A TEAM PROFESSIONAL ASSOCIATES, INC.

SURVEY REPORT MANUAL FOR POWERLINE & VINEYARD FRS SUBSIDENCE SURVEYS 2008

CONTRACT FCD: 2006C016

TASK ORDER: 10

SITUATED IN OR NEAR
SECTIONS 5, 8, 9, 16, 21, 22, 27 & 34, TOWNSHIP 1 SOUTH, RANGE 8 EAST,
SECTIONS 2 & 3, TOWNSHIP 2 SOUTH, RANGE 8 EAST,
MARICOPA COUNTY, ARIZONA.

PREPARED FOR FLOOD CONTROL DISTRICT OF MARICOPA COUNTY.

OCTOBER , 2008

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EACH ORGANIZED AS FOLLOWS

- GPS LOG SHEETS
- SUPPORTING PHOTOGRAPHS

SECTION 1

SURVEYORS SUMMARY/CERTIFICATION

SURVEYORS SUMMARY AND CERTIFICATION

INTRODUCTION

The purpose of the survey work discussed in this report is to provide values for control monuments established on and over areas described as the Powerline and Vineyard Dams. These values are to be used to detect and monitor any horizontal or vertical movement of the dam within the study area.

The work performed in this survey has also been performed in the past. The work performed in June of 2007, June of 2006 and by the consulting firm Entranco will serve as the basis for detecting and monitoring any horizontal or vertical movement of the dam within the study area.

BACKGROUND

A Team met with Flood Control District of Maricopa County (FCDMC) in September of 2005 to discuss the needs of FCDMC regarding its levee and Flood Retarding Structure (FRS) monitoring program. Entranco had been performing the monitoring in the past, but due to company restructuring and the closing of their offices in Phoenix they would no longer be able to conduct the monitoring. In May of 2006 A Team was commissioned by FCDMC to perform the monitoring of the Powerline Vineyard and Rittenhouse FRS in Pinal County. A Team gathered information through meetings and discussions with FCDMC regarding its requirements and needs of the current monitoring program. A Team was able to derive an adequate idea of how the surveys had been conducted by Entranco up to this point. A Team then developed the process it would follow to perform the monitoring of these structures.

A Team was instructed to survey all 12 rock bolts (threaded GPS/Optical monuments) on Powerline FRS, all subsidence caps or other existing survey monumentation on Powerline FRS between Station 110+00 and 120+00, and all 7 rock bolts (threaded GPS/Optical monuments) on Vineyard Road FRS.

PROJECT WORK SUMMARY

1. PRIMARY NETWORK

A Team assessed and located existing control in the area of the Powerline and Vineyard Dams in order to build a highly accurate and precise GPS control network. The purpose for this GPS network is to serve as a basis for future subsidence monitoring along and around the Powerline and Vineyard Dams area.

2. SECONDARY NETWORK

The four United States Department of Agriculture (USDA) brass caps, one GPS monument and the nineteen rock bolts were then located and tied using static GPS observations with the primary GPS control network. These points were required to meet an accuracy of 5 mm horizontal and 20 mm vertical by FCDMC.

3. DIGITAL LEVEL MEASUREMENTS

Digital level loops were run to measure the elevations of the four USDA brass caps, one GPS monument and the nineteen rock bolts. A report was developed showing the differences of the GPS Secondary Network of September 2008 derived values and those derived by the Digital Level Loop to check the performance of the GPS derived orthometric hieghts.

DISCUSSION

While the use of GPS to determine accurate elevations is becoming more widespread, subsiding areas present unique concerns.

Subsidence is not a phenomenon that lends itself to prediction (of annual rates, for example), except in an average sense, since it is a function of several variables that vary from year to year and even from season to season.

Subsidence is not uniform over even relatively small areas. Differential subsidence (the amount a particular area subsides with respect to a neighboring area) can occur over points separated by as little as a mile, and perhaps less. For this reason, subsidence can only be monitored accurately if it is related to areas of stability, and this is where GPS technology is of particular benefit.

Prior to the mid-1990s the generally accepted method of measuring and monitoring subsidence was by conventional leveling techniques (CLT). These techniques were extremely labor-intensive and costly. Because of the differential

nature of subsidence a denser network of leveling was required, driving the cost up higher yet.

A complicating factor in the use of GPS is that the coordinates obtained, both horizontal and vertical, are related to a mathematical surface, expressed in Cartesian (x, y, and z) coordinates. These coordinates then need to be converted to the geodetic system.

In North America the geodetic system is composed of two parts; the horizontal part is the North American Datum of 1983 (NAD83) and the vertical part is the North American Vertical Datum of 1988 (NAVD88). It is a relatively straightforward process to translate the GPS-derived Cartesian coordinates into the NAD83 and NAVD88 geodetic coordinates.

The accuracy of this translation depends on the physical stability of the points being measured. Subsiding areas present unique problems that make accurate coordinate conversion problematic. To overcome these problems it is necessary to perform simultaneous GPS observations in the subsiding area and stations with known NAVD88 elevations in non-subsiding (stable) areas. This was accomplished in this network with the use of controlling monuments being located in bedrock.

The use of GPS eliminates the need for significantly more expensive and labor-intensive terrestrial leveling techniques.

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

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

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

SURVEY REPORT AND SUMMARY

1) PRIMARY NETWORK REPORT

Great care was taken in preparing a Global Positioning Systems (GPS) Network of the various horizontal and vertical control stations available in the immediate and outer surrounding area of the Powerline and Vineyard Dams. The first priority was to find control in the area of the Powerline and Vineyard Dams located in bedrock to provide the needed stability for future monitoring activities. A search of the National Geodetic Survey's control point data base was performed. This search produced very good results, several points in bedrock and having a horizontal classification of "A" order, an ellipsoid classification of first – class 1order. A total of eleven control points were chosen to be included in the network. The following is a summary of the control found and utilized in the Primary Control Network.

STATION NAME	HORIZ. ORDER	VERTICAL ORDER	ELLIPS. ORDER	HORIZ. STATUS	ELLIPS. STATUS	VERTICAL STATUS
1AO1	B	K	3RD 2	CHECK	CHECK	CHECK
2AQ2	**B**	**K**	**3RD 2**	**FIXED**	**FIXED**	**CHECK**
2BP2	B	K	3RD 2	CHECK	CHECK	CHECK
2CO1	B	K	3RD 2	CHECK	CHECK	CHECK
2CQ2	B	K	3RD 2	CHECK	CHECK	CHECK
A 365	**A**	**1ST 1**	**3RD 1**	**FIXED**	**FIXED**	**CHECK**
DONEY	2ND	K		CHECK	CHECK	CHECK
G 474	**B**	**1ST 2**	**1ST 1**	**CHECK**	**CHECK**	**CHECK**
L 521	**A**	**1ST 2**	**1ST 1**	**FIXED**	**FIXED**	**CHECK**
HILL	2ND	K		CHECK	CHECK	CHECK
POSTEN	**A**	**1ST 2**	**3RD 1**	**FIXED**	**FIXED**	**CHECK**

Stations in red type are monuments located in bedrock.

Note: The fields left blank have no published control order value for that coordinate component. Control point A 365 and G 474 the orthometric height was determined by differential leveling and adjusted by the National Geodetic Survey in June 1991. Control point L 521 the orthometric height was determined by differential leveling and adjusted by the National Geodetic Survey in August 1994. Control point Posten the orthometric height was determined by differential leveling and adjusted by the National Geodetic Survey in November 1993. No vertical observational checks were made to these stations. This is a POSTED BENCH MARK height. The vertical designation of "K" designates an orthometric height was

determined by GPS observations and a high-resolution geoid model using precise GPS observation and processing techniques.

A GPS observation schedule was then made to ensure strong geometric figures and redundant measurements. The observation schedule for both the primary and secondary networks can be found in **Section 2.1.4** of this survey report manual. A Team occupied each point for a minimum of 240 minutes simultaneously. The survey was performed using "Trimble 4000SSE", "Trimble 5700" and "Trimble 5800 R8" GPS receivers. Field data was collected using the "Fast Static Survey" system. Data collection was collected at a rate of 15 seconds with the elevation mask at 10°. Data was downloaded into TRIMBLE GEOMATICS OFFICE VER. 1.63 BUILD 10 software (TGO). The data was processed with the elevation mask of 13° and evaluated for QA/QC with the TGO software.

The GPS baselines were then adjusted with TGO. The points used to constrain the primary network were 2AQ2, A365, L 521 and POSTEN. All points are in bedrock. The network was adjusted and constrained in geographic coordinates with ellipsoid heights. The network adjustment produced good results. The +/- 5 mm horizontal and +/- 20 mm vertical requirement at 95% confidence were achieved. See **Section 2.2.2** Primary Network Adjustment Report: "Adjusted Geodetic Coordinates", "Point Error Ellipses", and "Covariant Terms" section for more details on positional errors.

Upon completion of the adjustment the projection for Arizona Central Zone (0202) was applied to the geographic coordinates to generate the NAD83(1992) State Plane Coordinates for this project. These coordinate values are located in **Section 2.1.1.** of this survey report manual. The control points were then compared to the values for survey performed by Entranco, and in June of 2006 and June of 2007 by A Team. The results of these comparisons can be found in **Section 2.1.2** of this survey report manual.

The unconstrained NGS control points were then compared to their published values for quality control purposes. The results of this comparison can be found in **Section 2.1.3** of this survey report manual.

Upon completion of the adjustment a vertical adjustment was applied to generate the NAVD88 elevations for this project. The vertical adjustment consisted of a geoid (GEOID99) with an inclined plane, for more information see the coordinate system details below.

Coordinate System

COORDINATE SYSTEM	: GDACS NAD83 ZONE 0202
ZONE	: ZONE FROM DATA COLLECTOR
DATUM	: (WGS 84)
ELLIPSOID NAME	: (WGS 84)
GEOID MODEL	: GEOID99 (CONUS)
SITE	: GDACS METERS NAD 83 AZ SPC

ELLIPSOID

ELLIPSOID NAME	: (WGS 84)		
FLATTENING 1/F	: 298.257		
SEMI MAJOR AXIS	: 6378137.000M		
DATUM TRANSFORMATION	: THREE PARAMETER		
WGS84 TO (WGS 84)			
TRANSLATION X	: 0.000M	ROTATION X	: N/A
TRANSLATION Y	: 0.000M	ROTATION Y	: N/A
TRANSLATION Z	: 0.000M	ROTATION Z	: N/A
SCALE FACTOR	: N/A PPM		

TRANSVERSE MERCATOR PROJECTION

PROJECTION ORIGIN			FALSE ORIGIN	
LATITUDE	: 31°00'00.00000"N	FALSE	NORTHING	: 0.000M
LONGITUDE	: 111°55'00.00000"W	FALSE	EASTING	: 213360.000M
HEIGHT	: N/A	FALSE	ELEVATION	: N/A
SCALE FACTOR	: 0.99990000			

LOCAL SITE SETTINGS

PROJECT LATITUDE	: ?
PROJECT LONGITUDE	: ?
PROJECT HEIGHT	: 0.000M
GROUND SCALE FACTOR	: N/A
FALSE NORTHING OFFSET	: N/A
FALSE EASTING OFFSET	: N/A

GPS SITE CALIBRATION DETAILS

HORIZONTAL ADJUSTMENT

NORTH ORIGIN	: N/A	TRANSLATION NORTH	: N/A
EAST ORIGIN	: N/A	TRANSLATION EAST	: N/A
SCALE	: N/A	ROTATION	: N/A

VERTICAL ADJUSTMENT	: NONE
NORTH ORIGIN	: N/A
EAST ORIGIN	: N/A
VERTICAL CONSTANT CORRECTION	: N/A
SLOPE NORTH	: N/A
SLOPE EAST	: N/A

NETWORK ADJUSTMENT PARAMETERS

LONGITUDE DEFLECTION	: 0°00'00.047718"
LATITUDE DEFLECTION	: 0°00'00.086485"
AZIMUTH ROTATION	: 0°00'00.051524"
NETWORK SCALE	: 0.99999978

DISTANCE SCALE	: 1.00000000
DISTANCE CONSTANT	: 0.00000000m
HEIGHT CONSTANT	: 0.00000000m

2) SECONDARY NETWORK REPORT

For this survey of the Powerline and Vineyard FRS (September of 2008), A Team tied in the four USDA brass caps, one GPS monument and nineteen rock bolts into the primary network. These points consist of the nineteen rock bolts added in September 2008 and the five monuments existing from previous years. A GPS observation schedule was made to ensure strong geometric figures and redundant measurements. Each point in the secondary network was occupied twice for one hundred and twenty minutes and simultaneously with eleven other GPS receivers on eleven different points. Each point was occupied with control points 1A01, 2AQ2, 2BP2, 2C01, 2CQ2 and G 474 from the primary network as part of the other eleven points occupied simultaneously. The survey was performed using "Trimble 4000SSE", "Trimble 5700" and "Trimble 5800 R8" GPS receivers. Field data was collected using the "Fast Static Survey" system. Data collection was collected at a rate of 15 seconds with the elevation mask at 10°. Data was downloaded into TRIMBLE GEOMATICS OFFICE VER. 1.63 BUILD 10 software. The data was processed with the elevation mask of 13° and evaluated for QA/QC with the TGO software.

The GPS baselines were then adjusted with TRIMBLE GEOMATICS OFFICE VER. 1.63 BUILD 10 software. The points used to constrain the secondary network were 2CQ2, 2AQ2, 2CO1, 2BP2, 1AO1 and G 474. The network was adjusted and constrained in geographic coordinates with ellipsoid heights. The network adjustment produced good results. The +/- 5 mm horizontal and +/- 20 mm vertical requirement at 95% confidence were achieved. See **Section 2.3.2** Secondary Network Adjustment Report: "Adjusted Geodetic Coordinates", "Point Error Ellipses", and "Covariant Terms" section for more details on positional errors.

Upon completion of the adjustment the projection for Arizona Central Zone (0202) was applied to the geographic coordinates to generate the NAD83(1992) State Plane Coordinates for this project. These coordinate Values are located in **Section 2.1.1.** of this survey report manual. The control points were then compared to the values for survey performed by Entranco and in June of 2006, and July of 2007. The results of these comparisons can be found in **Section 2.1.2** of this survey report manual.

Upon completion of the adjustment a vertical adjustment was applied to generate the NAVD88 elevations for this project. The vertical adjustment consisted of a geoid (GEOID99) with an inclined plane, for more information see the coordinate system details above.

3) DIGITAL LEVEL AND VERTICAL CONTROL QC DATA REPORT

This task involved running differential digital level loops known as Conventional Level Techniques (CLT). These loops were run through the secondary network points in the project to determine relational elevation differences between monuments.

Control point 1AO1 was the basis of elevations for the level loops, particularly because of its close proximity to the project and its values are third order class B from the National Geodetic Survey (NGS). A Team believed at the time due to its published values and close proximity to the project that 1AO1 was the best choice as a basis of elevations for the level loops. A Team has chosen to use 1AO1 for the basis of elevations for all optical level measurements performed from this point forward in the monitoring of the Powerline and Vineyard Dams for the above mentioned purposes. An elevation of 1550.661ift, (as determined through Static GPS observation in September of 2008 during A Team's primary network) was used for 1A01.

A report was prepared comparing elevation values determined from the differential levels and the elevations determined by the static GPS observations. This report was used to check and prove the performance of the GPS derived elevations determined from the primary network. This report is located in **Section 3.3** of this report.

SURVEY INSTRUMENTATION AND FIELD PROCEDURES

The equipment utilized for this Vertical Control QC was a Leica NA2002 Digital Level. The specifications of this instrument are as follows:

	NA2002
Accuracy	GPCL2/3 - 0.9mm
Magnification	24x
Distance	GPCL2/3 - 1.8m to 60m (1cm -5cm) tape accuracy
Staff reading	1mm/0.1mm
Measuring time	4s

Leica Geosystems led the digital level innovation with the first patented digital level in 1990. Since then, significant performance improvements assure surveyors and engineers achieve optimum productivity. Digital

image processing permits height and distance information to be recorded electronically avoiding errors caused by manual recording and automating data processing. Field tests have shown that productivity savings of up to 50% can be gained with digital leveling.

The leveling crew utilized an SDR33 Data Collector to store measurements. The SDR33 was further utilized to adjust each individual bench loop upon completion using a "linear adjustment" solution. These "linear" adjustments are shown in **Section 3.2** of this Report. The adjusted elevation values of a completed level loop were the values used to begin the sequential bench loop.

Survey crews took certain measures of standard care and procedures each day and are as follows:

I. The NA2002 was adjusted (pegged) each day before beginning any measurements in order to ensure that there was no more than 1mm of error in the readings in 200 feet as outlined in the operation manual for calibrating and adjusting the NA2002.
II. The NA2002 was configured to measure in a 3-wire mode and the SDR33 to store the mean of the middle wire as well as to record the distance to each backsight and foresight.
III. The same tripod was utilized through every loop. The same leg of the tripod was always faced toward the backsight point throughout each loop.
IV. 60d nails were set at each turning point (unless otherwise noted) and when setting said nail, the nail was driven at a skew such to create a peak point for the level rod to set upon.
V. Each rod had a rod level attached.

When windy conditions were present, the field personnel waited until conditions improved. When light winds were present a bi-pod was used on the level rod and several measurements would be taken to assure an accurate measurement was taken.

OFFICE WORK

The GPS data was down loaded into Trimble Geomatics Ver, 1.63 and reviewed and checked for errors and reliability. The results of the GPS observations were output into reports for review and to assess the data.

OBSERVED DATA POINT REPORT: This report contains the geodetic coordinate data for each observation (Lat, Long, state plane coordinates). It also contains other geodetic data; convergence, grid scale factor, elevation scale factor, and combined scale factor for each of the points.

OBSERVED DATA COMPUTATIONS REPORT: This report contains the computations for performed by A Team to determine the average coordinate values for each point. If a point had more than two observations the calculations are performed in a vertical arrangement in the report. The cells are shaded to show this fact, otherwise they were arranged in a horizontally in the report. This was done to make the report easier to read and track. A comparison of the observations coordinate values is contained in the report.

A TEAM08 - ENTRANCO COMPARISON REPORT: This report contains differences of the Northing, Easting and Elevation values between the A Team 2008 and the Entranco 2004 values. The formula utilized to determine the difference is (A Team value) – (Entranco value). This format was chosen to be used as a negative value (-) would indicate change in the negative direction of that field and a positive value would indicate change in the positive direction of that field.

A TEAM08 – A TEAM06 COMPARISON REPORT: This report contains differences of the Northing, Easting and Elevation values between the A Team 2008 and the A TEAM 2006 values. The formula utilized to determine the difference is (A Team 2008 value) – (A TEAM 2007 value). This format was chosen to be used as a negative value (-) would indicate change in the negative direction of that field and a positive value would indicate change in the positive direction of that field.

A TEAM08 – A TEAM07 COMPARISON REPORT: This report contains differences of the Northing, Easting and Elevation values between the A Team 2008 and the A TEAM 2007 values. The formula utilized to determine the difference is (A Team 2008 value) – (A TEAM 2007 value). This format was chosen to be used as a negative value (-) would indicate change in the negative direction of that field and a positive value would indicate change in the positive direction of that field.

SURVEY NOTES

A Team determined the horizontal and vertical positions for comparison using a Static GPS Network in September 2008. In June 2007 and June 2006, A Team determined the horizontal and vertical positions for comparison using Real Time Kinematic GPS. In 2004 Entranco determined the horizontal and vertical positions using Real Time Kinematic GPS.

A Team encountered no notable problems while locating any of the structures or monitoring monuments with GPS during the field collection process.

A Team's work was performed utilizing the NAD 83 definition of the Ellipsoid, with the projection for Arizona Central Zone (0202) being applied to the geographic coordinates in order to generate the NAD83 (92) State Plane Coordinates for this Project. The vertical datum for this project was NAVD88. An adjustment to the projects GEOID (GEOID99) was performed utilizing inclined plane to produce elevations in relation with Maricopa County GDACSS coordinate system. For more information see Trimble Survey Controller coordinate system projection details listed above.

SURVEYORS CERTIFICATION

I, STONE E. WAHL, AN ARIZONA REGISTERED LAND SURVEYOR, CERTIFY THAT THE FIELD SURVEYS, DOCUMENTED HEREIN, ALONG WITH ALL FIELD, AND OFFICE PROCESS PROCEDURES, USED DURING THE COURSE OF THIS SURVEY, WERE PERFORMED UNDER MY DIRECT SUPERVISION, AND THAT THESE SURVEYS, ARE RETRACEABLE, AND REPEATABLE. FURTHER, I CERTIFY THAT THIS SURVEY REPORT WAS PREPARED UNDER MY DIRECT SUPERVISION; AND THAT THE COORDINATE VALUES AND THEIR ACURACIES, AS SHOWN IN THIS REPORT, ARE CORRECT.

STONE E. WAHL
AZ RLS #28237

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
28237
STONE E.
WAHL
Date Signed 10/31/08
ARIZONA, U.S.A.

Expires: 09/30/2009

SECTION 2

STATIC NETWORKS

SECTION 2.1

STATIC NETWORKS SURVEY DATA AND REPORTS

SECTION 2.1.1

FINAL COORDINATES REPORT

SECTION 2.1.1.A

ENTRANCO PRIMARY & SECONDARY MONUMENTS

A TEAM OBSERVED POINT VALUES ENTRANCO 2004

NAME	DESCRIPTION	INTERNATIONAL FEET									CONVERGENCE	COMBINED SCALE FACTOR
		NAD 83						NAD 83		NAVD 88		
		LATITUDE	2 SIGMA	LONGITUDE	2 SIGMA	ELLIP.	2 SIGMA	NORTHING	EASTING	ELEV (GDACS)		
CONTROL												
10568	CCF * 3" BC MCFCD VYSLB 3/97	33°17'08.18694"N	0.0320	111°30'29.71476"W	0.0310	1481.789	0.0430	831688.492	824804.286	1578.246	0°13'27"	0.999847110
10569	CCF * 3" BC MCFCD VYSLB 3/97	33°17'11.28011"N	0.0240	111°30'32.09899"W	0.0260	1481.058	0.0390	832000.321	824600.680	1577.514	0°13'26"	0.999847080
2AQ2	NGS 'B' STATION BEDROCK (GDACS CONTROL)	33°22'46.99368"N	FIXED	111°29'05.41099"W	FIXED	1881.161	FIXED	865960.015	831818.595	1977.031	0°14'15"	0.999830110
2BP2	MCDOT STAINLESS STEEL ROD 1999	33°20'10.60801"N	0.0220	111°32'02.83502"W	0.0240	1484.978	0.0400	850095.482	816832.176	1581.300	0°12'37"	0.999844750
2CQ2	MCDOT STAINLESS STEEL ROD 1999	33°17'21.67258"N	0.0230	111°30'23.96074"W	0.0230	1506.947	0.0400	833053.371	825287.363	1603.367	0°13'30"	0.999846040
COOT	CCF * 4" BC USDI COOT 1986	33°21'58.51101"N	0.0180	111°34'29.41899"W	0.0170	1448.063	0.0230	860957.874	804360.851	1544.528	0°11'17"	0.999843350
EBM1	CCF * 3.25"BC BEDROCK FCDMC P-POLE EBM1 2003	33°22'37.58844"N	FIXED	111°29'02.25171"W	FIXED	1760.804	FIXED	865010.545	832090.433	1856.673	0°14'17"	0.999835930
EBM2	CCF * 3.25"BC BEDROCK FCDMC P-POLE EBM2 2003	33°22'32.03452"N	FIXED	111°28'33.18687"W	FIXED	1746.158	FIXED	864459.550	834557.402	1841.970	0°14'33"	0.999837380
HAWK	CCF * 4" BC USDI HAWK 1991	33°21'57.44515"N	0.0180	111°34'29.38355"W	0.0170	1459.376	0.0220	860850.158	804364.210	1555.842	0°11'17"	0.999842810
HAWK RESET	CCF * 4" BC USDI HAWK RESET 198?	33°21'58.26212"N	0.0190	111°34'29.60118"W	0.0200	1446.342	0.0280	860932.668	804345.482	1542.807	0°11'17"	0.999843430
PECOS	CCF * 3" AL ADOT HWY DIV PECOS P&M GS 1975	33°17'10.50831"N	0.0280	111°30'49.99214"W	0.0290	1484.730	0.0470	831916.420	823082.136	1581.222	0°13'16"	0.999846480
SGC-22A	CCP * 1.5"AL CAP USBR SGC-22A 1984 BENT NORTH - TOP OF CAP	33°20'10.65808"N	0.0250	111°32'02.79186"W	0.0260	1484.779	0.0450	850100.556	816835.819	1581.102	0°12'37"	0.999844760
SGC-22A-2	CCP * 1.5"AL CAP USBR SGC-22A 1984 BENT NORTH - BASE OF REBAR	33°20'10.65574"N	0.0250	111°32'02.79074"W	0.0260	1484.483	0.0450	850100.320	816835.914	1580.805	0°12'37"	0.999844770
SGC-26A	CCP * 1.5" AL USBR SGA-26A 1984	33°17'11.40298"N	0.0270	111°30'51.07745"W	0.0290	1483.970	0.0470	832006.487	822989.661	1580.463	0°13'15"	0.999846490
SUBSIDENCE CAPS												
	POWERLINE FRS											
A-1	CCF * 2" BC USDA PR FRS 2-86 19+93	33°21'28.58923"N	0.0210	111°32'17.64109"W	0.0200	1494.362	0.0260	857972.348	815547.475	1590.622	0°12'29"	0.999843960
A-2	CCF * 2" BC USDA PR FRS 2-86 29+93	33°21'24.03239"N	0.0220	111°32'28.10138"W	0.0210	1493.720	0.0250	857508.585	814661.948	1590.002	0°12'23"	0.999843760
A-3	CCF * 2" BC USDA PR FRS 2-86 39+90	33°21'19.50271"N	0.0230	111°32'38.58677"W	0.0210	1493.355	0.0250	857047.583	813774.257	1589.659	0°12'18"	0.999843540
A-4	CCF * 2" BC USDA PR FRS 2-86 49+88	33°21'17.95864"N	0.0230	111°32'48.44241"W	0.0210	1493.286	0.0250	856888.548	812938.883	1589.609	0°12'12"	0.999843330
A-5	CCF * 2" BC USDA PR FRS 2-86 59+85	33°21'26.75094"N	0.0230	111°32'53.81601"W	0.0220	1493.130	0.0250	857775.560	812479.965	1589.454	0°12'09"	0.999843220
A-6	CCF * 2" BC USDA PR FRS 2-86 69+88	33°21'35.53655"N	0.0200	111°32'59.21091"W	0.0190	1492.682	0.0220	858661.895	812019.270	1589.008	0°12'06"	0.999843120
A-7	CCF * 2" BC USDA PR FRS 2-86 29+95	33°21'43.16331"N	0.0230	111°33'06.10120"W	0.0220	1492.256	0.0240	859430.671	811432.184	1588.587	0°12'03"	0.999842990
A-8	CCF * 2" BC USDA PR FRS 2-86 89+95	33°21'47.26405"N	0.0200	111°33'16.83718"W	0.0190	1491.743	0.0210	859841.950	810520.217	1588.089	0°11'57"	0.999842780
A-9	CCF * 2" BC USDA PR FRS 2-86 100+00	33°21'51.40467"N	0.0220	111°33'27.56233"W	0.0210	1492.966	0.0250	860257.290	809609.179	1589.326	0°11'51"	0.999842490
A-10	CCF * 2" BC USDA PR FRS 2-86 110+00	33°21'55.53044"N	0.0220	111°33'38.30846"W	0.0210	1494.943	0.0250	860671.149	808696.390	1591.317	0°11'45"	0.999842170
A-11	CCF * 2" BC USDA PR FRS 2-86 119+90	33°22'04.98487"N	0.0220	111°33'39.73237"W	0.0210	1493.341	0.0260	861626.285	808572.370	1589.709	0°11'44"	0.999842220
A-12	CCF * 2" BC USDA PR FRS 2-86 129+90	33°22'14.87374"N	0.0210	111°33'39.91388"W	0.0210	1492.396	0.0260	862625.689	808553.565	1588.758	0°11'44"	0.999842260
A-13	CCF * 2" BC USDA PR FRS 2-86 139+90	33°22'24.75134"N	0.0210	111°33'40.12326"W	0.0200	1490.901	0.0260	863623.946	808532.402	1587.257	0°11'44"	0.999842320
A-14	CCF * 2" BC USDA PR FRS 2-86 144+90	33°22'29.68820"N	0.0160	111°33'40.21730"W	0.0160	1490.441	0.0200	864122.881	808522.724	1586.793	0°11'44"	0.999842340
B-1	CCF * 2" BC USDA PR FRS 2-86 19+93	33°21'28.42894"N	0.0180	111°32'17.54535"W	0.0180	1489.682	0.0220	857956.178	815555.654	1585.942	0°12'29"	0.999844180
B-2	CCF * 2" BC USDA PR FRS 2-86 29+93	33°21'23.81727"N	0.0220	111°32'27.96749"W	0.0210	1483.491	0.0250	857486.884	814673.382	1579.774	0°12'23"	0.999844250
B-3	CCF * 2" BC USDA PR FRS 2-86 39+90	33°21'19.16752"N	0.0230	111°32'38.38973"W	0.0210	1477.128	0.0250	857013.766	813791.090	1573.432	0°12'18"	0.999844320
B-4	CCF * 2" BC USDA PR FRS 2-86 49+88	33°21'17.75485"N	0.0230	111°32'48.92542"W	0.0210	1470.985	0.0250	856867.807	812897.988	1567.309	0°12'12"	0.999844380
B-5	CCF * 2" BC USDA PR FRS 2-86 59+85	33°21'26.50314"N	0.0200	111°32'54.40939"W	0.0180	1469.331	0.0210	857750.338	812429.726	1565.656	0°12'09"	0.999844340
B-6	CCF * 2" BC USDA PR FRS 2-86 69+88	33°21'35.28077"N	0.0230	111°32'59.80216"W	0.0210	1466.751	0.0250	858635.868	811969.214	1563.078	0°12'06"	0.999844340
B-7	CCF * 2" BC USDA PR FRS 2-86 29+95	33°21'42.67309"N	0.0170	111°33'06.35508"W	0.0160	1468.053	0.0190	859381.049	811410.826	1564.385	0°12'02"	0.999844140
B-8	CCF * 2" BC USDA PR FRS 2-86 89+95	33°21'46.85484"N	0.0170	111°33'17.06131"W	0.0160	1468.641	0.0190	859800.526	810501.353	1564.988	0°11'57"	0.999843880
B-9	CCF * 2" BC USDA PR FRS 2-86 100+00	33°21'50.90858"N	0.0190	111°33'27.83564"W	0.0180	1468.981	0.0210	860207.072	809586.173	1565.342	0°11'51"	0.999843630
B-10	CCF * 2" BC USDA PR FRS 2-86 110+00	33°21'55.04546"N	0.0220	111°33'38.57697"W	0.0210	1469.418	0.0260	860622.055	808673.786	1565.793	0°11'45"	0.999843380
B-11	CCF * 2" BC USDA PR FRS 2-86 119+90	33°22'04.97671"N	0.0220	111°33'40.20361"W	0.0210	1474.637	0.0260	861625.324	808532.410	1571.007	0°11'44"	0.999843100
B-12	CCF * 2" BC USDA PR FRS 2-86 129+90	33°22'14.86840"N	0.0210	111°33'40.26405"W	0.0210	1478.987	0.0250	862625.047	808523.872	1575.349	0°11'44"	0.999842890
B-13	CCF * 2" BC USDA PR FRS 2-86 139+90	33°22'24.75165"N	0.0210	111°33'40.29981"W	0.0210	1485.178	0.0260	863623.926	808517.431	1581.534	0°11'44"	0.999842590
B-14	CCF * 2" BC USDA PR FRS 2-86 144+90	33°22'29.68479"N	0.0180	111°33'40.36341"W	0.0180	1486.186	0.0220	864122.495	808510.335	1582.539	0°11'44"	0.999842540

A TEAM OBSERVED POINT VALUES ENTRANCO 2004

NAME	DESCRIPTION	INTERNATIONAL FEET									CONVERGENCE	COMBINED SCALE FACTOR
		NAD 83						NAD 83		NAVD 88		
		LATITUDE	2 SIGMA	LONGITUDE	2 SIGMA	ELLIP.	2 SIGMA	NORTHING	EASTING	ELEV (GDACS)		
SUBSIDENCE CAPS												
VINEYARD FRS												
A-1	CCF * 2 BC USDA SCS A-1 VR FRS 2.86 90+00	33°17'11.26764"N	0.0230	111°30'40.75698"W	0.0230	1483.796	0.0420	831996.199	823865.759	1580.269	0°13'21"	0.999846740
A-2	CCF * 2 BC USDA SCS A-2 VR FRS 2.86 100+00	33°17'11.76416"N	0.0190	111°30'51.27093"W	0.0210	1483.647	0.0350	832042.928	822973.098	1580.139	0°13'15"	0.999846500
A-3	CCF * 2 BC USDA SCS A-3 VR FRS 2.86 110+00	33°17'21.31532"N	0.0250	111°30'55.94719"W	0.0270	1484.416	0.0450	833006.714	822572.449	1580.902	0°13'13"	0.999846350
A-4	CCF * 2 BC USDA SCS A-4 VR FRS 2.86 120+00	33°17'30.47498"N	0.0350	111°31'00.40956"W	0.0290	1483.944	0.0450	833931.007	822190.130	1580.420	0°13'10"	0.999846260
A-5	CCF * 2 BC USDA SCS A-5 VR FRS 2.86 130+00	33°17'39.62306"N	0.0270	111°31'04.89908"W	0.0280	1483.404	0.0430	834854.126	821805.533	1579.873	0°13'08"	0.999846180
A-6	CCF * 2 BC USDA SCS A-6 VR FRS 2.86 140+00	33°17'48.75440"N	0.0260	111°31'09.38346"W	0.0280	1483.880	0.0460	835775.559	821421.401	1580.342	0°13'05"	0.999846050
A-7	CCF * 2 BC USDA SCS A-7 VR FRS 2.86 150+00	33°17'57.90652"N	0.0260	111°31'13.84441"W	0.0280	1483.716	0.0460	836699.105	821039.271	1580.171	0°13'03"	0.999845950
A-8	CCF * 2 BC USDA SCS A-8 VR FRS 2.86 160+00	33°18'07.07181"N	0.0250	111°31'18.33623"W	0.0270	1484.164	0.0440	837623.976	820654.538	1580.612	0°13'01"	0.999845830
A-9	CCF * 2 BC USDA SCS A-9 VR FRS 2.86 170+00	33°18'16.42477"N	0.0250	111°31'22.10640"W	0.0270	1484.229	0.0430	838568.051	820330.999	1580.668	0°12'59"	0.999845730
A-10	CCF * 2 BC USDA SCS A-10 VR FRS 2.86 180+00	33°18'24.26088"N	0.0220	111°31'23.66003"W	0.0240	1483.794	0.0370	839359.534	820196.161	1580.222	0°12'58"	0.999845720
A-11	CCF * 2 BC USDA SCS A-11 VR FRS 2.86 190+00	33°18'35.94245"N	0.0250	111°31'25.97274"W	0.0240	1484.058	0.0420	840539.428	819995.450	1580.468	0°12'57"	0.999845650
A-12	CCF * 2 BC USDA SCS A-12 VR FRS 2.86 200+00	33°18'45.49168"N	0.0260	111°31'27.85634"W	0.0280	1483.456	0.0460	841503.949	819831.976	1579.853	0°12'56"	0.999845630
A-13	CCF * 2 BC USDA SCS A-13 VR FRS 2.86 210+00	33°18'55.34005"N	0.0270	111°31'30.51046"W	0.0280	1483.809	0.0450	842498.458	819603.015	1580.195	0°12'54"	0.999845550
A-14	CCF * 2 BC USDA SCS A-14 VR FRS 2.86 220+00	33°19'05.00190"N	0.0280	111°31'33.17532"W	0.0300	1483.532	0.0450	843474.116	819373.227	1579.905	0°12'53"	0.999845500
A-15	CCF * 2 BC USDA SCS A-15 VR FRS 2.86 230+00	33°19'14.63461"N	0.0300	111°31'35.82573"W	0.0300	1483.866	0.0430	844446.834	819144.691	1580.228	0°12'51"	0.999845430
A-16	CCF * 2 BC USDA SCS A-16 VR FRS 2.86 240+00	33°19'24.27037"N	0.0300	111°31'38.48849"W	0.0290	1483.954	0.0420	845419.859	818915.118	1580.306	0°12'50"	0.999845360
A-17	CCF * 2 BC USDA SCS A-17 VR FRS 2.86 250+00	33°19'32.79101"N	0.0330	111°31'40.83156"W	0.0310	1483.866	0.0430	846280.284	818713.103	1580.205	0°12'49"	0.999845310
A-18	CCF * 2 BC USDA SCS A-18 VR FRS 2.86 260+00	33°19'42.92334"N	0.0260	111°31'45.78400"W	0.0230	1483.403	0.0320	847302.778	818289.105	1579.735	0°12'46"	0.999845220
A-19	CCF * 2 BC USDA SCS A-19 VR FRS 2.86 270+00	33°19'51.68945"N	0.0300	111°31'51.23288"W	0.0300	1484.002	0.0440	848187.040	817823.527	1580.331	0°12'43"	0.999845060
A-20	CCF * 2 BC USDA SCS A-20 VR FRS 2.86 280+00	33°20'00.45046"N	0.0270	111°31'56.70226"W	0.0250	1484.239	0.0380	849070.788	817356.237	1580.565	0°12'40"	0.999844920
A-21	CCF * 2 BC USDA SCS A-21 VR FRS 2.86 290+00	33°20'09.20802"N	0.0250	111°32'02.18501"W	0.0240	1484.292	0.0370	849954.190	816887.839	1580.616	0°12'37"	0.999844800
A-22	CCF * 2 BC USDA SCS A-22 VR FRS 2.86 300+00	33°20'17.97016"N	0.0240	111°32'07.68449"W	0.0260	1483.918	0.0450	850838.056	816418.046	1580.239	0°12'34"	0.999844690
A-23	CCF * 2 BC USDA SCS A-23 VR FRS 2.86 310+00	33°20'26.73282"N	0.0230	111°32'13.16675"W	0.0230	1483.980	0.0430	851721.988	815949.740	1580.300	0°12'31"	0.999844560
A-24	CCF * 2 BC USDA SCS A-24 VR FRS 2.86 320+00	33°20'35.46543"N	0.0240	111°32'18.61309"W	0.0230	1484.311	0.0420	852602.900	815484.518	1580.630	0°12'28"	0.999844420
A-25	CCF * 2 BC USDA SCS A-25 VR FRS 2.86 330+00	33°20'44.07680"N	0.0280	111°32'24.49375"W	0.0270	1483.833	0.0460	853471.433	814982.523	1580.152	0°12'25"	0.999844310
A-26	CCF * 2 BC USDA SCS A-26 VR FRS 2.86 340+00	33°20'52.62423"N	0.0270	111°32'30.41018"W	0.0270	1483.695	0.0430	854333.500	814477.544	1580.014	0°12'22"	0.999844190
A-27	CCF * 2 BC USDA SCS A-27 VR FRS 2.86 350+00	33°21'01.12194"N	0.0260	111°32'36.28395"W	0.0270	1483.364	0.0410	855190.563	813976.229	1579.684	0°12'19"	0.999844070
A-28	CCF * 2 BC USDA SCS A-28 VR FRS 2.86 360+00	33°21'07.17777"N	0.0300	111°32'27.35309"W	0.0240	1483.488	0.0350	855805.340	814731.557	1579.786	0°12'24"	0.999844260
B-1	CCF * 2 BC USDA SCS B-1 VR FRS 2.86 90+00	33°17'11.08887"N	0.0200	111°30'40.72757"W	0.0220	1476.724	0.0390	831978.141	823868.325	1573.197	0°13'21"	0.999847080
B-2	CCF * 2 BC USDA SCS B-2 VR FRS 2.86 100+00	33°17'11.62102"N	0.0250	111°30'51.59714"W	0.0260	1470.491	0.0460	832028.355	822945.464	1566.985	0°13'15"	0.999847120
B-4	CCF * 2 BC USDA SCS B-4 VR FRS 2.86 120+00	33°17'30.36208"N	0.0330	111°31'00.76686"W	0.0300	1470.279	0.0440	833919.481	822159.847	1566.756	0°13'10"	0.999846910
B-5	CCF * 2 BC USDA SCS B-5 VR FRS 2.86 130+00	33°17'39.49343"N	0.0290	111°31'05.26192"W	0.0260	1468.899	0.0370	834840.907	821774.787	1565.370	0°13'08"	0.999846870
B-6	CCF * 2 BC USDA SCS B-6 VR FRS 2.86 140+00	33°17'48.64843"N	0.0310	111°31'09.74766"W	0.0290	1468.509	0.0420	835764.731	821390.531	1564.972	0°13'05"	0.999846780
B-7	CCF * 2 BC USDA SCS B-7 VR FRS 2.86 150+00	33°17'57.78611"N	0.0300	111°31'14.24050"W	0.0290	1468.191	0.0440	836686.808	821005.700	1564.647	0°13'03"	0.999846690
B-8	CCF * 2 BC USDA SCS B-8 VR FRS 2.86 160+00	33°18'06.96171"N	0.0300	111°31'18.70002"W	0.0290	1469.990	0.0440	837612.732	820623.706	1566.438	0°13'00"	0.999846490
B-9	CCF * 2 BC USDA SCS B-9 VR FRS 2.86 170+00	33°18'16.39687"N	0.0240	111°31'22.40330"W	0.0260	1473.019	0.0380	838565.137	820305.813	1569.458	0°12'58"	0.999846260
B-10	CCF * 2 BC USDA SCS B-10 VR FRS 2.86 180+00	33°18'24.21448"N	0.0240	111°31'24.02497"W	0.0250	1469.890	0.0410	839354.727	820165.209	1566.319	0°12'58"	0.999846370
B-11	CCF * 2 BC USDA SCS B-11 VR FRS 2.86 190+00	33°18'35.88897"N	0.0200	111°31'26.40223"W	0.0240	1467.211	0.0410	840533.886	819959.024	1563.622	0°12'56"	0.999846440
B-12	CCF * 2 BC USDA SCS B-12 VR FRS 2.86 200+00	33°18'45.44492"N	0.0230	111°31'28.24929"W	0.0240	1468.716	0.0430	841499.097	819798.649	1565.114	0°12'55"	0.999846330
B-13	CCF * 2 BC USDA SCS B-13 VR FRS 2.86 210+00	33°18'55.27514"N	0.0220	111°31'30.87914"W	0.0240	1469.259	0.0400	842491.780	819571.756	1565.645	0°12'54"	0.999846240
B-14	CCF * 2 BC USDA SCS B-14 VR FRS 2.86 220+00	33°19'04.90633"N	0.0220	111°31'33.56542"W	0.0240	1468.719	0.0430	843464.333	819340.162	1565.093	0°12'53"	0.999846200
B-15	CCF * 2 BC USDA SCS B-15 VR FRS 2.86 230+00	33°19'14.55078"N	0.0230	111°31'36.19177"W	0.0240	1469.915	0.0410	844438.246	819113.663	1566.278	0°12'51"	0.999846080
B-16	CCF * 2 BC USDA SCS B-16 VR FRS 2.86 240+00	33°19'24.20179"N	0.0270	111°31'38.83616"W	0.0260	1470.251	0.0370	845412.818	818885.645	1566.603	0°12'50"	0.999846000
B-17	CCF * 2 BC USDA SCS B-17 VR FRS 2.86 250+00	33°19'32.71362"N	0.0270	111°31'41.19276"W	0.0260	1469.727	0.0380	846272.348	818682.485	1566.067	0°12'49"	0.999845970
B-18	CCF * 2 BC USDA SCS B-18 VR FRS 2.86 260+00	33°19'42.78792"N	0.0270	111°31'46.12271"W	0.0230	1471.108	0.0310	847288.985	818260.419	1567.441	0°12'46"	0.999845790
B-19	CCF * 2 BC USDA SCS B-19 VR FRS 2.86 270+00	33°19'51.55150"N	0.0250	111°31'51.59525"W	0.0270	1469.682	0.0390	848172.984	817792.835	1566.012	0°12'43"	0.999845740
B-20	CCF * 2 BC USDA SCS B-20 VR FRS 2.86 280+00	33°20'00.31633"N	0.0210	111°31'57.01517"W	0.0220	1470.966	0.0340	849057.134	817329.740	1567.293	0°12'40"	0.999845550
B-21	CCF * 2 BC USDA SCS B-21 VR FRS 2.86 290+00	33°20'09.06828"N	0.0270	111°32'02.51057"W	0.0270	1470.741	0.0450	849939.965	816860.272	1567.065	0°12'37"	0.999845430
B-22	CCF * 2 BC USDA SCS B-22 VR FRS 2.86 300+00	33°20'17.82357"N	0.0260	111°32'08.01865"W	0.0270	1469.659	0.0430	850823.137	816389.752	1565.981	0°12'34"	0.999845360
B-23	CCF * 2 BC USDA SCS B-23 VR FRS 2.86 310+00	33°20'26.57818"N	0.0250	111°32'13.52435"W	0.0260	1468.550	0.0420	851706.247	815919.461	1564.871	0°12'31"	0.999845290
B-24	CCF * 2 BC USDA SCS B-24 VR FRS 2.86 320+00	33°20'35.29528"N	0.0250	111°32'18.99041"W	0.0260	1466.758	0.0420	852585.587	815452.572	1563.078	0°12'28"	0.999845250
B-25	CCF * 2 BC USDA SCS B-25 VR FRS 2.86 330+00	33°20'43.91987"N	0.0250	111°32'24.82467"W	0.0260	1469.254	0.0420	853455.470	814954.509	1565.574	0°12'25"	0.999845000
B-26	CCF * 2 BC USDA SCS B-26 VR FRS 2.86 340+00	33°20'52.46247"N	0.0270	111°32'30.75705"W	0.0270	1468.026	0.0430	854317.045	814448.180	1564.345	0°12'22"	0.999844930
B-27	CCF * 2 BC USDA SCS B-27 VR FRS 2.86 350+00	33°21'00.99572"N	0.0290	111°32'36.62034"W	0.0280	1467.814	0.0430	855177.704	813947.741	1564.134	0°12'19"	0.999844800
B-28	CCF * 2 BC USDA SCS B-28 VR FRS 2.86 360+00	33°21'07.36702"N	0.0350	111°32'27.50172"W	0.0280	1474.221	0.0390	855824.421	814718.881	1570.519	0°12'24"	0.999844700

SECTION 2.1.1.B

JUNE 2006 PRIMARY & SECONDARY MONUMENTS

SECTION 2.1.1.C

JUNE 2007 PRIMARY & SECONDARY MONUMENTS

A TEAM OBSERVED POINT VALUES 2007

Point Name	Feature Code	NAD83 (1992) Latitude	NAD83 (1992) Longitude	Horizontal Precision	GRS(80) Ellipsoid Height (Int. Ft.)	Vertical Precision	NAD83 (1992) Northing (Int. Ft.)	NAD83 (1992) Easting (Int. Ft.)	NAVD 88 Elevation (Int. Ft.)	CONVERGENCE	GRID SCALE FACTOR	ELEV. SCALE FACTOR	COMBINED SCALE FACTOR
CONTROL													
5000	4IN ACF IN CONC USDOI BM NO ID PR	33° 22' 10.81232"N	111° 33' 40.22462"W	0.0195	1477.262	0.0345	862215.115	808528.614	1573.627	0° 11' 44"	0.999913487	0.999929481	0.999842974
10568	CCF * 3 BC MCFCD VYSLB 3/97	33° 17' 08.18703"N	111° 30' 29.71472"W	0.0268	1481.801	0.0348	831688.501	824804.289	1578.257	0° 13' 27"	0.999917835	0.999929264	0.999847105
10569	CCF * 3 BC MCFCD VYSLB 3/97	33° 17' 11.28019"N	111° 30' 32.09923"W	0.0215	1481.009	0.0338	832000.329	824600.659	1577.465	0° 13' 26"	0.999917777	0.999929302	0.999847105
1AO1	MCDOT STAINLESS STEEL ROD 1999	33° 22' 46.53905"N	111° 34' 51.05457"W	0.0228	1454.329	0.0338	865806.037	802510.369	1550.798	0° 11' 5"	0.999912032	0.999930575	0.999842614
2AQ2	NGS 'B' STATION BEDROCK (GDACS CONTROL)	33° 22' 46.99350"N	111° 29' 05.41113"W	0.0235	1881.171	0.0368	865959.984	831818.585	1977.041	0° 14' 15"	0.999919896	0.999910201	0.999830105
2BP2	MCDOT STAINLESS STEEL ROD 1999	33° 20' 10.60803"N	111° 32' 02.83575"W	0.0208	1484.900	0.0338	850095.484	816832.114	1581.222	0° 12' 37"	0.999915629	0.999929116	0.999844752
2CO1	9/16" STAINLESS ROD DRIVEN TO REFUSAL	33° 17' 29.63615"N	111° 34' 59.36550"W	0.0238	1345.601	0.0405	833774.976	801908.103	1442.516	0° 10' 59"	0.999911892	0.999935765	0.999847663
2CQ2	MCDOT STAINLESS STEEL ROD 1999	33° 17' 21.67311"N	111° 30' 23.96080"W	0.0245	1506.838	0.0385	833053.423	825287.358	1603.258	0° 13' 30"	0.999917974	0.999928069	0.999846049
2DP1	NGS 3D MON (9/16 STAINLESS ROD DR	33° 14' 58.01814"N	111° 31' 40.85996"W	0.0277	1435.479	0.0450	818509.625	818814.083	1532.236	0° 12' 47"	0.999916165	0.999931475	0.999847645
EBM1	CCF * 3.25BC BEDROCK FCDMC P-POLE EBM1 2003	33° 22' 37.58836"N	111° 29' 02.25164"W	0.0250	1760.818	0.0385	865010.531	832090.445	1856.687	0° 14' 17"	0.999919978	0.999915946	0.999835931
EBM2	CCF * 3.25BC BEDROCK FCDMC P-POLE EBM2 2003	33° 22' 32.03413"N	111° 28' 33.18706"W	0.0238	1746.198	0.0400	864459.510	834557.386	1842.009	0° 14' 33"	0.999920732	0.999916644	0.999837382
KLEIN 2	CCF * 3 AL ADOT HW DIV P&M GS 1975	33° 15' 18.06993"N	111° 29' 53.52035"W	0.0190	1506.648	0.0310	820571.406	827921.242	1603.213	0° 13' 46"	0.999918738	0.999928078	0.999846821
PECOS	CCF * 3 AL ADOT HWY DIV PECOS	33° 17' 10.50806"N	111° 30' 49.99223"W	0.0188	1484.767	0.0333	831916.395	823082.129	1581.260	0° 13' 16"	0.999917347	0.999929122	0.999846475
PECOS RM1	CCF * 3 AL ADOT HWY DIV PECOS RM1	33° 17' 10.44905"N	111° 30' 49.46796"W	0.0175	1485.050	0.0340	831910.603	823126.654	1581.541	0° 13' 16"	0.999917359	0.999929109	0.999846474
SGC-22A	CCP * 1.5AL CAP USBR SGC-22A	33° 20' 10.65748"N	111° 32' 02.79165"W	0.0180	1484.765	0.0295	850100.496	816835.837	1581.087	0° 12' 37"	0.999915630	0.999929123	0.999844759
SGC-22A-2	CCP * 1.5AL CAP USBR SGC-22 - OBS AT BAR BEND	33° 20' 10.65537"N	111° 32' 02.79087"W	0.0180	1484.520	0.0305	850100.282	816835.904	1580.842	0° 12' 37"	0.999915630	0.999929135	0.999844771
SGC-26A	CCP * 1.5 AL USBR SGA-26A 1984	33° 17' 11.40252"N	111° 30' 51.07732"W	0.0207	1483.966	0.0333	832006.441	822989.673	1580.459	0° 13' 15"	0.999917321	0.999929161	0.999846487
SGC-29A	CCF * 1.5 AL SGC 29 1971	33° 15' 09.66635"N	111° 30' 24.72857"W	0.0250	1477.684	0.0425	819711.576	825274.538	1574.314	0° 13' 29"	0.999917970	0.999929461	0.999847437
SGC-29B	7-CIR * 5/8 IN CONC	33° 15' 09.66604"N	111° 30' 24.72870"W	0.0220	1477.708	0.0425	819711.544	825274.528	1574.338	0° 13' 29"	0.999917970	0.999929459	0.999847435
VINE	ADOT HWY DIV 3IN ACF VINE 1975 - LEANING	33° 21' 56.53290"N	111° 33' 39.44503"W	0.0215	1495.491	0.0320	860772.137	808599.655	1591.866	0° 11' 44"	0.999913504	0.999928611	0.999842122
VINE RM1*	ADOT HWY DIV 3IN ACF VINE RM1 1975	33° 21' 56.14850"N	111° 33' 39.20695"W	0.0230	1496.130	0.0350	860733.355	808619.978	1592.505	0° 11' 44"	0.999913509	0.999928580	0.999842096
GPS ROCKBOLT MONUMENTATION													
POWERLINE FRS													
GPS 01	GPS 01 "ROCKBOLT POWERLINE 102+50"	33° 21' 52.00740"N	111° 33' 30.55764"W	0.0205	1469.508	0.0335	860317.332	809354.942	1565.871	0° 11' 49"	0.999913693	0.999929852	0.999843551
GPS 02	GPS 02 "ROCKBOLT POWERLINE 102+50"	33° 21' 52.44564"N	111° 33' 30.26854"W	0.0200	1494.917	0.0355	860361.710	809379.308	1591.280	0° 11' 49"	0.999913699	0.999928637	0.999842342
GPS 03	GPS 03 "ROCKBOLT POWERLINE 107+50"	33° 21' 54.08277"N	111° 33' 35.89483"W	0.0205	1471.023	0.0375	860525.535	808901.585	1567.394	0° 11' 46"	0.999913580	0.999929779	0.999843364
GPS 04	GPS 04 "ROCKBOLT POWERLINE 107+50"	33° 21' 54.48694"N	111° 33' 35.64440"W	0.0200	1494.607	0.0377	860566.457	808922.683	1590.977	0° 11' 46"	0.999913585	0.999928652	0.999842243
GPS 05	GPS 05 "ROCKBOLT POWERLINE 112+50"	33° 21' 57.69376"N	111° 33' 40.21823"W	0.0235	1471.499	0.0380	860889.240	808533.682	1567.874	0° 11' 44"	0.999913488	0.999929755	0.999843249
GPS 06	GPS 06 "ROCKBOLT POWERLINE 112+50"	33° 21' 57.68183"N	111° 33' 39.60046"W	0.0220	1495.163	0.0345	860888.213	808586.076	1591.537	0° 11' 44"	0.999913501	0.999928626	0.999842133
GPS 07	GPS 07 "ROCKBOLT POWERLINE 117+50"	33° 22' 02.62626"N	111° 33' 40.19576"W	0.0210	1474.565	0.0305	861387.769	808533.886	1570.936	0° 11' 44"	0.999913488	0.999929609	0.999843104
GPS 08	GPS 08 "ROCKBOLT POWERLINE 117+50"	33° 22' 02.60262"N	111° 33' 39.71053"W	0.0230	1494.700	0.0310	861385.520	808575.044	1591.071	0° 11' 44"	0.999913498	0.999928649	0.999842153
GPS 09	GPS 09 "ROCKBOLT POWERLINE 122+50"	33° 22' 07.70560"N	111° 33' 40.22173"W	0.0220	1476.988	0.0320	861901.073	808529.932	1573.355	0° 11' 44"	0.999913487	0.999929493	0.999842987
GPS 10	GPS 10 "ROCKBOLT POWERLINE 122+50"	33° 22' 07.70056"N	111° 33' 39.79445"W	0.0205	1494.021	0.0315	861900.738	808566.168	1590.387	0° 11' 44"	0.999913496	0.999928681	0.999842183
GPS 11	GPS 11 "ROCKBOLT POWERLINE 127+50"	33° 22' 12.38758"N	111° 33' 40.22375"W	0.0185	1479.055	0.0325	862374.325	808528.145	1575.419	0° 11' 44"	0.999913487	0.999929396	0.999842888
GPS 12	GPS 12 "ROCKBOLT POWERLINE 127+50"	33° 22' 12.40426"N	111° 33' 39.87057"W	0.0200	1493.814	0.0325	862376.114	808558.091	1590.177	0° 11' 44"	0.999913494	0.999928691	0.999842191
VINEYARD FRS													
GPS 01	GPS 01 "ROCKBOLT VINEYARD 280+00"	33° 20' 00.29548"N	111° 31' 56.97399"W	0.0175	1472.437	0.0305	849055.040	817333.242	1568.763	0° 12' 40"	0.999915764	0.999929712	0.999845481
GPS 02	GPS 02 "ROCKBOLT VINEYARD 285+00"	33° 20' 04.67079"N	111° 31' 59.71802"W	0.0140	1472.685	0.0315	849496.388	817098.815	1569.010	0° 12' 39"	0.999915701	0.999929700	0.999845406
GPS 03	GPS 03 "ROCKBOLT VINEYARD 290+00"	33° 20' 09.02409"N	111° 32' 02.44278"W	0.0205	1472.178	0.0300	849935.519	816866.039	1568.502	0° 12' 37"	0.999915639	0.999929722	0.999845366
GPS 04	GPS 04 "ROCKBOLT VINEYARD 295+00"	33° 20' 13.38044"N	111° 32' 05.23310"W	0.0205	1472.394	0.0300	850374.941	816627.707	1568.718	0° 12' 36"	0.999915575	0.999929712	0.999845293
GPS 05	GPS 05 "ROCKBOLT VINEYARD 300+00"	33° 20' 17.76545"N	111° 32' 07.97304"W	0.0225	1470.760	0.0310	850817.277	816393.643	1567.082	0° 12' 34"	0.999915512	0.999929791	0.999845309
GPS 06	GPS 06 "ROCKBOLT VINEYARD 305+00"	33° 20' 22.13754"N	111° 32' 10.71897"W	0.0220	1470.680	0.0310	851258.307	816159.084	1567.000	0° 12' 33"	0.999915450	0.999929794	0.999845250
GPS 07	GPS 07 "ROCKBOLT VINEYARD 310+00"	33° 20' 26.50430"N	111° 32' 13.48982"W	0.0240	1469.499	0.0325	851698.791	815922.418	1565.819	0° 12' 31"	0.999915387	0.999929852	0.999845245
SUBSIDENCE CAPS													
POWERLINE FRS													
A-1	CCF * 2 BC USDA PR FRS 2-86 19+93	33° 21' 28.58887"N	111° 32' 17.64085"W	0.0285	1494.375	0.0360	857972.312	815547.496	1590.635	0° 12' 29"	0.999915288	0.999928664	0.999843958
A-2	CCF * 2 BC USDA PR FRS 2-86 29+93	33° 21' 24.03172"N	111° 32' 28.10123"W	0.0300	1493.700	0.0310	857508.517	814661.961	1589.983	0° 12' 23"	0.999915054	0.999928696	0.999843756
A-3	CCF* 2 BC USDA PR FRS 2-86 39+90	33° 21' 19.50229"N	111° 32' 38.58661"W	0.0255	1493.318	0.0285	857047.542	813774.270	1589.622	0° 12' 18"	0.999914822	0.999928714	0.999843542
A-4	CCF * 2 BC USDA PR FRS 2-86 49+88	33° 21' 17.95792"N	111° 32' 48.44222"W	0.0240	1493.220	0.0440	856888.475	812938.899	1589.543	0° 12' 12"	0.999914605	0.999928719	0.999843330
A-5	CCF * 2 BC USDA PR FRS 2-86 59+85	33° 21' 26.75045"N	111° 32' 53.81564"W	0.0193	1493.095	0.0350	857775.511	812479.997	1589.419	0° 12' 9"	0.999914487	0.999928725	0.999843218
A-6	CCF * 2 BC USDA PR FRS 2-86 69+88	33° 21' 35.53594"N	111° 32' 59.21053"W	0.0225	1492.601	0.0365	858661.834	812019.302	1588.926	0° 12' 6"	0.999914368	0.999928749	0.999843123
A-7	CCF * 2 BC USDA PR FRS 2-86 29+95	33° 21' 43.16274"N	111° 33' 06.10110"W	0.0205	1492.193	0.0340	859430.613	811432.193	1588.523	0° 12' 3"	0.999914218	0.999928768	0.999842992
A-8	CCF * 2 BC USDA PR FRS 2-86 89+95	33° 21' 47.26346"N	111° 33' 16.83699"W	0.0230	1491.748	0.0390	859841.891	810520.234	1588.094	0° 11' 57"	0.999913986	0.999928789	0.999842782
A-9	CCF * 2 BC USDA PR FRS 2-86 100+00	33° 21' 51.40452"N	111° 33' 27.56111"W	0.0205	1492.876	0.0365	860257.276	809609.282	1589.236	0° 11' 51"	0.999913757	0.999928736	0.999842499
A-10	CCF * 2 BC USDA PR FRS 2-86 110+00	33° 21' 55.52963"N	111° 33' 38.30758"W	0.0265	1495.043	0.0415	860671.068	808696.465	1591.417	0° 11' 45"	0.999913528	0.999928632	0.999842167
A-11	CCF * 2 BC USDA PR FRS 2-86 119+90	33° 22' 04.98485"N	111° 33' 39.73174"W	0.0205	1493.285	0.0405	861626.283	808572.424	1589.654	0° 11' 44"	0.999913498	0.999928716	0.999842220
A-12	CCF * 2 BC USDA PR FRS 2-86 129+90	33° 22' 14.87368"N	111° 33' 39.91286"W	0.0225	1492.281	0.0400	862625.683	808553.652	1588.643	0° 11' 44"	0.999913493	0.999928764	0.999842263
A-13	CCF * 2 BC USDA PR FRS 2-86 139+90	33° 22' 24.75068"N	111° 33' 40.12245"W	0.0240	1490.797	0.0410	863623.879	808532.471	1587.153	0° 11' 44"	0.999913488	0.999928835	0.999842329
A-14	CCF * 2 BC USDA PR FRS 2-86 144+90	33° 22' 29.68775"N	111° 33' 40.21621"W	0.0210	1490.237	0.0340	864122.836	808522.817	1586.590	0° 11' 44"	0.999913485	0.999928862	0.999842353
B-1	CCF * 2 BC USDA PR FRS 2-86 19+93	33° 21' 26.23019"N	111° 32' 22.82321"W	0.0245	1489.661	0.0315	857956.136	815555.668	1585.921	0° 12' 26"	0.999915290	0.999928889	0.999844185

A TEAM OBSERVED POINT VALUES 2007

Point Name	Feature Code	NAD83 (1992) Latitude	NAD83 (1992) Longitude	Horizontal Precision	GRS(80) Ellipsoid Height (Int. Ft.)	Vertical Precision	NAD83 (1992) Northing (Int. Ft.)	NAD83 (1992) Easting (Int. Ft.)	NAVD 88 Elevation (Int. Ft.)	CONVERGENCE	GRID SCALE FACTOR	ELEV. SCALE FACTOR	COMBINED SCALE FACTOR
SUBSIDENCE CAPS													
POWERLINE FRS													
B-2	CCF * 2 BC USDA PR FRS 2-86 29+93	33° 21' 23.81667"N	111° 32' 27.96728"W	0.0265	1483.469	0.0295	857486.823	814673.400	1579.751	0° 12' 23"	0.999915057	0.999929185	0.999844248
B-3	CCF * 2 BC USDA PR FRS 2-86 39+90	33° 21' 19.16692"N	111° 32' 38.38959"W	0.0300	1477.106	0.0325	857013.706	813791.103	1573.410	0° 12' 18"	0.999914826	0.999929488	0.999844320
B-4	CCF * 2 BC USDA PR FRS 2-86 49+88	33° 21' 17.75414"N	111° 32' 48.92492"W	0.0220	1470.962	0.0400	856867.735	812898.031	1567.286	0° 12' 12"	0.999914595	0.999929782	0.999844382
B-5	CCF * 2 BC USDA PR FRS 2-86 59+85	33° 21' 26.50274"N	111° 32' 54.40903"W	0.0170	1469.298	0.0407	857750.297	812429.757	1565.623	0° 12' 9"	0.999914474	0.999929861	0.999844341
B-6	CCF * 2 BC USDA PR FRS 2-86 69+88	33° 21' 35.28051"N	111° 32' 59.80213"W	0.0215	1466.723	0.0345	858635.841	811969.217	1563.049	0° 12' 6"	0.999914355	0.999929984	0.999844345
B-7	CCF * 2 BC USDA PR FRS 2-86 29+95	33° 21' 42.67266"N	111° 33' 06.35456"W	0.0230	1468.034	0.0370	859381.006	811410.870	1564.365	0° 12' 2"	0.999914213	0.999929921	0.999844140
B-8	CCF * 2 BC USDA PR FRS 2-86 89+95	33° 21' 46.85407"N	111° 33' 17.06103"W	0.0233	1468.616	0.0407	859800.448	810501.377	1564.962	0° 11' 57"	0.999913981	0.999929894	0.999843881
B-9	CCF * 2 BC USDA PR FRS 2-86 100+00	33° 21' 50.90851"N	111° 33' 27.83516"W	0.0225	1469.045	0.0385	860207.064	809586.213	1565.406	0° 11' 51"	0.999913751	0.999929873	0.999843630
B-10	CCF * 2 BC USDA PR FRS 2-86 110+00	33° 21' 55.04502"N	111° 33' 38.57582"W	0.0265	1469.411	0.0415	860622.011	808673.884	1565.785	0° 11' 45"	0.999913523	0.999929856	0.999843385
B-11	CCF * 2 BC USDA PR FRS 2-86 119+90	33° 22' 04.97660"N	111° 33' 40.20306"W	0.0180	1474.690	0.0340	861625.313	808532.457	1571.060	0° 11' 44"	0.999913488	0.999929604	0.999843097
B-12	CCF * 2 BC USDA PR FRS 2-86 129+90	33° 22' 14.86845"N	111° 33' 40.26332"W	0.0255	1478.889	0.0450	862625.052	808523.934	1575.252	0° 11' 44"	0.999913486	0.999929403	0.999842895
B-13	CCF * 2 BC USDA PR FRS 2-86 139+90	33° 22' 24.75101"N	111° 33' 40.29889"W	0.0240	1485.070	0.0425	863623.861	808517.509	1581.426	0° 11' 44"	0.999913484	0.999929108	0.999842598
B-14	CCF * 2 BC USDA PR FRS 2-86 144+90	33° 22' 29.68439"N	111° 33' 40.36278"W	0.0240	1486.070	0.0390	864122.455	808510.389	1582.422	0° 11' 44"	0.999913482	0.999929061	0.999842549
VINEYARD FRS													
A-1	CCF * 2 BC USDA SCS A-1 VR FRS 2.86	33° 17' 11.26767"N	111° 30' 40.75718"W	0.0235	1483.761	0.0410	831996.202	823865.742	1580.234	0° 13' 21"	0.999917568	0.999929170	0.999846744
A-2	CCF * 2 BC USDA SCS A-2 VR FRS 2.86	33° 17' 11.76401"N	111° 30' 51.27066"W	0.0265	1483.647	0.0405	832042.913	822973.121	1580.140	0° 13' 15"	0.999917316	0.999929176	0.999846498
A-3	CCF * 2 BC USDA SCS A-3 VR FRS 2.86	33° 17' 21.31498"N	111° 30' 55.94713"W	0.0265	1484.469	0.0460	833006.680	822572.454	1580.954	0° 13' 13"	0.999917203	0.999929137	0.999846346
A-4	CCF * 2 BC USDA SCS A-4 VR FRS 2.86	33° 17' 30.47460"N	111° 31' 00.40960"W	0.0255	1483.989	0.0370	833930.968	822190.127	1580.466	0° 13' 10"	0.999917096	0.999929160	0.999846262
A-5	CCF * 2 BC USDA SCS A-5 VR FRS 2.86	33° 17' 39.62249"N	111° 31' 04.89869"W	0.0230	1483.246	0.0335	834854.068	821805.567	1579.715	0° 13' 8"	0.999916989	0.999929195	0.999846190
A-6	CCF * 2 BC USDA SCS A-6 VR FRS 2.86	33° 17' 48.75454"N	111° 31' 09.38285"W	0.0255	1483.861	0.0410	835775.574	821421.453	1580.323	0° 13' 5"	0.999916882	0.999929166	0.999846053
A-7	CCF * 2 BC USDA SCS A-7 VR FRS 2.86	33° 17' 57.90614"N	111° 31' 13.84430"W	0.0265	1483.587	0.0465	836699.067	821039.280	1580.041	0° 13' 3"	0.999916776	0.999929179	0.999845960
A-8	CCF * 2 BC USDA SCS A-8 VR FRS 2.86	33° 18' 07.07169"N	111° 31' 18.33621"W	0.0193	1484.195	0.0357	837623.965	820654.540	1580.642	0° 13' 1"	0.999916669	0.999929150	0.999845824
A-9	CCF * 2 BC USDA SCS A-9 VR FRS 2.86	33° 18' 16.42366"N	111° 31' 22.10641"W	0.0223	1484.315	0.0420	838567.939	820330.999	1580.753	0° 12' 59"	0.999916580	0.999929144	0.999845729
A-10	CCF * 2 BC USDA SCS A-10 VR FRS 2.86	33° 18' 24.26051"N	111° 31' 23.66023"W	0.0295	1483.746	0.0500	839359.497	820196.145	1580.174	0° 12' 58"	0.999916543	0.999929171	0.999845720
A-11	CCF * 2 BC USDA SCS A-11 VR FRS 2.86	33° 18' 35.94279"N	111° 31' 25.97284"W	0.0220	1484.070	0.0310	840539.462	819995.441	1580.481	0° 12' 57"	0.999916487	0.999929156	0.999845649
A-12	CCF * 2 BC USDA SCS A-12 VR FRS 2.86	33° 18' 45.49124"N	111° 31' 27.85592"W	0.0253	1483.322	0.0310	841503.904	819832.012	1579.720	0° 12' 56"	0.999916443	0.999929191	0.999845640
A-13	CCF * 2 BC USDA SCS A-13 VR FRS 2.86	33° 18' 55.33963"N	111° 31' 30.50958"W	0.0363	1483.653	0.0447	842498.417	819603.090	1580.038	0° 12' 54"	0.999916380	0.999929176	0.999845561
A-14	CCF * 2 BC USDA SCS A-14 VR FRS 2.86	33° 19' 05.00186"N	111° 31' 33.17529"W	0.0190	1483.511	0.0320	843474.111	819373.230	1579.885	0° 12' 53"	0.999916317	0.999929182	0.999845505
A-15	CCF * 2 BC USDA SCS A-15 VR FRS 2.86	33° 19' 14.63436"N	111° 31' 35.82579"W	0.0175	1483.841	0.0305	844446.810	819144.686	1580.204	0° 12' 51"	0.999916254	0.999929166	0.999845427
A-16	CCF * 2 BC USDA SCS A-16 VR FRS 2.86	33° 19' 24.26997"N	111° 31' 38.48858"W	0.0185	1483.919	0.0330	845419.818	818915.110	1580.271	0° 12' 50"	0.999916192	0.999929163	0.999845361
A-17	CCF * 2 BC USDA SCS A-17 VR FRS 2.86	33° 19' 32.79076"N	111° 31' 40.83151"W	0.0155	1483.838	0.0300	846280.258	818713.107	1580.177	0° 12' 49"	0.999916137	0.999929167	0.999845309
A-18	CCF * 2 BC USDA SCS A-18 VR FRS 2.86	33° 19' 42.92293"N	111° 31' 45.78396"W	0.0200	1483.421	0.0310	847302.736	818289.108	1579.754	0° 12' 46"	0.999916022	0.999929187	0.999845214
A-19	CCF * 2 BC USDA SCS A-19 VR FRS 2.86	33° 19' 51.68917"N	111° 31' 51.23273"W	0.0190	1483.985	0.0295	848187.012	817823.540	1580.313	0° 12' 43"	0.999915896	0.999929160	0.999845062
A-20	CCF * 2 BC USDA SCS A-20 VR FRS 2.86	33° 20' 00.44994"N	111° 31' 56.70216"W	0.0175	1484.212	0.0310	849070.735	817356.245	1580.538	0° 12' 40"	0.999915770	0.999929149	0.999844925
A-21	CCF * 2 BC USDA SCS A-21 VR FRS 2.86	33° 20' 09.20777"N	111° 32' 02.18495"W	0.0210	1484.276	0.0355	849954.164	816887.844	1580.599	0° 12' 37"	0.999915644	0.999929146	0.999844796
A-22	CCF * 2 BC USDA SCS A-22 VR FRS 2.86	33° 20' 17.96967"N	111° 32' 07.68419"W	0.0190	1483.916	0.0310	850838.007	816418.072	1580.238	0° 12' 34"	0.999915519	0.999929163	0.999844688
A-23	CCF * 2 BC USDA SCS A-23 VR FRS 2.86	33° 20' 26.73258"N	111° 32' 13.16658"W	0.0185	1483.921	0.0290	851721.963	815949.754	1580.241	0° 12' 31"	0.999915394	0.999929163	0.999844563
A-24	CCF * 2 BC USDA SCS A-24 VR FRS 2.86	33° 20' 35.46516"N	111° 32' 18.61305"W	0.0195	1484.257	0.0285	852602.872	815484.521	1580.576	0° 12' 28"	0.999915271	0.999929147	0.999844424
A-25	CCF * 2 BC USDA SCS A-25 VR FRS 2.86	33° 20' 44.07674"N	111° 32' 24.49360"W	0.0220	1483.781	0.0280	853471.426	814982.535	1580.099	0° 12' 25"	0.999915138	0.999929170	0.999844314
A-26	CCF * 2 BC USDA SCS A-26 VR FRS 2.86	33° 20' 52.62386"N	111° 32' 30.41012"W	0.0225	1483.652	0.0310	854333.462	814477.549	1579.970	0° 12' 22"	0.999915006	0.999929176	0.999844188
A-27	CCF * 2 BC USDA SCS A-27 VR FRS 2.86	33° 21' 01.12166"N	111° 32' 36.28346"W	0.0215	1483.315	0.0340	855190.535	813976.270	1579.634	0° 12' 19"	0.999914875	0.999929192	0.999844072
A-28	CCF * 2 BC USDA SCS A-28 VR FRS 2.86	33° 21' 07.17743"N	111° 32' 27.35254"W	0.0215	1483.451	0.0365	855805.305	814731.604	1579.749	0° 12' 24"	0.999915072	0.999929186	0.999844264
B-1	CCF * 2 BC USDA SCS B-1 VR FRS 2.86	33° 17' 11.08855"N	111° 30' 40.72732"W	0.0245	1476.645	0.0420	831978.108	823868.346	1573.118	0° 13' 21"	0.999917569	0.999929510	0.999847085
B-2	CCF * 2 BC USDA SCS B-2 VR FRS 2.86	33° 17' 11.62074"N	111° 30' 51.59666"W	0.0235	1470.567	0.0365	833919.427	822159.883	1566.675	0° 13' 15"	0.999917308	0.999929800	0.999847114
B-4	CCF * 2 BC USDA SCS B-4 VR FRS 2.86	33° 17' 30.36155"N	111° 31' 00.76643"W	0.0215	1470.198	0.0305	834840.820	821774.809	1565.391	0° 13' 10"	0.999917569	0.999929510	0.999847085
B-5	CCF * 2 BC USDA SCS B-5 VR FRS 2.86	33° 17' 39.49257"N	111° 31' 05.26166"W	0.0290	1468.920	0.0410	834840.820	821774.809	1565.391	0° 13' 8"	0.999916980	0.999929879	0.999846865
B-6	CCF * 2 BC USDA SCS B-6 VR FRS 2.86	33° 17' 48.64790"N	111° 31' 09.74673"W	0.0280	1468.438	0.0425	835764.678	821390.610	1564.901	0° 13' 5"	0.999916873	0.999929902	0.999846781
B-7	CCF * 2 BC USDA SCS B-7 VR FRS 2.86	33° 17' 57.78594"N	111° 31' 14.24016"W	0.0225	1468.260	0.0430	836686.790	821005.730	1564.716	0° 13' 3"	0.999916766	0.999929910	0.999846682
B-8	CCF * 2 BC USDA SCS B-8 VR FRS 2.86	33° 18' 06.96111"N	111° 31' 18.70007"W	0.0265	1469.927	0.0610	837612.671	820623.701	1566.375	0° 13' 0"	0.999916661	0.999929831	0.999846497
B-9	CCF * 2 BC USDA SCS B-9 VR FRS 2.86	33° 18' 16.39601"N	111° 31' 22.40263"W	0.0215	1473.110	0.0415	838565.050	820305.870	1569.549	0° 12' 58"	0.999916573	0.999929679	0.999846258
B-10	CCF * 2 BC USDA SCS B-10 VR FRS 2.86	33° 18' 24.21385"N	111° 31' 24.02565"W	0.0300	1469.817	0.0515	839354.664	820165.152	1566.246	0° 12' 58"	0.999916534	0.999929836	0.999846376
B-11	CCF * 2 BC USDA SCS B-11 VR FRS 2.86	33° 18' 35.88875"N	111° 31' 26.40232"W	0.0290	1467.180	0.0435	840533.863	819959.015	1563.591	0° 12' 56"	0.999916477	0.999929962	0.999846445
B-12	CCF * 2 BC USDA SCS B-12 VR FRS 2.86	33° 18' 45.44482"N	111° 31' 28.24877"W	0.0300	1468.731	0.0397	841499.087	819798.693	1565.129	0° 12' 55"	0.999916433	0.999929888	0.999846327
B-13	CCF * 2 BC USDA SCS B-13 VR FRS 2.86	33° 18' 55.27501"N	111° 31' 30.87875"W	0.0277	1469.281	0.0370	842491.768	819571.788	1565.667	0° 12' 54"	0.999916371	0.999929861	0.999846238
B-14	CCF * 2 BC USDA SCS B-14 VR FRS 2.86	33° 19' 04.90623"N	111° 31' 33.56520"W	0.0205	1468.641	0.0335	843464.322	819340.181	1565.015	0° 12' 53"	0.999916308	0.999929892	0.999846206
B-15	CCF * 2 BC USDA SCS B-15 VR FRS 2.86	33° 19' 14.55057"N	111° 31' 36.19147"W	0.0180	1469.871	0.0310	844438.211	819113.685	1566.236	0° 12' 51"	0.999916246	0.999929833	0.999846085
B-16	CCF * 2 BC USDA SCS B-16 VR FRS 2.86	33° 19' 20.98421"N	111° 31' 37.95426"W	0.0210	1470.095	0.0370	845412.754	818885.691	1566.558	0° 12' 50"	0.999916205	0.999929822	0.999846033
B-17	CCF * 2 BC USDA SCS B-17 VR FRS 2.86	33° 19' 32.71325"N	111° 31' 41.19248"W	0.0205	1469.670	0.0360	846272.311	818682.509	1566.010	0° 12' 49"	0.999916129	0.999929843	0.999845978
B-18	CCF * 2 BC USDA SCS B-18 VR FRS 2.86	33° 19' 42.78756"N	111° 31' 46.12255"W	0.0220	1471.089	0.0347	847288.948	818260.432	1567.422	0° 12' 46"	0.999916014	0.999929775	0.999845795
B-19	CCF * 2 BC USDA SCS B-19 VR FRS 2.86	33° 19' 51.55118"N	111° 31' 51.59499"W	0.0195	1469.662	0.0300	848172.953	817792.857	1565.991	0° 12' 43"	0.999915888	0.999929844	0.999845737
B-20	CCF * 2 BC USDA SCS B-20 VR FRS 2.86	33° 20' 00.31585"N	111° 31' 57.01490"W	0.0260	1470.892	0.0405	849057.085	817329.763	1567.219	0° 12' 40"	0.999915763	0.999929785	0.999845554
B-21	CCF * 2 BC USDA SCS B-21 VR FRS 2.86	33° 20' 09.06769"N	111° 32' 02.51047"W	0.0170	1470.770	0.0300	849939.906	816860.281	1567.094	0° 12' 37"	0.999915637	0.999929791	0.999845434
B-22	CCF * 2 BC USDA SCS B-22 VR FRS 2.86	33° 20' 17.82289"N	111° 32' 08.01820"W	0.0175	1469.668	0.0285	850823.069	816389.791	1565.991	0° 12' 34"	0.999915511	0.999929843	0.999845360
B-23	CCF * 2 BC USDA SCS B-23 VR FRS 2.86	33° 20' 26.57775"N	111° 32' 13.52422"W	0.0180	1468.520	0.0295	851706.205	815919.473	1564.841	0° 12' 31"	0.999915386	0.999929898	0.999845290

A TEAM OBSERVED POINT VALUES 2007

Point Name	Feature Code	NAD83 (1992)		Horizontal Precision	GRS(80) Ellipsoid Height (Int. Ft.)	Vertical Precision	NAD83 (1992)		NAVD 88	CONVERGENCE	GRID SCALE FACTOR	ELEV. SCALE FACTOR	COMBINED SCALE FACTOR
		Latitude	Longitude				Northing (Int. Ft.)	Easting (Int. Ft.)	Elevation (Int. Ft.)				
SUBSIDENCE CAPS													
VINEYARD FRS													
B-24	CCF * 2 BC USDA SCS B-24 VR FRS 2.86	33° 20' 35.29479"N	111° 32' 18.99022"W	0.0200	1466.747	0.0300	852585.538	815452.588	1563.067	0° 12' 28"	0.999915263	0.999929982	0.999845251
B-25	CCF * 2 BC USDA SCS B-25 VR FRS 2.86	33° 20' 43.91978"N	111° 32' 24.82419"W	0.0215	1469.176	0.0290	853455.461	814954.549	1565.496	0° 12' 25"	0.999915131	0.999929867	0.999845004
B-26	CCF * 2 BC USDA SCS B-26 VR FRS 2.86	33° 20' 52.46217"N	111° 32' 30.75685"W	0.0240	1467.984	0.0320	854317.014	814448.197	1564.303	0° 12' 22"	0.999914998	0.999929924	0.999844928
B-27	CCF * 2 BC USDA SCS B-27 VR FRS 2.86	33° 21' 00.99533"N	111° 32' 36.61998"W	0.0210	1467.739	0.0320	855177.664	813947.772	1564.059	0° 12' 19"	0.999914867	0.999929935	0.999844808
B-28	CCF * 2 BC USDA SCS B-28 VR FRS 2.86	33° 21' 07.36645"N	111° 32' 27.50134"W	0.0243	1474.179	0.0445	855824.363	814718.914	1570.476	0° 12' 24"	0.999915069	0.999929628	0.999844703

SECTION 2.1.1.D

SEPTEMBER 2008 PRIMARY & SECONDARY MONUMENTS

A TEAM OBSERVED POINT VALUES 2008

Point Name	Feature Code	NAD83 (1992) Latitude	NAD83 (1992) Longitude	Horizontal Precision	GRS(80) Ellipsoid Height (Int. Ft.)	Vertical Precision	NAD83 (1992) Northing (Int. Ft.)	NAD83 (1992) Easting (Int. Ft.)	NAVD 88 Elevation (Int. Ft.)	CONVERGENCE	GRID SCALE FACTOR	ELEV. SCALE FACTOR	COMBINED SCALE FACTOR
CONTROL													
2AQ2	NGS 'B' STATION BEDROCK (GDACS CONTROL)	33°22'46.99368"N	111°29'05.41099"W	FIXED	1881.168	FIXED	865960.015	831818.595	1976.911	0°14'15"	0.999919896	0.999910200	0.999830100
A365	USCGS BRASS CAP IN BEDROCK 1967	33°26'55.04154"N	111°40'27.33851"W	FIXED	1457.789	FIXED	890842.813	773937.170	1554.278	0°08'01"	0.999906259	0.999930410	0.999836680
L521	NGS VERTICAL CONTROL DISK 1994	33°09'56.22283"N	112°00'31.58204"W	FIXED	1045.961	FIXED	787800.003	671815.492	1144.532	-0°03'01"	0.999900910	0.999950070	0.999850980
POSTEN	USCGS BRASS CAP IN BEDROCK 1935	33°03'18.71576"N	111°24'32.11406"W	FIXED	1652.976	FIXED	747990.000	855565.772	1749.414	0°16'37"	0.999927713	0.999921090	0.999848810
1AO1	MCDOT STAINLESS STEEL ROD 1999	33°22'46.53912"N	111°34'51.05460"W	0.0004	1454.321	0.0051	865806.049	802510.359	1550.661	0°11'05"	0.999912032	0.999930580	0.999842610
2BP2	MCDOT STAINLESS STEEL ROD 1999	33°20'10.60774"N	111°32'02.83524"W	0.0011	1484.961	0.0075	850095.454	816832.157	1581.153	0°12'37"	0.999915630	0.999929110	0.999844750
2CO1	9/16" STAINLESS ROD DRIVEN TO REFUSAL	33°17'29.63607"N	111°34'59.36546"W	0.0012	1345.681	0.0084	833774.967	801908.106	1442.463	0°10'59"	0.999911892	0.999935760	0.999847660
2CQ2	MCDOT STAINLESS STEEL ROD 1999	33°17'21.67235"N	111°30'23.96080"W	0.0011	1506.977	0.0064	833053.347	825287.358	1603.264	0°13'30"	0.999917974	0.999928060	0.999846040
DONEY	ADOT BRASS CAP ON ROCK OUTCROP 1975	33°16'03.80855"N	111°20'17.12833"W	0.0013	1991.465	0.0083	825427.666	876839.977	2086.703	0°19'03"	0.999935809	0.999904940	0.999840750
G474	NGS BRASS CAP ON ROCK OUTCROP 1981	33°24'34.30756"N	111°32'00.12521"W	0.0018	1652.034	0.0115	876748.180	816963.985	1747.999	0°12'40"	0.999915665	0.999921140	0.999836810
HILL	ADOT BRASS CAP IN BEDROCK 1974	33°21'05.76183"N	111°27'37.96426"W	0.0012	1737.310	0.0088	855760.198	839278.342	1832.918	0°15'03"	0.999922212	0.999917070	0.999839290
VINE RM1	ADOT BRASS CAP IN CONCRETE 1975	33°21'56.14891"N	111°33'39.20713"W	0.0035	1496.146	0.0249	860733.397	808619.963	1592.393	0°11'44"	0.999913509	0.999928580	0.999842090
69F1	ADOT HWY DIV 3IN ACF VINE RM1 1975	33°22'05.73347"N	111°33'40.70588"W	0.0010	1477.683	0.0059	861701.663	808489.553	1573.924	0°11'44"	0.999913477	0.999929460	0.999842940
GPS ROCKBOLT MONUMENTATION													
POWERLINE FRS													
RB 1	ROCKBOLT POWERLINE 127+50	33°22'12.38748"N	111°33'40.22447"W	0.0010	1479.026	0.0074	862374.315	808528.084	1575.262	0°11'44"	0.999913487	0.999929400	0.999842890
RB 2	ROCKBOLT POWERLINE 127+50	33°22'12.40443"N	111°33'39.87125"W	0.0020	1493.777	0.0137	862376.131	808558.032	1590.012	0°11'44"	0.999913494	0.999928690	0.999842190
RB 3	ROCKBOLT POWERLINE 122+50	33°22'07.70513"N	111°33'40.22223"W	0.0020	1476.986	0.0154	861901.076	808529.889	1573.226	0°11'44"	0.999913487	0.999929490	0.999842990
RB 4	ROCKBOLT POWERLINE 122+50	33°22'07.70067"N	111°33'39.79498"W	0.0020	1494.054	0.0130	861900.749	808566.124	1590.293	0°11'44"	0.999913496	0.999928680	0.999842180
RB 5	ROCKBOLT POWERLINE 117+50	33°22'02.62667"N	111°33'40.19645"W	0.0020	1474.539	0.0133	861387.810	808533.827	1570.783	0°11'44"	0.999913488	0.999929610	0.999843100
RB 6	ROCKBOLT POWERLINE 117+50	33°22'02.60310"N	111°33'39.71087"W	0.0020	1494.638	0.0115	861385.568	808575.016	1590.880	0°11'44"	0.999913498	0.999928650	0.999842160
RB 7	ROCKBOLT POWERLINE 112+50	33°21'57.69391"N	111°33'40.21850"W	0.0020	1471.473	0.0141	860889.255	808533.659	1567.721	0°11'44"	0.999913488	0.999929760	0.999843250
RB 8	ROCKBOLT POWERLINE 112+50	33°21'57.68226"N	111°33'39.60112"W	0.0020	1495.115	0.0142	860888.257	808586.020	1591.361	0°11'44"	0.999913501	0.999928630	0.999842140
RB 9	ROCKBOLT POWERLINE 107+50	33°21'54.08286"N	111°33'35.89568"W	0.0028	1471.035	0.0211	860525.544	808901.512	1567.278	0°11'46"	0.999913580	0.999929780	0.999843360
RB 10	ROCKBOLT POWERLINE 107+50	33°21'54.48674"N	111°33'35.64469"W	0.0010	1494.598	0.0073	860566.437	808922.659	1590.840	0°11'46"	0.999913585	0.999928650	0.999842240
RB 11	ROCKBOLT POWERLINE 102+50	33°21'52.00772"N	111°33'30.55783"W	0.0010	1469.536	0.0068	860317.365	809354.925	1565.772	0°11'49"	0.999913693	0.999929850	0.999843550
RB 12	ROCKBOLT POWERLINE 102+50	33°21'52.44560"N	111°33'30.26897"W	0.0010	1494.903	0.0075	860361.705	809379.271	1591.138	0°11'49"	0.999913699	0.999928640	0.999842340
VINEYARD FRS													
RB 13	ROCKBOLT VINEYARD 310+00	33°20'26.50478"N	111°32'13.48992"W	0.0010	1469.491	0.0065	851698.840	815922.409	1565.682	0°12'31"	0.999915387	0.999929850	0.999845240
RB 14	ROCKBOLT VINEYARD 305+00	33°20'22.13776"N	111°32'10.71930"W	0.0010	1470.669	0.0053	851258.329	816159.056	1566.861	0°12'33"	0.999915450	0.999929800	0.999845250
RB15	ROCKBOLT VINEYARD 300+00	33°20'17.76553"N	111°32'07.97325"W	0.0010	1470.800	0.0057	850817.285	816393.625	1566.993	0°12'34"	0.999915512	0.999929790	0.999845310
RB 16	ROCKBOLT VINEYARD 295+00	33°20'13.38066"N	111°32'05.23338"W	0.0010	1472.378	0.0073	850374.963	816627.682	1568.571	0°12'36"	0.999915575	0.999929710	0.999845290
RB 17	ROCKBOLT VINEYARD 290+00	33°20'09.02408"N	111°32'02.44272"W	0.0010	1472.178	0.0072	849935.519	816866.045	1568.372	0°12'37"	0.999915639	0.999929720	0.999845370
RB 18	ROCKBOLT VINEYARD 285+00	33°20'04.67100"N	111°31'59.71804"W	0.0018	1472.711	0.0118	849496.409	817098.813	1568.906	0°12'39"	0.999915701	0.999929700	0.999845400
RB19	ROCKBOLT VINEYARD 280+00	33°20'00.29557"N	111°31'56.97441"W	0.0018	1472.458	0.0118	849055.049	817333.206	1568.654	0°12'40"	0.999915764	0.999929710	0.999845480
SUBSIDENCE CAPS													
A-10	US DEPARTMENT OF AGRICULTURE BRASS CAP	33°21'55.53043"N	111°33'38.30826"W	0.0010	1494.979	0.0073	860671.148	808696.407	1591.225	0°11'45"	0.999913528	0.999928630	0.999842170
A-11	US DEPARTMENT OF AGRICULTURE BRASS CAP	33°22'04.98521"N	111°33'39.73177"W	0.0010	1493.306	0.0070	861626.319	808572.421	1589.547	0°11'44"	0.999913498	0.999928710	0.999842220
B-10	US DEPARTMENT OF AGRICULTURE BRASS CAP	33°21'55.04538"N	111°33'38.57651"W	0.0010	1469.466	0.0073	860622.047	808673.825	1565.712	0°11'45"	0.999913523	0.999929850	0.999843380
B-11	US DEPARTMENT OF AGRICULTURE BRASS CAP	33°22'04.97704"N	111°33'40.20312"W	0.0010	1474.638	0.0060	861625.357	808532.451	1570.880	0°11'44"	0.999913488	0.999929610	0.999843100

SECTION 2.1.2

STATIC MONUMENTS COORDINATE COMPARISON REPORTS

SECTION 2.1.2.A

SEPTEMBER 2008 VS. JUNE 2007

SEPTEMBER 2008 VS. JUNE 2007 COORDINATE COMPARISON REPORT

A TEAM OBSERVED POINT VALUES 2008										DIFFERENCES		
Point Name	Feature Code	NAD83 (1992)		Horizontal Precision	GRS(80) Ellipsoid Height (Int. Ft.)	Vertical Precision	NAD83 (1992)		NAVD 88	A TEAM VALUE - 2007 VALUE		
		Latitude	Longitude				Northing (Int. Ft.)	Easting (Int. Ft.)	Elevation (Int. Ft.)	DELTA NORTH	DELTA EAST	DELTA ELEVATION
CONTROL												
2AQ2	NGS 'B' STATION BEDROCK (GDACS CONTROL)	33°22'46.99368"N	111°29'05.41099"W	FIXED	1881.168	FIXED	865960.0150	831818.5950	1976.911	0.031	0.010	-0.130
A365	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°26'55.04154"N	111°40'27.33851"W	FIXED	1457.789	FIXED	890842.8130	773937.1700	1554.278	N/A	N/A	N/A
L521	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°09'56.22283"N	112°00'31.58204"W	FIXED	1045.961	FIXED	787800.0030	671815.4920	1144.532	N/A	N/A	N/A
POSTEN	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°03'18.71576"N	111°24'32.11406"W	FIXED	1652.976	FIXED	747990.0000	855565.7720	1749.414	N/A	N/A	N/A
1AO1	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°22'46.53912"N	111°34'51.05460"W	0.0004	1454.321	0.0051	865806.0490	802510.3590	1550.661	0.012	-0.010	-0.137
2BP2	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°20'10.60774"N	111°32'02.83524"W	0.0011	1484.961	0.0075	850095.4540	816832.1570	1581.153	-0.030	0.043	-0.069
2CO1	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°17'29.63607"N	111°34'59.36546"W	0.0012	1345.681	0.0084	833774.9670	801908.1060	1442.463	-0.009	0.003	-0.053
2CQ2	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°17'21.67235"N	111°30'23.96080"W	0.0011	1506.977	0.0064	833053.3470	825287.3580	1603.264	-0.076	0.000	0.006
DONEY	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°16'03.80855"N	111°20'17.12833"W	0.0013	1991.465	0.0083	825427.6660	876839.9770	2086.703	N/A	N/A	N/A
G474	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°24'34.30756"N	111°32'00.12521"W	0.0018	1652.034	0.0115	876748.1800	816963.9850	1747.999	N/A	N/A	N/A
HILL	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°21'05.76183"N	111°27'37.96426"W	0.0012	1737.310	0.0088	855760.1980	839278.3420	1832.918	N/A	N/A	N/A
VINE RM1	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°21'56.14891"N	111°33'39.20713"W	0.0035	1496.146	0.0249	860733.3970	808619.9630	1592.393	0.042	-0.015	-0.112
69F1	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°22'05.73347"N	111°33'40.70588"W	0.0010	1477.683	0.0059	861701.6630	808489.5530	1573.924	N/A	N/A	N/A
GPS ROCKBOLT MONUMENTATION												
POWERLINE FRS												
RB 1	GPS 11 "ROCKBOLT POWERLINE 127+50"	33°22'12.38748"N	111°33'40.22447"W	0.0010	1479.026	0.0074	862374.3150	808528.0840	1575.262	-0.010	-0.061	-0.157
RB 2	GPS 12 "ROCKBOLT POWERLINE 127+50"	33°22'12.40443"N	111°33'39.87125"W	0.0020	1493.777	0.0137	862376.1310	808558.0320	1590.012	0.018	-0.059	-0.165
RB 3	GPS 09 "ROCKBOLT POWERLINE 122+50"	33°22'07.70513"N	111°33'40.22223"W	0.0020	1476.986	0.0154	861901.0760	808529.8890	1573.226	0.003	-0.043	-0.129
RB 4	GPS 10 "ROCKBOLT POWERLINE 122+50"	33°22'07.70067"N	111°33'39.79498"W	0.0020	1494.054	0.0130	861900.7490	808566.1240	1590.293	0.011	-0.044	-0.094
RB 5	GPS 07 "ROCKBOLT POWERLINE 117+50"	33°22'02.62667"N	111°33'40.19645"W	0.0020	1474.539	0.0133	861387.8100	808533.8270	1570.783	0.041	-0.059	-0.153
RB 6	GPS 08 "ROCKBOLT POWERLINE 117+50"	33°22'02.60310"N	111°33'39.71087"W	0.0020	1494.638	0.0115	861385.5680	808575.0160	1590.880	0.048	-0.028	-0.191
RB 7	GPS 05 "ROCKBOLT POWERLINE 112+50"	33°21'57.69391"N	111°33'40.21850"W	0.0020	1471.473	0.0141	860889.2550	808533.6590	1567.721	0.015	-0.023	-0.153
RB 8	GPS 06 "ROCKBOLT POWERLINE 112+50"	33°21'57.68226"N	111°33'39.60112"W	0.0020	1495.115	0.0142	860888.2570	808586.0200	1591.361	0.044	-0.056	-0.176
RB 9	GPS 03 "ROCKBOLT POWERLINE 107+50"	33°21'54.08286"N	111°33'35.89568"W	0.0028	1471.035	0.0211	860525.5440	808901.5120	1567.278	0.009	-0.073	-0.116
RB 10	GPS 04 "ROCKBOLT POWERLINE 107+50"	33°21'54.48674"N	111°33'35.64469"W	0.0010	1494.598	0.0073	860566.4370	808922.6590	1590.840	-0.020	-0.024	-0.137
RB 11	GPS 01 "ROCKBOLT POWERLINE 102+50"	33°21'52.00772"N	111°33'30.55783"W	0.0010	1469.536	0.0068	860317.3650	809354.9250	1565.772	0.033	-0.017	-0.099
RB 12	GPS 02 "ROCKBOLT POWERLINE 102+50"	33°21'52.44560"N	111°33'30.26897"W	0.0010	1494.903	0.0075	860361.7050	809379.2710	1591.138	-0.005	-0.037	-0.142
VINEYARD FRS												
RB 13	GPS 07 "ROCKBOLT VINEYARD 310+00"	33°20'26.50478"N	111°32'13.48992"W	0.0010	1469.491	0.0065	851698.8400	815922.4090	1565.682	0.049	-0.009	-0.137
RB 14	GPS 06 "ROCKBOLT VINEYARD 305+00"	33°20'22.13776"N	111°32'10.71930"W	0.0010	1470.669	0.0053	851258.3290	816159.0560	1566.861	0.022	-0.028	-0.139
RB15	GPS 05 "ROCKBOLT VINEYARD 300+00"	33°20'17.76553"N	111°32'07.97325"W	0.0010	1470.800	0.0057	850817.2850	816393.6250	1566.993	0.008	-0.018	-0.089
RB 16	GPS 04 "ROCKBOLT VINEYARD 295+00"	33°20'13.38066"N	111°32'05.23338"W	0.0010	1472.378	0.0073	850374.9630	816627.6820	1568.571	0.022	-0.025	-0.147
RB 17	GPS 03 "ROCKBOLT VINEYARD 290+00"	33°20'09.02408"N	111°32'02.44272"W	0.0010	1472.178	0.0072	849935.5190	816866.0450	1568.372	0.000	0.006	-0.130
RB 18	GPS 02 "ROCKBOLT VINEYARD 285+00"	33°20'04.67100"N	111°31'59.71804"W	0.0018	1472.711	0.0118	849496.4090	817098.8130	1568.906	0.021	-0.002	-0.104
RB19	GPS 01 "ROCKBOLT VINEYARD 280+00"	33°20'00.29557"N	111°31'56.97441"W	0.0018	1472.458	0.0118	849055.0490	817333.2060	1568.654	0.009	-0.036	-0.109
SUBSIDENCE CAPS												
A-10	US DEPARTMENT OF AGRICULTURE BRASS CAP	33°21'55.53043"N	111°33'38.30826"W	0.0010	1494.979	0.0075	860671.1480	808696.4070	1591.225	0.080	-0.058	-0.192
A-11	US DEPARTMENT OF AGRICULTURE BRASS CAP	33°22'04.98521"N	111°33'39.73177"W	0.0010	1493.306	0.0073	861626.3190	808572.4210	1589.547	0.036	-0.003	-0.107
B-10	US DEPARTMENT OF AGRICULTURE BRASS CAP	33°21'55.04538"N	111°33'38.57651"W	0.0010	1469.466	0.0071	860622.0470	808673.8250	1565.712	0.036	-0.059	-0.073
B-11	US DEPARTMENT OF AGRICULTURE BRASS CAP	33°22'04.97704"N	111°33'40.20312"W	0.0010	1474.638	0.0063	861625.3570	808532.4510	1570.880	0.044	-0.006	-0.180

SECTION 2.1.2.B

SEPTEMBER 2008 VS. JUNE 2006

SEPTEMBER 2008 VS. JUNE 2006 COORDINATE COMPARISON REPORT

A TEAM OBSERVED POINT VALUES 2008										DIFFERENCES		
Point Name	Feature Code	NAD83 (1992)		Horizontal Precision	GRS(80) Ellipsoid Height (Int. Ft.)	Vertical Precision	NAD83 (1992)		NAVD 88	A TEAM VALUE - 2006 VALUE		
		Latitude	Longitude				Northing (Int. Ft.)	Easting (Int. Ft.)	Elevation (Int. Ft.)	DELTA NORTH	DELTA EAST	DELTA ELEVATION
CONTROL												
2AQ2	NGS 'B' STATION BEDROCK (GDACS CONTROL)	33°22'46.99368"N	111°29'05.41099"W	FIXED	1881.168	FIXED	865960.0150	831818.5950	1976.911	0.012	-0.007	-0.103
A365	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°26'55.04154"N	111°40'27.33851"W	FIXED	1457.789	FIXED	890842.8130	773937.1700	1554.278	N/A	N/A	N/A
L521	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°09'56.22283"N	112°00'31.58204"W	FIXED	1045.961	FIXED	787800.0030	671815.4920	1144.532	N/A	N/A	N/A
POSTEN	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°03'18.71576"N	111°24'32.11406"W	FIXED	1652.976	FIXED	747990.0000	855565.7720	1749.414	N/A	N/A	N/A
1AO1	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°22'46.53912"N	111°34'51.05460"W	0.0004	1454.321	0.0051	865806.0490	802510.3590	1550.661	N/A	N/A	N/A
2BP2	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°20'10.60774"N	111°32'02.83524"W	0.0011	1484.961	0.0075	850095.4540	816832.1570	1581.153	0.013	-0.028	-0.131
2CO1	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°17'29.63607"N	111°34'59.36546"W	0.0012	1345.681	0.0084	833774.9670	801908.1060	1442.463	0.008	0.025	-0.055
2CQ2	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°17'21.67235"N	111°30'23.96080"W	0.0011	1506.977	0.0064	833053.3470	825287.3580	1603.264	-0.044	0.006	-0.085
DONEY	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°16'03.80855"N	111°20'17.12833"W	0.0013	1991.465	0.0083	825427.6660	876839.9770	2086.703	N/A	N/A	N/A
G474	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°24'34.30756"N	111°32'00.12521"W	0.0018	1652.034	0.0115	876748.1800	816963.9850	1747.999	N/A	N/A	N/A
HILL	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°21'05.76183"N	111°27'37.96426"W	0.0012	1737.310	0.0088	855760.1980	839278.3420	1832.918	N/A	N/A	N/A
VINE RM1	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°21'56.14891"N	111°33'39.20713"W	0.0035	1496.146	0.0249	860733.3970	808619.9630	1592.393	N/A	N/A	N/A
69F1	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°22'05.73347"N	111°33'40.70588"W	0.0010	1477.683	0.0059	861701.6630	808489.5530	1573.924	N/A	N/A	N/A
GPS ROCKBOLT MONUMENTATION												
POWERLINE FRS												
RB 1	GPS 11 "ROCKBOLT POWERLINE 127+50"	33°22'12.38748"N	111°33'40.22447"W	0.0010	1479.026	0.0074	862374.3150	808528.0840	1575.262	N/A	N/A	N/A
RB 2	GPS 12 "ROCKBOLT POWERLINE 127+50"	33°22'12.40443"N	111°33'39.87125"W	0.0020	1493.777	0.0137	862376.1310	808558.0320	1590.012	N/A	N/A	N/A
RB 3	GPS 09 "ROCKBOLT POWERLINE 122+50"	33°22'07.70513"N	111°33'40.22223"W	0.0020	1476.986	0.0154	861901.0760	808529.8890	1573.226	N/A	N/A	N/A
RB 4	GPS 10 "ROCKBOLT POWERLINE 122+50"	33°22'07.70067"N	111°33'39.79498"W	0.0020	1494.054	0.0130	861900.7490	808566.1240	1590.293	N/A	N/A	N/A
RB 5	GPS 07 "ROCKBOLT POWERLINE 117+50"	33°22'02.62667"N	111°33'40.19645"W	0.0020	1474.539	0.0133	861387.8100	808533.8270	1570.783	N/A	N/A	N/A
RB 6	GPS 08 "ROCKBOLT POWERLINE 117+50"	33°22'02.60310"N	111°33'39.71087"W	0.0020	1494.638	0.0115	861385.5680	808575.0160	1590.880	N/A	N/A	N/A
RB 7	GPS 05 "ROCKBOLT POWERLINE 112+50"	33°21'57.69391"N	111°33'40.21850"W	0.0020	1471.473	0.0141	860889.2550	808533.6590	1567.721	N/A	N/A	N/A
RB 8	GPS 06 "ROCKBOLT POWERLINE 112+50"	33°21'57.68226"N	111°33'39.60112"W	0.0020	1495.115	0.0142	860888.2570	808586.0200	1591.361	N/A	N/A	N/A
RB 9	GPS 03 "ROCKBOLT POWERLINE 107+50"	33°21'54.08286"N	111°33'35.89568"W	0.0028	1471.035	0.0211	860525.5440	808901.5120	1567.278	N/A	N/A	N/A
RB 10	GPS 04 "ROCKBOLT POWERLINE 107+50"	33°21'54.48674"N	111°33'35.64469"W	0.0010	1494.598	0.0073	860566.4370	808922.6590	1590.840	N/A	N/A	N/A
RB 11	GPS 01 "ROCKBOLT POWERLINE 102+50"	33°21'52.00772"N	111°33'30.55783"W	0.0010	1469.536	0.0068	860317.3650	809354.9250	1565.772	N/A	N/A	N/A
RB 12	GPS 02 "ROCKBOLT POWERLINE 102+50"	33°21'52.44560"N	111°33'30.26897"W	0.0010	1494.903	0.0075	860361.7050	809379.2710	1591.138	N/A	N/A	N/A
VINEYARD FRS												
RB 13	GPS 07 "ROCKBOLT VINEYARD 310+00"	33°20'26.50478"N	111°32'13.48992"W	0.0010	1469.491	0.0065	851698.8400	815922.4090	1565.682	N/A	N/A	N/A
RB 14	GPS 06 "ROCKBOLT VINEYARD 305+00"	33°20'22.13776"N	111°32'10.71930"W	0.0010	1470.669	0.0053	851258.3290	816159.0560	1566.861	N/A	N/A	N/A
RB15	GPS 05 "ROCKBOLT VINEYARD 300+00"	33°20'17.76553"N	111°32'07.97325"W	0.0010	1470.800	0.0057	850817.2850	816393.6250	1566.993	N/A	N/A	N/A
RB 16	GPS 04 "ROCKBOLT VINEYARD 295+00"	33°20'13.38066"N	111°32'05.23338"W	0.0010	1472.378	0.0073	850374.9630	816627.6820	1568.571	N/A	N/A	N/A
RB 17	GPS 03 "ROCKBOLT VINEYARD 290+00"	33°20'09.02408"N	111°32'02.44272"W	0.0010	1472.178	0.0072	849935.5190	816866.0450	1568.372	N/A	N/A	N/A
RB 18	GPS 02 "ROCKBOLT VINEYARD 285+00"	33°20'04.67100"N	111°31'59.71804"W	0.0018	1472.711	0.0118	849496.4090	817098.8130	1568.906	N/A	N/A	N/A
RB19	GPS 01 "ROCKBOLT VINEYARD 280+00"	33°20'00.29557"N	111°31'56.97441"W	0.0018	1472.458	0.0118	849055.0490	817333.2060	1568.654	N/A	N/A	N/A
SUBSIDENCE CAPS												
A-10	US DEPARTMENT OF AGRICULTURE BRASS CAP	33°21'55.53043"N	111°33'38.30826"W	0.0010	1494.979	0.0075	860671.1480	808696.4070	1591.225	-0.007	-0.025	-0.111
A-11	US DEPARTMENT OF AGRICULTURE BRASS CAP	33°22'04.98521"N	111°33'39.73177"W	0.0010	1493.306	0.0073	861626.3190	808572.4210	1589.547	0.025	0.011	-0.208
B-10	US DEPARTMENT OF AGRICULTURE BRASS CAP	33°21'55.04538"N	111°33'38.57651"W	0.0010	1469.466	0.0071	860622.0470	808673.8250	1565.712	-0.021	-0.001	-0.119
B-11	US DEPARTMENT OF AGRICULTURE BRASS CAP	33°22'04.97704"N	111°33'40.20312"W	0.0010	1474.638	0.0063	861625.3570	808532.4510	1570.880	0.027	-0.003	-0.132

SECTION 2.1.2.C

SEPTEMBER 2008 VS. ENTRANCO

SEPTEMBER 2008 VS. ENTRANCO COORDINATE COMPARISON REPORT

A TEAM OBSERVED POINT VALUES 2008										DIFFERENCES		
		NAD83 (1992)		Horizontal Precision	GRS(80) Ellipsoid Height (Int. Ft.)	Vertical Precision	NAD83 (1992)		NAVD 88	A TEAM VALUE - ENTRANCO VALUE		
Point Name	Feature Code	Latitude	Longitude				Northing (Int. Ft.)	Easting (Int. Ft.)	Elevation (Int. Ft.)	DELTA NORTH	DELTA EAST	DELTA ELEVATION
CONTROL												
2AQ2	NGS 'B' STATION BEDROCK (GDACS CONTROL)	33°22'46.99368"N	111°29'05.41099"W	FIXED	1881.168	FIXED	865960.0150	831818.5950	1976.911	0.000	0.000	-0.120
A365	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°26'55.04154"N	111°40'27.33851"W	FIXED	1457.789	FIXED	890842.8130	773937.1700	1554.278	N/A	N/A	N/A
L521	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°09'56.22283"N	112°00'31.58204"W	FIXED	1045.961	FIXED	787800.0030	671815.4920	1144.532	N/A	N/A	N/A
POSTEN	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°03'18.71576"N	111°24'32.11406"W	FIXED	1652.976	FIXED	747990.0000	855565.7720	1749.414	N/A	N/A	N/A
1AO1	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°22'46.53912"N	111°34'51.05460"W	0.0004	1454.321	0.0051	865806.0490	802510.3590	1550.661	N/A	N/A	N/A
2BP2	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°20'10.60774"N	111°32'02.83524"W	0.0011	1484.961	0.0075	850095.4540	816832.1570	1581.153	-0.028	-0.019	-0.147
2CO1	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°17'29.63607"N	111°34'59.36546"W	0.0012	1345.681	0.0084	833774.9670	801908.1060	1442.463	N/A	N/A	N/A
2CQ2	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°17'21.67235"N	111°30'23.96080"W	0.0011	1506.977	0.0064	833053.3470	825287.3580	1603.264	-0.024	-0.005	-0.103
DONEY	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°16'03.80855"N	111°20'17.12833"W	0.0013	1991.465	0.0083	825427.6660	876839.9770	2086.703	N/A	N/A	N/A
G474	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°24'34.30756"N	111°32'00.12521"W	0.0018	1652.034	0.0115	876748.1800	816963.9850	1747.999	N/A	N/A	N/A
HILL	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°21'05.76183"N	111°27'37.96426"W	0.0012	1737.310	0.0088	855760.1980	839278.3420	1832.918	N/A	N/A	N/A
VINE RM1	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°21'56.14891"N	111°33'39.20713"W	0.0035	1496.146	0.0249	860733.3970	808619.9630	1592.393	N/A	N/A	N/A
69F1	NGS 3D MON (9/16" STAINLESS ROD DRIVEN TO REFUSAL)	33°22'05.73347"N	111°33'40.70588"W	0.0010	1477.683	0.0059	861701.6630	808489.5530	1573.924	N/A	N/A	N/A
GPS ROCKBOLT MONUMENTATION												
POWERLINE FRS												
RB 1	GPS 11 "ROCKBOLT POWERLINE 127+50"	33°22'12.38748"N	111°33'40.22447"W	0.0010	1479.026	0.0074	862374.3150	808528.0840	1575.262	N/A	N/A	N/A
RB 2	GPS 12 "ROCKBOLT POWERLINE 127+50"	33°22'12.40443"N	111°33'39.87125"W	0.0020	1493.777	0.0137	862376.1310	808558.0320	1590.012	N/A	N/A	N/A
RB 3	GPS 09 "ROCKBOLT POWERLINE 122+50"	33°22'07.70513"N	111°33'40.22223"W	0.0020	1476.986	0.0154	861901.0760	808529.8890	1573.226	N/A	N/A	N/A
RB 4	GPS 10 "ROCKBOLT POWERLINE 122+50"	33°22'07.70067"N	111°33'39.79498"W	0.0020	1494.054	0.0130	861900.7490	808566.1240	1590.293	N/A	N/A	N/A
RB 5	GPS 07 "ROCKBOLT POWERLINE 117+50"	33°22'02.62667"N	111°33'40.19645"W	0.0020	1474.539	0.0133	861387.8100	808533.8270	1570.783	N/A	N/A	N/A
RB 6	GPS 08 "ROCKBOLT POWERLINE 117+50"	33°22'02.60310"N	111°33'39.71087"W	0.0020	1494.638	0.0115	861385.5680	808575.0160	1590.880	N/A	N/A	N/A
RB 7	GPS 05 "ROCKBOLT POWERLINE 112+50"	33°21'57.69391"N	111°33'40.21850"W	0.0020	1471.473	0.0141	860889.2550	808533.6590	1567.721	N/A	N/A	N/A
RB 8	GPS 06 "ROCKBOLT POWERLINE 112+50"	33°21'57.68226"N	111°33'39.60112"W	0.0020	1495.115	0.0142	860888.2570	808586.0200	1591.361	N/A	N/A	N/A
RB 9	GPS 03 "ROCKBOLT POWERLINE 107+50"	33°21'54.08286"N	111°33'35.89568"W	0.0028	1471.035	0.0211	860525.5440	808901.5120	1567.278	N/A	N/A	N/A
RB 10	GPS 04 "ROCKBOLT POWERLINE 107+50"	33°21'54.48674"N	111°33'35.64469"W	0.0010	1494.598	0.0073	860566.4370	808922.6590	1590.840	N/A	N/A	N/A
RB 11	GPS 01 "ROCKBOLT POWERLINE 102+50"	33°21'52.00772"N	111°33'30.55783"W	0.0010	1469.536	0.0068	860317.3650	809354.9250	1565.772	N/A	N/A	N/A
RB 12	GPS 02 "ROCKBOLT POWERLINE 102+50"	33°21'52.44560"N	111°33'30.26897"W	0.0010	1494.903	0.0075	860361.7050	809379.2710	1591.138	N/A	N/A	N/A
VINEYARD FRS												
RB 13	GPS 07 "ROCKBOLT VINEYARD 310+00"	33°20'26.50478"N	111°32'13.48992"W	0.0010	1469.491	0.0065	851698.8400	815922.4090	1565.682	N/A	N/A	N/A
RB 14	GPS 06 "ROCKBOLT VINEYARD 305+00"	33°20'22.13776"N	111°32'10.71930"W	0.0010	1470.669	0.0053	851258.3290	816159.0560	1566.861	N/A	N/A	N/A
RB15	GPS 05 "ROCKBOLT VINEYARD 300+00"	33°20'17.76553"N	111°32'07.97325"W	0.0010	1470.800	0.0057	850817.2850	816393.6250	1566.993	N/A	N/A	N/A
RB 16	GPS 04 "ROCKBOLT VINEYARD 295+00"	33°20'13.38066"N	111°32'05.23338"W	0.0010	1472.378	0.0073	850374.9630	816627.6820	1568.571	N/A	N/A	N/A
RB 17	GPS 03 "ROCKBOLT VINEYARD 290+00"	33°20'09.02408"N	111°32'02.44272"W	0.0010	1472.178	0.0072	849935.5190	816866.0450	1568.372	N/A	N/A	N/A
RB 18	GPS 02 "ROCKBOLT VINEYARD 285+00"	33°20'04.67100"N	111°31'59.71804"W	0.0018	1472.711	0.0118	849496.4090	817098.8130	1568.906	N/A	N/A	N/A
RB19	GPS 01 "ROCKBOLT VINEYARD 280+00"	33°20'00.29557"N	111°31'56.97441"W	0.0018	1472.458	0.0118	849055.0490	817333.2060	1568.654	N/A	N/A	N/A
SUBSIDENCE CAPS												
A-10	US DEPARTMENT OF AGRICULTURE BRASS CAP	33°21'55.53043"N	111°33'38.30826"W	0.0010	1494.979	0.0075	860671.1480	808696.4070	1591.225	-0.001	0.017	-0.092
A-11	US DEPARTMENT OF AGRICULTURE BRASS CAP	33°22'04.98521"N	111°33'39.73177"W	0.0010	1493.306	0.0073	861626.3190	808572.4210	1589.547	0.034	0.051	-0.162
B-10	US DEPARTMENT OF AGRICULTURE BRASS CAP	33°21'55.04538"N	111°33'38.57651"W	0.0010	1469.466	0.0071	860622.0470	808673.8250	1565.712	-0.008	0.039	-0.081
B-11	US DEPARTMENT OF AGRICULTURE BRASS CAP	33°22'04.97704"N	111°33'40.20312"W	0.0010	1474.638	0.0063	861625.3570	808532.4510	1570.880	0.033	0.041	-0.127

SECTION 2.1.3

NGS QUALITY CONTROL DIFFERENCES REPORT

APRIL 2008 McMICKEN DAM SUBSIDENCE SURVEY
REPORT NAME: NGS QUALITY CONTROL DIFFERENCES

Point Number	NAD83 AZSPC Northing (METERS)	NAD83 AZSPC Easting (METERS)	Ortho Height (METERS)	Geoid Height (METERS)	Ellipsoid Height (METERS)	SCALE FACTOR
PRIMARY NETWORK DERIVED VALUES FOR OBSERVED						
DONEY	251590.353	267260.825	636.027	-29.028	606.999	0.99984075
2CQ2	253914.660	251547.587	488.675	-29.348	459.327	0.99984604
G474	267232.845	249010.623	532.790	-29.250	503.540	0.99983681
1AO1	263897.684	244605.158	472.642	-29.365	443.277	0.99984261
2BP2	259109.094	248970.441	481.936	-29.320	452.616	0.99984475
2CO1	254134.610	244421.591	439.663	-29.499	410.164	0.99984766
HILL	260835.708	255812.039	558.673	-29.141	529.532	0.99983929
NGS PUBLISHED VALUES FOR OBSERVED NGS CONTROL						
DONEY	251590.326	267260.856	636.100	-29.070	607.030	0.99984075
2CQ2	253914.651	251547.577	488.710	-29.390	459.320	0.99984604
G 474	267232.854	249010.623	532.801	-29.288	503.513	0.99983681
1AO1	263897.660	244605.161	472.760	-29.410	443.350	0.99984260
2BP2	259109.091	248970.438	482.010	-29.360	452.650	0.99984474
2CO1	254134.596	244421.579	439.700	-29.550	410.150	0.99984766
HILL	260835.637	255812.102	558.600	-29.181	529.419	0.99983930
DIFFERENCES IN METERS BETWEEN PRIMARY DERIVED						
DONEY	0.027	-0.031	-0.073	0.042	-0.031	0.00000000
2CQ2	0.009	0.010	-0.035	0.042	0.007	0.00000000
G 474	-0.009	0.000	-0.011	0.038	0.027	0.00000000
1AO1	0.024	-0.003	-0.118	0.045	-0.073	0.00000001
2BP2	0.003	0.003	-0.074	0.040	-0.034	0.00000001
2CO1	0.014	0.012	-0.037	0.051	0.014	0.00000000
HILL	0.071	-0.063	0.073	0.040	0.113	-0.00000001

NOTE:

THIS SHEET REPRESENTS THE DIFFERENCES BETWEEN THE NGS PUBLISHED VALUES AND PRIMARY NETWORK DERIVED VALUES OF THE CONTROL STATIONS WHICH WERE OBSERVED AND NOT CONSTRAINED IN THE PRIMARY NETWORK.

THIS INFORMATION WAS USED TO ASSESS THE THE NETWORK AND AS QUALITY CONTROL INFORMATION ONLY. THROUGH OUT THE PROJECT ANY OTHER MEASUREMENTS (RTK MONITORING) TAKEN USING THESE CONTROL POINTS, THE PRIMARY NETWORK DERIVED VALUES WERE USED.

SECTION 2.1.4

GPS SESSION TABLE

PRIMARY NETWORK GPS SESSION TABLE

SESSION 1 GPS DAY 255						
STATION	SURVEYOR	FILENAME	TRIPOD	GPS UNIT	START	STOP
L521	C. FISCHER	61262550	ATEAM #6	6126	12:19	19:18
1AO1	J. MARSHALL	60812550	ATEAM #5	6081	12:32	19:45
A365	J. GRAHAM	83412550	C4	4586	12:45	19:51
2CO1	J. MARSHALL	80972550	C2	6490	13:15	19:19
2AQ2	L. SPEAN	89542550	C3	3419	13:20	19:44
G474	J. GRAHAM	60762550	ATEAM #4	6076	13:30	19:15
2BP2	J. MALEK	76622551	ATEAM #1	7662	13:41	19:40
DONEY	H. EPPERSON	12412551	C8	0172	13:43	19:15
HILL	L. SPEAN	89572550	C3	6492	14:07	19:16
POSTEN	J. REED	89272550	ATEAM #3	0267	14:12	19:18
2CQ2	J. MALEK	56782550	ATEAM #2	5678	14:13	19:17

SECONDARY NETWORK GPS SESSION TABLE

SESSION 1 GPS DAY 261						
STATION	SURVEYOR	FILENAME	TRIPOD	GPS UNIT	START	STOP
1AO1	J. MARSHALL	60832610	ATEAM #5	6083	13:35	21:04
2AQ2	L. SPEAN	60762610	ATEAM #4	6076	14:00	20:26
2BP2	J. MALEK	60822610	ATEAM #1	6082	13:00	20:44
2CO1	J. MARSHALL	60812611	ATEAM #6	6081	12:57	21:28
2CQ2	J. MALEK	56782610	ATEAM #2	5678	13:27	20:26
69F1	J. MARSHALL	80972610	C2	6490	15:20	17:49
A11	L. SPEAN	89572611	C3	6492	18:00	21:07
B10	J. MALEK	45802611	C4	4580	18:13	21:00
B11	J. MARSHALL	89542610	C7	3419	17:04	20:26
G474	L. SPEAN	61262610	ATEAM #3	6126	14:33	21:03
RB1	J. MALEK	89552610	C1	8916	15:04	17:47
RB2	L. SPEAN	12412610	C8	0172	15:16	17:46
RB3	J. MALEK	83412610	C4	4580	15:20	17:52
RB4	L. SPEAN	89572610	C3	6492	15:35	17:51
RB5	J. MARSHALL	80972611	C2	6490	17:56	20:35
RB6	L. SPEAN	12412611	C8	0172	18:09	20:46
RB7	J. MALEK	89552611	C1	8916	18:03	20:55

SESSION 2 GPS DAY 262						
STATION	SURVEYOR	FILENAME	TRIPOD	GPS UNIT	START	STOP
1AO1	L. SPEAN	61262620	ATEAM #4	6126	13:17	20:16
2AQ2	J. MARSHALL	89542620	C7	3419	13:26	19:51
2BP2	J. MALEK	56782620	ATEAM #1	5678	13:47	20:06
2CO1	L. SPEAN	60762620	ATEAM #3	6076	14:08	20:39
2CQ2	J. MALEK	60822620	ATEAM #2	6082	14:13	19:47
A10	L. SPEAN	12412621	C8	0172	17:31	19:55
B10	J. MALEK	83412620	C4	4580	15:10	20:17
G474	J. MARSHALL	60812620	ATEAM #6	6081	14:14	20:23
RB10	J. MARSHALL	80972621	C2	6490	17:33	19:49
RB11	J. MARSHALL	80972620	C2	6490	14:53	17:25
RB12	J. MARSHALL	60832620	ATEAM #5	6083	15:15	20:29
RB8	L. SPEAN	12412620	C8	0172	14:53	17:27
RB9	J. MALEK	89552620	C1	8916	15:00	20:21
VINE RM1	L. SPEAN	89572620	C3	6492	15:08	20:02

SESSION 3 GPS DAY 263						
STATION	SURVEYOR	FILENAME	TRIPOD	GPS UNIT	START	STOP
1AO1	J. MARSHALL	60832630	ATEAM #5	6083	13:27	18:16
2AQ2	J. MALEK	83412630	C4	4580	13:11	17:27
2BP2	L. SPEAN	61262630	ATEAM #3	6126	13:37	18:18
2CO1	J. MARSHALL	60812630	ATEAM #6	6081	14:02	18:38
2CQ2	L. SPEAN	60762630	ATEAM #4	6076	14:11	17:33
G474	J. MALEK	60822630	ATEAM #1	6082	13:52	17:54
RB13	J. MARSHALL	89542630	C7	3419	14:52	17:30
RB14	J. MARSHALL	80972630	C2	6490	15:13	17:39
RB15	J. MALEK	56782630	ATEAM #2	5678	14:29	17:53
RB16	J. MALEK	89552630	C1	8916	14:12	18:27
RB17	L. SPEAN	12412630	C8	0172	14:40	18:10
RB18	L. SPEAN	89572630	C3	6492	15:00	18:02
RB19	J. MALEK	87772630	C6	3813	15:07	17:44

SECTION 2.2

PRIMARY NETWORK DATA & TGO REPORTS

SECTION 2.2.1

BASELINE PROCESSING REPORT

Baseline Processing Report

Project : 1714-10-PRMARY

User name John.Marshall
Coordinate System NAD83 ASPCS(1992)
Project Datum NAD 1983
Vertical Datum NAVD 88
Coordinate Units Meters
Distance Units Meters
Height Units Meters

Date & Time 2:20:07 PM 9/30/2008
Zone Arizona Central 0202

Geoid Model GEOID99 (Conus)

Processing Summary

ID	From	To	Baseline Length	Solution Type	Ratio	Reference Variance	RMS
B1	DONEY	2CQ2	15887.388m	Iono free fixed	24.7	0.509	0.009m
B9	DONEY	POSTEN	24481.531m	Iono free fixed	10.0	0.730	0.010m
B11	DONEY	HILL	14718.241m	Iono free fixed	14.5	0.707	0.011m
B2	DONEY	G474	24040.686m	Iono free fixed	12.6	1.432	0.015m
B3	DONEY	1AO1	25787.348m	Iono free fixed	13.2	0.634	0.010m
B4	DONEY	L521	63545.857m	Iono free fixed	11.8	0.597	0.010m
B5	DONEY	2BP2	19779.195m	Iono free fixed	16.0	0.658	0.010m
B7	DONEY	2CO1	22984.942m	Iono free fixed	15.3	0.757	0.012m
B8	DONEY	A365	37172.138m	Iono free fixed	11.9	1.063	0.013m
B10	DONEY	2AQ2	18467.508m	Iono free fixed	11.9	0.778	0.011m
B12	2CQ2	G474	13559.884m	Iono free fixed	11.4	1.686	0.014m
B13	2CQ2	1AO1	12161.594m	Iono free fixed	38.4	0.590	0.008m
B14	2CQ2	L521	48777.087m	Iono free fixed	57.1	0.727	0.010m
B15	2CQ2	2BP2	5799.506m	Iono free fixed	25.0	0.494	0.008m
B17	2CQ2	2CO1	7130.650m	Iono free fixed	4.5	0.608	0.010m
B18	2CQ2	A365	23567.098m	Iono free fixed	19.7	0.954	0.012m
B19	2CQ2	POSTEN	27525.077m	Iono free fixed	21.3	0.676	0.009m
B20	2CQ2	2AQ2	10227.895m	Iono free fixed	19.7	0.628	0.010m
B21	2CQ2	HILL	8130.939m	Iono free fixed	4.9	0.592	0.011m
B28	POSTEN	G474	40977.644m	Iono free fixed	14.2	1.812	0.015m
B36	POSTEN	1AO1	39389.622m	Iono free fixed	37.5	0.938	0.011m
B43	POSTEN	L521	57315.518m	Iono free fixed	41.9	0.930	0.011m
B48	POSTEN	2BP2	33290.923m	Iono free fixed	23.2	0.798	0.010m

ID	From	To	Baseline Length	Solution Type	Ratio	Reference Variance	RMS
B57	POSTEN	2CO1	30845.705m	Iono free fixed	8.8	0.986	0.013m
B60	POSTEN	A365	50156.642m	Iono free fixed	9.5	1.278	0.012m
B63	POSTEN	2AQ2	36684.465m	Iono free fixed	14.7	0.886	0.011m
B64	POSTEN	HILL	33226.544m	Iono free fixed	9.7	0.981	0.012m
B30	HILL	G474	9338.713m	Iono free fixed	3.1	1.283	0.015m
B38	HILL	1AO1	11619.821m	Iono free fixed	12.2	0.687	0.011m
B45	HILL	L521	55094.759m	Iono free fixed	21.9	0.786	0.012m
B50	HILL	2BP2	7057.640m	Iono free fixed	5.3	0.700	0.011m
B59	HILL	2CO1	13218.016m	Iono free fixed	14.3	0.808	0.012m
B62	HILL	A365	22608.931m	Iono free fixed	9.8	1.145	0.013m
B65	HILL	2AQ2	3852.533m	L1 fixed	3.0	2.751	0.007m
B22	G474	1AO1	5526.738m	Iono free fixed	133.6	1.487	0.013m
B23	G474	L521	51896.029m	Iono free fixed	21.2	1.852	0.015m
B24	G474	2BP2	8125.303m	Iono free fixed	81.0	1.467	0.013m
B26	G474	2CO1	13881.372m	Iono free fixed	10.2	1.713	0.017m
B27	G474	A365	13802.668m	Iono free fixed	10.2	1.720	0.017m
B29	G474	2AQ2	5597.110m	Iono free fixed	51.4	1.321	0.015m
B31	1AO1	L521	46399.126m	Iono free fixed	39.2	0.918	0.011m
B32	1AO1	2BP2	6480.703m	Iono free fixed	13.7	0.618	0.009m
B34	1AO1	2CO1	9766.368m	Iono free fixed	72.1	0.647	0.010m
B35	1AO1	A365	11581.315m	Iono free fixed	18.6	1.031	0.013m
B37	1AO1	2AQ2	8935.675m	Iono free fixed	33.6	0.781	0.011m
B39	L521	2BP2	48114.394m	Iono free fixed	27.3	0.925	0.011m
B41	L521	2CO1	42062.021m	Iono free fixed	15.0	0.763	0.012m
B44	L521	2AQ2	54285.976m	Iono free fixed	21.2	0.999	0.014m
B42	L521	A365	44225.842m	Iono free fixed	22.1	1.045	0.013m
B46	2BP2	2CO1	6741.908m	Iono free fixed	109.3	0.634	0.010m
B47	2BP2	A365	18035.929m	Iono free fixed	13.6	1.039	0.013m
B49	2BP2	2AQ2	6654.064m	Iono free fixed	52.6	0.720	0.011m
B56	2CO1	A365	19374.349m	Iono free fixed	14.2	1.165	0.014m
B58	2CO1	2AQ2	13395.337m	Iono free fixed	11.0	0.860	0.013m
B61	A365	2AQ2	19207.026m	Iono free fixed	14.7	1.179	0.013m

SECTION 2.2.2

NETWORK ADJUSTMENT REPORT

Network Adjustment Report

Project : 1714-10 Primary-1992

User name	John.Marshall	**Date & Time**	1:51:22 PM 10/23/2008
Coordinate System	NAD 83 AZSPCS(1992)	**Zone**	Arizona Central 0202
Project Datum	NAD 1983		
Vertical Datum	NAVD 88	**Geoid Model**	GEOID99 (Conus)
Coordinate Units	International feet		
Distance Units	International feet		
Height Units	International feet		

Adjustment Style Settings - ATEAM 95% Confidence Limits

Residual Tolerances

To End Iterations : 0.000033ift
Final Convergence Cutoff : 0.016404ift

Covariance Display

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

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

Set-up Errors

GPS
Error in Height of Antenna : 0.007ift
Centering Error : 0.007ift

Statistical Summary

Successful Adjustment in 1 iteration(s)

Network Reference Factor : 1.07
Chi Square Test (α=95%) : PASS
Degrees of Freedom : 137.00

GPS Observation Statistics

Reference Factor : 1.07
Redundancy Number (r) : 137.00

Individual GPS Observation Statistics

Observation ID	Reference Factor	Redundancy Number
B1	0.33	2.38
B2	0.17	2.54
B3	0.06	2.42
B4	0.81	2.48
B5	0.10	2.43
B7	0.14	2.43
B8	1.34	2.65
B9	1.28	2.48
B10	1.57	2.60
B11	0.07	2.45
B12	0.36	2.56
B13	0.26	2.39
B14	1.16	2.51
B15	0.18	2.32
B17	0.23	2.41
B18	1.06	2.66
B19	1.19	2.48
B20	1.65	2.59
B21	0.11	2.40
B22	0.27	2.49

Observation ID	Reference Factor	Redundancy Number
B23	0.89	2.61
B24	0.18	2.50
B26	0.09	2.57
B27	0.90	2.67
B28	1.01	2.61
B29	1.50	2.60
B30	0.42	2.53
B31	0.95	2.50
B32	0.07	2.36
B34	0.13	2.40
B35	1.40	2.63
B36	1.17	2.55
B37	1.56	2.59
B38	0.19	2.45
B39	1.17	2.55
B41	0.89	2.52
B42	0.82	2.79
B43	1.26	2.64
B44	2.10	2.71
B45	0.70	2.56
B46	0.56	2.39
B47	1.15	2.65
B48	1.15	2.51
B49	1.70	2.58
B50	0.06	2.45
B56	1.33	2.65
B57	1.22	2.55
B58	1.50	2.60
B59	0.37	2.47
B60	1.90	2.72
B62	1.06	2.69

Observation ID	Reference Factor	Redundancy Number
B63	2.24	2.80
B64	1.22	2.56
B65	1.44	2.35

Weighting Strategies

GPS Observations

User-defined Scalar Applied to All Observations

Scalar : 5.07

Adjusted Coordinates

Adjustment performed in WGS-84

Number of Points : 11
Number of Constrained Points : 4
Horizontal and Height Only : 4

Adjusted Grid Coordinates

Errors are reported using 1.96σ.

Point Name	Northing	N error	Easting	E error	Elevation	e error	Fix
DONEY	825427.666ift	0.009ift	876839.977ift	0.008ift	N/A	N/A	
2CQ2	833053.347ift	0.008ift	825287.358ift	0.008ift	N/A	N/A	
G474	876748.180ift	0.010ift	816963.985ift	0.009ift	N/A	N/A	
1AO1	865806.049ift	0.008ift	802510.359ift	0.008ift	N/A	N/A	
L521	787800.003ift	0.000ift	671815.492ift	0.000ift	N/A	N/A	N E h
2BP2	850095.454ift	0.008ift	816832.157ift	0.008ift	N/A	N/A	
2CO1	833774.967ift	0.008ift	801908.106ift	0.008ift	N/A	N/A	
A365	890842.813ift	0.000ift	773937.170ift	0.000ift	N/A	N/A	N E h
POSTEN	747990.000ift	0.000ift	855565.772ift	0.000ift	N/A	N/A	N E h
2AQ2	865960.015ift	0.000ift	831818.595ift	0.000ift	N/A	N/A	N E h
HILL	855760.198ift	0.008ift	839278.342ift	0.008ift	N/A	N/A	

Adjusted Geodetic Coordinates

Errors are reported using 1.96σ.

Point Name	Latitude	N error	Longitude	E error	Height	h error	Fix
DONEY	33°16'03.80855"N	0.009ift	111°20'17.12833"W	0.008ift	1991.465ift	0.039ift	
2CQ2	33°17'21.67235"N	0.008ift	111°30'23.96080"W	0.008ift	1506.977ift	0.032ift	
G474	33°24'34.30756"N	0.010ift	111°32'00.12521"W	0.009ift	1652.034ift	0.049ift	
1AO1	33°22'46.53912"N	0.008ift	111°34'51.05460"W	0.008ift	1454.320ift	0.035ift	
L521	33°09'56.22283"N	0.000ift	112°00'31.58204"W	0.000ift	1045.961ift	0.000ift	Lat Long h
2BP2	33°20'10.60774"N	0.008ift	111°32'02.83524"W	0.008ift	1484.961ift	0.033ift	
2CO1	33°17'29.63607"N	0.008ift	111°34'59.36546"W	0.008ift	1345.681ift	0.035ift	
A365	33°26'55.04154"N	0.000ift	111°40'27.33851"W	0.000ift	1457.789ift	0.000ift	Lat Long h
POSTEN	33°03'18.71576"N	0.000ift	111°24'32.11406"W	0.000ift	1652.976ift	0.000ift	Lat Long h
2AQ2	33°22'46.99368"N	0.000ift	111°29'05.41099"W	0.000ift	1881.168ift	0.000ift	Lat Long h
HILL	33°21'05.76183"N	0.008ift	111°27'37.96426"W	0.008ift	1737.310ift	0.034ift	

Coordinate Deltas

Point Name	ΔNorthing	ΔEasting	ΔElevation	ΔHeight	ΔGeoid Separation
DONEY	0.000ift	0.000ift	N/A	0.000ift	N/A
2CQ2	0.000ift	0.000ift	N/A	0.000ift	N/A
G474	0.000ift	0.000ift	N/A	0.000ift	N/A
1AO1	0.000ift	0.000ift	N/A	0.000ift	N/A
L521	0.000ift	0.000ift	N/A	0.000ift	N/A
2BP2	0.000ift	0.000ift	N/A	0.000ift	N/A
2CO1	0.000ift	0.000ift	N/A	0.000ift	N/A
A365	0.000ift	0.000ift	N/A	0.000ift	N/A
POSTEN	0.000ift	0.000ift	N/A	0.000ift	N/A
2AQ2	0.000ift	0.000ift	N/A	0.000ift	N/A
HILL	0.000ift	0.000ift	N/A	0.000ift	N/A

Control Coordinate Comparisons

Values shown are control coord minus adjusted coord.

Point Name	ΔNorthing	ΔEasting	ΔElevation	ΔHeight
DONEY	-0.086ift	0.101ift	N/A	0.103ift
2CQ2	-0.030ift	-0.032ift	N/A	-0.022ift
G474	0.030ift	0.003ift	N/A	-0.088ift
1AO1	-0.077ift	0.013ift	N/A	0.241ift
L521	N/A	N/A	N/A	N/A
2BP2	-0.012ift	-0.011ift	N/A	0.112ift
2CO1	-0.044ift	-0.038ift	N/A	-0.044ift
A365	N/A	N/A	N/A	N/A
POSTEN	N/A	N/A	N/A	N/A
2AQ2	N/A	N/A	N/A	N/A
HILL	-0.234ift	0.209ift	N/A	-0.371ift

Adjusted Observations

Adjustment performed in WGS-84

GPS Observations

GPS Transformation Group: <GPS Default>

Deflection in Longitude	: 0°00'00.0477"	**(1.96σ)**	: 0°00'00.0469"
Deflection in Latitude	: 0°00'00.0865"	**(1.96σ)**	: 0°00'00.0575"
Azimuth Rotation	: 0°00'00.0515"	**(1.96σ)**	: 0°00'00.0083"
Network Scale	: 0.99999978	**(1.96σ)**	: 0.00000004
Number of Observations	: 54		
Number of Outliers	: 0		

Observation Adjustment (Critical Tau = 3.54). Any outliers are in red.

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B63	2AQ2	POSTEN	**Az.**	168°51'18.2722"	0°00'00.0083"	0°00'00.0253"	1.29
			ΔHt.	-228.247ift	0.033ift	0.053ift	1.13
			Dist.	120345.571ift	0.005ift	-0.037ift	-3.10
B44	2AQ2	L521	**Az.**	244°12'07.6629"	0°00'00.0083"	0°00'00.0270"	1.89
			ΔHt.	-835.202ift	0.042ift	0.039ift	0.69
			Dist.	178089.751ift	0.007ift	0.031ift	2.57
B20	2AQ2	2CQ2	**Az.**	191°27'48.1005"	0°00'00.0488"	0°00'00.1596"	2.49
			ΔHt.	-374.203ift	0.035ift	0.039ift	0.90
			Dist.	33551.272ift	0.008ift	-0.006ift	-0.49
B10	2AQ2	DONEY	**Az.**	132°14'01.1023"	0°00'00.0290"	0°00'00.0232"	0.59
			ΔHt.	110.270ift	0.037ift	0.045ift	0.99
			Dist.	60583.223ift	0.008ift	-0.024ift	-2.28
B37	2AQ2	1AO1	**Az.**	269°56'11.8063"	0°00'00.0598"	0°00'00.0369"	0.47
			ΔHt.	-426.841ift	0.036ift	0.044ift	1.01
			Dist.	29311.102ift	0.008ift	0.024ift	2.28

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B60	A365	POSTEN	**Az.**	150°23'17.7825"	0°00'00.0083"	-0°00'00.0346"	-2.22
			ΔHt.	195.108ift	0.044ift	-0.038ift	-0.67
			Dist.	164543.936ift	0.007ift	-0.026ift	-2.18
B58	2AQ2	2CO1	**Az.**	223°08'22.3508"	0°00'00.0383"	0°00'00.1059"	2.11
			ΔHt.	-535.493ift	0.038ift	0.043ift	0.91
			Dist.	43941.316ift	0.009ift	0.009ift	0.79
B49	2AQ2	2BP2	**Az.**	223°36'25.5041"	0°00'00.0764"	0°00'00.2090"	2.10
			ΔHt.	-396.210ift	0.036ift	0.055ift	1.32
			Dist.	21825.577ift	0.008ift	0.012ift	1.11
B64	POSTEN	HILL	**Az.**	351°41'02.0135"	0°00'00.0166"	-0°00'00.0066"	-0.32
			ΔHt.	84.383ift	0.041ift	-0.005ift	-0.10
			Dist.	109002.178ift	0.009ift	-0.023ift	-1.97
B29	2AQ2	G474	**Az.**	306°13'36.2416"	0°00'00.1085"	-0°00'00.1326"	-0.92
			ΔHt.	-229.126ift	0.049ift	0.061ift	0.97
			Dist.	18360.264ift	0.009ift	0.023ift	1.94
B9	POSTEN	DONEY	**Az.**	15°38'22.1798"	0°00'00.0221"	0°00'00.0144"	0.55
			ΔHt.	338.517ift	0.041ift	-0.017ift	-0.42
			Dist.	80312.280ift	0.009ift	-0.021ift	-1.93
B65	2AQ2	HILL	**Az.**	144°03'26.0580"	0°00'00.1373"	0°00'00.1772"	1.10
			ΔHt.	-143.864ift	0.034ift	0.009ift	0.36
			Dist.	12637.612ift	0.008ift	-0.018ift	-1.91
B8	A365	DONEY	**Az.**	122°34'37.9762"	0°00'00.0147"	-0°00'00.0382"	-1.82
			ΔHt.	533.625ift	0.039ift	-0.061ift	-1.11
			Dist.	121944.788ift	0.008ift	0.002ift	0.17
B19	POSTEN	2CQ2	**Az.**	340°41'04.2857"	0°00'00.0199"	-0°00'00.0204"	-0.86
			ΔHt.	-145.955ift	0.040ift	-0.014ift	-0.35
			Dist.	90298.465ift	0.009ift	-0.018ift	-1.73

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B48	POSTEN	2BP2	**Az.**	339°30'13.4137"	0°00'00.0165"	-0°00'00.0145"	-0.72
			ΔHt.	-167.963ift	0.041ift	-0.019ift	-0.44
			Dist.	109213.949ift	0.009ift	-0.019ift	-1.71
B57	POSTEN	2CO1	**Az.**	328°15'07.7832"	0°00'00.0185"	-0°00'00.0231"	-1.00
			ΔHt.	-307.246ift	0.043ift	-0.034ift	-0.69
			Dist.	101192.167ift	0.009ift	-0.018ift	-1.68
B35	A365	1AO1	**Az.**	131°21'33.8179"	0°00'00.0460"	-0°00'00.1064"	-1.67
			ΔHt.	-3.486ift	0.038ift	-0.078ift	-1.52
			Dist.	37993.799ift	0.008ift	0.000ift	0.03
B36	POSTEN	1AO1	**Az.**	336°02'05.4413"	0°00'00.0141"	-0°00'00.0181"	-1.03
			ΔHt.	-198.594ift	0.041ift	-0.008ift	-0.16
			Dist.	129221.456ift	0.009ift	-0.019ift	-1.67
B56	A365	2CO1	**Az.**	154°01'20.0436"	0°00'00.0275"	-0°00'00.0647"	-1.66
			ΔHt.	-112.138ift	0.040ift	-0.070ift	-1.22
			Dist.	63559.786ift	0.008ift	-0.009ift	-0.75
B39	L521	2BP2	**Az.**	66°42'09.3123"	0°00'00.0122"	0°00'00.0091"	0.59
			ΔHt.	438.992ift	0.043ift	0.041ift	0.83
			Dist.	157845.862ift	0.009ift	0.018ift	1.62
B43	L521	POSTEN	**Az.**	102°10'26.0417"	0°00'00.0083"	-0°00'00.0213"	-1.60
			ΔHt.	606.955ift	0.043ift	0.041ift	0.82
			Dist.	188030.584ift	0.007ift	0.011ift	0.94
B28	POSTEN	G474	**Az.**	343°35'21.8680"	0°00'00.0148"	-0°00'00.0113"	-0.58
			ΔHt.	-0.879ift	0.053ift	-0.021ift	-0.30
			Dist.	134430.649ift	0.010ift	-0.021ift	-1.58
B18	A365	2CQ2	**Az.**	138°30'35.4173"	0°00'00.0224"	-0°00'00.0500"	-1.55
			ΔHt.	49.153ift	0.037ift	-0.039ift	-0.70
			Dist.	77314.412ift	0.008ift	-0.005ift	-0.41

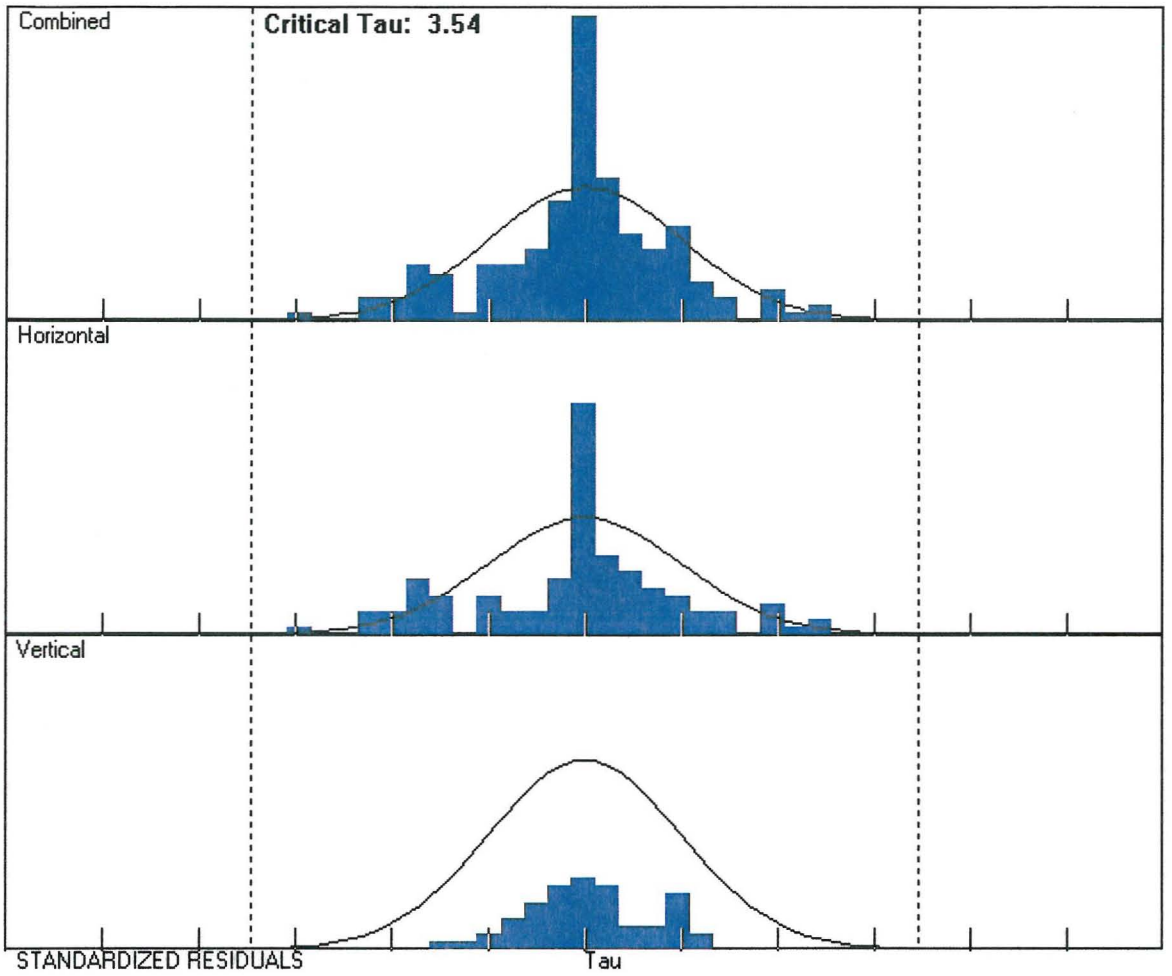
Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B47	A365	2BP2	**Az.**	133°39'45.2483"	0°00'00.0295"	-0°00'00.0634"	-1.51
			ΔHt.	27.145ift	0.038ift	-0.057ift	-1.04
			Dist.	59168.840ift	0.008ift	-0.003ift	-0.26
B14	L521	2CQ2	**Az.**	73°31'14.8794"	0°00'00.0120"	0°00'00.0083"	0.56
			ΔHt.	461.000ift	0.042ift	0.044ift	0.99
			Dist.	160019.797ift	0.009ift	0.016ift	1.50
B62	A365	HILL	**Az.**	118°21'55.4300"	0°00'00.0241"	-0°00'00.0515"	-1.45
			ΔHt.	279.492ift	0.037ift	-0.051ift	-0.86
			Dist.	74170.134ift	0.008ift	0.003ift	0.28
B31	L521	1AO1	**Az.**	59°07'06.8815"	0°00'00.0125"	0°00'00.0061"	0.40
			ΔHt.	408.361ift	0.043ift	0.014ift	0.31
			Dist.	152218.811ift	0.009ift	0.015ift	1.43
B23	L521	G474	**Az.**	58°26'57.9836"	0°00'00.0124"	0°00'00.0065"	0.38
			ΔHt.	606.077ift	0.055ift	-0.021ift	-0.29
			Dist.	170250.991ift	0.010ift	0.017ift	1.31
B41	L521	2CO1	**Az.**	70°29'10.2236"	0°00'00.0140"	0°00'00.0131"	0.77
			ΔHt.	299.709ift	0.045ift	0.000ift	0.01
			Dist.	137990.813ift	0.009ift	0.013ift	1.18
B27	A365	G474	**Az.**	108°16'16.3083"	0°00'00.0450"	-0°00'00.0692"	-1.06
			ΔHt.	194.230ift	0.051ift	-0.045ift	-0.59
			Dist.	45280.582ift	0.009ift	0.009ift	0.73
B4	L521	DONEY	**Az.**	79°33'00.3513"	0°00'00.0093"	0°00'00.0075"	0.69
			ΔHt.	945.472ift	0.043ift	0.019ift	0.43
			Dist.	208467.394ift	0.009ift	0.011ift	1.01
B42	A365	L521	**Az.**	224°52'34.0215"	0°00'00.0083"	0°00'00.0153"	0.88
			ΔHt.	-411.847ift	0.037ift	-0.023ift	-0.40
			Dist.	145088.909ift	0.006ift	-0.012ift	-0.95

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B46	2BP2	2CO1	**Az.**	222°39'03.8311"	0°00'00.0902"	0°00'00.0158"	0.17
			ΔHt.	-139.283ift	0.041ift	0.037ift	0.91
			Dist.	22117.183ift	0.010ift	-0.001ift	-0.08
B45	L521	HILL	**Az.**	67°51'40.7859"	0°00'00.0107"	0°00'00.0106"	0.79
			ΔHt.	691.339ift	0.044ift	-0.011ift	-0.21
			Dist.	180744.316ift	0.009ift	0.008ift	0.73
B59	HILL	2CO1	**Az.**	239°46'54.9657"	0°00'00.0473"	0°00'00.0025"	0.05
			ΔHt.	-391.629ift	0.042ift	-0.028ift	-0.58
			Dist.	43361.239ift	0.010ift	-0.001ift	-0.06
B12	2CQ2	G474	**Az.**	349°26'25.5065"	0°00'00.0481"	0°00'00.0039"	0.07
			ΔHt.	145.077ift	0.052ift	-0.036ift	-0.52
			Dist.	44484.215ift	0.011ift	0.003ift	0.19
B30	HILL	G474	**Az.**	313°29'47.4371"	0°00'00.0748"	-0°00'00.0254"	-0.30
			ΔHt.	-85.262ift	0.052ift	0.035ift	0.52
			Dist.	30636.218ift	0.011ift	-0.004ift	-0.30
B13	2CQ2	1AO1	**Az.**	325°24'34.7501"	0°00'00.0507"	-0°00'00.0001"	0.00
			ΔHt.	-52.638ift	0.039ift	0.016ift	0.42
			Dist.	39897.386ift	0.010ift	0.001ift	0.10
B1	DONEY	2CQ2	**Az.**	278°43'54.0377"	0°00'00.0403"	0°00'00.0170"	0.41
			ΔHt.	-484.472ift	0.039ift	-0.012ift	-0.33
			Dist.	52117.389ift	0.009ift	0.000ift	0.00
B22	G474	1AO1	**Az.**	233°05'00.2763"	0°00'00.1215"	-0°00'00.0238"	-0.17
			ΔHt.	-197.715ift	0.052ift	0.015ift	0.25
			Dist.	18129.921ift	0.011ift	0.004ift	0.30
B38	HILL	1AO1	**Az.**	285°31'56.6677"	0°00'00.0557"	0°00'00.0003"	0.00
			ΔHt.	-282.977ift	0.040ift	-0.012ift	-0.28
			Dist.	38118.823ift	0.010ift	0.001ift	0.10

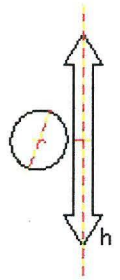
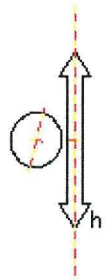
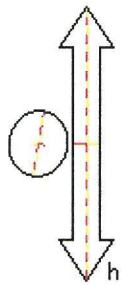
Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B17	2CQ2	2CO1	**Az.**	271°59'34.7483"	0°00'00.0903"	-0°00'00.0031"	-0.03
			ΔHt.	-161.291ift	0.041ift	0.011ift	0.27
			Dist.	23392.374ift	0.010ift	0.003ift	0.27
B24	G474	2BP2	**Az.**	180°29'39.3140"	0°00'00.0791"	-0°00'00.0031"	-0.04
			ΔHt.	-167.084ift	0.052ift	-0.011ift	-0.17
			Dist.	26655.295ift	0.011ift	0.003ift	0.25
B7	DONEY	2CO1	**Az.**	276°40'26.1944"	0°00'00.0283"	-0°00'00.0069"	-0.23
			ΔHt.	-645.763ift	0.042ift	0.000ift	0.00
			Dist.	75401.182ift	0.010ift	0.000ift	0.00
B15	2CQ2	2BP2	**Az.**	333°50'15.1271"	0°00'00.1049"	0°00'00.0168"	0.16
			ΔHt.	-22.007ift	0.038ift	0.005ift	0.15
			Dist.	19025.876ift	0.010ift	0.002ift	0.21
B2	DONEY	G474	**Az.**	310°55'05.6995"	0°00'00.0292"	-0°00'00.0068"	-0.20
			ΔHt.	-339.395ift	0.053ift	0.011ift	0.16
			Dist.	78866.084ift	0.010ift	-0.001ift	-0.07
B34	1AO1	2CO1	**Az.**	181°15'42.1916"	0°00'00.0617"	0°00'00.0067"	0.10
			ΔHt.	-108.652ift	0.042ift	0.007ift	0.18
			Dist.	32039.557ift	0.010ift	0.000ift	-0.01
B21	2CQ2	HILL	**Az.**	31°51'53.4233"	0°00'00.0738"	0°00'00.0031"	0.04
			ΔHt.	230.339ift	0.039ift	-0.002ift	-0.05
			Dist.	26673.248ift	0.010ift	0.002ift	0.16
B5	DONEY	2BP2	**Az.**	292°39'50.5915"	0°00'00.0326"	0°00'00.0022"	0.06
			ΔHt.	-506.480ift	0.040ift	0.006ift	0.15
			Dist.	64885.034ift	0.009ift	0.000ift	0.04
B26	G474	2CO1	**Az.**	199°31'08.0965"	0°00'00.0468"	-0°00'00.0044"	-0.08
			ΔHt.	-306.367ift	0.054ift	0.000ift	-0.01
			Dist.	45538.263ift	0.011ift	-0.002ift	-0.12

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B11	DONEY	HILL	**Az.**	309°14'23.9940"	0°00'00.0439"	-0°00'00.0019"	-0.04
			ΔHt.	-254.133ift	0.041ift	0.000ift	0.01
			Dist.	48283.228ift	0.010ift	-0.001ift	-0.11
B32	1AO1	2BP2	**Az.**	137°49'56.3793"	0°00'00.0961"	0°00'00.0091"	0.09
			ΔHt.	30.631ift	0.039ift	0.002ift	0.05
			Dist.	21260.631ift	0.010ift	0.000ift	-0.04
B50	HILL	2BP2	**Az.**	256°05'12.3312"	0°00'00.0898"	-0°00'00.0025"	-0.03
			ΔHt.	-252.346ift	0.040ift	-0.002ift	-0.05
			Dist.	23151.832ift	0.010ift	0.001ift	0.08
B3	DONEY	1AO1	**Az.**	298°49'48.4376"	0°00'00.0249"	-0°00'00.0014"	-0.05
			ΔHt.	-537.111ift	0.041ift	0.002ift	0.04
			Dist.	84595.548ift	0.010ift	-0.001ift	-0.07

Histograms of Standardized Residuals



Point Error Ellipses

DONEY	2CQ2	G474
		
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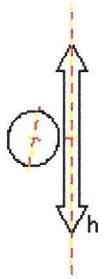
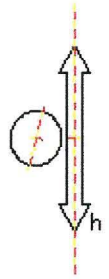
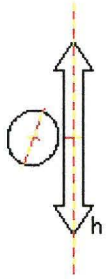
1AO1	**2BP2**	**2CO1**
		
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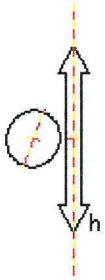
HILL		
		
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Covariant Terms

Adjustment performed in WGS-84

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
DONEY	2CQ2	**Az.**	278°43'53.9863"	0°00'00.0412"	1:5361076	1:5361076
		ΔHt.	-484.488ift	0.041ift		
		ΔElev.	?	?		
		Dist.	52117.400ift	0.010ift		
DONEY	G474	**Az.**	310°55'05.6480"	0°00'00.0304"	1:7222576	1:7222576
		ΔHt.	-339.431ift	0.056ift		
		ΔElev.	?	?		
		Dist.	78866.101ift	0.011ift		
DONEY	1AO1	**Az.**	298°49'48.3861"	0°00'00.0263"	1:8382932	1:8382932
		ΔHt.	-537.145ift	0.045ift		
		ΔElev.	?	?		
		Dist.	84595.566ift	0.010ift		
DONEY	L521	**Az.**	259°55'02.9642"	0°00'00.0087"	1:24292636	1:24292636
		ΔHt.	-945.504ift	0.039ift		
		ΔElev.	?	?		
		Dist.	208467.439ift	0.009ift		
DONEY	2BP2	**Az.**	292°39'50.5401"	0°00'00.0336"	1:6589431	1:6589431
		ΔHt.	-506.504ift	0.043ift		
		ΔElev.	?	?		
		Dist.	64885.048ift	0.010ift		
DONEY	2CO1	**Az.**	276°40'26.1430"	0°00'00.0295"	1:7466548	1:7466548
		ΔHt.	-645.784ift	0.046ift		
		ΔElev.	?	?		
		Dist.	75401.199ift	0.010ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
DONEY	A365	**Az.**	302°45'43.3864"	0°00'00.0152"	1:14473879	1:14473879
		ΔHt.	-533.676ift	0.039ift		
		ΔElev.	?	?		
		Dist.	121944.814ift	0.008ift		
DONEY	POSTEN	**Az.**	195°40'41.6057"	0°00'00.0217"	1:8938210	1:8938210
		ΔHt.	-338.489ift	0.039ift		
		ΔElev.	?	?		
		Dist.	80312.298ift	0.009ift		
DONEY	2AQ2	**Az.**	312°18'51.2730"	0°00'00.0304"	1:7148312	1:7148312
		ΔHt.	-110.297ift	0.039ift		
		ΔElev.	?	?		
		Dist.	60583.236ift	0.008ift		
DONEY	HILL	**Az.**	309°14'23.9425"	0°00'00.0447"	1:4917679	1:4917679
		ΔHt.	-254.155ift	0.042ift		
		ΔElev.	?	?		
		Dist.	48283.239ift	0.010ift		
2CQ2	G474	**Az.**	349°26'25.4549"	0°00'00.0488"	1:3936906	1:3936906
		ΔHt.	145.056ift	0.053ift		
		ΔElev.	?	?		
		Dist.	44484.225ift	0.011ift		
2CQ2	1AO1	**Az.**	325°24'34.6986"	0°00'00.0513"	1:4030271	1:4030271
		ΔHt.	-52.658ift	0.040ift		
		ΔElev.	?	?		
		Dist.	39897.395ift	0.010ift		
2CQ2	L521	**Az.**	253°47'45.3449"	0°00'00.0105"	1:20416035	1:20416035
		ΔHt.	-461.016ift	0.032ift		
		ΔElev.	?	?		
		Dist.	160019.831ift	0.008ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
2CQ2	2BP2	**Az.**	333°50'15.0755"	0°00'00.1052"	1:1926537	1:1926537
		ΔHt.	-22.017ift	0.038ift		
		ΔElev.	?	?		
		Dist.	19025.880ift	0.010ift		
2CQ2	2CO1	**Az.**	271°59'34.6968"	0°00'00.0906"	1:2431628	1:2431628
		ΔHt.	-161.297ift	0.041ift		
		ΔElev.	?	?		
		Dist.	23392.379ift	0.010ift		
2CQ2	A365	**Az.**	318°36'07.2413"	0°00'00.0215"	1:9806258	1:9806258
		ΔHt.	-49.189ift	0.032ift		
		ΔElev.	?	?		
		Dist.	77314.429ift	0.008ift		
2CQ2	POSTEN	**Az.**	160°37'51.7179"	0°00'00.0180"	1:11151495	1:11151495
		ΔHt.	145.998ift	0.032ift		
		ΔElev.	?	?		
		Dist.	90298.484ift	0.008ift		
2CQ2	2AQ2	**Az.**	11°27'04.8838"	0°00'00.0472"	1:4061045	1:4061045
		ΔHt.	374.191ift	0.032ift		
		ΔElev.	?	?		
		Dist.	33551.280ift	0.008ift		
2CQ2	HILL	**Az.**	31°51'53.3717"	0°00'00.0742"	1:2609267	1:2609267
		ΔHt.	230.332ift	0.039ift		
		ΔElev.	?	?		
		Dist.	26673.254ift	0.010ift		
G474	1AO1	**Az.**	233°05'00.2248"	0°00'00.1217"	1:1673172	1:1673172
		ΔHt.	-197.714ift	0.052ift		
		ΔElev.	?	?		
		Dist.	18129.925ift	0.011ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
G474	L521	**Az.**	238°42'37.2561"	0°00'00.0113"	1:18300696	1:18300696
		ΔHt.	-606.073ift	0.049ift		
		ΔElev.	?	?		
		Dist.	170251.028ift	0.009ift		
G474	2BP2	**Az.**	180°29'39.2625"	0°00'00.0795"	1:2360273	1:2360273
		ΔHt.	-167.073ift	0.052ift		
		ΔElev.	?	?		
		Dist.	26655.300ift	0.011ift		
G474	2CO1	**Az.**	199°31'08.0450"	0°00'00.0475"	1:3928422	1:3928422
		ΔHt.	-306.353ift	0.055ift		
		ΔElev.	?	?		
		Dist.	45538.273ift	0.012ift		
G474	A365	**Az.**	288°20'55.6829"	0°00'00.0446"	1:5139081	1:5139081
		ΔHt.	-194.245ift	0.049ift		
		ΔElev.	?	?		
		Dist.	45280.592ift	0.009ift		
G474	POSTEN	**Az.**	163°31'16.2890"	0°00'00.0139"	1:14041541	1:14041541
		ΔHt.	0.942ift	0.049ift		
		ΔElev.	?	?		
		Dist.	134430.679ift	0.010ift		
G474	2AQ2	**Az.**	126°12'00.0270"	0°00'00.1085"	1:2047754	1:2047754
		ΔHt.	229.134ift	0.049ift		
		ΔElev.	?	?		
		Dist.	18360.268ift	0.009ift		
G474	HILL	**Az.**	133°27'23.1453"	0°00'00.0753"	1:2895474	1:2895474
		ΔHt.	85.276ift	0.053ift		
		ΔElev.	?	?		
		Dist.	30636.225ift	0.011ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
1AO1	L521	**Az.**	239°21'12.0028"	0°00'00.0110"	1:18931779	1:18931779
		ΔHt.	-408.358ift	0.035ift		
		ΔElev.	?	?		
		Dist.	152218.845ift	0.008ift		
1AO1	2BP2	**Az.**	137°49'56.3277"	0°00'00.0964"	1:2189479	1:2189479
		ΔHt.	30.641ift	0.039ift		
		ΔElev.	?	?		
		Dist.	21260.635ift	0.010ift		
1AO1	2CO1	**Az.**	181°15'42.1401"	0°00'00.0623"	1:3100617	1:3100617
		ΔHt.	-108.639ift	0.042ift		
		ΔElev.	?	?		
		Dist.	32039.564ift	0.010ift		
1AO1	A365	**Az.**	311°24'38.9533"	0°00'00.0446"	1:4817286	1:4817286
		ΔHt.	3.469ift	0.035ift		
		ΔElev.	?	?		
		Dist.	37993.808ift	0.008ift		
1AO1	POSTEN	**Az.**	155°56'26.3219"	0°00'00.0128"	1:15876166	1:15876166
		ΔHt.	198.656ift	0.035ift		
		ΔElev.	?	?		
		Dist.	129221.484ift	0.008ift		
1AO1	2AQ2	**Az.**	89°53'01.5871"	0°00'00.0586"	1:3769369	1:3769369
		ΔHt.	426.848ift	0.035ift		
		ΔElev.	?	?		
		Dist.	29311.108ift	0.008ift		
1AO1	HILL	**Az.**	105°27'58.4254"	0°00'00.0563"	1:3957054	1:3957054
		ΔHt.	282.990ift	0.041ift		
		ΔElev.	?	?		
		Dist.	38118.831ift	0.010ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
L521	2BP2	**Az.**	66°42'09.2604"	0°00'00.0106"	1:19939031	1:19939031
		ΔHt.	438.999ift	0.033ift		
		ΔElev.	?	?		
		Dist.	157845.896ift	0.008ift		
L521	2CO1	**Az.**	70°29'10.1717"	0°00'00.0121"	1:17296008	1:17296008
		ΔHt.	299.719ift	0.035ift		
		ΔElev.	?	?		
		Dist.	137990.843ift	0.008ift		
L521	A365	**Az.**	44°41'32.6847"	0°00'00.0000"	1:0	1:0
		ΔHt.	411.827ift	0.000ift		
		ΔElev.	?	?		
		Dist.	145088.941ift	0.000ift		
L521	POSTEN	**Az.**	102°10'25.9898"	0°00'00.0000"	1:0	1:0
		ΔHt.	607.014ift	0.000ift		
		ΔElev.	?	?		
		Dist.	188030.625ift	0.000ift		
L521	2AQ2	**Az.**	63°54'52.8061"	0°00'00.0000"	1:0	1:0
		ΔHt.	835.207ift	0.000ift		
		ΔElev.	?	?		
		Dist.	178089.790ift	0.000ift		
L521	HILL	**Az.**	67°51'40.7340"	0°00'00.0095"	1:21863490	1:21863490
		ΔHt.	691.348ift	0.034ift		
		ΔElev.	?	?		
		Dist.	180744.355ift	0.008ift		
2BP2	2CO1	**Az.**	222°39'03.7796"	0°00'00.0906"	1:2169281	1:2169281
		ΔHt.	-139.280ift	0.041ift		
		ΔElev.	?	?		
		Dist.	22117.188ift	0.010ift		

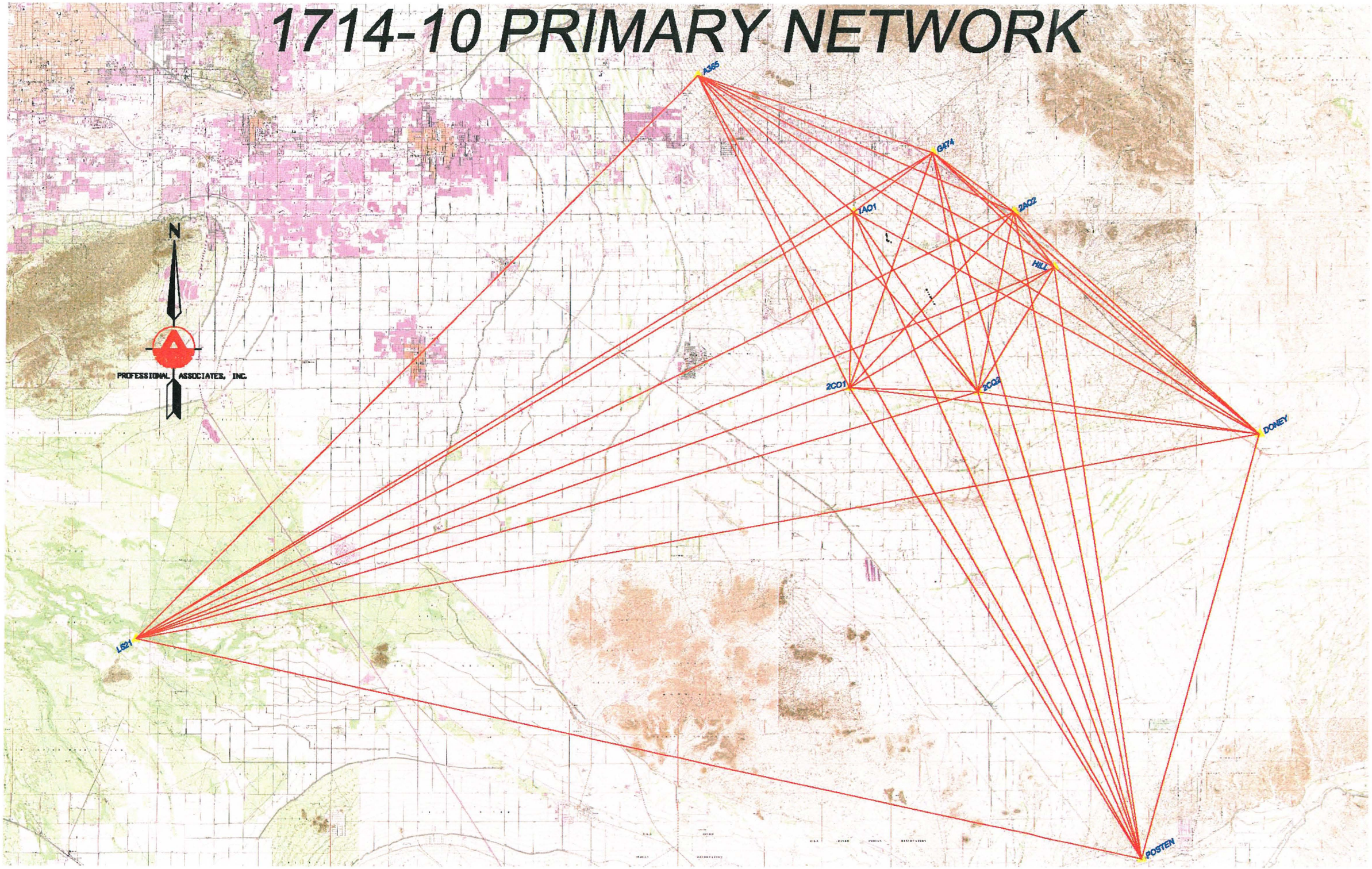
From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
2BP2	A365	**Az.**	313°44'22.8608"	0°00'00.0284"	1:7531303	1:7531303
		ΔHt.	-27.172ift	0.033ift		
		ΔElev.	?	?		
		Dist.	59168.853ift	0.008ift		
2BP2	POSTEN	**Az.**	159°26'06.5911"	0°00'00.0150"	1:13454809	1:13454809
		ΔHt.	168.015ift	0.033ift		
		ΔElev.	?	?		
		Dist.	109213.973ift	0.008ift		
2BP2	2AQ2	**Az.**	43°34'47.8926"	0°00'00.0742"	1:2677102	1:2677102
		ΔHt.	396.207ift	0.033ift		
		ΔElev.	?	?		
		Dist.	21825.581ift	0.008ift		
2BP2	HILL	**Az.**	76°02'46.6898"	0°00'00.0901"	1:2373517	1:2373517
		ΔHt.	252.349ift	0.040ift		
		ΔElev.	?	?		
		Dist.	23151.837ift	0.010ift		
2CO1	A365	**Az.**	334°04'20.3922"	0°00'00.0261"	1:7935420	1:7935420
		ΔHt.	112.108ift	0.035ift		
		ΔElev.	?	?		
		Dist.	63559.800ift	0.008ift		
2CO1	POSTEN	**Az.**	148°09'24.5148"	0°00'00.0166"	1:12741346	1:12741346
		ΔHt.	307.295ift	0.035ift		
		ΔElev.	?	?		
		Dist.	101192.190ift	0.008ift		
2CO1	2AQ2	**Az.**	43°05'07.7862"	0°00'00.0365"	1:5315829	1:5315829
		ΔHt.	535.487ift	0.035ift		
		ΔElev.	?	?		
		Dist.	43941.326ift	0.008ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
2CO1	HILL	**Az.**	59°42'52.4359"	0°00'00.0479"	1:4226388	1:4226388
		ΔHt.	391.629ift	0.043ift		
		ΔElev.	?	?		
		Dist.	43361.248ift	0.010ift		
A365	POSTEN	**Az.**	150°23'17.7310"	0°00'00.0000"	1:0	1:0
		ΔHt.	195.187ift	0.000ift		
		ΔElev.	?	?		
		Dist.	164543.972ift	0.000ift		
A365	HILL	**Az.**	118°21'55.3784"	0°00'00.0238"	1:9271497	1:9271497
		ΔHt.	279.521ift	0.034ift		
		ΔElev.	?	?		
		Dist.	74170.150ift	0.008ift		
POSTEN	2AQ2	**Az.**	348°53'47.9384"	0°00'00.0000"	1:0	1:0
		ΔHt.	228.192ift	0.000ift		
		ΔElev.	?	?		
		Dist.	120345.597ift	0.000ift		
POSTEN	HILL	**Az.**	351°41'01.9619"	0°00'00.0154"	1:12925906	1:12925906
		ΔHt.	84.334ift	0.034ift		
		ΔElev.	?	?		
		Dist.	109002.202ift	0.008ift		
2AQ2	HILL	**Az.**	144°03'26.0065"	0°00'00.1372"	1:1547801	1:1547801
		ΔHt.	-143.858ift	0.034ift		
		ΔElev.	?	?		
		Dist.	12637.615ift	0.008ift		

SECTION 2.2.3

PRIMARY NETWORK MAP

1714-10 PRIMARY NETWORK



SECTION 2.3

SECONDARY NETWORK DATA & TGO REPORTS

SECTION 2.3.1

BASELINE PROCESSING REPORT

Baseline Processing Report

Project : 1714-10-SECONDARY

User name	John.Marshall	**Date & Time**	3:27:02 PM 9/30/2008
Coordinate System	NAD 83 ASPCS(1992)	**Zone**	Arizona Central 0202
Project Datum	NAD 1983		
Vertical Datum	NAVD 88	**Geoid Model**	GEOID99 (Conus)
Coordinate Units	Meters		
Distance Units	Meters		
Height Units	Meters		

Processing Summary

ID	From	To	Baseline Length	Solution Type	Ratio	Reference Variance	RMS
B95	2AQ2	G474	5597.117m	Iono free fixed	30.8	1.106	0.011m
B161	G474	2AQ2	5597.112m	Iono free fixed	85.0	0.912	0.012m
B244	G474	2AQ2	5597.113m	Iono free fixed	12.7	1.153	0.013m
B107	G474	1AO1	5526.742m	Iono free fixed	74.4	0.999	0.011m
B157	G474	1AO1	5526.741m	Iono free fixed	138.2	0.928	0.010m
B241	G474	1AO1	5526.737m	Iono free fixed	19.8	1.277	0.012m
B94	2AQ2	1AO1	8935.684m	Iono free fixed	145.0	0.493	0.008m
B182	1AO1	2AQ2	8935.684m	Iono free fixed	132.9	0.614	0.010m
B251	1AO1	2AQ2	8935.675m	Iono free fixed	28.7	0.437	0.008m
B216	RB15	RB14	152.283m	L1 fixed	15.2	1.021	0.004m
B260	2BP2	RB16	105.640m	L1 fixed	75.2	0.714	0.003m
B220	RB15	RB16	152.557m	L1 fixed	27.6	0.817	0.003m
B215	2BP2	RB15	257.508m	L1 fixed	17.7	0.768	0.003m
B265	RB14	RB16	304.840m	L1 fixed	16.9	1.006	0.004m
B256	2BP2	RB14	409.623m	L1 fixed	21.1	0.877	0.003m
B204	2BP2	RB17	49.994m	L1 fixed	56.8	0.818	0.003m
B209	RB17	RB16	152.401m	L1 fixed	32.5	1.160	0.004m
B273	RB19	RB18	152.344m	L1 fixed	24.3	1.516	0.004m
B210	RB17	RB18	151.506m	L1 fixed	26.4	1.593	0.004m
B207	RB17	RB19	303.850m	L1 fixed	28.2	1.287	0.004m
B276	RB18	RB16	303.904m	L1 fixed	28.7	1.254	0.004m
B272	RB19	RB16	456.247m	L1 fixed	24.6	1.322	0.004m
B261	2BP2	RB18	199.931m	L1 fixed	53.9	0.794	0.003m

ID	From	To	Baseline Length	Solution Type	Ratio	Reference Variance	RMS
B258	2BP2	RB19	352.053m	L1 fixed	42.1	1.003	0.003m
B221	RB15	RB18	456.459m	L1 fixed	26.1	1.251	0.004m
B218	RB15	RB19	608.803m	L1 fixed	31.4	1.234	0.004m
B199	RB17	RB15	304.954m	L1 fixed	25.1	1.117	0.004m
B266	RB14	RB18	608.743m	L1 fixed	16.3	1.458	0.004m
B263	RB14	RB19	761.086m	L1 fixed	13.6	1.714	0.005m
B205	RB17	RB14	457.237m	L1 fixed	16.1	1.136	0.004m
B264	RB14	RB13	152.439m	L1 fixed	12.4	0.989	0.004m
B274	RB13	RB16	457.278m	L1 fixed	10.1	1.261	0.005m
B259	2BP2	RB13	562.002m	L1 fixed	11.0	0.975	0.004m
B219	RB15	RB13	304.722m	L1 fixed	8.4	1.077	0.004m
B275	RB13	RB18	761.181m	L1 fixed	10.2	1.622	0.005m
B271	RB19	RB13	913.525m	L1 fixed	10.9	1.675	0.005m
B208	RB17	RB13	609.676m	L1 fixed	10.7	1.316	0.005m
B270	2AQ2	RB18	6733.577m	Iono free fixed	8.5	0.763	0.010m
B269	2AQ2	RB16	6635.816m	Iono free fixed	7.5	0.737	0.010m
B268	2AQ2	RB13	6511.509m	Iono free fixed	8.0	0.674	0.010m
B267	2AQ2	RB19	6787.756m	Iono free fixed	7.9	0.868	0.010m
B262	2AQ2	RB14	6549.153m	Iono free fixed	8.0	0.881	0.011m
B248	G474	RB18	8307.940m	Iono free fixed	36.4	1.514	0.015m
B247	G474	RB16	8040.676m	Iono free fixed	39.8	1.210	0.013m
B246	G474	RB13	7643.052m	Iono free fixed	29.3	1.515	0.015m
B245	G474	RB19	8443.134m	Iono free fixed	34.3	1.821	0.015m
B243	G474	RB14	7774.612m	Iono free fixed	33.7	1.422	0.014m
B217	2AQ2	RB15	6590.676m	Iono free fixed	6.1	0.761	0.010m
B213	G474	RB15	7907.100m	Iono free fixed	48.1	1.313	0.012m
B206	2AQ2	RB17	6682.609m	Iono free fixed	7.2	0.814	0.011m
B202	G474	RB17	8174.039m	Iono free fixed	34.2	1.530	0.015m
B104	G474	2BP2	8125.310m	Iono free fixed	71.6	0.972	0.011m
B135	2BP2	G474	8125.310m	Iono free fixed	185.7	0.751	0.009m
B242	G474	2BP2	8125.301m	Iono free fixed	20.5	1.211	0.011m
B93	2AQ2	2BP2	6654.070m	Iono free fixed	10.9	0.567	0.008m
B142	2BP2	2AQ2	6654.078m	Iono free fixed	13.5	0.519	0.009m
B257	2BP2	2AQ2	6654.063m	Iono free fixed	37.3	0.475	0.008m
B38	RB1	RB2	10.192m	L1 fixed	14.9	1.124	0.004m
B3	RB3	RB4	12.210m	L1 fixed	20.2	1.030	0.004m
B62	RB4	69F1	65.218m	L1 fixed	21.1	0.842	0.004m
B11	RB3	69F1	62.023m	L1 fixed	16.5	1.107	0.004m

ID	From	To	Baseline Length	Solution Type	Ratio	Reference Variance	RMS
B26	B11	A11	13.453m	L1 fixed	8.0	1.384	0.004m
B35	B11	69F1	26.701m	L1 fixed	15.6	1.175	0.004m
B25	B11	RB4	84.786m	L1 fixed	15.9	1.147	0.004m
B1	RB3	B11	84.060m	L1 fixed	12.0	1.618	0.005m
B77	RB2	69F1	206.726m	L1 fixed	18.5	0.927	0.004m
B55	RB4	RB2	144.939m	L1 fixed	21.5	0.767	0.003m
B45	RB1	69F1	205.393m	L1 fixed	15.3	1.171	0.004m
B37	RB1	RB4	144.902m	L1 fixed	14.8	1.096	0.004m
B27	B11	RB2	229.079m	L1 fixed	12.1	1.300	0.004m
B23	B11	RB1	228.326m	L1 fixed	13.5	1.352	0.004m
B4	RB3	RB2	145.163m	L1 fixed	16.4	1.045	0.004m
B2	RB3	RB1	144.268m	L1 fixed	13.5	1.293	0.004m
B84	RB6	RB5	13.988m	L1 fixed	4.6	1.315	0.004m
B70	A11	RB5	73.876m	L1 fixed	7.7	1.437	0.004m
B63	A11	RB6	73.398m	L1 fixed	6.5	0.786	0.003m
B36	B11	RB5	72.417m	L1 fixed	6.1	2.013	0.005m
B28	B11	RB6	74.492m	L1 fixed	4.5	1.450	0.005m
B173	RB12	RB11	17.247m	L1 fixed	54.4	1.026	0.004m
B130	A10	B10	18.219m	L1 fixed	3.9	1.196	0.004m
B189	RB10	B10	78.097m	L1 fixed	23.0	1.154	0.004m
B129	A10	RB10	76.001m	L1 fixed	5.6	0.822	0.003m
B122	RB8	VINE RM1	48.329m	L1 fixed	57.7	0.770	0.003m
B195	VINE RM1	B10	38.580m	L1 fixed	3.2	1.233	0.004m
B133	A10	VINE RM1	30.054m	L1 fixed	5.5	0.761	0.003m
B119	RB8	B10	85.814m	L1 fixed	37.1	1.314	0.004m
B13	B10	RB7	91.979m	L1 fixed	3.7	1.795	0.005m
B192	RB10	VINE RM1	105.383m	L1 fixed	6.6	0.768	0.003m
B54	RB7	RB5	151.986m	L1 fixed	4.8	2.219	0.005m
B47	RB7	RB6	151.988m	L1 fixed	4.3	1.479	0.005m
B22	B10	RB5	237.309m	L1 fixed	3.8	1.910	0.005m
B15	B10	RB6	234.818m	L1 fixed	4.9	1.224	0.004m
B191	RB10	RB9	15.766m	L1 fixed	24.2	1.075	0.004m
B187	RB11	RB9	152.096m	L1 fixed	34.3	1.549	0.005m
B177	RB12	RB9	154.141m	L1 fixed	10.2	1.045	0.004m
B174	RB12	RB10	152.548m	L1 fixed	8.2	0.620	0.003m
B194	B10	RB9	75.382m	L1 fixed	5.4	1.447	0.005m
B132	A10	RB9	77.026m	L1 fixed	3.3	1.224	0.004m
B185	RB11	B10	227.455m	L1 fixed	32.9	1.434	0.004m

ID	From	To	Baseline Length	Solution Type	Ratio	Reference Variance	RMS
B175	RB12	B10	229.355m	L1 fixed	10.6	1.136	0.004m
B127	RB12	A10	228.546m	L1 fixed	8.0	0.686	0.003m
B198	VINE RM1	RB9	106.959m	L1 fixed	2.3	1.229	0.004m
B121	RB8	RB9	146.730m	L1 fixed	38.8	1.261	0.004m
B188	RB11	VINE RM1	257.586m	L1 fixed	37.6	1.289	0.004m
B178	RB12	VINE RM1	257.719m	L1 fixed	7.9	0.582	0.003m
B118	RB8	RB11	292.048m	L1 fixed	35.2	1.343	0.004m
B116	RB12	RB8	290.246m	L1 fixed	92.6	0.507	0.003m
B46	RB7	A11	225.101m	L1 fixed	5.3	1.611	0.005m
B24	B11	RB7	224.401m	L1 fixed	4.8	1.968	0.005m
B14	B10	A11	307.787m	L1 fixed	5.4	1.424	0.005m
B12	B10	B11	308.877m	L1 fixed	4.0	1.931	0.005m
B184	1AO1	VINE RM1	2420.822m	L1 fixed	8.3	1.112	0.004m
B183	1AO1	RB9	2527.313m	L1 fixed	58.7	2.185	0.006m
B180	1AO1	RB10	2524.407m	L1 fixed	8.4	1.501	0.005m
B179	1AO1	RB11	2674.575m	L1 fixed	65.6	1.309	0.004m
B172	1AO1	RB12	2671.979m	L1 fixed	12.9	1.257	0.004m
B128	1AO1	A10	2450.875m	L1 fixed	9.2	1.719	0.006m
B117	1AO1	RB8	2382.889m	L1 fixed	111.3	0.622	0.003m
B109	1AO1	RB5	2277.263m	L1 fixed	9.2	2.885	0.006m
B108	1AO1	69F1	2210.877m	L1 fixed	25.1	0.786	0.003m
B82	1AO1	RB6	2287.828m	L1 fixed	8.2	2.289	0.006m
B75	1AO1	RB2	2119.520m	L1 fixed	21.2	0.729	0.003m
B68	1AO1	A11	2244.728m	L1 fixed	9.7	2.238	0.006m
B60	1AO1	RB4	2196.707m	L1 fixed	32.6	0.750	0.003m
B52	1AO1	RB7	2370.282m	L1 fixed	6.7	2.868	0.006m
B43	1AO1	RB1	2111.836m	L1 fixed	14.8	1.028	0.004m
B33	1AO1	B11	2234.851m	L1 fixed	75.3	1.697	0.005m
B20	1AO1	B10	2455.150m	L1 fixed	6.3	2.881	0.006m
B181	1AO1	B10	2455.166m	L1 fixed	27.3	2.262	0.006m
B9	1AO1	RB3	2187.355m	L1 fixed	21.2	0.976	0.004m
B144	2BP2	VINE RM1	4096.842m	L1 fixed	6.8	1.088	0.004m
B143	2BP2	RB9	3994.342m	L1 fixed	3.7	1.581	0.005m
B140	2BP2	RB10	4000.384m	L1 fixed	6.4	1.274	0.005m
B139	2BP2	RB11	3860.828m	L1 fixed	44.3	1.283	0.004m
B137	2BP2	RB12	3867.381m	L1 fixed	12.8	1.193	0.004m
B123	2BP2	A10	4067.585m	L1 fixed	5.7	1.320	0.005m
B112	2BP2	RB8	4140.585m	L1 fixed	60.3	0.739	0.003m

ID	From	To	Baseline Length	Solution Type	Ratio	Reference Variance	RMS
B106	2BP2	RB5	4272.001m	L1 fixed	9.9	3.727	0.007m
B105	2BP2	69F1	4357.328m	L1 fixed	17.7	1.371	0.004m
B81	2BP2	RB6	4264.027m	L1 fixed	5.8	3.102	0.007m
B74	2BP2	RB2	4514.177m	L1 fixed	16.9	1.353	0.004m
B67	2BP2	A11	4323.945m	L1 fixed	11.3	3.013	0.006m
B59	2BP2	RB4	4393.324m	L1 fixed	25.7	1.267	0.004m
B51	2BP2	RB7	4150.538m	L1 fixed	6.7	3.446	0.007m
B42	2BP2	RB1	4518.824m	L1 fixed	11.8	1.435	0.004m
B32	2BP2	B11	4330.810m	L1 fixed	61.7	2.452	0.006m
B19	2BP2	B10	4059.955m	L1 fixed	7.2	3.153	0.007m
B141	2BP2	B10	4059.938m	L1 fixed	6.1	1.607	0.005m
B8	2BP2	RB3	4399.748m	L1 fixed	18.8	1.576	0.005m
B255	1AO1	RB18	6670.711m	Iono free fixed	35.2	0.614	0.009m
B254	1AO1	RB16	6375.739m	Iono free fixed	46.1	0.448	0.008m
B253	1AO1	RB13	5933.937m	Iono free fixed	8.7	0.472	0.008m
B252	1AO1	RB19	6818.728m	Iono free fixed	29.1	0.774	0.009m
B250	1AO1	RB14	6081.102m	Iono free fixed	15.0	0.508	0.008m
B214	1AO1	RB15	6228.211m	Iono free fixed	13.7	0.589	0.008m
B203	1AO1	RB17	6523.732m	Iono free fixed	36.5	0.608	0.009m
B163	G474	VINE RM1	5505.212m	Iono free fixed	3.0	0.754	0.010m
B162	G474	RB9	5522.816m	Iono free fixed	29.1	1.238	0.013m
B159	G474	RB10	5508.722m	Iono free fixed	1.8	0.668	0.010m
B158	G474	RB11	5520.232m	Iono free fixed	30.9	1.391	0.014m
B156	G474	RB12	5504.775m	Iono free fixed	7.3	0.819	0.010m
B125	G474	A10	5511.354m	Iono free fixed	2.2	0.748	0.010m
B114	G474	RB8	5468.215m	Iono free fixed	40.9	0.842	0.011m
B111	G474	RB5	5341.739m	Iono free fixed	6.2	2.026	0.018m
B110	G474	69F1	5264.664m	Iono free fixed	11.7	1.030	0.012m
B103	2BP2	1AO1	6480.704m	Iono free fixed	18.6	0.498	0.008m
B138	2BP2	1AO1	6480.706m	Iono free fixed	12.9	0.275	0.006m
B249	1AO1	2BP2	6480.699m	Iono free fixed	64.5	0.242	0.005m
B83	G474	RB6	5336.253m	Iono free fixed	3.3	0.986	0.014m
B76	G474	RB2	5075.907m	Iono free fixed	10.7	0.820	0.011m
B69	G474	A11	5272.344m	Iono free fixed	5.7	0.903	0.013m
B61	G474	RB4	5200.297m	Iono free fixed	15.5	0.784	0.010m
B53	G474	RB7	5475.490m	Iono free fixed	3.7	1.860	0.017m
B44	G474	RB1	5081.040m	Iono free fixed	12.0	1.029	0.011m
B34	G474	B11	5278.572m	Iono free fixed	64.4	1.491	0.015m

ID	From	To	Baseline Length	Solution Type	Ratio	Reference Variance	RMS
B21	G474	B10	5527.886m	Iono free fixed	5.0	1.309	0.015m
B160	G474	B10	5527.879m	Iono free fixed	3.8	1.196	0.013m
B10	G474	RB3	5205.706m	Iono free fixed	11.9	1.109	0.012m
B231	2CQ2	RB18	5599.800m	Iono free fixed	11.0	0.549	0.008m
B230	2CQ2	RB16	5903.571m	Iono free fixed	11.6	0.482	0.009m
B229	2CQ2	RB13	6360.707m	Iono free fixed	10.1	0.525	0.009m
B228	2CQ2	RB19	5447.509m	Iono free fixed	12.6	0.687	0.009m
B226	2CQ2	RB14	6208.326m	Iono free fixed	10.5	0.599	0.009m
B211	2CQ2	RB15	6056.083m	Iono free fixed	17.4	0.573	0.008m
B200	2CQ2	RB17	5751.256m	Iono free fixed	10.8	0.627	0.009m
B87	2CQ2	2BP2	5799.505m	Iono free fixed	15.4	0.441	0.007m
B136	2BP2	2CQ2	5799.501m	Iono free fixed	19.5	0.429	0.007m
B225	2CQ2	2BP2	5799.508m	Iono free fixed	28.0	0.218	0.006m
B240	2CO1	RB18	6664.506m	Iono free fixed	31.8	0.582	0.008m
B239	2CO1	RB16	6763.501m	Iono free fixed	48.1	0.598	0.009m
B238	2CO1	RB13	6936.073m	Iono free fixed	8.4	0.551	0.009m
B237	2CO1	RB19	6618.981m	Iono free fixed	24.7	0.852	0.010m
B235	2CO1	RB14	6876.135m	Iono free fixed	12.8	0.608	0.009m
B212	2CO1	RB15	6818.544m	Iono free fixed	9.0	0.630	0.008m
B201	2CO1	RB17	6713.005m	Iono free fixed	34.0	0.737	0.009m
B171	2CQ2	VINE RM1	9849.865m	Iono free fixed	13.0	0.497	0.009m
B170	2CQ2	RB9	9751.394m	Iono free fixed	16.0	0.823	0.011m
B167	2CQ2	RB10	9758.804m	Iono free fixed	4.4	0.643	0.011m
B166	2CQ2	RB11	9626.472m	Iono free fixed	35.7	0.797	0.010m
B164	2CQ2	RB12	9634.404m	Iono free fixed	24.6	0.410	0.007m
B154	2CO1	VINE RM1	8469.218m	Iono free fixed	6.0	0.413	0.008m
B153	2CO1	RB9	8429.004m	Iono free fixed	43.7	0.807	0.011m
B150	2CO1	RB10	8442.734m	Iono free fixed	5.6	0.451	0.009m
B149	2CO1	RB11	8403.899m	Iono free fixed	42.0	0.832	0.011m
B147	2CO1	RB12	8418.960m	Iono free fixed	17.7	0.377	0.006m
B126	2CQ2	A10	9821.591m	Iono free fixed	5.6	0.623	0.010m
B124	2CO1	A10	8456.475m	Iono free fixed	5.8	0.421	0.009m
B115	2CQ2	RB8	9895.662m	Iono free fixed	50.4	0.418	0.008m
B113	2CO1	RB8	8512.558m	Iono free fixed	67.3	0.378	0.008m
B102	2CO1	RB5	8656.740m	Iono free fixed	8.5	1.196	0.013m
B101	2CO1	69F1	8746.698m	Iono free fixed	14.6	0.490	0.008m
B98	2CO1	2BP2	6741.920m	Iono free fixed	12.8	0.793	0.009m
B134	2BP2	2CO1	6741.920m	Iono free fixed	17.4	0.343	0.007m

ID	From	To	Baseline Length	Solution Type	Ratio	Reference Variance	RMS
B234	2CO1	2BP2	6741.923m	Iono free fixed	30.7	0.351	0.007m
B91	2CQ2	RB5	10034.645m	Iono free fixed	3.9	1.087	0.012m
B90	2CQ2	69F1	10123.935m	Iono free fixed	60.3	0.422	0.008m
B86	2CQ2	2CO1	7130.661m	Iono free fixed	17.6	0.356	0.007m
B146	2CO1	2CQ2	7130.657m	Iono free fixed	17.7	0.354	0.007m
B222	2CQ2	2CO1	7130.663m	Iono free fixed	16.1	0.329	0.006m
B80	2CO1	RB6	8659.049m	Iono free fixed	6.5	0.532	0.009m
B78	2CQ2	RB6	10027.673m	Iono free fixed	16.6	0.569	0.010m
B73	2CO1	RB2	8951.678m	Iono free fixed	12.3	0.395	0.008m
B71	2CQ2	RB2	10291.468m	Iono free fixed	92.3	0.328	0.007m
B66	2CO1	A11	8730.221m	Iono free fixed	6.7	0.745	0.011m
B64	2CQ2	A11	10091.354m	Iono free fixed	31.0	0.526	0.009m
B58	2CO1	RB4	8811.152m	Iono free fixed	21.4	0.388	0.007m
B56	2CQ2	RB4	10164.607m	Iono free fixed	64.6	0.284	0.006m
B50	2CO1	RB7	8509.011m	Iono free fixed	5.4	1.202	0.013m
B48	2CQ2	RB7	9904.148m	Iono free fixed	6.1	1.155	0.012m
B41	2CO1	RB1	8949.053m	Iono free fixed	10.1	0.624	0.009m
B39	2CQ2	RB1	10295.514m	Iono free fixed	58.0	0.575	0.009m
B31	2CO1	B11	8727.076m	Iono free fixed	33.8	1.033	0.012m
B29	2CQ2	B11	10097.255m	Iono free fixed	13.5	0.937	0.011m
B18	2CO1	B10	8440.244m	Iono free fixed	3.7	1.029	0.012m
B151	2CO1	B10	8440.237m	Iono free fixed	8.6	0.987	0.012m
B16	2CQ2	B10	9812.332m	Iono free fixed	6.2	0.841	0.011m
B168	2CQ2	B10	9812.315m	Iono free fixed	16.1	1.146	0.013m
B7	2CO1	RB3	8808.685m	Iono free fixed	15.6	0.738	0.011m
B5	2CQ2	RB3	10170.239m	Iono free fixed	27.6	0.645	0.010m
B197	2AQ2	VINE RM1	7250.322m	Iono free fixed	1.9	0.730	0.010m
B196	2AQ2	RB9	7181.104m	Iono free fixed	1.9	1.064	0.012m
B190	2AQ2	RB10	7171.842m	Iono free fixed	3.9	0.788	0.010m
B186	2AQ2	RB11	7061.906m	Iono free fixed	27.2	0.893	0.012m
B176	2AQ2	RB12	7051.290m	Iono free fixed	4.1	0.593	0.010m
B131	2AQ2	A10	7231.801m	Iono free fixed	2.5	0.838	0.010m
B120	2AQ2	RB8	7250.210m	Iono free fixed	36.1	0.571	0.009m
B100	G474	2CO1	13881.390m	Iono free fixed	14.1	1.400	0.013m
B145	2CO1	G474	13881.387m	Iono free fixed	11.2	1.043	0.011m
B232	2CO1	G474	13881.383m	Iono free fixed	17.3	1.710	0.013m
B99	2CO1	1AO1	9766.380m	Iono free fixed	21.7	0.463	0.007m
B148	2CO1	1AO1	9766.379m	Iono free fixed	342.6	0.392	0.007m

ID	From	To	Baseline Length	Solution Type	Ratio	Reference Variance	RMS
B233	2CO1	1AO1	9766.376m	Iono free fixed	25.0	0.335	0.006m
B97	2AQ2	RB5	7234.975m	Iono free fixed	9.1	1.384	0.014m
B96	2AQ2	69F1	7230.411m	Iono free fixed	18.4	0.560	0.010m
B92	2AQ2	2CO1	13395.355m	Iono free fixed	14.6	0.786	0.009m
B152	2CO1	2AQ2	13395.363m	Iono free fixed	45.5	0.723	0.011m
B236	2CO1	2AQ2	13395.352m	Iono free fixed	53.7	0.479	0.009m
B89	2CQ2	G474	13559.890m	Iono free fixed	10.1	1.093	0.011m
B155	G474	2CQ2	13559.887m	Iono free fixed	13.4	1.128	0.012m
B223	2CQ2	G474	13559.884m	Iono free fixed	24.0	1.291	0.012m
B88	2CQ2	1AO1	12161.597m	Iono free fixed	56.3	0.378	0.007m
B165	2CQ2	1AO1	12161.594m	Iono free fixed	62.5	0.448	0.008m
B224	2CQ2	1AO1	12161.593m	Iono free fixed	244.5	0.235	0.006m
B85	2CQ2	2AQ2	10227.894m	Iono free fixed	22.2	0.503	0.008m
B169	2CQ2	2AQ2	10227.905m	Iono free fixed	40.1	0.761	0.011m
B227	2CQ2	2AQ2	10227.893m	Iono free fixed	58.8	0.433	0.008m
B79	2AQ2	RB6	7222.690m	Iono free fixed	6.1	0.870	0.012m
B72	2AQ2	RB2	7175.632m	Iono free fixed	16.5	0.362	0.008m
B65	2AQ2	A11	7209.661m	Iono free fixed	10.8	0.671	0.011m
B57	2AQ2	RB4	7196.691m	Iono free fixed	24.8	0.372	0.008m
B49	2AQ2	RB7	7265.852m	Iono free fixed	7.2	1.457	0.014m
B40	2AQ2	RB1	7184.808m	Iono free fixed	12.3	0.603	0.009m
B30	2AQ2	B11	7221.782m	Iono free fixed	54.6	1.068	0.012m
B17	2AQ2	B10	7241.998m	Iono free fixed	6.8	1.116	0.014m
B193	2AQ2	B10	7241.986m	Iono free fixed	2.1	1.134	0.012m
B6	2AQ2	RB3	7207.638m	Iono free fixed	18.4	0.694	0.010m

SECTION 2.3.2

NETWORK ADJUSTMENT REPORT

Network Adjustment Report

Project : 1714-10-SECONDARY

User name	John.Marshall	**Date & Time**	1:38:55 PM 10/23/2008
Coordinate System	NAD83 ASPCS (1992)	**Zone**	Arizona Central 0202
Project Datum	NAD 1983		
Vertical Datum	NAVD 88	**Geoid Model**	GEOID99 (Conus)
Coordinate Units	International feet		
Distance Units	International feet		
Height Units	International feet		

Adjustment Style Settings - ATEAM 95% Confidence

Residual Tolerances

To End Iterations : 0.000033ift
Final Convergence Cutoff : 0.016404ift

Covariance Display

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

Elevation Errors were used in the calculations.

Adjustment Controls

Compute Correlations for Geoid : False

Horizontal and Vertical adjustment performed

Set-up Errors

GPS
Error in Height of Antenna : 0.007ift
Centering Error : 0.007ift

Statistical Summary

Successful Adjustment in 10 iteration(s) (final convergence cutoff used)

Network Reference Factor : 1.03
Chi Square Test (α=95%) : PASS
Degrees of Freedom : 726.00

GPS Observation Statistics

Reference Factor : 1.03
Redundancy Number (r) : 726.00

Individual GPS Observation Statistics

Observation ID	Reference Factor	Redundancy Number
B278	0.77	2.71
B279	1.49	2.72
B280	0.59	2.72
B281	1.03	2.65
B282	0.41	2.57
B283	0.81	2.79
B284	0.27	2.38
B285	0.25	2.38
B286	0.63	2.49
B287	0.31	2.39
B288	0.32	2.36
B289	1.27	2.74
B290	0.87	2.77
B291	0.85	2.72
B292	1.05	2.68
B293	0.79	2.63
B294	0.77	2.78
B295	0.11	2.35
B296	1.79	2.51
B297	0.33	2.50

Observation ID	Reference Factor	Redundancy Number
B298	0.09	2.36
B299	0.20	2.28
B300	1.28	2.80
B301	0.83	2.76
B302	1.34	2.83
B303	0.79	2.81
B304	0.67	2.85
B305	0.32	2.73
B306	0.90	2.77
B307	0.45	2.76
B308	2.64	2.87
B309	1.40	2.79
B310	0.98	2.74
B311	0.81	2.78
B312	0.97	2.71
B313	1.26	2.73
B314	1.54	2.83
B315	0.66	2.83
B316	1.29	2.82
B317	0.98	2.84
B318	1.17	2.75
B319	0.74	2.79
B320	1.01	2.76
B321	2.43	2.89
B322	1.82	2.80
B323	1.49	2.75
B324	0.76	2.80
B325	0.97	2.73
B326	0.91	2.75
B327	1.32	2.86
B328	1.22	2.82

Observation ID	Reference Factor	Redundancy Number
B329	0.63	2.85
B330	0.63	2.74
B331	0.63	2.77
B332	0.61	2.76
B333	2.34	2.87
B334	1.02	2.79
B335	0.79	2.75
B336	0.76	2.77
B337	1.11	2.73
B338	1.03	2.73
B339	0.72	2.86
B340	0.93	2.85
B341	0.87	2.65
B342	0.68	2.67
B343	0.95	2.64
B344	2.11	2.84
B345	0.37	2.70
B346	0.78	2.62
B347	1.04	2.66
B348	0.88	2.65
B349	1.07	2.68
B350	0.49	2.84
B351	0.22	2.57
B352	0.72	2.62
B353	0.46	2.58
B354	1.55	2.82
B355	0.27	2.65
B356	0.27	2.58
B357	0.62	2.61
B358	0.55	2.58
B359	0.72	2.61

Observation ID	Reference Factor	Redundancy Number
B360	1.25	2.81
B361	0.72	2.83
B362	1.14	2.81
B363	1.73	2.88
B364	0.87	2.82
B365	0.39	2.79
B366	0.73	2.82
B367	1.05	2.80
B368	0.70	2.76
B369	0.17	2.38
B370	0.74	2.47
B371	0.26	2.40
B372	0.35	2.37
B373	1.67	2.54
B374	0.30	2.50
B375	0.14	2.41
B376	0.25	2.36
B377	0.71	2.50
B378	0.40	2.40
B379	0.19	2.38
B380	1.48	2.69
B381	1.71	2.52
B382	1.69	2.52
B383	0.34	2.47
B384	0.23	2.50
B385	0.72	2.48
B386	0.49	2.49
B387	0.38	2.41
B388	0.19	2.37
B389	0.42	2.57
B390	0.73	2.73

Observation ID	Reference Factor	Redundancy Number
B391	0.48	2.76
B392	1.11	2.74
B393	0.97	2.45
B394	0.99	2.57
B395	0.19	2.40
B396	1.27	2.58
B397	1.70	2.73
B398	0.54	2.48
B399	0.64	2.44
B400	1.41	2.60
B401	1.27	2.72
B402	1.02	2.77
B403	1.17	2.77
B404	0.32	2.41
B405	0.82	2.69
B406	0.15	2.36
B407	1.92	2.56
B408	1.24	2.78
B409	0.21	2.50
B410	0.20	2.43
B411	1.12	2.82
B412	0.85	2.81
B413	1.60	2.84
B414	1.59	2.62
B415	1.02	2.85
B416	0.46	2.58
B417	1.31	2.61
B418	2.06	2.74
B419	2.30	2.84
B420	1.30	2.63
B421	1.23	2.62

Observation ID	Reference Factor	Redundancy Number
B422	0.43	2.83
B423	0.76	2.80
B424	0.68	2.71
B425	0.72	2.84
B426	0.49	2.78
B427	0.77	2.74
B428	1.34	2.85
B430	1.19	2.77
B431	1.25	2.73
B432	1.02	2.84
B433	0.65	2.73
B434	0.30	2.85
B435	0.26	2.80
B436	1.03	2.76
B437	1.12	2.84
B438	1.17	2.83
B439	1.28	2.77
B440	1.07	2.74
B441	1.48	2.73
B442	0.94	2.85
B443	0.81	2.77
B444	0.90	2.78
B445	1.74	2.87
B446	1.94	2.86
B447	1.58	2.77
B448	1.49	2.75
B449	0.28	2.65
B450	0.68	2.50
B451	0.25	2.40
B452	1.82	2.57
B453	0.93	2.74

Observation ID	Reference Factor	Redundancy Number
B454	0.37	2.47
B455	0.46	2.44
B456	0.91	2.61
B457	0.74	2.68
B458	1.87	2.80
B459	1.18	2.86
B460	0.42	2.69
B461	0.17	2.65
B462	1.41	2.55
B463	1.84	2.75
B464	0.31	2.47
B465	0.45	2.47
B466	1.85	2.57
B467	1.26	2.78
B468	0.09	2.49
B469	0.20	2.44
B470	1.32	2.84
B471	1.70	2.54
B472	1.68	2.56
B473	1.50	2.77
B474	1.54	2.74
B475	0.21	2.47
B476	0.32	2.45
B477	0.93	2.76
B478	0.90	2.75
B479	0.59	2.81
B480	0.94	2.74
B481	0.46	2.56
B482	0.20	2.43
B483	0.62	2.75
B484	0.22	2.40

Observation ID	Reference Factor	Redundancy Number
B485	0.42	2.44
B486	0.31	2.41
B487	0.44	2.45
B488	1.18	2.74
B489	0.58	2.72
B491	0.23	2.73
B492	0.31	2.51
B493	0.36	2.46
B494	1.53	2.76
B495	0.55	2.44
B496	0.43	2.46
B497	0.43	2.42
B498	0.45	2.47
B499	0.77	2.83
B500	1.61	2.88
B501	1.42	2.83
B502	1.64	2.83
B503	0.78	2.77
B504	1.73	2.85
B505	1.03	2.76
B506	0.42	2.75
B507	0.91	2.75
B508	0.76	2.76
B509	1.27	2.89
B510	0.60	2.83
B511	1.31	2.85
B512	0.70	2.76
B513	1.76	2.85
B514	0.80	2.76
B515	0.68	2.74
B516	0.76	2.73

Observation ID	Reference Factor	Redundancy Number
B517	0.29	2.74
B520	0.94	2.82
B521	0.40	2.88
B522	1.03	2.82
B523	1.23	2.82
B524	1.30	2.79
B525	1.45	2.82
B526	1.04	2.84
B527	0.77	2.75
B528	1.93	2.85
B529	0.99	2.76
B530	0.95	2.74
B531	0.92	2.72
B532	0.90	2.75
B533	0.51	2.61
B534	2.02	2.86
B535	0.63	2.59
B536	0.72	2.61
B537	0.61	2.54
B538	0.69	2.57
B539	0.78	2.77
B540	0.29	2.45
B541	0.25	2.39
B542	0.38	2.42
B543	0.34	2.45
B544	0.48	2.75
B545	1.06	2.73
B546	1.07	2.74
B547	1.25	2.75
B548	0.34	2.46
B549	0.25	2.42

Observation ID	Reference Factor	Redundancy Number
B550	0.38	2.42
B551	0.33	2.44
B552	0.22	2.46
B553	0.29	2.43

Weighting Strategies

GPS Observations

User-defined Scalar Applied to All Observations

Scalar : 3.32

Adjusted Coordinates

Adjustment performed in WGS-84

Number of Points : 31
Number of Constrained Points : 0

Adjusted Grid Coordinates

Errors are reported using 1.96σ.

Point Name	Northing	N error	Easting	E error	Elevation	e error	Fix
2CQ2	833053.349ift	0.003ift	825287.359ift	0.003ift	N/A	N/A	
RB2	862376.133ift	0.006ift	808558.030ift	0.006ift	N/A	N/A	
2AQ2	865960.020ift	0.003ift	831818.596ift	0.003ift	N/A	N/A	
2CO1	833774.940ift	0.003ift	801908.077ift	0.003ift	N/A	N/A	
2BP2	850095.456ift	0.003ift	816832.158ift	0.003ift	N/A	N/A	
1AO1	865806.049ift	0.003ift	802510.367ift	0.003ift	N/A	N/A	
G474	876748.183ift	0.004ift	816963.999ift	0.003ift	N/A	N/A	
69F1	861701.666ift	0.006ift	808489.551ift	0.006ift	N/A	N/A	
RB3	861901.078ift	0.006ift	808529.887ift	0.006ift	N/A	N/A	
B11	861625.360ift	0.005ift	808532.450ift	0.005ift	N/A	N/A	
RB1	862374.318ift	0.006ift	808528.083ift	0.006ift	N/A	N/A	
RB4	861900.751ift	0.006ift	808566.121ift	0.006ift	N/A	N/A	
RB6	861385.571ift	0.006ift	808575.013ift	0.006ift	N/A	N/A	
RB5	861387.813ift	0.007ift	808533.825ift	0.006ift	N/A	N/A	
B10	860622.050ift	0.004ift	808673.823ift	0.004ift	N/A	N/A	
RB7	860889.258ift	0.006ift	808533.656ift	0.006ift	N/A	N/A	
A11	861626.322ift	0.006ift	808572.419ift	0.006ift	N/A	N/A	
RB8	860888.259ift	0.006ift	808586.019ift	0.006ift	N/A	N/A	
RB12	860361.706ift	0.005ift	809379.271ift	0.005ift	N/A	N/A	
RB11	860317.366ift	0.006ift	809354.924ift	0.006ift	N/A	N/A	
RB9	860525.544ift	0.006ift	808901.512ift	0.005ift	N/A	N/A	
VINE RM1	860733.397ift	0.005ift	808619.962ift	0.005ift	N/A	N/A	
A10	860671.148ift	0.006ift	808696.407ift	0.006ift	N/A	N/A	

Point Name	Northing	N error	Easting	E error	Elevation	e error	Fix
RB10	860566.437ift	0.006ift	808922.658ift	0.006ift	N/A	N/A	
RB17	849935.516ift	0.006ift	816866.043ift	0.006ift	N/A	N/A	
RB15	850817.281ift	0.006ift	816393.624ift	0.006ift	N/A	N/A	
RB14	851258.327ift	0.006ift	816159.055ift	0.006ift	N/A	N/A	
RB19	849055.046ift	0.006ift	817333.204ift	0.006ift	N/A	N/A	
RB13	851698.838ift	0.006ift	815922.408ift	0.006ift	N/A	N/A	
RB16	850374.961ift	0.006ift	816627.681ift	0.006ift	N/A	N/A	
RB18	849496.407ift	0.006ift	817098.813ift	0.006ift	N/A	N/A	

Adjusted Geodetic Coordinates

Errors are reported using 1.96σ.

Point Name	Latitude	N error	Longitude	E error	Height	h error	Fix
2CQ2	33°17'21.67237"N	0.003ift	111°30'23.96079"W	0.003ift	1506.956ift	0.011ift	
RB2	33°22'12.40446"N	0.006ift	111°33'39.87128"W	0.006ift	1493.775ift	0.014ift	
2AQ2	33°22'46.99373"N	0.003ift	111°29'05.41098"W	0.003ift	1881.156ift	0.012ift	
2CO1	33°17'29.63580"N	0.003ift	111°34'59.36580"W	0.003ift	1345.662ift	0.011ift	
2BP2	33°20'10.60775"N	0.003ift	111°32'02.83524"W	0.003ift	1484.937ift	0.007ift	
1AO1	33°22'46.53911"N	0.003ift	111°34'51.05451"W	0.003ift	1454.334ift	0.008ift	
G474	33°24'34.30759"N	0.004ift	111°32'00.12504"W	0.003ift	1652.002ift	0.016ift	
69F1	33°22'05.73350"N	0.006ift	111°33'40.70591"W	0.006ift	1477.681ift	0.015ift	
RB3	33°22'07.70515"N	0.006ift	111°33'40.22226"W	0.006ift	1476.985ift	0.015ift	
B11	33°22'04.97707"N	0.005ift	111°33'40.20313"W	0.005ift	1474.634ift	0.012ift	
RB1	33°22'12.38751"N	0.006ift	111°33'40.22449"W	0.006ift	1479.023ift	0.015ift	
RB4	33°22'07.70069"N	0.006ift	111°33'39.79500"W	0.006ift	1494.052ift	0.014ift	
RB6	33°22'02.60313"N	0.006ift	111°33'39.71090"W	0.006ift	1494.632ift	0.016ift	
RB5	33°22'02.62670"N	0.007ift	111°33'40.19648"W	0.006ift	1474.534ift	0.019ift	
B10	33°21'55.04541"N	0.004ift	111°33'38.57654"W	0.004ift	1469.456ift	0.010ift	
RB7	33°21'57.69394"N	0.006ift	111°33'40.21853"W	0.006ift	1471.467ift	0.018ift	
A11	33°22'04.98524"N	0.006ift	111°33'39.73179"W	0.006ift	1493.300ift	0.016ift	
RB8	33°21'57.68228"N	0.006ift	111°33'39.60114"W	0.006ift	1495.108ift	0.013ift	
RB12	33°21'52.44560"N	0.005ift	111°33'30.26897"W	0.005ift	1494.895ift	0.011ift	
RB11	33°21'52.00773"N	0.006ift	111°33'30.55784"W	0.006ift	1469.528ift	0.016ift	
RB9	33°21'54.08286"N	0.006ift	111°33'35.89569"W	0.005ift	1471.026ift	0.012ift	
VINE RM1	33°21'56.14892"N	0.005ift	111°33'39.20714"W	0.005ift	1496.137ift	0.011ift	
A10	33°21'55.53043"N	0.006ift	111°33'38.30827"W	0.006ift	1494.971ift	0.015ift	
RB10	33°21'54.48675"N	0.006ift	111°33'35.64470"W	0.006ift	1494.590ift	0.015ift	
RB17	33°20'09.02405"N	0.006ift	111°32'02.44274"W	0.006ift	1472.157ift	0.014ift	
RB15	33°20'17.76549"N	0.006ift	111°32'07.97327"W	0.006ift	1470.781ift	0.015ift	
RB14	33°20'22.13774"N	0.006ift	111°32'10.71931"W	0.006ift	1470.649ift	0.015ift	
RB19	33°20'00.29555"N	0.006ift	111°31'56.97443"W	0.006ift	1472.436ift	0.015ift	

Point Name	Latitude	N error	Longitude	E error	Height	h error	Fix
RB13	33°20'26.50476"N	0.006ift	111°32'13.48993"W	0.006ift	1469.472ift	0.015ift	
RB16	33°20'13.38063"N	0.006ift	111°32'05.23340"W	0.006ift	1472.358ift	0.014ift	
RB18	33°20'04.67098"N	0.006ift	111°31'59.71805"W	0.006ift	1472.690ift	0.015ift	

Coordinate Deltas

Point Name	ΔNorthing	ΔEasting	ΔElevation	ΔHeight	ΔGeoid Separation
2CQ2	0.000ift	0.000ift	N/A	0.000ift	N/A
RB2	0.000ift	0.000ift	N/A	0.000ift	N/A
2AQ2	0.000ift	0.000ift	N/A	0.000ift	N/A
2CO1	0.000ift	0.000ift	N/A	0.000ift	N/A
2BP2	0.000ift	0.000ift	N/A	0.000ift	N/A
1AO1	0.000ift	0.000ift	N/A	0.000ift	N/A
G474	0.000ift	0.000ift	N/A	0.000ift	N/A
69F1	0.000ift	0.000ift	N/A	0.000ift	N/A
RB3	0.000ift	0.000ift	N/A	0.000ift	N/A
B11	0.000ift	0.000ift	N/A	0.000ift	N/A
RB1	0.000ift	0.000ift	N/A	0.000ift	N/A
RB4	0.000ift	0.000ift	N/A	0.000ift	N/A
RB6	0.000ift	0.000ift	N/A	0.000ift	N/A
RB5	0.000ift	0.000ift	N/A	0.000ift	N/A
B10	0.000ift	0.000ift	N/A	0.000ift	N/A
RB7	0.000ift	0.000ift	N/A	0.000ift	N/A
A11	0.000ift	0.000ift	N/A	0.000ift	N/A
RB8	0.000ift	0.000ift	N/A	0.000ift	N/A
RB12	0.000ift	0.000ift	N/A	0.000ift	N/A
RB11	0.000ift	0.000ift	N/A	0.000ift	N/A
RB9	0.000ift	0.000ift	N/A	0.000ift	N/A
VINE RM1	0.000ift	0.000ift	N/A	0.000ift	N/A
A10	0.000ift	0.000ift	N/A	0.000ift	N/A
RB10	0.000ift	0.000ift	N/A	0.000ift	N/A
RB17	0.000ift	0.000ift	N/A	0.000ift	N/A
RB15	0.000ift	0.000ift	N/A	0.000ift	N/A
RB14	0.000ift	0.000ift	N/A	0.000ift	N/A
RB19	0.000ift	0.000ift	N/A	0.000ift	N/A
RB13	0.000ift	0.000ift	N/A	0.000ift	N/A
RB16	0.000ift	0.000ift	N/A	0.000ift	N/A

Point Name	ΔNorthing	ΔEasting	ΔElevation	ΔHeight	ΔGeoid Separation
RB18	0.000ift	0.000ift	N/A	0.000ift	N/A

Control Coordinate Comparisons

Values shown are control coord minus adjusted coord.

Point Name	ΔNorthing	ΔEasting	ΔElevation	ΔHeight
2CQ2	-0.002ift	-0.001ift	N/A	0.022ift
2AQ2	-0.005ift	-0.001ift	N/A	0.012ift
2CO1	0.027ift	0.029ift	N/A	0.020ift
2BP2	-0.001ift	0.000ift	N/A	0.023ift
1AO1	0.001ift	-0.008ift	N/A	-0.013ift
G474	-0.003ift	-0.014ift	N/A	0.032ift

Adjusted Observations

Adjustment performed in WGS-84

GPS Observations

Number of Observations : 272
Number of Outliers : 0

Observation Adjustment (Critical Tau = 3.98). Any outliers are in red.

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B308	2CQ2	B10	Az.	329°09'04.0433"	0°00'00.0337"	0°00'00.1345"	1.83
			ΔHt.	-37.500ift	0.015ift	0.074ift	1.37
			Dist.	32190.334ift	0.005ift	-0.041ift	-3.65
B333	2CO1	B10	Az.	14°19'40.2293"	0°00'00.0380"	0°00'00.2651"	3.36
			ΔHt.	123.793ift	0.015ift	0.062ift	1.16
			Dist.	27688.923ift	0.005ift	-0.022ift	-1.82
B458	1AO1	B10	Az.	130°15'05.2577"	0°00'00.1328"	0°00'00.0412"	0.17
			ΔHt.	15.122ift	0.013ift	0.008ift	0.33
			Dist.	8054.399ift	0.005ift	-0.030ift	-3.12
B407	A10	B10	Az.	204°53'50.5183"	0°00'27.3693"	0°01'46.5113"	3.07
			ΔHt.	-25.515ift	0.017ift	-0.010ift	-0.48
			Dist.	54.047ift	0.007ift	-0.008ift	-0.82
B344	2BP2	B10	Az.	322°26'01.9087"	0°00'00.0797"	0°00'00.0799"	0.51
			ΔHt.	-15.482ift	0.012ift	0.067ift	2.04
			Dist.	13319.081ift	0.005ift	-0.029ift	-2.94
B452	RB12	B10	Az.	290°27'12.7981"	0°00'01.8506"	0°00'01.6378"	0.65
			ΔHt.	-25.440ift	0.014ift	-0.005ift	-0.34
			Dist.	752.020ift	0.007ift	0.027ift	2.93
B419	2BP2	2AQ2	Az.	43°34'47.8723"	0°00'00.0409"	0°00'00.1861"	2.02
			ΔHt.	396.218ift	0.013ift	0.047ift	1.75
			Dist.	21825.584ift	0.004ift	-0.029ift	-2.86

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B471	B10	RB9	**Az.**	113°09'55.5157"	0°00'05.7257"	0°00'04.2449"	0.56
			ΔHt.	1.570ift	0.015ift	0.006ift	0.37
			Dist.	247.318ift	0.007ift	0.025ift	2.73
B414	2BP2	RB12	**Az.**	324°13'55.7689"	0°00'00.1016"	0°00'00.0050"	0.03
			ΔHt.	9.958ift	0.013ift	-0.039ift	-2.73
			Dist.	12687.351ift	0.006ift	0.001ift	0.12
B466	RB10	B10	**Az.**	282°47'39.9153"	0°00'05.9399"	0°00'10.2839"	1.37
			ΔHt.	-25.134ift	0.018ift	-0.016ift	-0.75
			Dist.	254.996ift	0.007ift	0.025ift	2.69
B502	2CQ2	2BP2	**Az.**	333°50'15.0718"	0°00'00.0469"	0°00'00.0653"	0.62
			ΔHt.	-22.019ift	0.012ift	-0.060ift	-2.69
			Dist.	19025.879ift	0.004ift	-0.002ift	-0.23
B321	2AQ2	B10	**Az.**	257°15'01.0499"	0°00'00.0463"	-0°00'00.2902"	-2.66
			ΔHt.	-411.700ift	0.016ift	0.088ift	1.36
			Dist.	23754.338ift	0.005ift	-0.031ift	-2.65
B418	2BP2	B10	**Az.**	322°26'01.9087"	0°00'00.0797"	-0°00'00.1062"	-0.72
			ΔHt.	-15.482ift	0.012ift	-0.038ift	-2.13
			Dist.	13319.081ift	0.005ift	0.025ift	2.65
B534	2BP2	2AQ2	**Az.**	43°34'47.8723"	0°00'00.0409"	0°00'00.0721"	0.76
			ΔHt.	396.218ift	0.013ift	0.086ift	2.62
			Dist.	21825.584ift	0.004ift	0.021ift	2.04
B446	2CQ2	2AQ2	**Az.**	11°27'04.8818"	0°00'00.0270"	-0°00'00.1117"	-1.80
			ΔHt.	374.200ift	0.015ift	0.030ift	0.86
			Dist.	33551.283ift	0.005ift	-0.027ift	-2.61

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B381	B10	RB7	**Az.**	332°30'57.7617"	0°00'05.1044"	-0°00'06.7835"	-1.08
			ΔHt.	2.012ift	0.021ift	-0.012ift	-0.58
			Dist.	301.765ift	0.007ift	0.024ift	2.56
B363	G474	B10	**Az.**	207°25'04.3507"	0°00'00.0602"	-0°00'00.3364"	-2.55
			ΔHt.	-182.546ift	0.019ift	0.021ift	0.28
			Dist.	18133.818ift	0.006ift	-0.016ift	-1.22
B528	2AQ2	1AO1	**Az.**	269°56'11.7149"	0°00'00.0317"	0°00'00.0161"	0.22
			ΔHt.	-426.822ift	0.014ift	-0.073ift	-2.54
			Dist.	29311.102ift	0.004ift	0.020ift	2.00
B504	2CQ2	2AQ2	**Az.**	11°27'04.8818"	0°00'00.0270"	0°00'00.1554"	2.54
			ΔHt.	374.200ift	0.015ift	0.030ift	0.87
			Dist.	33551.283ift	0.005ift	0.012ift	1.11
B472	B10	VINE RM1	**Az.**	334°22'54.2462"	0°00'11.1940"	0°00'16.5146"	1.08
			ΔHt.	26.681ift	0.014ift	0.005ift	0.38
			Dist.	123.700ift	0.007ift	-0.023ift	-2.53
B322	2AQ2	B11	**Az.**	259°41'33.9855"	0°00'00.0529"	-0°00'00.1729"	-1.90
			ΔHt.	-406.521ift	0.017ift	0.104ift	2.45
			Dist.	23688.130ift	0.006ift	0.005ift	0.53
B354	1AO1	B10	**Az.**	130°15'05.2577"	0°00'00.1328"	-0°00'00.1450"	-0.57
			ΔHt.	15.122ift	0.013ift	-0.017ift	-0.61
			Dist.	8054.399ift	0.005ift	0.024ift	2.43
B400	2BP2	A10	**Az.**	322°38'22.7928"	0°00'00.1076"	0°00'00.0115"	0.08
			ΔHt.	10.034ift	0.017ift	-0.049ift	-2.39
			Dist.	13344.142ift	0.007ift	0.002ift	0.20

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B445	2CQ2	B10	**Az.**	329°09'04.0433"	0°00'00.0337"	-0°00'00.1688"	-2.36
			ΔHt.	-37.500ift	0.015ift	0.059ift	1.16
			Dist.	32190.334ift	0.005ift	0.013ift	1.18
B500	2CQ2	G474	**Az.**	349°26'25.5175"	0°00'00.0216"	0°00'00.1193"	2.33
			ΔHt.	145.046ift	0.019ift	0.063ift	1.20
			Dist.	44484.223ift	0.005ift	0.012ift	1.00
B441	2CQ2	RB12	**Az.**	330°00'10.5796"	0°00'00.0413"	-0°00'00.1437"	-2.30
			ΔHt.	-12.061ift	0.015ift	-0.002ift	-0.06
			Dist.	31606.675ift	0.006ift	0.009ift	0.97
B513	2CO1	2AQ2	**Az.**	43°05'07.7865"	0°00'00.0210"	0°00'00.0708"	1.51
			ΔHt.	535.494ift	0.016ift	0.074ift	2.26
			Dist.	43941.369ift	0.005ift	0.010ift	1.00
B420	2BP2	RB9	**Az.**	322°57'44.3553"	0°00'00.1005"	0°00'00.0096"	0.07
			ΔHt.	-13.912ift	0.014ift	-0.037ift	-2.23
			Dist.	13103.862ift	0.006ift	0.001ift	0.11
B417	2BP2	RB10	**Az.**	323°08'37.9879"	0°00'00.1096"	0°00'00.0169"	0.11
			ΔHt.	9.652ift	0.017ift	-0.046ift	-2.19
			Dist.	13123.683ift	0.007ift	0.004ift	0.43
B511	2CO1	2BP2	**Az.**	42°37'26.8483"	0°00'00.0400"	-0°00'00.0067"	-0.07
			ΔHt.	139.275ift	0.012ift	-0.056ift	-2.16
			Dist.	22117.229ift	0.004ift	-0.004ift	-0.42
B462	RB11	B10	**Az.**	294°17'52.3847"	0°00'02.0666"	0°00'01.1536"	0.45
			ΔHt.	-0.073ift	0.018ift	-0.014ift	-0.72
			Dist.	746.209ift	0.007ift	0.020ift	2.16

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B296	RB6	B10	**Az.**	172°49'18.2772"	0°00'01.9231"	-0°00'04.7831"	-1.97
			ΔHt.	-25.177ift	0.019ift	0.011ift	0.60
			Dist.	769.955ift	0.007ift	0.020ift	2.14
B302	2CQ2	2BP2	**Az.**	333°50'15.0718"	0°00'00.0469"	0°00'00.0388"	0.37
			ΔHt.	-22.019ift	0.012ift	-0.047ift	-2.13
			Dist.	19025.879ift	0.004ift	0.007ift	0.72
B327	2CO1	2BP2	**Az.**	42°37'26.8483"	0°00'00.0400"	-0°00'00.0502"	-0.55
			ΔHt.	139.275ift	0.012ift	-0.060ift	-2.13
			Dist.	22117.229ift	0.004ift	0.004ift	0.37
B373	RB5	B10	**Az.**	169°50'06.1152"	0°00'01.9515"	-0°00'04.2119"	-1.73
			ΔHt.	-5.078ift	0.021ift	0.012ift	0.50
			Dist.	778.522ift	0.008ift	0.020ift	2.11
B421	2BP2	VINE RM1	**Az.**	322°32'35.3980"	0°00'00.0965"	-0°00'00.0273"	-0.19
			ΔHt.	11.200ift	0.013ift	-0.031ift	-2.10
			Dist.	13440.120ift	0.006ift	0.001ift	0.06
B413	2BP2	2CQ2	**Az.**	153°49'20.7690"	0°00'00.0469"	-0°00'00.1143"	-1.08
			ΔHt.	22.019ift	0.012ift	0.032ift	1.31
			Dist.	19025.879ift	0.004ift	0.020ift	2.09
B463	2AQ2	RB11	**Az.**	256°08'13.6959"	0°00'00.0632"	0°00'00.2036"	2.09
			ΔHt.	-411.627ift	0.020ift	0.065ift	1.44
			Dist.	23163.452ift	0.007ift	-0.021ift	-1.93
B439	G474	RB9	**Az.**	206°38'16.2375"	0°00'00.0735"	0°00'00.0373"	0.32
			ΔHt.	-180.976ift	0.020ift	0.096ift	2.05
			Dist.	18117.222ift	0.007ift	0.006ift	0.51

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B474	2AQ2	VINE RM1	**Az.**	257°32'27.1496"	0°00'00.0555"	0°00'00.1751"	2.02
			ΔHt.	-385.019ift	0.016ift	0.045ift	1.41
			Dist.	23782.106ift	0.006ift	-0.007ift	-0.74
B382	B10	A11	**Az.**	354°25'48.0938"	0°00'01.4585"	-0°00'03.3334"	-1.80
			ΔHt.	23.844ift	0.018ift	-0.015ift	-0.80
			Dist.	1009.465ift	0.007ift	0.018ift	2.01
B328	2CO1	1AO1	**Az.**	1°15'37.8041"	0°00'00.0277"	-0°00'00.0146"	-0.24
			ΔHt.	108.672ift	0.013ift	-0.043ift	-2.00
			Dist.	32039.591ift	0.004ift	-0.004ift	-0.43
B448	2CQ2	VINE RM1	**Az.**	329°10'16.4354"	0°00'00.0407"	-0°00'00.0751"	-1.19
			ΔHt.	-10.819ift	0.015ift	0.066ift	2.00
			Dist.	32313.515ift	0.006ift	0.008ift	0.86
B323	2AQ2	RB1	**Az.**	261°29'07.0118"	0°00'00.0616"	-0°00'00.1836"	-1.99
			ΔHt.	-402.133ift	0.019ift	0.067ift	1.43
			Dist.	23566.882ift	0.007ift	-0.003ift	-0.29
B309	2CQ2	B11	**Az.**	329°50'14.9576"	0°00'00.0373"	-0°00'00.0793"	-1.25
			ΔHt.	-32.322ift	0.016ift	0.075ift	1.98
			Dist.	33125.094ift	0.006ift	-0.007ift	-0.66
B473	2AQ2	RB9	**Az.**	256°53'49.3719"	0°00'00.0568"	0°00'00.1304"	1.44
			ΔHt.	-410.130ift	0.017ift	0.076ift	1.97
			Dist.	23554.592ift	0.006ift	-0.005ift	-0.51
B431	2CO1	VINE RM1	**Az.**	14°09'50.4405"	0°00'00.0464"	-0°00'00.0356"	-0.50
			ΔHt.	150.475ift	0.015ift	0.056ift	1.97
			Dist.	27783.855ift	0.006ift	0.003ift	0.35

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B314	2AQ2	2CO1	**Az.**	223°08'22.2999"	0°00'00.0210"	-0°00'00.0805"	-1.73
			ΔHt.	-535.494ift	0.016ift	0.059ift	1.97
			Dist.	43941.369ift	0.005ift	0.001ift	0.08
B360	G474	69F1	**Az.**	209°35'59.5445"	0°00'00.0831"	-0°00'00.1161"	-0.84
			ΔHt.	-174.320ift	0.022ift	-0.140ift	-1.94
			Dist.	17270.348ift	0.007ift	-0.001ift	-0.06
B447	2CQ2	RB9	**Az.**	329°24'40.3582"	0°00'00.0417"	-0°00'00.1179"	-1.76
			ΔHt.	-35.931ift	0.016ift	0.080ift	1.93
			Dist.	31990.467ift	0.006ift	0.004ift	0.40
B289	2CQ2	RB6	**Az.**	329°41'24.5778"	0°00'00.0438"	0°00'00.0168"	0.25
			ΔHt.	-12.324ift	0.020ift	0.044ift	1.03
			Dist.	32896.806ift	0.007ift	-0.020ift	-1.92
B401	2CO1	A10	**Az.**	14°20'53.8539"	0°00'00.0513"	0°00'00.0270"	0.36
			ΔHt.	149.309ift	0.019ift	0.074ift	1.92
			Dist.	27742.057ift	0.007ift	0.007ift	0.65
B318	2AQ2	69F1	**Az.**	259°53'34.7580"	0°00'00.0610"	-0°00'00.1748"	-1.91
			ΔHt.	-403.474ift	0.019ift	-0.013ift	-0.29
			Dist.	23716.487ift	0.007ift	-0.004ift	-0.36
B380	B10	B11	**Az.**	352°10'30.7913"	0°00'01.3052"	-0°00'02.9913"	-1.56
			ΔHt.	5.179ift	0.016ift	-0.003ift	-0.13
			Dist.	1013.308ift	0.007ift	0.018ift	1.89
B524	G474	RB16	**Az.**	180°56'29.2666"	0°00'00.0531"	0°00'00.0639"	0.74
			ΔHt.	-179.644ift	0.022ift	-0.120ift	-1.88
			Dist.	26377.592ift	0.007ift	0.008ift	0.69

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B501	2CQ2	1AO1	**Az.**	325°24'34.7200"	0°00'00.0226"	0°00'00.0682"	1.36
			ΔHt.	-52.622ift	0.013ift	-0.044ift	-1.87
			Dist.	39897.388ift	0.004ift	0.006ift	0.61
B494	2AQ2	RB15	**Az.**	225°45'59.2737"	0°00'00.0653"	0°00'00.1813"	1.87
			ΔHt.	-410.374ift	0.020ift	-0.064ift	-1.27
			Dist.	21617.337ift	0.007ift	0.011ift	0.99
B397	2AQ2	RB8	**Az.**	257°55'22.2913"	0°00'00.0598"	0°00'00.1108"	1.25
			ΔHt.	-386.048ift	0.018ift	0.068ift	1.86
			Dist.	23781.711ift	0.007ift	-0.017ift	-1.72
B316	2AQ2	1AO1	**Az.**	269°56'11.7149"	0°00'00.0317"	-0°00'00.1274"	-1.85
			ΔHt.	-426.822ift	0.014ift	0.014ift	0.59
			Dist.	29311.102ift	0.004ift	-0.009ift	-0.94
B470	2AQ2	B10	**Az.**	257°15'01.0499"	0°00'00.0463"	0°00'00.1700"	1.83
			ΔHt.	-411.700ift	0.016ift	0.039ift	0.94
			Dist.	23754.338ift	0.005ift	0.007ift	0.66
B279	2AQ2	RB2	**Az.**	261°28'42.7946"	0°00'00.0608"	-0°00'00.1597"	-1.83
			ΔHt.	-387.380ift	0.019ift	0.044ift	1.16
			Dist.	23537.005ift	0.007ift	-0.011ift	-1.14
B428	2CO1	B10	**Az.**	14°19'40.2293"	0°00'00.0380"	-0°00'00.1406"	-1.83
			ΔHt.	123.793ift	0.015ift	0.056ift	1.26
			Dist.	27688.923ift	0.005ift	0.000ift	0.01
B337	2CO1	RB4	**Az.**	13°30'04.9004"	0°00'00.0481"	-0°00'00.0309"	-0.45
			ΔHt.	148.390ift	0.018ift	0.010ift	0.26
			Dist.	28905.651ift	0.007ift	0.019ift	1.80

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B430	2CO1	RB9	**Az.**	14°50'03.2327"	0°00'00.0471"	-0°00'00.0623"	-0.84
			ΔHt.	125.363ift	0.016ift	0.069ift	1.77
			Dist.	27652.060ift	0.007ift	-0.002ift	-0.21
B509	2CO1	G474	**Az.**	19°29'29.6464"	0°00'00.0208"	0°00'00.0440"	0.87
			ΔHt.	306.340ift	0.019ift	0.105ift	1.75
			Dist.	45538.315ift	0.005ift	0.011ift	0.89
B292	2BP2	RB6	**Az.**	324°01'48.1877"	0°00'00.1022"	-0°00'00.0071"	-0.05
			ΔHt.	9.695ift	0.018ift	0.053ift	1.73
			Dist.	13988.588ift	0.007ift	-0.002ift	-0.26
B347	2BP2	RB7	**Az.**	322°39'23.3065"	0°00'00.1083"	-0°00'00.0104"	-0.07
			ΔHt.	-13.470ift	0.020ift	0.054ift	1.70
			Dist.	13616.276ift	0.007ift	-0.004ift	-0.45
B349	2BP2	A11	**Az.**	324°35'44.5338"	0°00'00.0999"	0°00'00.0338"	0.24
			ΔHt.	8.363ift	0.018ift	0.050ift	1.69
			Dist.	14185.152ift	0.007ift	-0.005ift	-0.53
B411	2BP2	2CO1	**Az.**	222°39'03.8035"	0°00'00.0400"	-0°00'00.1512"	-1.69
			ΔHt.	-139.275ift	0.012ift	0.016ift	0.75
			Dist.	22117.229ift	0.004ift	0.004ift	0.37
B432	G474	2CQ2	**Az.**	169°25'32.6517"	0°00'00.0217"	-0°00'00.0809"	-1.68
			ΔHt.	-145.046ift	0.019ift	0.007ift	0.17
			Dist.	44484.223ift	0.005ift	0.002ift	0.23
B440	G474	VINE RM1	**Az.**	207°43'52.9967"	0°00'00.0730"	0°00'00.0153"	0.14
			ΔHt.	-155.865ift	0.019ift	0.062ift	1.67
			Dist.	18059.680ift	0.007ift	-0.005ift	-0.53

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B525	G474	RB18	**Az.**	179°55'38.6637"	0°00'00.0520"	0°00'00.1470"	1.66
			ΔHt.	-179.312ift	0.023ift	-0.091ift	-1.24
			Dist.	27254.407ift	0.007ift	0.017ift	1.35
B436	G474	RB10	**Az.**	206°38'07.8279"	0°00'00.0803"	-0°00'00.0835"	-0.67
			ΔHt.	-157.412ift	0.022ift	0.085ift	1.63
			Dist.	18071.188ift	0.007ift	0.001ift	0.11
B300	2CQ2	2AQ2	**Az.**	11°27'04.8818"	0°00'00.0270"	-0°00'00.0615"	-1.04
			ΔHt.	374.200ift	0.015ift	-0.040ift	-1.63
			Dist.	33551.283ift	0.005ift	0.010ift	1.02
B467	2AQ2	RB10	**Az.**	256°58'55.4935"	0°00'00.0614"	0°00'00.1276"	1.30
			ΔHt.	-386.566ift	0.020ift	-0.088ift	-1.62
			Dist.	23524.604ift	0.007ift	0.007ift	0.64
B394	1AO1	RB8	**Az.**	129°10'20.4097"	0°00'00.1800"	-0°00'00.0884"	-0.37
			ΔHt.	40.774ift	0.015ift	-0.026ift	-1.62
			Dist.	7817.216ift	0.007ift	-0.003ift	-0.33
B408	2AQ2	A10	**Az.**	257°21'12.9478"	0°00'00.0608"	0°00'00.1577"	1.62
			ΔHt.	-386.185ift	0.019ift	-0.071ift	-1.33
			Dist.	23721.334ift	0.007ift	0.006ift	0.54
B313	2CQ2	A11	**Az.**	329°53'52.8253"	0°00'00.0432"	-0°00'00.0334"	-0.52
			ΔHt.	-13.656ift	0.020ift	0.065ift	1.62
			Dist.	33105.722ift	0.007ift	-0.015ift	-1.51
B362	G474	RB3	**Az.**	209°48'37.1145"	0°00'00.0847"	-0°00'00.1274"	-0.90
			ΔHt.	-175.017ift	0.023ift	-0.122ift	-1.62
			Dist.	17076.902ift	0.007ift	-0.009ift	-0.74

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B402	G474	A10	**Az.**	207°25'31.3055"	0°00'00.0801"	-0°00'00.0492"	-0.39
			ΔHt.	-157.031ift	0.022ift	0.085ift	1.61
			Dist.	18079.822ift	0.007ift	-0.003ift	-0.30
B547	2AQ2	RB18	**Az.**	222°02'12.1483"	0°00'00.0622"	0°00'00.0929"	0.98
			ΔHt.	-408.466ift	0.020ift	-0.030ift	-0.73
			Dist.	22086.258ift	0.007ift	0.018ift	1.60
B310	2CQ2	RB1	**Az.**	330°28'25.8901"	0°00'00.0425"	-0°00'00.0145"	-0.23
			ΔHt.	-27.933ift	0.018ift	0.071ift	1.60
			Dist.	33775.508ift	0.007ift	-0.001ift	-0.11
B505	2CQ2	RB19	**Az.**	333°47'38.5142"	0°00'00.0786"	0°00'00.1896"	1.57
			ΔHt.	-34.520ift	0.019ift	0.027ift	0.55
			Dist.	17871.094ift	0.007ift	-0.004ift	-0.37
B392	2CQ2	RB8	**Az.**	329°15'39.2740"	0°00'00.0435"	-0°00'00.1004"	-1.57
			ΔHt.	-11.848ift	0.017ift	0.036ift	0.92
			Dist.	32463.744ift	0.007ift	-0.006ift	-0.57
B367	G474	RB4	**Az.**	209°42'14.1871"	0°00'00.0836"	-0°00'00.0437"	-0.32
			ΔHt.	-157.950ift	0.022ift	-0.106ift	-1.55
			Dist.	17059.317ift	0.007ift	-0.010ift	-0.85
B442	2CQ2	1AO1	**Az.**	325°24'34.7200"	0°00'00.0226"	-0°00'00.0786"	-1.53
			ΔHt.	-52.622ift	0.013ift	-0.003ift	-0.11
			Dist.	39897.388ift	0.004ift	0.004ift	0.37
B438	2AQ2	G474	**Az.**	306°13'36.2550"	0°00'00.0556"	0°00'00.1816"	1.53
			ΔHt.	-229.154ift	0.019ift	-0.042ift	-1.15
			Dist.	18360.255ift	0.005ift	0.005ift	0.54

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B456	1AO1	RB11	**Az.**	128°54'39.6547"	0°00'00.1658"	-0°00'00.0128"	-0.06
			ΔHt.	15.195ift	0.017ift	-0.034ift	-1.52
			Dist.	8774.225ift	0.007ift	-0.002ift	-0.19
B531	1AO1	RB16	**Az.**	137°43'49.6194"	0°00'00.0661"	0°00'00.0046"	0.05
			ΔHt.	18.024ift	0.017ift	0.010ift	0.31
			Dist.	20916.321ift	0.007ift	0.014ift	1.51
B477	2CQ2	RB17	**Az.**	333°42'49.7688"	0°00'00.0738"	0°00'00.1685"	1.49
			ΔHt.	-34.799ift	0.018ift	0.021ift	0.46
			Dist.	18867.574ift	0.007ift	0.001ift	0.11
B459	2AQ2	1AO1	**Az.**	269°56'11.7149"	0°00'00.0317"	0°00'00.1070"	1.49
			ΔHt.	-426.822ift	0.014ift	-0.037ift	-1.10
			Dist.	29311.102ift	0.004ift	-0.007ift	-0.72
B453	2AQ2	RB12	**Az.**	256°13'44.3364"	0°00'00.0568"	0°00'00.1294"	1.47
			ΔHt.	-386.261ift	0.016ift	-0.020ift	-0.62
			Dist.	23129.064ift	0.006ift	-0.001ift	-0.15
B393	RB8	RB12	**Az.**	123°46'17.1662"	0°00'01.6963"	-0°00'00.0014"	0.00
			ΔHt.	-0.213ift	0.016ift	0.022ift	1.47
			Dist.	952.189ift	0.008ift	0.006ift	0.73
B545	2AQ2	RB13	**Az.**	228°20'26.7756"	0°00'00.0646"	0°00'00.0829"	0.86
			ΔHt.	-411.684ift	0.020ift	-0.014ift	-0.37
			Dist.	21357.558ift	0.007ift	0.015ift	1.44
B523	G474	RB13	**Az.**	182°35'30.9781"	0°00'00.0564"	0°00'00.1325"	1.37
			ΔHt.	-182.530ift	0.023ift	-0.060ift	-0.78
			Dist.	25073.109ift	0.007ift	0.019ift	1.43

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B306	2CQ2	RB5	**Az.**	329°37'49.4125"	0°00'00.0452"	-0°00'00.0066"	-0.09
			ΔHt.	-32.422ift	0.022ift	0.041ift	0.72
			Dist.	32919.683ift	0.007ift	-0.016ift	-1.42
B396	RB8	B10	**Az.**	161°56'29.0504"	0°00'05.2406"	0°00'08.7280"	1.29
			ΔHt.	-25.652ift	0.016ift	-0.015ift	-0.80
			Dist.	280.339ift	0.007ift	-0.013ift	-1.41
B415	2BP2	1AO1	**Az.**	317°51'28.8625"	0°00'00.0413"	-0°00'00.0847"	-0.90
			ΔHt.	-30.604ift	0.010ift	-0.008ift	-0.37
			Dist.	21260.629ift	0.004ift	-0.014ift	-1.40
B320	2AQ2	RB3	**Az.**	260°21'03.2447"	0°00'00.0619"	-0°00'00.1308"	-1.38
			ΔHt.	-404.171ift	0.020ift	0.001ift	0.01
			Dist.	23641.748ift	0.007ift	-0.009ift	-0.90
B437	G474	B10	**Az.**	207°25'04.3507"	0°00'00.0602"	0°00'00.1619"	1.38
			ΔHt.	-182.546ift	0.019ift	0.057ift	1.21
			Dist.	18133.818ift	0.006ift	0.006ift	0.49
B529	1AO1	RB19	**Az.**	138°40'45.3705"	0°00'00.0631"	0°00'00.0030"	0.03
			ΔHt.	18.102ift	0.018ift	0.043ift	0.91
			Dist.	22369.595ift	0.007ift	0.014ift	1.37
B522	G474	RB19	**Az.**	179°26'49.2675"	0°00'00.0513"	0°00'00.0621"	0.71
			ΔHt.	-179.566ift	0.023ift	-0.061ift	-0.82
			Dist.	27697.932ift	0.007ift	0.018ift	1.37
B364	G474	B11	**Az.**	209°21'08.1762"	0°00'00.0721"	0°00'00.0422"	0.33
			ΔHt.	-177.367ift	0.020ift	0.078ift	1.36
			Dist.	17315.947ift	0.006ift	0.004ift	0.37

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B301	2CQ2	2CO1	**Az.**	271°59'34.4339"	0°00'00.0399"	0°00'00.0159"	0.19
			ΔHt.	-161.294ift	0.014ift	0.025ift	1.36
			Dist.	23392.407ift	0.004ift	-0.003ift	-0.34
B338	2CO1	A11	**Az.**	13°38'24.3573"	0°00'00.0487"	-0°00'00.0012"	-0.02
			ΔHt.	147.638ift	0.020ift	0.052ift	1.22
			Dist.	28640.114ift	0.007ift	-0.014ift	-1.35
B546	2AQ2	RB16	**Az.**	224°30'13.3965"	0°00'00.0627"	0°00'00.0579"	0.61
			ΔHt.	-408.798ift	0.018ift	-0.050ift	-1.33
			Dist.	21765.476ift	0.007ift	0.010ift	0.90
B412	2BP2	G474	**Az.**	0°29'37.8783"	0°00'00.0355"	0°00'00.0314"	0.41
			ΔHt.	167.064ift	0.017ift	0.011ift	0.38
			Dist.	26655.301ift	0.005ift	-0.013ift	-1.31
B326	2AQ2	A11	**Az.**	259°40'38.4317"	0°00'00.0616"	-0°00'00.1212"	-1.29
			ΔHt.	-387.856ift	0.020ift	0.046ift	0.98
			Dist.	23648.657ift	0.007ift	-0.001ift	-0.08
B291	2CO1	RB6	**Az.**	13°45'29.5175"	0°00'00.0494"	0°00'00.0407"	0.58
			ΔHt.	148.970ift	0.020ift	-0.004ift	-0.11
			Dist.	28406.617ift	0.007ift	-0.013ift	-1.28
B348	2BP2	RB4	**Az.**	325°12'38.5622"	0°00'00.0981"	-0°00'00.0637"	-0.47
			ΔHt.	9.114ift	0.016ift	-0.031ift	-1.27
			Dist.	14412.767ift	0.007ift	0.005ift	0.56
B311	2CQ2	RB7	**Az.**	329°10'57.4761"	0°00'00.0458"	0°00'00.0244"	0.33
			ΔHt.	-35.489ift	0.022ift	0.018ift	0.31
			Dist.	32491.574ift	0.007ift	-0.015ift	-1.26

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B343	2BP2	RB3	**Az.**	325°05'37.0485"	0°00'00.0996"	-0°00'00.0402"	-0.30
			ΔHt.	-7.952ift	0.017ift	-0.032ift	-1.26
			Dist.	14433.850ift	0.007ift	0.008ift	0.89
B443	2CQ2	RB11	**Az.**	329°55'27.3829"	0°00'00.0461"	-0°00'00.0916"	-1.26
			ΔHt.	-37.428ift	0.019ift	0.029ift	0.55
			Dist.	31580.644ift	0.007ift	0.001ift	0.08
B480	1AO1	RB17	**Az.**	138°03'13.5437"	0°00'00.0653"	-0°00'00.0207"	-0.21
			ΔHt.	17.823ift	0.017ift	0.034ift	0.89
			Dist.	21401.827ift	0.007ift	0.012ift	1.26
B290	2AQ2	RB6	**Az.**	259°06'13.5325"	0°00'00.0621"	-0°00'00.1264"	-1.26
			ΔHt.	-386.524ift	0.021ift	0.017ift	0.30
			Dist.	23691.420ift	0.007ift	-0.007ift	-0.65
B507	2CQ2	RB16	**Az.**	333°39'47.2195"	0°00'00.0712"	0°00'00.1328"	1.24
			ΔHt.	-34.598ift	0.018ift	-0.035ift	-0.87
			Dist.	19367.258ift	0.007ift	-0.002ift	-0.18
B390	2CO1	RB8	**Az.**	14°01'10.7745"	0°00'00.0493"	-0°00'00.0061"	-0.09
			ΔHt.	149.446ift	0.017ift	-0.003ift	-0.09
			Dist.	27926.029ift	0.007ift	-0.012ift	-1.23
B294	G474	RB6	**Az.**	208°50'54.0717"	0°00'00.0823"	-0°00'00.0177"	-0.14
			ΔHt.	-157.370ift	0.023ift	0.020ift	0.29
			Dist.	17505.350ift	0.007ift	-0.015ift	-1.23
B281	2BP2	RB2	**Az.**	326°14'24.4855"	0°00'00.0949"	-0°00'00.0456"	-0.35
			ΔHt.	8.838ift	0.016ift	-0.027ift	-1.14
			Dist.	14809.244ift	0.007ift	0.011ift	1.22

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B293	1AO1	RB6	**Az.**	126°16'21.9894"	0°00'00.1926"	-0°00'00.1236"	-0.47
			ΔHt.	40.298ift	0.018ift	-0.030ift	-1.22
			Dist.	7505.357ift	0.007ift	-0.004ift	-0.41
B532	1AO1	RB18	**Az.**	138°22'22.9721"	0°00'00.0642"	0°00'00.0934"	0.96
			ΔHt.	18.356ift	0.018ift	0.010ift	0.23
			Dist.	21884.006ift	0.007ift	0.012ift	1.21
B423	2CQ2	2CO1	**Az.**	271°59'34.4339"	0°00'00.0399"	0°00'00.0203"	0.24
			ΔHt.	-161.294ift	0.014ift	-0.008ift	-0.34
			Dist.	23392.407ift	0.004ift	0.012ift	1.20
B488	2CQ2	RB15	**Az.**	333°37'47.1961"	0°00'00.0714"	0°00'00.1247"	1.20
			ΔHt.	-36.175ift	0.019ift	-0.051ift	-1.17
			Dist.	19867.600ift	0.007ift	0.011ift	1.13
B312	2CQ2	RB4	**Az.**	330°07'36.4154"	0°00'00.0428"	0°00'00.0730"	1.20
			ΔHt.	-12.904ift	0.018ift	0.023ift	0.65
			Dist.	33346.063ift	0.007ift	0.009ift	0.96
B335	2CO1	RB1	**Az.**	13°12'58.3091"	0°00'00.0477"	-0°00'00.0389"	-0.56
			ΔHt.	133.361ift	0.019ift	0.054ift	1.19
			Dist.	29358.123ift	0.007ift	0.001ift	0.11
B503	2CQ2	RB14	**Az.**	333°35'42.6402"	0°00'00.0695"	0°00'00.1294"	1.19
			ΔHt.	-36.307ift	0.019ift	0.024ift	0.48
			Dist.	20367.039ift	0.007ift	-0.001ift	-0.13
B370	69F1	B11	**Az.**	150°51'04.1645"	0°00'18.0188"	-0°00'09.3802"	-0.44
			ΔHt.	-3.047ift	0.017ift	-0.020ift	-1.19
			Dist.	87.545ift	0.008ift	0.002ift	0.18

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B340	G474	2BP2	**Az.**	180°29'39.3691"	0°00'00.0355"	0°00'00.0087"	0.11
			ΔHt.	-167.064ift	0.017ift	-0.040ift	-1.04
			Dist.	26655.301ift	0.005ift	-0.012ift	-1.19
B405	1AO1	A10	**Az.**	129°52'48.2812"	0°00'00.1791"	0°00'00.1545"	0.63
			ΔHt.	40.637ift	0.017ift	-0.018ift	-0.59
			Dist.	8040.247ift	0.007ift	-0.012ift	-1.18
B317	2AQ2	G474	**Az.**	306°13'36.2550"	0°00'00.0556"	-0°00'00.1376"	-1.17
			ΔHt.	-229.154ift	0.019ift	0.028ift	0.69
			Dist.	18360.255ift	0.005ift	-0.010ift	-0.99
B366	G474	RB7	**Az.**	208°12'19.1160"	0°00'00.0822"	0°00'00.0041"	0.03
			ΔHt.	-180.535ift	0.025ift	0.027ift	0.31
			Dist.	17961.940ift	0.008ift	-0.016ift	-1.17
B457	1AO1	RB10	**Az.**	129°26'15.6258"	0°00'00.1740"	0°00'00.0758"	0.32
			ΔHt.	40.256ift	0.017ift	-0.016ift	-0.56
			Dist.	8281.483ift	0.007ift	-0.011ift	-1.14
B352	1AO1	RB5	**Az.**	126°26'41.8668"	0°00'00.2000"	-0°00'00.1178"	-0.44
			ΔHt.	20.200ift	0.020ift	-0.031ift	-1.13
			Dist.	7470.782ift	0.007ift	-0.003ift	-0.34
B403	2CQ2	A10	**Az.**	329°13'50.1221"	0°00'00.0452"	-0°00'00.0740"	-1.03
			ΔHt.	-11.985ift	0.019ift	0.057ift	1.13
			Dist.	32220.763ift	0.007ift	0.012ift	1.11
B283	G474	RB2	**Az.**	210°32'00.9265"	0°00'00.0856"	-0°00'00.1528"	-1.12
			ΔHt.	-158.226ift	0.022ift	-0.054ift	-0.85
			Dist.	16651.231ift	0.007ift	-0.002ift	-0.21

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B336	2CO1	RB7	**Az.**	13°54'53.2883"	0°00'00.0515"	0°00'00.0418"	0.54
			ΔHt.	125.805ift	0.022ift	-0.009ift	-0.16
			Dist.	27914.523ift	0.007ift	-0.013ift	-1.11
B526	1AO1	2BP2	**Az.**	137°49'56.3641"	0°00'00.0413"	0°00'00.0759"	0.81
			ΔHt.	30.604ift	0.010ift	-0.023ift	-1.10
			Dist.	21260.629ift	0.004ift	0.010ift	1.08
B334	2CO1	B11	**Az.**	13°33'45.8912"	0°00'00.0422"	-0°00'00.0728"	-1.02
			ΔHt.	128.972ift	0.016ift	0.037ift	0.94
			Dist.	28629.902ift	0.006ift	-0.012ift	-1.09
B530	1AO1	RB13	**Az.**	136°37'54.1782"	0°00'00.0723"	0°00'00.0845"	0.78
			ΔHt.	15.138ift	0.018ift	0.043ift	1.09
			Dist.	19466.938ift	0.007ift	0.009ift	0.87
B346	2BP2	RB1	**Az.**	326°08'24.7835"	0°00'00.0959"	0°00'00.0124"	0.10
			ΔHt.	-5.914ift	0.017ift	-0.016ift	-0.70
			Dist.	14824.496ift	0.007ift	0.010ift	1.09
B539	2AQ2	RB14	**Az.**	227°02'40.0549"	0°00'00.0646"	0°00'00.1090"	1.09
			ΔHt.	-410.506ift	0.020ift	0.003ift	0.06
			Dist.	21481.086ift	0.007ift	0.008ift	0.66
B319	2AQ2	RB5	**Az.**	259°07'41.7844"	0°00'00.0641"	-0°00'00.1174"	-1.08
			ΔHt.	-406.622ift	0.023ift	0.038ift	0.57
			Dist.	23731.406ift	0.007ift	-0.004ift	-0.37
B427	2CO1	RB10	**Az.**	14°51'18.5727"	0°00'00.0516"	0°00'00.0396"	0.51
			ΔHt.	148.927ift	0.019ift	0.046ift	1.08
			Dist.	27696.977ift	0.007ift	0.004ift	0.40

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B303	2CQ2	1AO1	**Az.**	325°24'34.7200"	0°00'00.0226"	-0°00'00.0132"	-0.27
			ΔHt.	-52.622ift	0.013ift	-0.022ift	-1.08
			Dist.	39897.388ift	0.004ift	-0.007ift	-0.73
B359	1AO1	A11	**Az.**	124°46'14.2542"	0°00'00.1945"	-0°00'00.1691"	-0.64
			ΔHt.	38.966ift	0.018ift	-0.024ift	-1.08
			Dist.	7363.970ift	0.007ift	0.000ift	0.00
B520	G474	RB14	**Az.**	182°01'10.5671"	0°00'00.0559"	0°00'00.1037"	1.07
			ΔHt.	-181.352ift	0.023ift	-0.061ift	-0.78
			Dist.	25504.716ift	0.007ift	0.012ift	0.90
B515	2CO1	RB13	**Az.**	38°12'15.5486"	0°00'00.0601"	0°00'00.0248"	0.28
			ΔHt.	123.810ift	0.019ift	0.045ift	1.06
			Dist.	22754.276ift	0.007ift	-0.002ift	-0.20
B425	1AO1	2CO1	**Az.**	181°15'42.3715"	0°00'00.0277"	-0°00'00.0361"	-0.58
			ΔHt.	-108.672ift	0.013ift	0.026ift	1.06
			Dist.	32039.591ift	0.004ift	-0.002ift	-0.17
B527	1AO1	RB14	**Az.**	137°00'39.2452"	0°00'00.0714"	0°00'00.0347"	0.32
			ΔHt.	16.316ift	0.018ift	0.047ift	1.06
			Dist.	19949.726ift	0.007ift	0.006ift	0.64
B424	2CO1	RB12	**Az.**	15°52'45.2415"	0°00'00.0465"	-0°00'00.0734"	-1.05
			ΔHt.	149.233ift	0.015ift	-0.013ift	-0.50
			Dist.	27618.977ift	0.006ift	0.000ift	0.05
B361	G474	RB5	**Az.**	208°58'12.2717"	0°00'00.0845"	-0°00'00.0632"	-0.42
			ΔHt.	-177.468ift	0.025ift	0.021ift	0.22
			Dist.	17523.164ift	0.008ift	-0.015ift	-1.04

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B342	2BP2	RB5	**Az.**	323°53'58.3234"	0°00'00.1052"	0°00'00.0279"	0.19
			ΔHt.	-10.403ift	0.021ift	0.034ift	1.04
			Dist.	14014.750ift	0.007ift	-0.004ift	-0.40
B341	2BP2	69F1	**Az.**	324°30'05.5213"	0°00'00.0995"	-0°00'00.0146"	-0.11
			ΔHt.	-7.256ift	0.017ift	-0.025ift	-1.02
			Dist.	14294.688ift	0.007ift	0.009ift	1.02
B535	2BP2	RB19	**Az.**	154°29'43.4830"	0°00'01.1975"	-0°00'00.1745"	-0.11
			ΔHt.	-12.501ift	0.017ift	-0.005ift	-0.25
			Dist.	1154.870ift	0.007ift	-0.009ift	-1.02
B508	2CQ2	RB18	**Az.**	333°45'07.7113"	0°00'00.0762"	0°00'00.0754"	0.65
			ΔHt.	-34.266ift	0.019ift	-0.047ift	-1.01
			Dist.	18370.699ift	0.007ift	-0.005ift	-0.44
B444	2CQ2	RB10	**Az.**	329°28'52.3495"	0°00'00.0456"	-0°00'00.0735"	-1.01
			ΔHt.	-12.367ift	0.019ift	0.038ift	0.75
			Dist.	32014.781ift	0.007ift	0.008ift	0.76
B315	2AQ2	2BP2	**Az.**	223°36'25.4323"	0°00'00.0409"	-0°00'00.0925"	-1.01
			ΔHt.	-396.218ift	0.013ift	0.012ift	0.47
			Dist.	21825.584ift	0.004ift	0.000ift	0.05
B368	G474	A11	**Az.**	209°14'17.3967"	0°00'00.0828"	0°00'00.0674"	0.53
			ΔHt.	-158.702ift	0.023ift	0.022ift	0.38
			Dist.	17295.676ift	0.007ift	-0.011ift	-1.00
B450	RB12	RB11	**Az.**	208°58'02.9526"	0°00'31.5603"	0°00'15.7974"	0.43
			ΔHt.	-25.367ift	0.018ift	-0.021ift	-1.00
			Dist.	50.588ift	0.008ift	0.003ift	0.29

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B357	1AO1	RB7	**Az.**	129°24'33.7556"	0°00'00.1916"	-0°00'00.0882"	-0.35
			ΔHt.	17.133ift	0.020ift	-0.026ift	-1.00
			Dist.	7775.950ift	0.007ift	-0.002ift	-0.18
B377	RB3	B11	**Az.**	179°39'46.7737"	0°00'05.6625"	-0°00'04.3777"	-0.65
			ΔHt.	-2.350ift	0.018ift	-0.019ift	-1.00
			Dist.	275.754ift	0.008ift	-0.003ift	-0.28
B516	2CO1	RB16	**Az.**	41°44'50.2526"	0°00'00.0611"	0°00'00.0898"	1.00
			ΔHt.	126.696ift	0.018ift	0.001ift	0.02
			Dist.	22188.114ift	0.007ift	0.008ift	0.78
B329	G474	2CO1	**Az.**	199°31'08.1859"	0°00'00.0209"	-0°00'00.0065"	-0.14
			ΔHt.	-306.340ift	0.019ift	0.014ift	0.32
			Dist.	45538.315ift	0.005ift	-0.011ift	-0.99
B278	2CQ2	RB2	**Az.**	330°31'10.2465"	0°00'00.0420"	0°00'00.0466"	0.78
			ΔHt.	-13.181ift	0.018ift	0.035ift	0.98
			Dist.	33762.232ift	0.007ift	-0.001ift	-0.09
B538	2BP2	RB18	**Az.**	156°12'53.6139"	0°00'02.1005"	-0°00'01.7739"	-0.62
			ΔHt.	-12.247ift	0.017ift	0.000ift	0.01
			Dist.	655.772ift	0.007ift	-0.009ift	-0.96
B332	2CO1	RB3	**Az.**	13°25'52.6621"	0°00'00.0488"	-0°00'00.0219"	-0.31
			ΔHt.	131.323ift	0.019ift	-0.011ift	-0.22
			Dist.	28897.644ift	0.007ift	0.011ift	0.94
B537	2BP2	RB16	**Az.**	324°01'20.0285"	0°00'03.9465"	0°00'01.9143"	0.35
			ΔHt.	-12.580ift	0.015ift	0.000ift	0.03
			Dist.	346.343ift	0.007ift	0.009ift	0.94

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B512	2CO1	RB14	**Az.**	39°22'01.8977"	0°00'00.0609"	0°00'00.0166"	0.18
			ΔHt.	124.987ift	0.019ift	0.045ift	0.93
			Dist.	22557.638ift	0.007ift	0.007ift	0.63
B325	2AQ2	RB4	**Az.**	260°20'06.0593"	0°00'00.0608"	-0°00'00.0814"	-0.92
			ΔHt.	-387.104ift	0.019ift	0.038ift	0.92
			Dist.	23606.105ift	0.007ift	-0.009ift	-0.92
B478	2CO1	RB17	**Az.**	42°58'12.0795"	0°00'00.0621"	0°00'00.0659"	0.71
			ΔHt.	126.495ift	0.018ift	0.038ift	0.90
			Dist.	22022.457ift	0.007ift	0.009ift	0.91
B483	2AQ2	RB17	**Az.**	223°15'19.9685"	0°00'00.0627"	0°00'00.0857"	0.90
			ΔHt.	-408.999ift	0.019ift	-0.007ift	-0.17
			Dist.	21919.002ift	0.007ift	0.005ift	0.44
B514	2CO1	RB19	**Az.**	45°27'13.6050"	0°00'00.0634"	0°00'00.0689"	0.72
			ΔHt.	126.774ift	0.019ift	0.030ift	0.61
			Dist.	21713.993ift	0.007ift	0.009ift	0.88
B385	B11	RB4	**Az.**	7°09'59.0950"	0°00'05.5536"	-0°00'03.6529"	-0.55
			ΔHt.	19.417ift	0.017ift	0.015ift	0.88
			Dist.	277.466ift	0.008ift	-0.006ift	-0.66
B510	2CO1	1AO1	**Az.**	1°15'37.8041"	0°00'00.0277"	-0°00'00.0066"	-0.11
			ΔHt.	108.672ift	0.013ift	-0.012ift	-0.49
			Dist.	32039.591ift	0.004ift	0.009ift	0.87
B433	G474	RB12	**Az.**	205°02'55.3320"	0°00'00.0729"	0°00'00.0685"	0.62
			ΔHt.	-157.107ift	0.019ift	0.010ift	0.28
			Dist.	18058.250ift	0.007ift	0.009ift	0.86

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B536	2BP2	RB13	**Az.**	330°38'23.7742"	0°00'00.7501"	0°00'00.6259"	0.60
			ΔHt.	-15.465ift	0.017ift	0.013ift	0.63
			Dist.	1843.652ift	0.007ift	0.008ift	0.84
B331	2CO1	RB5	**Az.**	13°40'34.8752"	0°00'00.0507"	0°00'00.0227"	0.29
			ΔHt.	128.872ift	0.022ift	-0.022ift	-0.39
			Dist.	28399.157ift	0.007ift	-0.010ift	-0.84
B386	B11	A11	**Az.**	88°49'00.5543"	0°00'40.0075"	-0°00'06.8240"	-0.14
			ΔHt.	18.666ift	0.019ift	-0.017ift	-0.84
			Dist.	39.984ift	0.008ift	0.000ift	-0.03
B324	2AQ2	RB7	**Az.**	257°57'07.4043"	0°00'00.0637"	-0°00'00.0933"	-0.84
			ΔHt.	-409.689ift	0.022ift	0.054ift	0.78
			Dist.	23832.663ift	0.007ift	-0.007ift	-0.61
B499	2CQ2	2CO1	**Az.**	271°59'34.4339"	0°00'00.0399"	0°00'00.0634"	0.72
			ΔHt.	-161.294ift	0.014ift	-0.019ift	-0.71
			Dist.	23392.407ift	0.004ift	-0.008ift	-0.83
B350	G474	1AO1	**Az.**	233°05'00.2437"	0°00'00.0531"	0°00'00.0109"	0.09
			ΔHt.	-197.668ift	0.018ift	-0.029ift	-0.82
			Dist.	18129.932ift	0.005ift	-0.001ift	-0.06
B280	2CO1	RB2	**Az.**	13°16'20.3758"	0°00'00.0473"	-0°00'00.0027"	-0.04
			ΔHt.	148.113ift	0.018ift	0.022ift	0.57
			Dist.	29366.659ift	0.007ift	0.008ift	0.81
B286	RB2	B11	**Az.**	182°08'49.2075"	0°00'02.0520"	-0°00'01.7637"	-0.71
			ΔHt.	-19.141ift	0.017ift	-0.014ift	-0.80
			Dist.	751.274ift	0.008ift	-0.002ift	-0.17

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B399	RB8	VINE RM1	**Az.**	167°49'58.0815"	0°00'10.0594"	-0°00'02.9845"	-0.26
			ΔHt.	1.029ift	0.016ift	-0.010ift	-0.68
			Dist.	158.551ift	0.008ift	0.007ift	0.80
B495	RB15	RB19	**Az.**	152°08'38.4378"	0°00'00.8259"	0°00'00.1582"	0.17
			ΔHt.	1.655ift	0.019ift	-0.008ift	-0.44
			Dist.	1997.237ift	0.008ift	-0.007ift	-0.79
B479	G474	RB17	**Az.**	180°25'12.6085"	0°00'00.0527"	0°00'00.0434"	0.49
			ΔHt.	-179.845ift	0.022ift	-0.054ift	-0.79
			Dist.	26815.107ift	0.007ift	0.003ift	0.26
B358	1AO1	RB4	**Az.**	123°00'08.3424"	0°00'00.1977"	0°00'00.2054"	0.78
			ΔHt.	39.718ift	0.016ift	-0.009ift	-0.48
			Dist.	7206.426ift	0.007ift	-0.001ift	-0.09
B339	2BP2	1AO1	**Az.**	317°51'28.8625"	0°00'00.0413"	-0°00'00.0617"	-0.65
			ΔHt.	-30.604ift	0.010ift	0.019ift	0.78
			Dist.	21260.629ift	0.004ift	-0.007ift	-0.69
B481	2BP2	RB17	**Az.**	168°14'53.5309"	0°00'08.3234"	0°00'01.6349"	0.14
			ΔHt.	-12.780ift	0.016ift	-0.001ift	-0.08
			Dist.	163.504ift	0.007ift	-0.007ift	-0.75
B304	2CQ2	G474	**Az.**	349°26'25.5175"	0°00'00.0216"	-0°00'00.0240"	-0.50
			ΔHt.	145.046ift	0.019ift	-0.028ift	-0.69
			Dist.	44484.223ift	0.005ift	-0.008ift	-0.75
B330	2CO1	69F1	**Az.**	13°26'38.9303"	0°00'00.0487"	-0°00'00.0338"	-0.48
			ΔHt.	132.019ift	0.018ift	-0.032ift	-0.73
			Dist.	28694.278ift	0.007ift	0.005ift	0.52

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B544	2AQ2	RB19	**Az.**	220°49'47.2216"	0°00'00.0619"	0°00'00.0255"	0.27
			ΔHt.	-408.720ift	0.019ift	-0.005ift	-0.12
			Dist.	22264.012ift	0.007ift	0.008ift	0.73
B307	2CQ2	RB3	**Az.**	330°04'23.6113"	0°00'00.0435"	0°00'00.0459"	0.70
			ΔHt.	-29.971ift	0.019ift	-0.009ift	-0.18
			Dist.	33364.533ift	0.007ift	0.003ift	0.33
B391	G474	RB8	**Az.**	208°03'22.0316"	0°00'00.0784"	-0°00'00.0808"	-0.69
			ΔHt.	-156.894ift	0.021ift	0.016ift	0.31
			Dist.	17938.303ift	0.007ift	0.003ift	0.27
B455	RB12	VINE RM1	**Az.**	296°16'45.8301"	0°00'01.8032"	-0°00'00.6956"	-0.32
			ΔHt.	1.242ift	0.014ift	-0.008ift	-0.69
			Dist.	845.475ift	0.007ift	0.002ift	0.24
B489	2CO1	RB15	**Az.**	40°32'48.6838"	0°00'00.0626"	-0°00'00.0613"	-0.68
			ΔHt.	125.119ift	0.019ift	0.015ift	0.36
			Dist.	22368.702ift	0.007ift	0.006ift	0.64
B533	2BP2	RB14	**Az.**	330°08'48.3240"	0°00'01.0412"	0°00'00.5023"	0.35
			ΔHt.	-14.288ift	0.017ift	0.008ift	0.37
			Dist.	1343.742ift	0.007ift	0.006ift	0.68
B506	2CQ2	RB13	**Az.**	333°33'23.3307"	0°00'00.0671"	0°00'00.0686"	0.68
			ΔHt.	-37.484ift	0.019ift	0.009ift	0.20
			Dist.	20866.939ift	0.007ift	0.000ift	0.01
B422	G474	2CO1	**Az.**	199°31'08.1859"	0°00'00.0209"	-0°00'00.0118"	-0.26
			ΔHt.	-306.340ift	0.019ift	0.024ift	0.67
			Dist.	45538.315ift	0.005ift	0.001ift	0.13

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B497	RB15	RB16	**Az.**	152°19'25.0147"	0°00'03.2633"	0°00'00.5513"	0.15
			ΔHt.	1.576ift	0.018ift	-0.003ift	-0.20
			Dist.	500.472ift	0.008ift	-0.006ift	-0.66
B498	RB15	RB18	**Az.**	152°06'45.2466"	0°00'01.1006"	-0°00'00.4243"	-0.34
			ΔHt.	1.909ift	0.019ift	-0.003ift	-0.14
			Dist.	1497.457ift	0.008ift	-0.006ift	-0.66
B460	1AO1	RB9	**Az.**	129°44'56.3750"	0°00'00.1598"	-0°00'00.0230"	-0.10
			ΔHt.	16.692ift	0.015ift	0.005ift	0.22
			Dist.	8291.107ift	0.006ift	-0.006ift	-0.65
B398	RB8	RB9	**Az.**	139°10'42.5136"	0°00'03.3904"	-0°00'00.6517"	-0.17
			ΔHt.	-24.082ift	0.017ift	-0.011ift	-0.64
			Dist.	480.768ift	0.008ift	0.006ift	0.65
B426	2CO1	RB11	**Az.**	15°51'19.6215"	0°00'00.0511"	-0°00'00.0414"	-0.53
			ΔHt.	123.866ift	0.019ift	0.008ift	0.15
			Dist.	27569.702ift	0.007ift	-0.007ift	-0.65
B487	RB17	RB18	**Az.**	152°16'56.6918"	0°00'03.2837"	-0°00'02.3633"	-0.63
			ΔHt.	0.533ift	0.018ift	0.006ift	0.34
			Dist.	497.031ift	0.008ift	-0.001ift	-0.14
B496	RB15	RB13	**Az.**	332°05'01.5817"	0°00'01.6485"	0°00'00.7117"	0.39
			ΔHt.	-1.309ift	0.019ift	-0.001ift	-0.03
			Dist.	999.678ift	0.008ift	0.006ift	0.62
B387	RB1	RB4	**Az.**	175°36'11.4982"	0°00'03.5063"	0°00'00.8375"	0.22
			ΔHt.	15.029ift	0.018ift	0.001ift	0.06
			Dist.	475.134ift	0.008ift	0.005ift	0.60

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B542	RB14	RB16	**Az.**	152°15'47.0339"	0°00'01.6331"	0°00'00.1799"	0.10
			ΔHt.	1.708ift	0.017ift	0.009ift	0.59
			Dist.	1000.058ift	0.008ift	-0.002ift	-0.27
B493	RB15	RB14	**Az.**	332°12'11.6876"	0°00'03.3185"	0°00'00.4414"	0.12
			ΔHt.	-0.132ift	0.019ift	-0.002ift	-0.11
			Dist.	499.586ift	0.008ift	0.005ift	0.58
B465	RB11	VINE RM1	**Az.**	299°42'33.6987"	0°00'01.9652"	-0°00'00.3529"	-0.16
			ΔHt.	26.609ift	0.018ift	-0.011ift	-0.58
			Dist.	844.615ift	0.008ift	-0.004ift	-0.47
B454	RB12	RB9	**Az.**	289°07'31.8133"	0°00'03.0476"	-0°00'00.1873"	-0.05
			ΔHt.	-23.870ift	0.015ift	-0.008ift	-0.58
			Dist.	505.114ift	0.007ift	0.002ift	0.26
B485	RB17	RB13	**Az.**	332°03'25.2828"	0°00'00.8161"	0°00'00.5370"	0.58
			ΔHt.	-2.685ift	0.018ift	-0.007ift	-0.41
			Dist.	2000.107ift	0.008ift	0.000ift	-0.04
B550	RB19	RB18	**Az.**	332°14'23.6291"	0°00'03.2793"	0°00'02.1146"	0.57
			ΔHt.	0.254ift	0.018ift	0.003ift	0.21
			Dist.	499.781ift	0.008ift	-0.001ift	-0.16
B282	1AO1	RB2	**Az.**	119°44'39.7059"	0°00'00.2039"	0°00'00.0741"	0.27
			ΔHt.	39.442ift	0.016ift	-0.004ift	-0.26
			Dist.	6953.200ift	0.007ift	-0.005ift	-0.56
B416	2BP2	RB11	**Az.**	324°01'30.6525"	0°00'00.1137"	-0°00'00.0841"	-0.56
			ΔHt.	-15.409ift	0.017ift	-0.010ift	-0.51
			Dist.	12665.854ift	0.007ift	0.001ift	0.10

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B378	RB3	RB1	**Az.**	359°58'37.5773"	0°00'03.5383"	0°00'00.9509"	0.25
			ΔHt.	2.038ift	0.019ift	-0.009ift	-0.56
			Dist.	473.284ift	0.008ift	0.003ift	0.31
B345	2BP2	B11	**Az.**	324°27'44.6291"	0°00'00.0857"	0°00'00.0749"	0.55
			ΔHt.	-10.303ift	0.014ift	-0.001ift	-0.05
			Dist.	14207.686ift	0.006ift	0.003ift	0.28
B353	1AO1	RB3	**Az.**	123°09'24.9593"	0°00'00.2023"	0°00'00.1446"	0.55
			ΔHt.	22.651ift	0.017ift	-0.009ift	-0.47
			Dist.	7175.820ift	0.007ift	-0.002ift	-0.26
B372	69F1	RB4	**Az.**	21°13'57.6074"	0°00'07.7271"	0°00'00.3129"	0.04
			ΔHt.	16.370ift	0.018ift	-0.003ift	-0.21
			Dist.	213.321ift	0.008ift	-0.005ift	-0.54
B305	2CQ2	69F1	**Az.**	329°50'24.8609"	0°00'00.0432"	0°00'00.0068"	0.11
			ΔHt.	-29.275ift	0.018ift	-0.021ift	-0.51
			Dist.	33212.624ift	0.007ift	0.000ift	-0.02
B486	RB17	RB16	**Az.**	331°44'02.9179"	0°00'03.2350"	0°00'00.4886"	0.13
			ΔHt.	0.201ift	0.017ift	0.007ift	0.50
			Dist.	499.970ift	0.008ift	0.001ift	0.16
B548	RB19	RB13	**Az.**	332°07'32.1457"	0°00'00.5474"	0°00'00.3098"	0.50
			ΔHt.	-2.964ift	0.018ift	-0.003ift	-0.19
			Dist.	2996.915ift	0.008ift	-0.002ift	-0.19
B521	2AQ2	G474	**Az.**	306°13'36.2550"	0°00'00.0556"	-0°00'00.0483"	-0.36
			ΔHt.	-229.154ift	0.019ift	0.026ift	0.49
			Dist.	18360.255ift	0.005ift	0.003ift	0.26
B517	2CO1	RB18	**Az.**	44°11'58.4232"	0°00'00.0627"	0°00'00.0451"	0.49
			ΔHt.	127.028ift	0.019ift	0.003ift	0.06
			Dist.	21863.335ift	0.007ift	0.000ift	-0.05

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B383	B11	RB1	**Az.**	359°51'41.2893"	0°00'02.0724"	-0°00'00.8053"	-0.33
			ΔHt.	4.389ift	0.017ift	0.008ift	0.49
			Dist.	749.036ift	0.008ift	0.000ift	0.03
B365	G474	RB1	**Az.**	210°37'09.5099"	0°00'00.0862"	-0°00'00.0621"	-0.45
			ΔHt.	-172.979ift	0.022ift	-0.004ift	-0.06
			Dist.	16667.937ift	0.007ift	0.006ift	0.48
B476	RB17	RB15	**Az.**	332°01'46.0192"	0°00'01.6417"	0°00'00.4364"	0.24
			ΔHt.	-1.376ift	0.018ift	0.002ift	0.09
			Dist.	1000.429ift	0.008ift	-0.004ift	-0.47
B553	RB18	RB16	**Az.**	332°00'28.3932"	0°00'01.6279"	-0°00'00.8652"	-0.47
			ΔHt.	-0.332ift	0.017ift	-0.002ift	-0.12
			Dist.	996.990ift	0.008ift	0.000ift	0.00
B551	RB13	RB16	**Az.**	152°09'46.6035"	0°00'01.0823"	0°00'00.5754"	0.46
			ΔHt.	2.886ift	0.017ift	0.005ift	0.28
			Dist.	1500.147ift	0.008ift	-0.001ift	-0.13
B389	2BP2	RB8	**Az.**	322°49'44.4637"	0°00'00.1029"	-0°00'00.0541"	-0.39
			ΔHt.	10.171ift	0.015ift	-0.005ift	-0.33
			Dist.	13583.627ift	0.007ift	0.004ift	0.46
B543	RB14	RB18	**Az.**	152°08'05.4008"	0°00'00.8254"	-0°00'00.4258"	-0.45
			ΔHt.	2.041ift	0.019ift	0.004ift	0.19
			Dist.	1997.043ift	0.008ift	-0.003ift	-0.30
B371	69F1	RB1	**Az.**	3°28'26.1952"	0°00'02.4693"	0°00'00.0878"	0.03
			ΔHt.	1.342ift	0.018ift	-0.007ift	-0.43
			Dist.	673.814ift	0.008ift	0.001ift	0.10

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B374	RB5	B11	**Az.**	359°51'49.9850"	0°00'06.6886"	0°00'02.1214"	0.27
			ΔHt.	0.100ift	0.022ift	0.010ift	0.42
			Dist.	237.572ift	0.008ift	-0.001ift	-0.06
B549	RB19	RB16	**Az.**	332°05'08.2875"	0°00'01.0858"	0°00'00.1030"	0.08
			ΔHt.	-0.078ift	0.017ift	0.006ift	0.41
			Dist.	1496.768ift	0.008ift	-0.001ift	-0.13
B356	1AO1	RB1	**Az.**	119°52'46.5957"	0°00'00.2074"	-0°00'00.0077"	-0.03
			ΔHt.	24.689ift	0.016ift	-0.007ift	-0.40
			Dist.	6928.063ift	0.007ift	-0.002ift	-0.22
B297	RB6	B11	**Az.**	350°07'48.9519"	0°00'06.4327"	0°00'02.4848"	0.32
			ΔHt.	-19.998ift	0.019ift	0.008ift	0.40
			Dist.	243.558ift	0.008ift	-0.002ift	-0.20
B449	1AO1	RB12	**Az.**	128°35'07.1751"	0°00'00.1479"	-0°00'00.0421"	-0.19
			ΔHt.	40.561ift	0.013ift	0.002ift	0.14
			Dist.	8765.620ift	0.006ift	-0.004ift	-0.40
B434	G474	1AO1	**Az.**	233°05'00.2437"	0°00'00.0531"	-0°00'00.0476"	-0.40
			ΔHt.	-197.668ift	0.018ift	0.005ift	0.12
			Dist.	18129.932ift	0.005ift	0.003ift	0.29
B404	A10	RB12	**Az.**	114°34'25.0312"	0°00'02.1786"	-0°00'00.9780"	-0.40
			ΔHt.	-0.076ift	0.017ift	-0.005ift	-0.36
			Dist.	749.770ift	0.008ift	0.001ift	0.06
B285	RB2	RB3	**Az.**	183°35'09.2857"	0°00'03.4944"	-0°00'00.4198"	-0.11
			ΔHt.	-16.791ift	0.018ift	0.006ift	0.39
			Dist.	475.929ift	0.008ift	0.001ift	0.11

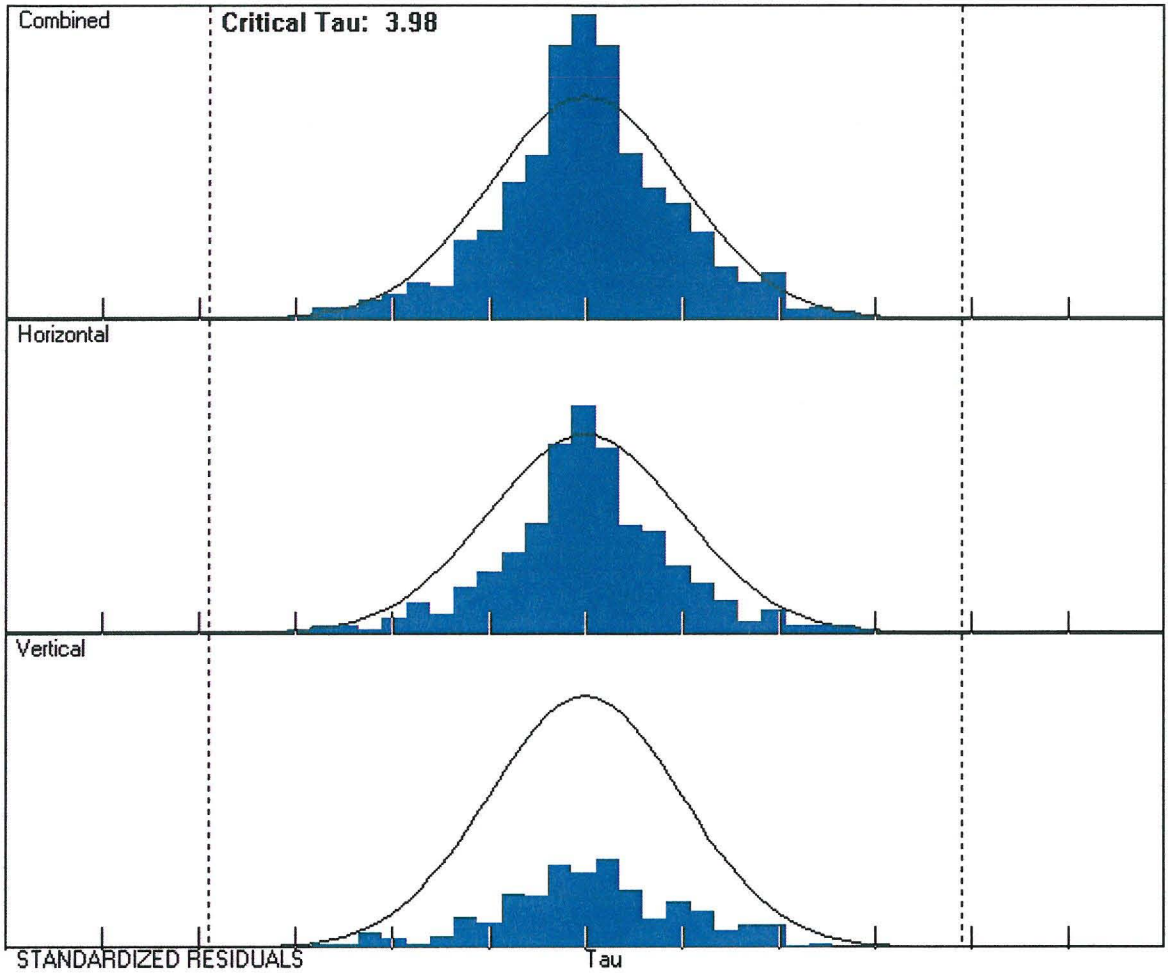
Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B464	RB11	RB9	**Az.**	294°51'30.8609"	0°00'03.3548"	0°00'00.2024"	0.05
			ΔHt.	1.497ift	0.019ift	-0.007ift	-0.37
			Dist.	498.963ift	0.008ift	-0.004ift	-0.39
B288	RB2	RB4	**Az.**	179°13'13.6070"	0°00'03.4774"	-0°00'00.5071"	-0.13
			ΔHt.	0.276ift	0.017ift	0.005ift	0.36
			Dist.	475.492ift	0.008ift	0.003ift	0.38
B541	RB14	RB13	**Az.**	331°57'50.4034"	0°00'03.2935"	0°00'01.3934"	0.38
			ΔHt.	-1.177ift	0.018ift	-0.002ift	-0.12
			Dist.	500.094ift	0.008ift	0.001ift	0.14
B376	RB5	A11	**Az.**	9°23'13.8455"	0°00'06.9931"	0°00'01.3603"	0.18
			ΔHt.	18.766ift	0.022ift	-0.007ift	-0.37
			Dist.	241.632ift	0.009ift	0.001ift	0.14
B491	1AO1	RB15	**Az.**	137°22'38.7955"	0°00'00.0696"	-0°00'00.0038"	-0.04
			ΔHt.	16.448ift	0.018ift	-0.015ift	-0.37
			Dist.	20432.327ift	0.007ift	-0.001ift	-0.11
B287	RB2	RB1	**Az.**	266°43'40.1052"	0°00'56.4028"	0°00'09.5971"	0.16
			ΔHt.	-14.752ift	0.018ift	-0.006ift	-0.35
			Dist.	30.005ift	0.008ift	-0.003ift	-0.35
B492	2BP2	RB15	**Az.**	328°55'48.4822"	0°00'01.6598"	0°00'00.7489"	0.34
			ΔHt.	-14.156ift	0.017ift	0.002ift	0.16
			Dist.	844.668ift	0.007ift	0.003ift	0.35
B384	B11	RB7	**Az.**	180°06'05.8105"	0°00'02.1556"	0°00'00.8791"	0.35
			ΔHt.	-3.167ift	0.021ift	-0.004ift	-0.15
			Dist.	736.167ift	0.008ift	0.000ift	0.03

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B284	RB2	69F1	**Az.**	185°59'34.6271"	0°00'02.4391"	-0°00'00.7643"	-0.28
			ΔHt.	-16.094ift	0.017ift	0.005ift	0.34
			Dist.	677.993ift	0.008ift	-0.001ift	-0.12
B552	RB13	RB18	**Az.**	152°06'00.7145"	0°00'00.6562"	-0°00'00.0506"	-0.07
			ΔHt.	3.218ift	0.019ift	0.006ift	0.34
			Dist.	2497.135ift	0.008ift	-0.001ift	-0.12
B355	1AO1	B11	**Az.**	124°57'14.8934"	0°00'00.1674"	-0°00'00.0846"	-0.32
			ΔHt.	20.301ift	0.014ift	-0.005ift	-0.33
			Dist.	7331.645ift	0.006ift	0.000ift	-0.04
B451	RB12	RB10	**Az.**	294°20'49.5280"	0°00'03.2646"	-0°00'00.8452"	-0.23
			ΔHt.	-0.306ift	0.017ift	0.005ift	0.32
			Dist.	500.453ift	0.008ift	0.002ift	0.18
B410	A10	VINE RM1	**Az.**	309°21'07.3383"	0°00'16.6531"	-0°00'01.7256"	-0.09
			ΔHt.	1.166ift	0.017ift	0.001ift	0.05
			Dist.	98.593ift	0.008ift	0.003ift	0.32
B540	RB14	RB19	**Az.**	152°09'19.5975"	0°00'00.6610"	0°00'00.1445"	0.19
			ΔHt.	1.787ift	0.019ift	0.006ift	0.31
			Dist.	2496.823ift	0.008ift	-0.003ift	-0.31
B435	G474	RB11	**Az.**	205°03'34.8504"	0°00'00.0793"	-0°00'00.0384"	-0.31
			ΔHt.	-182.473ift	0.022ift	0.008ift	0.12
			Dist.	18108.719ift	0.007ift	-0.003ift	-0.26
B482	RB17	RB14	**Az.**	332°05'15.4128"	0°00'01.0948"	0°00'00.3684"	0.30
			ΔHt.	-1.508ift	0.018ift	-0.002ift	-0.12
			Dist.	1500.014ift	0.008ift	-0.001ift	-0.10

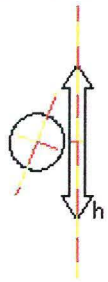
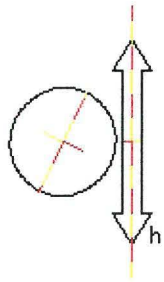
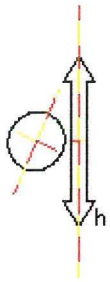
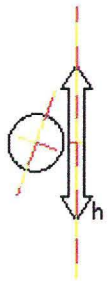
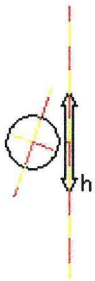
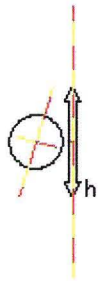
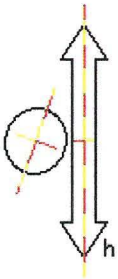
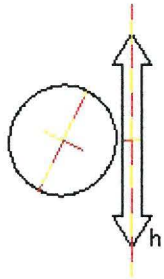
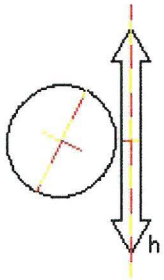
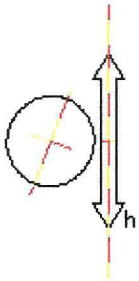
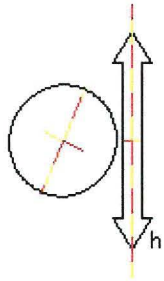
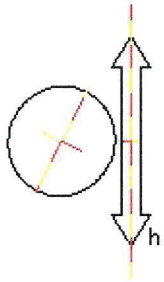
Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B299	RB6	A11	**Az.**	359°34'41.9699"	0°00'06.9284"	0°00'02.1068"	0.28
			ΔHt.	-1.332ift	0.020ift	-0.003ift	-0.18
			Dist.	240.785ift	0.008ift	0.000ift	-0.05
B379	RB3	RB4	**Az.**	90°42'48.0692"	0°00'47.1381"	0°00'14.1035"	0.28
			ΔHt.	17.067ift	0.018ift	-0.002ift	-0.14
			Dist.	36.239ift	0.008ift	0.000ift	-0.02
B475	RB9	VINE RM1	**Az.**	306°37'57.3745"	0°00'04.4174"	-0°00'01.4628"	-0.28
			ΔHt.	25.112ift	0.015ift	0.003ift	0.21
			Dist.	349.992ift	0.007ift	0.000ift	0.02
B461	1AO1	VINE RM1	**Az.**	129°53'12.3771"	0°00'00.1641"	0°00'00.0130"	0.05
			ΔHt.	41.803ift	0.013ift	-0.005ift	-0.27
			Dist.	7941.659ift	0.006ift	0.000ift	-0.04
B484	RB17	RB19	**Az.**	152°15'38.4427"	0°00'01.6386"	-0°00'00.1838"	-0.10
			ΔHt.	0.279ift	0.018ift	0.004ift	0.24
			Dist.	996.812ift	0.008ift	-0.002ift	-0.27
B395	RB8	RB11	**Az.**	126°47'18.7423"	0°00'01.8001"	0°00'00.3133"	0.16
			ΔHt.	-25.580ift	0.019ift	0.001ift	0.08
			Dist.	957.754ift	0.008ift	0.002ift	0.25
B369	69F1	RB3	**Az.**	11°37'49.8111"	0°00'08.1811"	-0°00'01.0889"	-0.12
			ΔHt.	-0.697ift	0.018ift	0.000ift	-0.02
			Dist.	203.469ift	0.008ift	-0.002ift	-0.25
B351	1AO1	69F1	**Az.**	124°39'07.9358"	0°00'00.1975"	0°00'00.0619"	0.24
			ΔHt.	23.348ift	0.016ift	-0.002ift	-0.14
			Dist.	7252.985ift	0.007ift	-0.002ift	-0.25

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B409	A10	RB9	**Az.**	125°33'59.7275"	0°00'06.5873"	-0°00'01.5972"	-0.21
			ΔHt.	-23.945ift	0.018ift	-0.005ift	-0.24
			Dist.	251.554ift	0.008ift	-0.002ift	-0.17
B469	RB10	VINE RM1	**Az.**	299°04'34.7179"	0°00'04.7466"	-0°00'00.9644"	-0.18
			ΔHt.	1.548ift	0.017ift	-0.003ift	-0.19
			Dist.	345.719ift	0.008ift	0.002ift	0.22
B375	RB5	RB7	**Az.**	180°12'53.5978"	0°00'03.4584"	0°00'00.0470"	0.01
			ΔHt.	-3.067ift	0.024ift	-0.005ift	-0.22
			Dist.	498.598ift	0.009ift	0.000ift	0.04
B388	RB7	A11	**Az.**	3°12'21.5444"	0°00'02.2908"	0°00'00.5279"	0.21
			ΔHt.	21.833ift	0.022ift	-0.004ift	-0.21
			Dist.	738.146ift	0.009ift	0.001ift	0.13
B406	A10	RB10	**Az.**	115°01'50.7981"	0°00'06.9166"	-0°00'00.7402"	-0.10
			ΔHt.	-0.381ift	0.019ift	0.003ift	0.16
			Dist.	249.329ift	0.008ift	-0.001ift	-0.17
B468	RB10	RB9	**Az.**	207°32'24.6145"	0°00'35.1282"	-0°00'00.1207"	0.00
			ΔHt.	-23.564ift	0.018ift	0.000ift	-0.01
			Dist.	46.041ift	0.008ift	-0.001ift	-0.15
B295	RB6	RB5	**Az.**	273°18'38.3539"	0°00'42.9989"	-0°00'04.1234"	-0.09
			ΔHt.	-20.098ift	0.022ift	0.002ift	0.09
			Dist.	41.253ift	0.008ift	-0.001ift	-0.13
B298	RB6	RB7	**Az.**	184°57'32.1164"	0°00'03.4021"	-0°00'00.2947"	-0.08
			ΔHt.	-23.165ift	0.022ift	-0.001ift	-0.08
			Dist.	498.077ift	0.009ift	0.001ift	0.10

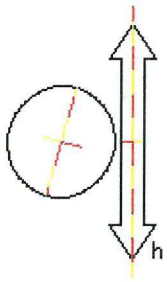
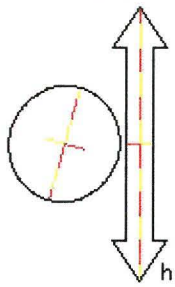
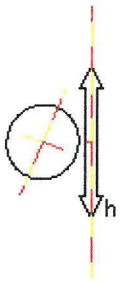
Histograms of Standardized Residuals



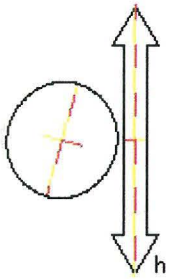
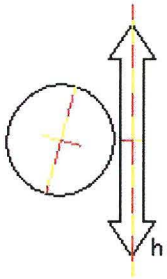
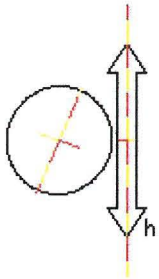
Point Error Ellipses

2CQ2	RB2	2AQ2
 68°	 64°	 66°
Tick Size: 0.0033ift Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
2CO1	**2BP2**	**1AO1**
 69°	 71°	 71°
Tick Size: 0.0033ift Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
G474	**69F1**	**RB3**
 69°	 64°	 65°
Tick Size: 0.0033ift Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
B11	**RB1**	**RB4**
 69°	 66°	 63°

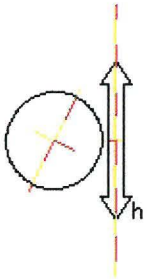
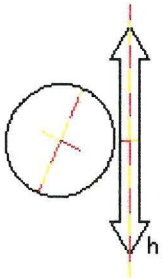
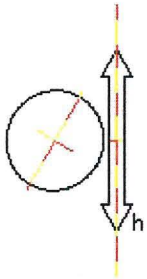
Tick Size: 0.0033ift Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ

RB6	RB5	B10
		

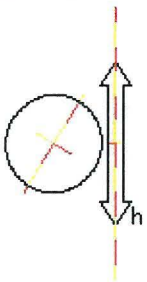
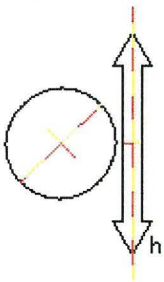
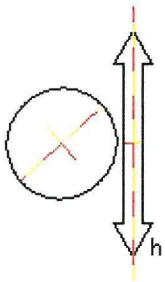
Tick Size: 0.0033ift Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ

RB7	A11	RB8
		

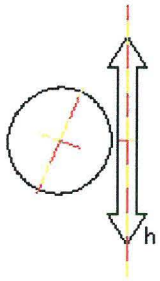
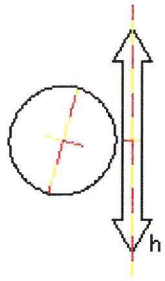
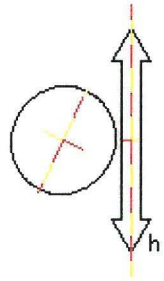
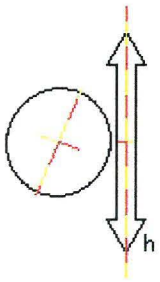
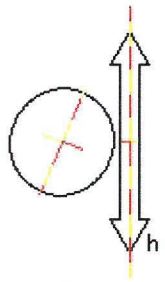
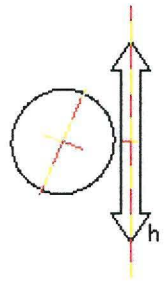
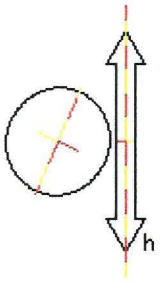
Tick Size: 0.0033ift Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ

RB12	RB11	RB9
		

Tick Size: 0.0033ift Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ

VINE RM1	A10	RB10
		

Tick Size: 0.0033ift Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ

RB17	RB15	RB14
		
Tick Size: 0.0033ift Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
RB19	**RB13**	**RB16**
		
Tick Size: 0.0033ift Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
RB18		
		
Tick Size: 0.0033ift Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		

Covariant Terms

Adjustment performed in WGS-84

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
2CQ2	RB2	**Az.**	330°31'10.2465"	0°00'00.0420"	1:4966710	1:4966710
		ΔHt.	-13.181ift	0.018ift		
		ΔElev.	?	?		
		Dist.	33762.232ift	0.007ift		
2CQ2	2AQ2	**Az.**	11°27'04.8818"	0°00'00.0270"	1:7249644	1:7249644
		ΔHt.	374.200ift	0.015ift		
		ΔElev.	?	?		
		Dist.	33551.283ift	0.005ift		
2CQ2	2CO1	**Az.**	271°59'34.4339"	0°00'00.0399"	1:5370215	1:5370215
		ΔHt.	-161.294ift	0.014ift		
		ΔElev.	?	?		
		Dist.	23392.407ift	0.004ift		
2CQ2	2BP2	**Az.**	333°50'15.0718"	0°00'00.0469"	1:4406035	1:4406035
		ΔHt.	-22.019ift	0.012ift		
		ΔElev.	?	?		
		Dist.	19025.879ift	0.004ift		
2CQ2	1AO1	**Az.**	325°24'34.7200"	0°00'00.0226"	1:9230982	1:9230982
		ΔHt.	-52.622ift	0.013ift		
		ΔElev.	?	?		
		Dist.	39897.388ift	0.004ift		
2CQ2	G474	**Az.**	349°26'25.5175"	0°00'00.0216"	1:9241127	1:9241127
		ΔHt.	145.046ift	0.019ift		
		ΔElev.	?	?		
		Dist.	44484.223ift	0.005ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
2CQ2	69F1	**Az.**	329°50'24.8609"	0°00'00.0432"	1:4845140	1:4845140
		ΔHt.	-29.275ift	0.018ift		
		ΔElev.	?	?		
		Dist.	33212.624ift	0.007ift		
2CQ2	RB3	**Az.**	330°04'23.6113"	0°00'00.0435"	1:4814882	1:4814882
		ΔHt.	-29.971ift	0.019ift		
		ΔElev.	?	?		
		Dist.	33364.533ift	0.007ift		
2CQ2	B11	**Az.**	329°50'14.9576"	0°00'00.0373"	1:5582864	1:5582864
		ΔHt.	-32.322ift	0.016ift		
		ΔElev.	?	?		
		Dist.	33125.094ift	0.006ift		
2CQ2	RB1	**Az.**	330°28'25.8901"	0°00'00.0425"	1:4907922	1:4907922
		ΔHt.	-27.933ift	0.018ift		
		ΔElev.	?	?		
		Dist.	33775.508ift	0.007ift		
2CQ2	RB4	**Az.**	330°07'36.4154"	0°00'00.0428"	1:4899107	1:4899107
		ΔHt.	-12.904ift	0.018ift		
		ΔElev.	?	?		
		Dist.	33346.063ift	0.007ift		
2CQ2	RB6	**Az.**	329°41'24.5778"	0°00'00.0438"	1:4728063	1:4728063
		ΔHt.	-12.324ift	0.020ift		
		ΔElev.	?	?		
		Dist.	32896.806ift	0.007ift		
2CQ2	RB5	**Az.**	329°37'49.4125"	0°00'00.0452"	1:4585460	1:4585460
		ΔHt.	-32.422ift	0.022ift		
		ΔElev.	?	?		
		Dist.	32919.683ift	0.007ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
2CQ2	B10	**Az.**	329°09'04.0433"	0°00'00.0337"	1:6210435	1:6210435
		ΔHt.	-37.500ift	0.015ift		
		ΔElev.	?	?		
		Dist.	32190.334ift	0.005ift		
2CQ2	RB7	**Az.**	329°10'57.4761"	0°00'00.0458"	1:4536850	1:4536850
		ΔHt.	-35.489ift	0.022ift		
		ΔElev.	?	?		
		Dist.	32491.574ift	0.007ift		
2CQ2	A11	**Az.**	329°53'52.8253"	0°00'00.0432"	1:4794460	1:4794460
		ΔHt.	-13.656ift	0.020ift		
		ΔElev.	?	?		
		Dist.	33105.722ift	0.007ift		
2CQ2	RB8	**Az.**	329°15'39.2740"	0°00'00.0435"	1:4800744	1:4800744
		ΔHt.	-11.848ift	0.017ift		
		ΔElev.	?	?		
		Dist.	32463.744ift	0.007ift		
2CQ2	RB12	**Az.**	330°00'10.5796"	0°00'00.0413"	1:5039117	1:5039117
		ΔHt.	-12.061ift	0.015ift		
		ΔElev.	?	?		
		Dist.	31606.675ift	0.006ift		
2CQ2	RB11	**Az.**	329°55'27.3829"	0°00'00.0461"	1:4546501	1:4546501
		ΔHt.	-37.428ift	0.019ift		
		ΔElev.	?	?		
		Dist.	31580.644ift	0.007ift		
2CQ2	RB9	**Az.**	329°24'40.3582"	0°00'00.0417"	1:5027719	1:5027719
		ΔHt.	-35.931ift	0.016ift		
		ΔElev.	?	?		
		Dist.	31990.467ift	0.006ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
2CQ2	VINE RM1	**Az.**	329°10'16.4354"	0°00'00.0407"	1:5140674	1:5140674
		ΔHt.	-10.819ift	0.015ift		
		ΔElev.	?	?		
		Dist.	32313.515ift	0.006ift		
2CQ2	A10	**Az.**	329°13'50.1221"	0°00'00.0452"	1:4679883	1:4679883
		ΔHt.	-11.985ift	0.019ift		
		ΔElev.	?	?		
		Dist.	32220.763ift	0.007ift		
2CQ2	RB10	**Az.**	329°28'52.3495"	0°00'00.0456"	1:4637805	1:4637805
		ΔHt.	-12.367ift	0.019ift		
		ΔElev.	?	?		
		Dist.	32014.781ift	0.007ift		
2CQ2	RB17	**Az.**	333°42'49.7688"	0°00'00.0738"	1:2808650	1:2808650
		ΔHt.	-34.799ift	0.018ift		
		ΔElev.	?	?		
		Dist.	18867.574ift	0.007ift		
2CQ2	RB15	**Az.**	333°37'47.1961"	0°00'00.0714"	1:2885426	1:2885426
		ΔHt.	-36.175ift	0.019ift		
		ΔElev.	?	?		
		Dist.	19867.600ift	0.007ift		
2CQ2	RB14	**Az.**	333°35'42.6402"	0°00'00.0695"	1:2999720	1:2999720
		ΔHt.	-36.307ift	0.019ift		
		ΔElev.	?	?		
		Dist.	20367.039ift	0.007ift		
2CQ2	RB19	**Az.**	333°47'38.5142"	0°00'00.0786"	1:2642366	1:2642366
		ΔHt.	-34.520ift	0.019ift		
		ΔElev.	?	?		
		Dist.	17871.094ift	0.007ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
2CQ2	RB13	**Az.**	333°33'23.3307"	0°00'00.0671"	1:3096373	1:3096373
		ΔHt.	-37.484ift	0.019ift		
		ΔElev.	?	?		
		Dist.	20866.939ift	0.007ift		
2CQ2	RB16	**Az.**	333°39'47.2195"	0°00'00.0712"	1:2909625	1:2909625
		ΔHt.	-34.598ift	0.018ift		
		ΔElev.	?	?		
		Dist.	19367.258ift	0.007ift		
2CQ2	RB18	**Az.**	333°45'07.7113"	0°00'00.0762"	1:2727911	1:2727911
		ΔHt.	-34.266ift	0.019ift		
		ΔElev.	?	?		
		Dist.	18370.699ift	0.007ift		
RB2	2AQ2	**Az.**	81°26'11.8098"	0°00'00.0608"	1:3445612	1:3445612
		ΔHt.	387.380ift	0.019ift		
		ΔElev.	?	?		
		Dist.	23537.005ift	0.007ift		
RB2	2CO1	**Az.**	193°17'04.0558"	0°00'00.0473"	1:4208040	1:4208040
		ΔHt.	-148.113ift	0.018ift		
		ΔElev.	?	?		
		Dist.	29366.659ift	0.007ift		
RB2	2BP2	**Az.**	146°13'31.1352"	0°00'00.0950"	1:2203885	1:2203885
		ΔHt.	-8.838ift	0.016ift		
		ΔElev.	?	?		
		Dist.	14809.244ift	0.007ift		
RB2	1AO1	**Az.**	299°45'18.8648"	0°00'00.2038"	1:1042984	1:1042984
		ΔHt.	-39.442ift	0.016ift		
		ΔElev.	?	?		
		Dist.	6953.200ift	0.007ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
RB2	G474	**Az.**	30°31'06.0329"	0°00'00.0855"	1:2311255	1:2311255
		ΔHt.	158.226ift	0.022ift		
		ΔElev.	?	?		
		Dist.	16651.231ift	0.007ift		
RB2	69F1	**Az.**	185°59'34.6271"	0°00'02.4391"	1:82497	1:82497
		ΔHt.	-16.094ift	0.017ift		
		ΔElev.	?	?		
		Dist.	677.993ift	0.008ift		
RB2	RB3	**Az.**	183°35'09.2857"	0°00'03.4944"	1:57530	1:57530
		ΔHt.	-16.791ift	0.018ift		
		ΔElev.	?	?		
		Dist.	475.929ift	0.008ift		
RB2	B11	**Az.**	182°08'49.2075"	0°00'02.0520"	1:98271	1:98271
		ΔHt.	-19.141ift	0.017ift		
		ΔElev.	?	?		
		Dist.	751.274ift	0.008ift		
RB2	RB1	**Az.**	266°43'40.1052"	0°00'56.4028"	1:3724	1:3724
		ΔHt.	-14.752ift	0.018ift		
		ΔElev.	?	?		
		Dist.	30.005ift	0.008ift		
RB2	RB4	**Az.**	179°13'13.6070"	0°00'03.4774"	1:58234	1:58234
		ΔHt.	0.276ift	0.017ift		
		ΔElev.	?	?		
		Dist.	475.492ift	0.008ift		
2AQ2	2CO1	**Az.**	223°08'22.2999"	0°00'00.0210"	1:9379292	1:9379292
		ΔHt.	-535.494ift	0.016ift		
		ΔElev.	?	?		
		Dist.	43941.369ift	0.005ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
2AQ2	2BP2	**Az.**	223°36'25.4323"	0°00'00.0409"	1:4873009	1:4873009
		ΔHt.	-396.218ift	0.013ift		
		ΔElev.	?	?		
		Dist.	21825.584ift	0.004ift		
2AQ2	1AO1	**Az.**	269°56'11.7149"	0°00'00.0317"	1:6726861	1:6726861
		ΔHt.	-426.822ift	0.014ift		
		ΔElev.	?	?		
		Dist.	29311.102ift	0.004ift		
2AQ2	G474	**Az.**	306°13'36.2550"	0°00'00.0556"	1:3945175	1:3945175
		ΔHt.	-229.154ift	0.019ift		
		ΔElev.	?	?		
		Dist.	18360.255ift	0.005ift		
2AQ2	69F1	**Az.**	259°53'34.7580"	0°00'00.0610"	1:3434916	1:3434916
		ΔHt.	-403.474ift	0.019ift		
		ΔElev.	?	?		
		Dist.	23716.487ift	0.007ift		
2AQ2	RB3	**Az.**	260°21'03.2447"	0°00'00.0619"	1:3393681	1:3393681
		ΔHt.	-404.171ift	0.020ift		
		ΔElev.	?	?		
		Dist.	23641.748ift	0.007ift		
2AQ2	B11	**Az.**	259°41'33.9855"	0°00'00.0529"	1:3974115	1:3974115
		ΔHt.	-406.521ift	0.017ift		
		ΔElev.	?	?		
		Dist.	23688.130ift	0.006ift		
2AQ2	RB1	**Az.**	261°29'07.0118"	0°00'00.0616"	1:3415533	1:3415533
		ΔHt.	-402.133ift	0.019ift		
		ΔElev.	?	?		
		Dist.	23566.882ift	0.007ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
2AQ2	RB4	**Az.**	260°20'06.0593"	0°00'00.0608"	1:3440775	1:3440775
		ΔHt.	-387.104ift	0.019ift		
		ΔElev.	?	?		
		Dist.	23606.105ift	0.007ift		
2AQ2	RB6	**Az.**	259°06'13.5325"	0°00'00.0621"	1:3419294	1:3419294
		ΔHt.	-386.524ift	0.021ift		
		ΔElev.	?	?		
		Dist.	23691.420ift	0.007ift		
2AQ2	RB5	**Az.**	259°07'41.7844"	0°00'00.0641"	1:3330641	1:3330641
		ΔHt.	-406.622ift	0.023ift		
		ΔElev.	?	?		
		Dist.	23731.406ift	0.007ift		
2AQ2	B10	**Az.**	257°15'01.0499"	0°00'00.0463"	1:4527717	1:4527717
		ΔHt.	-411.700ift	0.016ift		
		ΔElev.	?	?		
		Dist.	23754.338ift	0.005ift		
2AQ2	RB7	**Az.**	257°57'07.4043"	0°00'00.0637"	1:3344253	1:3344253
		ΔHt.	-409.689ift	0.022ift		
		ΔElev.	?	?		
		Dist.	23832.663ift	0.007ift		
2AQ2	A11	**Az.**	259°40'38.4317"	0°00'00.0616"	1:3439165	1:3439165
		ΔHt.	-387.856ift	0.020ift		
		ΔElev.	?	?		
		Dist.	23648.657ift	0.007ift		
2AQ2	RB8	**Az.**	257°55'22.2913"	0°00'00.0598"	1:3493155	1:3493155
		ΔHt.	-386.048ift	0.018ift		
		ΔElev.	?	?		
		Dist.	23781.711ift	0.007ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
2AQ2	RB12	**Az.**	256°13'44.3364"	0°00'00.0568"	1:3645743	1:3645743
		ΔHt.	-386.261ift	0.016ift		
		ΔElev.	?	?		
		Dist.	23129.064ift	0.006ift		
2AQ2	RB11	**Az.**	256°08'13.6959"	0°00'00.0632"	1:3310209	1:3310209
		ΔHt.	-411.627ift	0.020ift		
		ΔElev.	?	?		
		Dist.	23163.452ift	0.007ift		
2AQ2	RB9	**Az.**	256°53'49.3719"	0°00'00.0568"	1:3648157	1:3648157
		ΔHt.	-410.130ift	0.017ift		
		ΔElev.	?	?		
		Dist.	23554.592ift	0.006ift		
2AQ2	VINE RM1	**Az.**	257°32'27.1496"	0°00'00.0555"	1:3732447	1:3732447
		ΔHt.	-385.019ift	0.016ift		
		ΔElev.	?	?		
		Dist.	23782.106ift	0.006ift		
2AQ2	A10	**Az.**	257°21'12.9478"	0°00'00.0608"	1:3360659	1:3360659
		ΔHt.	-386.185ift	0.019ift		
		ΔElev.	?	?		
		Dist.	23721.334ift	0.007ift		
2AQ2	RB10	**Az.**	256°58'55.4935"	0°00'00.0614"	1:3325605	1:3325605
		ΔHt.	-386.566ift	0.020ift		
		ΔElev.	?	?		
		Dist.	23524.604ift	0.007ift		
2AQ2	RB17	**Az.**	223°15'19.9685"	0°00'00.0627"	1:3169520	1:3169520
		ΔHt.	-408.999ift	0.019ift		
		ΔElev.	?	?		
		Dist.	21919.002ift	0.007ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
2AQ2	RB15	**Az.**	225°45'59.2737"	0°00'00.0653"	1:3075787	1:3075787
		ΔHt.	-410.374ift	0.020ift		
		ΔElev.	?	?		
		Dist.	21617.337ift	0.007ift		
2AQ2	RB14	**Az.**	227°02'40.0549"	0°00'00.0646"	1:3052318	1:3052318
		ΔHt.	-410.506ift	0.020ift		
		ΔElev.	?	?		
		Dist.	21481.086ift	0.007ift		
2AQ2	RB19	**Az.**	220°49'47.2216"	0°00'00.0619"	1:3182835	1:3182835
		ΔHt.	-408.720ift	0.019ift		
		ΔElev.	?	?		
		Dist.	22264.012ift	0.007ift		
2AQ2	RB13	**Az.**	228°20'26.7756"	0°00'00.0646"	1:3080555	1:3080555
		ΔHt.	-411.684ift	0.020ift		
		ΔElev.	?	?		
		Dist.	21357.558ift	0.007ift		
2AQ2	RB16	**Az.**	224°30'13.3965"	0°00'00.0627"	1:3181964	1:3181964
		ΔHt.	-408.798ift	0.018ift		
		ΔElev.	?	?		
		Dist.	21765.476ift	0.007ift		
2AQ2	RB18	**Az.**	222°02'12.1483"	0°00'00.0622"	1:3172624	1:3172624
		ΔHt.	-408.466ift	0.020ift		
		ΔElev.	?	?		
		Dist.	22086.258ift	0.007ift		
2CO1	2BP2	**Az.**	42°37'26.8483"	0°00'00.0400"	1:5032163	1:5032163
		ΔHt.	139.275ift	0.012ift		
		ΔElev.	?	?		
		Dist.	22117.229ift	0.004ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
2CO1	1AO1	**Az.**	1°15'37.8041"	0°00'00.0277"	1:7237232	1:7237232
		ΔHt.	108.672ift	0.013ift		
		ΔElev.	?	?		
		Dist.	32039.591ift	0.004ift		
2CO1	G474	**Az.**	19°29'29.6464"	0°00'00.0208"	1:9269336	1:9269336
		ΔHt.	306.340ift	0.019ift		
		ΔElev.	?	?		
		Dist.	45538.315ift	0.005ift		
2CO1	69F1	**Az.**	13°26'38.9303"	0°00'00.0487"	1:4063781	1:4063781
		ΔHt.	132.019ift	0.018ift		
		ΔElev.	?	?		
		Dist.	28694.278ift	0.007ift		
2CO1	RB3	**Az.**	13°25'52.6621"	0°00'00.0488"	1:4035157	1:4035157
		ΔHt.	131.323ift	0.019ift		
		ΔElev.	?	?		
		Dist.	28897.644ift	0.007ift		
2CO1	B11	**Az.**	13°33'45.8912"	0°00'00.0422"	1:4697663	1:4697663
		ΔHt.	128.972ift	0.016ift		
		ΔElev.	?	?		
		Dist.	28629.902ift	0.006ift		
2CO1	RB1	**Az.**	13°12'58.3091"	0°00'00.0477"	1:4144257	1:4144257
		ΔHt.	133.361ift	0.019ift		
		ΔElev.	?	?		
		Dist.	29358.123ift	0.007ift		
2CO1	RB4	**Az.**	13°30'04.9004"	0°00'00.0481"	1:4120930	1:4120930
		ΔHt.	148.390ift	0.018ift		
		ΔElev.	?	?		
		Dist.	28905.651ift	0.007ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
2CO1	RB6	**Az.**	13°45'29.5175"	0°00'00.0494"	1:3973592	1:3973592
		ΔHt.	148.970ift	0.020ift		
		ΔElev.	?	?		
		Dist.	28406.617ift	0.007ift		
2CO1	RB5	**Az.**	13°40'34.8752"	0°00'00.0507"	1:3829650	1:3829650
		ΔHt.	128.872ift	0.022ift		
		ΔElev.	?	?		
		Dist.	28399.157ift	0.007ift		
2CO1	B10	**Az.**	14°19'40.2293"	0°00'00.0380"	1:5172679	1:5172679
		ΔHt.	123.793ift	0.015ift		
		ΔElev.	?	?		
		Dist.	27688.923ift	0.005ift		
2CO1	RB7	**Az.**	13°54'53.2883"	0°00'00.0515"	1:3770279	1:3770279
		ΔHt.	125.805ift	0.022ift		
		ΔElev.	?	?		
		Dist.	27914.523ift	0.007ift		
2CO1	A11	**Az.**	13°38'24.3573"	0°00'00.0487"	1:4042832	1:4042832
		ΔHt.	147.638ift	0.020ift		
		ΔElev.	?	?		
		Dist.	28640.114ift	0.007ift		
2CO1	RB8	**Az.**	14°01'10.7745"	0°00'00.0493"	1:4024148	1:4024148
		ΔHt.	149.446ift	0.017ift		
		ΔElev.	?	?		
		Dist.	27926.029ift	0.007ift		
2CO1	RB12	**Az.**	15°52'45.2415"	0°00'00.0465"	1:4324412	1:4324412
		ΔHt.	149.233ift	0.015ift		
		ΔElev.	?	?		
		Dist.	27618.977ift	0.006ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
2CO1	RB11	**Az.**	15°51'19.6215"	0°00'00.0511"	1:3832532	1:3832532
		ΔHt.	123.866ift	0.019ift		
		ΔElev.	?	?		
		Dist.	27569.702ift	0.007ift		
2CO1	RB9	**Az.**	14°50'03.2327"	0°00'00.0471"	1:4236952	1:4236952
		ΔHt.	125.363ift	0.016ift		
		ΔElev.	?	?		
		Dist.	27652.060ift	0.007ift		
2CO1	VINE RM1	**Az.**	14°09'50.4405"	0°00'00.0464"	1:4329693	1:4329693
		ΔHt.	150.475ift	0.015ift		
		ΔElev.	?	?		
		Dist.	27783.855ift	0.006ift		
2CO1	A10	**Az.**	14°20'53.8539"	0°00'00.0513"	1:3943939	1:3943939
		ΔHt.	149.309ift	0.019ift		
		ΔElev.	?	?		
		Dist.	27742.057ift	0.007ift		
2CO1	RB10	**Az.**	14°51'18.5727"	0°00'00.0516"	1:3932308	1:3932308
		ΔHt.	148.927ift	0.019ift		
		ΔElev.	?	?		
		Dist.	27696.977ift	0.007ift		
2CO1	RB17	**Az.**	42°58'12.0795"	0°00'00.0621"	1:3213944	1:3213944
		ΔHt.	126.495ift	0.018ift		
		ΔElev.	?	?		
		Dist.	22022.457ift	0.007ift		
2CO1	RB15	**Az.**	40°32'48.6838"	0°00'00.0626"	1:3204851	1:3204851
		ΔHt.	125.119ift	0.019ift		
		ΔElev.	?	?		
		Dist.	22368.702ift	0.007ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
2CO1	RB14	**Az.**	39°22'01.8977"	0°00'00.0609"	1:3222460	1:3222460
		ΔHt.	124.987ift	0.019ift		
		ΔElev.	?	?		
		Dist.	22557.638ift	0.007ift		
2CO1	RB19	**Az.**	45°27'13.6050"	0°00'00.0634"	1:3141388	1:3141388
		ΔHt.	126.774ift	0.019ift		
		ΔElev.	?	?		
		Dist.	21713.993ift	0.007ift		
2CO1	RB13	**Az.**	38°12'15.5486"	0°00'00.0601"	1:3291570	1:3291570
		ΔHt.	123.810ift	0.019ift		
		ΔElev.	?	?		
		Dist.	22754.276ift	0.007ift		
2CO1	RB16	**Az.**	41°44'50.2526"	0°00'00.0611"	1:3272391	1:3272391
		ΔHt.	126.696ift	0.018ift		
		ΔElev.	?	?		
		Dist.	22188.114ift	0.007ift		
2CO1	RB18	**Az.**	44°11'58.4232"	0°00'00.0627"	1:3175976	1:3175976
		ΔHt.	127.028ift	0.019ift		
		ΔElev.	?	?		
		Dist.	21863.335ift	0.007ift		
2BP2	1AO1	**Az.**	317°51'28.8625"	0°00'00.0413"	1:5044472	1:5044472
		ΔHt.	-30.604ift	0.010ift		
		ΔElev.	?	?		
		Dist.	21260.629ift	0.004ift		
2BP2	G474	**Az.**	0°29'37.8783"	0°00'00.0355"	1:5577947	1:5577947
		ΔHt.	167.064ift	0.017ift		
		ΔElev.	?	?		
		Dist.	26655.301ift	0.005ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
2BP2	69F1	**Az.**	324°30'05.5213"	0°00'00.0995"	1:2112258	1:2112258
		ΔHt.	-7.256ift	0.017ift		
		ΔElev.	?	?		
		Dist.	14294.688ift	0.007ift		
2BP2	RB3	**Az.**	325°05'37.0485"	0°00'00.0996"	1:2112548	1:2112548
		ΔHt.	-7.952ift	0.017ift		
		ΔElev.	?	?		
		Dist.	14433.850ift	0.007ift		
2BP2	B11	**Az.**	324°27'44.6291"	0°00'00.0857"	1:2435934	1:2435934
		ΔHt.	-10.303ift	0.014ift		
		ΔElev.	?	?		
		Dist.	14207.686ift	0.006ift		
2BP2	RB1	**Az.**	326°08'24.7835"	0°00'00.0959"	1:2182820	1:2182820
		ΔHt.	-5.914ift	0.017ift		
		ΔElev.	?	?		
		Dist.	14824.496ift	0.007ift		
2BP2	RB4	**Az.**	325°12'38.5622"	0°00'00.0981"	1:2142857	1:2142857
		ΔHt.	9.114ift	0.016ift		
		ΔElev.	?	?		
		Dist.	14412.767ift	0.007ift		
2BP2	RB6	**Az.**	324°01'48.1877"	0°00'00.1022"	1:2041046	1:2041046
		ΔHt.	9.695ift	0.018ift		
		ΔElev.	?	?		
		Dist.	13988.588ift	0.007ift		
2BP2	RB5	**Az.**	323°53'58.3234"	0°00'00.1052"	1:1986283	1:1986283
		ΔHt.	-10.403ift	0.021ift		
		ΔElev.	?	?		
		Dist.	14014.750ift	0.007ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
2BP2	B10	**Az.**	322°26'01.9087"	0°00'00.0797"	1:2637544	1:2637544
		ΔHt.	-15.482ift	0.012ift		
		ΔElev.	?	?		
		Dist.	13319.081ift	0.005ift		
2BP2	RB7	**Az.**	322°39'23.3065"	0°00'00.1083"	1:1936930	1:1936930
		ΔHt.	-13.470ift	0.020ift		
		ΔElev.	?	?		
		Dist.	13616.276ift	0.007ift		
2BP2	A11	**Az.**	324°35'44.5338"	0°00'00.0999"	1:2083469	1:2083469
		ΔHt.	8.363ift	0.018ift		
		ΔElev.	?	?		
		Dist.	14185.152ift	0.007ift		
2BP2	RB8	**Az.**	322°49'44.4637"	0°00'00.1029"	1:2038463	1:2038463
		ΔHt.	10.171ift	0.015ift		
		ΔElev.	?	?		
		Dist.	13583.627ift	0.007ift		
2BP2	RB12	**Az.**	324°13'55.7689"	0°00'00.1016"	1:2050809	1:2050809
		ΔHt.	9.958ift	0.013ift		
		ΔElev.	?	?		
		Dist.	12687.351ift	0.006ift		
2BP2	RB11	**Az.**	324°01'30.6525"	0°00'00.1137"	1:1855382	1:1855382
		ΔHt.	-15.409ift	0.017ift		
		ΔElev.	?	?		
		Dist.	12665.854ift	0.007ift		
2BP2	RB9	**Az.**	322°57'44.3553"	0°00'00.1005"	1:2092479	1:2092479
		ΔHt.	-13.912ift	0.014ift		
		ΔElev.	?	?		
		Dist.	13103.862ift	0.006ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
2BP2	VINE RM1	**Az.**	322°32'35.3980"	0°00'00.0965"	1:2169432	1:2169432
		ΔHt.	11.200ift	0.013ift		
		ΔElev.	?	?		
		Dist.	13440.120ift	0.006ift		
2BP2	A10	**Az.**	322°38'22.7928"	0°00'00.1076"	1:1964708	1:1964708
		ΔHt.	10.034ift	0.017ift		
		ΔElev.	?	?		
		Dist.	13344.142ift	0.007ift		
2BP2	RB10	**Az.**	323°08'37.9879"	0°00'00.1096"	1:1927149	1:1927149
		ΔHt.	9.652ift	0.017ift		
		ΔElev.	?	?		
		Dist.	13123.683ift	0.007ift		
2BP2	RB17	**Az.**	168°14'53.5309"	0°00'08.3234"	1:24468	1:24468
		ΔHt.	-12.780ift	0.016ift		
		ΔElev.	?	?		
		Dist.	163.504ift	0.007ift		
2BP2	RB15	**Az.**	328°55'48.4822"	0°00'01.6598"	1:124650	1:124650
		ΔHt.	-14.156ift	0.017ift		
		ΔElev.	?	?		
		Dist.	844.668ift	0.007ift		
2BP2	RB14	**Az.**	330°08'48.3240"	0°00'01.0412"	1:201286	1:201286
		ΔHt.	-14.288ift	0.017ift		
		ΔElev.	?	?		
		Dist.	1343.742ift	0.007ift		
2BP2	RB19	**Az.**	154°29'43.4830"	0°00'01.1975"	1:173071	1:173071
		ΔHt.	-12.501ift	0.017ift		
		ΔElev.	?	?		
		Dist.	1154.870ift	0.007ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
2BP2	RB13	**Az.**	330°38'23.7742"	0°00'00.7501"	1:277791	1:277791
		ΔHt.	-15.465ift	0.017ift		
		ΔElev.	?	?		
		Dist.	1843.652ift	0.007ift		
2BP2	RB16	**Az.**	324°01'20.0285"	0°00'03.9465"	1:52996	1:52996
		ΔHt.	-12.580ift	0.015ift		
		ΔElev.	?	?		
		Dist.	346.343ift	0.007ift		
2BP2	RB18	**Az.**	156°12'53.6139"	0°00'02.1005"	1:98570	1:98570
		ΔHt.	-12.247ift	0.017ift		
		ΔElev.	?	?		
		Dist.	655.772ift	0.007ift		
1AO1	G474	**Az.**	53°03'26.1639"	0°00'00.0530"	1:3810351	1:3810351
		ΔHt.	197.668ift	0.018ift		
		ΔElev.	?	?		
		Dist.	18129.932ift	0.005ift		
1AO1	69F1	**Az.**	124°39'07.9358"	0°00'00.1975"	1:1079650	1:1079650
		ΔHt.	23.348ift	0.016ift		
		ΔElev.	?	?		
		Dist.	7252.985ift	0.007ift		
1AO1	RB3	**Az.**	123°09'24.9593"	0°00'00.2023"	1:1060386	1:1060386
		ΔHt.	22.651ift	0.017ift		
		ΔElev.	?	?		
		Dist.	7175.820ift	0.007ift		
1AO1	B11	**Az.**	124°57'14.8934"	0°00'00.1674"	1:1265935	1:1265935
		ΔHt.	20.301ift	0.014ift		
		ΔElev.	?	?		
		Dist.	7331.645ift	0.006ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
1AO1	RB1	**Az.**	119°52'46.5957"	0°00'00.2074"	1:1030352	1:1030352
		ΔHt.	24.689ift	0.016ift		
		ΔElev.	?	?		
		Dist.	6928.063ift	0.007ift		
1AO1	RB4	**Az.**	123°00'08.3424"	0°00'00.1977"	1:1079543	1:1079543
		ΔHt.	39.718ift	0.016ift		
		ΔElev.	?	?		
		Dist.	7206.426ift	0.007ift		
1AO1	RB6	**Az.**	126°16'21.9894"	0°00'00.1926"	1:1107530	1:1107530
		ΔHt.	40.298ift	0.018ift		
		ΔElev.	?	?		
		Dist.	7505.357ift	0.007ift		
1AO1	RB5	**Az.**	126°26'41.8668"	0°00'00.2000"	1:1073351	1:1073351
		ΔHt.	20.200ift	0.020ift		
		ΔElev.	?	?		
		Dist.	7470.782ift	0.007ift		
1AO1	B10	**Az.**	130°15'05.2577"	0°00'00.1328"	1:1599606	1:1599606
		ΔHt.	15.122ift	0.013ift		
		ΔElev.	?	?		
		Dist.	8054.399ift	0.005ift		
1AO1	RB7	**Az.**	129°24'33.7556"	0°00'00.1916"	1:1117874	1:1117874
		ΔHt.	17.133ift	0.020ift		
		ΔElev.	?	?		
		Dist.	7775.950ift	0.007ift		
1AO1	A11	**Az.**	124°46'14.2542"	0°00'00.1945"	1:1093525	1:1093525
		ΔHt.	38.966ift	0.018ift		
		ΔElev.	?	?		
		Dist.	7363.970ift	0.007ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
1AO1	RB8	**Az.**	129°10'20.4097"	0°00'00.1800"	1:1177451	1:1177451
		ΔHt.	40.774ift	0.015ift		
		ΔElev.	?	?		
		Dist.	7817.216ift	0.007ift		
1AO1	RB12	**Az.**	128°35'07.1751"	0°00'00.1479"	1:1417548	1:1417548
		ΔHt.	40.561ift	0.013ift		
		ΔElev.	?	?		
		Dist.	8765.620ift	0.006ift		
1AO1	RB11	**Az.**	128°54'39.6547"	0°00'00.1658"	1:1294134	1:1294134
		ΔHt.	15.195ift	0.017ift		
		ΔElev.	?	?		
		Dist.	8774.225ift	0.007ift		
1AO1	RB9	**Az.**	129°44'56.3750"	0°00'00.1598"	1:1324885	1:1324885
		ΔHt.	16.692ift	0.015ift		
		ΔElev.	?	?		
		Dist.	8291.107ift	0.006ift		
1AO1	VINE RM1	**Az.**	129°53'12.3771"	0°00'00.1641"	1:1281717	1:1281717
		ΔHt.	41.803ift	0.013ift		
		ΔElev.	?	?		
		Dist.	7941.659ift	0.006ift		
1AO1	A10	**Az.**	129°52'48.2812"	0°00'00.1791"	1:1180104	1:1180104
		ΔHt.	40.637ift	0.017ift		
		ΔElev.	?	?		
		Dist.	8040.247ift	0.007ift		
1AO1	RB10	**Az.**	129°26'15.6258"	0°00'00.1740"	1:1211810	1:1211810
		ΔHt.	40.256ift	0.017ift		
		ΔElev.	?	?		
		Dist.	8281.483ift	0.007ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
1AO1	RB17	**Az.**	138°03'13.5437"	0°00'00.0653"	1:3238262	1:3238262
		ΔHt.	17.823ift	0.017ift		
		ΔElev.	?	?		
		Dist.	21401.827ift	0.007ift		
1AO1	RB15	**Az.**	137°22'38.7955"	0°00'00.0696"	1:3013937	1:3013937
		ΔHt.	16.448ift	0.018ift		
		ΔElev.	?	?		
		Dist.	20432.327ift	0.007ift		
1AO1	RB14	**Az.**	137°00'39.2452"	0°00'00.0714"	1:2997524	1:2997524
		ΔHt.	16.316ift	0.018ift		
		ΔElev.	?	?		
		Dist.	19949.726ift	0.007ift		
1AO1	RB19	**Az.**	138°40'45.3705"	0°00'00.0631"	1:3365484	1:3365484
		ΔHt.	18.102ift	0.018ift		
		ΔElev.	?	?		
		Dist.	22369.595ift	0.007ift		
1AO1	RB13	**Az.**	136°37'54.1782"	0°00'00.0723"	1:2941349	1:2941349
		ΔHt.	15.138ift	0.018ift		
		ΔElev.	?	?		
		Dist.	19466.938ift	0.007ift		
1AO1	RB16	**Az.**	137°43'49.6194"	0°00'00.0661"	1:3191103	1:3191103
		ΔHt.	18.024ift	0.017ift		
		ΔElev.	?	?		
		Dist.	20916.321ift	0.007ift		
1AO1	RB18	**Az.**	138°22'22.9721"	0°00'00.0642"	1:3304067	1:3304067
		ΔHt.	18.356ift	0.018ift		
		ΔElev.	?	?		
		Dist.	21884.006ift	0.007ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
G474	69F1	**Az.**	209°35'59.5445"	0°00'00.0831"	1:2368372	1:2368372
		ΔHt.	-174.320ift	0.022ift		
		ΔElev.	?	?		
		Dist.	17270.348ift	0.007ift		
G474	RB3	**Az.**	209°48'37.1145"	0°00'00.0847"	1:2313574	1:2313574
		ΔHt.	-175.017ift	0.023ift		
		ΔElev.	?	?		
		Dist.	17076.902ift	0.007ift		
G474	B11	**Az.**	209°21'08.1762"	0°00'00.0721"	1:2736188	1:2736188
		ΔHt.	-177.367ift	0.020ift		
		ΔElev.	?	?		
		Dist.	17315.947ift	0.006ift		
G474	RB1	**Az.**	210°37'09.5099"	0°00'00.0862"	1:2283676	1:2283676
		ΔHt.	-172.979ift	0.022ift		
		ΔElev.	?	?		
		Dist.	16667.937ift	0.007ift		
G474	RB4	**Az.**	209°42'14.1871"	0°00'00.0836"	1:2354014	1:2354014
		ΔHt.	-157.950ift	0.022ift		
		ΔElev.	?	?		
		Dist.	17059.317ift	0.007ift		
G474	RB6	**Az.**	208°50'54.0717"	0°00'00.0823"	1:2384063	1:2384063
		ΔHt.	-157.370ift	0.023ift		
		ΔElev.	?	?		
		Dist.	17505.350ift	0.007ift		
G474	RB5	**Az.**	208°58'12.2717"	0°00'00.0845"	1:2304178	1:2304178
		ΔHt.	-177.468ift	0.025ift		
		ΔElev.	?	?		
		Dist.	17523.164ift	0.008ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
G474	B10	**Az.**	207°25'04.3507"	0°00'00.0602"	1:3231746	1:3231746
		ΔHt.	-182.546ift	0.019ift		
		ΔElev.	?	?		
		Dist.	18133.818ift	0.006ift		
G474	RB7	**Az.**	208°12'19.1160"	0°00'00.0822"	1:2365739	1:2365739
		ΔHt.	-180.535ift	0.025ift		
		ΔElev.	?	?		
		Dist.	17961.940ift	0.008ift		
G474	A11	**Az.**	209°14'17.3967"	0°00'00.0828"	1:2380775	1:2380775
		ΔHt.	-158.702ift	0.023ift		
		ΔElev.	?	?		
		Dist.	17295.676ift	0.007ift		
G474	RB8	**Az.**	208°03'22.0316"	0°00'00.0784"	1:2507591	1:2507591
		ΔHt.	-156.894ift	0.021ift		
		ΔElev.	?	?		
		Dist.	17938.303ift	0.007ift		
G474	RB12	**Az.**	205°02'55.3320"	0°00'00.0729"	1:2733879	1:2733879
		ΔHt.	-157.107ift	0.019ift		
		ΔElev.	?	?		
		Dist.	18058.250ift	0.007ift		
G474	RB11	**Az.**	205°03'34.8504"	0°00'00.0793"	1:2446287	1:2446287
		ΔHt.	-182.473ift	0.022ift		
		ΔElev.	?	?		
		Dist.	18108.719ift	0.007ift		
G474	RB9	**Az.**	206°38'16.2375"	0°00'00.0735"	1:2684917	1:2684917
		ΔHt.	-180.976ift	0.020ift		
		ΔElev.	?	?		
		Dist.	18117.222ift	0.007ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
G474	VINE RM1	**Az.**	207°43'52.9967"	0°00'00.0730"	1:2720148	1:2720148
		ΔHt.	-155.865ift	0.019ift		
		ΔElev.	?	?		
		Dist.	18059.680ift	0.007ift		
G474	A10	**Az.**	207°25'31.3055"	0°00'00.0801"	1:2487819	1:2487819
		ΔHt.	-157.031ift	0.022ift		
		ΔElev.	?	?		
		Dist.	18079.822ift	0.007ift		
G474	RB10	**Az.**	206°38'07.8279"	0°00'00.0803"	1:2486512	1:2486512
		ΔHt.	-157.412ift	0.022ift		
		ΔElev.	?	?		
		Dist.	18071.188ift	0.007ift		
G474	RB17	**Az.**	180°25'12.6085"	0°00'00.0527"	1:3768610	1:3768610
		ΔHt.	-179.845ift	0.022ift		
		ΔElev.	?	?		
		Dist.	26815.107ift	0.007ift		
G474	RB14	**Az.**	182°01'10.5671"	0°00'00.0559"	1:3521949	1:3521949
		ΔHt.	-181.352ift	0.023ift		
		ΔElev.	?	?		
		Dist.	25504.716ift	0.007ift		
G474	RB19	**Az.**	179°26'49.2675"	0°00'00.0513"	1:3858479	1:3858479
		ΔHt.	-179.566ift	0.023ift		
		ΔElev.	?	?		
		Dist.	27697.932ift	0.007ift		
G474	RB13	**Az.**	182°35'30.9781"	0°00'00.0564"	1:3495196	1:3495196
		ΔHt.	-182.530ift	0.023ift		
		ΔElev.	?	?		
		Dist.	25073.109ift	0.007ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
G474	RB16	Az.	180°56'29.2666"	0°00'00.0531"	1:3745485	1:3745485
		ΔHt.	-179.644ift	0.022ift		
		ΔElev.	?	?		
		Dist.	26377.592ift	0.007ift		
G474	RB18	Az.	179°55'38.6637"	0°00'00.0520"	1:3814496	1:3814496
		ΔHt.	-179.312ift	0.023ift		
		ΔElev.	?	?		
		Dist.	27254.407ift	0.007ift		
69F1	RB3	Az.	11°37'49.8111"	0°00'08.1811"	1:24376	1:24376
		ΔHt.	-0.697ift	0.018ift		
		ΔElev.	?	?		
		Dist.	203.469ift	0.008ift		
69F1	B11	Az.	150°51'04.1645"	0°00'18.0188"	1:11569	1:11569
		ΔHt.	-3.047ift	0.017ift		
		ΔElev.	?	?		
		Dist.	87.545ift	0.008ift		
69F1	RB1	Az.	3°28'26.1952"	0°00'02.4693"	1:81382	1:81382
		ΔHt.	1.342ift	0.018ift		
		ΔElev.	?	?		
		Dist.	673.814ift	0.008ift		
69F1	RB4	Az.	21°13'57.6074"	0°00'07.7271"	1:25783	1:25783
		ΔHt.	16.370ift	0.018ift		
		ΔElev.	?	?		
		Dist.	213.321ift	0.008ift		
RB3	B11	Az.	179°39'46.7737"	0°00'05.6625"	1:35512	1:35512
		ΔHt.	-2.350ift	0.018ift		
		ΔElev.	?	?		
		Dist.	275.754ift	0.008ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
RB3	RB1	**Az.**	359°58'37.5773"	0°00'03.5383"	1:56843	1:56843
		ΔHt.	2.038ift	0.019ift		
		ΔElev.	?	?		
		Dist.	473.284ift	0.008ift		
RB3	RB4	**Az.**	90°42'48.0692"	0°00'47.1381"	1:4481	1:4481
		ΔHt.	17.067ift	0.018ift		
		ΔElev.	?	?		
		Dist.	36.239ift	0.008ift		
B11	RB1	**Az.**	359°51'41.2893"	0°00'02.0724"	1:97145	1:97145
		ΔHt.	4.389ift	0.017ift		
		ΔElev.	?	?		
		Dist.	749.036ift	0.008ift		
B11	RB4	**Az.**	7°09'59.0950"	0°00'05.5536"	1:36114	1:36114
		ΔHt.	19.417ift	0.017ift		
		ΔElev.	?	?		
		Dist.	277.466ift	0.008ift		
B11	RB6	**Az.**	170°07'48.6812"	0°00'06.4328"	1:31313	1:31313
		ΔHt.	19.998ift	0.019ift		
		ΔElev.	?	?		
		Dist.	243.558ift	0.008ift		
B11	RB5	**Az.**	179°51'49.9813"	0°00'06.6887"	1:29640	1:29640
		ΔHt.	-0.100ift	0.022ift		
		ΔElev.	?	?		
		Dist.	237.572ift	0.008ift		
B11	B10	**Az.**	172°10'29.8967"	0°00'01.3053"	1:154969	1:154969
		ΔHt.	-5.179ift	0.016ift		
		ΔElev.	?	?		
		Dist.	1013.308ift	0.007ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
B11	RB7	**Az.**	180°06'05.8105"	0°00'02.1556"	1:91937	1:91937
		ΔHt.	-3.167ift	0.021ift		
		ΔElev.	?	?		
		Dist.	736.167ift	0.008ift		
B11	A11	**Az.**	88°49'00.5543"	0°00'40.0075"	1:5309	1:5309
		ΔHt.	18.666ift	0.019ift		
		ΔElev.	?	?		
		Dist.	39.984ift	0.008ift		
RB1	RB4	**Az.**	175°36'11.4982"	0°00'03.5063"	1:57796	1:57796
		ΔHt.	15.029ift	0.018ift		
		ΔElev.	?	?		
		Dist.	475.134ift	0.008ift		
RB6	RB5	**Az.**	273°18'38.3539"	0°00'42.9989"	1:5013	1:5013
		ΔHt.	-20.098ift	0.022ift		
		ΔElev.	?	?		
		Dist.	41.253ift	0.008ift		
RB6	B10	**Az.**	172°49'18.2772"	0°00'01.9231"	1:104231	1:104231
		ΔHt.	-25.177ift	0.019ift		
		ΔElev.	?	?		
		Dist.	769.955ift	0.007ift		
RB6	RB7	**Az.**	184°57'32.1164"	0°00'03.4021"	1:57940	1:57940
		ΔHt.	-23.165ift	0.022ift		
		ΔElev.	?	?		
		Dist.	498.077ift	0.009ift		
RB6	A11	**Az.**	359°34'41.9699"	0°00'06.9284"	1:28793	1:28793
		ΔHt.	-1.332ift	0.020ift		
		ΔElev.	?	?		
		Dist.	240.785ift	0.008ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
RB5	B10	**Az.**	169°50'06.1152"	0°00'01.9515"	1:102554	1:102554
		ΔHt.	-5.078ift	0.021ift		
		ΔElev.	?	?		
		Dist.	778.522ift	0.008ift		
RB5	RB7	**Az.**	180°12'53.5978"	0°00'03.4584"	1:56926	1:56926
		ΔHt.	-3.067ift	0.024ift		
		ΔElev.	?	?		
		Dist.	498.598ift	0.009ift		
RB5	A11	**Az.**	9°23'13.8455"	0°00'06.9931"	1:28194	1:28194
		ΔHt.	18.766ift	0.022ift		
		ΔElev.	?	?		
		Dist.	241.632ift	0.009ift		
B10	RB7	**Az.**	332°30'57.7617"	0°00'05.1044"	1:40452	1:40452
		ΔHt.	2.012ift	0.021ift		
		ΔElev.	?	?		
		Dist.	301.765ift	0.007ift		
B10	A11	**Az.**	354°25'48.0938"	0°00'01.4585"	1:137581	1:137581
		ΔHt.	23.844ift	0.018ift		
		ΔElev.	?	?		
		Dist.	1009.465ift	0.007ift		
B10	RB8	**Az.**	341°56'29.6139"	0°00'05.2406"	1:39201	1:39201
		ΔHt.	25.652ift	0.016ift		
		ΔElev.	?	?		
		Dist.	280.339ift	0.007ift		
B10	RB12	**Az.**	110°27'08.2291"	0°00'01.8506"	1:114312	1:114312
		ΔHt.	25.440ift	0.014ift		
		ΔElev.	?	?		
		Dist.	752.020ift	0.007ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
B10	RB11	**Az.**	114°17'47.9746"	0°00'02.0666"	1:104811	1:104811
		ΔHt.	0.073ift	0.018ift		
		ΔElev.	?	?		
		Dist.	746.209ift	0.007ift		
B10	RB9	**Az.**	113°09'55.5157"	0°00'05.7257"	1:37237	1:37237
		ΔHt.	1.570ift	0.015ift		
		ΔElev.	?	?		
		Dist.	247.318ift	0.007ift		
B10	VINE RM1	**Az.**	334°22'54.2462"	0°00'11.1940"	1:18584	1:18584
		ΔHt.	26.681ift	0.014ift		
		ΔElev.	?	?		
		Dist.	123.700ift	0.007ift		
B10	A10	**Az.**	24°53'50.3708"	0°00'27.3692"	1:7336	1:7336
		ΔHt.	25.515ift	0.017ift		
		ΔElev.	?	?		
		Dist.	54.047ift	0.007ift		
B10	RB10	**Az.**	102°47'38.3029"	0°00'05.9399"	1:35321	1:35321
		ΔHt.	25.134ift	0.018ift		
		ΔElev.	?	?		
		Dist.	254.996ift	0.007ift		
RB7	A11	**Az.**	3°12'21.5444"	0°00'02.2908"	1:86362	1:86362
		ΔHt.	21.833ift	0.022ift		
		ΔElev.	?	?		
		Dist.	738.146ift	0.009ift		
RB8	RB12	**Az.**	123°46'17.1662"	0°00'01.6963"	1:124637	1:124637
		ΔHt.	-0.213ift	0.016ift		
		ΔElev.	?	?		
		Dist.	952.189ift	0.008ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
RB8	RB11	**Az.**	126°47'18.7423"	0°00'01.8001"	1:118995	1:118995
		ΔHt.	-25.580ift	0.019ift		
		ΔElev.	?	?		
		Dist.	957.754ift	0.008ift		
RB8	RB9	**Az.**	139°10'42.5136"	0°00'03.3904"	1:62235	1:62235
		ΔHt.	-24.082ift	0.017ift		
		ΔElev.	?	?		
		Dist.	480.768ift	0.008ift		
RB8	VINE RM1	**Az.**	167°49'58.0815"	0°00'10.0594"	1:20386	1:20386
		ΔHt.	1.029ift	0.016ift		
		ΔElev.	?	?		
		Dist.	158.551ift	0.008ift		
RB12	RB11	**Az.**	208°58'02.9526"	0°00'31.5603"	1:6305	1:6305
		ΔHt.	-25.367ift	0.018ift		
		ΔElev.	?	?		
		Dist.	50.588ift	0.008ift		
RB12	RB9	**Az.**	289°07'31.8133"	0°00'03.0476"	1:69099	1:69099
		ΔHt.	-23.870ift	0.015ift		
		ΔElev.	?	?		
		Dist.	505.114ift	0.007ift		
RB12	VINE RM1	**Az.**	296°16'45.8301"	0°00'01.8032"	1:116440	1:116440
		ΔHt.	1.242ift	0.014ift		
		ΔElev.	?	?		
		Dist.	845.475ift	0.007ift		
RB12	A10	**Az.**	294°34'29.4525"	0°00'02.1786"	1:96357	1:96357
		ΔHt.	0.076ift	0.017ift		
		ΔElev.	?	?		
		Dist.	749.770ift	0.008ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
RB12	RB10	**Az.**	294°20'49.5280"	0°00'03.2646"	1:64182	1:64182
		ΔHt.	-0.306ift	0.017ift		
		ΔElev.	?	?		
		Dist.	500.453ift	0.008ift		
RB11	RB9	**Az.**	294°51'30.8609"	0°00'03.3548"	1:64055	1:64055
		ΔHt.	1.497ift	0.019ift		
		ΔElev.	?	?		
		Dist.	498.963ift	0.008ift		
RB11	VINE RM1	**Az.**	299°42'33.6987"	0°00'01.9652"	1:108973	1:108973
		ΔHt.	26.609ift	0.018ift		
		ΔElev.	?	?		
		Dist.	844.615ift	0.008ift		
RB9	VINE RM1	**Az.**	306°37'57.3745"	0°00'04.4174"	1:47850	1:47850
		ΔHt.	25.112ift	0.015ift		
		ΔElev.	?	?		
		Dist.	349.992ift	0.007ift		
RB9	A10	**Az.**	305°34'01.0543"	0°00'06.5872"	1:32178	1:32178
		ΔHt.	23.945ift	0.018ift		
		ΔElev.	?	?		
		Dist.	251.554ift	0.008ift		
RB9	RB10	**Az.**	27°32'24.4764"	0°00'35.1281"	1:5735	1:5735
		ΔHt.	23.564ift	0.018ift		
		ΔElev.	?	?		
		Dist.	46.041ift	0.008ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
VINE RM1	A10	**Az.**	129°21'06.8439"	0°00'16.6531"	1:12684	1:12684
		ΔHt.	-1.166ift	0.017ift		
		ΔElev.	?	?		
		Dist.	98.593ift	0.008ift		
VINE RM1	RB10	**Az.**	119°04'32.7586"	0°00'04.7466"	1:44331	1:44331
		ΔHt.	-1.548ift	0.017ift		
		ΔElev.	?	?		
		Dist.	345.719ift	0.008ift		
A10	RB10	**Az.**	115°01'50.7981"	0°00'06.9166"	1:30375	1:30375
		ΔHt.	-0.381ift	0.019ift		
		ΔElev.	?	?		
		Dist.	249.329ift	0.008ift		
RB17	RB15	**Az.**	332°01'46.0192"	0°00'01.6417"	1:126018	1:126018
		ΔHt.	-1.376ift	0.018ift		
		ΔElev.	?	?		
		Dist.	1000.429ift	0.008ift		
RB17	RB14	**Az.**	332°05'15.4128"	0°00'01.0948"	1:190534	1:190534
		ΔHt.	-1.508ift	0.018ift		
		ΔElev.	?	?		
		Dist.	1500.014ift	0.008ift		
RB17	RB19	**Az.**	152°15'38.4427"	0°00'01.6386"	1:126912	1:126912
		ΔHt.	0.279ift	0.018ift		
		ΔElev.	?	?		
		Dist.	996.812ift	0.008ift		
RB17	RB13	**Az.**	332°03'25.2828"	0°00'00.8161"	1:254910	1:254910
		ΔHt.	-2.685ift	0.018ift		
		ΔElev.	?	?		
		Dist.	2000.107ift	0.008ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
RB17	RB16	**Az.**	331°44'02.9179"	0°00'03.2350"	1:64225	1:64225
		ΔHt.	0.201ift	0.017ift		
		ΔElev.	?	?		
		Dist.	499.970ift	0.008ift		
RB17	RB18	**Az.**	152°16'56.6918"	0°00'03.2837"	1:63381	1:63381
		ΔHt.	0.533ift	0.018ift		
		ΔElev.	?	?		
		Dist.	497.031ift	0.008ift		
RB15	RB14	**Az.**	332°12'11.6876"	0°00'03.3185"	1:62554	1:62554
		ΔHt.	-0.132ift	0.019ift		
		ΔElev.	?	?		
		Dist.	499.586ift	0.008ift		
RB15	RB19	**Az.**	152°08'38.4378"	0°00'00.8259"	1:250691	1:250691
		ΔHt.	1.655ift	0.019ift		
		ΔElev.	?	?		
		Dist.	1997.237ift	0.008ift		
RB15	RB13	**Az.**	332°05'01.5817"	0°00'01.6485"	1:125605	1:125605
		ΔHt.	-1.309ift	0.019ift		
		ΔElev.	?	?		
		Dist.	999.678ift	0.008ift		
RB15	RB16	**Az.**	152°19'25.0147"	0°00'03.2633"	1:63343	1:63343
		ΔHt.	1.576ift	0.018ift		
		ΔElev.	?	?		
		Dist.	500.472ift	0.008ift		
RB15	RB18	**Az.**	152°06'45.2466"	0°00'01.1006"	1:188267	1:188267
		ΔHt.	1.909ift	0.019ift		
		ΔElev.	?	?		
		Dist.	1497.457ift	0.008ift		

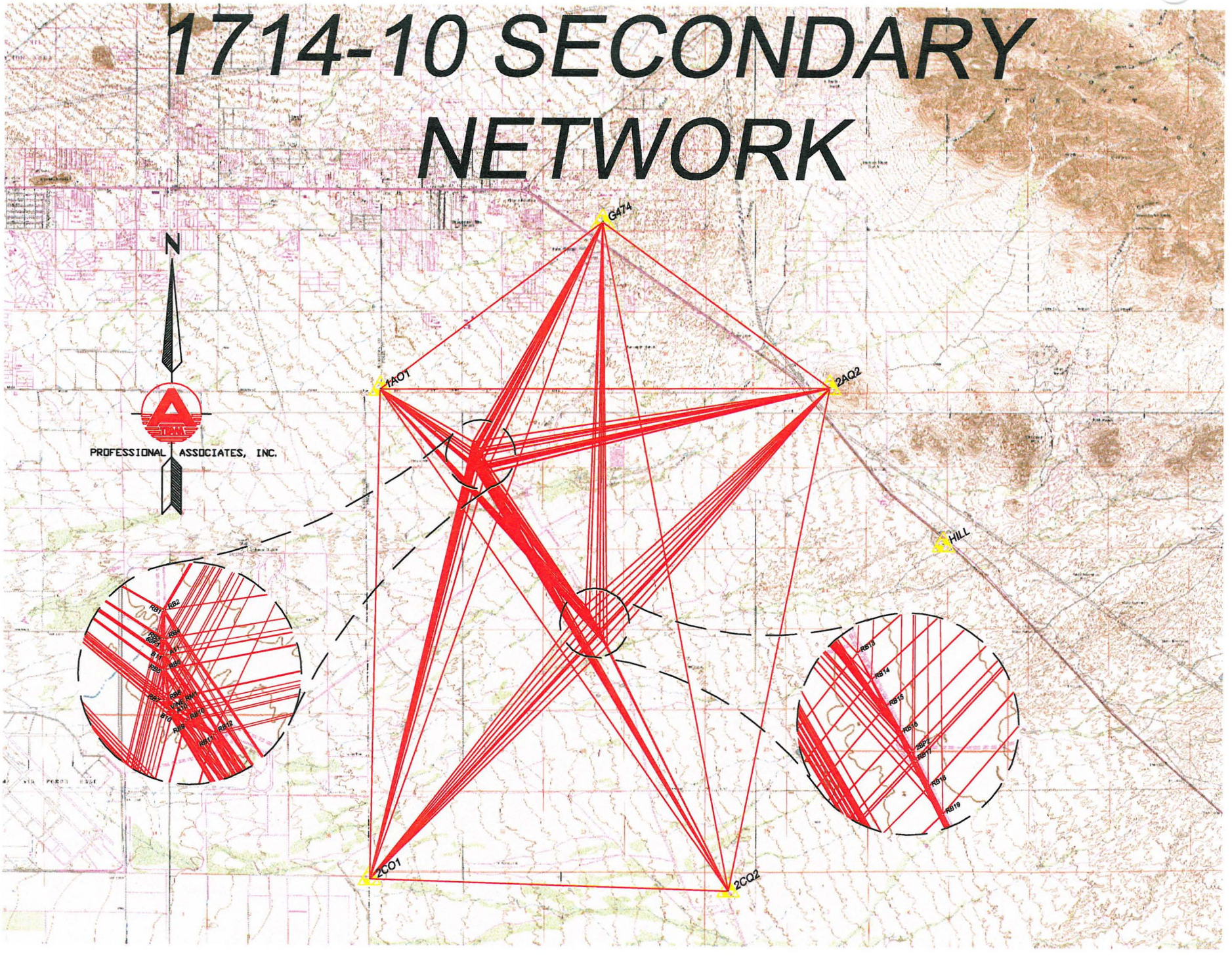
From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
RB14	RB19	**Az.**	152°09'19.5975"	0°00'00.6610"	1:315824	1:315824
		ΔHt.	1.787ift	0.019ift		
		ΔElev.	?	?		
		Dist.	2496.823ift	0.008ift		
RB14	RB13	**Az.**	331°57'50.4034"	0°00'03.2935"	1:63397	1:63397
		ΔHt.	-1.177ift	0.018ift		
		ΔElev.	?	?		
		Dist.	500.094ift	0.008ift		
RB14	RB16	**Az.**	152°15'47.0339"	0°00'01.6331"	1:127635	1:127635
		ΔHt.	1.708ift	0.017ift		
		ΔElev.	?	?		
		Dist.	1000.058ift	0.008ift		
RB14	RB18	**Az.**	152°08'05.4008"	0°00'00.8254"	1:253135	1:253135
		ΔHt.	2.041ift	0.019ift		
		ΔElev.	?	?		
		Dist.	1997.043ift	0.008ift		
RB19	RB13	**Az.**	332°07'32.1457"	0°00'00.5474"	1:380391	1:380391
		ΔHt.	-2.964ift	0.018ift		
		ΔElev.	?	?		
		Dist.	2996.915ift	0.008ift		
RB19	RB16	**Az.**	332°05'08.2875"	0°00'01.0858"	1:191469	1:191469
		ΔHt.	-0.078ift	0.017ift		
		ΔElev.	?	?		
		Dist.	1496.768ift	0.008ift		
RB19	RB18	**Az.**	332°14'23.6291"	0°00'03.2793"	1:63515	1:63515
		ΔHt.	0.254ift	0.018ift		
		ΔElev.	?	?		
		Dist.	499.781ift	0.008ift		

From Point	To Point		Components	A-posteriori Error (1.96σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
RB13	RB16	**Az.**	152°09'46.6035"	0°00'01.0823"	1:192095	1:192095
		ΔHt.	2.886ift	0.017ift		
		ΔElev.	?	?		
		Dist.	1500.147ift	0.008ift		
RB13	RB18	**Az.**	152°06'00.7145"	0°00'00.6562"	1:317565	1:317565
		ΔHt.	3.218ift	0.019ift		
		ΔElev.	?	?		
		Dist.	2497.135ift	0.008ift		
RB16	RB18	**Az.**	152°00'25.3622"	0°00'01.6279"	1:127813	1:127813
		ΔHt.	0.332ift	0.017ift		
		ΔElev.	?	?		
		Dist.	996.990ift	0.008ift		

SECTION 2.3.3

SECONDARY NETWORK MAP

1714-10 SECONDARY NETWORK



SECTION 3

DIGITAL LEVEL MEASUREMENTS AND VERTICAL QC DATA

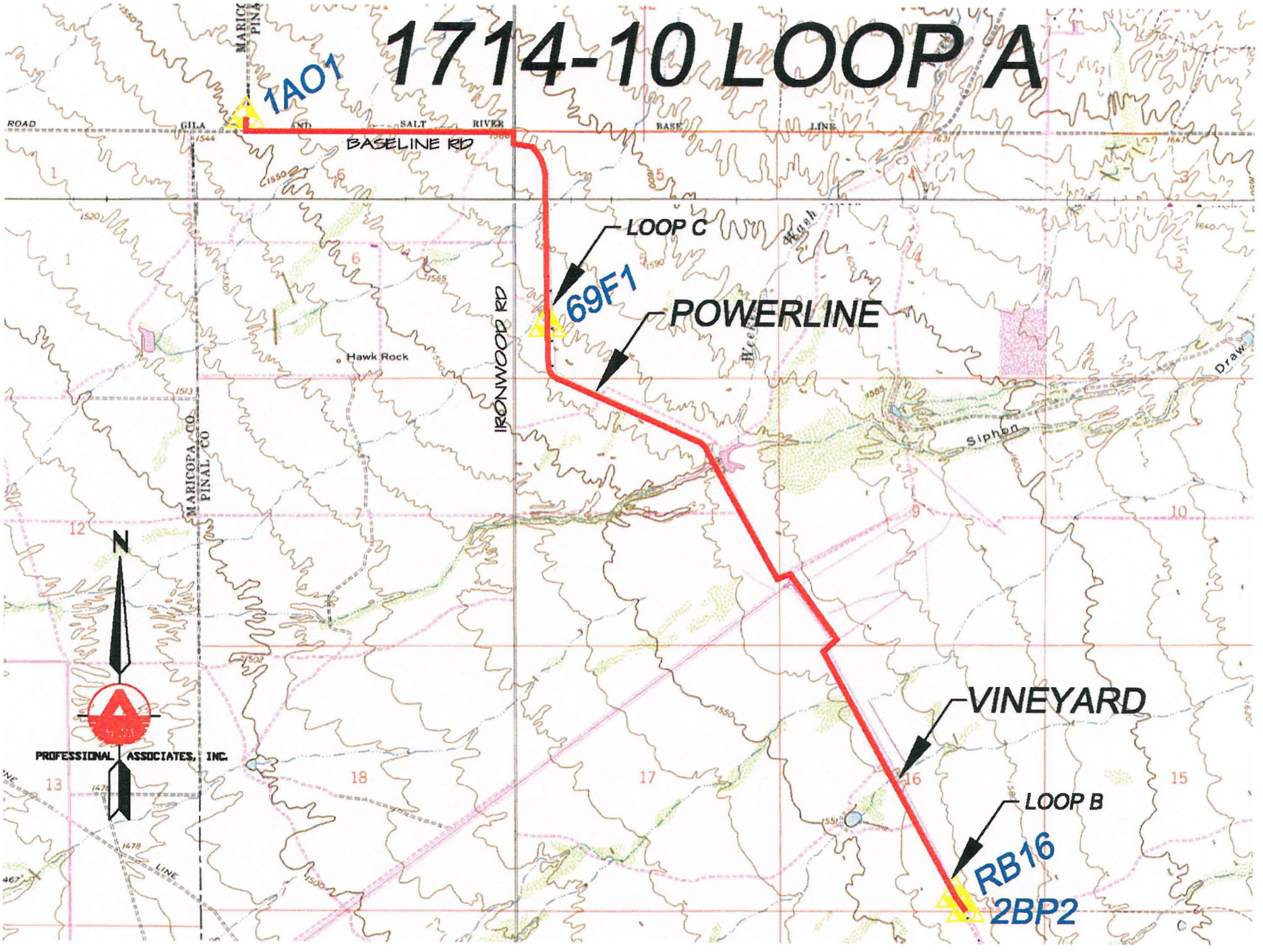
SECTION 3.1

LEVEL LOOP DIAGRAM

LEVEL LOOP A

1AO1 to 2BP2

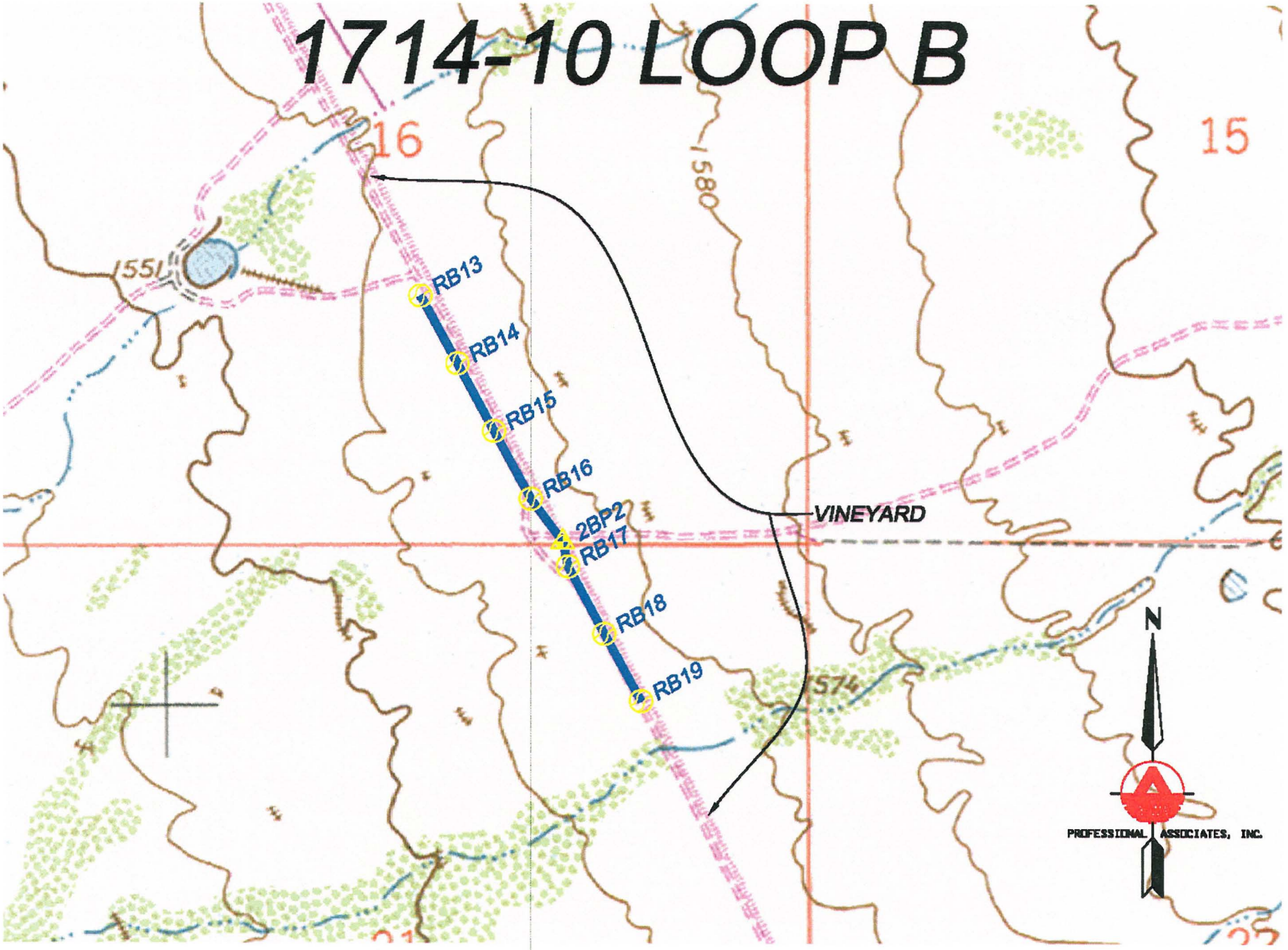
1714-10 LOOP A



LEVEL LOOP B

RB13 to RB19

1714-10 LOOP B

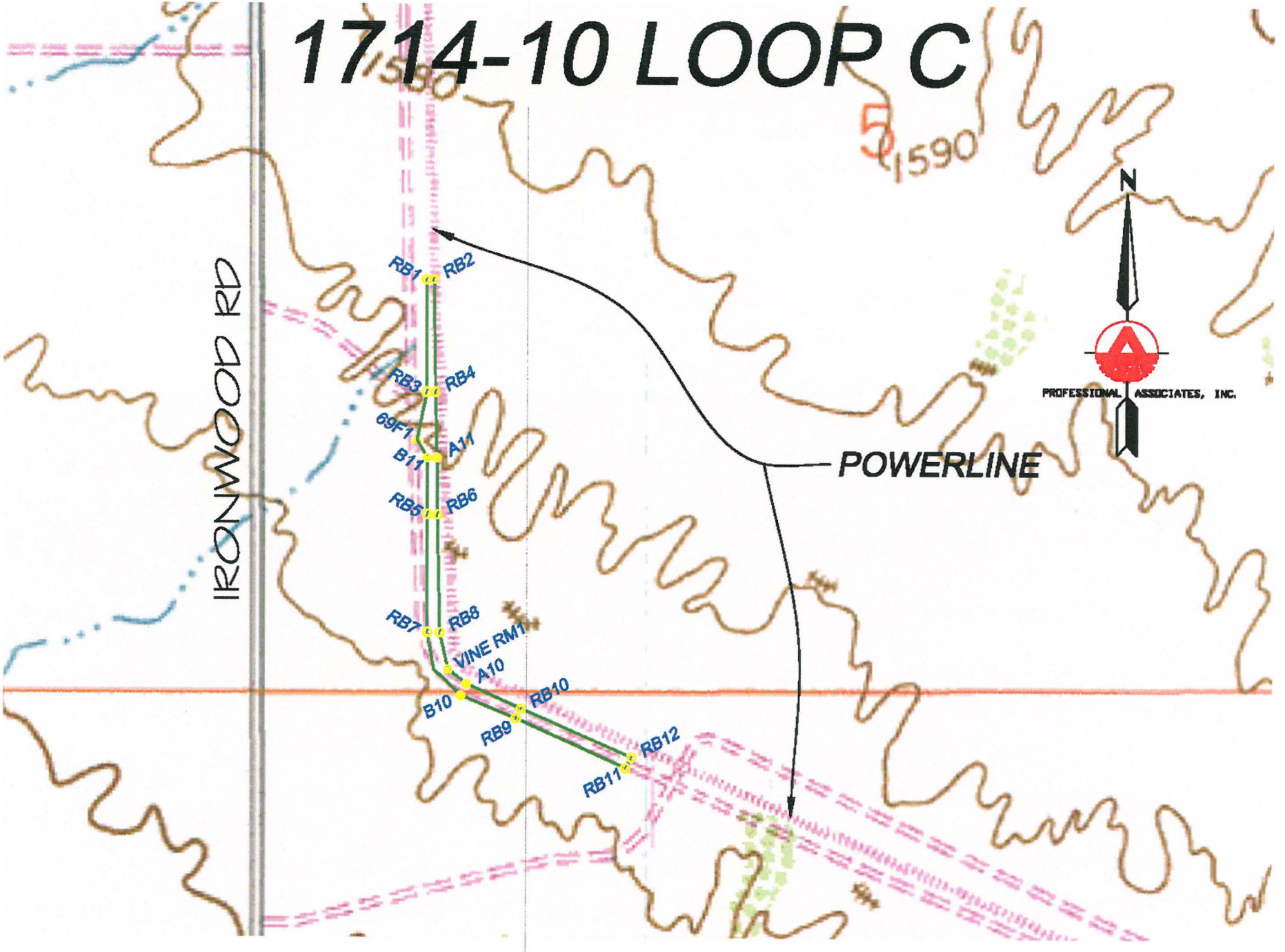


LOOP B DIAGRAM.tif (1275x1683x16M tiff)

LEVEL LOOP C

Sta. 102+50 to Sta. 127+50

1714-10 LOOP C



LOOP C DIAGRAM.tif (1275x1683x16M tiff)

SECTION 3.2

LEVEL LOOP FIELD BOOK DATA

LEVEL LOOP A

1AO1 to 2BP2

Job 1710-10 LOOP A Job Date 02-Oct-08 11:09

Instrument	NA 2000/3000	Level S/N	242852
Dist	Feet	Manual Method	1 Wire

Stn	BS(+)	HI	FS(-)	Elev	Dist	Offset
1AO1				1550.661		
	5.268	1555.929			178.280	0.000
100			4.702	1551.227	177.840	0.000
	6.563	1557.790			200.700	0.000
101			4.681	1553.109	189.360	0.000
	5.439	1558.548			201.140	0.000
102			4.126	1554.422	190.880	0.000
	6.980	1561.402			201.930	0.000
103			3.127	1558.275	189.830	0.000
	5.812	1564.087			200.470	0.000
104			4.335	1559.752	190.080	0.000
	6.305	1566.057			199.120	0.000
105			1.837	1564.220	186.430	0.000
	8.710	1572.930			196.980	0.000
106			3.796	1569.134	188.270	0.000
	5.897	1575.031			197.350	0.000
107			4.918	1570.113	198.760	0.000
	6.680	1576.793			197.630	0.000
108			4.027	1572.766	167.060	0.000
	6.439	1579.205			201.360	0.000
109			3.803	1575.402	186.080	0.000
	6.337	1581.739			199.020	0.000
110			4.287	1577.452	190.750	0.000
	6.580	1584.032			199.220	0.000
111			3.582	1580.450	197.860	0.000
	7.277	1587.727			196.880	0.000
112			3.598	1584.129	189.080	0.000
	7.003	1591.132			211.840	0.000
113			3.341	1587.791	176.230	0.000
	4.570	1592.361			200.270	0.000
114			5.482	1586.879	153.090	0.000
	7.291	1594.170			201.070	0.000
115			3.783	1590.387	197.980	0.000
	4.597	1594.984			186.690	0.000
116			6.659	1588.325	186.800	0.000
	3.688	1592.013			204.170	0.000
117			6.712	1585.301	189.570	0.000
	3.334	1588.635			203.240	0.000
118			6.497	1582.138	189.960	0.000
	4.268	1586.406			204.510	0.000
119			5.776	1580.630	198.600	0.000
	5.481	1586.111			204.110	0.000
120			5.206	1580.905	202.330	0.000
	2.176	1583.081			201.500	0.000
121			7.025	1576.056	215.440	0.000
	4.790	1580.846			200.210	0.000
122			7.001	1573.845	207.610	0.000
	4.424	1578.269			202.180	0.000

Stn	BS(+)	HI	FS(-)	Elev	Dist	Offset
123			6.548	1571.721	207.400	0.000
	4.929	1576.650			200.360	0.000
124			2.756	1573.894	215.990	0.000
	0.795	1574.689			204.090	0.000
125			6.337	1568.352	215.470	0.000
	4.472	1572.824			203.680	0.000
126			7.320	1565.504	208.600	0.000
	4.711	1570.215			206.560	0.000
127			4.925	1565.290	212.650	0.000
	5.687	1570.977			201.060	0.000
128			6.240	1564.737	213.800	0.000
	6.828	1571.565			203.890	0.000
129			4.018	1567.547	205.620	0.000
	2.638	1570.185			170.010	0.000
130			6.259	1563.926	207.150	0.000
	5.173	1569.099			201.990	0.000
131			4.846	1564.253	204.690	0.000
	5.282	1569.535			201.360	0.000
132			5.542	1563.993	212.970	0.000
	5.804	1569.797			200.950	0.000
133			5.657	1564.140	214.360	0.000
	5.330	1569.470			200.780	0.000
134			5.766	1563.704	216.900	0.000
	5.421	1569.125			198.060	0.000
135			7.223	1561.902	190.980	0.000
	3.645	1565.547			195.720	0.000
136			4.473	1561.074	215.890	0.000
	6.496	1567.570			199.210	0.000
137			5.021	1562.549	214.170	0.000
	6.256	1568.805			197.150	0.000
138			5.112	1563.693	217.050	0.000
	7.160	1570.853			200.630	0.000
139			5.296	1565.557	208.700	0.000
	6.559	1572.116			199.310	0.000
140			5.075	1567.041	214.510	0.000
	5.203	1572.244			200.350	0.000
141			5.388	1566.856	210.900	0.000
	5.066	1571.922			200.690	0.000
142			4.753	1567.169	209.940	0.000
	6.492	1573.661			178.400	0.000
143			4.350	1569.311	173.090	0.000
	4.632	1573.943			201.440	0.000
144			5.518	1568.425	207.880	0.000
	5.768	1574.193			200.750	0.000
145			5.365	1568.828	210.910	0.000
	5.308	1574.136			200.940	0.000
146			6.020	1568.116	190.840	0.000
	1.213	1569.329			195.320	0.000
147			5.994	1563.335	211.750	0.000
	5.342	1568.677			201.230	0.000
148			5.872	1562.805	211.330	0.000
	5.141	1567.946			204.020	0.000
149			4.782	1563.164	210.150	0.000
	5.827	1568.991			195.750	0.000

Stn	BS(+)	HI	FS(-)	Elev	Dist	Offset
150			4.898	1564.093	213.140	0.000
	5.741	1569.834			199.120	0.000
151			5.281	1564.553	208.290	0.000
	5.606	1570.159			201.750	0.000
152			5.545	1564.614	211.770	0.000
	5.069	1569.683			202.600	0.000
153			6.475	1563.208	207.610	0.000
	4.690	1567.898			203.050	0.000
154			0.001	1567.897	0.000	0.000
155			4.951	1562.947	205.930	0.000
	4.707	1567.654			202.660	0.000
156			4.883	1562.771	203.300	0.000
	5.381	1568.152			203.330	0.000
157			4.817	1563.335	200.460	0.000
	6.021	1569.356			202.160	0.000
158			4.791	1564.565	201.300	0.000
	5.962	1570.527			199.360	0.000
159			5.274	1565.253	211.500	0.000
	5.312	1570.565			202.630	0.000
160			5.176	1565.389	206.540	0.000
	5.643	1571.032			147.320	0.000
161			4.953	1566.079	141.970	0.000
	5.578	1571.657			141.310	0.000
162			3.043	1568.614	146.060	0.000
	3.461	1572.075			97.020	0.000
163			4.065	1568.010	100.420	0.000
	8.046	1576.056			49.840	0.000
164			1.684	1574.372	52.430	0.000
	9.788	1584.160			30.900	0.000
2BP2			2.997	1581.163	57.780	0.000
	3.270	1584.433			57.310	0.000
165			10.061	1574.372	30.880	0.000
	1.729	1576.101			52.000	0.000
166			8.091	1568.010	50.170	0.000
	4.104	1572.114			96.950	0.000
167			3.499	1568.615	100.460	0.000
	2.903	1571.518			200.050	0.000
168			5.825	1565.693	215.190	0.000
	4.952	1570.645			201.930	0.000
169			5.371	1565.274	214.040	0.000
	5.083	1570.357			199.910	0.000
170			5.361	1564.996	215.310	0.000
	4.644	1569.640			201.770	0.000
171			5.760	1563.880	222.070	0.000
	4.453	1568.333			205.500	0.000
172			5.562	1562.771	204.970	0.000
	4.881	1567.652			201.660	0.000
173			5.525	1562.127	206.600	0.000
	5.593	1567.720			202.190	0.000
174			4.787	1562.933	207.800	0.000
	6.038	1568.971			202.960	0.000
175			3.993	1564.978	202.010	0.000
	5.401	1570.379			201.580	0.000
176			5.765	1564.614	206.980	0.000
	4.948	1569.562			204.040	0.000

Stn	BS(+)	HI	FS(-)	Elev	Dist	Offset
177			5.437	1564.125	207.630	0.000
	5.006	1569.131			203.940	0.000
178			5.539	1563.592	205.020	0.000
	4.631	1568.223			201.950	0.000
179			5.618	1562.605	210.960	0.000
	5.567	1568.172			201.170	0.000
180			4.789	1563.383	235.220	0.000
	5.596	1568.979			196.480	0.000
181			4.213	1564.766	201.690	0.000
	6.862	1571.628			191.140	0.000
182			3.004	1568.624	198.100	0.000
	5.415	1574.039			201.740	0.000
183			5.502	1568.537	210.760	0.000
	5.106	1573.643			199.870	0.000
184			5.018	1568.625	203.170	0.000
	6.753	1575.378			199.430	0.000
185			6.579	1568.799	162.290	0.000
	3.098	1571.897			192.140	0.000
187			4.935	1566.962	217.800	0.000
	5.090	1572.052			197.580	0.000
188			4.959	1567.093	211.600	0.000
	4.987	1572.080			199.650	0.000
189			5.304	1566.776	208.080	0.000
	3.877	1570.653			199.530	0.000
190			5.317	1565.336	205.500	0.000
	3.593	1568.929			194.980	0.000
191			5.927	1563.002	200.180	0.000
	4.686	1567.688			198.820	0.000
192			5.608	1562.080	200.480	0.000
	4.193	1566.273			198.380	0.000
193			6.571	1559.702	201.500	0.000
	7.037	1566.739			197.520	0.000
194			3.747	1562.992	200.680	0.000
	5.906	1568.898			197.230	0.000
195			4.655	1564.243	193.090	0.000
	5.133	1569.376			199.890	0.000
196			5.096	1564.280	208.440	0.000
	5.326	1569.606			197.360	0.000
197			5.801	1563.805	214.540	0.000
	5.696	1569.501			198.440	0.000
198			5.443	1564.058	201.790	0.000
	5.137	1569.195			196.170	0.000
199			5.474	1563.721	195.410	0.000
	8.571	1572.292			146.660	0.000
200			6.603	1565.689	132.080	0.000
	3.483	1569.172			199.300	0.000
201			3.440	1565.732	198.800	0.000
	4.957	1570.689			200.470	0.000
202			4.865	1565.824	205.650	0.000
	3.969	1569.793			196.030	0.000
203			4.191	1565.602	197.470	0.000
	6.994	1572.596			195.450	0.000
204			4.541	1568.055	197.200	0.000
	6.457	1574.512			197.930	0.000

Stn	BS(+)	HI	FS(-)	Elev	Dist	Offset
231			0.550	1573.962	228.860	0.000
	2.748	1576.710			174.380	0.000
205			4.919	1571.791	205.710	0.000
	6.520	1578.311			202.090	0.000
206			4.092	1574.219	218.780	0.000
	6.635	1580.854			201.210	0.000
207			4.682	1576.172	214.220	0.000
	6.674	1582.846			200.860	0.000
208			2.013	1580.833	212.450	0.000
	5.203	1586.036			201.560	0.000
209			5.400	1580.636	216.990	0.000
	5.811	1586.447			200.490	0.000
210			4.250	1582.197	205.900	0.000
	6.611	1588.808			201.420	0.000
211			3.364	1585.444	210.630	0.000
	6.976	1592.420			200.170	0.000
212			3.448	1588.972	195.370	0.000
	6.345	1595.317			199.380	0.000
213			5.060	1590.257	193.240	0.000
	3.818	1594.075			201.120	0.000
214			7.468	1586.607	208.810	0.000
	6.865	1593.472			142.030	0.000
215			5.294	1588.178	147.890	0.000
	3.859	1592.037			191.040	0.000
216			7.005	1585.032	167.340	0.000
	4.253	1589.285			176.680	0.000
217			7.395	1581.890	203.990	0.000
	3.720	1585.610			192.570	0.000
218			7.252	1578.358	204.290	0.000
	4.487	1582.845			191.390	0.000
219			6.720	1576.125	211.210	0.000
	4.292	1580.417			197.720	0.000
220			6.657	1573.760	203.290	0.000
	3.922	1577.682			202.480	0.000
221			6.703	1570.979	203.650	0.000
	4.134	1575.113			207.400	0.000
222			5.712	1569.401	203.570	0.000
	4.463	1573.864			201.370	0.000
223			8.307	1565.557	200.970	0.000
	1.231	1566.788			201.480	0.000
224			6.809	1559.979	203.600	0.000
	4.278	1564.257			201.020	0.000
225			5.823	1558.434	202.660	0.000
	2.860	1561.294			201.730	0.000
226			6.702	1554.592	200.080	0.000
	4.001	1558.593			202.810	0.000
227			5.402	1553.191	194.430	0.000
	4.544	1557.735			202.720	0.000
228			6.444	1551.291	188.500	0.000
	5.107	1556.398			104.050	0.000
229			5.438	1550.960	75.320	0.000
	4.098	1555.058			100.000	0.000
1AO1			4.310	1550.748	100.000	0.000

Adjusted Elevation Summary - Linear

Job 1714-10 LOOP A Job Date 02-Oct-08 11:09

Loop Closure 0.087
Loop Distance 50148

	Stn	Code	Elev
ADJUSTED	1AO1	GDACS	1550.661
ADJUSTED	100	TP	1551.226
ADJUSTED	101	TP	1553.108
ADJUSTED	102	TP	1554.420
ADJUSTED	103	TP	1558.272
ADJUSTED	104	TP	1559.749
ADJUSTED	105	TP	1564.216
ADJUSTED	106	TP	1569.129
ADJUSTED	107	TP	1570.108
ADJUSTED	108	TP	1572.760
ADJUSTED	109	TP	1575.395
ADJUSTED	110	TP	1577.445
ADJUSTED	111	TP	1580.442
ADJUSTED	112	TP	1584.120
ADJUSTED	113	TP	1587.782
ADJUSTED	114	TP	1586.869
ADJUSTED	115	TP	1590.376
ADJUSTED	116	TP	1588.314
ADJUSTED	117	TP	1585.289
ADJUSTED	118	TP	1582.125
ADJUSTED	119	TP	1580.617
ADJUSTED	120	TP	1580.891
ADJUSTED	121	TP	1576.041
ADJUSTED	122	TP	1573.830
ADJUSTED	123	TP	1571.705
ADJUSTED	124	69F1 RLS39325	1573.877
ADJUSTED	125	TP	1568.335
ADJUSTED	126	TP	1565.486
ADJUSTED	127	TP	1565.271
ADJUSTED	128	TP	1564.718
ADJUSTED	129	TP	1567.527
ADJUSTED	130	TP	1563.905
ADJUSTED	131	TP	1564.232
ADJUSTED	132	TP	1563.971
ADJUSTED	133	TP	1564.117
ADJUSTED	134	TP	1563.681
ADJUSTED	135	TP	1561.878
ADJUSTED	136	TP	1561.049
ADJUSTED	137	TP	1562.524
ADJUSTED	138	TP	1563.667
ADJUSTED	139	TP	1565.530
ADJUSTED	140	TP	1567.014
ADJUSTED	141	TP	1566.828
ADJUSTED	142	TP	1567.140
ADJUSTED	143	TP	1569.282
ADJUSTED	144	TP	1568.395

	Stn	Code	Elev
ADJUSTED	145	TP	1568.797
ADJUSTED	146	TP	1568.085
ADJUSTED	147	TP	1563.303
ADJUSTED	148	TP	1562.772
ADJUSTED	149	TP	1563.131
ADJUSTED	150	TP	1564.059
ADJUSTED	151	TP	1564.518
ADJUSTED	152	TP	1564.579
ADJUSTED	153	TP	1563.172
	154	TP	1567.861
ADJUSTED	155	TP	1562.910
ADJUSTED	156	TP	1562.734
ADJUSTED	157	TP	1563.297
ADJUSTED	158	TP	1564.526
ADJUSTED	159	TP	1565.214
ADJUSTED	160	TP	1565.349
ADJUSTED	161	TP	1566.038
ADJUSTED	162	RB 16	1568.573
ADJUSTED	163	RB 16	1567.968
ADJUSTED	164	TP	1574.329
ADJUSTED	2BP2	TP	1581.120
ADJUSTED	165	TP	1574.328
ADJUSTED	166	TP	1567.966
ADJUSTED	167	TP	1568.570
ADJUSTED	168	TP	1565.647
ADJUSTED	169	TP	1565.228
ADJUSTED	170	TP	1564.949
ADJUSTED	171	TP	1563.832
ADJUSTED	172	TP	1562.723
ADJUSTED	173	TP	1562.078
ADJUSTED	174	TP	1562.883
ADJUSTED	175	TP	1564.928
ADJUSTED	176	TP	1564.563
ADJUSTED	177	TP	1564.073
ADJUSTED	178	TP	1563.540
ADJUSTED	179	TP	1562.552
ADJUSTED	180	TP	1563.329
ADJUSTED	181	TP	1564.712
ADJUSTED	182	TP	1568.569
ADJUSTED	183	TP	1568.481
ADJUSTED	184	TP	1568.569
ADJUSTED	185	TP	1568.742
ADJUSTED	187	TP	1566.904
ADJUSTED	188	TP	1567.035
ADJUSTED	189	TP	1566.717
ADJUSTED	190	TP	1565.276
ADJUSTED	191	TP	1562.942
ADJUSTED	192	TP	1562.019
ADJUSTED	193	TP	1559.640
ADJUSTED	194	TP	1562.930
ADJUSTED	195	TP	1564.180
ADJUSTED	196	TP	1564.216
ADJUSTED	197	TP	1563.741
ADJUSTED	198	TP	1563.993
ADJUSTED	199	TP	1563.655

	Stn	Code	Elev
ADJUSTED	200	TP	1565.623
ADJUSTED	201	TP	1565.665
ADJUSTED	202	TP	1565.756
ADJUSTED	203	TP	1565.534
ADJUSTED	204	TP	1567.986
ADJUSTED	231	TP	1573.892
ADJUSTED	205	TP	1571.721
ADJUSTED	206	TP	1574.148
ADJUSTED	207	TP	1576.100
ADJUSTED	208	TP	1580.761
ADJUSTED	209	TP	1580.563
ADJUSTED	210	TP	1582.123
ADJUSTED	211	TP	1585.370
ADJUSTED	212	TP	1588.897
ADJUSTED	213	TP	1590.181
ADJUSTED	214	TP	1586.531
ADJUSTED	215	TP	1588.101
ADJUSTED	216	TP	1584.954
ADJUSTED	217	TP	1581.812
ADJUSTED	218	TP	1578.279
ADJUSTED	219	TP	1576.045
ADJUSTED	220	TP	1573.680
ADJUSTED	221	TP	1570.898
ADJUSTED	222	TP	1569.319
ADJUSTED	223	TP	1565.475
ADJUSTED	224	TP	1559.896
ADJUSTED	225	TP	1558.350
ADJUSTED	226	TP	1554.508
ADJUSTED	227	TP	1553.106
ADJUSTED	228		

LEVEL LOOP B

RB13 to RB19

Job 1710-10 LOOP B Job Date 14-Oct-08 08:58

Instrument	NA 2000/3000	Level S/N	242852
Dist	Feet	Manual Method	1 Wire

Stn	BS(+)	HI	FS(-)	Elev	Dist	Offset
2BP2				1581.120		
	2.408	1583.528			66.840	0.000
1000			11.459	1572.069	55.350	0.000
	1.056	1573.125			134.550	0.000
1001			4.555	1568.570	133.200	0.000
	3.133	1571.703			121.430	0.000
1002			5.691	1566.012	145.330	0.000
	5.009	1571.021			108.540	0.000
1003			4.064	1566.957	127.210	0.000
	4.030	1570.987			124.130	0.000
1004			5.604	1565.383	116.260	0.000
	5.112	1570.495			132.710	0.000
1005			3.643	1566.852	127.190	0.000
	3.545	1570.397			125.730	0.000
1006			5.455	1564.942	121.260	0.000
	4.831	1569.773			124.960	0.000
1007			4.093	1565.680	129.880	0.000
	3.858	1569.538			129.780	0.000
1008			4.545	1564.993	144.910	0.000
	5.429	1570.422			200.460	0.000
1009			5.219	1565.203	205.950	0.000
	5.451	1570.654			202.720	0.000
1010			5.029	1565.625	201.970	0.000
	5.741	1571.366			200.610	0.000
1011			4.581	1566.785	196.290	0.000
	7.897	1574.682			150.630	0.000
1012			2.613	1572.069	139.110	0.000
	2.527	1574.596			126.230	0.000
1013			6.233	1568.363	121.160	0.000
	4.587	1572.950			124.860	0.000
1014			5.801	1567.149	124.550	0.000
	5.274	1572.423			125.220	0.000
1015			3.549	1568.874	123.810	0.000
	3.879	1572.753			128.210	0.000
1016			5.373	1567.380	125.780	0.000
	4.339	1571.719			121.860	0.000
1017			3.070	1568.649	126.660	0.000
	3.259	1571.908			126.210	0.000
1018			4.574	1567.334	137.370	0.000
	5.076	1572.410			198.520	0.000
1019			5.187	1567.223	196.180	0.000
	5.829	1573.052			200.040	0.000
1020			6.645	1566.407	197.670	0.000
	7.317	1573.724			90.870	0.000
1021			1.648	1572.076	89.970	0.000
	10.308	1582.384			48.170	0.000
2BP2			1.256	1581.128	73.030	0.000

Adjusted Elevation Summary - Linear

Job 1714-10 LOOP B Job Date 14-Oct-08 08:58

Loop Closure 0.008
Loop Distance 6273.3

	Stn	Code	Elev
ADJUSTED	2BP2	GDACS	1581.120
ADJUSTED	1000	TP	1572.069
ADJUSTED	1001	RB16	1568.569
ADJUSTED	1002	TP	1566.011
ADJUSTED	1003	RB15	1566.956
ADJUSTED	1004	TP	1565.381
ADJUSTED	1005	RB14	1566.850
ADJUSTED	1006	TP	1564.940
ADJUSTED	1007	RB13	1565.677
ADJUSTED	1008	TP	1564.990
ADJUSTED	1009	TP	1565.200
ADJUSTED	1010	TP	1565.621
ADJUSTED	1011	TP	1566.781
ADJUSTED	1012	TP	1572.064
ADJUSTED	1013	RB17	1568.358
ADJUSTED	1014	TP	1567.144
ADJUSTED	1015	RB18	1568.868
ADJUSTED	1016	TP	1567.374
ADJUSTED	1017	RB19	1568.643
ADJUSTED	1018	TP	1567.327
ADJUSTED	1019	TP	1567.216
ADJUSTED	1020	TP	1566.400
ADJUSTED	1021	TP	1572.068
ADJUSTED	2BP2	GDACS	1581.120

LEVEL LOOP C

Sta. 102+50 to Sta. 127+50

Job 1710-10 LOOP C Job Date 14-Oct-08 11:59

Instrument	NA 2000/3000	Level S/N	242852
Dist	Feet	Manual Method	1 Wire

Stn	BS(+)	HI	FS(-)	Elev	Dist	Offset
69F1				1573.877		
	2.548	1576.425			94.320	0.000
2000			3.246	1573.179	109.090	0.000
	3.648	1576.827			121.430	0.000
2001			4.766	1572.061	116.180	0.000
	7.098	1579.159			119.090	0.000
2002			3.886	1575.273	119.220	0.000
	9.476	1584.749			120.920	0.000
2003			2.868	1581.881	119.700	0.000
	9.602	1591.483			114.480	0.000
2004			1.498	1589.985	115.620	0.000
	5.920	1595.905			115.860	0.000
2005			5.243	1590.662	115.050	0.000
	5.244	1595.906			124.280	0.000
2006			5.656	1590.250	120.690	0.000
	5.598	1595.848			124.850	0.000
2007			6.292	1589.556	150.400	0.000
	6.692	1596.248			124.140	0.000
2008			5.372	1590.876	117.400	0.000
	5.588	1596.464			124.020	0.000
2009			5.404	1591.060	123.470	0.000
	5.449	1596.509			123.280	0.000
2010			5.156	1591.353	127.480	0.000
	5.598	1596.951			81.620	0.000
2011			4.569	1592.382	77.230	0.000
	4.424	1596.806			50.610	0.000
2012			5.592	1591.214	48.030	0.000
	5.642	1596.856			124.380	0.000
2013			6.024	1590.832	125.290	0.000
	5.782	1596.614			124.450	0.000
2014			5.439	1591.175	126.740	0.000
	5.443	1596.618			124.510	0.000
2015			5.515	1591.103	125.470	0.000
	5.400	1596.503			124.530	0.000
2016			11.239	1585.264	115.040	0.000
	0.767	1586.031			44.370	0.000
2017			10.999	1575.032	27.900	0.000
	0.098	1575.130			44.890	0.000
2018			8.123	1567.007	47.860	0.000
	2.990	1569.997			80.920	0.000
2019			4.239	1565.758	84.440	0.000
	3.540	1569.298			128.870	0.000
2020			4.221	1565.077	127.740	0.000
	6.378	1571.455			124.580	0.000
2021			4.168	1567.287	134.650	0.000
	4.299	1571.586			125.990	0.000
2022			5.883	1565.703	123.360	0.000
	4.891	1570.594			106.100	0.000

Stn	BS(+)	HI	FS(-)	Elev	Dist	Offset
2023			4.853	1565.741	111.330	0.000
	5.725	1571.466			59.490	0.000
2024			3.738	1567.728	56.370	0.000
	4.884	1572.612			125.480	0.000
2025			5.250	1567.362	123.420	0.000
	6.373	1573.735			122.770	0.000
2026			2.958	1570.777	128.190	0.000
	4.138	1574.915			125.630	0.000
2027			4.054	1570.861	112.780	0.000
	6.141	1577.002			46.210	0.000
2028			3.121	1573.881	41.540	0.000

Adjusted Elevation Summary - Linear

Job 1714-10 LOOP C Job Date 14-Oct-08 11:59

Loop Closure 0.004
Loop Distance 6143.7

	Stn	Code	Elev
ADJUSTED	69F1	AL CAP	1573.877
ADJUSTED	2000	RB3	1573.179
ADJUSTED	2001	TP	1572.061
ADJUSTED	2002	RB1	1575.273
ADJUSTED	2003	TP	1581.880
ADJUSTED	2004	RB2	1589.984
ADJUSTED	2005	TP	1590.661
ADJUSTED	2006	RB4	1590.249
ADJUSTED	2007	A11	1589.555
ADJUSTED	2008	RB6	1590.875
ADJUSTED	2009	TP	1591.059
ADJUSTED	2010	RB8	1591.351
ADJUSTED	2011	VINE RM1	1592.380
ADJUSTED	2012	A10	1591.212
ADJUSTED	2013	RB10	1590.830
ADJUSTED	2014	TP	1591.173
ADJUSTED	2015	RB12	1591.101
ADJUSTED	2016	TP	1585.262
ADJUSTED	2017	TP	1575.030
ADJUSTED	2018	TP	1567.004
ADJUSTED	2019	RB11	1565.755
ADJUSTED	2020	TP	1565.074
ADJUSTED	2021	RB9	1567.284
ADJUSTED	2022	B10	1565.700
ADJUSTED	2023	TP	1565.738
ADJUSTED	2024	RB7	1567.725
ADJUSTED	2025	TP	1567.358
ADJUSTED	2026	RB5	1570.773
ADJUSTED	2027	B11	1570.857
ADJUSTED	2028	69F1	1573.877

SECTION 3.3

GPS ELEVATIONS vs. DIGITAL LEVEL ELEVATIONS 2008 COMPARISON REPORT

OCTOBER 2008 GPS TO OPTICAL LEVELS ELEVATION COMPARISON

OCTOBER 2008 OPTICAL LEVEL ELEVATION DATA				OCTOBER 2008 GPS ELEVATION DATA				OPTICAL LEVEL vs. GPS ELEVATION DIFFERENCE	
POINT NAME	DESCRIPTION	ELEVATION	ELEVATION (IFT)	POINT NAME	DESCRIPTION	ELEVATION (M)	ELEVATION (IFT)	(M)	(IFT)
					CONTROL				
1AO1	GDAC MONUMENT	472.641	1550.661	1AO1	GDAC MONUMENT	472.641	1550.661	0.000	0.000
2BP2	GDAC MONUMENT	481.925	1581.120	2BP2	GDAC MONUMENT	481.935	1581.153	-0.010	-0.033
VINE RM1	GDAC MONUMENT	485.357	1592.380	VINE RM1	GDAC MONUMENT	485.361	1592.393	-0.004	-0.013
69F1	GDAC MONUMENT	479.718	1573.877	69F1	GDAC MONUMENT	479.732	1573.924	-0.014	-0.047
A-10	2 BC USDA PR FRS 2-86 110+00	485.001	1591.212	A-10	2 BC USDA PR FRS 2-86 110+00	485.005	1591.225	-0.004	-0.013
A-11	2 BC USDA PR FRS 2-86 119+90	484.496	1589.555	A-11	2 BC USDA PR FRS 2-86 119+90	484.494	1589.547	0.002	0.008
B-10	2 BC USDA PR FRS 2-86 110+00	477.225	1565.700	B-10	2 BC USDA PR FRS 2-86 110+00	477.229	1565.712	-0.004	-0.012
B-11	2 BC USDA PR FRS 2-86 119+90	478.797	1570.857	B-11	2 BC USDA PR FRS 2-86 119+90	478.804	1570.880	-0.007	-0.023
					POWERLINE FRS				
RB 1	GPS 11 "ROCKBOLT POWERLINE 127+50"	480.143	1575.273	RB 1	GPS 11 "ROCKBOLT POWERLINE 127+50"	480.140	1575.262	0.003	0.011
RB 2	GPS 12 "ROCKBOLT POWERLINE 127+50"	484.627	1589.984	RB 2	GPS 12 "ROCKBOLT POWERLINE 127+50"	484.636	1590.012	-0.009	-0.028
RB 3	GPS 09 "ROCKBOLT POWERLINE 122+50"	479.505	1573.179	RB 3	GPS 09 "ROCKBOLT POWERLINE 122+50"	479.519	1573.226	-0.014	-0.047
RB 4	GPS 10 "ROCKBOLT POWERLINE 122+50"	484.708	1590.249	RB 4	GPS 10 "ROCKBOLT POWERLINE 122+50"	484.721	1590.293	-0.013	-0.044
RB 5	GPS 07 "ROCKBOLT POWERLINE 117+50"	478.772	1570.773	RB 5	GPS 07 "ROCKBOLT POWERLINE 117+50"	478.775	1570.783	-0.003	-0.010
RB 6	GPS 08 "ROCKBOLT POWERLINE 117+50"	484.899	1590.875	RB 6	GPS 08 "ROCKBOLT POWERLINE 117+50"	484.900	1590.880	-0.002	-0.005
RB 7	GPS 05 "ROCKBOLT POWERLINE 112+50"	477.843	1567.725	RB 7	GPS 05 "ROCKBOLT POWERLINE 112+50"	477.841	1567.721	0.001	0.004
RB 8	GPS 06 "ROCKBOLT POWERLINE 112+50"	485.044	1591.351	RB 8	GPS 06 "ROCKBOLT POWERLINE 112+50"	485.047	1591.361	-0.003	-0.010
RB 9	GPS 03 "ROCKBOLT POWERLINE 107+50"	477.708	1567.284	RB 9	GPS 03 "ROCKBOLT POWERLINE 107+50"	477.706	1567.278	0.002	0.006
RB 10	GPS 04 "ROCKBOLT POWERLINE 107+50"	484.885	1590.830	RB 10	GPS 04 "ROCKBOLT POWERLINE 107+50"	484.888	1590.840	-0.003	-0.010
RB 11	GPS 01 "ROCKBOLT POWERLINE 102+50"	477.242	1565.755	RB 11	GPS 01 "ROCKBOLT POWERLINE 102+50"	477.247	1565.772	-0.005	-0.017
RB 12	GPS 02 "ROCKBOLT POWERLINE 102+50"	484.968	1591.101	RB 12	GPS 02 "ROCKBOLT POWERLINE 102+50"	484.979	1591.138	-0.011	-0.037
					VINEYARD FRS				
RB 13	GPS 07 "ROCKBOLT VINEYARD 310+00"	477.218	1565.677	RB 13	GPS 07 "ROCKBOLT VINEYARD 310+00"	477.220	1565.682	-0.002	-0.005
RB 14	GPS 06 "ROCKBOLT VINEYARD 305+00"	477.576	1566.850	RB 14	GPS 06 "ROCKBOLT VINEYARD 305+00"	477.579	1566.861	-0.003	-0.011
RB15	GPS 05 "ROCKBOLT VINEYARD 300+00"	477.608	1566.956	RB15	GPS 05 "ROCKBOLT VINEYARD 300+00"	477.619	1566.993	-0.011	-0.037
RB 16	GPS 04 "ROCKBOLT VINEYARD 295+00"	478.100	1568.569	RB 16	GPS 04 "ROCKBOLT VINEYARD 295+00"	478.100	1568.571	-0.001	-0.002
RB 17	GPS 03 "ROCKBOLT VINEYARD 290+00"	478.036	1568.358	RB 17	GPS 03 "ROCKBOLT VINEYARD 290+00"	478.040	1568.372	-0.004	-0.014
RB 18	GPS 02 "ROCKBOLT VINEYARD 285+00"	478.191	1568.868	RB 18	GPS 02 "ROCKBOLT VINEYARD 285+00"	478.203	1568.906	-0.012	-0.038
RB19	GPS 01 "ROCKBOLT VINEYARD 280+00"	478.122	1568.643	RB19	GPS 01 "ROCKBOLT VINEYARD 280+00"	478.126	1568.654	-0.003	-0.011

BASIS OF ELEVATIONS FOR OPTICAL LEVELS FOR OCTOBER 2008 SURVEY IS 1550.661 ON 1AO1 AS DETERMINED FROM THE GPS PRIMARY NETWORK CARRIED OUT BY ATEAM IN OCTOBER 2008.

SECTION 4

META DATA FOR CONTROL STATIONS

SECTION 4.1

PRIMARY CONTROL

EACH SHEET IS ORGANIZED AS FOLLOWS:

- **NGS RECOVERY SHEET**
- **GPS LOG SHEETS**
- **SUPPORTING PHOTOGRAPHS**

1A01

```
1        National Geodetic Survey,   Retrieval Date = OCTOBER  6, 2006
 AJ3653
 ***********************************************************************
 AJ3653  HT MOD       -  This is a Height Modernization Survey Station.
 AJ3653  DESIGNATION -  1AO1
 AJ3653  PID          -  AJ3653
 AJ3653  STATE/COUNTY-  AZ/MARICOPA
 AJ3653  USGS QUAD    -  APACHE JUNCTION (1982)
 AJ3653
 AJ3653                         *CURRENT SURVEY CONTROL
 AJ3653
 AJ3653* NAD 83(1992)-  33 22 46.53836(N)    111 34 51.05445(W)     ADJUSTED
 AJ3653* NAVD 88      -       472.76   (meters)    1551.0    (feet)  GPS OBS
 AJ3653
 AJ3653  X            -  -1,961,108.946 (meters)                     COMP
 AJ3653  Y            -  -4,958,037.069 (meters)                     COMP
 AJ3653  Z            -   3,489,434.340 (meters)                     COMP
 AJ3653  LAPLACE CORR-            2.98  (seconds)                    DEFLEC99
 AJ3653  ELLIP HEIGHT-          443.35  (meters)          (04/12/01) GPS OBS
 AJ3653  GEOID HEIGHT-          -29.42  (meters)                     GEOID03
 AJ3653
 AJ3653  HORZ ORDER   -  B
 AJ3653  ELLP ORDER   -  THIRD      CLASS II
 AJ3653
 AJ3653.The horizontal coordinates were established by GPS observations
 AJ3653.and adjusted by the National Geodetic Survey in April 2001..
 AJ3653
 AJ3653.The orthometric height was determined by GPS observations and a
 AJ3653.high-resolution geoid model using precise GPS observation and
 AJ3653.processing techniques.
 AJ3653
 AJ3653.The X, Y, and Z were computed from the position and the ellipsoidal
 ht.
 AJ3653
 AJ3653.The Laplace correction was computed from DEFLEC99 derived deflections.
 AJ3653
 AJ3653.The ellipsoidal height was determined by GPS observations
 AJ3653.and is referenced to NAD 83.
 AJ3653
 AJ3653.The geoid height was determined by GEOID03.
 AJ3653
 AJ3653;                    North         East     Units Scale Factor Converg.
 AJ3653;SPC AZ C      -   263,897.660   244,605.161   MT  0.99991203   +0 11
 05.1
 AJ3653;SPC AZ C      -   865,805.97    802,510.37   iFT  0.99991203   +0 11
 05.1
 AJ3653;UTM  12       - 3,693,520.728   445,972.730   MT  0.99963599   -0 19
 10.5
 AJ3653
 AJ3653!              -  Elev Factor  x  Scale Factor =   Combined Factor
 AJ3653!SPC AZ C      -   0.99993040  x   0.99991203  =   0.99984244
 AJ3653!UTM  12       -   0.99993040  x   0.99963599  =   0.99956642
 AJ3653
 AJ3653                         SUPERSEDED SURVEY CONTROL
 AJ3653
 AJ3653.No superseded survey control is available for this station.
 AJ3653
 AJ3653 U.S. NATIONAL GRID SPATIAL ADDRESS: 12SVB4597393521(NAD 83)
 AJ3653 MARKER: I = METAL ROD
 AJ3653 SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
 AJ3653 STAMPING: 1AO1 1999
 AJ3653 MARK LOGO: MCDOT
 AJ3653 PROJECTION: FLUSH
 AJ3653 MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
 AJ3653 STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
 AJ3653+STABILITY: POSITION/ELEVATION WELL
 AJ3653_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
```

```
AJ3653+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3653 ROD/PIPE-DEPTH:  5.3 meters
AJ3653_SLEEVE-DEPTH  :  0.8 meters
AJ3653
AJ3653  HISTORY     - Date     Condition        Report By
AJ3653  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3653
AJ3653                          STATION DESCRIPTION
AJ3653
AJ3653'DESCRIBED BY MARICOPA CO DOT 1999 (GF)
AJ3653'THE STATION IS LOCATED WITHIN A NATURAL DESERT AREA WITHIN THE
AJ3653'SOUTHEAST QUARTER OF SECTION 36 WITHIN A MARICOPA COUNTY ENCLAVE, WITH
AJ3653'THE CITY OF MESA ON THREE SIDES, TOWNSHIP 01 NORTH, RANGE 07 EAST,
AJ3653'SECTION 36
AJ3653'OWNERSHIP - CITY OF MESA RIGHT OF WAY
AJ3653'TO REACH THE STATION FROM THE JUNCTION OF US 60 AND SIGNAL BUTTE ROAD
AJ3653'(EXIT 193) , DRIVE SOUTH ON SIGNAL BUTTE ROAD ABOUT 0.5 MI (0.8 KM) TO
AJ3653'BASELINE ROAD, THENCE TURN LEFT (EAST) AND DRIVE 1.0 MI (1.6 KM) TO
AJ3653'MERIDIAN ROAD, THENCE TURN LEFT (NORTH) DRIVE ABOUT 325 FT (99.1 M)
AJ3653'AND PARK, WALK WEST 61 FT (18.6 M) FROM THE CENTERLINE OF MERIDIAN
AJ3653'ROAD, TO THE STATION AS DESCRIBED
AJ3653'MONUMENT DESCRIPTION - THE STATION IS MARKED BY AN ALUMINUM CAP
AJ3653'COMPRESSED ON A 14.0 FOOT (4.3 M) STAINLESS STEEL ROD DRIVEN TO
AJ3653'REFUSAL ENCASED IN A 1INCH GREASED PVC SLEEVE ENCLOSED IN A 5 INCH PVC
AJ3653'PIPE WITH A COUNTY LOGO ACCESS COVER STAMPED 1AO1 1999, SURROUNDED
AJ3653'WITH A CONCRETE COLLAR FLUSH WITH THE GROUND, WITNESSED BY A WHITE
AJ3653'CARSONITE MARKER
AJ3653'STATION TIES
AJ3653'325 FT (99.1 M) NORTH FROM THE CENTERLINE OF BASELINE ROAD
AJ3653'100 FT (30.5 M) NORTHEAST FROM THE NORTHEAST CORNER OF THE WIRE FENCE
AJ3653'SURROUNDING A HOLE LOCATED NORTHWEST OF THE INTERSECTION OF BASELINE
AJ3653'ROAD AND MERIDIAN ROAD
AJ3653'61 FT (18.6 M) WEST FROM THE CENTERLINE OF MERIDIAN ROAD
AJ3653'4.0 FT (1.2 M) EAST OF A WHITE CARSONITE MARKER
AJ3653'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3653'VISIT WWW.MCDOT.MARICOPA.GOV       SEARCH KEYWORD  GDACS
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A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: 1A01
Receiver No: 6081 (Static #5)
Day of Year: 255
Session No: Ø

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 11 year 2008
Operator: J. MARSHALL

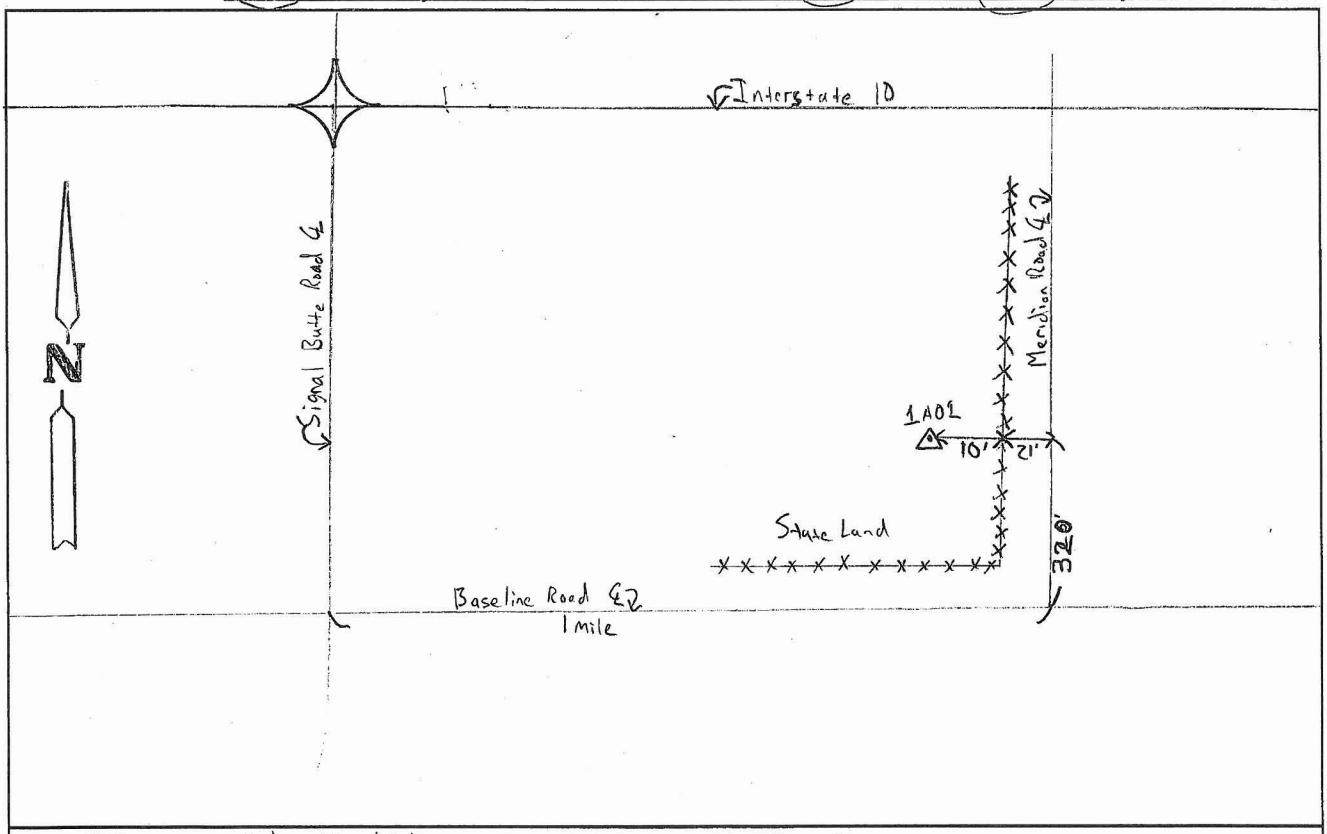
C/A CODE POSITION

Beg:
Lat: : 33 ° 22 ' 46.60 " N
Long: 111 ° 34 ' 51.10 " W
Ellip. Height: 443.6 M PDOP: 1.7
Ending:
Lat: 33 ° 22 ' 46.54 " N
Long: 111 ° 34 ' 51.08 " W
Ellip. Height: 443.4 M PDOP: 1.7

DC FILENAME: 6081-255-0
DC# — & POSTPROCESS#: 6081-255-0
Receiver Model: 4000 SSE
Antenna Type: Compact L1/L2 w/ GP
Antenna Serial #: 53509
Fixed Height Pole No: #5
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 12 :32 . Stop: 19 :45 . UTC
Beg. SV's Used: 11, 14, 16, 20, 22, 23, 30, 31, 32
End SV's Used: 7, 11, 8, 28, 13, 17, 27, 26, 19

Ant. Height (M) 1.5 meters
Ant. Height (FT)
MEASURED TO: Bottom of Antenna

Weather Conditions: (Clear) P. Cloudy Overcast Hot Warm (Cool) Cold (Calm) Breezy 74 °F +/-



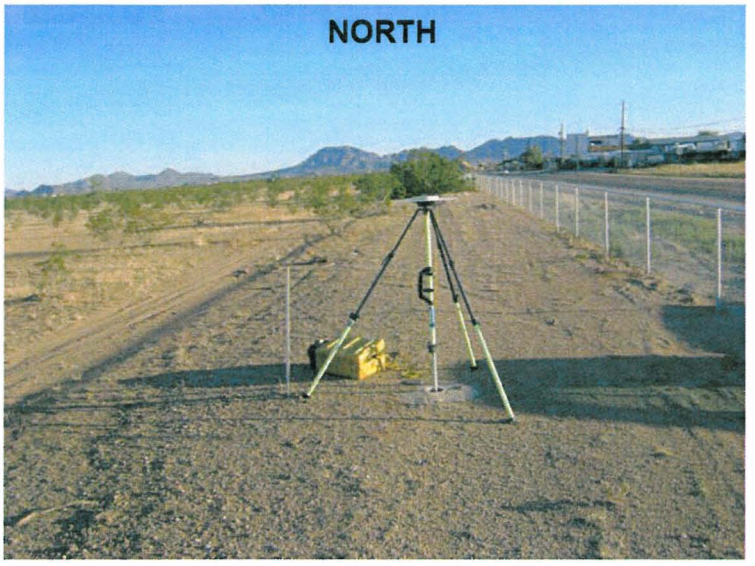
Type of Monument: Rod in Handhole Stamping:
Top of marker: ( ) flush 0.1 M ( ) above: (X) below: Nat. Ground Stamping:
Detail Notes:

Photographs: Camera #: C9 Monument: 13 North: 21 East: 22
South: 23 West: 24 Set up: 14 Misc 1: Misc 2:
Rubbing Performed ( )Yes (x)No Photos

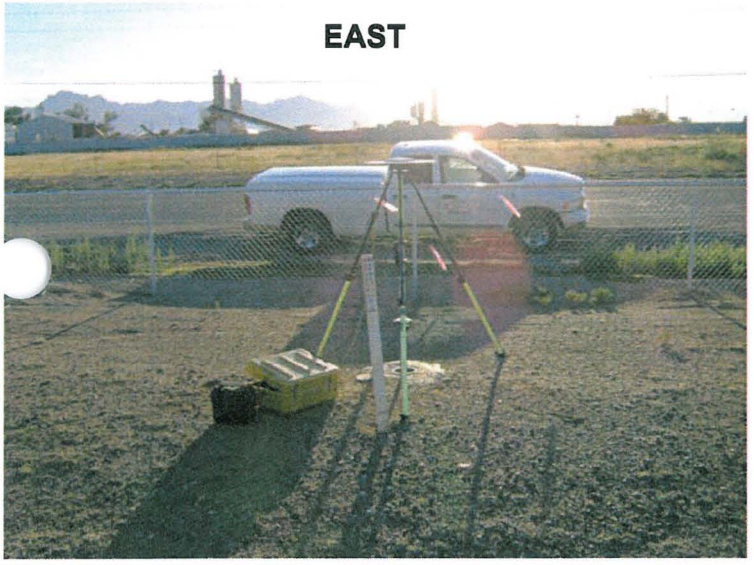
1BB1

MONUMENT

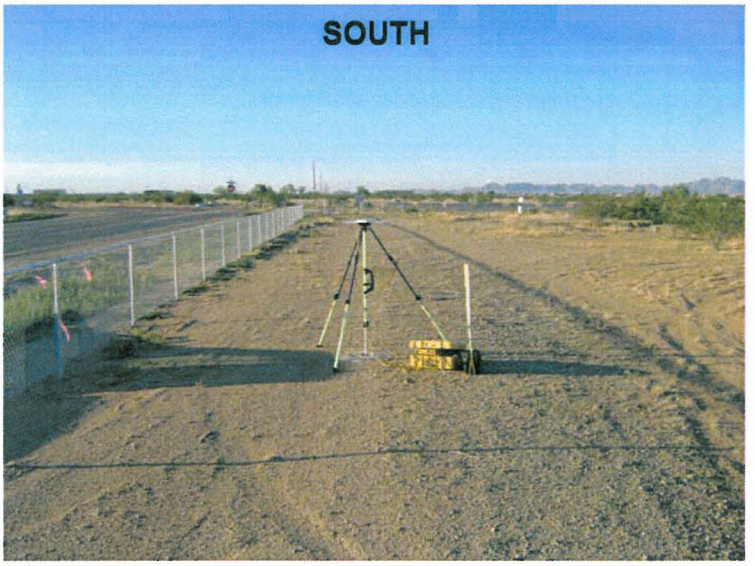
NORTH



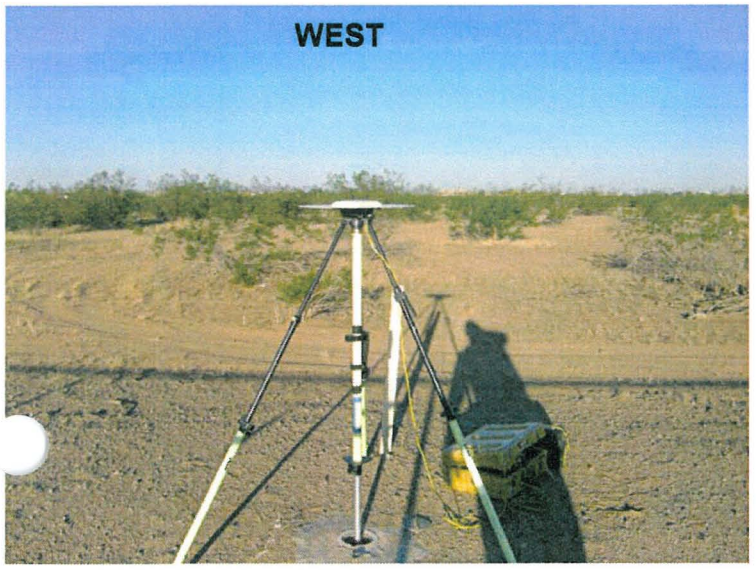
EAST



SOUTH



WEST



SETUP

2AQ2

```
1        National Geodetic Survey,   Retrieval Date = OCTOBER  6, 2006
 AJ3740
 ***********************************************************************
 AJ3740  HT MOD      -  This is a Height Modernization Survey Station.
 AJ3740  DESIGNATION -  2AQ2
 AJ3740  PID         -  AJ3740
 AJ3740  STATE/COUNTY-  AZ/PINAL
 AJ3740  USGS QUAD   -  GOLDFIELD (1981)
 AJ3740
 AJ3740                          *CURRENT SURVEY CONTROL
 AJ3740
 AJ3740* NAD 83(1992)-  33 22 46.99368(N)    111 29 05.41099(W)     ADJUSTED
 AJ3740* NAVD 88     -       602.60   (meters)    1977.0    (feet)  GPS OBS
 AJ3740
 AJ3740  X           -  -1,952,834.823 (meters)                     COMP
 AJ3740  Y           -  -4,961,410.242 (meters)                     COMP
 AJ3740  Z           -   3,489,517.595 (meters)                     COMP
 AJ3740  LAPLACE CORR-            3.47  (seconds)                   DEFLEC99
 AJ3740  ELLIP HEIGHT-          573.38  (meters)          (04/12/01) GPS OBS
 AJ3740  GEOID HEIGHT-          -29.25  (meters)                     GEOID03
 AJ3740
 AJ3740  HORZ ORDER  -  B
 AJ3740  ELLP ORDER  -  THIRD     CLASS II
 AJ3740
 AJ3740.The horizontal coordinates were established by GPS observations
 AJ3740.and adjusted by the National Geodetic Survey in April 2001..
 AJ3740
 AJ3740.The orthometric height was determined by GPS observations and a
 AJ3740.high-resolution geoid model using precise GPS observation and
 AJ3740.processing techniques.
 AJ3740
 AJ3740.The X, Y, and Z were computed from the position and the ellipsoidal
 ht.
 AJ3740
 AJ3740.The Laplace correction was computed from DEFLEC99 derived deflections.
 AJ3740
 AJ3740.The ellipsoidal height was determined by GPS observations
 AJ3740.and is referenced to NAD 83.
 AJ3740
 AJ3740.The geoid height was determined by GEOID03.
 AJ3740
 AJ3740;                    North         East     Units Scale Factor Converg.
 AJ3740;SPC AZ C     -   263,944.612   253,538.308   MT  0.99991990   +0 14
 15.3
 AJ3740;SPC AZ C     -   865,960.01    831,818.60   iFT  0.99991990   +0 14
 15.3
 AJ3740;UTM  12      - 3,693,489.055   454,903.394   MT  0.99962507   -0 16
 00.3
 AJ3740
 AJ3740!             -  Elev Factor  x  Scale Factor =   Combined Factor
 AJ3740!SPC AZ C     -   0.99990999  x   0.99991990  =   0.99982990
 AJ3740!UTM  12      -   0.99990999  x   0.99962507  =   0.99953509
 AJ3740
 AJ3740                          SUPERSEDED SURVEY CONTROL
 AJ3740
 AJ3740.No superseded survey control is available for this station.
 AJ3740
 AJ3740 U.S. NATIONAL GRID SPATIAL ADDRESS: 12SVB5490393489(NAD 83)
 AJ3740 MARKER: DD = SURVEY DISK
 AJ3740 SETTING: 66 = SET IN ROCK OUTCROP
 AJ3740 STAMPING: 2AQ2 SILLY MOUNTAIN
 AJ3740 MARK LOGO: MCDOT
 AJ3740 MAGNETIC: N = NO MAGNETIC MATERIAL
 AJ3740 STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
 AJ3740+STABILITY: POSITION/ELEVATION WELL
 AJ3740 SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 AJ3740+SATELLITE: SATELLITE OBSERVATIONS - 1999
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AJ3740
AJ3740  HISTORY     - Date     Condition        Report By
AJ3740  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3740
AJ3740                          STATION DESCRIPTION
AJ3740
AJ3740'DESCRIBED BY MARICOPA CO DOT 1999 (TM)
AJ3740'THE STATION IS LOCATED WITHIN PINAL COUNTY, TOWNSHIP 01 SOUTH, RANGE
AJ3740'08 EAST, SECTION 1
AJ3740'OWNERSHIP - BUREAU OF LAND MANAGEMENT
AJ3740'TO REACH THE STATION FROM THE JUNCTION OF US SR60 AND COUNTRY CLUB
AJ3740'DRIVE (SR87) (EXIT 179) , DRIVE EAST ON SR60 FOR ABOUT 22 MI (35.4 KM)
AJ3740'TO SILLY MOUNTAIN ROAD AT MILE POST 200 THENCE, TURN LEFT (NORTHEAST)
AJ3740'ONTO SILLY MOUNTAIN ROAD AND DRIVE 500 FEET (152.4 M) ALONG A FENCE
AJ3740'LINE TO A LOCKED GATE ON THE RIGHT (EAST) SIDE ON ROAD, PARK AT GATE
AJ3740'AND HIKE EAST TOWARDS THE TOP OF SILLY MOUNTAIN (YOU WILL HIKE PAST
AJ3740'SOME LARGE ROCKS ON THE TRAIL ON THE WAY UP AND VEER RIGHT AT THE FORK
AJ3740'AFTER THE ROCKS) AND TO THE STATION AS DESCRIBED
AJ3740'MONUMENT DESCRIPTION - THE STATION IS MARKED BY A 3 1/4 INCH MARICOPA
AJ3740'COUNTY D.O.T.  BRASS DISK, STAMPED SILLY MOUNTAIN 2AQ2, SET IN BEDROCK
AJ3740'STATION TIES
AJ3740'8.0 FT (2.4 M) WEST OF WHITE CARSONITE MARKER
AJ3740'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3740'VISIT WWW.MCDOT.MARICOPA.GOV       SEARCH KEYWORD  GDACS
```

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: 2AQ2
Receiver No: 03419
Day of Year: 255
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 09 day 11 year 2008
Operator: L. SPEAN

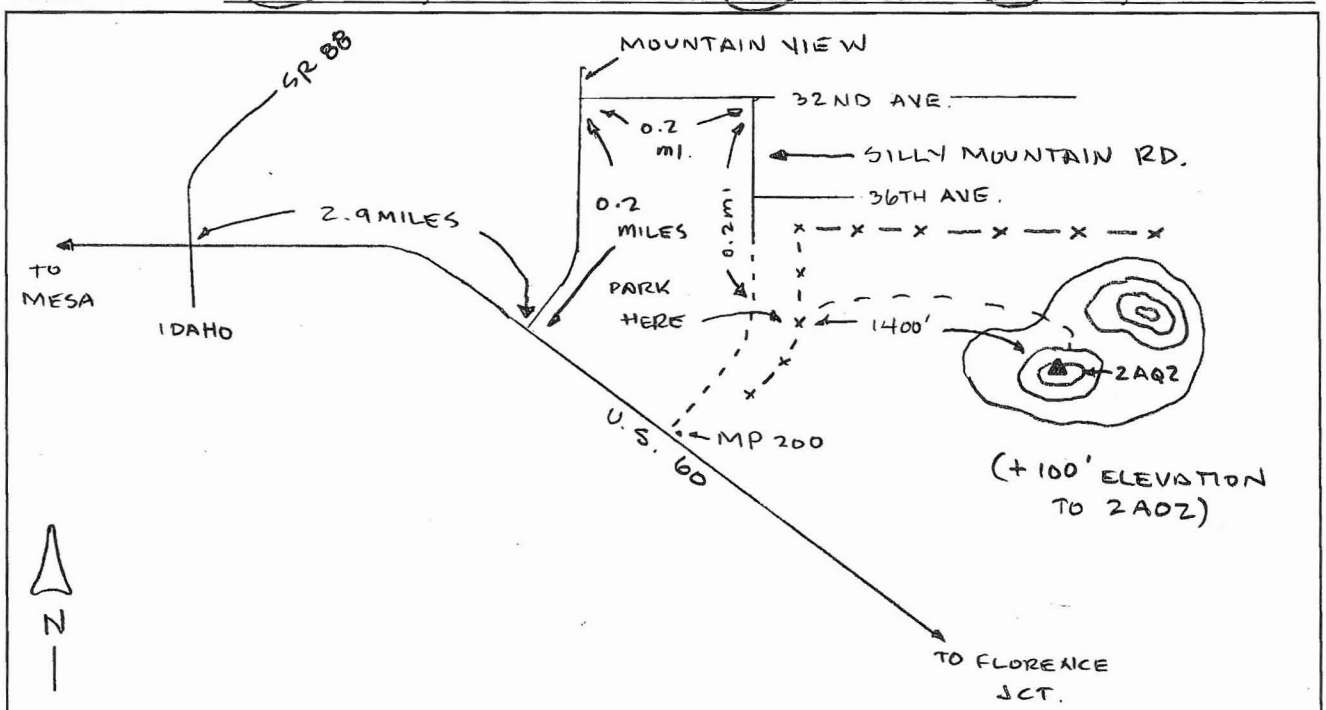
C/A CODE POSITION

Beg:
Lat: : 33 ° 22 ' 47.01 " N
Long: 111 ° 29 ' 05.46 " W
Ellip. Height: 1878.499 ~~M~~ IFT PDOP: 2.1
Ending:
Lat: 33 ° 22 ' 46.98 " N
Long: 111 ° 29 ' 05.44 " W
Ellip. Height: 1876.432 ~~M~~ IFT PDOP: 1.7

DC FILENAME: 1714-10-8954
DC# 8954 & POSTPROCESS#: 8954 2550
Receiver Model: TRIMBLE 5800
Antenna Type: TRIMBLE 5800
Antenna Serial #: 4550103419
Fixed Height Pole No: ROD
Type of Survey: Fast Static (✓) Kinematic Base ( ) RTK Base ( ).
Actual= Start 13 : 20 . Stop: 19 : 44 . UTC
Beg. SV's Used: 11, 14, 16, 20, 23, 31, 32
End SV's Used: 7, 8, 11, 13, 17, 19, 26, 27, 28

Ant. Height (M) 2.0M
Ant. Height (FT) 6.56
MEASURED TO: BOTTOM OF ANT. MOUNT

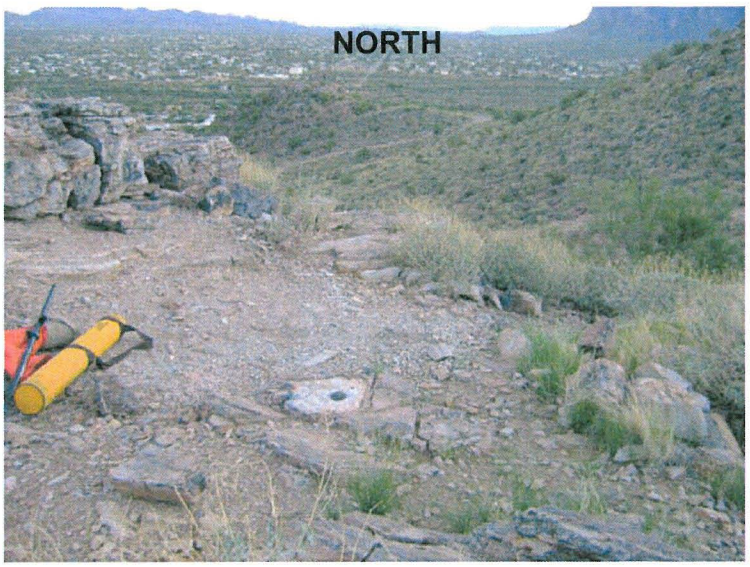
Weather Conditions: (Clear) P. Cloudy Overcast Hot (Warm) Cool Cold (Calm) Breezy 80 °F +/-

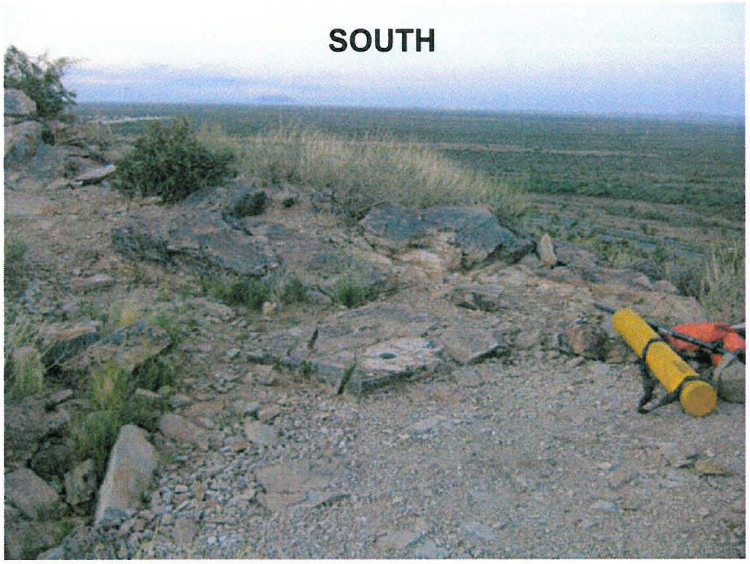


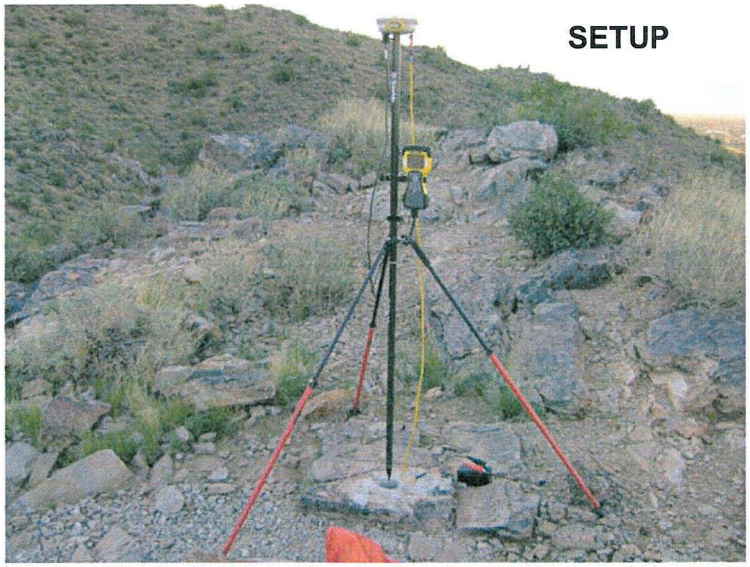
Type of Monument: BRASS CAP IN BEDROCK Stamping: GEODETIC CONTROL
Top of marker: (✓) flush M ( ) above: ( ) below: Nat. Ground Stamping: MONUMENT MARICOPA COUNTY D.O.T. SILLY MTN 2AQ2
Detail Notes:

Photographs: Camera #: C3 Monument: ✓ North: ✓ East: ✓
South: ✓ West: ✓ Set up: ✓ Misc 1: Misc 2:
Rubbing Performed ( )Yes (✓)No

2AQ2







2BP2

```
1        National Geodetic Survey,   Retrieval Date = OCTOBER  6, 2006
 AJ3742
 ***********************************************************************
 AJ3742  HT MOD       -  This is a Height Modernization Survey Station.
 AJ3742  DESIGNATION -  2BP2
 AJ3742  PID          -  AJ3742
 AJ3742  STATE/COUNTY-  AZ/PINAL
 AJ3742  USGS QUAD    -  DESERT WELL (1981)
 AJ3742
 AJ3742                         *CURRENT SURVEY CONTROL
 AJ3742
 AJ3742* NAD 83(1992)-  33 20 10.60762(N)    111 32 02.83538(W)     ADJUSTED
 AJ3742* NAVD 88      -       482.01   (meters)    1581.4    (feet)  GPS OBS
 AJ3742
 AJ3742  X            -  -1,958,037.292 (meters)                     COMP
 AJ3742  Y            -  -4,962,099.381 (meters)                     COMP
 AJ3742  Z            -   3,485,426.619 (meters)                     COMP
 AJ3742  LAPLACE CORR-            3.08  (seconds)                    DEFLEC99
 AJ3742  ELLIP HEIGHT-          452.65  (meters)          (04/12/01) GPS OBS
 AJ3742  GEOID HEIGHT-          -29.39  (meters)                     GEOID03
 AJ3742
 AJ3742  HORZ ORDER   -  B
 AJ3742  ELLP ORDER   -  THIRD      CLASS II
 AJ3742
 AJ3742.The horizontal coordinates were established by GPS observations
 AJ3742.and adjusted by the National Geodetic Survey in April 2001..
 AJ3742
 AJ3742.The orthometric height was determined by GPS observations and a
 AJ3742.high-resolution geoid model using precise GPS observation and
 AJ3742.processing techniques.
 AJ3742
 AJ3742.The X, Y, and Z were computed from the position and the ellipsoidal
 ht.
 AJ3742
 AJ3742.The Laplace correction was computed from DEFLEC99 derived deflections.
 AJ3742
 AJ3742.The ellipsoidal height was determined by GPS observations
 AJ3742.and is referenced to NAD 83.
 AJ3742
 AJ3742.The geoid height was determined by GEOID03.
 AJ3742
 AJ3742;                    North         East     Units Scale Factor Converg.
 AJ3742;SPC AZ C      -   259,109.091   248,970.438   MT  0.99991563   +0 12
 36.8
 AJ3742;SPC AZ C      -   850,095.44    816,832.15   iFT  0.99991563   +0 12
 36.8
 AJ3742;UTM  12       - 3,688,695.296   450,294.498   MT  0.99963046   -0 17
 36.7
 AJ3742
 AJ3742!              -  Elev Factor  x  Scale Factor =   Combined Factor
 AJ3742!SPC AZ C      -   0.99992894  x   0.99991563  =   0.99984458
 AJ3742!UTM  12       -   0.99992894  x   0.99963046  =   0.99955943
 AJ3742
 AJ3742                         SUPERSEDED SURVEY CONTROL
 AJ3742
 AJ3742.No superseded survey control is available for this station.
 AJ3742
 AJ3742 U.S. NATIONAL GRID SPATIAL ADDRESS: 12SVB5029488695(NAD 83)
 AJ3742 MARKER: I = METAL ROD
 AJ3742 SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
 AJ3742 STAMPING: 2BP2 1999
 AJ3742 MARK LOGO: MCDOT
 AJ3742 PROJECTION: FLUSH
 AJ3742 MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
 AJ3742 STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
 AJ3742+STABILITY: POSITION/ELEVATION WELL
 AJ3742_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
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AJ3742+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3742 ROD/PIPE-DEPTH:  7.6 meters
AJ3742_SLEEVE-DEPTH  :  0.8 meters
AJ3742
AJ3742  HISTORY     - Date     Condition        Report By
AJ3742  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3742
AJ3742                          STATION DESCRIPTION
AJ3742
AJ3742'DESCRIBED BY MARICOPA CO DOT 1999 (TM)
AJ3742'THE STATION IS LOCATED WITHIN PINAL COUNTY, TOWNSHIP 01 SOUTH, RANGE
AJ3742'08 EAST, SECTION 16
AJ3742'OWNERSHIP - MARICOPA COUNTY FLOOD CONTROL DISTRICT
AJ3742'TO REACH THE STATION FROM THE JUNCTION OF US 60 AND ELLSWORTH ROAD
AJ3742'(EXIT 191) , DRIVE SOUTH ON ELLSWORTH ROAD FOR 9.0 MI (14.5 KM) TO
AJ3742'RITTENHOUSE ROAD, THENCE TURN LEFT (SOUTHEAST) ON RITTENHOUSE ROAD AND
AJ3742'DRIVE 0.8 MI (1.3 KM) TO OCOTILLO ROAD, THENCE TURN LEFT (EAST) AND
AJ3742'DRIVE 5.4 MI (8.7 KM) TO SCHNEPF ROAD AND END OF PAVEMENT, CONTINUE
AJ3742'(EAST) ON OCOTILLO ROAD (A DIRT ROAD) FOR 1.4 MI (2.2 KM) TO A LOCKED
AJ3742'GATE GUARDING THE CENTRAL ARIZONA PROJECT SALT-GILA AQUEDUCT, DIRT
AJ3742'ROAD FOR 0.1 MI (0.2 KM) TO A POINT WHERE AN EARTH DAM BEGINS THENCE,
AJ3742'CONTINUE ALONG THE EARTH DAM, WESTERLY THEN NORTHERLY, FOR 3.9
AJ3742'MONUMENT DESCRIPTION - THE STATION IS MARKED BY AN ALUMINUM CAP
AJ3742'COMPRESSED ON A 20.0 FOOT (6.1 M) STAINLESS STEEL ROD DRIVEN TO
AJ3742'REFUSAL ENCASED IN A 1 INCH GREASED PVC SLEEVE ENCLOSED IN A 5 INCH
AJ3742'PVC PIPE WITH A COUNTY LOGO ACCESS COVER STAMPED 2BP2 1999, SURROUNDED
AJ3742'WITH A CONCRETE COLLAR FLUSH WITH THE GROUND, WITNESSED BY A WHITE
AJ3742'CARSONITE MARKER
AJ3742'STATION TIES
AJ3742'6.5 FT (2.0 M) SOUTHWEST OF 5/8 INCH REBAR
AJ3742'4.0 FT (1.2 M) NORTH OF AND PERPENDICULAR TO GATE AND BARBED WIRE
AJ3742'FENCE
AJ3742'3.4 FT (1.0 M) WEST OF WHITE CARSONITE MARKER
AJ3742'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3742'VISIT WWW.MCDOT.MARICOPA.GOV       SEARCH KEYWORD  GDACS
```

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: 2BP2
Receiver No: 7662
Day of Year: 255
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 11 year 2008
Operator: J. MALEK

C/A CODE POSITION

Beg:
Lat: : 33 ° 20 ' 10.63 " N
Long: 111 ° 32 ' 02.90 " W
Ellip. Height: 453.0 M PDOP: 2.4
Ending:
Lat: ° ' " N
Long: ° ' " W
Ellip. Height: M PDOP:

DC FILENAME:
DC# N/A & POSTPROCESS#: 76622550
Receiver Model: 4000 SSE
Antenna Type: L1/L2 COMPACT
Antenna Serial #: 14399
Fixed Height Pole No: ATEAM 1
Type of Survey: Fast Static (x) Kinematic Base ( ) RTK Base ( ).
Actual= Start 13 : 30 . Stop: : . UTC
Beg. SV's Used: 11,14,16,20,23,31,13,30
End SV's Used:

Ant. Height (M) 1.5
Ant. Height (FT)
MEASURED TO: BOT ANT. MOUNT

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

POWER FAIL

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

Photographs: Camera #: Monument: North: East:
South: West: Set up: Misc 1: Misc 2:
Rubbing Performed ( )Yes ( )No

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: 2BP2
Receiver No: 7662
Day of Year: 255
Session No: 2

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 11 year 2008
Operator: J. MALEK

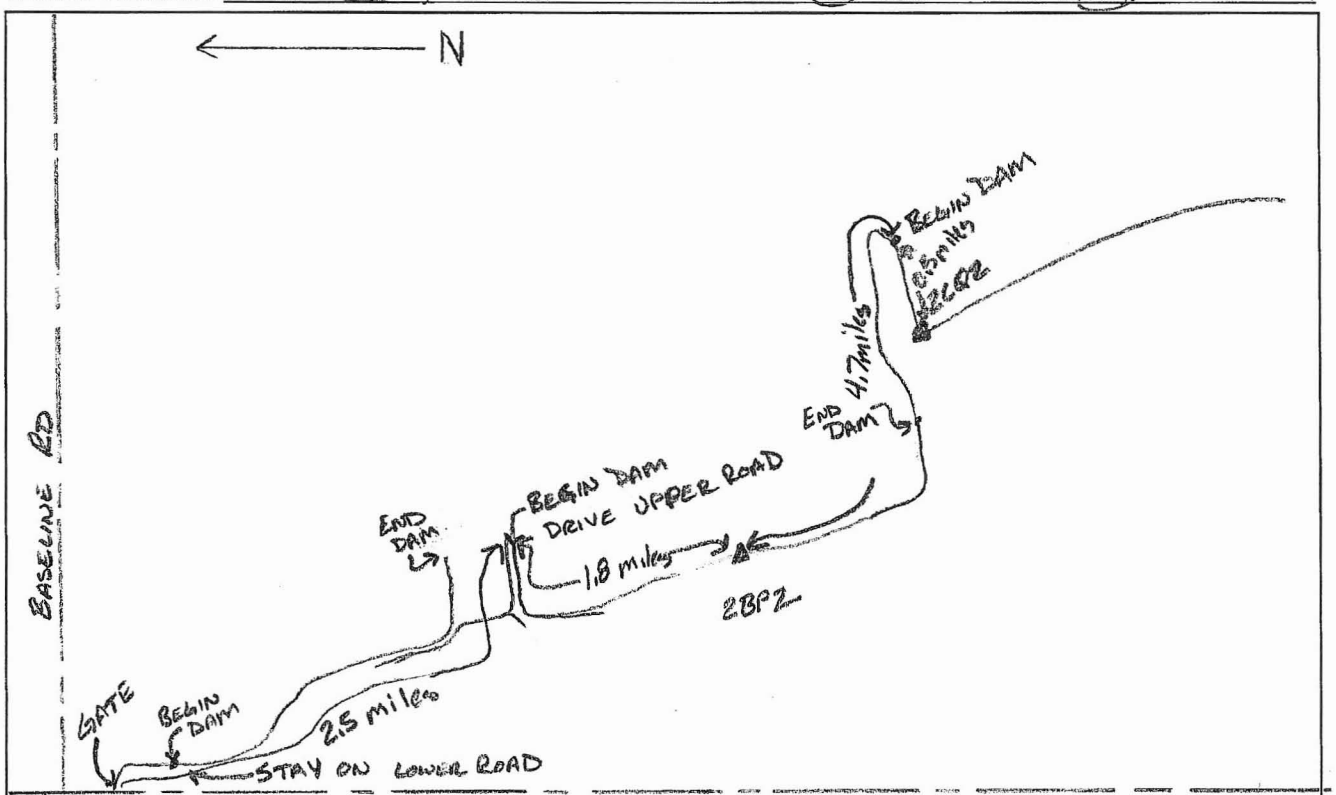
C/A CODE POSITION

Beg:
Lat: : 33 ° 20 ' 10.63 " N
Long: 111 ° 32 ' 02.90 " W
Ellip. Height: 453.5 M PDOP: 1.9
Ending:
Lat: 33 ° 20 ' 10.61 " N
Long: 111 ° 32 ' 02.86 " W
Ellip. Height: 452.8 M PDOP: 1.7

DC FILENAME:
DC# & POSTPROCESS#: 7662 2551
Receiver Model: 4000 SSE
Antenna Type: COMPACT L1/L2
Antenna Serial #: 14399
Fixed Height Pole No: A TEAM 1
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 13 : 41 . Stop: 19 :40 . UTC
Beg. SV's Used: 11, 14, 16, 20, 23, 32, 31
End SV's Used: 7, 11, 13, 8, 28, 17, 19, 27, 26

Ant. Height (M) 1.5
Ant. Height (FT)
MEASURED TO: BOT ANT MOUNT

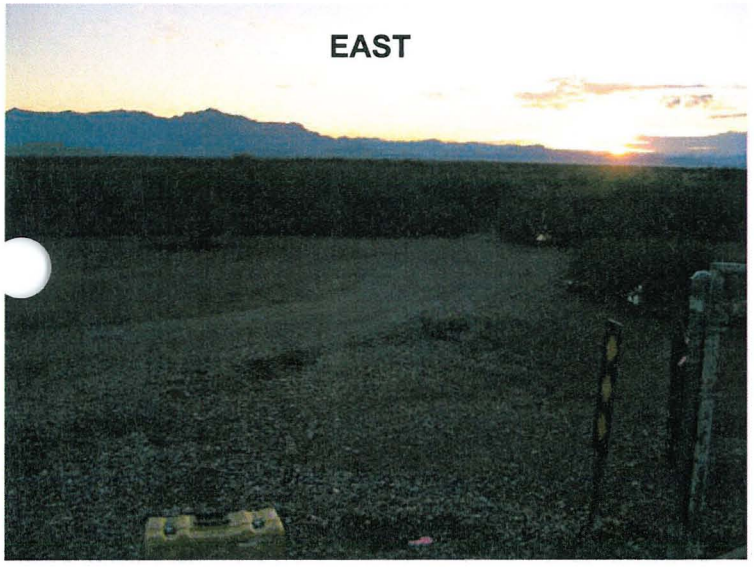
Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Cold Calm Breezy °F +/-

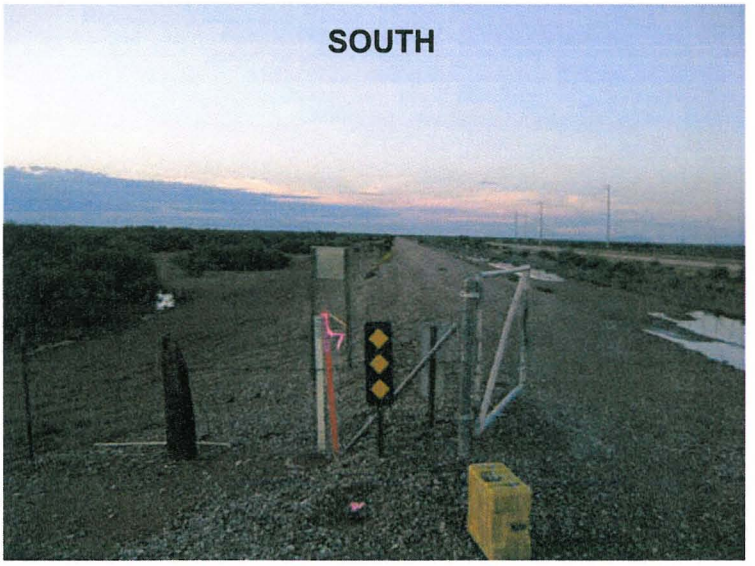


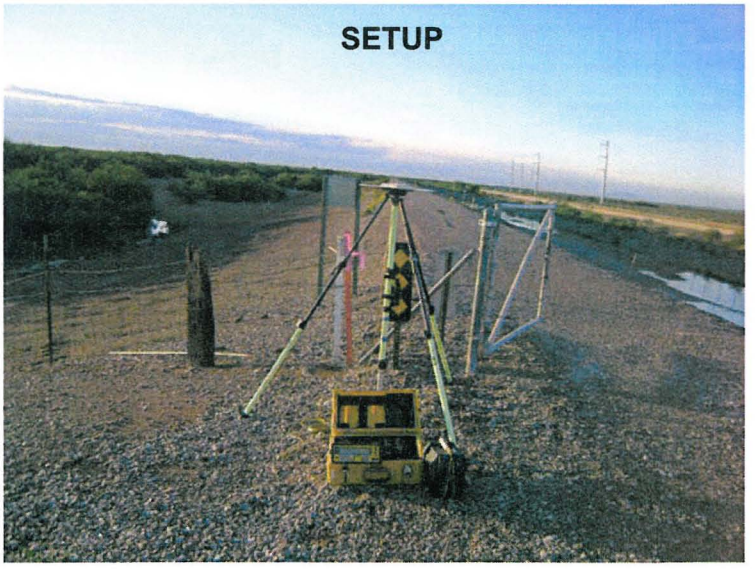
Type of Monument: GDAC 3D Stamping:
Top of marker: ( ) flush 0.15' M ( ) above: (X) below: Nat. Ground Stamping:
Detail Notes: MONUMENT IS ON TOP OF DAM NE OF GATE
MULTIPLE GATES ARE LOCKED TRAVELING THESE ROADS + DAMS

Photographs: Camera #: C1 Monument: 568 North: 569 East: 570
South: 571 West: 572 Set up: 573 Misc 1: Misc 2:
Rubbing Performed ( )Yes ( )No

2BP2







2C01

```
1        National Geodetic Survey,   Retrieval Date = OCTOBER  6, 2006
 AJ3654
 ***********************************************************************
 AJ3654  HT MOD      -  This is a Height Modernization Survey Station.
 AJ3654  DESIGNATION -  2CO1
 AJ3654  PID         -  AJ3654
 AJ3654  STATE/COUNTY-  AZ/MARICOPA
 AJ3654  USGS QUAD   -  DESERT WELL (1981)
 AJ3654
 AJ3654                        *CURRENT SURVEY CONTROL
 AJ3654
 AJ3654* NAD 83(1992)-  33 17 29.63563(N)    111 34 59.36591(W)     ADJUSTED
 AJ3654* NAVD 88     -       439.70   (meters)    1442.6    (feet)  GPS OBS
 AJ3654
 AJ3654  X           -  -1,963,272.302 (meters)                     COMP
 AJ3654  Y           -  -4,962,921.723 (meters)                     COMP
 AJ3654  Z           -   3,481,258.653 (meters)                     COMP
 AJ3654  LAPLACE CORR-           2.73  (seconds)                    DEFLEC99
 AJ3654  ELLIP HEIGHT-         410.15  (meters)          (04/12/01) GPS OBS
 AJ3654  GEOID HEIGHT-         -29.56  (meters)                     GEOID03
 AJ3654
 AJ3654  HORZ ORDER  -  B
 AJ3654  ELLP ORDER  -  THIRD     CLASS II
 AJ3654
 AJ3654.The horizontal coordinates were established by GPS observations
 AJ3654.and adjusted by the National Geodetic Survey in April 2001..
 AJ3654
 AJ3654.The orthometric height was determined by GPS observations and a
 AJ3654.high-resolution geoid model using precise GPS observation and
 AJ3654.processing techniques.
 AJ3654
 AJ3654.The X, Y, and Z were computed from the position and the ellipsoidal
 ht.
 AJ3654
 AJ3654.The Laplace correction was computed from DEFLEC99 derived deflections.
 AJ3654
 AJ3654.The ellipsoidal height was determined by GPS observations
 AJ3654.and is referenced to NAD 83.
 AJ3654
 AJ3654.The geoid height was determined by GEOID03.
 AJ3654
 AJ3654;                    North         East     Units Scale Factor Converg.
 AJ3654;SPC AZ C     -   254,134.596   244,421.579   MT  0.99991189   +0 10
 59.0
 AJ3654;SPC AZ C     -   833,774.92    801,908.07   iFT  0.99991189   +0 10
 59.0
 AJ3654;UTM  12      - 3,683,762.348   445,703.392   MT  0.99963635   -0 19
 12.4
 AJ3654
 AJ3654!             -  Elev Factor  x  Scale Factor =   Combined Factor
 AJ3654!SPC AZ C     -   0.99993561  x   0.99991189  =   0.99984751
 AJ3654!UTM  12      -   0.99993561  x   0.99963635  =   0.99957199
 AJ3654
 AJ3654                         SUPERSEDED SURVEY CONTROL
 AJ3654
 AJ3654.No superseded survey control is available for this station.
 AJ3654
 AJ3654 U.S. NATIONAL GRID SPATIAL ADDRESS: 12SVB4570383762(NAD 83)
 AJ3654 MARKER: I = METAL ROD
 AJ3654 SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
 AJ3654 PROJECTION: FLUSH
 AJ3654 MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
 AJ3654 STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
 AJ3654+STABILITY: POSITION/ELEVATION WELL
 AJ3654 SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 AJ3654+SATELLITE: SATELLITE OBSERVATIONS - April 21, 2006
 AJ3654_ROD/PIPE-DEPTH:  3.8 meters
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AJ3654_SLEEVE-DEPTH  :  0.8 meters
AJ3654
AJ3654  HISTORY     - Date     Condition        Report By
AJ3654  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3654  HISTORY     - 20060421 GOOD             MCDOT
AJ3654
AJ3654                          STATION DESCRIPTION
AJ3654
AJ3654'DESCRIBED BY MARICOPA CO DOT 1999 (RAP)
AJ3654'THE STATION IS LOCATED 40.MI SOUTH OF THE CITY OF APACHE JUNCTION,
AJ3654'TOWNSHIP 02 SOUTH, RANGE 08 EAST, SECTION 6
AJ3654'OWNERSHIP - MESA RIGHT OF WAY
AJ3654'TO REACH THE STATION FROM THE JUNCTION OF US 60 AND ELLSWORTH ROAD
AJ3654'(EXIT 191) , DRIVE SOUTH ON ELLSWORTH ROAD FOR 6.5 MI (10.5 KM) TO
AJ3654'PACOS ROAD, THENCE TURN LEFT (EAST) ON TO PACOS RD AND DRIVE 2.8 MI
AJ3654'(4.5 KM) TO THE END OF PAVEMENT AND A BARBED WIRE GATE IN A
AJ3654'NORTH-SOUTH BARBED WIRE FENCE, THENCE CONTINUE TO DRIVE EAST 800.0 FT
AJ3654'(243.8 M) BEYOND THE GATE (PASSING UNDER OVERHEAD POWER LINES) TO  A
AJ3654'GATE ON THE RIGHT (SOUTH) SIDE OF ROAD, THENCE TURN RIGHT (SOUTH) AND
AJ3654'GO  THROUGH THE GATE AND TRAVEL 85 FT (26.0 M) SOUTHEASTERLY TO THE
AJ3654'STATION AS THE STATION AS DESCRIBED
AJ3654'MONUMENT DESCRIPTION - THE STATION IS MARKED BY AN ALUMINUM CAP
AJ3654'COMPRESSED ON A 12.5 FOOT (3.8 M) STAINLESS STEEL ROD DRIVEN TO
AJ3654'REFUSAL ENCASED IN A 1INCH GREASED PVC SLEEVE ENCLOSED IN A 5 INCH PVC
AJ3654'PIPE WITH A COUNTY LOGO ACCESS COVER UNSTAMPED, SURROUNDED WITH A
AJ3654'CONCRETE COLLAR FLUSH WITH THE GROUND, WITNESSED BY A WHITE CARSONITE
AJ3654'MARKER
AJ3654'STATION TIES
AJ3654'800 FT (243.8 M) EAST ALONG A DIRT ROAD NORTH OF A BARBED WIRE FENCE,
AJ3654'EAST OF THE GATE AT THE END OF PAVEMENT TO A GATE IN THE EAST-WEST
AJ3654'FENCE, NEAR THE WEST EDGE OF THE GATE ON THE NORTH SIDE OF THE FENCE
AJ3654'IS A GLO BRASS CAP
AJ3654'85 FT (26.0 M) SOUTHWESTERLY FROM THE ABOVE DESCRIBED GLO BRASS CAP
AJ3654'80 FT (24.3 M) SOUTH OF THE EAST-WEST BARBED WIRE FENCE ALONG PECOS
AJ3654'DIRT ROAD
AJ3654'81.5 FT (24.8 M) EAST FROM OVER HEAD POWER LINES
AJ3654'5.0 FT (1.5 M) WEST OF A WHITE CARSONITE POST
AJ3654'4.0 FT (1.2 M) WEST OF THE NORTH-SOUTH BARBED WIRE FENCE
AJ3654'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3654'VISIT WWW.MCDOT.MARICOPA.GOV       SEARCH KEYWORD  GDACS
AJ3654
AJ3654                          STATION RECOVERY (2006)
AJ3654
AJ3654'RECOVERY NOTE BY MARICOPA CO DOT 2006 (BR)
AJ3654'THE MONUMENT APPEARS TO BE ABOUT 1/2 MILE BEHIND A LOCKED GATE.
AJ3654'BRIAN DALAGER
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A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: 2C01
Receiver No: 6490 (C2)
Day of Year: 255
Session No: Ø

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 11 year 2008
Operator: J. MARSHALL

C/A CODE POSITION

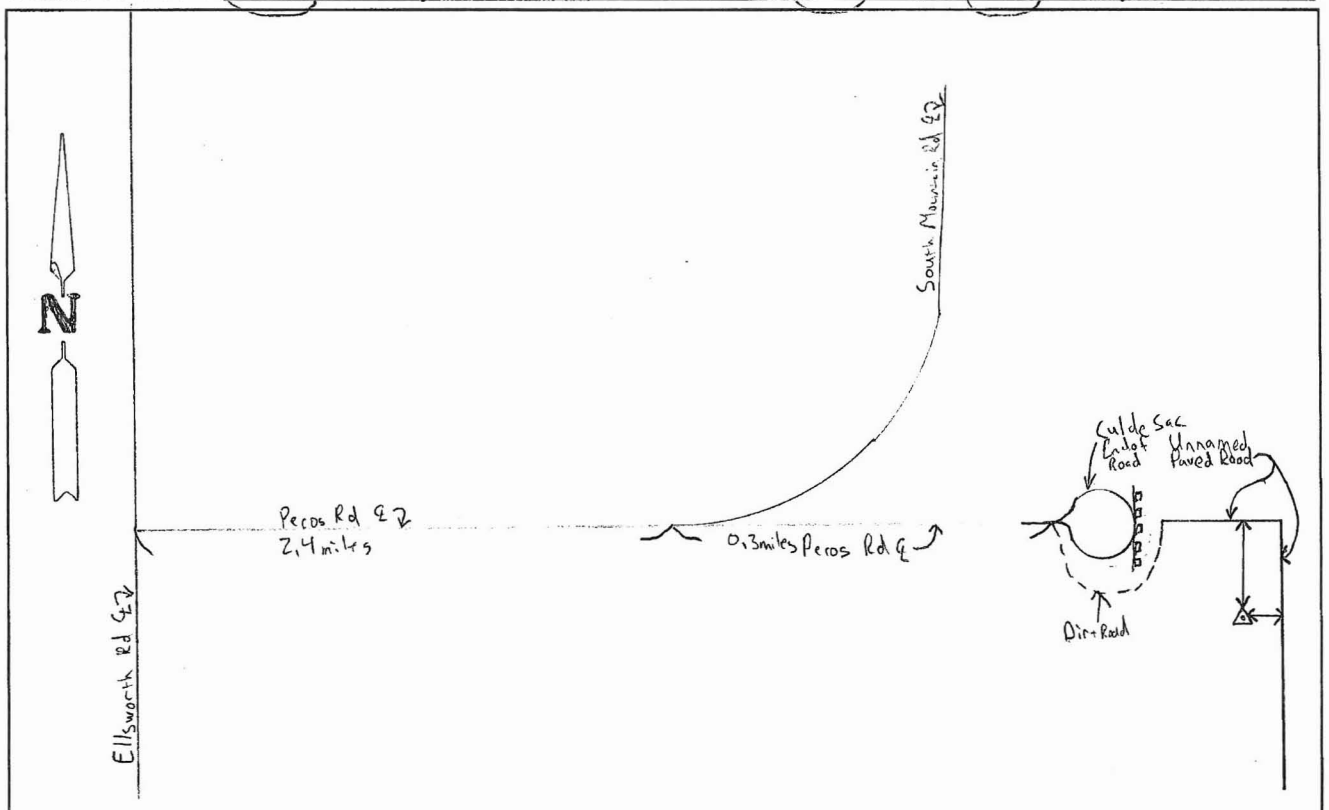
Beg:
Lat: : 33 ° 17 ' 29.64 " N
Long: 111 ° 34 ' 59.43 " W
Ellip. Height: 409.92 M PDOP: 2.1

Ending:
Lat: 33 ° 17 ' 29.62 " N
Long: 111 ° 34 ' 59.38 " W
Ellip. Height: 410.36 M PDOP: 1.5

DC FILENAME: 1714-10-8097
DC# 8097 & POSTPROCESS#: 80972550
Receiver Model: Trimble 5800
Antenna Type: Trimble 5800
Antenna Serial #: 6490 (C2)
Fixed Height Pole No: Rover Rod
Type of Survey: Fast Static (x) Kinematic Base ( ) RTK Base ( ).
Actual= Start 13 : 15 . Stop: 19 : 19 . UTC
Beg. SV's Used: 11 14 16 20 22 23 30 31 32
End SV's Used: 7 8 10 11 13 17 19 26 27 28

Ant. Height (M) 2.100 meters (Rod + Nipple + Base + Connector)
Ant. Height (FT)
MEASURED TO: Bottom of Antenna Mount

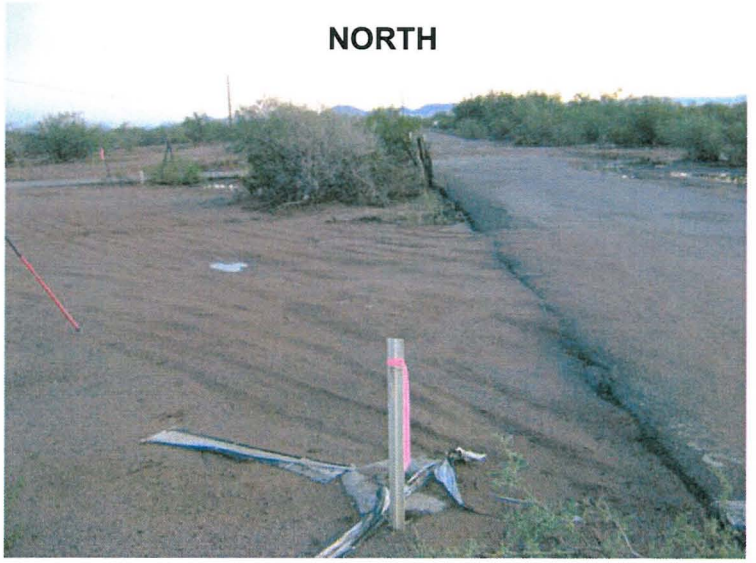
Weather Conditions: (Clear) P. Cloudy Overcast Hot Warm (Cool) Cold (Calm) Breezy 74 °F +/-

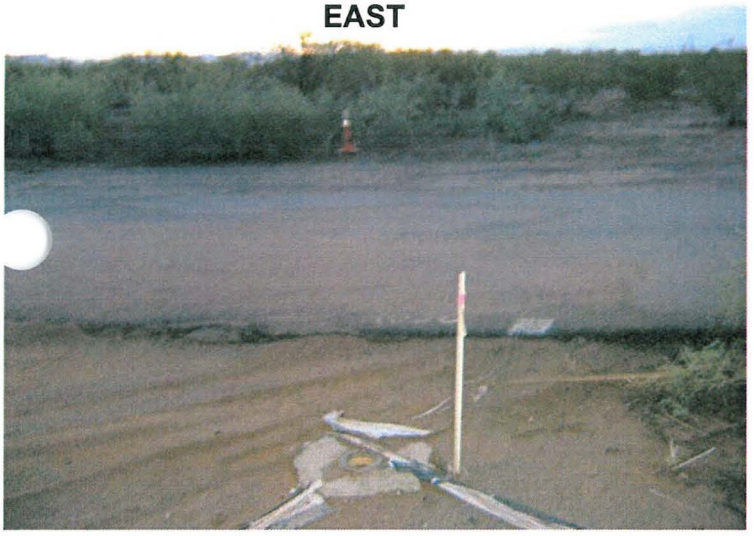


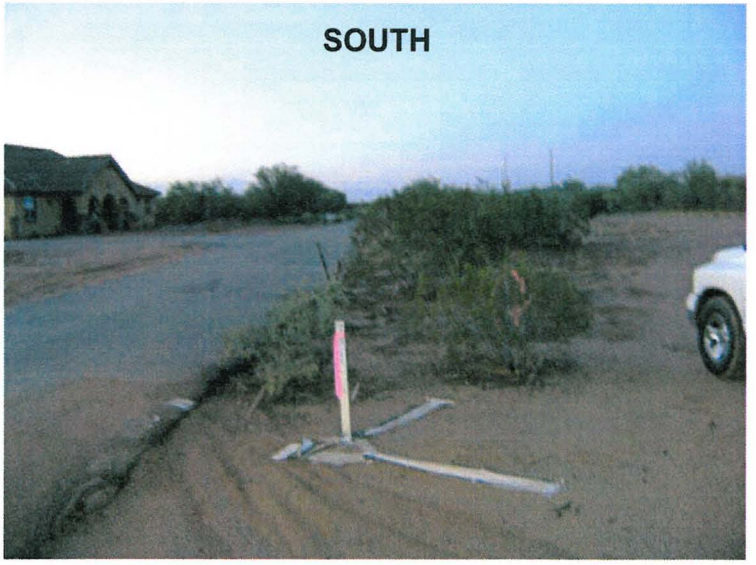
Type of Monument: Rod in Handhole Stamping:
Top of marker: ( ) flush 0.1 M ( ) above: (x) below: Nat. Ground Stamping:
Detail Notes:

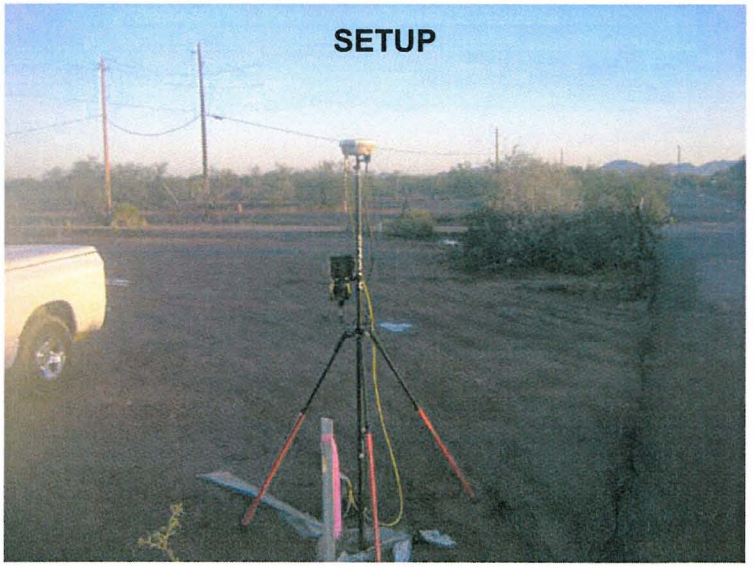
Photographs: Camera #: C9 Monument: 15 North: 16 East: 17
South: 18 West: 19 Set up: 20 Misc 1: Misc 2:
Rubbing Performed ( )Yes (x)No Photos

2CO1









2CQ2

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1        National Geodetic Survey,   Retrieval Date = OCTOBER  6, 2006
 AJ3739
 ***********************************************************************
 AJ3739  HT MOD      -  This is a Height Modernization Survey Station.
 AJ3739  DESIGNATION -  2CQ2
 AJ3739  PID         -  AJ3739
 AJ3739  STATE/COUNTY-  AZ/PINAL
 AJ3739  USGS QUAD   -  DESERT WELL (1981)
 AJ3739
 AJ3739                        *CURRENT SURVEY CONTROL
 AJ3739
 AJ3739* NAD 83(1992)-  33 17 21.67205(N)    111 30 23.96117(W)     ADJUSTED
 AJ3739* NAVD 88     -       488.71   (meters)    1603.4    (feet)  GPS OBS
 AJ3739
 AJ3739  X           -  -1,956,708.503 (meters)                     COMP
 AJ3739  Y           -  -4,965,702.197 (meters)                     COMP
 AJ3739  Z           -   3,481,080.545 (meters)                     COMP
 AJ3739  LAPLACE CORR-           3.29  (seconds)                    DEFLEC99
 AJ3739  ELLIP HEIGHT-         459.32  (meters)          (04/12/01) GPS OBS
 AJ3739  GEOID HEIGHT-         -29.42  (meters)                     GEOID03
 AJ3739
 AJ3739  HORZ ORDER  -  B
 AJ3739  ELLP ORDER  -  THIRD     CLASS II
 AJ3739
 AJ3739.The horizontal coordinates were established by GPS observations
 AJ3739.and adjusted by the National Geodetic Survey in April 2001..
 AJ3739
 AJ3739.The orthometric height was determined by GPS observations and a
 AJ3739.high-resolution geoid model using precise GPS observation and
 AJ3739.processing techniques.
 AJ3739
 AJ3739.The X, Y, and Z were computed from the position and the ellipsoidal
 ht.
 AJ3739
 AJ3739.The Laplace correction was computed from DEFLEC99 derived deflections.
 AJ3739
 AJ3739.The ellipsoidal height was determined by GPS observations
 AJ3739.and is referenced to NAD 83.
 AJ3739
 AJ3739.The geoid height was determined by GEOID03.
 AJ3739
 AJ3739;                    North         East     Units Scale Factor Converg.
 AJ3739;SPC AZ C     -   253,914.651   251,547.577   MT  0.99991797   +0 13
 30.2
 AJ3739;SPC AZ C     -   833,053.32    825,287.33   iFT  0.99991797   +0 13
 30.2
 AJ3739;UTM  12      - 3,683,479.913   452,825.167   MT  0.99962744   -0 16
 41.1
 AJ3739
 AJ3739!             -  Elev Factor  x  Scale Factor =   Combined Factor
 AJ3739!SPC AZ C     -   0.99992789  x   0.99991797  =   0.99984587
 AJ3739!UTM  12      -   0.99992789  x   0.99962744  =   0.99955536
 AJ3739
 AJ3739                         SUPERSEDED SURVEY CONTROL
 AJ3739
 AJ3739.No superseded survey control is available for this station.
 AJ3739
 AJ3739 U.S. NATIONAL GRID SPATIAL ADDRESS: 12SVB5282583480(NAD 83)
 AJ3739 MARKER: I = METAL ROD
 AJ3739 SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
 AJ3739 STAMPING: 2CQ2 1999
 AJ3739 MARK LOGO: MCDOT
 AJ3739 PROJECTION: FLUSH
 AJ3739 MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
 AJ3739 STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
 AJ3739+STABILITY: POSITION/ELEVATION WELL
 AJ3739_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
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AJ3739+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3739 ROD/PIPE-DEPTH:  7.5 meters
AJ3739_SLEEVE-DEPTH  :  0.8 meters
AJ3739
AJ3739  HISTORY     - Date     Condition        Report By
AJ3739  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3739
AJ3739                          STATION DESCRIPTION
AJ3739
AJ3739'DESCRIBED BY MARICOPA CO DOT 1999 (TM)
AJ3739'THE STATION IS LOCATED WITHIN PINAL COUNTY, TOWNSHIP 02 SOUTH, RANGE
AJ3739'08 EAST, SECTION 1
AJ3739'OWNERSHIP - MARICOPA COUNTY FLOOD CONTROL DISTRICT
AJ3739'NOTE - THIS STATION IS BEHIND LOCKED GATES BELONGING TO MARICOPA
AJ3739'COUNTY FLOOD CONTROL DISTRICT
AJ3739'TO REACH THE STATION FROM THE JUNCTION OF US 60 AND ELLSWORTH ROAD
AJ3739'(EXIT 191) , DRIVE SOUTH ON ELLSWORTH ROAD FOR 9.0 MI (14.5 KM) TO
AJ3739'RITTENHOUSE ROAD, THENCE TURN LEFT (SOUTHEAST) ON RITTENHOUSE ROAD AND
AJ3739'DRIVE 0.8 MI (1.3 KM) TO OCOTILLO ROAD, THENCE TURN LEFT (EAST) AND
AJ3739'DRIVE 5.4 MI (8.7 KM) TO SCHNEPF ROAD AND END OF PAVEMENT, CONTINUE
AJ3739'EAST ON THE DIRT ROAD (OCOTILLO ALIGNMENT) FOR 1.4 MI (2.2 KM) TO A
AJ3739'LOCKED GATE GUARDING THE CENTRAL ARIZONA PROJECT SALT-GILA
AJ3739'MONUMENT DESCRIPTION - THE STATION IS MARKED BY AN ALUMINUM CAP
AJ3739'COMPRESSED ON A 18.0 FOOT (5.5 M) STAINLESS STEEL ROD DRIVEN TO
AJ3739'REFUSAL ENCASED IN A 1INCH GREASED PVC SLEEVE ENCLOSED IN A 5 INCH PVC
AJ3739'PIPE WITH A COUNTY LOGO ACCESS COVER STAMPED 2CQ2 1999, SURROUNDED
AJ3739'WITH A CONCRETE COLLAR FLUSH WITH THE GROUND
AJ3739'STATION TIES
AJ3739'2640 FT (804.7 M) WEST FROM END OF DAM
AJ3739'175 FT (53.3 M) NORTH OF FLOOD CONTROL STRUCTURE
AJ3739'NO WHITE CARSONITE MARKER INDICATED
AJ3739'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3739'VISIT WWW.MCDOT.MARICOPA.GOV       SEARCH KEYWORD  GDACS
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A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: 2CQ2
Receiver No: 5678
Day of Year: 255
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 11 year 2008
Operator: J. MALEK

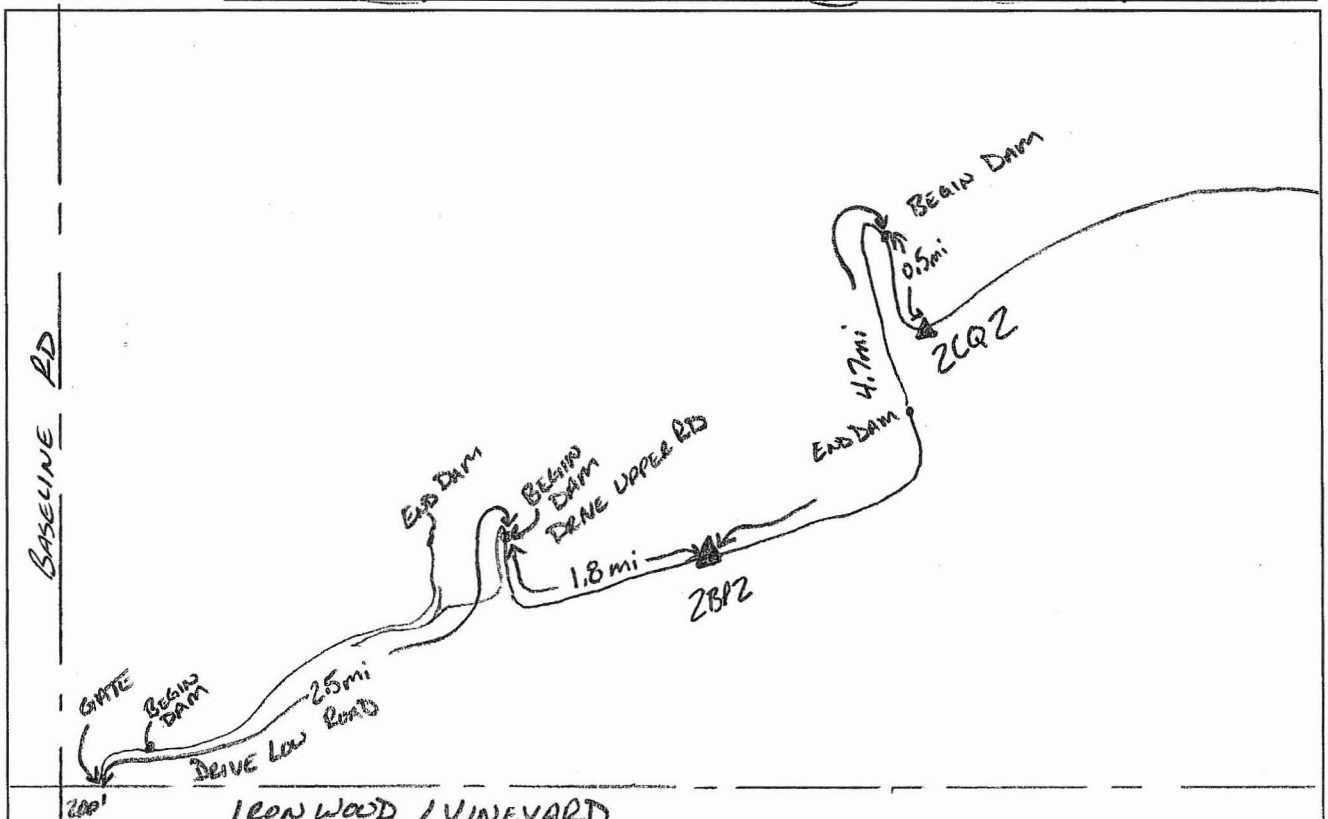
C/A CODE POSITION

Beg:
Lat: : 33 ° 17 ' 21.72 " N
Long: 111 ° 30 ' 24.01 " W
Ellip. Height: 458.9 M PDOP: 2.3.
Ending:
Lat: 33 ° 17 ' 21.65 " N
Long: 111 ° 30 ' 23.97 " W
Ellip. Height: 461.7 M PDOP: 1.8.

DC FILENAME:
DC# & POSTPROCESS#: 5678 2550
Receiver Model: 4000 SSE
Antenna Type: COMPACT L1/L2
Antenna Serial #: 04449
Fixed Height Pole No: ATEAM 2
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 14 : 13 . Stop: 19 : 17 . UTC
Beg. SV's Used: 11, 13, 16, 20, 23, 31
End SV's Used: 11, 7, 13, 27, 8, 28, 17, 19, 10

Ant. Height (M) 1.5 M
Ant. Height (FT)
MEASURED TO: BOTTOM ANT. MOUNT

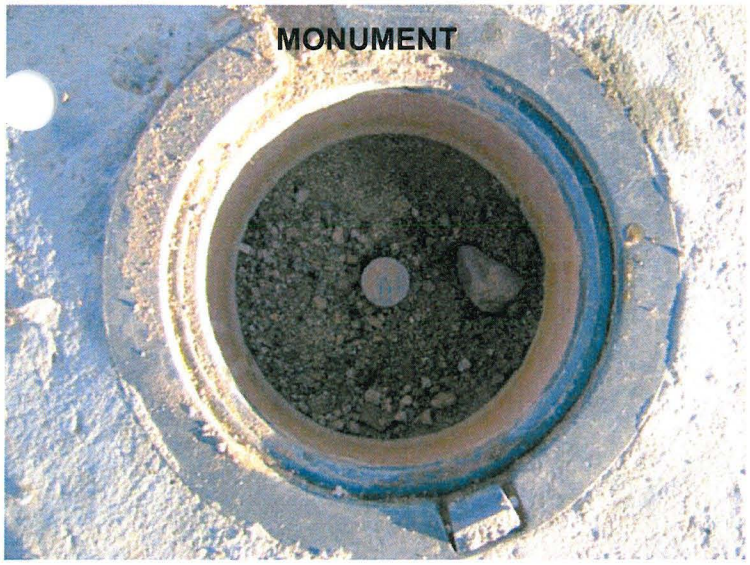
Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Cold Calm Breezy °F +/-

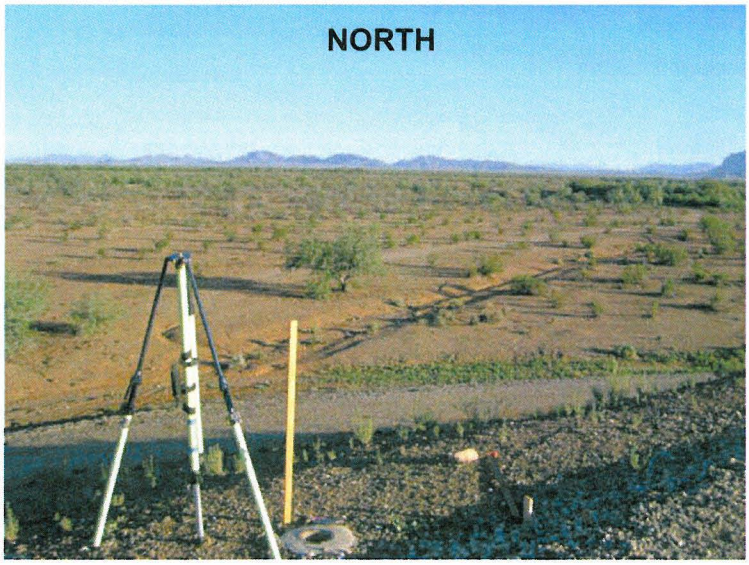


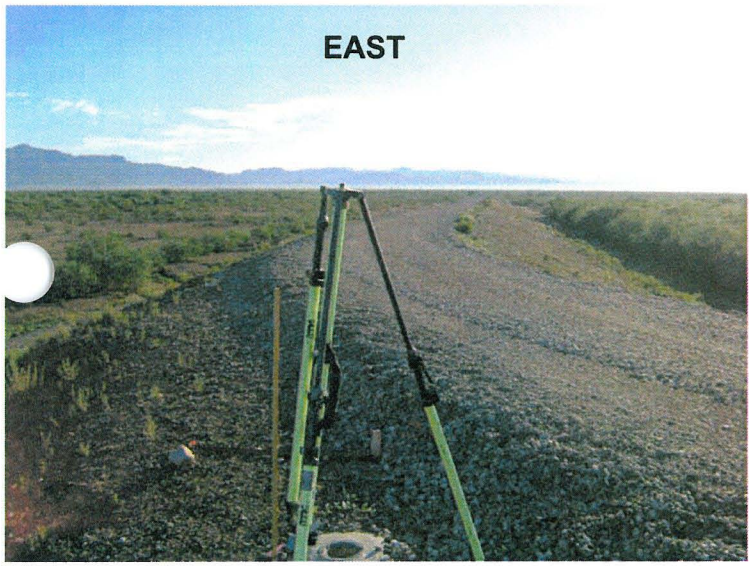
Type of Monument: GDAC 3D Stamping:
Top of marker: ( ) flush 0.15' M ( ) above: (X) below: Nat. Ground Stamping:
Detail Notes: MONUMENT IS ON EDGE OF TOP OF DAM
MULTIPLE GATES ARE LOCKED TRAVELING THESE ROADS + DAMS

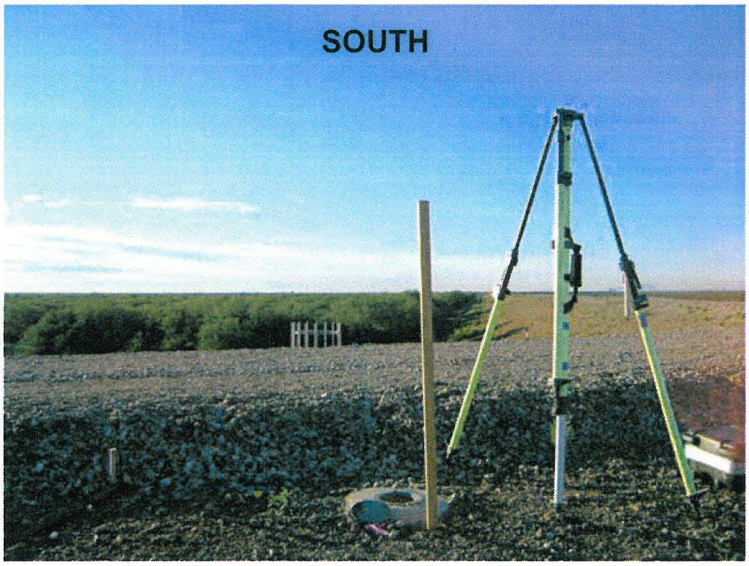
Photographs: Camera #: C1 Monument: 574 North: 575 East: 576
South: 577 West: 578 Set up: 579 Misc 1: Misc 2:
Rubbing Performed ( )Yes (X)No

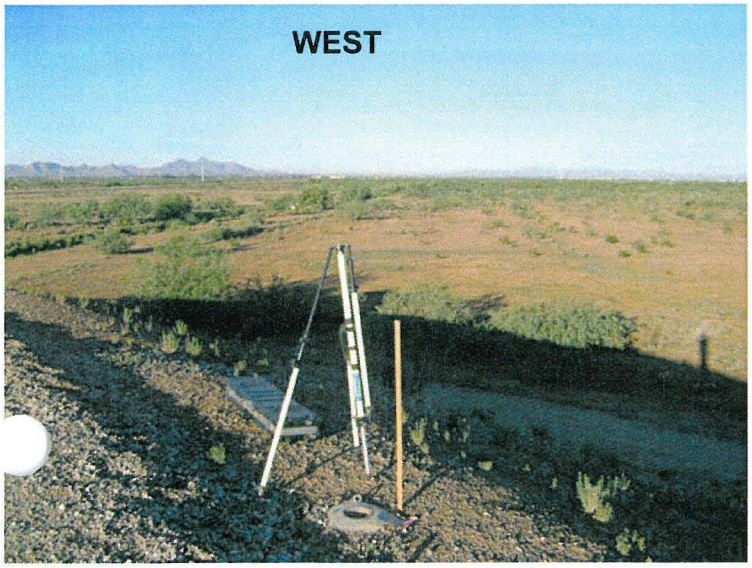
2CQ2

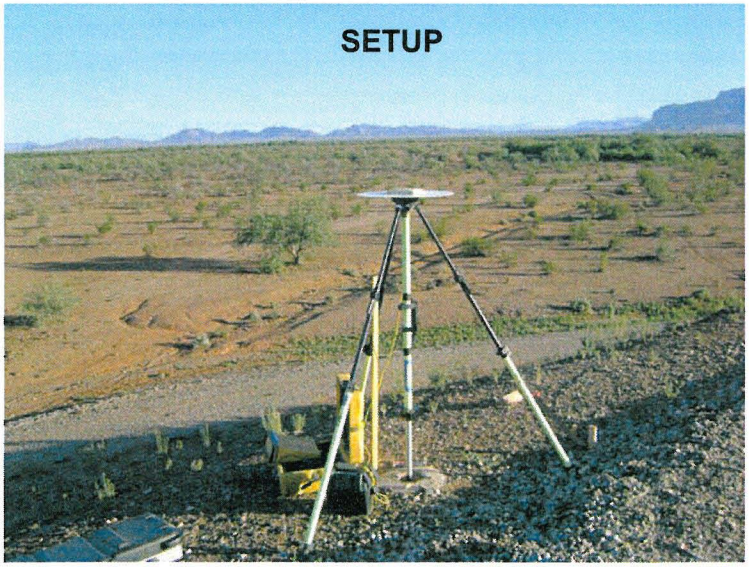












A365

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1        National Geodetic Survey,   Retrieval Date = OCTOBER  6, 2006
 DU0654
 ***********************************************************************
 DU0654  FBN          -  This is a Federal Base Network Control Station.
 DU0654  DESIGNATION -  A 365
 DU0654  PID          -  DU0654
 DU0654  STATE/COUNTY-  AZ/MARICOPA
 DU0654  USGS QUAD    -  BUCKHORN (1982)
 DU0654
 DU0654                          *CURRENT SURVEY CONTROL
 DU0654
 DU0654* NAD 83(1992)-  33 26 55.04154(N)    111 40 27.33851(W)     ADJUSTED
 DU0654* NAVD 88      -       473.781  (meters)    1554.40   (feet)  ADJUSTED
 DU0654
 DU0654  X            -  -1,967,632.745 (meters)                     COMP
 DU0654  Y            -  -4,950,915.664 (meters)                     COMP
 DU0654  Z            -   3,495,825.974 (meters)                     COMP
 DU0654  LAPLACE CORR-            3.21  (seconds)                    DEFLEC99
 DU0654  ELLIP HEIGHT-          444.35  (meters)          (09/30/99) GPS OBS
 DU0654  GEOID HEIGHT-          -29.45  (meters)                     GEOID03
 DU0654  DYNAMIC HT  -          473.215 (meters)    1552.54   (feet) COMP
 DU0654  MODELED GRAV-      979,428.4   (mgal)                       NAVD 88
 DU0654  OBS GRAVITY -      979,430.7   (mgal)                       GRAV_OBS
 DU0654
 DU0654  HORZ ORDER   -  A
 DU0654  VERT ORDER   -  FIRST      CLASS I
 DU0654  ELLP ORDER   -  THIRD      CLASS I
 DU0654
 DU0654.The horizontal coordinates were established by GPS observations
 DU0654.and adjusted by the National Geodetic Survey in September 1992..
 DU0654
 DU0654.The orthometric height was determined by differential leveling
 DU0654.and adjusted by the National Geodetic Survey in June 1991..
 DU0654
 DU0654.Photographs are available for this station.
 DU0654
 DU0654.The X, Y, and Z were computed from the position and the ellipsoidal
 ht.
 DU0654
 DU0654.The Laplace correction was computed from DEFLEC99 derived deflections.
 DU0654
 DU0654.The ellipsoidal height was determined by GPS observations
 DU0654.and is referenced to NAD 83.
 DU0654
 DU0654.The geoid height was determined by GEOID03.
 DU0654
 DU0654.The dynamic height is computed by dividing the NAVD 88
 DU0654.geopotential number by the normal gravity value computed on the
 DU0654.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 DU0654.degrees latitude (g = 980.6199 gals.).
 DU0654
 DU0654.The modeled gravity was interpolated from observed gravity values.
 DU0654.The observed gravity was obtained from relative gravimeter ties
 DU0654.to the IGSN71 gravity network.
 DU0654
 DU0654;                    North         East     Units Scale Factor Converg.
 DU0654;SPC AZ C      -   271,528.889   235,896.050   MT  0.99990626   +0 08
 01.0
 DU0654;SPC AZ C      -   890,842.81    773,937.17   iFT  0.99990626   +0 08
 01.0
 DU0654;UTM  12       - 3,701,226.334   437,333.498   MT  0.99964841   -0 22
 18.0
 DU0654
 DU0654!              -  Elev Factor  x  Scale Factor =   Combined Factor
 DU0654!SPC AZ C      -   0.99993024  x   0.99990626  =   0.99983651
 DU0654!UTM  12       -   0.99993024  x   0.99964841  =   0.99957868
 DU0654
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DU0654                          SUPERSEDED SURVEY CONTROL
DU0654
DU0654  NAD 83(1986)-  33 26 55.03352(N)    111 40 27.34301(W) AD(       ) B
DU0654  ELLIP H (09/04/92)  444.40   (m)                       GP(       ) 3
1
DU0654  NAD 83(1986)-  33 26 55.03352(N)    111 40 27.34301(W) AD(       ) 1
DU0654  NAVD 88 (08/15/94)  473.78   (m)         1554.4    (f) LEVELING    3
DU0654  NAVD 88 (09/04/92)  473.78   (m)         1554.4    (f) LEVELING    3
DU0654  NGVD 29 (??/??/92)  473.195  (m)         1552.47   (f) ADJ UNCH    1
1
DU0654
DU0654.Superseded values are not recommended for survey control.
DU0654.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
DU0654.See file dsdata.txt to determine how the superseded data were derived.
DU0654
DU0654 U.S. NATIONAL GRID SPATIAL ADDRESS: 12SVC3733301226(NAD 83)
DU0654 MARKER: DB = BENCH MARK DISK
DU0654 SETTING: 66 = SET IN ROCK OUTCROP
DU0654 SP SET: IN DRILL HOLE IN ROCK OUTCROP
DU0654 STAMPING: A 365 1967
DU0654 MARK LOGO: CGS
DU0654 MAGNETIC: O = OTHER; SEE DESCRIPTION
DU0654 STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
DU0654+STABILITY: POSITION/ELEVATION WELL
DU0654 SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
DU0654+SATELLITE: SATELLITE OBSERVATIONS - September 27, 2006
DU0654
DU0654  HISTORY     - Date     Condition        Report By
DU0654  HISTORY     - 1967     MONUMENTED       CGS
DU0654  HISTORY     - 1975     GOOD             NGS
DU0654  HISTORY     - 1981     GOOD             NGS
DU0654  HISTORY     - 19840323 GOOD
DU0654  HISTORY     - 1986     GOOD             AZDT
DU0654  HISTORY     - 1987     GOOD             NGS
DU0654  HISTORY     - 19920120 GOOD             NGS
DU0654  HISTORY     - 19920204 GOOD             NGS
DU0654  HISTORY     - 19940203 GOOD             NGS
DU0654  HISTORY     - 19940203 GOOD             NOS
DU0654  HISTORY     - 19940216 GOOD             NOS
DU0654  HISTORY     - 19960304 GOOD             CHANCE
DU0654  HISTORY     - 19980916 POOR             AZ-013
DU0654  HISTORY     - 19981102 GOOD             NGS
DU0654  HISTORY     - 20000329 GOOD             MCDOT
DU0654  HISTORY     - 20060927 GOOD             USPSQD
DU0654
DU0654                          STATION DESCRIPTION
DU0654
DU0654'DESCRIBED BY COAST AND GEODETIC SURVEY 1967
DU0654'4.3 MI NE FROM BUCKHORN.
DU0654'ABOUT 1.0 MILE EAST ALONG U.S. HIGHWAYS 60, 70, 80 AND 89 FROM THE
DU0654'POST OFFICE AT BUCKHORN, THENCE 2.5 MILES NORTH ALONG BUSH HIGHWAY,
DU0654'THENCE 0.8 MILE SOUTHEAST ALONG A TRAIL ROAD, IN S 7, T 1 N, R 7 E, AT
DU0654'THE FOOT OF THE WEST SLOPE OF THE HIGHEST HILL IN THE VICINITY, 53
DU0654'FEET SOUTHEAST OF THE CENTER LINE OF THE TRAIL ROAD AROUND THE HILL,
DU0654'SET IN THE TOP OF A ROCK OUTCROP, 0.7 FOOT NORTH OF A METAL WITNESS
DU0654'POST, AND ABOUT 5 FEET ABOVE THE LEVEL OF THE TRAIL ROAD.
DU0654
DU0654                          STATION RECOVERY (1975)
DU0654
DU0654'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1975
DU0654'ABOUT 8.7 MILES EAST ALONG U.S. HIGHWAY 60, 70, 80 AND 89 FROM
DU0654'DOWNTOWN MESA TO BUSH HIGHWAY, THENCE 2.5 MILES NORTH ALONG BUSH
DU0654'HIGHWAY, THENCE 0.8 MILE SOUTHEAST ALONG A TRAIL ROAD TO THE FOOT OF
DU0654'THE WEST SLOPE OF THE HIGHEST HILL IN THE VICINITY, 53 FEET SOUTHEAST
DU0654'OF THE CENTERLINE OF THE TRAIL ROAD AROUND THE HILL, SET IN THE TOP OF
DU0654'A ROCK OUTCROP, 0.7 FOOT NORTH OF A METAL WITNESS POST, AND ABOUT 5
DU0654'FEET ABOVE THE LEVEL OF THE TRAIL ROAD.  1/4, SEC 7, T 1N, R 7E.
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DU0654
DU0654                          STATION RECOVERY (1981)
DU0654
DU0654'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1981
DU0654'RECOVERED IN GOOD CONDITION.
DU0654
DU0654                          STATION RECOVERY (1984)
DU0654
DU0654'RECOVERED 1984
DU0654'RECOVERED IN GOOD CONDITION.
DU0654
DU0654                          STATION RECOVERY (1986)
DU0654
DU0654'RECOVERY NOTE BY ARIZONA DEPARTMENT OF TRANSPORTATION 1986 (JRT)
DU0654'THE STATION WAS RECOVERED AT THIS DATE.
DU0654'THE STATION WAS FOUND IN GOOD CONDITION.  PREVIOUS TO REACH
DU0654'DESCRIPTION WAS ADEQUATE.
DU0654
DU0654                          STATION RECOVERY (1987)
DU0654
DU0654'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1987 (MRM)
DU0654'THE STATION WAS RECOVERED AT THIS DATE.
DU0654'
DU0654'THE STATION IS LOCATED ABOUT 7.2 KM (4.5 MI)
DU0654'EAST-SOUTHEAST OF SIGNAL BUTTE,
DU0654'7.2 KM (4.5 MI) NORTH OF SR 360 (SUPERSTITION FREEWAY) AND AT THE
DU0654'BOTTOM OF THE WEST END OF A SMALL HILL.
DU0654'OWNERSHIP--UNKNOWN.
DU0654'
DU0654'TO REACH THE STATION FROM THE JUNCTION OF STATE ROUTE 360
DU0654'(SUPERSTITION FREEWAY) AND POWERS ROAD IN MESA, GO
DU0654'NORTH FOR 3.2 KM (2.0 MI) ON POWERS ROAD TO APACHE TRAIL.
DU0654'CONTINUE STRAIGHT AHEAD AND GO NORTH FOR 4.0 KM (2.5 MI) ON BUSH
DU0654'HIGHWAY TO MCKELLIPS ROAD.
DU0654'TURN RIGHT AND GO EAST FOR 0.8 KM (0.5 MI) ON MCKELLIPS ROAD TO A
DU0654'DIRT ROAD ON THE RIGHT, AT THE END OF A BLOCK WALL.
DU0654'TURN RIGHT AND GO SOUTHEAST FOR 0.3 KM (0.2 MI) ON THE DIRT ROAD TO
DU0654'A DIRT ROAD LEFT.
DU0654'CONTINUE STRAIGHT AHEAD AND GO SOUTHEAST FOR
DU0654'0.1 KM (0.05 MI) ON THE DIRT ROAD TO THE WEST BASE OF A SMALL HILL
DU0654'AND THE STATION, BETWEEN TWO LARGE PALOVERDE TREES.
DU0654'
DU0654'THE STATION IS A STANDARD CGS BENCH MARK DISK
DU0654'STAMPED---A 365 1965---,
DU0654'SET INTO A DRILL HOLE IN THE TOP OF ROCK OUTCROP OF 0.5 METERS
DU0654'LARGEST DIMENSION.  LOCATED
DU0654'15.2 METERS (50.0 FT) SOUTHEAST FROM THE APPROXIMATE CENTER OF THE
DU0654'TRAIL ROAD AROUND THE HILL,
DU0654'9.7 METERS (31.8 FT) NORTHEAST FROM A PALOVERDE TREE AND
DU0654'8.3 METERS (27.2 FT) SOUTH FROM A PALOVERDE TREE.
DU0654'
DU0654'CALIFORNIA FAA AIRPORTS, 1987.
DU0654'
DU0654'THIS STATION SUITABLE FOR GPS SURVEYS.
DU0654'
DU0654'DESCRIBED BY S.E. RANDALL.
DU0654
DU0654                          STATION RECOVERY (1992)
DU0654
DU0654'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1992
DU0654'14.5 KM (9.00 MI) EASTERLY ALONG U.S. HIGHWAY 60 (MAIN STREET) FROM
DU0654'THE JUNCTION OF STATE HIGHWAY 87 (COUNTRY CLUB DRIVE) IN MESA, THENCE
DU0654'4.0 KM (2.50 MI) NORTHERLY ALONG NORTH POWERS ROAD, THENCE 0.9 KM
DU0654'(0.55 MI) EASTERLY ALONG EAST MCKELLIPS ROAD, THENCE 0.3 KM (0.20 MI)
DU0654'SOUTHERLY ACROSS COUNTRY, NEAR THE CENTER OF A 1 BY 2-FOOT AREA OF
DU0654'OUTCROPPING BEDROCK ALONG THE WEST SLOPE OF A HILL, 5.0 M (16.4 FT)
DU0654'EAST OF THE BASE OF THE HILL, AND 1.0 M (3.3 FT) SOUTH OF A WITNESS
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DU0654'POST.
DU0654
DU0654                          STATION RECOVERY (1992)
DU0654
DU0654'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1992
DU0654'THE STATION IS LOCATED ABOUT 12 KM (7.5 MI) NORTHEAST OF MESA, 4 KM
DU0654'(2.5 MI) EAST-SOUTHEAST OF FALCON FIELD, 0.3 KM (0.2 MI) SOUTH OF
DU0654'MCKELLIPS ROAD, JUST NORTHWEST OF THE FALCON HILL ELEMENTARY SCHOOL,
DU0654'ON THE WEST END OF A LOW RIDGE AND AT THE TOE OF THE HILL.
DU0654'OWNERSHIP--UNKNOWN.
DU0654'TO REACH THE STATION FROM THE JUNCTION OF STATE HIGHWAY 360 AND POWER
DU0654'ROAD (EXIT 16) ABOUT 14.4 KM (8.9 MI) EAST OF THE JUNCTION OF STATE
DU0654'HIGHWAYS 87 AND 360 IN MESA, GO NORTH ON POWER ROAD FOR 3.29 KM
DU0654'(2.04 MI) TO ITS JUNCTION WITH U.S. HIGHWAY 60 (MAIN STREET).
DU0654'CONTINUE NORTH ON POWER ROAD FOR 3.98 KM (2.47 MI) TO A CROSSROAD.
DU0654'TURN RIGHT, EAST ON MCKELLIPS ROAD FOR 0.98 KM (0.61 MI) TO A DIM
DU0654'ROAD RIGHT, JUST BEFORE REACHING A CANAL CROSSING.  TURN RIGHT,
DU0654'SOUTH, CROSSING A SLIGHT HUMP, THEN TURN RIGHT, SOUTHWEST ON A DIRT
DU0654'ROAD ACROSS AN OPEN AREA FOR 0.28 KM (0.17 MI) TO TREES ON THE LEFT.
DU0654'TURN LEFT ACROSS THE FIELD FOR 0.08 KM (0.05 MI) TO A ROW OF BOULDERS
DU0654'BETWEEN TWO TREES AND THE STATION 15 M (49.2 FT) BEYOND.
DU0654'THE STATION IS SET IN A DRILL HOLE IN A 0.3 M (1.0 FT) X 0.5 M
DU0654'(1.6 FT) X 0.1 M (0.3 FT) HIGH OUTCROP BETWEEN TWO PALO VERDE TREES
DU0654'AND 1.0 M (3.3 FT) ABOVE THE SURROUNDING TERRAIN.  LOCATED 55.0 M
DU0654'(180.4 FT) WEST AROUND BASE OF RIDGE FROM THE NORTHWEST FENCE CORNER
DU0654'OF SCHOOL PLAYGROUND, 10.0 M (32.8 FT) NORTHEAST OF A PARTIALLY DEAD
DU0654'PALO VERDE TREE AND 8.5 M (27.9 FT) SOUTH OF A PALO VERDE TREE.
DU0654
DU0654                          STATION RECOVERY (1994)
DU0654
DU0654'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1994 (JDR)
DU0654'RECOVERED AS DESCRIBED. NOTE-CONTINUE NORTH ON POWER ROAD PAST MAIN
DU0654'STREET FOR 2.3 MI (3.7 KM) TO JENSEN ROAD. TURN RIGHT HEADING EAST FOR
DU0654'0.55 MI (0.89 KM) TO A FIELD ON THE LEFT. THERE IS A DIRT ROAD LEADING
DU0654'TO A HILL OF ROCK OUTCROPS. STATION IS ABOUT 600 FT (182.9 M) FROM
DU0654'ROAD AND IS BETWEEN TWO TREES.
DU0654
DU0654                          STATION RECOVERY (1994)
DU0654
DU0654'RECOVERY NOTE BY NATIONAL OCEAN SERVICE 1994 (JDR)
DU0654'RECOVERED AS DESCRIBED. NOTE-CONTINUE NORTH ON POWER ROAD PAST MAIN
DU0654'STREET FOR 2.3 MI (3.7 KM) TO JENSEN ROAD. TURN RIGHT HEADING EAST FOR
DU0654'0.55 MI (0.89 KM) TO A FIELD ON THE LEFT. THERE IS A DIRT ROAD LEADING
DU0654'TO A HILL OF ROCK OUTCROPS. STATION IS ABOUT 600 FT (182.9 M) FROM
DU0654'ROAD AND IS BETWEEN TWO TREES.
DU0654
DU0654                          STATION RECOVERY (1994)
DU0654
DU0654'RECOVERY NOTE BY NATIONAL OCEAN SERVICE 1994 (RAH)
DU0654'THE STATION IS LOCATED ABOUT 7.5 MI (12.1 KM) NORTHEAST OF MESA, 2.5
DU0654'MI (4.0 KM) EAST SOUTHEAST OF FALCON FIELD AND 0.2 MI (0.3 KM) SOUTH
DU0654'OF MCKELLIPS ROAD, JUST NORTHWEST OF FALCON HILL ELEMENTARY SCHOOL ON
DU0654'THE WEST END OF A LOW RIDGE AND THE TOE OF A HILL. TO REACH THE
DU0654'STATION FROM THE JUNCTION OF U.S. HIGHWAY 60, STATE HIGHWAY 360 AND
DU0654'POWER ROAD, GO NORTH ON POWER ROAD FOR 4.3 MI (6.9 KM) TO JENSEN ROAD.
DU0654'TURN RIGHT ON JENSEN ROAD FOR 0.5 MI (0.8 KM) EAST TO A TRACK ROAD
DU0654'JUST PAST A BLOCK WALL AROUND A HOUSING DEVELOPMENT, AND RUNNING
DU0654'NORTHEAST FROM A LOW GRASSY AREA ON THE LEFT.  FOLLOW TRACK ROAD
DU0654'NORTHEAST TO WEST TOE OF A HILL AND STATION ON THE RIGHT BETWEEN TWO
DU0654'PALO VERDE TREES. DESCRIBED AND RECOVERED BY RALPH A. HARRELL, CHIEF
DU0654'OF NOS PARTY.
DU0654
DU0654                          STATION RECOVERY (1996)
DU0654
DU0654'RECOVERY NOTE BY JE CHANCE AND ASSOCIATES 1996 (KHB)
DU0654'RECOVERED AS DESCRIBED.  UPDATES TO THE DESCRIPTION FOLLOW TO REACH
DU0654'THE STATION FROM THE JUNCTION OF US HIGHWAY 60 (MAIN STREET) AND STATE
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DU0654'HIGHWAY 87 (COUNTRY CLUB DRIVE) IN MESA, GO EAST ON US HIGHWAY 60 FOR
DU0654'14.4 KM (8.95 MI) TO POWER ROAD (EXIT 189 ON US HIGHWAY 60) .  PROCEED
DU0654'NORTH ON POWER ROAD FOR 4.0 KM (2.50 MI) PAST MAIN STREET TO JENSEN
DU0654'ROAD.  TURN RIGHT ON AND GO EAST ON JENSEN ROAD FOR 0.88 KM (0.55 MI)
DU0654'TO A SMALL PARK ON THE NORTH SIDE OF THE ROAD AND THE STATION
DU0654'APPROXIMATELY 182.9 M (600.1 FT) FROM THE ROAD, ON THE SOUTH SIDE OF A
DU0654'ROCK HILL THE STATION IS LOCATED 26.1 M (85.6 FT) SOUTH-SOUTHWEST FROM
DU0654'A PARK SIGN
DU0654
DU0654                          STATION RECOVERY (1998)
DU0654
DU0654'RECOVERY NOTE BY MARICOPA COUNTY ARIZONA 1998 (LOC)
DU0654'RECOVERED AS DESCRIBED.
DU0654
DU0654                          STATION RECOVERY (1998)
DU0654
DU0654'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1998 (CSM)
DU0654'THE STATION IS LOCATED IN THE EAST SECTION OF MESA, AT THE CITY OF
DU0654'MESA, FALCON HILL PARK LOCATED ON JENSEN STREET, 0.96 KM (0.60 MI)
DU0654'EAST OF ITS JUNCTION WITH POWER ROAD, IN ROCK OUTCROP AT THE WEST BASE
DU0654'OF A HILL ON THE EAST SIDE OF THE PARK.  OWNERSHIP--CITY OF MESA.  TO
DU0654'REACH THE STATION FROM THE EXIT RAMP AT THE JUNCTION OF U.S. STATE
DU0654'HIGHWAY 60 (EXIT 188) AND POWER ROAD IN MESA, GO NORTH ON POWER ROAD
DU0654'FOR 6.96 KM (4.30 MI) TO THE JUNCTION OF JENSEN STREET ON THE RIGHT,
DU0654'TURN RIGHT, EAST ON JENSEN STREET AND GO 0.96 KM (0.60 MI) TO THE EAST
DU0654'SIDE OF FALCON HILL PARK ON THE LEFT AND A HOUSE NUMBERED 7231 ON THE
DU0654'RIGHT.  TURN LEFT, NORTH ON A NARROW TRAIL ROAD BETWEEN THE LANDSCAPED
DU0654'AREA AROUND THE PARK AND GO 0.08 KM (0.05 MI) TO THE STATION ON THE
DU0654'RIGHT.  THE STATION IS A US COAST AND GEODETIC SURVEY BENCH MARK DISK
DU0654'SET IN A DRILL HOLE IN A 0.55 M (1.80 FT) BY 0.40 M (1.31 FT) ROCK
DU0654'OUTCROP AT THE BASE OF THE HILL, DIRECTLY EAST AND ACROSS THE GRASSY
DU0654'AREA OF THE PARK FROM A VOLLEYBALL NET IN THE CENTER OF THE PARK.  IT
DU0654'IS 42.05 M (137.96 FT) NORTH-NORTHEAST OF LIGHT POLE NUMBER 24, 29.6 M
DU0654'(97.1 FT) SOUTH-SOUTHEAST OF LIGHT POLE NUMBER 29, 26.7 M (87.6 FT)
DU0654'SOUTH OF THE SOUTH LEG OF A PARK RULES AND REGULATION SIGN, 17.83 M
DU0654'(58.50 FT) EAST-SOUTHEAST OF LIGHT POLE NUMBER 28, 10.21 M (33.50 FT)
DU0654'EAST-SOUTHEAST OF THE EAST CONCRETE CURBING AROUND THE PARK AND 10.05
DU0654'M (32.97 FT) NORTHEAST OF A SMALL 6-FT TALL SAGUARO CACTUS.
DU0654
DU0654                          STATION RECOVERY (2000)
DU0654
DU0654'RECOVERY NOTE BY MARICOPA CO DOT 2000 (KRH)
DU0654'RECOVERED AS DESCRIBED.
DU0654
DU0654                          STATION RECOVERY (2006)
DU0654
DU0654'RECOVERY NOTE BY US POWER SQUADRON 2006 (RHC)
DU0654'RECOVERED IN GOOD CONDITION.
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A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: A 365
Receiver No: 04596
Day of Year: 255
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 11 year 2008
Operator: Jason Graham

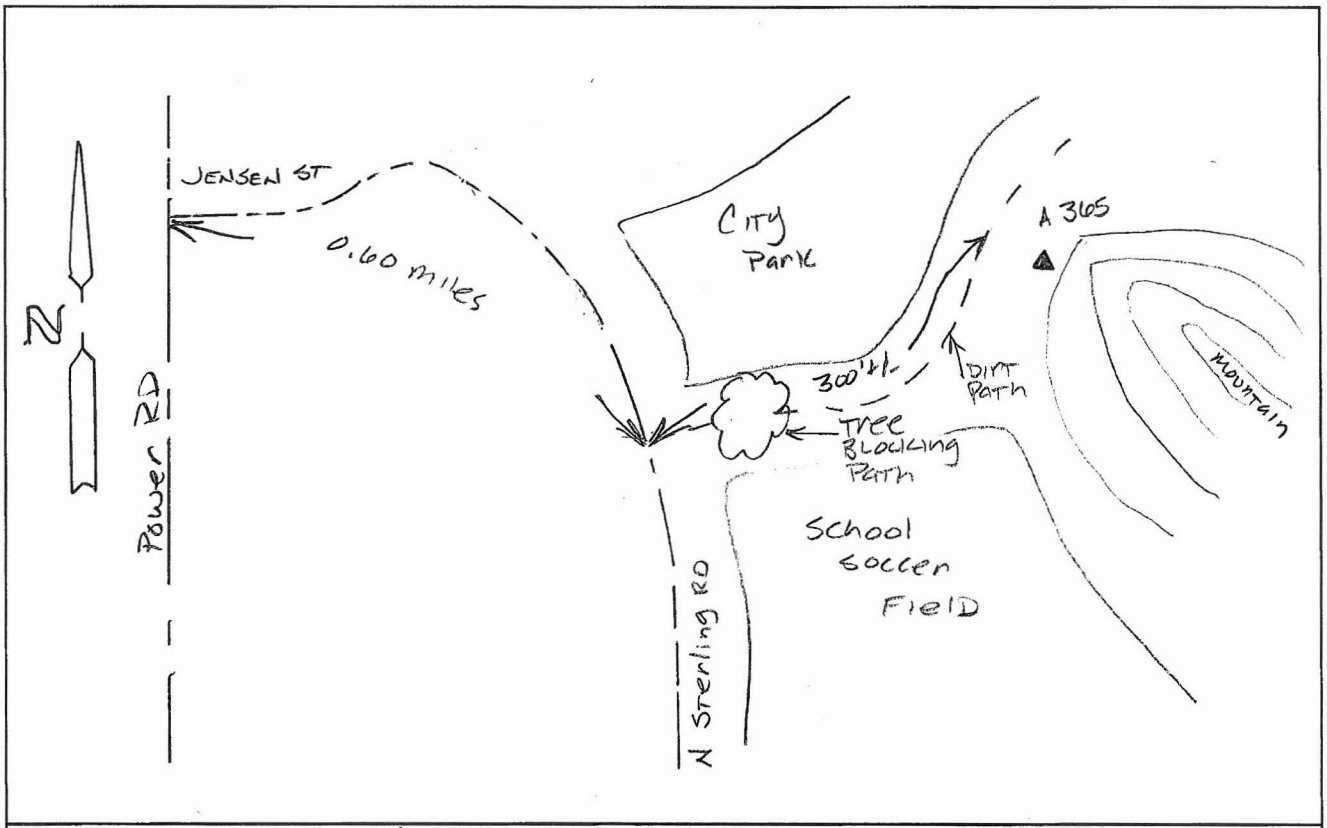
C/A CODE POSITION

Beg:
Lat: : 33 ° 26 ' 55.09 " N
Long: 111 ° 40 ' 27.39 " W
Ellip. Height: 442.7 M PDOP: 1.7
Ending:
Lat: 33 ° 26 ' 55.04 " N
Long: 111 ° 40 ' 27.37 " W
Ellip. Height: 442.7 M PDOP: 1.7

DC FILENAME:
DC# 8341 & POSTPROCESS#: 83412550
Receiver Model: 5800
Antenna Type: 5800 internal
Antenna Serial #: 4580
Fixed Height Pole No: Rover #4
Type of Survey: Fast Static (✓) Kinematic Base ( ) RTK Base ( ).
Actual= Start 12 : 45 . Stop: 19 : 51 . UTC
Beg. SV's Used: 11, 14, 16, 20, 22, 23, 30, 31, 32.
End SV's Used: 7, 8, 11, 13, 17, 19, 26, 27, 28.

Ant. Height (M) 2.000 m
Ant. Height (FT) 6.562
MEASURED TO: Bottom of Antenna Mount

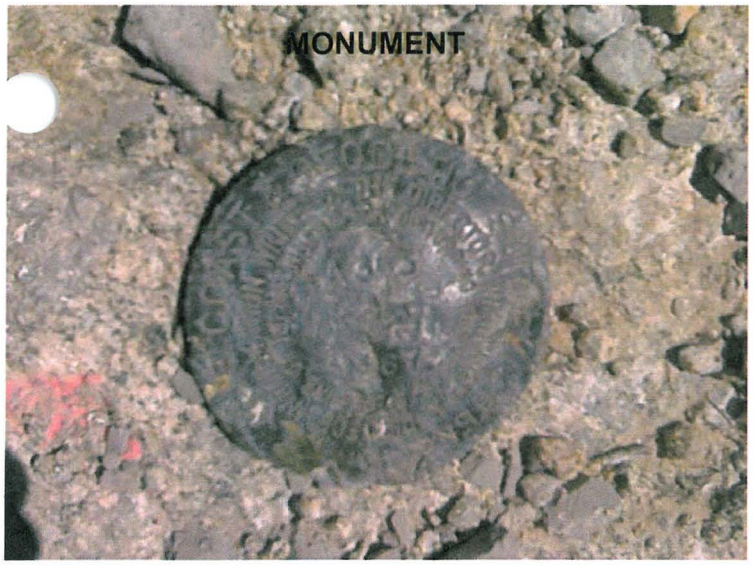
Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Cold Calm Breezy °F +/-

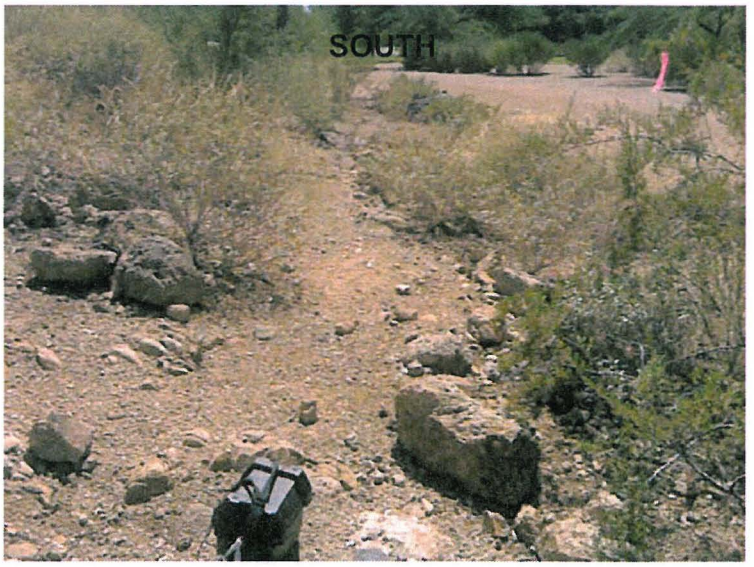


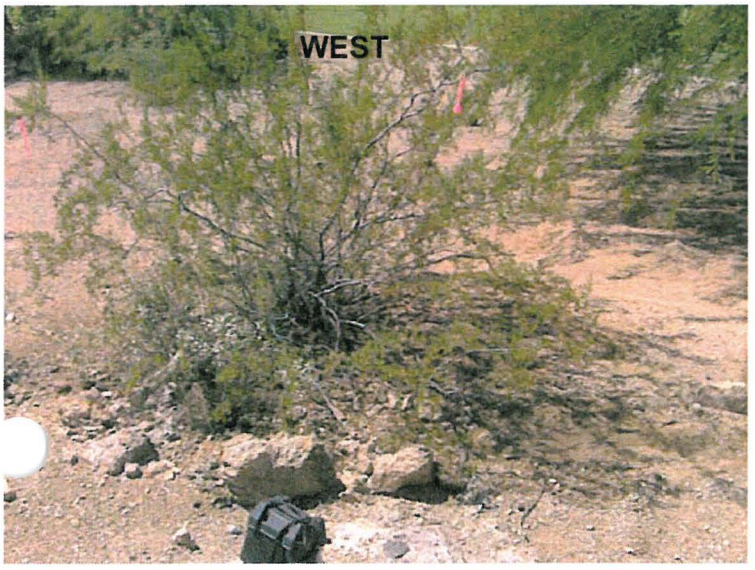
Type of Monument: USC+GS Brass Cap Stamping: A 365 1967
Top of marker: (✓) flush M ( ) above: ( ) below: Nat. Ground Stamping:
Detail Notes:

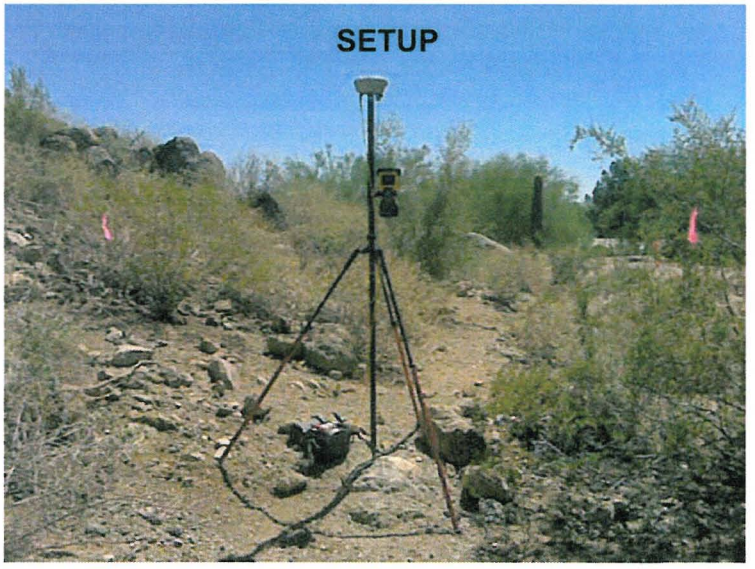
Photographs: Camera #: C4 Monument: 116 North: 117 East: 118
South: 119 West: 120 Set up: 115 Misc 1: Misc 2:
Rubbing Performed ( )Yes (✓) No

A365









DONEY

```
1        National Geodetic Survey,   Retrieval Date = OCTOBER  6, 2006
 DU2077
 ***********************************************************************
 DU2077  DESIGNATION -  DONEY
 DU2077  PID         -  DU2077
 DU2077  STATE/COUNTY-  AZ/PINAL
 DU2077  USGS QUAD   -  FLORENCE JUNCTION (1966)
 DU2077
 DU2077                         *CURRENT SURVEY CONTROL
 DU2077
 DU2077* NAD 83(1992)-  33 16 03.80770(N)    111 20 17.12714(W)     ADJUSTED
 DU2077* NAVD 88     -       636.1    (meters)    2087.     (feet)  VERTCON
 DU2077
 DU2077  LAPLACE CORR-           3.23  (seconds)                    DEFLEC99
 DU2077  GEOID HEIGHT-         -29.11  (meters)                     GEOID03
 DU2077
 DU2077  HORZ ORDER  -  SECOND
 DU2077
 DU2077.The horizontal coordinates were established by classical geodetic
 methods
 DU2077.and adjusted by the National Geodetic Survey in August 1993..
 DU2077
 DU2077.The NAVD 88 height was computed by applying the VERTCON shift value to
 DU2077.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)
 DU2077
 DU2077.The Laplace correction was computed from DEFLEC99 derived deflections.
 DU2077
 DU2077.The geoid height was determined by GEOID03.
 DU2077
 DU2077;                    North         East     Units Scale Factor Converg.
 DU2077;SPC AZ C     -   251,590.326   267,260.856   MT  0.99993581   +0 19
 02.6
 DU2077;SPC AZ C     -   825,427.58    876,840.08   iFT  0.99993581   +0 19
 02.6
 DU2077;UTM  12      - 3,681,018.491   468,512.616   MT  0.99961222   -0 11
 07.7
 DU2077
 DU2077!             -  Elev Factor  x  Scale Factor =   Combined Factor
 DU2077!SPC AZ C     -   0.99990472  x   0.99993581  =   0.99984054
 DU2077!UTM  12      -   0.99990472  x   0.99961222  =   0.99951698
 DU2077
 DU2077|-------------------------------------------------------------------|
 DU2077| PID    Reference Object                    Distance      Geod. Az  |
 DU2077|                                                          dddmmss.s |
 DU2077| CH5081 DONEY RM 1                           5.734 METERS 10511     |
 DU2077| DU2055 LORE RESET                         APPROX. 2.1 KM 1874530.0 |
 DU2077| CH5082 DONEY RM 2                          13.608 METERS 27657     |
 DU2077|-------------------------------------------------------------------|
 DU2077
 DU2077                          SUPERSEDED SURVEY CONTROL
 DU2077
 DU2077  NAD 83(1986)-  33 16 03.80220(N)    111 20 17.13004(W) AD(       ) 2
 DU2077  NAD 27      -  33 16 03.60848(N)    111 20 14.67434(W) AD(       ) 2
 DU2077  NGVD 29 (07/19/86)  635.5    (m)         2085.     (f) VERT ANG
 DU2077
 DU2077.Superseded values are not recommended for survey control.
 DU2077.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 DU2077.See file dsdata.txt to determine how the superseded data were derived.
 DU2077
 DU2077 U.S. NATIONAL GRID SPATIAL ADDRESS: 12SVB6851381018(NAD 83)
 DU2077 MARKER: DD = SURVEY DISK
 DU2077_SETTING: 66 = SET IN ROCK OUTCROP
 DU2077
 DU2077  HISTORY     - Date     Condition        Report By
 DU2077  HISTORY     - 1976     MONUMENTED       AZDT
 DU2077
 DU2077                          STATION DESCRIPTION
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DU2077
DU2077'DESCRIBED BY ARIZONA DEPARTMENT OF TRANSPORTATION 1976 (TT)
DU2077'THE STATION IS ABOUT 0.7 MILES NORTH OF FLORENCE JUNCTION AND
DU2077'U.S. HIGHWAY 60-80-89 ON THE HIGHEST PART OF A HILL.
DU2077'
DU2077'THE STATION IS AN ADOT HIGHWAY DIVISION DISK STAMPED DONEY
DU2077'P AND M G.S. 1975 AND IS EPOXIED IN A DRILL HOLE IN A ROCK
DU2077'OUTCROP.  THE STATION IS LOCATED ON HIGHEST PART OF A LOW HILL
DU2077'ABOUT 800 FEET EAST OF AN OLD PAVED ROAD.
DU2077'
DU2077'REFERENCE MARK 1 IS AN ADOT HIGHWAY DIVISION DISK STAMPED RM 1
DU2077'1975 AND IS EPOXIED IN A ROCK OUTCROP.
DU2077'
DU2077'REFERENCE MARK 2 IS AN ADOT HIGHWAY DIVISION DISK STAMPED RM 2,
DU2077'1975 AND IS EPOXIED IN A ROCK OUTCROP.
DU2077'
DU2077'TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAY 60 AND
DU2077'80-89 AT FLORENCE JUNCTION, GO NORTHWEST ON U.S. 60 FOR 0.25
DU2077'MILES TO AN OLD PAVED ROAD ON THE RIGHT (NORTH).  FOLLOW OLD PAVED
DU2077'ROAD FOR 0.45 MILES TO THE STATION ON THE RIGHT (EAST) ABOUT 800
DU2077'FEET EAST OF ROAD ON A LOW HILL.  ABOUT A 5 MINUTE PACK.
DU2077'
DU2077'HEIGHT OF LIGHT ABOVE STATION MARK 1.5 METERS.
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A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: DONEY
Receiver No: C8 40172
Day of Year: 255
Session No: 1

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 09 day 11 year 2008
Operator: H. EPPERSON

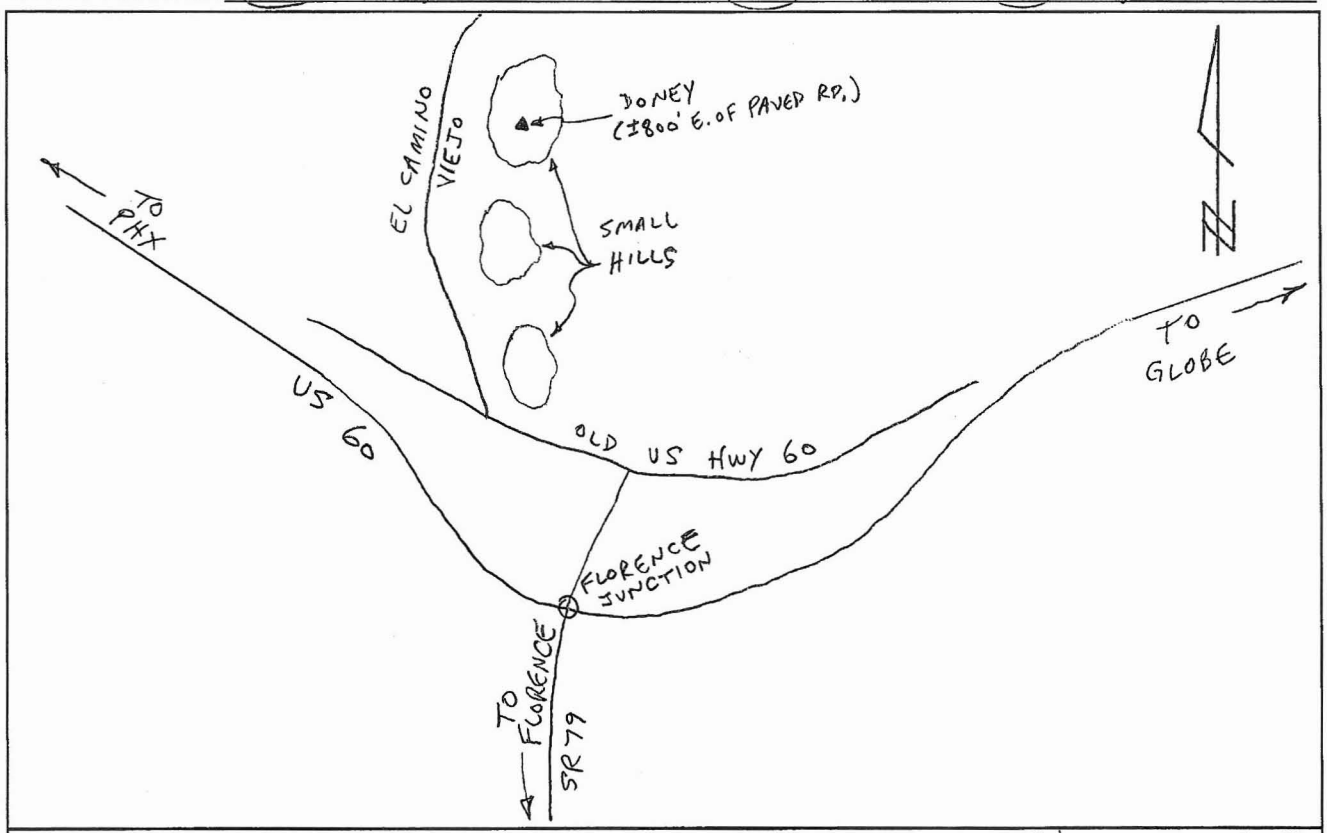
C/A CODE POSITION

Beg:
Lat: : 33 ° 16 ' 03.832 " N
Long: 111 ° 20 ' 17.192 " W
Ellip. Height: 605.566 M PDOP: 2.6
Ending:
Lat: 33 ° 16 ' 03.786 " N
Long: 111 ° 20 ' 17.139 " W
Ellip. Height: 608.142 M PDOP: 1.8

DC FILENAME: 1714-10-1241
DC# 31241 & POSTPROCESS#: 12412551
Receiver Model: TRIMBLE 5800 (C8)
Antenna Type: TRIMBLE 5800 INTERNAL
Antenna Serial #: 40172 (C8)
Fixed Height Pole No: C8
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 13 : 43 . Stop: 19 : 15 . UTC
Beg. SV's Used: G11, G14, G16, G20, G23, G31, G32
End SV's Used: G7, G8, G10, G11, G13, G17, G19, G27, G28

Ant. Height (M) 2.0
Ant. Height (FT)
MEASURED TO: BOTTOM OF ANT. MOUNT

Weather Conditions: (Clear) P. Cloudy Overcast Hot (Warm) Cool Cold (Calm) Breezy 70°F +/-

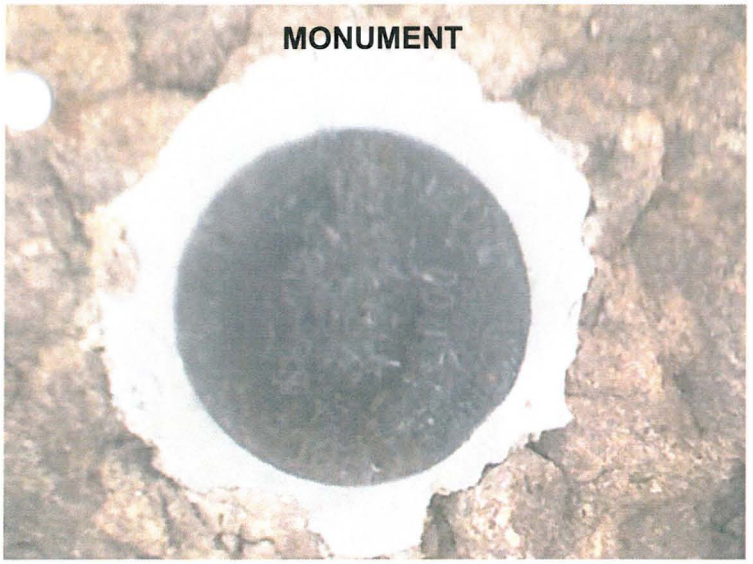


Type of Monument: 3 1/4" BRASS DISK Stamping: DONEY P&M G.S. 1975.
Top of marker: (X) flush M ( ) above: ( ) below: Nat. Ground Stamping: ADOT HWY DIVISION
Detail Notes: BRASS DISK EPOXIED IN ROCK (SAME AS NGS GO-TO SHEET).

Photographs: Camera #: HAL (TREO) Monument: DONEY MONUMENT North: DONEY NORTH East: DONEY EAST
South: DONEY SOUTH West: DONEY WEST Set up: DONEY SETUP Misc 1: Misc 2:
Rubbing Performed ( )Yes (X)No DIGITAL PICTURES

DONEY

MONUMENT



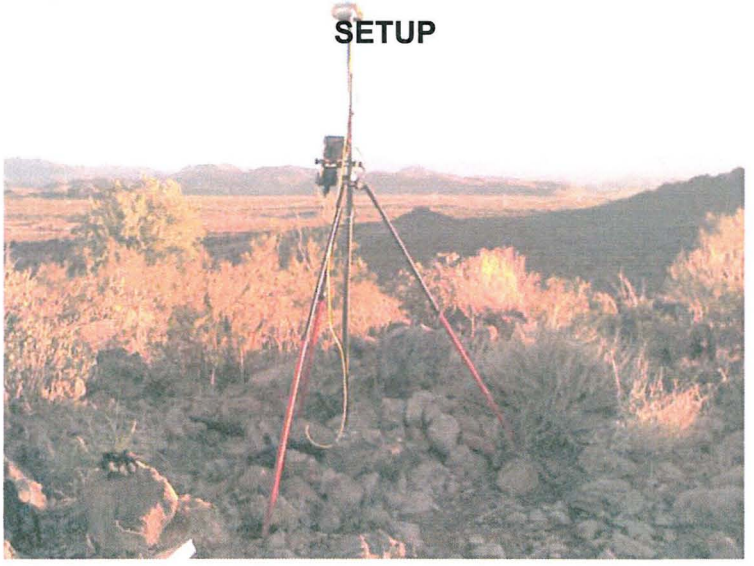
NORTH

EAST

SOUTH

WEST

SETUP



G474

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1        National Geodetic Survey,   Retrieval Date = OCTOBER  6, 2006
 DU1317
 ***********************************************************************
 DU1317  DESIGNATION -  G 474
 DU1317  PID         -  DU1317
 DU1317  STATE/COUNTY-  AZ/PINAL
 DU1317  USGS QUAD   -  APACHE JUNCTION (1982)
 DU1317
 DU1317                        *CURRENT SURVEY CONTROL
 DU1317
 DU1317* NAD 83(1992)-  33 24 34.30786(N)    111 32 00.12518(W)     ADJUSTED
 DU1317* NAVD 88     -       532.801  (meters)    1748.03   (feet)  ADJUSTED
 DU1317
 DU1317  X           -  -1,956,347.235 (meters)                     COMP
 DU1317  Y           -  -4,958,007.200 (meters)                     COMP
 DU1317  Z           -   3,492,239.735 (meters)                     COMP
 DU1317  LAPLACE CORR-           2.79  (seconds)                    DEFLEC99
 DU1317  ELLIP HEIGHT-         503.52  (meters)          (01/27/00) GPS OBS
 DU1317  GEOID HEIGHT-         -29.31  (meters)                     GEOID03
 DU1317  DYNAMIC HT  -         532.150 (meters)    1745.90  (feet)  COMP
 DU1317  MODELED GRAV-     979,399.0   (mgal)                       NAVD 88
 DU1317
 DU1317  HORZ ORDER  -  B
 DU1317  VERT ORDER  -  FIRST     CLASS II
 DU1317  ELLP ORDER  -  FIRST     CLASS I
 DU1317
 DU1317.The horizontal coordinates were established by GPS observations
 DU1317.and adjusted by the National Geodetic Survey in September 1992..
 DU1317
 DU1317.The orthometric height was determined by differential leveling
 DU1317.and adjusted by the National Geodetic Survey in June 1991..
 DU1317
 DU1317.The X, Y, and Z were computed from the position and the ellipsoidal
 ht.
 DU1317
 DU1317.The Laplace correction was computed from DEFLEC99 derived deflections.
 DU1317
 DU1317.The ellipsoidal height was determined by GPS observations
 DU1317.and is referenced to NAD 83.
 DU1317
 DU1317.The geoid height was determined by GEOID03.
 DU1317
 DU1317.The dynamic height is computed by dividing the NAVD 88
 DU1317.geopotential number by the normal gravity value computed on the
 DU1317.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 DU1317.degrees latitude (g = 980.6199 gals.).
 DU1317
 DU1317.The modeled gravity was interpolated from observed gravity values.
 DU1317
 DU1317;                    North         East     Units Scale Factor Converg.
 DU1317;SPC AZ C     -   267,232.854   249,010.623   MT  0.99991566   +0 12
 39.8
 DU1317;SPC AZ C     -   876,748.21    816,963.99   iFT  0.99991566   +0 12
 39.8
 DU1317;UTM  12      - 3,696,816.074   450,406.145   MT  0.99963032   -0 17
 37.3
 DU1317
 DU1317!             -  Elev Factor  x  Scale Factor =   Combined Factor
 DU1317!SPC AZ C     -   0.99992096  x   0.99991566  =   0.99983662
 DU1317!UTM  12      -   0.99992096  x   0.99963032  =   0.99955131
 DU1317
 DU1317                         SUPERSEDED SURVEY CONTROL
 DU1317
 DU1317  NAD 83(1986)-  33 24 34.30078(N)    111 32 00.12903(W) AD(       ) B
 DU1317  ELLIP H (09/30/92)  503.60   (m)                        GP(       ) 2
 1
 DU1317  NAVD 88 (09/30/92)  532.80   (m)         1748.0    (f) LEVELING    3
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DU1317
DU1317.Superseded values are not recommended for survey control.
DU1317.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
DU1317.See file dsdata.txt to determine how the superseded data were derived.
DU1317
DU1317 U.S. NATIONAL GRID SPATIAL ADDRESS: 12SVB5040696816(NAD 83)
DU1317 MARKER: DU = BOUNDARY MARKER
DU1317 SETTING: 66 = SET IN ROCK OUTCROP
DU1317 SP SET: ROCK OUTCROP
DU1317 STAMPING: G 474 1981
DU1317 MARK LOGO: NGS
DU1317 MAGNETIC: N = NO MAGNETIC MATERIAL
DU1317 STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
DU1317+STABILITY: POSITION/ELEVATION WELL
DU1317 SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
DU1317+SATELLITE: SATELLITE OBSERVATIONS - June 25, 2006
DU1317
DU1317  HISTORY     - Date     Condition        Report By
DU1317  HISTORY     - 1981     MONUMENTED       NGS
DU1317  HISTORY     - 1984     GOOD             AZDT
DU1317  HISTORY     - 19920420 GOOD             NGS
DU1317  HISTORY     - 19980929 GOOD             AZ-013
DU1317  HISTORY     - 19991120 GOOD             USPSQD
DU1317  HISTORY     - 20000330 GOOD             MCDOT
DU1317  HISTORY     - 20011212 GOOD             INDIV
DU1317  HISTORY     - 20020319 GOOD             NGS
DU1317  HISTORY     - 20060625 GOOD             GEOCAC
DU1317
DU1317                          STATION DESCRIPTION
DU1317
DU1317'DESCRIBED BY NATIONAL GEODETIC SURVEY 1981
DU1317'1.9 KM (1.2 MI.) SE FROM APACHE JUNCTION.
DU1317'THE MARK IS 2 M BELOW THE BASE OF THE CROSS.
DU1317'1.4 KILOMETERS (0.9 MILE) SOUTHEAST ALONG U.S. HIGHWAY 60 FROM THE
DU1317'JUNCTION OF STATE HIGHWAY 88 AT APACHE JUNCTION, THENCE 0.3 KILOMETER
DU1317'(0.2 MILE) EAST ALONG BROADWAY STREET TO THE UNITED PRESBYTERIAN
DU1317'CHURCH, THENCE 0.2 KILOMETER (0.1 MILE) NORTH THROUGH THE CHURCH
DU1317'PARKING LOT TO THE OUTCROP KNOLL, IN THE TOP OF A
DU1317'ROCK OUTCROP AT THE BASE OF THE SOUTH SIDE OF THE KNOLL, 32.0
DU1317'METER (104.5 FEET) WEST OF THE 25-FT. WOODEN CROSS ON THE EAST SIDE
DU1317'OF THE KNOLL, 30.2 METERS (99.0 FEET) NORTHWEST OF THE FIRST POWER
DU1317'POLE SOUTH OF THE KNOLL, 27.3 METER (89.6 FEET) SOUTHWEST OF THE POWER
DU1317'POLE ON TOP OF THE KNOLL, 30.5 METERS (100.0 FEET) WEST OF THE AZDT
DU1317'BM 1262 AB AND 1.0 METER (3.3 FEET) EAST OF THE EXTENTION OF THE EAST
DU1317'WALL OF THE CHURCH.
DU1317'THE MARK IS 0.6 METERS  W FROM A WITNESS POST.
DU1317
DU1317                          STATION RECOVERY (1984)
DU1317
DU1317'RECOVERY NOTE BY ARIZONA DEPARTMENT OF TRANSPORTATION 1984
DU1317'RECOVERED IN GOOD CONDITION.
DU1317
DU1317                          STATION RECOVERY (1992)
DU1317
DU1317'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1992
DU1317'THE STATION IS LOCATED ON THE EAST SIDE OF APACHE JUNCTION, ON THE
DU1317'SOUTH SIDE OF A LOW ROCKY HILL, ON THE NORTH SIDE OF THE PAVED
DU1317'PARKING LOT OF THE JOHN CALVIN PRESBYTERIAN CHURCH, 0.2 KM (0.1 MI)
DU1317'NORTH OF BROADWAY AVENUE.  OWNERSHIP--UNKNOWN.
DU1317'TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAYS 60 AND 89 AND
DU1317'STATE HIGHWAY 88 NORTH IN APACHE JUNCTION, GO SOUTHEAST ON HIGHWAYS
DU1317'60 AND 89 FOR 1.39 KM (0.86 MI) TO A CROSSROAD (ROYAL PALM ROAD ON
DU1317'THE RIGHT).  TURN LEFT, EAST, ON BROADWAY AVENUE FOR 0.40 KM
DU1317'(0.25 MI) TO THE EAST ENTRANCE TO THE JOHN CALVIN CHURCH PARKING LOT
DU1317'ON THE LEFT.  TURN LEFT, NORTH, INTO PARKING LOT FOR 0.17 KM
DU1317'(0.11 MI) TO END OF PAVEMENT.  CONTINUE AHEAD UPHILL ON A ROCKY TRACK
DU1317'ROAD UNDER THE POWER LINE FOR 30 M (98.4 FT) TO THE STATION ON THE
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DU1317'LEFT, ABOUT 14 M (45.9 FT) WEST.
DU1317'THE STATION IS SET IN A DRILL HOLE IN A 0.8 M (2.6 FT) X 1.8 M
DU1317'(5.9 FT) FLUSH OUTCROP.  LOCATED 31.9 M (104.7 FT) NORTH OF THE EDGE
DU1317'OF THE LOT PAVEMENT, 30.2 M (99.1 FT) NORTHWEST OF A POWERLINE POLE,
DU1317'14.2 M (46.6 FT) WEST OF THE LANE CENTER, 8.2 M (26.9 FT) NORTHEAST
DU1317'OF A LONE SAGUARO CACTUS, 7.9 M (25.9 FT) SOUTHEAST OF AND 2 M
DU1317'(6.6 FT) LOWER THAN P+M BM 1262 AC 1973 ADOT, 1 M (3.3 FT) EAST OF
DU1317'THE EXTENDED EAST WALL OF THE CHURCH AND 0.6 M (2.0 FT) WEST OF A
DU1317'SHORT METAL WITNESS POST.
DU1317
DU1317                          STATION RECOVERY (1998)
DU1317
DU1317'RECOVERY NOTE BY MARICOPA COUNTY ARIZONA 1998 (LOC)
DU1317'RECOVERED AS DESCRIBED.
DU1317
DU1317                          STATION RECOVERY (1999)
DU1317
DU1317'RECOVERY NOTE BY US POWER SQUADRON 1999
DU1317'RECOVERED IN GOOD CONDITION.
DU1317
DU1317                          STATION RECOVERY (2000)
DU1317
DU1317'RECOVERY NOTE BY MARICOPA CO DOT 2000 (DC)
DU1317'RECOVERED AS DESCRIBED.
DU1317
DU1317                          STATION RECOVERY (2001)
DU1317
DU1317'RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2001 (TAL)
DU1317'RECOVERED AS DESCRIBED
DU1317
DU1317                          STATION RECOVERY (2002)
DU1317
DU1317'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2002 (DHM)
DU1317'ALL PERSONS UTILIZING THIS MARK ARE ASKED TO PARK THEIR VEHICLES IN
DU1317'THE JOHN CALVIN PRESBYTERIAN CHURCH PARKING LOT AND PROCEED TO THE
DU1317'STATION ON FOOT TO MINIMIZE DUST.  THE CHURCH WILL CONTINUE TO ALLOW
DU1317'ACCESS TO THEIR LOT AND THE SURVEY STATION IF SURVEYORS ABIDE BY THIS
DU1317'REQUEST.  NOTE - THE STATION WAS NOT RECOVERED ON THIS DATE.
DU1317
DU1317                          STATION RECOVERY (2006)
DU1317
DU1317'RECOVERY NOTE BY GEOCACHING 2006 (JM)
DU1317'THE WITNESS POST WAS MISSING, ONLY THE BASE OF THE POST REMAINS.
```

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: G474
Receiver No: 6076
Day of Year: 255
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 11 year 2008
Operator: Jason Graham

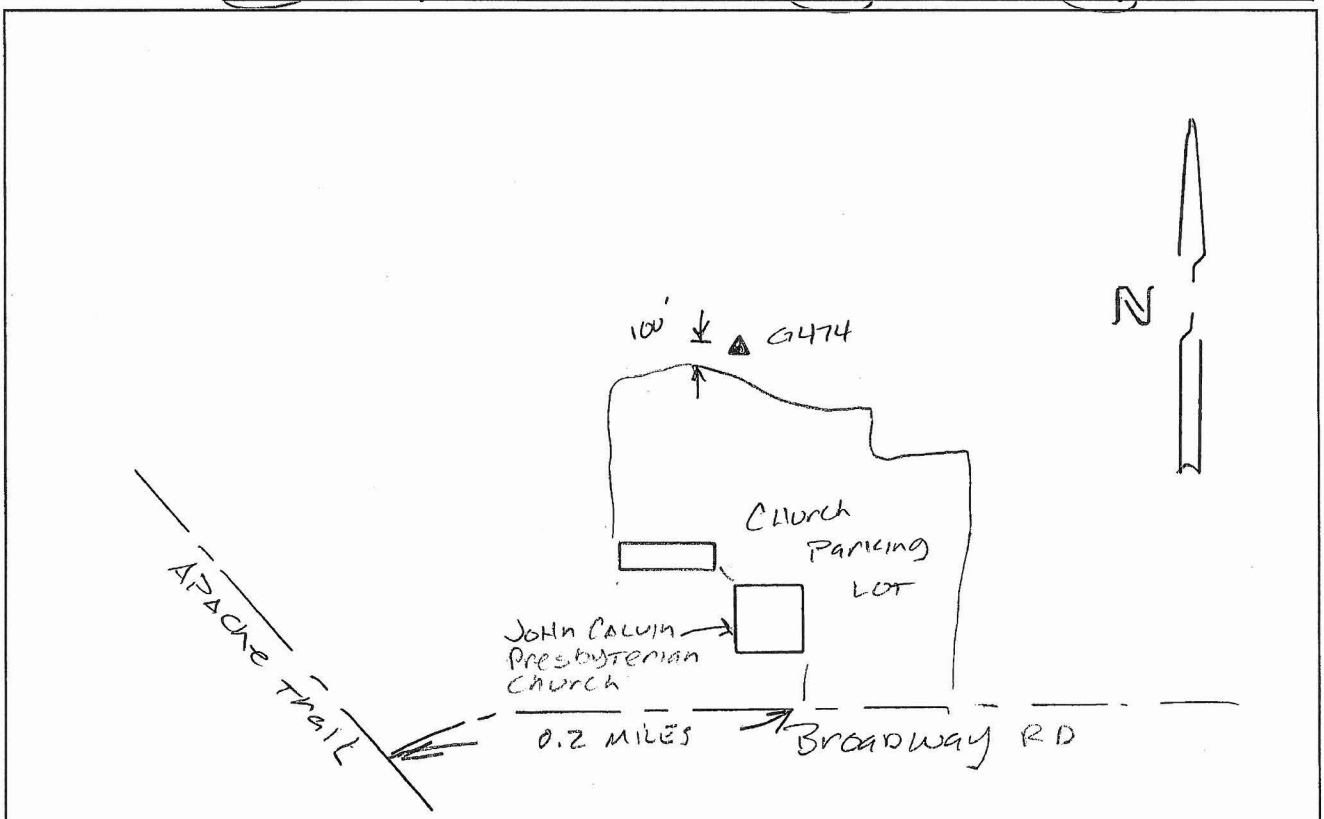
C/A CODE POSITION

Beg:
Lat: : 33 ° 24 ' 34.32 " N
Long: 111 ° 32 ' 00.20 " W
Ellip. Height: 504.8 M PDOP: 2.4
Ending:
Lat: 33 ° 24 ' 34.28 " N
Long: 111 ° 32 ' 00.13 " W
Ellip. Height: 506.4 M PDOP: 2.0

DC FILENAME:
DC# & POSTPROCESS#: 60762550
Receiver Model: 4000 SSE
Antenna Type: Compact L1/L2
Antenna Serial #: 9B2414
Fixed Height Pole No: #4
Type of Survey: Fast Static (✓) Kinematic Base ( ) RTK Base ( ).
Actual= Start 13 : 30 . Stop: 19 : 15 . UTC
Beg. SV's Used: 13, 14, 16, 20, 23, 31
End SV's Used: 11, 13, 08, 28, 17, 19, 10

Ant. Height (M) 1.500
Ant. Height (FT) 4.92
MEASURED TO: Bottom of Antenna Mount

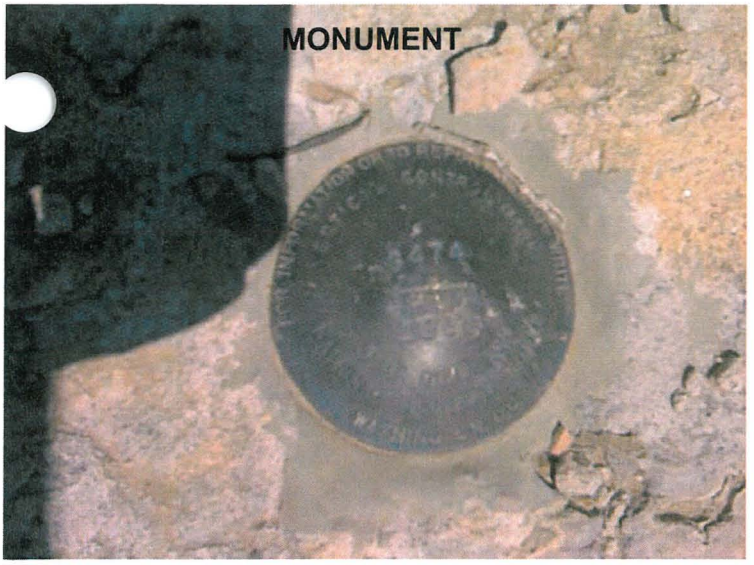
Weather Conditions: (Clear) P. Cloudy Overcast Hot Warm (Cool) Cold Calm (Breezy) 75°F +/-

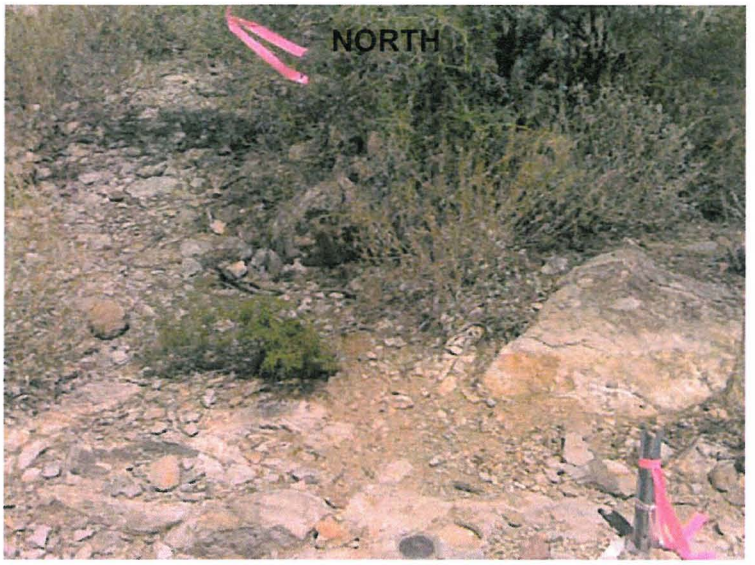


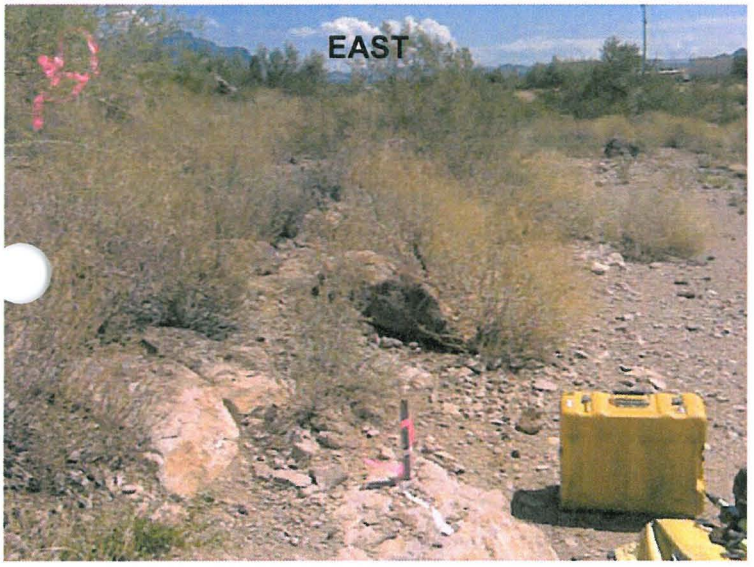
Type of Monument: NGS Brass cap Stamping: G474 1981
Top of marker: (✓) flush M ( ) above: ( ) below: Nat. Ground Stamping:
Detail Notes:

Photographs: Camera #: C4 Monument: 111 North: 112 East: 113
South: — West: 114 Set up: 110 Misc 1: Misc 2:
Rubbing Performed ( )Yes (✓)No

G474

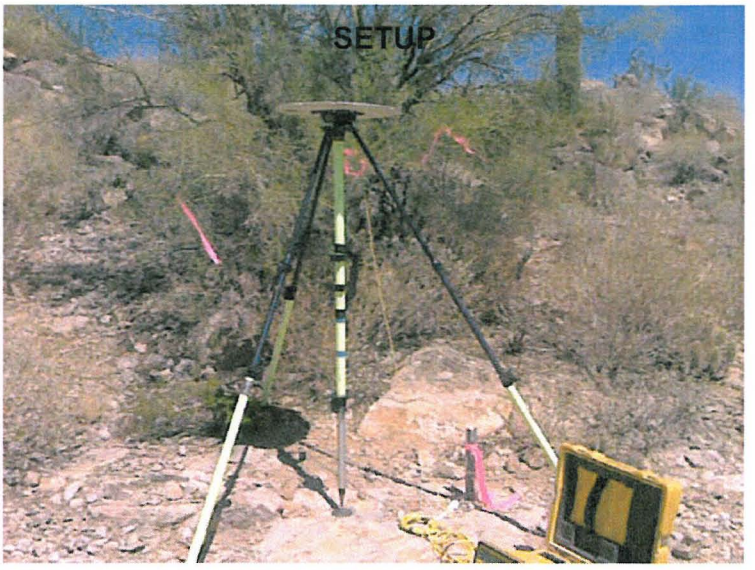






SOUTH

PHOTO NOT AVAILABLE



L521

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1        National Geodetic Survey,   Retrieval Date = OCTOBER  6, 2006
 DV2347
 ***********************************************************************
 DV2347  DESIGNATION -  L 521
 DV2347  PID         -  DV2347
 DV2347  STATE/COUNTY-  AZ/PINAL
 DV2347  USGS QUAD   -  PIMA BUTTE (1967)
 DV2347
 DV2347                         *CURRENT SURVEY CONTROL
 DV2347
 DV2347* NAD 83(1992)-  33 09 56.22283(N)    112 00 31.58204(W)     ADJUSTED
 DV2347* NAVD 88     -       348.897  (meters)    1144.67   (feet)  ADJUSTED
 DV2347
 DV2347  X           -  -2,002,924.396 (meters)                     COMP
 DV2347  Y           -  -4,955,227.281 (meters)                     COMP
 DV2347  Z           -   3,469,523.219 (meters)                     COMP
 DV2347  LAPLACE CORR-           1.20  (seconds)                    DEFLEC99
 DV2347  ELLIP HEIGHT-         318.78  (meters)          (01/27/00) GPS OBS
 DV2347  GEOID HEIGHT-         -30.11  (meters)                     GEOID03
 DV2347  DYNAMIC HT  -         348.488 (meters)    1143.33   (feet) COMP
 DV2347  MODELED GRAV-     979,455.8   (mgal)                       NAVD 88
 DV2347
 DV2347  HORZ ORDER  -  A
 DV2347  VERT ORDER  -  FIRST     CLASS II
 DV2347  ELLP ORDER  -  FIRST     CLASS I
 DV2347
 DV2347.The horizontal coordinates were established by GPS observations
 DV2347.and adjusted by the National Geodetic Survey in January 2000..
 DV2347
 DV2347.The orthometric height was determined by differential leveling
 DV2347.and adjusted by the National Geodetic Survey in August 1994..
 DV2347
 DV2347.The X, Y, and Z were computed from the position and the ellipsoidal
 ht.
 DV2347
 DV2347.The Laplace correction was computed from DEFLEC99 derived deflections.
 DV2347
 DV2347.The ellipsoidal height was determined by GPS observations
 DV2347.and is referenced to NAD 83.
 DV2347
 DV2347.The geoid height was determined by GEOID03.
 DV2347
 DV2347.The dynamic height is computed by dividing the NAVD 88
 DV2347.geopotential number by the normal gravity value computed on the
 DV2347.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 DV2347.degrees latitude (g = 980.6199 gals.).
 DV2347
 DV2347.The modeled gravity was interpolated from observed gravity values.
 DV2347
 DV2347;                    North         East     Units Scale Factor Converg.
 DV2347;SPC AZ C     -   240,121.441   204,769.362   MT  0.99990091   -0 03
 01.4
 DV2347;SPC AZ C     -   787,800.00    671,815.49   iFT  0.99990091   -0 03
 01.4
 DV2347;UTM  12      - 3,670,100.570   405,939.136   MT  0.99970908   -0 33
 06.8
 DV2347
 DV2347!             -  Elev Factor  x  Scale Factor =   Combined Factor
 DV2347!SPC AZ C     -   0.99994995  x   0.99990091  =   0.99985087
 DV2347!UTM  12      -   0.99994995  x   0.99970908  =   0.99965905
 DV2347
 DV2347                         SUPERSEDED SURVEY CONTROL
 DV2347
 DV2347  NAVD 88 (01/27/00)  348.90   (m)         1144.7    (f) LEVELING    3
 DV2347
 DV2347.Superseded values are not recommended for survey control.
 DV2347.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
```

```
DV2347.See file dsdata.txt to determine how the superseded data were derived.
DV2347
DV2347 U.S. NATIONAL GRID SPATIAL ADDRESS: 12SVB0593970101(NAD 83)
DV2347 MARKER: DV = VERTICAL CONTROL DISK
DV2347 SETTING: 66 = SET IN ROCK OUTCROP
DV2347 SP SET: IN A DRILL HOLE IN BEDROCK
DV2347 STAMPING: L 521 1994
DV2347 MARK LOGO: NGS
DV2347 MAGNETIC: N = NO MAGNETIC MATERIAL
DV2347 STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
DV2347+STABILITY: POSITION/ELEVATION WELL
DV2347 SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
DV2347+SATELLITE: SATELLITE OBSERVATIONS - August 17, 2006
DV2347
DV2347  HISTORY     - Date     Condition        Report By
DV2347  HISTORY     - 1994     MONUMENTED       NGS
DV2347  HISTORY     - 19980916 POOR             AZ-013
DV2347  HISTORY     - 20000427 GOOD             MCDOT
DV2347  HISTORY     - 20060817 GOOD             GEOCAC
DV2347
DV2347                          STATION DESCRIPTION
DV2347
DV2347'DESCRIBED BY NATIONAL GEODETIC SURVEY 1994
DV2347'9.3 KM (5.75 MI) SOUTHERLY ALONG 51ST AVENUE FROM THE POST OFFICE IN
DV2347'LAVEEN, THENCE 18.8 KM (11.70 MI) EASTERLY ALONG BELTLINE ROAD,
DV2347'THENCE 6.3 KM (3.90 MI) SOUTHERLY ALONG MARICOPA ROAD, NEAR THE
DV2347'CENTER OF A 4 BY 6-FOOT AREA OF OUTCROPPING BEDROCK, 51.8 M
DV2347'(169.9 FT) WEST OF THE ROAD CENTERLINE, 2.0 M (6.6 FT) ABOVE THE
DV2347'LEVEL OF THE ROAD, AND 0.4 M (1.3 FT) EAST OF A WITNESS POST.
DV2347
DV2347                          STATION RECOVERY (1998)
DV2347
DV2347'RECOVERY NOTE BY MARICOPA COUNTY ARIZONA 1998 (LOC)
DV2347'RECOVERED AS DESCRIBED.
DV2347
DV2347                          STATION RECOVERY (2000)
DV2347
DV2347'RECOVERY NOTE BY MARICOPA CO DOT 2000 (JJR)
DV2347'RECOVERED AS DESCRIBED.
DV2347
DV2347                          STATION RECOVERY (2006)
DV2347
DV2347'RECOVERY NOTE BY GEOCACHING 2006 (ACM)
DV2347'RECOVERED IN GOOD CONDITION.
```

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: L521
Receiver No: 6126
Day of Year: 255
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 11 year 2008
Operator: CLINTON FISCHER

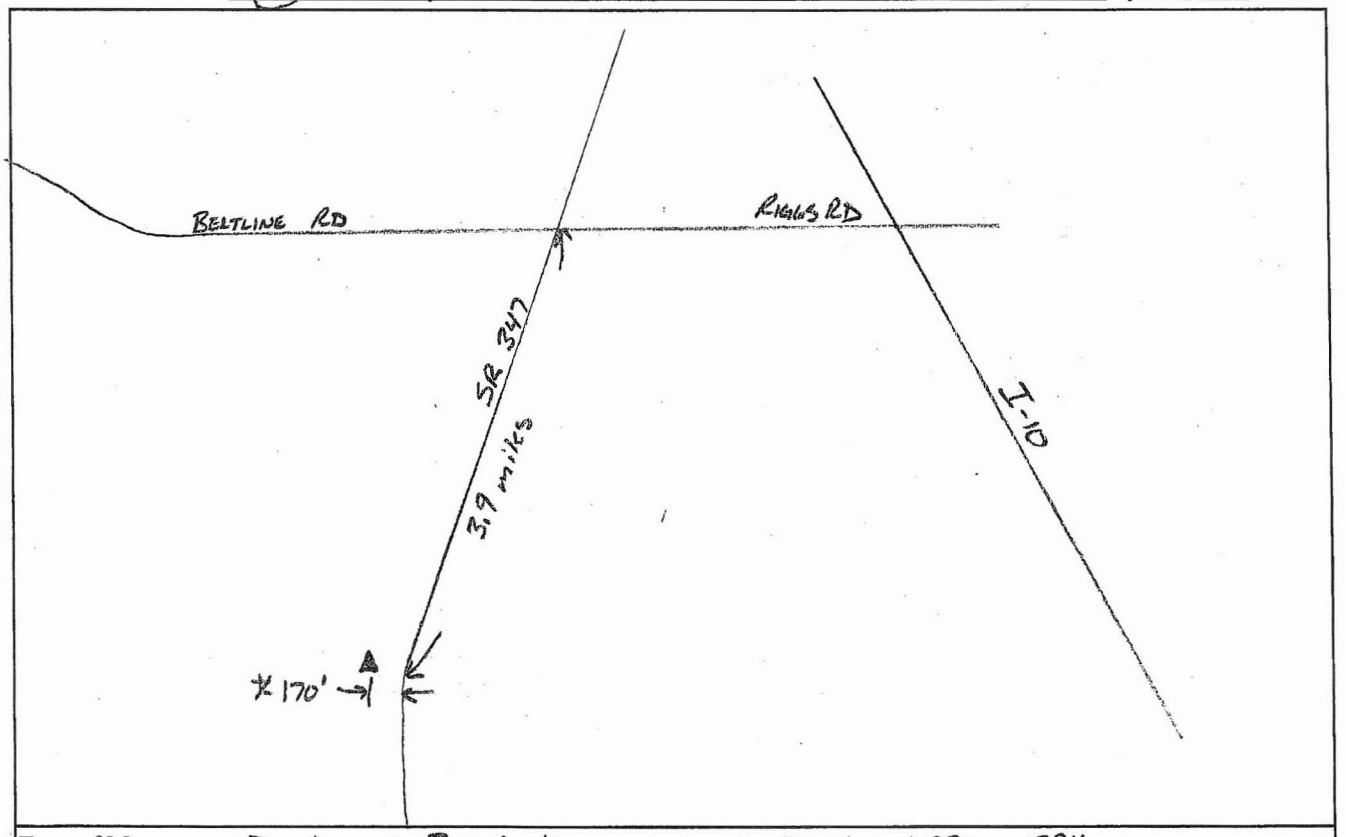
C/A CODE POSITION

Beg:
Lat: : 33 ° 09 ' 56.30 " N
Long: 112 ° 00 ' 31.62 " W
Ellip. Height: 318+ M PDOP: 2.4
Ending:
Lat: 33 ° 09 ' 56.19 " N
Long: 112 ° 00 ' 31.58 " W
Ellip. Height: 320 M PDOP: ____

DC FILENAME: ——
DC# —— & POSTPROCESS#: 61262550
Receiver Model: 4000 SSE
Antenna Type: Compact L1/L2
Antenna Serial #:
Fixed Height Pole No: ATEAM #6
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 12 : 19 . Stop: 19 : 18 . UTC
Beg. SV's Used: 11, 14, 16, 20, 27, 30, 31
End SV's Used: 19, 07, 13, 28, 11, 17, 10

Ant. Height (M) 1.5m
Ant. Height (FT)
MEASURED TO: BOTTOM ANTENNA MOUNT

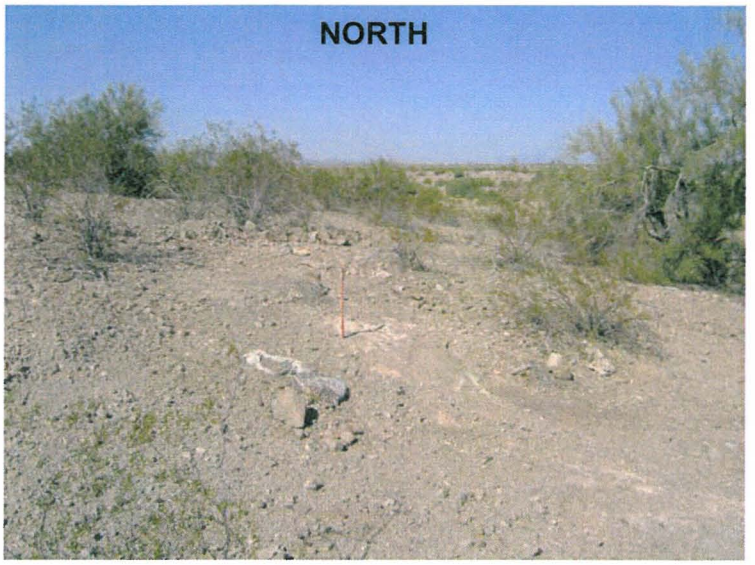
Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Cold Calm Breezy 74 °F +/-

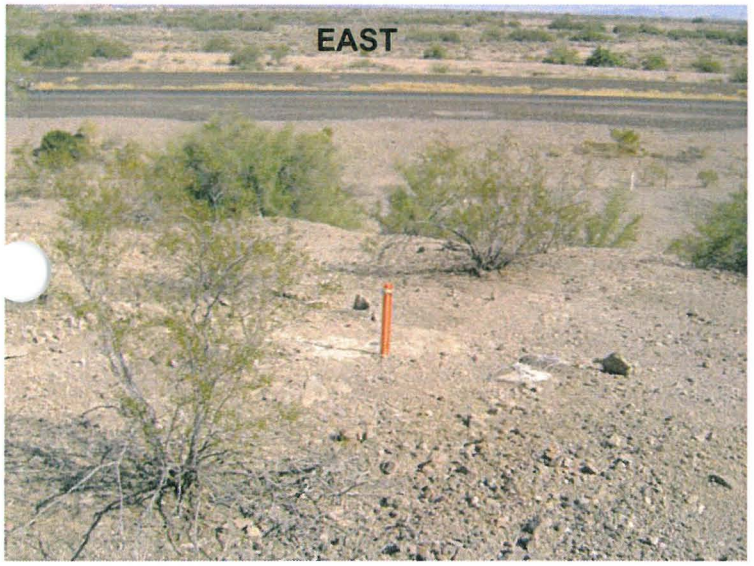


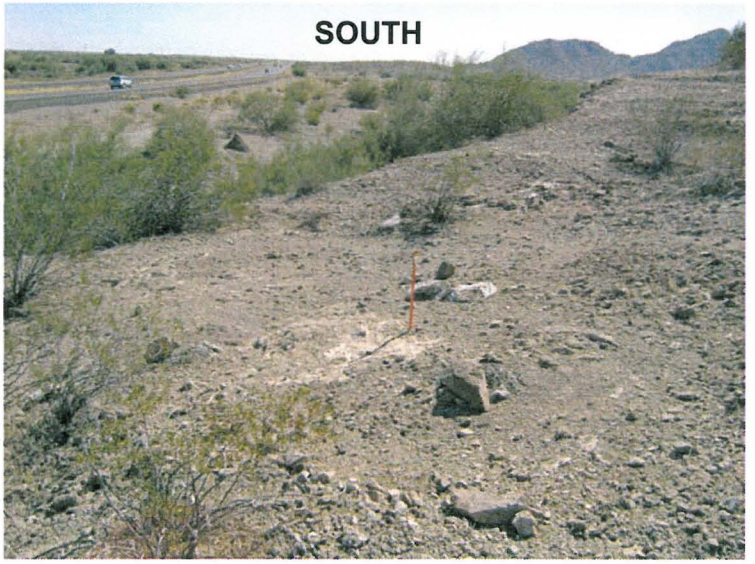
Type of Monument: DISK IN BEDROCK Stamping: L521 1994
Top of marker: (x) flush M ( ) above: ( ) below: Nat. Ground Stamping:
Detail Notes:

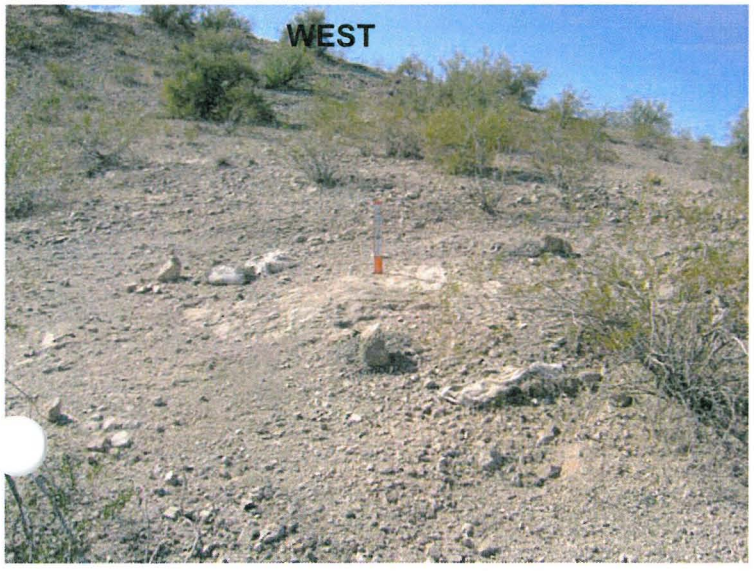
Photographs: Camera #: Monument: North: East:
South: West: Set up: Misc 1: Misc 2:
Rubbing Performed ( )Yes (X)No

L521









SETUP

PHOTO NOT AVAILABLE

HILL

```
1        National Geodetic Survey,   Retrieval Date = OCTOBER  6, 2006
 DU2083
 ***********************************************************************
 DU2083  DESIGNATION -  HILL
 DU2083  PID         -  DU2083
 DU2083  STATE/COUNTY-  AZ/PINAL
 DU2083  USGS QUAD   -  SUPERSTITION MTS SW (1981)
 DU2083
 DU2083                         *CURRENT SURVEY CONTROL
 DU2083
 DU2083* NAD 83(1992)-  33 21 05.75950(N)    111 27 37.96181(W)     ADJUSTED
 DU2083* NAVD 88     -       558.6    (meters)    1833.     (feet)  VERTCON
 DU2083
 DU2083  LAPLACE CORR-            3.92  (seconds)                   DEFLEC99
 DU2083  GEOID HEIGHT-          -29.21  (meters)                    GEOID03
 DU2083
 DU2083  HORZ ORDER  -  SECOND
 DU2083
 DU2083.The horizontal coordinates were established by classical geodetic
 methods
 DU2083.and adjusted by the National Geodetic Survey in August 1993..
 DU2083
 DU2083.The NAVD 88 height was computed by applying the VERTCON shift value to
 DU2083.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)
 DU2083
 DU2083.The Laplace correction was computed from DEFLEC99 derived deflections.
 DU2083
 DU2083.The geoid height was determined by GEOID03.
 DU2083
 DU2083;                    North         East     Units Scale Factor Converg.
 DU2083;SPC AZ C     -   260,835.637   255,812.102   MT  0.99992221   +0 15
 02.8
 DU2083;SPC AZ C     -   855,759.96    839,278.55   iFT  0.99992221   +0 15
 02.8
 DU2083;UTM  12      - 3,690,361.122   457,149.076   MT  0.99962264   -0 15
 11.5
 DU2083
 DU2083!             -  Elev Factor  x  Scale Factor =   Combined Factor
 DU2083!SPC AZ C     -   0.99991690  x   0.99992221  =   0.99983912
 DU2083!UTM  12      -   0.99991690  x   0.99962264  =   0.99953957
 DU2083
 DU2083|-----------------------------------------------------------------|
 DU2083| PID    Reference Object                    Distance      Geod. Az  |
 DU2083|                                                          dddmmss.s |
 DU2083| CH5297 HILL RM 1                            7.005 METERS 09542     |
 DU2083| CH5298 HILL RM 2                           11.140 METERS 27342     |
 DU2083| DU2085 ROADSIDE                           APPROX. 3.9 KM 3263121.8 |
 DU2083|-----------------------------------------------------------------|
 DU2083
 DU2083                          SUPERSEDED SURVEY CONTROL
 DU2083
 DU2083  NAD 83(1986)-  33 21 05.75528(N)    111 27 37.96513(W) AD(       ) 2
 DU2083  NAD 27      -  33 21 05.57126(N)    111 27 35.49596(W) AD(       ) 2
 DU2083  NGVD 29 (07/19/86)  558.0    (m)         1831.     (f) VERT ANG
 DU2083
 DU2083.Superseded values are not recommended for survey control.
 DU2083.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 DU2083.See file dsdata.txt to determine how the superseded data were derived.
 DU2083
 DU2083 U.S. NATIONAL GRID SPATIAL ADDRESS: 12SVB5714990361(NAD 83)
 DU2083 MARKER: DD = SURVEY DISK
 DU2083 SETTING: 66 = SET IN ROCK OUTCROP
 DU2083 SP SET: PARTIALLY EXPOSED BEDROCK
 DU2083 SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 DU2083+SATELLITE: SATELLITE OBSERVATIONS - March 21, 2004
 DU2083
 DU2083  HISTORY     - Date     Condition        Report By
```

```
DU2083  HISTORY     - 1974     MONUMENTED       AZDT
DU2083  HISTORY     - 20040321 GOOD             USPSQD
DU2083
DU2083                          STATION DESCRIPTION
DU2083
DU2083'DESCRIBED BY ARIZONA DEPARTMENT OF TRANSPORTATION 1974 (TT)
DU2083'THE STATION IS LOCATED 6.4 MILES SOUTHEAST OF APACHE JCT. AND
DU2083'ABOUT 10 MILES NORTHWEST OF FLORENCE JCT. SOUTH OF EASTBOUND
DU2083'RIGHT OF WAY FENCE.
DU2083'
DU2083'THE STATION IS AN ADOT HIGHWAY DIVISION B.C. STAMPED HILL
DU2083'P AND M GS 1974 EPOXIED TO BEDROCK 0.05 FEET BELOW MEAN GROUND
DU2083'LEVEL.
DU2083'
DU2083'REFERENCE MARK 1 IS AN ADOT HIGHWAY DIVISION B.C. STAMPED
DU2083'HILL RM 1 1974 AND IS EPOXIED TO EXPOSED BEDROCK APPROXIMATELY
DU2083'3.0 FEET LOWER THAN THE STATION.
DU2083'
DU2083'REFERENCE MARK 2 IS AN ADOT HIGHWAY DIVISION B.C. STAMPED HILL
DU2083'RM 2 1974 AND IS EPOXIED TO EXPOSED BEDROCK APPROXIMATELY 3.0 FEET
DU2083'LOWER THAN THE STATION.
DU2083'
DU2083'TO REACH THE STATION FROM THE JUNCTION OF U.S. 60, 80, 89 AND
DU2083'STATE ROUTE 88 IN APACHE JCT., TRAVEL SOUTHEAST ON U.S. 60, 80
DU2083'AND 89 TO MP 202.6.  THE STATION IS 200 FEET SOUTH OF SOUTHEAST
DU2083'RIGHT OF WAY FENCE ON THE MOST EASTERLY AND HIGHEST OF TWO
DU2083'SMALL HILLS.  THE STATION IS MARKED WITH A WITNESS POST WHICH
DU2083'IS SET IN ROCK CAIRN 4 FEET SOUTH OF THE STATION.
DU2083'
DU2083'HEIGHT OF LIGHT ABOVE STATION MARK 1.5 METERS.
DU2083
DU2083                          STATION RECOVERY (2004)
DU2083
DU2083'RECOVERY NOTE BY US POWER SQUADRON 2004 (RW)
DU2083'FOUND IN COOD CONDITION
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A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: HILL
Receiver No: 36492
Day of Year: 255
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 09 day 11 year 2008
Operator: L. SPEAN

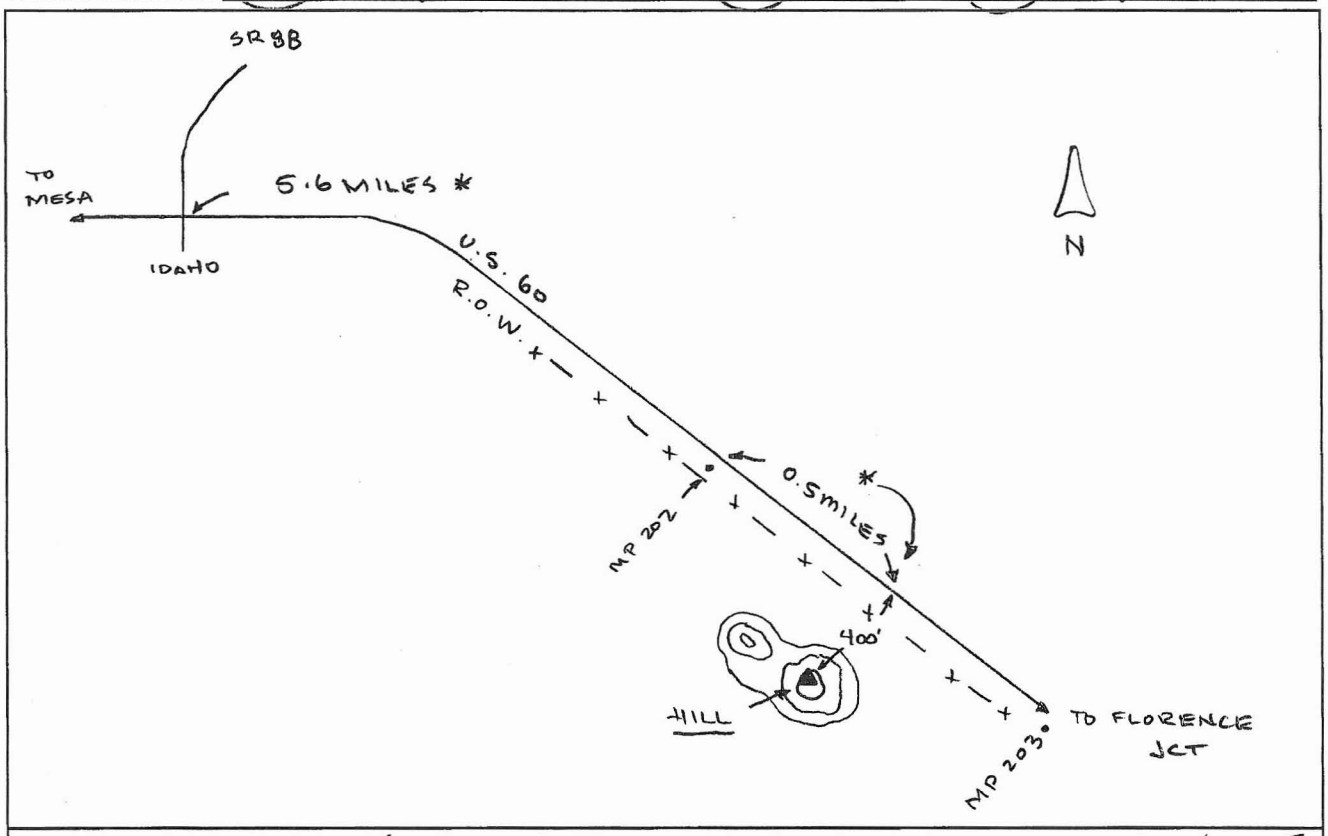
C/A CODE POSITION

Beg:
Lat: : 33 ° 21 ' 05.79 " N
Long: 111 ° 27 ' 38.01 " W
Ellip. Height: 527.723 M PDOP: 2.0
Ending:
Lat: 33 ° 21 ' 05.73 " N
Long: 111 ° 27 ' 37.97 " W
Ellip. Height: 530.549 M PDOP: 1.8

DC FILENAME: 1714-10-8957
DC# 8957 & POSTPROCESS#: 89572550
Receiver Model: TRIMBLE 5800
Antenna Type: TRIMBLE 5800
Antenna Serial #: 44301 36492
Fixed Height Pole No: C3 ROD
Type of Survey: Fast Static (✓) Kinematic Base ( ) RTK Base ( ).
Actual= Start 14 : 07 . Stop: 19 : 16 . UTC
Beg. SV's Used: 11, 13, 16, 20, 23, 31, 32
End SV's Used: 7, 8, 10, 11, 13, 17, 19, 27, 28

Ant. Height (M) 2.0 M
Ant. Height (FT) 6.56
MEASURED TO: BOTTOM OF ANT. MOUNT

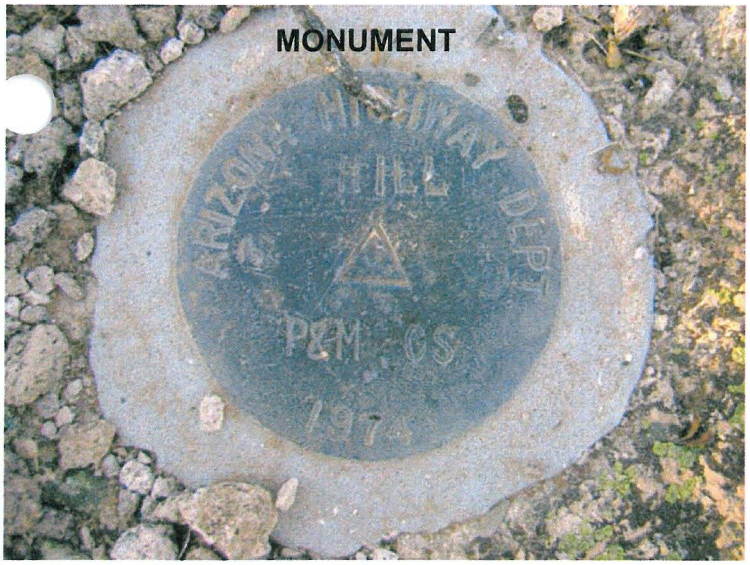
Weather Conditions: (Clear) P. Cloudy Overcast Hot (Warm) Cool Cold (Calm) Breezy 80 °F +/-

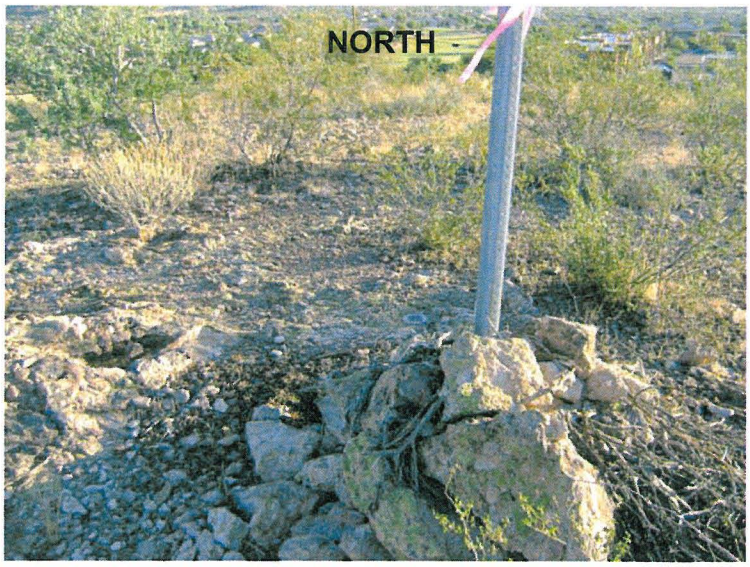


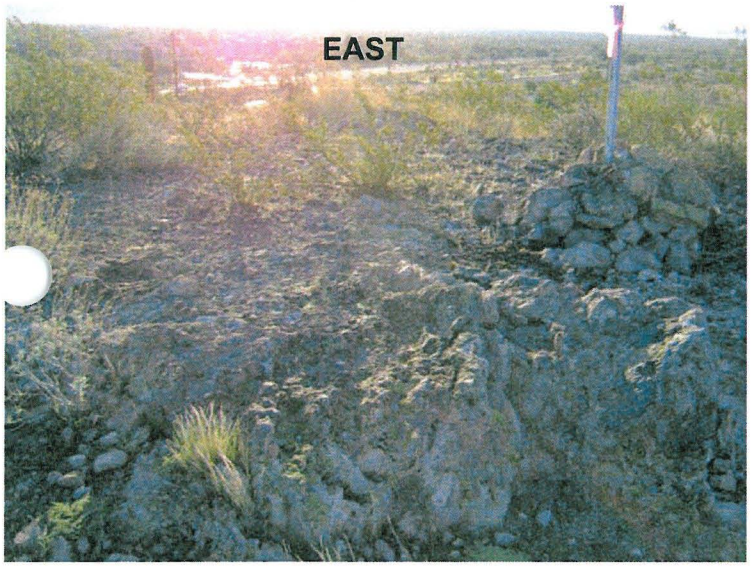
Type of Monument: BRASS CAP IN BEDROCK Stamping: ARIZONA HIGHWAY DEPT.
Top of marker: (✓)flush M ( ) above: ( ) below: Nat. Ground Stamping: HILL PEM GS 1974
Detail Notes:

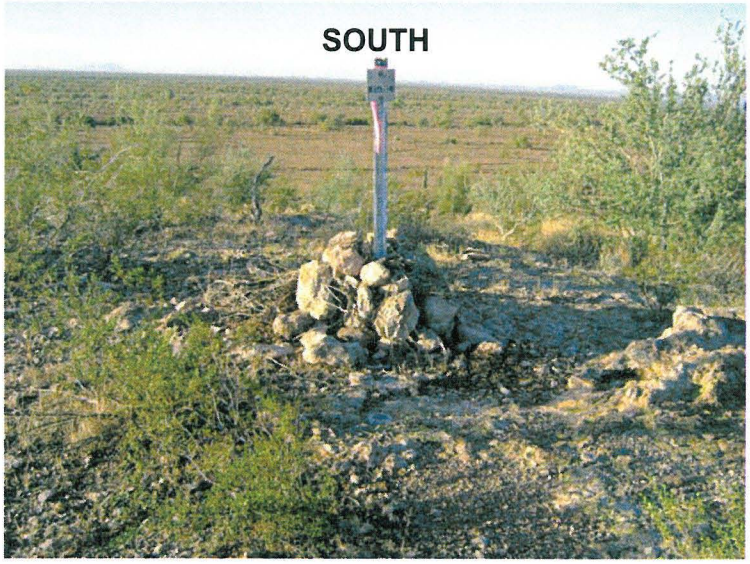
Photographs: Camera #: C3 Monument: ✓ North: ✓ East: ✓
South: ✓ West: ✓ Set up: ✓ Misc 1: Misc 2:
Rubbing Performed ( )Yes (✓)No

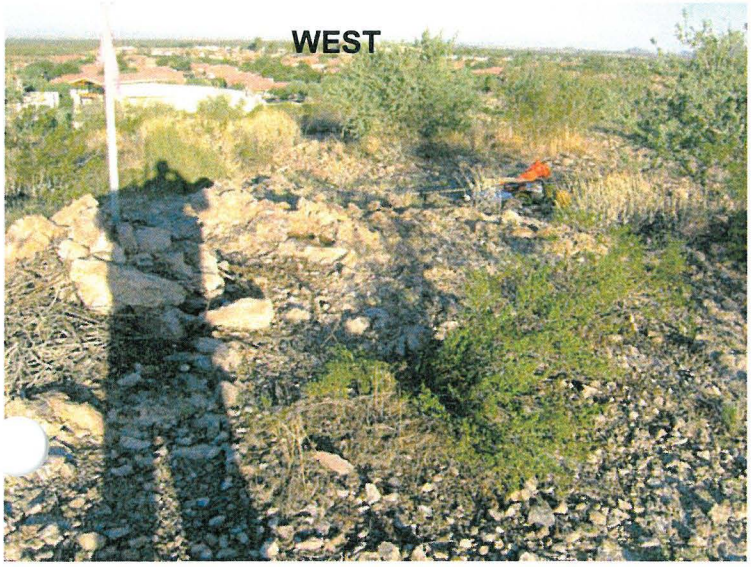
HILL

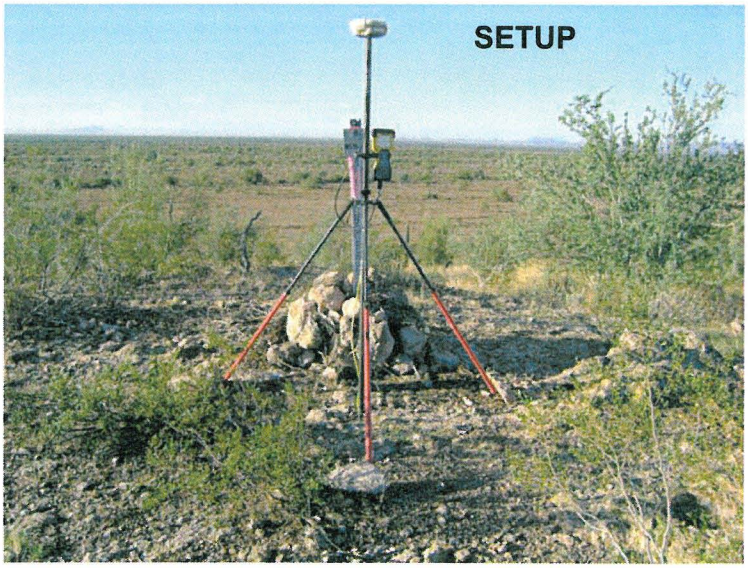

MONUMENT
ARIZONA HIGHWAY DEPT
HILL
P&M CS
1974


NORTH


EAST


SOUTH


WEST


SETUP

POSTEN

```
1        National Geodetic Survey,   Retrieval Date = OCTOBER  6, 2006
 DU0546
 ***********************************************************************
 DU0546  FBN          -  This is a Federal Base Network Control Station.
 DU0546  DESIGNATION -  POSTEN
 DU0546  PID          -  DU0546
 DU0546  STATE/COUNTY-  AZ/PINAL
 DU0546  USGS QUAD    -  FLORENCE (1981)
 DU0546
 DU0546                        *CURRENT SURVEY CONTROL
 DU0546
 DU0546* NAD 83(1992)-  33 03 18.71576(N)    111 24 32.11406(W)     ADJUSTED
 DU0546* NAVD 88      -       533.267  (meters)    1749.56   (feet)  ADJUSTED
 DU0546
 DU0546  X            -  -1,953,435.883 (meters)                     COMP
 DU0546  Y            -  -4,982,297.355 (meters)                     COMP
 DU0546  Z            -   3,459,366.028 (meters)                     COMP
 DU0546  LAPLACE CORR-            1.67  (seconds)                    DEFLEC99
 DU0546  ELLIP HEIGHT-          503.81  (meters)          (09/30/99) GPS OBS
 DU0546  GEOID HEIGHT-          -29.48  (meters)                     GEOID03
 DU0546  DYNAMIC HT  -          532.608 (meters)    1747.40  (feet)  COMP
 DU0546  MODELED GRAV-      979,386.7   (mgal)                       NAVD 88
 DU0546
 DU0546  HORZ ORDER  -  A
 DU0546  VERT ORDER  -  FIRST     CLASS II
 DU0546  ELLP ORDER  -  THIRD     CLASS I
 DU0546
 DU0546.The horizontal coordinates were established by GPS observations
 DU0546.and adjusted by the National Geodetic Survey in September 1992..
 DU0546
 DU0546.The orthometric height was determined by differential leveling
 DU0546.and adjusted by the National Geodetic Survey in November 1993..
 DU0546.WARNING-GPS observations at this control monument resulted in a GPS
 DU0546.derived orthometric height which differed from the leveled height by
 DU0546.more than one decimeter (0.1 meter).
 DU0546
 DU0546.The X, Y, and Z were computed from the position and the ellipsoidal
 ht.
 DU0546
 DU0546.The Laplace correction was computed from DEFLEC99 derived deflections.
 DU0546
 DU0546.The ellipsoidal height was determined by GPS observations
 DU0546.and is referenced to NAD 83.
 DU0546
 DU0546.The geoid height was determined by GEOID03.
 DU0546
 DU0546.The dynamic height is computed by dividing the NAVD 88
 DU0546.geopotential number by the normal gravity value computed on the
 DU0546.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 DU0546.degrees latitude (g = 980.6199 gals.).
 DU0546
 DU0546.The modeled gravity was interpolated from observed gravity values.
 DU0546
 DU0546;                    North         East     Units Scale Factor Converg.
 DU0546;SPC AZ C      -   227,987.352   260,776.447   MT  0.99992771   +0 16
 37.0
 DU0546;SPC AZ C      -   747,990.00    855,565.77   iFT  0.99992771   +0 16
 37.0
 DU0546;UTM  12       - 3,657,480.625   461,824.016   MT  0.99961797   -0 13
 23.0
 DU0546
 DU0546!              -  Elev Factor  x  Scale Factor =   Combined Factor
 DU0546!SPC AZ C      -   0.99992091  x   0.99992771  =   0.99984862
 DU0546!UTM  12       -   0.99992091  x   0.99961797  =   0.99953891
 DU0546
 DU0546|-----------------------------------------------------------------|
 DU0546| PID    Reference Object                     Distance      Geod. Az  |
```

```
DU0546|                                                          dddmmss.s |
DU0546| DU0547 POSTEN RM 1                            7.909 METERS 00354     |
DU0546| DU1555 POSTEN RM 3 AZIMUTH                                0913721.3 |
DU0546| CH6130 POSTEN AZ MK                                       0952050.5 |
DU0546| DU0545 POSTEN RM 2                           10.241 METERS 10915     |
DU0546| DU2063 FLORENCE STATE PRISON TANK          APPROX. 4.7 KM 1334435.8 |
DU0546| DU2067 FLORENCE BLACK WATER TANK           APPROX. 3.7 KM 1484341.1 |
DU0546| DU2068 MONUMENT C D POSITION                 9.000 METERS 34113     |
DU0546|-----------------------------------------------------------------------|
DU0546
DU0546                          SUPERSEDED SURVEY CONTROL
DU0546
DU0546  NAD 83(1986)-  33 03 18.70801(N)    111 24 32.11474(W) AD(       ) B
DU0546  ELLIP H (09/30/92)  503.90   (m)                       GP(       ) 2
1
DU0546  NAD 83(1986)-  33 03 18.70801(N)    111 24 32.11474(W) AD(       ) 1
DU0546  NAD 27      -  33 03 18.48610(N)    111 24 29.67890(W) AD(       ) 1
DU0546  NAVD 88 (09/30/99)  533.27   (m)         1749.6    (f) LEVELING    3
DU0546  NGVD 29 (??/??/92)  532.691  (m)         1747.67   (f) ADJ UNCH    1
2
DU0546
DU0546.Superseded values are not recommended for survey control.
DU0546.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
DU0546.See file dsdata.txt to determine how the superseded data were derived.
DU0546
DU0546 U.S. NATIONAL GRID SPATIAL ADDRESS: 12SVB6182457481(NAD 83)
DU0546 MARKER: DS = TRIANGULATION STATION DISK
DU0546 SETTING: 66 = SET IN ROCK OUTCROP
DU0546 SP SET: ROCK OUTCROP
DU0546 STAMPING: POSTEN 1935
DU0546 MARK LOGO: CGS
DU0546 MAGNETIC: O = OTHER; SEE DESCRIPTION
DU0546 STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
DU0546+STABILITY: POSITION/ELEVATION WELL
DU0546 SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
DU0546+SATELLITE: SATELLITE OBSERVATIONS - January 24, 2006
DU0546
DU0546  HISTORY     - Date     Condition        Report By
DU0546  HISTORY     - 1935     MONUMENTED       CGS
DU0546  HISTORY     - 1936     GOOD             CGS
DU0546  HISTORY     - 1967     GOOD             CGS
DU0546  HISTORY     - 1967     GOOD             NGS
DU0546  HISTORY     - 1968     GOOD             AMS
DU0546  HISTORY     - 1971     GOOD             NGS
DU0546  HISTORY     - 1976     GOOD             NGS
DU0546  HISTORY     - 1977     GOOD             NGS
DU0546  HISTORY     - 19840323 GOOD
DU0546  HISTORY     - 19920110 GOOD             NGS
DU0546  HISTORY     - 19920204 GOOD             NGS
DU0546  HISTORY     - 19980918 GOOD             AZ-013
DU0546  HISTORY     - 19981105 GOOD             NGS
DU0546  HISTORY     - 20060124 GOOD             DIBBLE
DU0546
DU0546                          STATION DESCRIPTION
DU0546
DU0546'DESCRIBED BY COAST AND GEODETIC SURVEY 1936
DU0546'ABOUT 2-1/2 MILES, AIR LINE, NORTHWEST OF FLORENCE ON POSTON
DU0546'BUTTE, ON A PROMINENT HILL THAT IS EASILY IDENTIFIED BY THE
DU0546'LARGE PYRAMID ON THE TOP AND BY A LARGE WHITEWASHED LETTER F
DU0546'ON THE SOUTHERN SLOPE.  THE PYRAMID IS THE TOMB OF ARIZONAS
DU0546'PIONEER STATESMAN, CHARLES D. POSTON.  MARKED BY A STANDARD
DU0546'BRONZE DISK.  REFERENCE MARK NO. 1,
DU0546'A STANDARD BRONZE REFERENCE DISK, IS 7.918 METERS
DU0546'(25.98 FEET) FROM STATION N 03 DEG 54 MIN E.
DU0546'REFERENCE MARK NO. 2, A STANDARD BRONZE REFERENCE DISK,
DU0546'IS 10.260 METERS (33.66 FEET) FROM STATION S 70 DEG 45 MIN E.
DU0546'THE AZIMUTH MARK (MARKING NOT KNOWN), IS 1.8
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DU0546'MILES ALONG HIGHWAY NO. 80 FROM FLORENCE, AT THE NORTH END OF A
DU0546'BRIDGE OVER THE GILA RIVER, AND 1-1/2 MILES FROM STATION
DU0546'S 88 DEG 23 MIN E.
DU0546
DU0546                          STATION RECOVERY (1967)
DU0546
DU0546'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1967 (CND)
DU0546'THE STATION MARK, STAMPED POSTEN 1935, IS ABOUT 0.25 MILE NORTH
DU0546'ALONG PINAL STREET FROM THE COURTHOUSE AT FLORENCE, THENCE
DU0546'0.35 MILE EAST ALONG 5TH STREET WHICH IS U.S. HIGHWAY 89 BUSINESS
DU0546'ROUTE, THENCE 1.5 MILES NORTH ALONG U.S. HIGHWAYS 80 AND 89,
DU0546'THENCE 0.5 MILE WEST ALONG HUNT HIGHWAY, THENCE 1.15 MILES NORTH
DU0546'ALONG THE SOUTHERN PACIFIC RAILROAD, THENCE 0.35 MILE NORTHWEST
DU0546'ALONG AN ABANDONED ROCKY ROAD, IN SECTION 27, T 4 S, R 9 E, ON
DU0546'THE CREST OF POSTEN BUTTE WHICH HAS A LARGE PYRAMID, RADIO
DU0546'TOWER AND THE LETTER F CONSTRUCTED ON IT, 22 FEET SOUTH OF
DU0546'THE SOUTHEAST CORNER OF THE PYRAMID, SET IN THE TOP OF A ROCK
DU0546'OUTCROP, AND ABOUT LEVEL WITH THE GROUND.
DU0546'
DU0546'R.M. 1, STAMPED POSTEN NO 1 1935, IS 26 FEET NORTH OF THE
DU0546'STATION MARK, 53 FEET SOUTH OF THE RADIO TOWER, 7 FEET NORTHEAST
DU0546'OF THE SOUTHEAST CORNER OF THE PYRAMID, 4-1/2 FEET EAST OF THE
DU0546'EAST EDGE OF THE PYRAMID, SET IN THE TOP OF A ROCK OUTCROP, AND
DU0546'ABOUT 2 FEET ABOVE THE LEVEL OF THE STATION MARK.
DU0546'
DU0546'R.M. 2, STAMPED POSTEN NO 2 1935, IS 38 FEET EAST OF THE
DU0546'STATION MARK, 48 FEET SOUTHEAST OF THE SOUTHEAST CORNER OF THE
DU0546'PYRAMID, SET IN THE TOP OF A ROCK OUTCROP, AND ABOUT 5 FEET
DU0546'BELOW THE LEVEL OF THE STATION MARK.
DU0546
DU0546                          STATION RECOVERY (1967)
DU0546
DU0546'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1967
DU0546'4.1 MI NW FROM FLORENCE.
DU0546'ABOUT 0.25 MILE NORTH ALONG PINAL STREET FROM THE COURTHOUSE AT
DU0546'FLORENCE, THENCE 0.35 MILE EAST ALONG 5TH STREET WHICH IS U.S. HIGHWAY
DU0546'89 BUSINESS ROUTE, THENCE 1.5 MILES NORTH ALONG U.S. HIGHWAY 80-89,
DU0546'THENCE 0.5 MILE WEST ALONG HUNT HIGHWAY, THENCE 1.15 MILES NORTH ALONG
DU0546'THE SOUTHERN PACIFIC RAILROAD, THENCE 0.35 MILE NORTHWEST ALONG AN
DU0546'ABANDONED ROCKY ROAD, IN S 27, T 4 S, R 9 E, ON THE CREST OF POSTEN
DU0546'BUTTE WHICH HAS A LARGE PYRAMID, RADIO TOWER AND THE LETTER F
DU0546'CONSTRUCTED ON IT, 22 FEET SOUTH OF THE SOUTHEAST CORNER OF THE
DU0546'PYRAMID, SET IN THE TOP OF A ROCK OUTCROP AND ABOUT LEVEL WITH THE
DU0546'GROUND.
DU0546
DU0546                          STATION RECOVERY (1968)
DU0546
DU0546'RECOVERY NOTE BY US ARMY MAP SERVICE (NOW DMA) 1968
DU0546'STATION AND REFERENCE MARKS WERE RECOVERED.
DU0546
DU0546                          STATION RECOVERY (1971)
DU0546
DU0546'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1971 (LFS)
DU0546'THE STATION MARK AND REFERENCE MARKS 1 AND 2 WERE RECOVERED
DU0546'AND FOUND IN GOOD CONDITION.  THE AZIMUTH MARK WAS DESTROYED
DU0546'DURING BRIDGE CONSTRUCTION AND A NEW AZIMUTH MARK WAS ESTABLISHED
DU0546'AT THIS TIME.  THE DESCRIPTION OF THE MARKS AND ROUTE TO THE
DU0546'STATION IS ADEQUATE.
DU0546'
DU0546'THE 1971 AZIMUTH MARK IS A STANDARD DISK STAMPED, POSTEN 1935
DU0546'1971.  IT IS SET IN A DRILL HOLE IN THE EAST HEADWALL OF A
DU0546'CONCRETE BRIDGE WHICH IS OVER A WASH.  THE MARK IS ALONG THE
DU0546'ROUTE TO THE STATION, 2.0 MILES PAST THE BRIDGE OVER THE GILA
DU0546'RIVER.
DU0546'
DU0546'HEIGHT OF LIGHT ABOVE STATION MARK 5 FEET.
DU0546'
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DU0546'AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN--2-1/2 MILES
DU0546'NORTHWEST OF FLORENCE.
DU0546
DU0546                          STATION RECOVERY (1976)
DU0546
DU0546'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1976 (TT)
DU0546'THE STATION MARK AND REFERENCE MARKS 1 AND 2 WERE RECOVERED AND FOUND
DU0546'IN GOOD CONDITION.  THE ANGLE BETWEEN REFERENCE MARKS AND THE
DU0546'DISTANCES TO THE MARKS CHECKED.  THE DESCRIPTIONS OF THE MARKS AND
DU0546'THE ROUTE TO THE STATION IS ADEQUATE.
DU0546'
DU0546'AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN--2-1/2 MILES N.W.
DU0546'OF FLORENCE.
DU0546'
DU0546'HEIGHT OF LIGHT ABOVE STATION MARK 5 FEET.
DU0546
DU0546                          STATION RECOVERY (1977)
DU0546
DU0546'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1977 (TT)
DU0546'THE STATION MARK, REFERENCE MARKS AND AZIMUTH MARK WERE RECOVERED
DU0546'AS DESCRIBED AND FOUND IN GOOD CONDITION.  THE ANGLE BETWEEN
DU0546'REFERENCE MARKS AND AZIMUTH MARK AND DISTANCE TO THE MARKS CHECKED
DU0546'THE 1971 RECOVERY NOTE.  THE DESCRIPTION TO STATION AND MARKS ARE
DU0546'ADEQUATE.
DU0546'
DU0546'AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN--2.5 MILES
DU0546'NORTHWEST OF FLORENCE.
DU0546'
DU0546'HEIGHT OF LIGHT ABOVE STATION MARK 5 FEET.
DU0546
DU0546                          STATION RECOVERY (1984)
DU0546
DU0546'RECOVERED 1984
DU0546'RECOVERED IN GOOD CONDITION.
DU0546
DU0546                          STATION RECOVERY (1992)
DU0546
DU0546'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1992
DU0546'2.8 KM (1.75 MI) NORTHERLY ALONG U.S. HIGHWAY 89 (PINAL PARKWAY)
DU0546'FROM THE JUNCTION OF STATE HIGHWAY 287 (BUTTE AVENUE) IN FLORENCE,
DU0546'THENCE 2.8 KM (1.75 MI) WESTERLY ALONG HUNT HIGHWAY, THENCE 0.4 KM
DU0546'(0.25 MI) ACROSS COUNTRY TO THE HIGHEST POINT OF A LARGE MOUND, IN A
DU0546'LARGE EXPOSED AREA OF BEDROCK AT THE HIGHEST POINT OF THE MOUND, 10.4
DU0546'M (34.1 FT) WEST OF REFERENCE MARK 2, 8.0 M (26.2 FT) SOUTH OF
DU0546'REFERENCE MARK 1, 6.6 M (21.7 FT) SOUTH OF THE SOUTHEAST CORNER OF A
DU0546'STONE MONUMENT.
DU0546
DU0546                          STATION RECOVERY (1992)
DU0546
DU0546'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1992
DU0546'THE STATION IS LOCATED ABOUT 4 KM (2.5 MI) NORTHWEST OF FLORENCE, 2.5
DU0546'KM (1.6 MI) WEST OF U.S. HIGHWAY 89, ON A LOW HILL, AT THE SITE OF A
DU0546'4 METERHIGH ROCK AND CONCRETE PYRAMID COMMEMORATING CHARLES POSTEN,
DU0546'ON POSTEN BUTTE (LOCALLY KNOWN AS -F- MOUNTAIN), IN THE NORTHEAST 1/4
DU0546'SECTION 27, T4S, R9E.  OWNERSHIP--PINAL CITY HISTORICAL SOCIETY, 2201
DU0546'SOUTH MAIN STREET, FLORENCE, AZ 85232.  CONTACT BILLY EARLY, PHONE
DU0546'602-868-5578, BEFORE NIGHT WORK.
DU0546'TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAYS 89 AND 89
DU0546'BUSINESS AND STATE HIGHWAY 287 ON THE EAST SIDE OF FLORENCE (AT
DU0546'NORTHWEST CORNER OF STATE PRISON), GO NORTH ON HIGHWAY 89 FOR 2.77 KM
DU0546'(1.72 MI) TO A PAVED ROAD LEFT JUST PAST THE GILA RIVER BRIDGE. TURN
DU0546'LEFT, WEST, ON HUNT HIGHWAY FOR 1.61 KM (1.00 MI) TO A DIRT ROAD LEFT
DU0546'(POSTEN BUTTE LOOP).  CONTINUE AHEAD FOR 0.67 KM (0.42 MI) TO A DIRT
DU0546'LANE RIGHT.  TURN RIGHT, NORTHERLY, PASSING UNDER A LOW RAILROAD
DU0546'TRESTLE, FOR 0.09 KM (0.06 MI) TO A WIRE GATE AND A CATTLE GUARD.
DU0546'PASS THROUGH THE GATE FOR 10 M (32.8 FT) TO A TRACK ROAD LEFT.  TURN
DU0546'LEFT, WEST FOR 0.07 KM (0.04 MI) TO A FORK.  BEAR RIGHT, NORTHWEST ON
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DU0546'TRACK ROAD FOR 0.66 KM (0.41 MI) TO THE TOP OF THE HILL AND THE
DU0546'STATION.
DU0546'THE STATION IS SET IN A DRILL HOLE IN FLUSH OUTCROP ON THE SOUTHEAST
DU0546'SLOPE OF THE HILL.  LOCATED 9 M (29.5 FT) SOUTHEAST OF AND 0.5 M
DU0546'(1.6 FT) LOWER THAN THE TOP OF THE HILL, 8.8 M (28.9 FT) SOUTHEAST OF
DU0546'THE SOUTHWEST CORNER OF THE PYRAMID, 8.7 M (28.5 FT) SOUTHWEST OF A
DU0546'15-CM IRON PIPE PROJECTING 35-CM, 6.7 M (22.0 FT) SOUTH-SOUTHEAST OF
DU0546'THE SOUTHEAST CORNER OF THE PYRAMID AND 2 M (6.6 FT) NORTHWEST OF AN
DU0546'OUTCROP DROPOFF.
DU0546'NOTE--LAST MILEAGE TO THE STATION CAN BE REACHED WITH A SMALL VEHICLE.
DU0546'ROAD IS VERY ROCKY AND NARROW AND IS DANGEROUS IN A FULL-SIZE
DU0546'VEHICLE.  A LOW RAILROAD TRESTLE IS ALONG THE ROUTE.
DU0546'DESCRIBED BY G.R. HEID.
DU0546
DU0546                          STATION RECOVERY (1998)
DU0546
DU0546'RECOVERY NOTE BY MARICOPA COUNTY ARIZONA 1998 (LOC)
DU0546'RECOVERED AS DESCRIBED.
DU0546
DU0546                          STATION RECOVERY (1998)
DU0546
DU0546'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1998 (CSM)
DU0546'THE STATION IS LOCATED ABOUT 4.0 KM (2.50 MI) NORTHWEST OF FLORENCE,
DU0546'2.5 KM (1.55 MI) WEST OF THE JUNCTION OF STATE HIGHWAY 79 AND HUNT
DU0546'HIGHWAY AT STATE HIGHWAY 79 MILEPOST 136, ON TOP OF A PROMINENT HILL,
DU0546'AT THE SITE OF A ROCK AND CONCRETE PYRAMID COMMEMORATING CHARLES
DU0546'POSTEN ON POSTEN BUTTE (LOCALLY KNOWN AS -F- MOUNTAIN).
DU0546'OWNERSHIP--PINAL COUNTY HISTORICAL SOCIETY, PHONE 602-868-5578.
DU0546'NOTE--EXTREME CAUTION SHOULD BE USED TO REACH THIS STATION AS A 4
DU0546'WHEEL DRIVE IS NEEDED.  IT WOULD BE BETTER FOR A JEEP OR A SMALL
DU0546'VEHICLE TO BE USED AS THE ROAD IS VERY ROCKY, ROUGH AND STEEP.  TO
DU0546'REACH THE STATION FROM THE JUNCTION OF STATE HIGHWAY 79 AND 287 ON THE
DU0546'NORTH SIDE OF FLORENCE, GO NORTH ON HIGHWAY 79 FOR 2.82 KM (1.75 MI)
DU0546'TO THE JUNCTION OF HUNT HIGHWAY, JUST PAST THE NORTH END OF THE
DU0546'HIGHWAY 79 BRIDGE OVER THE GILA RIVER AND AT MILE POST 136.  TURN
DU0546'LEFT, WEST ON HUNT HIGHWAY AND GO 2.25 KM (1.40 MI) TO A DIRT ROAD ON
DU0546'THE RIGHT.  TURN RIGHT, NORTH ON THE ROAD, PASSING UNDER THE RAILROAD,
DU0546'FOR 0.08 KM (0.05 MI) TO A CATTLE GUARD AND DIRT TRACK ROAD ON THE
DU0546'LEFT.  TURN LEFT, WEST ON THE TRACK ROAD AND GO UP THE STEEP HILL
DU0546'(4-WD NEEDED) FOR 0.48 KM (0.30 MI) TO A TURNAROUND.  AT THIS POINT IT
DU0546'IS SUGGESTED YOU PACK THE LAST 0.16 KM (0.10 MI) TO THE STATION AS THE
DU0546'ROCK ROAD IS VERY STEEP AND IT WILL BE DANGEROUS GOING UP AND HARD TO
DU0546'TURN AROUND AT THE TOP OF THE HILL.  THE STATION IS A US COAST AND
DU0546'GEODETIC SURVEY TRIANGULATION DISK SET IN A DRILL HOLE IN ROCK
DU0546'OUTCROP, SOUTH-SOUTHEAST OF THE PYRAMID.  IT IS 8.8 M (28.9 FT)
DU0546'SOUTHEAST OF THE SOUTHWEST CORNER OF THE PYRAMID, 8.7 M (28.5 FT)
DU0546'SOUTHWEST OF A 15 CM IRON PIPE PROJECTING 35 CM, 7.9 KM (4.90 MI)
DU0546'SOUTH OF RM 1 LOCATED ON THE EAST SIDE OF THE PYRAMID, 6.7 M (22.0 FT)
DU0546'SOUTH-SOUTHEAST OF THE SOUTHEAST CORNER OF THE PYRAMID.
DU0546
DU0546                          STATION RECOVERY (2006)
DU0546
DU0546'RECOVERY NOTE BY DIBBLE AND ASSOCIATES 2006 (BSF)
DU0546'RECOVERED IN GOOD CONDITION.
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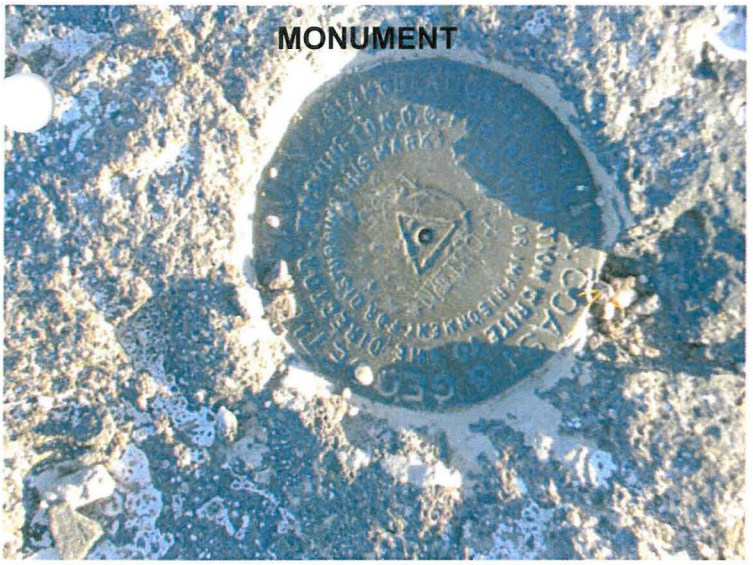
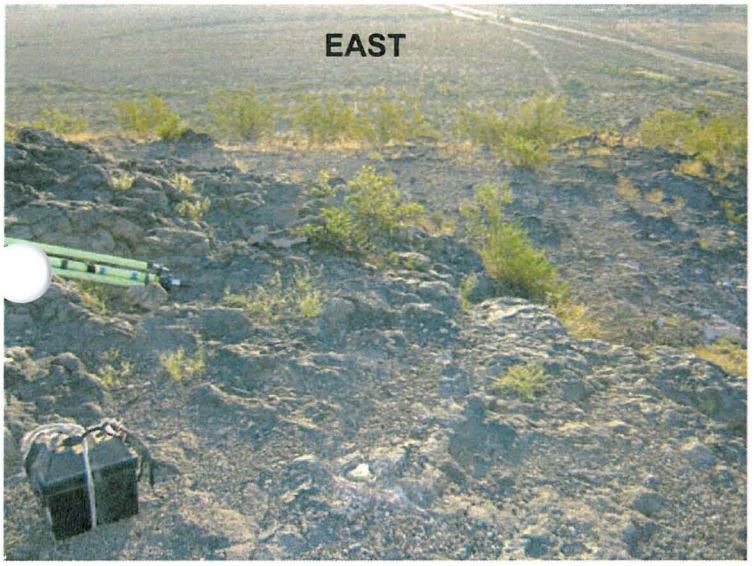
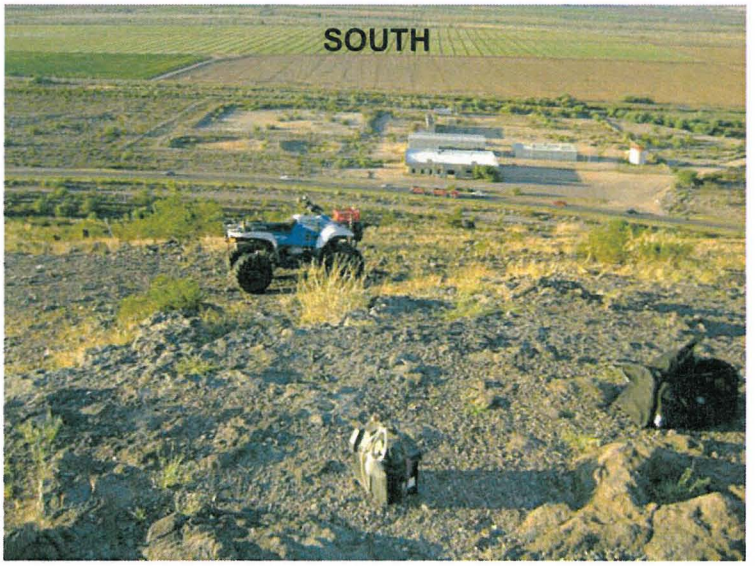
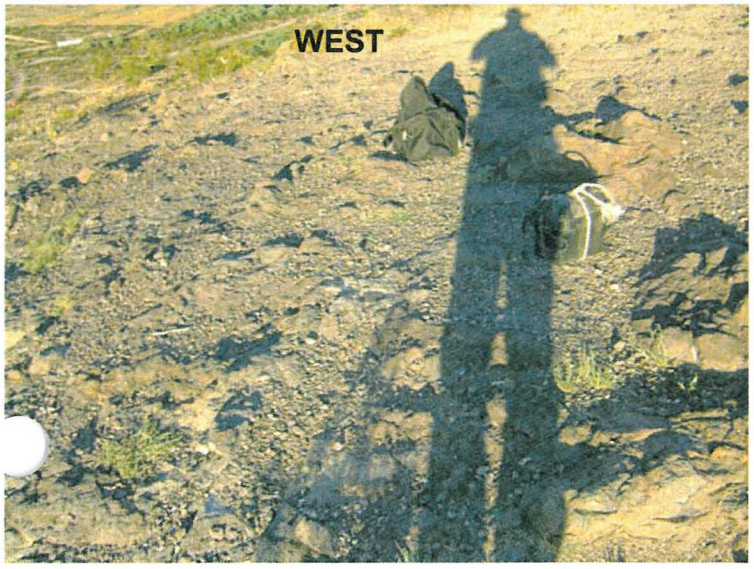
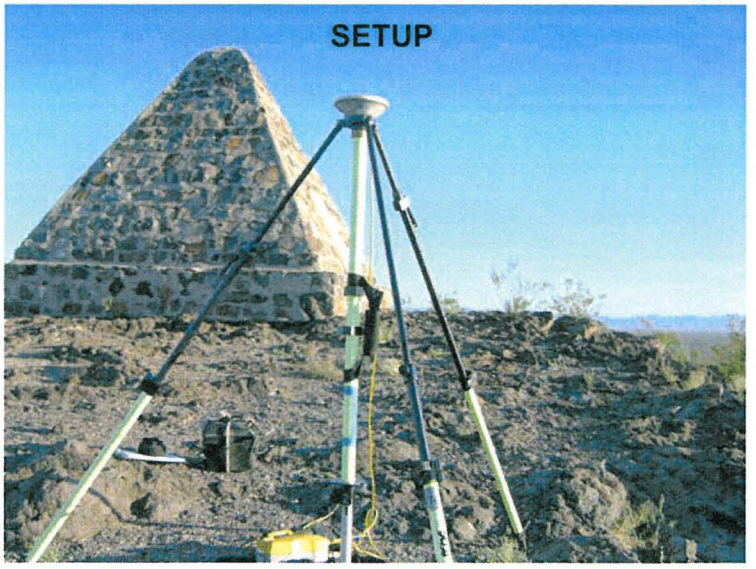
POSTEN











SECTION 4.2

SECONDARY CONTROL

EACH SHEET IS ORGANIZED AS FOLLOWS:

- **GPS LOG SHEETS**
- **SUPPORTING PHOTOGRAPHS**

1A01

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: 1A01
Receiver No: 6083 (Static #4)
Day of Year: 261
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 17 year 2008
Operator: S. MARSHALL

C/A CODE POSITION

Beg:
Lat: : 33 ° 22 ' 46.57 " N
Long: 111 ° 34 ' 51.10 " W
Ellip. Height: 443.0 M PDOP: 2.4
Ending:
Lat: ° ' 46.57 " N
Long: ° ' 51.11 " W
Ellip. Height: 439.8 M PDOP: 1.9

DC FILENAME:
DC# & POSTPROCESS#: 60832610
Receiver Model: 4000 SSE
Antenna Type: Compact L1/L2 w/GP
Antenna Serial #: 53509
Fixed Height Pole No: #5
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 13 : 35 . Stop: 21 : 04 . UTC
Beg. SV's Used: 11, 14, 25, 16, 20, 23, 31
End SV's Used: 7, 27, 26, 4, 15, 08, 17, 28, 11

Ant. Height (M) 1.5 Meters
Ant. Height (FT)
MEASURED TO: Bottom of Antenna Mount

Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Cold Calm Breezy 70°F +/-

Type of Monument: Rod in Handhole Stamping:
Top of marker: ( ) flush 0.2 M ( ) above: (X) below: Nat. Ground Stamping:
Detail Notes:

Photographs: Camera #: C4 Monument: North: East:
South: West: Set up: Misc 1: Misc 2:
Rubbing Performed ( )Yes (X)No Photos

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: 1A01
Receiver No: 6126
Day of Year: 262
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 09 day 18 year 2008
Operator: L. SPEAN

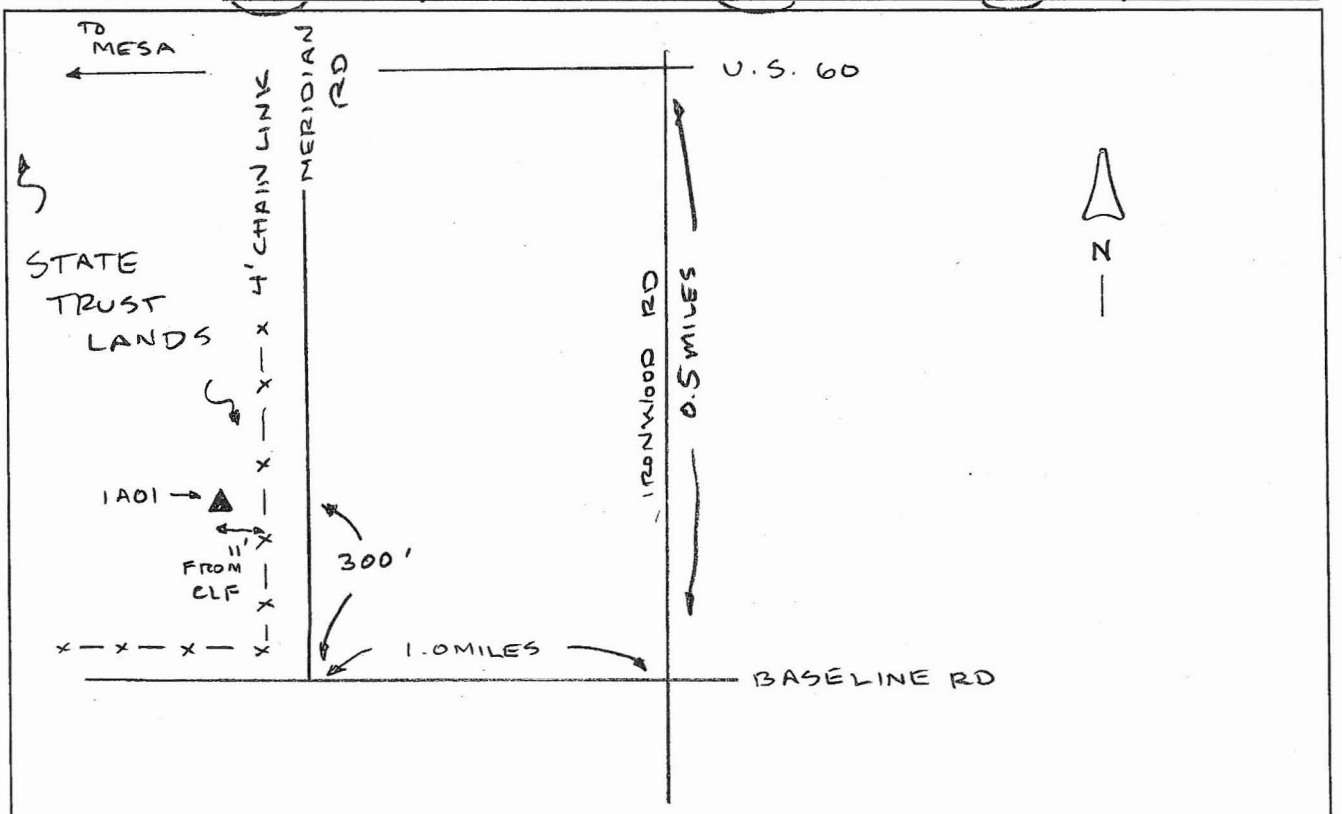
C/A CODE POSITION

Beg:
Lat: : 33 ° 22 ' 46.60 " N
Long: 111 ° 34 ' 51.14 " W
Ellip. Height: 443.3 M PDOP: 2.2
Ending:
Lat: 33 ° 22 ' 46.57 " N
Long: 111 ° 34 ' 51.12 " W
Ellip. Height: 441.8 M PDOP: 2.4

DC FILENAME: 6126-262-0
DC# _____ & POSTPROCESS#: _____
Receiver Model: TRIMBLE 4000 SSE
Antenna Type: COMPACT L1/L2 W/ GP
Antenna Serial #: 61001
Fixed Height Pole No: ATEAM # 4
Type of Survey: Fast Static (✓) Kinematic Base ( ) RTK Base ( ).
Actual= Start 13 : 17 . Stop: 20 : 16 . UTC
Beg. SV's Used: 13, 16, 20, 23, 25, 31, 7
End SV's Used: 7, 26, 15, 28, 17, 25, 11

Ant. Height (M) 1.5M
Ant. Height (FT)
MEASURED TO: BOTTOM OF ANT. MOUNT.

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



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

Photographs: Camera #: C3 Monument: ✓ North: ✓ East: ✓
South: ✓ West: ✓ Set up: _____ Misc 1: _____ Misc 2: _____
Rubbing Performed ( )Yes (✓)No

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: 1A01
Receiver No: 6083 (Static 4)
Day of Year: 263
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 19 year 2008
Operator: J. MARSHALL

C/A CODE POSITION

Beg:
Lat: : 33 ° 22 ' 46.56 " N
Long: 111 ° 34 ' 51.10 " W
Ellip. Height: 443.3 M PDOP: 2.0
Ending:
Lat: 33 ° 22 ' 46.58 " N
Long: 111 ° 34 ' 51.11 " W
Ellip. Height: 439.9 M PDOP: 1.9

DC FILENAME:
DC# & POSTPROCESS#: 60832630
Receiver Model: 4000 SSE
Antenna Type: Compact L1/L2 w/GP
Antenna Serial #: 53509
Fixed Height Pole No: 5
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 13 :77 Stop: 18 :16 UTC
Beg. SV's Used: 11 13 16 26 23 25 31 37
End SV's Used: 13, 27, 19, 08, 23, 25, 03, 28

Ant. Height (M) 1.5 Meters
Ant. Height (FT)
MEASURED TO: Bottom of Antenna Mount

Weather Conditions: (Clear) P. Cloudy Overcast Hot (Warm) Cool Cold (Calm) Breezy 75°F +/-

Type of Monument: Rod in Handhole Stamping:
Top of marker: ( ) flush 2.1 M ( ) above: (X) below: Nat. Ground Stamping:
Detail Notes:

Photographs: Camera #: C9 Monument: North: East:
South: West: Set up: 66 Misc 1: Misc 2:
Rubbing Performed ( )Yes (X)No Photos

2AQ2

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: 2AQ2
Receiver No: 6076
Day of Year: 261
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 09 day 17 year 2008
Operator: L. SPERN

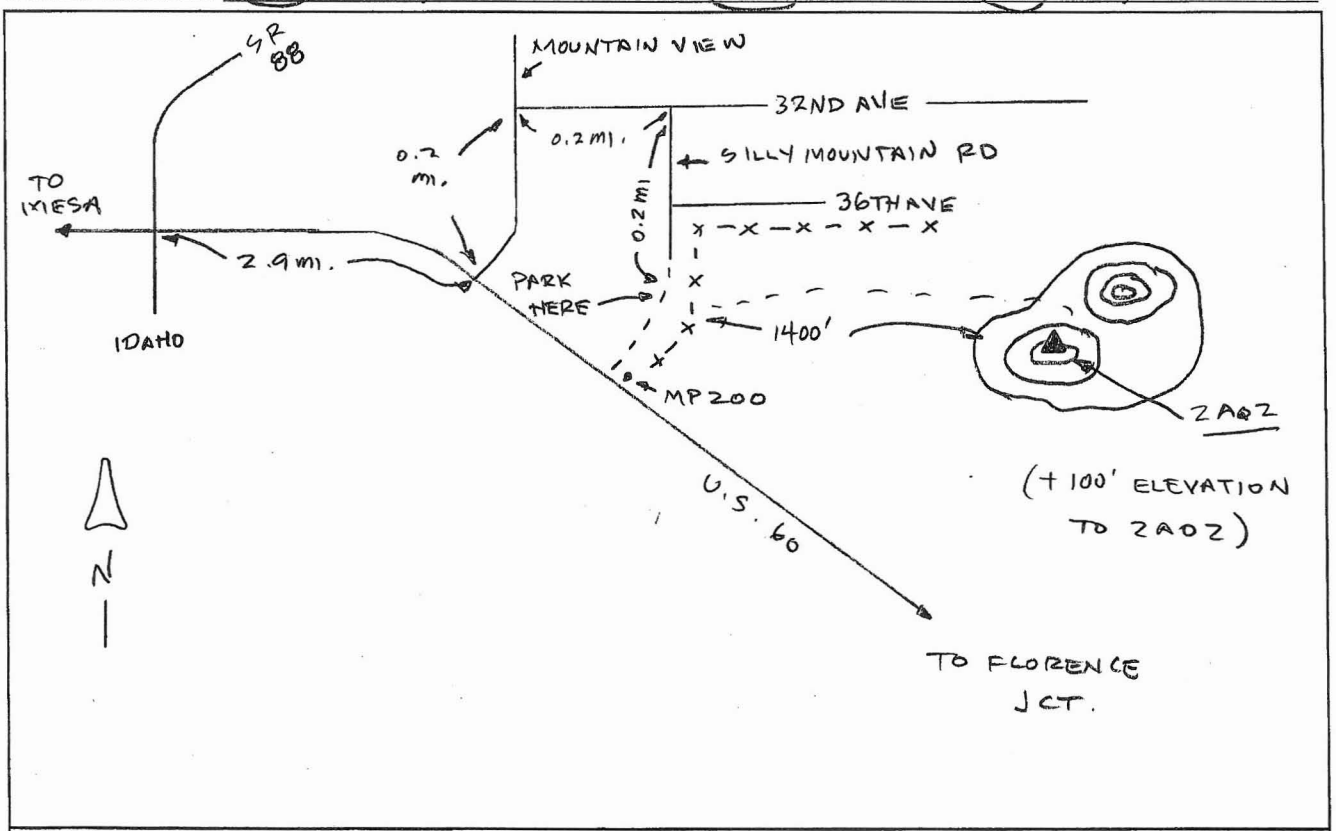
C/A CODE POSITION

Beg:
Lat: : 33 ° 22 ' 47.03 " N
Long: 111 ° 29 ' 05.46 " W
Ellip. Height: 572.3 M PDOP: 1.9.
Ending:
Lat: 33 ° 22 ' 46.98 " N
Long: 111 ° 29 ' 05.49 " W
Ellip. Height: 570.7 M PDOP: 2.0.

DC FILENAME: 6076-261-0
DC# _____ & POSTPROCESS#: _____
Receiver Model: TRIMBLE 4000 SSE
Antenna Type: COMPACT L1/L2 W/GP
Antenna Serial #: 28246
Fixed Height Pole No: A TEAM #4
Type of Survey: Fast Static (✓) Kinematic Base ( ) RTK Base ( ).
Actual= Start 14:00 . Stop: 20:26 . UTC
Beg. SV's Used: 25, 11, 13, 32, 16, 20, 23, 31
End SV's Used: 25, 7, 26, 28, 15, 8, 17, 11

Ant. Height (M) 1.5 M
Ant. Height (FT)
MEASURED TO: BOTTOM OF ANT. MOUNT

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



Type of Monument: BRASS CAP IN BEDROCK Stamping: GEODETIC CONTROL.
Top of marker: (✓) flush M ( ) above: ( ) below: Nat. Ground Stamping: MONUMENT SILLY MTN.
Detail Notes: 2AQ2 MARICOPA COUNTY D.O.T.

Photographs: Camera #: C3 Monument: ✓ North: _____ East: _____
South: _____ West: _____ Set up: ✓ Misc 1: _____ Misc 2: _____
Rubbing Performed ( )Yes (✓)No

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: ZAQZ
Receiver No: 3419 (C7)
Day of Year: 262
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 18 year 2008
Operator: J. MARSHALL

C/A CODE POSITION

Beg:
Lat: : 33 ° 22 ' 47.02 " N
Long: 111 ° 29 ' 05.47 " W
Ellip. Height: 570.1 M PDOP: 2.1
Ending:
Lat: 33 ° 22 ' 46.99 " N
Long: 111 ° 29 ' 05.46 " W
Ellip. Height: 569.2 M PDOP: 2.0

DC FILENAME: 1714-10-8954
DC# 8954 & POSTPROCESS#: 89542620
Receiver Model: Trimble 5800
Antenna Type: Trimble 5800
Antenna Serial #: 3419
Fixed Height Pole No: Rod
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 13 :26 . Stop: 19 :51 . UTC
Beg. SV's Used: 11,16,20,23,25,31,32
End SV's Used: 7,8,11,15,17,25,26,27,28

Ant. Height (M) 2.0 meters
Ant. Height (FT)
MEASURED TO: Bottom of Antenna Mount

Weather Conditions: (Clear) P. Cloudy Overcast Hot Warm (Cool) Cold (Calm) Breezy 75°F +/-

Type of Monument: Brass Cap in Rock Stamping:
Top of marker: (X) flush M ( ) above: ( ) below: Nat. Ground Stamping:
Detail Notes:

Photographs: Camera #: C9 Monument: North: East:
South: West: Set up: 46 Misc 1: Misc 2:
Rubbing Performed ( )Yes (X)No

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: 2AQ2
Receiver No: 4580
Day of Year: 263
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 19 year 2008
Operator: J. MALEX

C/A CODE POSITION

Beg:
Lat: : 33 ° 22 ' 47.02 " N
Long: 111 ° 29 ' 05.48 " W
Ellip. Height: 573.03 M PDOP: 2.6
Ending:
Lat: 33 ° 22 ' 47.01 " N
Long: 111 ° 29 ' 05.42 " W
Ellip. Height: 571.27 M PDOP: 1.6

DC FILENAME: 1714-10-8341
DC# 8341 & POSTPROCESS#: 8341 2630
Receiver Model: 5800
Antenna Type: 5800
Antenna Serial #: 4580
Fixed Height Pole No: C4
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 13 : 11 . Stop: 17 : 27 . UTC
Beg. SV's Used: 11,14,16,20,23,25,31,32
End SV's Used: 3,6,7,8,10,13,19,23,25,27,28

Ant. Height (M) 2.0
Ant. Height (FT)
MEASURED TO: BOTTOM ANTENNA MOUNT

Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Cold Calm Breezy 68 °F +/-

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

Photographs: Camera #: Monument: North: East:
South: West: Set up: Misc 1: Misc 2:
Rubbing Performed ( )Yes ( )No

2BP2

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: 2BP2
Receiver No: 6082
Day of Year: 261
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 17 year 2008
Operator: J MALEK

C/A CODE POSITION

Beg:
Lat: : 33 ° 20 ' 10.65 " N
Long: 111 ° 32 ' 02.89 " W
Ellip. Height: 451.5 M PDOP: 2.4
Ending:
Lat: 33 ° 20 ' 10.58 " N
Long: 111 ° 32 ' 02.91 " W
Ellip. Height: 447 M PDOP: 2.3

DC FILENAME:
DC# & POSTPROCESS#: 6082-261-0
Receiver Model: 4000 SSE
Antenna Type: COMPACT L1L2
Antenna Serial #: ~~02404~~ 02406
Fixed Height Pole No: ATEAM # 1
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 13 : 00 . Stop: 20 : 44 . UTC
Beg. SV's Used: 11, 14, 16, 20, 23, 30, 25, 31
End SV's Used: 7, 28, 26 15, 8, 17, 11

Ant. Height (M) 1.5
Ant. Height (FT)
MEASURED TO: BOTTOM ANTENNA MOUNT

Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Cold Calm Breezy 68 °F +/-

Type of Monument: Stamping:
Top of marker: ( ) flush 0.15' M ( ) above: (X) below: Nat. Ground Stamping:
Detail Notes:

Photographs: Camera #: Monument: North: East:
South: West: Set up: Misc 1: Misc 2:
Rubbing Performed ( )Yes ( )No

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: 2BP2
Receiver No: 5678
Day of Year: 262
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 18 year 2008
Operator: J. MALEK

C/A CODE POSITION

Beg:
Lat: : 33 ° 20 ' 10.64 " N
Long: 111 ° 32 ' 02.90 " W
Ellip. Height: 451.5 M PDOP: 1.9
Ending:
Lat: 33 ° 20 ' 10.62 " N
Long: 111 ° 32 ' 02.91 " W
Ellip. Height: 449.8 M PDOP: 2.1

DC FILENAME:
DC# & POSTPROCESS#: 56782620
Receiver Model: 4000
Antenna Type: COMPACT L1/L2
Antenna Serial #: 04449
Fixed Height Pole No: A TEAM)
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 13 : 47 . Stop: 20 : 06 . UTC
Beg. SV's Used: 32, 11, 13, 16, 20, 23, 25, 31
End SV's Used: 26, 7, 15, 27, 28, 8, 17, 25, 11

Ant. Height (M) 1.5
Ant. Height (FT)
MEASURED TO: BOTTOM ANTENNA MOUNT

Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Cold Calm Breezy 68 °F +/-

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

Photographs: Camera #: Monument: North: East:
South: West: Set up: Misc 1: Misc 2:
Rubbing Performed ( )Yes ( )No

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: 2BP2
Receiver No: 6126
Day of Year: 263
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 09 day 19 year 2008
Operator: L. SPEAN

C/A CODE POSITION

Beg:
Lat: : 33 ° 20 ' 10.63 " N
Long: 111 ° 32 ' 02.88 " W
Ellip. Height: 451.5 M PDOP: 2.3
Ending:
Lat: 33 ° 20 ' 10.66 " N
Long: 111 ° 32 ' 02.90 " W
Ellip. Height: 448.9 M PDOP: 2.1

DC FILENAME: 6126-263-0
DC# _____ & POSTPROCESS#: _____
Receiver Model: TRIMBLE 4000 SSE
Antenna Type: COMPACT L1/L2 W/GP
Antenna Serial #: 61001
Fixed Height Pole No: ATEAM # 3
Type of Survey: Fast Static (✓) Kinematic Base ( ) RTK Base ( ).
Actual= Start 13 : 37 . Stop: 18 : 18 . UTC
Beg. SV's Used: 11, 16, 20, 23, 13, 25, 31
End SV's Used: 28, 7, 19, 23, 13, 25, 3

Ant. Height (M) 1.5
Ant. Height (FT)
MEASURED TO: BOTTOM OF ANT. MOUNT

Weather Conditions: (Clear) P. Cloudy Overcast Hot (Warm) Cool Cold (Calm) Breezy 80 °F +/-

Type of Monument: NGS 3D Stamping:
Top of marker: ( ) flush 0.10' ( ) above: (✓) below: Nat. Ground Stamping:
Detail Notes:

Photographs: Camera #: C3 Monument: ✓ North: ✓ East: ✓
South: ✓ West: ✓ Set up: Misc 1: Misc 2:
Rubbing Performed ( )Yes (✓)No

2C01

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: ZC01
Receiver No: 6081 (Static #5)
Day of Year: 261
Session No: 1

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 17 year 2008
Operator: J. MARSHALL

C/A CODE POSITION

Beg:
Lat: : 33 ° 17 ' 29.68 " N
Long: 111 ° 34 ' 59.42 " W
Ellip. Height: 408.0 M PDOP: 2.1
Ending:
Lat: 33 ° 17 ' 29.68 " N
Long: 111 ° 34 ' 59.45 " W
Ellip. Height: 406.6 M PDOP: 1.9

DC FILENAME:
DC# & POSTPROCESS#: 60812611
Receiver Model: 4000 SSE
Antenna Type: Compact L1/L2 w/GP
Antenna Serial #: 98220
Fixed Height Pole No: #6
Type of Survey: Fast Static (x) Kinematic Base ( ) RTK Base ( ).
Actual= Start 12 : 57 Stop: 21 : 28 UTC
Beg. SV's Used: 11, 14, 16, 20, 32, 23, 31
End SV's Used: 26, 15, 08, 28, 17, 04, 27, 11

Ant. Height (M) 1.5 Meters
Ant. Height (FT)
MEASURED TO: Bottom of Antenna Mount

Weather Conditions: (Clear) P. Cloudy Overcast Hot Warm (Cool) Cold (Calm) Breezy 70 °F +/-

Type of Monument: Rod in Hand Hole Stamping:
Top of marker: ( ) flush 0.1 M ( ) above: (x) below: Nat. Ground Stamping:
Detail Notes:

Photographs: Camera #: C9 Monument: 25 North: East:
South: West: Set up: Misc 1: Misc 2:
Rubbing Performed ( )Yes (x)No Photos

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: 2C01
Receiver No: 6076
Day of Year: 262
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 09 day 18 year 2008
Operator: L. SPEAN

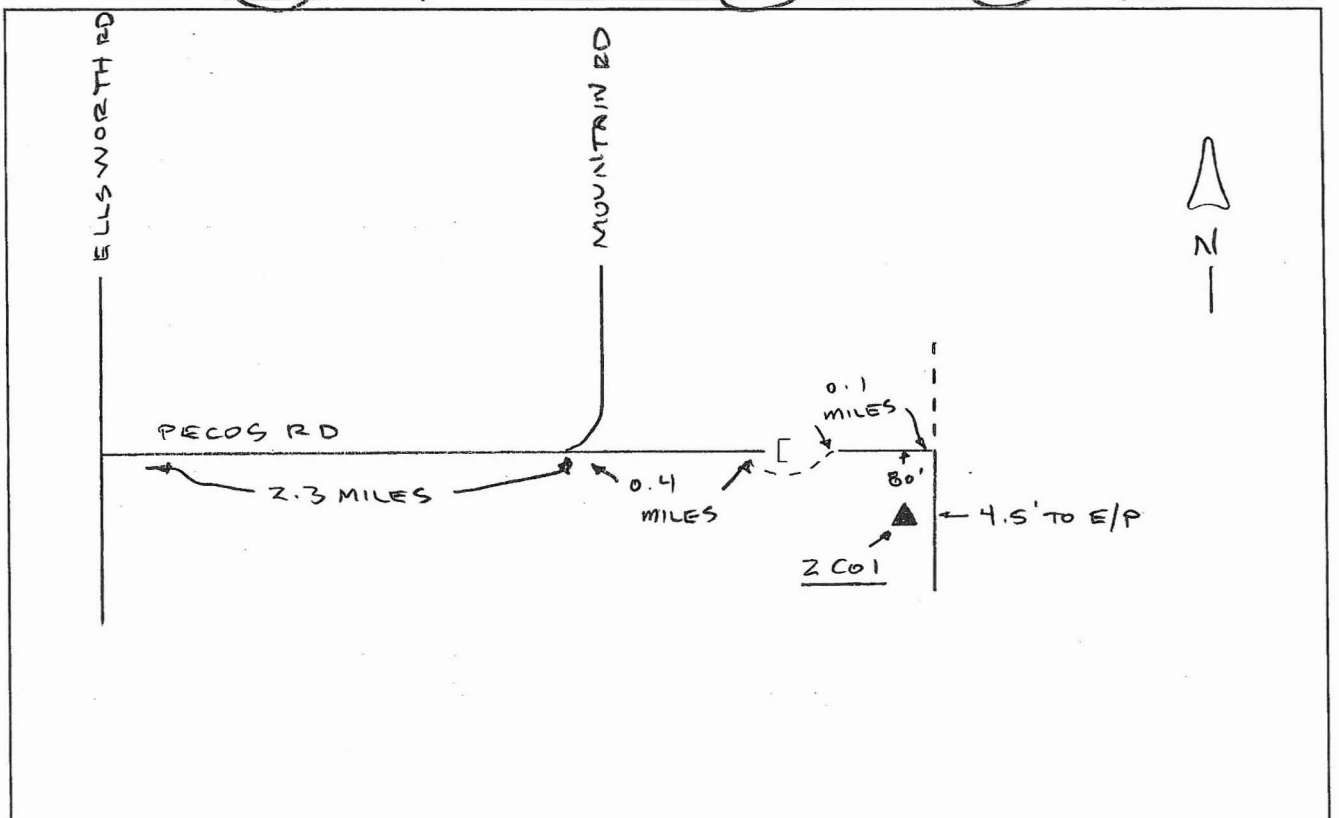
C/A CODE POSITION

Beg:
Lat: : 33 ° 17 ' 29.68 " N
Long: 111 ° 34 ' 59.44 " W
Ellip. Height: 409.4 M PDOP: 2.0
Ending:
Lat: 33 ° 17 ' 29.66 " N
Long: 111 ° 34 ' 59.43 " W
Ellip. Height: 405.5 M PDOP: 2.3

DC FILENAME: 6076-262-0
DC# _____ & POSTPROCESS#: _____
Receiver Model: TRIMBLE 4000 SSE
Antenna Type: COMPACT L1 | L2 W/GP
Antenna Serial #: 98246
Fixed Height Pole No: A TEAM # 3
Type of Survey: Fast Static (✓) Kinematic Base ( ) RTK Base ( ).
Actual= Start 14 : 08 . Stop: 20 : 39 . UTC
Beg. SV's Used: 13, 25, 31, 7, 32, 16, 20, 23
End SV's Used: 15, 11, 7, 26, 28, 8, 17

Ant. Height (M) 1.5M
Ant. Height (FT)
MEASURED TO: BOTTOM OF ANT. MOUNT

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



Type of Monument: NGS 30 Stamping:
Top of marker: ( ) flush 0.10' ( ) above: (✓) below: Nat. Ground Stamping:
Detail Notes:

Photographs: Camera #: C3 Monument: ✓ North: ✓ East: ✓
South: ✓ West: ✓ Set up: Misc 1: Misc 2:
Rubbing Performed ( )Yes (✓)No

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: 2C01
Receiver No: 6081 (Static #5)
Day of Year: 263
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 19 year 2008
Operator: J. MARSHALL

C/A CODE POSITION

Beg:
Lat: : 33 ° 17 ' 29.67 " N
Long: 111 ° 34 ' 59.41 " W
Ellip. Height: 409.9 M PDOP: 2.0
Ending:
Lat: 33 ° 17 ' 29.64 " N
Long: 111 ° 34 ' 59.41 " W
Ellip. Height: 410.6 M PDOP: 1.9

DC FILENAME:
DC# & POSTPROCESS#: 60812630
Receiver Model: 4000 SSE
Antenna Type: Compact L1/L2 w/ GP
Antenna Serial #: 98220
Fixed Height Pole No: 6
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 14 : 02 . Stop: 18 : 38 . UTC
Beg. SV's Used: 25, 31, 32, 13, 07, 16, 20, 23
End SV's Used: 25, 11, 28, 27, 13, 07, 19, 08, 10

Ant. Height (M) 1.5 meters
Ant. Height (FT)
MEASURED TO: Bottom of Antenna Mount

Weather Conditions: (Clear) P. Cloudy Overcast Hot (Warm) Cool Cold (Calm) Breezy 72 °F +/-

Type of Monument: Rod in Handhole Stamping:
Top of marker: ( ) flush 0.1 M ( ) above: (X) below: Nat. Ground Stamping:
Detail Notes:

Photographs: Camera #: C9 Monument: North: East:
South: West: Set up: 67 Misc 1: Misc 2:
Rubbing Performed ( )Yes (X)No

2CQ2

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: 2CQ2
Receiver No: 5678
Day of Year: 261
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 17 year 2008
Operator: J. MALEK

C/A CODE POSITION

Beg:
Lat: : 33 ° 17 ' 21.72 " N
Long: 111 ° 30 ' 24.01 " W
Ellip. Height: 457.4 M PDOP: 2.5
Ending:
Lat: 33 ° 17 ' 21.65 " N
Long: 111 ° 30 ' 24.05 " W
Ellip. Height: 455.7 M PDOP: 2.0

DC FILENAME:
DC# & POSTPROCESS#: 56782610
Receiver Model: 4000 SSE
Antenna Type: COMPACT L1/L2
Antenna Serial #: 04449
Fixed Height Pole No: A TEAM 2
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 13 : 27 . Stop: 20 : 26 . UTC
Beg. SV's Used: 11, 16, 20, 23, 31, 32
End SV's Used: 7, 25, 26, 15, 8, 17, 27, 11, 28

Ant. Height (M) 1.5
Ant. Height (FT)
MEASURED TO: BOTTOM ANTENNA MOUNT

Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Cold Calm Breezy 70 °F +/-

Type of Monument: Stamping:
Top of marker: ( ) flush 0.25' ( ) above: (X) below: Nat. Ground Stamping:
Detail Notes:

Photographs: Camera #: Monument: North: East:
South: West: Set up: Misc 1: Misc 2:
Rubbing Performed ( )Yes ( )No

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: 2CQ2
Receiver No: 6082
Day of Year: 262
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 18 year 2008
Operator: J. MALEK

C/A CODE POSITION

Beg:
Lat: : 33 ° 17 ' 21.73 " N
Long: 111 ° 30 ' 24.04 " W
Ellip. Height: 458.9 M PDOP: 2.1
Ending:
Lat: 33 ° 17 ' 21.68 " N
Long: 111 ° 30 ' 24.04 " W
Ellip. Height: 456.4 M PDOP: 2.1

DC FILENAME:
DC# & POSTPROCESS#: 60822620
Receiver Model: 9000
Antenna Type: COMPACT L1/L2
Antenna Serial #: 02406
Fixed Height Pole No: ATEAM #2
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 14 : 13 . Stop: 19 : 47 . UTC
Beg. SV's Used: 25,31,13,7,16,20,23
End SV's Used: 25,17,11,15,7,19,8,26

Ant. Height (M) 1.5
Ant. Height (FT)
MEASURED TO: BOTTOM ANTENNA MOUNT

Weather Conditions: (Clear) P. Cloudy Overcast Hot Warm (Cool) Cold (Calm) Breezy 68 °F +/-

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

Photographs: Camera #: Monument: North: East:
South: West: Set up: Misc 1: Misc 2:
Rubbing Performed ( )Yes ( )No

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: 2CQ2
Receiver No: 6076
Day of Year: 263
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 09 day 19 year 2008
Operator: L. SPEAN

C/A CODE POSITION

Beg:
Lat: : 33 ° 17 ' 21.70 " N
Long: 111 ° 30 ' 23.99 " W
Ellip. Height: 459.1 M PDOP: 2.0.
Ending:
Lat: 33 ° 17 ' 21.71 " N
Long: 111 ° 30 ' 23.98 " W
Ellip. Height: 456.4 M PDOP: 2.3.

DC FILENAME: 6076-263-0
DC# _____ & POSTPROCESS#: _____
Receiver Model: TRIMBLE 4000 SSE
Antenna Type: COMPACT L1/L2 W/GP
Antenna Serial #: 98246
Fixed Height Pole No: A-TEAM #4
Type of Survey: Fast Static (✓) Kinematic Base ( ) RTK Base ( ).
Actual= Start 14 : 11 . Stop: 17 : 33 . UTC
Beg. SV's Used: 25, 31, 32, 7, 13, 16, 20, 23.
End SV's Used: 25, 3, 28, 7, 13, 19, 8, 23.

Ant. Height (M) 1.5 M
Ant. Height (FT)
MEASURED TO: BOTTOM OF ANT. MOUNT

Weather Conditions: (Clear) P. Cloudy Overcast Hot (Warm) Cool Cold (Calm) Breezy 80 °F +/-

Type of Monument: NGS 30 Stamping:
Top of marker: ( ) flush 0.20' ( ) above: (✓) below: Nat. Ground Stamping:
Detail Notes:

Photographs: Camera #: C3 Monument: ✓ North: ✓ East: ✓
South: ✓ West: ✓ Set up: Misc 1: Misc 2:
Rubbing Performed ( )Yes (✓)No

G474

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: G 474
Receiver No: 6126
Day of Year: 261
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 09 day 17 year 2008
Operator: L. SPEAN

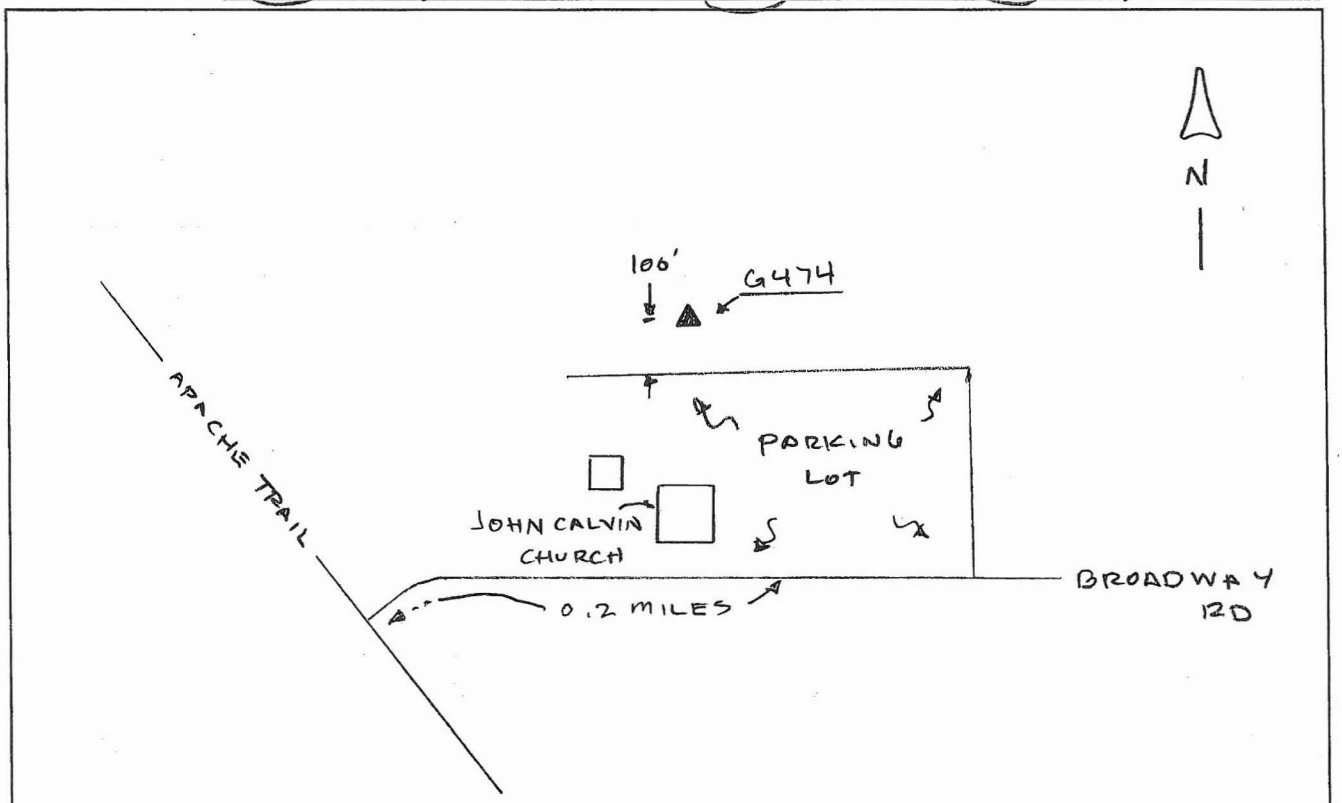
C/A CODE POSITION

Beg:
Lat: : 33 ° 24 ' 34.35 " N
Long: 111 ° 32 ' 00.20 " W
Ellip. Height: 503.6 M PDOP: 2.2.
Ending:
Lat: 33 ° 24 ' 34.32 " N
Long: 111 ° 32 ' 00.16 " W
Ellip. Height: 501.1 M PDOP: 2.1.

DC FILENAME: 6126 - 261 - 0
DC# _____ & POSTPROCESS#: _____
Receiver Model: TRIMBLE 4000 SSE
Antenna Type: COMPACT L1/L2 W/GP
Antenna Serial #: 61001
Fixed Height Pole No: A-TEAM #3
Type of Survey: Fast Static (✓) Kinematic Base ( ) RTK Base ( ).
Actual= Start 14 : 33 . Stop: 21 : 03 . UTC
Beg. SV's Used: 31, 7, 13, 16, 20, 23
End SV's Used: 4, 11, 28, 7, 26, 15, 17

Ant. Height (M) 1.5 M
Ant. Height (FT)
MEASURED TO: BOTTOM OF ANT. MOUNT

Weather Conditions: (Clear) P. Cloudy Overcast Hot (Warm) Cool Cold (Calm) Breezy 80 °F +/-



Type of Monument: BRASS CAP IN BEDROCK Stamping: NATIONAL GEODETIC
Top of marker: (✓) flush M ( ) above: ( ) below: Nat. Ground Stamping: SURVEY VERTICAL
Detail Notes: CONTROL MARK G474 1981

Photographs: Camera #: C3 Monument: ✓ North: _____ East: _____
South: _____ West: _____ Set up: ✓ Misc 1: _____ Misc 2: _____
Rubbing Performed ( )Yes (✓)No

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: G474
Receiver No: 6081
Day of Year: 262
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 18 year 2008
Operator: S. MARSHALL

C/A CODE POSITION

Beg:
Lat: : 33 ° 24 ' 34.36 "N
Long: 111 ° 32 ' 00.20 "W
Ellip. Height: 503.4 M PDOP: 2.0
Ending:
Lat: 33 ° 24 ' 34.32 "N
Long: 111 ° 32 ' 00.20 "W
Ellip. Height: 500.8 M PDOP: 2.0

DC FILENAME:
DC# & POSTPROCESS#: 60812620
Receiver Model: 4000SSE
Antenna Type: Compact L1/L2 w/GP
Antenna Serial #: 98220
Fixed Height Pole No: #6
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 14 : 14 . Stop: 20 : 23 . UTC
Beg. SV's Used: 25, 31, 32, 07, 13, 16, 20, 23
End SV's Used: 25, 11, 26, 07, 27, 15, 28, 08, 17

Ant. Height (M) 1.5 meters
Ant. Height (FT)
MEASURED TO: Bottom of Antenna Mount

Weather Conditions: (Clear) P. Cloudy Overcast Hot Warm (Cool) Cold (Calm) Breezy 75°F +/-

Type of Monument: Brass Cap in Rock Stamping:
Top of marker: (x) flush M ( ) above: ( ) below: Nat. Ground Stamping:
Detail Notes:

Photographs: Camera #: C9 Monument: North: East:
South: West: Set up: 47 Misc 1: Misc 2:
Rubbing Performed ( )Yes (x)No Photos

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: G474
Receiver No: 6082
Day of Year: 263
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 19 year 2008
Operator: J. MALEK

C/A CODE POSITION

Beg:
Lat: : 33 ° 24 ' 34.35 " N
Long: 111 ° 32 ' 00.18 " W
Ellip. Height: 502.2 M PDOP: 2.0
Ending:
Lat: 33 ° 24 ' 34.36 " N
Long: 111 ° 32 ' 00.12 " W
Ellip. Height: 501.6 M PDOP: 2.5

DC FILENAME:
DC# & POSTPROCESS#: 60822630
Receiver Model: 4000 SSE
Antenna Type: COMPACT L1/L2
Antenna Serial #: 02406
Fixed Height Pole No: ATEAM # 1
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 13 : 52 . Stop: 17 : 54 . UTC
Beg. SV's Used: 11, 13, 31, 16, 20, 23, 25
End SV's Used: 7, 13, 3, 19, 8, 23, 25

Ant. Height (M) 1.5
Ant. Height (FT)
MEASURED TO: BOTTOM ANTENNA MOUNT

Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Cold Calm Breezy 68 °F +/-

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

Photographs: Camera #: Monument: North: East:
South: West: Set up: Misc 1: Misc 2:
Rubbing Performed ( )Yes ( )No

69F1

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: 69F1
Receiver No: 6490 (C2)
Day of Year: 261
Session No: Ø

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 17 year 2008
Operator: J. MARSHALL

C/A CODE POSITION

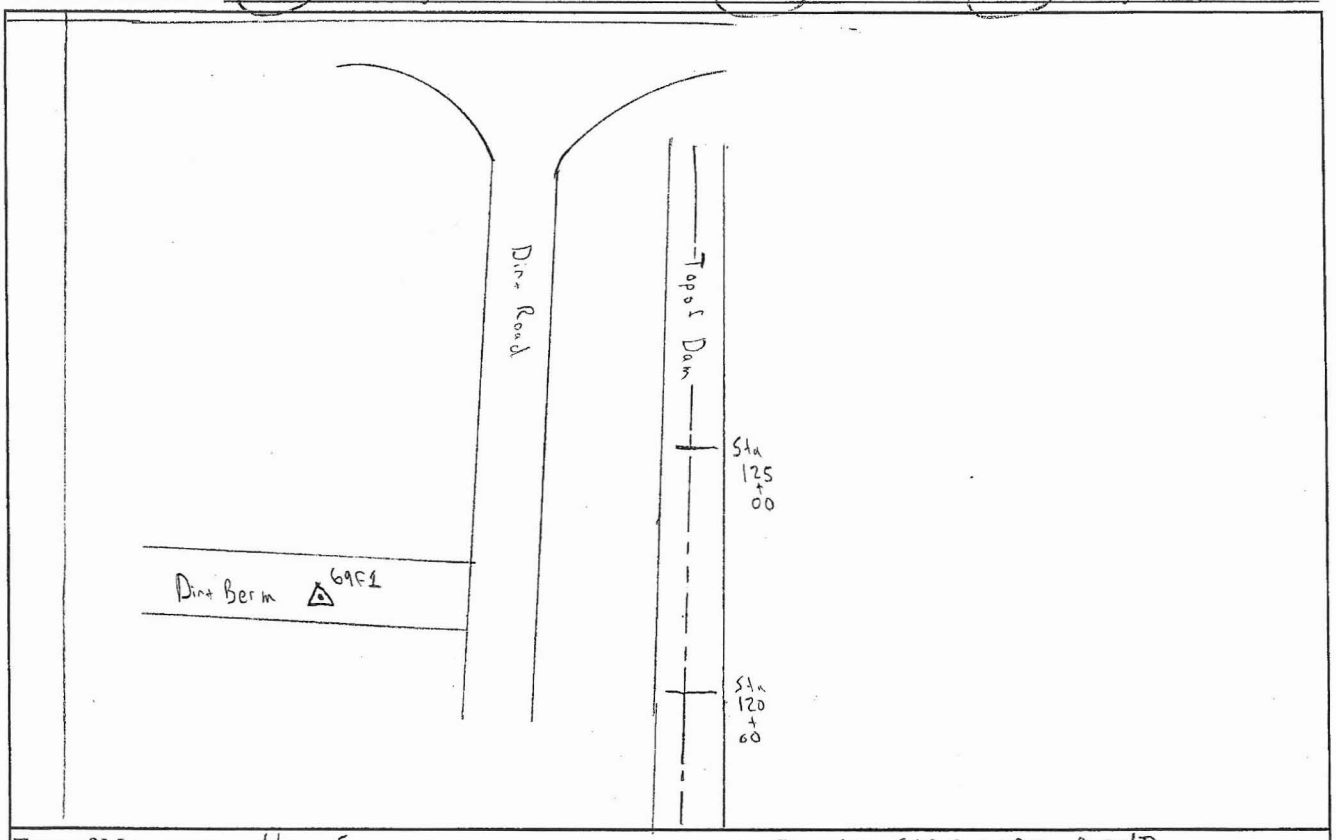
Beg:
Lat: : 33 ° 22 ' 05.79 " N
Long: 111 ° 33 ' 40.79 " W
Ellip. Height: 449.4 M PDOP: 2.3

Ending:
Lat: 33 ° 22 ' 05.77 " N
Long: 111 ° 33 ' 40.74 " W
Ellip. Height: 450.7 M PDOP: 1.6

DC FILENAME: 1714-10-8097
DC# 8097 & POSTPROCESS#: 80972610
Receiver Model: Trimble 5800
Antenna Type: Trimble 5800
Antenna Serial #: 6490
Fixed Height Pole No: Rod
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 15 : 20 . Stop: 17 : 49 . UTC
Beg. SV's Used: 3, 6, 7, 13, 16, 20, 23, 27, 32
End SV's Used: 3, 6, 7, 8, 10, 13, 19, 23, 25, 27, 28

Ant. Height (M) 2.0 Meters
Ant. Height (FT)
MEASURED TO: Bottom of Antenna Mount

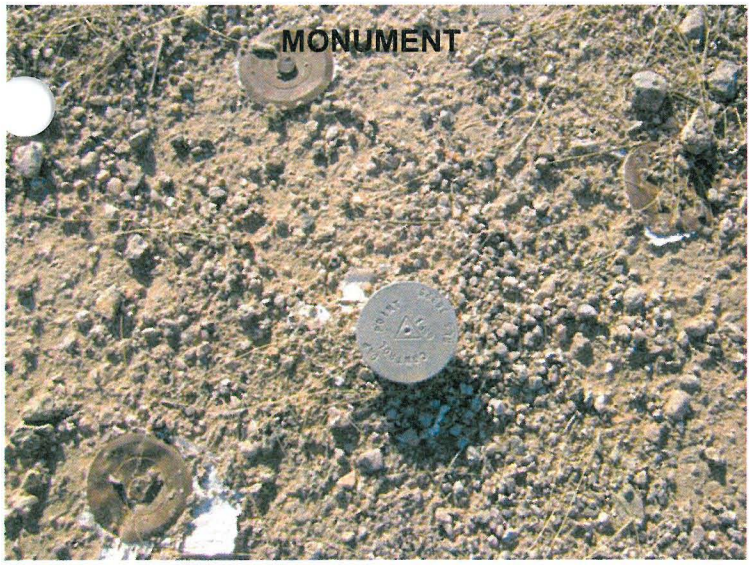
Weather Conditions: (Clear) P. Cloudy Overcast Hot (Warm) Cool Cold (Calm) Breezy 80 °F +/-

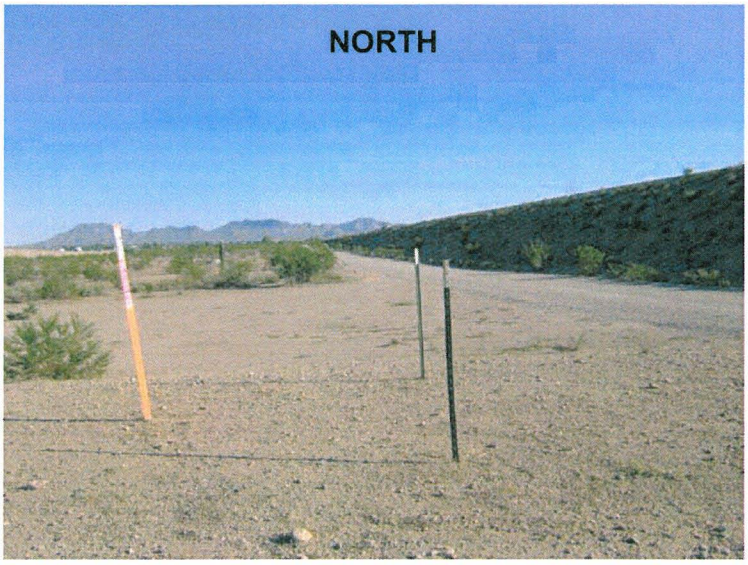


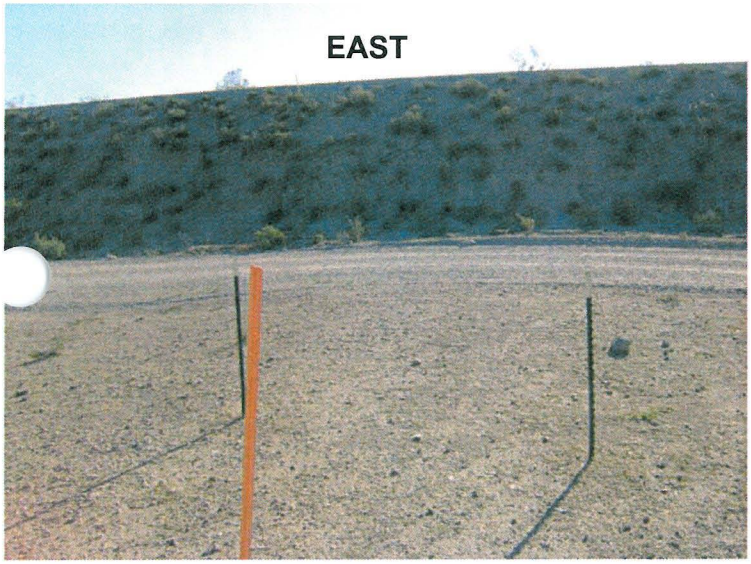
Type of Monument: Alum Cap
Stamping: CAP CONTROL POINT
Top of marker: ( ) flush 0.1 M (x) above: ( ) below: Nat. Ground
Stamping: 69F1 RLS 38325
Detail Notes:

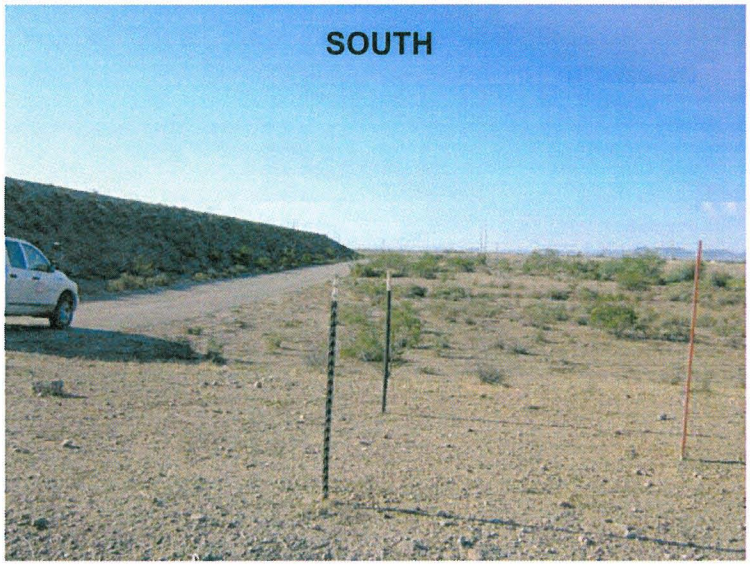
Photographs: Camera #: C9 Monument: 33 North: 34 East: 35
South: 36 West: 37 Set up: 38 Misc 1: Misc 2:
Rubbing Performed ( )Yes (X)No Photos

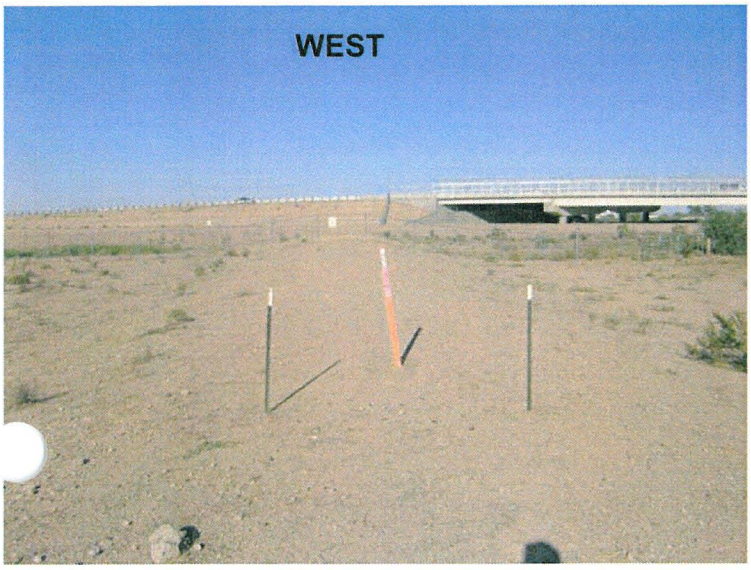
69F1

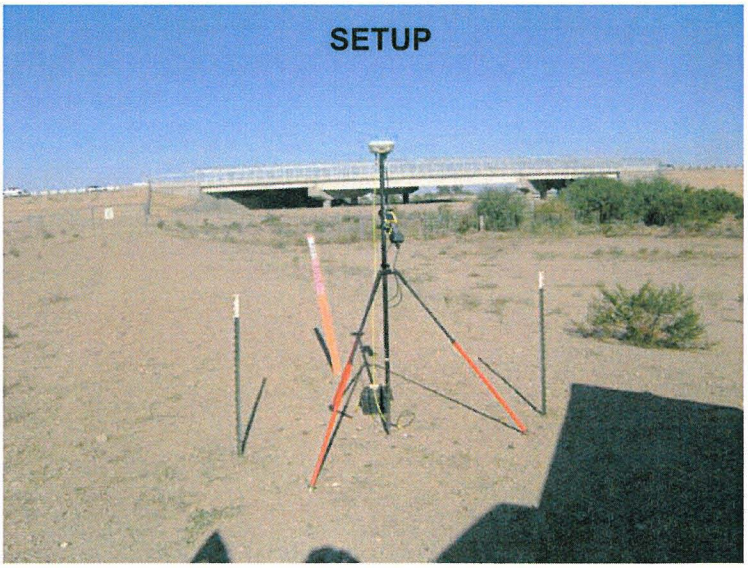












RB1

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: RB2
Receiver No: 8916
Day of Year: 261
Session No: 6

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 17 year 2008
Operator: J. MALEK

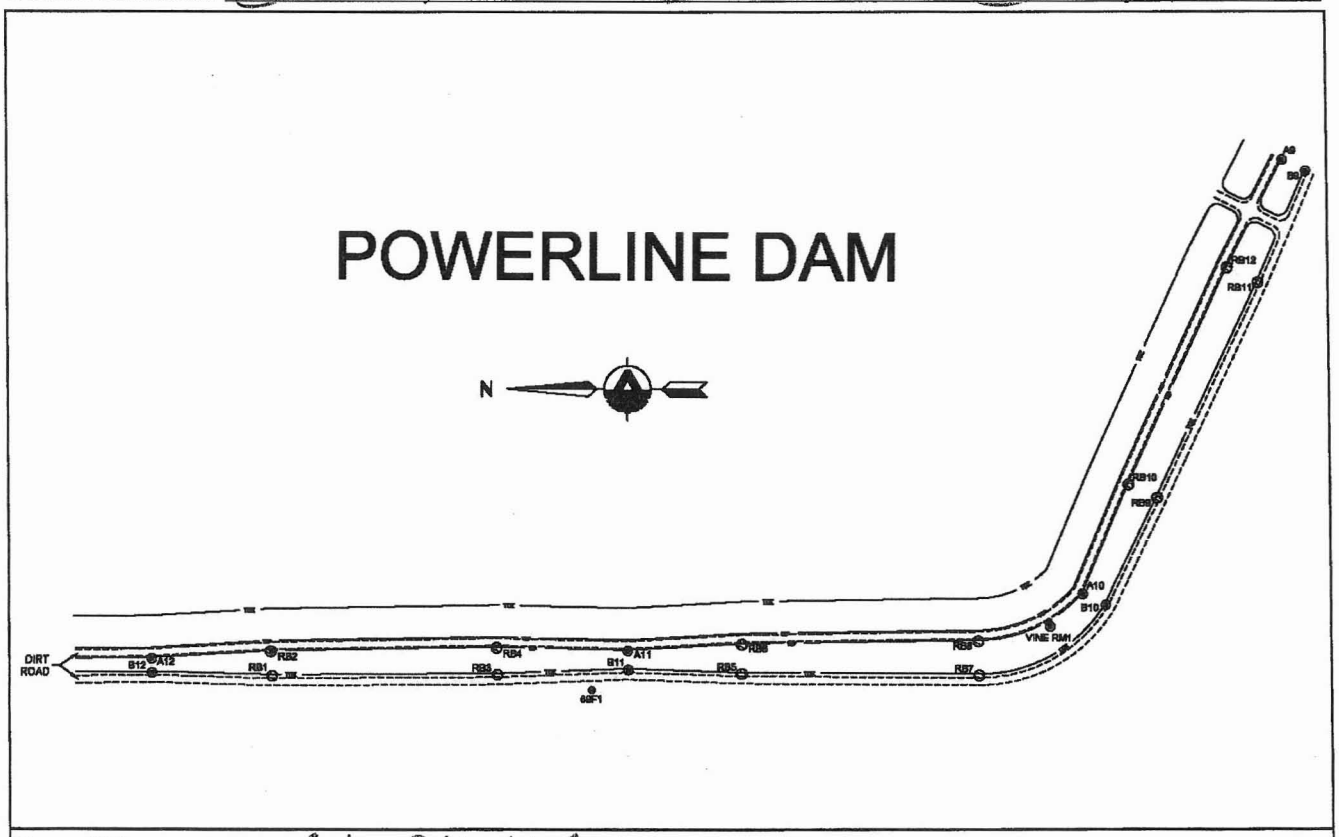
C/A CODE POSITION

Beg:
Lat: : 33 ° 22 ' 12.44 " N
Long: 111 ° 33 ' 40.31 " W
Ellip. Height: 449.9 M PDOP: 1.9
Ending:
Lat: 33 ° 22 ' 12.43 " N
Long: 111 ° 33 ' 40.26 " W
Ellip. Height: 451.0 M PDOP: 1.6

DC FILENAME: 1714-10-8955
DC# 8955 & POSTPROCESS#: 8955 2610
Receiver Model: 5800
Antenna Type: 5800
Antenna Serial #: 8916
Fixed Height Pole No:
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 15 : 04 . Stop: 17 : 47 . UTC
Beg. SV's Used: 6,7,13,16,20,23,25,27,32,3
End SV's Used: 3,6,7,8,10,13,19,23,25,27,28

Ant. Height (M) 2.0
Ant. Height (FT)
MEASURED TO: BOTTOM ANTENNA MOUNT

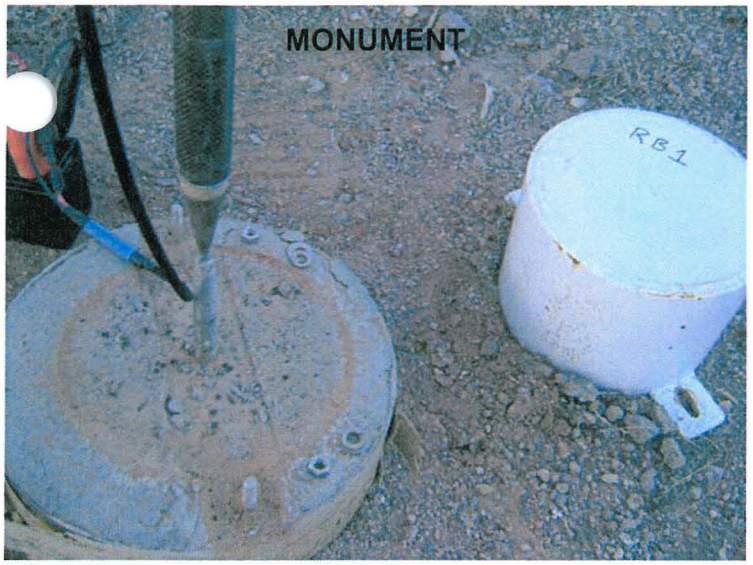
Weather Conditions: (Clear) P. Cloudy Overcast (Hot) Warm Cool Cold (Calm) Breezy 70 °F +/-

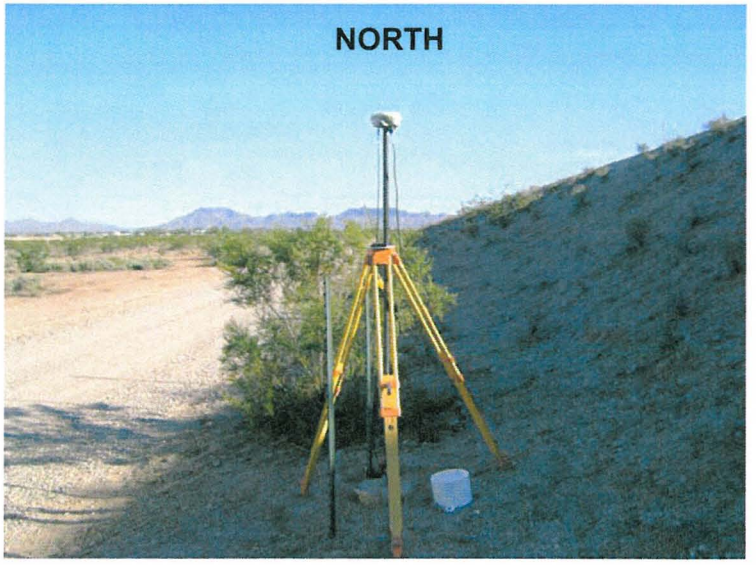


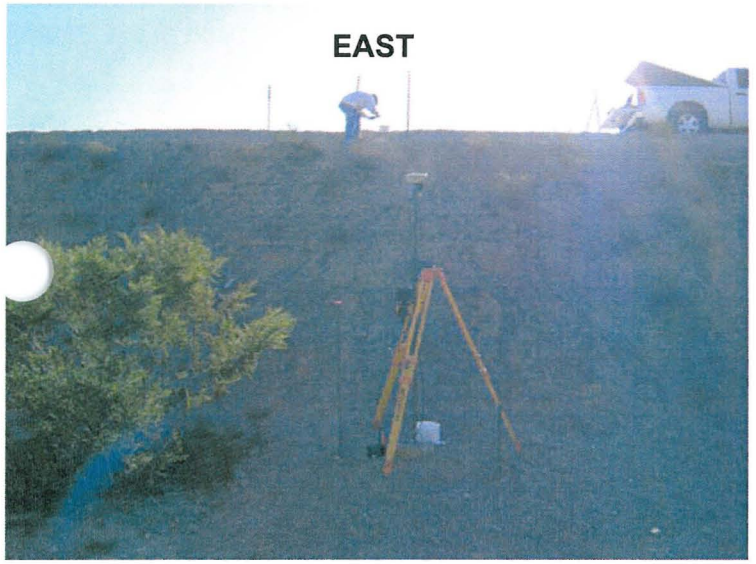
Type of Monument: Rock Bolt IN CONC. Stamping:
Top of marker: ( ) flush 0.6' (X) above: ( ) below: Nat. Ground Stamping:
Detail Notes: TOE OF DAM

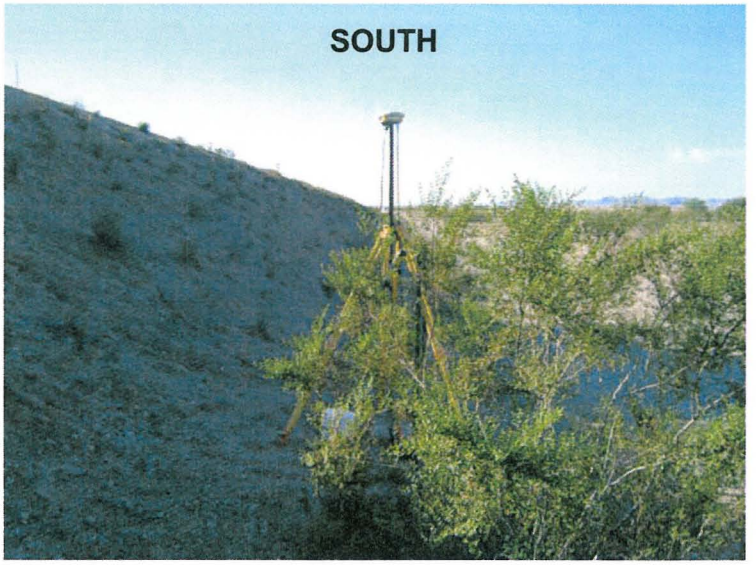
Photographs: Camera #: C1 Monument: 590 North: 591 East: 592
South: 593 West: 594 Set up: 592 Misc 1: Misc 2:
Rubbing Performed ( )Yes ( )No

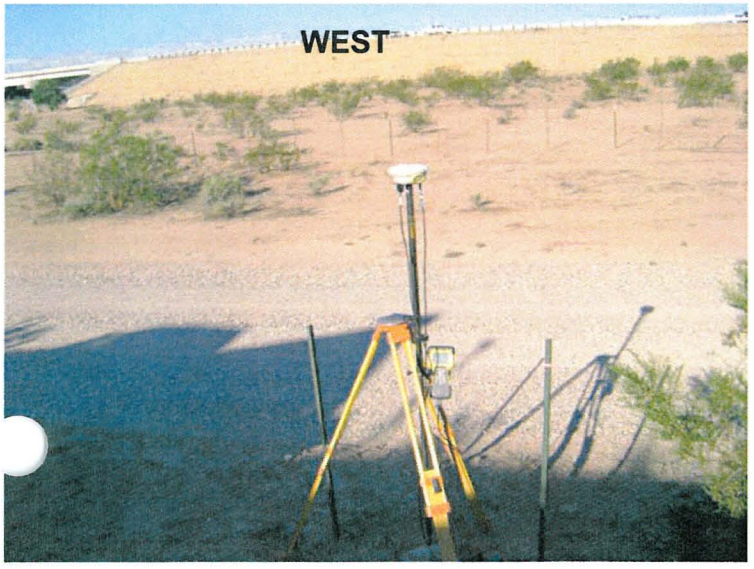
RB1

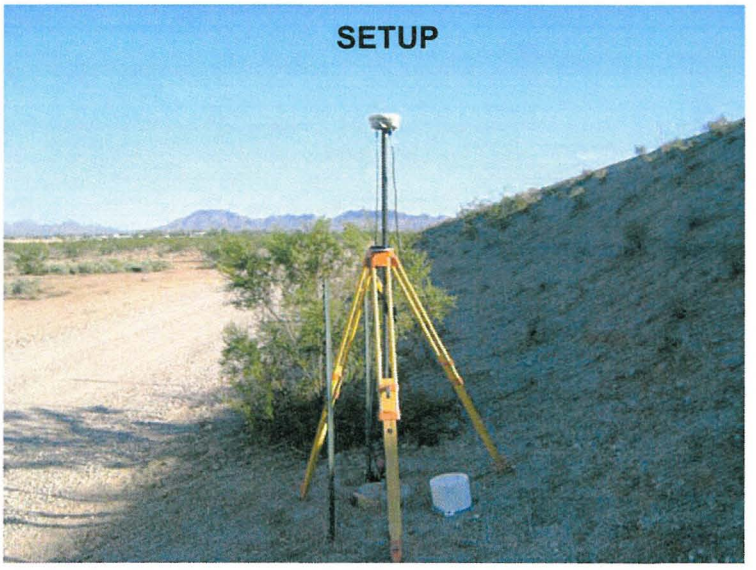












RB2

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: RB2
Receiver No: 40172
Day of Year: 261
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 09 day 17 year 2008
Operator: L. SPERN

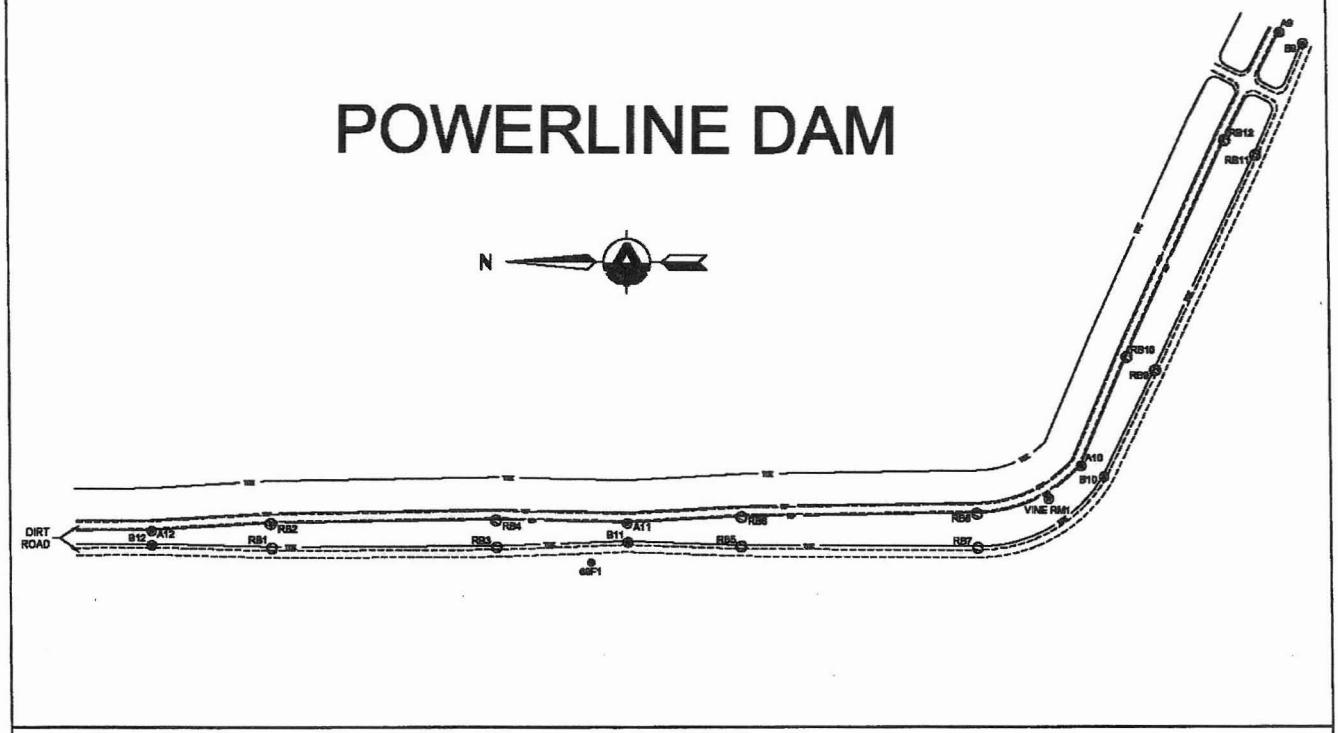
C/A CODE POSITION

Beg:
Lat: : 33 ° 22 ' 12.45 " N
Long: 111 ° 33 ' 39.95 " W
Ellip. Height: 454.034 M PDOP: 2.2
Ending:
Lat: 33 ° 22 ' 12.44 " N
Long: 111 ° 33 ' 39.90 " W
Ellip. Height: 455.7 M PDOP: 1.6

DC FILENAME: 1714-10-1241
DC# 31241 & POSTPROCESS#: 12412610
Receiver Model: TRIMBLE 5800
Antenna Type: TRIMBLE 5800
Antenna Serial #: 40172
Fixed Height Pole No: CB ROD
Type of Survey: Fast Static (✓) Kinematic Base ( ) RTK Base ( ).
Actual= Start 15 : 16 . Stop: 17 : 46 . UTC
Beg. SV's Used: 3, 6, 7, 13, 16, 20, 23, 25, 27, 32
End SV's Used: 3, 6, 7, 8, 10, 13, 19, 23, 25, 27, 28

Ant. Height (M) 2.0 M
Ant. Height (FT)
MEASURED TO: BOTTOM OF ANT MOUNT

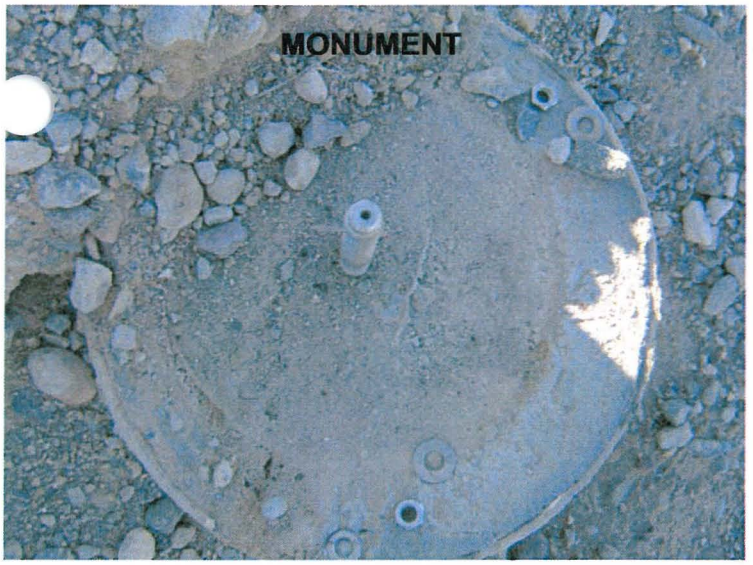
Weather Conditions: (Clear) P. Cloudy Overcast Hot (Warm) Cool Cold (Calm) Breezy 85 °F +/-

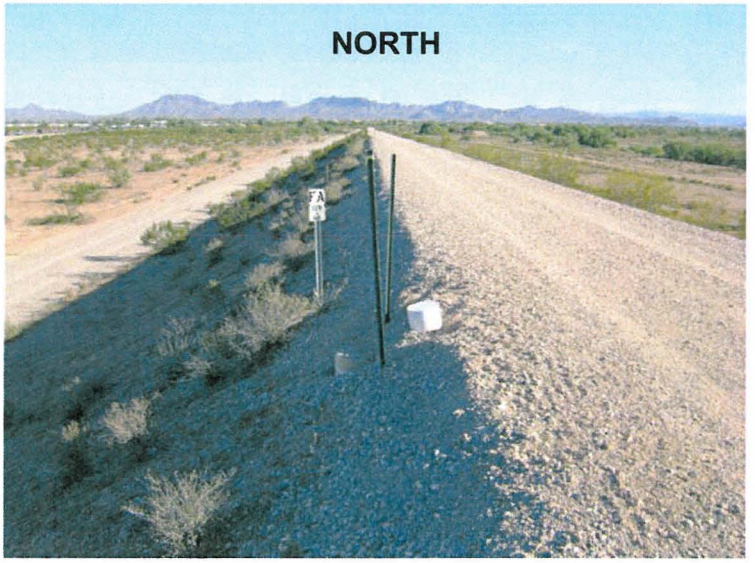


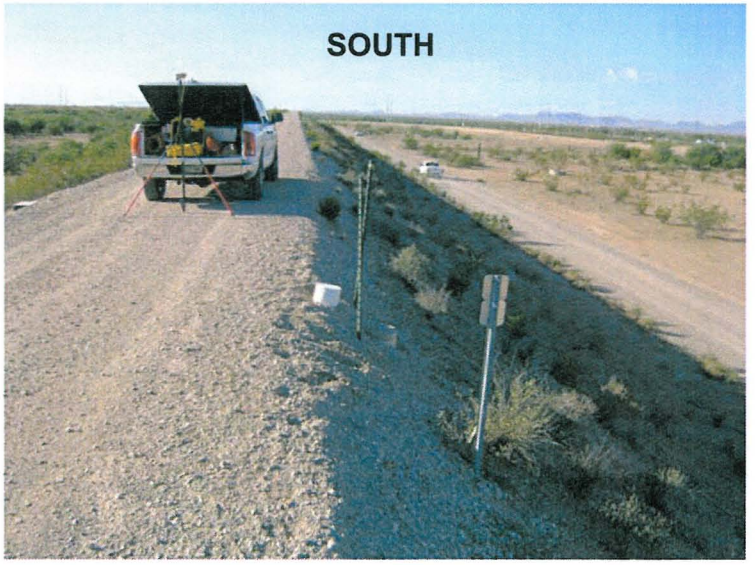
Type of Monument: ROD IN CONCRETE BASE Stamping:
Top of marker: ( ) flush 0.35'M (✓) above: ( ) below: Nat. Ground Stamping:
Detail Notes:

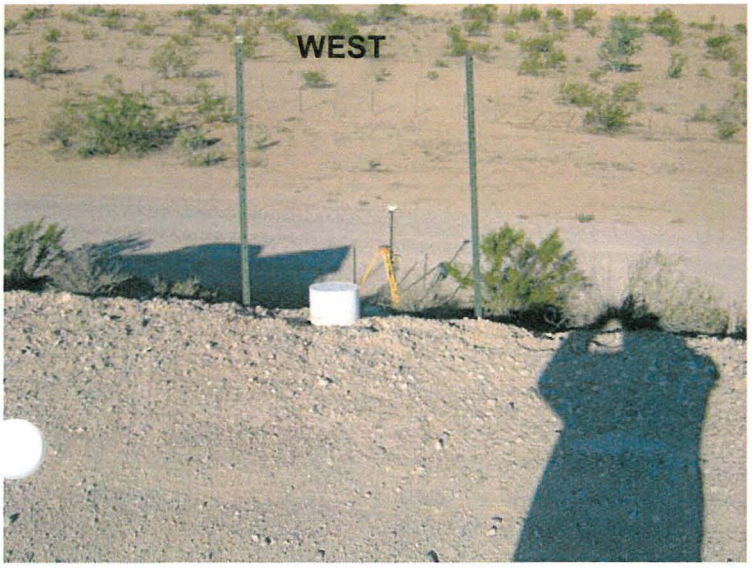
Photographs: Camera #: C3 Monument: ✓ North: ✓ East: ✓
South: ✓ West: ✓ Set up: ✓ Misc 1: Misc 2:
Rubbing Performed ( )Yes (✓)No

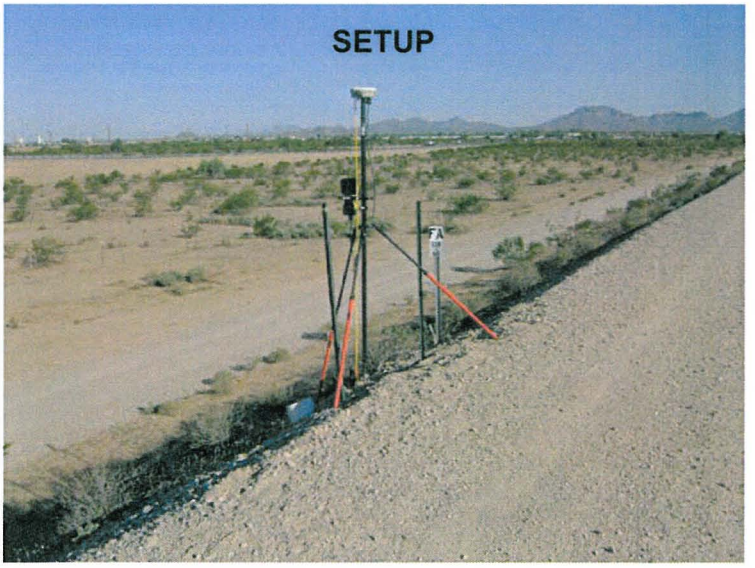
RB2











RB3

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: RB3
Receiver No: 4580
Day of Year: 261
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 17 year 2008
Operator: J. MALEK

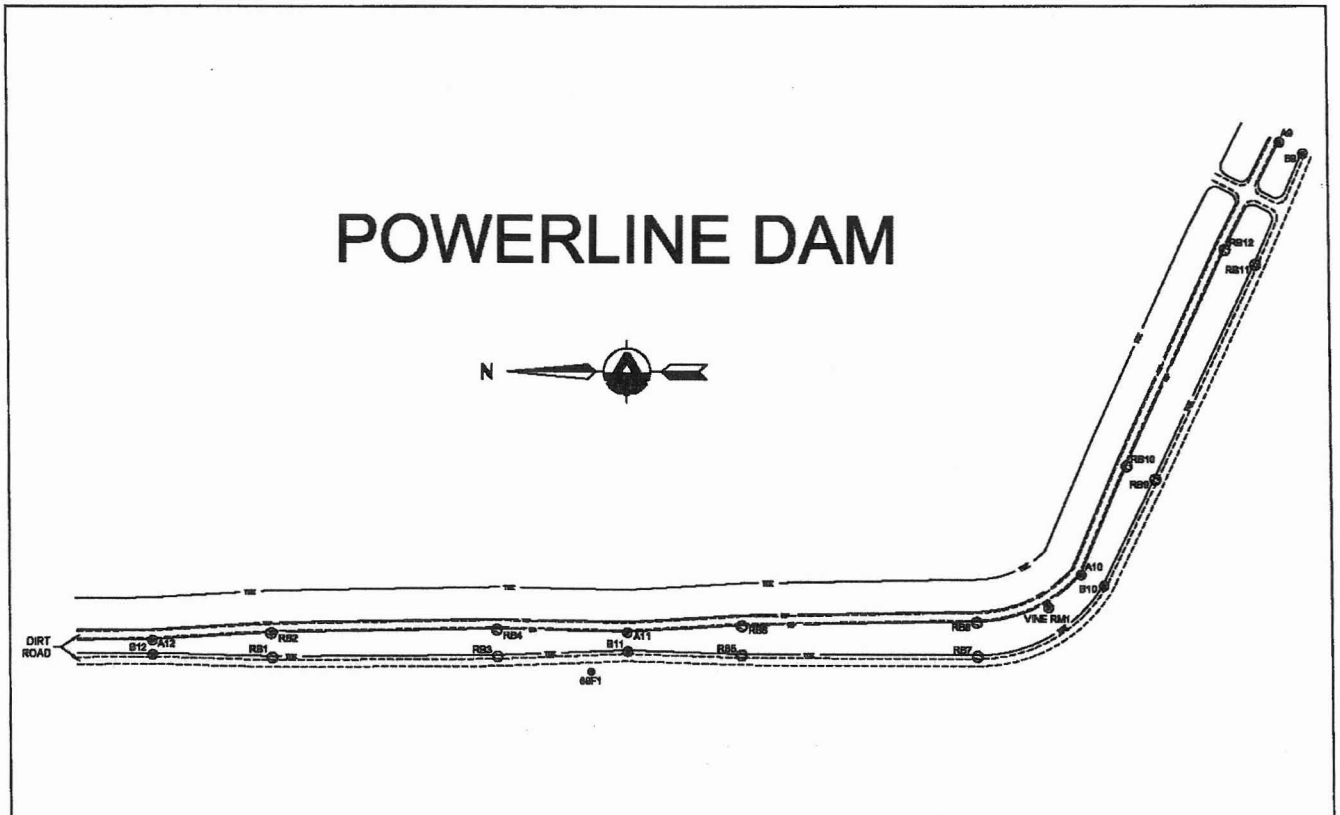
C/A CODE POSITION

Beg:
Lat: : 33 ° 22 ' 07.74 " N
Long: 111 ° 33 ' 40.30 " W
Ellip. Height: 449.2 M PDOP: 2.2
Ending:
Lat: 33 ° 22 ' 07.74 " N
Long: 111 ° 33 ' 40.26 " W
Ellip. Height: 450.2 M PDOP: 1.6

DC FILENAME: 1714-10-8341
DC# 8341 & POSTPROCESS#: 83412610
Receiver Model: 5800
Antenna Type: 5800
Antenna Serial #: 458
Fixed Height Pole No: C4
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 15 : 20 . Stop: 17 : 52 . UTC
Beg. SV's Used: 3,6,7,13,16,20,23,25,27,32
End SV's Used: 3,6,7,8,10,13,19,23,25,27,28

Ant. Height (M) 2.0
Ant. Height (FT)
MEASURED TO: Bottom Antenna Mount

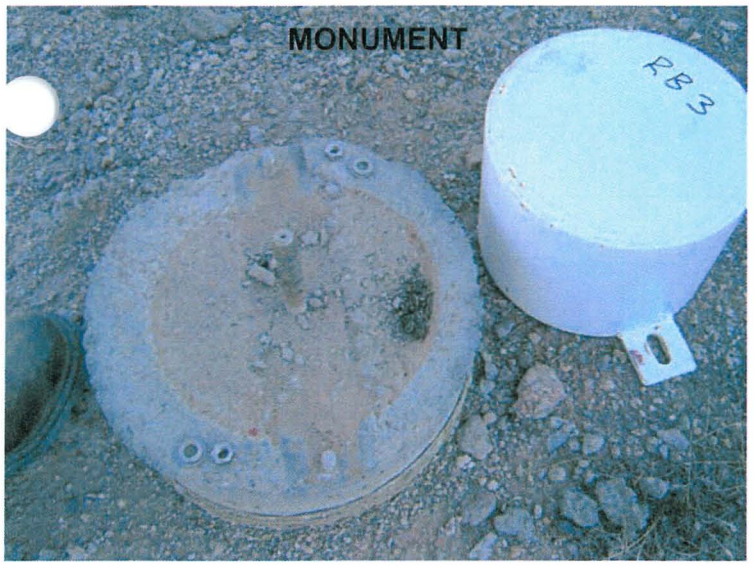
Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Cold Calm Breezy 70 °F +/-

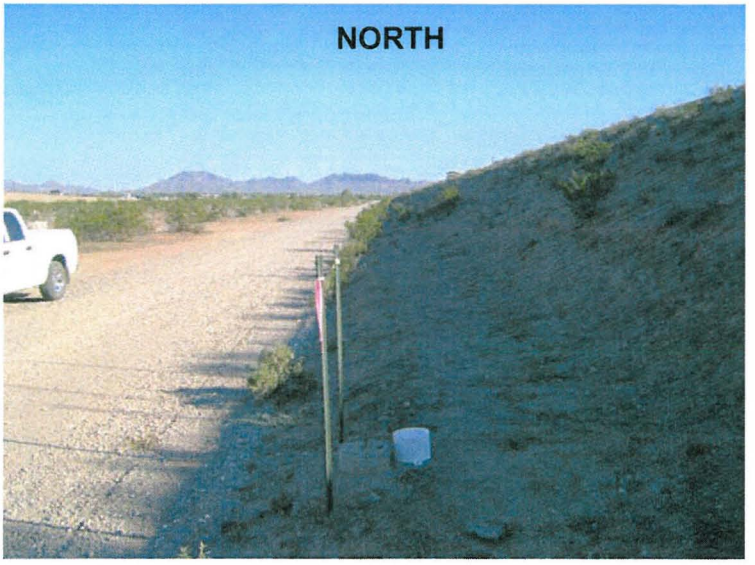


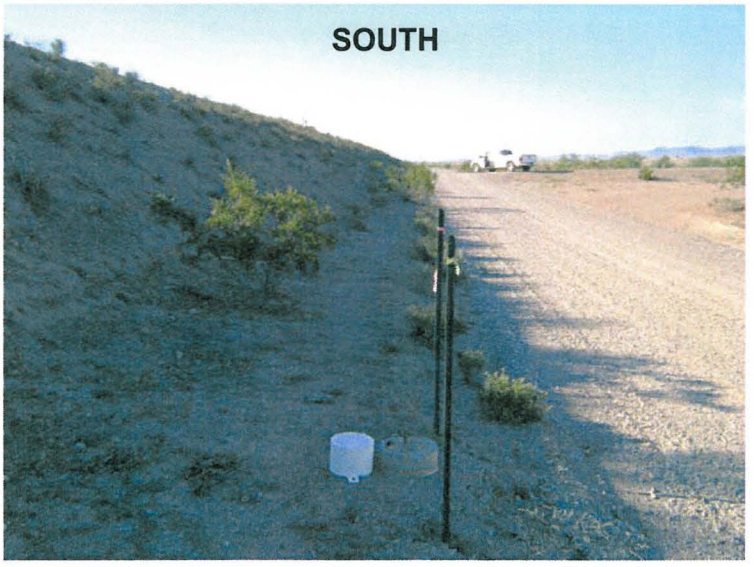
Type of Monument: Rock Bolt in Concrete Stamping:
Top of marker: ( ) flush 0.7' (X) above: ( ) below: Nat. Ground Stamping:
Detail Notes: Toe of Dam

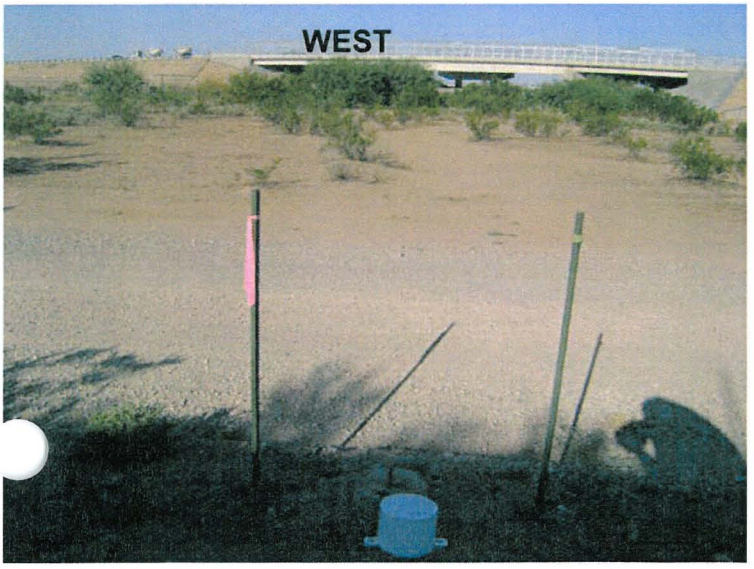
Photographs: Camera #: C1 Monument: 596 North: 597 East: 598
South: 599 West: 600 Set up: 601 Misc 1: Misc 2:
Rubbing Performed ( )Yes ( )No

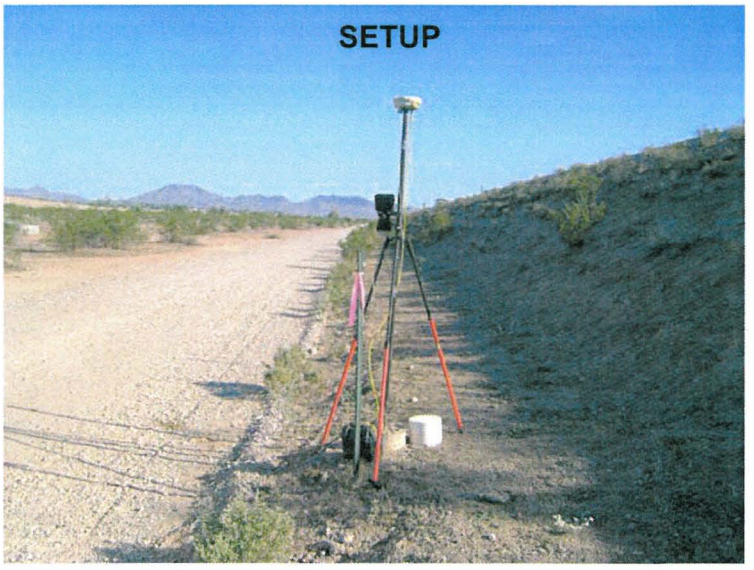
RB3











RB4

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: RB 4
Receiver No: 6492
Day of Year: 261
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 09 day 17 year 2008
Operator: L. SPEAN

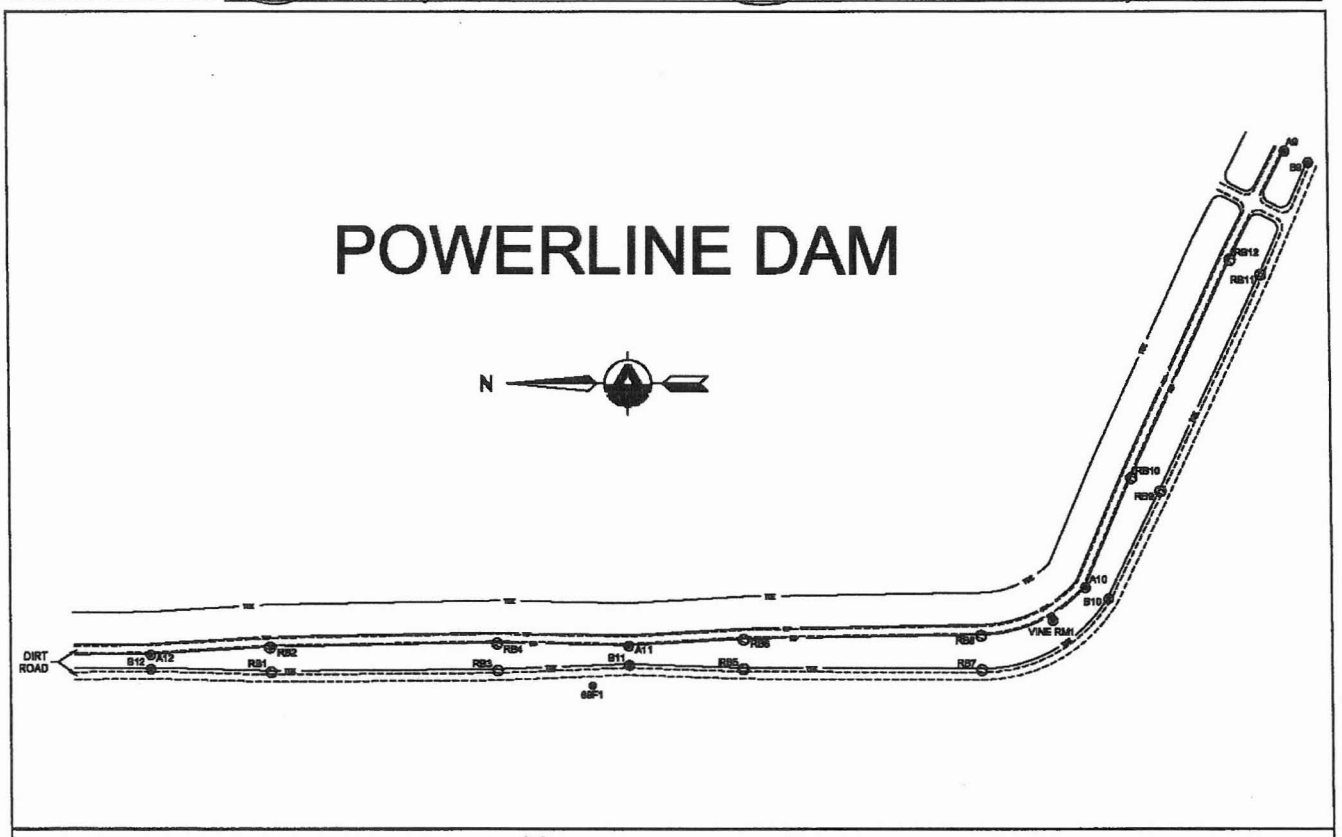
C/A CODE POSITION

Beg:
Lat: : 33 ° 22 ' 07.75 " N
Long: 111 ° 33 ' 39.88 " W
Ellip. Height: 454.01 M PDOP: 2.4
Ending:
Lat: 33 ° 22 ' 07.73 " N
Long: 111 ° 33 ' 39.82 " W
Ellip. Height: 455.819 M PDOP: 1.6

DC FILENAME: 1714-10-8957
DC# 8957 & POSTPROCESS#: 8957 2610
Receiver Model: TRIMBLE 5800
Antenna Type: TRIMBLE 5800
Antenna Serial #:
Fixed Height Pole No: C3 ROD
Type of Survey: Fast Static (✓) Kinematic Base ( ) RTK Base ( ).
Actual= Start 15 : 35 . Stop: 17 : 51 . UTC
Beg. SV's Used: 3, 6, 7, 13, 16, 20, 23, 25, 27, 32
End SV's Used: 3, 6, 7, 8, 10, 13, 19, 23, 25, 27, 28

Ant. Height (M) 2.0 M
Ant. Height (FT)
MEASURED TO: BOTTOM OF ANT. MOUNT

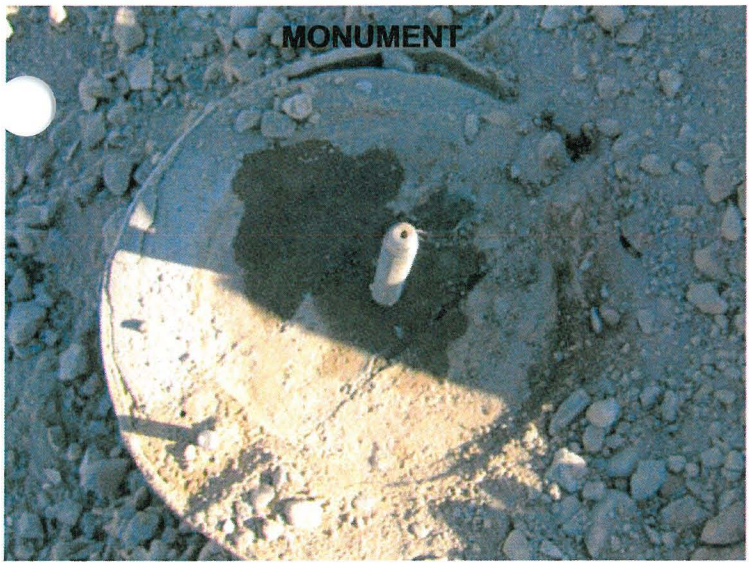
Weather Conditions: (Clear) P. Cloudy Overcast Hot (Warm) Cool Cold (Calm) Breezy 85 °F +/-

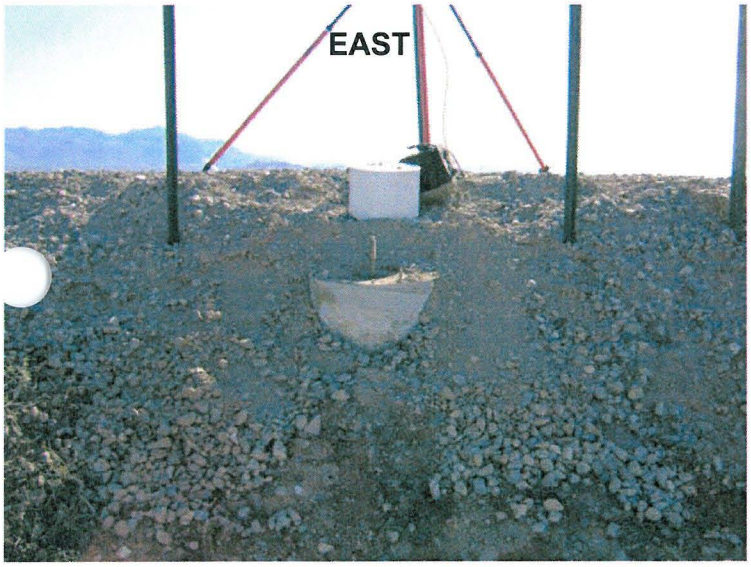


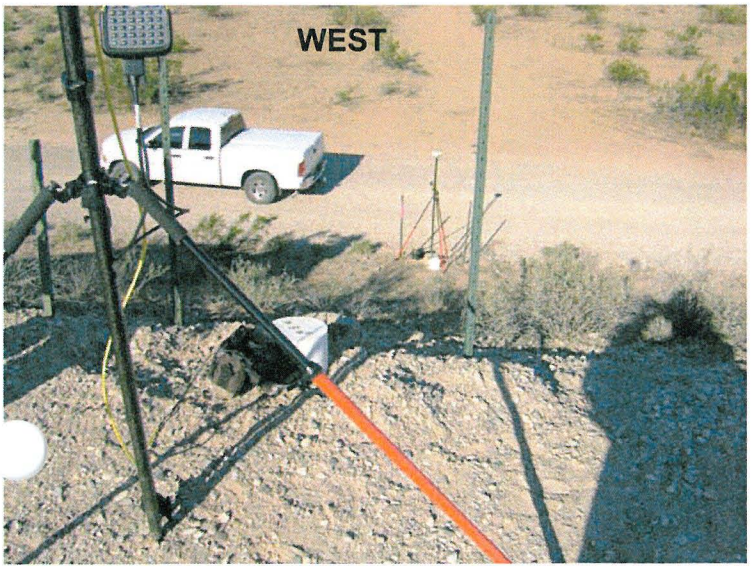
Type of Monument: ROD IN CONCRETE Stamping:
Top of marker: ( ) flush M ( ) above: ( ) below: Nat. Ground Stamping:
Detail Notes:

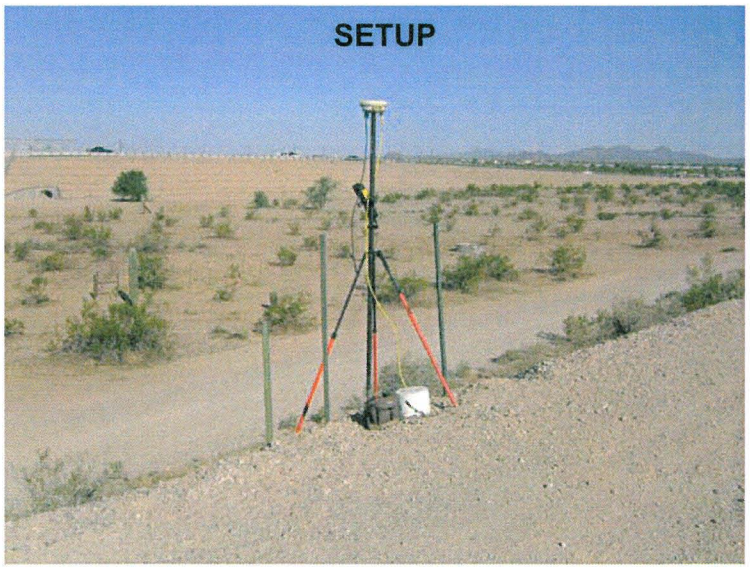
Photographs: Camera #: C3 Monument: ✓ North: ✓ East: ✓
South: ✓ West: ✓ Set up: ✓ Misc 1: Misc 2:
Rubbing Performed ( )Yes (✓)No

RB4









RB5

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: RB5
Receiver No: 6490 (C2)
Day of Year: 261
Session No: 1

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 17 year 2008
Operator: J. MARSHALL

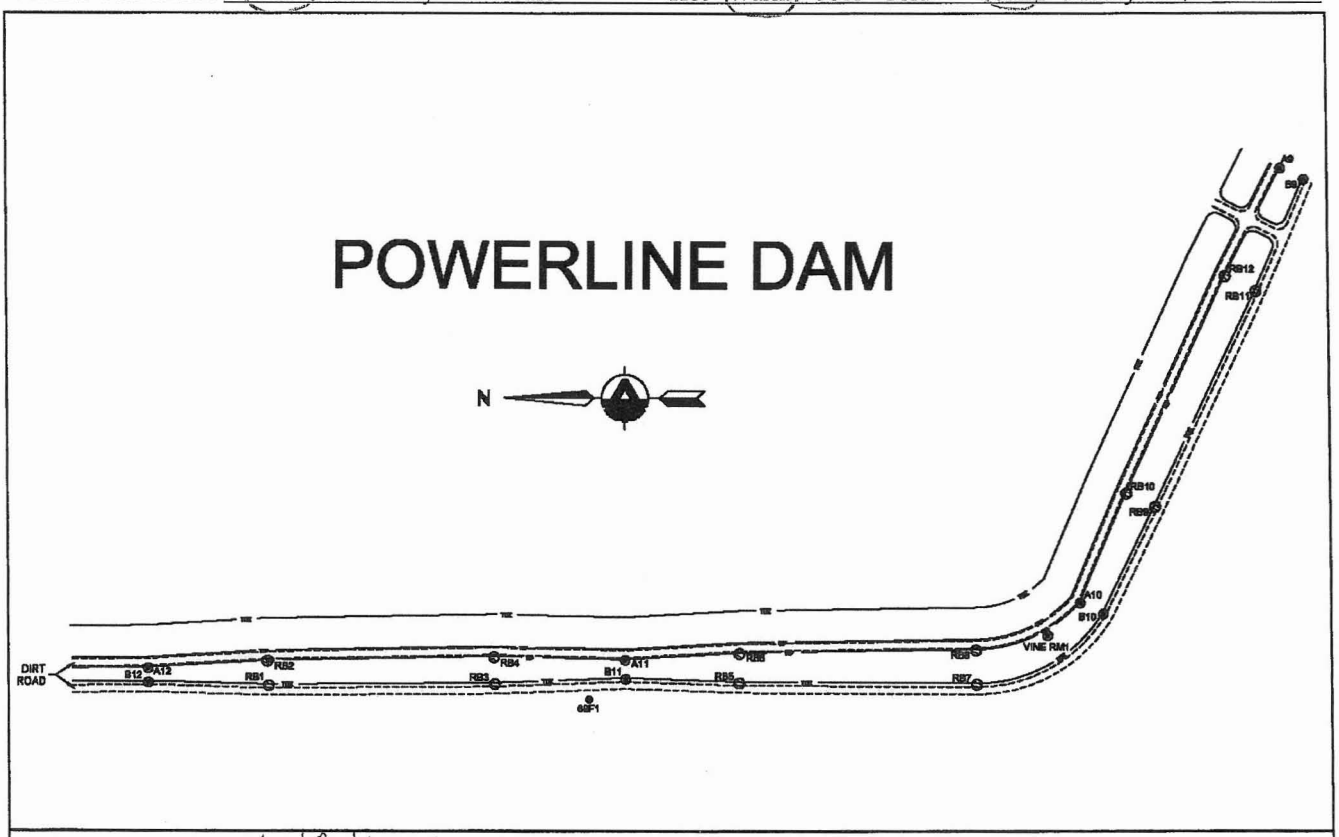
C/A CODE POSITION

Beg:
Lat: : 33 ° 22 ' 02.65 " N
Long: 111 ° 33 ' 40.23 " W
Ellip. Height: 450.0 M PDOP: 1.5
Ending:
Lat: 33 ° 22 ' 02.59 " N
Long: 111 ° 33 ' 40.27 " W
Ellip. Height: 442.4 M PDOP: 2.3

DC FILENAME: 1714-10-8097
DC# 8097 & POSTPROCESS#: 80972611
Receiver Model: Trimble 5800
Antenna Type: Trimble 5800
Antenna Serial #: 6490
Fixed Height Pole No: Rod
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 17 : 56 . Stop: 20 : 35 . UTC
Beg. SV's Used: 3, 6 7, 8, 10, 13, 19, 23, 25, 27, 28
End SV's Used: 7, 8, 11, 15, 17, 25, 26, 27, 28,

Ant. Height (M) 2.0 meters
Ant. Height (FT)
MEASURED TO: Bottom of Antenna Mount

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

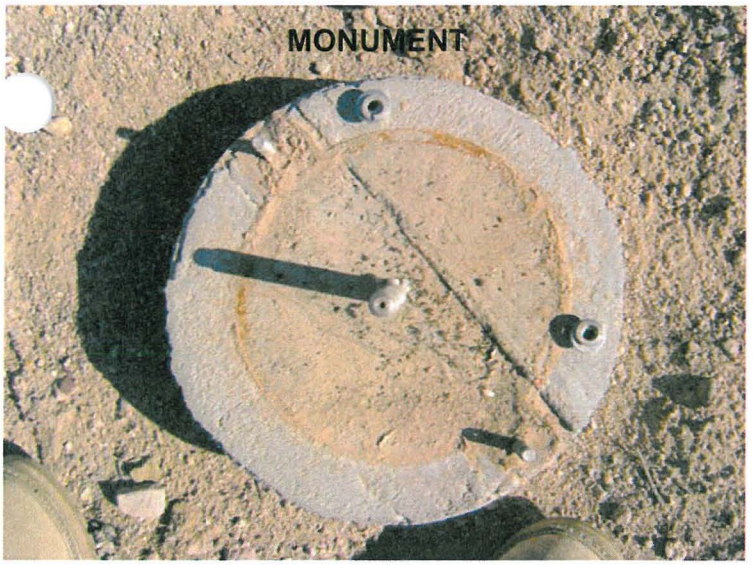


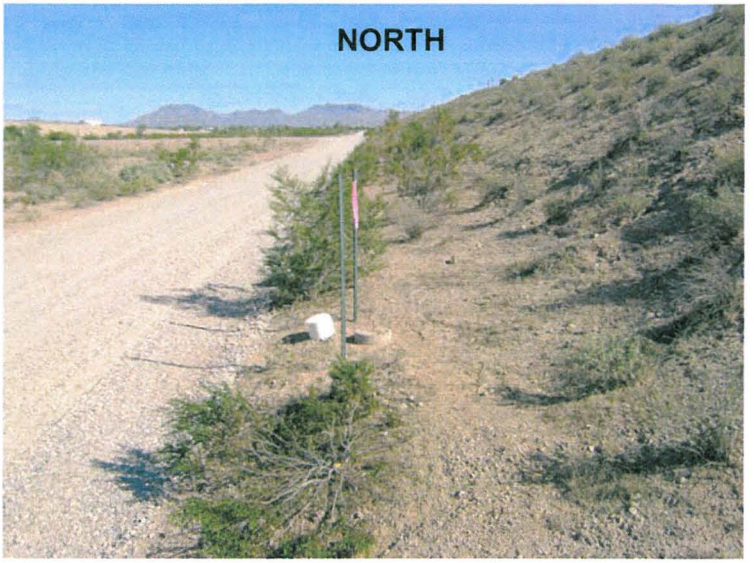
Type of Monument: Steel Rod in Concrete Stamping: —
Top of marker: ( ) flush 0.35M (X) above: ( ) below: Nat. Ground Stamping:
Detail Notes:

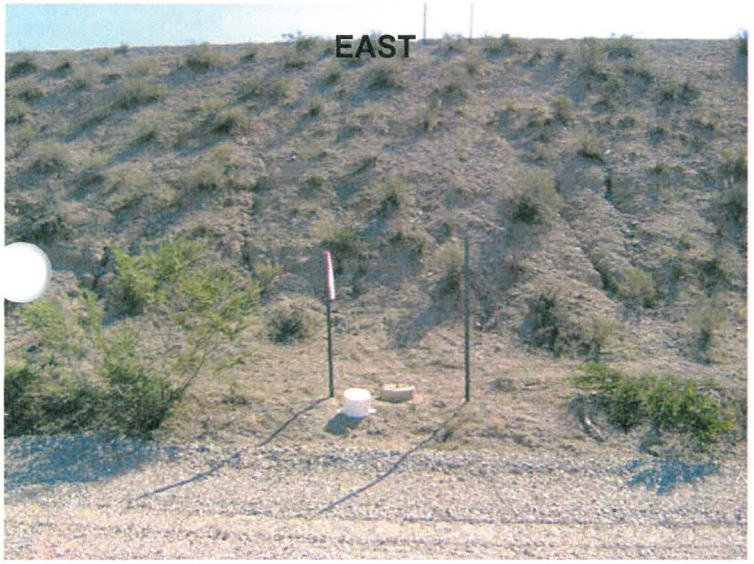
Photographs: Camera #: C9 Monument: 39 North: 40 East: 41
South: 42 West: 43 Set up: 45 Misc 1: Misc 2:
Rubbing Performed ( )Yes (X)No Photos

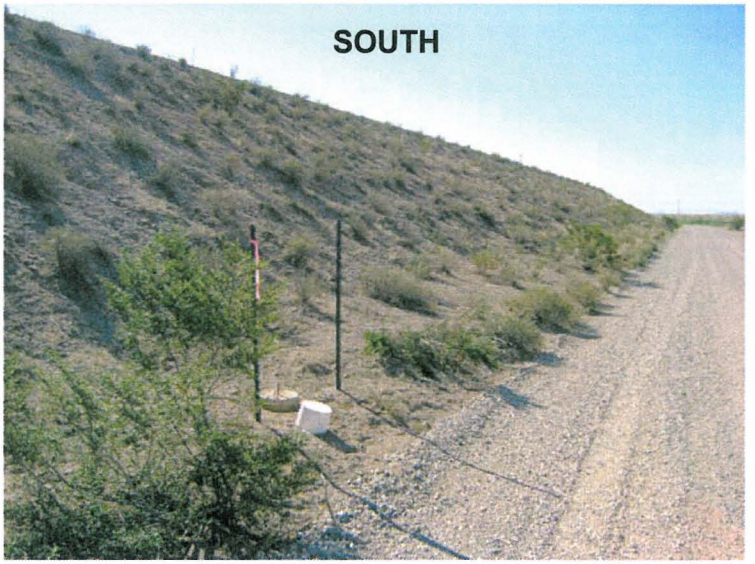
115'50

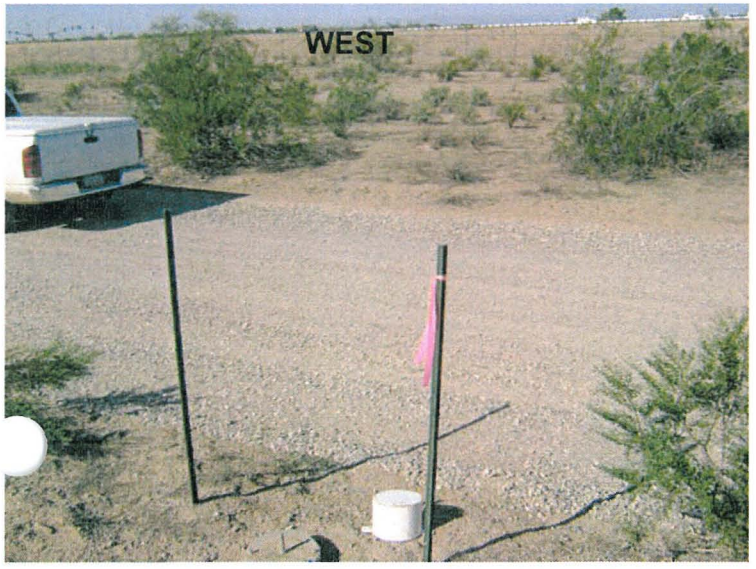
RB5

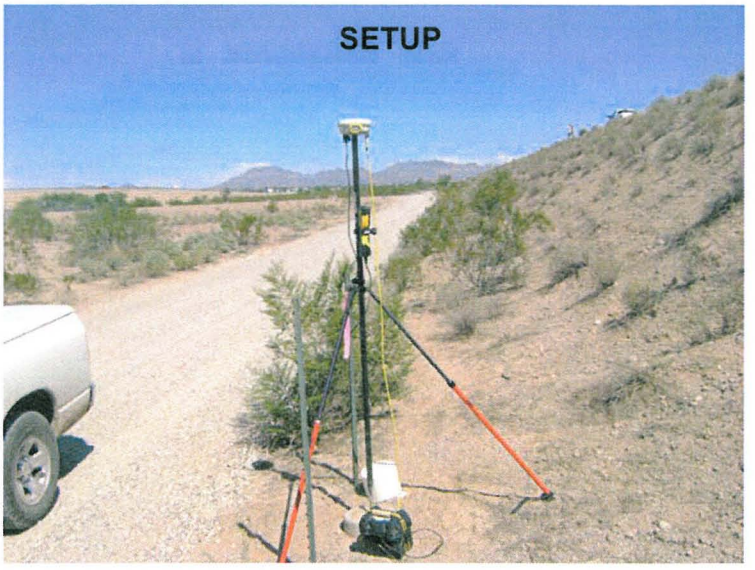












RB6

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: RB6
Receiver No: 40172
Day of Year: 261
Session No: 1

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 09/ 17 day year 2008
Operator: L. SPEAN

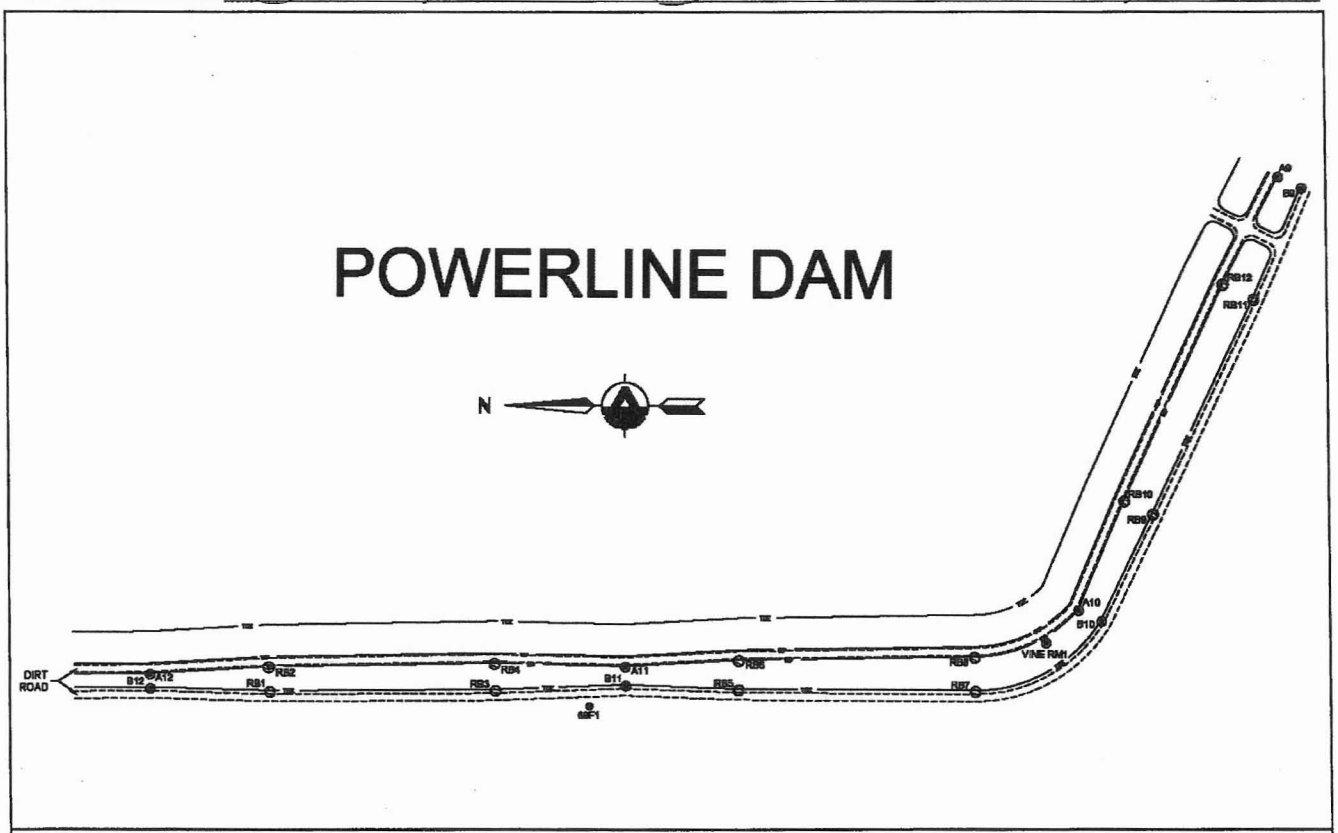
C/A CODE POSITION

Beg:
Lat: : 33 ° 22 ' 02.61 " N
Long: 111 ° 33 ' 39.75 " W
Ellip. Height: 456.6 M PDOP: 1.7
Ending:
Lat: 33 ° 22 ' 02.58 " N
Long: 111 ° 33 ' 39.78 " W
Ellip. Height: 449.0 M PDOP: 2.2

DC FILENAME: 1714-10-1241
DC# 1241 & POSTPROCESS#: 12412611
Receiver Model: TRIMBLE 5800
Antenna Type: TRIMBLE 5800
Antenna Serial #: 40172
Fixed Height Pole No: C8 ROD
Type of Survey: Fast Static (✓) Kinematic Base ( ) RTK Base ( ).
Actual= Start 18 : 09 . Stop: 20 : 46 . UTC
Beg. SV's Used: 3, 7, 8, 10, 13, 19, 23, 25, 27, 28
End SV's Used: 7, 8, 11, 15, 17, 26, 27, 28

Ant. Height (M) 2.0 M
Ant. Height (FT)
MEASURED TO: BOTTOM OF

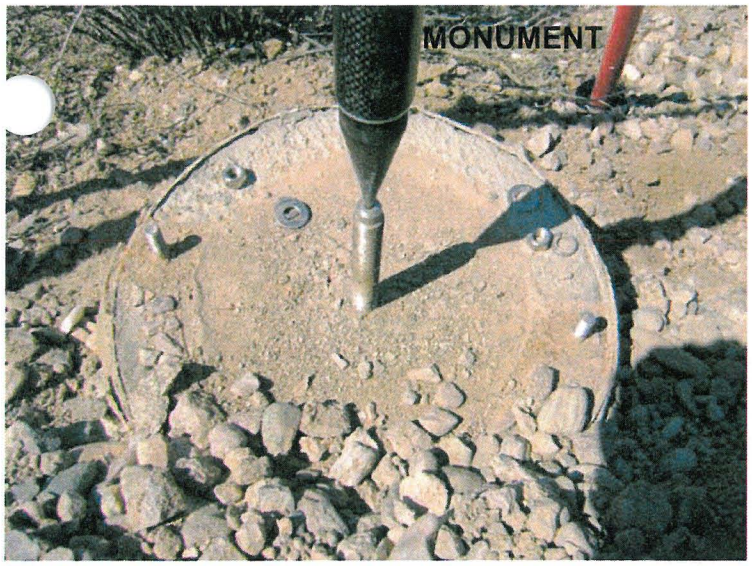
Weather Conditions: (Clear) P. Cloudy Overcast (Hot) Warm Cool Cold (Calm) Breezy 90 °F +/-

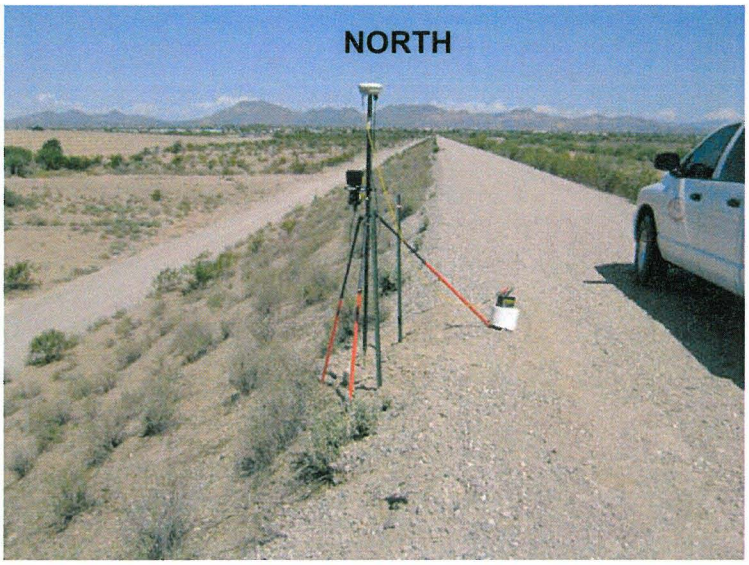


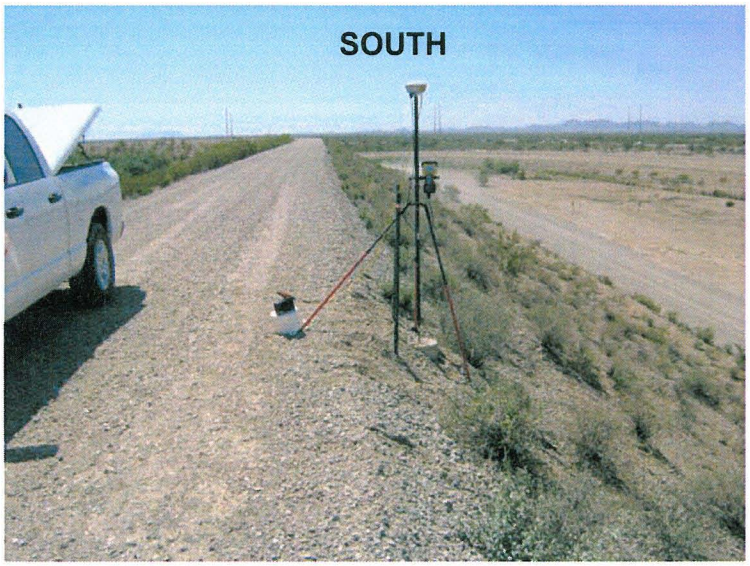
Type of Monument: ROD IN CONCRETE Stamping:
Top of marker: ( ) flush 0.35 M (✓) above: ( ) below: Nat. Ground Stamping:
Detail Notes:

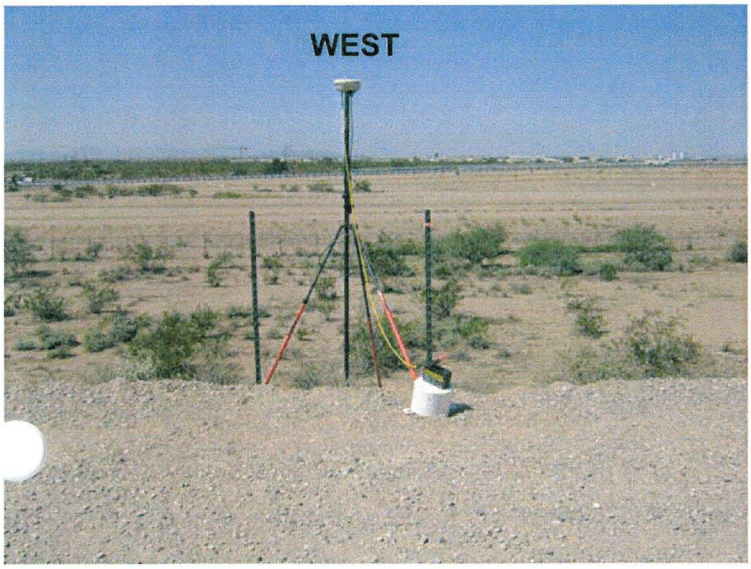
Photographs: Camera #: C3 Monument: ✓ North: ✓ East: ✓
South: ✓ West: ✓ Set up: ✓ Misc 1: Misc 2:
Rubbing Performed ( )Yes (✓)No

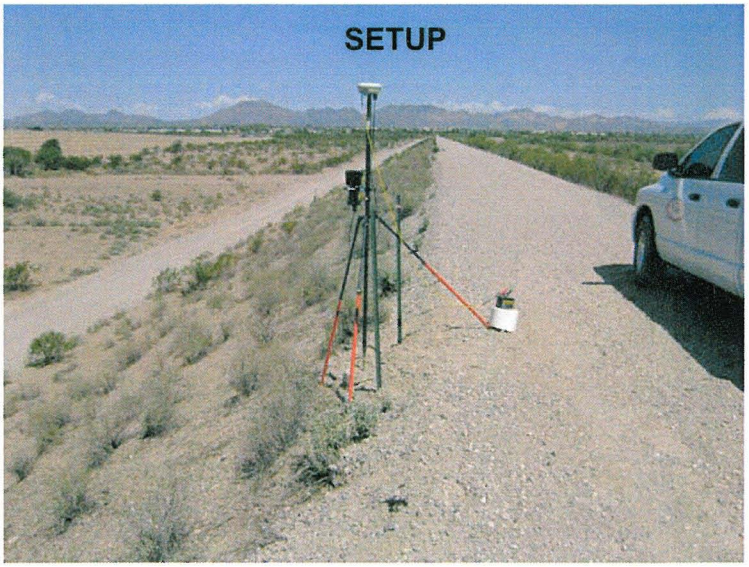
RB6











RB7

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: RB7
Receiver No: 8916
Day of Year: 261
Session No: 1

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 17 year 2008
Operator: J. MALEK

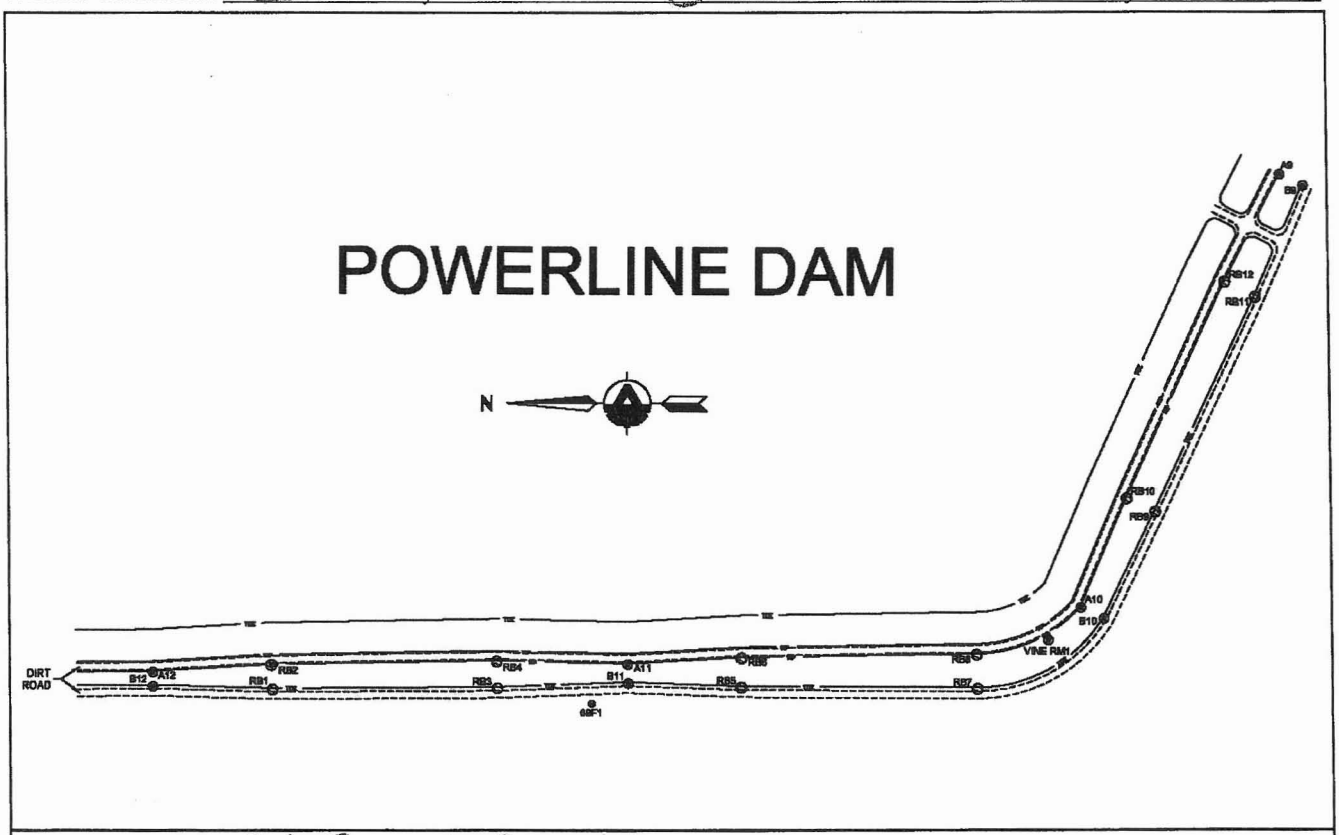
C/A CODE POSITION

Beg:
Lat: : 33 ° 21 '57.72 "N
Long: 111 ° 33 '40.26 "W
Ellip. Height: 449.7 M PDOP: 1.7
Ending:
Lat: 33 ° 21 '57.69 "N
Long: 111 ° 33 '40.29 "W
Ellip. Height: 441.73 M PDOP: 2.1

DC FILENAME: 1714-10-8955
DC# 8955 & POSTPROCESS#: 8955 2611
Receiver Model: 5800
Antenna Type: 5800
Antenna Serial #: 8916
Fixed Height Pole No:
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 18 : 03 . Stop: 20 : 55 . UTC
Beg. SV's Used: 3,6,7,8, 10,13, 19, 23, 25, 27, 28
End SV's Used: 7,8,11, 15,17,26, 27,28

Ant. Height (M) 2.0
Ant. Height (FT)
MEASURED TO: BOTTOM ANTENNA MOUNT

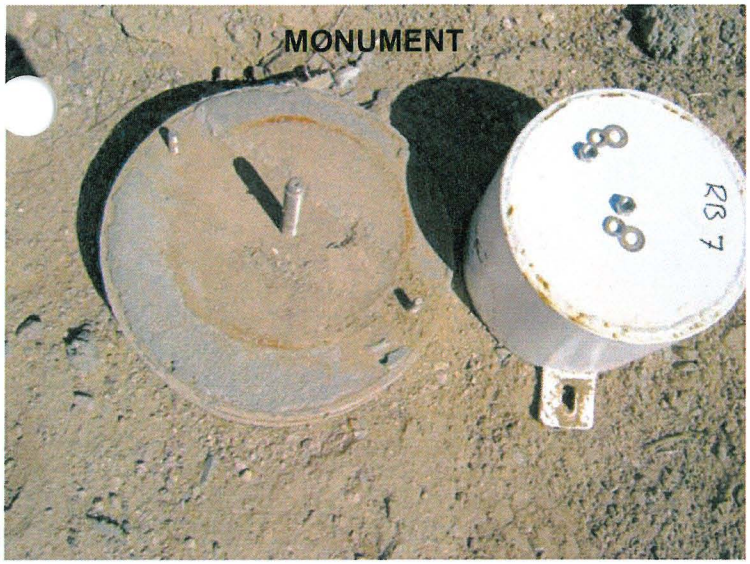
Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Cold Calm Breezy 86°F +/-

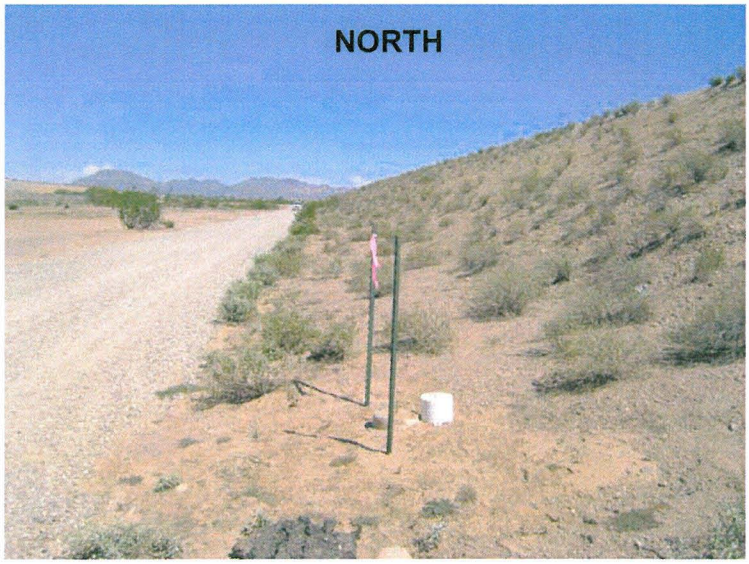


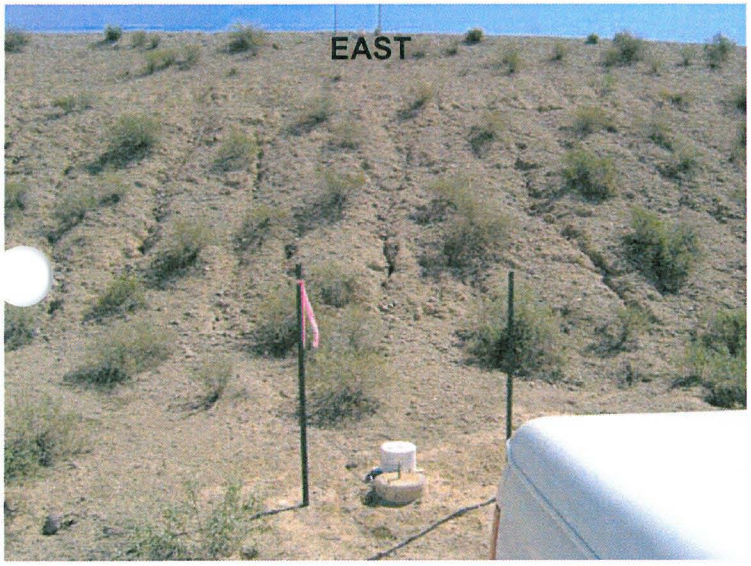
Type of Monument: Rock Bolt in Concrete Stamping:
Top of marker: ( ) flush (X) above: ( ) below: Nat. Ground Stamping:
Detail Notes: TOE OF DAM EAST SIDE

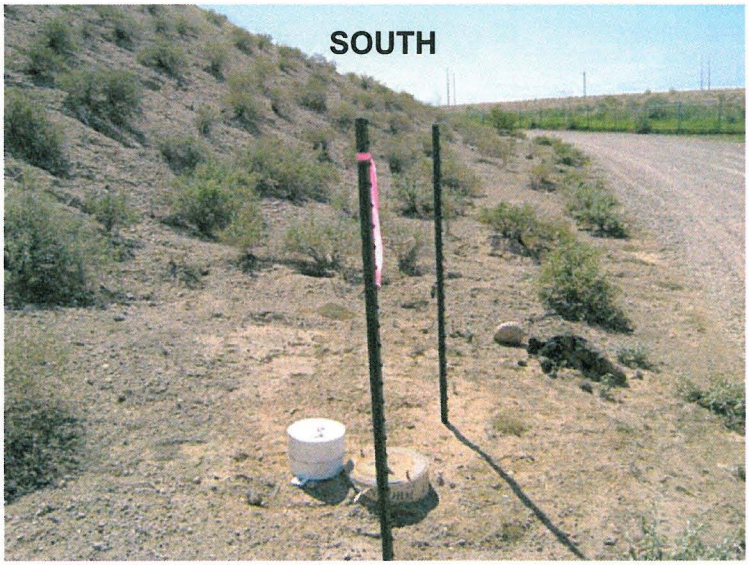
Photographs: Camera #: C1 Monument: 602 North: 603 East: 604
South: 605 West: 606 Set up: 607 Misc 1: Misc 2:
Rubbing Performed ( )Yes (X)No

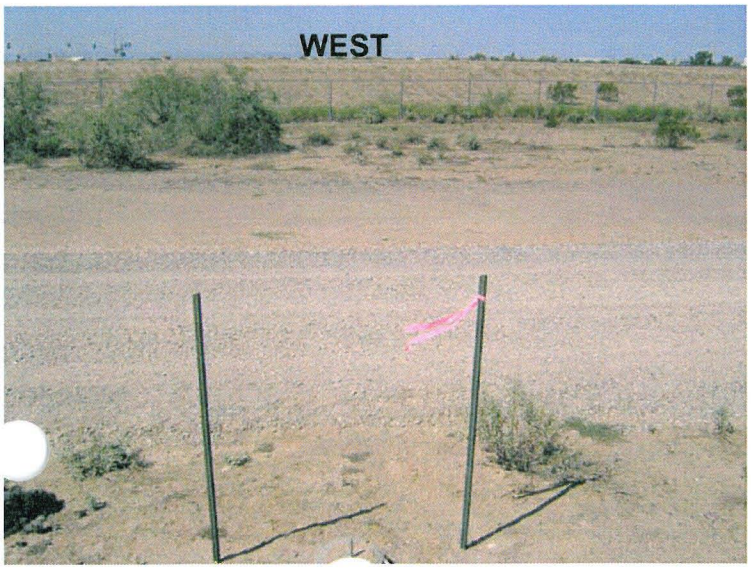
RB7

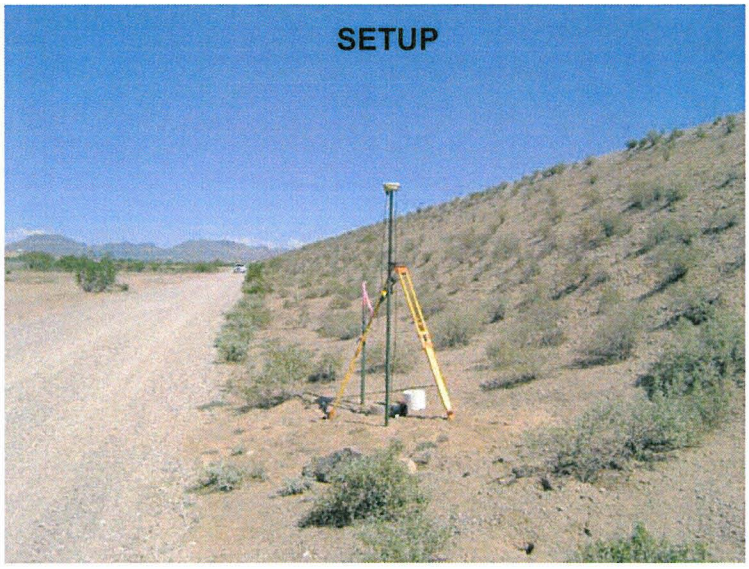












RB8

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: RB 8
Receiver No: 40172
Day of Year: 262
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 09 day 18 year 2008
Operator: L. SPEAN

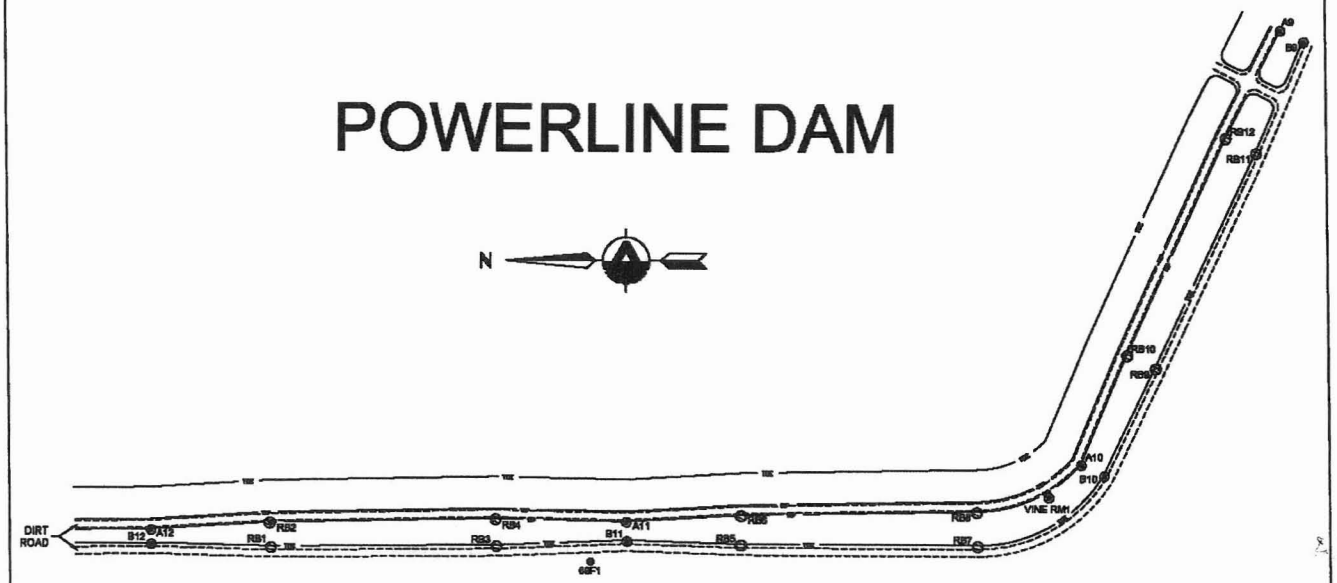
C/A CODE POSITION

Beg:
Lat: : 33 ° 21 ' 57.74 " N
Long: 111 ° 33 ' 39.68 " W
Ellip. Height: 453.976 M PDOP: 1.5
Ending:
Lat: 33 ° 21 ' 57.71 " N
Long: 111 ° 33 ' 39.63 " W
Ellip. Height: 455.732 M PDOP: 1.8

DC FILENAME: 1714-10-1241
DC# 1241 & POSTPROCESS#: 12412620
Receiver Model: TRIMBLE 5800
Antenna Type: TRIMBLE 5800
Antenna Serial #: 40172
Fixed Height Pole No: CB ROD
Type of Survey: Fast Static (✓) Kinematic Base ( ) RTK Base ( ).
Actual= Start 14 : 53 . Stop: 17 : 27 . UTC
Beg. SV's Used: 3, 6, 7, 13, 16, 20, 23, 25, 27, 31, 32
End SV's Used: 3, 6, 7, 8, 10, 13, 19, 23, 25, 27.

Ant. Height (M) 2.0 M
Ant. Height (FT)
MEASURED TO: BOTTOM OF ANT. MOUNT

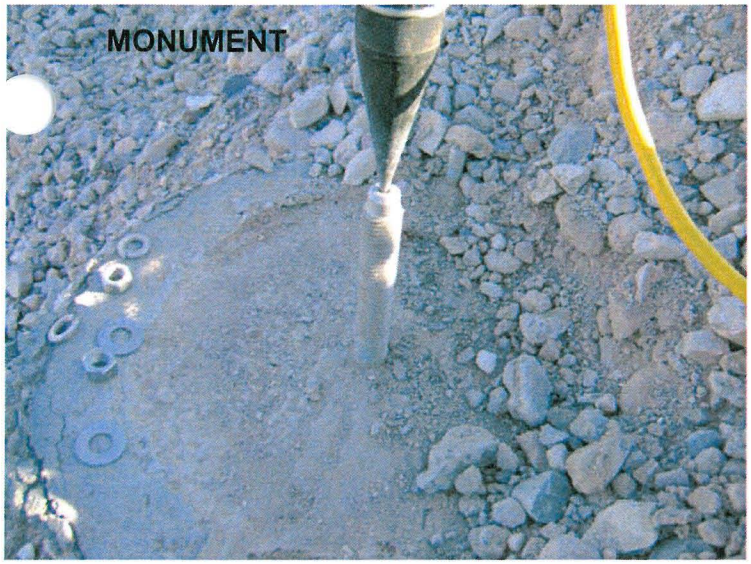
Weather Conditions: (Clear) P. Cloudy Overcast Hot (Warm) Cool Cold (Calm) Breezy 85 °F +/-

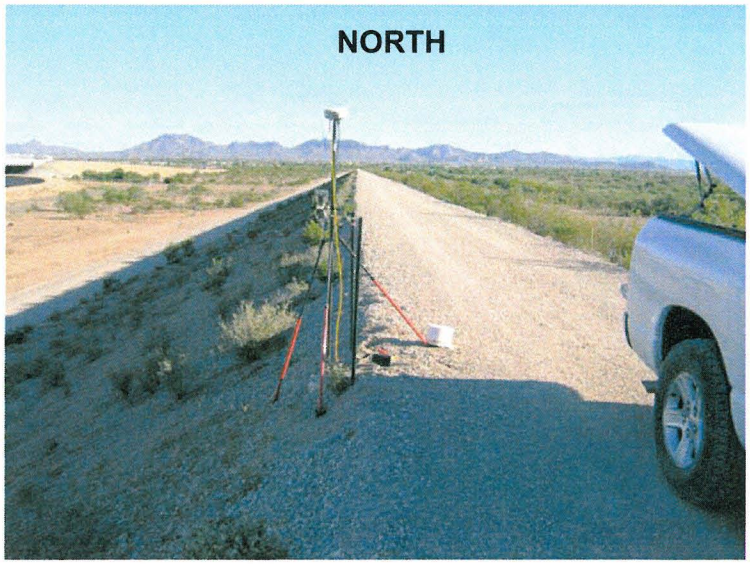


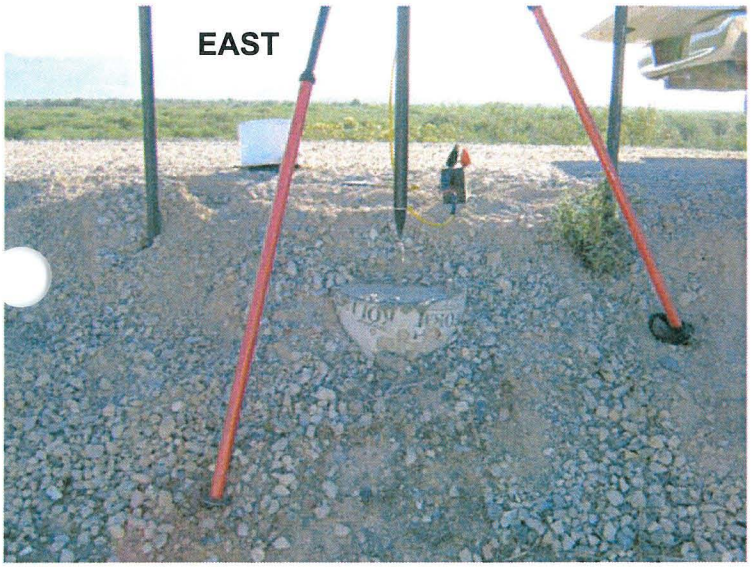
Type of Monument: ROD IN CONCRETE Stamping:
Top of marker: ( ) flush 0.35 M (✓) above: ( ) below: Nat. Ground Stamping:
Detail Notes:

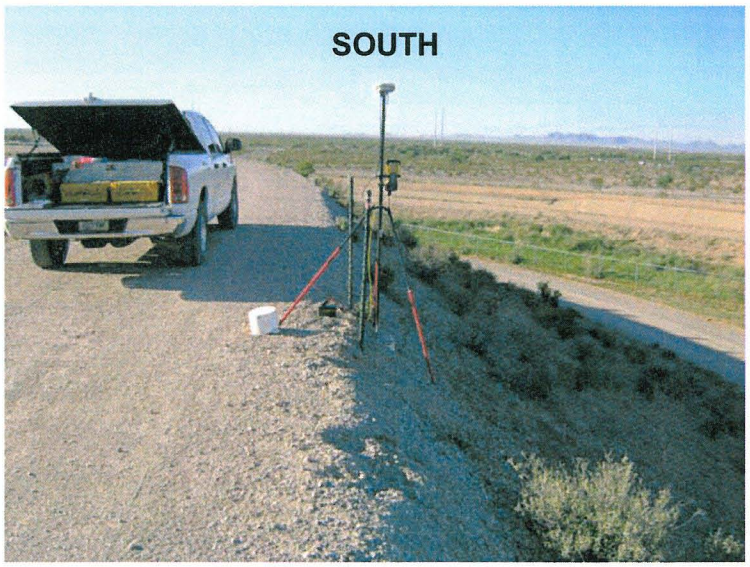
Photographs: Camera #: C3 Monument: ✓ North: ✓ East: ✓
South: ✓ West: ✓ Set up: Misc 1: Misc 2:
Rubbing Performed ( )Yes (✓)No

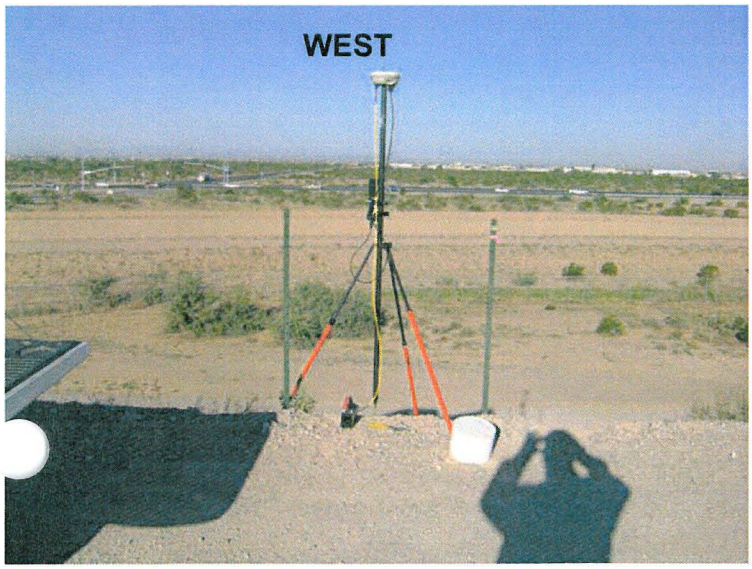
RB8

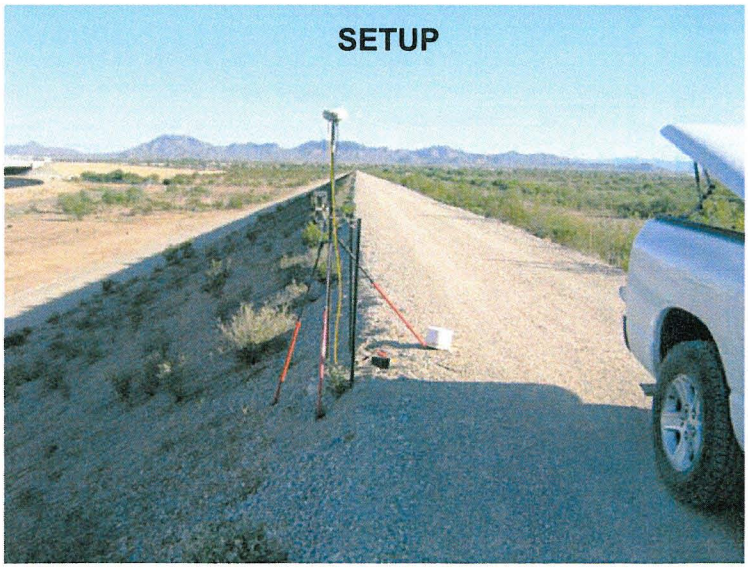












RB9

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: RB9
Receiver No: 8916
Day of Year: 262
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 18 year 2008
Operator: J. MALEK

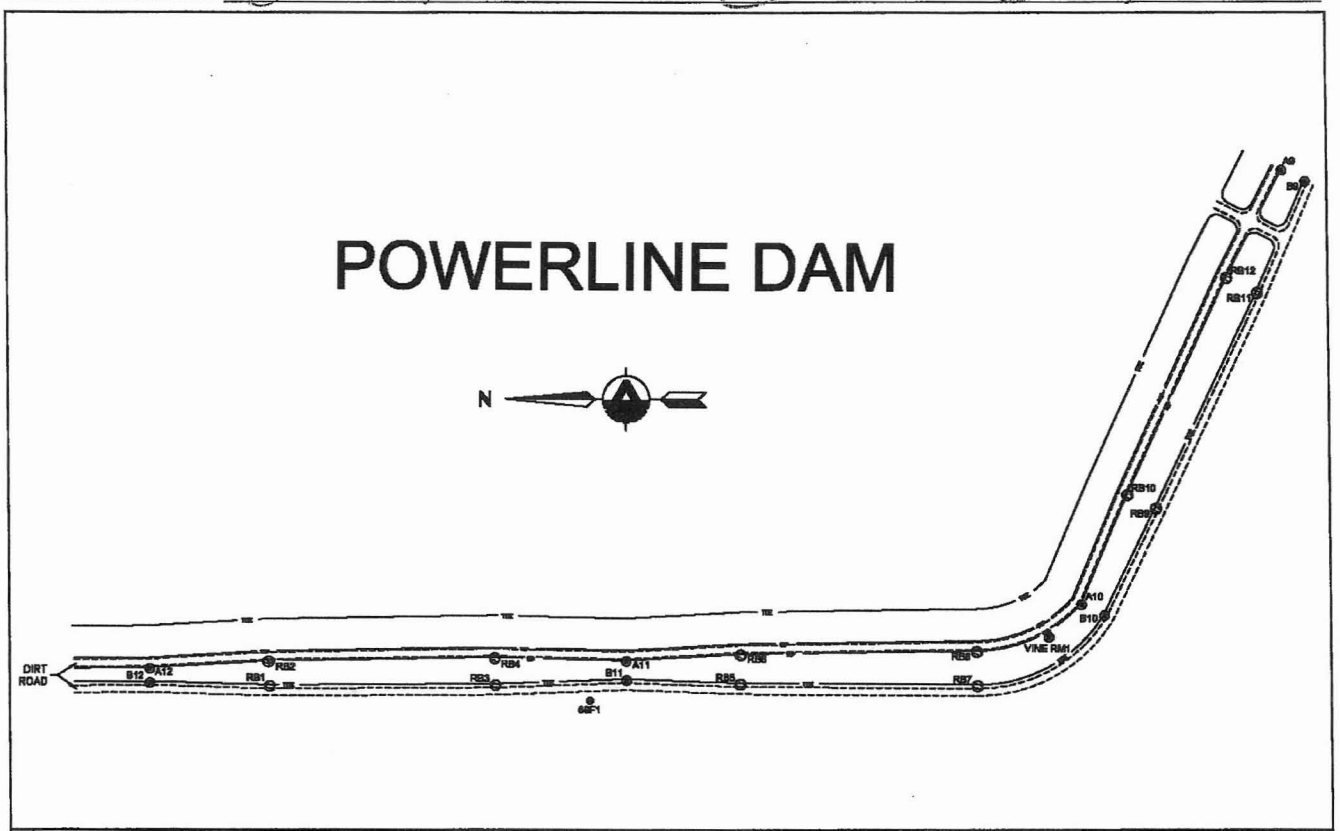
C/A CODE POSITION

Beg:
Lat: : 33 ° 21 ' 54.16 " N
Long: 111 ° 33 ' 35.97 " W
Ellip. Height: 445.27 M PDOP: 1.9
Ending:
Lat: 33 ° 21 ' 54.08 " N
Long: 111 ° 33 ' 35.96 " W
Ellip. Height: 442.70 M PDOP: 2.0

DC FILENAME: 1714-10-8955
DC# 8955 & POSTPROCESS#: 89552620
Receiver Model: 5890
Antenna Type: 5800
Antenna Serial #: 8916
Fixed Height Pole No:
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 15 : 00 . Stop: 20 : 21 . UTC
Beg. SV's Used: 3,6,7,13,16,20,23,25,32
End SV's Used: 7,8,11,15,17,25,26,27,28

Ant. Height (M) 2.0
Ant. Height (FT)
MEASURED TO: BOTTOM ANTENNA MOUNT

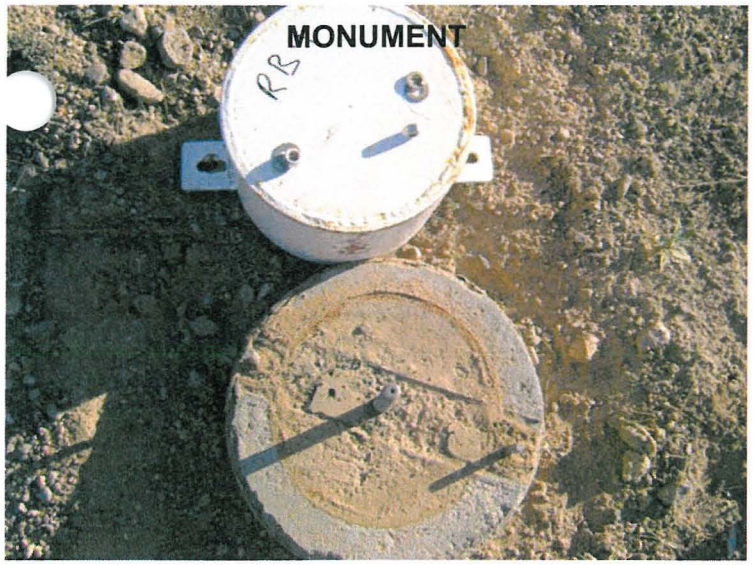
Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Cold Calm Breezy 75 °F +/-

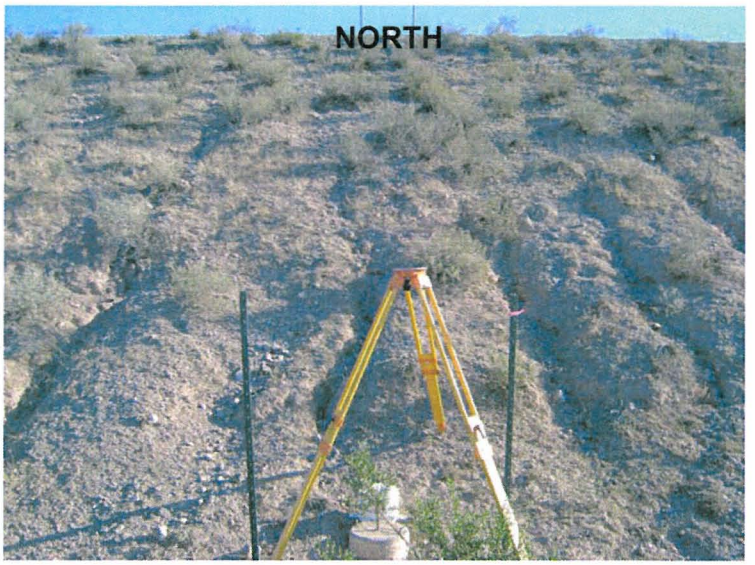


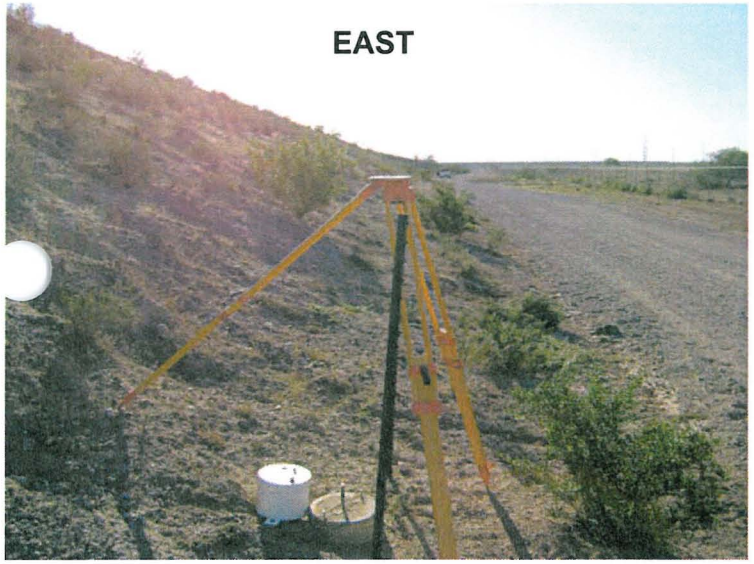
Type of Monument: Rock Bolt in Conc. Stamping:
Top of marker: ( ) flush 0.8' M (X) above: ( ) below: Nat. Ground Stamping:
Detail Notes:

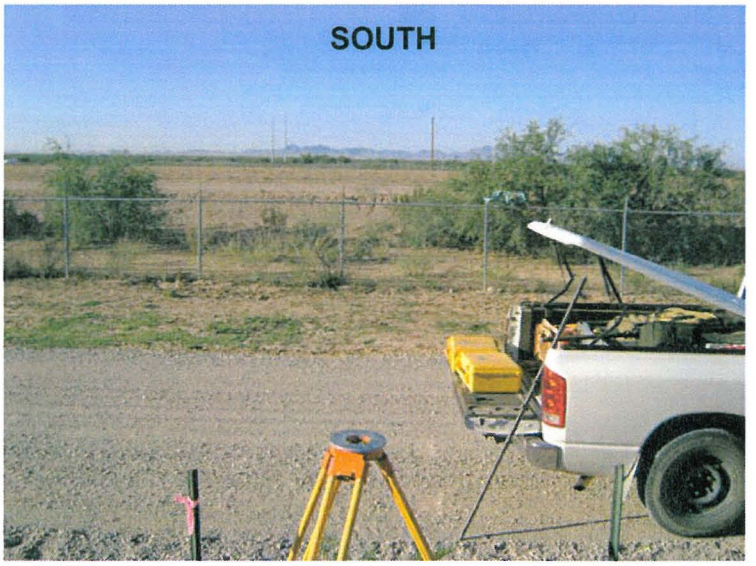
Photographs: Camera #: C1 Monument: 614 North: 615 East: 616
South: 617 West: 618 Set up: 619 Misc 1: Misc 2:
Rubbing Performed ( )Yes (X)No

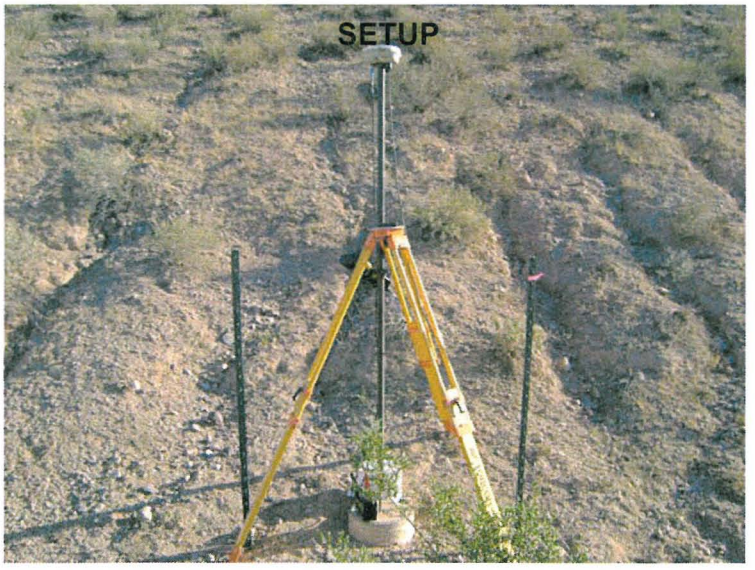
RB9











RB10

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: RB16
Receiver No: 6490 (C2)
Day of Year: 262
Session No: 1

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 18 year 2008
Operator: J. MARSHALL

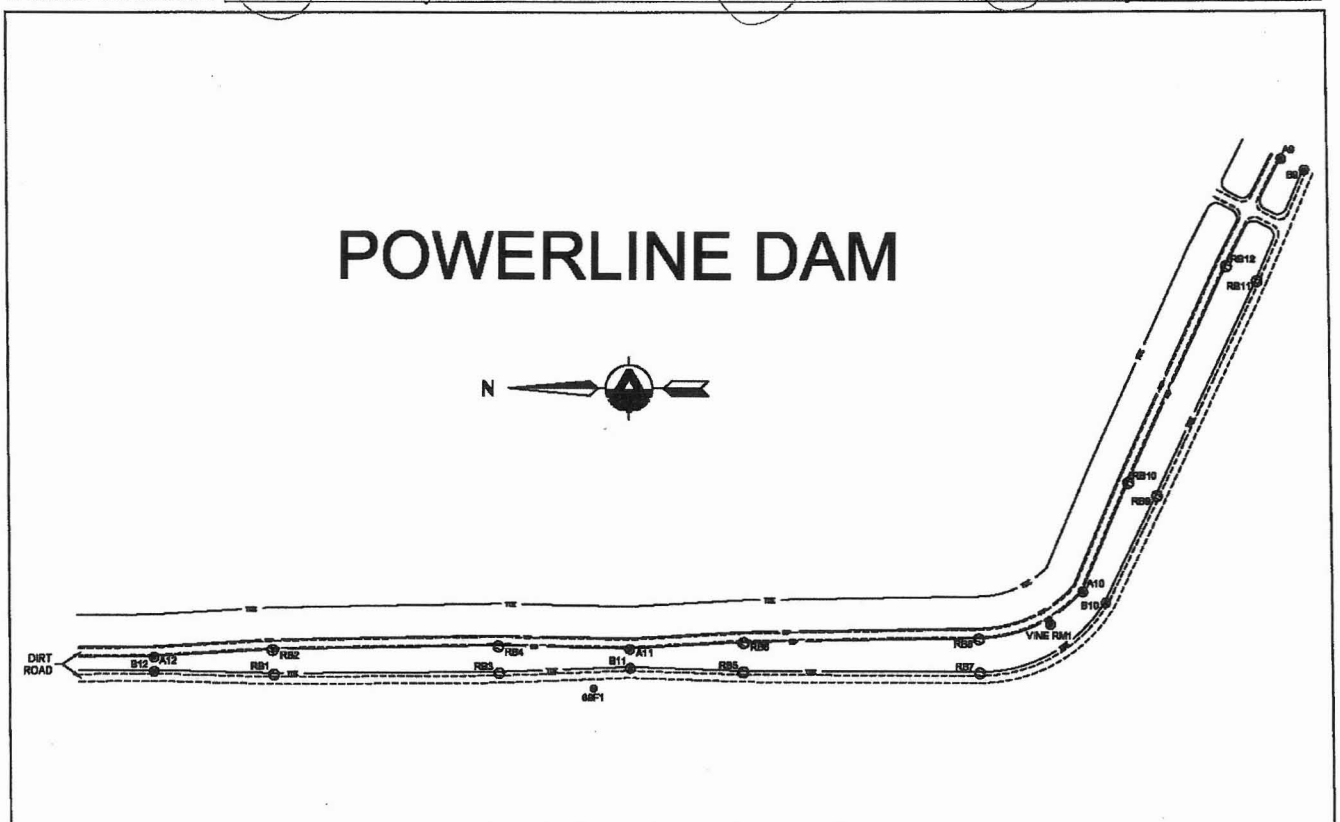
C/A CODE POSITION

Beg:
Lat: : 33 ° 21 ' 54.52 " N
Long: 111 ° 33 ' 35.69 " W
Ellip. Height: 454.7 M PDOP: 1.8
Ending:
Lat: 33 ° 21 ' 54.47 " N
Long: 111 ° 33 ' 39.70 " W
Ellip. Height: 451.728 M PDOP: 2.0

DC FILENAME: 1714-10-8097
DC# 8097 & POSTPROCESS#: 80972621
Receiver Model: Trimble 5800
Antenna Type: Trimble 5800
Antenna Serial #: 6490
Fixed Height Pole No: Rod
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 17 : 33 Stop: 19 : 49 UTC
Beg. SV's Used: 3, 6, 7, 8, 10, 13, 19, 23, 25, 27
End SV's Used: 7, 8, 11, 15, 17, 19, 25, 26, 27, 28.

Ant. Height (M) 2.0 M
Ant. Height (FT)
MEASURED TO: Bottom of Antenna

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

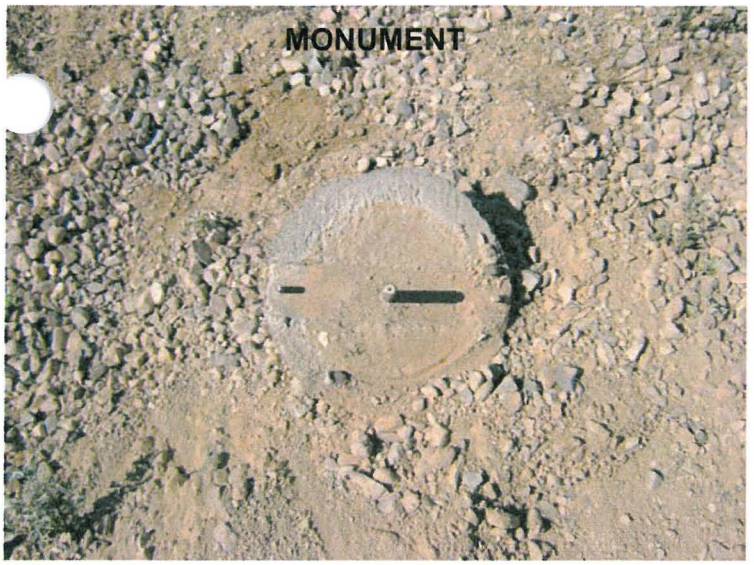


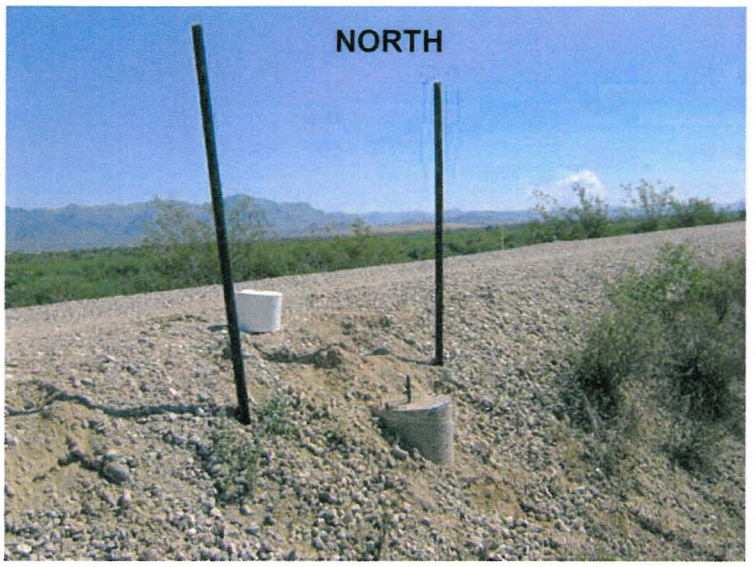
Type of Monument: Rock Bolt in Concrete Stamping:
Top of marker: ( ) flush 6.35M (X) above: ( ) below: Nat. Ground Stamping:
Detail Notes:

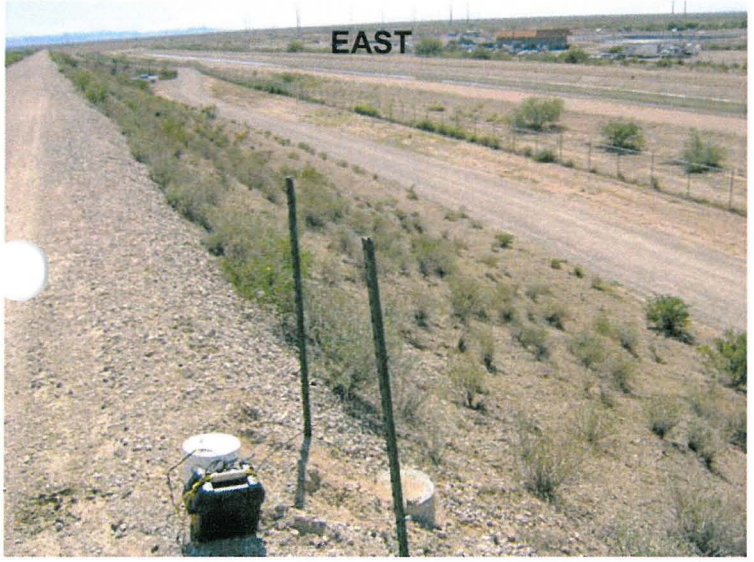
Photographs: Camera #: C9 Monument: 60 North: 61 East: 62
South: 63 West: 64 Set up: 65 Misc 1: Misc 2:
Rubbing Performed ( )Yes (X)No Photos

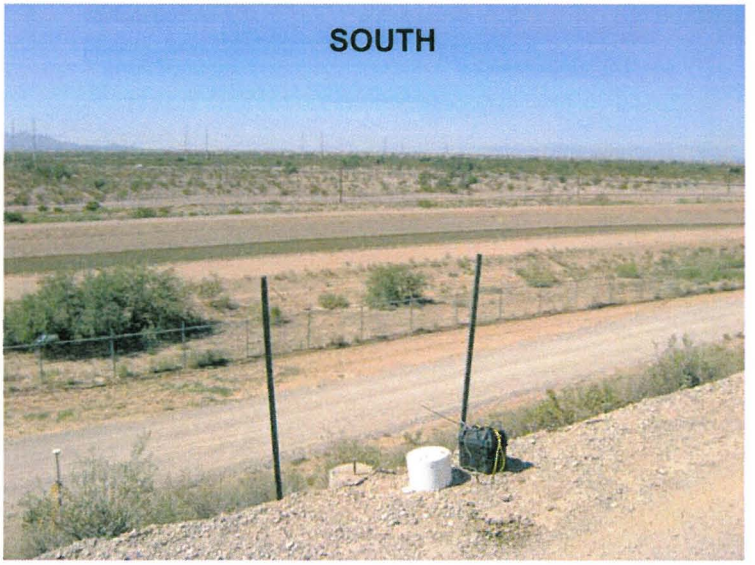
107+50

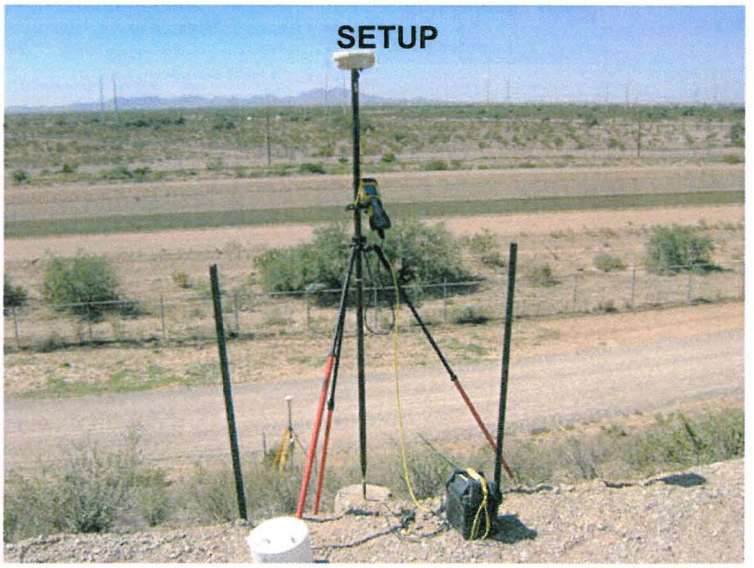
RB10











RB11

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: RB11
Receiver No: 6490 (C2)
Day of Year: 262
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 19 year 2008
Operator: J. MARSHALL

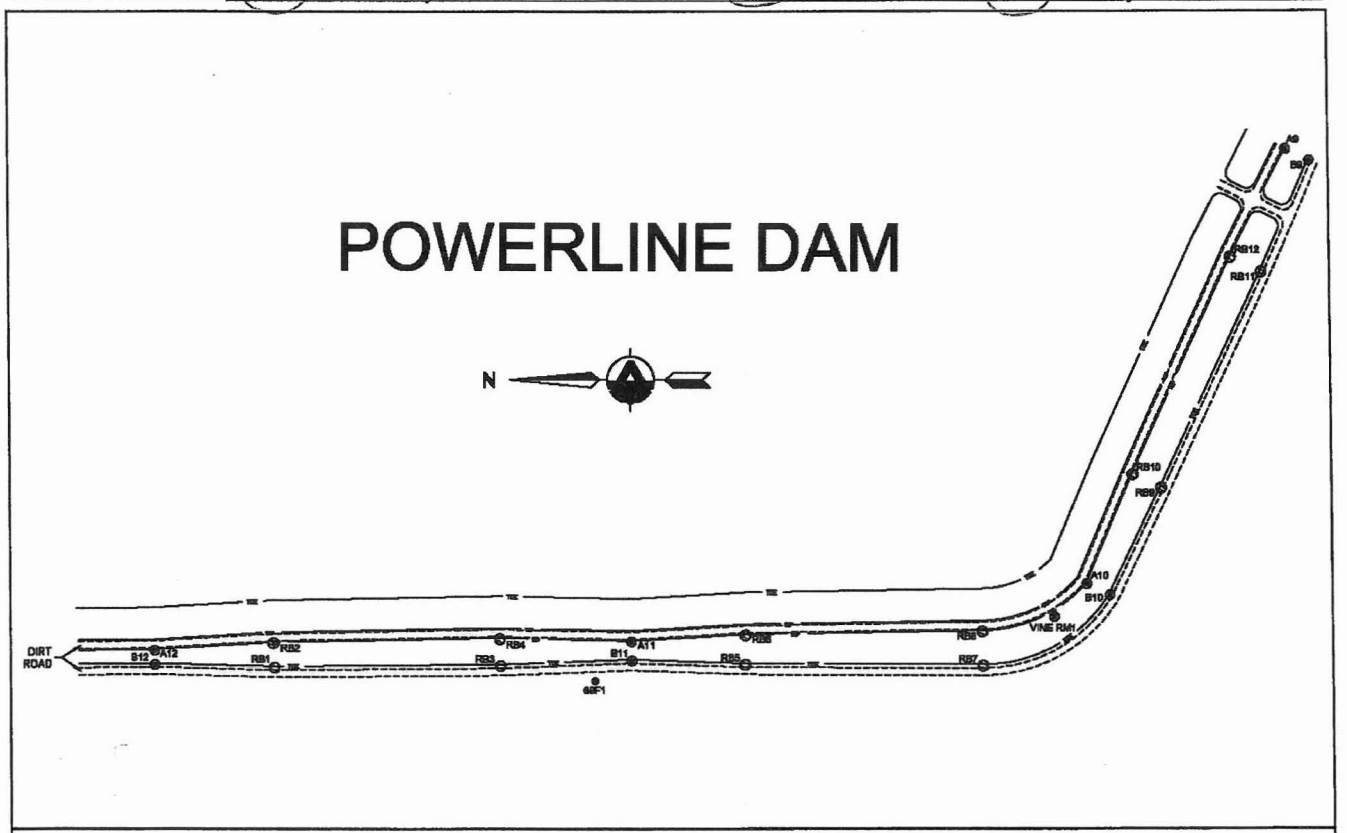
C/A CODE POSITION

Beg:
Lat: : 33 ° 21 ' 52.08 " N
Long: 111 ° 33 ' 30.64 " W
Ellip. Height: 445.3 M PDOP: 1.8
Ending:
Lat: 33 ° 21 ' 52.05 " N
Long: 111 ° 33 ' 30.60 " W
Ellip. Height: 447.3 M PDOP: 1.9

DC FILENAME: 1714-10-8097
DC# 8097 & POSTPROCESS#: 80972620
Receiver Model: Trimble 5800
Antenna Type: Trimble 5800
Antenna Serial #: 6490
Fixed Height Pole No: Rod
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 14 : 53 . Stop: 17 : 25 . UTC
Beg. SV's Used: 3, 6, 7 13, 16, 20, 23 25 27 32
End SV's Used: 3, 6, 7, 8, 10, 13, 19, 23, 25, 27

Ant. Height (M) 2.0 meters
Ant. Height (FT)
MEASURED TO: Bottom of Antenna Mount

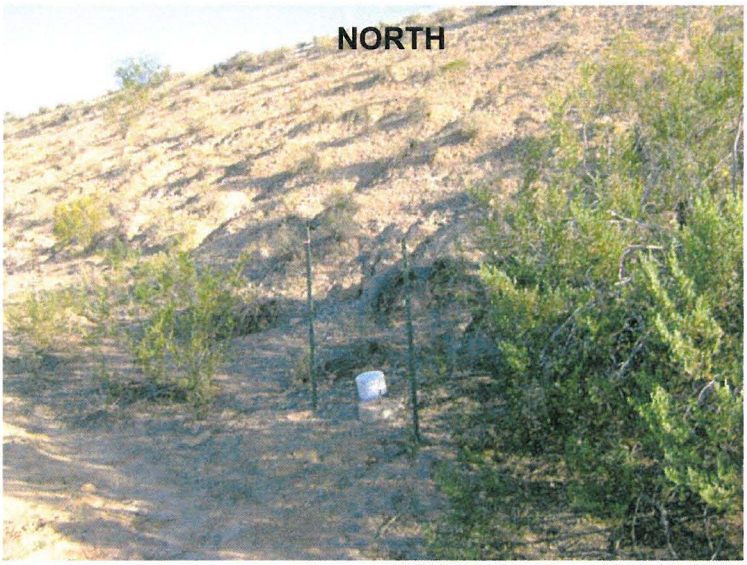
Weather Conditions: (Clear) P. Cloudy Overcast Hot (Warm) Cool Cold (Calm) Breezy 75 °F +/-

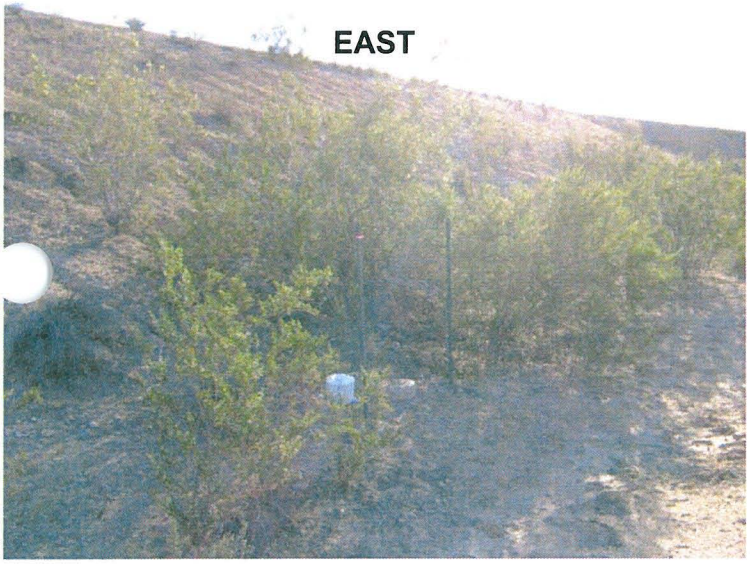


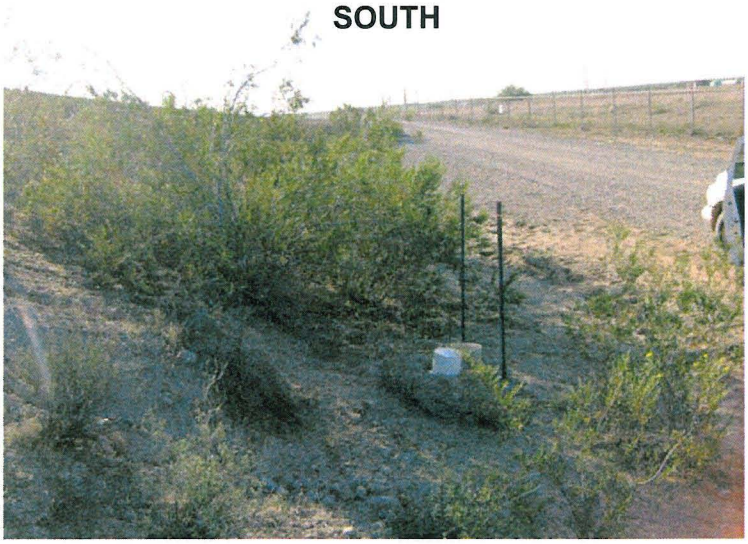
Type of Monument: Rodin Concrete Stamping:
Top of marker: ( ) flush 0.35 M ( ) above: ( ) below: Nat. Ground Stamping:
Detail Notes:

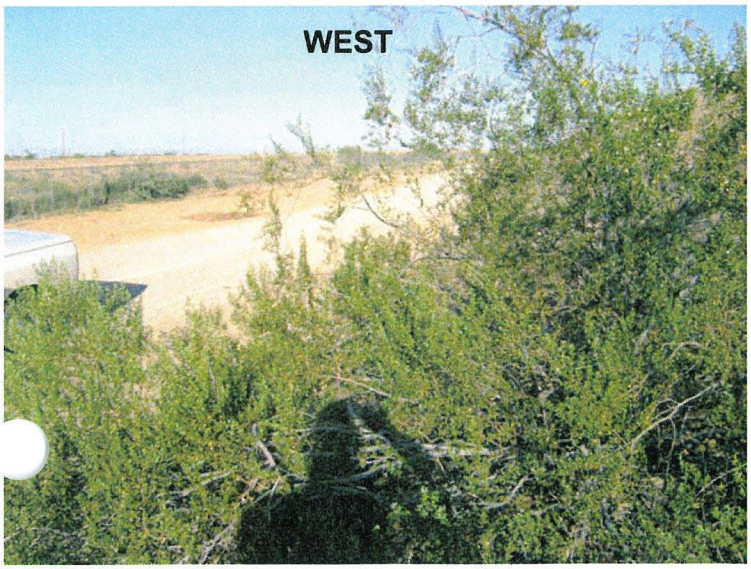
Photographs: Camera #: C9 Monument: 48 North: 49 East: 50
South: 51 West: 52 Set up: 59 Misc 1: Misc 2:
Rubbing Performed ( )Yes (X)No Photos

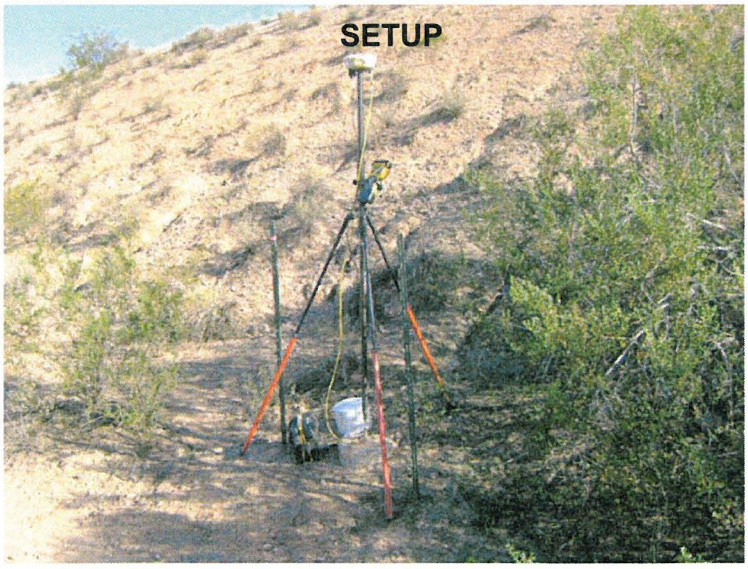
RB11











RB12

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: RB12
Receiver No: 6083 (Static 4)
Day of Year: 262
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 18 year 2008
Operator: S. MARSHALL

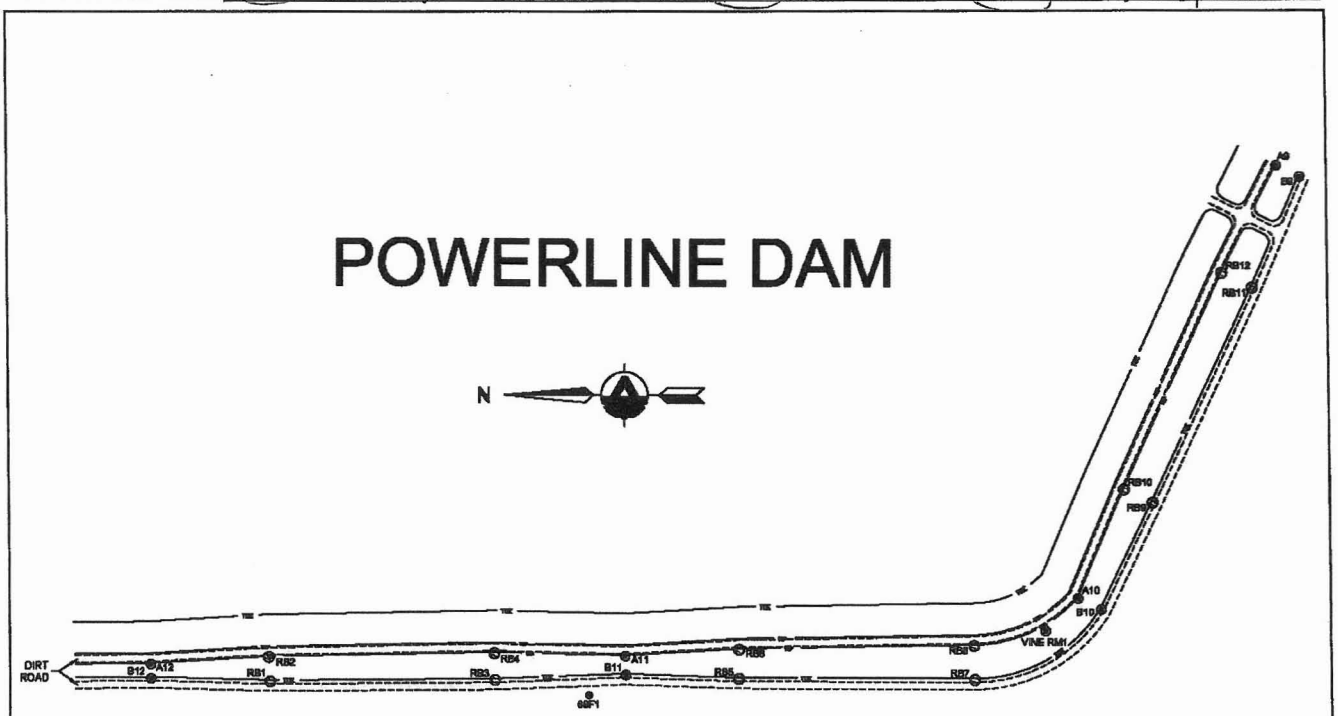
C/A CODE POSITION

Beg:
Lat: : 33 ° 21 ' 52.52 " N
Long: 111 ° 33 ' 30.36 " W
Ellip. Height: 452.8 M PDOP: 2.5
Ending:
Lat: 33 ° 21 ' 52.416 " N
Long: 111 ° 33 ' 20.33 " W
Ellip. Height: 453.2 M PDOP: 1.9

DC FILENAME:
DC# & POSTPROCESS#: 60832620
Receiver Model: 4000 SSE
Antenna Type: Compact L1/L2 w/GA
Antenna Serial #: 53509
Fixed Height Pole No: 5
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 15 : 15 . Stop: 20 : 29 . UTC
Beg. SV's Used: 3 25 7 13 16 27 20 22
End SV's Used: 11, 25, 26, 7, 15, 28, 27, 08, 17

Ant. Height (M) 1.5 meters
Ant. Height (FT)
MEASURED TO: Bottom of Antenna Mount

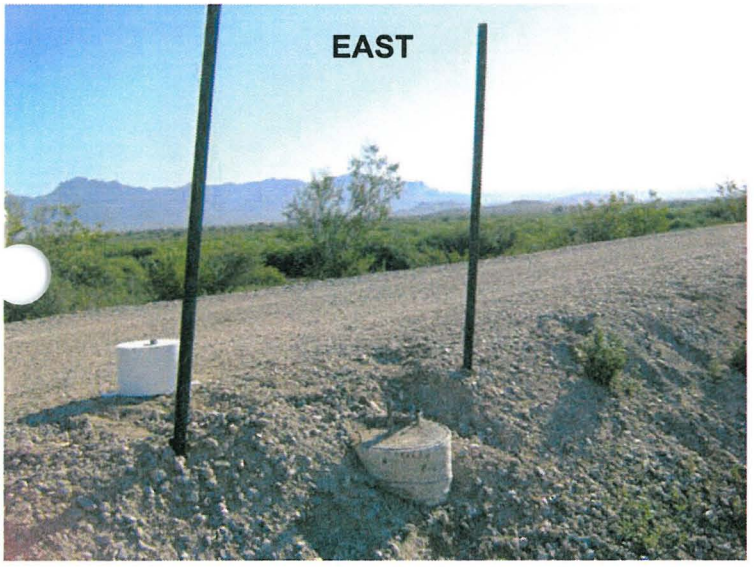
Weather Conditions: (Clear) P. Cloudy Overcast Hot (Warm) Cool Cold (Calm) Breezy 81 °F +/-

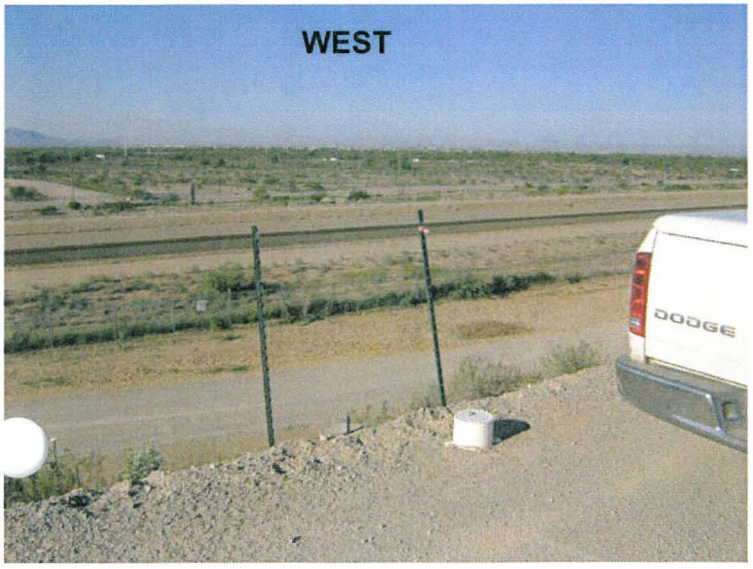


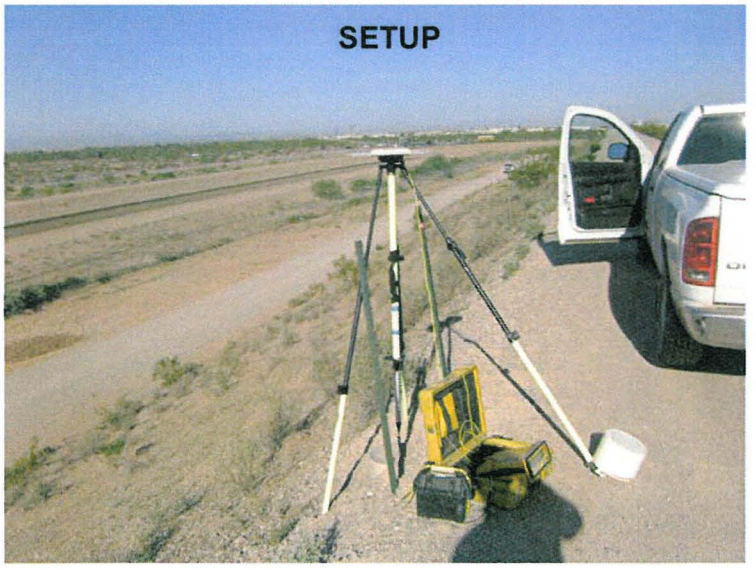
Type of Monument: Rod in Concrete Stamping:
Top of marker: ( ) flush 0.35M (X) above: ( ) below: Nat. Ground Stamping:
Detail Notes:

Photographs: Camera #: C9 Monument: 53 North: 54 East: 55
South: 56 West: 57 Set up: 58 Misc 1: Misc 2:
Rubbing Performed ( )Yes (X)No Photos

RB12







RB13

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: RB13
Receiver No: 3419 (C7)
Day of Year: 263
Session No: Ø

Project Name: Powerline & Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 20 year 2008
Operator: J. MARSHALL

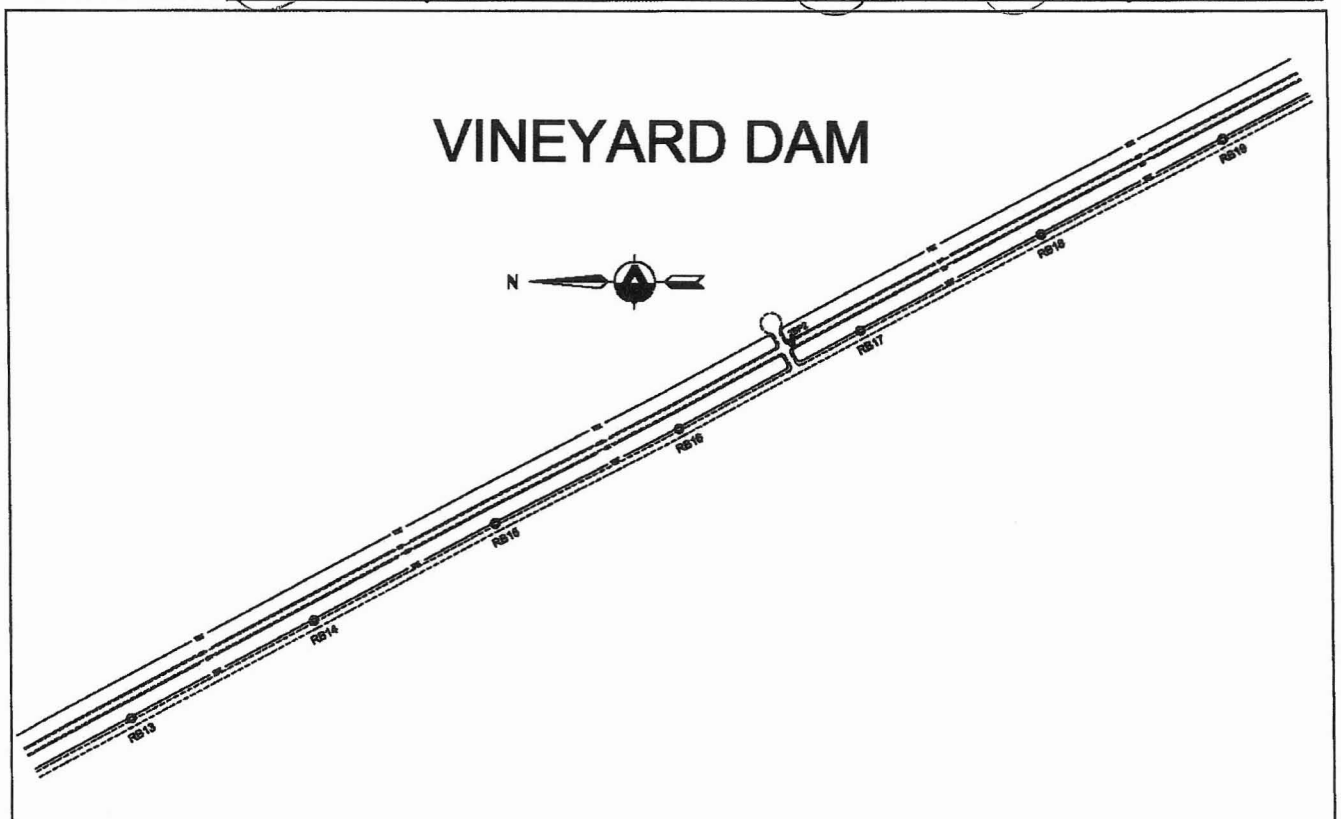
C/A CODE POSITION

Beg:
Lat: : 33 ° 20 ' 26.52 " N
Long: 111 ° 32 ' 13.57 " W
Ellip. Height: 447.8 M PDOP: 1.9
Ending:
Lat: 33 ° 20 ' 26.57 " N
Long: 111 ° 32 ' 13.50 " W
Ellip. Height: 445.8 M PDOP: 1.6

DC FILENAME: 1714-10-8954
DC# 8954 & POSTPROCESS#: 89542630
Receiver Model: Trimble 5800
Antenna Type: Trimble 5800
Antenna Serial #: 3419
Fixed Height Pole No: Rod
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 14 : 57 . Stop: 17 : 30 . UTC
Beg. SV's Used: 3, 6, 7, 13, 16, 20, 23, 25, 27, 32
End SV's Used: 3, 6, 7, 8, 10, 13, 19, 23, 25, 27, 28

Ant. Height (M) 2.0 Meters
Ant. Height (FT)
MEASURED TO: Bottom of Antenna Mount

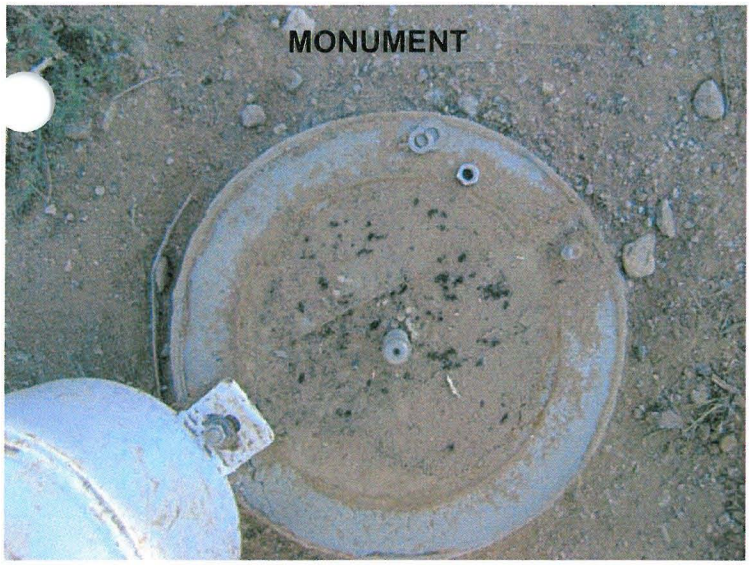
Weather Conditions: (Clear) P. Cloudy Overcast Hot Warm (Cool) Cold (Calm) Breezy 77 °F +/-

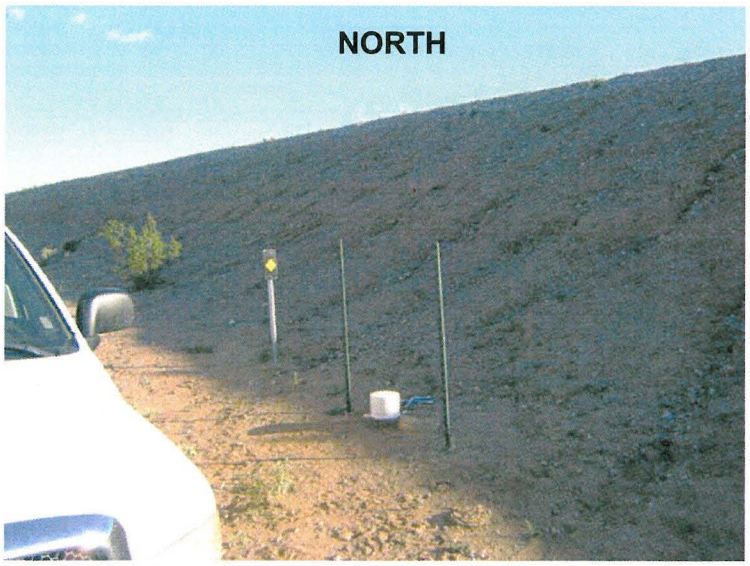


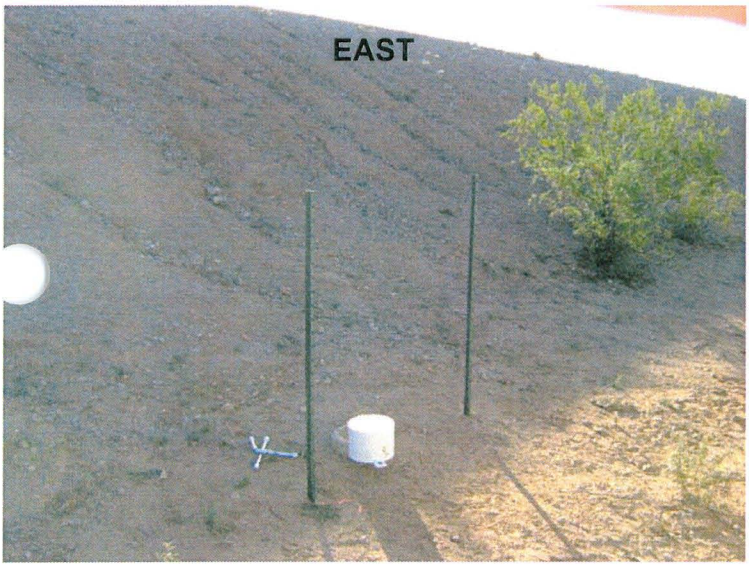
Type of Monument: Bolt in Concrete Stamping:
Top of marker: ( ) flush 0.35 M (X) above: ( ) below: Nat. Ground Stamping:
Detail Notes:

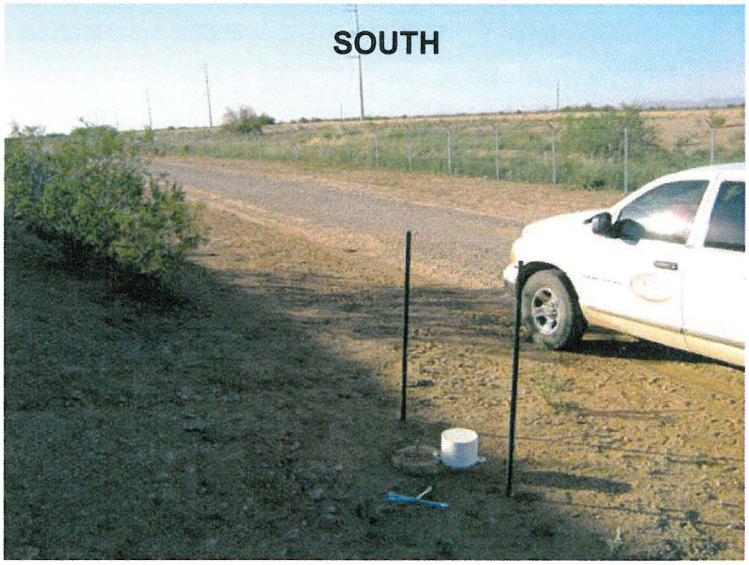
Photographs: Camera #: C9 Monument: 68 North: 69 East: 70
South: 71 West: 72 Set up: 73 Misc 1: Misc 2:
Rubbing Performed ( )Yes (X)No Photos

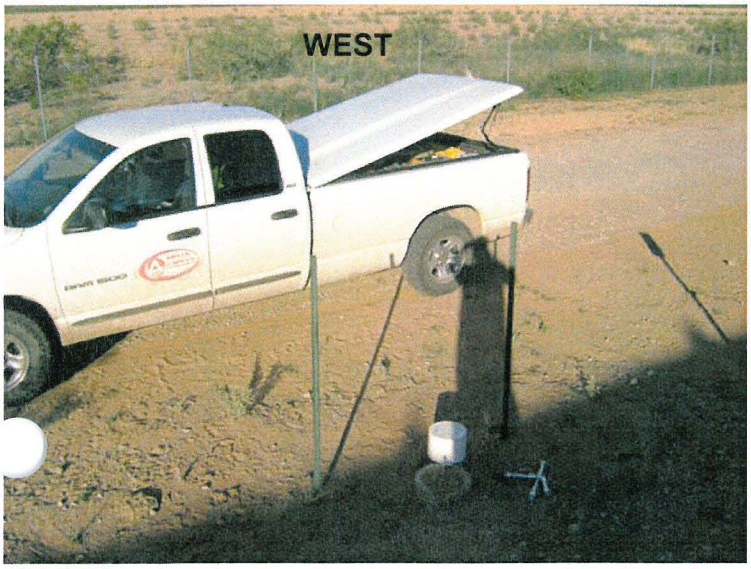
RB13

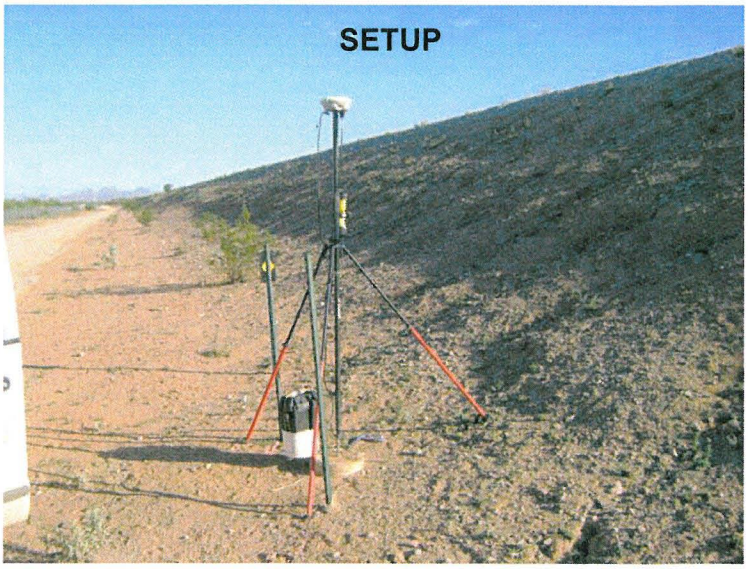












RB14

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: RB14
Receiver No: 6490 (C2)
Day of Year: 263
Session No: Ø

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 20 year 2008
Operator: J. MARSHALL

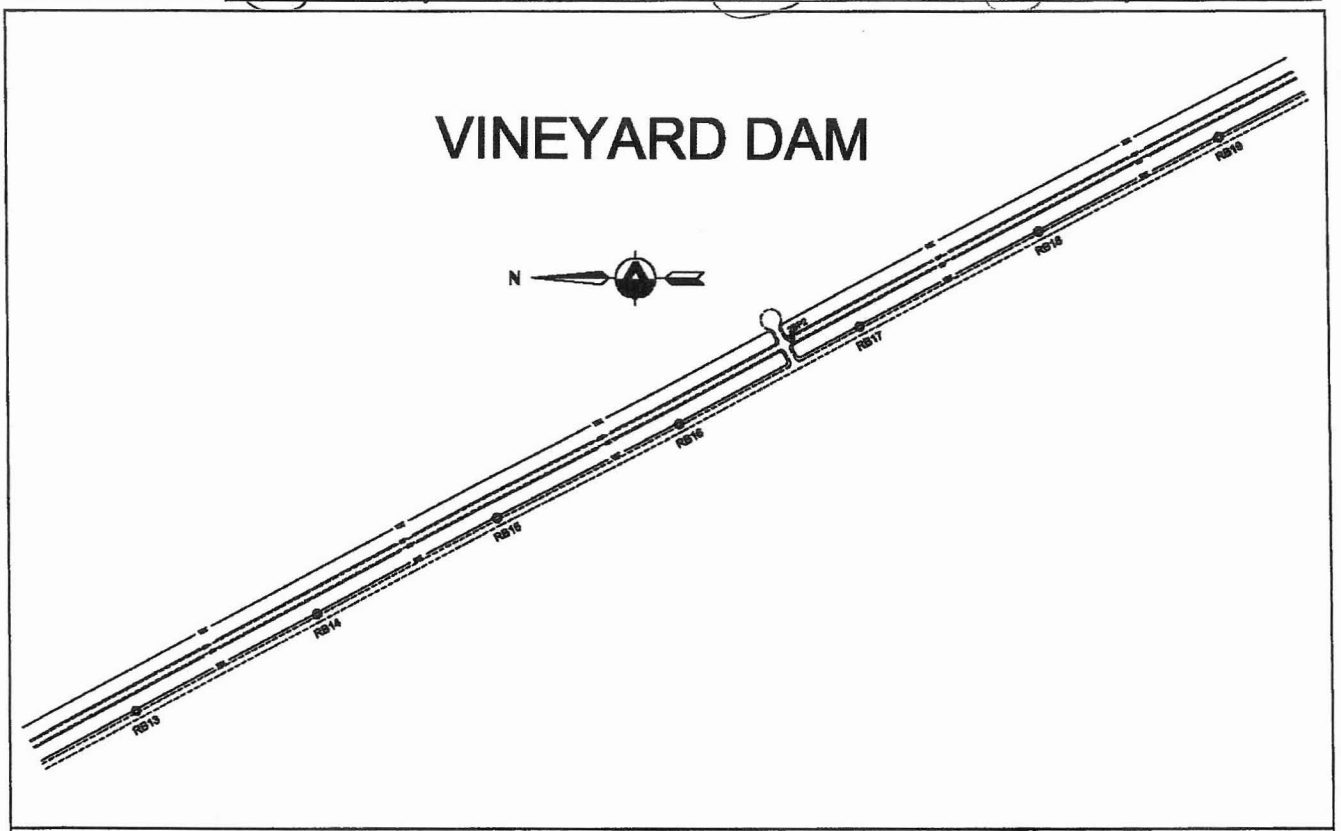
C/A CODE POSITION

Beg:
Lat: : 33 ° 20 ' 22.16 " N
Long: 111 ° 32 ' 10.79 " W
Ellip. Height: 446.9 M PDOP: 2.2
Ending:
Lat: 33 ° 20 ' 22.15 " N
Long: 111 ° 32 ' 10.72 " W
Ellip. Height: 445.6 M PDOP: 1.6

DC FILENAME: 1714-10-8097
DC# 8097 & POSTPROCESS#: 80972630
Receiver Model: Trimble 5800
Antenna Type: Trimble 5800
Antenna Serial #: 6490
Fixed Height Pole No: Rod
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 15 : 13 . Stop: 17 : 39 . UTC
Beg. SV's Used: 3, 6, 7, 13, 16, 20, 23, 25, 27, 32
End SV's Used: 3, 6, 7, 8, 10, 13, 19, 23, 25, 27, 28

Ant. Height (M) 2.0 Meters
Ant. Height (FT)
MEASURED TO: Bottom of Antenna Mount

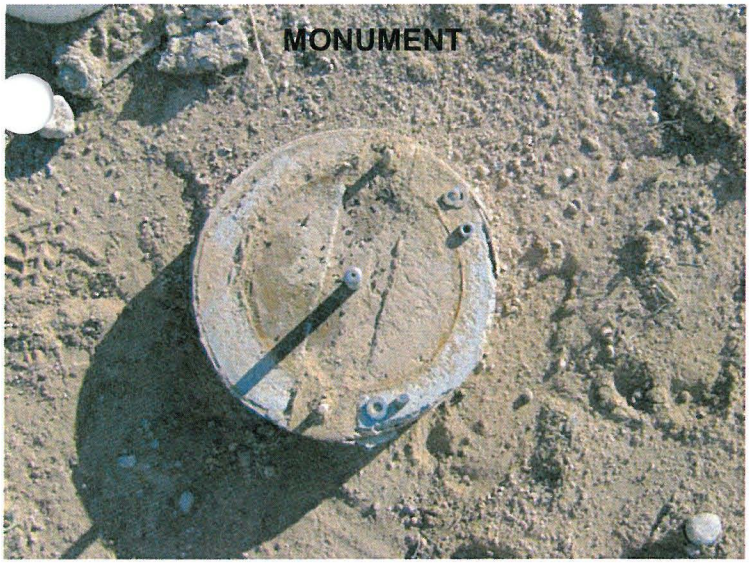
Weather Conditions: (Clear) P. Cloudy Overcast Hot (Warm) Cool Cold (Calm) Breezy 80 °F +/-

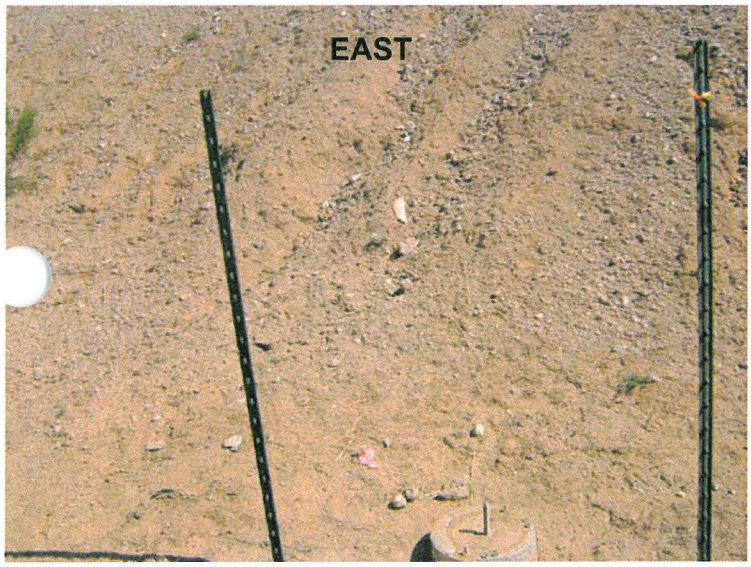


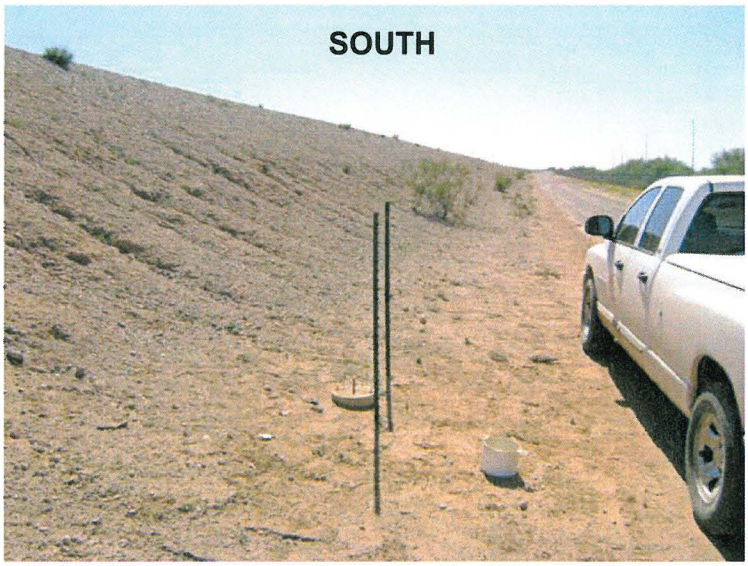
Type of Monument: Bolt in Concrete Stamping:
Top of marker: ( ) flush 0.35 M (X) above: ( ) below: Nat. Ground Stamping:
Detail Notes:

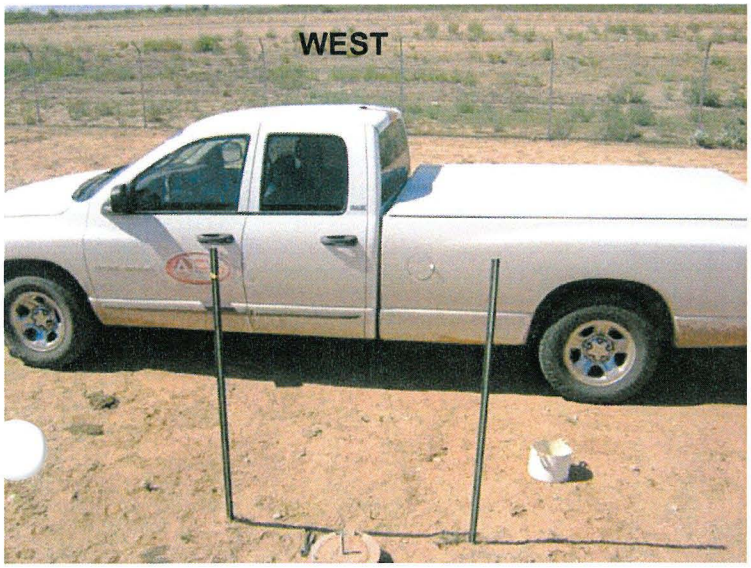
Photographs: Camera #: C9 Monument: 74 North: 76 East: 77
South: 78 West: 79 Set up: 75 Misc 1: Misc 2:
Rubbing Performed ( )Yes (X)No Photos

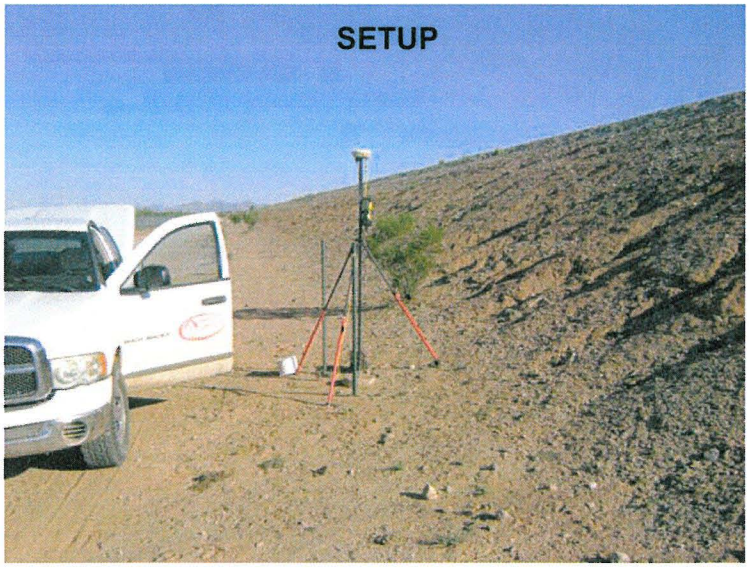
RB14











RB15

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: RB15
Receiver No: 5678
Day of Year: 263
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 18 year 2008
Operator: J. MALEK

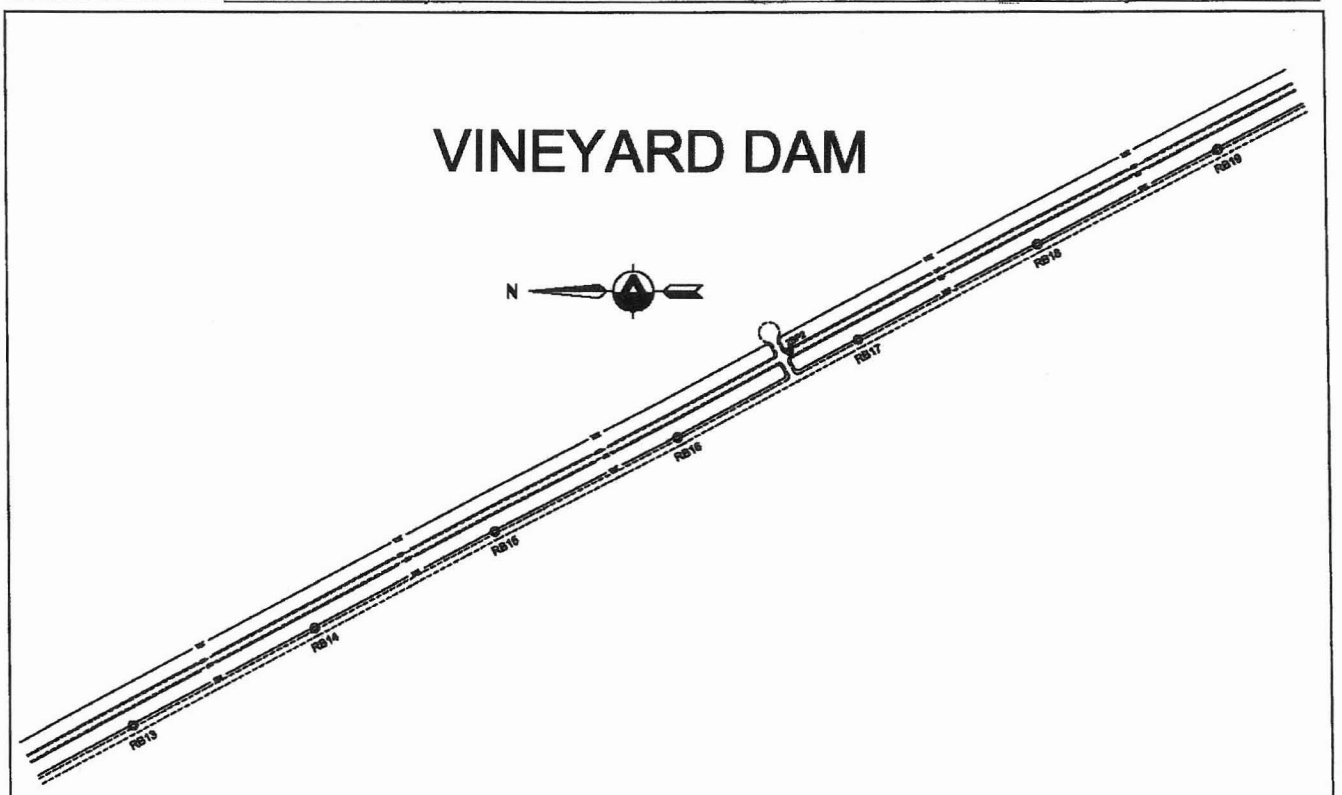
C/A CODE POSITION

Beg:
Lat: : 33 ° 20 ' 17.79 "N
Long: 111 ° 32 ' 08.00 "W
Ellip. Height: 447.2 M PDOP: 2.1
Ending:
Lat: 33 ° 20 ' 17.81 "N
Long: 111 ° 32 ' 08.00 "W
Ellip. Height: 445.3 M PDOP: 2.1

DC FILENAME:
DC# & POSTPROCESS#: 56782636
Receiver Model: 4000 SSE
Antenna Type: COMPACT L1/L2
Antenna Serial #: 04449
Fixed Height Pole No: ATEAM 2
Type of Survey: Fast Static (x) Kinematic Base ( ) RTK Base ( ).
Actual= Start 14 : 29 . Stop: 17 :53 . UTC
Beg. SV's Used: 25, 31, 32, 7, 13, 16, 20, 23
End SV's Used: 25, 03, 28, 07, 27, 13, 19, 08, 23

Ant. Height (M) 1.5
Ant. Height (FT)
MEASURED TO: BOTTOM ANTENNA MOUNT

Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Cold Calm Breezy 72 °F +/-

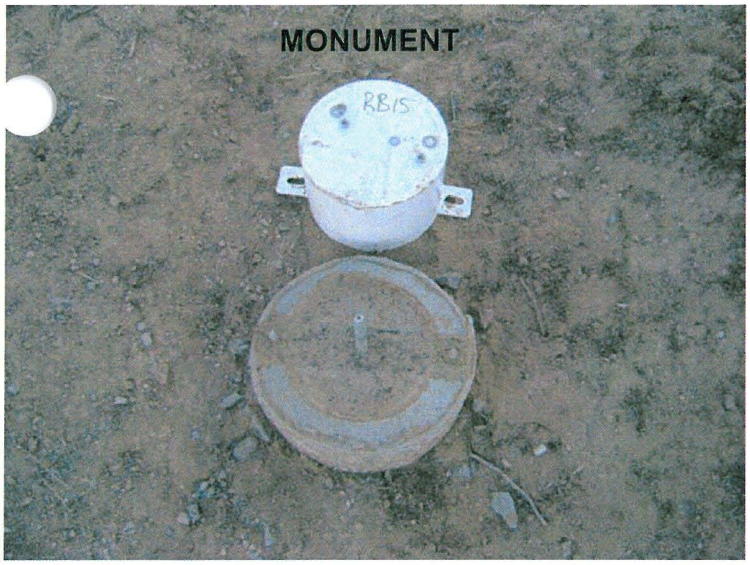


Type of Monument: Rock Bolt In Concrete Stamping:
Top of marker: ( ) flush 0.65' (x) above: ( ) below: Nat. Ground Stamping:
Detail Notes:

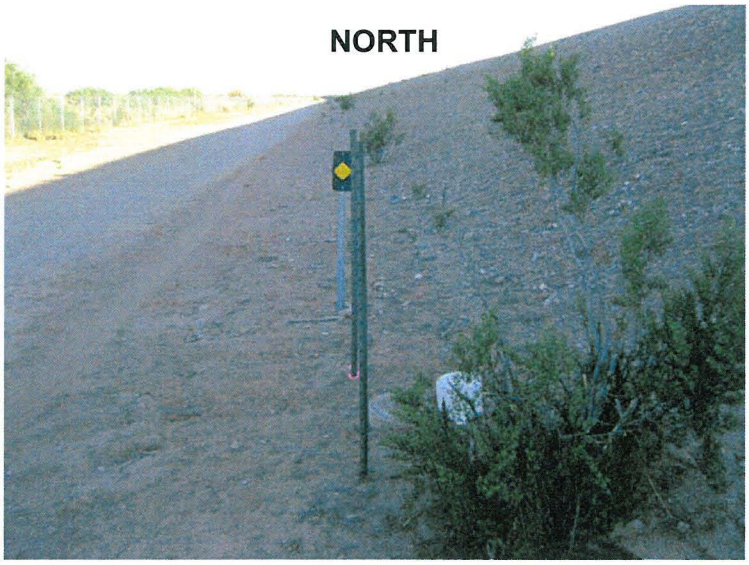
Photographs: Camera #: C1 Monument: 620 North: 621 East: 622
South: 623 West: 624 Set up: 625 Misc 1: Misc 2:
Rubbing Performed ( )Yes ( )No

RB15

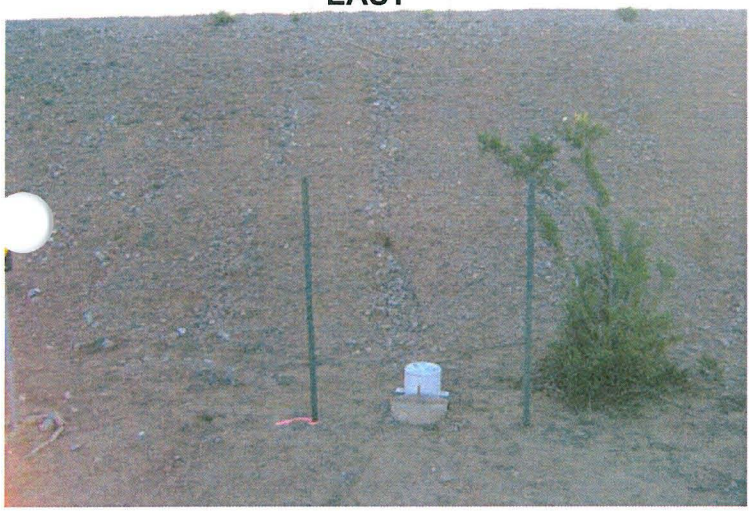
MONUMENT



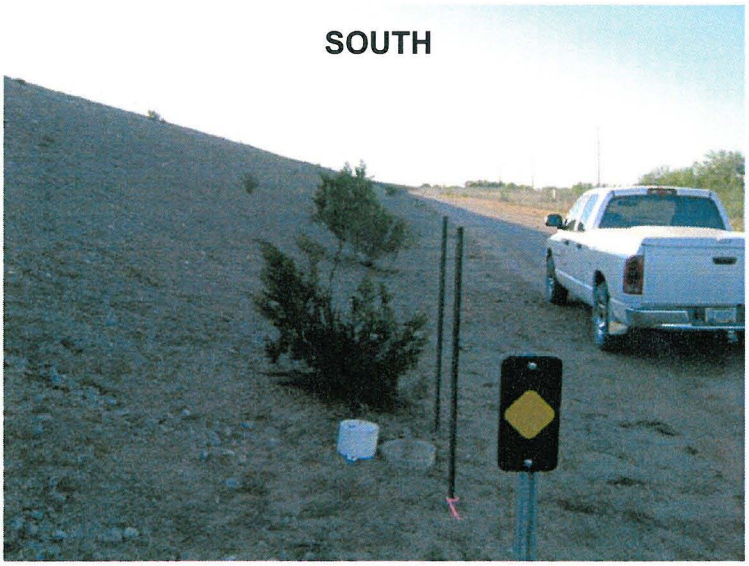
NORTH



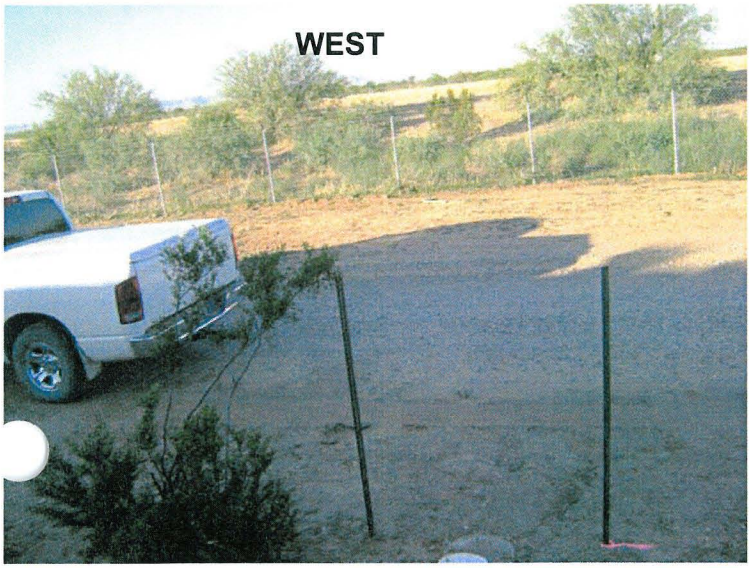
EAST



SOUTH



WEST



SETUP

RB16

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: RB116
Receiver No: 38916
Day of Year: 263
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 18 year 2008
Operator: J. MALBIK

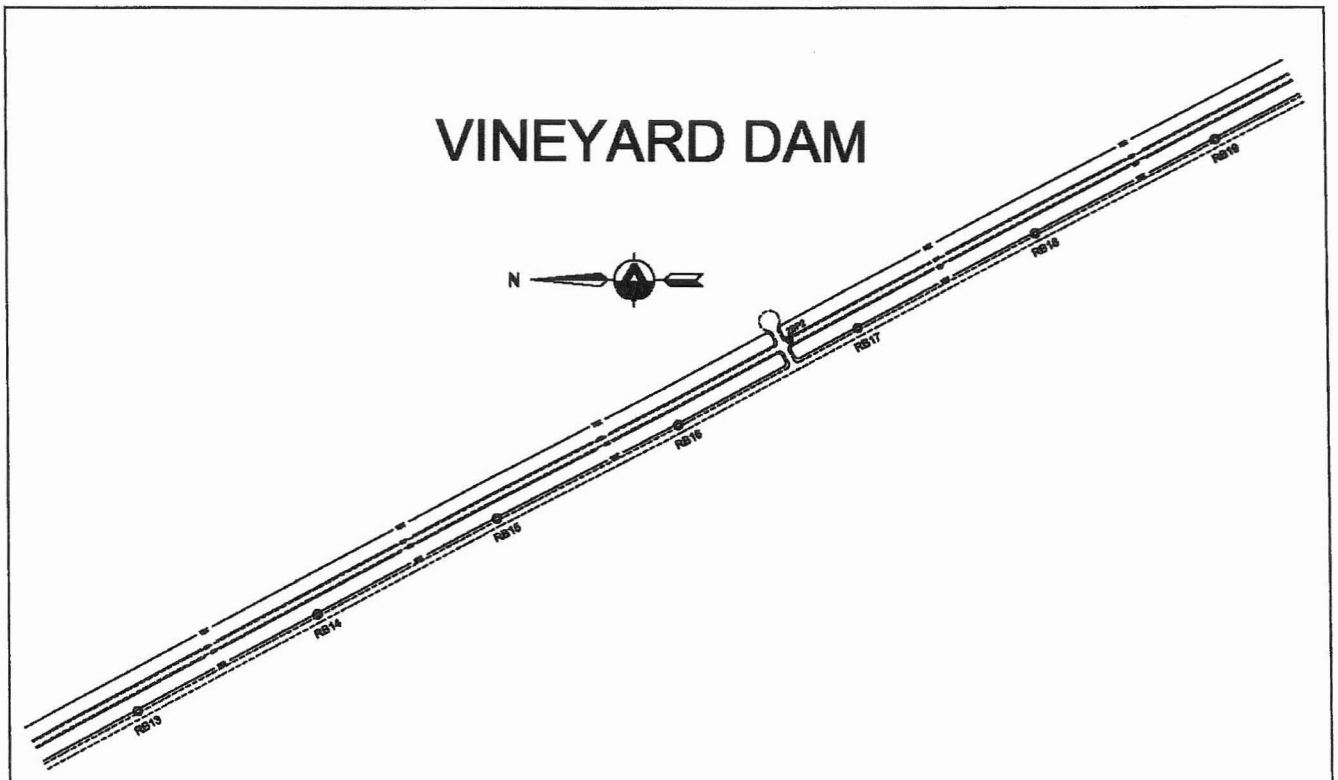
C/A CODE POSITION

Beg:
Lat: : 33 ° 20 ' 13.43 " N
Long: 111 ° 32 ' 05.30 " W
Ellip. Height: 448.38 M PDOP: 1.5
Ending:
Lat: 33 ° 20 ' 13.39 " N
Long: 111 ° 32 ' 05.26 " W
Ellip. Height: 445.63 M PDOP: 1.4

DC FILENAME: 1714-10- 8955
DC# 8955 & POSTPROCESS#: 8955 2630
Receiver Model: 5800
Antenna Type: 5800
Antenna Serial #: 38916
Fixed Height Pole No: 61
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 14 : 12 . Stop: 18 : 27 . UTC
Beg. SV's Used: 3, 6, 7, 13, 16, 20, 23, 25, 27, 31, 32.
End SV's Used: 3, 7, 8, 10, 11, 13, 19, 23, 25, 27, 28

Ant. Height (M) 2.0
Ant. Height (FT)
MEASURED TO: BOTTOM ANTENNA MOUNT

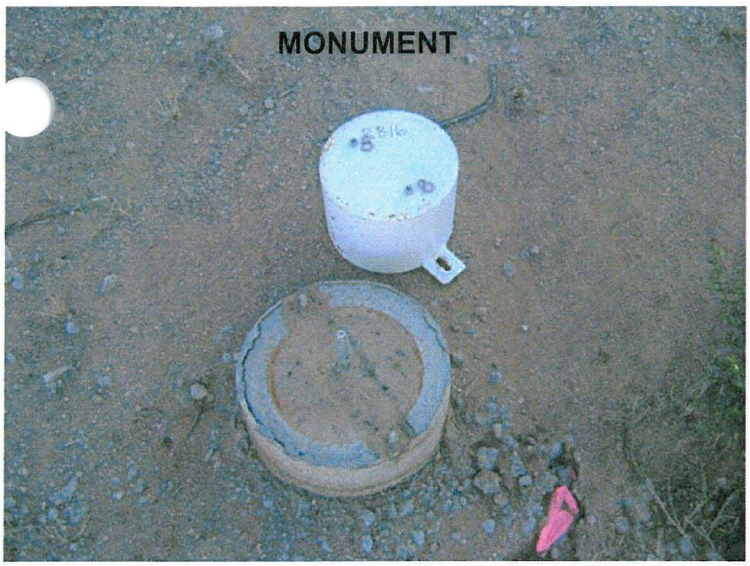
Weather Conditions: (Clear) P. Cloudy Overcast (Hot) Warm Cool Cold (Calm) Breezy 75°F +/-

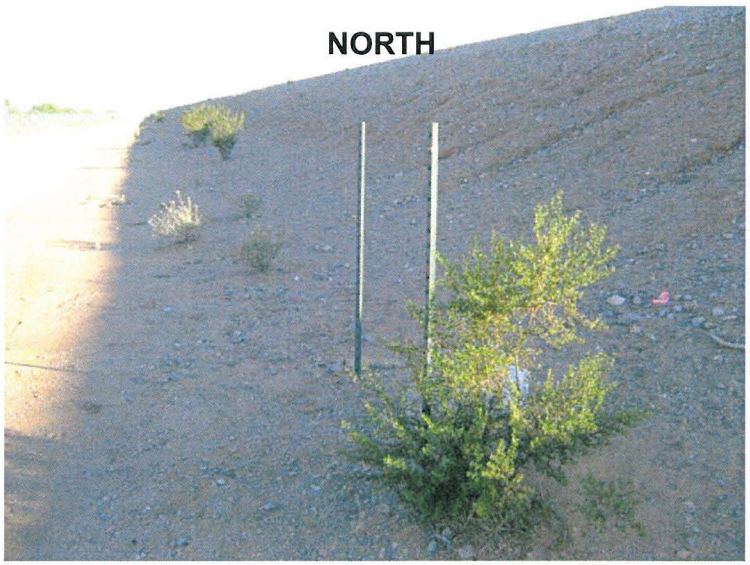


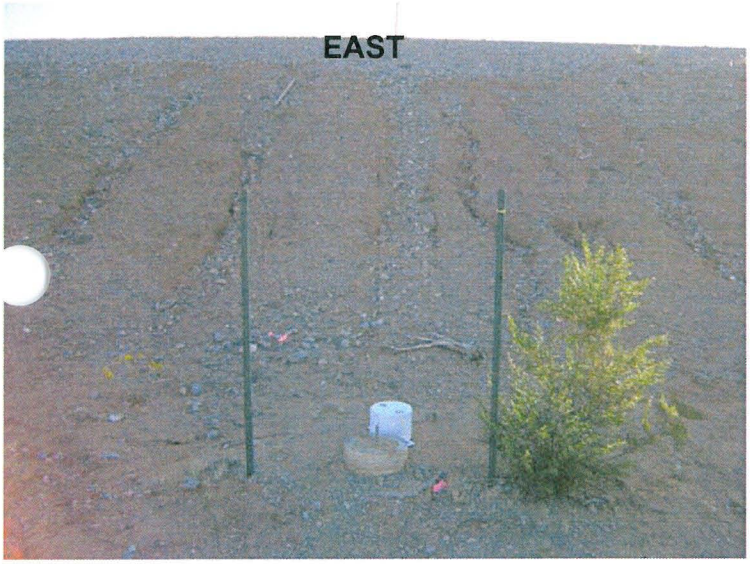
Type of Monument: Rock Bolt IN Conc. Stamping:
Top of marker: ( ) flush 0.75 ☒ (x) above: ( ) below: Nat. Ground Stamping:
Detail Notes:

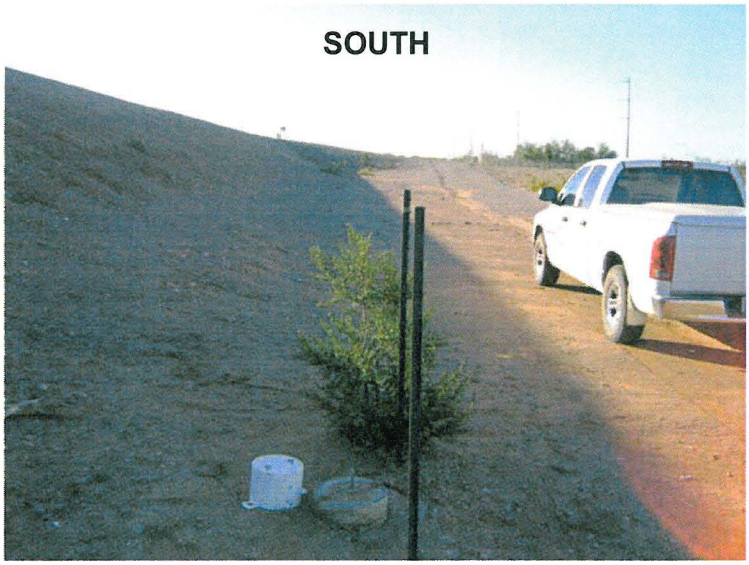
Photographs: Camera #: 61 Monument: 626 North: 627 East: 628
South: 629 West: 630 Set up: 631 Misc 1: Misc 2:
Rubbing Performed ( )Yes ( )No

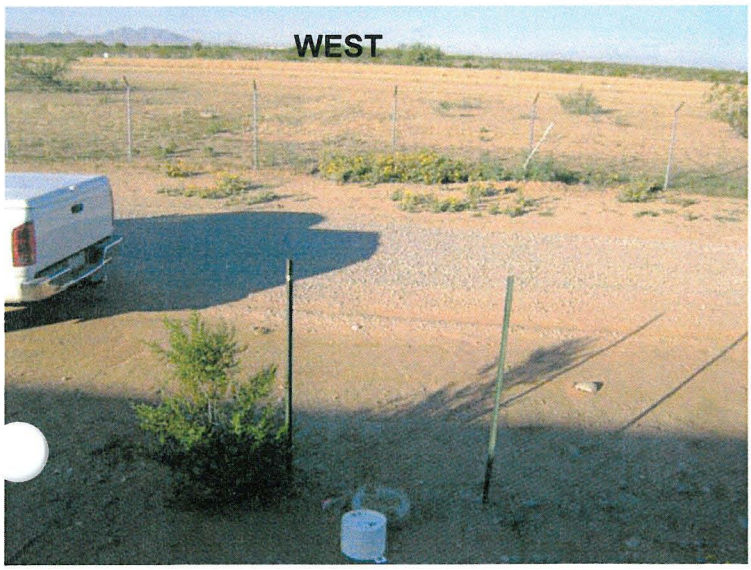
RB16

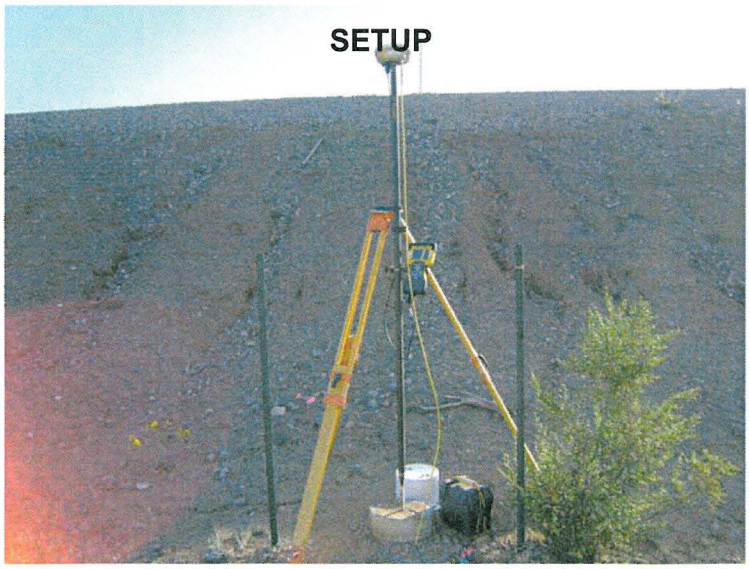












RB17

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: RB 17
Receiver No: 40172
Day of Year: 263
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 09 day 19 year 2008
Operator: L. SPEAN

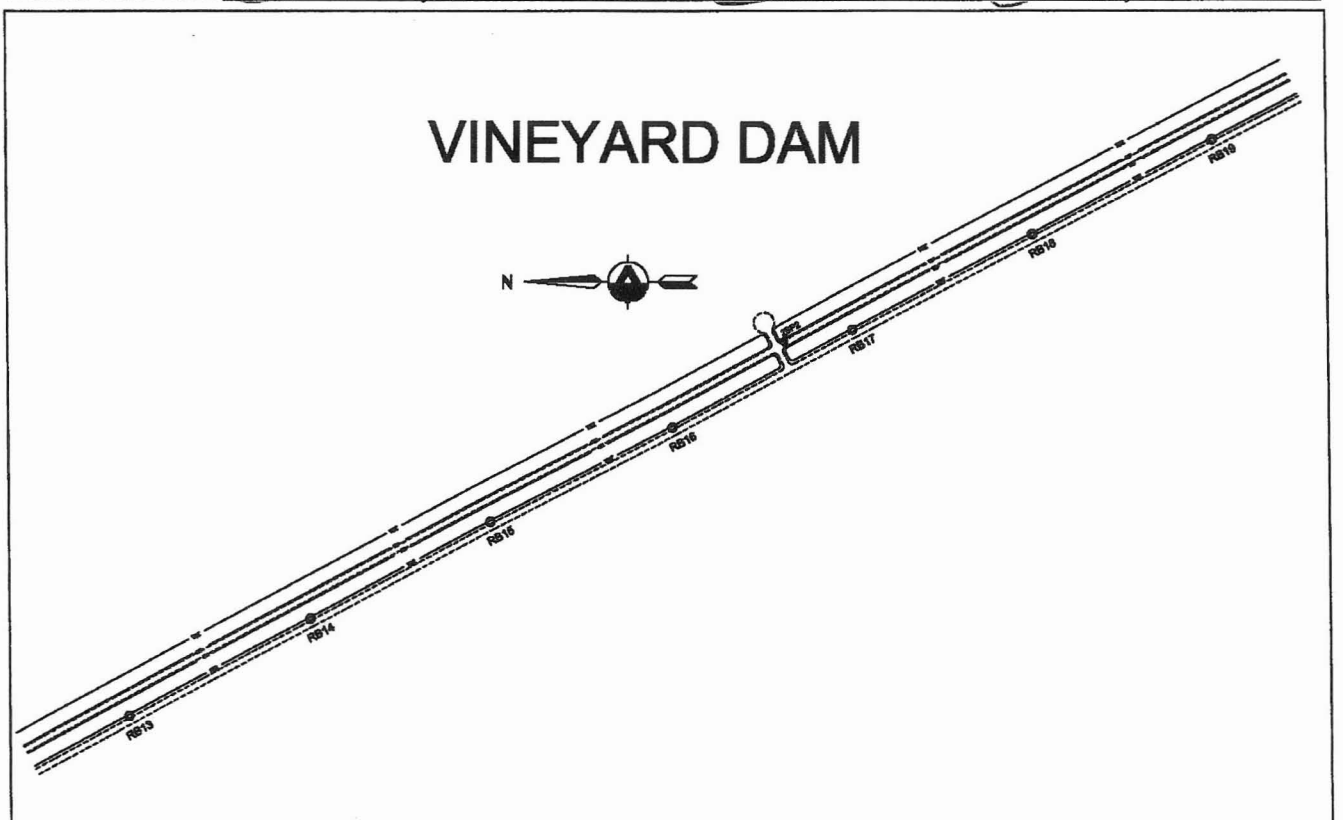
C/A CODE POSITION

Beg:
Lat: : 33 ° 20 ' 09.06 " N
Long: 111 ° 32 ' 02.51 " W
Ellip. Height: 448.35 M PDOP: 1.5
Ending:
Lat: 33 ° 20 ' 09.05 " N
Long: 111 ° 32 ' 02.47 " W
Ellip. Height: 445.82 M PDOP: 1.5

DC FILENAME: 1714-10 - 1241
DC# 1241 & POSTPROCESS#: 12412630
Receiver Model: TRIMBLE 5800
Antenna Type: TRIMBLE 5800
Antenna Serial #: 40172
Fixed Height Pole No: CB ROD
Type of Survey: Fast Static (✓) Kinematic Base ( ) RTK Base ( ).
Actual= Start 14 : 40 . Stop: 18 : 10 . UTC
Beg. SV's Used: 3, 6, 7, 13, 16, 20, 23, 25, 27, 31, 32
End SV's Used: 3, 7, 8, 10, 11, 13, 19, 23, 25, 27, 28

Ant. Height (M) 2.0 M
Ant. Height (FT) BOTTOM OF ANT. MOUNT
MEASURED TO:

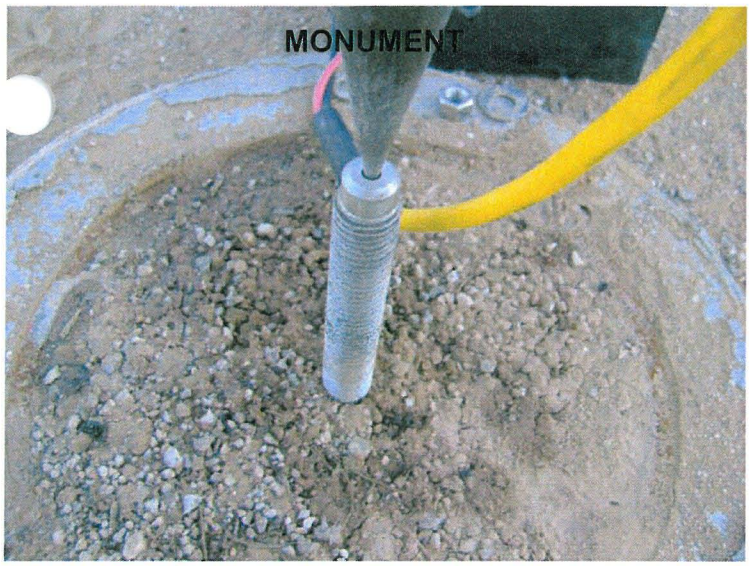
Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Cold Calm Breezy 85 °F +/-

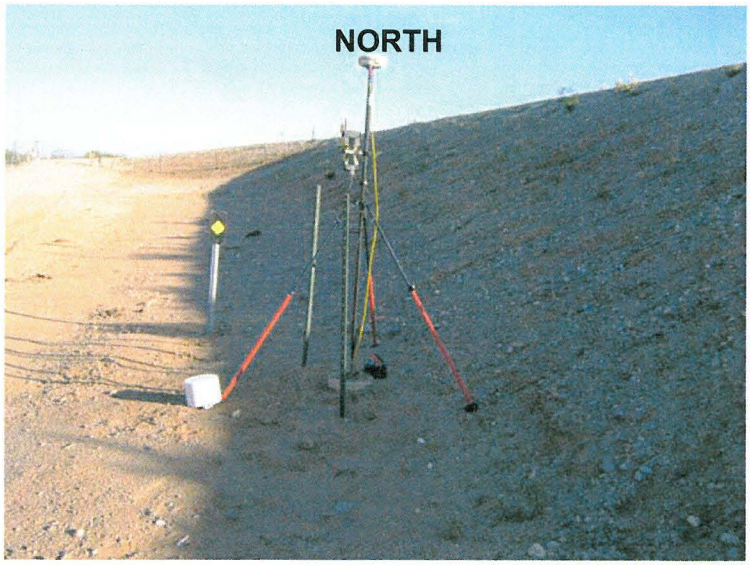


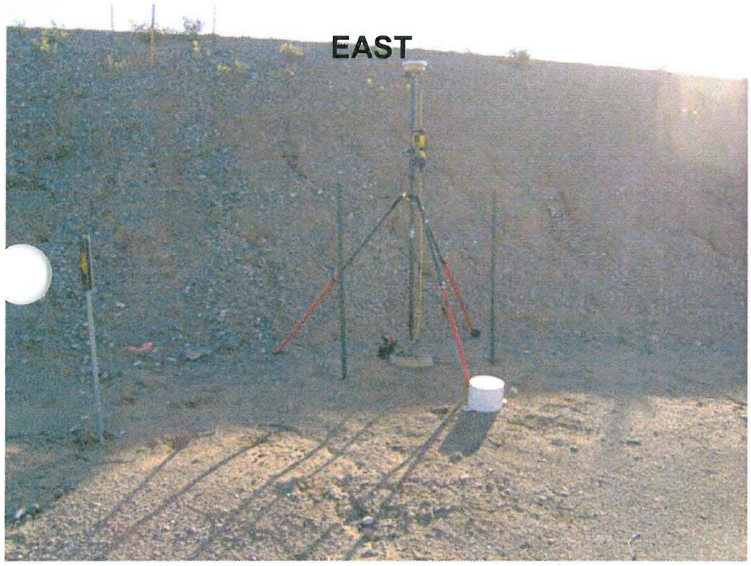
Type of Monument: ROD IN CONCRETE Stamping:
Top of marker: ( ) flush 0.35' ☒ (✓) above: ( ) below: Nat. Ground Stamping:
Detail Notes:

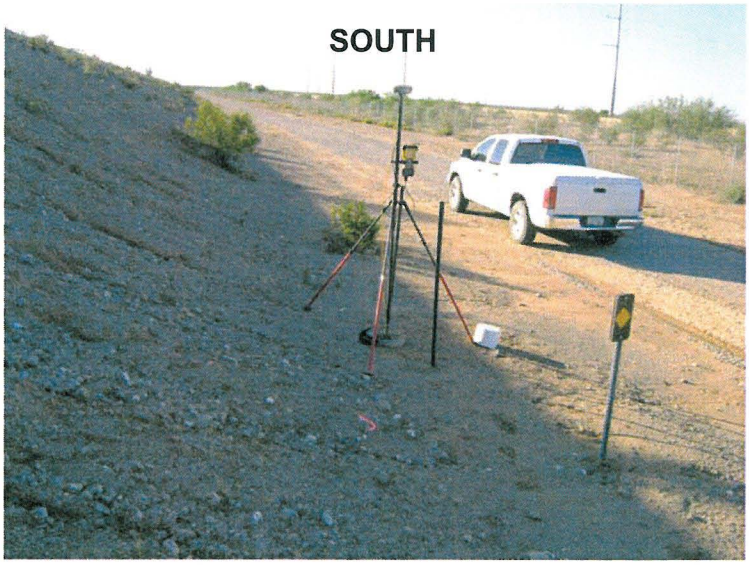
Photographs: Camera #: C3 Monument: ✓ North: ✓ East: ✓
South: ✓ West: ✓ Set up: Misc 1: Misc 2:
Rubbing Performed ( )Yes (✓)No

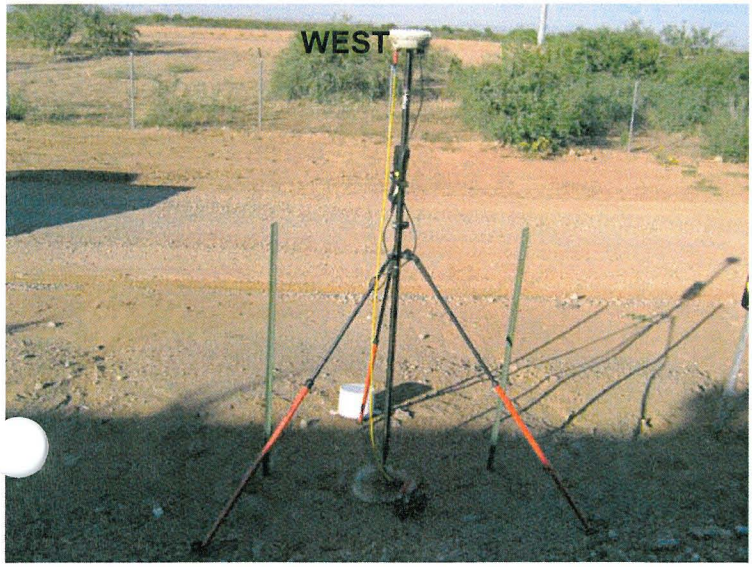
RB17

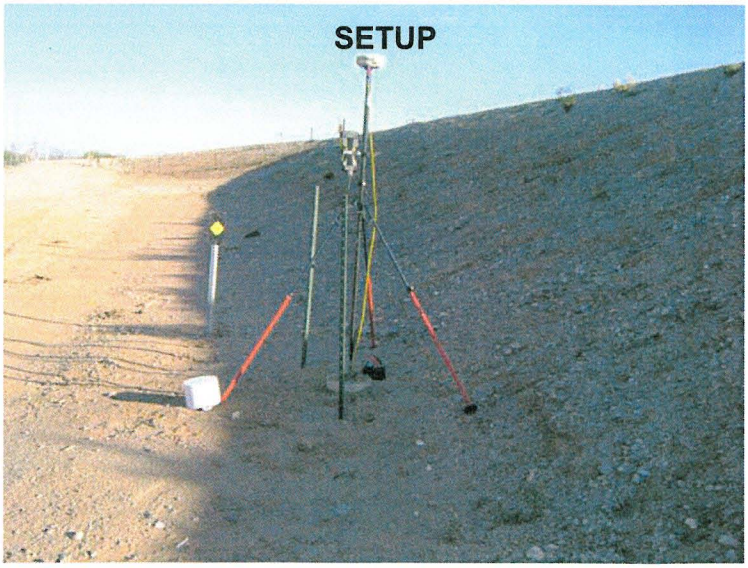












RB18

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: RB 18
Receiver No: 36492
Day of Year: 263
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 09 day 19 year 2008
Operator: L. SPEAN

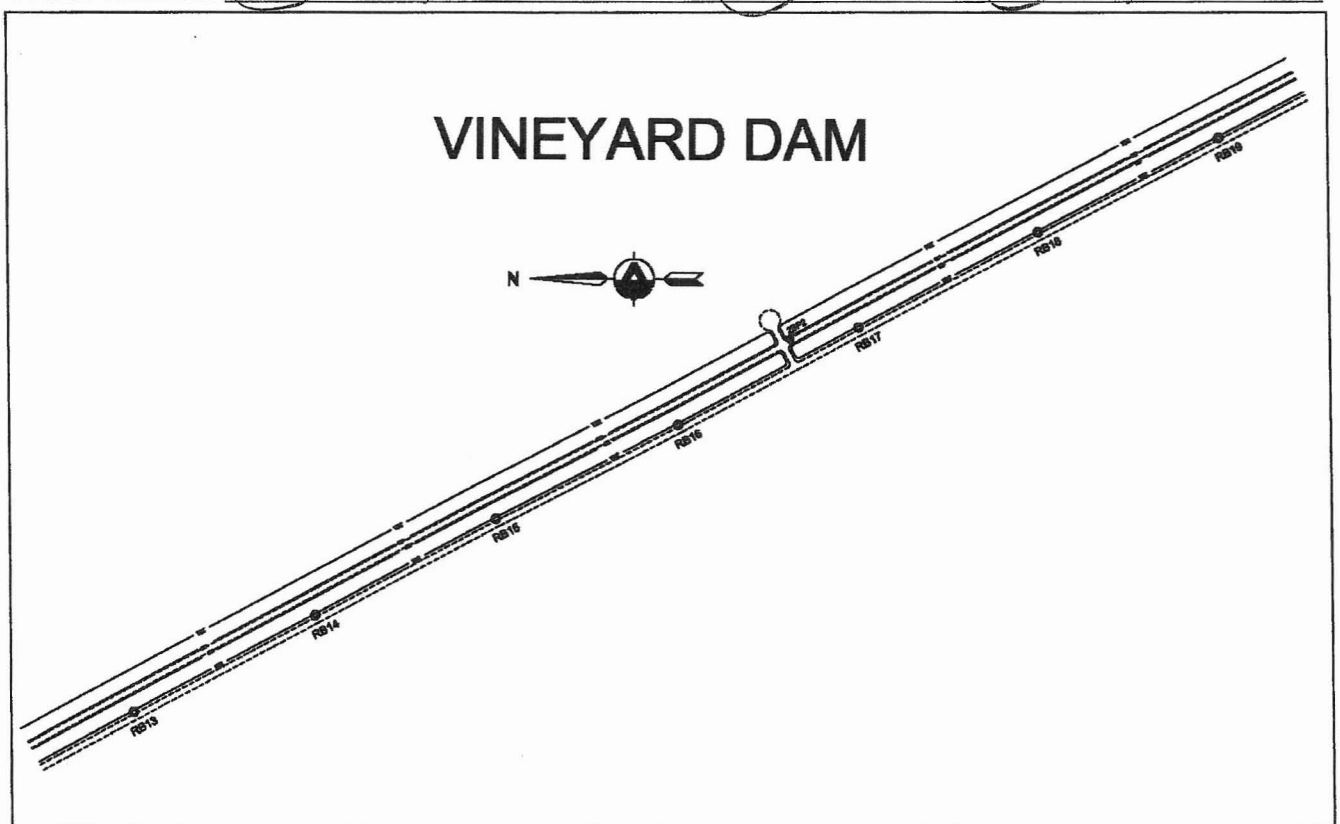
C/A CODE POSITION

Beg:
Lat: : 33 ° 20 ' 04.69 " N
Long: 111 ° 31 ' 59.79 " W
Ellip. Height: 448.22 M PDOP: 2.0
Ending:
Lat: 33 ° 20 ' 04.68 " N
Long: 111 ° 31 ' 59.73 " W
Ellip. Height: 446.07 M PDOP: 1.7

DC FILENAME: 1714-10-8957
DC# 8957 & POSTPROCESS#: 8957 2630
Receiver Model: TRIMBLE 5800
Antenna Type: TRIMBLE 5800
Antenna Serial #: 36492
Fixed Height Pole No: C3 ROD
Type of Survey: Fast Static (✓) Kinematic Base ( ) RTK Base ( ).
Actual= Start 19 : 00 . Stop: 18 : 02 . UTC
Beg. SV's Used: 3, 6, 7, 13, 16, 20, 23, 25, 27, 32
End SV's Used: 3, 7, 8, 10, 13, 19, 23, 25, 27, 28

Ant. Height (M) 2.0 M
Ant. Height (FT)
MEASURED TO: BOTTOM OF ANT. MOUNT

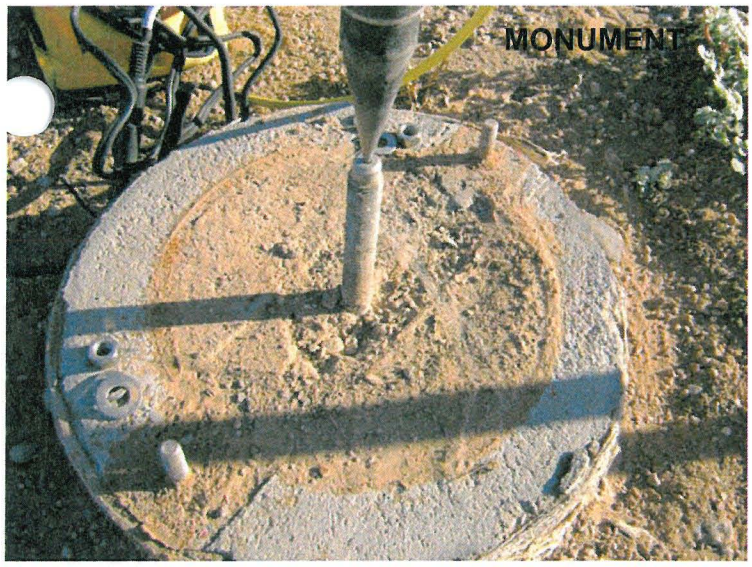
Weather Conditions: (Clear) P. Cloudy Overcast Hot (Warm) Cool Cold (Calm) Breezy 85 °F +/-

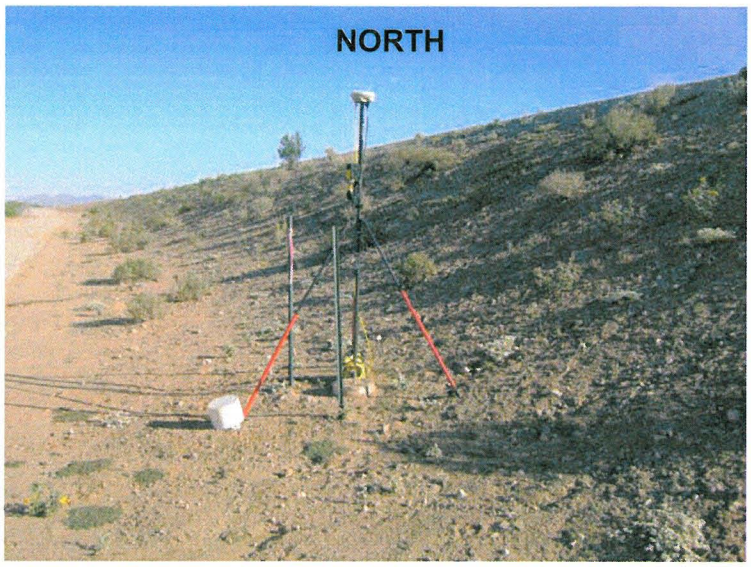


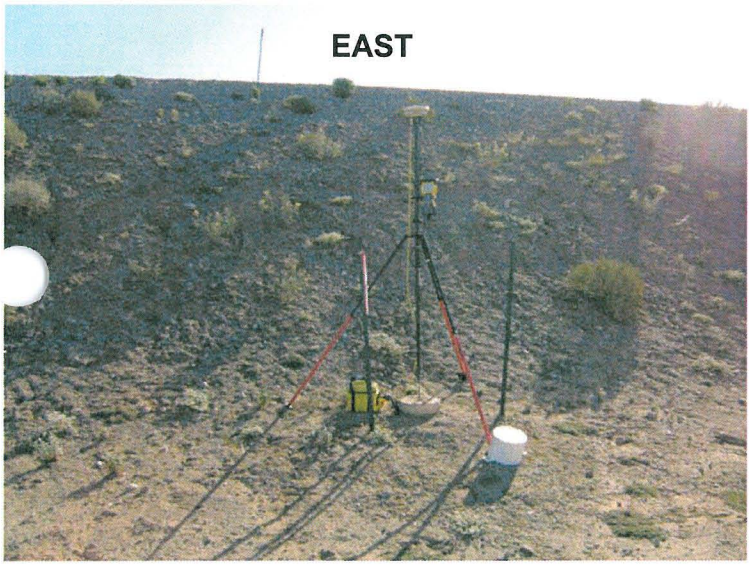
Type of Monument: ROD IN CONCRETE Stamping:
Top of marker: ( ) flush 0.75' ☒ (✓) above: ( ) below: Nat. Ground Stamping:
Detail Notes:

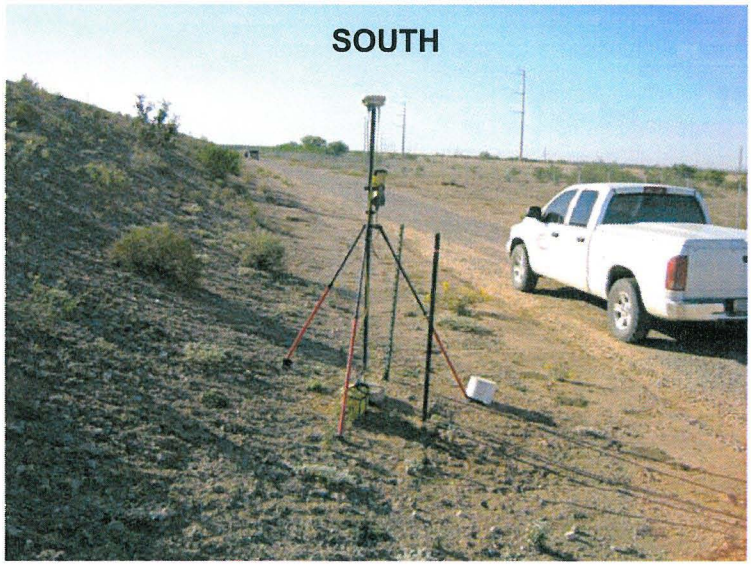
Photographs: Camera #: ✓ Monument: ✓ North: ✓ East: ✓
South: ✓ West: ✓ Set up: Misc 1: Misc 2:
Rubbing Performed ( )Yes (✓)No

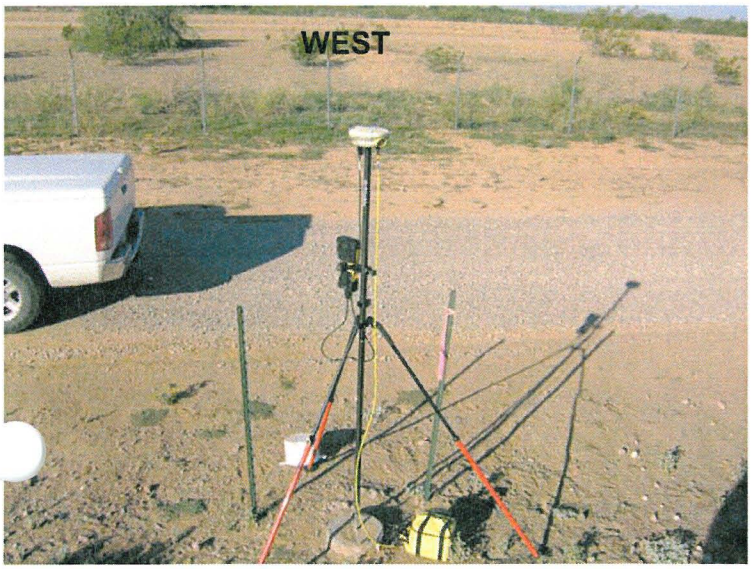
RB18

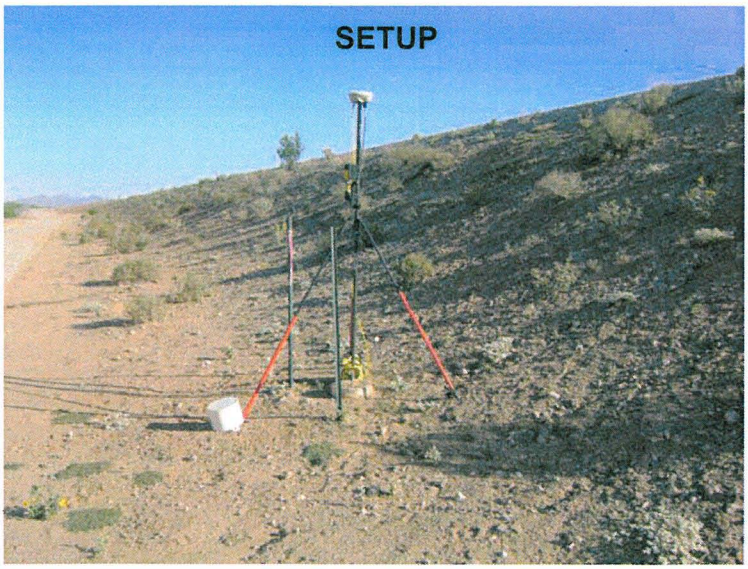












RB19

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: RB 19
Receiver No: 3813
Day of Year: 263
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 19 year 2008
Operator: J. MAZEK

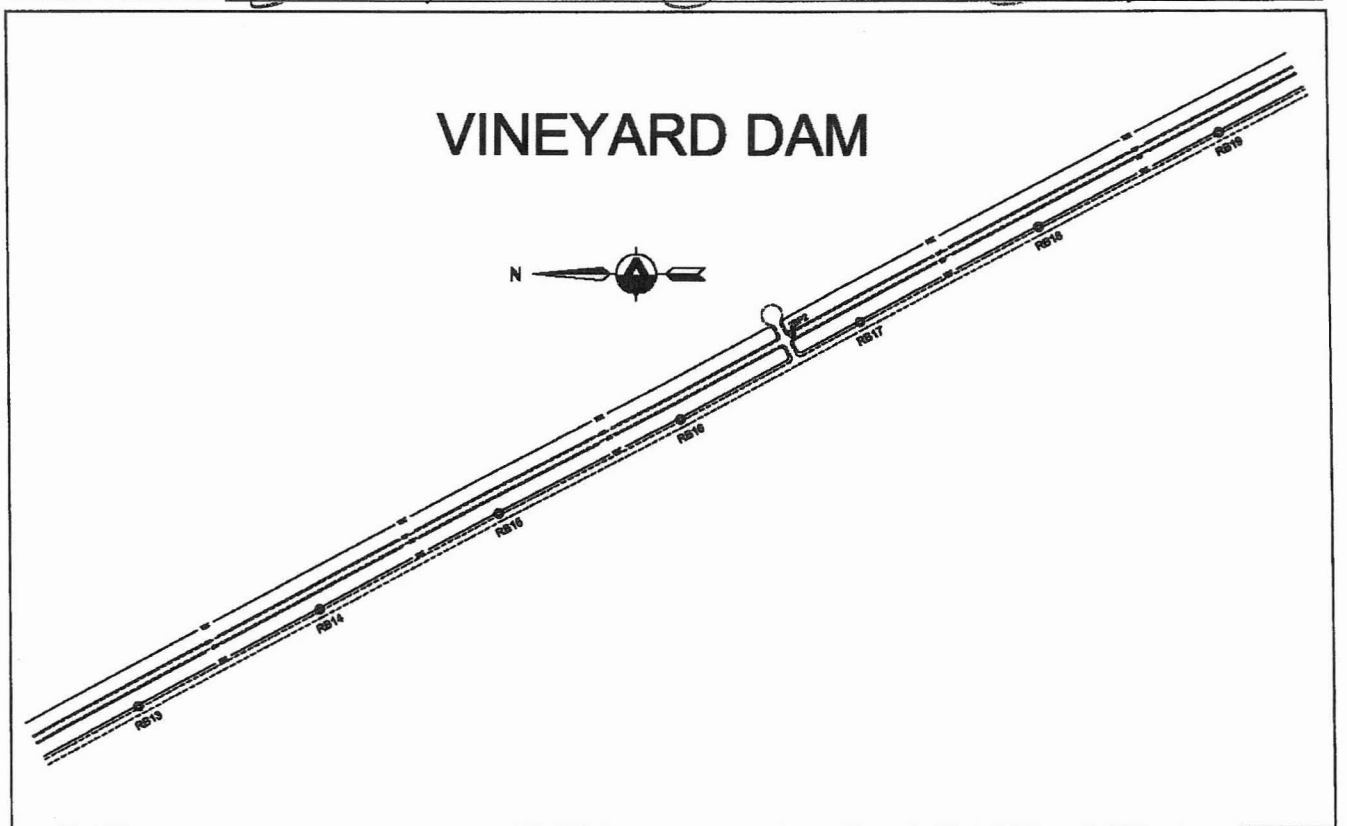
C/A CODE POSITION

Beg:
Lat: : 33 ° 20 ' 00.32 " N
Long: 111 ° 31 ' 57.03 " W
Ellip. Height: 446.34 M PDOP: 2.3
Ending:
Lat: 33 ° 20 ' 00.31 " N
Long: 111 ° 31 ' 56.99 " W
Ellip. Height: 446.42 M PDOP: 1.5

DC FILENAME: 1714-10-8777
DC# 8777 & POSTPROCESS#: 87772630
Receiver Model: 5700
Antenna Type: ZEPHYR
Antenna Serial #: 0380
Fixed Height Pole No: C6
Type of Survey: Fast Static (✓) Kinematic Base ( ) RTK Base ( ).
Actual= Start 15 : 07 . Stop: 17 : 44 . UTC
Beg. SV's Used: 3, 6, 7, 13, 16, 20, 23, 25 32
End SV's Used: 3, 6, 7, 8, 10, 13, 19, 23, 25, 27, 28.

Ant. Height (M) 2.0
Ant. Height (FT)
MEASURED TO: BOTTOM ANTENNA MOUNT

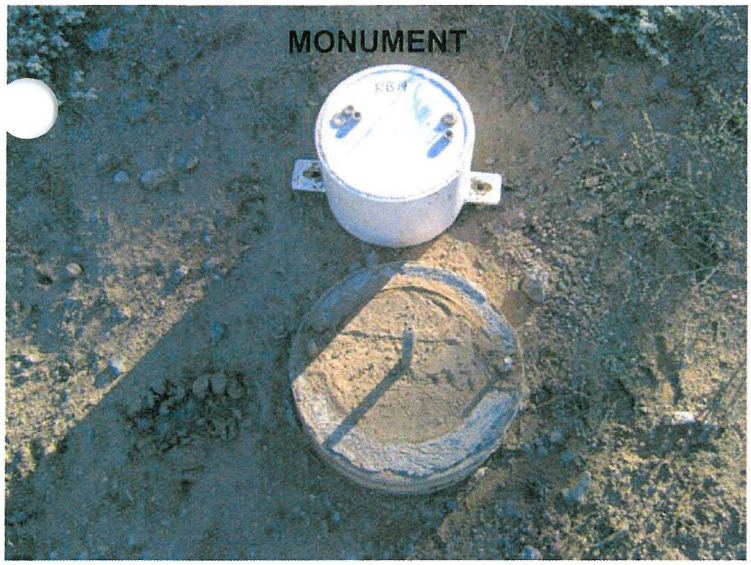
Weather Conditions: (Clear) P. Cloudy Overcast (Hot) Warm Cool Cold (Calm) Breezy 73 °F +/-

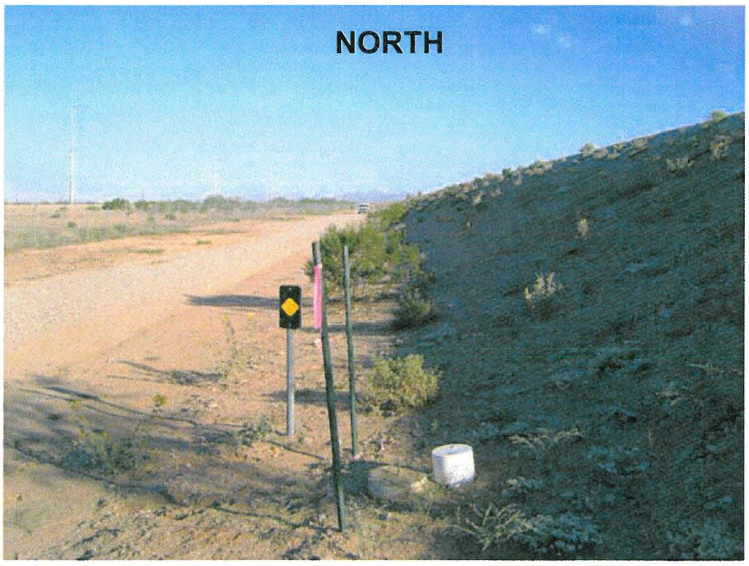


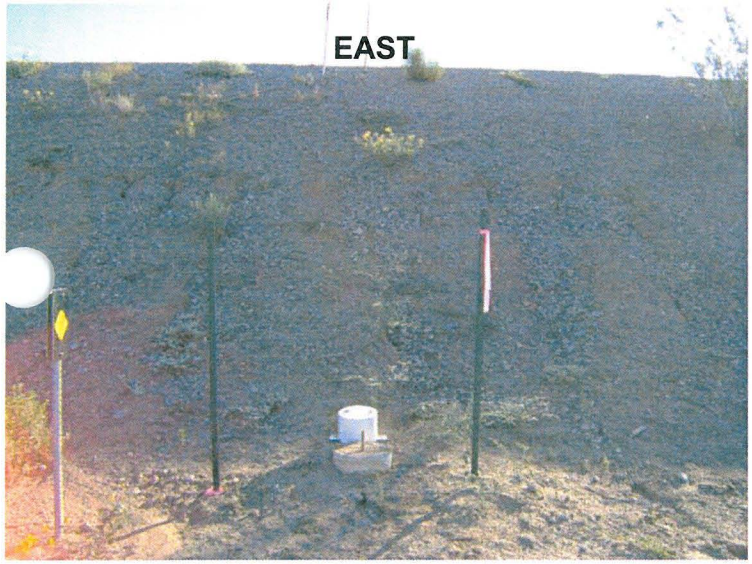
Type of Monument: Rock Bolt in Cone, Stamping:
Top of marker: ( ) flush 0.7' M (✓) above: ( ) below: Nat. Ground Stamping:
Detail Notes:

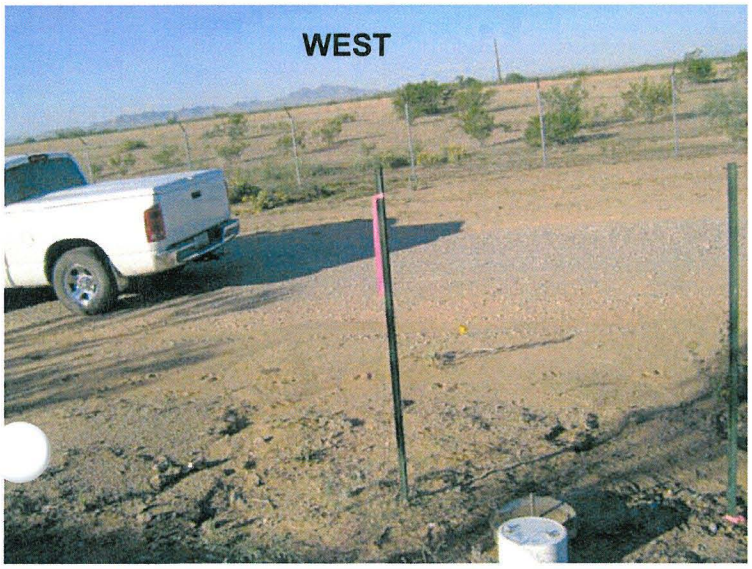
Photographs: Camera #: C1 Monument: 632 North: 633 East: 634
South: 635 West: 636 Set up: 637 Misc 1: Misc 2:
Rubbing Performed ( )Yes (✓)No

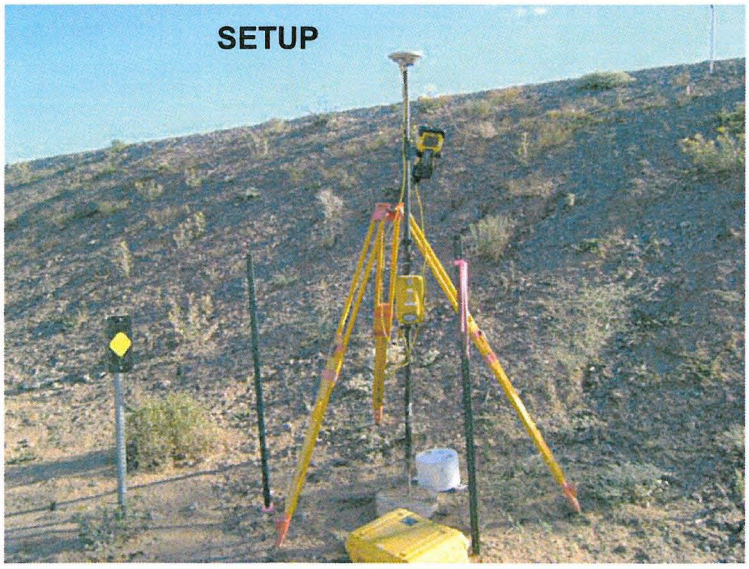
RB19











VINE RM1

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: VINE RM1
Receiver No: 36492
Day of Year: 262
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 09 day 18 year 2008
Operator: L. SPEAN

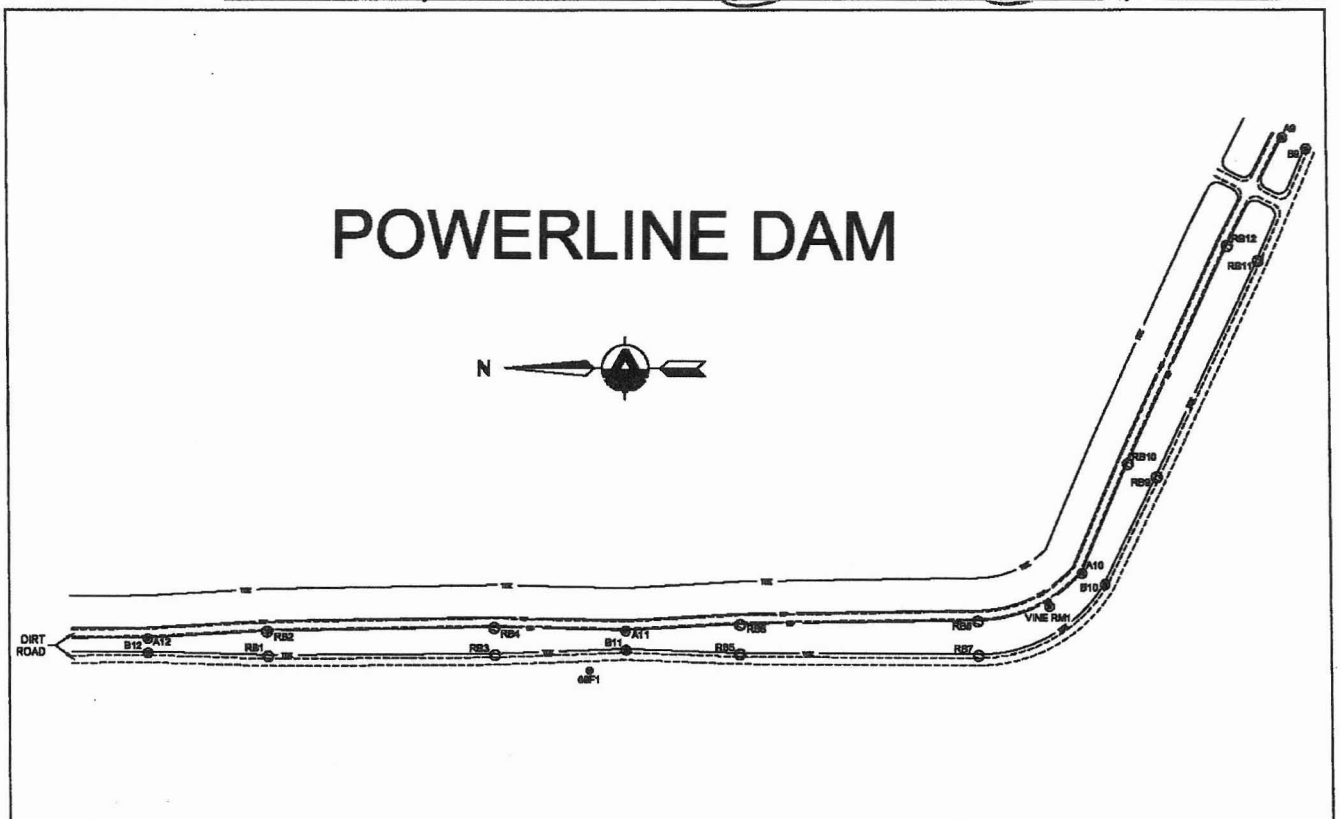
C/A CODE POSITION

Beg:
Lat: : 33 ° 21 ' 56.22 " N
Long: 111 ° 33 ' 39.28 " W
Ellip. Height: 451.846 M PDOP: 2.1
Ending:
Lat: 33 ° 21 ' 56.15 " N
Long: 111 ° 33 ' 39.26 " W
Ellip. Height: 450.448 M PDOP: 2.1

DC FILENAME: 1714-10-8957
DC# 8957 & POSTPROCESS#: 8957 2620
Receiver Model: TRIMBLE 5800
Antenna Type: TRIMBLE 5800
Antenna Serial #: 36492
Fixed Height Pole No: C3 1200
Type of Survey: Fast Static (✓) Kinematic Base ( ) RTK Base ( ).
Actual= Start 15 : 08 . Stop: 20 : 02 . UTC
Beg. SV's Used: 3, 6, 7, 13, 16, 20, 23, 25, 27, 32
End SV's Used: 7, 8, 11, 15, 17, 25, 26, 27, 28.

Ant. Height (M) 2.0 M
Ant. Height (FT)
MEASURED TO: BOTTOM OF ANT. MOUNT

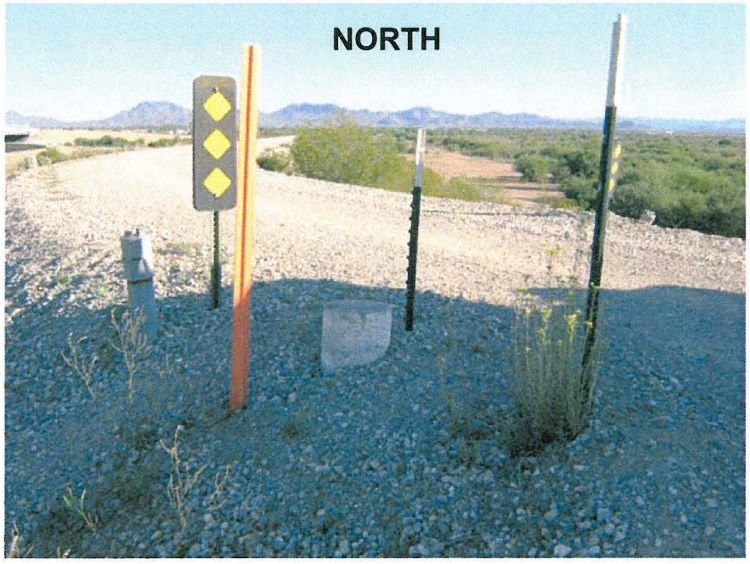
Weather Conditions: (Clear) P. Cloudy Overcast Hot (Warm) Cool Cold (Calm) Breezy 85 °F +/-

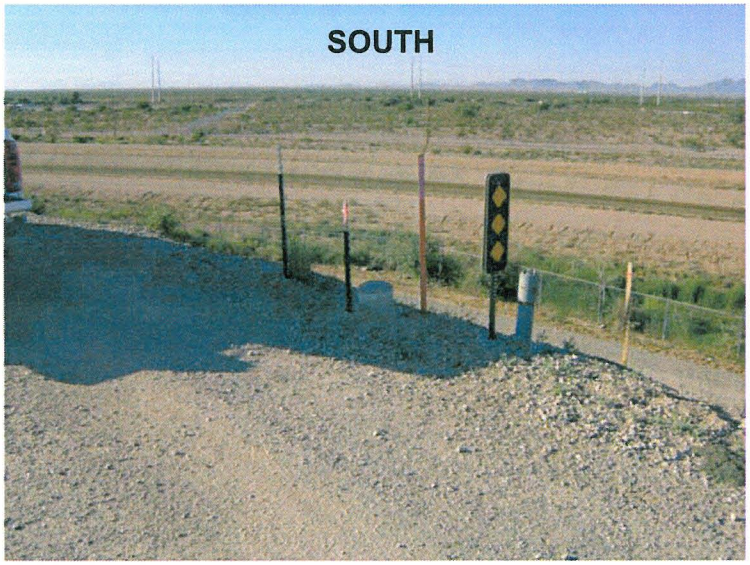


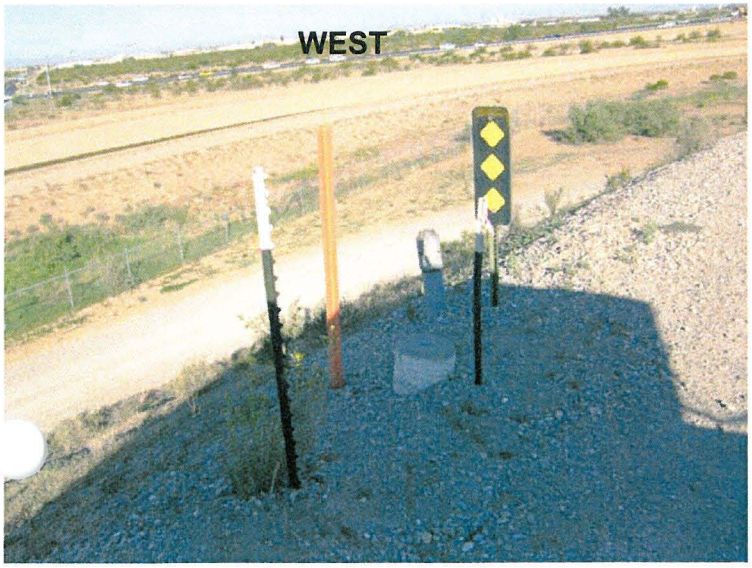
Type of Monument: BRASS CAP IN CONCRETE Stamping: A.D.O.T. HIGHWAY DIV.
Top of marker: ( ) flush 0.40 M (✓) above: ( ) below: Nat. Ground Stamping: VINE RM 1 1975
Detail Notes:

Photographs: Camera #: C3 Monument: ✓ North: ✓ East: ✓
South: ✓ West: ✓ Set up: Misc 1: Misc 2:
Rubbing Performed ( )Yes (✓)No

VINE RM1







SETUP

PHOTO NOT AVAILABLE

A10

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: A10
Receiver No: 40172
Day of Year: 262
Session No: 1

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 09 day 18 year 2008
Operator: L. SPEAN

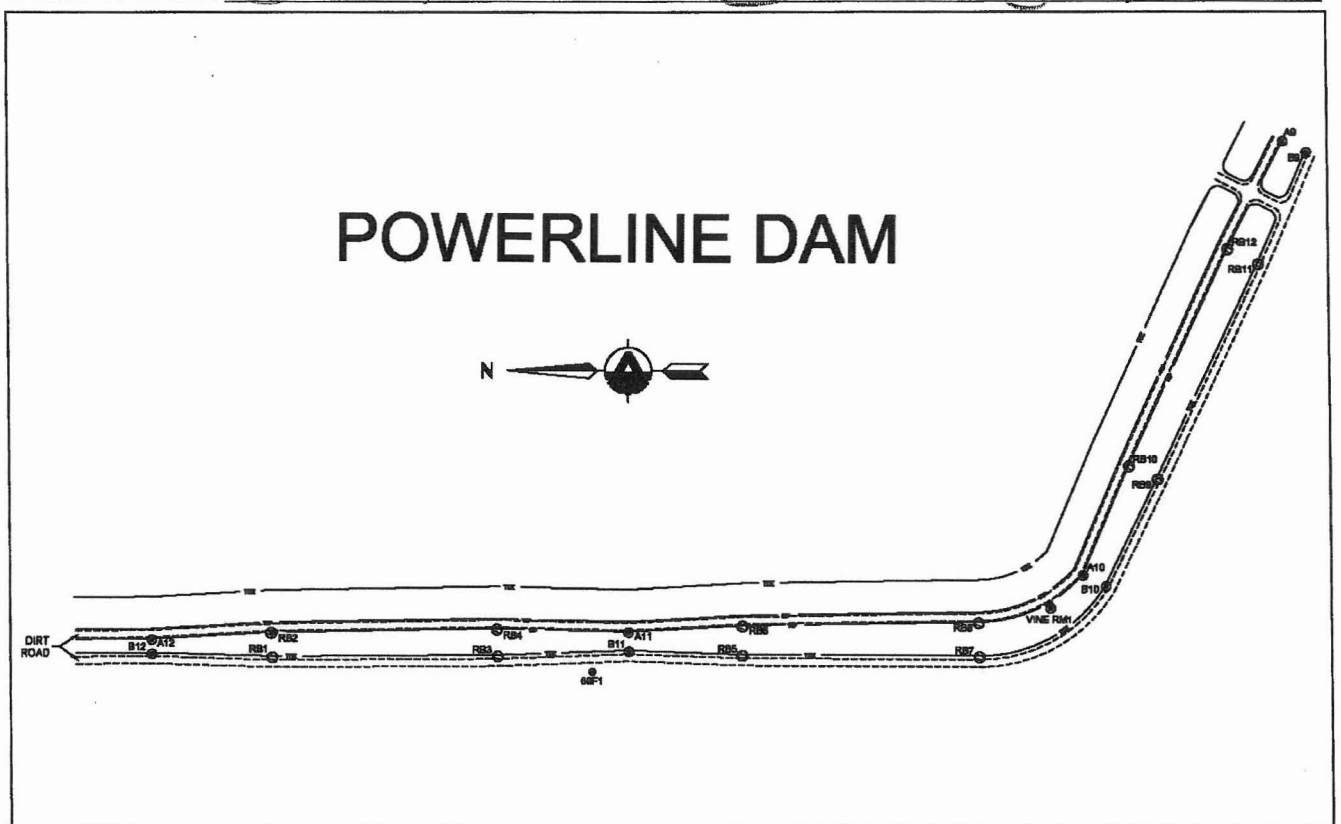
C/A CODE POSITION

Beg:
Lat: : 33 ° 21 ' 55.56" N
Long: 111 ° 33 ' 38.35" W
Ellip. Height: 455.607 M PDOP: 1.8
Ending:
Lat: 33 ° 21 ' 55.53" N
Long: 111 ° 33 ' 38.35" W
Ellip. Height: 451.011 M PDOP: 2.1

DC FILENAME: 1714-10-1241
DC# 1241 & POSTPROCESS#: 12412621
Receiver Model: TRIMBLE 5800
Antenna Type: TRIMBLE 5800
Antenna Serial #: 40172
Fixed Height Pole No: CB ROD
Type of Survey: Fast Static (✓) Kinematic Base ( ) RTK Base ( ).
Actual= Start 17 : 31 . Stop: 19 : 55 . UTC
Beg. SV's Used: 3, 6, 7, 8, 10, 13, 19, 23, 25, 27
End SV's Used: 7, 8, 11, 15, 17, 25, 26, 27, 28

Ant. Height (M) 2.0 M
Ant. Height (FT)
MEASURED TO: BOTTOM OF ANT. MOUNT

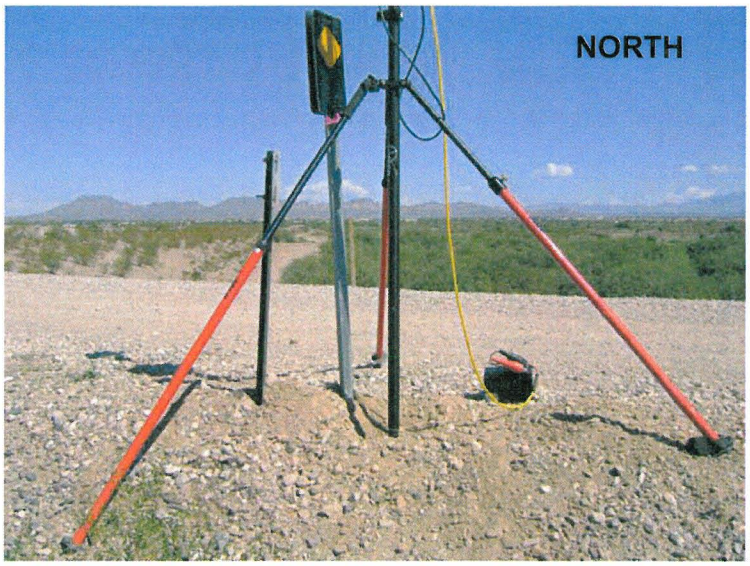
Weather Conditions: (Clear) P. Cloudy Overcast Hot (Warm) Cool Cold (Calm) Breezy 85 °F +/-

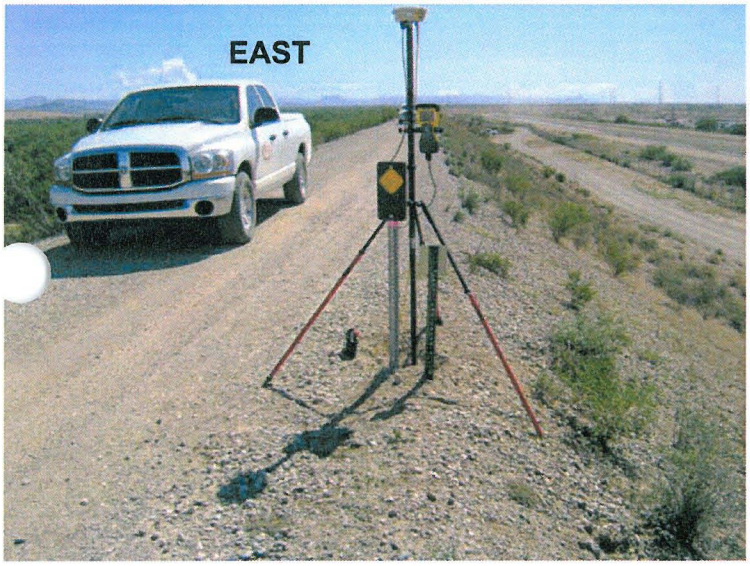


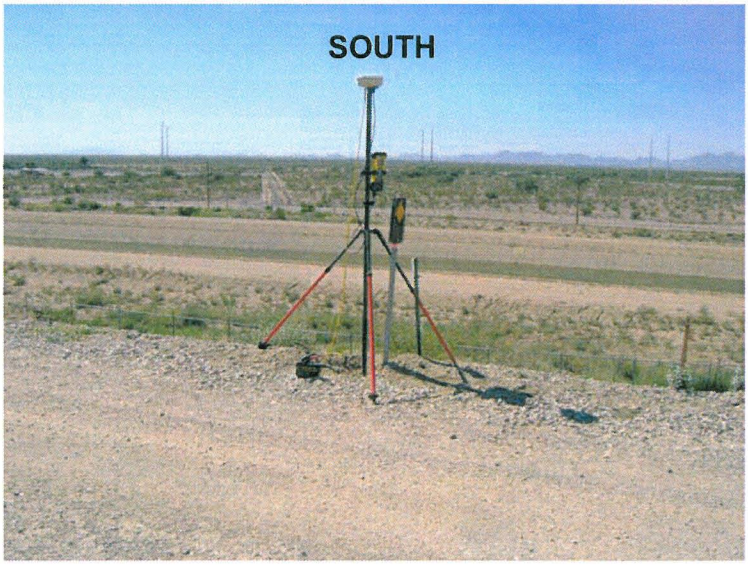
Type of Monument: BRASS CAP Stamping:
Top of marker: ( ) flush 0.10' ( ) above: (✓) below: Nat. Ground Stamping:
Detail Notes:

Photographs: Camera #: C3 Monument: ✓ North: ✓ East: ✓
South: ✓ West: ✓ Set up: Misc 1: Misc 2:
Rubbing Performed ( )Yes (✓)No

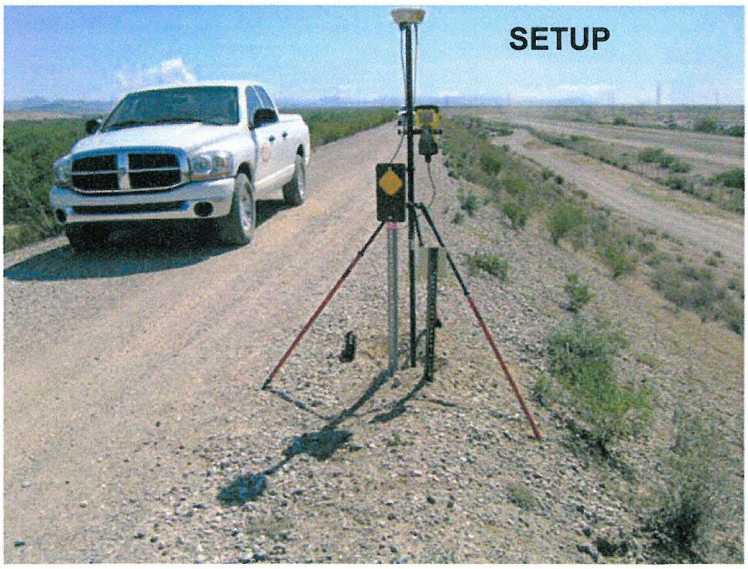
MONUMENT
US DEPT OF
A 10
PR
FRST
2 86
SCS
AGRICULTURE


NORTH


EAST


SOUTH

WEST


SETUP

A11

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: A11
Receiver No: 36492
Day of Year: 261
Session No: 1

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 09 day 17 year 2008
Operator: L. SPEAN

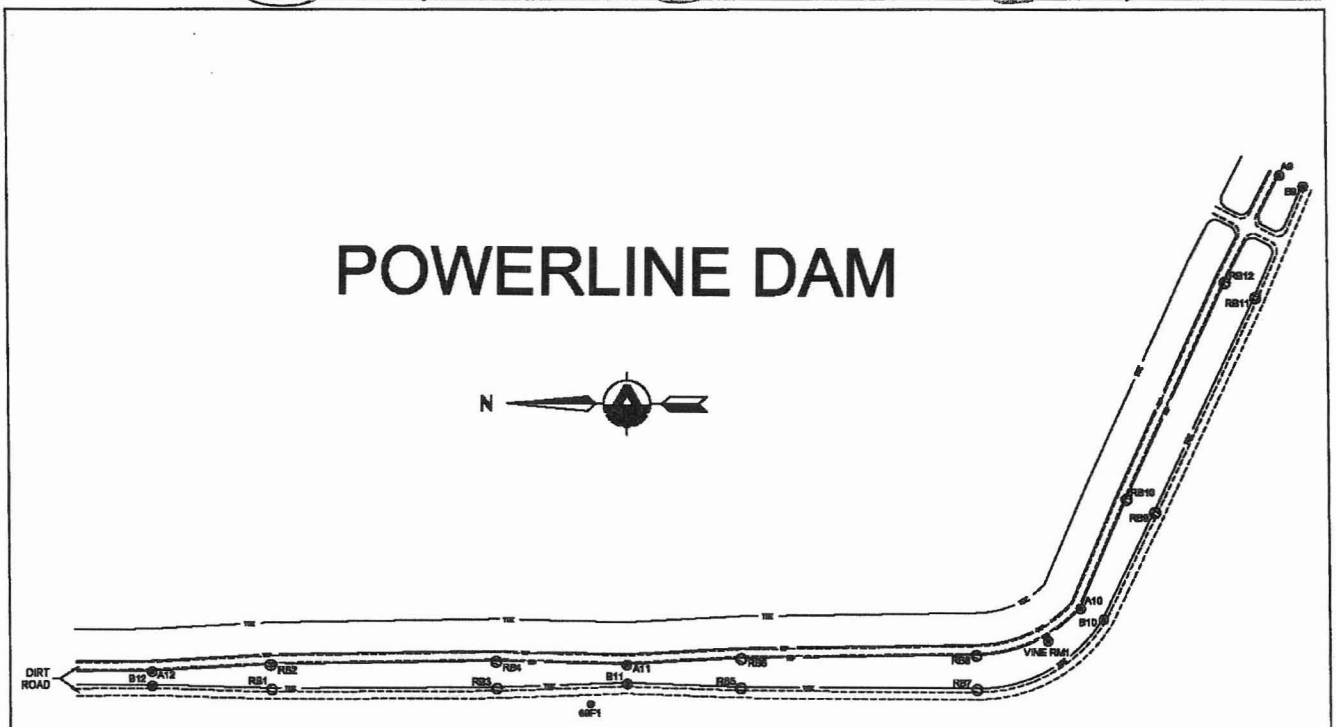
C/A CODE POSITION

Beg:
Lat: : 33 ° 22 ' 05.01 " N
Long: 111 ° 33 ' 39.75 " W
Ellip. Height: 456.504 M PDOP: 1.5
Ending:
Lat: 33 ° 22 ' 05.01 " N
Long: 111 ° 33 ' 39.80 " W
Ellip. Height: 449.87 M PDOP: 1.9

DC FILENAME: 1714-10-8957
DC# 8957 & POSTPROCESS#: 89572611
Receiver Model: TRIMBLE 5800
Antenna Type: TRIMBLE 5800
Antenna Serial #: 36492
Fixed Height Pole No: C3 ROD
Type of Survey: Fast Static (✓) Kinematic Base ( ) RTK Base ( ).
Actual= Start 18 : 00 . Stop: 21 : 07 . UTC
Beg. SV's Used: 3, 6, 7, 8, 10, 13, 19, 23, 25, 27, 28
End SV's Used: 4, 7, 8, 11, 15, 17, 26, 27, 28

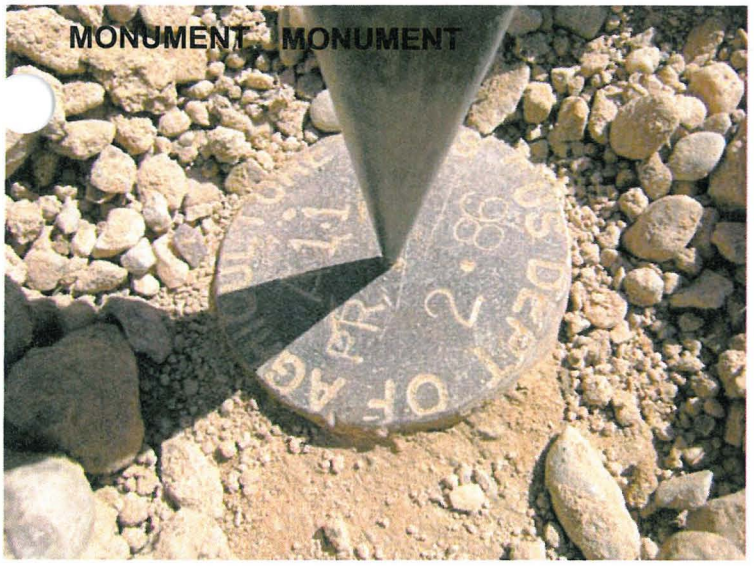
Ant. Height (M) 2.0 M
Ant. Height (FT)
MEASURED TO: BOTTOM OF ANT. MOUNT

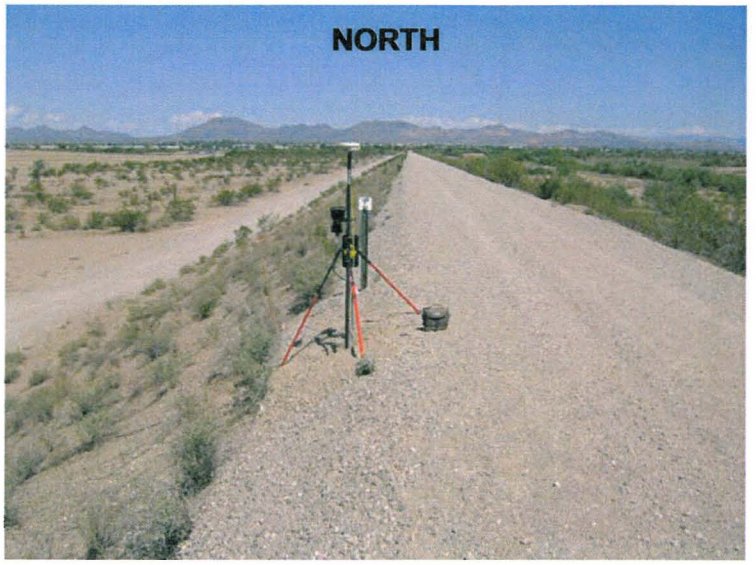
Weather Conditions: (Clear) P. Cloudy Overcast (Hot) Warm Cool Cold (Calm) Breezy 90 °F +/-

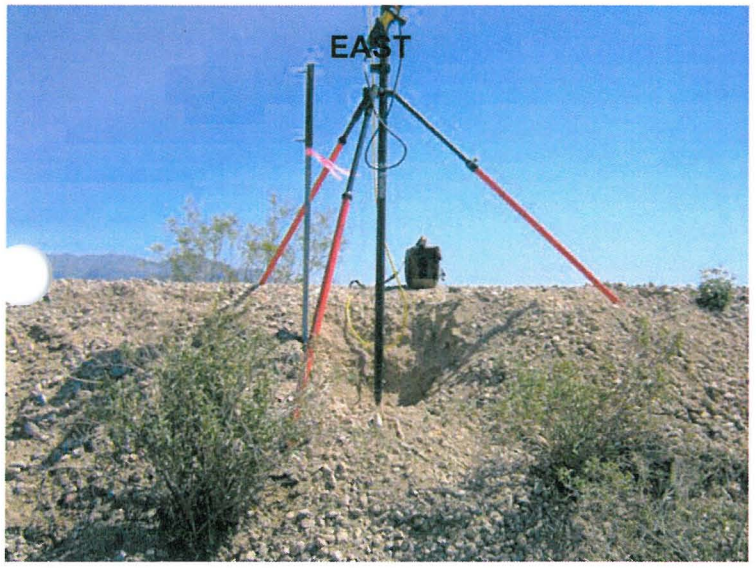


Type of Monument: BRASS CAP Stamping: A11 2.86
Top of marker: ( ) flush 0.50' (✓) above: (✓) below: Nat. Ground Stamping: DEPT OF AGRICULTURE
Detail Notes: TOP WEST EDGE OF DAM

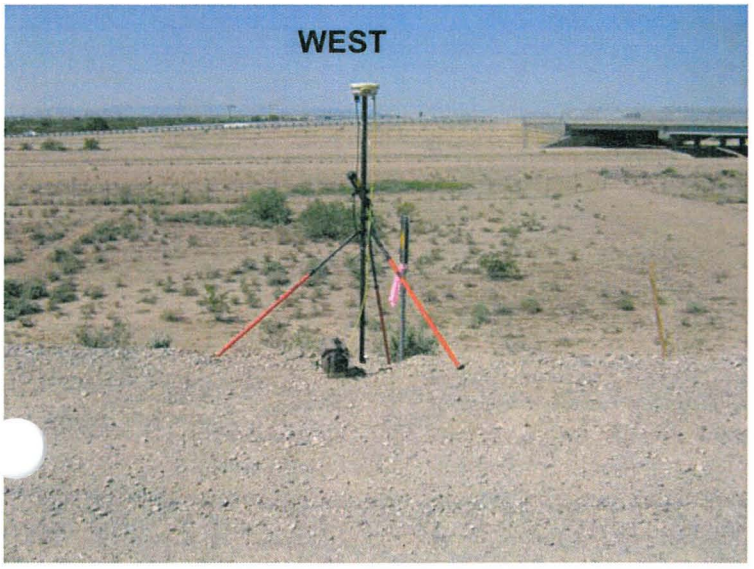
Photographs: Camera #: C3 Monument: ✓ North: ✓ East: ✓
South: ✓ West: ✓ Set up: ✓ Misc 1: Misc 2:
Rubbing Performed ( )Yes (✓)No

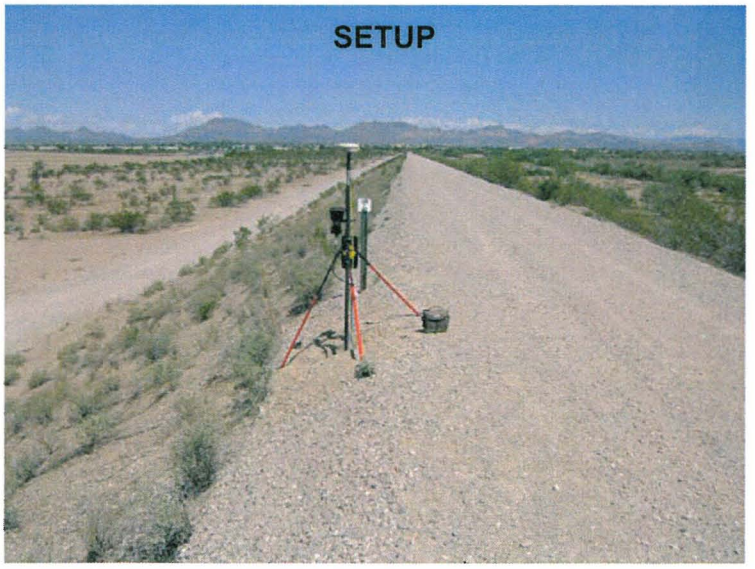

MONUMENT MONUMENT


NORTH


EAST

SOUTH


WEST


SETUP

B10

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: B10
Receiver No: 4580
Day of Year: 262
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 18 year 2008
Operator: J. MALEK

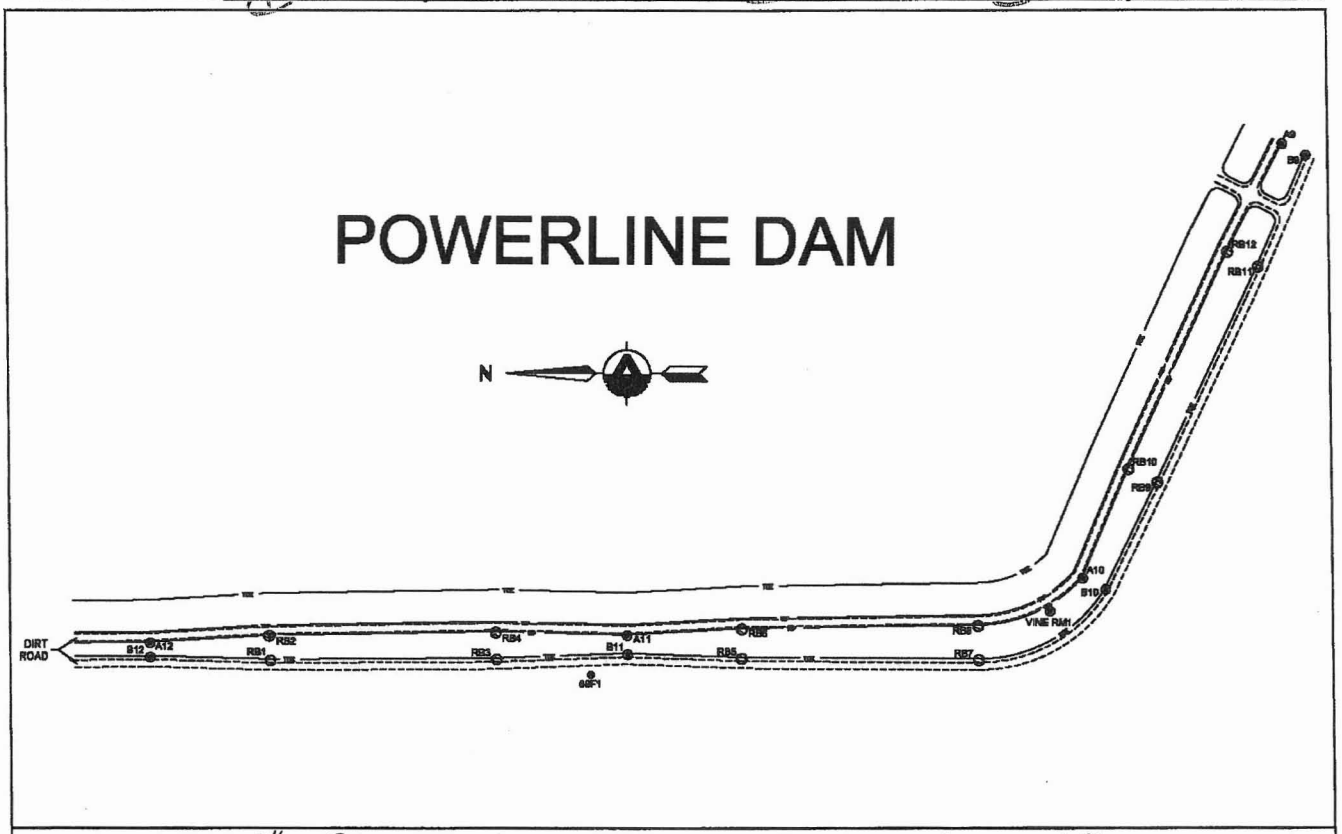
C/A CODE POSITION

Beg:
Lat: : 33 ° 21 ' 55.12 " N
Long: 111 ° 33 ' 38.65 " W
Ellip. Height: 443.9 M PDOP: 2.1
Ending:
Lat: 33 ° 21 ' 55.04 " N
Long: 111 ° 33 ' 38.65 " W
Ellip. Height: 442.3 M PDOP: 2.0

DC FILENAME: 1714-10-8341
DC# 8341 & POSTPROCESS#: 8341 2620
Receiver Model: 5800
Antenna Type: 5800
Antenna Serial #:
Fixed Height Pole No: c4
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 15 : 10 . Stop: 20 : 17 . UTC
Beg. SV's Used: 3, 6, 7, 13, 16, 20, 23, 25, 27, 32
End SV's Used: 7, 8, 11, 15, 17, 25, 26, 27, 28

Ant. Height (M) 2.0
Ant. Height (FT)
MEASURED TO: BOTTOM ANTENNA MOUNT

Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Cold Calm Breezy 75 °F +/-



Type of Monument: 2" BC Stamping: A10 2BC
Top of marker: ( ) flush 1.0' M ( ) above: (X) below: Nat. Ground Stamping: DEPT OF AGRICULTURE
Detail Notes:

Photographs: Camera #: Monument: North: East:
South: West: Set up: Misc 1: Misc 2:
Rubbing Performed ( )Yes (X)No

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: B10
Receiver No: 4580
Day of Year: 261
Session No: 1

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 17 year 2008
Operator: J. MALEK

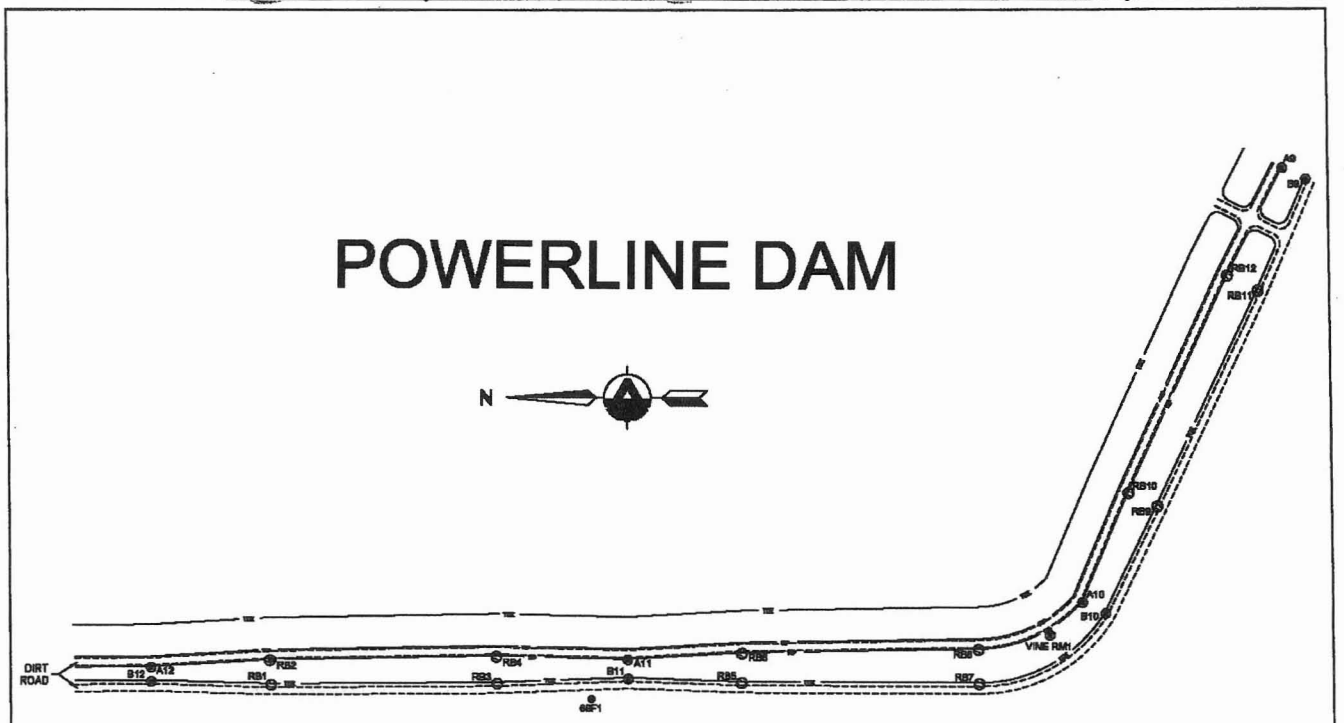
C/A CODE POSITION

Beg:
Lat: : 33 ° 21 ' 55.07 " N
Long: 111 ° 33 ' 38.62 " W
Ellip. Height: 448.19 M PDOP: 1.7
Ending:
Lat: 33 ° 21 ' 55.06 " N
Long: 111 ° 33 ' 38.65 " W
Ellip. Height: 442.0 M PDOP: 1.9

DC FILENAME: 1714-10-8341
DC# 8341 & POSTPROCESS#: 4580 2611
Receiver Model: 5800
Antenna Type: 5800
Antenna Serial #: 4580
Fixed Height Pole No: C4
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 18 : 13 . Stop: 21 : 00 . UTC
Beg. SV's Used: 3,7,8,10,13,19,23,25,27,29
End SV's Used: 4,7,8,11,15,17,26,27,28

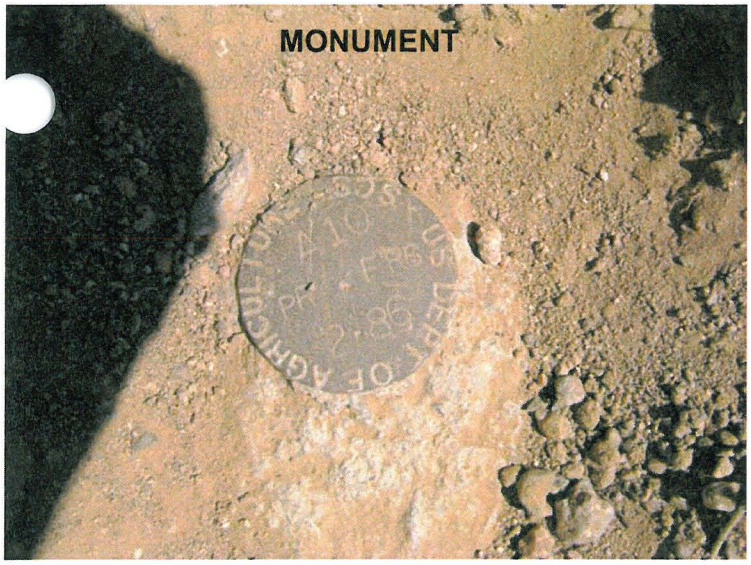
Ant. Height (M) 2.0
Ant. Height (FT)
MEASURED TO: BOTTOM ANTENNA MOUNT

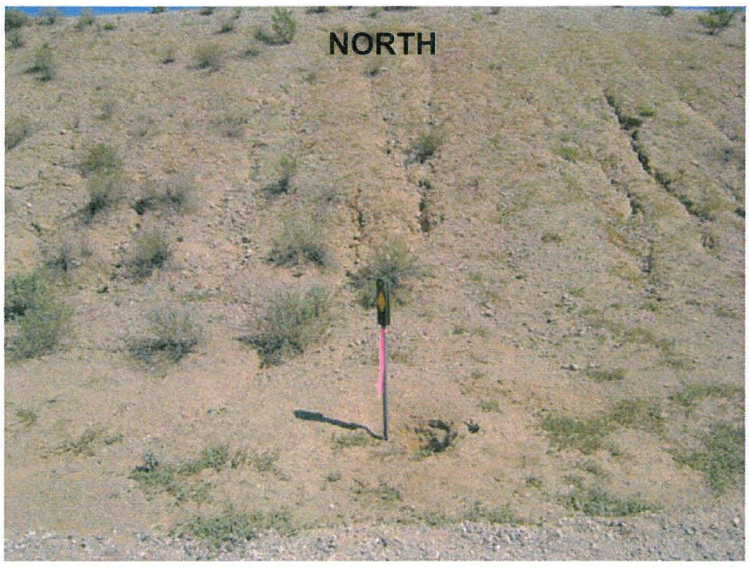
Weather Conditions: Clear P. Cloudy Overcast Hot Warm Cool Cold Calm Breezy °F +/-



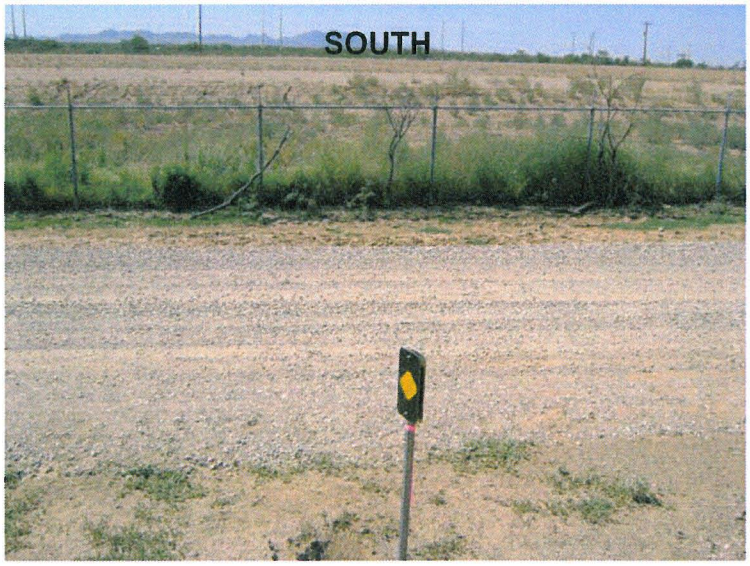
Type of Monument: 2" BC IN CONC. Stamping: A10 2.86
Top of marker: ( ) flush 1' ( ) above: (X) below: Nat. Ground Stamping: DEPT OF AGRICULTURE
Detail Notes: TOE OF DAM SOUTH SIDE

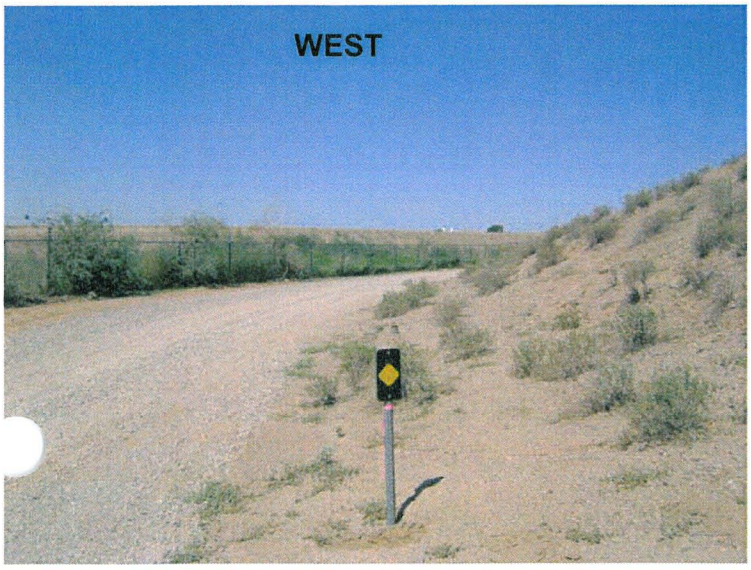
Photographs: Camera #: C1 Monument: 608 North: 609 East: 610
South: 611 West: 612 Set up: 613 Misc 1: Misc 2:
Rubbing Performed ( )Yes (X)No

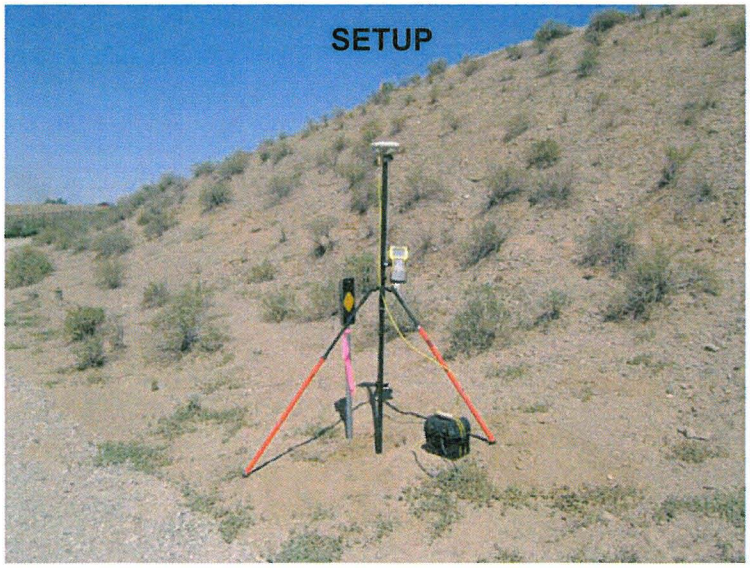

MONUMENT


NORTH

EAST


SOUTH


WEST


SETUP

B11

A TEAM Professional Associates, INC.
GPS STATION LOG FOR FIXED HEIGHT ROD

1920 W. Peoria Avenue, - Phoenix, Arizona - 85745 - (602) 906-0020 - (602) 906-0019 Fax

Station Name: B11
Receiver No: 3419 (C7)
Day of Year: 261
Session No: 0

Project Name: Powerline &Vineyard FRS Monitoring
Job number: 1714-10
Local Date: mo. 9 day 17 year 2008
Operator: S. MARSHALL

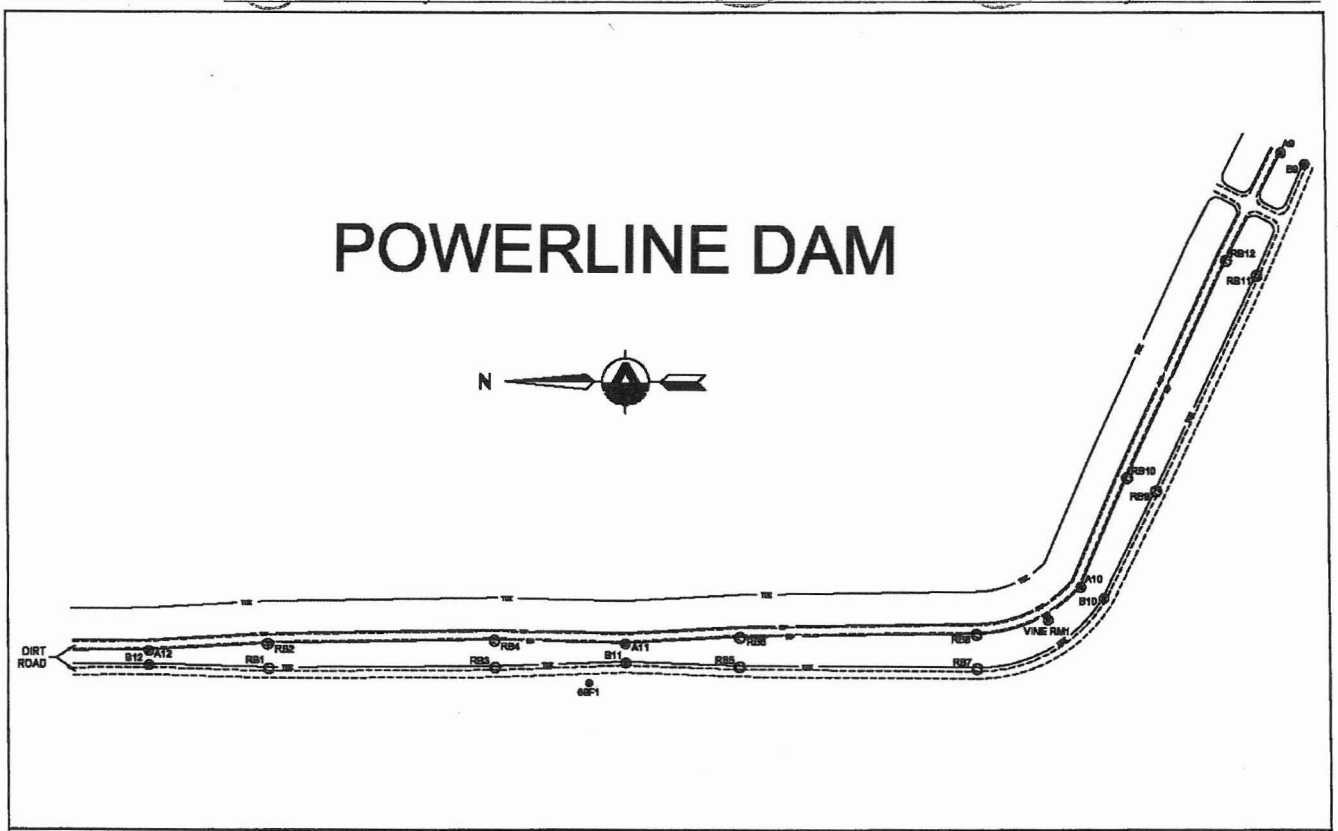
C/A CODE POSITION

Beg:
Lat: : 33 ° 22 ' 05.03 " N
Long: 111 ° 33 ' 40.29 " W
Ellip. Height: 448.9 M PDOP: 1.9
Ending:
Lat: 33 ° 22 ' 04.93 " N
Long: 111 ° 33 ' 40.29 " W
Ellip. Height: 442.7 M PDOP: 2.0

DC FILENAME: 1714-10-8954
DC# 8954 & POSTPROCESS#: 89542610
Receiver Model: Trimble 5800
Antenna Type: Trimble 5900
Antenna Serial #: 3419
Fixed Height Pole No: Rod
Type of Survey: Fast Static (X) Kinematic Base ( ) RTK Base ( ).
Actual= Start 17 : 04 . Stop: 20 : 26 . UTC
Beg. SV's Used: 3,6,7,13,16,20,23,27,32
End SV's Used: 7,8,11,15,17,25,26,27,28

Ant. Height (M) 2.0 Meters
Ant. Height (FT)
MEASURED TO: Bottom of Antenna Mount

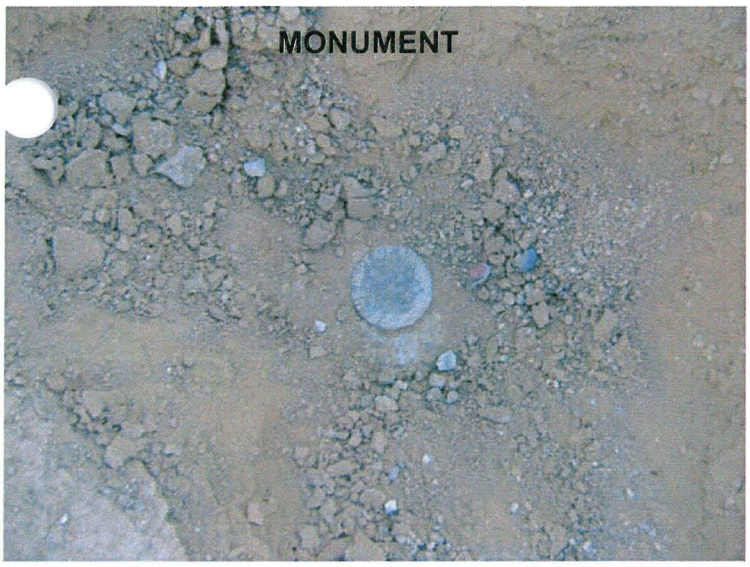
Weather Conditions: (Clear) P. Cloudy Overcast Hot (Warm) Cool Cold (Calm) Breezy 80 °F +/-

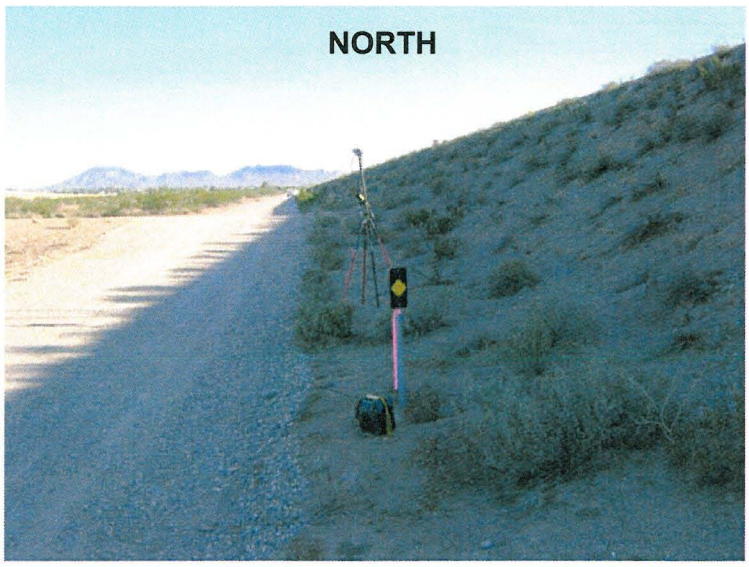


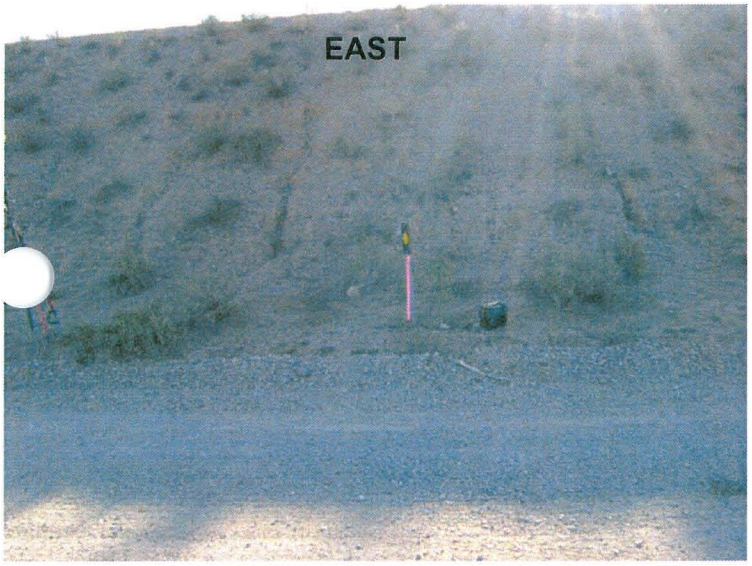
Type of Monument: Alum Cap Stamping: US DEPT OF AGRICULTURE
Top of marker: ( ) flush 0.2 M ( ) above: (X) below: Nat. Ground Stamping: PR FRS B11 12 86
Detail Notes:

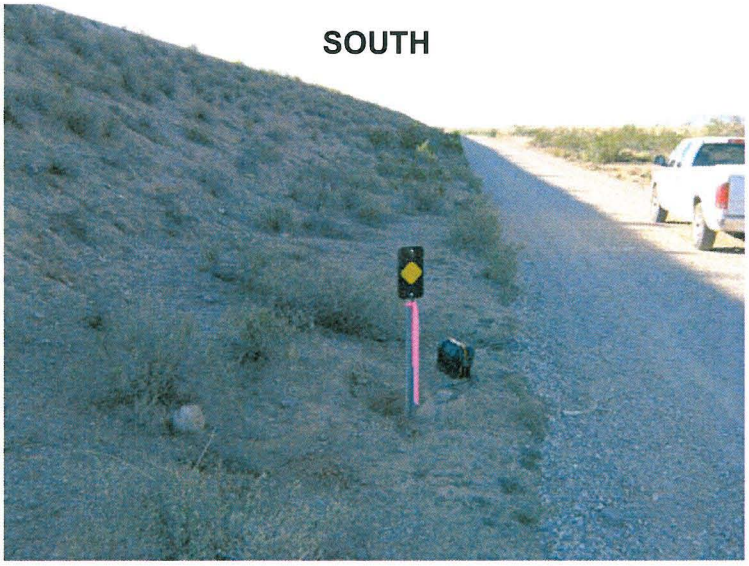
Photographs: Camera #: C9 Monument: 27 North: 28 East: 29
South: 30 West: 31 Set up: 32 Misc 1: Misc 2:
Rubbing Performed ( )Yes (X)No Photos

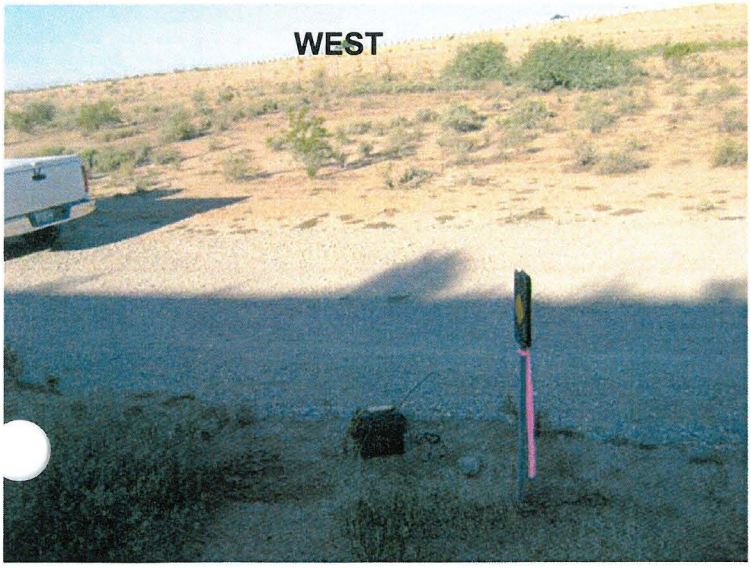
120400

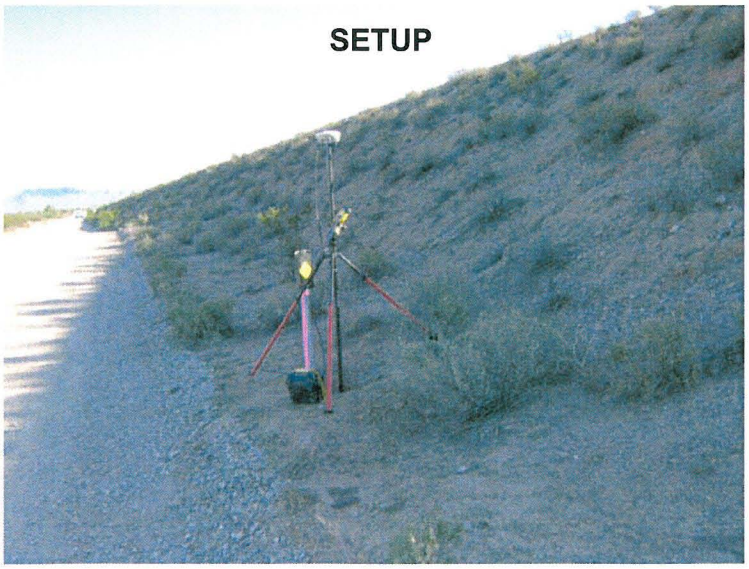

MONUMENT


NORTH


EAST


SOUTH


WEST


SETUP