-18			
XC #220			5.80
FD #228		4.76	4.30
270-15-32	80-58-27		5220.85
90-15-36	270-00-58		
0-15-24			
180-15-31			



	6.000		
B.S. +220			5.10
0-02-23	90-03-01		
180-02-42	269-56-00		
90-02-33			
270-02-55			
℄ Q +228			5.80
F.S. +227		4.90	4.42
179-10-32	89-53-37		5200.56
359-10-50	270-05-30		
269-10-43			
89-10-56			

FD 1" IP in M.H.

D.S. #228		5.13
0-00-32	90-02-51	
180-00-45	270-57-13	
90-00-34		
270-00-40		
RR #227		5.80
E.S. #226		4.67
180-07-06	90-52-37	5280.39
0-07-06	270-07-06	
270-06-52		
90-07-06		



BS. #27		5.20
0-00-30	90-11-52	
180-00-33	270-47-13	
90-00-09		
270-00-13		
XC #26		5.62
FS #24		
180-06-39		
0-06-50		
270-06-18		
90-06-20		

B.S. #200

0-00-35

180-00-46

90-00-35

270-00-43

T.P. #202 5.84

F.S. #203 4.82 4.30

221-18-24 90-41-07 53/2.12

91-18-34 269-42-53

1-18-22

181-18-34

B.G. Lvl H/H

B.S. #247			5.18
0-00-30	80-40-50		
180-00-52	270-09-05		
90-00-14			
270-00-58			
FS #245			5.85
F.S. #244		4.85	4.30
179-23-33	90-18-40	2425.33	
359-23-45	269-18-10		
269-23-42			
89-23-40			

B.C. 1m HA

BS. #243			5.26
0-00-35	80-50-45		
180-00-46	270-08-00		
90-00-27			
270-00-45			
TC #244			5.78
FS. #245		4.87	4.25
170-44-20	90-08-00		5285.54
350-44-30	260-50-57		
260-44-21			
80-44-35			

REBAR in 24/41

B.S. #244		5.22
0-00-32	80-53-06	
180-00-44	270-05-57	
90-00-28		
270-00-32		
T.P. #245		5.90
F.S. #246		4.33
180-05-05	90-10-14	5280.97
0-05-14	269-48-30	
270-04-54		
90-05-03		

FD. PK

B.S. #245			5.20
0-00-32	90-5-00		
180-00-37	270-07-50		
90-00-33			
270-00-30			
T.C #246			5.30
E.S #247		12.25	11.72
180-02-58	90-58-28		5285.00
0-03-13	270-00-25		
270-03-04			
90-03-16			

I.D. IN HOLE

D.J. #246		12.00
0-00-31	89-53-07	
180-00-43	270-05-03	
90-00-38		
270-00-45		
TC #247		5.93
P.O.T.P.		AJL
180-20-51	80-42-21	2213.63
0-30-10	270-18-34	
270-30-04		
90-30-15		

B.S. #247		5.15
0-00-25	90-22-59	
180-00-47	269-36-49	
90-00-52		
270-01-02		
TC TP		520
F.S. #428		5.01
178-53-11	90-17-01	3078.90
358-53-22	269-42-06	
268-53-33		
88-53-42		

D.S. TP. 2.20

0-00-16 89-46-48

180-00-30 270-12-21

90-00-45

270-01-02

T.P. #28 5.08

F.S. #29

90-25-43

270-25-55

180-26-02

0-26-27

B.S. #282				
0-00-24				
180-00-46				
90-00-17				
270-02-46				
TP #264			5462	
FS. #263		4.26	4.26	
90-21-43	89-56-12		5410.02	
270-21-56	270-02-56			
180-21-46				
0-22-03				

FD. #262 IN H/H

BS #264			1.80
0-00-42	90-05-47		
180-00-59	269-53-23		
90-00-36			
270-00-45			
TC #263			5.80
FS #262		4.70	4.20
179-58-52	89-56-18		5282.82
359-59-13	270-02-46		
269-58-50			
89-58-34			

FD. TEDAZ IN 4/4

BS. #263			5.08
0-00-31	20-06-53		
180-00-30	260-52-15		
90-00-45			
270-00-54			
XC #262			5.85
FS #270		8.00	7.20
115-06-03	90-20-05		5825.40
205-06-24	260-38-48		
205-06-15			
25-06-38			
FS #260			4.85
180-33-46	80-54-14		1194.68
0-33-53	270-04-45		
270-33-57			
90-34-02			

FD. REBAR IN LOCK

B.S. #202		5.16
0-00-39	90-08-04	
180-01-05	260-51-11	
20-00-38		
200-00-39		
TR #260		5.93
FS #278		
80-15-54		
260-16-15		
120-15-36		
350-16-00		

BS #264

0-00-43

180-00-45

90-00-17

270-00-27

TC #282 5.30

FS #281 4.26

270-51-42 90-02-23 5283.71

90-51-56 260-56-45

0-51-20

180-51-28

FD. 1" I.P.

B.S. #282		4.58
0-00-25	80-59-12	
180-00-34	260-59-00	
90-00-27		
270-00-30		
I.C. #281		5.32
F.S. T.P.		4.25
150-01-40	90-02-30	1809.45
330-01-51	260-51-31	
249-01-37		
69-01-48		

B.S. #281		4.66
0-00-34	80-55-46	
180-00-43	270-03-05	
90-00-26		
270-00-29		
TC T.P.		5.25
E3 279		5.03
200-42-25	89-37-55	2065.71
110-42-34	270-21-01	
20-42-11		
200-42-46		

BS T.P.		2.75
0-02-46	90-26-02	
180-01-04	269-33-06	
90-02-32		
270-00-38		
FS 279		6.02
FS. #262		5.08
204-57-58	89-33-51	
24-52-06	270-19-26	
294-51-32		
114-51-34		

B.S. #209

0-00-25

180-00-20

90-00-25

270-00-18

T.P. #208 5.12

F.S. T.P. 12.25

176-37-52 80-31-31 2501.90

356-38-02 270-22-18

266-37-50

86-38-12

USE B.M. (TR-20-4)

BS #208		12.05	
0-00-00	90-00-06		
180-00-16	270-00-20		
90-00-39			
270-00-58			
TC TP (USE OC)		4.00	
FS #206		12.25	SET IN OLD 2X2
185-13-27	80-30-27	5258.75	
5-13-34	270-28-44		
205-11-10			
95-14-15			
FS #207		7.50 - 4.75	FD SET STAKE
281-05-20	91-06-16	150.63	
101-05-41	268-53-11		
11-05-45			
191-05-40			

BS. TP (USCE BC)		12.05
0-00-23	90-21-04	
180-00-19	270-38-13	
90-00-19		
270-00-17		
TC # 216		5.08
FS. TP (ECC TO 205)		12.25
120-25-40	90-07-33	1322.22
350-25-33	270-51-48	
260-25-31		
80-25-36		

VISABILITY TO BS
VERY VERY POOR
DUE TO RUSH

SET SPIKE

B.S. #206		12.05
0-00-26	90-17-02	
180-00-25	269-42-32	
90-00-17		
270-01-24		
AC T.P. (ECC TO #205)		5.10
F.S. TP		4.93
265-16-18	88-45-55	6394.40
85-16-15	271-13-36	
355-16-04		
175-16-12		
F.S. #205		5.02
304-22-28	90-00-00	13.05 LEVEL
124-22-26	270-00-00	
35-22-17		
214-22-38		

SET SPIKE

GIVE

BS. TP (EQ TO #205)		2.60
0-00-32	91-16-06	
180-00-39	269-43-05	
90-00-23		
270-00-33		
AC TP (EQ TO #190)		5.33
FS. #190		1.40
301-03-39	92-22-11	270.34
121-03-42	267-37-00	
31-03-31		
211-03-36		
FS. #189		1.24
10-35-31	94-07-04	888.80
190-35-37	265-52-08	
100-35-27		
280-35-29		

FD. SPIKE

FD. REBAR

B.S. TP (CCC TO "199)		2.70
0-00-28	81-41-53	
180-00-38	272-17-25	
90-00-30		
270-00-40		
TC #190		5.30
F.S. TP		4.26
160-54-10	90-16-54	8070.21
340-54-13	269-42-10	
250-54-12		
70-54-14		

FD 2" IP AT END OF PUMP LINE
120

BS #190		2.78
0-00-38	80-45-40	
180-00-48	270-13-22	
90-00-13		
270-00-11		
TC T.P. (2" IP)		5.27
F.S. T.P. (PREVIOUS)		4.76
180-40-03	90-15-07	5162.05
0-40-12	269-44-08	
270-39-25		
90-39-31		

BC. IN M.H. AT ℄ INT OF MC DOWELL ℄ JACK RABBITT TC.
THIS TP APPEARS PREVIOUSLY BETWEEN # 209 AND #176

B.S. T.P.	(2" I.P.)	1.00
0-00-00	90-51-03	
180-00-08	270-08-13	
90-00-34		
270-00-41		
T.C. T.P.	(PREVIOUS)	5.85

I.C. in H.H. & McDowell & Tacheabbitt T.C.

F.I. #209

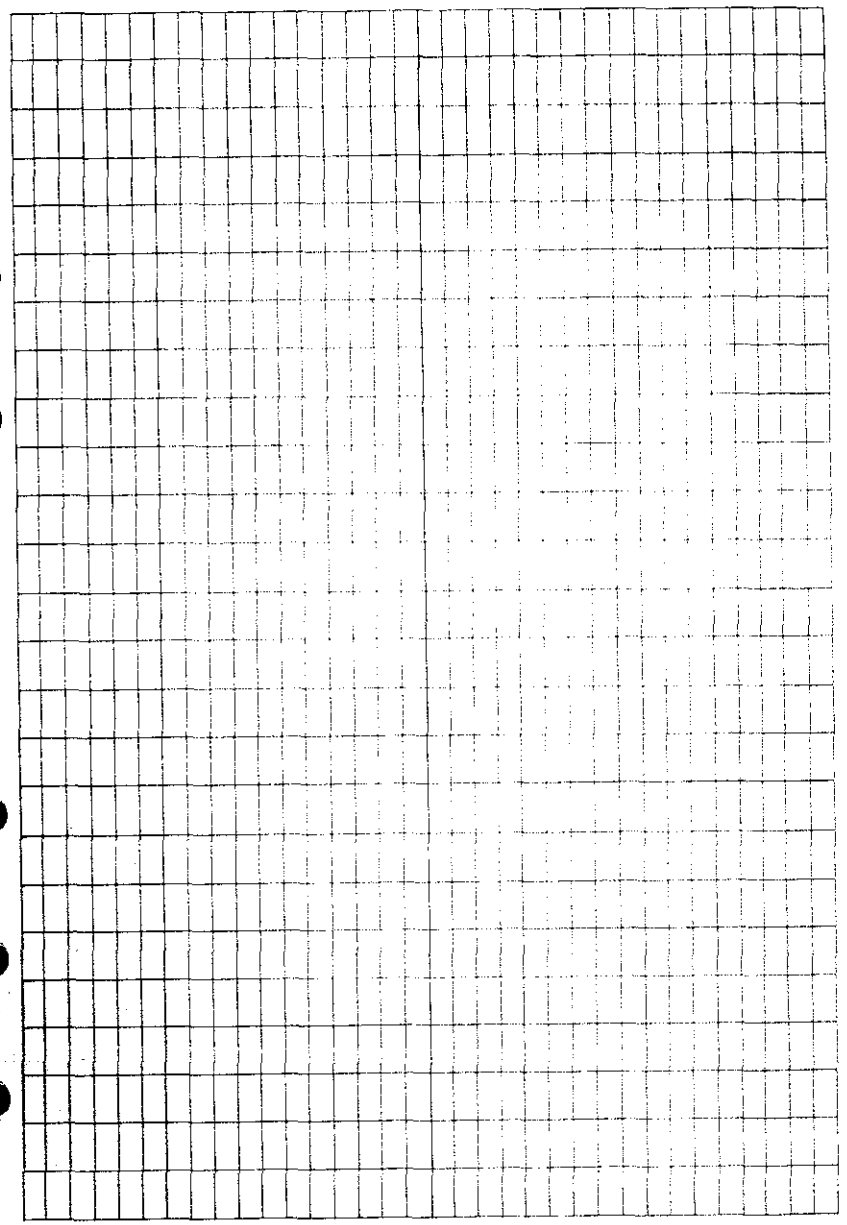
209-52-01

90-51-51

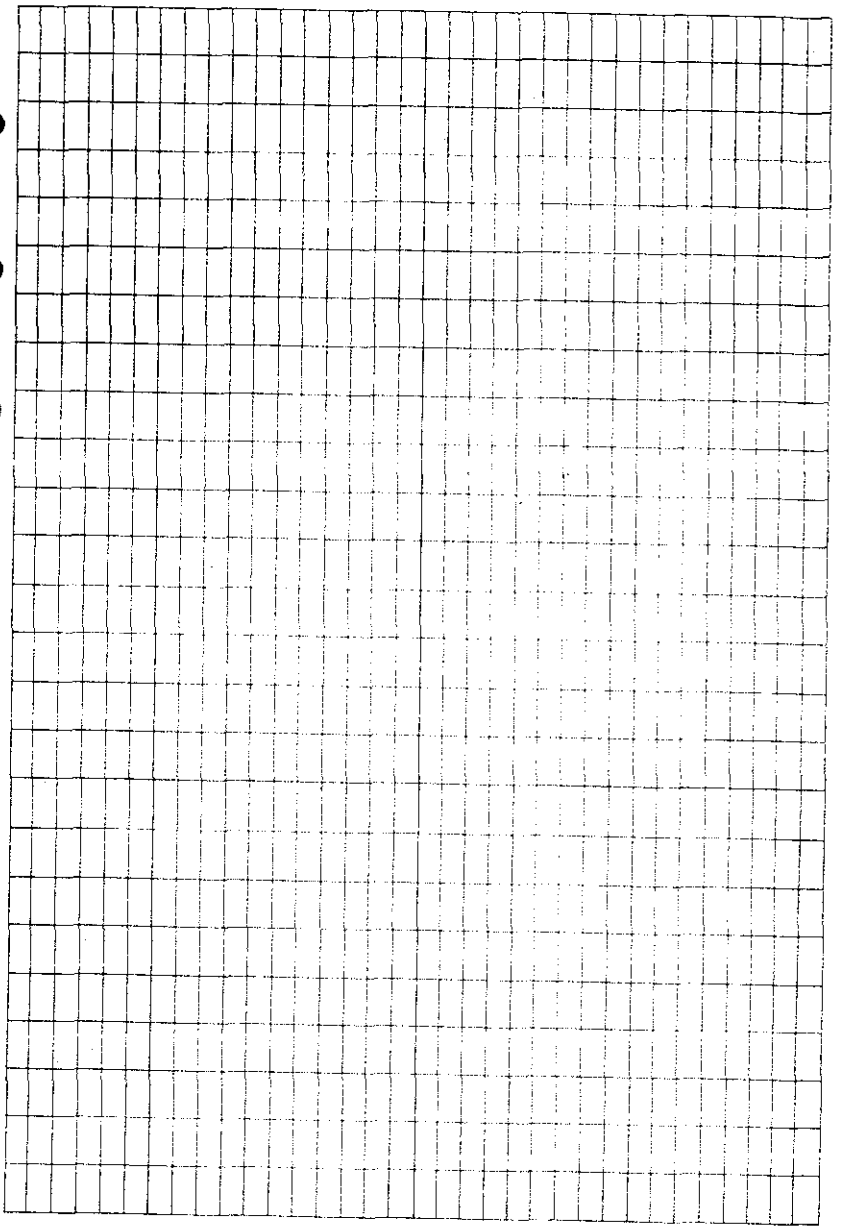
309-52-13

170-52-19

B.S. #60		
0-00-30		
180-00-41		
90-00-43		
270-00-36		
T.C. #73		5.76
F.S. #TP (ECC. #74)		4.90
90-40-17	90-11-23	2693.33
270-40-20	260-47-53	
180-40-28		
0-40-36		



DD #33		4.67
0-00-16	89-30-22	
180-00-23	270-08-30	
90-00-46		
270-00-45		
TC TP. (ECL #24)		5.25
ED. #24		
30-13-14		51.35
210-13-23		
120-13-42		
300-14-04		
ED. #326		11.70
128-51-46	89-47-00	1897.93
358-55-02	270-12-18	
268-55-16		
88-55-22		



FS. I.P (ext. #88) 4.75

260-12-55 90-11-57 5000.20

90-13-01 260-47-18

350-13-10

170-13-32

B.S. (Ecc. #274)		4.07
0-00-17	89-10-47	
180-00-13	270-09-38	
90-00-31		
270-00-33		
TC (Ecc. #88)		5.32
FS #102		4.80
180-19-41	89-57-13	5535.88
0-19-11	270-01-33	
270-19-26		
90-19-28		
FS #88		6.17
109-04-13	89-52-11	116.04
90-04-18	270-02-13	
289-04-25		
109-04-24		

- 0.60

E.S. EQC TO #99		2.60
0-00-24	90-04-45	
180-00-29	270-54-45	
90-00-57		
270-00-58		
EQC #102		5.47
E.S. #101		
270-17-56		
90-18-04		
0-18-35		
180-18-42		

STA	+	HI.	−	EL
TBM #74				
	3.63			
ECC TO #74			3.64	
	3.30			
TBM #74			3.31	
		//		
TBM #74				
	5.90			
PP. # 326			5.22	
	4.84			
TBM #74			5.49	
		//		
ECC TO #74				
	4.58			
PP#74			4.92	
	4.64			
ECC TO #74			4.20	

CUTTING	SHIMS	W/S	P.P.

TBM					
	3.17				
TP			6.25		
	4.02				
TP			6.70		
	3.85				
T.P.			6.92		
	2.77				
T.P.			5.67		
	3.05				
TP			6.75		
	3.55				
#88			5.09		
	6.00				
TP			3.15		
	5.75				
T.P.			2.95		
	6.30				
TP			3.45		
	5.95				
TP			3.17		
	6.02				
TP			2.95		
	5.85				
TBM			3.20		

CLOSES 0.05

EQC TO #74

EQC TO #74

BC. #140		5.00
0-00-45	91-40-32	1422.61
180-00-47	268-18-43	
90-00-25		
270-00-29		
TC Δ LITCHFIELD		4.75
FS #124		4.01
273-32-13	90-31-28	5155.19
93-32-18	269-27-45	
3-31-54		
183-32-00		

41.96

47.27

T@ #140		6.18
F.S. @ LITCHFIELD		4.44
	88. 22-33	
	271-36-48	
T@ #124		5.36
F.S. @ LITCHFIELD		4.44
	89. 29-15	
	270-30-05	

+ 44.97

+ 47.09

BM				
	4.02			
TP			4.66	
	6.82			
TP			3.56	
	7.05			
#96			4.58	
	4.45			
TP			6.97	
	3.40			
TP			6.67	
	4.52			
BM			3.09	

THIS RUN INTO #124

#140		
	+41.97	
Δ LITCHFIELD		
	-47.27	
#124		
	+ 47.09	
Δ LITCHFIELD		
#140	-41.96	
	CLOSES 0.17	

#85

USE OF LOCAL MEANS ON AVERAGE GROUND

#95

	T3M	R2M1
1/10	DIRT	NOTHING
2/9 12	PAINT	NOTHING
3/10 11	DIRT	NOTHING
10/15 11/14	PAINT	D/C W/ H/H
11/14 12/13	PAINT	H/H LID STUCK
12/13	PAINT	HAS ROCK IN IT
13/24	PAINT	NOTHING
14/23 13/24	PAINT	NOTHING
15/22 14/23	DIRT	NOTHING
16/21 15/22	DIRT	"
21/28 22/27	DIRT	"
22/27 23/26	DIRT	NOTHING

23 24	PLANT.	W/H FILLED W/
26 25		
24	PLANT.	FILLED W/ HOLE
25		OF W
25	PLANT.	FILLED W/ HOLE
36		W/3 STRADDLERS
26 27	PLANT.	B/C W/ W/H.
35 36		
27 26	PLANT.	PL+SHIMER W/
34 35		FILLED W/ HOLE
28 29	PLANT.	1" I/P W/ W/H
33 34		
29 28	PLANT.	REBAR W/ W/H
32 33		
30 31	PLANT.	REBAR W/ W/H
31 32		
33 34	PLANT.	2 FILLED W/ HOLES
		ONE W/ STRADDLERS
34 35	PLANT.	FILLED W/ HOLE
35 36	PLANT.	FILLED W/ W/H
36	PLANT.	IRON PIN W/ HOLE

T 3N R 1 W

6 / 5 / 7 / 8	PLANT	B/C IN H/H
5 / 4 / 8 / 9	DIRT	NOTHING
8 / 9 / 17	PLANT	FILLED IN HOLE
7 / 8 / 16 / 17	PLANT	FILLED IN HOLE
18 / 17 / 19 / 20	PLANT	FILLED IN HOLE
17 / 20	PLANT	3 HOLES ONE H/H CAMP + STRADDLER
20 / 29	PLANT	2" I/P IN HOLE
19 / 20 / 28 / 29	PLANT	H/H STAKE
29 / 32	PLANT	B/C IN H/H
29 / 32	PLANT	NOTHING
5 / 32	PLANT	B/C IN H/H

32	PVMT	B/C in H/H
	T2W. R1W.	
6 5 / 7 8	DIRT	NOTHING
	T2W. R2W.	
1 / 12	PVMT.	IRON PIN
2 1 / 11 12	PVMT.	FILLED in H/H
3 2 / 10 11	PVMT	CEDAR in HOLE
4 3 / 9 14	PVMT.	CAP in HOLE
9 10 / 16 15	DIRT	NOTHING ?
10 11 / 15 14	PVMT.	2" I/P in HOLE
11 12 / 14 13	PVMT.	B/C in H/H
12 / 13	PVMT.	IRON PIN in H/H

T3N. R1W

3/12 / 10/11	PLANT	B/C IN H/H
4/5 / 9/10	PLANT	NOTHING
9/10 / 14/15	PLANT	FLUSH B/C
10/11 / 15/14	PLANT	FILLED IN HOLE W/ SPACERS
11/12 / 14/13	PLANT	B/C IN H/H
14/13 / 23/24	PLANT	B/C IN H/H
15/14 / 22/23	PLANT	B/C IN H/H
16/15 / 21/22	PLANT	REBAR IN HOLE
21/22 / 28/27	PLANT	REBAR IN HOLE
22/23 / 27/26	PLANT	B/C IN H/H
25/24 / 26/25	PLANT	B/C IN H/H
26/25 / 35/36	PLANT	B/C IN H/H