Maricopa County

geo technologies

Mapping Services for Wittmann Area Drainage Master Plan FCD 2001C2

Technical Data Notebook – Volume I

Aerial Ground Control Survey Reports

Stewart Geo Technologies
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Maricopa County

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EXECUTIVE SUMMARY

This report documents the results of surveys near Surprise, Arizona in 2002. The intent of these surveys is to support two- and four-foot contour interval mapping for the Flood Control District of Maricopa County (FCDMC).

This report is organized into two volumes. The first volume details results of the ground control survey. The second volume gives results of the airborne GPS and aerotriangulation. This document can be read with either Adobe Acrobat© or Adobe Acrobat Reader©. A hardcopy version of this report is also on file with FCDMC.

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Section B Airborne GPS report

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VOLUME I. PHOTOGRAMMETRIC CONTROL SURVEY TECHNICAL DATA NOTEBOOK

Section A. Surveyor's certification

The following report represents a survey made by me or under my direction in the County of Maricopa, State of Arizona. I, Jaime A. Satalich, an Arizona registered land surveyor (N° 35326, expires 9/30/2003), hereby certify the following results of my survey in and around the vicinity of Surprise, Arizona.

The intent of this survey is to provide photogrammetric ground control using GPS methods in and around the town of Surprise, Arizona. This densification survey is based upon NAD 83 (1992 epoch) and NAVD 88 control values published by the National Geodetic Survey. Horizontal positions are expressed in the Arizona Coordinate System, 1983, Central Zone. Results of the constrained NAD 83 (1992 epoch) network adjustments give horizontal uncertainties for stations in these networks of better than ±0.07′ (2σ) in position, and vertical uncertainties for stations in this network of better than ±0.06′ (2σ) in height.

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
35326
JAIME A.
SATALICH
Date Signed 9.3.2002
ARIZONA U.S.A.

Maricopa County

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VOLUME II. AIRBORNE GPS AND AEROTRIANGULATION TECHNICAL DATA NOTEBOOK

Section A. Surveyor's certification

The following report represents a survey made by me or under my direction in the County of Maricopa, State of Arizona. I, Jaime A. Satalich, an Arizona registered land surveyor (N°. 35326, expires 9/30/2003), hereby certify the following results of my survey near Surprise, Arizona.

The intent of this survey is to densify photogrammetric ground control using airborne GPS and aerotriangulation methods near the town of Surprise, Arizona. This densification survey is based upon NAD 83 (1992 epoch) and NAVD 88 control values published by the National Geodetic Survey. Horizontal positions are expressed in the Arizona Coordinate System, 1983, Central Zone.

Results of the airborne GPS positions give horizontal uncertainties (*a priori*) for the airborne GPS stations of better than ±0.21′ (1σ) and vertical uncertainties (*a priori*) for stations of better than ±0.35′ (1σ) in height. All airborne GPS was processed using GrafNav© V. 6.03. Results of the aerotriangulation adjustment indicate the following statistics for this project. The aerotriangulation adjustment indicates that the maximum residuals at the ground control stations are: x (easting) = +0.42′, y (northing) = +0.03′, and z (elevation) –0.26′. Results of the aerotriangulation adjustment indicates that the maximum residuals for object coordinates (pass points) are: x = +0.51′, y = +0.48′, and z = +0.75′. The RMS fit for all object coordinates are: x = ±0.10′, y = ±0.10′, and z = ±0.19′. The RMS fit (*a posteriori*) of all airborne GPS stations are: x = ±0.33′, y = ±0.23′, and z = ±0.31′. All aerotriangulation was performed using ORIMA-SOCET-TE/GPS© V. 4.06.

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
35326
JAIME A.
SATALICH
Date Signed 3.3.2003
ARIZONA U.S.A.

Section B. Narrative

Introduction

This report describes the results of a survey using Global Positioning System (GPS) surveying techniques near Surprise, County of Maricopa, State of Arizona. The intent of this survey is to provide photogrammetric ground control.

The listing of final coordinate values is shown in Section D of this report. Diagram showing the GPS control networks is shown in Section C. The narrative you are now reading is Section B of this report.

Geodetic Control

One of the requirements of this contract is to make all ties through the Geodetic Densification and Cadastral Survey (GDACS) network established by Maricopa County. The bases of this system are geodetic values published by the National Geodetic Survey (NGS) in NAD 83 (1992 epoch) and NAVD 88. For this project, horizontal positions are expressed in the Arizona Coordinate System, NAD 83, Central Zone. NGS control stations shown as the basis for this survey are shown in Section E of this report.

Field Observations

RBF Consulting, Phoenix, Arizona, made GPS observations in April and May 2002. The survey consisted of fast-static and real-time kinematic (RTK) observations. The survey used Trimble 4700 (with compact L_1/L_2 geodetic antennae) and 4800 receivers. These receivers are dual-frequency (L_1/L_2), full-wavelength, P-code receivers. These receivers are capable of tracking at least ten satellites simultaneously on both frequencies. GPS receivers logged data at a five-second epoch rate. All stations in the final network adjustments were occupied on two separate occupation sessions. Fixed-height tripods were used at all setups.

GPS Baseline Reduction

Reduction methodology. Raw GPS data was processed using Trimble Geomatics Office©, which is manufactured by Trimble Navigation, Ltd. Only the independent baselines from each session were computed and included in the network adjustments.

All data was reduced using broadcast orbits and a modified Hopfield tropospheric model. No zenith delay parameters were estimated for these reductions. Baselines were initially reduced using a 15-degree elevation mask. If an acceptable solution was not calculated, the elevations mask was raised to either 20- or 25-degrees, and the baseline was re-calculated. All NAVSTAR satellites in view were used except those that exhibited large ranging errors. Those satellites exhibiting "noisy" data were removed for the baseline processing. All remaining baselines achieved fixed integer solutions.

Problems encountered. Only one significant problem occurred during the field survey. One GDACS station that was intended to be used during the survey was FRIA RM 4. The field surveyor blundered and misoccupied the mark, and instead occupied the nearby primary triangulation station (FRIA). This

blunder was discovered when Stewart Geo Technologies (SGT) did its analysis of the network adjustments for the McMicken Dam priority area. As the mapping for the McMicken Dam area was of very high priority for FCDMC, SGT chose to not send RBF Consulting back to reoccupy FRIA RM 4 and its adjacent connecting stations, as it would have delayed the much needed mapping at the dam.

The impact of this blunder on the mapping accuracy for this project is negligible. However, it should be said that stations in the vicinity of the blunder, especially station FRIA, are poorly connected to the GDACS network compared to other stations in the network. Future users of this data should keep this in mind, and are recommended to prove all the control values in the immediate vicinity of station FRIA.

Network Adjustments

Adjustment methodology. STAR*NET PRO© (version 6.0.23e) was used for all network adjustments. STAR*NET PRO©, produced by Starplus Software, is a least-squares package capable of adjusting both terrestrial and GPS observations. GPS vector files produced by Trimble Geomatics Office© were imported into STAR*NET PRO©. The vector files contain dx, dy, and dz values in an Earth-centered, Cartesian coordinate system. The vector files also contain *a priori* covariance information regarding the statistical characteristics of the GPS baselines. Often times, vector covariances need to be scaled because the weights are too optimistic. In the case of the network of McMicken Dam priority area, the *a priori* vector covariances were scaled by a factor of 4.50 to bring the network observations into statistical unity. For the Wittmann area main network, the *a priori* vector covariances were scaled by a factor of 7.84 to bring the network observations into statistical unity. During the network adjustments, antenna height and centering errors were assigned a global standard error (1σ) of ±1 mm (±0.003′).

Geoid heights were derived from the GEOID99 geoid height model published by the National Geodetic Survey (NGS). GEOID99 is the most recent geoid height model published by NGS. No transformations were applied to the GEOID99 geoid heights. Various network adjustments were solved separately as they use distinctly different mathematical models to account for scale and rotation parameters. A summary of the network parameters and adjustment statistics is shown in Appendix I of the narrative (Section B).

The entire Wittmann ADMP project was adjusted in two parts. The portion of the network near McMicken Dam was adjusted before the remainder of the network. This was done to accommodate the needs of FCDMC to "fast track" mapping near McMicken Dam. As a result, two sets of network adjustments were performed and are documented in this report.

Minimally constrained adjustment – McMicken Dam priority area network. After demonstrating that the network vectors are free of blunders, it is customary to perform a minimally constrained (also known as "free" or internal) least-squares network adjustment. This ensures that the network closes upon itself. In the minimally constrained network adjustment, one station is constrained in latitude, longitude and ellipsoid height. In the case of the McMicken dam priority area network, GDACS station 4DD1 was constrained by its published latitude, longitude, and height. The variance of unit weight for the minimally constrained adjustment is 1.00.

According to the minimally constrained network adjustment for the McMicken Dam priority area, the positional uncertainty of all stations is better than ±0.05′ (2σ) in horizontal position, and better than ±0.06′ (2σ) in vertical position. All stations conform to a relative horizontal precision of better than 6 ppm (1:166,000). Results of the minimally constrained adjustment for the McMicken Dam priority area are shown in Section I.

Constrained NAD 83 (1992 epoch) adjustment – McMicken Dam priority area network. A constrained least-squares network adjustment determines the proper scale and rotation parameters for the GPS vectors to make them conform to the local control. The network constrained five nearby GDACS control stations in latitude, longitude, and ellipsoid height. This is known as external network adjustment, and determines the accuracy of the GPS control network. After solving for scale and rotations, the variance of unit weight for the constrained NAD 83 (1992 epoch) horizontal network adjustment is 1.12. A variance factor between 1.0 and 1.5 in a constrained network adjustment indicates that the observations check with the local control. In the case of the McMicken dam priority area network, it means that the GPS network agrees substantially with the local horizontal control, and that neither is being influenced by systematic effects.

According to the constrained horizontal network adjustment for the McMicken Dam priority area, the positional uncertainty of all stations is better than ±0.05′ (2σ) in horizontal position. All stations conform to a relative horizontal precision of 7 ppm (1:143,000) or better. Results of the constrained horizontal network adjustment for the McMicken Dam priority area are shown in Section J.

Constrained NAVD 88 adjustment – McMicken Dam priority area network. This network constrained the five previous GDACS control stations – five by their published NAVD 88 orthometric heights and two by their published NAD 83 (1992 epoch) positions. In the classical sense, this adjustment solves for rotations along the north and east axes, and for scale. No rotations were solved along the north axis, as it would have over-parameterized the solution. The geoid slope is absorbed the two rotation angles, while the geoid heights are absorbed by the scale correction. The variance factor for the constrained NAVD 88 network adjustment for the McMicken Dam priority area is 1.03, showing substantial agreement with the published GDACS control. The maximum vertical uncertainty for any station in the network is better than ±0.05′. Results of the vertical network adjustment for the McMicken Dam priority area are shown in Section K.

Special constrained NAD 83 (1992 epoch) adjustment using station FRIA – McMicken Dam priority area network. This network adjustment constrained station FRIA by its published NGS′ NAD 83 position. Please note that station FRIA RM 4 is the GDACS station, and is located approximately 11.8 meters (39 feet) away from station FRIA. After solving for scale and rotations, the variance of unit weight for the special constrained NAD 83 (1992 epoch) horizontal network adjustment is 4.86. This indicates that either the control or the network is being influenced by some sort of systematic effect. In all likelihood, this systematic effect is a result of a highly precise network (GPS) being constrained to control (second-order classical triangulation) of lesser accuracy.

According to the constrained horizontal network adjustment for the McMicken Dam priority area, the positional uncertainty of all stations is better than ±0.18′ (2σ) in horizontal position. All stations conform to a relative horizontal precision of 28 ppm (1:35,000) or better. It should be noted that inversing between the published NGS (Section L) value and the value from the constrained NAD 83 adjustment (Section J) gives a difference of approximately 0.19′ at station FRIA. Results of the special constrained horizontal network adjustment for the McMicken Dam priority area are shown in Section L.

Minimally constrained adjustment – Wittmann main area network. In this adjustment, GDACS station Q 366 was constrained by its published latitude, longitude, and height. The variance of unit weight for the minimally constrained adjustment is 1.00.

According to the minimally constrained network adjustment for the Wittmann main area network, the positional uncertainty of all stations is better than ±0.11′ (2σ) in horizontal position, and better than ±0.15′ (2σ) in vertical position. All stations conform to a relative horizontal precision of better than 10 ppm (1:100,000). Results of the minimally constrained adjustment for the Wittmann main area network are shown in Section M.

Constrained NAD 83 (1992 epoch) adjustment – Wittmann main area network. Twenty-five stations were constrained in this adjustment for the main area network. These stations consist of published GDACS stations and ties from the McMicken Dam network. After solving for scale and rotations, the variance of unit weight for the constrained NAD 83 (1992 epoch) horizontal network adjustment is 1.35. This means that the GPS network agrees substantially with the local horizontal control, and that neither is being influenced by systematic effects.

According to the constrained horizontal network adjustment for the Wittmann main area network, the positional uncertainty of all stations is better than ±0.03′ (2σ) in horizontal position. All stations conform to a relative horizontal precision of 13 ppm (1:76,000) or better. Results of the constrained horizontal network adjustment for the Wittmann main area network are shown in Section N.

Constrained NAVD 88 adjustment – Wittmann main area network. Twenty-five stations were constrained vertically in this adjustment for the main area network. Two stations were constrained in horizontal position. These stations consist of published GDACS stations and ties from the McMicken Dam network. After solving for scale and rotations, the variance of unit weight for the constrained NAVD 88 vertical network adjustment is 1.08. This means that the GPS network agrees substantially with the local horizontal control, and that neither is being influenced by systematic effects.

According to the constrained vertical network adjustment for the Wittmann main area network, the positional uncertainty of all stations is better than ±0.06′ (2σ) in vertical position. Results of the constrained vertical network adjustment for the Wittmann main area network are shown in Section O.

Discussion and Conclusion

Conclusion. The methodology and procedures of the GPS survey are presented in this report. NAD 83 (1992 epoch) and NAVD 88 values are estimated for control stations at the project site. All geodetic control originates from the NGS and GDACS networks. Control stations were surveyed with tolerance to support the photogrammetric mapping, and achieve what was requested per the scope of work.

Appendix I. Network parameters and adjustment statistics.

Minimally constrained adjustment – McMicken Dam priority area network

Number of stations: 21
Number of GPS vector observations: 44
Variance factor: 1.00

Constrained NAD 83 (1992 epoch) adjustment – McMicken Dam priority area network

Number of stations: 21
Number of GPS vector observations: 44
Variance factor: 1.12
Scale (ppm): +0.441 (±0.068)
North rotation: -0.413 (±0.174)
East rotation: -0.380 (±0.068)
Up rotation: -0.116 (±0.015)

Constrained NAVD 88 adjustment – McMicken Dam priority area network

Number of stations: 21
Number of GPS vector observations: 44
Variance factor: 1.03
Scale (ppm): +0.583 (±0.151)
East rotation: -0.162 (±0.043)

Special constrained NAD 83 (1992 epoch) FRIA adjustment – McMicken Dam priority area network

Number of stations: 21
Number of GPS vectors: 44
Variance factor: 4.86
Scale (ppm): +2.447 (±0.056)
North rotation: -0.806 (±0.174)
East rotation: -0.286 (±0.068)
Up rotation: +0.120 (±0.112)

Minimally constrained adjustment – Wittmann main area network

Number of stations: 48
Number of GPS vectors: 120
Variance factor: 1.00

Constrained NAD 83 (1992 epoch) adjustment – Wittmann main area network

Number of stations: 48
Number of GPS vectors: 120
Variance factors: 1.35
Scale (ppm): +0.635 (±0.089)
North rotation: +0.135 (±0.082)
East rotation: +0.121 (±0.081)
Up rotation: -0.019 (±0.018)

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Constrained NAVD 88 adjustment – Wittmann main area network

Number of stations: 48
Number of GPS vectors: 120
Variance factors: 1.08
Scale (ppm): +0.481 (±0.255)
North rotation: +0.156 (±0.082)

Section C. Network Diagrams

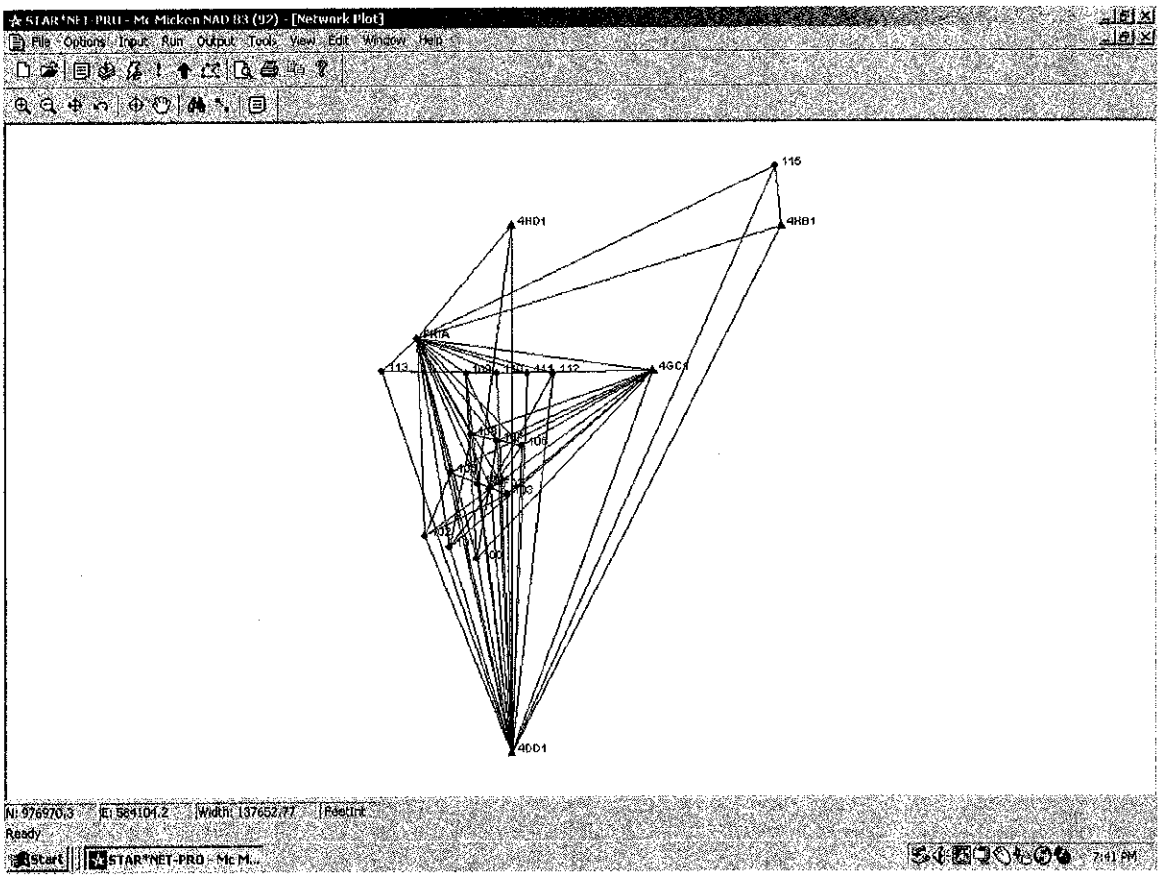

Figure 1. McMicken Dam priority area network.

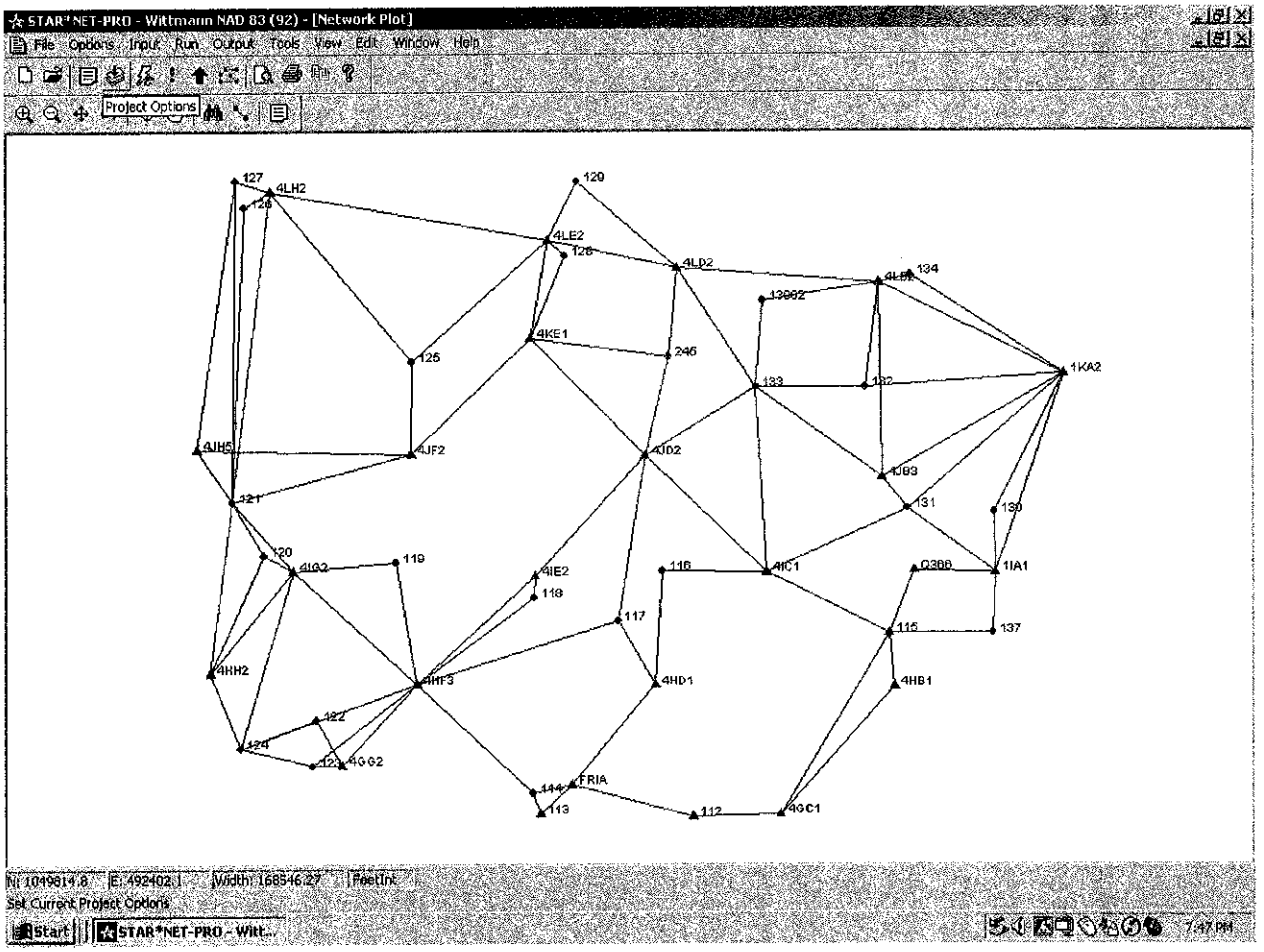

Figure 2. Wittmann main network.

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Mapping Services for Wittmann Area Drainage Master Plan
FCD 2001C2
Photogrammetric Control Survey

Horizontal Datum: NAD 83 (1992.0 epoch) through the Arizona Coordinate System, 1983, Central Zone
Vertical Datum: NAVD 88

Station	Northing (International feet)	Easting (International feet)	Monument Height	Offset (Monument - Target)	Target Height
112	958452.95	540017.53	1298.7	0.0	1298.7
113	958771.77	519399.45	2085.6	0.3	2085.4
114	961584.60	518397.88	1623.0	0.0	1623.0
115	983293.34	566541.40	1312.6	0.0	1312.6
116	991625.23	535919.41	1467.0	0.0	1467.0
117	984909.98	529823.85	1448.1	0.0	1448.1
118	988037.14	518493.23	1508.5	0.0	1508.5
119	992775.57	499833.43	1602.2	0.0	1602.2
120	993862.06	481975.74	1662.3	0.0	1662.3
121	1001096.55	477657.41	1721.2	0.0	1721.2
122	971553.57	489029.78	1634.1	0.0	1634.1
123	965298.79	488635.07	1726.7	-0.2	1726.9
124	967649.58	478768.44	1570.8	0.0	1570.8
125	1020021.48	501917.84	1812.2	0.0	1812.2
126	1041045.78	479267.70	1920.9	0.4	1920.5
127	1044665.88	478219.15	1927.4	0.3	1927.1
128	1034421.42	522605.87	1984.2	0.0	1984.2
129	1044524.04	524245.03	2250.2	0.4	2249.9
130	999511.61	580740.42	1401.0	0.0	1401.0
131	1000152.61	569029.80	1417.4	0.0	1417.4
132	1016603.31	563353.50	1672.3	0.0	1672.3
133	1016629.80	548496.90	1694.4	0.0	1694.4
134	1031804.93	569399.38	1810.0	0.0	1810.0
137	983160.82	580696.32	1256.7	0.0	1256.7
245	1020767.91	536631.22	1773.8	0.0	1773.8
13002	1028338.01	549457.24	1844.5	-0.1	1844.6
1IA1	991544.68	580918.50	1331.2	0.0	1331.2
1KA2	1018369.36	590177.69	1384.1	0.0	1384.1
4GC1	958797.24	551879.89	1252.6	0.0	1252.6
4GG2	965445.28	492570.59	1717.0	0.0	1717.0
4HB1	976019.96	567292.45	1275.9	0.0	1275.9
4HD1	976209.66	534920.55	1393.3	0.0	1393.3
4HF3	976278.72	502692.98	1526.7	0.0	1526.7
4HH2	977709.67	474786.89	1566.6	0.0	1566.6
4IC1	991524.65	549957.22	1423.8	0.0	1423.8
4IE2	990979.76	518661.71	1521.9	0.0	1521.9
4IG2	991657.06	485912.23	1642.6	0.0	1642.6
4JB3	1004387.52	565531.68	1476.4	0.0	1476.4
4JD2	1007321.92	533522.21	1612.5	0.0	1612.5
4JF2	1007550.88	501878.58	1679.9	-0.3	1680.2
4JH5	1008155.84	472945.54	1707.5	0.0	1707.5
4KE1	1023250.03	517954.29	1819.4	0.0	1819.4
4LB2	1030809.02	565182.33	1855.3	0.0	1855.3
4LD2	1032767.38	537779.69	1998.7	0.0	1998.7
4LE2	1036581.86	520311.62	2020.2	0.0	2020.2
4LH2	1043247.57	482867.08	1978.8	0.0	1978.8
FRI4	962716.15	523586.96	1593.8	0.0	1593.8
Q366	991733.77	569967.03	1392.5	0.0	1392.5

TYP_LID	HOR_LID	VER_LID	XNAD27	YNAD27	XNAD83	YNAD83	NGVD29	NAVD88	MNT_LID	PNTNUM
6	19	21	0.000	0.000	540017.530	958452.950	0.000	1298.700		112
6	19	21	0.000	0.000	519399.450	958771.770	0.000	2085.600		113
6	19	21	0.000	0.000	518397.880	961584.600	0.000	1623.000		114
6	19	21	0.000	0.000	566541.400	983293.340	0.000	1312.600		115
6	19	21	0.000	0.000	535919.410	991625.230	0.000	1467.000		116
6	19	21	0.000	0.000	529823.850	984909.980	0.000	1448.100		117
6	19	21	0.000	0.000	518493.230	988037.140	0.000	1508.500		118
6	19	21	0.000	0.000	499833.430	992775.570	0.000	1602.200		119
6	19	21	0.000	0.000	481975.740	993862.060	0.000	1662.300		120
6	19	21	0.000	0.000	477657.410	1001096.550	0.000	1721.200		121
6	19	21	0.000	0.000	489029.780	971553.570	0.000	1634.100		122
6	19	21	0.000	0.000	488635.070	965298.790	0.000	1726.700		123
6	19	21	0.000	0.000	478768.440	967649.580	0.000	1570.800		124
6	19	21	0.000	0.000	501917.840	1020021.480	0.000	1812.200		125
6	19	21	0.000	0.000	479267.700	1041045.780	0.000	1920.900		126
6	19	21	0.000	0.000	478219.150	1044665.880	0.000	1927.400		127
6	19	21	0.000	0.000	522605.870	1034421.420	0.000	1984.200		128
6	19	21	0.000	0.000	524245.030	1044524.040	0.000	2250.200		129
6	19	21	0.000	0.000	580740.420	999511.610	0.000	1401.000		130
6	19	21	0.000	0.000	569029.800	1000152.610	0.000	1417.400		131
6	19	21	0.000	0.000	563353.500	1016603.310	0.000	1672.300		132
6	19	21	0.000	0.000	548496.900	1016629.800	0.000	1694.400		133
6	19	21	0.000	0.000	569399.380	1031804.930	0.000	1810.000		134
6	19	21	0.000	0.000	580696.320	983160.820	0.000	1256.700		137
6	19	21	0.000	0.000	536631.220	1020767.910	0.000	1773.800		245
6	19	21	0.000	0.000	549457.240	1028338.010	0.000	1844.500		13002
6	3	21	0.000	0.000	580918.500	991544.680	0.000	1331.200		1IA1
999	3	21	0.000	0.000	590177.690	1018369.360	0.000	1384.100		1KA2
999	3	21	0.000	0.000	551879.890	958797.240	0.000	1252.600		4GC1
999	3	21	0.000	0.000	492570.590	965445.280	0.000	1717.000		4GG2
999	3	21	0.000	0.000	567292.450	976019.960	0.000	1275.900		4HB1
999	3	21	0.000	0.000	534920.550	976209.660	0.000	1393.300		4HD1
999	3	21	0.000	0.000	502692.980	976278.720	0.000	1526.700		4HF3
999	3	21	0.000	0.000	474786.890	977709.670	0.000	1566.600		4HH2
999	3	21	0.000	0.000	549957.220	991524.650	0.000	1423.800		4IC1
999	3	21	0.000	0.000	518661.710	990979.760	0.000	1521.900		4IE2
999	3	21	0.000	0.000	485912.230	991657.060	0.000	1642.600		4IG2
999	3	21	0.000	0.000	565531.680	1004387.520	0.000	1476.400		4JB3
999	3	21	0.000	0.000	533522.210	1007321.920	0.000	1612.500		4JD2
999	3	21	0.000	0.000	501878.580	1007550.880	0.000	1679.900		4JF2
999	3	21	0.000	0.000	472945.540	1008155.840	0.000	1707.500		4JH5
999	3	21	0.000	0.000	517954.290	1023250.030	0.000	1819.400		4KE1
999	3	21	0.000	0.000	565182.330	1030809.020	0.000	1855.300		4LB2
999	3	21	0.000	0.000	537779.690	1032767.380	0.000	1998.700		4LD2
999	3	21	0.000	0.000	520311.620	1036581.860	0.000	2020.200		4LE2
999	3	21	0.000	0.000	482867.080	1043247.570	0.000	1978.800		4LH2
20	19	21	0.000	0.000	523586.960	962716.150	0.000	1593.800		FRIA
999	2	16	0.000	0.000	569967.030	991733.770	0.000	1392.500		Q366
6	19	21	0.000	0.000	530770.070	936282.220	0.000	1295.000		100
6	19	21	0.000	0.000	527547.210	937653.390	0.000	1333.900		101
6	19	21	0.000	0.000	524609.060	939077.640	0.000	1386.500		102
6	19	21	0.000	0.000	534389.460	944008.520	0.000	1303.900		103
6	19	21	0.000	0.000	530917.410	945296.410	0.000	1342.600		104
6	19	21	0.000	0.000	527725.940	946665.060	0.000	1392.900		105
6	19	21	0.000	0.000	536193.310	949814.470	0.000	1308.700		106
6	19	21	0.000	0.000	533174.820	950365.120	0.000	1347.600		107
6	19	21	0.000	0.000	530090.090	951139.180	0.000	1386.300		108
6	19	21	0.000	0.000	529503.570	958528.880	0.000	1385.900		109
6	19	21	0.000	0.000	533177.700	958513.900	0.000	1346.700		110
6	19	21	0.000	0.000	536883.740	958439.630	0.000	1316.500		111
999	3	21	0.000	0.000	534978.520	912882.720	0.000	1127.100		4DD1
999	3	21	0.000	0.000	532388.460	944918.380	0.000	1327.800		4FD2

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
35326
JAIME A.
SATALICH
Date Signed 5-27-2013
ARIZONA U.S.A.

PNTNUM	DESC
112	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 112" in dirt, approximately 0.9 of a mile westerly of the apparent centerline of Cotton Lane, and approximately 0.35 of a mile southerly of the apparent centerline of Bell Road.
113	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 113" in dirt, located in rugged terrain approximately 3.0 miles southwesterly of the centerline intersection of Crozier Road and Bell Road.
114	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 114" in dirt, located in rugged terrain approximately 2.8 miles northwesterly of the centerline intersection of Crozier Road and Bell Road.
115	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 115" in dirt, approximately 3.3 miles northeasterly of U.S. Route 60 and approximately 30 feet northwesterly of the haul road along McMicken Floodway.
116	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 116" in dirt, approximately 1.2 miles southeasterly of the apparent centerline of Patton Road and approximately 0.25 of a mile northeasterly of the apparent centerline of U.S. Route 60.
117	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 117" in dirt, approximately 0.4 of a mile southerly of the apparent centerline of Happy Valley Road and approximately 200 feet easterly of the apparent centerline of 195th Avenue.
118	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 118" in dirt, approximately 2.0 miles westerly of the apparent centerline of 195th Avenue and 0.2 of a mile northerly along the prolongation of Happy Valley Road.
119	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 119" in dirt, approximately 4.5 miles northerly of the apparent centerline of Bell Road and approximately 0.35 of a mile easterly of the apparent centerline of 243rd Avenue.
120	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 120" in dirt, approximately 5.7 miles westerly of the apparent centerline of Crozier Road and approximately 3000-feet southerly of the apparent centerline of Patton Road.
121	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 121" in dirt, approximately 6.6 miles westerly of the apparent centerline of Crozier Road and approximately 4000-feet northerly of the apparent centerline of Patton Road.
122	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 122" in dirt, approximately 2000 feet westerly of the apparent centerline of 251st Street and approximately 0.3 of a mile northerly of the apparent centerline of Bell Road.
123	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 123" in dirt, approximately 0.7 of a mile southerly of Bell Road and approximately 0.5 of a mile westerly of mile marker 124 along Bell Road.
124	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 124" in dirt, approximately 0.35 of a mile westerly of mile marker 122 along Bell Road and approximately 300-feet southerly of the apparent centerline of Bell Road.
125	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 125" in dirt. This station is located in a desolate area along a ridgeline, approximately 1000-feet southerly of U.S. Highway 60 in Maricopa County.
126	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 126" in dirt, approximately 0.3 of a mile northerly of the apparent centerline of Gates Road and approximately 0.3 of a mile westerly of the apparent centerline of U.S. Route 60.
127	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 127" in dirt, approximately 0.9 of a mile northerly of the apparent centerline of State Route 74 and approximately 0.25 of a mile westerly of the apparent centerline of U.S. Route 60.
128	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 128" in dirt, approximately 21.4 miles northwesterly from the intersection of Interstate 17/State Route 74 and approximately 50-feet northerly of the apparent centerline of State Route 74.
129	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 129" in dirt, approximately 16.4 miles westerly from the intersection of State Route 74/Lake Pleasant Blvd. and approximately 1.0 miles northerly of the apparent centerline of Route 74.
130	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 130" in dirt. This station is located in a desolate area southerly of the intersection of Lake Pleasant Road and Jomax Road.
131	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 131" in dirt. This station is located in a desolate area southerly of the intersection of Lake Pleasant Road and Jomax Road.
132	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 132" in dirt. This station is located in a desolate portion of Maricopa County.
133	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 133" in dirt. This station is located in a desolate portion of Maricopa County.
134	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 134" in dirt, approximately 12.6 miles northwesterly from the intersection of Interstate 17/State Route 74 and approximately 50-feet southwesterly of the apparent centerline of Route 74.
137	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 137" in dirt, approximately 2.5 miles northerly of the apparent centerline of Union Hills Drive and approximately 1.7 miles westerly of the apparent centerline of Lake Pleasant Boulevard.
245	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 245" in dirt. This station is located approximately 0.8 of a mile northerly of the Daimler Chrysler plant along Dove Valley, and approximately 58-feet easterly of an access road.
13002	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 13002" in dirt, approximately 16.3 miles northwesterly of the intersection of Interstate 17/State Route 74, and approximately 50-feet southerly of Route 74.
1IA1	Found NGS class A-type rod mark with logo cap stamped "1IA1 1999". This is a GDACS station. See NGS PID AJ3868 for a more complete description.
1KA2	Found NGS class A-type rod mark with logo cap stamped "1KA2 12/99". This is a GDACS station. See NGS PID AJ3880 for a more complete description.
4GC1	Found NGS class A-type rod mark with logo cap stamped "4GC1 1999". This is a GDACS station. See NGS PID AJ3855 for a more complete description.
4GG2	Found NGS class A-type rod mark with logo cap stamped "4GG2 1999". This is a GDACS station. See NGS PID AJ3854 for a more complete description.
4HB1	Found NGS class A-type rod mark with logo cap stamped "4HB1 1999". This is a GDACS station. See NGS PID AJ3859 for a more complete description.
4HD1	Found NGS class A-type rod mark with logo cap stamped "4HD1 1999". This is a GDACS station. See NGS PID AJ3860 for a more complete description.
4HF3	Found NGS class A-type rod mark with logo cap stamped "4HF3 1999". This is a GDACS station. See NGS PID AJ3861 for a more complete description.
4HH2	Found NGS class A-type rod mark with logo cap stamped "4HH2 1999". This is a GDACS station. See NGS PID AJ3862 for a more complete description.
4IC1	Found NGS class A-type rod mark with logo cap stamped "4IC1 1999". This is a GDACS station. See NGS PID AJ3867 for a more complete description.
4IE2	Found NGS class A-type rod mark with logo cap stamped "4IE2 1999". This is a GDACS station. See NGS PID AJ3866 for a more complete description.
4IG2	Found NGS class A-type rod mark with logo cap stamped "4IG2 1999". This is a GDACS station. See NGS PID AJ3865 for a more complete description.
4JB3	Found NGS class A-type rod mark with logo cap stamped "4JB3 2000". This is a GDACS station. See NGS PID AJ3871 for a more complete description.
4JD2	Found NGS class A-type rod mark with logo cap stamped "4JD2 1999". This is a GDACS station. See NGS PID AJ3872 for a more complete description.
4JF2	Found NGS class A-type rod mark with logo cap stamped "4JF2 1999". This is a GDACS station. See NGS PID AJ3873 for a more complete description.
4JH5	Found NGS class A-type rod mark with logo cap stamped "4JH5 1999". This is a GDACS station. See NGS PID AJ3874 for a more complete description.
4KE1	Found NGS class A-type rod mark with logo cap stamped "4KE1". This is a GDACS station. See NGS PID AJ3878 for a more complete description.
4LB2	Found NGS class A-type rod mark with logo cap stamped "4LB2 11/99". This is a GDACS station. See NGS PID AJ3868 for a more complete description.
4LD2	Found NGS class A-type rod mark with logo cap stamped "4LD2 12/99". This is a GDACS station. See NGS PID AJ3885 for a more complete description.
4LE2	Found NGS class A-type rod mark with logo cap stamped "4LE2 1999". This is a GDACS station. See NGS PID AJ3886 for a more complete description.
4LH2	Found NGS class A-type rod mark with logo cap stamped "4LH2 12/99". This is a GDACS station. See NGS PID AJ3888 for a more complete description.
FRIA	Found 3 3/4-inch bronze Coast & Geodetic Survey triangulation mark stamped "FRIA 1947". This is not a GDACS station. See NGS PID DV2038 for a more complete description.
Q366	Found 3 3/4-inch bronze Coast & Geodetic Survey vertical control mark stamped "Q 366 1967". This is a GDACS station. See NGS PID DV0080 for a more complete description.
100	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 100" in dirt.
101	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 101" in dirt.
102	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 102" in dirt.
103	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 103" in dirt.
104	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 104" in dirt.
105	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 105" in dirt.
106	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 106" in dirt.
107	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 107" in dirt.
108	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 108" in dirt.
109	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 109" in dirt.
110	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 110" in dirt.
111	Set 1/2-inch rebar with center-punched aluminum cap stamped "FCD 111" in dirt.
4DD1	Found NGS class A-type rod mark with logo cap stamped "4DD1 1999". This is a GDACS station. See NGS PID AJ3840 for a more complete description.
4FD2	Found NGS class A-type rod mark with logo cap stamped "4FD2 1999". This is a GDACS station. See NGS PID AJ3850 for a more complete description.

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
35326
JAIME A.
SATALICH
Date Signed 5-29-2017
ARIZONA U.S.A.

Maricopa County

stewart geo technologies

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AJ3868  DESIGNATION -  1IA1
AJ3868  PID         -  AJ3868
AJ3868  STATE/COUNTY-  AZ/MARICOPA
AJ3868  USGS QUAD   -  CALDERWOOD BUTTE (1981)
AJ3868
AJ3868                        *CURRENT SURVEY CONTROL
AJ3868  ___________________________________________________________________
AJ3868* NAD 83(1992)-  33 43 30.00049(N)    112 18 29.97421(W)     ADJUSTED
AJ3868* NAVD 88     -       405.76   (meters)    1331.2    (feet)  GPS OBS
AJ3868  ___________________________________________________________________
AJ3868  X           -  -2,015,841.481 (meters)                     COMP
AJ3868  Y           -  -4,913,095.637 (meters)                     COMP
AJ3868  Z           -   3,521,326.392 (meters)                     COMP
AJ3868  LAPLACE CORR-           2.15  (seconds)                   DEFLEC99
AJ3868  ELLIP HEIGHT-         376.01  (meters)                     GPS OBS
AJ3868  GEOID HEIGHT-         -29.71  (meters)                     GEOID99
AJ3868
AJ3868  HORZ ORDER  -  B
AJ3868  ELLP ORDER  -  THIRD     CLASS II
AJ3868
AJ3868.The horizontal coordinates were established by GPS observations
AJ3868.and adjusted by the National Geodetic Survey in April 2001.
AJ3868
AJ3868.The orthometric height was determined by GPS observations and a
AJ3868.high-resolution geoid model using precise GPS observation and
AJ3868.processing techniques.
AJ3868
AJ3868.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AJ3868
AJ3868.The Laplace correction was computed from DEFLEC99 derived deflections.
AJ3868
AJ3868.The ellipsoidal height was determined by GPS observations
AJ3868.and is referenced to NAD 83.
AJ3868
AJ3868.The geoid height was determined by GEOID99.
AJ3868
AJ3868;                    North         East     Units   Scale      Converg.
AJ3868;SPC AZ C     -   302,222.818   177,063.959   MT  0.99991624 -0 13 02.8
AJ3868;UTM  12      - 3,732,433.666   378,786.893   MT  0.99978113 -0 43 35.3
AJ3868
AJ3868                          SUPERSEDED SURVEY CONTROL
AJ3868
AJ3868.No superseded survey control is available for this station.
AJ3868
AJ3868_MARKER: I = METAL ROD
AJ3868_SETTING: 15 = METAL ROD DRIVEN INTO GROUND. SEE TEXT FOR ADDITIONAL
AJ3868+WITH SETTING: INFORMATION.
AJ3868_STAMPING: 1IA1 1999
AJ3868_MARK LOGO: MCDOT
AJ3868_PROJECTION: FLUSH
AJ3868_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3868_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3868+STABILITY: POSITION/ELEVATION WELL
AJ3868_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3868+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3868_ROD/PIPE-DEPTH:  1.2 meters
AJ3868_SLEEVE-DEPTH  :  0.8 meters
AJ3868
AJ3868  HISTORY     - Date     Condition        Report By
AJ3868  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3868
AJ3868                          STATION DESCRIPTION
AJ3868
AJ3868'DESCRIBED BY MARICOPA CO DOT 1999 (JJR)
AJ3868'THE STATION IS LOCATED ABOUT 12 MI (19.3 KM) NORTHWEST OF SUN CITY
AJ3868'WEST, TOWNSHIP 5 NORTH, RANGE 1 WEST, SECTION 36
AJ3868'OWNERSHIP - PRIVATE
AJ3868'TO REACH THE STATION FROM THE JUNCTION OF US 74 AND LAKE PLEASANT
AJ3868'ROAD, DRIVE SOUTH ON LAKE PLEASANT ROAD 5.5 MI (8.9 KM) TO THE
AJ3868'INTERSECTION OF JOMAX ROAD AND LAKE PLEASANT ROAD, THENCE TURN RIGHT
```

AJ3868'(WEST) ONTO JOMAX ROAD AND DRIVE 1.2 MI (1.9 KM) TO THE INTERSECTION
AJ3868'OF 107TH AVE AND JOMAX ROAD, THENCE CONTINUE DRIVING NORTHWESTERLY ON
AJ3868'JOMAX ROAD 0.3 MI (0.5 KM) TO THE END OF PAVEMENT, THENCE CONTINUE
AJ3868'DRIVING NORTHWEST ON THE DIRT ROAD 0.4 MI (0.6 KM) PASSING DIRT ROAD
AJ3868'ON THE LEFT, THENCE CONTINUE DRIVING NORTHWEST ON THE DIRT ROAD 0.1 MI
AJ3868'(0.2 KM) PASSING A DIRT ROAD ON THE RIGHT, THENCE CONTINUE DRIVING
AJ3868'NORTHWESTERLY, WESTERLY AND SOUTHWESTERLY 0.7 MI (1.1 KM) PASSING A
AJ3868'DIRT ROAD ON THE LEFT, THENCE CONTINUE DRIVING SOUTHWESTERLY 0.5 MI
AJ3868'(0.8 KM) TO 115TH AVENUE (DIRT ROAD) , THENCE TURN LEFT (SOUTH) ONTO
AJ3868'115TH AVE AND DRIVE SOUTH ABOUT 35 FT (10.7 M) TO THE STATION 10 FT
AJ3868'(3.0 M) RIGHT (WEST) OF THE DIRT ROAD
AJ3868'THE STATION IS MARKED BY AN ALUMINUM CAP COMPRESSED ON A 4.0 FOOT (1.2
AJ3868'M) STAINLESS STEEL ROD DRIVEN TO REFUSAL, ENCASED IN A 1 INCH GREASED
AJ3868'PVC SLEEVE ENCLOSED IN A 5 INCH PVC PIPE WITH A COUNTY LOGO ACCESS
AJ3868'COVER STAMPED 1IA1 1999, SURROUNDED WITH A CONCRETE COLLAR FLUSH WITH
AJ3868'THE GROUND, WITNESSED BY A WHITE CARSONITE MARKER
AJ3868'STATION TIES -
AJ3868'10 FT (3.0 M) WEST OF THE EDGE OF 115TH AVENUE
AJ3868'35 FT (10.7 M) SOUTH OF DIRT ROAD
AJ3868'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3868'VISIT-WWW.MCDOT.MARICOPA.GOV SEARCH KEYWORD GDACS

Maricopa County

stewart geo technologies

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AJ3880  DESIGNATION -  1KA2
AJ3880  PID         -  AJ3880
AJ3880  STATE/COUNTY-  AZ/MARICOPA
AJ3880  USGS QUAD   -  BALDY MTN (1981)
AJ3880
AJ3880                        *CURRENT SURVEY CONTROL
AJ3880  ____________________________________________________________
AJ3880* NAD 83(1992)-  33 47 55.72457(N)    112 16 41.45730(W)     ADJUSTED
AJ3880* NAVD 88     -       421.87   (meters)    1384.1    (feet)  GPS OBS
AJ3880  ____________________________________________________________
AJ3880  X           -  -2,011,536.557 (meters)                     COMP
AJ3880  Y           -  -4,909,957.543 (meters)                     COMP
AJ3880  Z           -   3,528,142.291 (meters)                     COMP
AJ3880  LAPLACE CORR-            1.28  (seconds)                   DEFLEC99
AJ3880  ELLIP HEIGHT-          392.38  (meters)                    GPS OBS
AJ3880  GEOID HEIGHT-          -29.45  (meters)                    GEOID99
AJ3880
AJ3880  HORZ ORDER  -  B
AJ3880  ELLP ORDER  -  THIRD     CLASS II
AJ3880
AJ3880.The horizontal coordinates were established by GPS observations
AJ3880.and adjusted by the National Geodetic Survey in April 2001.
AJ3880
AJ3880.The orthometric height was determined by GPS observations and a
AJ3880.high-resolution geoid model using precise GPS observation and
AJ3880.processing techniques.
AJ3880
AJ3880.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AJ3880
AJ3880.The Laplace correction was computed from DEFLEC99 derived deflections.
AJ3880
AJ3880.The ellipsoidal height was determined by GPS observations
AJ3880.and is referenced to NAD 83.
AJ3880
AJ3880.The geoid height was determined by GEOID99.
AJ3880
AJ3880;                    North         East     Units   Scale      Converg.
AJ3880;SPC AZ C     -   310,398.982   179,886.160   MT  0.99991381 -0 12 04.0
AJ3880;UTM  12      - 3,740,583.283   381,681.290   MT  0.99977258 -0 42 40.0
AJ3880
AJ3880                          SUPERSEDED SURVEY CONTROL
AJ3880
AJ3880.No superseded survey control is available for this station.
AJ3880
AJ3880_MARKER: I = METAL ROD
AJ3880_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AJ3880_STAMPING: 1KA2 12/99
AJ3880_MARK LOGO: MCDOT
AJ3880_PROJECTION: FLUSH
AJ3880_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3880_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3880+STABILITY: POSITION/ELEVATION WELL
AJ3880_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3880+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3880_ROD/PIPE-DEPTH:  6.7 meters
AJ3880_SLEEVE-DEPTH  :  0.8 meters
AJ3880
AJ3880  HISTORY     - Date     Condition        Report By
AJ3880  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3880
AJ3880                          STATION DESCRIPTION
AJ3880
AJ3880'DESCRIBED BY MARICOPA CO DOT 1999 (JJR)
AJ3880'THE STATION IS LOCATED ABOUT 10.0 MI (16.1 KM) NORTHEAST OF SUN CITY
AJ3880'WEST, TOWNSHIP 5 NORTH, RANGE 1 EAST, SECTION 8
AJ3880'OWNERSHIP - STATE LAND
AJ3880'TO REACH THE STATION FROM THE JUNCTION OF INTERSTATE 17 AND STATE
AJ3880'ROUTE 74 AT EXIT 223, DRIVE WESTERLY ON STATE ROUTE 74 6.2 MI (10.0
AJ3880'KM) TO THE INTERSECTION OF LAKE PLEASANT ROAD AND STATE ROUTE 74,
AJ3880'THENCE TURN LEFT (SOUTH) ONTO LAKE PLEASANT ROAD AND DRIVE 0.4 MI (0.6
```

AJ3880'KM) TO THE INTERSECTION OF LAKE PLEASANT ROAD AND CAREFREE HIGHWAY,
AJ3880'THENCE TURN RIGHT (WEST) ONTO THE DIRT ROAD AND DRIVE WESTERLY 0.8 MI
AJ3880'(1.3 KM) TO A CANAL, THENCE CROSS THE CANAL AND CONTINUE DRIVING
AJ3880'WESTERLY-NORTHWESTERLY ON THE DIRT ROAD 0.8 MI (1.3 KM) TO ANOTHER
AJ3880'CANAL, THENCE CROSS THE CANAL AND DRIVE SOUTHWESTERLY-WESTERLY 0.6 MI
AJ3880'(1.0 KM) TO AN OVERHEAD TRANSMISSION LINE, THENCE CONTINUE WESTERLY
AJ3880'0.2 MI (0.3 KM) TO AN UNMARKED DIRT ROAD ON THE RIGHT, THENCE TURN
AJ3880'RIGHT (NORTH) ONTO THE DIRT ROAD AND DRIVE 300 FT (91.4 M) TO THE
AJ3880'STATION 25 FT (7.6 M) LEFT (WEST) OF THE ROAD
AJ3880'THE STATION IS MARKED BY AN ALUMINUM CAP COMPRESSED ON A 22.0 FOOT
AJ3880'(6.7 M) STAINLESS STEEL ROD DRIVEN TO REFUSAL, ENCASED IN A 1 INCH
AJ3880'GREASED PVC SLEEVE ENCLOSED IN A 5 INCH PVC PIPE WITH A COUNTY LOGO
AJ3880'ACCESS COVER STAMPED 1KA2 12/99, SURROUNDED WITH A CONCRETE COLLAR
AJ3880'FLUSH WITH THE GROUND, WITNESSED BY A WHITE CARSONITE MARKER
AJ3880'STATION TIES -
AJ3880'300 FT (91.4 M) NORTH OF A DIRT ROAD
AJ3880'25 FT (7.6 M) WEST OF A DIRT ROAD
AJ3880'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3880'VISIT-WWW.MCDOT.MARICOPA.GOV SEARCH KEYWORD GDACS

Maricopa County

stewart geo technologies

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AJ3855  DESIGNATION -  4GC1
AJ3855  PID         -  AJ3855
AJ3855  STATE/COUNTY-  AZ/MARICOPA
AJ3855  USGS QUAD   -  MC MICKEN DAM (1981)
AJ3855
AJ3855                        *CURRENT SURVEY CONTROL
AJ3855  ___________________________________________________________________
AJ3855* NAD 83(1992)-  33 38 04.79147(N)    112 24 11.96723(W)     ADJUSTED
AJ3855* NAVD 88     -       381.80   (meters)    1252.6    (feet)  GPS OBS
AJ3855  ___________________________________________________________________
AJ3855  X           -  -2,026,094.874 (meters)                     COMP
AJ3855  Y           -  -4,914,865.238 (meters)                     COMP
AJ3855  Z           -   3,512,974.509 (meters)                     COMP
AJ3855  LAPLACE CORR-          -0.38  (seconds)                    DEFLEC99
AJ3855  ELLIP HEIGHT-         351.70  (meters)                     GPS OBS
AJ3855  GEOID HEIGHT-         -30.07  (meters)                     GEOID99
AJ3855
AJ3855  HORZ ORDER  -  B
AJ3855  ELLP ORDER  -  THIRD     CLASS II
AJ3855
AJ3855.The horizontal coordinates were established by GPS observations
AJ3855.and adjusted by the National Geodetic Survey in April 2001.
AJ3855
AJ3855.The orthometric height was determined by GPS observations and a
AJ3855.high-resolution geoid model using precise GPS observation and
AJ3855.processing techniques.
AJ3855
AJ3855.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AJ3855
AJ3855.The Laplace correction was computed from DEFLEC99 derived deflections.
AJ3855
AJ3855.The ellipsoidal height was determined by GPS observations
AJ3855.and is referenced to NAD 83.
AJ3855
AJ3855.The geoid height was determined by GEOID99.
AJ3855
AJ3855;                    North         East     Units   Scale      Converg.
AJ3855;SPC AZ C     -   292,241.400   168,212.991   MT  0.99992512 -0 16 10.4
AJ3855;UTM  12      - 3,722,532.427   369,848.825   MT  0.99980883 -0 46 38.7
AJ3855
AJ3855                         SUPERSEDED SURVEY CONTROL
AJ3855
AJ3855.No superseded survey control is available for this station.
AJ3855
AJ3855_MARKER: I = METAL ROD
AJ3855_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AJ3855_STAMPING: 4GC1 1999
AJ3855_MARK LOGO: MCDOT
AJ3855_PROJECTION: FLUSH
AJ3855_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3855_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3855+STABILITY: POSITION/ELEVATION WELL
AJ3855_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3855+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3855_ROD/PIPE-DEPTH: 14.8 meters
AJ3855_SLEEVE-DEPTH  :  0.8 meters
AJ3855
AJ3855  HISTORY     - Date     Condition        Report By
AJ3855  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3855
AJ3855                         STATION DESCRIPTION
AJ3855
AJ3855'DESCRIBED BY MARICOPA CO DOT 1999 (JJR)
AJ3855'THE STATION IS LOCATED WITHIN THE CITY OF SURPRISE, TOWNSHIP 3 NORTH,
AJ3855'RANGE 1 WEST, SECTION 6
AJ3855'OWNERSHIP - CITY OF SURPRISE
AJ3855'TO REACH THE STATION FROM THE JUNCTION OF U.S.  60 (GRAND AVENUE) AND
AJ3855'BELL ROAD, DRIVE WEST ON BELL ROAD 2.8 MI (4.5 KM) TO THE INTERSECTION
AJ3855'OF MOUNTAIN VISTA BOULEVARD AND BELL ROAD, THENCE TURN LEFT (SOUTH)
AJ3855'ONTO MOUNTAIN VISTA BOULEVARD AND DRIVE SOUTHERLY 0.25 MI (0.40 KM) TO
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AJ3855'THE INTERSECTION OF VISTA RANCH ROAD AND MOUNTAIN VISTA BOULEVARD,
AJ3855'THENCE TURN RIGHT ONTO VISTA RANCH ROAD AND DRIVE WESTERLY 0.15 MI
AJ3855'(0.24 KM) TO THE STATION ON THE SOUTH SIDE OF THE ROAD 10 FT (3.0 M)
AJ3855'SOUTH OF THE CURB
AJ3855'MONUMENT DESCRIPTION - THE STATION IS MARKED BY AN ALUMINUM CAP
AJ3855'COMPRESSED ON A 48.5 FT (14.8 M) STAINLESS STEEL ROD DRIVEN TO
AJ3855'REFUSAL, ENCASED IN A 1 INCH GREASED PVC SLEEVE ENCLOSED IN A 5 INCH
AJ3855'PVC PIPE WITH A COUNTY LOGO ACCESS COVER STAMPED 4GC1 1999, SURROUNDED
AJ3855'WITH A CONCRETE COLLAR FLUSH WITH THE GROUND, WITNESSED BY A WHITE
AJ3855'CARSONITE MARKER
AJ3855'STATION TIES -
AJ3855'55 FT (16.8 M) NORTH OF A 6FT BLOCK WALL
AJ3855'4.5 FT (1.4 M) NORTH OF THE TOP OF BANK OF A RETENTION AREA
AJ3855'10 FT (3.0 M) SOUTH OF A CONCRETE CURB
AJ3855'62.3 FT (19.0 M) SOUTHWEST OF A STREET LIGHT
AJ3855'437 FT (133.2 M) WEST OF THE CENTERLINE OF 159TH DRIVE AS MEASURED
AJ3855'ALONG THE CENTERLINE OF VISTA RANCH ROAD
AJ3855'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3855'VISIT-WWW.MCDOT.MARICOPA.GOV       SEARCH KEYWORD  GDACS
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AJ3854  DESIGNATION -  4GG2
AJ3854  PID         -  AJ3854
AJ3854  STATE/COUNTY-  AZ/MARICOPA
AJ3854  USGS QUAD   -  WHITE TANK MTS NE (1978)
AJ3854
AJ3854                        *CURRENT SURVEY CONTROL
AJ3854  ___________________________________________________________________
AJ3854* NAD 83(1992)-  33 39 07.24839(N)    112 35 53.95981(W)     ADJUSTED
AJ3854* NAVD 88     -       523.34   (meters)    1717.0    (feet)  GPS OBS
AJ3854  ___________________________________________________________________
AJ3854  X           -  -2,042,445.750 (meters)                     COMP
AJ3854  Y           -  -4,907,065.791 (meters)                     COMP
AJ3854  Z           -   3,514,655.052 (meters)                     COMP
AJ3854  LAPLACE CORR-           2.72  (seconds)                    DEFLEC99
AJ3854  ELLIP HEIGHT-         493.31  (meters)                     GPS OBS
AJ3854  GEOID HEIGHT-         -29.98  (meters)                     GEOID99
AJ3854
AJ3854  HORZ ORDER  -  B
AJ3854  ELLP ORDER  -  THIRD     CLASS II
AJ3854
AJ3854.The horizontal coordinates were established by GPS observations
AJ3854.and adjusted by the National Geodetic Survey in April 2001.
AJ3854
AJ3854.The orthometric height was determined by GPS observations and a
AJ3854.high-resolution geoid model using precise GPS observation and
AJ3854.processing techniques.
AJ3854
AJ3854.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AJ3854
AJ3854.The Laplace correction was computed from DEFLEC99 derived deflections.
AJ3854
AJ3854.The ellipsoidal height was determined by GPS observations
AJ3854.and is referenced to NAD 83.
AJ3854
AJ3854.The geoid height was determined by GEOID99.
AJ3854
AJ3854;                    North         East     Units   Scale      Converg.
AJ3854;SPC AZ C     -   294,267.720   150,135.515   MT  0.99994926 -0 22 39.9
AJ3854;UTM  12      - 3,724,718.726   351,791.783   MT  0.99987080 -0 53 09.1
AJ3854
AJ3854                         SUPERSEDED SURVEY CONTROL
AJ3854
AJ3854.No superseded survey control is available for this station.
AJ3854
AJ3854_MARKER: I = METAL ROD
AJ3854_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AJ3854_STAMPING: 4GG2 1999
AJ3854_MARK LOGO: MCDOT
AJ3854_PROJECTION: FLUSH
AJ3854_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3854_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3854+STABILITY: POSITION/ELEVATION WELL
AJ3854_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3854+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3854_ROD/PIPE-DEPTH:  3.1 meters
AJ3854_SLEEVE-DEPTH  :  0.8 meters
AJ3854
AJ3854  HISTORY     - Date     Condition        Report By
AJ3854  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3854
AJ3854                         STATION DESCRIPTION
AJ3854
AJ3854'DESCRIBED BY MARICOPA CO DOT 1999 (JJR)
AJ3854'THE STATION IS LOCATED ABOUT 5.5 MI (8.9 KM) WEST OF THE CITY OF
AJ3854'SURPRISE, TOWNSHIP 4 NORTH, RANGE 3 WEST, SECTION 32
AJ3854'OWNERSHIP - MARICOPA COUNTY
AJ3854'TO REACH THE STATION FROM THE JUNCTION OF STATE ROUTE 303 AND BELL
AJ3854'ROAD, DRIVE WEST ON BELL ROAD 10.2 MI (16.4 KM) TO AN UNMARKED DIRT
AJ3854'ROAD ON THE LEFT BEING 0.6 MI (1.0 KM) WEST OF MILEPOST 125, THENCE
AJ3854'TURN LEFT (SOUTH) ONTO THE DIRT ROAD AND DRIVE SOUTHWESTERLY 1.0 MI
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AJ3854'(1.6 KM) TO AN UNMARKED DIRT ROAD RUNNING NORTHWEST-SOUTHEAST, THENCE
AJ3854'TURN LEFT ONTO THE DIRT ROAD AND DRIVE SOUTHEASTERLY ON THE DIRT ROAD
AJ3854'0.1 MI (0.2 KM) TO AN UNMARKED DIRT ROAD ON THE LEFT, THENCE TURN LEFT
AJ3854'ONTO THE DIRT ROAD AND DRIVE NORTHEASTERLY 0.4 MI (0.6 KM) TO THE
AJ3854'STATION 15 FT (4.6 M) TO THE RIGHT OF THE DIRT ROAD
AJ3854'MONUMENT DESCRIPTION - THE STATION IS MARKED BY AN ALUMINUM CAP
AJ3854'COMPRESSED ON A 10.1 FT (3.1 M) STAINLESS STEEL ROD DRIVEN TO REFUSAL,
AJ3854'ENCASED IN A 1 INCH GREASED PVC SLEEVE ENCLOSED IN A 5 INCH PVC PIPE
AJ3854'WITH A COUNTY LOGO ACCESS COVER STAMPED 4GG2 1999, SURROUNDED WITH A
AJ3854'CONCRETE COLLAR FLUSH WITH THE GROUND, WITNESSED BY A WHITE CARSONITE
AJ3854'MARKER
AJ3854'STATION TIES -
AJ3854'15 FT (4.6 M) EAST OF THE DIRT ROAD
AJ3854'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3854'VISIT-WWW.MCDOT.MARICOPA.GOV SEARCH KEYWORD GDACS

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AJ3859  DESIGNATION -  4HB1
AJ3859  PID         -  AJ3859
AJ3859  STATE/COUNTY-  AZ/MARICOPA
AJ3859  USGS QUAD   -  CALDERWOOD BUTTE (1981)
AJ3859
AJ3859                        *CURRENT SURVEY CONTROL
AJ3859  ___________________________________________________________________
AJ3859* NAD 83(1992)-  33 40 55.86577(N)    112 21 10.53175(W)     ADJUSTED
AJ3859* NAVD 88     -       388.88   (meters)    1275.9    (feet)  GPS OBS
AJ3859  ___________________________________________________________________
AJ3859  X           -  -2,020,662.087 (meters)                     COMP
AJ3859  Y           -  -4,913,949.173 (meters)                     COMP
AJ3859  Z           -   3,517,365.960 (meters)                     COMP
AJ3859  LAPLACE CORR-            1.24  (seconds)                   DEFLEC99
AJ3859  ELLIP HEIGHT-          358.94  (meters)                    GPS OBS
AJ3859  GEOID HEIGHT-          -29.90  (meters)                    GEOID99
AJ3859
AJ3859  HORZ ORDER  -  B
AJ3859  ELLP ORDER  -  THIRD     CLASS II
AJ3859
AJ3859.The horizontal coordinates were established by GPS observations
AJ3859.and adjusted by the National Geodetic Survey in April 2001.
AJ3859
AJ3859.The orthometric height was determined by GPS observations and a
AJ3859.high-resolution geoid model using precise GPS observation and
AJ3859.processing techniques.
AJ3859
AJ3859.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AJ3859
AJ3859.The Laplace correction was computed from DEFLEC99 derived deflections.
AJ3859
AJ3859.The ellipsoidal height was determined by GPS observations
AJ3859.and is referenced to NAD 83.
AJ3859
AJ3859.The geoid height was determined by GEOID99.
AJ3859
AJ3859;                    North         East     Units   Scale      Converg.
AJ3859;SPC AZ C     -   297,490.884   172,910.739   MT  0.99992016 -0 14 31.0
AJ3859;UTM  12      - 3,727,739.410   374,592.370   MT  0.99979389 -0 45 01.5
AJ3859
AJ3859                         SUPERSEDED SURVEY CONTROL
AJ3859
AJ3859.No superseded survey control is available for this station.
AJ3859
AJ3859_MARKER: I = METAL ROD
AJ3859_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AJ3859_STAMPING: 4HB1 1999
AJ3859_MARK LOGO: MCDOT
AJ3859_PROJECTION: FLUSH
AJ3859_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3859_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3859+STABILITY: POSITION/ELEVATION WELL
AJ3859_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3859+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3859_ROD/PIPE-DEPTH:  9.0 meters
AJ3859_SLEEVE-DEPTH  :  0.8 meters
AJ3859
AJ3859  HISTORY     - Date     Condition        Report By
AJ3859  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3859
AJ3859                         STATION DESCRIPTION
AJ3859
AJ3859'DESCRIBED BY MARICOPA CO DOT 1999 (JJR)
AJ3859'THE STATION IS LOCATED WITHIN THE LIMITS OF SUN CITY WEST, TOWNSHIP 4
AJ3859'NORTH, RANGE 1 WEST, SECTION 15
AJ3859'OWNERSHIP - CITY OF SUN CITY WEST
AJ3859'TO REACH THE STATION FROM THE JUNCTION OF U.S.  60 (GRAND AVENUE) AND
AJ3859'BELL ROAD, DRIVE EAST ON BELL ROAD 1.5 MI (2.4 KM) TO THE INTERSECTION
AJ3859'OF EL MIRAGE ROAD AND BELL ROAD, THENCE TURN LEFT (NORTH) ONTO EL
AJ3859'MIRAGE ROAD AND DRIVE 3.0 MI (4.8 KM) TO THE INTERSECTION OF DEER
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AJ3859'VALLEY ROAD AND EL MIRAGE ROAD, THENCE TURN LEFT (WEST) ONTO DEER
AJ3859'VALLEY ROAD AND DRIVE WESTERLY 1.6 MI (2.6 KM) TO THE STATION ON THE
AJ3859'LEFT 18 FT (5.5 M) SOUTH OF THE CURB
AJ3859'THE STATION IS MARKED BY AN ALUMINUM CAP COMPRESSED ON A 29.5 FOOT
AJ3859'(9.0 M) STAINLESS STEEL ROD DRIVEN TO REFUSAL, ENCASED IN A 1 INCH
AJ3859'GREASED PVC SLEEVE ENCLOSED IN A 5 INCH PVC PIPE WITH A COUNTY LOGO
AJ3859'ACCESS COVER STAMPED 4HB1 1999, SURROUNDED WITH A CONCRETE COLLAR
AJ3859'FLUSH WITH THE GROUND, WITNESSED BY A WHITE CARSONITE MARKER
AJ3859'STATION TIES -
AJ3859'18 FT (5.5 M) SOUTH OF A CURB ON THE SOUTH SIDE OF DEER VALLEY ROAD
AJ3859'25 FT (7.6 M) EAST OF AN ASPHALT PARKING LOT OF A FIRE STATION FOR SUN
AJ3859'CITY WEST
AJ3859'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3859'VISIT-WWW.MCDOT.MARICOPA.GOV SEARCH KEYWORD GDACS

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AJ3860  DESIGNATION -  4HD1
AJ3860  PID         -  AJ3860
AJ3860  STATE/COUNTY-  AZ/MARICOPA
AJ3860  USGS QUAD   -  MC MICKEN DAM (1981)
AJ3860
AJ3860                        *CURRENT SURVEY CONTROL
AJ3860  ___________________________________________________________________
AJ3860* NAD 83(1992)-  33 40 56.22517(N)    112 27 33.63628(W)     ADJUSTED
AJ3860* NAVD 88     -       424.68   (meters)    1393.3    (feet)  GPS OBS
AJ3860  ___________________________________________________________________
AJ3860  X           -  -2,029,794.508 (meters)                     COMP
AJ3860  Y           -  -4,910,209.461 (meters)                     COMP
AJ3860  Z           -   3,517,395.007 (meters)                     COMP
AJ3860  LAPLACE CORR-          -0.19  (seconds)                    DEFLEC99
AJ3860  ELLIP HEIGHT-         394.70  (meters)                     GPS OBS
AJ3860  GEOID HEIGHT-         -29.94  (meters)                     GEOID99
AJ3860
AJ3860  HORZ ORDER  -  B
AJ3860  ELLP ORDER  -  THIRD     CLASS II
AJ3860
AJ3860.The horizontal coordinates were established by GPS observations
AJ3860.and adjusted by the National Geodetic Survey in April 2001.
AJ3860
AJ3860.The orthometric height was determined by GPS observations and a
AJ3860.high-resolution geoid model using precise GPS observation and
AJ3860.processing techniques.
AJ3860
AJ3860.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AJ3860
AJ3860.The Laplace correction was computed from DEFLEC99 derived deflections.
AJ3860
AJ3860.The ellipsoidal height was determined by GPS observations
AJ3860.and is referenced to NAD 83.
AJ3860
AJ3860.The geoid height was determined by GEOID99.
AJ3860
AJ3860;                    North         East     Units   Scale      Converg.
AJ3860;SPC AZ C     -   297,548.705   163,043.784   MT  0.99993120 -0 18 03.5
AJ3860;UTM  12      - 3,727,884.775   364,727.461   MT  0.99982559 -0 48 34.0
AJ3860
AJ3860                         SUPERSEDED SURVEY CONTROL
AJ3860
AJ3860.No superseded survey control is available for this station.
AJ3860
AJ3860_MARKER: I = METAL ROD
AJ3860_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AJ3860_STAMPING: 4HD1 1999
AJ3860_MARK LOGO: MCDOT
AJ3860_PROJECTION: FLUSH
AJ3860_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3860_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3860+STABILITY: POSITION/ELEVATION WELL
AJ3860_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3860+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3860_ROD/PIPE-DEPTH:  4.4 meters
AJ3860_SLEEVE-DEPTH  :  0.8 meters
AJ3860
AJ3860  HISTORY     - Date     Condition        Report By
AJ3860  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3860
AJ3860                         STATION DESCRIPTION
AJ3860
AJ3860'DESCRIBED BY MARICOPA CO DOT 1999 (JJR)
AJ3860'THE STATION IS LOCATED WITHIN THE CITY OF SURPRISE, TOWNSHIP 4 NORTH,
AJ3860'RANGE 2 WEST, SECTION 15
AJ3860'OWNERSHIP - MARICOPA COUNTY
AJ3860'TO REACH THE STATION FROM THE JUNCTION OF U.S.  60 (GRAND AVENUE) AND
AJ3860'DEER VALLEY ROAD, DRIVE SOUTHWEST THEN WEST ON DEER VALLEY ROAD 2.5 MI
AJ3860'(4.0 KM) TO THE STATION ON THE RIGHT (NORTH) 95 FT (29.0 M) FROM THE
AJ3860'CENTERLINE OF THE ROAD
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AJ3860'THE STATION IS MARKED BY AN ALUMINUM CAP COMPRESSED ON A 14.4 FOOT
AJ3860'(4.4 M) STAINLESS STEEL ROD DRIVEN TO REFUSAL, ENCASED IN A 1 INCH
AJ3860'GREASED PVC SLEEVE ENCLOSED IN A 5 INCH PVC PIPE WITH A COUNTY LOGO
AJ3860'ACCESS COVER STAMPED 4HD1 1999, SURROUNDED WITH A CONCRETE COLLAR
AJ3860'FLUSH WITH THE GROUND, WITNESSED BY A WHITE CARSONITE MARKER
AJ3860'STATION TIES -
AJ3860'95 FT (29.0 M) NORTH OF THE CENTERLINE OF THE CENTERLINE OF DEER
AJ3860'VALLEY ROAD
AJ3860'220 FT (67.1 M) EAST OF A BOX CULVERT UNDER DEER VALLEY ROAD
AJ3860'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3860'VISIT-WWW.MCDOT.MARICOPA.GOV       SEARCH KEYWORD  GDACS
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AJ3861  DESIGNATION -  4HF3
AJ3861  PID         -  AJ3861
AJ3861  STATE/COUNTY-  AZ/MARICOPA
AJ3861  USGS QUAD   -  WHITE TANK MTS NE (1978)
AJ3861
AJ3861                        *CURRENT SURVEY CONTROL
AJ3861  ____________________________________________________________________
AJ3861* NAD 83(1992)-  33 40 55.07004(N)    112 33 55.01967(W)     ADJUSTED
AJ3861* NAVD 88     -       465.33   (meters)    1526.7    (feet)  GPS OBS
AJ3861  ____________________________________________________________________
AJ3861  X           -  -2,038,890.556 (meters)                     COMP
AJ3861  Y           -  -4,906,497.438 (meters)                     COMP
AJ3861  Z           -   3,517,387.928 (meters)                     COMP
AJ3861  LAPLACE CORR-           1.16  (seconds)                    DEFLEC99
AJ3861  ELLIP HEIGHT-         435.34  (meters)                     GPS OBS
AJ3861  GEOID HEIGHT-         -29.95  (meters)                     GEOID99
AJ3861
AJ3861  HORZ ORDER  -  B
AJ3861  ELLP ORDER  -  THIRD     CLASS II
AJ3861
AJ3861.The horizontal coordinates were established by GPS observations
AJ3861.and adjusted by the National Geodetic Survey in April 2001.
AJ3861
AJ3861.The orthometric height was determined by GPS observations and a
AJ3861.high-resolution geoid model using precise GPS observation and
AJ3861.processing techniques.
AJ3861
AJ3861.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AJ3861
AJ3861.The Laplace correction was computed from DEFLEC99 derived deflections.
AJ3861
AJ3861.The ellipsoidal height was determined by GPS observations
AJ3861.and is referenced to NAD 83.
AJ3861
AJ3861.The geoid height was determined by GEOID99.
AJ3861
AJ3861;                    North         East     Units   Scale      Converg.
AJ3861;SPC AZ C     -   297,569.753   153,220.821   MT  0.99994457 -0 21 35.0
AJ3861;UTM  12      - 3,727,992.989   354,906.007   MT  0.99985954 -0 52 05.6
AJ3861
AJ3861                          SUPERSEDED SURVEY CONTROL
AJ3861
AJ3861.No superseded survey control is available for this station.
AJ3861
AJ3861_MARKER: I = METAL ROD
AJ3861_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AJ3861_STAMPING: 4HF3 1999
AJ3861_MARK LOGO: MCDOT
AJ3861_PROJECTION: FLUSH
AJ3861_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3861_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3861+STABILITY: POSITION/ELEVATION WELL
AJ3861_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3861+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3861_ROD/PIPE-DEPTH: 15.8 meters
AJ3861_SLEEVE-DEPTH  :  0.8 meters
AJ3861
AJ3861  HISTORY     - Date     Condition        Report By
AJ3861  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3861
AJ3861                          STATION DESCRIPTION
AJ3861
AJ3861'DESCRIBED BY MARICOPA CO DOT 1999 (JJR)
AJ3861'THE STATION IS LOCATED WITHIN THE CITY OF SURPRISE, TOWNSHIP 4 NORTH,
AJ3861'RANGE 3 WEST, SECTION 21
AJ3861'OWNERSHIP - PRIVATE
AJ3861'TO REACH THE STATION FROM THE JUNCTION OF STATE ROUTE 303 AND BELL
AJ3861'ROAD, DRIVE WEST 9.5 MI (15.3 KM) ON BELL ROAD WHICH BECOMES SUN
AJ3861'VALLEY PARKWAY TO THE INTERSECTION OF 243RD AVENUE AND SUN VALLEY
AJ3861'PARKWAY BEING 0.9 MI (1.4 KM) WEST OF MILEPOST 126, THENCE TURN RIGHT
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AJ3861'(NORTH) ONTO 243RD AVENUE (DIRT ROAD) AND DRIVE 0.9 MI (1.4 KM) TO THE
AJ3861'INTERSECTION OF A DIRT POWER LINE ROAD AND 243RD AVENUE , THENCE TURN
AJ3861'RIGHT ONTO THE DIRT POWER LINE ROAD AND DRIVE EAST 1.0 MI (1.6 KM) TO
AJ3861'THE INTERSECTION OF A SMALL UNMARKED DIRT ROAD AND THE DIRT POWER LINE
AJ3861'ROAD, THENCE TURN LEFT (NORTH) ONTO THE SMALL DIRT ROAD AND DRIVE
AJ3861'NORTHERLY, NORTHWESTERLY, AND WESTERLY (YOU WILL CROSS A SANDY WASH)
AJ3861'TO THE STATION
AJ3861'THE STATION IS MARKED BY AN ALUMINUM CAP COMPRESSED ON A 52.0 FOOT
AJ3861'(15.8 M) STAINLESS STEEL ROD DRIVEN TO REFUSAL, ENCASED IN A 1 INCH
AJ3861'GREASED PVC SLEEVE ENCLOSED IN A 5 INCH PVC PIPE WITH A COUNTY LOGO
AJ3861'ACCESS COVER STAMPED 4HF3 1999, SURROUNDED WITH A CONCRETE COLLAR
AJ3861'FLUSH WITH THE GROUND, WITNESSED BY A WHITE CARSONITE MARKER
AJ3861'STATION TIES -
AJ3861'175 FT (53.3 M) SOUTHWEST OF THE GLO MONUMENT MARKING THE CORNER OF
AJ3861'SECTIONS 15, 16, 21, 22
AJ3861'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3861'VISIT-WWW.MCDOT.MARICOPA.GOV SEARCH KEYWORD GDACS

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AJ3862  DESIGNATION -  4HH2
AJ3862  PID         -  AJ3862
AJ3862  STATE/COUNTY-  AZ/MARICOPA
AJ3862  USGS QUAD   -  DAGGS TANK (1988)
AJ3862
AJ3862                        *CURRENT SURVEY CONTROL
AJ3862  ____________________________________________________________________
AJ3862* NAD 83(1992)-  33 41 07.37060(N)    112 39 25.37166(W)     ADJUSTED
AJ3862* NAVD 88     -       477.49   (meters)    1566.6    (feet)  GPS OBS
AJ3862  ____________________________________________________________________
AJ3862  X           -  -2,046,669.021 (meters)                     COMP
AJ3862  Y           -  -4,903,040.920 (meters)                     COMP
AJ3862  Z           -   3,517,709.967 (meters)                     COMP
AJ3862  LAPLACE CORR-           2.92  (seconds)                    DEFLEC99
AJ3862  ELLIP HEIGHT-         447.35  (meters)                     GPS OBS
AJ3862  GEOID HEIGHT-         -30.09  (meters)                     GEOID99
AJ3862
AJ3862  HORZ ORDER  -  B
AJ3862  ELLP ORDER  -  THIRD     CLASS II
AJ3862
AJ3862.The horizontal coordinates were established by GPS observations
AJ3862.and adjusted by the National Geodetic Survey in April 2001.
AJ3862
AJ3862.The orthometric height was determined by GPS observations and a
AJ3862.high-resolution geoid model using precise GPS observation and
AJ3862.processing techniques.
AJ3862
AJ3862.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AJ3862
AJ3862.The Laplace correction was computed from DEFLEC99 derived deflections.
AJ3862
AJ3862.The ellipsoidal height was determined by GPS observations
AJ3862.and is referenced to NAD 83.
AJ3862
AJ3862.The geoid height was determined by GEOID99.
AJ3862
AJ3862;                    North         East     Units   Scale      Converg.
AJ3862;SPC AZ C     -   298,005.909   144,715.043   MT  0.99995807 -0 24 38.4
AJ3862;UTM  12      - 3,728,504.583   346,405.083   MT  0.99989084 -0 55 09.2
AJ3862
AJ3862                          SUPERSEDED SURVEY CONTROL
AJ3862
AJ3862.No superseded survey control is available for this station.
AJ3862
AJ3862_MARKER: I = METAL ROD
AJ3862_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AJ3862_STAMPING: 4HH2 1999
AJ3862_MARK LOGO: MCDOT
AJ3862_PROJECTION: FLUSH
AJ3862_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3862_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3862+STABILITY: POSITION/ELEVATION WELL
AJ3862_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3862+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3862_ROD/PIPE-DEPTH:  7.0 meters
AJ3862_SLEEVE-DEPTH  :  0.8 meters
AJ3862
AJ3862  HISTORY     - Date     Condition        Report By
AJ3862  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3862
AJ3862                          STATION DESCRIPTION
AJ3862
AJ3862'DESCRIBED BY MARICOPA CO DOT 1999 (JJR)
AJ3862'THE STATION IS LOCATED WITHIN THE CITY OF SURPRISE, TOWNSHIP 4 NORTH,
AJ3862'RANGE 4 WEST, SECTION 15
AJ3862'OWNERSHIP - PRIVATE
AJ3862'TO REACH THE STATION FROM THE JUNCTION OF U.S.  60 (GRAND AVENUE) AND
AJ3862'PATTON ROAD, DRIVE WEST 9.6 MI (15.4 KM) ON PATTON ROAD TO THE
AJ3862'INTERSECTION OF AKIN LANE (GRAVEL ROAD) AND PATTON ROAD, THENCE TURN
AJ3862'LEFT (SOUTH) ONTO AKIN LANE AND DRIVE SOUTHERLY 2.0 MI (3.2 KM) TO THE
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AJ3862'INTERSECTION OF AN UNMARKED DIRT POWER LINE ROAD AND AKIN LANE, THENCE
AJ3862'TURN LEFT (SOUTH) ONTO THE DIRT POWER LINE ROAD AND DRIVE THROUGH A
AJ3862'BARBED WIRE GATE AND CONTINUE SOUTHERLY 1.7 MI (2.7 KM) TO THE
AJ3862'INTERSECTION OF AN UNMARKED EAST-WEST DIRT ROAD, THENCE TURN RIGHT
AJ3862'(WEST) AND DRIVE WESTERLY 0.4 MI (0.6 KM) TO THE INTERSECTION OF AN
AJ3862'UNMARKED NORTH-SOUTH DIRT ROAD ON THE LEFT, THENCE TURN LEFT (SOUTH)
AJ3862'ONTO THE DIRT ROAD AND DRIVE 105 FT (32.0 M) TO THE STATION 45 FT
AJ3862'(13.7 M) TO THE RIGHT (WEST) THE STATION IS MARKED BY AN ALUMINUM CAP
AJ3862'COMPRESSED ON A 23.1 FOOT (7.0 M) STAINLESS STEEL ROD DRIVEN TO
AJ3862'REFUSAL, ENCASED IN A 1 INCH GREASED PVC SLEEVE ENCLOSED IN A 5 INCH
AJ3862'PVC PIPE WITH A COUNTY LOGO ACCESS COVER STAMPED 4HH2 1999, SURROUNDED
AJ3862'WITH A CONCRETE COLLAR FLUSH WITH THE GROUND, WITNESSED BY A WHITE
AJ3862'CARSONITE MARKER
AJ3862'STATION TIES -
AJ3862'45 FT (13.7 M) WEST OF THE CENTERLINE OF A DIRT ROAD
AJ3862'105 FT (32.0 M) SOUTH OF THE CENTERLINE OF A DIRT ROAD
AJ3862'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3862'VISIT-WWW.MCDOT.MARICOPA.GOV SEARCH KEYWORD GDACS

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AJ3867  DESIGNATION -  4IC1
AJ3867  PID         -  AJ3867
AJ3867  STATE/COUNTY-  AZ/MARICOPA
AJ3867  USGS QUAD   -  MC MICKEN DAM (1981)
AJ3867
AJ3867                        *CURRENT SURVEY CONTROL
AJ3867  ___________________________________________________________________
AJ3867* NAD 83(1992)-  33 43 28.48869(N)    112 24 36.55679(W)     ADJUSTED
AJ3867* NAVD 88     -       433.97   (meters)    1423.8    (feet)  GPS OBS
AJ3867  ___________________________________________________________________
AJ3867  X           -  -2,024,588.827 (meters)                     COMP
AJ3867  Y           -  -4,909,550.764 (meters)                     COMP
AJ3867  Z           -   3,521,303.256 (meters)                     COMP
AJ3867  LAPLACE CORR-           1.53  (seconds)                    DEFLEC99
AJ3867  ELLIP HEIGHT-         404.12  (meters)                     GPS OBS
AJ3867  GEOID HEIGHT-         -29.81  (meters)                     GEOID99
AJ3867
AJ3867  HORZ ORDER  -  B
AJ3867  ELLP ORDER  -  THIRD     CLASS II
AJ3867
AJ3867.The horizontal coordinates were established by GPS observations
AJ3867.and adjusted by the National Geodetic Survey in April 2001.
AJ3867
AJ3867.The orthometric height was determined by GPS observations and a
AJ3867.high-resolution geoid model using precise GPS observation and
AJ3867.processing techniques.
AJ3867
AJ3867.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AJ3867
AJ3867.The Laplace correction was computed from DEFLEC99 derived deflections.
AJ3867
AJ3867.The ellipsoidal height was determined by GPS observations
AJ3867.and is referenced to NAD 83.
AJ3867
AJ3867.The geoid height was determined by GEOID99.
AJ3867
AJ3867;                    North         East     Units   Scale      Converg.
AJ3867;SPC AZ C     -   302,216.715   167,626.960   MT  0.99992578 -0 16 26.4
AJ3867;UTM  12      - 3,732,511.393   369,351.395   MT  0.99981043 -0 46 58.9
AJ3867
AJ3867                         SUPERSEDED SURVEY CONTROL
AJ3867
AJ3867.No superseded survey control is available for this station.
AJ3867
AJ3867_MARKER: I = METAL ROD
AJ3867_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AJ3867_STAMPING: 4IC1 1999
AJ3867_MARK LOGO: MCDOT
AJ3867_PROJECTION: FLUSH
AJ3867_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3867_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3867+STABILITY: POSITION/ELEVATION WELL
AJ3867_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3867+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3867_ROD/PIPE-DEPTH: 10.9 meters
AJ3867_SLEEVE-DEPTH  :  0.8 meters
AJ3867
AJ3867  HISTORY     - Date     Condition        Report By
AJ3867  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3867
AJ3867                         STATION DESCRIPTION
AJ3867
AJ3867'DESCRIBED BY MARICOPA CO DOT 1999 (JJR)
AJ3867'THE STATION IS LOCATED ABOUT 12 MI (19.3 KM) NORTHWEST OF SUN CITY
AJ3867'WEST, TOWNSHIP 4 NORTH, RANGE 2 WEST, SECTION 1
AJ3867'OWNERSHIP - MARICOPA COUNTY
AJ3867'TO REACH THE STATION FROM THE JUNCTION OF U.S.  60 (GRAND AVENUE) AND
AJ3867'163RD AVENUE, DRIVE NORTH ON 163RD AVENUE 2.6 MI (4.2 KM) TO THE
AJ3867'INTERSECTION OF JOMAX ROAD AND 163RD AVENUE, THENCE TURN RIGHT (EAST)
AJ3867'ONTO JOMAX ROAD AND DRIVE 0.1 MI (0.2 KM) TO THE STATION ON THE RIGHT
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AJ3867'43 FT (13.1 M) SOUTH OF JOMAX ROAD
AJ3867'THE STATION IS MARKED BY AN ALUMINUM CAP COMPRESSED ON A 35.8 FOOT
AJ3867'(10.9 M) STAINLESS STEEL ROD DRIVEN TO REFUSAL, ENCASED IN A 1 INCH
AJ3867'GREASED PVC SLEEVE ENCLOSED IN A 5 INCH PVC PIPE WITH A COUNTY LOGO
AJ3867'ACCESS COVER STAMPED 4IC1 1999, SURROUNDED WITH A CONCRETE COLLAR
AJ3867'FLUSH WITH THE GROUND, WITNESSED BY A WHITE CARSONITE MARKER
AJ3867'STATION TIES -
AJ3867'43 FT (13.1 M) SOUTH OF JOMAX ROAD
AJ3867'0.1 MI (0.2 KM) EAST OF 163RD AVENUE
AJ3867'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3867'VISIT-WWW.MCDOT.MARICOPA.GOV       SEARCH KEYWORD  GDACS
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AJ3866  DESIGNATION -  4IE2
AJ3866  PID         -  AJ3866
AJ3866  STATE/COUNTY-  AZ/MARICOPA
AJ3866  USGS QUAD   -  WHITE TANK MTS NE (1978)
AJ3866
AJ3866                        *CURRENT SURVEY CONTROL
AJ3866  ___________________________________________________________________
AJ3866* NAD 83(1992)-  33 43 21.46293(N)    112 30 47.05278(W)     ADJUSTED
AJ3866* NAVD 88     -       463.89   (meters)    1521.9    (feet)  GPS OBS
AJ3866  ___________________________________________________________________
AJ3866  X           -  -2,033,459.682 (meters)                     COMP
AJ3866  Y           -  -4,906,040.188 (meters)                     COMP
AJ3866  Z           -   3,521,139.759 (meters)                     COMP
AJ3866  LAPLACE CORR-           1.02  (seconds)                    DEFLEC99
AJ3866  ELLIP HEIGHT-         433.94  (meters)                     GPS OBS
AJ3866  GEOID HEIGHT-         -29.90  (meters)                     GEOID99
AJ3866
AJ3866  HORZ ORDER  -  B
AJ3866  ELLP ORDER  -  THIRD     CLASS II
AJ3866
AJ3866.The horizontal coordinates were established by GPS observations
AJ3866.and adjusted by the National Geodetic Survey in April 2001.
AJ3866
AJ3866.The orthometric height was determined by GPS observations and a
AJ3866.high-resolution geoid model using precise GPS observation and
AJ3866.processing techniques.
AJ3866
AJ3866.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AJ3866
AJ3866.The Laplace correction was computed from DEFLEC99 derived deflections.
AJ3866
AJ3866.The ellipsoidal height was determined by GPS observations
AJ3866.and is referenced to NAD 83.
AJ3866
AJ3866.The geoid height was determined by GEOID99.
AJ3866
AJ3866;                    North         East     Units   Scale      Converg.
AJ3866;SPC AZ C     -   302,050.631   158,088.089   MT  0.99993765 -0 19 52.0
AJ3866;UTM  12      - 3,732,430.071   359,812.430   MT  0.99984228 -0 50 24.5
AJ3866
AJ3866                         SUPERSEDED SURVEY CONTROL
AJ3866
AJ3866.No superseded survey control is available for this station.
AJ3866
AJ3866_MARKER: I = METAL ROD
AJ3866_SETTING: 15 = METAL ROD DRIVEN INTO GROUND. SEE TEXT FOR ADDITIONAL
AJ3866+WITH SETTING: INFORMATION.
AJ3866_STAMPING: 4IE2 1999
AJ3866_MARK LOGO: MCDOT
AJ3866_PROJECTION: FLUSH
AJ3866_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3866_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3866+STABILITY: POSITION/ELEVATION WELL
AJ3866_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3866+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3866_ROD/PIPE-DEPTH:  1.9 meters
AJ3866_SLEEVE-DEPTH  :  0.8 meters
AJ3866
AJ3866  HISTORY     - Date     Condition        Report By
AJ3866  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3866
AJ3866                         STATION DESCRIPTION
AJ3866
AJ3866'DESCRIBED BY MARICOPA CO DOT 1999 (JJR)
AJ3866'THE STATION IS LOCATED ABOUT 12 MI (19.3 KM) NORTHWEST OF THE CITY OF
AJ3866'SURPRISE, TOWNSHIP 4 NORTH, RANGE 3 WEST, SECTION 1
AJ3866'OWNERSHIP - PRIVATE
AJ3866'TO REACH THE STATION FROM THE JUNCTION OF U.S.  60 (GRAND AVENUE) AND
AJ3866'PATTON ROAD, DRIVE WEST ON PATTON ROAD 1.5 MI (2.4 KM) TO THE
AJ3866'INTERSECTION OF 207TH AVENUE AND PATTON ROAD, THENCE TURN LEFT (SOUTH)
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AJ3866'ONTO 207TH AVENUE AND DRIVE SOUTHERLY 1.0 MI (1.6 KM) TO THE
AJ3866'INTERSECTION OF JOMAX ROAD AND 207TH AVENUE, THENCE TURN RIGHT (WEST)
AJ3866'ONTO JOMAX ROAD AND DRIVE 0.3 MI (0.5 KM) TO A DIRT ROAD ON THE LEFT
AJ3866'JUST WEST OF A BARBED WIRE FENCE, THENCE TURN LEFT (SOUTH) ONTO THE
AJ3866'DIRT ROAD AND DRIVE SOUTHERLY 560 FT (170.7 M) TO THE STATION ON THE
AJ3866'RIGHT 51 FT (15.5 M) WEST OF THE BARBED WIRE FENCE TO THE LEFT OF THE
AJ3866'ROAD
AJ3866'THE STATION IS MARKED BY AN ALUMINUM CAP COMPRESSED ON A 6.2 FOOT (1.9
AJ3866'M) STAINLESS STEEL ROD DRIVEN TO REFUSAL, ENCASED IN A 1 INCH GREASED
AJ3866'PVC SLEEVE ENCLOSED IN A 5 INCH PVC PIPE WITH A COUNTY LOGO ACCESS
AJ3866'COVER STAMPED 4IE2 1999, SURROUNDED WITH A CONCRETE COLLAR FLUSH WITH
AJ3866'THE GROUND, WITNESSED BY A WHITE CARSONITE MARKER
AJ3866'STATION TIES -
AJ3866'560 FT (170.7 M) SOUTH OF JOMAX ROAD
AJ3866'51 FT (15.5 M) WEST OF A BARBED WIRE FENCE
AJ3866'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3866'VISIT-WWW.MCDOT.MARICOPA.GOV SEARCH KEYWORD GDACS

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AJ3865  DESIGNATION -  4IG2
AJ3865  PID         -  AJ3865
AJ3865  STATE/COUNTY-  AZ/MARICOPA
AJ3865  USGS QUAD   -  WHITE TANK MTS NE (1978)
AJ3865
AJ3865                        *CURRENT SURVEY CONTROL
AJ3865  ____________________________________________________________________
AJ3865* NAD 83(1992)-  33 43 26.12198(N)    112 37 14.83900(W)     ADJUSTED
AJ3865* NAVD 88     -       500.68   (meters)    1642.6    (feet)  GPS OBS
AJ3865  ____________________________________________________________________
AJ3865  X           -  -2,042,660.723 (meters)                     COMP
AJ3865  Y           -  -4,902,163.140 (meters)                     COMP
AJ3865  Z           -   3,521,279.535 (meters)                     COMP
AJ3865  LAPLACE CORR-            2.02  (seconds)                   DEFLEC99
AJ3865  ELLIP HEIGHT-          470.64  (meters)                    GPS OBS
AJ3865  GEOID HEIGHT-          -29.99  (meters)                    GEOID99
AJ3865
AJ3865  HORZ ORDER  -  B
AJ3865  ELLP ORDER  -  THIRD     CLASS II
AJ3865
AJ3865.The horizontal coordinates were established by GPS observations
AJ3865.and adjusted by the National Geodetic Survey in April 2001.
AJ3865
AJ3865.The orthometric height was determined by GPS observations and a
AJ3865.high-resolution geoid model using precise GPS observation and
AJ3865.processing techniques.
AJ3865
AJ3865.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AJ3865
AJ3865.The Laplace correction was computed from DEFLEC99 derived deflections.
AJ3865
AJ3865.The ellipsoidal height was determined by GPS observations
AJ3865.and is referenced to NAD 83.
AJ3865
AJ3865.The geoid height was determined by GEOID99.
AJ3865
AJ3865;                    North         East     Units   Scale      Converg.
AJ3865;SPC AZ C     -   302,257.072   148,106.049   MT  0.99995248 -0 23 27.4
AJ3865;UTM  12      - 3,732,725.165   349,833.465   MT  0.99987800 -0 54 00.1
AJ3865
AJ3865                          SUPERSEDED SURVEY CONTROL
AJ3865
AJ3865.No superseded survey control is available for this station.
AJ3865
AJ3865_MARKER: I = METAL ROD
AJ3865_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AJ3865_STAMPING: 4IG2 1999
AJ3865_MARK LOGO: MCDOT
AJ3865_PROJECTION: FLUSH
AJ3865_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3865_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3865+STABILITY: POSITION/ELEVATION WELL
AJ3865_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3865+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3865_ROD/PIPE-DEPTH: 14.4 meters
AJ3865_SLEEVE-DEPTH  :  0.8 meters
AJ3865
AJ3865  HISTORY     - Date     Condition        Report By
AJ3865  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3865
AJ3865                          STATION DESCRIPTION
AJ3865
AJ3865'DESCRIBED BY MARICOPA CO DOT 1999 (JJR)
AJ3865'THE STATION IS LOCATED ABOUT 17 MI (27.4 KM) NORTHWEST OF THE CITY OF
AJ3865'SURPRISE, TOWNSHIP 4 NORTH, RANGE 4 WEST, SECTION 1
AJ3865'OWNERSHIP - STATE LAND DEPARTMENT
AJ3865'TO REACH THE STATION FROM THE JUNCTION OF U.S.  60 (GRAND AVENUE) AND
AJ3865'PATTON ROAD, DRIVE WEST ON PATTON ROAD 8.1 MI (13.0 KM) TO A CATTLE
AJ3865'GUARD IN THE ROAD, THENCE DRIVE OVER THE CATTLE GUARD AND TURN LEFT
AJ3865'(SOUTH) ONTO AN UNMARKED DIRT ROAD WITH A GATE IN A BARBED WIRE FENCE,
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AJ3865'THENCE DRIVE THROUGH THE GATE AND DRIVE SOUTHERLY ON THE DIRT ROAD 1.0
AJ3865'MI (1.6 KM) TO THE STATION (NOTE-DIRT ROAD RUNS SOUTHERLY ON THE WEST
AJ3865'SIDE OF A BARBED WIRE FENCE) THE STATION IS MARKED BY AN ALUMINUM CAP
AJ3865'COMPRESSED ON A 47.2 FOOT (14.4 M) STAINLESS STEEL ROD DRIVEN TO
AJ3865'REFUSAL, ENCASED IN A 1 INCH GREASED PVC SLEEVE ENCLOSED IN A 5 INCH
AJ3865'PVC PIPE WITH A COUNTY LOGO ACCESS COVER STAMPED 4IG2 1999, SURROUNDED
AJ3865'WITH A CONCRETE COLLAR FLUSH WITH THE GROUND, WITNESSED BY A WHITE
AJ3865'CARSONITE MARKER
AJ3865'STATION TIES -
AJ3865'120 FT (36.6 M) SOUTHWEST OF A BARBED WIRE FENCE CORNER
AJ3865'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3865'VISIT-WWW.MCDOT.MARICOPA.GOV SEARCH KEYWORD GDACS

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AJ3871  DESIGNATION -  4JB3
AJ3871  PID         -  AJ3871
AJ3871  STATE/COUNTY-  AZ/MARICOPA
AJ3871  USGS QUAD   -  BALDY MTN (1981)
AJ3871
AJ3871                        *CURRENT SURVEY CONTROL
AJ3871  ___________________________________________________________
AJ3871* NAD 83(1992)-  33 45 36.44516(N)    112 21 32.80830(W)     ADJUSTED
AJ3871* NAVD 88     -       450.01   (meters)    1476.4    (feet)  GPS OBS
AJ3871  ___________________________________________________________
AJ3871  X           -  -2,019,386.446 (meters)                     COMP
AJ3871  Y           -  -4,909,339.525 (meters)                     COMP
AJ3871  Z           -   3,524,590.751 (meters)                     COMP
AJ3871  LAPLACE CORR-           1.10  (seconds)                    DEFLEC99
AJ3871  ELLIP HEIGHT-         420.33  (meters)                     GPS OBS
AJ3871  GEOID HEIGHT-         -29.65  (meters)                     GEOID99
AJ3871
AJ3871  HORZ ORDER  -  B
AJ3871  ELLP ORDER  -  THIRD     CLASS II
AJ3871
AJ3871.The horizontal coordinates were established by GPS observations
AJ3871.and adjusted by the National Geodetic Survey in April 2001.
AJ3871
AJ3871.The orthometric height was determined by GPS observations and a
AJ3871.high-resolution geoid model using precise GPS observation and
AJ3871.processing techniques.
AJ3871
AJ3871.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AJ3871
AJ3871.The Laplace correction was computed from DEFLEC99 derived deflections.
AJ3871
AJ3871.The ellipsoidal height was determined by GPS observations
AJ3871.and is referenced to NAD 83.
AJ3871
AJ3871.The geoid height was determined by GEOID99.
AJ3871
AJ3871;                     North         East     Units   Scale      Converg.
AJ3871;SPC AZ C     -   306,137.316   172,374.056   MT  0.99992070 -0 14 45.2
AJ3871;UTM  12      - 3,736,389.179   374,132.575   MT  0.99979531 -0 45 19.4
AJ3871
AJ3871                         SUPERSEDED SURVEY CONTROL
AJ3871
AJ3871.No superseded survey control is available for this station.
AJ3871
AJ3871_MARKER: DD = SURVEY DISK
AJ3871_SETTING: 66 = SET IN ROCK OUTCROP
AJ3871_STAMPING: 4JB3 2000
AJ3871_MARK LOGO: MCDOT
AJ3871_MAGNETIC: N = NO MAGNETIC MATERIAL
AJ3871_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3871+STABILITY: POSITION/ELEVATION WELL
AJ3871_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3871+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3871
AJ3871  HISTORY     - Date     Condition        Report By
AJ3871  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3871
AJ3871                          STATION DESCRIPTION
AJ3871
AJ3871'DESCRIBED BY MARICOPA CO DOT 1999 (JJR)
AJ3871'THE STATION IS LOCATED WITHIN THE CITY LIMITS OF PEORIA, TOWNSHIP 5
AJ3871'NORTH, RANGE 1 WEST, SECTION 21
AJ3871'OWNERSHIP - STATE LAND
AJ3871'TO REACH THE STATION FROM THE JUNCTION OF CAREFREE HIGHWAY AND LAKE
AJ3871'PLEASANT ROAD, DRIVE SOUTH ON LAKE PLEASANT ROAD 5.5 MI (8.9 KM) TO
AJ3871'THE INTERSECTION OF JOMAX ROAD AND LAKE PLEASANT ROAD, THENCE TURN
AJ3871'RIGHT (WEST) ON JOMAX ROAD AND DRIVE 1.2 MI (1.9 KM) TO THE
AJ3871'INTERSECTION OF 107TH AVENUE AND JOMAX ROAD, THENCE CONTINUE DRIVING
AJ3871'NORTHWEST ON JOMAX ROAD 0.3 MI (0.5 KM) TO THE END OF PAVEMENT, THENCE
AJ3871'CONTINUE DRIVING NORTHWEST ON THE DIRT ROAD 0.4 MI (0.6 KM) TO AN
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AJ3871'UNMARKED DIRT ROAD ON THE LEFT, THENCE CONTINUE DRIVING NORTHWEST 0.1
AJ3871'MI (0.2 KM) TO AN UNMARKED DIRT ROAD ON THE RIGHT, THENCE CONTINUE
AJ3871'DRIVING NORTHWEST, WEST AND SOUTHWEST 0.7 MI (1.1 KM) TO AN UNMARKED
AJ3871'DIRT ROAD ON THE LEFT, THENCE CONTINUE DRIVING SOUTHWEST 0.4 MI (0.6
AJ3871'KM) TO 115TH AVENUE (DIRT ROAD) ON THE LEFT, THENCE CONTINUE DRIVING
AJ3871'WESTERLY 0.6 MI (1.0 KM) TO LARGE OVERHEAD HIGH POWER LINES, THENCE
AJ3871'CONTINUE DRIVING WESTERLY CROSSING THE POWER LINES 0.1 MI (0.2 KM) TO
AJ3871'A CATTLE GUARD, THENCE CONTINUE ACROSS THE CATTLE GUARD DRIVING
AJ3871'WESTERLY 0.9 MI (1.4 KM) TO A SMALL BRIDGE ACROSS THE BEARDSLEY CANAL
AJ3871'ALIGNMENT, THENCE CROSS THE BRIDGE AND TURN TO THE RIGHT (NORTHEAST)
AJ3871'AND DRIVE NORTHEASTERLY ON AN UNMARKED DIRT ROAD 1.3 MI (2.1 KM) TO AN
AJ3871'UNMARKED DIRT ROAD ON THE RIGHT, THENCE CONTINUE DRIVING NORTHEASTERLY
AJ3871'AND NORTHERLY 1.0 MI (1.6 KM) TO A Y IN THE ROAD, THENCE STAY TO THE
AJ3871'LEFT SIDE OF THE Y AND CONTINUE DRIVING ON THE DIRT ROAD NORTHWESTERLY
AJ3871'1.3 MI (2.1 KM) TO AN UNMARKED DIRT ROAD ON THE LEFT, THENCE TURN LEFT
AJ3871'ONTO THE DIRT ROAD AND DRIVE SOUTHWESTERLY 0.1 MI (0.2 KM) TO A CHAIN
AJ3871'LINK FENCE FOR THE HAYDEN RHODES AQUEDUCT (CAP CANAL) , THENCE TURN
AJ3871'LEFT AND FOLLOW THE CHAIN LINK FENCE SOUTHEAST AND SOUTHWEST AROUND A
AJ3871'CORNER 0.1 MI, (0.2 KM) THENCE TURN LEFT (SOUTH) ONTO AN UNMARKED DIRT
AJ3871'ROAD DEPARTING THE FENCE AND DRIVE SOUTHERLY 0.6 MI (1.0 KM) TO A
AJ3871'WASH, THENCE DRIVE INTO THE WASH AND TURN RIGHT FOLLOWING THE WASH
AJ3871'NORTHWESTERLY 0.5 MI (0.8 KM) TO AN UNMARKED DIRT ROAD ON LEFT, THENCE
AJ3871'TURN LEFT (WESTERLY) ONTO THE DIRT ROAD EXITING THE WASH AND DRIVE 0.2
AJ3871'MI (0.3 KM) TO A FENCE, THENCE CONTINUE DRIVING WESTERLY ON THE DIRT
AJ3871'ROAD 0.2 MI (0.3 KM) TO A Y IN THE ROAD, THENCE STAY TO THE LEFT OF
AJ3871'THE Y AND CONTINUE DRIVING SOUTHWESTERLY AND SOUTHERLY 0.5 MI (0.8 KM)
AJ3871'TO THE STATION ON THE RIGHT 150 EAST OF THE CENTERLINE OF THE DIRT
AJ3871'ROAD
AJ3871'THE STATION IS MARKED BY A 3 1/4 INCH MARICOPA COUNTY D.O.T. BRASS
AJ3871'DISK STAMPED 4JB3 2000, SET IN A ROCK OUTCROP
AJ3871'STATION TIES -
AJ3871'150 FT (45.7 M) EAST OF THE CENTERLINE OF THE DIRT ROAD
AJ3871'100 FT (30.5 M) NORTH OF THE CENTERLINE OF THE DIRT ROAD
AJ3871'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3871'VISIT-WWW.MCDOT.MARICOPA.GOV SEARCH KEYWORD GDACS

Maricopa County

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AJ3872  DESIGNATION -  4JD2
AJ3872  PID         -  AJ3872
AJ3872  STATE/COUNTY-  AZ/MARICOPA
AJ3872  USGS QUAD   -  HIEROGLYPHIC MTS SW (1965)
AJ3872
AJ3872                        *CURRENT SURVEY CONTROL
AJ3872  ___________________________________________________________________
AJ3872* NAD 83(1992)-  33 46 03.95508(N)    112 27 52.13885(W)     ADJUSTED
AJ3872* NAVD 88     -       491.49   (meters)    1612.5    (feet)  GPS OBS
AJ3872  ___________________________________________________________________
AJ3872  X           -  -2,028,244.654 (meters)                     COMP
AJ3872  Y           -  -4,905,213.900 (meters)                     COMP
AJ3872  Z           -   3,525,318.423 (meters)                     COMP
AJ3872  LAPLACE CORR-           1.93  (seconds)                    DEFLEC99
AJ3872  ELLIP HEIGHT-         461.69  (meters)                     GPS OBS
AJ3872  GEOID HEIGHT-         -29.74  (meters)                     GEOID99
AJ3872
AJ3872  HORZ ORDER  -  B
AJ3872  ELLP ORDER  -  THIRD     CLASS II
AJ3872
AJ3872.The horizontal coordinates were established by GPS observations
AJ3872.and adjusted by the National Geodetic Survey in April 2001.
AJ3872
AJ3872.The orthometric height was determined by GPS observations and a
AJ3872.high-resolution geoid model using precise GPS observation and
AJ3872.processing techniques.
AJ3872
AJ3872.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AJ3872
AJ3872.The Laplace correction was computed from DEFLEC99 derived deflections.
AJ3872
AJ3872.The ellipsoidal height was determined by GPS observations
AJ3872.and is referenced to NAD 83.
AJ3872
AJ3872.The geoid height was determined by GEOID99.
AJ3872
AJ3872;                     North         East     Units   Scale      Converg.
AJ3872;SPC AZ C     -   307,031.720   162,617.570   MT  0.99993173 -0 18 16.2
AJ3872;UTM  12      - 3,737,370.204   364,385.552   MT  0.99982673 -0 48 50.8
AJ3872
AJ3872                         SUPERSEDED SURVEY CONTROL
AJ3872
AJ3872.No superseded survey control is available for this station.
AJ3872
AJ3872_MARKER: I = METAL ROD
AJ3872_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AJ3872_STAMPING: 4JD2 1999
AJ3872_MARK LOGO: MCDOT
AJ3872_PROJECTION: PROJECTING 18 CENTIMETERS
AJ3872_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3872_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3872+STABILITY: POSITION/ELEVATION WELL
AJ3872_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3872+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3872_ROD/PIPE-DEPTH:  8.5 meters
AJ3872_SLEEVE-DEPTH  :  0.8 meters
AJ3872
AJ3872  HISTORY     - Date     Condition        Report By
AJ3872  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3872
AJ3872                         STATION DESCRIPTION
AJ3872
AJ3872'DESCRIBED BY MARICOPA CO DOT 1999 (JJR)
AJ3872'THE STATION IS LOCATED ABOUT 10.5 MI (16.9 KM) NORTHWEST OF SUN CITY
AJ3872'WEST, TOWNSHIP 5 NORTH, RANGE 2 WEST, SECTION 16
AJ3872'OWNERSHIP - PRIVATE
AJ3872'TO REACH THE STATION FROM THE JUNCTION OF U.S.  60 (GRAND AVENUE) AND
AJ3872'203RD AVENUE, DRIVE NORTH ON 203RD AVENUE 1.9 MI (3.1 KM) TO THE
AJ3872'INTERSECTION OF DOVE VALLEY ROAD AND 203RD AVENUE, THENCE TURN RIGHT
AJ3872'(EAST) ONTO DOVE VALLEY ROAD AND DRIVE 2.0 MI (3.2 KM) TO A
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AJ3872'NORTH-SOUTH DIRT ROAD, THENCE TURN RIGHT (SOUTH) ONTO THE DIRT ROAD
AJ3872'AND DRIVE 0.9 MI (1.4 KM) TO THE STATION ON THE RIGHT 30 FT (9.1 M)
AJ3872'FROM THE CENTERLINE OF THE DIRT ROAD
AJ3872'THE STATION IS MARKED BY AN ALUMINUM CAP COMPRESSED ON A 28.0 FOOT
AJ3872'(8.5 M) STAINLESS STEEL ROD DRIVEN TO REFUSAL, ENCASED IN A 1 INCH
AJ3872'GREASED PVC SLEEVE ENCLOSED IN A 5 INCH PVC PIPE WITH A COUNTY LOGO
AJ3872'ACCESS COVER STAMPED 4JD2 1999, SURROUNDED WITH A CONCRETE COLLAR
AJ3872'ABOVE THE GROUND, WITNESSED BY A WHITE CARSONITE MARKER
AJ3872'STATION TIES -
AJ3872'30 FT (9.1 M) WEST OF A DIRT ROAD
AJ3872'44 FT (13.4 M) NORTHWEST OF A GLO MONUMENT
AJ3872'25 FT (7.6 M) NORTH OF A DIRT ROAD
AJ3872'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3872'VISIT-WWW.MCDOT.MARICOPA.GOV SEARCH KEYWORD GDACS

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AJ3873  DESIGNATION -  4JF2
AJ3873  PID         -  AJ3873
AJ3873  STATE/COUNTY-  AZ/MARICOPA
AJ3873  USGS QUAD   -  WITTMANN (1981)
AJ3873
AJ3873                        *CURRENT SURVEY CONTROL
AJ3873  ____________________________________________________________
AJ3873* NAD 83(1992)-  33 46 04.39833(N)    112 34 06.99510(W)     ADJUSTED
AJ3873* NAVD 88     -       512.03   (meters)    1679.9    (feet)  GPS OBS
AJ3873  ____________________________________________________________
AJ3873  X           -  -2,037,159.416 (meters)                     COMP
AJ3873  Y           -  -4,901,528.435 (meters)                     COMP
AJ3873  Z           -   3,525,341.132 (meters)                     COMP
AJ3873  LAPLACE CORR-           1.54  (seconds)                    DEFLEC99
AJ3873  ELLIP HEIGHT-         482.12  (meters)                     GPS OBS
AJ3873  GEOID HEIGHT-         -29.86  (meters)                     GEOID99
AJ3873
AJ3873  HORZ ORDER  -  B
AJ3873  ELLP ORDER  -  THIRD     CLASS II
AJ3873
AJ3873.The horizontal coordinates were established by GPS observations
AJ3873.and adjusted by the National Geodetic Survey in April 2001.
AJ3873
AJ3873.The orthometric height was determined by GPS observations and a
AJ3873.high-resolution geoid model using precise GPS observation and
AJ3873.processing techniques.
AJ3873
AJ3873.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AJ3873
AJ3873.The Laplace correction was computed from DEFLEC99 derived deflections.
AJ3873
AJ3873.The ellipsoidal height was determined by GPS observations
AJ3873.and is referenced to NAD 83.
AJ3873
AJ3873.The geoid height was determined by GEOID99.
AJ3873
AJ3873;                    North         East     Units   Scale      Converg.
AJ3873;SPC AZ C     -   307,101.507   152,972.591   MT  0.99994494 -0 21 44.6
AJ3873;UTM  12      - 3,737,525.763   354,742.491   MT  0.99986012 -0 52 19.3
AJ3873
AJ3873                         SUPERSEDED SURVEY CONTROL
AJ3873
AJ3873.No superseded survey control is available for this station.
AJ3873
AJ3873_MARKER: I = METAL ROD
AJ3873_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AJ3873_STAMPING: 4JF2 1999
AJ3873_MARK LOGO: MCDOT
AJ3873_PROJECTION: FLUSH
AJ3873_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3873_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3873+STABILITY: POSITION/ELEVATION WELL
AJ3873_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3873+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3873_ROD/PIPE-DEPTH: 15.5 meters
AJ3873_SLEEVE-DEPTH  :  0.8 meters
AJ3873
AJ3873  HISTORY     - Date     Condition        Report By
AJ3873  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3873
AJ3873                         STATION DESCRIPTION
AJ3873
AJ3873'DESCRIBED BY MARICOPA CO DOT 1999 (JJR)
AJ3873'THE STATION IS LOCATED ABOUT 2.4 MI (3.9 KM) SOUTHWEST OF THE TOWN OF
AJ3873'WITTMANN, TOWNSHIP 5 NORTH, RANGE 3 WEST, SECTION 16
AJ3873'OWNERSHIP - STATE LAND DEPARTMENT
AJ3873'TO REACH THE STATION FROM THE JUNCTION OF U.S.  60 (GRAND AVENUE) AND
AJ3873'CENTER STREET IN WITTMANN, DRIVE SOUTHEAST ON CENTER STREET 0.4 MI
AJ3873'(0.6 KM) TO THE INTERSECTION OF CROZIER ROAD AND CENTER STREET, THENCE
AJ3873'TURN LEFT (SOUTH) ONTO CROZIER ROAD AND DRIVE 0.4 MI (0.6 KM) TO THE
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AJ3873'INTERSECTION OF LONE MOUNTAIN ROAD AND CROZIER ROAD, THENCE TURN RIGHT
AJ3873'(WEST) ONTO LONE MOUNTAIN ROAD AND DRIVE 2.0 MI (3.2 KM) TO A BARBED
AJ3873'WIRE FENCE CORNER AND GLO BRASS CAP FOR THE SOUTHEAST CORNER OF
AJ3873'SECTION 16 ON THE RIGHT (NORTH) SIDE OF THE ROAD, THENCE CONTINUE
AJ3873'DRIVING WEST 73 FT (22.3 M) TO THE STATION ABOUT 78 FT (23.8 M) ON THE
AJ3873'RIGHT (NORTH) THE STATION IS MARKED BY AN ALUMINUM CAP COMPRESSED ON A
AJ3873'50.7 FOOT (15.5 M) STAINLESS STEEL ROD DRIVEN TO REFUSAL, ENCASED IN A
AJ3873'1 INCH GREASED PVC SLEEVE ENCLOSED IN A 5 INCH PVC PIPE WITH A COUNTY
AJ3873'LOGO ACCESS COVER STAMPED 4JF2 1999, SURROUNDED WITH A CONCRETE FLUSH
AJ3873'COLLAR WITH THE GROUND, WITNESSED BY WHITE CARSONITE MARKER
AJ3873'STATION TIES -
AJ3873'72.8 FT (22.2 M) WEST OF A BARBED WIRE FENCE
AJ3873'51.0 FT (15.5 M) NORTHWEST OF A BUREAU OF RECLAMATION BRASS CAP SET IN
AJ3873'CONCRETE STAMPED H-17 1955 ELEVATION 1678.5
AJ3873'68.0 FT (20.7 M) NORTH OF A BARBED WIRE FENCE
AJ3873'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3873'VISIT-WWW.MCDOT.MARICOPA.GOV       SEARCH KEYWORD  GDACS
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AJ3874  DESIGNATION -  4JH5
AJ3874  PID         -  AJ3874
AJ3874  STATE/COUNTY-  AZ/MARICOPA
AJ3874  USGS QUAD   -  WICKENBURG SW (1965)
AJ3874
AJ3874                        *CURRENT SURVEY CONTROL
AJ3874  ___________________________________________________________________
AJ3874* NAD 83(1992)-  33 46 08.44057(N)    112 39 49.77108(W)     ADJUSTED
AJ3874* NAVD 88     -      520.46   (meters)    1707.5    (feet)  GPS OBS
AJ3874  ___________________________________________________________________
AJ3874  X           -  -2,045,278.066 (meters)                    COMP
AJ3874  Y           -  -4,898,078.755 (meters)                    COMP
AJ3874  Z           -   3,525,449.291 (meters)                    COMP
AJ3874  LAPLACE CORR-           2.01  (seconds)                   DEFLEC99
AJ3874  ELLIP HEIGHT-         490.43  (meters)                    GPS OBS
AJ3874  GEOID HEIGHT-         -29.98  (meters)                    GEOID99
AJ3874
AJ3874  HORZ ORDER  -  B
AJ3874  ELLP ORDER  -  THIRD     CLASS II
AJ3874
AJ3874.The horizontal coordinates were established by GPS observations
AJ3874.and adjusted by the National Geodetic Survey in April 2001.
AJ3874
AJ3874.The orthometric height was determined by GPS observations and a
AJ3874.high-resolution geoid model using precise GPS observation and
AJ3874.processing techniques.
AJ3874
AJ3874.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AJ3874
AJ3874.The Laplace correction was computed from DEFLEC99 derived deflections.
AJ3874
AJ3874.The ellipsoidal height was determined by GPS observations
AJ3874.and is referenced to NAD 83.
AJ3874
AJ3874.The geoid height was determined by GEOID99.
AJ3874
AJ3874;                     North         East     Units   Scale      Converg.
AJ3874;SPC AZ C     -   307,285.899   144,153.801   MT  0.99995903 -0 24 55.2
AJ3874;UTM  12      - 3,737,788.574   345,926.356   MT  0.99989265 -0 55 30.0
AJ3874
AJ3874                          SUPERSEDED SURVEY CONTROL
AJ3874
AJ3874.No superseded survey control is available for this station.
AJ3874
AJ3874_MARKER: I = METAL ROD
AJ3874_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AJ3874_STAMPING: 4JH5 1999
AJ3874_MARK LOGO: MCDOT
AJ3874_PROJECTION: FLUSH
AJ3874_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3874_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3874+STABILITY: POSITION/ELEVATION WELL
AJ3874_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3874+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3874_ROD/PIPE-DEPTH: 29.3 meters
AJ3874_SLEEVE-DEPTH  :  0.8 meters
AJ3874
AJ3874  HISTORY     - Date     Condition        Report By
AJ3874  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3874
AJ3874                          STATION DESCRIPTION
AJ3874
AJ3874'DESCRIBED BY MARICOPA CO DOT 1999 (JJR)
AJ3874'THE STATION IS LOCATED ABOUT 8.0 MI (12.9 KM) WEST OF THE TOWN OF
AJ3874'WITTMANN, TOWNSHIP 5 NORTH, RANGE 4 WEST, SECTION 15
AJ3874'OWNERSHIP - STATE LAND DEPARTMENT
AJ3874'TO REACH THE STATION FROM THE JUNCTION OF U.S.  60 (GRAND AVENUE) AND
AJ3874'PATTON ROAD, DRIVE WEST ON PATTON ROAD 11.2 MI (18.0 KM) TO THE
AJ3874'INTERSECTION OF OGDEN ROAD AND PATTON ROAD, THENCE TURN RIGHT (NORTH)
AJ3874'ONTO OGDEN ROAD AND DRIVE NORTHEASTERLY 2.0 MI (3.2 KM) TO A Y IN THE
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AJ3874'ROAD, THENCE STAY TO THE LEFT OF THE Y AND DRIVE 0.5 MI (0.8 KM) AND
AJ3874'PARK, THENCE HIKE ABOUT 30 YARDS NORTH UP ON TOP OF A KNOLL TO THE
AJ3874'STATION
AJ3874'THE STATION IS MARKED BY AN ALUMINUM CAP COMPRESSED ON A 96.0 FOOT
AJ3874'(29.3 M) STAINLESS STEEL ROD DRIVEN TO REFUSAL, ENCASED IN A 1 INCH
AJ3874'GREASED PVC SLEEVE ENCLOSED IN A 5 INCH PVC PIPE WITH A COUNTY LOGO
AJ3874'ACCESS COVER STAMPED 4JH5 1999, SURROUNDED WITH A CONCRETE COLLAR
AJ3874'FLUSH WITH THE GROUND, WITNESSED BY A WHITE CARSONITE MARKER
AJ3874'STATION TIES -
AJ3874'NO TIES
AJ3874'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3874'VISIT-WWW.MCDOT.MARICOPA.GOV       SEARCH KEYWORD  GDACS
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Maricopa County

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AJ3878  DESIGNATION -  4KE1
AJ3878  PID         -  AJ3878
AJ3878  STATE/COUNTY-  AZ/MARICOPA
AJ3878  USGS QUAD   -  WITTMANN (1981)
AJ3878
AJ3878                        *CURRENT SURVEY CONTROL
AJ3878  ___________________________________________________________________
AJ3878* NAD 83(1992)-  33 48 40.67683(N)    112 30 57.64977(W)     ADJUSTED
AJ3878* NAVD 88     -       554.55   (meters)    1819.4    (feet)  GPS OBS
AJ3878  ___________________________________________________________________
AJ3878  X           -  -2,031,647.137 (meters)                     COMP
AJ3878  Y           -  -4,900,955.279 (meters)                     COMP
AJ3878  Z           -   3,529,366.923 (meters)                     COMP
AJ3878  LAPLACE CORR-            2.27  (seconds)                   DEFLEC99
AJ3878  ELLIP HEIGHT-          524.83  (meters)                    GPS OBS
AJ3878  GEOID HEIGHT-          -29.67  (meters)                    GEOID99
AJ3878
AJ3878  HORZ ORDER  -  B
AJ3878  ELLP ORDER  -  THIRD     CLASS II
AJ3878
AJ3878.The horizontal coordinates were established by GPS observations
AJ3878.and adjusted by the National Geodetic Survey in April 2001.
AJ3878
AJ3878.The orthometric height was determined by GPS observations and a
AJ3878.high-resolution geoid model using precise GPS observation and
AJ3878.processing techniques.
AJ3878
AJ3878.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AJ3878
AJ3878.The Laplace correction was computed from DEFLEC99 derived deflections.
AJ3878
AJ3878.The ellipsoidal height was determined by GPS observations
AJ3878.and is referenced to NAD 83.
AJ3878
AJ3878.The geoid height was determined by GEOID99.
AJ3878
AJ3878;                    North         East     Units   Scale      Converg.
AJ3878;SPC AZ C     -   311,886.609   157,872.466   MT  0.99993794 -0 20 00.7
AJ3878;UTM  12      - 3,742,266.640   359,684.314   MT  0.99984272 -0 50 37.5
AJ3878
AJ3878                         SUPERSEDED SURVEY CONTROL
AJ3878
AJ3878.No superseded survey control is available for this station.
AJ3878
AJ3878_MARKER: I = METAL ROD
AJ3878_SETTING: 15 = METAL ROD DRIVEN INTO GROUND. SEE TEXT FOR ADDITIONAL
AJ3878+WITH SETTING: INFORMATION.
AJ3878_STAMPING: 4KE1
AJ3878_MARK LOGO: MCDOT
AJ3878_PROJECTION: PROJECTING 23 CENTIMETERS
AJ3878_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3878_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3878+STABILITY: POSITION/ELEVATION WELL
AJ3878_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3878+SATELLITE: SATELLITE OBSERVATIONS - 2000
AJ3878_ROD/PIPE-DEPTH:  1.8 meters
AJ3878_SLEEVE-DEPTH  :  0.8 meters
AJ3878
AJ3878  HISTORY     - Date     Condition        Report By
AJ3878  HISTORY     - 2000     MONUMENTED       MCDOT
AJ3878
AJ3878                         STATION DESCRIPTION
AJ3878
AJ3878'DESCRIBED BY MARICOPA CO DOT 2000 (JJR)
AJ3878'THE STATION IS LOCATED ABOUT 3.5 MI (5.6 KM) NORTH-NORTHEAST OF THE
AJ3878'TOWN OF WITTMANN, TOWNSHIP 6 NORTH, RANGE 2 WEST, SECTION 31
AJ3878'OWNERSHIP - PRIVATE
AJ3878'TO REACH THE STATION FROM THE JUNCTION OF INTERSTATE 17 AND STATE
AJ3878'ROUTE 74 AT EXIT 223, DRIVE WESTERLY ON STATE ROUTE 74 APPROXIMATELY
AJ3878'22 MI (35.4 KM) TO THE INTERSECTION OF 211TH AVENUE AND STATE ROUTE
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AJ3878'74, THENCE TURN LEFT (SOUTH) ONTO 211TH AVENUE AND DRIVE SOUTHERLY 2.2
AJ3878'MI (3.5 KM) TO THE STATION ON THE LEFT 50 FT (15.2 M) EAST OF THE ROAD
AJ3878'THE STATION IS MARKED BY AN ALUMINUM CAP COMPRESSED ON A 6.0 FOOT (1.8
AJ3878'M) STAINLESS STEEL ROD DRIVEN TO REFUSAL, ENCASED IN A 1 INCH GREASED
AJ3878'PVC SLEEVE ENCLOSED IN A 5 INCH PVC PIPE WITH A COUNTY LOGO ACCESS
AJ3878'COVER STAMPED 4KE1, SURROUNDED WITH A CONCRETE COLLAR FLUSH WITH THE
AJ3878'GROUND, WITNESSED BY A WHITE CARSONITE MARKER
AJ3878'STATION TIES -
AJ3878'75 FT (22.9 M) NORTH OF MILE POST 2
AJ3878'6 FT (1.8 M) WEST OF A BARBED WIRE FENCE ON THE EAST SIDE OF 211TH
AJ3878'AVENUE
AJ3878'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3878'VISIT-WWW.MCDOT.MARICOPA.GOV SEARCH KEYWORD GDACS

Maricopa County

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AJ3884  DESIGNATION -  4LB2
AJ3884  PID         -  AJ3884
AJ3884  STATE/COUNTY-  AZ/MARICOPA
AJ3884  USGS QUAD   -  BALDY MTN (1981)
AJ3884
AJ3884                        *CURRENT SURVEY CONTROL
AJ3884  ___________________________________________________________________
AJ3884* NAD 83(1992)-  33 49 57.82721(N)    112 21 38.29527(W)     ADJUSTED
AJ3884* NAVD 88     -       565.49   (meters)    1855.3    (feet)  GPS OBS
AJ3884  ___________________________________________________________________
AJ3884  X           -  -2,017,849.285 (meters)                     COMP
AJ3884  Y           -  -4,905,231.621 (meters)                     COMP
AJ3884  Z           -   3,531,348.134 (meters)                     COMP
AJ3884  LAPLACE CORR-           0.65  (seconds)                    DEFLEC99
AJ3884  ELLIP HEIGHT-         536.05  (meters)                     GPS OBS
AJ3884  GEOID HEIGHT-         -29.40  (meters)                     GEOID99
AJ3884
AJ3884  HORZ ORDER  -  B
AJ3884  ELLP ORDER  -  THIRD     CLASS II
AJ3884
AJ3884.The horizontal coordinates were established by GPS observations
AJ3884.and adjusted by the National Geodetic Survey in April 2001.
AJ3884
AJ3884.The orthometric height was determined by GPS observations and a
AJ3884.high-resolution geoid model using precise GPS observation and
AJ3884.processing techniques.
AJ3884
AJ3884.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AJ3884
AJ3884.The Laplace correction was computed from DEFLEC99 derived deflections.
AJ3884
AJ3884.The ellipsoidal height was determined by GPS observations
AJ3884.and is referenced to NAD 83.
AJ3884
AJ3884.The geoid height was determined by GEOID99.
AJ3884
AJ3884;                     North         East     Units   Scale      Converg.
AJ3884;SPC AZ C     -   314,190.589   172,267.574   MT  0.99992081 -0 14 49.9
AJ3884;UTM  12      - 3,744,442.071   374,097.783   MT  0.99979541 -0 45 27.6
AJ3884
AJ3884                          SUPERSEDED SURVEY CONTROL
AJ3884
AJ3884.No superseded survey control is available for this station.
AJ3884
AJ3884_MARKER: I = METAL ROD
AJ3884_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AJ3884_STAMPING: 4LB2 11/99
AJ3884_MARK LOGO: MCDOT
AJ3884_PROJECTION: FLUSH
AJ3884_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3884_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3884+STABILITY: POSITION/ELEVATION WELL
AJ3884_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3884+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3884_ROD/PIPE-DEPTH:  5.5 meters
AJ3884_SLEEVE-DEPTH  :  0.8 meters
AJ3884
AJ3884  HISTORY     - Date     Condition        Report By
AJ3884  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3884
AJ3884                          STATION DESCRIPTION
AJ3884
AJ3884'DESCRIBED BY MARICOPA CO DOT 1999 (JJR)
AJ3884'THE STATION IS LOCATED ABOUT 13.7 MI (22.0 KM) SOUTHWEST OF THE TOWN
AJ3884'OF NEW RIVER, TOWNSHIP 6 NORTH, RANGE 1 WEST, SECTION 28
AJ3884'OWNERSHIP - AZ DEPARTMENT OF TRANSPORTATION RIGHT OF WAY
AJ3884'TO REACH THE STATION FROM THE JUNCTION OF INTERSTATE 17 AND CAREFREE
AJ3884'HIGHWAY AT EXIT 223, DRIVE WESTERLY ON CAREFREE HIGHWAY 14.0 MI (22.5
AJ3884'KM) TO THE MONUMENT ON THE RIGHT (NORTH) 5 FT (1.5 M) SOUTH OF A
AJ3884'BARBED WIRE RIGHT OF WAY FENCE
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AJ3884'THE STATION IS MARKED BY AN ALUMINUM CAP COMPRESSED ON A 18.0 FOOT
AJ3884'(5.5 M) STAINLESS STEEL ROD DRIVEN TO REFUSAL, ENCASED IN A 1 INCH
AJ3884'GREASED PVC SLEEVE ENCLOSED IN A 5 INCH PVC PIPE WITH A COUNTY LOGO
AJ3884'ACCESS COVER STAMPED 4LB2 11/99, SURROUNDED WITH A CONCRETE COLLAR
AJ3884'FLUSH WITH THE GROUND, WITNESSED BY A WHITE CARSONITE MARKER
AJ3884'STATION TIES -
AJ3884'5.0 FT (1.5 M) SOUTH OF A BARBED WIRE FENCE
AJ3884'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3884'VISIT-WWW.MCDOT.MARICOPA.GOV       SEARCH KEYWORD  GDACS
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AJ3885  DESIGNATION -  4LD2
AJ3885  PID         -  AJ3885
AJ3885  STATE/COUNTY-  AZ/MARICOPA
AJ3885  USGS QUAD   -  HIEROGLYPHIC MTS SW (1965)
AJ3885
AJ3885                        *CURRENT SURVEY CONTROL
AJ3885  ____________________________________________________________________
AJ3885* NAD 83(1992)-  33 50 15.91309(N)    112 27 03.26928(W)     ADJUSTED
AJ3885* NAVD 88     -       609.19   (meters)    1998.7    (feet)  GPS OBS
AJ3885  ____________________________________________________________________
AJ3885  X           -  -2,025,470.395 (meters)                     COMP
AJ3885  Y           -  -4,901,793.077 (meters)                     COMP
AJ3885  Z           -   3,531,835.332 (meters)                     COMP
AJ3885  LAPLACE CORR-           1.93  (seconds)                    DEFLEC99
AJ3885  ELLIP HEIGHT-         579.67  (meters)                     GPS OBS
AJ3885  GEOID HEIGHT-         -29.47  (meters)                     GEOID99
AJ3885
AJ3885  HORZ ORDER  -  B
AJ3885  ELLP ORDER  -  THIRD     CLASS II
AJ3885
AJ3885.The horizontal coordinates were established by GPS observations
AJ3885.and adjusted by the National Geodetic Survey in April 2001.
AJ3885
AJ3885.The orthometric height was determined by GPS observations and a
AJ3885.high-resolution geoid model using precise GPS observation and
AJ3885.processing techniques.
AJ3885
AJ3885.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AJ3885
AJ3885.The Laplace correction was computed from DEFLEC99 derived deflections.
AJ3885
AJ3885.The ellipsoidal height was determined by GPS observations
AJ3885.and is referenced to NAD 83.
AJ3885
AJ3885.The geoid height was determined by GEOID99.
AJ3885
AJ3885;                    North         East     Units   Scale      Converg.
AJ3885;SPC AZ C     -   314,787.498   163,915.249   MT  0.99993013 -0 17 51.0
AJ3885;UTM  12      - 3,745,113.297   365,752.081   MT  0.99982218 -0 48 29.0
AJ3885
AJ3885                         SUPERSEDED SURVEY CONTROL
AJ3885
AJ3885.No superseded survey control is available for this station.
AJ3885
AJ3885_MARKER: I = METAL ROD
AJ3885_SETTING: 15 = METAL ROD DRIVEN INTO GROUND. SEE TEXT FOR ADDITIONAL
AJ3885+WITH SETTING: INFORMATION.
AJ3885_STAMPING: 4LD2 12/99
AJ3885_MARK LOGO: MCDOT
AJ3885_PROJECTION: FLUSH
AJ3885_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3885_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3885+STABILITY: POSITION/ELEVATION WELL
AJ3885_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3885+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3885_ROD/PIPE-DEPTH:  2.4 meters
AJ3885_SLEEVE-DEPTH  :  0.8 meters
AJ3885
AJ3885  HISTORY     - Date     Condition        Report By
AJ3885  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3885
AJ3885                         STATION DESCRIPTION
AJ3885
AJ3885'DESCRIBED BY MARICOPA CO DOT 1999 (JJR)
AJ3885'THE STATION IS LOCATED ABOUT 18.5 MI (29.8 KM) SOUTHWEST OF THE TOWN
AJ3885'OF NEW RIVER, TOWNSHIP 6 NORTH, RANGE 2 WEST, SECTION 21
AJ3885'OWNERSHIP - BLM
AJ3885'TO REACH THE STATION FROM THE JUNCTION OF INTERSTATE 17 AND CAREFREE
AJ3885'HIGHWAY AT EXIT 223, DRIVE WESTERLY ON CAREFREE HIGHWAY 19.1 MI (30.7
AJ3885'KM) TO AN UNMARKED DIRT ROAD ON THE RIGHT, THENCE TURN RIGHT
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AJ3885'(NORTHERLY) ONTO THE DIRT ROAD AND DRIVE 0.4 MI (0.6 KM) TO THE
AJ3885'STATION 100 FT (30.5 M) RIGHT (EAST) OF THE CENTERLINE OF THE ROAD
AJ3885'THE STATION IS MARKED BY AN ALUMINUM CAP COMPRESSED ON A 8.0 FOOT (2.4
AJ3885'M) STAINLESS STEEL ROD DRIVEN TO REFUSAL, ENCASED IN A 1 INCH GREASED
AJ3885'PVC SLEEVE ENCLOSED IN A 5 INCH PVC PIPE WITH A COUNTY LOGO ACCESS
AJ3885'COVER STAMPED 4LD2 12/99, SURROUNDED WITH A CONCRETE COLLAR FLUSH WITH
AJ3885'THE GROUND, WITNESSED BY A WHITE CARSONITE MARKER
AJ3885'STATION TIES -
AJ3885'100.0 FT (30.5 M) EAST OF THE CENTERLINE OF THE DIRT ROAD
AJ3885'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3885'VISIT-WWW.MCDOT.MARICOPA.GOV SEARCH KEYWORD GDACS

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AJ3886  DESIGNATION -  4LE2
AJ3886  PID         -  AJ3886
AJ3886  STATE/COUNTY-  AZ/MARICOPA
AJ3886  USGS QUAD   -  WITTMANN (1981)
AJ3886
AJ3886                        *CURRENT SURVEY CONTROL
AJ3886  ___________________________________________________________________
AJ3886* NAD 83(1992)-  33 50 52.70425(N)    112 30 30.62008(W)     ADJUSTED
AJ3886* NAVD 88     -       615.77   (meters)    2020.2    (feet)  GPS OBS
AJ3886  ___________________________________________________________________
AJ3886  X           -  -2,030,157.343 (meters)                     COMP
AJ3886  Y           -  -4,899,176.193 (meters)                     COMP
AJ3886  Z           -   3,532,780.553 (meters)                     COMP
AJ3886  LAPLACE CORR-           2.45  (seconds)                    DEFLEC99
AJ3886  ELLIP HEIGHT-         586.18  (meters)          (04/12/01) GPS OBS
AJ3886  GEOID HEIGHT-         -29.52  (meters)                     GEOID99
AJ3886
AJ3886  HORZ ORDER  -  B
AJ3886  ELLP ORDER  -  THIRD     CLASS II
AJ3886
AJ3886.The horizontal coordinates were established by GPS observations
AJ3886.and adjusted by the National Geodetic Survey in April 2001.
AJ3886
AJ3886.The orthometric height was determined by GPS observations and a
AJ3886.high-resolution geoid model using precise GPS observation and
AJ3886.processing techniques.
AJ3886
AJ3886.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AJ3886
AJ3886.The Laplace correction was computed from DEFLEC99 derived deflections.
AJ3886
AJ3886.The ellipsoidal height was determined by GPS observations
AJ3886.and is referenced to NAD 83.
AJ3886
AJ3886.The geoid height was determined by GEOID99.
AJ3886
AJ3886;                     North         East     Units   Scale      Converg.
AJ3886;SPC AZ C     -   315,950.151   158,590.981   MT  0.99993697 -0 19 46.8
AJ3886;UTM  12      - 3,746,323.230   360,438.931   MT  0.99984011 -0 50 25.3
AJ3886
AJ3886                          SUPERSEDED SURVEY CONTROL
AJ3886
AJ3886.No superseded survey control is available for this station.
AJ3886
AJ3886_U.S. NATIONAL GRID SPATIAL ADDRESS: 12SUC6043946323(NAD 83)
AJ3886_MARKER: I = METAL ROD
AJ3886_SETTING: 15 = METAL ROD DRIVEN INTO GROUND. SEE TEXT FOR ADDITIONAL
AJ3886+WITH SETTING: INFORMATION.
AJ3886_STAMPING: 4LE2 1/00
AJ3886_MARK LOGO: MCDOT
AJ3886_PROJECTION: FLUSH
AJ3886_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3886_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3886+STABILITY: POSITION/ELEVATION WELL
AJ3886_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3886+SATELLITE: SATELLITE OBSERVATIONS - 2000
AJ3886_ROD/PIPE-DEPTH:  2.4 meters
AJ3886_SLEEVE-DEPTH  :  0.8 meters
AJ3886
AJ3886  HISTORY     - Date     Condition        Report By
AJ3886  HISTORY     - 2000     MONUMENTED       MCDOT
AJ3886
AJ3886                          STATION DESCRIPTION
AJ3886
AJ3886'DESCRIBED BY MARICOPA CO DOT 2000 (JJR)
AJ3886'THE STATION IS LOCATED ABOUT 5.0 MI (8.0 KM) NORTH OF THE TOWN OF
AJ3886'WITTMANN, TOWNSHIP 6 NORTH, RANGE 2 WEST, SECTION 18
AJ3886'OWNERSHIP - PRIVATE
AJ3886'TO REACH THE STATION FROM THE JUNCTION OF INTERSTATE 17 AND CAREFREE
AJ3886'HIGHWAY AT EXIT 223, DRIVE WESTERLY ON CAREFREE HIGHWAY 23.5 MI (37.8
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AJ3886'KM) TO AN UNMARKED DIRT ROAD ON THE RIGHT BEING 0.6 MI (1.0 KM) WEST
AJ3886'OF MILE POST 8, THENCE TURN RIGHT (NORTHERLY) ONTO THE DIRT ROAD AND
AJ3886'DRIVE 0.2 MI (0.3 KM) TO A Y IN THE ROAD, THENCE STAY TO THE RIGHT OF
AJ3886'THE Y AND DRIVE 0.1 MI (0.2 KM) TO THE STATION 30 FT (9.1 M) RIGHT OF
AJ3886'THE CENTERLINE OF THE ROAD
AJ3886'THE STATION IS MARKED BY AN ALUMINUM CAP COMPRESSED ON AN 8.0 FOOT
AJ3886'(2.4 M) STAINLESS STEEL ROD DRIVEN TO REFUSAL, ENCASED IN A 1 INCH
AJ3886'GREASED PVC SLEEVE ENCLOSED IN A 5 INCH PVC PIPE WITH A COUNTY LOGO
AJ3886'ACCESS COVER STAMPED 4LE2 1/00, SURROUNDED WITH A CONCRETE COLLAR
AJ3886'FLUSH WITH THE GROUND, WITNESSED BY A WHITE CARSONITE MARKER
AJ3886'STATION TIES -
AJ3886'30.0 FT (9.1 M) EAST OF THE CENTERLINE OF THE DIRT ROAD
AJ3886'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3886'VISIT-WWW.MCDOT.MARICOPA.GOV SEARCH KEYWORD GDACS

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AJ3888  DESIGNATION -  4LH2
AJ3888  PID         -  AJ3888
AJ3888  STATE/COUNTY-  AZ/MARICOPA
AJ3888  USGS QUAD   -  WICKENBURG SW (1965)
AJ3888
AJ3888                        *CURRENT SURVEY CONTROL
AJ3888
AJ3888* NAD 83(1992)-  33 51 56.29312(N)    112 37 55.13352(W)     ADJUSTED
AJ3888* NAVD 88     -       603.15   (meters)    1978.8    (feet)  GPS OBS
AJ3888
AJ3888  X           -  -2,040,286.500 (meters)                     COMP
AJ3888  Y           -  -4,893,772.355 (meters)                     COMP
AJ3888  Z           -   3,534,400.609 (meters)                     COMP
AJ3888  LAPLACE CORR-           2.53  (seconds)                    DEFLEC99
AJ3888  ELLIP HEIGHT-         573.42  (meters)                     GPS OBS
AJ3888  GEOID HEIGHT-         -29.67  (meters)                     GEOID99
AJ3888
AJ3888  HORZ ORDER  -  B
AJ3888  ELLP ORDER  -  THIRD     CLASS II
AJ3888
AJ3888.The horizontal coordinates were established by GPS observations
AJ3888.and adjusted by the National Geodetic Survey in April 2001.
AJ3888
AJ3888.The orthometric height was determined by GPS observations and a
AJ3888.high-resolution geoid model using precise GPS observation and
AJ3888.processing techniques.
AJ3888
AJ3888.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AJ3888
AJ3888.The Laplace correction was computed from DEFLEC99 derived deflections.
AJ3888
AJ3888.The ellipsoidal height was determined by GPS observations
AJ3888.and is referenced to NAD 83.
AJ3888
AJ3888.The geoid height was determined by GEOID99.
AJ3888
AJ3888;                    North         East     Units   Scale      Converg.
AJ3888;SPC AZ C     -   317,981.858   147,177.885   MT  0.99995398 -0 23 55.0
AJ3888;UTM  12      - 3,748,456.430   349,045.370   MT  0.99988092 -0 54 34.5
AJ3888
AJ3888                          SUPERSEDED SURVEY CONTROL
AJ3888
AJ3888.No superseded survey control is available for this station.
AJ3888
AJ3888_MARKER: I = METAL ROD
AJ3888_SETTING: 15 = METAL ROD DRIVEN INTO GROUND. SEE TEXT FOR ADDITIONAL
AJ3888+WITH SETTING: INFORMATION.
AJ3888_STAMPING: 4LH2 12/99
AJ3888_MARK LOGO: MCDOT
AJ3888_PROJECTION: FLUSH
AJ3888_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3888_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3888+STABILITY: POSITION/ELEVATION WELL
AJ3888_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3888+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3888_ROD/PIPE-DEPTH:  1.8 meters
AJ3888_SLEEVE-DEPTH  :  0.8 meters
AJ3888
AJ3888  HISTORY     - Date     Condition        Report By
AJ3888  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3888
AJ3888                          STATION DESCRIPTION
AJ3888
AJ3888'DESCRIBED BY MARICOPA CO DOT 1999 (JJR)
AJ3888'THE STATION IS LOCATED ABOUT 9.0 MI (14.5 KM) SOUTHEAST OF THE TOWN OF
AJ3888'WICKENBURG, TOWNSHIP 6 NORTH, RANGE 4 WEST, SECTION 14
AJ3888'OWNERSHIP - PRIVATE
AJ3888'TO REACH THE STATION FROM THE JUNCTION OF US 60 AND STATE ROUTE 74,
AJ3888'DRIVE NORTHEASTERLY ON STATE ROUTE 74 ABOUT 580 FT (176.8 M) AND GET
AJ3888'OFF THE ROAD ON THE NORTH SIDE, THENCE DRIVE NORTHERLY ON THE UNMARKED
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AJ3888'DIRT ROAD UNDER THE POWER LINE ABOUT 200 FT (61.0 M) , THENCE PULL OFF
AJ3888'TO THE RIGHT AND PARK, THE STATION WILL BE VISIBLE JUST TO THE NORTH,
AJ3888'ABOUT 5 FT (1.5 M) SOUTH OF A BARBED WIRE FENCE
AJ3888'THE STATION IS MARKED BY AN ALUMINUM CAP COMPRESSED ON A 6.0 FOOT (1.8
AJ3888'M) STAINLESS STEEL ROD DRIVEN TO REFUSAL, ENCASED IN A 1 INCH GREASED
AJ3888'PVC SLEEVE ENCLOSED IN A 5 INCH PVC PIPE WITH A COUNTY LOGO ACCESS
AJ3888'COVER STAMPED 4LH2 12/99, SURROUNDED WITH A CONCRETE COLLAR FLUSH WITH
AJ3888'THE GROUND, WITNESSED BY A WHITE CARSONITE MARKER
AJ3888'STATION TIES -
AJ3888'210 FT (64.0 M) NORTH OF THE CENTERLINE OF STATE ROUTE 74
AJ3888'75 FT (22.9 M) EAST OF AN OVERHEAD POWER LINE
AJ3888'5 FT (1.5 M) SOUTH OF A BARBED WIRE FENCE
AJ3888'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3888'VISIT-WWW.MCDOT.MARICOPA.GOV       SEARCH KEYWORD  GDACS
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DV2038  DESIGNATION -  FRIA
DV2038  PID         -  DV2038
DV2038  STATE/COUNTY-  AZ/MARICOPA
DV2038  USGS QUAD   -  MC MICKEN DAM (1981)
DV2038
DV2038                        *CURRENT SURVEY CONTROL
DV2038  ___________________________________________________________________
DV2038* NAD 83(1992)-  33 38 42.12194(N)    112 29 46.86297(W)     ADJUSTED
DV2038* NAVD 88     -       487.6    (meters)    1600.     (feet)  VERTCON
DV2038  ___________________________________________________________________
DV2038  LAPLACE CORR-          -2.08  (seconds)                    DEFLEC99
DV2038  GEOID HEIGHT-         -29.95  (meters)                     GEOID99
DV2038
DV2038  HORZ ORDER  -  SECOND
DV2038
DV2038.The horizontal coordinates were established by classical geodetic methods
DV2038.and adjusted by the National Geodetic Survey in August 1993.
DV2038
DV2038.The NAVD 88 height was computed by applying the VERTCON shift value to
DV2038.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)
DV2038
DV2038.The Laplace correction was computed from DEFLEC99 derived deflections.
DV2038
DV2038.The geoid height was determined by GEOID99.
DV2038
DV2038;                     North         East     Units   Scale      Converg.
DV2038;SPC AZ C     -   293,435.942   159,589.295   MT  0.99993563 -0 19 16.2
DV2038;UTM  12      - 3,723,803.233   361,236.981   MT  0.99983738 -0 49 45.0
DV2038
DV2038:                Primary Azimuth Mark                     Grid Az
DV2038:SPC AZ C     -  FRIA AZ MK                               190 21 06.0
DV2038:UTM  12      -  FRIA AZ MK                               190 51 34.8
DV2038
DV2038|-------------------------------------------------------------------|
DV2038| PID    Reference Object                     Distance      Geod. Az  |
DV2038|                                                           dddmmss.s |
DV2038| CR7745 FRIA RM 3                             7.118 METERS 05817     |
DV2038| AI3350 FRIA RM 1                            11.702 METERS 11424     |
DV2038| DV2035 LUKE FIELD BEACON                   APPROX.17.0 KM 1315042.1 |
DV2038| CH5192 FRIA AZ MK                                        1900149.8 |
DV2038| CH5193 FRIA RM 2                            11.976 METERS 22939     |
DV2038| AI3351 FRIA RM 4                            11.836 METERS 23035     |
DV2038| DV2037 FRIA RM TARGET                       12.920 METERS 25825     |
DV2038|-------------------------------------------------------------------|
DV2038
DV2038                         SUPERSEDED SURVEY CONTROL
DV2038
DV2038  NAD 83(1986)-  33 38 42.11722(N)    112 29 46.87056(W) AD(       ) 2
DV2038  NAD 27      -  33 38 41.98700(N)    112 29 44.27400(W) AD(       ) 2
DV2038  NGVD 29     -       487.1    (m)         1598.     (f) VERT ANG
DV2038
DV2038.Superseded values are not recommended for survey control.
DV2038.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
DV2038.See file dsdata.txt to determine how the superseded data were derived.
DV2038
DV2038_MARKER: DS = TRIANGULATION STATION DISK
DV2038_SETTING: 66 = SET IN ROCK OUTCROP
DV2038_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
DV2038+STABILITY: POSITION/ELEVATION WELL
DV2038
DV2038  HISTORY     - Date     Condition        Report By
DV2038  HISTORY     - 1947     MONUMENTED       CGS
DV2038  HISTORY     - 1976     GOOD             LOCENG
DV2038  HISTORY     - 1986     GOOD             AZDT
DV2038
DV2038                         STATION DESCRIPTION
DV2038
DV2038'DESCRIBED BY COAST AND GEODETIC SURVEY 1947 (DHK)
DV2038'THE STATION IS LOCATED ABOUT 9.5 MILES SOUTH-SOUTHEAST OF
DV2038'WITTMAN AND 2.5 MILES WEST OF THE BEARDSLEY AQUA FRIA CANAL,
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DV2038'ON A LOW ROUND KNOLL AT THE NORTHEAST END OF THE WHITE TANK
DV2038'MOUNTAINS. THE STATION MARK IS A BRONZE DISK SET ON HIGHEST
DV2038'POINT OF KNOLL, PROJECTS 8 INCHES AND IS STAMPED--FRIA 1947.
DV2038'
DV2038'REFERENCE MARK NO. 1 IS A BRONZE DISK SET FLUSH 30 INCHES LOWER
DV2038'THAN THE STATION MARK AND IS STAMPED--FRIA NO 1 1947.
DV2038'
DV2038'REFERENCE MARK NO. 2 IS A BRONZE DISK PROJECTING 14 INCHES, IS
DV2038'12 INCHES HIGHER THAN THE STATION MARK AND IS STAMPED--FRIA NO
DV2038'2 1947.
DV2038'
DV2038'THE AZIMUTH MARK IS A BRONZE DISK SET ON THE EAST END OF AN
DV2038'EAST-WEST RIDGE, 24 PACES WEST OF CENTER LINE OF ROAD. IT
DV2038'PROJECTS 6 INCHES AND IS STAMPED--FRIA 1947.
DV2038'
DV2038'TO REACH THE STATION FROM THE POST OFFICE IN MARINETTE, GO WEST
DV2038'ON HIGHWAY 1.7 MILE TO AN OILED ROAD LEFT AT THE AQUA FRIA
DV2038'RAILROAD JUNCTION. TURN LEFT, GO 4.7 MILES TO A ROAD RIGHT.
DV2038'TURN RIGHT, GO 1.0 MILE TO A T ROAD. TURN LEFT, GO 1.9 MILE
DV2038'TO CROSSROAD AND A RAILROAD CROSSING. CONTINUE STRAIGHT AHEAD
DV2038'1.85 MILE TO A CROSSROAD AT A CANAL. CROSS CANAL AND CONTINUE
DV2038'STRAIGHT AHEAD 1.1 MILE TO A FORK. TURN RIGHT, GO 1.4 MILE
DV2038'TO A T ROAD. TURN RIGHT, GO 0.7 MILE TO AZIMUTH MARK ON LEFT.
DV2038'CONTINUE 0.55 MILE TO A DIM ROAD RIGHT. TURN RIGHT, GO 0.25
DV2038'MILE TO FOOT OF KNOLL AT THE SOUTHEAST SIDE AND END OF TRUCK
DV2038'TRAVEL. WALK NORTHWESTERLY UP STEEP RIDGE TO HIGHEST POINT
DV2038'AND STATION. A 5 MINUTE PACK.
DV2038
DV2038 STATION RECOVERY (1976)
DV2038
DV2038'RECOVERY NOTE BY LOCAL ENGINEER (INDIVIDUAL OR FIRM) 1976 (JM)
DV2038'FRIA 1947 RECOVERED GOOD.
DV2038'
DV2038'FRIA NO 1 1947 RECOVERED GOOD.
DV2038'
DV2038'FRIA NO 2 1947 RECOVERED GOOD.
DV2038'
DV2038'DOZER ROAD TO TOP OF HILL. ROUGH RIDE BUT MARK IS NOW DRIVABLE.
DV2038'
DV2038'NOT ON NGS LEVEL.
DV2038
DV2038 STATION RECOVERY (1986)
DV2038
DV2038'RECOVERY NOTE BY ARIZONA DEPARTMENT OF TRANSPORTATION 1986 (ART)
DV2038'THE STATION MARK AND THE AZIMUTH MARK WERE RECOVERED AND FOUND IN GOOD
DV2038'CONDITION. REFERENCE MARKS 1 AND 2 WERE DESTROYED AND REFERENCE MARKS
DV2038'3 AND 4 WERE ESTABLISHED AT THIS TIME.
DV2038'
DV2038'REFERENCE MARK 3 IS AN AZDT DISK STAMPED---FRIA NO 3 1947 1986---. IT
DV2038'IS SET IN AN OUTCROP OF BEDROCK WHICH PROJECTS 4 INCHES.
DV2038'
DV2038'REFERENCE MARK 4 IS AN AZDT DISK STAMPED---FRIA NO 4 1947 1986---. IT
DV2038'IS SET IN BEDROCK WHICH IS FLUSH WITH THE GROUND SURFACE.
DV2038'
DV2038'TO REACH THE STATION FROM THE INTERSECTION OF BELL ROAD AND GRAND
DV2038'AVENUE WHICH IS U.S.HIGHWAY 60 IN SURPRISE, TRAVEL WEST ALONG BELL
DV2038'ROAD FOR 2.55 MILES TO REEMS ROAD. TURN LEFT AND TRAVEL SOUTH FOR 1.0
DV2038'MILE TO GREENWAY ROAD. TURN RIGHT AND TRAVEL WEST FOR 4.25 MILES TO
DV2038'THE TOP OF A FLOOD CONTROL DAM, CONTINUE WEST AND THEN NORTH ALONG THE
DV2038'ROAD FOR 1.7 MILES TO A CATTLE GUARD. CONTINUE NORTH FOR 0.8 MILE TO
DV2038'AN INTERSECTION. TURN LEFT ON A DIRT ROAD AND TRAVEL WEST FOR 0.5
DV2038'MILE TO A FORK. TAKE RIGHT FORK 0.35 MILE TO A FORK, TAKE THE LEFT
DV2038'FORK 0.2 MILE TO A FORK, TAKE THE LEFT FORK 0.05 MILE TO A FORK. TAKE
DV2038'THE LEFT FORK THROUGH A WASH AND CONTINUE 0.15 MILE TO THE TOP OF A
DV2038'PROMINENT HILL AND THE STATION.
DV2038'
DV2038'TO REACH THE AZIMUTH MARK FROM THE STATION TRAVEL SOUTH ON A NORTH
DV2038'SOUTH ROAD FOR 0.65 MILE TO A GATE. PASS THROUGH GATE AND CONTINUE
DV2038'SOUTH FOR 0.25 MILE TO THE MARK ON THE RIGHT. THE MARK IS 65 FEET
DV2038'WEST OF THE ROAD ON THE EAST END OF THE RIDGE.

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AI3351  DESIGNATION -  FRIA RM 4
AI3351  PID         -  AI3351
AI3351  STATE/COUNTY-  AZ/MARICOPA
AI3351  USGS QUAD   -  MC MICKEN DAM (1981)
AI3351
AI3351                        *CURRENT SURVEY CONTROL
AI3351
AI3351* NAD 83(1992)-  33 38 41.87806(N)    112 29 47.21784(W)     ADJUSTED
AI3351* NAVD 88     -       486.07   (meters)    1594.7    (feet)  GPS OBS
AI3351
AI3351  X           -  -2,033,871.570 (meters)                     COMP
AI3351  Y           -  -4,911,061.100 (meters)                     COMP
AI3351  Z           -   3,513,983.691 (meters)                     COMP
AI3351  LAPLACE CORR-          -2.08  (seconds)                    DEFLEC99
AI3351  ELLIP HEIGHT-         456.10  (meters)                     GPS OBS
AI3351  GEOID HEIGHT-         -29.95  (meters)                     GEOID99
AI3351
AI3351  HORZ ORDER  -  A
AI3351  ELLP ORDER  -  FIRST     CLASS I
AI3351
AI3351.The horizontal coordinates were established by GPS observations
AI3351.and adjusted by the National Geodetic Survey in January 2000.
AI3351
AI3351.The orthometric height was determined by GPS observations and a
AI3351.high-resolution geoid model using precise GPS observation and
AI3351.processing techniques.
AI3351
AI3351.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AI3351
AI3351.The Laplace correction was computed from DEFLEC99 derived deflections.
AI3351
AI3351.The ellipsoidal height was determined by GPS observations
AI3351.and is referenced to NAD 83.
AI3351
AI3351.The geoid height was determined by GEOID99.
AI3351
AI3351;                    North         East     Units   Scale      Converg.
AI3351;SPC AZ C     -   293,428.480   159,580.109   MT  0.99993564 -0 19 16.4
AI3351;UTM  12      - 3,723,795.854   361,227.730   MT  0.99983742 -0 49 45.2
AI3351
AI3351                          SUPERSEDED SURVEY CONTROL
AI3351
AI3351.No superseded survey control is available for this station.
AI3351
AI3351_MARKER: DR = REFERENCE MARK DISK
AI3351_SETTING: 66 = SET IN ROCK OUTCROP
AI3351_STAMPING: FRIA NO 4 1947 1986
AI3351_MARK LOGO: AZDT
AI3351_MAGNETIC: N = NO MAGNETIC MATERIAL
AI3351_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AI3351+STABILITY: POSITION/ELEVATION WELL
AI3351_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AI3351+SATELLITE: SATELLITE OBSERVATIONS - March 16, 2000
AI3351
AI3351  HISTORY     - Date     Condition        Report By
AI3351  HISTORY     - 1986     MONUMENTED       AZDT
AI3351  HISTORY     - 19980917 GOOD             AZ-013
AI3351  HISTORY     - 20000316 GOOD             MCDOT
AI3351
AI3351                          STATION DESCRIPTION
AI3351
AI3351'DESCRIBED BY MARICOPA COUNTY ARIZONA 1998 (LOC)
AI3351'TO REACH THE STATION FROM THE INTERSECTION OF BELL ROAD AND GRAND
AI3351'AVENUE WHICH IS U.S. HIGHWAY 60 IN SURPRISE, TRAVEL WEST ALONG BELL
AI3351'ROAD FOR 2.55 MILES TO REEMS ROAD. TURN LEFT AND TRAVEL SOUTH FOR 1.0
AI3351'MILE TO GREENWAY ROAD.  TURN RIGHT AND TRAVEL WEST FOR 4.25 MILES TO
AI3351'THE TOP OF THE FLOOD CONTROL DAM, CONTINUE WEST AND THEN NORTH ALONG
AI3351'THE ROAD FOR 1.7 MILES TO A CATTLE GUARD. CONTINUE NORTH FOR 0.8 MILE
AI3351'TO AN INTERSECTION.  TURN LEFT ON A DIRT ROAD AND TRAVEL WEST FOR 0.5
AI3351'MILE TO A FORK.  TAKE RIGHT FORK 0.35 MILE TO A FORK, TAKE THE LEFT
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AI3351'FORK 0.2 MILE TO A FORK, TAKE THE LEFT FORK 0.05 MILE TO A FORK. TAKE
AI3351'THE LEFT FORK THROUGH A WASH AND CONTINUE 0.15 MILE TO THE TOP OF A
AI3351'PROMINENT HILL AND THE STATION.  WALK NORTHWESTERLY UP STEEP RIDGE TO
AI3351'HIGHEST POINT AND STATION.  A 5 MINUTE PACK.
AI3351
AI3351                          STATION RECOVERY (2000)
AI3351
AI3351'RECOVERY NOTE BY MARICOPA CO DOT 2000 (JJR)
AI3351'THE STATION IS LOCATED ABOUT 7 MI (11.3 KM) WEST OF THE TOWN OF
AI3351'SURPRISE, TOWNSHIP 4 NORTH, RANGE 2 WEST, SECTION 31
AI3351'OWNERSHIP - STATE LAND
AI3351'TO REACH THE STATION FROM THE INTERSECTION OF BELL ROAD AND THE
AI3351'ESTRELLA FREEWAY (SR-303) , DRIVE WEST ON BELL ROAD 4.6 MI (7.4 KM) TO
AI3351'A CATTLE GUARD ON THE LEFT (SOUTHWEST) SIDE OF THE ROAD, THENCE DRIVE
AI3351'OVER CATTLE GUARD AND CONTINUE SOUTHWESTERLY A FEW HUNDRED FEET, THE
AI3351'STATION IS ON THE TOP OF THE MOUNTAIN TO YOUR LEFT, THERE ARE MULTIPLE
AI3351'4X4 TRAILS TO THE TOP AND ALL ARE DIFFICULT TO CLIMB
AI3351'MONUMENT DESCRIPTION - AS PREVIOUSLY DESCRIBED
AI3351'STATION TIES - NONE AVAILABLE
AI3351'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AI3351'VISIT-WWW.MCDOT.MARICOPA.GOV       SEARCH KEYWORD  GDACS
```

```
DV0080  DESIGNATION -  Q 366
DV0080  PID         -  DV0080
DV0080  STATE/COUNTY-  AZ/MARICOPA
DV0080  USGS QUAD   -  CALDERWOOD BUTTE (1981)
DV0080
DV0080                        *CURRENT SURVEY CONTROL
DV0080
DV0080* NAD 83(1992)-  33 43 31.44117(N)    112 20 39.65043(W)     ADJUSTED
DV0080* NAVD 88     -       424.444  (meters)    1392.53   (feet)  ADJUSTED
DV0080
DV0080  X           -  -2,018,926.414 (meters)                     COMP
DV0080  Y           -  -4,911,818.882 (meters)                     COMP
DV0080  Z           -   3,521,373.666 (meters)                     COMP
DV0080  LAPLACE CORR-            1.17  (seconds)                   DEFLEC99
DV0080  ELLIP HEIGHT-          394.66  (meters)                    GPS OBS
DV0080  GEOID HEIGHT-          -29.75  (meters)                    GEOID99
DV0080  DYNAMIC HT  -          423.950 (meters)    1390.91  (feet) COMP
DV0080  MODELED GRAV-      979,460.5   (mgal)                      NAVD 88
DV0080
DV0080  HORZ ORDER  -  A
DV0080  VERT ORDER  -  FIRST     CLASS II
DV0080  ELLP ORDER  -  FIRST     CLASS I
DV0080
DV0080.The horizontal coordinates were established by GPS observations
DV0080.and adjusted by the National Geodetic Survey in January 2000.
DV0080
DV0080.The orthometric height was determined by differential leveling
DV0080.and adjusted by the National Geodetic Survey in June 1991.
DV0080
DV0080.The X, Y, and Z were computed from the position and the ellipsoidal ht.
DV0080
DV0080.The Laplace correction was computed from DEFLEC99 derived deflections.
DV0080
DV0080.The ellipsoidal height was determined by GPS observations
DV0080.and is referenced to NAD 83.
DV0080
DV0080.The geoid height was determined by GEOID99.
DV0080
DV0080.The dynamic height is computed by dividing the NAVD 88
DV0080.geopotential number by the normal gravity value computed on the
DV0080.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
DV0080.degrees latitude (g = 980.6199 gals.).
DV0080
DV0080.The modeled gravity was interpolated from observed gravity values.
DV0080
DV0080;                     North         East     Units   Scale      Converg.
DV0080;SPC AZ C     -   302,280.454   173,725.950   MT  0.99991936 -0 14 14.8
DV0080;UTM  12      - 3,732,520.944   375,449.967   MT  0.99979124 -0 44 47.4
DV0080
DV0080                        SUPERSEDED SURVEY CONTROL
DV0080
DV0080  NGVD 29     -       423.817  (m)         1390.47   (f) ADJ UNCH    1 2
DV0080
DV0080.Superseded values are not recommended for survey control.
DV0080.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
DV0080.See file dsdata.txt to determine how the superseded data were derived.
DV0080
DV0080_MARKER: DB = BENCH MARK DISK
DV0080_SETTING: 66 = SET IN ROCK OUTCROP
DV0080_STAMPING: Q 366 1967
DV0080_MARK LOGO: CGS
DV0080_MAGNETIC: N = NO MAGNETIC MATERIAL
DV0080_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
DV0080+STABILITY: POSITION/ELEVATION WELL
DV0080_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
DV0080+SATELLITE: SATELLITE OBSERVATIONS - March 21, 2000
DV0080
DV0080  HISTORY     - Date     Condition        Report By
DV0080  HISTORY     - 1967     MONUMENTED       CGS
DV0080  HISTORY     - 1981     GOOD             NGS
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DV0080  HISTORY     - 19980929 GOOD            AZ-013
DV0080  HISTORY     - 20000321 GOOD            MCDOT
DV0080
DV0080                          STATION DESCRIPTION
DV0080
DV0080'DESCRIBED BY COAST AND GEODETIC SURVEY 1967
DV0080'12.65 MI NW FROM EL MIRAGE.
DV0080'ABOUT 7.0 MILES NORTHWEST ALONG U.S. HIGHWAYS 60, 70 AND 89 AND STATE
DV0080'HIGHWAY 93 FROM THE POST OFFICE AT EL MIRAGE, THENCE 5.05 MILES
DV0080'NORTHEAST ALONG CANAL ROAD WHICH PARALLELS THE SOUTHEAST SIDE OF THE
DV0080'BEARDSLEY CANAL, THENCE 0.1 MILE NORTH ALONG A TRAIL ROAD, THENCE 0.5
DV0080'MILE WEST ALONG A DIRT ROAD, IN SECTION 34, T 5 N, R 1 W, 20 FEET
DV0080'NORTHWEST OF THE MORE SOUTHEASTERLY FOOT OF A ROCK HILL, 0.1 MILE WEST
DV0080'OF SECTION CORNER POST NUMBER 34-35, 198 FEET NORTH OF THE CENTER LINE
DV0080'OF THE ROAD, SET IN THE TOP OF A ROCK OUTCROP WHICH PROJECTS 2 1/2
DV0080'FEET ON THE SOUTHWEST SIDE, 6.3 FEET WEST OF A METAL WITNESS POST, AND
DV0080'ABOUT 25 FEET ABOVE THE LEVEL OF THE ROAD.
DV0080
DV0080                          STATION RECOVERY (1981)
DV0080
DV0080'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1981
DV0080'RECOVERED IN GOOD CONDITION.
DV0080
DV0080                          STATION RECOVERY (1998)
DV0080
DV0080'RECOVERY NOTE BY MARICOPA COUNTY ARIZONA 1998 (LOC)
DV0080'RECOVERED AS DESCRIBED.
DV0080
DV0080                          STATION RECOVERY (2000)
DV0080
DV0080'RECOVERY NOTE BY MARICOPA CO DOT 2000 (JJR)
DV0080'THE STATION IS LOCATED APPROXIMATELY 3 MI (4.8 KM) EAST OF THE CITY OF
DV0080'SURPRISE, TOWNSHIP 5 NORTH, RANGE 1 WEST, SECTION 34
DV0080'OWNERSHIP - STATE LAND
DV0080'TO REACH THE STATION FROM THE INTERSECTION OF GRAND AVENUE (US-60) AND
DV0080'THE ESTRELLA FREEWAY (SR-303) , DRIVE NORTHWEST ON US-60 1.0 MI (1.6
DV0080'KM) TO 163RD AVENUE, THENCE TURN RIGHT (NORTH) ONTO 163RD AVENUE AND
DV0080'DRIVE 2.8 MI (4.5 KM) TO JOMAX ROAD, THENCE TURN RIGHT (WEST) ONTO
DV0080'JOMAX ROAD AND DRIVE 4.2 MI (6.8 KM) TO THE STATION 198 FT (60.4 M)
DV0080'LEFT (NORTH) OF CENTERLINE OF ROAD ON SOUTHEAST EDGE OF SMALL ROCKY
DV0080'MOUNTAIN
DV0080'MONUMENT DESCRIPTION - AS PREVIOUSLY DESCRIBED
DV0080'STATION TIES -
DV0080'6.3 FT (1.9 M) WEST OF A METAL WITNESS POST
DV0080'20 FT (6.1 M) NORTHWEST OF THE SOUTHEASTERLY FOOT OF A ROCK HILL
DV0080'198 FT (60.4 M) NORTH OF THE CENTERLINE OF JOMAX ROAD
DV0080'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
DV0080'VISIT-WWW.MARICOPA.GOV       SEARCH KEYWORD  GDACS
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BOOK_____ PAGE_____

JOB No: 45101144

CLIENT: MARICOPA CO. FLOOD CONTROL

TOPOGRAPHY COVER SHEET

PARTY CHIEF: RICK A

CREW:

DATE: 4-5-02

RBF CONSULTING
PLANNING DESIGN CONSTRUCTION
16605 N 28th Avenue Suite 100 Phoenix Arizona 85053
(602) 467-2200 Fax (602) 467-2201

WITTMAN

FILE NAME:

POINT RANGE: 112

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(S) SUBDRAIN LOCATION

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

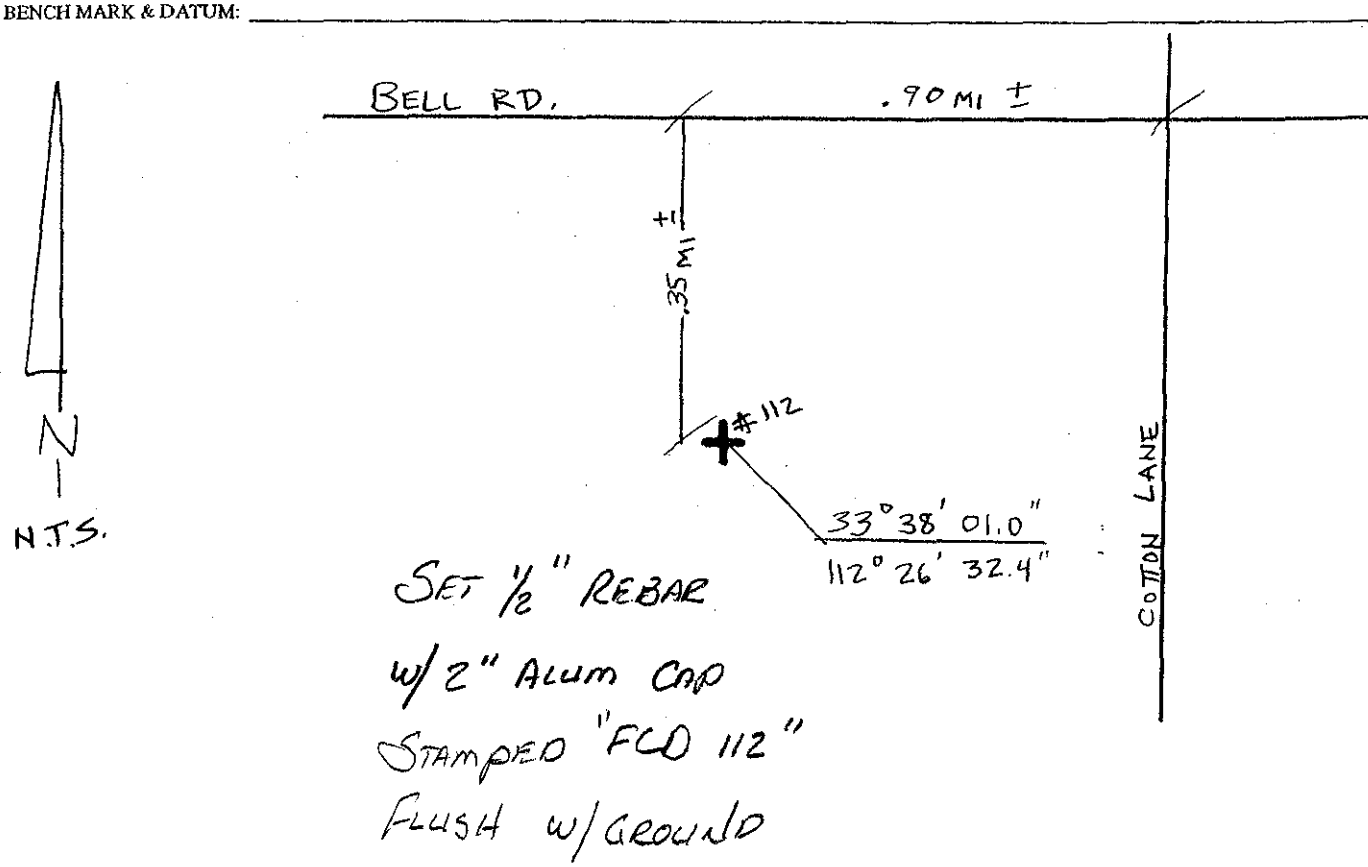
(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

(G) GIS

DESCRIPTION: CO TO DESCRIPTION FOR PT #112

OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC

PROJECT BENCH MARK & DATUM:



BOOK_____ PAGE_____

JOB No: 45101144

CLIENT: _____

TOPOGRAPHY COVER SHEET

PARTY CHIEF: Rick A.

CREW: _____

DATE: 4-5-02

RBF CONSULTING
PLANNING DESIGN CONSTRUCTION
16605 N 28th Avenue Suite 100 Phoenix Arizona 85053
(602) 467-2200 Fax (602) 467-2201

WITTMAN

FILE NAME: _____

POINT RANGE: 113

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(S) SUBDRAIN LOCATION

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

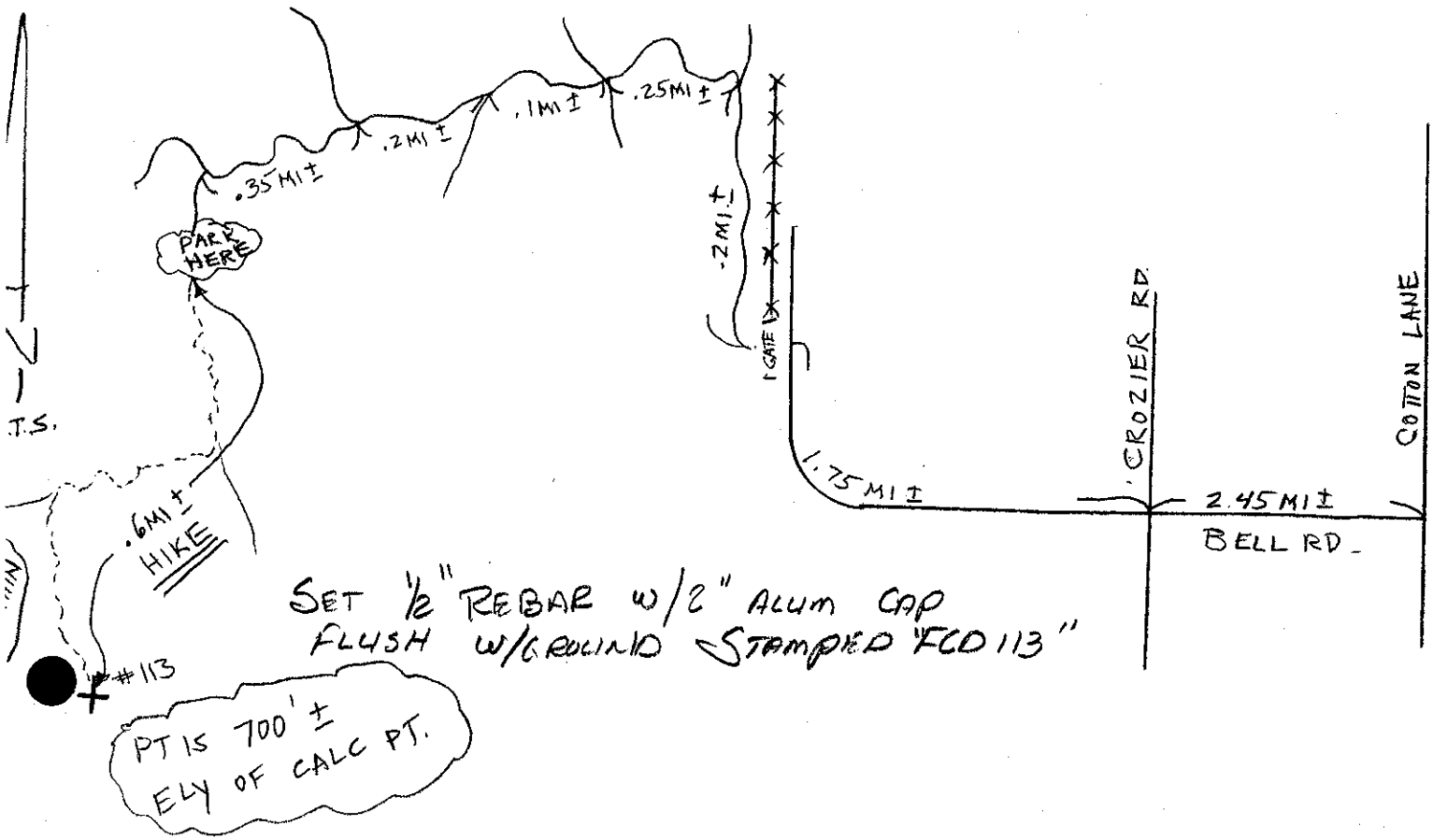
(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

(G) GIS

DESCRIPTION: GO TO DESCRIPTION FOR PT 113

OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC

PROJECT BENCH MARK & DATUM: _____



BOOK_____ PAGE_____

JOB No: 45101144

CLIENT: _____

TOPOGRAPHY COVER SHEET

PARTY CHIEF: RICK A.

CREW: _____

DATE: 4-5-02

RBF CONSULTING
PLANNING DESIGN CONSTRUCTION
16605 N 28th Avenue Suite 100 Phoenix Arizona 85053
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WITTMAN

FILE NAME: _____

POINT RANGE: 114

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(S) SUBDRAIN LOCATION

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

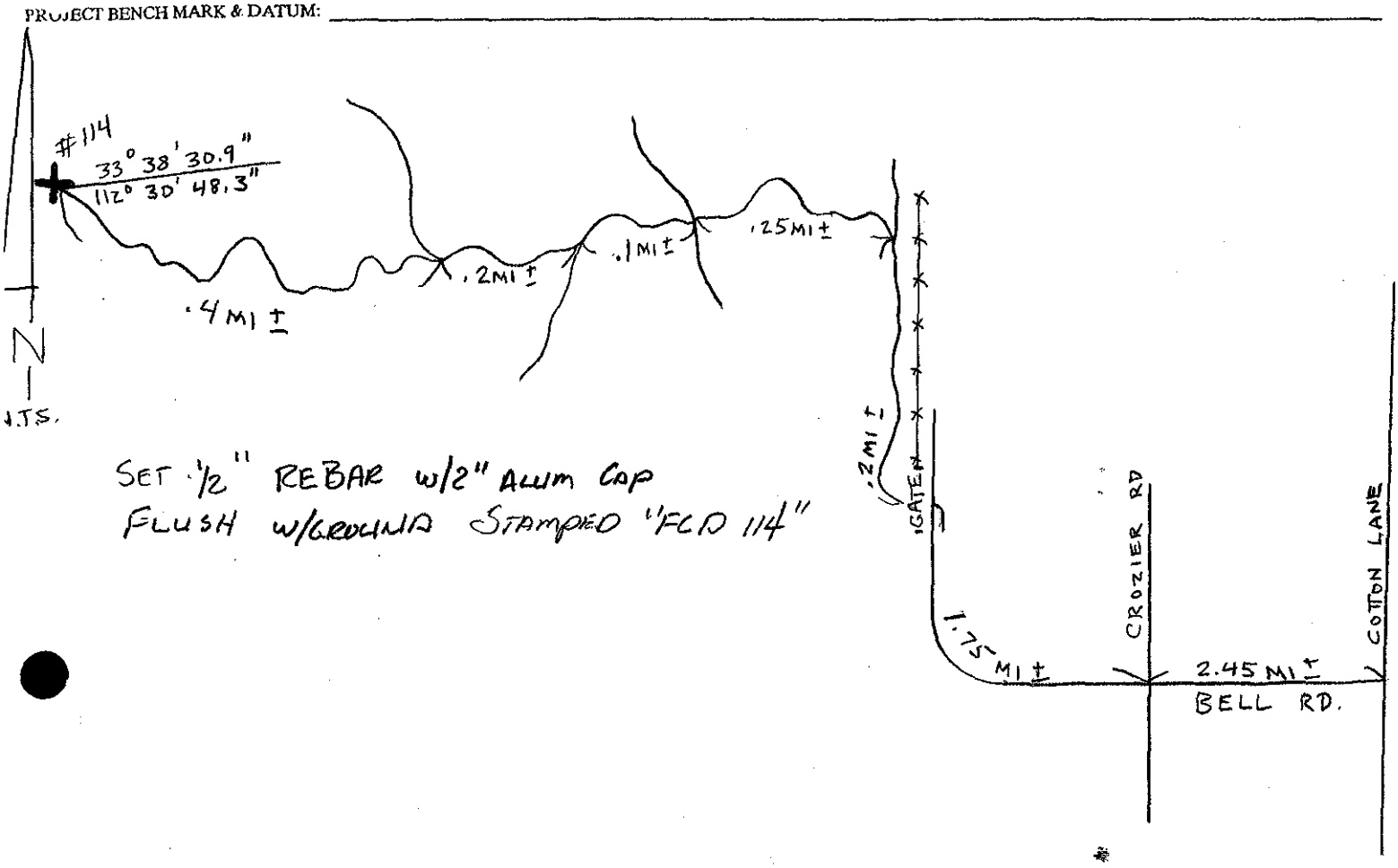
(B) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

(G) GIS

DESCRIPTION: GO TO DESCRIPTION FOR PT. 114

OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC

PROJECT BENCH MARK & DATUM: _____



SET 1/2" REBAR w/2" ALUM CAP
FLUSH w/GROUND STAMPED "FCD 114"

115

BOOK 1 PAGE 8

JOB No: 45101144

CLIENT: WITTMANN / ADMP

TOPOGRAPHY COVER SHEET

PARTY CHIEF: Capwell, Stern

CREW:

DATE: 4/3/2002

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(602) 467-2200 Fax (602) 467-2201

HP/VP # 115 CONTROL SKETCH.

FILE NAME:

POINT RANGE: 115

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(S) SUBDRAIN LOCATION

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

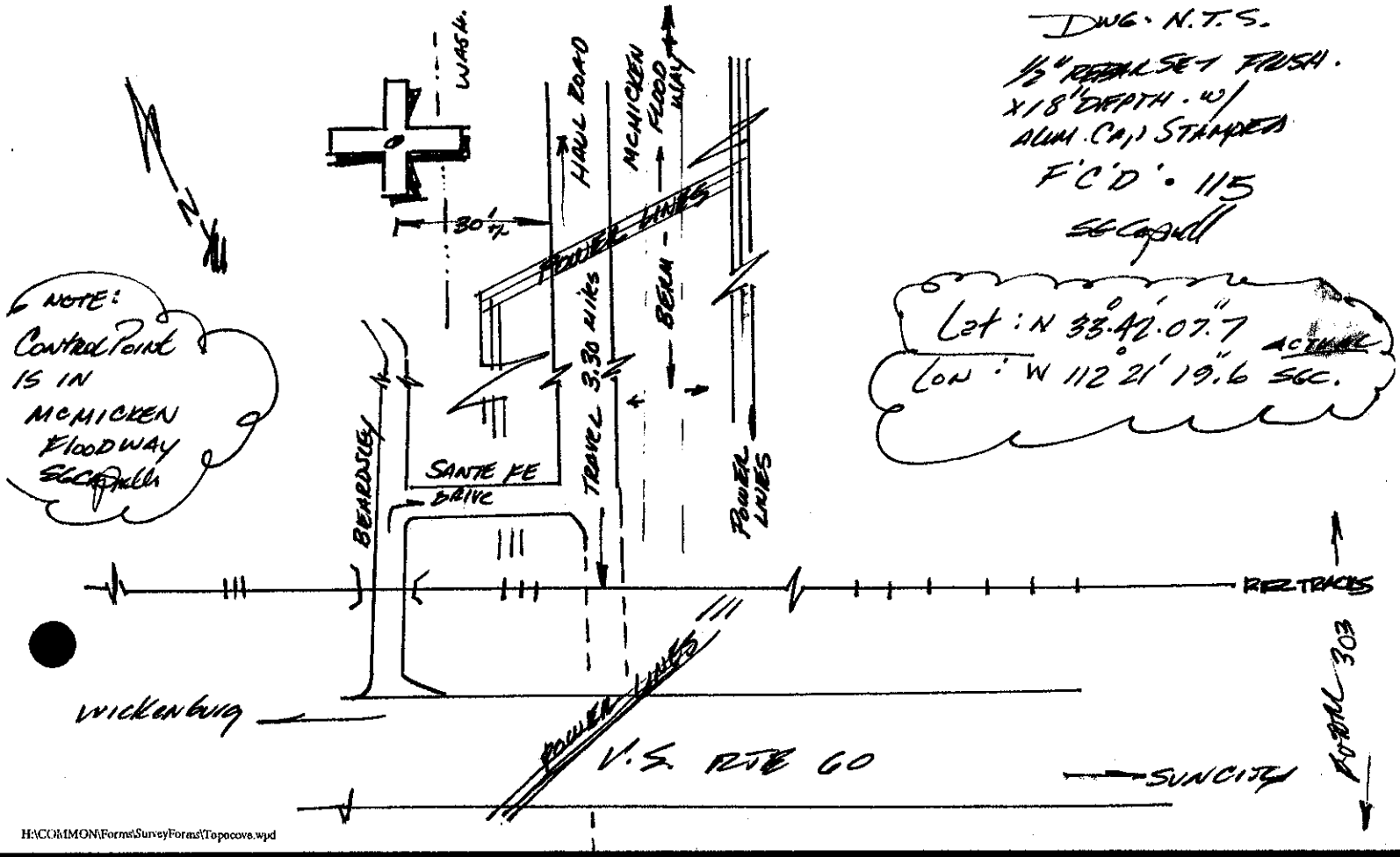
(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

(G) GIS

DESCRIPTION: HEAVY CONSTRUCTION TRAFFIC: @ ACCESS ROAD TRAVEL 3.30 +/- MI. +/- & C.P. 15' @ WEST OF HAUL ROAD 30' +/- SET FLUSH. (MILEAGE FROM N. BALLAST OF RAILROAD TRACKS - SGCapwell.

OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC

PROJECT BENCH MARK & DATUM:



116

BOOK 1 PAGE 5

JOB No: 45-M1144

CLIENT: WITTMANN/ADMP

REVISED 4/15/02 M.L.W.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: Capwell/Steven G.

CREW: " "

DATE: 4/02/2002

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16605 N 28th Avenue Suite 100 Phoenix Arizona 85053
(602) 467-2200 Fax (602) 467-2201

HP/VP 116 CONTROL SKETCH.

FILE NAME:

POINT RANGE: # 116

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(S) SUBDRAIN LOCATION

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

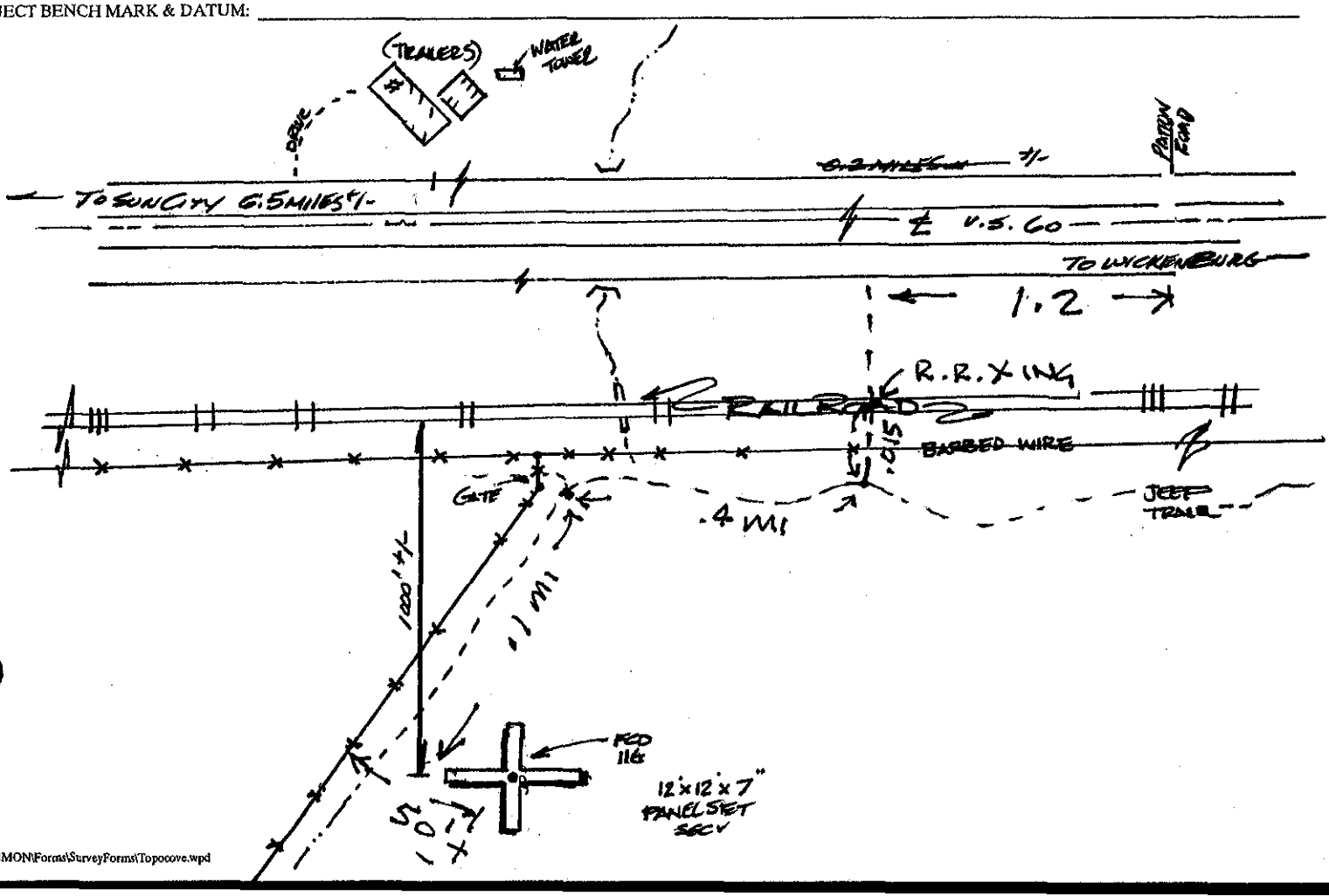
(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

(G) GIS

DESCRIPTION: 1/2" REBAR x 18" DEPTH W/ALUM. CAP STAMPED (FCD116) & PUNCHMARK (0.15MI +/- EAST PATTON ROAD & 1000' +/- NORTH OF N. BALLAST OF R.R. TRACK.) (DRIVEN FLUSH)

☐ IMPERIAL OF HORIZONTAL CONTROL: ☐ METRIC (SEE SKETCH)

PROJECT BENCH MARK & DATUM:



BOOK 1 PAGE 6

JOB No: 4510144

CLIENT: Wittmann / ADMP

TOPOGRAPHY COVER SHEET

PARTY CHIEF: Capwell, Steven G.

CREW: Capwell,

DATE: 4/3/2002

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16605 N 28th Avenue Suite 100 Phoenix Arizona 85053
(602) 467-2200 Fax (602) 467-2201

(LAT) N: 33°-42'-21.9" (42.365)
(LONG) W: 112°-28'-34.0" (28.57)
DEC =

HPVP # 117

FILE NAME: _____ POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(S) SUBDRAIN LOCATION

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

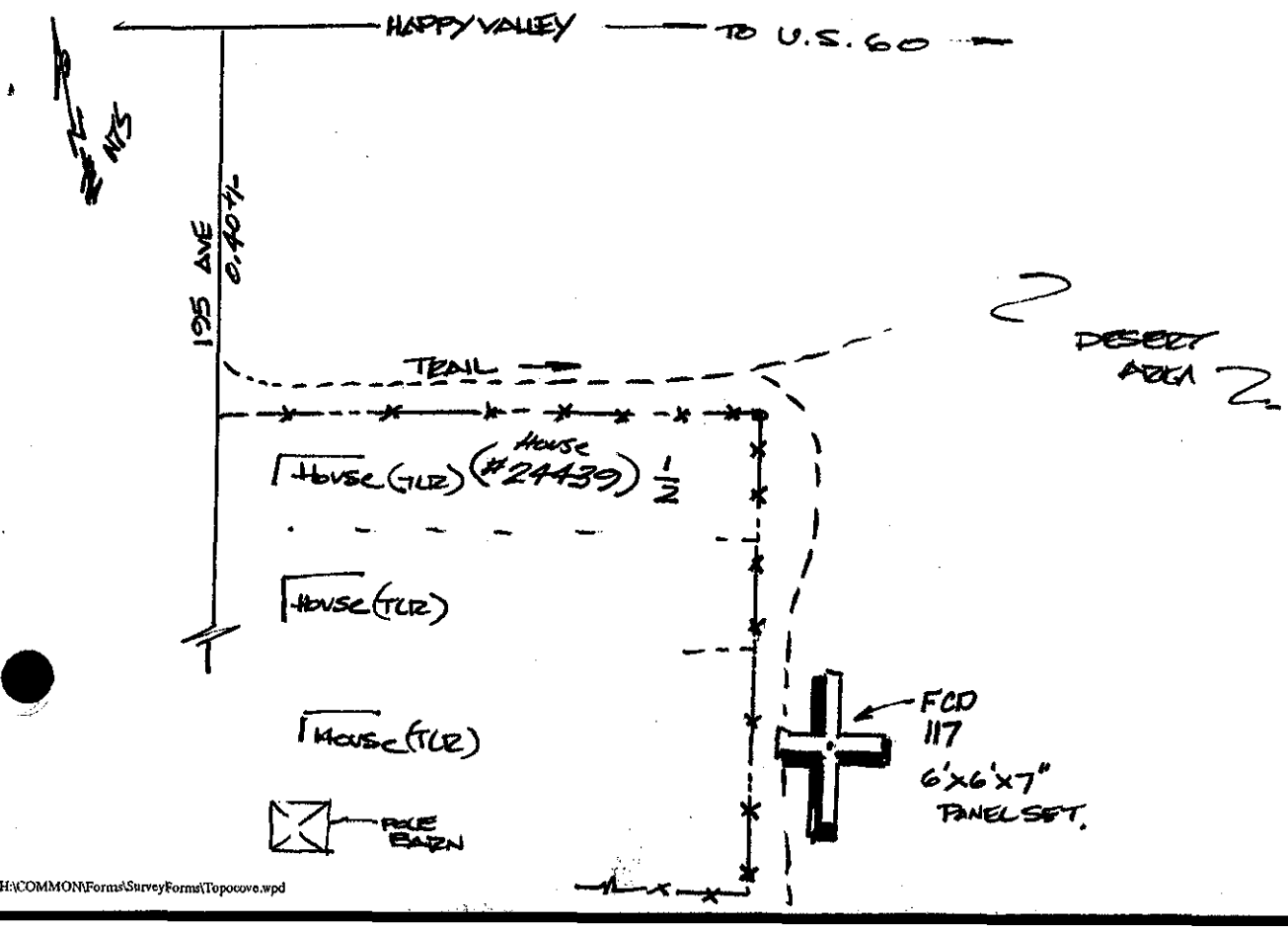
(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

(G) GIS

DESCRIPTION: 1/2" REBAR x 18" DEPTH w/ ALUM CAP STAMPED FCD 117 SET FLUSH w/ 6'x6'x7" PANEL. SEE SKETCH BELOW. S.G. Capwell.

OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC

PROJECT BENCH MARK & DATUM: _____



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BOOK 1 PAGE 7

JOB No: 95701144

CLIENT: WITTMANN / ADMP

TOPOGRAPHY COVER SHEET

PARTY CHIEF: Capwell Steven G.

CREW: " "

DATE: 4/3/2002

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(602) 467-2200 Fax (602) 467-2201

MAP/UP# 118 CONTROL SKETCH.

FILE NAME:

POINT RANGE: 118

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

(S) SUBDRAIN LOCATION

(G) GIS

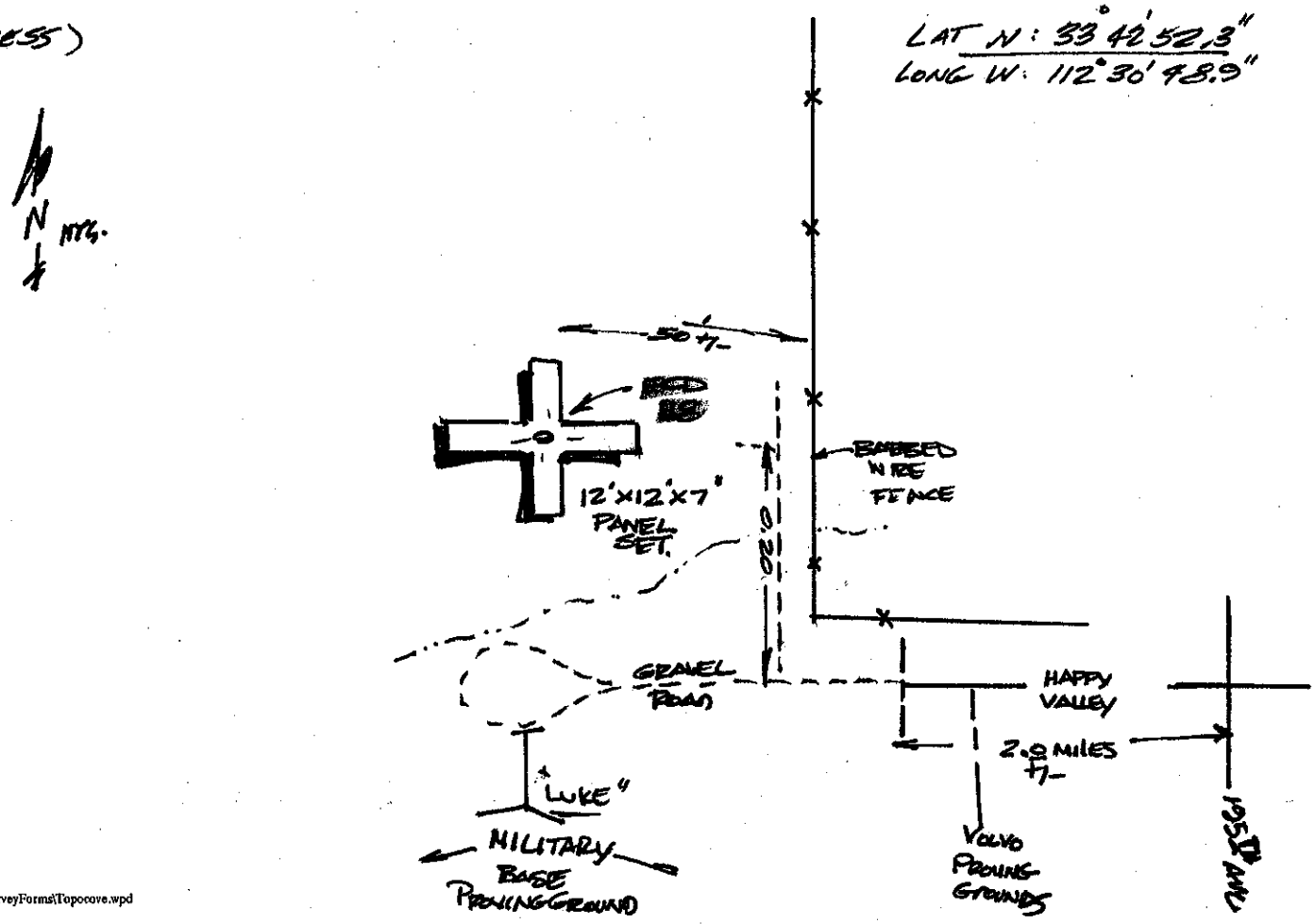
DESCRIPTION: SET 1/2" REBAR STAMPED PLUM. CAP STAMPED "FCD 118" SET FLUSH W/GROUND

OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC

PROJECT BENCH MARK & DATUM:

(4x2 ACCESS)

LAT N: 33° 42' 52.3"
LONG W: 112° 30' 48.9"



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BOOK_____ PAGE_____

JOB No: _____

CLIENT: _____

TOPOGRAPHY COVER SHEET

PARTY CHIEF: Cornell, Steven G.

CREW: _____

DATE: _____

RBF CONSULTING

RBF CONSULTING
PLANNING DESIGN CONSTRUCTION
16605 N 28th Avenue Suite 100 Phoenix Arizona 85053
(602) 467-2200 Fax (602) 467-2201

HP/VP 119 CONTROL SKETCH

FILE NAME: _____

POINT RANGE: #119

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(S) SUBDRAIN LOCATION

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

N. 33·43·637
W 112 34.506

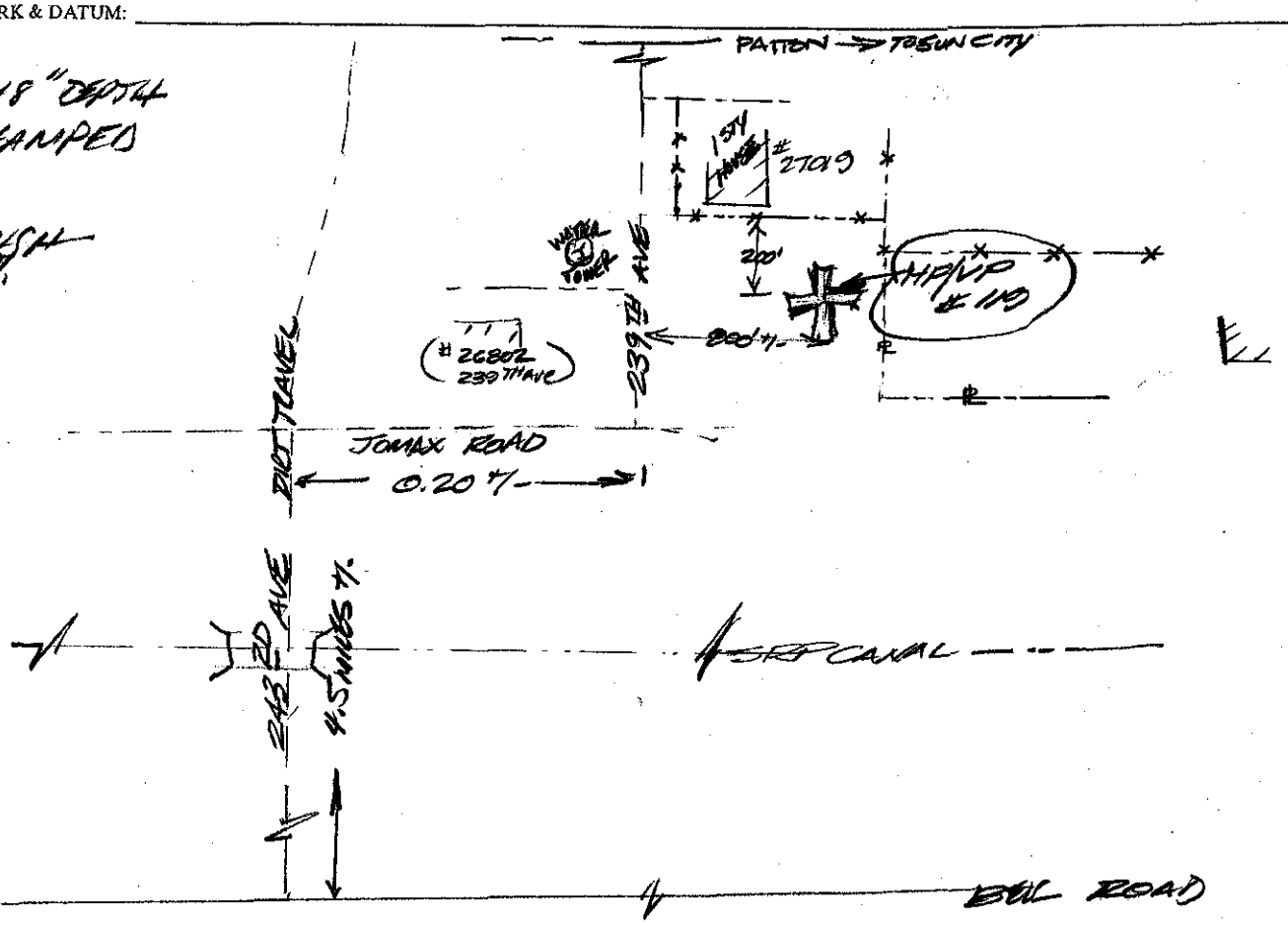
(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

(G) GIS

DESCRIPTION: BEL & 239TH AVE. TRAVEL NORTH - 4.5 MILES +/-

BASE OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC _____

PROJECT BENCH MARK & DATUM: _____



120

BOOK_____ PAGE_____

JOB No: 45101144

CLIENT: WITTMAN AOMP

TOPOGRAPHY COVER SHEET

PARTY CHIEF: RICK ARMET

CREW:

DATE: 4.24.2002

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16605 N 28th Avenue Suite 100 Phoenix Arizona 85053
(602) 467-2200 Fax (602) 467-2201

FILE NAME:

POINT RANGE: 120

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

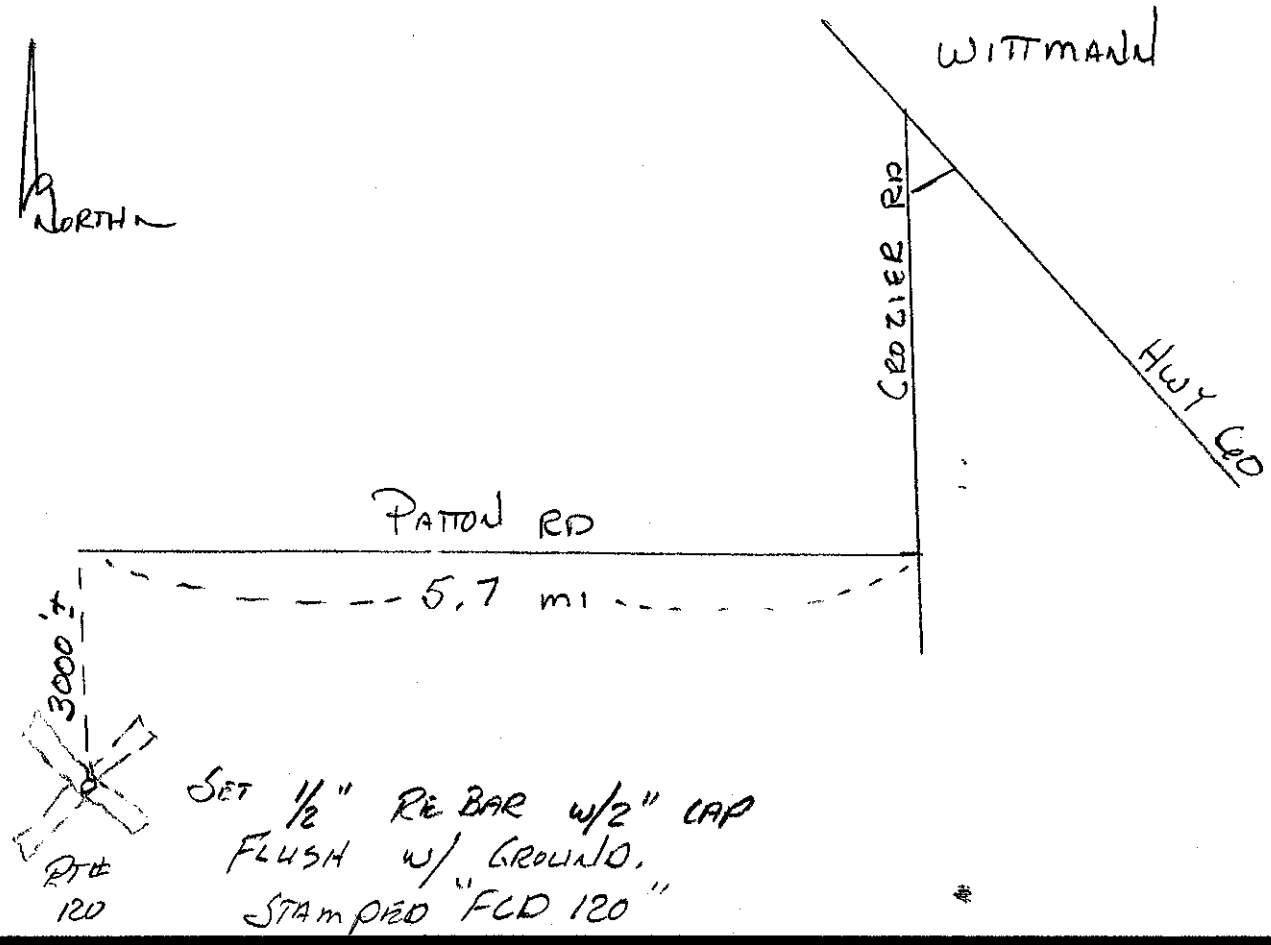
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: SET 1/2" REBAR W/2" ALUM CAP STAMPED "FCD 120"

BASE OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC FLUSH W/ GROUND

PROJECT BENCH MARK & DATUM:



BOOK_____ PAGE_____

JOB No: 45-101144

CLIENT: WITTMAN AOMP

TOPOGRAPHY COVER SHEET

PARTY CHIEF: LLOYD WILLIS

CREW: 4-26-02

DATE:

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16605 N 28th Avenue Suite 100 Phoenix Arizona 85053
(602) 467-2200 Fax (602) 467-2201

FILE NAME:

POINT RANGE: 121

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

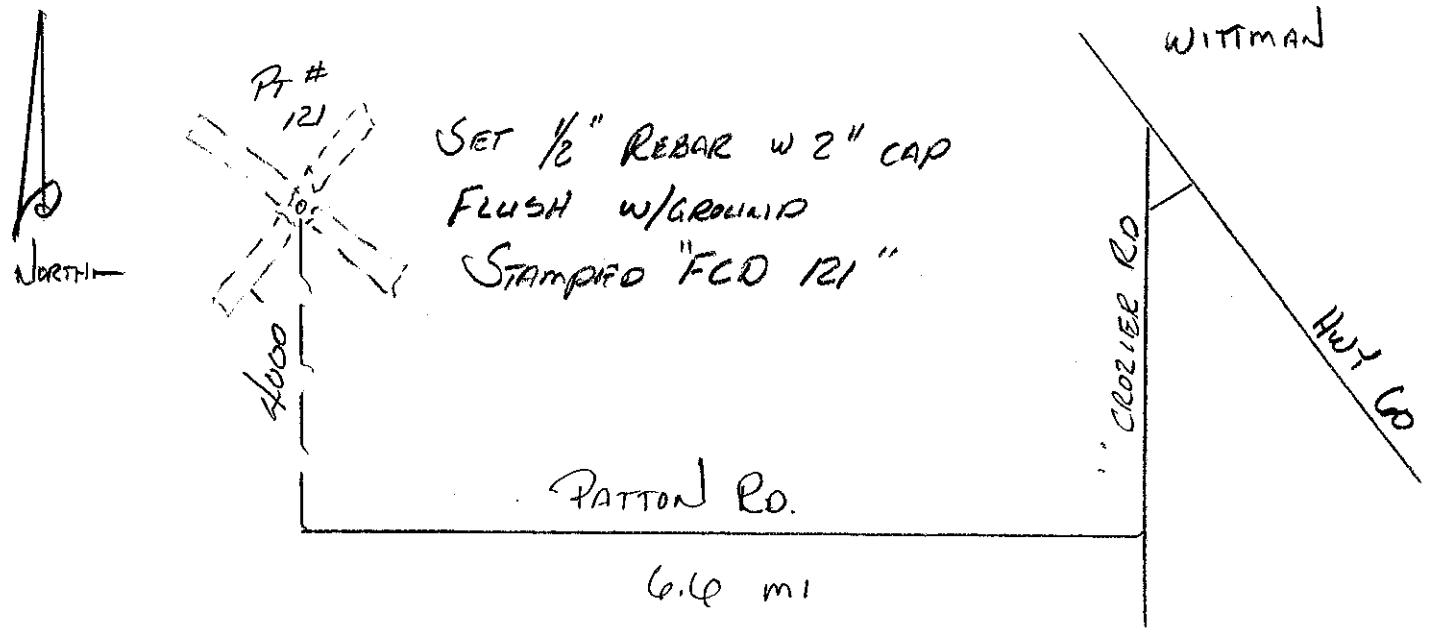
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: SET 1/2" REBAR w/2" ALUM CAP STAMPED "FCD 120" FLUSH w/GROUND.

☐ IMPERIAL
HORIZONTAL CONTROL : ☐ METRIC

PROJECT BENCH MARK & DATUM:



100

BOOK_____ PAGE_____

JOB No: 45 1011F4

CLIENT: _____

TOPOGRAPHY COVER SHEET

PARTY CHIEF: Capwell, Steven G

CREW: " "

DATE: 4/02/2002

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(602) 467-2200 Fax (602) 467-2201

HP/VP # 122 CONTROL PANEL

FILE NAME: _____

POINT RANGE: # FCD # 122

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(S) SUBDRAIN LOCATION

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

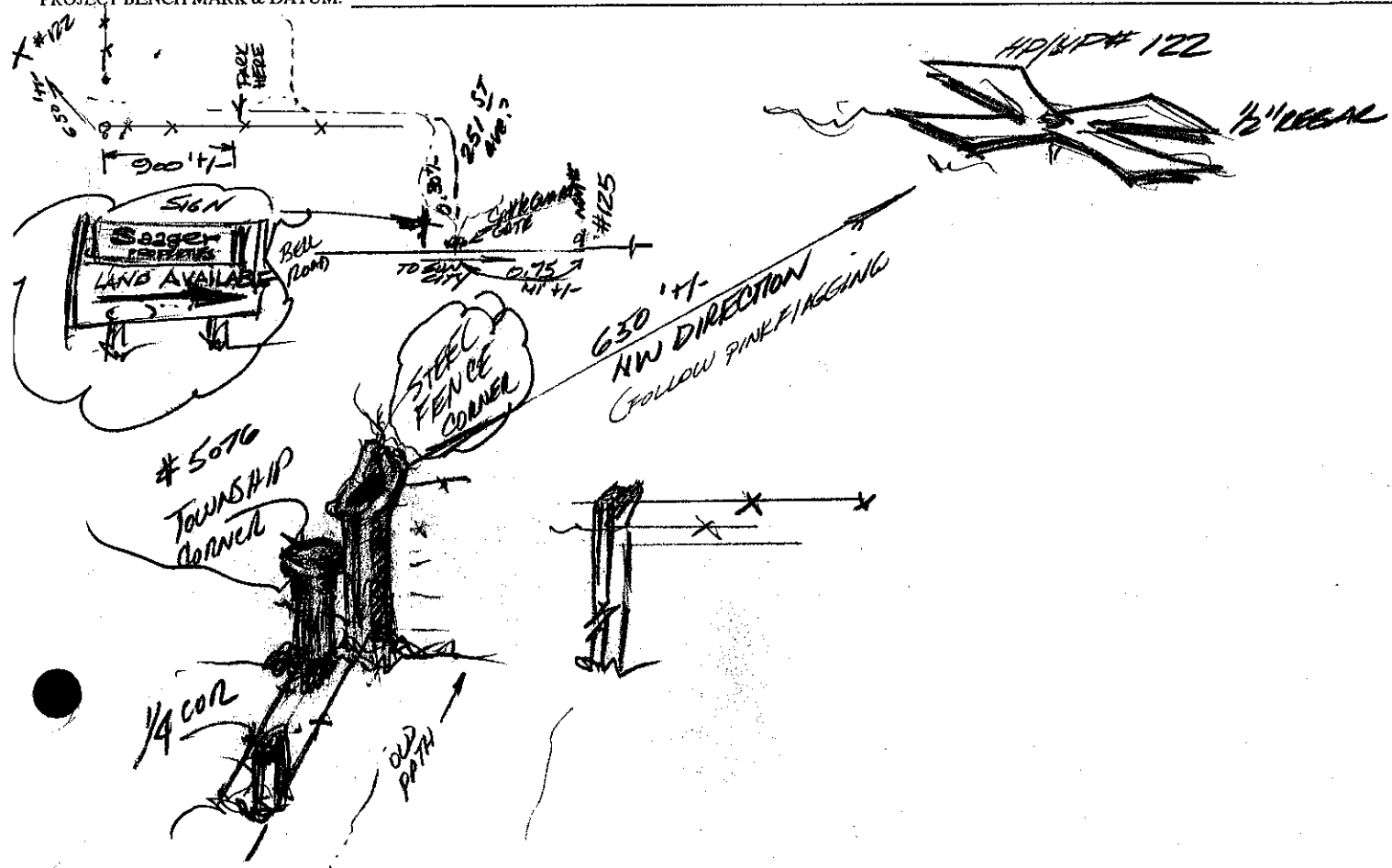
(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

(G) GIS

DESCRIPTION: 1/2" REBAR x 18" DEPTH W/ALUMINUM FLUSH STAMPED FCD # 122 W/CENTERL PUNCH. ACCESSIBLE 4X2 UNTIL LAST 1500 L.F +/- SEE SKETCH BELOW!

OF HORIZONTAL CONTROL : ☐ IMPERIAL ☐ METRIC _____

PROJECT BENCH MARK & DATUM: _____



v123

BOOK_____ PAGE 2

JOB No: 95.101144

CLIENT: WHITMAN / McMICKEN DAM

TOPOGRAPHY COVER SHEET

PARTY CHIEF: Caldwell / Stuart

CREW: " "

DATE: 4/02/2002

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(602) 467-2200 Fax (602) 467-2201

123 CONTROL POINT (12x12x7 PANEL)

FILE NAME: H:PDATA/

POINT RANGE: 123

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

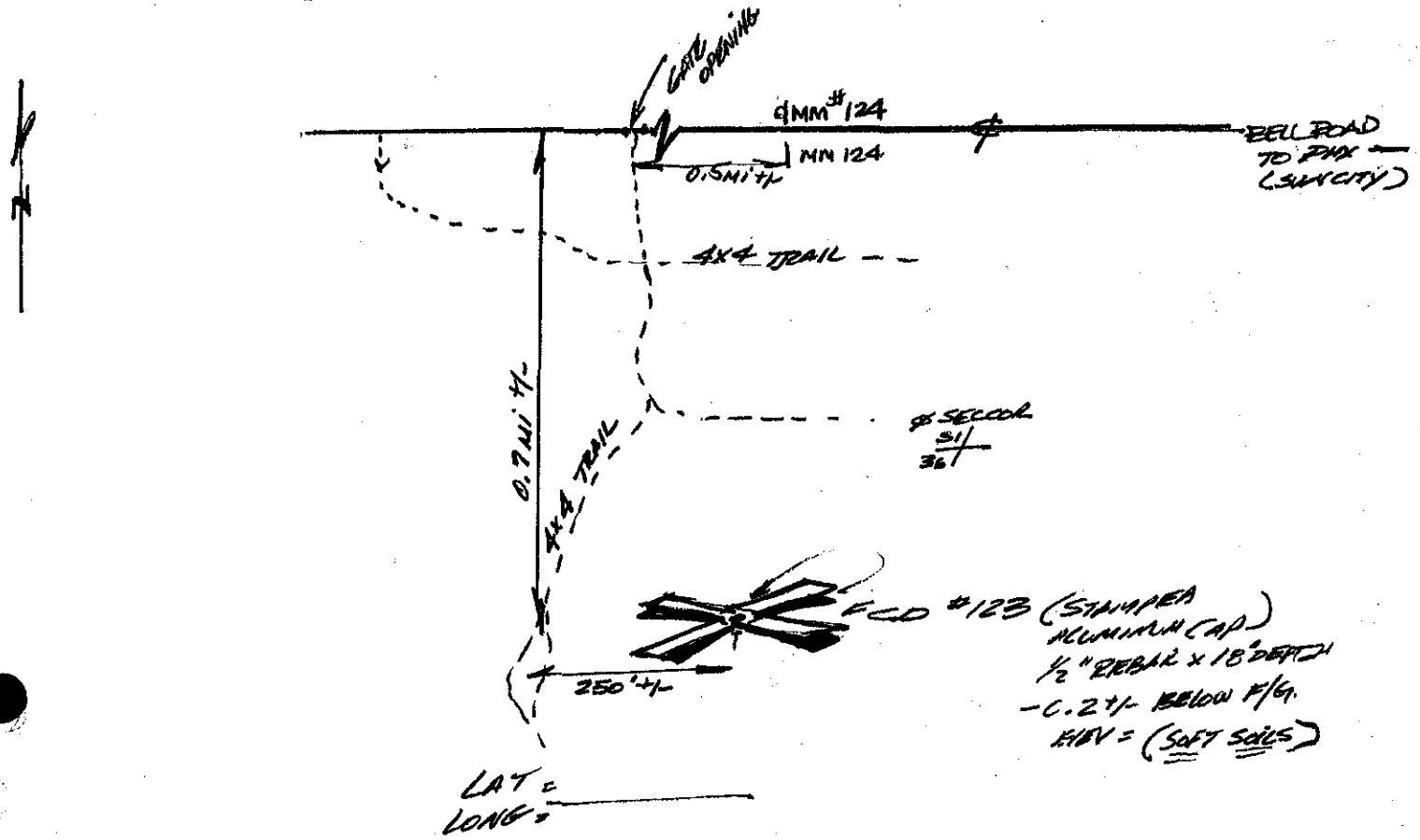
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: 1/2" REBAR -0.20'+/- BELOW F/G x 18" DEPTH W/ ALUM CAP STAMPED FCD 123 W/ CENTER PUNCH 12 x 12 x 7" PANEL SET

OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC NAVIGATE BY SEARCH CORDS" SEC.

PROJECT BENCH MARK & DATUM: _____



1A

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BOOK 1 PAGE

JOB No: 45 101144.002

CLIENT: FLOOD CONTROL DISTRICT / WITTMANN / ADMD

TOPOGRAPHY COVER SHEET

PARTY CHIEF: Caswell, Steven G.

CREW:

DATE: 4/02/2002

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(602) 467-2200 Fax (602) 467-2201

CFD "124"

FILE NAME:

POINT RANGE: CFD 124

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(S) SUBDRAIN LOCATION

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

(G) GIS

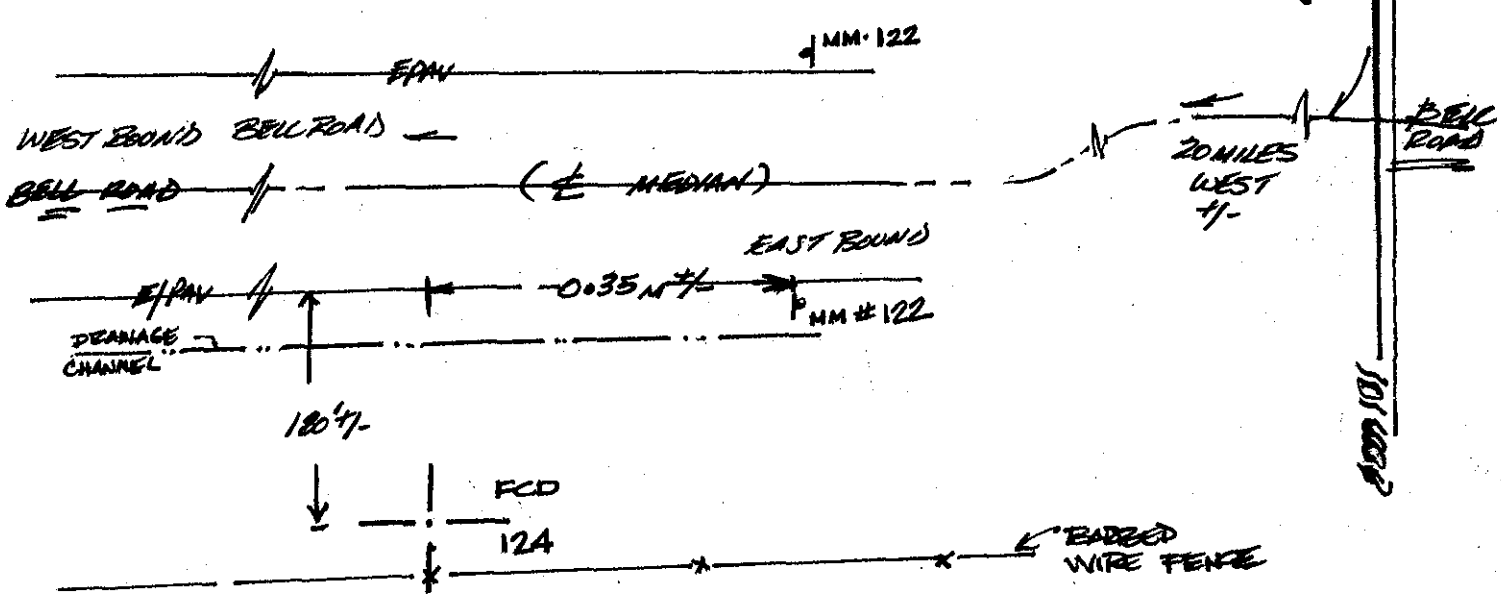
DESCRIPTION: 0.35 MILES WEST OF MM # 122 @ SOUTH FENCELINE @ 12'-15' +/- SOUTH OF TOP BERM @ DRAINAGE CHANNEL

OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC

PROJECT BENCH MARK & DATUM:

DEC = LAT = 33° - 39.48'
LON = 112° - 38.63'

ALUMINUM CAP STAMPED FCD 124 WITH CENTER PUNCH
4 TOP 1/2" REBAR SET FLUSH
W/ 6'x6'x7" PANEL
20 MILES +/- WEST ON BELL ROAD FROM LOOP 101



125

BOOK_____ PAGE_____

JOB No: _____

CLIENT: _____

TOPOGRAPHY COVER SHEET

PARTY CHIEF: RK WESLEY

CREW: _____

DATE: 4/12/02

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FILE NAME: _____

POINT ~~RANGE~~ NAME: 125

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(S) SUBDRAIN LOCATION

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

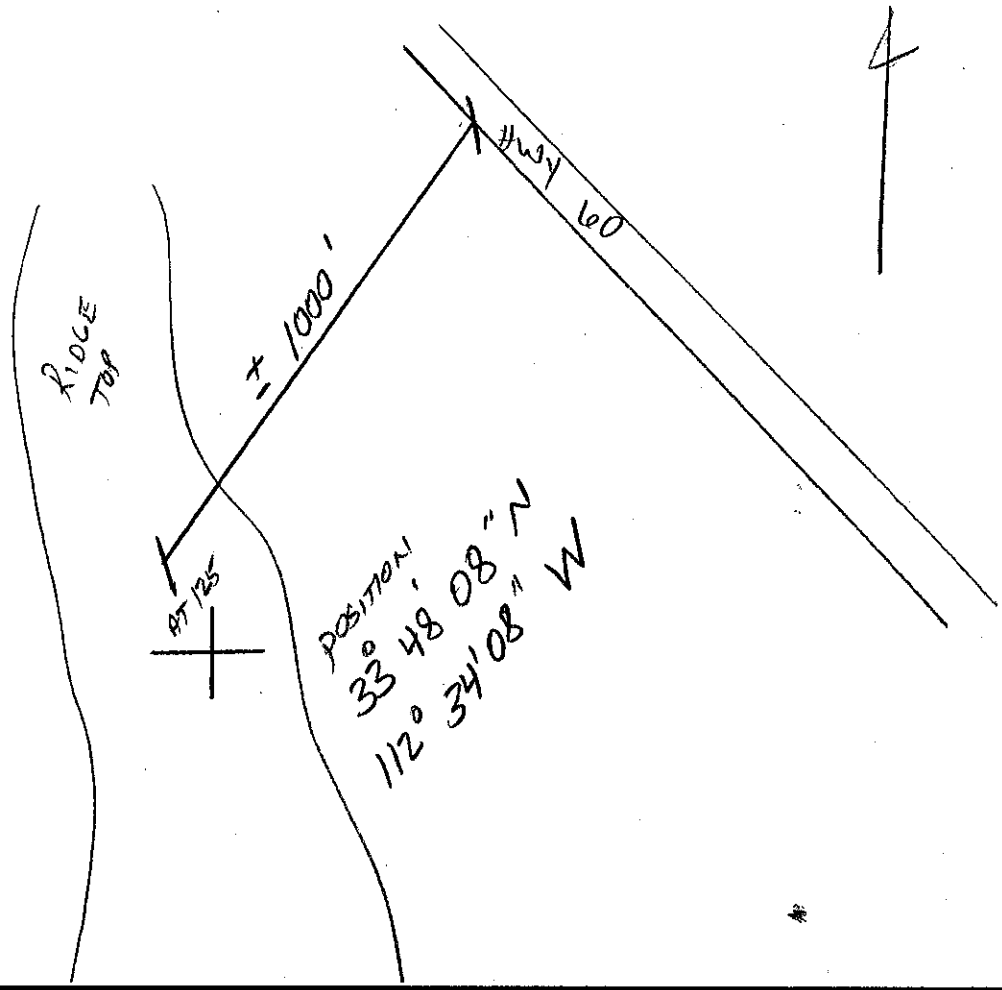
(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

(G) GIS

DESCRIPTION: Set 1/2" Rebar w/2" ALUM CAP STAMPED "ECD 125" / 12' WIDE TARGET / CAP FLUSH

UNITS OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC _____

PROJECT BENCH MARK & DATUM: _____



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BOOK_____ PAGE_____

JOB No: 45101144

CLIENT: _____

TOPOGRAPHY COVER SHEET

PARTY CHIEF: RICK A.

CREW: _____

DATE: 4-10-02

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FILE NAME: _____

POINT RANGE: 126

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

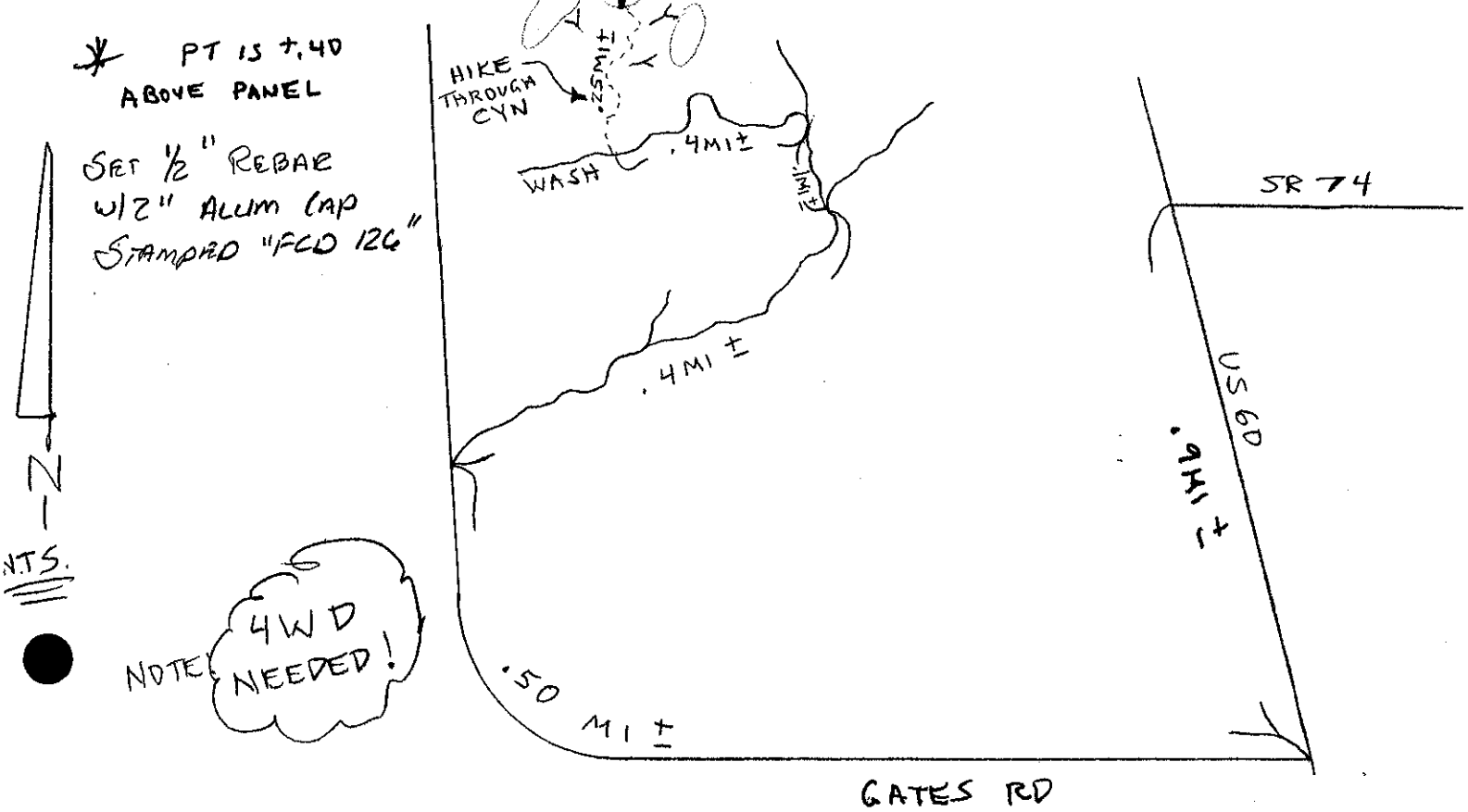
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: GO TO FDR PT 126

☐ IMPERIAL
OF HORIZONTAL CONTROL : ☐ METRIC

PROJECT BENCH MARK & DATUM: #126 N 33° 51' 34.3" W 112° 38' 37.8"



127

BOOK_____ PAGE_____

JOB No: 45101144

CLIENT: _____

TOPOGRAPHY COVER SHEET

PARTY CHIEF: Rick A.

CREW: _____

DATE: 4-9-02

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WITTMAN

FILE NAME: _____

POINT RANGE: 127

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

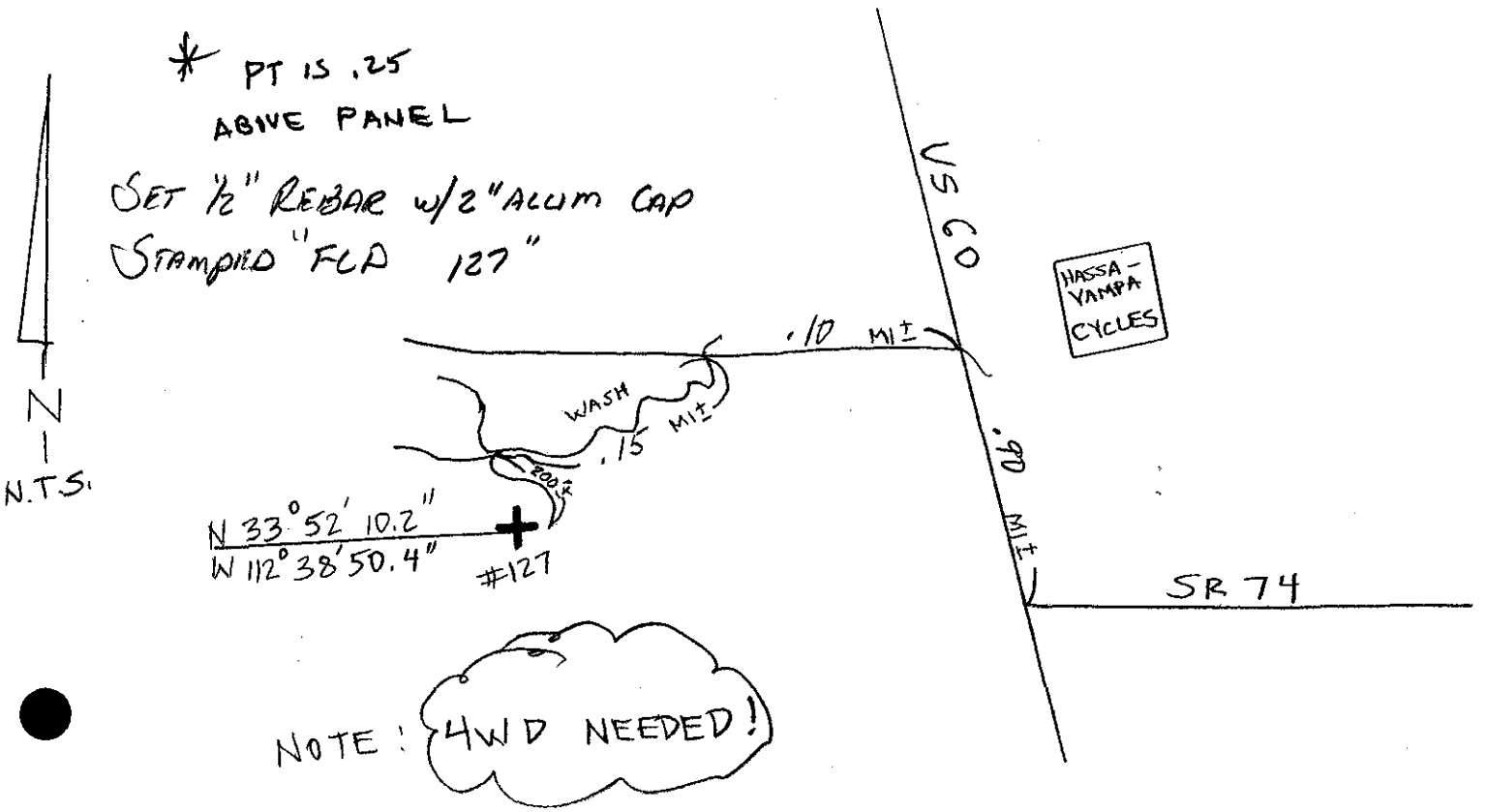
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: GO TO FOR PT 127

OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC _____

PROJECT BENCH MARK & DATUM: _____



BOOK_____ PAGE_____ 128

JOB No: 4501144

CLIENT: Whittman

TOPOGRAPHY COVER SHEET

PARTY CHIEF: SRR

CREW:

DATE: 4-05-02

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FILE NAME: _____ POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: Pt #128 N.17 to 74W N. Side of Rt 74W 50'± 6' target

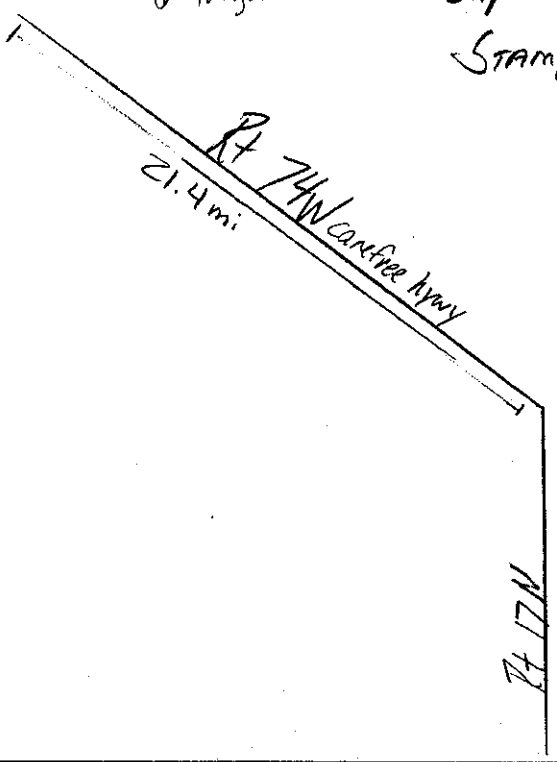
☐ IMPERIAL
F HORIZONTAL CONTROL : ☐ METRIC

PROJECT BENCH MARK & DATUM:

N. 33°50'30.8
W. 112°30'02.9

+ pt 128
6' target

SET 1/2" REBAR w/2" ALUM CAP FLUSH w/GROUND STAMPED "FCD 128"



1 of 1

BOOK_____ PAGE_____

JOB No: 45101144

CLIENT: _____

TOPOGRAPHY COVER SHEET

PARTY CHIEF: Rick A.

CREW: _____

DATE: 4-9-02

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WITMAN

FILE NAME: _____

POINT RANGE: #129 + #14004

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

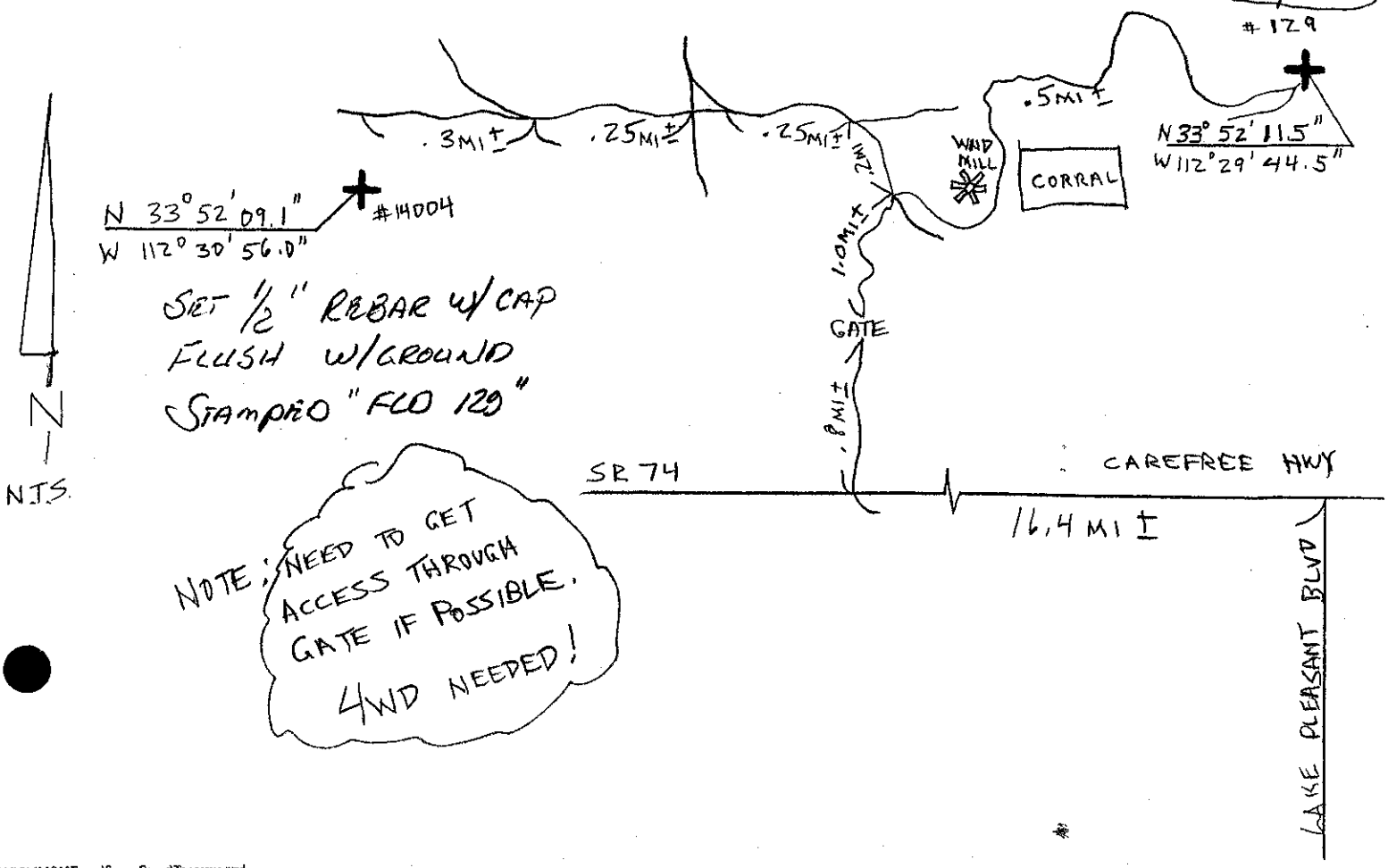
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: GO TO FOR PT 129 + 14004

☐ IMPERIAL
OF HORIZONTAL CONTROL: ☐ METRIC _____

PROJECT BENCH MARK & DATUM: _____ +0.35' ABOVE MARK



NOTE: NEED TO GET ACCESS THROUGH GATE IF POSSIBLE. 4WD NEEDED!

BOOK 1 PAGE 130

JOB No: 4510144

CLIENT: WITTMANN / McMICKEN DAM / MCFCD

TOPOGRAPHY COVER SHEET

PARTY CHIEF: Capwell, Steven G.

CREW: CAPWELL.

DATE: 04-09-2002

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CP # 130 CONTROL SKETCH

FILE NAME:

POINT RANGE: # 130

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(S) SUBDRAIN LOCATION

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

(G) GIS

DESCRIPTION: SET 1/2" REBAR 18" DEPTH W/ALUM CAP STAMPED "FCD · 130" SET FLUSH

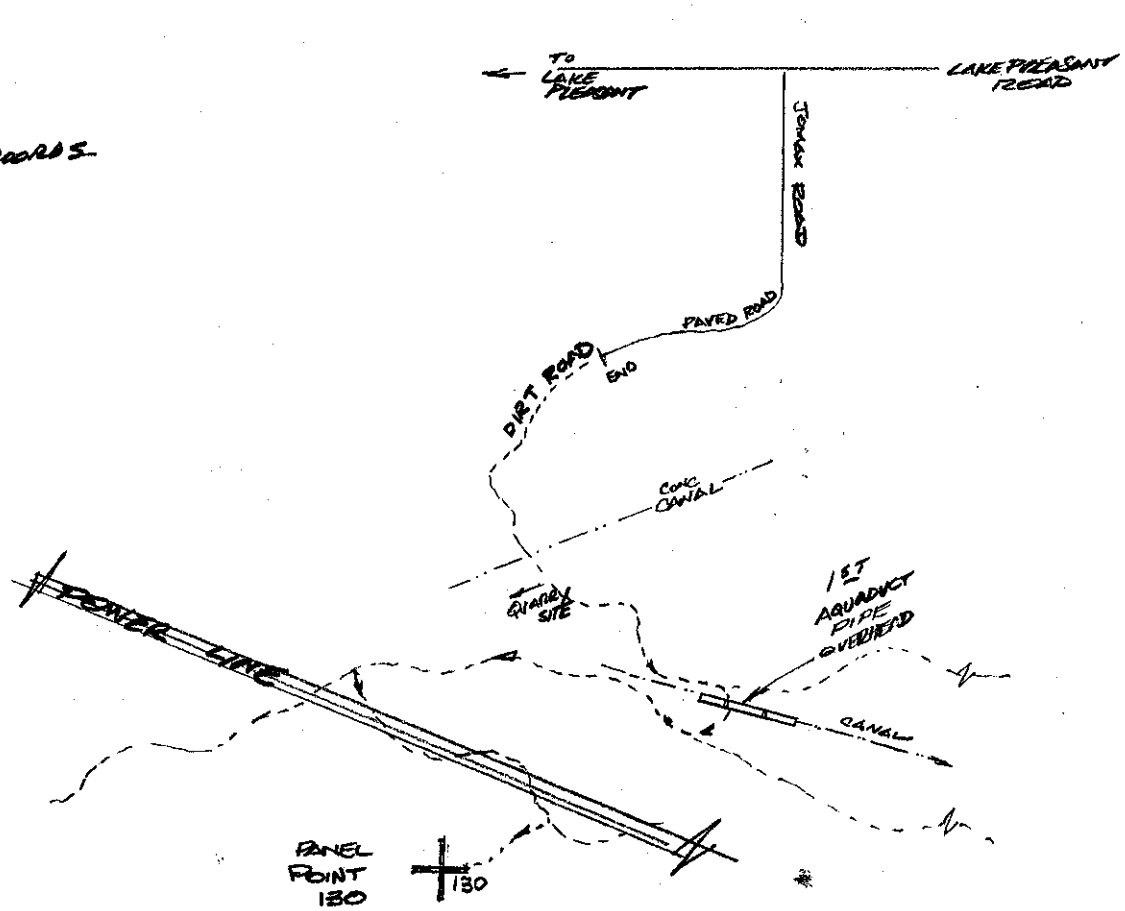
UNITS OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC

PROJECT BENCH MARK & DATUM:

NOTES:
- 4x2 ACCESSIBLE
- 6'x6' PANEL SET
- NAVIGATE USING SEARCH COORDS.

LAT: N 33°-44-30
LON: W 112-18.54

1/2" REBAR · 18" DEPTH FLUSH
W/ALUM. CAP STAMPED
FCD · 130



BOOK 1 PAGE 4 131

JOB No: 45-1001144

CLIENT: WITTMANN / McMICKEN DAM / MCFCD

TOPOGRAPHY COVER SHEET

PARTY CHIEF: Caswell, Steven G

CREW: Caswell

DATE: 4/09/2002

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CONTROL POINT #131 SKETCH

FILE NAME: _____ POINT RANGE: #131

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: To APROACH GENERAL AREA USE SITE SKETCH #130 THEN NAVIGATE USING SEARCH COORDS.

☐ IMPERIAL
F HORIZONTAL CONTROL : ☐ METRIC

PROJECT BENCH MARK & DATUM:

NOTES

ROAD ACCESS ONLY.

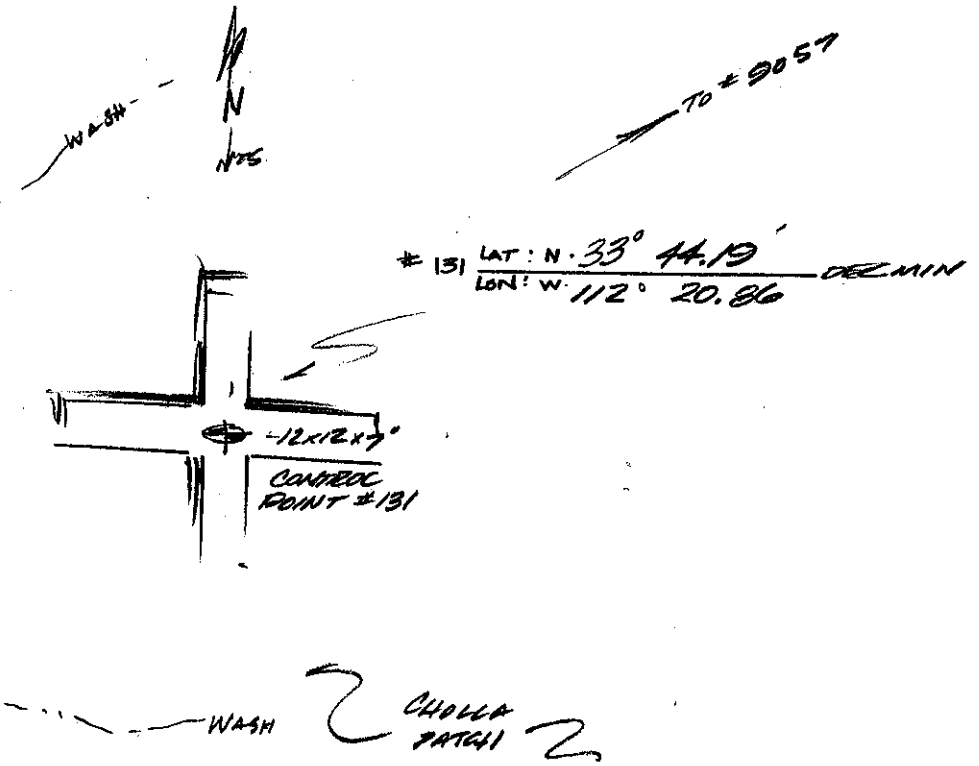
DEEP WASHES ARE PRESENT

12'x12'x7" PAPER PANEL SET

CONTROL POINT SET to SEARCH COORDINATES.

SET 1/2" REBAR x 18" DEPTH w/ ALUMINUM CAP STAMPED

FCD
131
SET FLUSH.



DWG. SG

BOOK_____ PAGE_____ 150

JOB No: _____

CLIENT: _____

TOPOGRAPHY COVER SHEET

PARTY CHIEF: RK WESLEY

CREW: _____

DATE: 4/10/02

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FILE NAME: _____

POINT ~~RANGE~~ NAME: 132

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

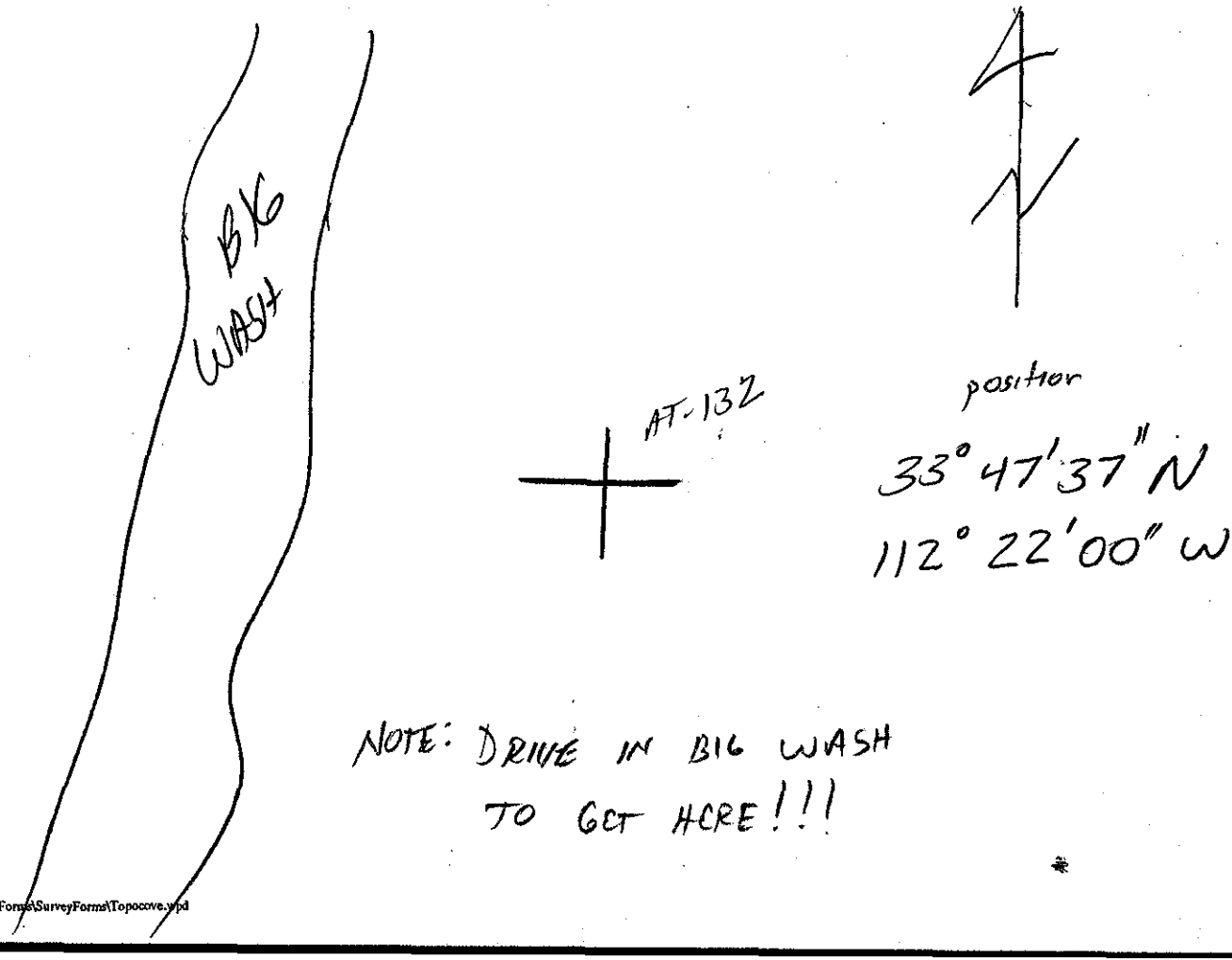
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: Set 1/2" Rebar w/2" ALUM CAP STAMPED "FCD 132" / 6' wide Target. CAP FLUSH

☐ IMPERIAL
OF HORIZONTAL CONTROL : ☐ METRIC _____

ECT BENCH MARK & DATUM: _____



NOTE: DRIVE IN BIG WASH TO GET HERE!!!

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133

BOOK_____ PAGE_____

JOB No: _____

CLIENT: _____

TOPOGRAPHY COVER SHEET

PARTY CHIEF: RK WESLEY

CREW: _____

DATE: 4/9/02

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FILE NAME: _____

POINT ~~RANGE~~ NAME: 133

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

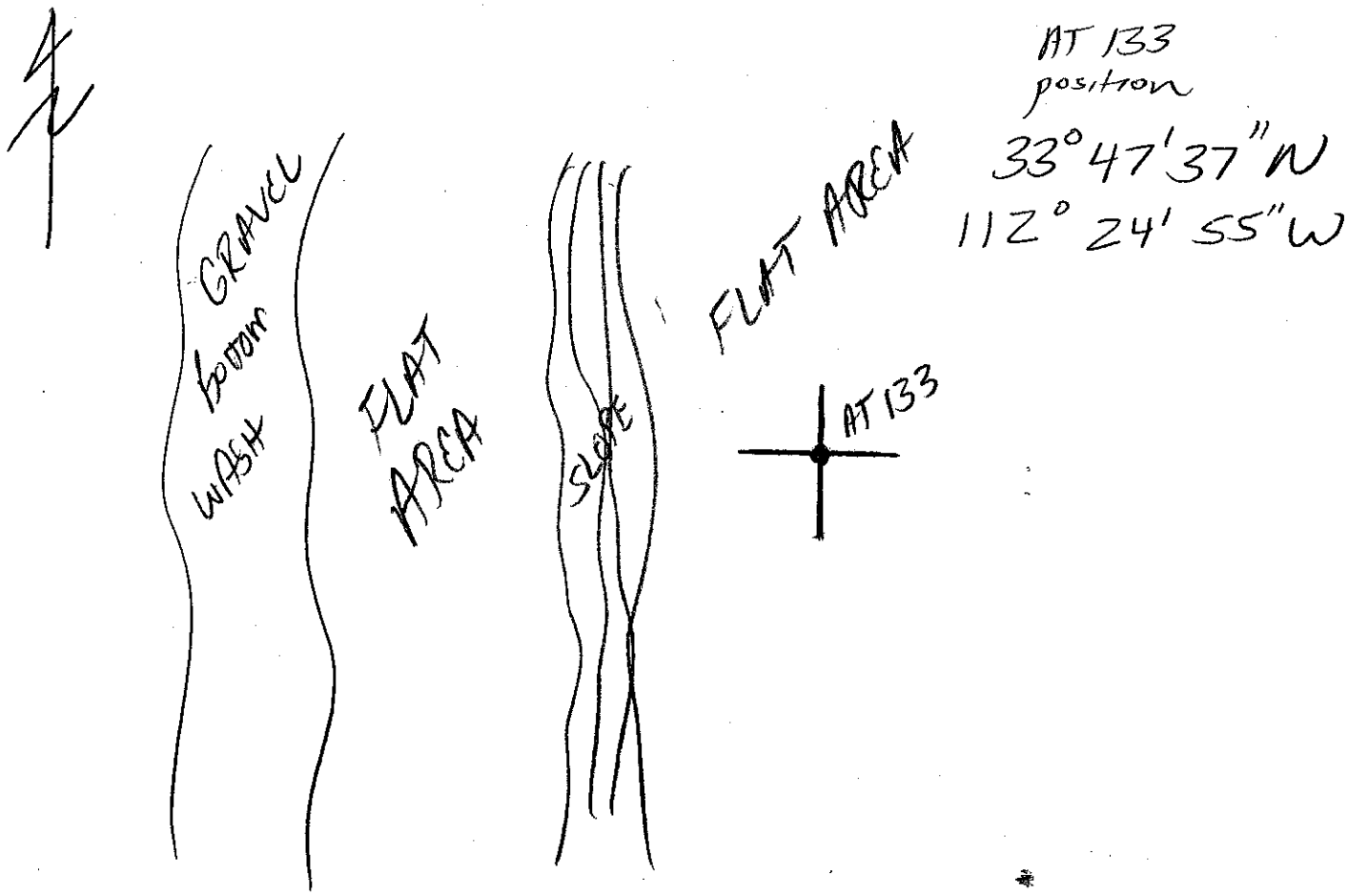
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: Set 1/2" Rebar w/ 2" ALUM CAP STAMPED "FCD 133" / 6' WIDE TARGET
CAP FLUSH

☐ IMPERIAL
OF HORIZONTAL CONTROL : ☐ METRIC

PROJECT BENCH MARK & DATUM: _____



BOOK_____ PAGE 134

JOB No: 45101144

CLIENT: Whittman

TOPOGRAPHY COVER SHEET

PARTY CHIEF: SRR

CREW:

DATE: 45-05-02

RBF CONSULTING

RBF CONSULTING
PLANNING DESIGN CONSTRUCTION
16605 N 28th Avenue Suite 100 Phoenix Arizona 85053
(602) 467-2200 Fax (602) 467-2201

FILE NAME: _____ POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

(S) SUBDRAIN LOCATION

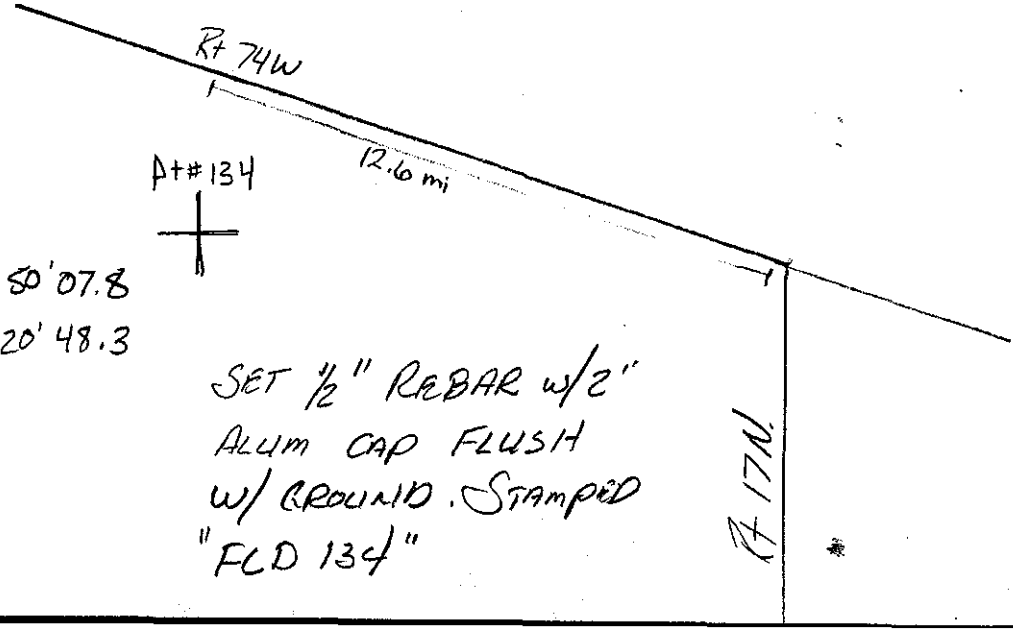
(G) GIS

DESCRIPTION: Pt 134 N.17 to 74W 50'± From rd. 12' target next to fence on S. side of Rt 74W.

☐ IMPERIAL
OF HORIZONTAL CONTROL : ☐ METRIC

PROJECT BENCH MARK & DATUM:

N



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BOOK_____ PAGE_____

JOB No: 45701144

CLIENT: _____

TOPOGRAPHY COVER SHEET

PARTY CHIEF: RICK A.

CREW: _____

DATE: 4-5-02

RBF CONSULTING
PLANNING DESIGN CONSTRUCTION
16605 N 28th Avenue Suite 100 Phoenix Arizona 85053
(602) 467-2200 Fax (602) 467-2201

WITTMAN

FILE NAME: _____

POINT RANGE: 137

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

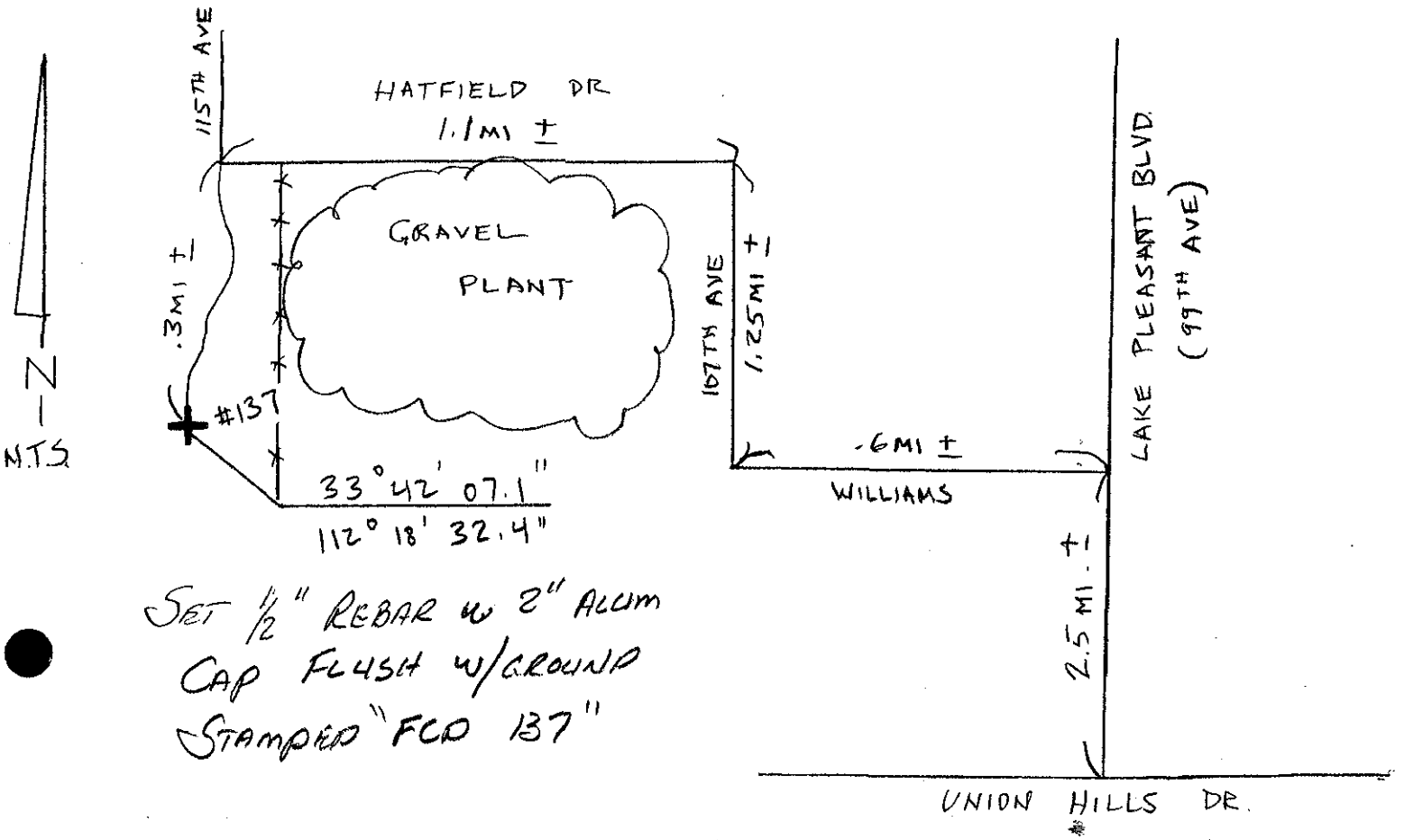
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: GO TO DESCRIPTION FOR PT 137

☐ IMPERIAL
F OF HORIZONTAL CONTROL : ☐ METRIC

PROJECT BENCH MARK & DATUM: _____



SET 1/2" REBAR W 2" ALUM CAP FLUSH W/GROUND STAMPED "FCD 137"

245

BOOK_____ PAGE_____

JOB No: _____

CLIENT: WITTMAN /

TOPOGRAPHY COVER SHEET

PARTY CHIEF: DAVE BEARDSLEY

CREW: JASON HARMON

DATE: 04-10-02

RBF CONSULTING

RBF CONSULTING
PLANNING DESIGN CONSTRUCTION
16605 N 28th Avenue Suite 100 Phoenix Arizona 85053
(602) 467-2200 Fax (602) 467-2201

CONTROL SKETCH: FCD #245

FILE NAME: _____ POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

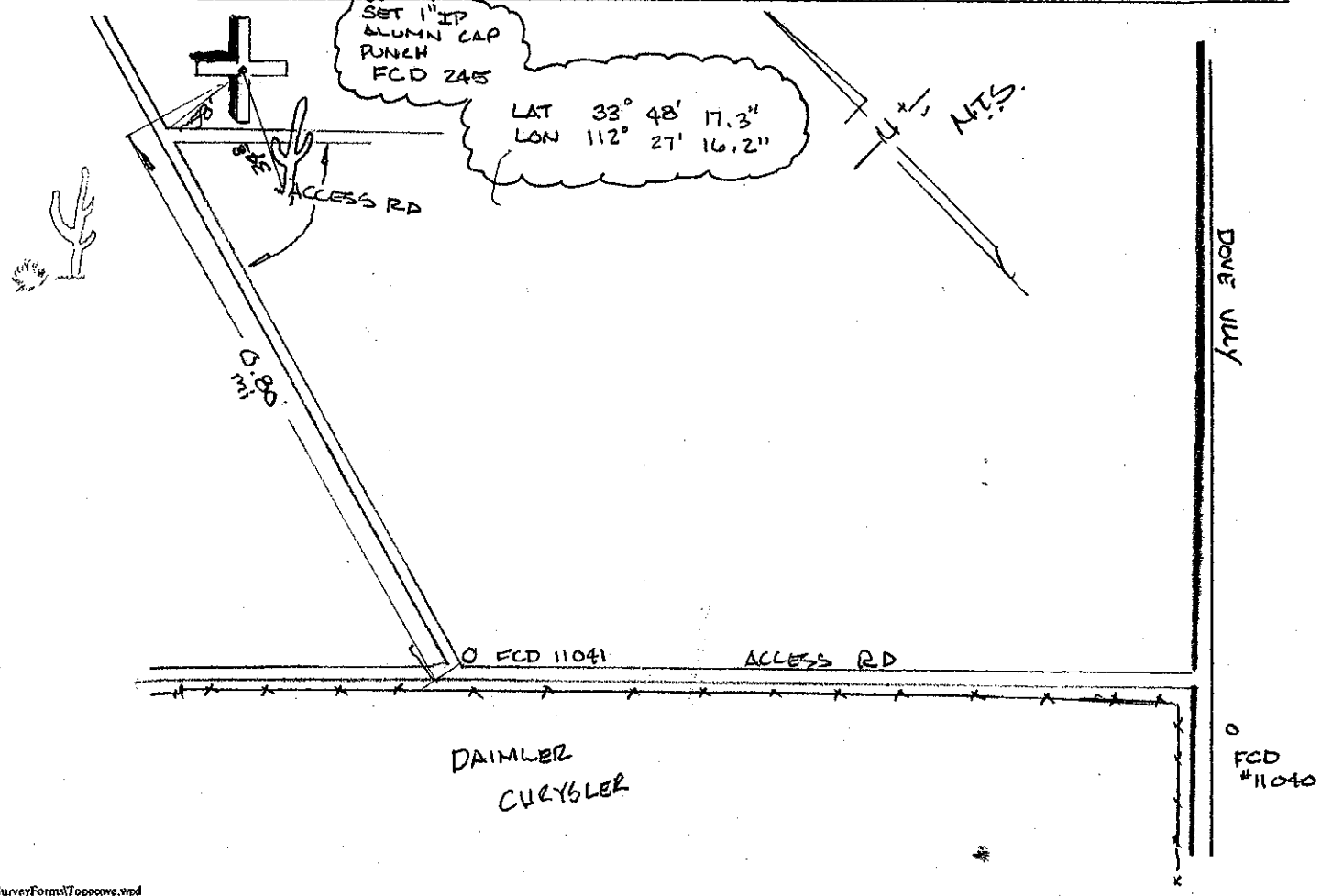
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: N'LY 0.80 mi FROM ACCESS RD. @ FCD #11041 TO ACCESS RD INTX.
34.8' NLY FROM CACTUS, ~58.2' ELY FROM NLY INTERIOR ∡ RD INTX

OF HORIZONTAL CONTROL : ☐ IMPERIAL ☐ METRIC

PROJECT BENCH MARK & DATUM: _____



BOOK_____ PAGE 13002

JOB No: 45101144

CLIENT: Whitt mann

TOPOGRAPHY COVER SHEET

PARTY CHIEF: SRR

CREW:

DATE: 4-05-02

RBF CONSULTING
PLANNING DESIGN CONSTRUCTION
16605 N 28th Avenue Suite 100 Phoenix Arizona 85053
(602) 467-2200 Fax (602) 467-2201

FILE NAME: _____ POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

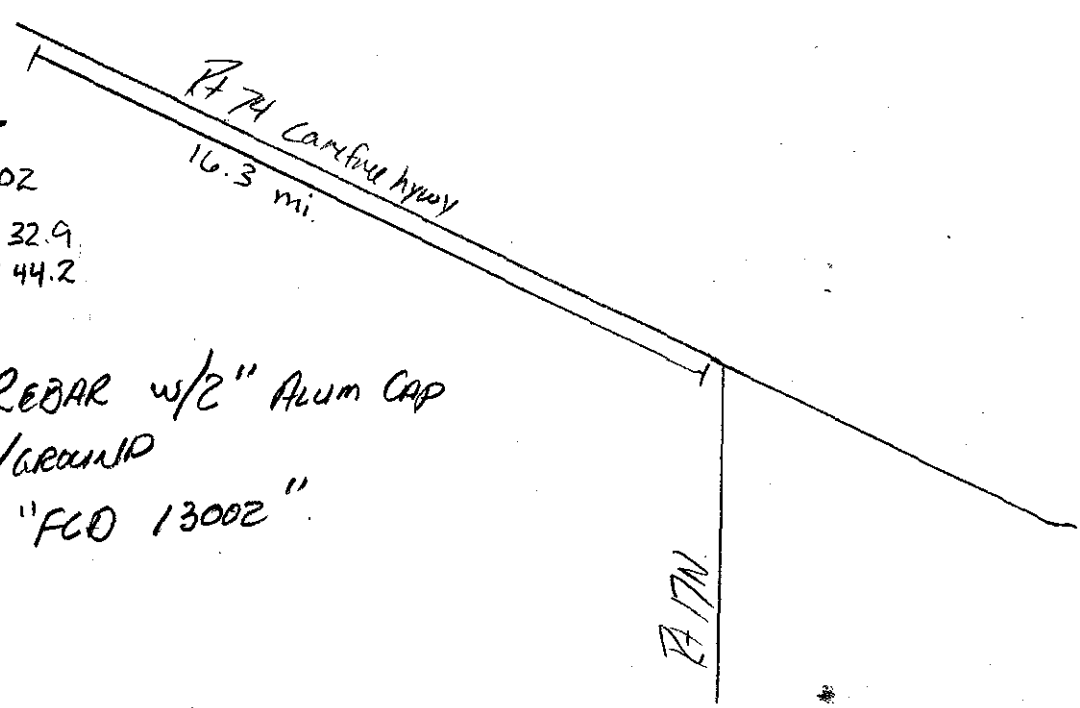
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: Pt 13002 N.17 to 74W S side of Rt 74 50'± 16.3mi on 74W.
6' target

☐ IMPERIAL
OF HORIZONTAL CONTROL : ☐ METRIC

PROJECT BENCH MARK & DATUM:



H:\COMMON\Forms\SurveyForms\Topocove.wpd

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45-101144.002 WITMANN ADMP
RBF BLIND PANEL LOCATIONS
COORDINATES REFERENCED TO NAD83/92 NAVD88

Name	Northing	Easting	Panel elev	Reference
8116	1001880.76	549297.25	1524.84	9006
8117	1007335.97	549322.44	1581.84	9007
8118	1012272.06	549413.60	1632.76	9008
8119	1023018.49	549394.86	1758.91	9012
8120	1001905.61	554647.97	1502.42	9017
8121	1007112.06	554688.82	1554.67	9019
8122	1012448.83	554720.86	1640.80	9020
8123	1001877.46	559966.32	1476.15	9029
8124	1007085.58	559995.03	1544.26	9030
8125	1012398.36	560015.83	1671.99	9032
8126	1001833.56	565209.22	1456.60	9041
8127	1007132.92	565242.29	1526.34	9044
8128	1001780.13	570534.89	1424.16	9057
8129	1006994.96	570576.53	1487.38	9058
8130	1001740.83	575813.33	1407.30	9073
8131	1002099.51	517772.71	1600.27	10004
8132	1007384.06	517806.01	1648.96	10005
8133	1002102.23	523046.42	1589.85	10016
8134	1007356.73	522989.79	1638.84	10018
8135	1012638.21	523014.74	1691.93	10020
8136	1017944.84	523048.48	1752.02	10021
8137	1023170.30	523072.96	1817.05	10022
8138	1001997.40	528272.81	1568.53	10027
8139	1007351.33	528227.25	1623.67	10028
8140	1012538.39	528357.04	1677.30	10029
8141	1017865.71	528369.20	1747.13	10030
8142	1023219.99	528333.71	1825.51	10032
8143	1001949.50	533373.35	1550.69	10038
8144	1007257.29	533497.32	1611.83	10039
8145	1012516.60	533366.87	1672.90	10040
8146	1017863.75	533657.14	1743.07	10041
8147	1023160.68	533535.80	1821.82	10042
8148	1001821.98	538774.14	1543.63	10047
8149	1007278.06	538841.99	1596.39	10048
8150	1012498.95	538938.33	1655.18	10049
8151	1017772.66	538921.16	1723.27	10050
8152	1023082.86	538968.82	1790.34	10051
8153	1001981.23	544028.84	1530.31	10057
8154	1007278.63	544075.68	1584.05	10058

This coordinate information is based on GPS field survey observations and GPS post processing conducted under my direct supervision.
Daniel K. Mardock, RLS
Arizona RLS 37174

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
37174
DANIEL K.
MARDOCK
DATE SIGNED 3-6-03
ARIZONA U.S.A.

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8155	1012461.39	543977.16	1641.34	10059
8156	1017830.92	544092.84	1709.45	10060
8157	1023068.92	544170.55	1796.44	10061
8158	1002305.96	486093.17	1705.68	11002
8159	1007590.54	486081.13	1730.13	11003
8160	1012841.96	486118.09	1768.29	11004
8161	1018153.47	486242.60	1794.82	11005
8162	1002275.09	491360.39	1686.70	11011
8163	1007516.10	491406.59	1715.34	11012
8164	1012837.12	491412.36	1734.92	11013
8165	1018051.33	491458.67	1782.70	11014
8166	1023445.92	491485.92	1835.38	11017
8167	1002243.02	496652.03	1666.11	11020
8168	1007530.71	496645.12	1697.99	11021
8169	1012815.80	496672.01	1736.37	11022
8170	1018095.86	496714.41	1788.25	11023
8171	1023351.97	496738.09	1846.42	11026
8172	1002216.07	501958.42	1652.48	11029
8173	1012759.79	501962.64	1724.97	11031
8174	1018093.19	502040.48	1788.99	11032
8175	1023301.20	502111.13	1848.02	11035
8176	1002165.50	507209.75	1629.57	11038
8177	1007310.22	507272.04	1667.84	11039
8178	1012743.28	507271.56	1714.32	11040
8179	1018002.11	507335.40	1767.13	11041
8180	1023164.68	507235.65	1834.88	11044
8181	1002090.54	512627.63	1606.76	11047
8182	1012706.63	512577.81	1703.19	11049
8183	1017983.33	512598.74	1760.58	11050
8184	1023260.94	512608.34	1826.65	11053
8185	1012582.19	517947.07	1698.25	11060
8186	1018203.18	517834.35	1760.45	11061
8187	1002383.91	480842.02	1724.82	12056
8188	1007608.25	480732.45	1748.29	12057
8189	1012917.24	480869.82	1781.28	12058
8190	1018208.31	480927.42	1818.78	12059
8191	1023539.96	480910.30	1840.41	12062
8192	1023458.05	486243.60	1826.20	12071
8193	1028338.00	549457.22	1844.47	13002
8194	1033560.62	549514.27	1949.12	13003
8195	1028473.71	517895.57	1891.89	14001
8196	1033788.11	517887.77	1978.97	14002
8197	1039046.13	517927.76	2071.33	14003
8198	1044275.54	518191.45	2185.40	14004

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8199	1028486.73	523103.18	1895.40	14012
8200	1033776.62	523054.50	1979.17	14013
8201	1028429.60	528337.02	1919.14	14021
8202	1033755.99	528308.65	2004.84	14022
8203	1028317.52	533679.82	1918.27	14031
8204	1033707.77	533594.52	2017.63	14032
8205	1028395.72	538856.29	1904.01	14040
8206	1033731.47	538990.36	2006.35	14042
8207	1028318.57	544212.85	1875.92	14051
8208	1033668.30	544251.32	1961.11	14053
8209	1028708.05	486273.03	1878.22	15001
8210	1044666.80	486244.07	2057.73	15004
8211	1028677.17	491531.75	1897.63	15012
8212	1033941.39	491567.63	1956.31	15013
8213	1039254.08	491673.89	2016.14	15014
8214	1044498.94	491617.03	2085.66	15015
8215	1028659.35	496804.16	1911.63	15022
8216	1033913.80	496836.14	1985.64	15023
8217	1039172.20	496909.51	2061.04	15024
8218	1028562.20	502082.72	1919.66	15032
8219	1033890.57	502120.95	1990.64	15033
8220	1039072.54	502112.60	2074.93	15034
8221	1028660.26	507376.68	1904.28	15042
8222	1033851.94	507473.08	1984.87	15043
8223	1039153.02	507421.29	2085.28	15044
8224	1028538.83	512653.47	1902.80	15052
8225	1033801.74	512621.54	1981.65	15053
8226	1039038.86	512842.72	2080.86	15054
8227	1028741.98	480986.69	1868.92	16054
8228	1034025.41	481054.29	1896.97	16055
8229	1039217.19	481106.11	1934.15	16056
8230	1044661.73	481131.65	1967.33	16061
8231	1033990.48	486303.54	1931.23	16068
8232	1039169.00	486153.22	1983.03	16069
8233	1007329.94	512592.67	1643.04	11048

Project Engineering Consultants, Ltd.

March 5, 2003

Stewart Geo Technologies, Inc.
17361 Armstrong Avenue
Irvine, California 92614-5721

ATTN: Jay Satalich

Re: Wittman Area Drainage Master Plan

Dear Mr. Satalich,

Below you will find the blind panel data as requested. The work for this portion of the project was performed in April, 2002. Additional field checks were performed in June and August of 2003. Fieldwork was performed using kinematic GPS methods, utilizing Ashtech Z-Surveyor and Z-Extreme units. Coordinate and elevation values are on the Maricopa County Geodetic Densification and Cadastral Survey (GDACS) control system (NAD83 with 1992 adjustment horizontally and NAVD88 vertically) in Arizona Central Coordinate System. All values listed are in international feet. All coordinate and elevation values are within 0.2' relative to valid NAVD88 benchmarks and GDACS control stations, as per contract.

Pt #	Northing	Easting	Panel Elev
2115	976387.80705	513360.52775	1474.17650
2154	986493.92374	565211.94308	1339.82937
5005	981388.74730	550165.09169	1358.09361
5007	986656.25882	550197.34237	1389.79933
5010	991566.13977	550230.42344	1422.15963
5020	986593.00489	554795.81762	1369.86876
5023	991568.32098	554685.91190	1404.89499
5029	981393.89239	559852.28601	1318.28084
5030	986602.00459	559923.99766	1352.58919
5036	981479.81512	554737.24844	1337.32939
5044	991502.55119	565171.08089	1374.28480
5051	986556.36479	570443.25210	1324.59641
5062	986547.05849	575753.33107	1318.27753
5065	991630.71426	502919.95185	1584.02236
5066	991707.20905	489671.46147	1633.27100
5067	987042.22469	489643.66372	1610.32805
5068	987058.90775	484337.19019	1623.12991
5069	991786.50541	480731.61132	1653.15204
5070	991751.97039	484341.71082	1651.04329
5071	981837.22649	484296.19124	1591.32545
5072	976735.65404	484271.17091	1586.59122
5073	971232.84697	484281.54407	1614.26510
5074	966001.83301	484194.86401	1658.99890
5075	965923.71699	489507.72402	1718.19541
5076	971199.09305	489540.35773	1638.14300

Engineers • Planners • Surveyors
2310 W. Mission Lane, Suite 4, Phoenix, Arizona 85021 Tel: (602) 906-1901 Fax: (602) 906-3080 e-mail: pec@pecaz.com

5077	976504.14469	489558.74343	1583.09051
5078	981776.09833	489624.28591	1582.16207
5079	991632.09024	508208.69985	1563.18240
5080	991511.63331	518692.34471	1522.60173
5156	991561.80322	559914.00380	1393.94487
6002	965828.99568	518495.16938	1475.25593
6004	971131.31324	518532.84525	1440.95469
6007	976380.33925	518617.47567	1460.88583
6009	981643.20945	518709.89899	1482.60167
6010	986907.04707	518693.42048	1503.11353
6016	960345.68627	523703.84387	1487.85104
6018	965752.17391	523679.12526	1441.23684
6019	971015.48779	523752.79845	1412.26707
6020	976263.78696	523748.87572	1436.87667
6021	981554.13415	523910.73032	1456.39440
6022	986842.84286	523883.17469	1477.15690
6025	991533.54013	523873.45830	1507.27164
6026	960415.44264	528947.98700	1393.40875
6027	965716.77966	528974.33873	1384.11740
6028	970959.15569	528984.26268	1395.19354
6029	976242.51344	529064.13917	1415.41271
6030	981492.03006	529082.00711	1434.30133
6031	986813.64679	529136.15032	1456.78565
6034	991529.71357	529134.71969	1484.00119
6036	965595.04941	534254.71676	1353.25123
6037	970944.97858	534249.80063	1376.61747
6038	976117.59837	534337.57193	1396.25325
6039	981484.35428	534335.62041	1405.29859
6040	986774.74582	534347.18219	1434.69819
6043	991528.84646	534394.41672	1467.91425
6045	965613.57301	539511.10944	1328.20866
6046	970915.81349	539566.75519	1353.75982
6047	976095.10058	539621.20883	1370.18375
6048	981464.47498	539629.75043	1393.23824
6049	986772.98345	539562.24343	1420.33140
6052	991494.06939	539688.42220	1454.21592
6054	965608.35666	544793.66873	1312.17107
6055	970765.40470	544699.09132	1329.71461
6056	976165.78158	544860.42782	1350.84313
6057	981587.35017	544965.44899	1371.03349
6058	986730.42182	544951.83142	1407.55577
6061	991564.82283	544955.76131	1441.02358
6066	976089.01956	550139.22730	1334.47834
7015	966015.20200	492125.00499	1713.92745
7016	971198.08014	492216.60998	1635.54791
7018	976479.44630	492299.40494	1580.35434
7019	981773.69428	492339.07329	1572.07345
7020	987009.50203	492284.40115	1603.24473
7025	965944.35499	497484.58301	1667.57248
7026	971174.46790	497461.08832	1603.52357
7028	976457.74766	497512.18906	1553.37602
7031	981727.08741	497555.78898	1560.50520

7032	986995.71461	497594.69374	1581.09255
7035	991692.45456	497664.63101	1608.27102
7037	965894.43601	502692.47233	1628.53347
7038	971174.34690	502771.30548	1571.55180
7040	976407.75408	502839.02685	1519.67522
7043	981505.30711	502880.59517	1534.68180
7046	986982.07777	502882.39218	1567.24410
7051	965839.31143	508021.43301	1576.01380
7052	971134.88546	508026.13981	1528.63185
7054	976382.64634	508080.99750	1492.68048
7055	981716.02452	508114.19424	1518.90418
7056	986782.26581	508127.31871	1539.11416
7061	965833.74324	513276.22870	1550.41668
7062	971120.51716	513311.54717	1483.56296
7065	981678.37331	513360.72267	1501.15162
7066	986945.18735	513427.06309	1527.54592
7069	991532.46741	513415.97595	1548.09382
9003	996629.83633	549345.50300	1471.10993
9016	996556.59431	554699.15871	1453.52036
9028	996549.45093	559959.16290	1434.83265
9040	996514.82230	565254.01787	1445.64637
9056	996487.62360	570493.00194	1383.96001
9072	996466.82835	575758.69907	1379.68505
9118	991523.22565	575692.27889	1340.98329
9121	991506.58751	570458.61711	1351.80772
10003	996816.32228	517738.00803	1560.62701
10014	996791.81694	522941.79638	1547.51350
10026	996763.22983	528174.82669	1523.71390
10036	996685.82242	533427.69364	1507.68046
10046	996827.58095	538844.16767	1498.33004
10055	996616.70924	544248.74910	1484.78676
11001	997026.80617	486056.90852	1677.60169
11010	996992.58696	491319.72733	1650.76444
11019	996956.38061	496605.72538	1638.58620
11028	996914.08099	501891.19628	1615.70718
11037	996883.71248	507177.30090	1595.55116
11046	996846.59270	512460.48424	1575.68159
11269	991667.15505	491317.52511	1622.70009
12055	997069.58590	480766.46721	1686.20398

Please call if you have any questions.

Sincerely,

Larry Maldonado

Larry Maldonado

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
16863
LARRY M.
MALDONADO
Date Signed 3-5-03
ARIZONA, U.S.A.

Engineers • Planners • Surveyors
2310 W. Mission Lane, Suite 4, Phoenix, Arizona 85021 Tel: (602) 906-1901 Fax: (602) 906-3080 e-mail: pec@pecaz.com

Maricopa County

stewart geo technologies

STAR*NET-PRO Version 6.0.23e
Copyright 1988-2001 Starplus Software, Inc.
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Run Date: Tue Jul 23 2002 16:13:08

Summary of Files Used and Option Settings

Project Folder and Data Files

Project Name	MC MICKEN FREE
Project Folder	D:\GPS PROJECTS\WITTMANN\MC MICKEN
Data File List	Mc Micken Free.dat
	Mc Micken Free.gps

Project Option Settings

STAR*NET Run Mode	: Adjust with Error Propagation
Type of Adjustment	: 3D
Project Units	: FeetInt; DMS
Coordinate System	: Mercator NAD83; AZ Central 0202
Geoid Height	: 0.0000 (Default, Meters)
Vertical Deflection	: N=0.00 E=0.00 (Defaults, Seconds)
Longitude Sign Convention	: Positive West
Input/Output Coordinate Order	: North-East
Angle Data Station Order	: At-From-To
Distance/Vertical Data Type	: Slope/Zenith
Convergence Limit; Max Iterations	: 0.010000; 10
Default Coefficient of Refraction	: 0.070000
Create Coordinate File	: Yes
Create Geodetic Position File	: Yes
Create Ground Scale Coordinate File	: No
Create Dump File	: No
GPS Vector Standard Error Factors	: 4.5000
GPS Vector Centering (Meters)	: 0.00100
GPS Vector Transformations	: None

Summary of Unadjusted Input Observations

Number of Entered Stations (FeetInt) = 1

Fixed Stations	Latitude	Longitude	Elev	Description
4DD1	33-30-29.701920	112-27-29.031850	1027.7890	

Number of GPS Vector Observations (FeetInt) = 64

From To	DeltaX DeltaY DeltaZ	StdErrX StdErrY StdErrZ	CorrelXY CorrelXZ CorrelYZ
(V1 Postprocessed 12-APR-2002 08:29:50.000 mc miken dam.asc)			
4DD1	-400.4716	0.0160	0.8785
FRIA	29536.8691	0.0334	-0.8631
	41730.4664	0.0255	-0.9323
(V2 Postprocessed 12-APR-2002 11:50:55.000 mc miken dam.asc)			

4DD1	2861.3596	0.0240	0.5667
104	17997.5978	0.0330	-0.4677
	27117.2684	0.0279	-0.7242

(V3 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)

4DD1	7683.2246	0.0225	0.4697
110	23926.2100	0.0387	-0.3984
	38138.0692	0.0238	-0.6173

(V4 Postprocessed 12-APR-2002 10:26:45.000 mc miken dam.asc)

4DD1	11106.9528	0.0220	0.4793
111	22505.3298	0.0367	-0.4144
	38075.6401	0.0232	-0.6127

(V5 Postprocessed 12-APR-2002 08:52:20.000 mc miken dam.asc)

4DD1	14015.4709	0.0173	0.5210
112	21337.4609	0.0300	-0.3372
	38090.2149	0.0292	-0.6763

(V6 Postprocessed 12-APR-2002 09:51:30.000 mc miken dam.asc)

4DD1	-5247.2158	0.0199	0.5235
113	28721.8190	0.0312	-0.5951
	38698.9520	0.0345	-0.5602

(V7 Postprocessed 12-APR-2002 01:13:20.000 mc miken dam.asc)

4DD1	43703.6499	0.0271	0.5442
115	24059.1791	0.0440	-0.4584
	58877.5849	0.0285	-0.5206

(V8 Postprocessed 12-APR-2002 09:06:25.000 mc miken dam.asc)

4DD1	4149.1979	0.0205	0.5161
4FD2	17256.7150	0.0348	-0.3032
	26800.6629	0.0372	-0.6705

(V9 Postprocessed 12-APR-2002 01:14:25.000 mc miken dam.asc)

4DD1	42904.4503	0.0256	0.5567
4HB1	20059.7178	0.0413	-0.4499
	52807.3443	0.0265	-0.5183

(V10 Postprocessed 12-APR-2002 11:49:05.000 mc miken dam.asc)

4DD1	12942.4365	0.0266	0.5524
4HD1	32329.1821	0.0349	-0.4327
	52902.6104	0.0267	-0.6915

(V11 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)

FRIA	8083.7058	0.0154	0.4635
110	-5610.6255	0.0259	-0.3796
	-3592.4289	0.0160	-0.6027

(V12 Postprocessed 12-APR-2002 10:26:45.000 mc miken dam.asc)

FRIA	11507.4292	0.0169	0.4762
111	-7031.4997	0.0271	-0.4095
	-3654.8679	0.0170	-0.6097

(V13 Postprocessed 12-APR-2002 08:52:20.000 mc miken dam.asc)

FRIA	14415.9492	0.0118	0.5000
112	-8199.4065	0.0196	-0.3426
	-3640.2506	0.0194	-0.6653

(V14 Postprocessed 12-APR-2002 09:51:30.000 mc miken dam.asc)

FRIA	-4846.6484	0.0096	0.4539
113	-815.0348	0.0141	-0.5289
	-3031.6075	0.0160	-0.5143

(V15 Postprocessed 12-APR-2002 01:13:20.000 mc miken dam.asc)

FRIA	44104.1465	0.0223	0.5470
115	-5477.6047	0.0360	-0.4525
	17147.0695	0.0233	-0.5193

(V16 Postprocessed 12-APR-2002 11:50:55.000 mc miken dam.asc)

FRIA	3261.8522	0.0231	0.5567
104	-11539.2113	0.0314	-0.4569
	-14613.2321	0.0259	-0.7162
(V17 Postprocessed 12-APR-2002 09:06:25.000 mc miken dam.asc)			
FRIA	4549.6817	0.0160	0.5114
4FD2	-12280.1457	0.0269	-0.3158
	-14929.8069	0.0289	-0.6695
(V18 Postprocessed 12-APR-2002 01:14:25.000 mc miken dam.asc)			
FRIA	43304.9473	0.0190	0.5447
4HB1	-9477.0610	0.0304	-0.4442
	11076.8305	0.0194	-0.5135
(V19 Postprocessed 12-APR-2002 11:49:05.000 mc miken dam.asc)			
FRIA	13342.9353	0.0196	0.5576
4HD1	2792.3782	0.0262	-0.4434
	11172.0962	0.0218	-0.6982
(V20 Postprocessed 12-APR-2002 11:50:55.000 mc miken dam.asc)			
104	10081.0768	0.0258	0.5698
4HD1	14331.5820	0.0350	-0.4604
	25785.3420	0.0293	-0.7182
(V21 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)			
110	3423.7176	0.0123	0.4283
111	-1420.8807	0.0208	-0.3414
	-62.4369	0.0130	-0.5800
(V22 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)			
110	-12930.3514	0.0314	0.4262
113	4795.6085	0.0528	-0.4324
	560.8141	0.0400	-0.4697
(V23 Postprocessed 12-APR-2002 10:26:45.000 mc miken dam.asc)			
111	-16354.1407	0.0465	0.4464
113	6216.4828	0.0756	-0.4884
	623.2564	0.0623	-0.4721
(V24 Postprocessed 12-APR-2002 09:06:25.000 mc miken dam.asc)			
112	-9866.2489	0.0144	0.4812
4FD2	-4080.7028	0.0239	-0.2528
	-11289.4979	0.0252	-0.6437
(V25 Postprocessed 12-APR-2002 01:14:25.000 mc miken dam.asc)			
115	-799.2065	0.0171	0.5187
4HB1	-3999.4340	0.0277	-0.4262
	-6070.2222	0.0182	-0.4975
(V26 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)			
101	10520.3342	0.0155	0.5241
106	2981.5793	0.0230	-0.6401
	10155.5707	0.0210	-0.6577
(V27 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)			
101	5121.7908	0.0189	0.4451
108	5917.9967	0.0371	-0.5877
	11275.0681	0.0296	-0.8298
(V28 Postprocessed 11-APR-2002 12:34:00.000 mc miken dam.asc)			
4GC1	-26913.0518	0.0184	0.5395
101	-1693.9469	0.0286	-0.6166
	-17670.0783	0.0244	-0.7147
(V29 Postprocessed 11-APR-2002 12:34:00.000 mc miken dam.asc)			
101	1432.2033	0.0186	0.5286
FRIA	14176.4203	0.0327	-0.6205
	21000.9372	0.0263	-0.8337
(V30 Postprocessed 11-APR-2002 12:34:00.000 mc miken dam.asc)			

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4DD1                        -1832.7069          0.0229          0.5425
101                         15360.3956          0.0344         -0.6558
                            20729.5632          0.0308         -0.6847
(V31 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)
106                         -5398.5470          0.0113          0.3964
108                          2936.4176          0.0218         -0.5308
                             1119.4970          0.0174         -0.7973
(V32 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)
4GC1                       -16392.6856          0.0198          0.5542
106                          1287.6438          0.0308         -0.6333
                            -7514.4838          0.0261         -0.7250
(V33 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)
106                         -9088.1766          0.0208          0.5203
FRIA                        11194.8098          0.0379         -0.6190
                            10845.3568          0.0297         -0.8407
(V34 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)
4DD1                         8687.6592          0.0235          0.5414
106                         18341.9944          0.0360         -0.6624
                            30885.1583          0.0324         -0.6918
(V35 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)
4GC1                       -21791.2488          0.0175          0.5143
108                          4224.0748          0.0311         -0.6133
                            -6394.9910          0.0248         -0.8306
(V36 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)
108                         -3689.6476          0.0170          0.5191
FRIA                         8258.3726          0.0302         -0.6107
                             9725.8533          0.0242         -0.8314
(V37 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)
4DD1                         3289.0928          0.0248          0.4549
108                         21278.3913          0.0487         -0.5992
                            32004.6737          0.0389         -0.8364
(V38 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)
4GC1                       -29354.2130          0.0197          0.5409
102                          112.0974           0.0282         -0.3862
                           -16467.7557          0.0254         -0.7028
(V39 Postprocessed 11-APR-2002 10:34:20.000 mc miken dam.asc)
4GC1                       -19259.8720          0.0110          0.4369
103                         -1005.6497          0.0158         -0.3348
                           -12361.3708          0.0118         -0.5487
(V40 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)
4GC1                       -24905.3148          0.0170          0.3826
105                          2818.6619          0.0235         -0.3920
                           -10128.7525          0.0177         -0.5442
(V41 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)
4GC1                       -19084.5002          0.0170          0.5591
107                          2685.6311          0.0261         -0.4093
                            -7047.4342          0.0172         -0.4656
(V42 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)
4GC1                       -20806.2365          0.0141          0.4542
109                          8243.7808          0.0242         -0.3287
                             -243.7735          0.0146         -0.4562
(V43 Postprocessed 11-APR-2002 10:18:05.000 mc miken dam.asc)
4GC1                       -25480.8440          0.0134          0.8067
FRIA                        12482.5097          0.0285         -0.8189
                             3330.8301          0.0214         -0.9175
(V44 Postprocessed 11-APR-2002 10:14:25.000 mc miken dam.asc)
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4GC1                        -25080.3590          0.0147           0.8470
4DD1                        -17054.3860          0.0303          -0.8311
                            -38399.6061          0.0229          -0.9179
(V45 Postprocessed 11-APR-2002 01:24:40.000 mc miken dam.asc)
4GC1                        -24201.6426          0.0123           0.5270
100                          -3590.8503          0.0184          -0.4211
                            -18819.6821          0.0122          -0.4666
(V46 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)
FRIA                         -3873.3600          0.0231           0.5251
102                         -12370.3940          0.0289          -0.4744
                            -19798.5934          0.0267          -0.6842
(V47 Postprocessed 11-APR-2002 10:34:20.000 mc miken dam.asc)
FRIA                          6220.9701          0.0131           0.3497
103                         -13488.1546          0.0200          -0.3844
                            -15692.2028          0.0138          -0.4970
(V48 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)
FRIA                           575.5354          0.0154           0.3750
105                          -9663.8318          0.0211          -0.3939
                            -13459.5895          0.0162          -0.5296
(V49 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)
FRIA                          6396.3372          0.0125           0.0000
107                          -9796.7907          0.0268          -0.2721
                            -10378.2797          0.0134          -0.2786
(V50 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)
FRIA                          4674.6220          0.0110           0.0000
109                          -4238.6884          0.0228          -0.2084
                             -3574.6152          0.0104          -0.3848
(V51 Postprocessed 11-APR-2002 01:24:40.000 mc miken dam.asc)
FRIA                          1279.1938          0.0153          -0.0000
100                         -16073.3673          0.0327          -0.2384
                            -22150.5089          0.0150          -0.4445
(V52 Postprocessed 11-APR-2002 10:18:05.000 mc miken dam.asc)
4DD1                           -400.4805          0.0168           0.8237
FRIA                          29536.9010          0.0365          -0.8452
                              41730.4322          0.0270          -0.9278
(V53 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)
4DD1                           -4273.8518          0.0269           0.5630
102                           17166.4947          0.0336          -0.3722
                              21931.8600          0.0280          -0.6378
(V54 Postprocessed 11-APR-2002 10:34:20.000 mc miken dam.asc)
4DD1                           5820.4674          0.0160           0.4619
103                           16048.7134          0.0238          -0.3922
                              26038.2569          0.0173          -0.5800
(V55 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)
4DD1                            175.0377          0.0218           0.4662
105                           19873.0326          0.0290          -0.4849
                              28270.8739          0.0225          -0.5624
(V56 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)
4DD1                           5995.8521          0.0203           0.6155
107                           19740.0049          0.0336          -0.4671
                              31352.1627          0.0209          -0.5533
(V57 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)
4DD1                           4274.1089          0.0175           0.4930
109                           25298.1432          0.0333          -0.3512
                              38155.8398          0.0177          -0.5026
(V58 Postprocessed 11-APR-2002 01:24:40.000 mc miken dam.asc)
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4DD1                          878.7046          0.0154          0.5755
100                         13463.5125          0.0248         -0.4297
                            19579.9283          0.0155         -0.5162
(V59 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)
102                         10094.3079          0.0154          0.4748
103                         -1117.7228          0.0200         -0.3301
                             4106.3551          0.0171         -0.5985
(V60 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)
102                          4448.9009          0.0147          0.4914
105                          2706.5764          0.0175         -0.4186
                             6338.9726          0.0160         -0.6001
(V61 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)
103                         -5645.4063          0.0098          0.3739
105                          3824.3017          0.0125         -0.3927
                             2232.6154          0.0102         -0.4773
(V62 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)
107                         -1721.7169          0.0113          0.4429
109                          5558.1063          0.0213         -0.3184
                             6803.6459          0.0127         -0.4680
(V63 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)
107                         -5117.1460          0.0134          0.5866
100                         -6276.4816          0.0218         -0.4412
                           -11772.2021          0.0136         -0.5282
(V64 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)
109                         -3395.4091          0.0149          0.4837
100                        -11834.6269          0.0281         -0.3466
                           -18575.9083          0.0156         -0.5013
```

Maricopa County

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Adjustment Statistical Summary

Convergence Iterations	=	2
Number of Stations	=	21
Number of Observations	=	192
Number of Unknowns	=	60
Number of Redundant Obs	=	132

Observation	Count	Sum Squares of StdRes	Error Factor
GPS Deltas	192	131.985	1.000
Total	192	131.985	1.000

The Chi-Square Test at 5.00% Level Passed
Lower/Upper Bounds (0.879/1.120)

Maricopa County

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Adjusted Station Information

Adjusted Coordinates (FeetInt)

Station	N	E	Elev	Description
100	936282.2126	530770.0814	1196.1308	
101	937653.3840	527547.2245	1235.1872	
102	939077.6326	524609.0807	1287.8240	
103	944008.5057	534389.4789	1205.0455	
104	945296.3948	530917.4262	1243.8274	
105	946665.0436	527725.9659	1294.2431	
106	949814.4480	536193.3292	1209.8990	
107	950365.1018	533174.8431	1248.9010	
108	951139.1643	530090.1116	1287.6752	
109	958528.8588	529503.5973	1287.3053	
110	958513.8788	533177.7220	1248.1082	
111	958439.6059	536883.7617	1217.8496	
112	958452.9354	540017.5556	1199.9837	
113	958771.7579	519399.4835	1987.2386	
115	983293.2996	566541.4258	1214.4684	
4DD1	912882.7165	534978.5233	1027.7890	
4FD2	944918.4051	532388.4783	1228.9618	
4GC1	958797.2076	551879.9089	1153.7863	
4HB1	976019.9343	567292.4829	1177.6136	
4HD1	976209.6281	534920.5671	1294.8860	
FRIA	962716.1337	523586.9959	1495.4126	

Adjusted Positions and Ellipsoid Heights (FeetInt)

(Average Geoid Height = 0.000 Meters, 0.000 FeetInt)

Station	Latitude	Longitude	Ellip Ht
100	33-34-20.986812	112-28-20.215563	1196.1308
101	33-34-34.379891	112-28-58.395132	1235.1872
102	33-34-48.310448	112-29-33.216114	1287.8240
103	33-35-37.617135	112-27-37.917227	1205.0455
104	33-35-50.176551	112-28-19.045279	1243.8274
105	33-36-03.546304	112-28-56.864408	1294.2431
106	33-36-35.151529	112-27-16.948890	1209.8990
107	33-36-40.442749	112-27-52.674348	1248.9010
108	33-36-47.937841	112-28-29.198544	1287.6752
109	33-38-01.016012	112-28-36.606902	1287.3053
110	33-38-01.062534	112-27-53.150702	1248.1082
111	33-38-00.519837	112-27-09.313322	1217.8496
112	33-38-00.810798	112-26-32.249476	1199.9837
113	33-38-02.861723	112-30-36.127946	1987.2386
115	33-42-07.793187	112-21-19.785263	1214.4684
4DD1	33-30-29.701920	112-27-29.031850	1027.7890
4FD2	33-35-46.514622	112-28-01.630134	1228.9618
4GC1	33-38-04.791112	112-24-11.967011	1153.7863
4HB1	33-40-55.865501	112-21-10.531369	1177.6136
4HD1	33-40-56.224836	112-27-33.636093	1294.8860
FRIA	33-38-42.119839	112-29-46.862113	1495.4126

Convergence Angles (DMS) and Grid Factors at Stations

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(Grid Azimuth = Geodetic Azimuth - Convergence)
(Elevation Factor Includes a 0.00 Meter Geoid Height Correction)

Station	Convergence Angle	------- Factors ------- Scale	x Elevation	= Combined
100	-0-18-26.13	0.99993279	0.99994277	0.99987556
101	-0-18-47.35	0.99993405	0.99994090	0.99987495
102	-0-19-06.73	0.99993522	0.99993838	0.99987361
103	-0-18-03.34	0.99993140	0.99994234	0.99987375
104	-0-18-26.20	0.99993273	0.99994049	0.99987322
105	-0-18-47.24	0.99993398	0.99993807	0.99987206
106	-0-17-52.19	0.99993072	0.99994211	0.99987284
107	-0-18-12.01	0.99993187	0.99994024	0.99987211
108	-0-18-32.29	0.99993305	0.99993839	0.99987145
109	-0-18-36.98	0.99993328	0.99993841	0.99987169
110	-0-18-12.91	0.99993186	0.99994028	0.99987215
111	-0-17-48.63	0.99993046	0.99994173	0.99987220
112	-0-17-28.10	0.99992930	0.99994258	0.99987189
113	-0-19-43.20	0.99993734	0.99990492	0.99984227
115	-0-14-36.60	0.99992039	0.99994189	0.99986229
4DD1	-0-17-56.00	0.99993118	0.99995082	0.99988201
4FD2	-0-18-16.53	0.99993217	0.99994120	0.99987337
4GC1	-0-16-10.42	0.99992512	0.99994479	0.99986992
4HB1	-0-14-31.01	0.99992016	0.99994365	0.99986382
4HD1	-0-18-03.48	0.99993120	0.99993804	0.99986925
FRIA	-0-19-16.25	0.99993563	0.99992845	0.99986409
Project Averages:	-0-17-56.84	0.99993114	0.99993907	0.99987021

Maricopa County

stewart geo technologies

Adjusted Observations and Residuals

Adjusted GPS Vector Observations Sorted by Residuals (FeetInt)

From To	Component	Adj Value	Residual	StdErr	StdRes
(V6 Postprocessed 12-APR-2002 09:51:30.000 mc miken dam.asc)					
4DD1	Delta-N	45814.3450	-0.0501	0.0226	2.2
113	Delta-E	-15821.1482	0.0551	0.0158	3.5*
	Delta-U	903.1442	-0.0580	0.0424	1.4
	Length	48477.6093			
(V52 Postprocessed 11-APR-2002 10:18:05.000 mc miken dam.asc)					
4DD1	Delta-N	49780.0386	0.0037	0.0079	0.5
FRIA	Delta-E	-11653.4078	0.0067	0.0089	0.8
	Delta-U	404.9593	0.0668	0.0469	1.4
	Length	51127.4696			
(V37 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)					
4DD1	Delta-N	38235.3244	-0.0061	0.0162	0.4
108	Delta-E	-5088.8470	0.0043	0.0220	0.2
	Delta-U	224.2108	-0.0647	0.0613	1.1
	Length	38573.1340			
(V36 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)					
108	Delta-N	11543.3031	0.0165	0.0105	1.6
FRIA	Delta-E	-6566.3757	0.0188	0.0138	1.4
	Delta-U	203.5131	-0.0501	0.0386	1.3
	Length	13281.8129			
(V9 Postprocessed 12-APR-2002 01:14:25.000 mc miken dam.asc)					
4DD1	Delta-N	63313.4556	0.0078	0.0223	0.4
4HB1	Delta-E	31987.5750	-0.0198	0.0198	1.0
	Delta-U	29.2761	-0.0515	0.0466	1.1
	Length	70935.1779			
(V53 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)					
4DD1	Delta-N	26143.7673	0.0033	0.0193	0.2
102	Delta-E	-10507.4260	0.0176	0.0206	0.9
	Delta-U	241.0095	0.0491	0.0430	1.1
	Length	28177.3075			
(V49 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)					
FRIA	Delta-N	-12298.6663	-0.0303	0.0148	2.0
107	Delta-E	9658.1164	0.0225	0.0154	1.5
	Delta-U	-252.3651	0.0274	0.0244	1.1
	Length	15639.6960			
(V7 Postprocessed 12-APR-2002 01:13:20.000 mc miken dam.asc)					
4DD1	Delta-N	70583.8653	-0.0105	0.0237	0.4
115	Delta-E	31198.3514	-0.0085	0.0212	0.4
	Delta-U	43.9772	-0.0438	0.0497	0.9
	Length	77171.3749			
(V23 Postprocessed 12-APR-2002 10:26:45.000 mc miken dam.asc)					
111	Delta-N	241.6024	0.0104	0.0473	0.2
113	Delta-E	-17488.5782	0.0430	0.0396	1.1
	Delta-U	762.0878	-0.0067	0.0892	0.1
	Length	17506.8420			
(V33 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)					
106	Delta-N	12837.7283	0.0008	0.0124	0.1
FRIA	Delta-E	-12675.0095	0.0085	0.0170	0.5

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                    Delta-U          277.7271       -0.0370   0.0480   0.8
                    Length         18042.7345
(V30 Postprocessed 11-APR-2002 12:34:00.000 mc miken dam.asc)
4DD1                Delta-N        24734.6545        0.0121   0.0174   0.7
101                 Delta-E        -7561.4866        0.0073   0.0179   0.4
                    Delta-U          191.3625       -0.0338   0.0451   0.8
                    Length         25865.3403
(V51 Postprocessed 11-APR-2002 01:24:40.000 mc miken dam.asc)
FRIA                Delta-N       -26396.5223        0.0089   0.0155   0.6
100                 Delta-E         7331.9108       -0.0069   0.0189   0.4
                    Delta-U         -317.2735       -0.0337   0.0305   1.1
                    Length         27397.7000
(V10 Postprocessed 12-APR-2002 11:49:05.000 mc miken dam.asc)
4DD1                Delta-N        63333.9365       -0.0058   0.0173   0.3
4HD1                Delta-E         -389.1126       -0.0086   0.0205   0.4
                    Delta-U          170.9054       -0.0337   0.0438   0.8
                    Length         63335.3624
(V15 Postprocessed 12-APR-2002 01:13:20.000 mc miken dam.asc)
FRIA                Delta-N        20820.4926       -0.0081   0.0195   0.4
115                 Delta-E        42843.8741        0.0147   0.0175   0.8
                    Delta-U         -335.1515        0.0308   0.0407   0.8
                    Length         47636.1500
(V24 Postprocessed 12-APR-2002 09:06:25.000 mc miken dam.asc)
112                 Delta-N       -13574.8414       -0.0332   0.0165   2.0
4FD2                Delta-E        -7561.2066       -0.0023   0.0120   0.2
                    Delta-U           23.1947        0.0014   0.0316   0.0
                    Length         15538.6197
(V63 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)
107                 Delta-N       -14097.1784       -0.0315   0.0117   2.7
100                 Delta-E        -2330.4994        0.0094   0.0101   0.9
                    Delta-U          -57.6654       -0.0038   0.0246   0.2
                    Length         14288.6315
(V1 Postprocessed 12-APR-2002 08:29:50.000 mc miken dam.asc)
4DD1                Delta-N        49780.0386       -0.0104   0.0075   1.4
FRIA                Delta-E       -11653.4078       -0.0137   0.0071   1.9
                    Delta-U          404.9593        0.0261   0.0438   0.6
                    Length         51127.4696
(V62 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)
107                 Delta-N         8145.2523        0.0261   0.0116   2.2
109                 Delta-E        -3714.9061       -0.0157   0.0100   1.6
                    Delta-U           36.4840       -0.0036   0.0225   0.2
                    Length          8952.4854
(V43 Postprocessed 11-APR-2002 10:18:05.000 mc miken dam.asc)
4GC1                Delta-N         3786.2868       -0.0008   0.0067   0.1
FRIA                Delta-E       -28315.0281        0.0060   0.0074   0.8
                    Delta-U          322.1467        0.0300   0.0368   0.8
                    Length         28568.8741
(V34 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)
4DD1                Delta-N        36942.2482       -0.0089   0.0181   0.5
106                 Delta-E         1022.0044       -0.0046   0.0184   0.3
                    Delta-U          149.3588       -0.0284   0.0473   0.6
                    Length         36956.6842
(V44 Postprocessed 11-APR-2002 10:14:25.000 mc miken dam.asc)
4GC1                Delta-N       -45998.8971       -0.0047   0.0073   0.6
4DD1                Delta-E       -16687.5587       -0.0029   0.0072   0.4
                    Delta-U         -183.3836       -0.0291   0.0394   0.7
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	Length	48932.6760			
(V2 Postprocessed 12-APR-2002 11:50:55.000 mc miken dam.asc)					
4DD1	Delta-N	32396.1498	-0.0029	0.0164	0.2
104	Delta-E	-4230.8674	-0.0090	0.0183	0.5
	Delta-U	190.4438	-0.0275	0.0429	0.6
	Length	32671.8079			
(V4 Postprocessed 12-APR-2002 10:26:45.000 mc miken dam.asc)					
4DD1	Delta-N	45572.0006	-0.0168	0.0176	1.0
111	Delta-E	1667.3821	-0.0161	0.0184	0.9
	Delta-U	140.1923	-0.0167	0.0415	0.4
	Length	45602.7088			
(V17 Postprocessed 12-APR-2002 09:06:25.000 mc miken dam.asc)					
FRIA	Delta-N	-17750.3599	0.0274	0.0182	1.5
4FD2	Delta-E	8902.1579	0.0035	0.0130	0.3
	Delta-U	-275.8977	-0.0046	0.0362	0.1
	Length	19859.5018			
(V22 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)					
110	Delta-N	184.8995	-0.0011	0.0316	0.0
113	Delta-E	-13781.6195	-0.0168	0.0274	0.6
	Delta-U	734.5964	0.0217	0.0602	0.4
	Length	13802.4221			
(V18 Postprocessed 12-APR-2002 01:14:25.000 mc miken dam.asc)					
FRIA	Delta-N	13550.4313	0.0063	0.0165	0.4
4HB1	Delta-E	43635.7714	0.0049	0.0148	0.3
	Delta-U	-367.6490	0.0263	0.0342	0.8
	Length	45692.7773			
(V5 Postprocessed 12-APR-2002 08:52:20.000 mc miken dam.asc)					
4DD1	Delta-N	45601.6950	-0.0180	0.0183	1.0
112	Delta-E	4801.4611	-0.0056	0.0140	0.4
	Delta-U	121.7775	0.0189	0.0390	0.5
	Length	45853.9360			
(V19 Postprocessed 12-APR-2002 11:49:05.000 mc miken dam.asc)					
FRIA	Delta-N	13558.5874	0.0054	0.0135	0.4
4HD1	Delta-E	11259.1623	0.0048	0.0150	0.3
	Delta-U	-207.9607	0.0255	0.0337	0.8
	Length	17625.1887			
(V47 Postprocessed 11-APR-2002 10:34:20.000 mc miken dam.asc)					
FRIA	Delta-N	-18649.1347	-0.0007	0.0111	0.1
103	Delta-E	10908.4628	-0.0153	0.0118	1.3
	Delta-U	-301.5472	-0.0212	0.0223	0.9
	Length	21607.3070			
(V58 Postprocessed 11-APR-2002 01:24:40.000 mc miken dam.asc)					
4DD1	Delta-N	23380.1311	0.0210	0.0134	1.6
100	Delta-E	-4331.0948	-0.0001	0.0117	0.0
	Delta-U	154.7858	0.0112	0.0279	0.4
	Length	23778.4119			
(V38 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)					
4GC1	Delta-N	-19850.1683	0.0126	0.0155	0.8
102	Delta-E	-27181.3828	0.0124	0.0154	0.8
	Delta-U	106.9544	0.0160	0.0368	0.4
	Length	33658.1074			
(V8 Postprocessed 12-APR-2002 09:06:25.000 mc miken dam.asc)					
4DD1	Delta-N	32025.7878	0.0210	0.0235	0.9
4FD2	Delta-E	-2757.6701	-0.0021	0.0166	0.1
	Delta-U	176.3962	0.0093	0.0467	0.2
	Length	32144.7810			

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(V29 Postprocessed 11-APR-2002 12:34:00.000 mc miken dam.asc)
101                Delta-N        25044.1319       -0.0169   0.0113   1.5
FRIA               Delta-E        -4097.8340       -0.0117   0.0150   0.8
                   Delta-U          244.7844       -0.0100   0.0419   0.2
                   Length         25378.3511
(V56 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)
4DD1               Delta-N        37477.2429        0.0198   0.0175   1.1
107                Delta-E        -1999.7065       -0.0068   0.0149   0.5
                   Delta-U          187.3356        0.0059   0.0381   0.2
                   Length         37531.0225
(V27 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)
101                Delta-N        13501.2136        0.0186   0.0126   1.5
108                Delta-E         2469.4222        0.0055   0.0169   0.3
                   Delta-U           47.9713       -0.0095   0.0465   0.2
                   Length         13725.2729
(V50 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)
FRIA               Delta-N        -4154.5767       -0.0179   0.0114   1.6
109                Delta-E         5940.7316        0.0037   0.0134   0.3
                   Delta-U         -209.3635        0.0109   0.0210   0.5
                   Length          7252.3536
(V59 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)
102                Delta-N         4985.8005        0.0057   0.0120   0.5
103                Delta-E         9754.0405        0.0146   0.0126   1.2
                   Delta-U          -85.6454        0.0133   0.0250   0.5
                   Length         10954.7637
(V41 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)
4GC1               Delta-N        -8521.1058       -0.0003   0.0152   0.0
107                Delta-E       -18667.6467       -0.0112   0.0131   0.9
                   Delta-U           85.0559       -0.0167   0.0294   0.6
                   Length         20520.6606
(V3 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)
4DD1               Delta-N        45626.9488       -0.0102   0.0183   0.6
110                Delta-E        -2039.4692       -0.0105   0.0191   0.5
                   Delta-U          170.2978       -0.0137   0.0433   0.3
                   Length         45672.8244
(V26 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)
101                Delta-N        12209.6913        0.0160   0.0123   1.3
106                Delta-E         8580.5552        0.0100   0.0123   0.8
                   Delta-U          -30.6204       -0.0063   0.0302   0.2
                   Length         14923.2512
(V16 Postprocessed 12-APR-2002 11:50:55.000 mc miken dam.asc)
FRIA               Delta-N       -17380.5779        0.0008   0.0155   0.1
104                Delta-E         7428.8321        0.0082   0.0177   0.5
                   Delta-U         -260.1464        0.0181   0.0404   0.4
                   Length         18903.4312
(V14 Postprocessed 12-APR-2002 09:51:30.000 mc miken dam.asc)
FRIA               Delta-N        -3968.4142        0.0099   0.0109   0.9
113                Delta-E        -4165.9989       -0.0139   0.0080   1.7
                   Delta-U          491.0341        0.0096   0.0190   0.5
                   Length          5774.5106
(V57 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)
4DD1               Delta-N        45622.7827        0.0091   0.0171   0.5
109                Delta-E        -5714.0992        0.0140   0.0149   0.9
                   Delta-U          208.8242        0.0013   0.0349   0.0
                   Length         45979.7003
(V55 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)
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4DD1	Delta-N	33748.3407	-0.0035	0.0161	0.2
105	Delta-E	-7429.8617	0.0157	0.0179	0.9
	Delta-U	237.8244	0.0036	0.0352	0.1
	Length	34557.3423			
(V12 Postprocessed 12-APR-2002 10:26:45.000 mc miken dam.asc)					
FRIA	Delta-N	-4202.4620	0.0071	0.0131	0.5
111	Delta-E	13322.1917	0.0083	0.0140	0.6
	Delta-U	-282.2227	0.0122	0.0307	0.4
	Length	13972.1555			
(V64 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)					
109	Delta-N	-22242.2288	0.0083	0.0146	0.6
100	Delta-E	1387.0124	-0.0083	0.0127	0.7
	Delta-U	-103.0837	0.0096	0.0297	0.3
	Length	22285.6718			
(V28 Postprocessed 11-APR-2002 12:34:00.000 mc miken dam.asc)					
4GC1	Delta-N	-21260.7270	0.0116	0.0135	0.9
101	Delta-E	-24236.1484	0.0080	0.0144	0.6
	Delta-U	56.5416	-0.0053	0.0369	0.1
	Length	32239.9224			
(V48 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)					
FRIA	Delta-N	-16029.6884	-0.0035	0.0121	0.3
105	Delta-E	4229.3661	0.0071	0.0135	0.5
	Delta-U	-207.7581	-0.0123	0.0248	0.5
	Length	16579.5540			
(V39 Postprocessed 11-APR-2002 10:34:20.000 mc miken dam.asc)					
4GC1	Delta-N	-14872.7049	-0.0010	0.0090	0.1
103	Delta-E	-17422.9481	-0.0129	0.0093	1.4
	Delta-U	38.7095	0.0046	0.0185	0.2
	Length	22907.5963			
(V40 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)					
4GC1	Delta-N	-12247.2361	-0.0006	0.0132	0.0
105	Delta-E	-24099.8064	0.0127	0.0148	0.9
	Delta-U	122.9973	-0.0004	0.0276	0.0
	Length	27033.5086			
(V46 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)					
FRIA	Delta-N	-23635.3866	0.0085	0.0161	0.5
102	Delta-E	1154.6095	0.0051	0.0182	0.3
	Delta-U	-221.0163	0.0071	0.0386	0.2
	Length	23664.6038			
(V11 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)					
FRIA	Delta-N	-4148.9582	0.0074	0.0126	0.6
110	Delta-E	9615.3378	0.0072	0.0130	0.5
	Delta-U	-249.9240	0.0066	0.0290	0.2
	Length	10475.2583			
(V60 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)					
102	Delta-N	7605.5958	0.0056	0.0108	0.5
105	Delta-E	3075.0347	0.0024	0.0118	0.2
	Delta-U	4.8063	0.0106	0.0228	0.5
	Length	8203.7155			
(V35 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)					
4GC1	Delta-N	-7761.4727	-0.0011	0.0107	0.1
108	Delta-E	-21756.4154	0.0118	0.0143	0.8
	Delta-U	121.1466	-0.0023	0.0396	0.1
	Length	23099.7131			
(V61 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)					
103	Delta-N	2621.8392	0.0002	0.0079	0.0

105	Delta-E	-6678.2369	-0.0119	0.0085	1.4
	Delta-U	87.9682	0.0005	0.0149	0.0
	Length	7175.0002			
(V13 Postprocessed 12-APR-2002 08:52:20.000 mc miken dam.asc)					
FRIA	Delta-N	-4171.5634	-0.0106	0.0122	0.9
112	Delta-E	16456.2488	0.0026	0.0097	0.3
	Delta-U	-302.3099	-0.0044	0.0256	0.2
	Length	16979.4422			
(V25 Postprocessed 12-APR-2002 01:14:25.000 mc miken dam.asc)					
115	Delta-N	-7271.0987	-0.0095	0.0154	0.6
4HB1	Delta-E	782.0592	0.0055	0.0138	0.4
	Delta-U	-38.1372	0.0010	0.0311	0.0
	Length	7313.1353			
(V32 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)					
4GC1	Delta-N	-9057.6143	-0.0047	0.0141	0.3
106	Delta-E	-15646.1891	-0.0072	0.0153	0.5
	Delta-U	48.3024	-0.0058	0.0398	0.1
	Length	18078.8812			
(V45 Postprocessed 11-APR-2002 01:24:40.000 mc miken dam.asc)					
4GC1	Delta-N	-22616.8757	0.0055	0.0106	0.5
100	Delta-E	-21006.4434	-0.0051	0.0097	0.5
	Delta-U	19.5459	0.0062	0.0208	0.3
	Length	30867.3632			
(V42 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)					
4GC1	Delta-N	-373.6687	-0.0046	0.0135	0.3
109	Delta-E	-22377.7587	0.0076	0.0121	0.6
	Delta-U	121.5634	-0.0012	0.0259	0.0
	Length	22381.2084			
(V20 Postprocessed 12-APR-2002 11:50:55.000 mc miken dam.asc)					
104	Delta-N	30938.2949	-0.0017	0.0175	0.1
4HD1	Delta-E	3837.6094	-0.0004	0.0196	0.0
	Delta-U	27.7543	-0.0079	0.0454	0.2
	Length	31175.4087			
(V31 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)					
106	Delta-N	1293.1397	0.0036	0.0082	0.4
108	Delta-E	-6110.8132	-0.0011	0.0105	0.1
	Delta-U	76.8448	-0.0040	0.0270	0.1
	Length	6246.6114			
(V21 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)					
110	Delta-N	-54.6421	0.0025	0.0104	0.2
111	Delta-E	3706.8519	0.0040	0.0107	0.4
	Delta-U	-30.5866	-0.0024	0.0230	0.1
	Length	3707.3808			
(V54 Postprocessed 11-APR-2002 10:34:20.000 mc miken dam.asc)					
4DD1	Delta-N	31126.2143	0.0016	0.0128	0.1
103	Delta-E	-751.6841	-0.0006	0.0133	0.0
	Delta-U	154.0101	-0.0021	0.0280	0.1
	Length	31135.6703			

GPS Vector Residual Summary (FeetInt)
(Sorted by 3D Residual Length)

From	To	N	E	Up	2D	3D	Length	VectID
4DD1	113	-0.050	0.055	-0.058	0.074	0.094	48478	6
4DD1	FRIA	0.004	0.007	0.067	0.008	0.067	51127	52
4DD1	108	-0.006	0.004	-0.065	0.007	0.065	38573	37

108	FRIA	0.016	0.019	-0.050	0.025	0.056	13282	36
4DD1	4HB1	0.008	-0.020	-0.051	0.021	0.056	70935	9
4DD1	102	0.003	0.018	0.049	0.018	0.052	28177	53
FRIA	107	-0.030	0.022	0.027	0.038	0.047	15640	49
4DD1	115	-0.010	-0.008	-0.044	0.013	0.046	77171	7
111	113	0.010	0.043	-0.007	0.044	0.045	17507	23
106	FRIA	0.001	0.009	-0.037	0.009	0.038	18043	33
4DD1	101	0.012	0.007	-0.034	0.014	0.037	25865	30
FRIA	100	0.009	-0.007	-0.034	0.011	0.036	27398	51
4DD1	4HD1	-0.006	-0.009	-0.034	0.010	0.035	63335	10
FRIA	115	-0.008	0.015	0.031	0.017	0.035	47636	15
112	4FD2	-0.033	-0.002	0.001	0.033	0.033	15539	24
107	100	-0.031	0.009	-0.004	0.033	0.033	14289	63
4DD1	FRIA	-0.010	-0.014	0.026	0.017	0.031	51127	1
107	109	0.026	-0.016	-0.004	0.030	0.031	8952	62
4GC1	FRIA	-0.001	0.006	0.030	0.006	0.031	28569	43
4DD1	106	-0.009	-0.005	-0.028	0.010	0.030	36957	34
4GC1	4DD1	-0.005	-0.003	-0.029	0.006	0.030	48933	44
4DD1	104	-0.003	-0.009	-0.028	0.009	0.029	32672	2
4DD1	111	-0.017	-0.016	-0.017	0.023	0.029	45603	4
FRIA	4FD2	0.027	0.004	-0.005	0.028	0.028	19860	17
110	113	-0.001	-0.017	0.022	0.017	0.027	13802	22
FRIA	4HB1	0.006	0.005	0.026	0.008	0.027	45693	18
4DD1	112	-0.018	-0.006	0.019	0.019	0.027	45854	5
FRIA	4HD1	0.005	0.005	0.026	0.007	0.027	17625	19
FRIA	103	-0.001	-0.015	-0.021	0.015	0.026	21607	47
4DD1	100	0.021	-0.000	0.011	0.021	0.024	23778	58
4GC1	102	0.013	0.012	0.016	0.018	0.024	33658	38
4DD1	4FD2	0.021	-0.002	0.009	0.021	0.023	32145	8
101	FRIA	-0.017	-0.012	-0.010	0.021	0.023	25378	29
4DD1	107	0.020	-0.007	0.006	0.021	0.022	37531	56
101	108	0.019	0.006	-0.010	0.019	0.022	13725	27
FRIA	109	-0.018	0.004	0.011	0.018	0.021	7252	50
102	103	0.006	0.015	0.013	0.016	0.021	10955	59
4GC1	107	-0.000	-0.011	-0.017	0.011	0.020	20521	41
4DD1	110	-0.010	-0.010	-0.014	0.015	0.020	45673	3
101	106	0.016	0.010	-0.006	0.019	0.020	14923	26
FRIA	104	0.001	0.008	0.018	0.008	0.020	18903	16
FRIA	113	0.010	-0.014	0.010	0.017	0.020	5775	14
4DD1	109	0.009	0.014	0.001	0.017	0.017	45980	57
4DD1	105	-0.004	0.016	0.004	0.016	0.017	34557	55
FRIA	111	0.007	0.008	0.012	0.011	0.016	13972	12
109	100	0.008	-0.008	0.010	0.012	0.015	22286	64
4GC1	101	0.012	0.008	-0.005	0.014	0.015	32240	28
FRIA	105	-0.003	0.007	-0.012	0.008	0.015	16580	48
4GC1	103	-0.001	-0.013	0.005	0.013	0.014	22908	39
4GC1	105	-0.001	0.013	-0.000	0.013	0.013	27034	40
FRIA	102	0.009	0.005	0.007	0.010	0.012	23665	46
FRIA	110	0.007	0.007	0.007	0.010	0.012	10475	11
102	105	0.006	0.002	0.011	0.006	0.012	8204	60
4GC1	108	-0.001	0.012	-0.002	0.012	0.012	23100	35
103	105	0.000	-0.012	0.001	0.012	0.012	7175	61
FRIA	112	-0.011	0.003	-0.004	0.011	0.012	16979	13
115	4HB1	-0.010	0.005	0.001	0.011	0.011	7313	25
4GC1	106	-0.005	-0.007	-0.006	0.009	0.010	18079	32
4GC1	100	0.006	-0.005	0.006	0.008	0.010	30867	45

4GC1	109	-0.005	0.008	-0.001	0.009	0.009	22381	42
104	4HD1	-0.002	-0.000	-0.008	0.002	0.008	31175	20
106	108	0.004	-0.001	-0.004	0.004	0.005	6247	31
110	111	0.002	0.004	-0.002	0.005	0.005	3707	21
4DD1	103	0.002	-0.001	-0.002	0.002	0.003	31136	54

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Adjusted Bearings (DMS) and Horizontal Distances (FeetInt)

(Relative Confidence of Bearing is in Seconds)

From	To	Grid Bearing	Grid Dist Grnd Dist	95% RelConfidence Brg	 Dist	 PPM
100	107	N09-41-24.84E	14286.7298 14288.5341	0.24	0.0177	1.2410
100	109	N03-15-29.83W	22282.6670 22285.4854	0.16	0.0186	0.8351
100	4DD1	S10-11-44.70E	23774.9322 23777.8160	0.13	0.0160	0.6744
100	4GC1	N43-09-18.45E	30863.4058 30867.3341	0.11	0.0143	0.4625
100	FRIA	N15-12-08.34W	27392.4972 27396.0654	0.11	0.0160	0.5855
101	106	N35-24-41.54E	14921.3473 14923.2298	0.29	0.0162	1.0835
101	108	N10-40-42.06E	13723.4306 13725.1725	0.32	0.0165	1.2045
101	4DD1	S16-41-58.03E	25861.3644 25864.5088	0.14	0.0175	0.6752
101	4GC1	N49-00-39.87E	32235.7071 32239.8196	0.12	0.0158	0.4891
101	FRIA	N08-58-45.16W	25373.7036 25377.0170	0.14	0.0163	0.6406
102	103	N63-14-40.72E	10953.0680 10954.4509	0.31	0.0187	1.7097
102	105	N22-19-57.75E	8202.6690 8203.7130	0.45	0.0180	2.1949
102	4DD1	S21-35-47.35E	28172.6636 28176.1076	0.14	0.0170	0.6030
102	4GC1	N54-07-45.32E	33653.5245 33657.8405	0.10	0.0188	0.5589
102	FRIA	N02-28-32.95W	23660.5873 23663.6933	0.16	0.0171	0.7217
103	105	N68-15-51.66W	7173.5346 7174.4457	0.40	0.0152	2.1164
103	4DD1	S01-05-03.02E	31131.3624 31135.1657	0.10	0.0138	0.4429
103	4GC1	N49-47-03.99E	22904.6032 22907.5389	0.12	0.0137	0.5962
103	FRIA	N30-00-13.47W	21602.5227 21605.3559	0.13	0.0138	0.6369
104	4DD1	S07-08-28.87E	32667.0943 32671.0936	0.18	0.0241	0.7391
104	4HD1	N07-22-42.65E	31171.3511 31175.3669	0.21	0.0292	0.9357
104	FRIA	N22-49-18.94W	18899.2728 18901.7570	0.31	0.0234	1.2384
105	4DD1	S12-06-59.85E	34552.0652 34556.3150	0.10	0.0152	0.4402
105	4GC1	N63-19-49.10E	27029.6572 27033.1437	0.12	0.0156	0.5772
105	FRIA	N14-27-33.94W	16576.1445	0.20	0.0148	0.8943

			16578.3336			
106	108	N77-45-13.62W	6245.3293	0.48	0.0189	3.0288
			6246.1272			
106	4DD1	S01-53-02.28W	36951.7056	0.10	0.0157	0.4259
			36956.2355			
106	4GC1	N60-12-10.19E	18076.4696	0.20	0.0160	0.8867
			18078.7941			
106	FRIA	N44-20-11.81W	18038.1023	0.17	0.0180	0.9965
			18040.4753			
107	109	N24-12-48.51W	8951.2554	0.36	0.0190	2.1192
			8952.4030			
107	4DD1	S02-45-17.96E	37525.7575	0.08	0.0171	0.4550
			37530.3712			
107	4GC1	N65-44-04.20E	20517.7946	0.17	0.0148	0.7195
			20520.4402			
107	FRIA	N37-49-17.19W	15635.6900	0.19	0.0176	1.1230
			15637.7532			
108	4DD1	S07-16-54.47E	38567.5041	0.10	0.0151	0.3924
			38572.2585			
108	4GC1	N70-38-09.35E	23096.3394	0.14	0.0171	0.7386
			23099.3251			
108	FRIA	N29-19-27.02W	13278.4312	0.25	0.0161	1.2097
			13280.1882			
109	4DD1	S06-50-22.35E	45973.3088	0.07	0.0167	0.3625
			45978.9679			
109	4GC1	N89-18-46.48E	22377.9206	0.15	0.0155	0.6909
			22380.8101			
109	FRIA	N54-42-44.42W	7248.4098	0.40	0.0172	2.3780
			7249.3671			
110	111	S88-51-06.79E	3706.7839	1.14	0.0211	5.7047
			3707.2573			
110	113	N88-55-39.92W	13780.6516	0.43	0.0253	1.8375
			13782.6174			
110	4DD1	S02-15-35.87E	45666.6822	0.10	0.0208	0.4563
			45672.2930			
110	FRIA	N66-20-20.32W	10470.9585	0.39	0.0210	2.0023
			10472.3387			
111	113	N88-54-42.02W	17487.4329	0.35	0.0261	1.4934
			17489.9273			
111	4DD1	S02-23-41.19W	45596.7116	0.10	0.0211	0.4632
			45602.3127			
111	FRIA	N72-10-15.91W	13967.5578	0.30	0.0216	1.5450
			13969.3983			
112	4DD1	S06-18-35.92W	45847.9737	0.08	0.0235	0.5130
			45853.6126			
112	4FD2	S29-24-31.94W	15536.6126	0.28	0.0298	1.9176
			15538.5927			
112	FRIA	N75-27-15.69W	16974.6326	0.28	0.0170	1.0039
			16976.8719			
113	4DD1	S18-45-07.29E	48461.4342	0.07	0.0242	0.4988
			48468.1139			
113	FRIA	N46-42-45.31E	5752.6829	0.80	0.0171	2.9707
			5753.5276			
115	4DD1	S24-08-42.82W	77161.3053	0.08	0.0287	0.3720
			77171.1490			
115	4HB1	S05-53-43.95E	7312.0400	0.75	0.0301	4.1124

			7313.0424			
115	FRIA	S64-24-12.30W	47628.8023	0.13	0.0264	0.5537
			47635.3214			
4DD1	4FD2	N04-37-20.06W	32140.2190	0.14	0.0284	0.8840
			32144.1515			
4DD1	4GC1	N20-12-32.21E	48926.4482	0.04	0.0098	0.1999
			48932.5138			
4DD1	4HB1	N27-06-12.98E	70926.0197	0.08	0.0268	0.3778
			70935.0197			
4DD1	4HD1	N00-03-08.77W	63326.9381	0.09	0.0237	0.3741
			63334.7992			
4DD1	FRIA	N12-52-34.07W	51118.8455	0.03	0.0085	0.1665
			51125.3311			
4FD2	FRIA	N26-18-49.33W	19855.1061	0.25	0.0252	1.2709
			19857.7142			
4GC1	FRIA	N82-06-50.36W	28563.0340	0.07	0.0102	0.3565
			28566.8314			
4HB1	FRIA	S73-04-11.75W	45685.4540	0.13	0.0246	0.5394
			45691.6721			
4HD1	FRIA	S40-01-40.29W	17621.6976	0.27	0.0268	1.5192
			17624.0479			

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Error Propagation

Station Coordinate Standard Deviations (FeetInt)

Station	N	E	Elev
100	0.006451	0.006035	0.014108
101	0.006684	0.007535	0.020109
102	0.007156	0.007568	0.016627
103	0.005631	0.005897	0.013048
104	0.010062	0.011299	0.026295
105	0.006146	0.006641	0.013967
106	0.006473	0.007368	0.019726
107	0.006933	0.006327	0.014642
108	0.006021	0.007490	0.020678
109	0.006674	0.006388	0.014256
110	0.008496	0.008707	0.019914
111	0.008645	0.008968	0.020354
112	0.009506	0.007460	0.020386
113	0.009555	0.007345	0.018382
115	0.012268	0.011036	0.025885
4DD1	0.000000	0.000000	0.000000
4FD2	0.011764	0.008632	0.023854
4GC1	0.004068	0.004151	0.012288
4HB1	0.011491	0.010347	0.024295
4HD1	0.009680	0.010968	0.024730
FRIA	0.003417	0.003498	0.010326

Station Coordinate Error Ellipses (FeetInt)
Confidence Region = 95%

Station	Semi-Major Axis	Semi-Minor Axis	Azimuth of Major Axis	Elev
100	0.016224	0.014296	150-58	0.027651
101	0.019268	0.015380	118-43	0.039413
102	0.019063	0.016928	59-08	0.032588
103	0.014455	0.013762	100-04	0.025574
104	0.028596	0.023533	63-27	0.051538
105	0.016308	0.014987	101-43	0.027375
106	0.018787	0.014947	117-31	0.038662
107	0.017589	0.014779	150-58	0.028697
108	0.018658	0.014325	106-51	0.040528
109	0.017451	0.014382	141-37	0.027942
110	0.021640	0.020455	122-06	0.039032
111	0.022166	0.020935	115-02	0.039893
112	0.023670	0.017738	16-05	0.039955
113	0.024180	0.016898	159-12	0.036029
115	0.030398	0.026599	161-17	0.050733
4DD1	0.000000	0.000000	0-00	0.000000
4FD2	0.029395	0.020284	16-08	0.046753
4GC1	0.010377	0.009733	125-50	0.024085
4HB1	0.028410	0.025007	162-43	0.047617
4HD1	0.027813	0.022554	63-30	0.048469
FRIA	0.008788	0.008126	126-14	0.020238

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Relative Error Ellipses (FeetInt)
Confidence Region = 95%

Stations From	To	Semi-Major Axis	Semi-Minor Axis	Azimuth of Major Axis	Vertical
100	107	0.018367	0.015723	159-21	0.028783
100	109	0.019184	0.016158	149-56	0.029273
100	4DD1	0.016224	0.014296	150-58	0.027651
100	4GC1	0.015901	0.014075	151-58	0.026148
100	FRIA	0.016356	0.014091	142-03	0.026014
101	106	0.020834	0.016152	122-24	0.040254
101	108	0.021560	0.016309	111-40	0.044544
101	4DD1	0.019268	0.015380	118-43	0.039413
101	4GC1	0.019123	0.015215	118-07	0.038670
101	FRIA	0.018905	0.014816	115-44	0.038594
102	103	0.018737	0.016610	59-06	0.029394
102	105	0.018941	0.016969	66-42	0.029486
102	4DD1	0.019063	0.016928	59-08	0.032588
102	4GC1	0.018821	0.016601	58-37	0.031552
102	FRIA	0.018773	0.016672	62-13	0.031188
103	105	0.015214	0.013938	102-22	0.022262
103	4DD1	0.014455	0.013762	100-04	0.025574
103	4GC1	0.013981	0.013267	92-38	0.023527
103	FRIA	0.014252	0.013274	104-15	0.023578
104	4DD1	0.028596	0.023533	63-27	0.051538
104	4HD1	0.033255	0.026976	62-36	0.058566
104	FRIA	0.028481	0.023380	63-22	0.051122
105	4DD1	0.016308	0.014987	101-43	0.027375
105	4GC1	0.016070	0.014693	99-38	0.025988
105	FRIA	0.016032	0.014491	102-40	0.025378
106	108	0.018978	0.014317	109-18	0.038995
106	4DD1	0.018787	0.014947	117-31	0.038662
106	4GC1	0.018615	0.014748	116-39	0.037879
106	FRIA	0.018448	0.014387	114-35	0.037822
107	109	0.018990	0.015552	151-12	0.028138
107	4DD1	0.017589	0.014779	150-58	0.028697
107	4GC1	0.017416	0.014751	152-03	0.027850
107	FRIA	0.017566	0.014325	144-47	0.026007
108	4DD1	0.018658	0.014325	106-51	0.040528
108	4GC1	0.018421	0.013975	106-01	0.039557
108	FRIA	0.018237	0.013624	105-15	0.039275
109	4DD1	0.017451	0.014382	141-37	0.027942
109	4GC1	0.017255	0.014343	142-21	0.027121
109	FRIA	0.017363	0.013742	136-39	0.024934
110	111	0.021348	0.020296	117-26	0.036815
110	113	0.029685	0.024216	155-32	0.046182
110	4DD1	0.021640	0.020455	122-06	0.039032
110	FRIA	0.020987	0.019876	121-38	0.036947
111	113	0.030243	0.025022	154-58	0.047483
111	4DD1	0.022166	0.020935	115-02	0.039893
111	FRIA	0.021592	0.020412	113-43	0.038030
112	4DD1	0.023670	0.017738	16-05	0.039955
112	4FD2	0.030170	0.020525	17-00	0.046398
112	FRIA	0.023150	0.017033	16-19	0.038023
113	4DD1	0.024180	0.016898	159-12	0.036029
113	FRIA	0.023260	0.015707	159-49	0.032214

115	4DD1	0.030398	0.026599	161-17	0.050733
115	4HB1	0.030238	0.026321	161-46	0.048898
115	FRIA	0.030118	0.026305	161-38	0.049772
4DD1	4FD2	0.029395	0.020284	16-08	0.046753
4DD1	4GC1	0.010377	0.009733	125-50	0.024085
4DD1	4HB1	0.028410	0.025007	162-43	0.047617
4DD1	4HD1	0.027813	0.022554	63-30	0.048469
4DD1	FRIA	0.008788	0.008126	126-14	0.020238
4FD2	FRIA	0.029049	0.019771	16-14	0.045406
4GC1	FRIA	0.010295	0.009109	116-16	0.021975
4HB1	FRIA	0.028064	0.024644	163-07	0.046430
4HD1	FRIA	0.027516	0.022211	63-05	0.047549

Elapsed Time = 00:00:01

□22
47
01 00000000 Top of File
01 00000006 Summary of Files Used and Option Settings
02 00000009 Project Folder and Data Files
02 00000016 Project Option Settings
01 00000038 Summary of Unadjusted Input Observations
02 00000041 Entered Stations
03 00000043 Fixed Positions
02 00000046 GPS Vector Observations
01 00000308 Adjustment Statistical Summary
01 00000328 Adjusted Station Information
02 00000331 Adjusted Coordinates
02 00000356 Adjusted Positions and Ellipsoid Heights
02 00000382 Convergence Angles and Grid Factors at Stations
01 00000411 Adjusted Observations and Residuals
02 00000414 Adjusted GPS Vector Observations
02 00000739 GPS Vector Residual Summary
01 00000808 Adjusted Bearings and Horizontal Distances
01 00000941 Error Propagation
02 00000944 Station Coordinate Standard Deviations
02 00000969 Station Coordinate Error Ellipses
02 00000996 Relative Error Ellipses
01 00001064 End of File
000112D7
STARPLUS
00022181

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STAR*NET-PRO Version 6.0.23e
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Run Date: Tue Jul 23 2002 16:39:06

Summary of Files Used and Option Settings

Project Folder and Data Files

Project Name	MC MICKEN NAD 83 (92)
Project Folder	D:\GPS PROJECTS\WITTMANN\MC MICKEN
Data File List	Mc Micken NAD 83 (92).dat
	Mc Micken NAD (92).gps

Project Option Settings

STAR*NET Run Mode	: Adjust with Error Propagation
Type of Adjustment	: 3D
Project Units	: FeetInt; DMS
Coordinate System	: Mercator NAD83; AZ Central 0202
Geoid Height	: 0.0000 (Default, Meters)
Vertical Deflection	: N=0.00 E=0.00 (Defaults, Seconds)
Longitude Sign Convention	: Positive West
Input/Output Coordinate Order	: North-East
Angle Data Station Order	: At-From-To
Distance/Vertical Data Type	: Slope/Zenith
Convergence Limit; Max Iterations	: 0.010000; 10
Default Coefficient of Refraction	: 0.070000
Create Coordinate File	: Yes
Create Geodetic Position File	: Yes
Create Ground Scale Coordinate File	: No
Create Dump File	: No
GPS Vector Standard Error Factors	: 4.5000
GPS Vector Centering (Meters)	: 0.00100
GPS Vector Transformations	: Solve for Scale and Rotations

Summary of Unadjusted Input Observations

Number of Entered Stations (FeetInt) = 5

Fixed Stations	Latitude	Longitude	Elev	Description
4DD1	33-30-29.701920	112-27-29.031850	1027.7900	
4FD2	33-35-46.514410	112-28-01.630310	1229.0400	
4GC1	33-38-04.791470	112-24-11.967230	1153.8700	
4HB1	33-40-55.865770	112-21-10.531750	1177.6200	
4HD1	33-40-56.225170	112-27-33.636280	1294.9500	

Number of GPS Vector Observations (FeetInt) = 64

From	DeltaX	StdErrX	CorrelXY
To	DeltaY	StdErrY	CorrelXZ
	DeltaZ	StdErrZ	CorrelYZ

(V1 Postprocessed 12-APR-2002 08:29:50.000 mc miken dam.asc)

4DD1	-400.4716	0.0160	0.8785
FRIA	29536.8691	0.0334	-0.8631
	41730.4664	0.0255	-0.9323
(V2 Postprocessed 12-APR-2002 11:50:55.000 mc miken dam.asc)			
4DD1	2861.3596	0.0240	0.5667
104	17997.5978	0.0330	-0.4677
	27117.2684	0.0279	-0.7242
(V3 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)			
4DD1	7683.2246	0.0225	0.4697
110	23926.2100	0.0387	-0.3984
	38138.0692	0.0238	-0.6173
(V4 Postprocessed 12-APR-2002 10:26:45.000 mc miken dam.asc)			
4DD1	11106.9528	0.0220	0.4793
111	22505.3298	0.0367	-0.4144
	38075.6401	0.0232	-0.6127
(V5 Postprocessed 12-APR-2002 08:52:20.000 mc miken dam.asc)			
4DD1	14015.4709	0.0173	0.5210
112	21337.4609	0.0300	-0.3372
	38090.2149	0.0292	-0.6763
(V6 Postprocessed 12-APR-2002 09:51:30.000 mc miken dam.asc)			
4DD1	-5247.2158	0.0199	0.5235
113	28721.8190	0.0312	-0.5951
	38698.9520	0.0345	-0.5602
(V7 Postprocessed 12-APR-2002 01:13:20.000 mc miken dam.asc)			
4DD1	43703.6499	0.0271	0.5442
115	24059.1791	0.0440	-0.4584
	58877.5849	0.0285	-0.5206
(V8 Postprocessed 12-APR-2002 09:06:25.000 mc miken dam.asc)			
4DD1	4149.1979	0.0205	0.5161
4FD2	17256.7150	0.0348	-0.3032
	26800.6629	0.0372	-0.6705
(V9 Postprocessed 12-APR-2002 01:14:25.000 mc miken dam.asc)			
4DD1	42904.4503	0.0256	0.5567
4HB1	20059.7178	0.0413	-0.4499
	52807.3443	0.0265	-0.5183
(V10 Postprocessed 12-APR-2002 11:49:05.000 mc miken dam.asc)			
4DD1	12942.4365	0.0266	0.5524
4HD1	32329.1821	0.0349	-0.4327
	52902.6104	0.0267	-0.6915
(V11 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)			
FRIA	8083.7058	0.0154	0.4635
110	-5610.6255	0.0259	-0.3796
	-3592.4289	0.0160	-0.6027
(V12 Postprocessed 12-APR-2002 10:26:45.000 mc miken dam.asc)			
FRIA	11507.4292	0.0169	0.4762
111	-7031.4997	0.0271	-0.4095
	-3654.8679	0.0170	-0.6097
(V13 Postprocessed 12-APR-2002 08:52:20.000 mc miken dam.asc)			
FRIA	14415.9492	0.0118	0.5000
112	-8199.4065	0.0196	-0.3426
	-3640.2506	0.0194	-0.6653
(V14 Postprocessed 12-APR-2002 09:51:30.000 mc miken dam.asc)			
FRIA	-4846.6484	0.0096	0.4539
113	-815.0348	0.0141	-0.5289
	-3031.6075	0.0160	-0.5143
(V15 Postprocessed 12-APR-2002 01:13:20.000 mc miken dam.asc)			

FRIA	44104.1465	0.0223	0.5470
115	-5477.6047	0.0360	-0.4525
	17147.0695	0.0233	-0.5193
(V16 Postprocessed 12-APR-2002 11:50:55.000 mc miken dam.asc)			
FRIA	3261.8522	0.0231	0.5567
104	-11539.2113	0.0314	-0.4569
	-14613.2321	0.0259	-0.7162
(V17 Postprocessed 12-APR-2002 09:06:25.000 mc miken dam.asc)			
FRIA	4549.6817	0.0160	0.5114
4FD2	-12280.1457	0.0269	-0.3158
	-14929.8069	0.0289	-0.6695
(V18 Postprocessed 12-APR-2002 01:14:25.000 mc miken dam.asc)			
FRIA	43304.9473	0.0190	0.5447
4HB1	-9477.0610	0.0304	-0.4442
	11076.8305	0.0194	-0.5135
(V19 Postprocessed 12-APR-2002 11:49:05.000 mc miken dam.asc)			
FRIA	13342.9353	0.0196	0.5576
4HD1	2792.3782	0.0262	-0.4434
	11172.0962	0.0218	-0.6982
(V20 Postprocessed 12-APR-2002 11:50:55.000 mc miken dam.asc)			
104	10081.0768	0.0258	0.5698
4HD1	14331.5820	0.0350	-0.4604
	25785.3420	0.0293	-0.7182
(V21 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)			
110	3423.7176	0.0123	0.4283
111	-1420.8807	0.0208	-0.3414
	-62.4369	0.0130	-0.5800
(V22 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)			
110	-12930.3514	0.0314	0.4262
113	4795.6085	0.0528	-0.4324
	560.8141	0.0400	-0.4697
(V23 Postprocessed 12-APR-2002 10:26:45.000 mc miken dam.asc)			
111	-16354.1407	0.0465	0.4464
113	6216.4828	0.0756	-0.4884
	623.2564	0.0623	-0.4721
(V24 Postprocessed 12-APR-2002 09:06:25.000 mc miken dam.asc)			
112	-9866.2489	0.0144	0.4812
4FD2	-4080.7028	0.0239	-0.2528
	-11289.4979	0.0252	-0.6437
(V25 Postprocessed 12-APR-2002 01:14:25.000 mc miken dam.asc)			
115	-799.2065	0.0171	0.5187
4HB1	-3999.4340	0.0277	-0.4262
	-6070.2222	0.0182	-0.4975
(V26 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)			
101	10520.3342	0.0155	0.5241
106	2981.5793	0.0230	-0.6401
	10155.5707	0.0210	-0.6577
(V27 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)			
101	5121.7908	0.0189	0.4451
108	5917.9967	0.0371	-0.5877
	11275.0681	0.0296	-0.8298
(V28 Postprocessed 11-APR-2002 12:34:00.000 mc miken dam.asc)			
4GC1	-26913.0518	0.0184	0.5395
101	-1693.9469	0.0286	-0.6166
	-17670.0783	0.0244	-0.7147
(V29 Postprocessed 11-APR-2002 12:34:00.000 mc miken dam.asc)			

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101                          1432.2033          0.0186          0.5286
FRIA                        14176.4203          0.0327         -0.6205
                            21000.9372          0.0263         -0.8337
(V30 Postprocessed 11-APR-2002 12:34:00.000 mc miken dam.asc)
4DD1                        -1832.7069          0.0229          0.5425
101                         15360.3956          0.0344         -0.6558
                            20729.5632          0.0308         -0.6847
(V31 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)
106                         -5398.5470          0.0113          0.3964
108                          2936.4176          0.0218         -0.5308
                             1119.4970          0.0174         -0.7973
(V32 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)
4GC1                       -16392.6856          0.0198          0.5542
106                          1287.6438          0.0308         -0.6333
                            -7514.4838          0.0261         -0.7250
(V33 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)
106                         -9088.1766          0.0208          0.5203
FRIA                        11194.8098          0.0379         -0.6190
                            10845.3568          0.0297         -0.8407
(V34 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)
4DD1                         8687.6592          0.0235          0.5414
106                         18341.9944          0.0360         -0.6624
                            30885.1583          0.0324         -0.6918
(V35 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)
4GC1                       -21791.2488          0.0175          0.5143
108                          4224.0748          0.0311         -0.6133
                            -6394.9910          0.0248         -0.8306
(V36 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)
108                         -3689.6476          0.0170          0.5191
FRIA                         8258.3726          0.0302         -0.6107
                             9725.8533          0.0242         -0.8314
(V37 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)
4DD1                         3289.0928          0.0248          0.4549
108                         21278.3913          0.0487         -0.5992
                            32004.6737          0.0389         -0.8364
(V38 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)
4GC1                       -29354.2130          0.0197          0.5409
102                          112.0974           0.0282         -0.3862
                           -16467.7557          0.0254         -0.7028
(V39 Postprocessed 11-APR-2002 10:34:20.000 mc miken dam.asc)
4GC1                       -19259.8720          0.0110          0.4369
103                         -1005.6497          0.0158         -0.3348
                           -12361.3708          0.0118         -0.5487
(V40 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)
4GC1                       -24905.3148          0.0170          0.3826
105                          2818.6619          0.0235         -0.3920
                           -10128.7525          0.0177         -0.5442
(V41 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)
4GC1                       -19084.5002          0.0170          0.5591
107                          2685.6311          0.0261         -0.4093
                            -7047.4342          0.0172         -0.4656
(V42 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)
4GC1                       -20806.2365          0.0141          0.4542
109                          8243.7808          0.0242         -0.3287
                             -243.7735          0.0146         -0.4562
(V43 Postprocessed 11-APR-2002 10:18:05.000 mc miken dam.asc)
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4GC1                        -25480.8440          0.0134          0.8067
FRIA                         12482.5097          0.0285         -0.8189
                              3330.8301          0.0214         -0.9175
(V44 Postprocessed 11-APR-2002 10:14:25.000 mc miken dam.asc)
4GC1                        -25080.3590          0.0147          0.8470
4DD1                        -17054.3860          0.0303         -0.8311
                            -38399.6061          0.0229         -0.9179
(V45 Postprocessed 11-APR-2002 01:24:40.000 mc miken dam.asc)
4GC1                        -24201.6426          0.0123          0.5270
100                          -3590.8503          0.0184         -0.4211
                            -18819.6821          0.0122         -0.4666
(V46 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)
FRIA                         -3873.3600          0.0231          0.5251
102                         -12370.3940          0.0289         -0.4744
                            -19798.5934          0.0267         -0.6842
(V47 Postprocessed 11-APR-2002 10:34:20.000 mc miken dam.asc)
FRIA                          6220.9701          0.0131          0.3497
103                         -13488.1546          0.0200         -0.3844
                            -15692.2028          0.0138         -0.4970
(V48 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)
FRIA                           575.5354          0.0154          0.3750
105                          -9663.8318          0.0211         -0.3939
                            -13459.5895          0.0162         -0.5296
(V49 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)
FRIA                          6396.3372          0.0125         -0.0000
107                          -9796.7907          0.0268         -0.2721
                            -10378.2797          0.0134         -0.2786
(V50 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)
FRIA                          4674.6220          0.0110         -0.0000
109                          -4238.6884          0.0228         -0.2084
                             -3574.6152          0.0104         -0.3848
(V51 Postprocessed 11-APR-2002 01:24:40.000 mc miken dam.asc)
FRIA                          1279.1938          0.0153          0.0000
100                         -16073.3673          0.0327         -0.2384
                            -22150.5089          0.0150         -0.4445
(V52 Postprocessed 11-APR-2002 10:18:05.000 mc miken dam.asc)
4DD1                           -400.4805          0.0168          0.8237
FRIA                         29536.9010          0.0365         -0.8452
                             41730.4322          0.0270         -0.9278
(V53 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)
4DD1                          -4273.8518          0.0269          0.5630
102                          17166.4947          0.0336         -0.3722
                             21931.8600          0.0280         -0.6378
(V54 Postprocessed 11-APR-2002 10:34:20.000 mc miken dam.asc)
4DD1                          5820.4674          0.0160          0.4619
103                          16048.7134          0.0238         -0.3922
                             26038.2569          0.0173         -0.5800
(V55 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)
4DD1                           175.0377          0.0218          0.4662
105                          19873.0326          0.0290         -0.4849
                             28270.8739          0.0225         -0.5624
(V56 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)
4DD1                          5995.8521          0.0203          0.6155
107                          19740.0049          0.0336         -0.4671
                             31352.1627          0.0209         -0.5533
(V57 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)
```

4DD1	4274.1089	0.0175	0.4930
109	25298.1432	0.0333	-0.3512
	38155.8398	0.0177	-0.5026
(V58 Postprocessed 11-APR-2002 01:24:40.000 mc miken dam.asc)			
4DD1	878.7046	0.0154	0.5755
100	13463.5125	0.0248	-0.4297
	19579.9283	0.0155	-0.5162
(V59 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)			
102	10094.3079	0.0154	0.4748
103	-1117.7228	0.0200	-0.3301
	4106.3551	0.0171	-0.5985
(V60 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)			
102	4448.9009	0.0147	0.4914
105	2706.5764	0.0175	-0.4186
	6338.9726	0.0160	-0.6001
(V61 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)			
103	-5645.4063	0.0098	0.3739
105	3824.3017	0.0125	-0.3927
	2232.6154	0.0102	-0.4773
(V62 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)			
107	-1721.7169	0.0113	0.4429
109	5558.1063	0.0213	-0.3184
	6803.6459	0.0127	-0.4680
(V63 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)			
107	-5117.1460	0.0134	0.5866
100	-6276.4816	0.0218	-0.4412
	-11772.2021	0.0136	-0.5282
(V64 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)			
109	-3395.4091	0.0149	0.4837
100	-11834.6269	0.0281	-0.3466
	-18575.9083	0.0156	-0.5013

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Adjustment Statistical Summary

Convergence Iterations	=	2
Number of Stations	=	21
Number of Observations	=	192
Number of Unknowns	=	52
Number of Redundant Obs	=	140

Observation	Count	Sum Squares of StdRes	Error Factor
GPS Deltas	192	176.327	1.122
Total	192	176.327	1.122

Warning: The Chi-Square Test at 5.00% Level Exceeded Upper Bound
Lower/Upper Bounds (0.883/1.117)

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Adjusted Station Information

Adjusted Coordinates (FeetInt)

Station	N	E	Elev	Description
100	936282.2228	530770.0674	1196.1987	
101	937653.3929	527547.2080	1235.2641	
102	939077.6406	524609.0617	1287.9092	
103	944008.5217	534389.4613	1205.1213	
104	945296.4084	530917.4125	1243.8830	
105	946665.0566	527725.9442	1294.3361	
106	949814.4672	536193.3096	1209.9811	
107	950365.1192	533174.8223	1248.9883	
108	951139.1807	530090.0888	1287.7722	
109	958528.8774	529503.5704	1287.4147	
110	958513.8976	533177.6964	1248.2017	
111	958439.6269	536883.7377	1217.9354	
112	958452.9486	540017.5345	1200.0670	
113	958771.7677	519399.4533	1987.3614	
115	983293.3393	566541.3954	1214.5148	
4DD1	912882.7165	534978.5233	1027.7900	
4FD2	944918.3837	532388.4633	1229.0400	
4GC1	958797.2439	551879.8905	1153.8700	
4HB1	976019.9616	567292.4508	1177.6200	
4HD1	976209.6620	534920.5515	1294.9500	
FRIA	962716.1486	523586.9645	1495.5353	

Adjusted Positions and Ellipsoid Heights (FeetInt)
(Average Geoid Height = 0.000 Meters, 0.000 FeetInt)

Station	Latitude	Longitude	Ellip Ht
100	33-34-20.986913	112-28-20.215730	1196.1987
101	33-34-34.379979	112-28-58.395328	1235.2641
102	33-34-48.310525	112-29-33.216339	1287.9092
103	33-35-37.617293	112-27-37.917436	1205.1213
104	33-35-50.176685	112-28-19.045442	1243.8830
105	33-36-03.546432	112-28-56.864666	1294.3361
106	33-36-35.151718	112-27-16.949123	1209.9811
107	33-36-40.442919	112-27-52.674596	1248.9883
108	33-36-47.938001	112-28-29.198815	1287.7722
109	33-38-01.016194	112-28-36.607223	1287.4147
110	33-38-01.062718	112-27-53.151005	1248.2017
111	33-38-00.520043	112-27-09.313607	1217.9354
112	33-38-00.810927	112-26-32.249726	1200.0670
113	33-38-02.861818	112-30-36.128303	1987.3614
115	33-42-07.793578	112-21-19.785625	1214.5148
4DD1	33-30-29.701920	112-27-29.031850	1027.7900
4FD2	33-35-46.514410	112-28-01.630310	1229.0400
4GC1	33-38-04.791470	112-24-11.967230	1153.8700
4HB1	33-40-55.865770	112-21-10.531750	1177.6200
4HD1	33-40-56.225170	112-27-33.636280	1294.9500
FRIA	33-38-42.119984	112-29-46.862486	1495.5353

Convergence Angles (DMS) and Grid Factors at Stations

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(Grid Azimuth = Geodetic Azimuth - Convergence)
(Elevation Factor Includes a 0.00 Meter Geoid Height Correction)

Station	Convergence Angle	------- Factors ------- Scale	x Elevation	= Combined
100	-0-18-26.13	0.99993279	0.99994276	0.99987556
101	-0-18-47.35	0.99993405	0.99994090	0.99987495
102	-0-19-06.73	0.99993522	0.99993838	0.99987360
103	-0-18-03.34	0.99993140	0.99994234	0.99987374
104	-0-18-26.20	0.99993273	0.99994048	0.99987322
105	-0-18-47.24	0.99993398	0.99993807	0.99987205
106	-0-17-52.19	0.99993072	0.99994210	0.99987283
107	-0-18-12.01	0.99993187	0.99994024	0.99987211
108	-0-18-32.29	0.99993305	0.99993838	0.99987144
109	-0-18-36.98	0.99993328	0.99993840	0.99987169
110	-0-18-12.91	0.99993186	0.99994028	0.99987214
111	-0-17-48.63	0.99993046	0.99994172	0.99987219
112	-0-17-28.10	0.99992930	0.99994258	0.99987189
113	-0-19-43.20	0.99993734	0.99990491	0.99984226
115	-0-14-36.60	0.99992039	0.99994189	0.99986229
4DD1	-0-17-56.00	0.99993118	0.99995082	0.99988201
4FD2	-0-18-16.53	0.99993217	0.99994119	0.99987336
4GC1	-0-16-10.42	0.99992512	0.99994479	0.99986991
4HB1	-0-14-31.01	0.99992016	0.99994365	0.99986382
4HD1	-0-18-03.48	0.99993120	0.99993804	0.99986925
FRIA	-0-19-16.25	0.99993563	0.99992844	0.99986408
Project Averages:	-0-17-56.84	0.99993114	0.99993907	0.99987021

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Adjusted Observations and Residuals

Adjusted GPS Vector Observations Sorted by Residuals (FeetInt)

Datum Transformations			StdDev	
Scale Factor 0.999999558862	:	0.441138 PPM	0.0686	(Solved)
Rotation Around North Axis	:	-0.413265 Sec	0.1738	(Solved)
Rotation Around East Axis	:	-0.380122 Sec	0.0679	(Solved)
Rotation Around Vert Axis	:	-0.115644 Sec	0.0149	(Solved)

From To	Component	Adj Value	Residual	StdErr	StdRes
(V9 Postprocessed 12-APR-2002 01:14:25.000 mc miken dam.asc)					
4DD1	Delta-N	63313.4370	-0.0108	0.0223	0.5
4HB1	Delta-E	31987.5639	-0.0310	0.0198	1.6
	Delta-U	29.2299	-0.0976	0.0466	2.1
	Length	70935.1563			
(V6 Postprocessed 12-APR-2002 09:51:30.000 mc miken dam.asc)					
4DD1	Delta-N	45814.3451	-0.0500	0.0226	2.2
113	Delta-E	-15821.1476	0.0557	0.0158	3.5*
	Delta-U	903.1498	-0.0524	0.0424	1.2
	Length	48477.6094			
(V10 Postprocessed 12-APR-2002 11:49:05.000 mc miken dam.asc)					
4DD1	Delta-N	63333.9429	0.0006	0.0173	0.0
4HD1	Delta-E	-389.0933	0.0107	0.0205	0.5
	Delta-U	170.8515	-0.0876	0.0438	2.0
	Length	63335.3685			
(V52 Postprocessed 11-APR-2002 10:18:05.000 mc miken dam.asc)					
4DD1	Delta-N	49780.0387	0.0039	0.0079	0.5
FRIA	Delta-E	-11653.4072	0.0074	0.0089	0.8
	Delta-U	404.9662	0.0736	0.0469	1.6
	Length	51127.4696			
(V7 Postprocessed 12-APR-2002 01:13:20.000 mc miken dam.asc)					
4DD1	Delta-N	70583.8564	-0.0193	0.0237	0.8
115	Delta-E	31198.3462	-0.0137	0.0212	0.6
	Delta-U	43.9561	-0.0650	0.0497	1.3
	Length	77171.3647			
(V53 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)					
4DD1	Delta-N	26143.7700	0.0060	0.0193	0.3
102	Delta-E	-10507.4263	0.0173	0.0206	0.8
	Delta-U	241.0246	0.0642	0.0430	1.5
	Length	28177.3102			
(V36 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)					
108	Delta-N	11543.3005	0.0139	0.0105	1.3
FRIA	Delta-E	-6566.3753	0.0192	0.0138	1.4
	Delta-U	203.5043	-0.0589	0.0386	1.5
	Length	13281.8104			
(V44 Postprocessed 11-APR-2002 10:14:25.000 mc miken dam.asc)					
4GC1	Delta-N	-45998.9040	-0.0116	0.0073	1.6
4DD1	Delta-E	-16687.5583	-0.0025	0.0072	0.4
	Delta-U	-183.4155	-0.0609	0.0394	1.5
	Length	48932.6824			
(V24 Postprocessed 12-APR-2002 09:06:25.000 mc miken dam.asc)					
112	Delta-N	-13574.8657	-0.0575	0.0165	3.5*

4FD2	Delta-E	-7561.2047	-0.0004	0.0120	0.0
	Delta-U	23.1992	0.0059	0.0316	0.2
	Length	15538.6400			
(V20 Postprocessed 12-APR-2002 11:50:55.000 mc miken dam.asc)					
104	Delta-N	30938.2994	0.0029	0.0175	0.2
4HD1	Delta-E	3837.6229	0.0131	0.0196	0.7
	Delta-U	27.7137	-0.0486	0.0454	1.1
	Length	31175.4148			
(V49 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)					
FRIA	Delta-N	-12298.6642	-0.0282	0.0148	1.9
107	Delta-E	9658.1164	0.0225	0.0154	1.5
	Delta-U	-252.3584	0.0341	0.0244	1.4
	Length	15639.6943			
(V37 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)					
4DD1	Delta-N	38235.3272	-0.0033	0.0162	0.2
108	Delta-E	-5088.8467	0.0045	0.0220	0.2
	Delta-U	224.2264	-0.0491	0.0613	0.8
	Length	38573.1368			
(V33 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)					
106	Delta-N	12837.7259	-0.0016	0.0124	0.1
FRIA	Delta-E	-12675.0092	0.0089	0.0170	0.5
	Delta-U	277.7186	-0.0455	0.0480	0.9
	Length	18042.7324			
(V23 Postprocessed 12-APR-2002 10:26:45.000 mc miken dam.asc)					
111	Delta-N	241.6024	0.0104	0.0473	0.2
113	Delta-E	-17488.5781	0.0430	0.0396	1.1
	Delta-U	762.0887	-0.0057	0.0892	0.1
	Length	17506.8420			
(V19 Postprocessed 12-APR-2002 11:49:05.000 mc miken dam.asc)					
FRIA	Delta-N	13558.5939	0.0118	0.0135	0.9
4HD1	Delta-E	11259.1810	0.0236	0.0150	1.6
	Delta-U	-208.0214	-0.0352	0.0337	1.0
	Length	17625.2063			
(V2 Postprocessed 12-APR-2002 11:50:55.000 mc miken dam.asc)					
4DD1	Delta-N	32396.1518	-0.0009	0.0164	0.1
104	Delta-E	-4230.8615	-0.0031	0.0183	0.2
	Delta-U	190.4305	-0.0408	0.0429	1.0
	Length	32671.8090			
(V5 Postprocessed 12-APR-2002 08:52:20.000 mc miken dam.asc)					
4DD1	Delta-N	45601.6856	-0.0274	0.0183	1.5
112	Delta-E	4801.4630	-0.0036	0.0140	0.3
	Delta-U	121.7859	0.0272	0.0390	0.7
	Length	45853.9269			
(V1 Postprocessed 12-APR-2002 08:29:50.000 mc miken dam.asc)					
4DD1	Delta-N	49780.0387	-0.0102	0.0075	1.4
FRIA	Delta-E	-11653.4072	-0.0130	0.0071	1.8
	Delta-U	404.9662	0.0330	0.0438	0.8
	Length	51127.4696			
(V41 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)					
4GC1	Delta-N	-8521.1103	-0.0048	0.0152	0.3
107	Delta-E	-18667.6459	-0.0104	0.0131	0.8
	Delta-U	85.0376	-0.0351	0.0294	1.2
	Length	20520.6616			
(V58 Postprocessed 11-APR-2002 01:24:40.000 mc miken dam.asc)					
4DD1	Delta-N	23380.1337	0.0236	0.0134	1.8
100	Delta-E	-4331.0943	0.0004	0.0117	0.0

	Delta-U	154.8011	0.0265	0.0279	1.0
	Length	23778.4144			
(V63 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)					
107	Delta-N	-14097.1781	-0.0312	0.0117	2.7
100	Delta-E	-2330.4994	0.0094	0.0101	0.9
	Delta-U	-57.6636	-0.0020	0.0246	0.1
	Length	14288.6313			
(V25 Postprocessed 12-APR-2002 01:14:25.000 mc miken dam.asc)					
115	Delta-N	-7271.1084	-0.0192	0.0154	1.2
4HB1	Delta-E	782.0533	-0.0004	0.0138	0.0
	Delta-U	-38.1623	-0.0240	0.0311	0.8
	Length	7313.1444			
(V62 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)					
107	Delta-N	8145.2521	0.0259	0.0116	2.2
109	Delta-E	-3714.9062	-0.0158	0.0100	1.6
	Delta-U	36.4837	-0.0039	0.0225	0.2
	Length	8952.4852			
(V18 Postprocessed 12-APR-2002 01:14:25.000 mc miken dam.asc)					
FRIA	Delta-N	13550.4128	-0.0123	0.0165	0.7
4HB1	Delta-E	43635.7598	-0.0067	0.0148	0.5
	Delta-U	-367.7021	-0.0267	0.0342	0.8
	Length	45692.7612			
(V56 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)					
4DD1	Delta-N	37477.2451	0.0220	0.0175	1.3
107	Delta-E	-1999.7059	-0.0063	0.0149	0.4
	Delta-U	187.3491	0.0194	0.0381	0.5
	Length	37531.0248			
(V29 Postprocessed 11-APR-2002 12:34:00.000 mc miken dam.asc)					
101	Delta-N	25044.1296	-0.0192	0.0113	1.7
FRIA	Delta-E	-4097.8336	-0.0113	0.0150	0.8
	Delta-U	244.7760	-0.0185	0.0419	0.4
	Length	25378.3487			
(V51 Postprocessed 11-APR-2002 01:24:40.000 mc miken dam.asc)					
FRIA	Delta-N	-26396.5200	0.0112	0.0155	0.7
100	Delta-E	7331.9108	-0.0069	0.0189	0.4
	Delta-U	-317.2650	-0.0252	0.0305	0.8
	Length	27397.6978			
(V22 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)					
110	Delta-N	184.8995	-0.0011	0.0316	0.0
113	Delta-E	-13781.6194	-0.0168	0.0274	0.6
	Delta-U	734.5973	0.0225	0.0602	0.4
	Length	13802.4221			
(V4 Postprocessed 12-APR-2002 10:26:45.000 mc miken dam.asc)					
4DD1	Delta-N	45572.0007	-0.0167	0.0176	0.9
111	Delta-E	1667.3825	-0.0157	0.0184	0.9
	Delta-U	140.1969	-0.0120	0.0415	0.3
	Length	45602.7090			
(V8 Postprocessed 12-APR-2002 09:06:25.000 mc miken dam.asc)					
4DD1	Delta-N	32025.7542	-0.0127	0.0235	0.5
4FD2	Delta-E	-2757.6662	0.0018	0.0166	0.1
	Delta-U	176.4090	0.0222	0.0467	0.5
	Length	32144.7472			
(V32 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)					
4GC1	Delta-N	-9057.6185	-0.0089	0.0141	0.6
106	Delta-E	-15646.1886	-0.0066	0.0153	0.4
	Delta-U	48.2859	-0.0223	0.0398	0.6

	Length	18078.8827			
(V30 Postprocessed	11-APR-2002 12:34:00.000 mc miken dam.asc)				
4DD1	Delta-N	24734.6571	0.0146	0.0174	0.8
101	Delta-E	-7561.4863	0.0076	0.0179	0.4
	Delta-U	191.3777	-0.0185	0.0451	0.4
	Length	25865.3428			
(V28 Postprocessed	11-APR-2002 12:34:00.000 mc miken dam.asc)				
4GC1	Delta-N	-21260.7312	0.0074	0.0135	0.5
101	Delta-E	-24236.1478	0.0086	0.0144	0.6
	Delta-U	56.5250	-0.0218	0.0369	0.6
	Length	32239.9248			
(V55 Postprocessed	11-APR-2002 11:01:05.000 mc miken dam.asc)				
4DD1	Delta-N	33748.3434	-0.0008	0.0161	0.0
105	Delta-E	-7429.8618	0.0156	0.0179	0.9
	Delta-U	237.8396	0.0187	0.0352	0.5
	Length	34557.3451			
(V50 Postprocessed	11-APR-2002 01:27:35.000 mc miken dam.asc)				
FRIA	Delta-N	-4154.5748	-0.0161	0.0114	1.4
109	Delta-E	5940.7315	0.0036	0.0134	0.3
	Delta-U	-209.3572	0.0173	0.0210	0.8
	Length	7252.3522			
(V42 Postprocessed	11-APR-2002 01:27:35.000 mc miken dam.asc)				
4GC1	Delta-N	-373.6734	-0.0093	0.0135	0.7
109	Delta-E	-22377.7579	0.0084	0.0121	0.7
	Delta-U	121.5447	-0.0200	0.0259	0.8
	Length	22381.2076			
(V57 Postprocessed	11-APR-2002 01:27:35.000 mc miken dam.asc)				
4DD1	Delta-N	45622.7847	0.0111	0.0171	0.7
109	Delta-E	-5714.0987	0.0145	0.0149	1.0
	Delta-U	208.8374	0.0145	0.0349	0.4
	Length	45979.7023			
(V35 Postprocessed	11-APR-2002 12:37:00.000 mc miken dam.asc)				
4GC1	Delta-N	-7761.4768	-0.0052	0.0107	0.5
108	Delta-E	-21756.4148	0.0124	0.0143	0.9
	Delta-U	121.1303	-0.0186	0.0396	0.5
	Length	23099.7139			
(V40 Postprocessed	11-APR-2002 11:01:05.000 mc miken dam.asc)				
4GC1	Delta-N	-12247.2402	-0.0046	0.0132	0.4
105	Delta-E	-24099.8063	0.0128	0.0148	0.9
	Delta-U	122.9806	-0.0171	0.0276	0.6
	Length	27033.5103			
(V27 Postprocessed	11-APR-2002 12:37:00.000 mc miken dam.asc)				
101	Delta-N	13501.2138	0.0188	0.0126	1.5
108	Delta-E	2469.4222	0.0055	0.0169	0.3
	Delta-U	47.9717	-0.0092	0.0465	0.2
	Length	13725.2731			
(V59 Postprocessed	11-APR-2002 11:40:20.000 mc miken dam.asc)				
102	Delta-N	4985.8008	0.0060	0.0120	0.5
103	Delta-E	9754.0406	0.0147	0.0126	1.2
	Delta-U	-85.6444	0.0143	0.0250	0.6
	Length	10954.7639			
(V13 Postprocessed	12-APR-2002 08:52:20.000 mc miken dam.asc)				
FRIA	Delta-N	-4171.5729	-0.0202	0.0122	1.6
112	Delta-E	16456.2502	0.0039	0.0097	0.4
	Delta-U	-302.3085	-0.0029	0.0256	0.1
	Length	16979.4459			

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(V47 Postprocessed 11-APR-2002 10:34:20.000 mc miken dam.asc)
FRIA               Delta-N        -18649.1320        0.0020   0.0111   0.2
103                Delta-E         10908.4621       -0.0161   0.0118   1.4
                   Delta-U          -301.5379       -0.0119   0.0223   0.5
                   Length          21607.3042
(V26 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)
101                Delta-N         12209.6914        0.0161   0.0123   1.3
106                Delta-E          8580.5552        0.0100   0.0123   0.8
                   Delta-U           -30.6203       -0.0062   0.0302   0.2
                   Length          14923.2513
(V15 Postprocessed 12-APR-2002 01:13:20.000 mc miken dam.asc)
FRIA               Delta-N         20820.4838       -0.0169   0.0195   0.9
115                Delta-E         42843.8684        0.0090   0.0175   0.5
                   Delta-U          -335.1795        0.0028   0.0407   0.1
                   Length          47636.1412
(V46 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)
FRIA               Delta-N        -23635.3842        0.0109   0.0161   0.7
102                Delta-E          1154.6087        0.0042   0.0182   0.2
                   Delta-U          -221.0080        0.0154   0.0386   0.4
                   Length          23664.6012
(V14 Postprocessed 12-APR-2002 09:51:30.000 mc miken dam.asc)
FRIA               Delta-N         -3968.4143        0.0098   0.0109   0.9
113                Delta-E         -4165.9991       -0.0140   0.0080   1.8
                   Delta-U           491.0329        0.0084   0.0190   0.4
                   Length           5774.5107
(V39 Postprocessed 11-APR-2002 10:34:20.000 mc miken dam.asc)
4GC1               Delta-N        -14872.7087       -0.0048   0.0090   0.5
103                Delta-E        -17422.9479       -0.0128   0.0093   1.4
                   Delta-U            38.6938       -0.0111   0.0185   0.6
                   Length          22907.5987
(V3 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)
4DD1               Delta-N         45626.9489       -0.0101   0.0183   0.6
110                Delta-E         -2039.4688       -0.0101   0.0191   0.5
                   Delta-U           170.3026       -0.0090   0.0433   0.2
                   Length          45672.8245
(V64 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)
109                Delta-N        -22242.2283        0.0088   0.0146   0.6
100                Delta-E          1387.0125       -0.0082   0.0127   0.6
                   Delta-U          -103.0816        0.0117   0.0297   0.4
                   Length          22285.6714
(V34 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)
4DD1               Delta-N         36942.2509       -0.0063   0.0181   0.3
106                Delta-E          1022.0046       -0.0044   0.0184   0.2
                   Delta-U           149.3741       -0.0130   0.0473   0.3
                   Length          36956.6869
(V38 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)
4GC1               Delta-N        -19850.1724        0.0086   0.0155   0.6
102                Delta-E        -27181.3827        0.0124   0.0154   0.8
                   Delta-U           106.9377       -0.0008   0.0368   0.0
                   Length          33658.1097
(V54 Postprocessed 11-APR-2002 10:34:20.000 mc miken dam.asc)
4DD1               Delta-N         31126.2173        0.0046   0.0128   0.4
103                Delta-E          -751.6842       -0.0008   0.0133   0.1
                   Delta-U           154.0262        0.0140   0.0280   0.5
                   Length          31135.6734
(V12 Postprocessed 12-APR-2002 10:26:45.000 mc miken dam.asc)
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FRIA	Delta-N	-4202.4620	0.0070	0.0131	0.5
111	Delta-E	13322.1916	0.0081	0.0140	0.6
	Delta-U	-282.2249	0.0100	0.0307	0.3
	Length	13972.1554			
(V16 Postprocessed 12-APR-2002 11:50:55.000 mc miken dam.asc)					
FRIA	Delta-N	-17380.5761	0.0026	0.0155	0.2
104	Delta-E	7428.8374	0.0135	0.0177	0.8
	Delta-U	-260.1665	-0.0020	0.0404	0.1
	Length	18903.4319			
(V60 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)					
102	Delta-N	7605.5958	0.0057	0.0108	0.5
105	Delta-E	3075.0347	0.0025	0.0118	0.2
	Delta-U	4.8064	0.0106	0.0228	0.5
	Length	8203.7156			
(V61 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)					
103	Delta-N	2621.8389	-0.0000	0.0079	0.0
105	Delta-E	-6678.2369	-0.0119	0.0085	1.4
	Delta-U	87.9673	-0.0004	0.0149	0.0
	Length	7175.0001			
(V45 Postprocessed 11-APR-2002 01:24:40.000 mc miken dam.asc)					
4GC1	Delta-N	-22616.8799	0.0013	0.0106	0.1
100	Delta-E	-21006.4425	-0.0042	0.0097	0.4
	Delta-U	19.5293	-0.0104	0.0208	0.5
	Length	30867.3657			
(V43 Postprocessed 11-APR-2002 10:18:05.000 mc miken dam.asc)					
4GC1	Delta-N	3786.2802	-0.0074	0.0067	1.1
FRIA	Delta-E	-28315.0272	0.0069	0.0074	0.9
	Delta-U	322.1217	0.0049	0.0368	0.1
	Length	28568.8720			
(V11 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)					
FRIA	Delta-N	-4148.9582	0.0073	0.0126	0.6
110	Delta-E	9615.3376	0.0070	0.0130	0.5
	Delta-U	-249.9261	0.0045	0.0290	0.2
	Length	10475.2582			
(V17 Postprocessed 12-APR-2002 09:06:25.000 mc miken dam.asc)					
FRIA	Delta-N	-17750.3938	-0.0065	0.0182	0.4
4FD2	Delta-E	8902.1612	0.0068	0.0130	0.5
	Delta-U	-275.8917	0.0015	0.0362	0.0
	Length	19859.5335			
(V48 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)					
FRIA	Delta-N	-16029.6860	-0.0010	0.0121	0.1
105	Delta-E	4229.3654	0.0063	0.0135	0.5
	Delta-U	-207.7498	-0.0039	0.0248	0.2
	Length	16579.5514			
(V31 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)					
106	Delta-N	1293.1398	0.0037	0.0082	0.5
108	Delta-E	-6110.8132	-0.0011	0.0105	0.1
	Delta-U	76.8450	-0.0038	0.0270	0.1
	Length	6246.6114			
(V21 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)					
110	Delta-N	-54.6421	0.0025	0.0104	0.2
111	Delta-E	3706.8519	0.0040	0.0107	0.4
	Delta-U	-30.5867	-0.0025	0.0230	0.1
	Length	3707.3808			

GPS Vector Residual Summary (FeetInt)

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(Sorted by 3D Residual Length)

From	To	N	E	Up	2D	3D	Length	VectID
4DD1	4HB1	-0.011	-0.031	-0.098	0.033	0.103	70935	9
4DD1	113	-0.050	0.056	-0.052	0.075	0.091	48478	6
4DD1	4HD1	0.001	0.011	-0.088	0.011	0.088	63335	10
4DD1	FRIA	0.004	0.007	0.074	0.008	0.074	51127	52
4DD1	115	-0.019	-0.014	-0.065	0.024	0.069	77171	7
4DD1	102	0.006	0.017	0.064	0.018	0.067	28177	53
108	FRIA	0.014	0.019	-0.059	0.024	0.064	13282	36
4GC1	4DD1	-0.012	-0.003	-0.061	0.012	0.062	48933	44
112	4FD2	-0.058	-0.000	0.006	0.058	0.058	15539	24
104	4HD1	0.003	0.013	-0.049	0.013	0.050	31175	20
FRIA	107	-0.028	0.022	0.034	0.036	0.050	15640	49
4DD1	108	-0.003	0.004	-0.049	0.006	0.049	38573	37
106	FRIA	-0.002	0.009	-0.046	0.009	0.046	18043	33
111	113	0.010	0.043	-0.006	0.044	0.045	17507	23
FRIA	4HD1	0.012	0.024	-0.035	0.026	0.044	17625	19
4DD1	104	-0.001	-0.003	-0.041	0.003	0.041	32672	2
4DD1	112	-0.027	-0.004	0.027	0.028	0.039	45854	5
4DD1	FRIA	-0.010	-0.013	0.033	0.017	0.037	51127	1
4GC1	107	-0.005	-0.010	-0.035	0.011	0.037	20521	41
4DD1	100	0.024	0.000	0.026	0.024	0.035	23778	58
107	100	-0.031	0.009	-0.002	0.033	0.033	14289	63
115	4HB1	-0.019	-0.000	-0.024	0.019	0.031	7313	25
107	109	0.026	-0.016	-0.004	0.030	0.031	8952	62
FRIA	4HB1	-0.012	-0.007	-0.027	0.014	0.030	45693	18
4DD1	107	0.022	-0.006	0.019	0.023	0.030	37531	56
101	FRIA	-0.019	-0.011	-0.018	0.022	0.029	25378	29
FRIA	100	0.011	-0.007	-0.025	0.013	0.028	27398	51
110	113	-0.001	-0.017	0.023	0.017	0.028	13802	22
4DD1	111	-0.017	-0.016	-0.012	0.023	0.026	45603	4
4DD1	4FD2	-0.013	0.002	0.022	0.013	0.026	32145	8
4GC1	106	-0.009	-0.007	-0.022	0.011	0.025	18079	32
4DD1	101	0.015	0.008	-0.019	0.016	0.025	25865	30
4GC1	101	0.007	0.009	-0.022	0.011	0.025	32240	28
4DD1	105	-0.001	0.016	0.019	0.016	0.024	34557	55
FRIA	109	-0.016	0.004	0.017	0.016	0.024	7252	50
4GC1	109	-0.009	0.008	-0.020	0.013	0.024	22381	42
4DD1	109	0.011	0.015	0.014	0.018	0.023	45980	57
4GC1	108	-0.005	0.012	-0.019	0.013	0.023	23100	35
4GC1	105	-0.005	0.013	-0.017	0.014	0.022	27034	40
101	108	0.019	0.006	-0.009	0.020	0.022	13725	27
102	103	0.006	0.015	0.014	0.016	0.021	10955	59
FRIA	112	-0.020	0.004	-0.003	0.021	0.021	16979	13
FRIA	103	0.002	-0.016	-0.012	0.016	0.020	21607	47
101	106	0.016	0.010	-0.006	0.019	0.020	14923	26
FRIA	115	-0.017	0.009	0.003	0.019	0.019	47636	15
FRIA	102	0.011	0.004	0.015	0.012	0.019	23665	46
FRIA	113	0.010	-0.014	0.008	0.017	0.019	5775	14
4GC1	103	-0.005	-0.013	-0.011	0.014	0.018	22908	39
4DD1	110	-0.010	-0.010	-0.009	0.014	0.017	45673	3
109	100	0.009	-0.008	0.012	0.012	0.017	22286	64
4DD1	106	-0.006	-0.004	-0.013	0.008	0.015	36957	34
4GC1	102	0.009	0.012	-0.001	0.015	0.015	33658	38
4DD1	103	0.005	-0.001	0.014	0.005	0.015	31136	54

FRIA	111	0.007	0.008	0.010	0.011	0.015	13972	12
FRIA	104	0.003	0.013	-0.002	0.014	0.014	18903	16
102	105	0.006	0.002	0.011	0.006	0.012	8204	60
103	105	-0.000	-0.012	-0.000	0.012	0.012	7175	61
4GC1	100	0.001	-0.004	-0.010	0.004	0.011	30867	45
4GC1	FRIA	-0.007	0.007	0.005	0.010	0.011	28569	43
FRIA	110	0.007	0.007	0.004	0.010	0.011	10475	11
FRIA	4FD2	-0.007	0.007	0.001	0.009	0.010	19860	17
FRIA	105	-0.001	0.006	-0.004	0.006	0.008	16580	48
106	108	0.004	-0.001	-0.004	0.004	0.005	6247	31
110	111	0.002	0.004	-0.002	0.005	0.005	3707	21

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Adjusted Bearings (DMS) and Horizontal Distances (FeetInt)

(Relative Confidence of Bearing is in Seconds)
NOTE - Adjustment Failed the Chi-Square Test
Angular and Distance Errors are Scaled by Total Error Factor

From	To	Grid Bearing	Grid Dist Grnd Dist	95% RelConfidence Brg	 Dist	 PPM
100	107	N09-41-24.73E	14286.7357 14288.5400	0.27	0.0201	1.4069
100	109	N03-15-29.95W	22282.6761 22285.4945	0.18	0.0213	0.9567
100	4DD1	S10-11-44.80E	23774.9447 23777.8286	0.13	0.0171	0.7200
100	4GC1	N43-09-18.31E	30863.4219 30867.3503	0.11	0.0154	0.4989
100	FRIA	N15-12-08.46W	27392.5063 27396.0746	0.13	0.0186	0.6779
101	106	N35-24-41.42E	14921.3539 14923.2365	0.33	0.0184	1.2302
101	108	N10-40-41.94E	13723.4367 13725.1787	0.36	0.0187	1.3629
101	4DD1	S16-41-58.14E	25861.3777 25864.5222	0.15	0.0189	0.7309
101	4GC1	N49-00-39.73E	32235.7236 32239.8362	0.13	0.0172	0.5330
101	FRIA	N08-58-45.27W	25373.7118 25377.0253	0.17	0.0188	0.7424
102	103	N63-14-40.60E	10953.0729 10954.4559	0.35	0.0211	1.9274
102	105	N22-19-57.64E	8202.6726 8203.7167	0.51	0.0203	2.4708
102	4DD1	S21-35-47.46E	28172.6779 28176.1221	0.15	0.0184	0.6532
102	4GC1	N54-07-45.18E	33653.5416 33657.8576	0.11	0.0208	0.6192
102	FRIA	N02-28-33.06W	23660.5947 23663.7008	0.18	0.0196	0.8301
103	105	N68-15-51.78W	7173.5374 7174.4486	0.45	0.0171	2.3821
103	4DD1	S01-05-03.14E	31131.3788 31135.1821	0.10	0.0142	0.4577
103	4GC1	N49-47-03.85E	22904.6156 22907.5514	0.13	0.0147	0.6402
103	FRIA	N30-00-13.59W	21602.5286 21605.3619	0.15	0.0158	0.7296
104	4DD1	S07-08-28.95E	32667.1095 32671.1088	0.19	0.0257	0.7881
104	4HD1	N07-22-42.62E	31171.3709 31175.3868	0.19	0.0269	0.8639
104	FRIA	N22-49-19.12W	18899.2808 18901.7651	0.34	0.0257	1.3619
105	4DD1	S12-06-59.96E	34552.0825 34556.3324	0.10	0.0163	0.4707
105	4GC1	N63-19-48.96E	27029.6706	0.13	0.0171	0.6311

			27033.1573			
105	FRIA	N14-27-34.05W	16576.1487	0.22	0.0168	1.0145
			16578.3378			
106	108	N77-45-13.74W	6245.3319	0.54	0.0213	3.4045
			6246.1298			
106	4DD1	S01-53-02.17W	36951.7242	0.11	0.0168	0.4536
			36956.2541			
106	4GC1	N60-12-10.03E	18076.4791	0.22	0.0174	0.9611
			18078.8036			
106	FRIA	N44-20-11.94W	18038.1074	0.20	0.0203	1.1258
			18040.4806			
107	109	N24-12-48.63W	8951.2591	0.40	0.0214	2.3853
			8952.4067			
107	4DD1	S02-45-18.07E	37525.7758	0.09	0.0185	0.4928
			37530.3896			
107	4GC1	N65-44-04.03E	20517.8046	0.19	0.0159	0.7755
			20520.4502			
107	FRIA	N37-49-17.32W	15635.6946	0.22	0.0197	1.2589
			15637.7578			
108	4DD1	S07-16-54.58E	38567.5232	0.10	0.0161	0.4181
			38572.2777			
108	4GC1	N70-38-09.19E	23096.3502	0.15	0.0187	0.8108
			23099.3359			
108	FRIA	N29-19-27.14W	13278.4340	0.28	0.0181	1.3615
			13280.1912			
109	4DD1	S06-50-22.46E	45973.3305	0.08	0.0183	0.3987
			45978.9897			
109	4GC1	N89-18-46.32E	22377.9294	0.17	0.0171	0.7641
			22380.8190			
109	FRIA	N54-42-44.57W	7248.4112	0.44	0.0191	2.6402
			7249.3686			
110	111	S88-51-06.91E	3706.7854	1.28	0.0237	6.4051
			3707.2589			
110	113	N88-55-40.05W	13780.6560	0.49	0.0286	2.0740
			13782.6219			
110	4DD1	S02-15-35.98E	45666.7020	0.11	0.0238	0.5205
			45672.3129			
110	FRIA	N66-20-20.44W	10470.9623	0.44	0.0236	2.2525
			10472.3425			
111	113	N88-54-42.15W	17487.4389	0.39	0.0295	1.6892
			17489.9334			
111	4DD1	S02-23-41.08W	45596.7315	0.11	0.0241	0.5281
			45602.3327			
111	FRIA	N72-10-16.02W	13967.5630	0.34	0.0243	1.7429
			13969.4036			
112	4DD1	S06-18-35.82W	45847.9845	0.08	0.0248	0.5408
			45853.6235			
112	4FD2	S29-24-31.64W	15536.6397	0.25	0.0247	1.5920
			15538.6198			
112	FRIA	N75-27-15.70W	16974.6430	0.30	0.0185	1.0891
			16976.8824			
113	4DD1	S18-45-07.40E	48461.4532	0.08	0.0275	0.5682
			48468.1331			
113	FRIA	N46-42-45.15E	5752.6855	0.90	0.0192	3.3313
			5753.5302			
115	4DD1	S24-08-42.71W	77161.3291	0.08	0.0290	0.3763

			77171.1728			
115	4HB1	S05-53-43.86E	7312.0521	0.77	0.0306	4.1810
			7313.0546			
115	FRIA	S64-24-12.20W	47628.8139	0.13	0.0274	0.5745
			47635.3332			
4DD1	4FD2	N04-37-20.16W	32140.1989	0.00	0.0000	0.0000
			32144.1315			
4DD1	4GC1	N20-12-32.09E	48926.4759	0.00	0.0000	0.0000
			48932.5415			
4DD1	4HB1	N27-06-12.86E	70926.0294	0.00	0.0000	0.0000
			70935.0294			
4DD1	4HD1	N00-03-08.82W	63326.9720	0.00	0.0000	0.0000
			63334.8332			
4DD1	FRIA	N12-52-34.18W	51118.8670	0.04	0.0099	0.1927
			51125.3527			
4FD2	FRIA	N26-18-49.32W	19855.1458	0.11	0.0099	0.4992
			19857.7541			
4GC1	FRIA	N82-06-50.52W	28563.0439	0.07	0.0102	0.3575
			28566.8415			
4HB1	FRIA	S73-04-11.70W	45685.4570	0.04	0.0102	0.2228
			45691.6752			
4HD1	FRIA	S40-01-40.29W	17621.7223	0.12	0.0100	0.5665
			17624.0727			

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Error Propagation

Station Coordinate Standard Deviations (FeetInt)
NOTE - Adjustment Failed the Chi-Square Test
Standard Deviations are Scaled by Total Error Factor

Station	N	E	Elev
100	0.006891	0.006370	0.018104
101	0.007222	0.008178	0.026098
102	0.007795	0.008227	0.024969
103	0.005821	0.006115	0.016103
104	0.010736	0.012052	0.028926
105	0.006585	0.007140	0.022170
106	0.006897	0.007952	0.023333
107	0.007509	0.006783	0.019757
108	0.006412	0.008121	0.027478
109	0.007348	0.007001	0.023948
110	0.009693	0.009971	0.026844
111	0.009854	0.010260	0.025595
112	0.010010	0.007844	0.021401
113	0.010922	0.008539	0.034342
115	0.012408	0.011207	0.026139
4DD1	0.000000	0.000000	0.000000
4FD2	0.000000	0.000000	0.000000
4GC1	0.000000	0.000000	0.000000
4HB1	0.000000	0.000000	0.000000
4HD1	0.000000	0.000000	0.000000
FRIA	0.004015	0.004174	0.026767

Station Coordinate Error Ellipses (FeetInt)
NOTE - Adjustment Failed the Chi-Square Test
Error Ellipses are Scaled by Total Error Factor
Confidence Region = 95%

Station	Semi-Major Axis	Semi-Minor Axis	Azimuth of Major Axis	Elev
100	0.017283	0.015130	153-13	0.035484
101	0.020924	0.016593	118-34	0.051151
102	0.020847	0.018303	57-18	0.048938
103	0.014969	0.014247	90-40	0.031561
104	0.030558	0.025043	62-56	0.056693
105	0.017502	0.016090	98-00	0.043452
106	0.020249	0.015931	116-32	0.045733
107	0.018990	0.015902	152-37	0.038723
108	0.020192	0.015291	105-35	0.053856
109	0.019106	0.015880	142-39	0.046938
110	0.024690	0.023432	118-36	0.052614
111	0.025300	0.023925	111-51	0.050165
112	0.024990	0.018561	17-05	0.041946
113	0.027541	0.019827	159-45	0.067309
115	0.030766	0.026989	160-36	0.051231
4DD1	0.000000	0.000000	0-00	0.000000
4FD2	0.000000	0.000000	0-00	0.000000
4GC1	0.000000	0.000000	0-00	0.000000

4HB1	0.000000	0.000000	0-00	0.000000
4HD1	0.000000	0.000000	0-00	0.000000
FRIA	0.010217	0.009827	91-14	0.052462

Relative Error Ellipses (FeetInt)
NOTE - Adjustment Failed the Chi-Square Test
Relative Error Ellipses are Scaled by Total Error Factor
Confidence Region = 95%

Stations From	To	Semi-Major Axis	Semi-Minor Axis	Azimuth of Major Axis	Vertical
100	107	0.020813	0.017879	159-15	0.033056
100	109	0.021958	0.018659	149-42	0.037194
100	4DD1	0.017283	0.015130	153-13	0.035484
100	4GC1	0.017283	0.015130	153-13	0.035484
100	FRIA	0.018862	0.016686	142-43	0.040021
101	106	0.023565	0.018340	122-25	0.046433
101	108	0.024325	0.018459	111-39	0.050379
101	4DD1	0.020924	0.016593	118-34	0.051151
101	4GC1	0.020924	0.016593	118-34	0.051151
101	FRIA	0.021744	0.017325	115-17	0.048045
102	103	0.021122	0.018750	59-08	0.036336
102	105	0.021322	0.019112	66-49	0.033285
102	4DD1	0.020847	0.018303	57-18	0.048938
102	4GC1	0.020847	0.018303	57-18	0.048938
102	FRIA	0.021601	0.019164	61-56	0.038199
103	105	0.017126	0.015703	102-10	0.028486
103	4DD1	0.014969	0.014247	90-40	0.031561
103	4GC1	0.014969	0.014247	90-40	0.031561
103	FRIA	0.016383	0.015382	97-32	0.038800
104	4DD1	0.030558	0.025043	62-56	0.056693
104	4HD1	0.030558	0.025043	62-56	0.056693
104	FRIA	0.031161	0.025712	63-20	0.065273
105	4DD1	0.017502	0.016090	98-00	0.043452
105	4GC1	0.017502	0.016090	98-00	0.043452
105	FRIA	0.018172	0.016509	100-26	0.032077
106	108	0.021332	0.016115	109-19	0.045373
106	4DD1	0.020249	0.015931	116-32	0.045733
106	4GC1	0.020249	0.015931	116-32	0.045733
106	FRIA	0.020837	0.016449	114-15	0.050726
107	109	0.021374	0.017538	151-11	0.033743
107	4DD1	0.018990	0.015902	152-37	0.038723
107	4GC1	0.018990	0.015902	152-37	0.038723
107	FRIA	0.019697	0.016288	146-01	0.036899
108	4DD1	0.020192	0.015291	105-35	0.053856
108	4GC1	0.020192	0.015291	105-35	0.053856
108	FRIA	0.020514	0.015432	104-50	0.046779
109	4DD1	0.019106	0.015880	142-39	0.046938
109	4GC1	0.019106	0.015880	142-39	0.046938
109	FRIA	0.019296	0.015399	137-33	0.029784
110	111	0.023969	0.022790	117-27	0.041888
110	113	0.033464	0.027333	155-26	0.057808
110	4DD1	0.024690	0.023432	118-36	0.052614
110	FRIA	0.023611	0.022384	122-02	0.045868
111	113	0.034163	0.028310	154-54	0.062418
111	4DD1	0.025300	0.023925	111-51	0.050165

111	FRIA	0.024360	0.023072	114-14	0.050279
112	4DD1	0.024990	0.018561	17-05	0.041946
112	4FD2	0.024990	0.018561	17-05	0.041946
112	FRIA	0.024916	0.018476	16-40	0.056482
113	4DD1	0.027541	0.019827	159-45	0.067309
113	FRIA	0.026103	0.017625	159-43	0.036509
115	4DD1	0.030766	0.026989	160-36	0.051231
115	4HB1	0.030766	0.026989	160-36	0.051231
115	FRIA	0.031135	0.027298	161-32	0.074821
4DD1	4FD2	0.000000	0.000000	0-00	0.000000
4DD1	4GC1	0.000000	0.000000	0-00	0.000000
4DD1	4HB1	0.000000	0.000000	0-00	0.000000
4DD1	4HD1	0.000000	0.000000	0-00	0.000000
4DD1	FRIA	0.010217	0.009827	91-14	0.052462
4FD2	FRIA	0.010217	0.009827	91-14	0.052462
4GC1	FRIA	0.010217	0.009827	91-14	0.052462
4HB1	FRIA	0.010217	0.009827	91-14	0.052462
4HD1	FRIA	0.010217	0.009827	91-14	0.052462

Elapsed Time = 00:00:00

□22
47
01 00000000 Top of File
01 00000006 Summary of Files Used and Option Settings
02 00000009 Project Folder and Data Files
02 00000016 Project Option Settings
01 00000038 Summary of Unadjusted Input Observations
02 00000041 Entered Stations
03 00000043 Fixed Positions
02 00000050 GPS Vector Observations
01 00000312 Adjustment Statistical Summary
01 00000332 Adjusted Station Information
02 00000335 Adjusted Coordinates
02 00000360 Adjusted Positions and Ellipsoid Heights
02 00000386 Convergence Angles and Grid Factors at Stations
01 00000415 Adjusted Observations and Residuals
02 00000418 Adjusted GPS Vector Observations
02 00000749 GPS Vector Residual Summary
01 00000818 Adjusted Bearings and Horizontal Distances
01 00000953 Error Propagation
02 00000956 Station Coordinate Standard Deviations
02 00000983 Station Coordinate Error Ellipses
02 00001012 Relative Error Ellipses
01 00001082 End of File
00011783
STARPLUS
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Run Date: Tue Jul 23 2002 18:15:09

Summary of Files Used and Option Settings

Project Folder and Data Files

Project Name	MC MICKEN NAVD 88
Project Folder	D:\GPS PROJECTS\WITTMANN\MC MICKEN
Data File List	Mc Micken NAVD 88.dat
	Mc Micken NAVD 88.gps

Project Option Settings

STAR*NET Run Mode	: Adjust with Error Propagation
Type of Adjustment	: 3D
Project Units	: FeetInt; DMS
Coordinate System	: Mercator NAD83; AZ Central 0202
Geoid Height Model	: GEOID99CONUS.GHT
Vertical Deflection	: N=0.00 E=0.00 (Defaults, Seconds)
Longitude Sign Convention	: Positive West
Input/Output Coordinate Order	: North-East
Angle Data Station Order	: At-From-To
Distance/Vertical Data Type	: Slope/Zenith
Convergence Limit; Max Iterations	: 0.010000; 10
Default Coefficient of Refraction	: 0.070000
Create Coordinate File	: Yes
Create Geodetic Position File	: Yes
Create Ground Scale Coordinate File	: No
Create Dump File	: No
GPS Vector Standard Error Factors	: 4.5000
GPS Vector Centering (Meters)	: 0.00100
GPS Vector Transformations	: Custom
Scale	: Solve
Rotation North	: None
Rotation East	: Solve
Rotation Up	: None

Summary of Unadjusted Input Observations

Number of Entered Stations (FeetInt) = 5

Fixed Stations	Latitude	Longitude	Elev	Description
4DD1	33-30-29.701920	112-27-29.031850	1127.1000	
4HD1	33-40-56.225170	112-27-33.636280	1393.3000	

Partially Fixed	Latitude	Longitude	Elev	Description
	N-StdErr	E-StdErr	StdErr	
4FD2	33-35-46.514410	112-28-01.630310	1327.8000	
	FREE	FREE	FIXED	

4GC1	33-38-04.791470	112-24-11.967230	1252.6000
	FREE	FREE	FIXED
4HB1	33-40-55.865770	112-21-10.531750	1275.9000
	FREE	FREE	FIXED

Number of GPS Vector Observations (FeetInt) = 64

From To	DeltaX DeltaY DeltaZ	StdErrX StdErrY StdErrZ	CorrelXY CorrelXZ CorrelYZ
(V1 Postprocessed 12-APR-2002 08:29:50.000 mc miken dam.asc)			
4DD1	-400.4716	0.0160	0.8785
FRIA	29536.8691	0.0334	-0.8631
	41730.4664	0.0255	-0.9323
(V2 Postprocessed 12-APR-2002 11:50:55.000 mc miken dam.asc)			
4DD1	2861.3596	0.0240	0.5667
104	17997.5978	0.0330	-0.4677
	27117.2684	0.0279	-0.7242
(V3 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)			
4DD1	7683.2246	0.0225	0.4697
110	23926.2100	0.0387	-0.3984
	38138.0692	0.0238	-0.6173
(V4 Postprocessed 12-APR-2002 10:26:45.000 mc miken dam.asc)			
4DD1	11106.9528	0.0220	0.4793
111	22505.3298	0.0367	-0.4144
	38075.6401	0.0232	-0.6127
(V5 Postprocessed 12-APR-2002 08:52:20.000 mc miken dam.asc)			
4DD1	14015.4709	0.0173	0.5210
112	21337.4609	0.0300	-0.3372
	38090.2149	0.0292	-0.6763
(V6 Postprocessed 12-APR-2002 09:51:30.000 mc miken dam.asc)			
4DD1	-5247.2158	0.0199	0.5235
113	28721.8190	0.0312	-0.5951
	38698.9520	0.0345	-0.5602
(V7 Postprocessed 12-APR-2002 01:13:20.000 mc miken dam.asc)			
4DD1	43703.6499	0.0271	0.5442
115	24059.1791	0.0440	-0.4584
	58877.5849	0.0285	-0.5206
(V8 Postprocessed 12-APR-2002 09:06:25.000 mc miken dam.asc)			
4DD1	4149.1979	0.0205	0.5161
4FD2	17256.7150	0.0348	-0.3032
	26800.6629	0.0372	-0.6705
(V9 Postprocessed 12-APR-2002 01:14:25.000 mc miken dam.asc)			
4DD1	42904.4503	0.0256	0.5567
4HB1	20059.7178	0.0413	-0.4499
	52807.3443	0.0265	-0.5183
(V10 Postprocessed 12-APR-2002 11:49:05.000 mc miken dam.asc)			
4DD1	12942.4365	0.0266	0.5524
4HD1	32329.1821	0.0349	-0.4327
	52902.6104	0.0267	-0.6915
(V11 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)			
FRIA	8083.7058	0.0154	0.4635
110	-5610.6255	0.0259	-0.3796
	-3592.4289	0.0160	-0.6027
(V12 Postprocessed 12-APR-2002 10:26:45.000 mc miken dam.asc)			
FRIA	11507.4292	0.0169	0.4762

```
111                          -7031.4997          0.0271          -0.4095
                             -3654.8679          0.0170          -0.6097
(V13 Postprocessed 12-APR-2002 08:52:20.000 mc miken dam.asc)
FRIA                         14415.9492          0.0118           0.5000
112                          -8199.4065          0.0196          -0.3426
                             -3640.2506          0.0194          -0.6653
(V14 Postprocessed 12-APR-2002 09:51:30.000 mc miken dam.asc)
FRIA                         -4846.6484          0.0096           0.4539
113                           -815.0348          0.0141          -0.5289
                             -3031.6075          0.0160          -0.5143
(V15 Postprocessed 12-APR-2002 01:13:20.000 mc miken dam.asc)
FRIA                         44104.1465          0.0223           0.5470
115                          -5477.6047          0.0360          -0.4525
                             17147.0695          0.0233          -0.5193
(V16 Postprocessed 12-APR-2002 11:50:55.000 mc miken dam.asc)
FRIA                          3261.8522          0.0231           0.5567
104                         -11539.2113          0.0314          -0.4569
                            -14613.2321          0.0259          -0.7162
(V17 Postprocessed 12-APR-2002 09:06:25.000 mc miken dam.asc)
FRIA                          4549.6817          0.0160           0.5114
4FD2                        -12280.1457          0.0269          -0.3158
                            -14929.8069          0.0289          -0.6695
(V18 Postprocessed 12-APR-2002 01:14:25.000 mc miken dam.asc)
FRIA                         43304.9473          0.0190           0.5447
4HB1                         -9477.0610          0.0304          -0.4442
                             11076.8305          0.0194          -0.5135
(V19 Postprocessed 12-APR-2002 11:49:05.000 mc miken dam.asc)
FRIA                         13342.9353          0.0196           0.5576
4HD1                          2792.3782          0.0262          -0.4434
                             11172.0962          0.0218          -0.6982
(V20 Postprocessed 12-APR-2002 11:50:55.000 mc miken dam.asc)
104                          10081.0768          0.0258           0.5698
4HD1                         14331.5820          0.0350          -0.4604
                             25785.3420          0.0293          -0.7182
(V21 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)
110                           3423.7176          0.0123           0.4283
111                          -1420.8807          0.0208          -0.3414
                               -62.4369          0.0130          -0.5800
(V22 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)
110                         -12930.3514          0.0314           0.4262
113                           4795.6085          0.0528          -0.4324
                               560.8141          0.0400          -0.4697
(V23 Postprocessed 12-APR-2002 10:26:45.000 mc miken dam.asc)
111                         -16354.1407          0.0465           0.4464
113                           6216.4828          0.0756          -0.4884
                               623.2564          0.0623          -0.4721
(V24 Postprocessed 12-APR-2002 09:06:25.000 mc miken dam.asc)
112                          -9866.2489          0.0144           0.4812
4FD2                         -4080.7028          0.0239          -0.2528
                            -11289.4979          0.0252          -0.6437
(V25 Postprocessed 12-APR-2002 01:14:25.000 mc miken dam.asc)
115                           -799.2065          0.0171           0.5187
4HB1                         -3999.4340          0.0277          -0.4262
                             -6070.2222          0.0182          -0.4975
(V26 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)
101                          10520.3342          0.0155           0.5241
```

```
106                          2981.5793          0.0230          -0.6401
                            10155.5707          0.0210          -0.6577
(V27 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)
101                          5121.7908          0.0189           0.4451
108                          5917.9967          0.0371          -0.5877
                            11275.0681          0.0296          -0.8298
(V28 Postprocessed 11-APR-2002 12:34:00.000 mc miken dam.asc)
4GC1                       -26913.0518          0.0184           0.5395
101                         -1693.9469          0.0286          -0.6166
                           -17670.0783          0.0244          -0.7147
(V29 Postprocessed 11-APR-2002 12:34:00.000 mc miken dam.asc)
101                          1432.2033          0.0186           0.5286
FRIA                        14176.4203          0.0327          -0.6205
                            21000.9372          0.0263          -0.8337
(V30 Postprocessed 11-APR-2002 12:34:00.000 mc miken dam.asc)
4DD1                        -1832.7069          0.0229           0.5425
101                         15360.3956          0.0344          -0.6558
                            20729.5632          0.0308          -0.6847
(V31 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)
106                         -5398.5470          0.0113           0.3964
108                          2936.4176          0.0218          -0.5308
                             1119.4970          0.0174          -0.7973
(V32 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)
4GC1                       -16392.6856          0.0198           0.5542
106                          1287.6438          0.0308          -0.6333
                            -7514.4838          0.0261          -0.7250
(V33 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)
106                         -9088.1766          0.0208           0.5203
FRIA                        11194.8098          0.0379          -0.6190
                            10845.3568          0.0297          -0.8407
(V34 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)
4DD1                         8687.6592          0.0235           0.5414
106                         18341.9944          0.0360          -0.6624
                            30885.1583          0.0324          -0.6918
(V35 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)
4GC1                       -21791.2488          0.0175           0.5143
108                          4224.0748          0.0311          -0.6133
                            -6394.9910          0.0248          -0.8306
(V36 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)
108                         -3689.6476          0.0170           0.5191
FRIA                         8258.3726          0.0302          -0.6107
                             9725.8533          0.0242          -0.8314
(V37 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)
4DD1                         3289.0928          0.0248           0.4549
108                         21278.3913          0.0487          -0.5992
                            32004.6737          0.0389          -0.8364
(V38 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)
4GC1                       -29354.2130          0.0197           0.5409
102                          112.0974           0.0282          -0.3862
                           -16467.7557          0.0254          -0.7028
(V39 Postprocessed 11-APR-2002 10:34:20.000 mc miken dam.asc)
4GC1                       -19259.8720          0.0110           0.4369
103                         -1005.6497          0.0158          -0.3348
                           -12361.3708          0.0118          -0.5487
(V40 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)
4GC1                       -24905.3148          0.0170           0.3826
```

```
105                          2818.6619          0.0235          -0.3920
                           -10128.7525          0.0177          -0.5442
(V41 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)
4GC1                       -19084.5002          0.0170           0.5591
107                          2685.6311          0.0261          -0.4093
                            -7047.4342          0.0172          -0.4656
(V42 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)
4GC1                       -20806.2365          0.0141           0.4542
109                          8243.7808          0.0242          -0.3287
                             -243.7735          0.0146          -0.4562
(V43 Postprocessed 11-APR-2002 10:18:05.000 mc miken dam.asc)
4GC1                       -25480.8440          0.0134           0.8067
FRIA                        12482.5097          0.0285          -0.8189
                             3330.8301          0.0214          -0.9175
(V44 Postprocessed 11-APR-2002 10:14:25.000 mc miken dam.asc)
4GC1                       -25080.3590          0.0147           0.8470
4DD1                       -17054.3860          0.0303          -0.8311
                           -38399.6061          0.0229          -0.9179
(V45 Postprocessed 11-APR-2002 01:24:40.000 mc miken dam.asc)
4GC1                       -24201.6426          0.0123           0.5270
100                         -3590.8503          0.0184          -0.4211
                           -18819.6821          0.0122          -0.4666
(V46 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)
FRIA                        -3873.3600          0.0231           0.5251
102                        -12370.3940          0.0289          -0.4744
                           -19798.5934          0.0267          -0.6842
(V47 Postprocessed 11-APR-2002 10:34:20.000 mc miken dam.asc)
FRIA                         6220.9701          0.0131           0.3497
103                        -13488.1546          0.0200          -0.3844
                           -15692.2028          0.0138          -0.4970
(V48 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)
FRIA                          575.5354          0.0154           0.3750
105                         -9663.8318          0.0211          -0.3939
                           -13459.5895          0.0162          -0.5296
(V49 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)
FRIA                         6396.3372          0.0125           0.0000
107                         -9796.7907          0.0268          -0.2721
                           -10378.2797          0.0134          -0.2786
(V50 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)
FRIA                         4674.6220          0.0110          -0.0000
109                         -4238.6884          0.0228          -0.2084
                            -3574.6152          0.0104          -0.3848
(V51 Postprocessed 11-APR-2002 01:24:40.000 mc miken dam.asc)
FRIA                         1279.1938          0.0153          -0.0000
100                        -16073.3673          0.0327          -0.2384
                           -22150.5089          0.0150          -0.4445
(V52 Postprocessed 11-APR-2002 10:18:05.000 mc miken dam.asc)
4DD1                         -400.4805          0.0168           0.8237
FRIA                        29536.9010          0.0365          -0.8452
                            41730.4322          0.0270          -0.9278
(V53 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)
4DD1                        -4273.8518          0.0269           0.5630
102                         17166.4947          0.0336          -0.3722
                            21931.8600          0.0280          -0.6378
(V54 Postprocessed 11-APR-2002 10:34:20.000 mc miken dam.asc)
4DD1                         5820.4674          0.0160           0.4619
```

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103                          16048.7134          0.0238          -0.3922
                             26038.2569          0.0173          -0.5800
(V55 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)
4DD1                           175.0377          0.0218           0.4662
105                          19873.0326          0.0290          -0.4849
                             28270.8739          0.0225          -0.5624
(V56 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)
4DD1                          5995.8521          0.0203           0.6155
107                          19740.0049          0.0336          -0.4671
                             31352.1627          0.0209          -0.5533
(V57 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)
4DD1                          4274.1089          0.0175           0.4930
109                          25298.1432          0.0333          -0.3512
                             38155.8398          0.0177          -0.5026
(V58 Postprocessed 11-APR-2002 01:24:40.000 mc miken dam.asc)
4DD1                           878.7046          0.0154           0.5755
100                          13463.5125          0.0248          -0.4297
                             19579.9283          0.0155          -0.5162
(V59 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)
102                          10094.3079          0.0154           0.4748
103                          -1117.7228          0.0200          -0.3301
                              4106.3551          0.0171          -0.5985
(V60 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)
102                           4448.9009          0.0147           0.4914
105                           2706.5764          0.0175          -0.4186
                              6338.9726          0.0160          -0.6001
(V61 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)
103                          -5645.4063          0.0098           0.3739
105                           3824.3017          0.0125          -0.3927
                              2232.6154          0.0102          -0.4773
(V62 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)
107                          -1721.7169          0.0113           0.4429
109                           5558.1063          0.0213          -0.3184
                              6803.6459          0.0127          -0.4680
(V63 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)
107                          -5117.1460          0.0134           0.5866
100                          -6276.4816          0.0218          -0.4412
                            -11772.2021          0.0136          -0.5282
(V64 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)
109                          -3395.4091          0.0149           0.4837
100                         -11834.6269          0.0281          -0.3466
                            -18575.9083          0.0156          -0.5013
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Maricopa County

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Adjustment Statistical Summary

Convergence Iterations	=	3
Number of Stations	=	21
Number of Observations	=	192
Number of Unknowns	=	56
Number of Redundant Obs	=	136

Observation	Count	Sum Squares of StdRes	Error Factor
GPS Deltas	192	144.472	1.031
Total	192	144.472	1.031

The Chi-Square Test at 5.00% Level Passed
Lower/Upper Bounds (0.881/1.119)

Maricopa County

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Adjusted Station Information

Adjusted Coordinates (FeetInt)

Station	N	E	Elev	Description
100	936282.2261	530770.0783	1294.9695	
101	937653.3982	527547.2196	1333.9375	
102	939077.6476	524609.0742	1386.4870	
103	944008.5236	534389.4780	1303.8631	
104	945296.4127	530917.4189	1342.5583	
105	946665.0629	527725.9612	1392.8911	
106	949814.4692	536193.3293	1308.6849	
107	950365.1233	533174.8412	1347.6240	
108	951139.1862	530090.1082	1386.3274	
109	958528.8850	529503.5934	1385.8687	
110	958513.9049	533177.7203	1346.7387	
111	958439.6321	536883.7621	1316.5397	
112	958452.9643	540017.5584	1298.7391	
113	958771.7836	519399.4737	2085.6198	
115	983293.3395	566541.4433	1312.5532	
4DD1	912882.7165	534978.5233	1127.1000	
4FD2	944918.4343	532388.4787	1327.8000	
4GC1	958797.2342	551879.9182	1252.6000	
4HB1	976019.9695	567292.5006	1275.9000	
4HD1	976209.6620	534920.5515	1393.3000	
FRIA	962716.1620	523586.9884	1593.8464	

Adjusted Positions and Ellipsoid Heights (FeetInt)

Station	Latitude	Longitude	Ellip Ht	Geoid Ht
100	33-34-20.986946	112-28-20.215602	1196.2889	-98.6806
101	33-34-34.380031	112-28-58.395191	1235.3464	-98.5911
102	33-34-48.310596	112-29-33.216192	1287.9843	-98.5027
103	33-35-37.617312	112-27-37.917239	1205.2095	-98.6536
104	33-35-50.176727	112-28-19.045367	1243.9934	-98.5649
105	33-36-03.546495	112-28-56.864465	1294.4095	-98.4816
106	33-36-35.151739	112-27-16.948890	1210.0677	-98.6172
107	33-36-40.442961	112-27-52.674372	1249.0712	-98.5527
108	33-36-47.938057	112-28-29.198586	1287.8451	-98.4823
109	33-38-01.016271	112-28-36.606951	1287.4821	-98.3865
110	33-38-01.062792	112-27-53.150724	1248.2874	-98.4512
111	33-38-00.520095	112-27-09.313319	1218.0287	-98.5109
112	33-38-00.811084	112-26-32.249444	1200.1847	-98.5545
113	33-38-02.861976	112-30-36.128062	1987.4189	-98.2009
115	33-42-07.793582	112-21-19.785058	1214.6707	-97.8826
4DD1	33-30-29.701920	112-27-29.031850	1027.9298	-99.1702
4FD2	33-35-46.514911	112-28-01.630131	1229.1997	-98.6003
4GC1	33-38-04.791376	112-24-11.966903	1153.9572	-98.6428
4HB1	33-40-55.865850	112-21-10.531161	1177.8138	-98.0862
4HD1	33-40-56.225170	112-27-33.636280	1295.0713	-98.2287
FRIA	33-38-42.120119	112-29-46.862204	1495.5965	-98.2499
			Average:	-98.4805

Convergence Angles (DMS) and Grid Factors at Stations

Maricopa County

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(Grid Azimuth = Geodetic Azimuth - Convergence)
(Elevation Factor Includes a Geoid Height Correction at Each Station))

Station	Convergence Angle	------- Factors ------- Scale	x Elevation	= Combined
100	-0-18-26.13	0.99993279	0.99994276	0.99987555
101	-0-18-47.35	0.99993405	0.99994089	0.99987495
102	-0-19-06.73	0.99993522	0.99993837	0.99987360
103	-0-18-03.34	0.99993140	0.99994233	0.99987374
104	-0-18-26.20	0.99993273	0.99994048	0.99987321
105	-0-18-47.24	0.99993398	0.99993807	0.99987205
106	-0-17-52.19	0.99993072	0.99994210	0.99987283
107	-0-18-12.01	0.99993187	0.99994023	0.99987210
108	-0-18-32.29	0.99993305	0.99993838	0.99987144
109	-0-18-36.98	0.99993328	0.99993840	0.99987168
110	-0-18-12.91	0.99993186	0.99994027	0.99987214
111	-0-17-48.63	0.99993046	0.99994172	0.99987219
112	-0-17-28.10	0.99992930	0.99994257	0.99987188
113	-0-19-43.20	0.99993734	0.99990491	0.99984226
115	-0-14-36.60	0.99992039	0.99994188	0.99986228
4DD1	-0-17-56.00	0.99993118	0.99995081	0.99988200
4FD2	-0-18-16.53	0.99993217	0.99994119	0.99987336
4GC1	-0-16-10.42	0.99992512	0.99994479	0.99986991
4HB1	-0-14-31.01	0.99992016	0.99994364	0.99986381
4HD1	-0-18-03.48	0.99993120	0.99993803	0.99986924
FRIA	-0-19-16.25	0.99993563	0.99992844	0.99986408
Project Averages:	-0-17-56.84	0.99993114	0.99993906	0.99987020

Maricopa County

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Adjusted Observations and Residuals

Adjusted GPS Vector Observations Sorted by Residuals (FeetInt)

Datum Transformations			StdDev	
Scale Factor 0.999999416506	:	0.583494 PPM	0.1507	(Solved)
Rotation Around North Axis	:	0.000000 Sec	0.0000	(None)
Rotation Around East Axis	:	-0.162362 Sec	0.0432	(Solved)
Rotation Around Vert Axis	:	0.000000 Sec	0.0000	(None)

From To	Component	Adj Value	Residual	StdErr	StdRes
(V6 Postprocessed 12-APR-2002 09:51:30.000 mc miken dam.asc)					
4DD1	Delta-N	45814.3450	-0.0501	0.0226	2.2
113	Delta-E	-15821.1489	0.0544	0.0158	3.4*
	Delta-U	903.1471	-0.0551	0.0424	1.3
	Length	48477.6096			
(V8 Postprocessed 12-APR-2002 09:06:25.000 mc miken dam.asc)					
4DD1	Delta-N	32025.7988	0.0320	0.0235	1.4
4FD2	Delta-E	-2757.6682	-0.0002	0.0166	0.0
	Delta-U	176.4679	0.0810	0.0467	1.7
	Length	32144.7922			
(V17 Postprocessed 12-APR-2002 09:06:25.000 mc miken dam.asc)					
FRIA	Delta-N	-17750.3490	0.0382	0.0182	2.1
4FD2	Delta-E	8902.1607	0.0064	0.0130	0.5
	Delta-U	-275.8295	0.0637	0.0362	1.8
	Length	19859.4924			
(V52 Postprocessed 11-APR-2002 10:18:05.000 mc miken dam.asc)					
4DD1	Delta-N	49780.0385	0.0037	0.0079	0.5
FRIA	Delta-E	-11653.4088	0.0058	0.0089	0.7
	Delta-U	404.9629	0.0703	0.0469	1.5
	Length	51127.4698			
(V37 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)					
4DD1	Delta-N	38235.3245	-0.0060	0.0162	0.4
108	Delta-E	-5088.8476	0.0037	0.0220	0.2
	Delta-U	224.2097	-0.0659	0.0613	1.1
	Length	38573.1342			
(V24 Postprocessed 12-APR-2002 09:06:25.000 mc miken dam.asc)					
112	Delta-N	-13574.8334	-0.0252	0.0165	1.5
4FD2	Delta-E	-7561.2047	-0.0004	0.0120	0.0
	Delta-U	23.2422	0.0489	0.0316	1.5
	Length	15538.6119			
(V36 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)					
108	Delta-N	11543.3030	0.0164	0.0105	1.6
FRIA	Delta-E	-6566.3760	0.0184	0.0138	1.3
	Delta-U	203.5178	-0.0454	0.0386	1.2
	Length	13281.8131			
(V53 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)					
4DD1	Delta-N	26143.7674	0.0033	0.0193	0.2
102	Delta-E	-10507.4265	0.0171	0.0206	0.8
	Delta-U	241.0083	0.0479	0.0430	1.1
	Length	28177.3077			
(V9 Postprocessed 12-APR-2002 01:14:25.000 mc miken dam.asc)					
4DD1	Delta-N	63313.4544	0.0067	0.0223	0.3

4HB1	Delta-E	31987.5742	-0.0207	0.0198	1.0
	Delta-U	29.2858	-0.0418	0.0466	0.9
	Length	70935.1765			
(V10 Postprocessed 12-APR-2002 11:49:05.000 mc miken dam.asc)					
4DD1	Delta-N	63333.9339	-0.0084	0.0173	0.5
4HD1	Delta-E	-389.1282	-0.0242	0.0205	1.2
	Delta-U	170.8999	-0.0391	0.0438	0.9
	Length	63335.3599			
(V5 Postprocessed 12-APR-2002 08:52:20.000 mc miken dam.asc)					
4DD1	Delta-N	45601.6979	-0.0151	0.0183	0.8
112	Delta-E	4801.4610	-0.0057	0.0140	0.4
	Delta-U	121.8018	0.0431	0.0390	1.1
	Length	45853.9389			
(V49 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)					
FRIA	Delta-N	-12298.6662	-0.0302	0.0148	2.0
107	Delta-E	9658.1165	0.0226	0.0154	1.5
	Delta-U	-252.3689	0.0236	0.0244	1.0
	Length	15639.6961			
(V23 Postprocessed 12-APR-2002 10:26:45.000 mc miken dam.asc)					
111	Delta-N	241.6024	0.0104	0.0473	0.2
113	Delta-E	-17488.5783	0.0429	0.0396	1.1
	Delta-U	762.0883	-0.0062	0.0892	0.1
	Length	17506.8421			
(V7 Postprocessed 12-APR-2002 01:13:20.000 mc miken dam.asc)					
4DD1	Delta-N	70583.8647	-0.0111	0.0237	0.5
115	Delta-E	31198.3506	-0.0093	0.0212	0.4
	Delta-U	43.9832	-0.0379	0.0497	0.8
	Length	77171.3741			
(V43 Postprocessed 11-APR-2002 10:18:05.000 mc miken dam.asc)					
4GC1	Delta-N	3786.2866	-0.0010	0.0067	0.2
FRIA	Delta-E	-28315.0286	0.0054	0.0074	0.7
	Delta-U	322.1564	0.0397	0.0368	1.1
	Length	28568.8746			
(V51 Postprocessed 11-APR-2002 01:24:40.000 mc miken dam.asc)					
FRIA	Delta-N	-26396.5222	0.0091	0.0155	0.6
100	Delta-E	7331.9110	-0.0067	0.0189	0.4
	Delta-U	-317.2782	-0.0384	0.0305	1.3
	Length	27397.7000			
(V30 Postprocessed 11-APR-2002 12:34:00.000 mc miken dam.asc)					
4DD1	Delta-N	24734.6545	0.0121	0.0174	0.7
101	Delta-E	-7561.4872	0.0067	0.0179	0.4
	Delta-U	191.3612	-0.0351	0.0451	0.8
	Length	25865.3405			
(V15 Postprocessed 12-APR-2002 01:13:20.000 mc miken dam.asc)					
FRIA	Delta-N	20820.4920	-0.0086	0.0195	0.4
115	Delta-E	42843.8744	0.0149	0.0175	0.9
	Delta-U	-335.1491	0.0331	0.0407	0.8
	Length	47636.1500			
(V1 Postprocessed 12-APR-2002 08:29:50.000 mc miken dam.asc)					
4DD1	Delta-N	49780.0385	-0.0104	0.0075	1.4
FRIA	Delta-E	-11653.4088	-0.0146	0.0071	2.1
	Delta-U	404.9629	0.0297	0.0438	0.7
	Length	51127.4698			
(V33 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)					
106	Delta-N	12837.7283	0.0007	0.0124	0.1
FRIA	Delta-E	-12675.0099	0.0082	0.0170	0.5

	Delta-U	277.7320	-0.0321	0.0480	0.7
	Length	18042.7348			
(V18 Postprocessed 12-APR-2002 01:14:25.000 mc miken dam.asc)					
FRIA	Delta-N	13550.4302	0.0052	0.0165	0.3
4HB1	Delta-E	43635.7715	0.0051	0.0148	0.3
	Delta-U	-367.6430	0.0324	0.0342	0.9
	Length	45692.7771			
(V63 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)					
107	Delta-N	-14097.1783	-0.0314	0.0117	2.7
100	Delta-E	-2330.4993	0.0095	0.0101	0.9
	Delta-U	-57.6664	-0.0048	0.0246	0.2
	Length	14288.6314			
(V2 Postprocessed 12-APR-2002 11:50:55.000 mc miken dam.asc)					
4DD1	Delta-N	32396.1491	-0.0036	0.0164	0.2
104	Delta-E	-4230.8723	-0.0140	0.0183	0.8
	Delta-U	190.4434	-0.0279	0.0429	0.7
	Length	32671.8078			
(V34 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)					
4DD1	Delta-N	36942.2483	-0.0089	0.0181	0.5
106	Delta-E	1022.0038	-0.0053	0.0184	0.3
	Delta-U	149.3575	-0.0297	0.0473	0.6
	Length	36956.6842			
(V62 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)					
107	Delta-N	8145.2524	0.0261	0.0116	2.2
109	Delta-E	-3714.9061	-0.0157	0.0100	1.6
	Delta-U	36.4841	-0.0035	0.0225	0.2
	Length	8952.4854			
(V47 Postprocessed 11-APR-2002 10:34:20.000 mc miken dam.asc)					
FRIA	Delta-N	-18649.1346	-0.0006	0.0111	0.1
103	Delta-E	10908.4633	-0.0149	0.0118	1.3
	Delta-U	-301.5522	-0.0261	0.0223	1.2
	Length	21607.3072			
(V22 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)					
110	Delta-N	184.8995	-0.0011	0.0316	0.0
113	Delta-E	-13781.6196	-0.0169	0.0274	0.6
	Delta-U	734.5969	0.0221	0.0602	0.4
	Length	13802.4222			
(V4 Postprocessed 12-APR-2002 10:26:45.000 mc miken dam.asc)					
4DD1	Delta-N	45572.0006	-0.0168	0.0176	1.0
111	Delta-E	1667.3814	-0.0167	0.0184	0.9
	Delta-U	140.1947	-0.0143	0.0415	0.3
	Length	45602.7088			
(V38 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)					
4GC1	Delta-N	-19850.1684	0.0125	0.0155	0.8
102	Delta-E	-27181.3828	0.0123	0.0154	0.8
	Delta-U	106.9594	0.0210	0.0368	0.6
	Length	33658.1075			
(V44 Postprocessed 11-APR-2002 10:14:25.000 mc miken dam.asc)					
4GC1	Delta-N	-45998.8974	-0.0050	0.0073	0.7
4DD1	Delta-E	-16687.5582	-0.0024	0.0072	0.3
	Delta-U	-183.3775	-0.0229	0.0394	0.6
	Length	48932.6761			
(V58 Postprocessed 11-APR-2002 01:24:40.000 mc miken dam.asc)					
4DD1	Delta-N	23380.1313	0.0212	0.0134	1.6
100	Delta-E	-4331.0956	-0.0009	0.0117	0.1
	Delta-U	154.7846	0.0100	0.0279	0.4

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                    Length          23778.4122
(V56 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)
4DD1                Delta-N         37477.2429        0.0198   0.0175   1.1
107                 Delta-E         -1999.7073       -0.0076   0.0149   0.5
                    Delta-U           187.3354        0.0057   0.0381   0.1
                    Length          37531.0226
(V27 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)
101                 Delta-N         13501.2136        0.0186   0.0126   1.5
108                 Delta-E          2469.4222        0.0055   0.0169   0.3
                    Delta-U            47.9714       -0.0094   0.0465   0.2
                    Length          13725.2729
(V29 Postprocessed 11-APR-2002 12:34:00.000 mc miken dam.asc)
101                 Delta-N         25044.1319       -0.0170   0.0113   1.5
FRIA                Delta-E         -4097.8343       -0.0121   0.0150   0.8
                    Delta-U           244.7893       -0.0052   0.0419   0.1
                    Length          25378.3512
(V59 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)
102                 Delta-N          4985.8006        0.0057   0.0120   0.5
103                 Delta-E          9754.0405        0.0146   0.0126   1.2
                    Delta-U           -85.6456        0.0131   0.0250   0.5
                    Length          10954.7637
(V26 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)
101                 Delta-N         12209.6913        0.0160   0.0123   1.3
106                 Delta-E          8580.5552        0.0100   0.0123   0.8
                    Delta-U           -30.6204       -0.0063   0.0302   0.2
                    Length          14923.2512
(V50 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)
FRIA                Delta-N         -4154.5766       -0.0179   0.0114   1.6
109                 Delta-E          5940.7318        0.0038   0.0134   0.3
                    Delta-U          -209.3672        0.0073   0.0210   0.3
                    Length           7252.3538
(V19 Postprocessed 12-APR-2002 11:49:05.000 mc miken dam.asc)
FRIA                Delta-N         13558.5849        0.0029   0.0135   0.2
4HD1                Delta-E         11259.1477       -0.0098   0.0150   0.7
                    Delta-U          -207.9697        0.0165   0.0337   0.5
                    Length          17625.1776
(V14 Postprocessed 12-APR-2002 09:51:30.000 mc miken dam.asc)
FRIA                Delta-N         -3968.4142        0.0099   0.0109   0.9
113                 Delta-E         -4165.9987       -0.0137   0.0080   1.7
                    Delta-U           491.0334        0.0090   0.0190   0.5
                    Length           5774.5104
(V3 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)
4DD1                Delta-N         45626.9488       -0.0103   0.0183   0.6
110                 Delta-E         -2039.4699       -0.0111   0.0191   0.6
                    Delta-U           170.3003       -0.0113   0.0433   0.3
                    Length          45672.8245
(V48 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)
FRIA                Delta-N        -16029.6883       -0.0034   0.0121   0.3
105                 Delta-E          4229.3666        0.0075   0.0135   0.6
                    Delta-U          -207.7627       -0.0169   0.0248   0.7
                    Length          16579.5541
(V13 Postprocessed 12-APR-2002 08:52:20.000 mc miken dam.asc)
FRIA                Delta-N         -4171.5605       -0.0078   0.0122   0.6
112                 Delta-E         16456.2497        0.0034   0.0097   0.4
                    Delta-U          -302.2892        0.0164   0.0256   0.6
                    Length          16979.4420
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(V20 Postprocessed 12-APR-2002 11:50:55.000 mc miken dam.asc)
104                Delta-N          30938.2930       -0.0035   0.0175   0.2
4HD1               Delta-E           3837.5988       -0.0110   0.0196   0.6
                   Delta-U             27.7492       -0.0130   0.0454   0.3
                   Length           31175.4056
(V57 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)
4DD1               Delta-N          45622.7827        0.0091   0.0171   0.5
109                Delta-E          -5714.1000        0.0132   0.0149   0.9
                   Delta-U            208.8241        0.0012   0.0349   0.0
                   Length           45979.7004
(V39 Postprocessed 11-APR-2002 10:34:20.000 mc miken dam.asc)
4GC1               Delta-N         -14872.7050       -0.0011   0.0090   0.1
103                Delta-E         -17422.9481       -0.0130   0.0093   1.4
                   Delta-U             38.7142        0.0094   0.0185   0.5
                   Length           22907.5964
(V41 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)
4GC1               Delta-N          -8521.1059       -0.0004   0.0152   0.0
107                Delta-E         -18667.6471       -0.0116   0.0131   0.9
                   Delta-U             85.0619       -0.0107   0.0294   0.4
                   Length           20520.6610
(V55 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)
4DD1               Delta-N          33748.3408       -0.0034   0.0161   0.2
105                Delta-E          -7429.8622        0.0152   0.0179   0.9
                   Delta-U            237.8234        0.0025   0.0352   0.1
                   Length           34557.3425
(V12 Postprocessed 12-APR-2002 10:26:45.000 mc miken dam.asc)
FRIA               Delta-N          -4202.4620        0.0071   0.0131   0.5
111                Delta-E          13322.1921        0.0086   0.0140   0.6
                   Delta-U           -282.2238        0.0111   0.0307   0.4
                   Length           13972.1558
(V16 Postprocessed 12-APR-2002 11:50:55.000 mc miken dam.asc)
FRIA               Delta-N         -17380.5786        0.0002   0.0155   0.0
104                Delta-E           7428.8281        0.0042   0.0177   0.2
                   Delta-U           -260.1503        0.0142   0.0404   0.4
                   Length           18903.4303
(V64 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)
109                Delta-N         -22242.2287        0.0084   0.0146   0.6
100                Delta-E           1387.0124       -0.0083   0.0127   0.6
                   Delta-U           -103.0848        0.0085   0.0297   0.3
                   Length           22285.6718
(V28 Postprocessed 11-APR-2002 12:34:00.000 mc miken dam.asc)
4GC1               Delta-N         -21260.7271        0.0115   0.0135   0.9
101                Delta-E         -24236.1485        0.0079   0.0144   0.5
                   Delta-U             56.5465       -0.0004   0.0369   0.0
                   Length           32239.9226
(V45 Postprocessed 11-APR-2002 01:24:40.000 mc miken dam.asc)
4GC1               Delta-N         -22616.8757        0.0054   0.0106   0.5
100                Delta-E         -21006.4437       -0.0054   0.0097   0.6
                   Delta-U             19.5508        0.0111   0.0208   0.5
                   Length           30867.3634
(V40 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)
4GC1               Delta-N         -12247.2362       -0.0007   0.0132   0.1
105                Delta-E         -24099.8065        0.0126   0.0148   0.9
                   Delta-U            123.0023        0.0047   0.0276   0.2
                   Length           27033.5088
(V25 Postprocessed 12-APR-2002 01:14:25.000 mc miken dam.asc)
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115	Delta-N	-7271.0993	-0.0101	0.0154	0.7
4HB1	Delta-E	782.0591	0.0054	0.0138	0.4
	Delta-U	-38.1335	0.0047	0.0311	0.2
	Length	7313.1358			
(V60 Postprocessed	11-APR-2002 11:40:20.000 mc miken dam.asc)				
102	Delta-N	7605.5958	0.0056	0.0108	0.5
105	Delta-E	3075.0346	0.0023	0.0118	0.2
	Delta-U	4.8064	0.0107	0.0228	0.5
	Length	8203.7155			
(V35 Postprocessed	11-APR-2002 12:37:00.000 mc miken dam.asc)				
4GC1	Delta-N	-7761.4729	-0.0013	0.0107	0.1
108	Delta-E	-21756.4155	0.0117	0.0143	0.8
	Delta-U	121.1515	0.0027	0.0396	0.1
	Length	23099.7133			
(V61 Postprocessed	11-APR-2002 11:01:05.000 mc miken dam.asc)				
103	Delta-N	2621.8392	0.0002	0.0079	0.0
105	Delta-E	-6678.2369	-0.0119	0.0085	1.4
	Delta-U	87.9685	0.0009	0.0149	0.1
	Length	7175.0002			
(V11 Postprocessed	12-APR-2002 10:28:25.000 mc miken dam.asc)				
FRIA	Delta-N	-4148.9582	0.0074	0.0126	0.6
110	Delta-E	9615.3381	0.0075	0.0130	0.6
	Delta-U	-249.9251	0.0055	0.0290	0.2
	Length	10475.2586			
(V46 Postprocessed	11-APR-2002 11:40:20.000 mc miken dam.asc)				
FRIA	Delta-N	-23635.3865	0.0086	0.0161	0.5
102	Delta-E	1154.6100	0.0055	0.0182	0.3
	Delta-U	-221.0210	0.0024	0.0386	0.1
	Length	23664.6038			
(V42 Postprocessed	11-APR-2002 01:27:35.000 mc miken dam.asc)				
4GC1	Delta-N	-373.6688	-0.0047	0.0135	0.4
109	Delta-E	-22377.7590	0.0072	0.0121	0.6
	Delta-U	121.5694	0.0048	0.0259	0.2
	Length	22381.2088			
(V32 Postprocessed	11-APR-2002 12:41:00.000 mc miken dam.asc)				
4GC1	Delta-N	-9057.6144	-0.0049	0.0141	0.3
106	Delta-E	-15646.1893	-0.0073	0.0153	0.5
	Delta-U	48.3072	-0.0009	0.0398	0.0
	Length	18078.8814			
(V31 Postprocessed	11-APR-2002 12:41:00.000 mc miken dam.asc)				
106	Delta-N	1293.1397	0.0036	0.0082	0.4
108	Delta-E	-6110.8132	-0.0011	0.0105	0.1
	Delta-U	76.8449	-0.0039	0.0270	0.1
	Length	6246.6114			
(V21 Postprocessed	12-APR-2002 10:28:25.000 mc miken dam.asc)				
110	Delta-N	-54.6421	0.0025	0.0104	0.2
111	Delta-E	3706.8519	0.0040	0.0107	0.4
	Delta-U	-30.5867	-0.0024	0.0230	0.1
	Length	3707.3808			
(V54 Postprocessed	11-APR-2002 10:34:20.000 mc miken dam.asc)				
4DD1	Delta-N	31126.2144	0.0017	0.0128	0.1
103	Delta-E	-751.6846	-0.0012	0.0133	0.1
	Delta-U	154.0087	-0.0035	0.0280	0.1
	Length	31135.6704			

GPS Vector Residual Summary (FeetInt)

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(Sorted by 3D Residual Length)

From	To	N	E	Up	2D	3D	Length	VectID
4DD1	113	-0.050	0.054	-0.055	0.074	0.092	48478	6
4DD1	4FD2	0.032	-0.000	0.081	0.032	0.087	32145	8
FRIA	4FD2	0.038	0.006	0.064	0.039	0.075	19859	17
4DD1	FRIA	0.004	0.006	0.070	0.007	0.071	51127	52
4DD1	108	-0.006	0.004	-0.066	0.007	0.066	38573	37
112	4FD2	-0.025	-0.000	0.049	0.025	0.055	15539	24
108	FRIA	0.016	0.018	-0.045	0.025	0.052	13282	36
4DD1	102	0.003	0.017	0.048	0.017	0.051	28177	53
4DD1	4HB1	0.007	-0.021	-0.042	0.022	0.047	70935	9
4DD1	4HD1	-0.008	-0.024	-0.039	0.026	0.047	63335	10
4DD1	112	-0.015	-0.006	0.043	0.016	0.046	45854	5
FRIA	107	-0.030	0.023	0.024	0.038	0.045	15640	49
111	113	0.010	0.043	-0.006	0.044	0.045	17507	23
4DD1	115	-0.011	-0.009	-0.038	0.014	0.041	77171	7
4GC1	FRIA	-0.001	0.005	0.040	0.006	0.040	28569	43
FRIA	100	0.009	-0.007	-0.038	0.011	0.040	27398	51
4DD1	101	0.012	0.007	-0.035	0.014	0.038	25865	30
FRIA	115	-0.009	0.015	0.033	0.017	0.037	47636	15
4DD1	FRIA	-0.010	-0.015	0.030	0.018	0.035	51127	1
106	FRIA	0.001	0.008	-0.032	0.008	0.033	18043	33
FRIA	4HB1	0.005	0.005	0.032	0.007	0.033	45693	18
107	100	-0.031	0.009	-0.005	0.033	0.033	14289	63
4DD1	104	-0.004	-0.014	-0.028	0.014	0.031	32672	2
4DD1	106	-0.009	-0.005	-0.030	0.010	0.031	36957	34
107	109	0.026	-0.016	-0.003	0.030	0.031	8952	62
FRIA	103	-0.001	-0.015	-0.026	0.015	0.030	21607	47
110	113	-0.001	-0.017	0.022	0.017	0.028	13802	22
4DD1	111	-0.017	-0.017	-0.014	0.024	0.028	45603	4
4GC1	102	0.013	0.012	0.021	0.018	0.027	33658	38
4GC1	4DD1	-0.005	-0.002	-0.023	0.006	0.024	48933	44
4DD1	100	0.021	-0.001	0.010	0.021	0.023	23778	58
4DD1	107	0.020	-0.008	0.006	0.021	0.022	37531	56
101	108	0.019	0.006	-0.009	0.019	0.022	13725	27
101	FRIA	-0.017	-0.012	-0.005	0.021	0.021	25378	29
102	103	0.006	0.015	0.013	0.016	0.020	10955	59
101	106	0.016	0.010	-0.006	0.019	0.020	14923	26
FRIA	109	-0.018	0.004	0.007	0.018	0.020	7252	50
FRIA	4HD1	0.003	-0.010	0.016	0.010	0.019	17625	19
FRIA	113	0.010	-0.014	0.009	0.017	0.019	5775	14
4DD1	110	-0.010	-0.011	-0.011	0.015	0.019	45673	3
FRIA	105	-0.003	0.008	-0.017	0.008	0.019	16580	48
FRIA	112	-0.008	0.003	0.016	0.008	0.018	16979	13
104	4HD1	-0.004	-0.011	-0.013	0.012	0.017	31175	20
4DD1	109	0.009	0.013	0.001	0.016	0.016	45980	57
4GC1	103	-0.001	-0.013	0.009	0.013	0.016	22908	39
4GC1	107	-0.000	-0.012	-0.011	0.012	0.016	20521	41
4DD1	105	-0.003	0.015	0.002	0.016	0.016	34557	55
FRIA	111	0.007	0.009	0.011	0.011	0.016	13972	12
FRIA	104	0.000	0.004	0.014	0.004	0.015	18903	16
109	100	0.008	-0.008	0.008	0.012	0.014	22286	64
4GC1	101	0.011	0.008	-0.000	0.014	0.014	32240	28
4GC1	100	0.005	-0.005	0.011	0.008	0.014	30867	45
4GC1	105	-0.001	0.013	0.005	0.013	0.013	27034	40

115	4HB1	-0.010	0.005	0.005	0.011	0.012	7313	25
102	105	0.006	0.002	0.011	0.006	0.012	8204	60
4GC1	108	-0.001	0.012	0.003	0.012	0.012	23100	35
103	105	0.000	-0.012	0.001	0.012	0.012	7175	61
FRIA	110	0.007	0.007	0.005	0.011	0.012	10475	11
FRIA	102	0.009	0.006	0.002	0.010	0.011	23665	46
4GC1	109	-0.005	0.007	0.005	0.009	0.010	22381	42
4GC1	106	-0.005	-0.007	-0.001	0.009	0.009	18079	32
106	108	0.004	-0.001	-0.004	0.004	0.005	6247	31
110	111	0.002	0.004	-0.002	0.005	0.005	3707	21
4DD1	103	0.002	-0.001	-0.004	0.002	0.004	31136	54

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Adjusted Bearings (DMS) and Horizontal Distances (FeetInt)

(Relative Confidence of Bearing is in Seconds)

From	To	Grid Bearing	Grid Dist Grnd Dist	95% RelConfidence Brg	 Dist	 PPM
100	107	N09-41-24.84E	14286.7379 14288.5423	0.24	0.0185	1.2933
100	109	N03-15-29.83W	22282.6797 22285.4982	0.16	0.0203	0.9105
100	4DD1	S10-11-44.70E	23774.9460 23777.8300	0.13	0.0178	0.7481
100	4GC1	N43-09-18.45E	30863.4239 30867.3524	0.11	0.0183	0.5914
100	FRIA	N15-12-08.35W	27392.5127 27396.0811	0.11	0.0185	0.6742
101	106	N35-24-41.54E	14921.3559 14923.2385	0.29	0.0171	1.1448
101	108	N10-40-42.06E	13723.4385 13725.1805	0.32	0.0173	1.2599
101	4DD1	S16-41-58.04E	25861.3794 25864.5240	0.14	0.0193	0.7462
101	4GC1	N49-00-39.87E	32235.7259 32239.8386	0.12	0.0198	0.6130
101	FRIA	N08-58-45.16W	25373.7180 25377.0316	0.14	0.0184	0.7266
102	103	N63-14-40.72E	10953.0743 10954.4573	0.31	0.0192	1.7491
102	105	N22-19-57.75E	8202.6737 8203.7178	0.45	0.0183	2.2255
102	4DD1	S21-35-47.35E	28172.6799 28176.1241	0.14	0.0194	0.6869
102	4GC1	N54-07-45.31E	33653.5440 33657.8602	0.10	0.0225	0.6697
102	FRIA	N02-28-32.96W	23660.6007 23663.7068	0.16	0.0188	0.7957
103	105	N68-15-51.66W	7173.5387 7174.4499	0.40	0.0154	2.1476
103	4DD1	S01-05-03.03E	31131.3803 31135.1839	0.10	0.0173	0.5541
103	4GC1	N49-47-03.99E	22904.6166 22907.5524	0.12	0.0161	0.7010
103	FRIA	N30-00-13.47W	21602.5350 21605.3685	0.13	0.0155	0.7174
104	4DD1	S07-08-28.91E	32667.1130 32671.1125	0.17	0.0234	0.7162
104	4HD1	N07-22-42.58E	31171.3659 31175.3819	0.17	0.0244	0.7819
104	FRIA	N22-49-18.90W	18899.2825 18901.7669	0.30	0.0258	1.3658
105	4DD1	S12-06-59.86E	34552.0851 34556.3352	0.10	0.0191	0.5534
105	4GC1	N63-19-49.10E	27029.6729 27033.1597	0.12	0.0185	0.6848
105	FRIA	N14-27-33.95W	16576.1539	0.20	0.0157	0.9495

			16578.3431			
106	108	N77-45-13.63W	6245.3329	0.48	0.0191	3.0510
			6246.1308			
106	4DD1	S01-53-02.28W	36951.7268	0.10	0.0200	0.5423
			36956.2570			
106	4GC1	N60-12-10.19E	18076.4802	0.20	0.0174	0.9599
			18078.8048			
106	FRIA	N44-20-11.81W	18038.1127	0.17	0.0190	1.0512
			18040.4859			
107	109	N24-12-48.51W	8951.2605	0.36	0.0192	2.1499
			8952.4082			
107	4DD1	S02-45-17.97E	37525.7790	0.08	0.0213	0.5675
			37530.3930			
107	4GC1	N65-44-04.20E	20517.8068	0.17	0.0166	0.8094
			20520.4526			
107	FRIA	N37-49-17.19W	15635.6989	0.19	0.0182	1.1647
			15637.7622			
108	4DD1	S07-16-54.48E	38567.5263	0.10	0.0199	0.5166
			38572.2810			
108	4GC1	N70-38-09.35E	23096.3529	0.14	0.0190	0.8246
			23099.3387			
108	FRIA	N29-19-27.02W	13278.4388	0.25	0.0166	1.2506
			13280.1959			
109	4DD1	S06-50-22.36E	45973.3353	0.07	0.0230	0.4993
			45978.9947			
109	4GC1	N89-18-46.48E	22377.9338	0.15	0.0175	0.7837
			22380.8235			
109	FRIA	N54-42-44.42W	7248.4139	0.40	0.0173	2.3887
			7249.3713			
110	111	S88-51-06.80E	3706.7860	1.14	0.0212	5.7165
			3707.2595			
110	113	N88-55-39.92W	13780.6596	0.43	0.0258	1.8734
			13782.6255			
110	4DD1	S02-15-35.87E	45666.7083	0.10	0.0260	0.5694
			45672.3195			
110	FRIA	N66-20-20.33W	10470.9648	0.39	0.0212	2.0293
			10472.3450			
111	113	N88-54-42.03W	17487.4431	0.35	0.0269	1.5374
			17489.9376			
111	4DD1	S02-23-41.19W	45596.7377	0.10	0.0262	0.5756
			45602.3392			
111	FRIA	N72-10-15.91W	13967.5661	0.30	0.0221	1.5826
			13969.4067			
112	4DD1	S06-18-35.92W	45848.0029	0.08	0.0282	0.6145
			45853.6421			
112	4FD2	S29-24-31.97W	15536.6136	0.28	0.0297	1.9116
			15538.5938			
112	FRIA	N75-27-15.73W	16974.6424	0.28	0.0180	1.0630
			16976.8819			
113	4DD1	S18-45-07.30E	48461.4616	0.07	0.0292	0.6020
			48468.1418			
113	FRIA	N46-42-45.29E	5752.6864	0.80	0.0172	2.9892
			5753.5311			
115	4DD1	S24-08-42.82W	77161.3488	0.08	0.0396	0.5129
			77171.1931			
115	4HB1	S05-53-43.94E	7312.0448	0.75	0.0300	4.0974

			7313.0472			
115	FRIA	S64-24-12.30W	47628.8298	0.13	0.0317	0.6650
			47635.3494			
4DD1	4FD2	N04-37-20.04W	32140.2480	0.14	0.0292	0.9076
			32144.1809			
4DD1	4GC1	N20-12-32.21E	48926.4764	0.04	0.0197	0.4024
			48932.5423			
4DD1	4HB1	N27-06-12.98E	70926.0590	0.08	0.0360	0.5077
			70935.0596			
4DD1	4HD1	N00-03-08.82W	63326.9720	0.00	0.0000	0.0000
			63334.8336			
4DD1	FRIA	N12-52-34.07W	51118.8748	0.03	0.0189	0.3699
			51125.3608			
4FD2	FRIA	N26-18-49.41W	19855.1088	0.25	0.0252	1.2697
			19857.7172			
4GC1	FRIA	N82-06-50.36W	28563.0508	0.07	0.0144	0.5034
			28566.8485			
4HB1	FRIA	S73-04-11.75W	45685.4801	0.12	0.0296	0.6487
			45691.6987			
4HD1	FRIA	S40-01-40.18W	17621.6967	0.19	0.0130	0.7373
			17624.0471			

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Error Propagation

Station Coordinate Standard Deviations (FeetInt)

Station	N	E	Elev
100	0.007153	0.006055	0.012255
101	0.007413	0.007591	0.018921
102	0.007958	0.007702	0.015112
103	0.007046	0.005883	0.010812
104	0.009740	0.010755	0.024867
105	0.007692	0.006704	0.012093
106	0.008216	0.007363	0.018580
107	0.008663	0.006320	0.013064
108	0.007994	0.007503	0.019515
109	0.009248	0.006424	0.012978
110	0.010609	0.008694	0.020136
111	0.010728	0.008963	0.020614
112	0.011393	0.007493	0.018695
113	0.011445	0.007649	0.018227
115	0.015838	0.012047	0.023105
4DD1	0.000000	0.000000	0.000000
4FD2	0.012046	0.008586	0.000000
4GC1	0.007645	0.004892	0.000000
4HB1	0.014266	0.011455	0.000000
4HD1	0.000000	0.000000	0.000000
FRIA	0.007545	0.003754	0.009219

Station Coordinate Error Ellipses (FeetInt)
Confidence Region = 95%

Station	Semi-Major Axis	Semi-Minor Axis	Azimuth of Major Axis	Elev
100	0.017874	0.014379	160-15	0.024020
101	0.020340	0.016148	132-00	0.037085
102	0.019487	0.018846	5-58	0.029620
103	0.017251	0.014395	177-42	0.021192
104	0.027246	0.022783	61-58	0.048739
105	0.019179	0.015998	159-49	0.023702
106	0.020589	0.017474	156-07	0.036417
107	0.021427	0.015161	168-17	0.025604
108	0.020577	0.017227	145-33	0.038250
109	0.023091	0.015047	164-54	0.025436
110	0.026034	0.021199	172-55	0.039466
111	0.026261	0.021938	178-44	0.040404
112	0.028256	0.017766	11-58	0.036642
113	0.029178	0.016853	159-59	0.035725
115	0.039697	0.028222	17-49	0.045285
4DD1	0.000000	0.000000	0-00	0.000000
4FD2	0.029839	0.020510	12-13	0.000000
4GC1	0.019690	0.010291	21-23	0.000000
4HB1	0.036083	0.026523	21-49	0.000000
4HD1	0.000000	0.000000	0-00	0.000000
FRIA	0.018910	0.008241	166-12	0.018069

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Relative Error Ellipses (FeetInt)
Confidence Region = 95%

Stations From	To	Semi-Major Axis	Semi-Minor Axis	Azimuth of Major Axis	Vertical
100	107	0.018941	0.015900	165-48	0.029354
100	109	0.020606	0.016426	159-53	0.030652
100	4DD1	0.017874	0.014379	160-15	0.024020
100	4GC1	0.018331	0.015625	33-03	0.024020
100	FRIA	0.018573	0.014284	155-13	0.027682
101	106	0.020836	0.017065	121-47	0.040559
101	108	0.021585	0.017049	113-14	0.044825
101	4DD1	0.020340	0.016148	132-00	0.037085
101	4GC1	0.020422	0.017942	80-58	0.037085
101	FRIA	0.019785	0.016143	132-09	0.039491
102	103	0.019167	0.016612	59-50	0.029425
102	105	0.019073	0.017089	63-04	0.029629
102	4DD1	0.019487	0.018846	5-58	0.029620
102	4GC1	0.022541	0.016610	55-36	0.029620
102	FRIA	0.019444	0.017736	35-09	0.032219
103	105	0.015433	0.013943	103-45	0.022298
103	4DD1	0.017251	0.014395	177-42	0.021192
103	4GC1	0.016095	0.013555	57-12	0.021192
103	FRIA	0.015624	0.013629	135-01	0.024278
104	4DD1	0.027246	0.022783	61-58	0.048739
104	4HD1	0.027246	0.022783	61-58	0.048739
104	FRIA	0.027953	0.025471	45-52	0.049931
105	4DD1	0.019179	0.015998	159-49	0.023702
105	4GC1	0.018601	0.015077	73-05	0.023702
105	FRIA	0.016309	0.015117	121-16	0.025735
106	108	0.019114	0.014320	109-04	0.038992
106	4DD1	0.020589	0.017474	156-07	0.036417
106	4GC1	0.019042	0.015670	106-40	0.036417
106	FRIA	0.019340	0.014473	118-24	0.037774
107	109	0.019262	0.015554	151-33	0.028332
107	4DD1	0.021427	0.015161	168-17	0.025604
107	4GC1	0.017436	0.016574	144-39	0.025604
107	FRIA	0.018215	0.014316	143-59	0.026133
108	4DD1	0.020577	0.017227	145-33	0.038250
108	4GC1	0.019813	0.014619	94-44	0.038250
108	FRIA	0.018502	0.013901	108-44	0.039226
109	4DD1	0.023091	0.015047	164-54	0.025436
109	4GC1	0.018296	0.015406	121-10	0.025436
109	FRIA	0.017429	0.013754	136-01	0.024641
110	111	0.021383	0.020305	116-28	0.036815
110	113	0.029757	0.024648	153-39	0.046178
110	4DD1	0.026034	0.021199	172-55	0.039466
110	FRIA	0.021257	0.019887	118-14	0.036802
111	113	0.030371	0.025677	151-40	0.047477
111	4DD1	0.026261	0.021938	178-44	0.040404
111	FRIA	0.022107	0.020422	109-45	0.037877
112	4DD1	0.028256	0.017766	11-58	0.036642
112	4FD2	0.030005	0.020556	18-08	0.036642
112	FRIA	0.023044	0.018027	17-39	0.035713
113	4DD1	0.029178	0.016853	159-59	0.035725
113	FRIA	0.023263	0.015818	160-00	0.032139

115	4DD1	0.039697	0.028222	17-49	0.045285
115	4HB1	0.030163	0.026259	160-30	0.045285
115	FRIA	0.031805	0.029753	49-26	0.044938
4DD1	4FD2	0.029839	0.020510	12-13	0.000000
4DD1	4GC1	0.019690	0.010291	21-23	0.000000
4DD1	4HB1	0.036083	0.026523	21-49	0.000000
4DD1	4HD1	0.000000	0.000000	0-00	0.000000
4DD1	FRIA	0.018910	0.008241	166-12	0.018069
4FD2	FRIA	0.028145	0.020265	13-32	0.018069
4GC1	FRIA	0.014378	0.009227	97-31	0.018069
4HB1	FRIA	0.029662	0.027159	78-57	0.018069
4HD1	FRIA	0.018910	0.008241	166-12	0.018069

Elapsed Time = 00:00:00

□23
47
01 00000000 Top of File
01 00000006 Summary of Files Used and Option Settings
02 00000009 Project Folder and Data Files
02 00000016 Project Option Settings
01 00000042 Summary of Unadjusted Input Observations
02 00000045 Entered Stations
03 00000047 Fixed Positions
03 00000051 Partially Fixed Positions
02 00000060 GPS Vector Observations
01 00000322 Adjustment Statistical Summary
01 00000342 Adjusted Station Information
02 00000345 Adjusted Coordinates
02 00000370 Adjusted Positions and Ellipsoid Heights
02 00000396 Convergence Angles and Grid Factors at Stations
01 00000425 Adjusted Observations and Residuals
02 00000428 Adjusted GPS Vector Observations
02 00000759 GPS Vector Residual Summary
01 00000828 Adjusted Bearings and Horizontal Distances
01 00000961 Error Propagation
02 00000964 Station Coordinate Standard Deviations
02 00000989 Station Coordinate Error Ellipses
02 00001016 Relative Error Ellipses
01 00001084 End of File
00011863
STARPLUS
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STAR*NET-PRO Version 6.0.23e
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Run Date: Tue Jul 23 2002 16:44:09

Summary of Files Used and Option Settings

Project Folder and Data Files

Project Name	MC MICKEN NAD 83 (92) - FRIA
Project Folder	D:\GPS PROJECTS\WITTMANN\MC MICKEN
Data File List	Mc Micken NAD 83 (92) - FRIA.dat
	Mc Micken NAD (92) - FRIA.gps

Project Option Settings

STAR*NET Run Mode	: Adjust with Error Propagation
Type of Adjustment	: 3D
Project Units	: FeetInt; DMS
Coordinate System	: Mercator NAD83; AZ Central 0202
Geoid Height	: 0.0000 (Default, Meters)
Vertical Deflection	: N=0.00 E=0.00 (Defaults, Seconds)
Longitude Sign Convention	: Positive West
Input/Output Coordinate Order	: North-East
Angle Data Station Order	: At-From-To
Distance/Vertical Data Type	: Slope/Zenith
Convergence Limit; Max Iterations	: 0.010000; 10
Default Coefficient of Refraction	: 0.070000
Create Coordinate File	: Yes
Create Geodetic Position File	: Yes
Create Ground Scale Coordinate File	: No
Create Dump File	: No
GPS Vector Standard Error Factors	: 4.5000
GPS Vector Centering (Meters)	: 0.00100
GPS Vector Transformations	: Solve for Scale and Rotations

Summary of Unadjusted Input Observations

Number of Entered Stations (FeetInt) = 6

Fixed Stations	Latitude	Longitude	Elev	Description
4DD1	33-30-29.701920	112-27-29.031850	1027.7900	
4FD2	33-35-46.514410	112-28-01.630310	1229.0400	
4GC1	33-38-04.791470	112-24-11.967230	1153.8700	
4HB1	33-40-55.865770	112-21-10.531750	1177.6200	
4HD1	33-40-56.225170	112-27-33.636280	1294.9500	

Partially Fixed	Latitude	Longitude	Elev	Description
	N-StdErr	E-StdErr	StdErr	
FRIA	33-38-42.121940	112-29-46.862970	1600.0000	
	FIXED	FIXED	FREE	

Number of GPS Vector Observations (FeetInt) = 64

From	DeltaX	StdErrX	CorrelXY
To	DeltaY	StdErrY	CorrelXZ
	DeltaZ	StdErrZ	CorrelYZ
(V1 Postprocessed 12-APR-2002 08:29:50.000 mc miken dam.asc)			
4DD1	-400.4716	0.0160	0.8785
FRIA	29536.8691	0.0334	-0.8631
	41730.4664	0.0255	-0.9323
(V2 Postprocessed 12-APR-2002 11:50:55.000 mc miken dam.asc)			
4DD1	2861.3596	0.0240	0.5667
104	17997.5978	0.0330	-0.4677
	27117.2684	0.0279	-0.7242
(V3 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)			
4DD1	7683.2246	0.0225	0.4697
110	23926.2100	0.0387	-0.3984
	38138.0692	0.0238	-0.6173
(V4 Postprocessed 12-APR-2002 10:26:45.000 mc miken dam.asc)			
4DD1	11106.9528	0.0220	0.4793
111	22505.3298	0.0367	-0.4144
	38075.6401	0.0232	-0.6127
(V5 Postprocessed 12-APR-2002 08:52:20.000 mc miken dam.asc)			
4DD1	14015.4709	0.0173	0.5210
112	21337.4609	0.0300	-0.3372
	38090.2149	0.0292	-0.6763
(V6 Postprocessed 12-APR-2002 09:51:30.000 mc miken dam.asc)			
4DD1	-5247.2158	0.0199	0.5235
113	28721.8190	0.0312	-0.5951
	38698.9520	0.0345	-0.5602
(V7 Postprocessed 12-APR-2002 01:13:20.000 mc miken dam.asc)			
4DD1	43703.6499	0.0271	0.5442
115	24059.1791	0.0440	-0.4584
	58877.5849	0.0285	-0.5206
(V8 Postprocessed 12-APR-2002 09:06:25.000 mc miken dam.asc)			
4DD1	4149.1979	0.0205	0.5161
4FD2	17256.7150	0.0348	-0.3032
	26800.6629	0.0372	-0.6705
(V9 Postprocessed 12-APR-2002 01:14:25.000 mc miken dam.asc)			
4DD1	42904.4503	0.0256	0.5567
4HB1	20059.7178	0.0413	-0.4499
	52807.3443	0.0265	-0.5183
(V10 Postprocessed 12-APR-2002 11:49:05.000 mc miken dam.asc)			
4DD1	12942.4365	0.0266	0.5524
4HD1	32329.1821	0.0349	-0.4327
	52902.6104	0.0267	-0.6915
(V11 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)			
FRIA	8083.7058	0.0154	0.4635
110	-5610.6255	0.0259	-0.3796
	-3592.4289	0.0160	-0.6027
(V12 Postprocessed 12-APR-2002 10:26:45.000 mc miken dam.asc)			
FRIA	11507.4292	0.0169	0.4762
111	-7031.4997	0.0271	-0.4095
	-3654.8679	0.0170	-0.6097
(V13 Postprocessed 12-APR-2002 08:52:20.000 mc miken dam.asc)			
FRIA	14415.9492	0.0118	0.5000
112	-8199.4065	0.0196	-0.3426
	-3640.2506	0.0194	-0.6653

```
(V14 Postprocessed 12-APR-2002 09:51:30.000 mc miken dam.asc)
FRIA                        -4846.6484          0.0096          0.4539
113                          -815.0348          0.0141         -0.5289
                            -3031.6075          0.0160         -0.5143
(V15 Postprocessed 12-APR-2002 01:13:20.000 mc miken dam.asc)
FRIA                        44104.1465          0.0223          0.5470
115                         -5477.6047          0.0360         -0.4525
                            17147.0695          0.0233         -0.5193
(V16 Postprocessed 12-APR-2002 11:50:55.000 mc miken dam.asc)
FRIA                         3261.8522          0.0231          0.5567
104                        -11539.2113          0.0314         -0.4569
                           -14613.2321          0.0259         -0.7162
(V17 Postprocessed 12-APR-2002 09:06:25.000 mc miken dam.asc)
FRIA                         4549.6817          0.0160          0.5114
4FD2                       -12280.1457          0.0269         -0.3158
                           -14929.8069          0.0289         -0.6695
(V18 Postprocessed 12-APR-2002 01:14:25.000 mc miken dam.asc)
FRIA                        43304.9473          0.0190          0.5447
4HB1                        -9477.0610          0.0304         -0.4442
                            11076.8305          0.0194         -0.5135
(V19 Postprocessed 12-APR-2002 11:49:05.000 mc miken dam.asc)
FRIA                        13342.9353          0.0196          0.5576
4HD1                         2792.3782          0.0262         -0.4434
                            11172.0962          0.0218         -0.6982
(V20 Postprocessed 12-APR-2002 11:50:55.000 mc miken dam.asc)
104                         10081.0768          0.0258          0.5698
4HD1                        14331.5820          0.0350         -0.4604
                            25785.3420          0.0293         -0.7182
(V21 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)
110                          3423.7176          0.0123          0.4283
111                         -1420.8807          0.0208         -0.3414
                              -62.4369          0.0130         -0.5800
(V22 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)
110                        -12930.3514          0.0314          0.4262
113                          4795.6085          0.0528         -0.4324
                              560.8141          0.0400         -0.4697
(V23 Postprocessed 12-APR-2002 10:26:45.000 mc miken dam.asc)
111                        -16354.1407          0.0465          0.4464
113                          6216.4828          0.0756         -0.4884
                              623.2564          0.0623         -0.4721
(V24 Postprocessed 12-APR-2002 09:06:25.000 mc miken dam.asc)
112                         -9866.2489          0.0144          0.4812
4FD2                        -4080.7028          0.0239         -0.2528
                           -11289.4979          0.0252         -0.6437
(V25 Postprocessed 12-APR-2002 01:14:25.000 mc miken dam.asc)
115                          -799.2065          0.0171          0.5187
4HB1                        -3999.4340          0.0277         -0.4262
                            -6070.2222          0.0182         -0.4975
(V26 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)
101                         10520.3342          0.0155          0.5241
106                          2981.5793          0.0230         -0.6401
                            10155.5707          0.0210         -0.6577
(V27 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)
101                          5121.7908          0.0189          0.4451
108                          5917.9967          0.0371         -0.5877
                            11275.0681          0.0296         -0.8298
```

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(V28 Postprocessed 11-APR-2002 12:34:00.000 mc miken dam.asc)
4GC1                    -26913.0518          0.0184          0.5395
101                      -1693.9469          0.0286         -0.6166
                        -17670.0783          0.0244         -0.7147
(V29 Postprocessed 11-APR-2002 12:34:00.000 mc miken dam.asc)
101                       1432.2033          0.0186          0.5286
FRIA                     14176.4203          0.0327         -0.6205
                         21000.9372          0.0263         -0.8337
(V30 Postprocessed 11-APR-2002 12:34:00.000 mc miken dam.asc)
4DD1                     -1832.7069          0.0229          0.5425
101                      15360.3956          0.0344         -0.6558
                         20729.5632          0.0308         -0.6847
(V31 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)
106                      -5398.5470          0.0113          0.3964
108                       2936.4176          0.0218         -0.5308
                          1119.4970          0.0174         -0.7973
(V32 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)
4GC1                    -16392.6856          0.0198          0.5542
106                       1287.6438          0.0308         -0.6333
                         -7514.4838          0.0261         -0.7250
(V33 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)
106                      -9088.1766          0.0208          0.5203
FRIA                     11194.8098          0.0379         -0.6190
                         10845.3568          0.0297         -0.8407
(V34 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)
4DD1                      8687.6592          0.0235          0.5414
106                      18341.9944          0.0360         -0.6624
                         30885.1583          0.0324         -0.6918
(V35 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)
4GC1                    -21791.2488          0.0175          0.5143
108                       4224.0748          0.0311         -0.6133
                         -6394.9910          0.0248         -0.8306
(V36 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)
108                      -3689.6476          0.0170          0.5191
FRIA                      8258.3726          0.0302         -0.6107
                          9725.8533          0.0242         -0.8314
(V37 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)
4DD1                      3289.0928          0.0248          0.4549
108                      21278.3913          0.0487         -0.5992
                         32004.6737          0.0389         -0.8364
(V38 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)
4GC1                    -29354.2130          0.0197          0.5409
102                       112.0974           0.0282         -0.3862
                        -16467.7557          0.0254         -0.7028
(V39 Postprocessed 11-APR-2002 10:34:20.000 mc miken dam.asc)
4GC1                    -19259.8720          0.0110          0.4369
103                      -1005.6497          0.0158         -0.3348
                        -12361.3708          0.0118         -0.5487
(V40 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)
4GC1                    -24905.3148          0.0170          0.3826
105                       2818.6619          0.0235         -0.3920
                        -10128.7525          0.0177         -0.5442
(V41 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)
4GC1                    -19084.5002          0.0170          0.5591
107                       2685.6311          0.0261         -0.4093
                         -7047.4342          0.0172         -0.4656
```

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(V42 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)
4GC1                    -20806.2365          0.0141          0.4542
109                       8243.7808          0.0242         -0.3287
                          -243.7735          0.0146         -0.4562
(V43 Postprocessed 11-APR-2002 10:18:05.000 mc miken dam.asc)
4GC1                    -25480.8440          0.0134          0.8067
FRIA                     12482.5097          0.0285         -0.8189
                          3330.8301          0.0214         -0.9175
(V44 Postprocessed 11-APR-2002 10:14:25.000 mc miken dam.asc)
4GC1                    -25080.3590          0.0147          0.8470
4DD1                    -17054.3860          0.0303         -0.8311
                        -38399.6061          0.0229         -0.9179
(V45 Postprocessed 11-APR-2002 01:24:40.000 mc miken dam.asc)
4GC1                    -24201.6426          0.0123          0.5270
100                      -3590.8503          0.0184         -0.4211
                        -18819.6821          0.0122         -0.4666
(V46 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)
FRIA                     -3873.3600          0.0231          0.5251
102                     -12370.3940          0.0289         -0.4744
                        -19798.5934          0.0267         -0.6842
(V47 Postprocessed 11-APR-2002 10:34:20.000 mc miken dam.asc)
FRIA                      6220.9701          0.0131          0.3497
103                     -13488.1546          0.0200         -0.3844
                        -15692.2028          0.0138         -0.4970
(V48 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)
FRIA                       575.5354          0.0154          0.3750
105                      -9663.8318          0.0211         -0.3939
                        -13459.5895          0.0162         -0.5296
(V49 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)
FRIA                      6396.3372          0.0125         -0.0000
107                      -9796.7907          0.0268         -0.2721
                        -10378.2797          0.0134         -0.2786
(V50 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)
FRIA                      4674.6220          0.0110          0.0000
109                      -4238.6884          0.0228         -0.2084
                         -3574.6152          0.0104         -0.3848
(V51 Postprocessed 11-APR-2002 01:24:40.000 mc miken dam.asc)
FRIA                      1279.1938          0.0153          0.0000
100                     -16073.3673          0.0327         -0.2384
                        -22150.5089          0.0150         -0.4445
(V52 Postprocessed 11-APR-2002 10:18:05.000 mc miken dam.asc)
4DD1                       -400.4805          0.0168          0.8237
FRIA                      29536.9010          0.0365         -0.8452
                          41730.4322          0.0270         -0.9278
(V53 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)
4DD1                      -4273.8518          0.0269          0.5630
102                       17166.4947          0.0336         -0.3722
                          21931.8600          0.0280         -0.6378
(V54 Postprocessed 11-APR-2002 10:34:20.000 mc miken dam.asc)
4DD1                       5820.4674          0.0160          0.4619
103                       16048.7134          0.0238         -0.3922
                          26038.2569          0.0173         -0.5800
(V55 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)
4DD1                        175.0377          0.0218          0.4662
105                       19873.0326          0.0290         -0.4849
                          28270.8739          0.0225         -0.5624
```

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(V56 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)
4DD1                          5995.8521          0.0203          0.6155
107                          19740.0049          0.0336         -0.4671
                             31352.1627          0.0209         -0.5533
(V57 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)
4DD1                          4274.1089          0.0175          0.4930
109                          25298.1432          0.0333         -0.3512
                             38155.8398          0.0177         -0.5026
(V58 Postprocessed 11-APR-2002 01:24:40.000 mc miken dam.asc)
4DD1                           878.7046          0.0154          0.5755
100                          13463.5125          0.0248         -0.4297
                             19579.9283          0.0155         -0.5162
(V59 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)
102                          10094.3079          0.0154          0.4748
103                          -1117.7228          0.0200         -0.3301
                              4106.3551          0.0171         -0.5985
(V60 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)
102                           4448.9009          0.0147          0.4914
105                           2706.5764          0.0175         -0.4186
                              6338.9726          0.0160         -0.6001
(V61 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)
103                          -5645.4063          0.0098          0.3739
105                           3824.3017          0.0125         -0.3927
                              2232.6154          0.0102         -0.4773
(V62 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)
107                          -1721.7169          0.0113          0.4429
109                           5558.1063          0.0213         -0.3184
                              6803.6459          0.0127         -0.4680
(V63 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)
107                          -5117.1460          0.0134          0.5866
100                          -6276.4816          0.0218         -0.4412
                            -11772.2021          0.0136         -0.5282
(V64 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)
109                          -3395.4091          0.0149          0.4837
100                         -11834.6269          0.0281         -0.3466
                            -18575.9083          0.0156         -0.5013
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Maricopa County

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Adjustment Statistical Summary

Convergence Iterations	=	3
Number of Stations	=	21
Number of Observations	=	192
Number of Unknowns	=	50
Number of Redundant Obs	=	142

Observation	Count	Sum Squares of StdRes	Error Factor
GPS Deltas	192	3348.718	4.856
Total	192	3348.718	4.856

Warning: The Chi-Square Test at 5.00% Level Exceeded Upper Bound
Lower/Upper Bounds (0.884/1.116)

Maricopa County

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Adjusted Station Information

Adjusted Coordinates (FeetInt)

Station	N	E	Elev	Description
100	936282.2699	530770.0355	1196.2297	
101	937653.4659	527547.1584	1235.2935	
102	939077.7056	524609.0132	1287.9430	
103	944008.5820	534389.4378	1205.1366	
104	945296.4726	530917.3937	1243.8897	
105	946665.1356	527725.9096	1294.3615	
106	949814.5525	536193.2918	1209.9881	
107	950365.2021	533174.8127	1249.0064	
108	951139.2733	530090.0584	1287.7870	
109	958528.9863	529503.5609	1287.4365	
110	958514.0489	533177.6944	1248.1895	
111	958439.7727	536883.7444	1217.9161	
112	958453.0569	540017.5543	1200.0454	
113	958771.9456	519399.4173	1987.3766	
115	983293.4266	566541.4493	1214.4723	
4DD1	912882.7165	534978.5233	1027.7900	
4FD2	944918.3837	532388.4633	1229.0400	
4GC1	958797.2439	551879.8905	1153.8700	
4HB1	976019.9616	567292.4508	1177.6200	
4HD1	976209.6620	534920.5515	1294.9500	
FRIA	962716.3464	523586.9247	1495.5428	

Adjusted Positions and Ellipsoid Heights (FeetInt)
(Average Geoid Height = 0.000 Meters, 0.000 FeetInt)

Station	Latitude	Longitude	Ellip Ht
100	33-34-20.987377	112-28-20.216110	1196.2297
101	33-34-34.380699	112-28-58.395918	1235.2935
102	33-34-48.311166	112-29-33.216916	1287.9430
103	33-35-37.617888	112-27-37.917718	1205.1366
104	33-35-50.177318	112-28-19.045669	1243.8897
105	33-36-03.547212	112-28-56.865080	1294.3615
106	33-36-35.152561	112-27-16.949338	1209.9881
107	33-36-40.443739	112-27-52.674715	1249.0064
108	33-36-47.938915	112-28-29.199181	1287.7870
109	33-38-01.017271	112-28-36.607342	1287.4365
110	33-38-01.064215	112-27-53.151038	1248.1895
111	33-38-00.521486	112-27-09.313538	1217.9161
112	33-38-00.812000	112-26-32.249498	1200.0454
113	33-38-02.863576	112-30-36.128741	1987.3766
115	33-42-07.794444	112-21-19.784991	1214.4723
4DD1	33-30-29.701920	112-27-29.031850	1027.7900
4FD2	33-35-46.514410	112-28-01.630310	1229.0400
4GC1	33-38-04.791470	112-24-11.967230	1153.8700
4HB1	33-40-55.865770	112-21-10.531750	1177.6200
4HD1	33-40-56.225170	112-27-33.636280	1294.9500
FRIA	33-38-42.121940	112-29-46.862970	1495.5428

Convergence Angles (DMS) and Grid Factors at Stations

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(Grid Azimuth = Geodetic Azimuth - Convergence)
(Elevation Factor Includes a 0.00 Meter Geoid Height Correction)

Station	Convergence Angle	------- Factors ------- Scale	x Elevation	= Combined
100	-0-18-26.13	0.99993279	0.99994276	0.99987556
101	-0-18-47.35	0.99993405	0.99994089	0.99987495
102	-0-19-06.73	0.99993522	0.99993837	0.99987360
103	-0-18-03.34	0.99993140	0.99994234	0.99987374
104	-0-18-26.20	0.99993273	0.99994048	0.99987322
105	-0-18-47.24	0.99993398	0.99993807	0.99987205
106	-0-17-52.19	0.99993072	0.99994210	0.99987283
107	-0-18-12.01	0.99993187	0.99994024	0.99987211
108	-0-18-32.29	0.99993305	0.99993838	0.99987144
109	-0-18-36.98	0.99993328	0.99993840	0.99987169
110	-0-18-12.91	0.99993186	0.99994028	0.99987214
111	-0-17-48.63	0.99993046	0.99994173	0.99987219
112	-0-17-28.10	0.99992930	0.99994258	0.99987189
113	-0-19-43.20	0.99993734	0.99990491	0.99984226
115	-0-14-36.60	0.99992039	0.99994189	0.99986229
4DD1	-0-17-56.00	0.99993118	0.99995082	0.99988201
4FD2	-0-18-16.53	0.99993217	0.99994119	0.99987336
4GC1	-0-16-10.42	0.99992512	0.99994479	0.99986991
4HB1	-0-14-31.01	0.99992016	0.99994365	0.99986382
4HD1	-0-18-03.48	0.99993120	0.99993804	0.99986925
FRIA	-0-19-16.25	0.99993563	0.99992844	0.99986408
Project Averages:	-0-17-56.84	0.99993114	0.99993907	0.99987021

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Adjusted Observations and Residuals

Adjusted GPS Vector Observations Sorted by Residuals (FeetInt)

Datum Transformations			StdDev	
Scale Factor 0.999997552619	:	2.447381 PPM	0.0563	(Solved)
Rotation Around North Axis	:	-0.805732 Sec	0.1736	(Solved)
Rotation Around East Axis	:	-0.286219 Sec	0.0679	(Solved)
Rotation Around Vert Axis	:	0.119758 Sec	0.0115	(Solved)

From To	Component	Adj Value	Residual	StdErr	StdRes
(V18 Postprocessed 12-APR-2002 01:14:25.000 mc miken dam.asc)					
FRIA	Delta-N	13550.2380	-0.1872	0.0165	11.4*
4HB1	Delta-E	43635.6985	-0.0680	0.0148	4.6*
	Delta-U	-367.6194	0.0559	0.0342	1.6
	Length	45692.6501			
(V19 Postprocessed 12-APR-2002 11:49:05.000 mc miken dam.asc)					
FRIA	Delta-N	13558.3820	-0.2001	0.0135	14.8*
4HD1	Delta-E	11259.1843	0.0269	0.0150	1.8
	Delta-U	-208.0006	-0.0145	0.0337	0.4
	Length	17625.0452			
(V9 Postprocessed 12-APR-2002 01:14:25.000 mc miken dam.asc)					
4DD1	Delta-N	63313.3467	-0.1011	0.0223	4.5*
4HB1	Delta-E	31987.4273	-0.1675	0.0198	8.4*
	Delta-U	29.3204	-0.0072	0.0466	0.2
	Length	70935.0141			
(V17 Postprocessed 12-APR-2002 09:06:25.000 mc miken dam.asc)					
FRIA	Delta-N	-17750.5456	-0.1583	0.0182	8.7*
4FD2	Delta-E	8902.2051	0.0507	0.0130	3.9*
	Delta-U	-275.8901	0.0032	0.0362	0.1
	Length	19859.6888			
(V43 Postprocessed 11-APR-2002 10:18:05.000 mc miken dam.asc)					
4GC1	Delta-N	3786.4379	0.1502	0.0067	22.3*
FRIA	Delta-E	-28315.0161	0.0180	0.0074	2.4
	Delta-U	322.0763	-0.0404	0.0368	1.1
	Length	28568.8813			
(V44 Postprocessed 11-APR-2002 10:14:25.000 mc miken dam.asc)					
4GC1	Delta-N	-45998.8305	0.0618	0.0073	8.4*
4DD1	Delta-E	-16687.4721	0.0837	0.0072	11.6*
	Delta-U	-183.4680	-0.1134	0.0394	2.9
	Length	48932.5842			
(V10 Postprocessed 12-APR-2002 11:49:05.000 mc miken dam.asc)					
4DD1	Delta-N	63333.8153	-0.1270	0.0173	7.3*
4HD1	Delta-E	-389.1653	-0.0613	0.0205	3.0
	Delta-U	170.8800	-0.0590	0.0438	1.3
	Length	63335.2415			
(V24 Postprocessed 12-APR-2002 09:06:25.000 mc miken dam.asc)					
112	Delta-N	-13574.9556	-0.1474	0.0165	8.9*
4FD2	Delta-E	-7561.1934	0.0109	0.0120	0.9
	Delta-U	23.2000	0.0068	0.0316	0.2
	Length	15538.7130			
(V52 Postprocessed 11-APR-2002 10:18:05.000 mc miken dam.asc)					
4DD1	Delta-N	49780.1230	0.0882	0.0079	11.2*

FRIA	Delta-E	-11653.4824	-0.0678	0.0089	7.6*
	Delta-U	404.9734	0.0809	0.0469	1.7
	Length	51127.5689			
(V49 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)					
FRIA	Delta-N	-12298.7432	-0.1073	0.0148	7.3*
107	Delta-E	9658.1424	0.0484	0.0154	3.1*
	Delta-U	-252.3347	0.0579	0.0244	2.4
	Length	15639.7721			
(V15 Postprocessed 12-APR-2002 01:13:20.000 mc miken dam.asc)					
FRIA	Delta-N	20820.3811	-0.1196	0.0195	6.1*
115	Delta-E	42843.8537	-0.0057	0.0175	0.3
	Delta-U	-335.1377	0.0445	0.0407	1.1
	Length	47636.0828			
(V20 Postprocessed 12-APR-2002 11:50:55.000 mc miken dam.asc)					
104	Delta-N	30938.1777	-0.1189	0.0175	6.8*
4HD1	Delta-E	3837.5990	-0.0108	0.0196	0.5
	Delta-U	27.7288	-0.0335	0.0454	0.7
	Length	31175.2911			
(V1 Postprocessed 12-APR-2002 08:29:50.000 mc miken dam.asc)					
4DD1	Delta-N	49780.1230	0.0741	0.0075	9.9*
FRIA	Delta-E	-11653.4824	-0.0882	0.0071	12.5*
	Delta-U	404.9734	0.0402	0.0438	0.9
	Length	51127.5689			
(V36 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)					
108	Delta-N	11543.3751	0.0885	0.0105	8.5*
FRIA	Delta-E	-6566.3857	0.0088	0.0138	0.6
	Delta-U	203.4895	-0.0739	0.0386	1.9
	Length	13281.8800			
(V7 Postprocessed 12-APR-2002 01:13:20.000 mc miken dam.asc)					
4DD1	Delta-N	70583.8382	-0.0376	0.0237	1.6
115	Delta-E	31198.2562	-0.1037	0.0212	4.9*
	Delta-U	44.0055	-0.0156	0.0497	0.3
	Length	77171.3116			
(V28 Postprocessed 11-APR-2002 12:34:00.000 mc miken dam.asc)					
4GC1	Delta-N	-21260.6435	0.0952	0.0135	7.1*
101	Delta-E	-24236.1250	0.0314	0.0144	2.2
	Delta-U	56.4984	-0.0484	0.0369	1.3
	Length	32239.8497			
(V25 Postprocessed 12-APR-2002 01:14:25.000 mc miken dam.asc)					
115	Delta-N	-7271.1805	-0.0913	0.0154	5.9*
4HB1	Delta-E	782.0065	-0.0472	0.0138	3.4*
	Delta-U	-38.1216	0.0167	0.0311	0.5
	Length	7313.2109			
(V50 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)					
FRIA	Delta-N	-4154.6485	-0.0898	0.0114	7.8*
109	Delta-E	5940.7556	0.0276	0.0134	2.1
	Delta-U	-209.3331	0.0415	0.0210	2.0
	Length	7252.4134			
(V53 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)					
4DD1	Delta-N	26143.7703	0.0062	0.0193	0.3
102	Delta-E	-10507.4843	-0.0408	0.0206	2.0
	Delta-U	241.0500	0.0896	0.0430	2.1
	Length	28177.3323			
(V35 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)					
4GC1	Delta-N	-7761.3937	0.0779	0.0107	7.3*
108	Delta-E	-21756.3934	0.0338	0.0143	2.4

	Delta-U	121.0999	-0.0490	0.0396	1.2
	Length	23099.6656			
(V41 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)					
4GC1	Delta-N	-8521.0317	0.0738	0.0152	4.9*
107	Delta-E	-18667.6089	0.0266	0.0131	2.0
	Delta-U	85.0161	-0.0565	0.0294	1.9
	Length	20520.5953			
(V16 Postprocessed 12-APR-2002 11:50:55.000 mc miken dam.asc)					
FRIA	Delta-N	-17380.6663	-0.0875	0.0155	5.6*
104	Delta-E	7428.8645	0.0406	0.0177	2.3
	Delta-U	-260.1608	0.0038	0.0404	0.1
	Length	18903.5254			
(V38 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)					
4GC1	Delta-N	-19850.0989	0.0821	0.0155	5.3*
102	Delta-E	-27181.3545	0.0406	0.0154	2.6
	Delta-U	106.9104	-0.0281	0.0368	0.8
	Length	33658.0435			
(V42 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)					
4GC1	Delta-N	-373.5895	0.0746	0.0135	5.5*
109	Delta-E	-22377.7228	0.0435	0.0121	3.6*
	Delta-U	121.5235	-0.0411	0.0259	1.6
	Length	22381.1710			
(V33 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)					
106	Delta-N	12837.7980	0.0705	0.0124	5.7*
FRIA	Delta-E	-12675.0216	-0.0035	0.0170	0.2
	Delta-U	277.7003	-0.0638	0.0480	1.3
	Length	18042.7921			
(V32 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)					
4GC1	Delta-N	-9057.5330	0.0766	0.0141	5.4*
106	Delta-E	-15646.1651	0.0168	0.0153	1.1
	Delta-U	48.2588	-0.0493	0.0398	1.2
	Length	18078.8195			
(V40 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)					
4GC1	Delta-N	-12247.1643	0.0713	0.0132	5.4*
105	Delta-E	-24099.7791	0.0399	0.0148	2.7
	Delta-U	122.9543	-0.0434	0.0276	1.6
	Length	27033.4516			
(V8 Postprocessed 12-APR-2002 09:06:25.000 mc miken dam.asc)					
4DD1	Delta-N	32025.6867	-0.0801	0.0235	3.4*
4FD2	Delta-E	-2757.6976	-0.0296	0.0166	1.8
	Delta-U	176.4184	0.0315	0.0467	0.7
	Length	32144.6827			
(V13 Postprocessed 12-APR-2002 08:52:20.000 mc miken dam.asc)					
FRIA	Delta-N	-4171.6348	-0.0821	0.0122	6.7*
112	Delta-E	16456.2827	0.0364	0.0097	3.8*
	Delta-U	-302.3076	-0.0019	0.0256	0.1
	Length	16979.4926			
(V48 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)					
FRIA	Delta-N	-16029.7677	-0.0828	0.0121	6.8*
105	Delta-E	4229.3815	0.0224	0.0135	1.7
	Delta-U	-207.7309	0.0151	0.0248	0.6
	Length	16579.6343			
(V47 Postprocessed 11-APR-2002 10:34:20.000 mc miken dam.asc)					
FRIA	Delta-N	-18649.2195	-0.0855	0.0111	7.7*
103	Delta-E	10908.4791	0.0010	0.0118	0.1
	Delta-U	-301.5175	0.0088	0.0223	0.4

	Length	21607.3880			
(V46 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)					
FRIA	Delta-N	-23635.4683	-0.0732	0.0161	4.5*
102	Delta-E	1154.6259	0.0214	0.0182	1.2
	Delta-U	-220.9902	0.0335	0.0386	0.9
	Length	23664.6860			
(V45 Postprocessed 11-APR-2002 01:24:40.000 mc miken dam.asc)					
4GC1	Delta-N	-22616.8115	0.0697	0.0106	6.6*
100	Delta-E	-21006.4067	0.0315	0.0097	3.2*
	Delta-U	19.5099	-0.0298	0.0208	1.4
	Length	30867.2912			
(V58 Postprocessed 11-APR-2002 01:24:40.000 mc miken dam.asc)					
4DD1	Delta-N	23380.1288	0.0187	0.0134	1.4
100	Delta-E	-4331.1447	-0.0501	0.0117	4.3*
	Delta-U	154.8344	0.0598	0.0279	2.1
	Length	23778.4190			
(V51 Postprocessed 11-APR-2002 01:24:40.000 mc miken dam.asc)					
FRIA	Delta-N	-26396.6093	-0.0781	0.0155	5.0*
100	Delta-E	7331.9356	0.0179	0.0189	0.9
	Delta-U	-317.2393	0.0008	0.0305	0.0
	Length	27397.7901			
(V56 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)					
4DD1	Delta-N	37477.2505	0.0274	0.0175	1.6
107	Delta-E	-1999.7552	-0.0555	0.0149	3.7*
	Delta-U	187.3803	0.0507	0.0381	1.3
	Length	37531.0330			
(V3 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)					
4DD1	Delta-N	45627.0062	0.0472	0.0183	2.6
110	Delta-E	-2039.5200	-0.0612	0.0191	3.2*
	Delta-U	170.3072	-0.0044	0.0433	0.1
	Length	45672.8841			
(V4 Postprocessed 12-APR-2002 10:26:45.000 mc miken dam.asc)					
4DD1	Delta-N	45572.0569	0.0396	0.0176	2.2
111	Delta-E	1667.3326	-0.0656	0.0184	3.6*
	Delta-U	140.2014	-0.0075	0.0415	0.2
	Length	45602.7634			
(V39 Postprocessed 11-APR-2002 10:34:20.000 mc miken dam.asc)					
4GC1	Delta-N	-14872.6386	0.0653	0.0090	7.2*
103	Delta-E	-17422.9199	0.0152	0.0093	1.6
	Delta-U	38.6691	-0.0358	0.0185	1.9
	Length	22907.5318			
(V54 Postprocessed 11-APR-2002 10:34:20.000 mc miken dam.asc)					
4DD1	Delta-N	31126.2141	0.0014	0.0128	0.1
103	Delta-E	-751.7425	-0.0590	0.0133	4.4*
	Delta-U	154.0543	0.0420	0.0280	1.5
	Length	31135.6717			
(V34 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)					
4DD1	Delta-N	36942.2631	0.0059	0.0181	0.3
106	Delta-E	1021.9419	-0.0672	0.0184	3.7*
	Delta-U	149.3998	0.0127	0.0473	0.3
	Length	36956.6974			
(V29 Postprocessed 11-APR-2002 12:34:00.000 mc miken dam.asc)					
101	Delta-N	25044.1995	0.0507	0.0113	4.5*
FRIA	Delta-E	-4097.8454	-0.0232	0.0150	1.5
	Delta-U	244.7573	-0.0373	0.0419	0.9
	Length	25378.4194			

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(V37 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)
4DD1                Delta-N          38235.3370        0.0065   0.0162   0.4
108                 Delta-E          -5088.9116       -0.0603   0.0220   2.7
                    Delta-U            224.2487       -0.0268   0.0613   0.4
                    Length           38573.1552
(V30 Postprocessed 11-APR-2002 12:34:00.000 mc miken dam.asc)
4DD1                Delta-N          24734.6715        0.0291   0.0174   1.7
101                 Delta-E          -7561.5498       -0.0559   0.0179   3.1*
                    Delta-U            191.4038        0.0075   0.0451   0.2
                    Length           25865.3754
(V57 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)
4DD1                Delta-N          45622.7954        0.0218   0.0171   1.3
109                 Delta-E          -5714.1499       -0.0366   0.0149   2.5
                    Delta-U            208.8690        0.0461   0.0349   1.3
                    Length           45979.7194
(V55 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)
4DD1                Delta-N          33748.3460        0.0018   0.0161   0.1
105                 Delta-E          -7429.9210       -0.0436   0.0179   2.4
                    Delta-U            237.8660        0.0451   0.0352   1.3
                    Length           34557.3605
(V5 Postprocessed 12-APR-2002 08:52:20.000 mc miken dam.asc)
4DD1                Delta-N          45601.7080       -0.0050   0.0183   0.3
112                 Delta-E           4801.4203       -0.0464   0.0140   3.3*
                    Delta-U            121.7942        0.0355   0.0390   0.9
                    Length           45853.9447
(V2 Postprocessed 12-APR-2002 11:50:55.000 mc miken dam.asc)
4DD1                Delta-N          32396.1459       -0.0067   0.0164   0.4
104                 Delta-E          -4230.9096       -0.0513   0.0183   2.8
                    Delta-U            190.4438       -0.0276   0.0429   0.6
                    Length           32671.8095
(V6 Postprocessed 12-APR-2002 09:51:30.000 mc miken dam.asc)
4DD1                Delta-N          45814.4124        0.0173   0.0226   0.8
113                 Delta-E         -15821.2070       -0.0037   0.0158   0.2
                    Delta-U            903.1542       -0.0480   0.0424   1.1
                    Length           48477.6924
(V63 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)
107                 Delta-N         -14097.1884       -0.0415   0.0117   3.6*
100                 Delta-E          -2330.5006        0.0082   0.0101   0.8
                    Delta-U            -57.6616        0.0001   0.0246   0.0
                    Length           14288.6416
(V23 Postprocessed 12-APR-2002 10:26:45.000 mc miken dam.asc)
111                 Delta-N            241.6134        0.0214   0.0473   0.5
113                 Delta-E         -17488.5876        0.0336   0.0396   0.8
                    Delta-U            762.0887       -0.0058   0.0892   0.1
                    Length           17506.8516
(V12 Postprocessed 12-APR-2002 10:26:45.000 mc miken dam.asc)
FRIA                Delta-N          -4202.4900       -0.0210   0.0131   1.6
111                 Delta-E          13322.2169        0.0334   0.0140   2.4
                    Delta-U           -282.2278        0.0072   0.0307   0.2
                    Length           13972.1880
(V11 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)
FRIA                Delta-N          -4148.9852       -0.0196   0.0126   1.6
110                 Delta-E           9615.3616        0.0310   0.0130   2.4
                    Delta-U           -249.9289        0.0017   0.0290   0.1
                    Length           10475.2910
(V62 Postprocessed 11-APR-2002 02:03:30.000 mc miken dam.asc)
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107	Delta-N	8145.2575	0.0313	0.0116	2.7
109	Delta-E	-3714.9081	-0.0177	0.0100	1.8
	Delta-U	36.4840	-0.0036	0.0225	0.2
	Length	8952.4909			
(V22 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)					
110	Delta-N	184.9095	0.0089	0.0316	0.3
113	Delta-E	-13781.6276	-0.0249	0.0274	0.9
	Delta-U	734.5971	0.0224	0.0602	0.4
	Length	13802.4304			
(V59 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)					
102	Delta-N	4985.7974	0.0026	0.0120	0.2
103	Delta-E	9754.0404	0.0145	0.0126	1.2
	Delta-U	-85.6417	0.0170	0.0250	0.7
	Length	10954.7622			
(V27 Postprocessed 11-APR-2002 12:37:00.000 mc miken dam.asc)					
101	Delta-N	13501.2091	0.0142	0.0126	1.1
108	Delta-E	2469.4208	0.0041	0.0169	0.2
	Delta-U	47.9679	-0.0131	0.0465	0.3
	Length	13725.2682			
(V26 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)					
101	Delta-N	12209.6891	0.0139	0.0123	1.1
106	Delta-E	8580.5559	0.0107	0.0123	0.9
	Delta-U	-30.6207	-0.0066	0.0302	0.2
	Length	14923.2498			
(V64 Postprocessed 11-APR-2002 01:27:35.000 mc miken dam.asc)					
109	Delta-N	-22242.2439	-0.0068	0.0146	0.5
100	Delta-E	1387.0132	-0.0075	0.0127	0.6
	Delta-U	-103.0799	0.0135	0.0297	0.5
	Length	22285.6870			
(V60 Postprocessed 11-APR-2002 11:40:20.000 mc miken dam.asc)					
102	Delta-N	7605.5982	0.0080	0.0108	0.7
105	Delta-E	3075.0337	0.0014	0.0118	0.1
	Delta-U	4.8074	0.0116	0.0228	0.5
	Length	8203.7174			
(V61 Postprocessed 11-APR-2002 11:01:05.000 mc miken dam.asc)					
103	Delta-N	2621.8447	0.0058	0.0079	0.7
105	Delta-E	-6678.2379	-0.0128	0.0085	1.5
	Delta-U	87.9656	-0.0020	0.0149	0.1
	Length	7175.0030			
(V14 Postprocessed 12-APR-2002 09:51:30.000 mc miken dam.asc)					
FRIA	Delta-N	-3968.4313	-0.0072	0.0109	0.7
113	Delta-E	-4165.9832	0.0018	0.0080	0.2
	Delta-U	491.0299	0.0055	0.0190	0.3
	Length	5774.5107			
(V31 Postprocessed 11-APR-2002 12:41:00.000 mc miken dam.asc)					
106	Delta-N	1293.1374	0.0013	0.0082	0.2
108	Delta-E	-6110.8153	-0.0032	0.0105	0.3
	Delta-U	76.8416	-0.0072	0.0270	0.3
	Length	6246.6129			
(V21 Postprocessed 12-APR-2002 10:28:25.000 mc miken dam.asc)					
110	Delta-N	-54.6432	0.0014	0.0104	0.1
111	Delta-E	3706.8532	0.0053	0.0107	0.5
	Delta-U	-30.5868	-0.0025	0.0230	0.1
	Length	3707.3821			

GPS Vector Residual Summary (FeetInt)

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(Sorted by 3D Residual Length)

From	To	N	E	Up	2D	3D	Length	VectID
FRIA	4HB1	-0.187	-0.068	0.056	0.199	0.207	45693	18
FRIA	4HD1	-0.200	0.027	-0.015	0.202	0.202	17625	19
4DD1	4HB1	-0.101	-0.168	-0.007	0.196	0.196	70935	9
FRIA	4FD2	-0.158	0.051	0.003	0.166	0.166	19860	17
4GC1	FRIA	0.150	0.018	-0.040	0.151	0.157	28569	43
4GC1	4DD1	0.062	0.084	-0.113	0.104	0.154	48933	44
4DD1	4HD1	-0.127	-0.061	-0.059	0.141	0.153	63335	10
112	4FD2	-0.147	0.011	0.007	0.148	0.148	15539	24
4DD1	FRIA	0.088	-0.068	0.081	0.111	0.138	51128	52
FRIA	107	-0.107	0.048	0.058	0.118	0.131	15640	49
FRIA	115	-0.120	-0.006	0.045	0.120	0.128	47636	15
104	4HD1	-0.119	-0.011	-0.034	0.119	0.124	31175	20
4DD1	FRIA	0.074	-0.088	0.040	0.115	0.122	51128	1
108	FRIA	0.088	0.009	-0.074	0.089	0.116	13282	36
4DD1	115	-0.038	-0.104	-0.016	0.110	0.111	77171	7
4GC1	101	0.095	0.031	-0.048	0.100	0.111	32240	28
115	4HB1	-0.091	-0.047	0.017	0.103	0.104	7313	25
FRIA	109	-0.090	0.028	0.041	0.094	0.103	7252	50
4DD1	102	0.006	-0.041	0.090	0.041	0.099	28177	53
4GC1	108	0.078	0.034	-0.049	0.085	0.098	23100	35
4GC1	107	0.074	0.027	-0.057	0.078	0.097	20521	41
FRIA	104	-0.088	0.041	0.004	0.096	0.097	18904	16
4GC1	102	0.082	0.041	-0.028	0.092	0.096	33658	38
4GC1	109	0.075	0.043	-0.041	0.086	0.096	22381	42
106	FRIA	0.071	-0.003	-0.064	0.071	0.095	18043	33
4GC1	106	0.077	0.017	-0.049	0.078	0.093	18079	32
4GC1	105	0.071	0.040	-0.043	0.082	0.093	27033	40
4DD1	4FD2	-0.080	-0.030	0.032	0.085	0.091	32145	8
FRIA	112	-0.082	0.036	-0.002	0.090	0.090	16979	13
FRIA	105	-0.083	0.022	0.015	0.086	0.087	16580	48
FRIA	103	-0.086	0.001	0.009	0.086	0.086	21607	47
FRIA	102	-0.073	0.021	0.033	0.076	0.083	23665	46
4GC1	100	0.070	0.032	-0.030	0.076	0.082	30867	45
4DD1	100	0.019	-0.050	0.060	0.053	0.080	23778	58
FRIA	100	-0.078	0.018	0.001	0.080	0.080	27398	51
4DD1	107	0.027	-0.056	0.051	0.062	0.080	37531	56
4DD1	110	0.047	-0.061	-0.004	0.077	0.077	45673	3
4DD1	111	0.040	-0.066	-0.008	0.077	0.077	45603	4
4GC1	103	0.065	0.015	-0.036	0.067	0.076	22908	39
4DD1	103	0.001	-0.059	0.042	0.059	0.072	31136	54
4DD1	106	0.006	-0.067	0.013	0.067	0.069	36957	34
101	FRIA	0.051	-0.023	-0.037	0.056	0.067	25378	29
4DD1	108	0.006	-0.060	-0.027	0.061	0.066	38573	37
4DD1	101	0.029	-0.056	0.008	0.063	0.063	25865	30
4DD1	109	0.022	-0.037	0.046	0.043	0.063	45980	57
4DD1	105	0.002	-0.044	0.045	0.044	0.063	34557	55
4DD1	112	-0.005	-0.046	0.036	0.047	0.059	45854	5
4DD1	104	-0.007	-0.051	-0.028	0.052	0.059	32672	2
4DD1	113	0.017	-0.004	-0.048	0.018	0.051	48478	6
107	100	-0.041	0.008	0.000	0.042	0.042	14289	63
111	113	0.021	0.034	-0.006	0.040	0.040	17507	23
FRIA	111	-0.021	0.033	0.007	0.040	0.040	13972	12
FRIA	110	-0.020	0.031	0.002	0.037	0.037	10475	11

107	109	0.031	-0.018	-0.004	0.036	0.036	8952	62
110	113	0.009	-0.025	0.022	0.026	0.035	13802	22
102	103	0.003	0.015	0.017	0.015	0.023	10955	59
101	108	0.014	0.004	-0.013	0.015	0.020	13725	27
101	106	0.014	0.011	-0.007	0.018	0.019	14923	26
109	100	-0.007	-0.008	0.013	0.010	0.017	22286	64
102	105	0.008	0.001	0.012	0.008	0.014	8204	60
103	105	0.006	-0.013	-0.002	0.014	0.014	7175	61
FRIA	113	-0.007	0.002	0.005	0.007	0.009	5775	14
106	108	0.001	-0.003	-0.007	0.003	0.008	6247	31
110	111	0.001	0.005	-0.003	0.005	0.006	3707	21

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Adjusted Bearings (DMS) and Horizontal Distances (FeetInt)

(Relative Confidence of Bearing is in Seconds)
NOTE - Adjustment Failed the Chi-Square Test
Angular and Distance Errors are Scaled by Total Error Factor

From	To	Grid Bearing	Grid Dist Grnd Dist	95% RelConfidence Brg	Dist	PPM
100	107	N09-41-24.96E	14286.7747 14288.5791	1.16	0.0866	6.0596
100	109	N03-15-29.71W	22282.7365 22285.5549	0.76	0.0913	4.0968
100	4DD1	S10-11-45.00E	23774.9967 23777.8806	0.57	0.0726	3.0554
100	4GC1	N43-09-18.68E	30863.4093 30867.3377	0.49	0.0653	2.1152
100	FRIA	N15-12-08.22W	27392.6538 27396.2222	0.49	0.0731	2.6671
101	106	N35-24-41.68E	14921.3823 14923.2649	1.40	0.0791	5.3044
101	108	N10-40-42.17E	13723.4594 13725.2014	1.57	0.0808	5.8849
101	4DD1	S16-41-58.35E	25861.4619 25864.6064	0.64	0.0796	3.0776
101	4GC1	N49-00-40.29E	32235.7131 32239.8258	0.55	0.0727	2.2545
101	FRIA	N08-58-45.04W	25373.8336 25377.1471	0.67	0.0770	3.0360
102	103	N63-14-40.89E	10953.0930 10954.4760	1.53	0.0912	8.3281
102	105	N22-19-57.83E	8202.6909 8203.7350	2.20	0.0876	10.6798
102	4DD1	S21-35-47.61E	28172.7562 28176.2003	0.65	0.0776	2.7551
102	4GC1	N54-07-45.67E	33653.5427 33657.8589	0.47	0.0886	2.6326
102	FRIA	N02-28-32.94W	23660.7271 23663.8333	0.75	0.0801	3.3851
103	105	N68-15-51.40W	7173.5546 7174.4658	1.95	0.0738	10.2872
103	4DD1	S01-05-03.28E	31131.4395 31135.2429	0.42	0.0600	1.9263
103	4GC1	N49-47-04.40E	22904.5947 22907.5305	0.55	0.0618	2.6999
103	FRIA	N30-00-13.07W	21602.6559 21605.4893	0.60	0.0610	2.8237
104	4DD1	S07-08-29.02E	32667.1755 32671.1748	0.81	0.1105	3.3827
104	4HD1	N07-22-42.80E	31171.3098 31175.3256	0.82	0.1157	3.7111
104	FRIA	N22-49-18.76W	18899.4122 18901.8966	1.43	0.1076	5.6926
105	4DD1	S12-07-00.07E	34552.1671 34556.4170	0.43	0.0679	1.9644
105	4GC1	N63-19-49.61E	27029.6661	0.53	0.0715	2.6444

			27033.1527			
105	FRIA	N14-27-33.74W	16576.2651	0.90	0.0681	4.1067
			16578.4542			
106	108	N77-45-13.59W	6245.3458	2.31	0.0919	14.7215
			6246.1437			
106	4DD1	S01-53-02.05W	36951.8088	0.46	0.0702	1.8991
			36956.3388			
106	4GC1	N60-12-10.98E	18076.4522	0.92	0.0733	4.0571
			18078.7767			
106	FRIA	N44-20-11.22W	18038.2033	0.79	0.0840	4.6552
			18040.5765			
107	109	N24-12-48.38W	8951.2827	1.75	0.0922	10.3044
			8952.4303			
107	4DD1	S02-45-18.11E	37525.8591	0.38	0.0777	2.0716
			37530.4729			
107	4GC1	N65-44-04.83E	20517.7793	0.81	0.0663	3.2300
			20520.4250			
107	FRIA	N37-49-16.70W	15635.8039	0.88	0.0803	5.1347
			15637.8671			
108	4DD1	S07-16-54.68E	38567.6189	0.44	0.0667	1.7284
			38572.3735			
108	4GC1	N70-38-10.06E	23096.3482	0.63	0.0787	3.4055
			23099.3340			
108	FRIA	N29-19-26.47W	13278.5305	1.17	0.0747	5.6271
			13280.2876			
109	4DD1	S06-50-22.45E	45973.4397	0.31	0.0757	1.6464
			45979.0989			
109	4GC1	N89-18-47.32E	22377.9376	0.68	0.0709	3.1678
			22380.8272			
109	FRIA	N54-42-43.01W	7248.4874	1.86	0.0792	10.9211
			7249.4448			
110	111	S88-51-06.62E	3706.7941	5.54	0.1027	27.7097
			3707.2675			
110	113	N88-55-39.66W	13780.6906	2.09	0.1234	8.9532
			13782.6565			
110	4DD1	S02-15-35.97E	45666.8532	0.45	0.0978	2.1409
			45672.4642			
110	FRIA	N66-20-19.90W	10471.0157	1.89	0.1013	9.6737
			10472.3959			
111	113	N88-54-41.79W	17487.4822	1.68	0.1274	7.2843
			17489.9766			
111	4DD1	S02-23-41.08W	45596.8775	0.47	0.0995	2.1831
			45602.4787			
111	FRIA	N72-10-15.50W	13967.6232	1.46	0.1043	7.4708
			13969.4637			
112	4DD1	S06-18-35.86W	45848.0944	0.35	0.1047	2.2847
			45853.7334			
112	4FD2	S29-24-31.17W	15536.7438	1.04	0.1044	6.7170
			15538.7240			
112	FRIA	N75-27-14.83W	16974.7232	1.28	0.0766	4.5122
			16976.9626			
113	4DD1	S18-45-07.30E	48461.6332	0.32	0.1128	2.3284
			48468.3131			
113	FRIA	N46-42-44.53E	5752.6964	3.87	0.0828	14.3976
			5753.5412			
115	4DD1	S24-08-42.74W	77161.4308	0.33	0.1238	1.6040

			77171.2745			
115	4HB1	S05-53-42.10E	7312.1335	3.25	0.1304	17.8364
			7313.1359			
115	FRIA	S64-24-12.81W	47628.8507	0.57	0.1147	2.4078
			47635.3700			
4DD1	4FD2	N04-37-20.16W	32140.1989	0.00	0.0000	0.0001
			32144.1315			
4DD1	4GC1	N20-12-32.09E	48926.4759	0.00	0.0000	0.0000
			48932.5415			
4DD1	4HB1	N27-06-12.86E	70926.0294	0.00	0.0000	0.0000
			70935.0294			
4DD1	4HD1	N00-03-08.82W	63326.9720	0.00	0.0000	0.0000
			63334.8332			
4DD1	FRIA	N12-52-34.15W	51119.0688	0.00	0.0000	0.0000
			51125.5546			
4FD2	FRIA	N26-18-48.78W	19855.3409	0.00	0.0000	0.0001
			19857.9492			
4GC1	FRIA	N82-06-49.15W	28563.1105	0.00	0.0000	0.0001
			28566.9081			
4HB1	FRIA	S73-04-12.60W	45685.4375	0.00	0.0000	0.0000
			45691.6557			
4HD1	FRIA	S40-01-42.14W	17621.5964	0.00	0.0000	0.0001
			17623.9467			

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Error Propagation

Station Coordinate Standard Deviations (FeetInt)

NOTE - Adjustment Failed the Chi-Square Test
Standard Deviations are Scaled by Total Error Factor

Station	N	E	Elev
100	0.029202	0.027254	0.078270
101	0.030328	0.034800	0.112902
102	0.032903	0.035006	0.107998
103	0.024496	0.025917	0.069665
104	0.046100	0.051835	0.125163
105	0.027433	0.030033	0.095904
106	0.028885	0.033763	0.100964
107	0.031534	0.028594	0.085444
108	0.026437	0.034236	0.118893
109	0.030202	0.029039	0.103594
110	0.039863	0.040835	0.116153
111	0.040737	0.042289	0.110740
112	0.042274	0.032420	0.092587
113	0.044577	0.033260	0.148593
115	0.052940	0.047469	0.113046
4DD1	0.000000	0.000000	0.000000
4FD2	0.000000	0.000000	0.000000
4GC1	0.000000	0.000000	0.000000
4HB1	0.000000	0.000000	0.000000
4HD1	0.000000	0.000000	0.000000
FRIA	0.000000	0.000000	0.115818

Station Coordinate Error Ellipses (FeetInt)

NOTE - Adjustment Failed the Chi-Square Test
Error Ellipses are Scaled by Total Error Factor
Confidence Region = 95%

Station	Semi-Major Axis	Semi-Minor Axis	Azimuth of Major Axis	Elev
100	0.073571	0.064398	150-41	0.153407
101	0.088857	0.069792	117-23	0.221283
102	0.088656	0.077255	58-27	0.211672
103	0.063446	0.059951	92-51	0.136541
104	0.131484	0.107439	62-56	0.245316
105	0.073664	0.066983	98-51	0.187968
106	0.085970	0.066617	115-50	0.197886
107	0.080531	0.066115	150-02	0.167467
108	0.085158	0.062915	105-18	0.233025
109	0.080116	0.064024	140-07	0.203041
110	0.101395	0.096077	121-43	0.227656
111	0.104408	0.098778	113-46	0.217046
112	0.105572	0.076544	16-44	0.181468
113	0.112858	0.076137	159-45	0.291236
115	0.131166	0.114404	161-33	0.221567
4DD1	0.000001	0.000001	0-00	0.000001
4FD2	0.000001	0.000001	0-00	0.000001
4GC1	0.000001	0.000001	0-00	0.000001

4HB1	0.000001	0.000001	0-00	0.000001
4HD1	0.000001	0.000001	0-00	0.000001
FRIA	0.000001	0.000001	0-00	0.226999

Relative Error Ellipses (FeetInt)
NOTE - Adjustment Failed the Chi-Square Test
Relative Error Ellipses are Scaled by Total Error Factor
Confidence Region = 95%

Stations From	To	Semi-Major Axis	Semi-Minor Axis	Azimuth of Major Axis	Vertical
100	107	0.089702	0.076727	159-20	0.143018
100	109	0.094133	0.079373	149-45	0.160934
100	4DD1	0.073571	0.064398	150-41	0.153407
100	4GC1	0.073571	0.064398	150-41	0.153407
100	FRIA	0.073571	0.064398	150-41	0.173032
101	106	0.101643	0.079080	122-27	0.200884
101	108	0.104971	0.079694	111-43	0.217978
101	4DD1	0.088857	0.069792	117-23	0.221283
101	4GC1	0.088857	0.069792	117-23	0.221283
101	FRIA	0.088857	0.069792	117-23	0.207854
102	103	0.091270	0.080928	59-05	0.157193
102	105	0.092150	0.082563	66-38	0.144021
102	4DD1	0.088656	0.077255	58-27	0.211672
102	4GC1	0.088656	0.077255	58-27	0.211672
102	FRIA	0.088656	0.077255	58-27	0.165232
103	105	0.073959	0.067797	102-10	0.123251
103	4DD1	0.063446	0.059951	92-51	0.136541
103	4GC1	0.063446	0.059951	92-51	0.136541
103	FRIA	0.063446	0.059951	92-51	0.167884
104	4DD1	0.131484	0.107439	62-56	0.245316
104	4HD1	0.131484	0.107439	62-56	0.245316
104	FRIA	0.131484	0.107439	62-56	0.282440
105	4DD1	0.073664	0.066983	98-51	0.187968
105	4GC1	0.073664	0.066983	98-51	0.187968
105	FRIA	0.073664	0.066983	98-51	0.138769
106	108	0.092247	0.069635	109-22	0.196325
106	4DD1	0.085970	0.066617	115-50	0.197886
106	4GC1	0.085970	0.066617	115-50	0.197886
106	FRIA	0.085970	0.066617	115-50	0.219482
107	109	0.092337	0.075714	151-08	0.146005
107	4DD1	0.080531	0.066115	150-02	0.167467
107	4GC1	0.080531	0.066115	150-02	0.167467
107	FRIA	0.080531	0.066115	150-02	0.159508
108	4DD1	0.085158	0.062915	105-18	0.233025
108	4GC1	0.085158	0.062915	105-18	0.233025
108	FRIA	0.085158	0.062915	105-18	0.202411
109	4DD1	0.080116	0.064024	140-07	0.203041
109	4GC1	0.080116	0.064024	140-07	0.203041
109	FRIA	0.080116	0.064024	140-07	0.128723
110	111	0.103696	0.098588	117-26	0.181251
110	113	0.144477	0.117962	155-23	0.250097
110	4DD1	0.101395	0.096077	121-43	0.227656
110	FRIA	0.101395	0.096077	121-43	0.198445
111	113	0.147342	0.122031	154-49	0.270026
111	4DD1	0.104408	0.098778	113-46	0.217046

111	FRIA	0.104408	0.098778	113-46	0.217514
112	4DD1	0.105572	0.076544	16-44	0.181468
112	4FD2	0.105572	0.076544	16-44	0.181468
112	FRIA	0.105572	0.076544	16-44	0.244353
113	4DD1	0.112858	0.076137	159-45	0.291236
113	FRIA	0.112858	0.076137	159-45	0.157973
115	4DD1	0.131166	0.114404	161-33	0.221567
115	4HB1	0.131166	0.114404	161-33	0.221567
115	FRIA	0.131166	0.114404	161-33	0.323639
4DD1	4FD2	0.000002	0.000002	0-00	0.000001
4DD1	4GC1	0.000002	0.000002	0-00	0.000001
4DD1	4HB1	0.000002	0.000002	0-00	0.000001
4DD1	4HD1	0.000002	0.000002	0-00	0.000001
4DD1	FRIA	0.000002	0.000002	0-00	0.226999
4FD2	FRIA	0.000002	0.000002	0-00	0.226999
4GC1	FRIA	0.000002	0.000002	0-00	0.226999
4HB1	FRIA	0.000002	0.000002	0-00	0.226999
4HD1	FRIA	0.000002	0.000002	0-00	0.226999

Elapsed Time = 00:00:01

□23
47
01 00000000 Top of File
01 00000006 Summary of Files Used and Option Settings
02 00000009 Project Folder and Data Files
02 00000016 Project Option Settings
01 00000038 Summary of Unadjusted Input Observations
02 00000041 Entered Stations
03 00000043 Fixed Positions
03 00000050 Partially Fixed Positions
02 00000055 GPS Vector Observations
01 00000317 Adjustment Statistical Summary
01 00000337 Adjusted Station Information
02 00000340 Adjusted Coordinates
02 00000365 Adjusted Positions and Ellipsoid Heights
02 00000391 Convergence Angles and Grid Factors at Stations
01 00000420 Adjusted Observations and Residuals
02 00000423 Adjusted GPS Vector Observations
02 00000754 GPS Vector Residual Summary
01 00000823 Adjusted Bearings and Horizontal Distances
01 00000958 Error Propagation
02 00000961 Station Coordinate Standard Deviations
02 00000988 Station Coordinate Error Ellipses
02 00001017 Relative Error Ellipses
01 00001087 End of File
000118DC
STARPLUS
0002322D

Maricopa County

stewart geo technologies

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Run Date: Wed Jul 24 2002 10:44:29

Summary of Files Used and Option Settings

Project Folder and Data Files

Project Name	WITTMANN
Project Folder	D:\GPS PROJECTS\WITTMANN\WITTMANN MAIN
Data File List	Wittmann.dat
	Wittmann.gps

Project Option Settings

STAR*NET Run Mode	: Adjust with Error Propagation
Type of Adjustment	: 3D
Project Units	: FeetInt; DMS
Coordinate System	: Mercator NAD83; AZ Central 0202
Geoid Height	: 0.0000 (Default, Meters)
Vertical Deflection	: N=0.00 E=0.00 (Defaults, Seconds)
Longitude Sign Convention	: Positive West
Input/Output Coordinate Order	: North-East
Angle Data Station Order	: At-From-To
Distance/Vertical Data Type	: Slope/Zenith
Convergence Limit; Max Iterations	: 0.010000; 10
Default Coefficient of Refraction	: 0.070000
Create Coordinate File	: Yes
Create Geodetic Position File	: Yes
Create Ground Scale Coordinate File	: No
Create Dump File	: No
GPS Vector Standard Error Factors	: 7.8400
GPS Vector Centering (Meters)	: 0.00100
GPS Vector Transformations	: None

Summary of Unadjusted Input Observations

Number of Entered Stations (FeetInt) = 1

Fixed Stations	Latitude	Longitude	Elev	Description
Q366	33-43-31.441170	112-20-39.650430	1294.8200	

Number of GPS Vector Observations (FeetInt) = 120

From To	DeltaX DeltaY DeltaZ	StdErrX StdErrY StdErrZ	CorrelXY CorrelXZ CorrelYZ
(V1 Postprocessed 12-APR-2002 08:52:20.000 network control.asc)			
FRIA	14415.9492	0.0195	0.5384
112	-8199.4065	0.0335	-0.3690
	-3640.2506	0.0332	-0.6915

```
(V2 Postprocessed 12-APR-2002 09:51:30.000 network control.asc)
FRIA                        -4846.6484          0.0153           0.5138
113                          -815.0348          0.0236          -0.5935
                            -3031.6075          0.0270          -0.5499
(V3 Postprocessed 12-APR-2002 11:49:05.000 network control.asc)
FRIA                        13342.9353          0.0335           0.5745
4HD1                         2792.3781          0.0451          -0.4590
                            11172.0963          0.0375          -0.7166
(V4 Postprocessed 12-APR-2002 01:14:25.000 network control.asc)
115                          -799.2065          0.0291           0.5370
4HB1                        -3999.4340          0.0478          -0.4469
                            -6070.2222          0.0310          -0.5135
(V5 Postprocessed 15-APR-2002 12:23:50.000 network control.asc)
115                          -799.1712          0.0446           0.7277
4HB1                        -3999.3924          0.0603          -0.7689
                            -6070.2797          0.0515          -0.7699
(V6 Postprocessed 18-APR-2002 07:58:41.000 network control.asc)
4JD2                       -11163.0071          0.0225           0.8713
4KE1                        13971.8573          0.0494          -0.8476
                            13282.4494          0.0365          -0.9330
(V7 Postprocessed 18-APR-2002 09:47:25.000 network control.asc)
4IC1                        19447.2799          0.0188           0.4409
131                         -2767.7818          0.0296          -0.3952
                             7243.7299          0.0214          -0.5329
(V8 Postprocessed 18-APR-2002 12:15:00.000 network control.asc)
4IC1                         3770.4795          0.0523           0.5720
133                         13289.6310          0.0834          -0.6628
                            21019.7286          0.0710          -0.7440
(V9 Postprocessed 18-APR-2002 12:15:00.000 network control.asc)
4JD2                        15764.7196          0.0446           0.5463
133                          -938.8890          0.0700          -0.6781
                             7846.5331          0.0636          -0.6987
(V10 Postprocessed 30-APR-2002 10:54:10.000 network control.asc)
4JD2                        15764.7147          0.0337           0.5444
133                          -938.8823          0.0524          -0.5440
                             7846.4801          0.0452          -0.7584
(V11 Postprocessed 30-APR-2002 01:27:15.000 network control.asc)
4JD2                        15764.7049          0.0306           0.6059
133                          -938.8895          0.0493          -0.3733
                             7846.4621          0.0359          -0.6386
(V12 Postprocessed 19-APR-2002 12:09:00.000 network control.asc)
117                        -26910.8794          0.0424           0.5712
4HF3                         5808.2661          0.0660          -0.6490
                            -7270.6647          0.0576          -0.7455
(V13 Postprocessed 18-APR-2002 08:01:04.000 network control.asc)
4JD2                        11994.2288          0.0211           0.8653
4IC1                       -14228.5388          0.0457          -0.8498
                           -13173.1822          0.0340          -0.9301
(V14 Postprocessed 18-APR-2002 01:36:15.000 network control.asc)
4JD2                        -8016.5762          0.0402           0.6049
117                        -10019.2336          0.0707          -0.4834
                           -18748.0226          0.0409          -0.5747
(V15 Postprocessed 23-APR-2002 12:23:15.000 network control.asc)
4JD2                        -8016.5799          0.0302           0.5287
117                        -10019.2872          0.0472          -0.5936
                           -18748.0189          0.0350          -0.6170
```

```
(V17 Postprocessed 16-APR-2002 11:08:15.000 network control.asc)
4IE2                        -761.3355          0.0302          0.4974
118                        -1441.3464          0.0444         -0.3366
                           -2456.1564          0.0364         -0.6629
(V18 Postprocessed 22-APR-2002 10:21:45.000 network control.asc)
4IE2                        -761.3925          0.0113          0.4053
118                        -1441.3167          0.0159         -0.3781
                           -2456.1506          0.0124         -0.5365
(V19 Postprocessed 15-APR-2002 11:00:25.000 network control.asc)
115                         4895.2701          0.0327          0.4564
Q366                        2989.7099          0.0488         -0.3141
                            7078.3559          0.0348         -0.6071
(V20 Postprocessed 15-APR-2002 10:47:30.000 network control.asc)
4GC1                      -11064.8389          0.0225          0.2341
112                         4283.0726          0.0453         -0.2649
                            -309.4765          0.0300         -0.6858
(V21 Postprocessed 15-APR-2002 09:26:40.000 network control.asc)
115                        13097.0757          0.0373          0.6561
137                        -5375.3899          0.0587         -0.7159
                             -93.7193          0.0795         -0.7060
(V22 Postprocessed 15-APR-2002 09:02:20.000 network control.asc)
4GC1                       18623.2272          0.0395          0.9135
115                         7004.7973          0.0856         -0.9151
                           20477.9707          0.0644         -0.9539
(V24 Postprocessed 15-APR-2002 12:48:25.000 network control.asc)
4IC1                       13682.1074          0.1008          0.8592
115                       -10431.1246          0.1301         -0.8781
                           -6847.2833          0.1075         -0.8626
(V25 Postprocessed 15-APR-2002 12:23:50.000 network control.asc)
4GC1                       17824.0880          0.0368          0.4961
4HB1                        3005.3875          0.0602         -0.5686
                           14407.6746          0.0465         -0.6091
(V27 Postprocessed 12-APR-2002 12:03:50.000 network control.asc)
FRIA                       -5044.1111          0.0578          0.5621
114                         1367.1549          0.0927         -0.4909
                            -950.5149          0.0852         -0.7784
(V30 Postprocessed 22-APR-2002 08:57:35.000 network control.asc)
4HF3                      -23922.6741          0.0433          0.7344
124                         4642.6182          0.0705         -0.7655
                           -7290.5929          0.1052         -0.8040
(V31 Postprocessed 19-APR-2002 12:09:00.000 network control.asc)
117                         2931.7643          0.0458          0.5639
4HD1                       -6370.2922          0.0689         -0.6875
                           -7247.4207          0.0636         -0.6911
(V32 Postprocessed 19-APR-2002 08:03:05.000 network control.asc)
4HF3                      -15336.5700          0.0240          0.6505
123                         -447.9213          0.0428         -0.5480
                           -9104.5415          0.0332         -0.7699
(V33 Postprocessed 19-APR-2002 09:06:50.000 network control.asc)
114                       -11455.6208          0.0341          0.6881
4HF3                       13603.6670          0.0562         -0.7307
                           12099.4500          0.0800         -0.7576
(V34 Postprocessed 22-APR-2002 08:29:45.000 network control.asc)
4KE1                        4887.7352          0.0146          0.4977
4LE2                        5836.8361          0.0246         -0.3046
                           11199.5658          0.0268         -0.6640
```

```
(V35 Postprocessed 22-APR-2002 07:42:15.000 network control.asc)
4KE1                        6572.6151          0.0259           0.7210
128                         3876.4512          0.0454          -0.6104
                            9395.8072          0.0306          -0.7965
(V36 Postprocessed 22-APR-2002 09:58:15.000 network control.asc)
4KE1                       16780.1144          0.0339           0.5083
245                        -8337.5120          0.0569          -0.4861
                           -2002.1965          0.0334          -0.6727
(V37 Postprocessed 22-APR-2002 07:42:58.000 network control.asc)
4IE2                      -17817.8084          0.0177           0.5998
4HF3                       -1500.1679          0.0306          -0.5218
                          -12309.1367          0.0273          -0.7227
(V38 Postprocessed 22-APR-2002 10:45:45.000 network control.asc)
4IE2                      -17817.8025          0.0175           0.8599
4HF3                       -1500.1674          0.0374          -0.8419
                          -12309.1349          0.0279          -0.9277
(V39 Postprocessed 22-APR-2002 10:45:45.000 network control.asc)
118                       -17056.3954          0.0332           0.4779
4HF3                          -58.8387          0.0472          -0.3266
                           -9852.9622          0.0397          -0.6289
(V40 Postprocessed 23-APR-2002 10:30:20.000 network control.asc)
124                        10274.9627          0.0205           0.4609
122                        -1952.9294          0.0295          -0.3024
                            3343.5261          0.0225          -0.5997
(V41 Postprocessed 23-APR-2002 09:41:45.000 network control.asc)
4GG2                       -1983.6515          0.0144           0.4070
122                         4554.3385          0.0226          -0.3997
                            5019.0613          0.0161          -0.4721
(V42 Postprocessed 23-APR-2002 08:44:05.000 network control.asc)
123                         3672.5096          0.0141           0.6541
4GG2                       -1416.7480          0.0222          -0.6933
                             138.4265          0.0304          -0.7474
(V43 Postprocessed 23-APR-2002 11:20:20.000 network control.asc)
124                         8586.1093          0.0159           0.5218
123                        -5090.5190          0.0247          -0.4945
                           -1813.9785          0.0219          -0.7349
(V44 Postprocessed 23-APR-2002 07:49:00.000 network control.asc)
4LE2                        1684.8651          0.0139           0.6370
128                        -1960.3940          0.0239          -0.4907
                           -1803.7460          0.0184          -0.7219
(V45 Postprocessed 23-APR-2002 11:57:30.000 network control.asc)
245                         3484.7613          0.0175           0.5090
4LD2                        5588.8031          0.0275          -0.6328
                           10100.6653          0.0251          -0.6614
(V46 Postprocessed 23-APR-2002 09:57:45.000 network control.asc)
4LD2                       25003.6295          0.0292           0.4902
4LB2                      -11281.2531          0.0480          -0.4756
                           -1598.4641          0.0290          -0.6460
(V47 Postprocessed 23-APR-2002 08:55:35.000 network control.asc)
4LD2                      -15377.1191          0.0276           0.6372
4LE2                        8585.5586          0.0511          -0.6652
                            3101.1211          0.0720          -0.7364
(V48 Postprocessed 23-APR-2002 11:57:30.000 network control.asc)
4JD2                        5617.0885          0.0159           0.5329
245                         5634.3161          0.0250          -0.6309
                           11280.2563          0.0211          -0.7034
```

```
(V49 Postprocessed 23-APR-2002 09:00:05.000 network control.asc)
4IC1                    -12984.7953          0.0177           0.5849
116                       5340.2420          0.0288          -0.6357
                            49.1517          0.0383          -0.6548
(V50 Postprocessed 24-APR-2002 12:13:10.000 network control.asc)
119                     -13117.9927          0.0277           0.5677
4IG2                      4695.6645          0.0424          -0.6435
                          -984.4399          0.0323          -0.6718
(V51 Postprocessed 24-APR-2002 10:17:35.000 network control.asc)
119                     -13118.0202          0.0307           0.4798
4IG2                      4695.6560          0.0445          -0.4518
                          -984.4083          0.0325          -0.5726
(V52 Postprocessed 24-APR-2002 09:33:05.000 network control.asc)
4IG2                      -3188.8877          0.0141           0.4036
120                       2621.6355          0.0220          -0.4195
                          1822.4291          0.0167          -0.4673
(V53 Postprocessed 25-APR-2002 09:20:20.000 network control.asc)
120                       3188.8623          0.0311           0.4826
4IG2                      -2621.6537          0.0485          -0.5465
                          -1822.4390          0.0564          -0.5006
(V54 Postprocessed 24-APR-2002 11:25:40.000 network control.asc)
124                      11553.4063          0.0339           0.5609
4IG2                      9577.5630          0.0547          -0.5788
                         20058.2901          0.0490          -0.7758
(V55 Postprocessed 25-APR-2002 09:20:20.000 network control.asc)
4IG2                     -11553.3566          0.0369           0.4411
124                       -9577.5499          0.0613          -0.4552
                         -20058.3413          0.0480          -0.4968
(V56 Postprocessed 24-APR-2002 09:23:10.000 network control.asc)
4IG2                      12369.3818          0.0270           0.8924
4HF3                     -14220.1337          0.0576          -0.8875
                         -12767.7794          0.0431          -0.9489
(V57 Postprocessed 24-APR-2002 10:28:25.000 network control.asc)
4HH2                      13150.6063          0.0426           0.5006
4IG2                       2879.8582          0.0617          -0.3313
                          11711.1147          0.0469          -0.6399
(V58 Postprocessed 25-APR-2002 09:30:55.000 network control.asc)
4HH2                      13150.5885          0.0338           0.4441
4IG2                       2879.8577          0.0507          -0.4969
                          11711.1537          0.0426          -0.4560
(V59 Postprocessed 24-APR-2002 12:13:10.000 network control.asc)
119                        -748.6688          0.0396           0.6569
4HF3                      -9524.4676          0.0613          -0.7180
                         -13752.2366          0.0444          -0.7658
(V60 Postprocessed 24-APR-2002 10:17:35.000 network control.asc)
119                        -748.6912          0.0341           0.4723
4HF3                      -9524.4265          0.0492          -0.3621
                         -13752.2247          0.0342          -0.5730
(V61 Postprocessed 24-APR-2002 11:25:40.000 network control.asc)
124                      23922.7854          0.0301           0.5863
4HF3                      -4642.5652          0.0506          -0.5762
                           7290.5174          0.0461          -0.7835
(V62 Postprocessed 24-APR-2002 11:41:50.000 network control.asc)
4GG2                      11663.9911          0.0298           0.5733
4HF3                       1864.6864          0.0453          -0.6403
                           8966.0543          0.0399          -0.7325
```

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(V63 Postprocessed 25-APR-2002 10:07:30.000 network control.asc)
121                        -2887.0495          0.0247           0.5160
4JH5                        5448.2915          0.0353          -0.4979
                            5833.8215          0.0280          -0.6434
(V64 Postprocessed 26-APR-2002 08:49:05.000 network control.asc)
121                        -2886.9825          0.0200           0.5699
4JH5                        5448.2604          0.0326          -0.6301
                            5833.7873          0.0426          -0.6392
(V65 Postprocessed 25-APR-2002 12:18:55.000 network control.asc)
121                         2511.1671          0.0279           0.5670
120                        -5330.2221          0.0419          -0.5835
                           -6024.0285          0.0281          -0.5847
(V66 Postprocessed 25-APR-2002 09:02:40.000 network control.asc)
121                         2511.1680          0.0139           0.4431
120                        -5330.2108          0.0236          -0.4560
                           -6024.0154          0.0302          -0.5281
(V67 Postprocessed 25-APR-2002 12:21:15.000 network control.asc)
120                        -9961.6878          0.0465           0.5874
4HH2                       -5501.5219          0.0683          -0.6428
                          -13533.6054          0.0467          -0.6438
(V68 Postprocessed 25-APR-2002 09:30:55.000 network control.asc)
121                        -7450.5933          0.0417           0.4519
4HH2                      -10831.7673          0.0643          -0.5095
                          -19557.5721          0.0508          -0.4879
(V69 Postprocessed 25-APR-2002 12:21:15.000 network control.asc)
4HH2                        7450.5664          0.0322           0.5771
121                        10831.7319          0.0481          -0.5547
                           19557.6219          0.0315          -0.5580
(V70 Postprocessed 25-APR-2002 09:20:20.000 network control.asc)
121                         5700.0209          0.0189           0.4341
4IG2                       -7951.8641          0.0306          -0.4264
                           -7846.4369          0.0237          -0.4921
(V71 Postprocessed 25-APR-2002 09:30:55.000 network control.asc)
124                        -1597.2230          0.0276           0.4384
4HH2                        6697.6495          0.0443          -0.4562
                            8347.1774          0.0326          -0.4865
(V72 Postprocessed 25-APR-2002 12:21:15.000 network control.asc)
124                        -1597.2312          0.0279           0.5551
4HH2                        6697.6360          0.0424          -0.5225
                            8347.1496          0.0277          -0.5350
(V73 Postprocessed 26-APR-2002 08:07:45.000 network control.asc)
121                        13489.4779          0.0314           0.9040
4LH2                       19576.8980          0.0678          -0.8908
                           35201.6304          0.0534          -0.9485
(V75 Postprocessed 26-APR-2002 10:18:45.000 network control.asc)
4LH2                       12842.3591          0.0269           0.5341
125                       -19128.4936          0.0364          -0.4509
                          -19282.8798          0.0295          -0.6600
(V76 Postprocessed 26-APR-2002 09:58:25.000 network control.asc)
126                         3767.3139          0.0220           0.4440
4LH2                        -278.6363          0.0332          -0.3485
                            1881.7787          0.0216          -0.5552
(V77 Postprocessed 26-APR-2002 08:44:05.000 network control.asc)
127                         3985.7105          0.0177           0.6288
4LH2                       -2545.3733          0.0274          -0.6922
                           -1121.9537          0.0368          -0.6904
```

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(V78 Postprocessed 26-APR-2002 10:55:30.000 network control.asc)
4LE2                      -33232.1388          0.0369           0.5466
4LH2                       17729.0785          0.0583          -0.4740
                            5315.1467          0.0510          -0.7672
(V79 Postprocessed 30-APR-2002 11:22:05.000 network control.asc)
4LE2                      -33232.1661          0.0284           0.5511
4LH2                       17729.1550          0.0439          -0.6655
                            5315.1530          0.0402          -0.7011
(V80 Postprocessed 26-APR-2002 09:58:25.000 network control.asc)
121                         9722.1051          0.0365           0.4475
126                        19855.5021          0.0547          -0.3062
                           33319.8719          0.0361          -0.5190
(V81 Postprocessed 26-APR-2002 08:44:05.000 network control.asc)
121                         9503.7168          0.0376           0.7074
127                        22122.2331          0.0538          -0.7843
                           36323.6545          0.0728          -0.7388
(V82 Postprocessed 26-APR-2002 08:40:30.000 network control.asc)
4JF2                      -23748.8983          0.0239           0.6081
121                         5869.6140          0.0383          -0.6645
                           -5479.0011          0.0513          -0.6746
(V83 Postprocessed 26-APR-2002 10:13:30.000 network control.asc)
4JF2                      -23748.9096          0.0434           0.4842
121                         5869.5872          0.0623          -0.3515
                           -5479.0009          0.0477          -0.6108
(V84 Postprocessed 26-APR-2002 10:18:45.000 network control.asc)
4JF2                        2582.8893          0.0208           0.4627
125                         6317.9117          0.0289          -0.4017
                           10439.7746          0.0246          -0.5590
(V85 Postprocessed 26-APR-2002 10:55:30.000 network control.asc)
4LE2                      -20389.7817          0.0402           0.5668
125                        -1399.4380          0.0653          -0.5001
                          -13967.7230          0.0596          -0.7871
(V86 Postprocessed 26-APR-2002 08:49:05.000 network control.asc)
4JH5                       12390.7660          0.0356           0.6429
127                        16673.9833          0.0558          -0.7044
                           30489.8183          0.0739          -0.6875
(V87 Postprocessed 26-APR-2002 08:49:05.000 network control.asc)
4JF2                      -26635.9402          0.0270           0.5351
4JH5                       11317.8681          0.0508          -0.5730
                             354.8315          0.0650          -0.6191
(V88 Postprocessed 30-APR-2002 08:05:35.000 network control.asc)
FRIA                       13342.9610          0.0242           0.6497
4HD1                        2792.2951          0.0400          -0.6398
                           11172.0790          0.0518          -0.7564
(V89 Postprocessed 30-APR-2002 09:25:00.000 network control.asc)
116                        -4094.1555          0.0261           0.4540
4HD1                       -7501.2384          0.0413          -0.4346
                          -12871.4352          0.0256          -0.5757
(V90 Postprocessed 30-APR-2002 09:24:10.000 network control.asc)
117                         2931.7610          0.0196           0.4457
4HD1                       -6370.2912          0.0310          -0.4192
                           -7247.4524          0.0193          -0.5642
(V91 Postprocessed 30-APR-2002 08:46:40.000 network control.asc)
4LD2                      -10159.0990          0.0382           0.6014
129                        11020.7432          0.0516          -0.7048
                            9844.3097          0.0647          -0.6167
```

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(V92 Postprocessed 30-APR-2002 10:23:45.000 network control.asc)
4LD2                      -10159.1080          0.0349           0.5447
129                        11020.7387          0.0501          -0.3839
                            9844.3144          0.0444          -0.7166
(V93 Postprocessed 30-APR-2002 08:46:40.000 network control.asc)
4LE2                        5218.0361          0.0201           0.5451
129                         2435.2082          0.0271          -0.6218
                            6743.1541          0.0359          -0.5767
(V94 Postprocessed 30-APR-2002 10:23:45.000 network control.asc)
4LE2                        5218.0222          0.0229           0.4837
129                         2435.2008          0.0305          -0.3209
                            6743.1522          0.0270          -0.6433
(V95 Postprocessed 30-APR-2002 01:06:30.000 network control.asc)
133                         3273.3222          0.0260           0.5513
13002                       5565.6473          0.0429          -0.3391
                            9817.1913          0.0270          -0.5481
(V96 Postprocessed 30-APR-2002 03:49:00.000 network control.asc)
133                        13754.3552          0.0290           0.7093
132                        -5621.6213          0.0498           0.2001
                              22.5846          0.0513          -0.0414
(V97 Postprocessed 30-APR-2002 10:33:15.000 network control.asc)
133                        -6662.7693          0.0184           0.8971
4LD2                       12162.0920          0.0409          -0.8648
                           13534.4011          0.0299          -0.9420
(V98 Postprocessed 30-APR-2002 10:54:10.000 network control.asc)
4IE2                       17109.6441          0.0288           0.5415
4JD2                        2710.8563          0.0433          -0.5456
                           13709.5032          0.0354          -0.7515
(V99 Postprocessed 30-APR-2002 01:28:35.000 network control.asc)
4JD2                      -17109.7079          0.0342           0.5359
4IE2                       -2710.8514          0.0580          -0.3809
                          -13709.5411          0.0441          -0.6432
(V100 Postprocessed 30-APR-2002 11:44:50.000 network control.asc)
4LB2                      -25003.5668          0.0307           0.5574
4LD2                       11281.2486          0.0476          -0.6497
                            1598.4285          0.0382          -0.6847
(V101 Postprocessed 30-APR-2002 08:23:15.000 network control.asc)
4LE2                       15377.1393          0.0205           0.8841
4LD2                       -8585.5214          0.0439          -0.8839
                           -3101.1284          0.0337          -0.9448
(V102 Postprocessed 01-MAY-2002 09:00:35.000 network control.asc)
1IA1                      -10121.1308          0.0279           0.4458
Q366                        4188.8461          0.0469          -0.3674
                             155.1047          0.0349          -0.5416
(V103 Postprocessed 01-MAY-2002 08:10:35.000 network control.asc)
1IA1                        1464.7665          0.0134           0.5843
130                         4118.8608          0.0236          -0.5664
                            6664.5579          0.0313          -0.7247
(V104 Postprocessed 01-MAY-2002 12:43:25.000 network control.asc)
1IA1                        1464.7315          0.0177           0.6186
130                         4118.8165          0.0302          -0.4252
                            6664.5566          0.0167          -0.5757
(V105 Postprocessed 01-MAY-2002 08:18:00.000 network control.asc)
1KA2                      -12659.0215          0.0370           0.7163
130                        -6176.7662          0.0601          -0.7582
                          -15697.2095          0.0891          -0.7833
```

```
(V106 Postprocessed 01-MAY-2002 12:43:25.000 network control.asc)
1KA2                      -12659.0688          0.0298           0.5949
130                        -6176.8000          0.0481          -0.3949
                          -15697.2233          0.0287          -0.4937
(V107 Postprocessed 01-MAY-2002 10:18:55.000 network control.asc)
1IA1                       -9251.3567          0.0251           0.4927
131                         8862.3905          0.0332          -0.3207
                            7167.7159          0.0296          -0.6407
(V108 Postprocessed 01-MAY-2002 10:18:55.000 network control.asc)
131                        23375.1673          0.0352           0.5367
1KA2                        1433.1951          0.0511          -0.3787
                           15194.0420          0.0457          -0.7196
(V109 Postprocessed 01-MAY-2002 10:18:55.000 network control.asc)
4JB3                        2379.0928          0.0167           0.4772
131                        -3460.8241          0.0216          -0.2979
                           -3542.0691          0.0186          -0.6107
(V110 Postprocessed 01-MAY-2002 12:35:15.000 network control.asc)
132                        25297.5373          0.0311           0.6049
1KA2                       -9002.4669          0.0492          -0.4263
                            1395.4446          0.0284          -0.4868
(V111 Postprocessed 01-MAY-2002 12:35:15.000 network control.asc)
4LB2                       -4586.3993          0.0247           0.5986
132                        -6502.4428          0.0394          -0.4081
                          -11913.3743          0.0223          -0.4820
(V112 Postprocessed 01-MAY-2002 11:22:45.000 network control.asc)
4JB3                      -13297.6701          0.0386           0.5556
133                        12596.5337          0.0598          -0.6736
                           10233.9149          0.0547          -0.7014
(V113 Postprocessed 01-MAY-2002 09:44:05.000 network control.asc)
1IA1                       -1919.3198          0.0163           0.4338
137                        -4176.2919          0.0243          -0.4172
                           -7017.0200          0.0175          -0.5603
(V114 Postprocessed 01-MAY-2002 01:53:35.000 network control.asc)
1IA1                       14123.7811          0.0373           0.7595
1KA2                       10295.6907          0.0551          -0.6497
                           22361.7796          0.0420          -0.7164
(V115 Postprocessed 01-MAY-2002 08:18:00.000 network control.asc)
1IA1                       14123.7682          0.0193           0.8797
1KA2                       10295.6203          0.0409          -0.8710
                           22361.8226          0.0311          -0.9353
(V116 Postprocessed 01-MAY-2002 01:55:05.000 network control.asc)
4LB2                       20711.0854          0.0399           0.7611
1KA2                      -15504.8999          0.0582          -0.6568
                          -10517.9196          0.0447          -0.7116
(V117 Postprocessed 01-MAY-2002 08:27:35.000 network control.asc)
4LB2                       20711.0857          0.0203           0.8753
1KA2                      -15504.9739          0.0428          -0.8656
                          -10517.9119          0.0328          -0.9335
(V118 Postprocessed 01-MAY-2002 09:34:45.000 network control.asc)
4JB3                       25754.2628          0.0239           0.4759
1KA2                       -2027.6439          0.0349          -0.3656
                           11651.9827          0.0258          -0.6180
(V119 Postprocessed 01-MAY-2002 11:09:05.000 network control.asc)
4JB3                       25754.2542          0.0310           0.5667
1KA2                       -2027.6150          0.0490          -0.6383
                           11651.9878          0.0421          -0.7474
```

```
(V120 Postprocessed 01-MAY-2002 09:34:45.000 network control.asc)
4JB3                        5043.1868          0.0248          0.4695
4LB2                       13477.3574          0.0363         -0.3666
                           22169.8812          0.0269         -0.6235
(V121 Postprocessed 01-MAY-2002 11:09:05.000 network control.asc)
4JB3                        5043.1859          0.0301          0.5576
4LB2                       13477.3693          0.0488         -0.6330
                           22169.8783          0.0420         -0.7556
(V122 Postprocessed 02-MAY-2002 08:58:15.000 network control.asc)
4LB2                        4125.8584          0.0146          0.4194
134                        -1045.5885          0.0248         -0.3262
                             817.0792          0.0181         -0.5312
(V123 Postprocessed 02-MAY-2002 09:43:45.000 network control.asc)
4LB2                      -15067.4448          0.0205          0.4632
13002                       4684.8343          0.0300         -0.4500
                           -2118.7072          0.0216         -0.5622
(V124 Postprocessed 02-MAY-2002 08:07:45.000 network control.asc)
1KA2                      -16585.2179          0.0313          0.6316
134                        14459.3880          0.0575         -0.6200
                           11334.9909          0.0780         -0.7458
(V125 Postprocessed 03-MAY-2002 01:16:50.000 network control.asc)
4KE1                      -18084.8602          0.0300          0.5865
4JF2                       -1880.4530          0.0522         -0.3734
                          -13207.9496          0.0389         -0.6798
(V126 Postprocessed 03-MAY-2002 11:01:45.000 network control.asc)
114                          197.4178          0.0153          0.5418
113                        -2182.1823          0.0232         -0.5883
                           -2081.0750          0.0206         -0.7197
```

Adjustment Statistical Summary

```
Convergence Iterations  =     2

Number of Stations      =    48

Number of Observations  =   360
Number of Unknowns      =   141
Number of Redundant Obs =   219
```

Observation	Count	Sum Squares of StdRes	Error Factor
GPS Deltas	360	218.979	1.000
Total	360	218.979	1.000

The Chi-Square Test at 5.00% Level Passed
Lower/Upper Bounds (0.906/1.094)

Adjusted Station Information

Adjusted Coordinates (FeetInt)

Maricopa County

stewart geo technologies

Station	N	E	Elev	Description
112	958452.9993	540017.5467	1199.9369	
113	958771.8224	519399.4681	1987.1877	
114	961584.6550	518397.9019	1524.5669	
115	983293.3643	566541.3726	1214.5416	
116	991625.2106	535919.4402	1368.8682	
117	984909.9923	529823.8681	1349.8503	
118	988037.1685	518493.2482	1410.1911	
119	992775.6108	499833.4448	1503.8351	
120	993862.0968	481975.7554	1563.7983	
121	1001096.5566	477657.4426	1622.6829	
122	971553.6421	489029.7875	1535.4708	
123	965298.8517	488635.0840	1628.0961	
124	967649.6502	478768.4669	1471.9702	
125	1020021.4506	501917.8629	1714.4034	
126	1041045.7404	479267.7250	1823.3987	
127	1044665.8339	478219.1886	1829.9031	
128	1034421.3691	522605.8838	1887.2342	
129	1044523.9820	524245.0523	2153.5746	
130	999511.5801	580740.4011	1303.6317	
131	1000152.5839	569029.7876	1319.8340	
132	1016603.2744	563353.4762	1575.2004	
133	1016629.7788	548496.8969	1597.1769	
134	1031804.8966	569399.3439	1713.4397	
137	983160.8141	580696.3000	1158.8699	
245	1020767.8841	536631.2329	1676.5729	
13002	1028337.9809	549457.2160	1747.6954	
1IA1	991544.6618	580918.4805	1233.6412	
1KA2	1018369.3092	590177.6673	1287.2532	
4GC1	958797.2904	551879.8836	1153.8232	
4GG2	965445.3512	492570.5903	1618.5006	
4HB1	976019.9987	567292.4345	1177.6640	
4HD1	976209.6838	534920.5742	1294.8783	
4HF3	976278.7574	502693.0234	1428.2511	
4HH2	977709.7373	474786.8952	1467.7388	
4IC1	991524.6065	549957.2479	1325.8055	
4IE2	990979.7841	518661.7236	1423.6570	
4IG2	991657.1190	485912.2397	1544.1129	
4JB3	1004387.5053	565531.6415	1379.0015	
4JD2	1007321.9080	533522.2238	1514.7618	
4JF2	1007550.8604	501878.6091	1581.8509	
4JH5	1008155.8170	472945.6162	1609.0711	
4KE1	1023250.0072	517954.2995	1721.9077	
4LB2	1030808.9841	565182.2836	1758.6734	
4LD2	1032767.3468	537779.7015	1901.8504	
4LE2	1036581.8062	520311.6360	1923.2425	
4LH2	1043247.5177	482867.1006	1881.3801	
FRIA	962716.2026	523586.9766	1495.3696	
Q366	991733.7744	569967.0277	1294.8200	

Adjusted Positions and Ellipsoid Heights (FeetInt)
(Average Geoid Height = 0.000 Meters, 0.000 FeetInt)

Station	Latitude	Longitude	Ellip Ht
112	33-38-00.811430	112-26-32.249584	1199.9369
113	33-38-02.862360	112-30-36.128131	1987.1877

114	33-38-30.633713	112-30-48.165950	1524.5669
115	33-42-07.793824	112-21-19.785897	1214.5416
116	33-43-28.788316	112-27-22.768852	1368.8682
117	33-42-22.031451	112-28-34.508482	1349.8503
118	33-42-52.341563	112-30-48.845797	1410.1911
119	33-43-38.097085	112-34-30.103600	1503.8351
120	33-43-47.668192	112-38-01.625898	1563.7983
121	33-44-58.938272	112-38-53.362878	1622.6829
122	33-40-07.446326	112-36-36.330767	1535.4708
123	33-39-05.540655	112-36-40.503558	1628.0961
124	33-39-28.126200	112-38-37.415825	1471.9702
125	33-48-07.772367	112-34-07.464686	1714.4034
126	33-51-34.261256	112-38-37.633138	1823.3987
127	33-52-10.000316	112-38-50.371759	1829.9031
128	33-50-31.460173	112-30-03.272036	1887.2342
129	33-52-11.497360	112-29-44.512499	2153.5746
130	33-44-48.814357	112-18-32.441675	1303.6317
131	33-44-54.693708	112-20-51.163845	1319.8340
132	33-47-37.206835	112-21-59.240470	1575.2004
133	33-47-36.792378	112-24-55.284641	1597.1769
134	33-50-07.856904	112-20-48.352182	1713.4397
137	33-42-07.046034	112-18-32.227865	1158.8699
245	33-48-17.140912	112-27-16.141457	1676.5729
13002	33-49-32.670358	112-24-44.573323	1747.6954
1IA1	33-43-30.000314	112-18-29.974445	1233.6412
1KA2	33-47-55.724043	112-16-41.457557	1287.2532
4GC1	33-38-04.791930	112-24-11.967315	1153.8232
4GG2	33-39-07.249130	112-35-53.959795	1618.5006
4HB1	33-40-55.866136	112-21-10.531946	1177.6640
4HD1	33-40-56.225387	112-27-33.636012	1294.8783
4HF3	33-40-55.070446	112-33-55.019176	1428.2511
4HH2	33-41-07.371218	112-39-25.371564	1467.7388
4IC1	33-43-28.488212	112-24-36.556447	1325.8055
4IE2	33-43-21.463159	112-30-47.052622	1423.6570
4IG2	33-43-26.122569	112-37-14.838927	1544.1129
4JB3	33-45-36.445001	112-21-32.808762	1379.0015
4JD2	33-46-03.954995	112-27-52.138707	1514.7618
4JF2	33-46-04.398175	112-34-06.994756	1581.8509
4JH5	33-46-08.440368	112-39-49.770184	1609.0711
4KE1	33-48-40.676599	112-30-57.649607	1721.9077
4LB2	33-49-57.826861	112-21-38.295827	1758.6734
4LD2	33-50-15.912743	112-27-03.269119	1901.8504
4LE2	33-50-52.703716	112-30-30.619869	1923.2425
4LH2	33-51-56.292642	112-37-55.133218	1881.3801
FRIA	33-38-42.120519	112-29-46.862346	1495.3696
Q366	33-43-31.441170	112-20-39.650430	1294.8200

Convergence Angles (DMS) and Grid Factors at Stations
(Grid Azimuth = Geodetic Azimuth - Convergence)
(Elevation Factor Includes a 0.00 Meter Geoid Height Correction)

Station	Convergence Angle	------- Factors ------- Scale	x Elevation	= Combined
112	-0-17-28.10	0.99992930	0.99994259	0.99987189
113	-0-19-43.20	0.99993734	0.99990492	0.99984227
114	-0-19-50.11	0.99993776	0.99992705	0.99986482

115	-0-14-36.60	0.99992039	0.99994189	0.99986228
116	-0-17-58.65	0.99993082	0.99993450	0.99986533
117	-0-18-37.94	0.99993316	0.99993541	0.99986858
118	-0-19-52.76	0.99993772	0.99993253	0.99987025
119	-0-21-56.02	0.99994587	0.99992805	0.99987392
120	-0-23-53.57	0.99995442	0.99992518	0.99987961
121	-0-24-23.06	0.99995660	0.99992236	0.99987897
122	-0-23-03.99	0.99995096	0.99992653	0.99987750
123	-0-23-05.68	0.99995115	0.99992210	0.99987326
124	-0-24-10.71	0.99995604	0.99992957	0.99988561
125	-0-21-46.00	0.99994492	0.99991797	0.99986290
126	-0-24-18.49	0.99995578	0.99991276	0.99986855
127	-0-24-25.97	0.99995631	0.99991245	0.99986877
128	-0-19-31.35	0.99993603	0.99990971	0.99984574
129	-0-19-21.74	0.99993537	0.99989696	0.99983234
130	-0-13-04.66	0.99991628	0.99993763	0.99985391
131	-0-14-21.76	0.99991964	0.99993685	0.99985649
132	-0-15-00.64	0.99992138	0.99992463	0.99984602
133	-0-16-38.56	0.99992628	0.99992358	0.99984987
134	-0-14-22.15	0.99991953	0.99991802	0.99983755
137	-0-13-03.62	0.99991630	0.99994455	0.99986085
245	-0-17-57.22	0.99993056	0.99991978	0.99985035
13002	-0-16-33.43	0.99992595	0.99991638	0.99984233
1IA1	-0-13-02.84	0.99991624	0.99994097	0.99985721
1KA2	-0-12-03.98	0.99991381	0.99993841	0.99985222
4GC1	-0-16-10.42	0.99992512	0.99994479	0.99986992
4GG2	-0-22-39.90	0.99994926	0.99992256	0.99987183
4HB1	-0-14-31.01	0.99992016	0.99994365	0.99986382
4HD1	-0-18-03.48	0.99993120	0.99993804	0.99986925
4HF3	-0-21-35.00	0.99994457	0.99993166	0.99987624
4HH2	-0-24-38.36	0.99995807	0.99992977	0.99988785
4IC1	-0-16-26.36	0.99992578	0.99993656	0.99986234
4IE2	-0-19-52.02	0.99993765	0.99993188	0.99986954
4IG2	-0-23-27.37	0.99995248	0.99992612	0.99987860
4JB3	-0-14-45.16	0.99992070	0.99993402	0.99985473
4JD2	-0-18-16.19	0.99993173	0.99992752	0.99985926
4JF2	-0-21-44.57	0.99994494	0.99992431	0.99986926
4JH5	-0-24-55.16	0.99995903	0.99992301	0.99988204
4KE1	-0-20-00.68	0.99993794	0.99991761	0.99985556
4LB2	-0-14-49.90	0.99992081	0.99991586	0.99983667
4LD2	-0-17-50.98	0.99993013	0.99990901	0.99983914
4LE2	-0-19-46.77	0.99993697	0.99990798	0.99984495
4LH2	-0-23-55.04	0.99995398	0.99990999	0.99986397
FRIA	-0-19-16.25	0.99993563	0.99992845	0.99986409
Q366	-0-14-14.85	0.99991936	0.99993805	0.99985741
Project Averages:	-0-18-59.01	0.99993565	0.99992634	0.99986200

Adjusted Observations and Residuals

Adjusted GPS Vector Observations Sorted by Residuals (FeetInt)

From	Component	Adj Value	Residual	StdErr	StdRes
To					

(V62 Postprocessed 24-APR-2002 11:41:50.000 network control.asc)

4GG2	Delta-N	10901.2573	0.0272	0.0212	1.3
4HF3	Delta-E	10051.9797	0.0726	0.0226	3.2*
	Delta-U	-195.5108	-0.0185	0.0597	0.3
	Length	14829.6302			
(V24 Postprocessed 15-APR-2002 12:48:25.000 network control.asc)					
4IC1	Delta-N	-8152.9666	0.0505	0.0413	1.2
115	Delta-E	16625.5271	0.0115	0.0566	0.2
	Delta-U	-119.4551	-0.0598	0.1837	0.3
	Length	18517.3779			
(V61 Postprocessed 24-APR-2002 11:25:40.000 network control.asc)					
124	Delta-N	8798.2484	-0.0094	0.0232	0.4
4HF3	Delta-E	23866.0660	-0.0579	0.0227	2.5
	Delta-U	-59.1702	0.0502	0.0673	0.7
	Length	25436.2297			
(V30 Postprocessed 22-APR-2002 08:57:35.000 network control.asc)					
4HF3	Delta-N	-8780.1490	0.0214	0.0568	0.4
124	Delta-E	-23872.7871	-0.0245	0.0272	0.9
	Delta-U	28.2680	0.0680	0.1181	0.6
	Length	25436.2297			
(V21 Postprocessed 15-APR-2002 09:26:40.000 network control.asc)					
115	Delta-N	-72.4029	-0.0476	0.0458	1.0
137	Delta-E	14157.3015	0.0381	0.0260	1.5
	Delta-U	-60.4557	-0.0376	0.0916	0.4
	Length	14157.6157			
(V3 Postprocessed 12-APR-2002 11:49:05.000 network control.asc)					
FRIA	Delta-N	13558.5744	-0.0077	0.0226	0.3
4HD1	Delta-E	11259.1888	0.0312	0.0253	1.2
	Delta-U	-207.9253	0.0607	0.0584	1.0
	Length	17625.1951			
(V116 Postprocessed 01-MAY-2002 01:55:05.000 network control.asc)					
4LB2	Delta-N	-12333.5451	-0.0228	0.0272	0.8
1KA2	Delta-E	25052.4041	0.0262	0.0246	1.1
	Delta-U	-490.0479	0.0558	0.0751	0.7
	Length	27928.1119			
(V54 Postprocessed 24-APR-2002 11:25:40.000 network control.asc)					
124	Delta-N	24060.0371	-0.0015	0.0247	0.1
4IG2	Delta-E	6975.4342	-0.0374	0.0261	1.4
	Delta-U	57.1002	0.0519	0.0724	0.7
	Length	25050.8548			
(V125 Postprocessed 03-MAY-2002 01:16:50.000 network control.asc)					
4KE1	Delta-N	-15794.5245	-0.0108	0.0260	0.4
4JF2	Delta-E	-15986.2274	-0.0339	0.0228	1.5
	Delta-U	-152.1383	0.0508	0.0629	0.8
	Length	22473.3090			
(V99 Postprocessed 30-APR-2002 01:28:35.000 network control.asc)					
4JD2	Delta-N	-16423.0128	0.0137	0.0302	0.5
4IE2	Delta-E	-14775.4602	0.0593	0.0272	2.2
	Delta-U	-102.7830	-0.0114	0.0696	0.2
	Length	22091.6305			
(V17 Postprocessed 16-APR-2002 11:08:15.000 network control.asc)					
4IE2	Delta-N	-2943.9225	0.0029	0.0240	0.1
118	Delta-E	-151.4886	-0.0559	0.0244	2.3
	Delta-U	-13.6742	-0.0013	0.0551	0.0
	Length	2947.8493			
(V22 Postprocessed 15-APR-2002 09:02:20.000 network control.asc)					
4GC1	Delta-N	24568.1616	-0.0151	0.0152	1.0

115	Delta-E	14547.9439	0.0213	0.0149	1.4
	Delta-U	41.1930	-0.0491	0.1121	0.4
	Length	28552.3893			
(V5 Postprocessed 15-APR-2002 12:23:50.000 network control.asc)					
115	Delta-N	-7271.0991	0.0092	0.0254	0.4
4HB1	Delta-E	782.0641	-0.0065	0.0292	0.2
	Delta-U	-38.1600	0.0533	0.0823	0.6
	Length	7313.1363			
(V11 Postprocessed 30-APR-2002 01:27:15.000 network control.asc)					
4JD2	Delta-N	9388.7324	0.0190	0.0258	0.7
133	Delta-E	14927.1757	-0.0091	0.0225	0.4
	Delta-U	74.9833	0.0503	0.0590	0.9
	Length	17634.4689			
(V20 Postprocessed 15-APR-2002 10:47:30.000 network control.asc)					
4GC1	Delta-N	-400.1477	0.0204	0.0195	1.0
112	Delta-E	-11862.1283	-0.0382	0.0237	1.6
	Delta-U	42.7514	-0.0328	0.0502	0.7
	Length	11868.9526			
(V68 Postprocessed 25-APR-2002 09:30:55.000 network control.asc)					
121	Delta-N	-23409.2172	0.0019	0.0384	0.0
4HH2	Delta-E	-2705.0352	0.0188	0.0351	0.5
	Delta-U	-168.2591	-0.0507	0.0758	0.7
	Length	23565.5889			
(V88 Postprocessed 30-APR-2002 08:05:35.000 network control.asc)					
FRIA	Delta-N	13558.5744	0.0437	0.0287	1.5
4HD1	Delta-E	11259.1888	-0.0243	0.0170	1.4
	Delta-U	-207.9253	0.0146	0.0613	0.2
	Length	17625.1951			
(V9 Postprocessed 18-APR-2002 12:15:00.000 network control.asc)					
4JD2	Delta-N	9388.7324	-0.0434	0.0348	1.2
133	Delta-E	14927.1757	-0.0225	0.0348	0.6
	Delta-U	74.9833	0.0159	0.0922	0.2
	Length	17634.4689			
(V10 Postprocessed 30-APR-2002 10:54:10.000 network control.asc)					
4JD2	Delta-N	9388.7324	-0.0018	0.0239	0.1
133	Delta-E	14927.1757	-0.0154	0.0263	0.6
	Delta-U	74.9833	0.0489	0.0682	0.7
	Length	17634.4689			
(V57 Postprocessed 24-APR-2002 10:28:25.000 network control.asc)					
4HH2	Delta-N	14028.4651	0.0440	0.0328	1.3
4IG2	Delta-E	11026.3499	-0.0236	0.0343	0.7
	Delta-U	68.7532	0.0115	0.0746	0.2
	Length	17843.2887			
(V95 Postprocessed 30-APR-2002 01:06:30.000 network control.asc)					
133	Delta-N	11714.5625	0.0444	0.0230	1.9
13002	Delta-E	903.7453	0.0251	0.0203	1.2
	Delta-U	147.2084	0.0037	0.0480	0.1
	Length	11750.2936			
(V114 Postprocessed 01-MAY-2002 01:53:35.000 network control.asc)					
1IA1	Delta-N	26863.5613	-0.0148	0.0255	0.6
1KA2	Delta-E	9158.5554	0.0223	0.0231	1.0
	Delta-U	34.3053	0.0435	0.0708	0.6
	Length	28381.8823			
(V100 Postprocessed 30-APR-2002 11:44:50.000 network control.asc)					
4LB2	Delta-N	1840.4167	0.0097	0.0222	0.4
4LD2	Delta-E	-27415.3047	-0.0326	0.0237	1.4

	Delta-U	125.1572	0.0357	0.0601	0.6
	Length	27477.2948			
(V7 Postprocessed 18-APR-2002 09:47:25.000 network control.asc)					
4IC1	Delta-N	8720.3359	-0.0113	0.0165	0.7
131	Delta-E	19033.7186	-0.0464	0.0160	2.9
	Delta-U	-16.4419	-0.0108	0.0340	0.3
	Length	20936.2597			
(V73 Postprocessed 26-APR-2002 08:07:45.000 network control.asc)					
121	Delta-N	42192.5696	-0.0096	0.0137	0.7
4LH2	Delta-E	4910.7553	-0.0088	0.0124	0.7
	Delta-U	215.4350	0.0469	0.0900	0.5
	Length	42477.9338			
(V78 Postprocessed 26-APR-2002 10:55:30.000 network control.asc)					
4LE2	Delta-N	6451.0383	0.0289	0.0274	1.1
4LH2	Delta-E	-37487.6768	-0.0161	0.0288	0.6
	Delta-U	-76.4013	-0.0353	0.0761	0.5
	Length	38038.7650			
(V108 Postprocessed 01-MAY-2002 10:18:55.000 network control.asc)					
131	Delta-N	18307.6255	0.0099	0.0273	0.4
1KA2	Delta-E	21074.5854	-0.0438	0.0275	1.6
	Delta-U	-51.2185	-0.0156	0.0666	0.2
	Length	27916.1230			
(V104 Postprocessed 01-MAY-2002 12:43:25.000 network control.asc)					
1IA1	Delta-N	7967.3499	0.0232	0.0151	1.5
130	Delta-E	-208.3539	0.0071	0.0129	0.6
	Delta-U	68.4673	-0.0401	0.0334	1.2
	Length	7970.3679			
(V81 Postprocessed 26-APR-2002 08:44:05.000 network control.asc)					
121	Delta-N	43577.8584	-0.0252	0.0396	0.6
127	Delta-E	252.2420	0.0196	0.0248	0.8
	Delta-U	161.6830	-0.0330	0.0861	0.4
	Length	43578.8883			
(V60 Postprocessed 24-APR-2002 10:17:35.000 network control.asc)					
119	Delta-N	-16480.3140	-0.0011	0.0265	0.0
4HF3	Delta-E	2965.0757	0.0404	0.0281	1.4
	Delta-U	-82.3065	0.0197	0.0572	0.3
	Length	16745.1245			
(V106 Postprocessed 01-MAY-2002 12:43:25.000 network control.asc)					
1KA2	Delta-N	-18893.4976	0.0043	0.0266	0.2
130	Delta-E	-9372.4425	0.0308	0.0222	1.4
	Delta-U	5.7223	-0.0324	0.0532	0.6
	Length	21090.4472			
(V110 Postprocessed 01-MAY-2002 12:35:15.000 network control.asc)					
132	Delta-N	1883.4216	-0.0144	0.0270	0.5
1KA2	Delta-E	26820.0780	0.0004	0.0229	0.0
	Delta-U	-305.2009	0.0421	0.0543	0.8
	Length	26887.8599			
(V63 Postprocessed 25-APR-2002 10:07:30.000 network control.asc)					
121	Delta-N	7026.4914	-0.0099	0.0182	0.5
4JH5	Delta-E	-4762.3589	0.0410	0.0196	2.1
	Delta-U	-15.3370	0.0003	0.0438	0.0
	Length	8488.3378			
(V97 Postprocessed 30-APR-2002 10:33:15.000 network control.asc)					
133	Delta-N	16088.0849	-0.0084	0.0084	1.0
4LD2	Delta-E	-10796.9940	-0.0112	0.0075	1.5
	Delta-U	295.6850	0.0397	0.0527	0.8

	Length	19377.5382			
(V64 Postprocessed 26-APR-2002 08:49:05.000 network control.asc)					
121	Delta-N	7026.4914	0.0202	0.0262	0.8
4JH5	Delta-E	-4762.3589	-0.0328	0.0153	2.1
	Delta-U	-15.3370	0.0168	0.0485	0.3
	Length	8488.3378			
(V79 Postprocessed 30-APR-2002 11:22:05.000 network control.asc)					
4LE2	Delta-N	6451.0383	-0.0098	0.0220	0.4
4LH2	Delta-E	-37487.6768	0.0384	0.0220	1.7
	Delta-U	-76.4013	0.0112	0.0581	0.2
	Length	38038.7650			
(V115 Postprocessed 01-MAY-2002 08:18:00.000 network control.asc)					
1IA1	Delta-N	26863.5613	-0.0117	0.0088	1.3
1KA2	Delta-E	9158.5554	0.0075	0.0085	0.9
	Delta-U	34.3053	-0.0386	0.0535	0.7
	Length	28381.8823			
(V107 Postprocessed 01-MAY-2002 10:18:55.000 network control.asc)					
1IA1	Delta-N	8563.9689	0.0410	0.0198	2.1
131	Delta-E	-11923.0161	-0.0011	0.0202	0.1
	Delta-U	81.0410	-0.0003	0.0425	0.0
	Length	14680.1378			
(V31 Postprocessed 19-APR-2002 12:09:00.000 network control.asc)					
117	Delta-N	-8673.6923	-0.0226	0.0352	0.6
4HD1	Delta-E	5144.4384	0.0108	0.0350	0.3
	Delta-U	-57.4077	-0.0322	0.0918	0.4
	Length	10084.7151			
(V118 Postprocessed 01-MAY-2002 09:34:45.000 network control.asc)					
4JB3	Delta-N	14089.5232	0.0112	0.0184	0.6
1KA2	Delta-E	24589.3099	-0.0260	0.0196	1.3
	Delta-U	-110.9399	-0.0290	0.0416	0.7
	Length	28340.0976			
(V89 Postprocessed 30-APR-2002 09:25:00.000 network control.asc)					
116	Delta-N	-15422.5571	-0.0170	0.0204	0.8
4HD1	Delta-E	-918.4026	-0.0190	0.0220	0.9
	Delta-U	-79.7137	0.0303	0.0462	0.7
	Length	15450.0837			
(V85 Postprocessed 26-APR-2002 10:55:30.000 network control.asc)					
4LE2	Delta-N	-16668.1988	0.0146	0.0306	0.5
125	Delta-E	-18300.8214	-0.0116	0.0309	0.4
	Delta-U	-223.4947	-0.0348	0.0869	0.4
	Length	24754.7746			
(V111 Postprocessed 01-MAY-2002 12:35:15.000 network control.asc)					
4LB2	Delta-N	-14215.6581	-0.0061	0.0216	0.3
132	Delta-E	-1767.8059	-0.0265	0.0183	1.4
	Delta-U	-188.3933	0.0285	0.0431	0.7
	Length	14326.3940			
(V14 Postprocessed 18-APR-2002 01:36:15.000 network control.asc)					
4JD2	Delta-N	-22434.2020	-0.0200	0.0350	0.6
117	Delta-E	-3579.7644	0.0307	0.0299	1.0
	Delta-U	-177.2859	0.0126	0.0785	0.2
	Length	22718.7051			
(V67 Postprocessed 25-APR-2002 12:21:15.000 network control.asc)					
120	Delta-N	-16203.7516	0.0126	0.0315	0.4
4HH2	Delta-E	-7077.2967	-0.0273	0.0348	0.8
	Delta-U	-103.5510	0.0219	0.0825	0.3
	Length	17682.2062			

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(V82 Postprocessed 26-APR-2002 08:40:30.000 network control.asc)
4JF2                Delta-N          -6608.1678       -0.0076   0.0305   0.2
121                 Delta-E         -24182.9312       -0.0127   0.0176   0.7
                    Delta-U             25.8268        0.0333   0.0585   0.6
                    Length           25069.5574
(V15 Postprocessed 23-APR-2002 12:23:15.000 network control.asc)
4JD2                Delta-N         -22434.2020        0.0052   0.0234   0.2
117                 Delta-E          -3579.7644        0.0136   0.0239   0.6
                    Delta-U           -177.2859       -0.0318   0.0570   0.6
                    Length           22718.7051
(V105 Postprocessed 01-MAY-2002 08:18:00.000 network control.asc)
1KA2                Delta-N         -18893.4976       -0.0346   0.0488   0.7
130                 Delta-E          -9372.4425       -0.0002   0.0240   0.0
                    Delta-U              5.7223        0.0008   0.0998   0.0
                    Length           21090.4472
(V8 Postprocessed 18-APR-2002 12:15:00.000 network control.asc)
4IC1                Delta-N          25101.6683       -0.0335   0.0368   0.9
133                 Delta-E          -1580.7331        0.0020   0.0399   0.1
                    Delta-U            256.2028        0.0055   0.1086   0.1
                    Length           25152.6959
(V12 Postprocessed 19-APR-2002 12:09:00.000 network control.asc)
117                 Delta-N          -8779.2435        0.0023   0.0299   0.1
4HF3                Delta-E         -27087.1793        0.0005   0.0323   0.0
                    Delta-U             59.0404        0.0338   0.0869   0.4
                    Length           28474.4427
(V98 Postprocessed 30-APR-2002 10:54:10.000 network control.asc)
4IE2                Delta-N          16430.0430        0.0289   0.0191   1.5
4JD2                Delta-E          14767.7864        0.0016   0.0225   0.1
                    Delta-U             79.4265        0.0159   0.0555   0.3
                    Length           22091.6305
(V75 Postprocessed 26-APR-2002 10:18:45.000 network control.asc)
4LH2                Delta-N         -23096.1326       -0.0181   0.0191   0.9
125                 Delta-E          19214.2987        0.0115   0.0210   0.5
                    Delta-U           -188.5791        0.0242   0.0459   0.5
                    Length           30044.2370
(V27 Postprocessed 12-APR-2002 12:03:50.000 network control.asc)
FRIA                Delta-N          -1160.7749       -0.0016   0.0446   0.0
114                 Delta-E          -5183.3558        0.0252   0.0445   0.6
                    Delta-U             28.5237       -0.0165   0.1234   0.1
                    Length            5311.8160
(V92 Postprocessed 30-APR-2002 10:23:45.000 network control.asc)
4LD2                Delta-N          11688.1632       -0.0208   0.0268   0.8
129                 Delta-E         -13597.8473        0.0009   0.0271   0.0
                    Delta-U            244.0355       -0.0217   0.0652   0.3
                    Length           17932.4890
(V33 Postprocessed 19-APR-2002 09:06:50.000 network control.asc)
114                 Delta-N          14605.0519        0.0136   0.0447   0.3
4HF3                Delta-E         -15791.4487       -0.0264   0.0228   1.2
                    Delta-U           -107.3827        0.0018   0.0906   0.0
                    Length           21510.2051
(V39 Postprocessed 22-APR-2002 10:45:45.000 network control.asc)
118                 Delta-N         -11851.0498       -0.0254   0.0270   0.9
4HF3                Delta-E         -15733.9930       -0.0140   0.0271   0.5
                    Delta-U              8.7835       -0.0039   0.0586   0.1
                    Length           19697.8678
(V96 Postprocessed 30-APR-2002 03:49:00.000 network control.asc)
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133	Delta-N	45.4254	0.0076	0.0524	0.1
132	Delta-E	14858.7819	0.0263	0.0189	1.4
	Delta-U	-27.2461	0.0096	0.0534	0.2
	Length	14858.8763			
(V46 Postprocessed 23-APR-2002 09:57:45.000 network control.asc)					
4LD2	Delta-N	-1816.3533	0.0089	0.0216	0.4
4LB2	Delta-E	27416.7213	-0.0271	0.0241	1.1
	Delta-U	-161.1966	0.0005	0.0543	0.0
	Length	27477.2948			
(V32 Postprocessed 19-APR-2002 08:03:05.000 network control.asc)					
4HF3	Delta-N	-11069.3541	0.0128	0.0181	0.7
123	Delta-E	-13990.5709	-0.0077	0.0170	0.5
	Delta-U	192.2351	0.0241	0.0538	0.4
	Length	17841.0658			
(V51 Postprocessed 24-APR-2002 10:17:35.000 network control.asc)					
119	Delta-N	-1207.4361	-0.0168	0.0239	0.7
4IG2	Delta-E	-13915.5182	-0.0029	0.0251	0.1
	Delta-U	35.6211	-0.0219	0.0527	0.4
	Length	13967.8494			
(V13 Postprocessed 18-APR-2002 08:01:04.000 network control.asc)					
4JD2	Delta-N	-15711.8991	-0.0089	0.0101	0.9
4IC1	Delta-E	16520.9207	-0.0212	0.0098	2.2
	Delta-U	-201.3904	-0.0150	0.0590	0.3
	Length	22800.1130			
(V50 Postprocessed 24-APR-2002 12:13:10.000 network control.asc)					
119	Delta-N	-1207.4361	-0.0007	0.0196	0.0
4IG2	Delta-E	-13915.5182	-0.0250	0.0212	1.2
	Delta-U	35.6211	0.0109	0.0527	0.2
	Length	13967.8494			
(V55 Postprocessed 25-APR-2002 09:20:20.000 network control.asc)					
4IG2	Delta-N	-24058.4042	0.0268	0.0365	0.7
124	Delta-E	-6980.7531	-0.0034	0.0318	0.1
	Delta-U	-87.1851	0.0025	0.0713	0.0
	Length	25050.8548			
(V45 Postprocessed 23-APR-2002 11:57:30.000 network control.asc)					
245	Delta-N	12007.2301	0.0114	0.0146	0.8
4LD2	Delta-E	1085.9330	0.0148	0.0141	1.1
	Delta-U	221.7924	-0.0192	0.0358	0.5
	Length	12058.2759			
(V123 Postprocessed 02-MAY-2002 09:43:45.000 network control.asc)					
4LB2	Delta-N	-2539.2242	-0.0212	0.0161	1.3
13002	Delta-E	-15716.7761	-0.0129	0.0170	0.8
	Delta-U	-17.0283	-0.0084	0.0352	0.2
	Length	15920.5841			
(V109 Postprocessed 01-MAY-2002 10:18:55.000 network control.asc)					
4JB3	Delta-N	-4220.4768	0.0023	0.0130	0.2
131	Delta-E	3516.7871	0.0260	0.0136	1.9
	Delta-U	-59.8899	0.0027	0.0271	0.1
	Length	5493.9787			
(V4 Postprocessed 12-APR-2002 01:14:25.000 network control.asc)					
115	Delta-N	-7271.0991	-0.0098	0.0260	0.4
4HB1	Delta-E	782.0641	0.0104	0.0230	0.5
	Delta-U	-38.1600	-0.0217	0.0537	0.4
	Length	7313.1363			
(V86 Postprocessed 26-APR-2002 08:49:05.000 network control.asc)					
4JH5	Delta-N	36552.0671	-0.0244	0.0431	0.6

127	Delta-E	5009.0877	-0.0050	0.0251	0.2
	Delta-U	188.1968	0.0068	0.0858	0.1
	Length	36894.1728			
(V42 Postprocessed 23-APR-2002 08:44:05.000 network control.asc)					
123	Delta-N	172.9568	0.0166	0.0169	1.0
4GG2	Delta-E	3934.9333	0.0056	0.0099	0.6
	Delta-U	-9.9658	0.0190	0.0350	0.5
	Length	3938.7451			
(V47 Postprocessed 23-APR-2002 08:55:35.000 network control.asc)					
4LD2	Delta-N	3724.2875	-0.0140	0.0414	0.3
4LE2	Delta-E	-17490.4050	-0.0091	0.0199	0.5
	Delta-U	13.7582	0.0196	0.0803	0.2
	Length	17882.5271			
(V121 Postprocessed 01-MAY-2002 11:09:05.000 network control.asc)					
4JB3	Delta-N	26424.0497	-0.0062	0.0215	0.3
4LB2	Delta-E	-462.9223	-0.0170	0.0233	0.7
	Delta-U	362.9242	0.0183	0.0636	0.3
	Length	26430.5962			
(V25 Postprocessed 15-APR-2002 12:23:50.000 network control.asc)					
4GC1	Delta-N	17297.3850	0.0099	0.0309	0.3
4HB1	Delta-E	15333.3491	-0.0213	0.0301	0.7
	Delta-U	11.0544	0.0101	0.0727	0.1
	Length	23115.1735			
(V19 Postprocessed 15-APR-2002 11:00:25.000 network control.asc)					
115	Delta-N	8456.0990	0.0056	0.0258	0.2
Q366	Delta-E	3390.2240	0.0164	0.0273	0.6
	Delta-U	78.2894	-0.0189	0.0570	0.3
	Length	9110.7277			
(V59 Postprocessed 24-APR-2002 12:13:10.000 network control.asc)					
119	Delta-N	-16480.3140	0.0251	0.0234	1.1
4HF3	Delta-E	2965.0757	0.0040	0.0276	0.1
	Delta-U	-82.3065	0.0019	0.0774	0.0
	Length	16745.1245			
(V91 Postprocessed 30-APR-2002 08:46:40.000 network control.asc)					
4LD2	Delta-N	11688.1632	-0.0211	0.0393	0.5
129	Delta-E	-13597.8473	-0.0057	0.0282	0.2
	Delta-U	244.0355	-0.0127	0.0772	0.2
	Length	17932.4890			
(V56 Postprocessed 24-APR-2002 09:23:10.000 network control.asc)					
4IG2	Delta-N	-15265.3982	-0.0001	0.0109	0.0
4HF3	Delta-E	16887.2829	-0.0251	0.0112	2.2
	Delta-U	-128.2564	-0.0014	0.0752	0.0
	Length	22764.6470			
(V80 Postprocessed 26-APR-2002 09:58:25.000 network control.asc)					
121	Delta-N	39964.8350	0.0022	0.0305	0.1
126	Delta-E	1326.6470	0.0243	0.0307	0.8
	Delta-U	162.3757	-0.0057	0.0613	0.1
	Length	39987.1779			
(V34 Postprocessed 22-APR-2002 08:29:45.000 network control.asc)					
4KE1	Delta-N	13347.3663	0.0162	0.0170	1.0
4LE2	Delta-E	2280.0069	0.0189	0.0120	1.6
	Delta-U	196.9390	-0.0020	0.0332	0.1
	Length	13542.1344			
(V69 Postprocessed 25-APR-2002 12:21:15.000 network control.asc)					
4HH2	Delta-N	23409.6241	-0.0194	0.0248	0.8
121	Delta-E	2703.0387	-0.0076	0.0243	0.3

	Delta-U	141.6290	-0.0127	0.0560	0.2
	Length	23565.5889			
(V120 Postprocessed 01-MAY-2002 09:34:45.000 network control.asc)					
4JB3	Delta-N	26424.0497	-0.0026	0.0190	0.1
4LB2	Delta-E	-462.9223	-0.0223	0.0205	1.1
	Delta-U	362.9242	0.0079	0.0433	0.2
	Length	26430.5962			
(V58 Postprocessed 25-APR-2002 09:30:55.000 network control.asc)					
4HH2	Delta-N	14028.4651	0.0156	0.0325	0.5
4IG2	Delta-E	11026.3499	-0.0074	0.0285	0.3
	Delta-U	68.7532	-0.0162	0.0605	0.3
	Length	17843.2887			
(V112 Postprocessed 01-MAY-2002 11:22:45.000 network control.asc)					
4JB3	Delta-N	12170.8866	0.0126	0.0300	0.4
133	Delta-E	-17089.7563	0.0187	0.0298	0.6
	Delta-U	207.6526	-0.0032	0.0792	0.0
	Length	20981.7390			
(V72 Postprocessed 25-APR-2002 12:21:15.000 network control.asc)					
124	Delta-N	10032.9615	0.0178	0.0224	0.8
4HH2	Delta-E	-4052.7111	-0.0115	0.0215	0.5
	Delta-U	-7.0372	-0.0081	0.0487	0.2
	Length	10820.5745			
(V43 Postprocessed 23-APR-2002 11:20:20.000 network control.asc)					
124	Delta-N	-2281.6364	0.0047	0.0122	0.4
123	Delta-E	9884.1319	0.0198	0.0127	1.6
	Delta-U	153.6693	-0.0099	0.0321	0.3
	Length	10145.2226			
(V48 Postprocessed 23-APR-2002 11:57:30.000 network control.asc)					
4JD2	Delta-N	13464.3253	0.0117	0.0118	1.0
245	Delta-E	3037.9248	0.0124	0.0126	1.0
	Delta-U	157.2438	-0.0145	0.0320	0.5
	Length	13803.6868			
(V71 Postprocessed 25-APR-2002 09:30:55.000 network control.asc)					
124	Delta-N	10032.9615	-0.0140	0.0256	0.5
4HH2	Delta-E	-4052.7111	-0.0138	0.0236	0.6
	Delta-U	-7.0372	-0.0105	0.0507	0.2
	Length	10820.5745			
(V53 Postprocessed 25-APR-2002 09:20:20.000 network control.asc)					
120	Delta-N	-2177.8304	0.0205	0.0389	0.5
4IG2	Delta-E	3952.1882	0.0048	0.0256	0.2
	Delta-U	-20.1720	-0.0056	0.0658	0.1
	Length	4512.5540			
(V1 Postprocessed 12-APR-2002 08:52:20.000 network control.asc)					
FRIA	Delta-N	-4171.5682	-0.0154	0.0203	0.8
112	Delta-E	16456.2592	0.0129	0.0155	0.8
	Delta-U	-302.3137	-0.0080	0.0441	0.2
	Length	16979.4535			
(V90 Postprocessed 30-APR-2002 09:24:10.000 network control.asc)					
117	Delta-N	-8673.6923	0.0039	0.0156	0.3
4HD1	Delta-E	5144.4384	0.0142	0.0167	0.9
	Delta-U	-57.4077	-0.0149	0.0346	0.4
	Length	10084.7151			
(V40 Postprocessed 23-APR-2002 10:30:20.000 network control.asc)					
124	Delta-N	3976.5527	0.0073	0.0164	0.4
122	Delta-E	10234.8312	0.0195	0.0170	1.2
	Delta-U	60.6212	-0.0017	0.0351	0.0

	Length	10980.3651			
(V101 Postprocessed 30-APR-2002 08:23:15.000 network control.asc)					
4LE2	Delta-N	-3714.4911	-0.0034	0.0087	0.4
4LD2	Delta-E	17492.4695	0.0047	0.0088	0.5
	Delta-U	-29.0259	0.0194	0.0577	0.3
	Length	17882.5271			
(V102 Postprocessed 01-MAY-2002 09:00:35.000 network control.asc)					
1IA1	Delta-N	147.5682	-0.0025	0.0265	0.1
Q366	Delta-E	-10953.6688	-0.0118	0.0239	0.5
	Delta-U	58.3145	0.0149	0.0540	0.3
	Length	10954.8180			
(V6 Postprocessed 18-APR-2002 07:58:41.000 network control.asc)					
4JD2	Delta-N	15847.4290	0.0083	0.0108	0.8
4KE1	Delta-E	-15654.7080	0.0075	0.0102	0.7
	Delta-U	195.2747	0.0144	0.0637	0.2
	Length	22276.6474			
(V35 Postprocessed 22-APR-2002 07:42:15.000 network control.asc)					
4KE1	Delta-N	11199.9788	0.0128	0.0170	0.8
128	Delta-E	4587.1531	0.0063	0.0166	0.4
	Delta-U	161.8165	0.0109	0.0557	0.2
	Length	12104.0359			
(V65 Postprocessed 25-APR-2002 12:18:55.000 network control.asc)					
121	Delta-N	-7204.5163	0.0132	0.0209	0.6
120	Delta-E	4370.0260	-0.0119	0.0212	0.6
	Delta-U	-60.5850	0.0028	0.0493	0.1
	Length	8426.4971			
(V83 Postprocessed 26-APR-2002 10:13:30.000 network control.asc)					
4JF2	Delta-N	-6608.1678	0.0084	0.0340	0.2
121	Delta-E	-24182.9312	-0.0126	0.0354	0.4
	Delta-U	25.8268	0.0090	0.0750	0.1
	Length	25069.5574			
(V94 Postprocessed 30-APR-2002 10:23:45.000 network control.asc)					
4LE2	Delta-N	7966.0128	0.0143	0.0180	0.8
129	Delta-E	3888.2901	0.0076	0.0186	0.4
	Delta-U	228.4498	0.0010	0.0389	0.0
	Length	8867.2627			
(V52 Postprocessed 24-APR-2002 09:33:05.000 network control.asc)					
4IG2	Delta-N	2178.3302	0.0025	0.0132	0.2
120	Delta-E	-3951.9176	0.0117	0.0124	0.9
	Delta-U	19.1989	-0.0110	0.0252	0.4
	Length	4512.5540			
(V119 Postprocessed 01-MAY-2002 11:09:05.000 network control.asc)					
4JB3	Delta-N	14089.5232	-0.0061	0.0219	0.3
1KA2	Delta-E	24589.3099	-0.0071	0.0237	0.3
	Delta-U	-110.9399	-0.0123	0.0640	0.2
	Length	28340.0976			
(V70 Postprocessed 25-APR-2002 09:20:20.000 network control.asc)					
121	Delta-N	-9381.7889	0.0041	0.0183	0.2
4IG2	Delta-E	8322.5132	0.0052	0.0163	0.3
	Delta-U	-82.3338	-0.0135	0.0355	0.4
	Length	12541.4898			
(V77 Postprocessed 26-APR-2002 08:44:05.000 network control.asc)					
127	Delta-N	-1385.4357	-0.0124	0.0214	0.6
4LH2	Delta-E	4658.5016	0.0036	0.0127	0.3
	Delta-U	50.9130	-0.0047	0.0424	0.1
	Length	4860.4178			

(V49 Postprocessed 23-APR-2002 09:00:05.000 network control.asc)

4IC1	Delta-N	33.4784	-0.0123	0.0233	0.5
116	Delta-E	-14040.0518	-0.0049	0.0133	0.4
	Delta-U	38.3578	-0.0011	0.0434	0.0
	Length	14040.1441			

(V36 Postprocessed 22-APR-2002 09:58:15.000 network control.asc)

4KE1	Delta-N	-2373.7187	-0.0127	0.0246	0.5
245	Delta-E	18693.7880	-0.0013	0.0276	0.0
	Delta-U	-53.8106	0.0014	0.0643	0.0
	Length	18843.9685			

(V84 Postprocessed 26-APR-2002 10:18:45.000 network control.asc)

4JF2	Delta-N	12472.3005	0.0092	0.0175	0.5
125	Delta-E	-39.6602	-0.0054	0.0172	0.3
	Delta-U	128.8224	-0.0072	0.0356	0.2
	Length	12473.0288			

(V124 Postprocessed 02-MAY-2002 08:07:45.000 network control.asc)

1KA2	Delta-N	13364.7463	-0.0097	0.0445	0.2
134	Delta-E	-20828.8135	-0.0041	0.0227	0.2
	Delta-U	411.5490	0.0068	0.0888	0.1
	Length	24751.2684			

(V103 Postprocessed 01-MAY-2002 08:10:35.000 network control.asc)

1IA1	Delta-N	7967.3499	-0.0080	0.0182	0.4
130	Delta-E	-208.3539	-0.0084	0.0102	0.8
	Delta-U	68.4673	0.0043	0.0358	0.1
	Length	7970.3679			

(V93 Postprocessed 30-APR-2002 08:46:40.000 network control.asc)

4LE2	Delta-N	7966.0128	0.0060	0.0230	0.3
129	Delta-E	3888.2901	-0.0024	0.0156	0.2
	Delta-U	228.4498	0.0100	0.0407	0.2
	Length	8867.2627			

(V2 Postprocessed 12-APR-2002 09:51:30.000 network control.asc)

FRIA	Delta-N	-3968.4185	0.0056	0.0178	0.3
113	Delta-E	-4165.9949	-0.0099	0.0122	0.8
	Delta-U	491.0263	0.0018	0.0325	0.1
	Length	5774.5101			

(V87 Postprocessed 26-APR-2002 08:49:05.000 network control.asc)

4JF2	Delta-N	422.0010	-0.0092	0.0411	0.2
4JH5	Delta-E	-28939.8481	0.0069	0.0219	0.3
	Delta-U	7.2265	0.0011	0.0732	0.0
	Length	28942.9257			

(V113 Postprocessed 01-MAY-2002 09:44:05.000 network control.asc)

1IA1	Delta-N	-8385.7983	0.0040	0.0131	0.3
137	Delta-E	-190.3958	-0.0095	0.0139	0.7
	Delta-U	-76.4585	-0.0041	0.0283	0.1
	Length	8388.3079			

(V37 Postprocessed 22-APR-2002 07:42:58.000 network control.asc)

4IE2	Delta-N	-14794.8975	0.0001	0.0156	0.0
4HF3	Delta-E	-15885.5388	0.0082	0.0132	0.6
	Delta-U	-6.6777	-0.0066	0.0397	0.2
	Length	21708.0487			

(V117 Postprocessed 01-MAY-2002 08:27:35.000 network control.asc)

4LB2	Delta-N	-12333.5451	0.0088	0.0094	0.9
1KA2	Delta-E	25052.4041	-0.0023	0.0091	0.2
	Delta-U	-490.0479	-0.0053	0.0561	0.1
	Length	27928.1119			

(V66 Postprocessed 25-APR-2002 09:02:40.000 network control.asc)

121	Delta-N	-7204.5163	-0.0037	0.0207	0.2
120	Delta-E	4370.0260	-0.0083	0.0120	0.7
	Delta-U	-60.5850	0.0045	0.0330	0.1
	Length	8426.4971			
(V41 Postprocessed 23-APR-2002 09:41:45.000 network control.asc)					
4GG2	Delta-N	6085.5602	-0.0014	0.0131	0.1
122	Delta-E	-3581.4475	-0.0100	0.0126	0.8
	Delta-U	-84.2240	0.0007	0.0254	0.0
	Length	7061.7210			
(V18 Postprocessed 22-APR-2002 10:21:45.000 network control.asc)					
4IE2	Delta-N	-2943.9225	-0.0051	0.0093	0.5
118	Delta-E	-151.4886	0.0081	0.0097	0.8
	Delta-U	-13.6742	0.0002	0.0188	0.0
	Length	2947.8493			
(V126 Postprocessed 03-MAY-2002 11:01:45.000 network control.asc)					
114	Delta-N	-2807.4503	-0.0017	0.0114	0.1
113	Delta-E	1017.9375	0.0092	0.0119	0.8
	Delta-U	462.4071	-0.0001	0.0304	0.0
	Length	3021.8859			
(V76 Postprocessed 26-APR-2002 09:58:25.000 network control.asc)					
126	Delta-N	2227.4766	0.0006	0.0175	0.0
4LH2	Delta-E	3584.1993	0.0089	0.0186	0.5
	Delta-U	57.5558	-0.0021	0.0374	0.1
	Length	4220.3613			
(V44 Postprocessed 23-APR-2002 07:49:00.000 network control.asc)					
4LE2	Delta-N	-2147.5329	-0.0061	0.0111	0.5
128	Delta-E	2306.9934	-0.0024	0.0100	0.2
	Delta-U	-36.2459	-0.0058	0.0297	0.2
	Length	3152.0517			
(V38 Postprocessed 22-APR-2002 10:45:45.000 network control.asc)					
4IE2	Delta-N	-14794.8975	-0.0029	0.0085	0.3
4HF3	Delta-E	-15885.5388	0.0030	0.0083	0.4
	Delta-U	-6.6777	-0.0053	0.0484	0.1
	Length	21708.0487			
(V122 Postprocessed 02-MAY-2002 08:58:15.000 network control.asc)					
4LB2	Delta-N	1014.2620	0.0022	0.0140	0.2
134	Delta-E	4213.4052	0.0014	0.0128	0.1
	Delta-U	-45.6821	-0.0036	0.0282	0.1
	Length	4334.0048			

GPS Vector Residual Summary (FeetInt)
(Sorted by 3D Residual Length)

From	To	N	E	Up	2D	3D	Length	VectID
4GG2	4HF3	0.027	0.073	-0.018	0.077	0.080	14830	62
4IC1	115	0.050	0.011	-0.060	0.052	0.079	18517	24
124	4HF3	-0.009	-0.058	0.050	0.059	0.077	25436	61
4HF3	124	0.021	-0.024	0.068	0.032	0.075	25436	30
115	137	-0.048	0.038	-0.038	0.061	0.072	14158	21
FRIA	4HD1	-0.008	0.031	0.061	0.032	0.069	17625	3
4LB2	1KA2	-0.023	0.026	0.056	0.035	0.066	27928	116
124	4IG2	-0.001	-0.037	0.052	0.037	0.064	25051	54
4KE1	4JF2	-0.011	-0.034	0.051	0.036	0.062	22473	125
4JD2	4IE2	0.014	0.059	-0.011	0.061	0.062	22092	99
4IE2	118	0.003	-0.056	-0.001	0.056	0.056	2948	17
4GC1	115	-0.015	0.021	-0.049	0.026	0.056	28552	22

115	4HB1	0.009	-0.006	0.053	0.011	0.055	7313	5
4JD2	133	0.019	-0.009	0.050	0.021	0.055	17634	11
4GC1	112	0.020	-0.038	-0.033	0.043	0.054	11869	20
121	4HH2	0.002	0.019	-0.051	0.019	0.054	23566	68
FRIA	4HD1	0.044	-0.024	0.015	0.050	0.052	17625	88
4JD2	133	-0.043	-0.022	0.016	0.049	0.051	17634	9
4JD2	133	-0.002	-0.015	0.049	0.015	0.051	17634	10
4HH2	4IG2	0.044	-0.024	0.012	0.050	0.051	17843	57
133	13002	0.044	0.025	0.004	0.051	0.051	11750	95
1IA1	1KA2	-0.015	0.022	0.043	0.027	0.051	28382	114
4LB2	4LD2	0.010	-0.033	0.036	0.034	0.049	27477	100
4IC1	131	-0.011	-0.046	-0.011	0.048	0.049	20936	7
121	4LH2	-0.010	-0.009	0.047	0.013	0.049	42478	73
4LE2	4LH2	0.029	-0.016	-0.035	0.033	0.048	38039	78
131	1KA2	0.010	-0.044	-0.016	0.045	0.048	27916	108
1IA1	130	0.023	0.007	-0.040	0.024	0.047	7970	104
121	127	-0.025	0.020	-0.033	0.032	0.046	43579	81
119	4HF3	-0.001	0.040	0.020	0.040	0.045	16745	60
1KA2	130	0.004	0.031	-0.032	0.031	0.045	21090	106
132	1KA2	-0.014	0.000	0.042	0.014	0.044	26888	110
121	4JH5	-0.010	0.041	0.000	0.042	0.042	8488	63
133	4LD2	-0.008	-0.011	0.040	0.014	0.042	19378	97
121	4JH5	0.020	-0.033	0.017	0.038	0.042	8488	64
4LE2	4LH2	-0.010	0.038	0.011	0.040	0.041	38039	79
1IA1	1KA2	-0.012	0.008	-0.039	0.014	0.041	28382	115
1IA1	131	0.041	-0.001	-0.000	0.041	0.041	14680	107
117	4HD1	-0.023	0.011	-0.032	0.025	0.041	10085	31
4JB3	1KA2	0.011	-0.026	-0.029	0.028	0.041	28340	118
116	4HD1	-0.017	-0.019	0.030	0.025	0.040	15450	89
4LE2	125	0.015	-0.012	-0.035	0.019	0.040	24755	85
4LB2	132	-0.006	-0.027	0.028	0.027	0.039	14326	111
4JD2	117	-0.020	0.031	0.013	0.037	0.039	22719	14
120	4HH2	0.013	-0.027	0.022	0.030	0.037	17682	67
4JF2	121	-0.008	-0.013	0.033	0.015	0.036	25070	82
4JD2	117	0.005	0.014	-0.032	0.015	0.035	22719	15
1KA2	130	-0.035	-0.000	0.001	0.035	0.035	21090	105
4IC1	133	-0.034	0.002	0.005	0.034	0.034	25153	8
117	4HF3	0.002	0.001	0.034	0.002	0.034	28474	12
4IE2	4JD2	0.029	0.002	0.016	0.029	0.033	22092	98
4LH2	125	-0.018	0.011	0.024	0.021	0.032	30044	75
FRIA	114	-0.002	0.025	-0.016	0.025	0.030	5312	27
4LD2	129	-0.021	0.001	-0.022	0.021	0.030	17932	92
114	4HF3	0.014	-0.026	0.002	0.030	0.030	21510	33
118	4HF3	-0.025	-0.014	-0.004	0.029	0.029	19698	39
133	132	0.008	0.026	0.010	0.027	0.029	14859	96
4LD2	4LB2	0.009	-0.027	0.000	0.028	0.028	27477	46
4HF3	123	0.013	-0.008	0.024	0.015	0.028	17841	32
119	4IG2	-0.017	-0.003	-0.022	0.017	0.028	13968	51
4JD2	4IC1	-0.009	-0.021	-0.015	0.023	0.027	22800	13
119	4IG2	-0.001	-0.025	0.011	0.025	0.027	13968	50
4IG2	124	0.027	-0.003	0.002	0.027	0.027	25051	55
245	4LD2	0.011	0.015	-0.019	0.019	0.027	12058	45
4LB2	13002	-0.021	-0.013	-0.008	0.025	0.026	15921	123
4JB3	131	0.002	0.026	0.003	0.026	0.026	5494	109
115	4HB1	-0.010	0.010	-0.022	0.014	0.026	7313	4
4JH5	127	-0.024	-0.005	0.007	0.025	0.026	36894	86

123	4GG2	0.017	0.006	0.019	0.017	0.026	3939	42
4LD2	4LE2	-0.014	-0.009	0.020	0.017	0.026	17883	47
4JB3	4LB2	-0.006	-0.017	0.018	0.018	0.026	26431	121
4GC1	4HB1	0.010	-0.021	0.010	0.024	0.026	23115	25
115	Q366	0.006	0.016	-0.019	0.017	0.026	9111	19
119	4HF3	0.025	0.004	0.002	0.025	0.025	16745	59
4LD2	129	-0.021	-0.006	-0.013	0.022	0.025	17932	91
4IG2	4HF3	-0.000	-0.025	-0.001	0.025	0.025	22765	56
121	126	0.002	0.024	-0.006	0.024	0.025	39987	80
4KE1	4LE2	0.016	0.019	-0.002	0.025	0.025	13542	34
4HH2	121	-0.019	-0.008	-0.013	0.021	0.024	23566	69
4JB3	4LB2	-0.003	-0.022	0.008	0.022	0.024	26431	120
4HH2	4IG2	0.016	-0.007	-0.016	0.017	0.024	17843	58
4JB3	133	0.013	0.019	-0.003	0.023	0.023	20982	112
124	4HH2	0.018	-0.011	-0.008	0.021	0.023	10821	72
124	123	0.005	0.020	-0.010	0.020	0.023	10145	43
4JD2	245	0.012	0.012	-0.015	0.017	0.022	13804	48
124	4HH2	-0.014	-0.014	-0.011	0.020	0.022	10821	71
120	4IG2	0.021	0.005	-0.006	0.021	0.022	4513	53
FRIA	112	-0.015	0.013	-0.008	0.020	0.022	16979	1
117	4HD1	0.004	0.014	-0.015	0.015	0.021	10085	90
124	122	0.007	0.020	-0.002	0.021	0.021	10980	40
4LE2	4LD2	-0.003	0.005	0.019	0.006	0.020	17883	101
1IA1	Q366	-0.002	-0.012	0.015	0.012	0.019	10955	102
4JD2	4KE1	0.008	0.008	0.014	0.011	0.018	22277	6
4KE1	128	0.013	0.006	0.011	0.014	0.018	12104	35
121	120	0.013	-0.012	0.003	0.018	0.018	8426	65
4JF2	121	0.008	-0.013	0.009	0.015	0.018	25070	83
4LE2	129	0.014	0.008	0.001	0.016	0.016	8867	94
4IG2	120	0.002	0.012	-0.011	0.012	0.016	4513	52
4JB3	1KA2	-0.006	-0.007	-0.012	0.009	0.015	28340	119
121	4IG2	0.004	0.005	-0.013	0.007	0.015	12541	70
127	4LH2	-0.012	0.004	-0.005	0.013	0.014	4860	77
4IC1	116	-0.012	-0.005	-0.001	0.013	0.013	14040	49
4KE1	245	-0.013	-0.001	0.001	0.013	0.013	18844	36
4JF2	125	0.009	-0.005	-0.007	0.011	0.013	12473	84
1KA2	134	-0.010	-0.004	0.007	0.011	0.013	24751	124
1IA1	130	-0.008	-0.008	0.004	0.012	0.012	7970	103
4LE2	129	0.006	-0.002	0.010	0.006	0.012	8867	93
FRIA	113	0.006	-0.010	0.002	0.011	0.012	5775	2
4JF2	4JH5	-0.009	0.007	0.001	0.011	0.012	28943	87
1IA1	137	0.004	-0.010	-0.004	0.010	0.011	8388	113
4IE2	4HF3	0.000	0.008	-0.007	0.008	0.011	21708	37
4LB2	1KA2	0.009	-0.002	-0.005	0.009	0.011	27928	117
121	120	-0.004	-0.008	0.004	0.009	0.010	8426	66
4GG2	122	-0.001	-0.010	0.001	0.010	0.010	7062	41
4IE2	118	-0.005	0.008	0.000	0.010	0.010	2948	18
114	113	-0.002	0.009	-0.000	0.009	0.009	3022	126
126	4LH2	0.001	0.009	-0.002	0.009	0.009	4220	76
4LE2	128	-0.006	-0.002	-0.006	0.007	0.009	3152	44
4IE2	4HF3	-0.003	0.003	-0.005	0.004	0.007	21708	38
4LB2	134	0.002	0.001	-0.004	0.003	0.004	4334	122

Adjusted Bearings (DMS) and Horizontal Distances (FeetInt)
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Maricopa County

stewart geo technologies

(Relative Confidence of Bearing is in Seconds)

From	To	Grid Bearing	Grid Dist Grnd Dist	95% RelConfidence Brg	 Dist	 PPM
112	4GC1	N88-20-15.08E	11867.3322 11868.8630	0.75	0.0474	3.9973
112	FRIA	N75-27-15.67W	16974.6439 16976.8832	0.54	0.0344	2.0264
113	114	N19-35-57.50W	2985.8269 2986.2647	1.78	0.0276	9.2591
113	FRIA	N46-42-45.10E	5752.6830 5753.5277	1.35	0.0285	4.9568
114	4HF3	N46-54-15.85W	21507.2047 21509.9895	0.45	0.0557	2.5882
114	FRIA	N77-41-54.45E	5311.0165 5311.7357	1.72	0.0334	6.2867
115	137	S89-27-48.54E	14155.5480 14157.5063	0.79	0.0450	3.1796
115	4GC1	S30-54-05.52W	28548.5008 28552.3247	0.24	0.0301	1.0529
115	4HB1	S05-53-44.08E	7312.0409 7313.0433	1.06	0.0393	5.3709
115	4IC1	N63-36-11.86W	18514.4953 18517.0437	0.54	0.0509	2.7511
115	Q366	N22-05-25.59E	9109.0963 9110.3740	1.13	0.0514	5.6437
116	4HD1	S03-42-26.50W	15447.8542 15449.9065	0.53	0.0399	2.5813
116	4IC1	S89-35-21.80E	14038.1682 14040.0781	0.61	0.0295	2.0999
117	4HD1	S30-21-43.53E	10083.2427 10084.5653	0.60	0.0322	3.1953
117	4HF3	S72-21-08.57W	28470.7034 28474.3347	0.30	0.0378	1.3290
117	4JD2	N09-22-13.28E	22715.0126 22718.1065	0.32	0.0340	1.4947
118	4HF3	S53-20-37.13W	19695.3633 19697.8594	0.26	0.0255	1.2955
118	4IE2	N03-16-36.53E	2947.4346 2947.8186	1.46	0.0201	6.8269
119	4HF3	S09-50-02.34E	16742.8601 16744.9540	0.40	0.0308	1.8418
119	4IG2	S85-24-23.28W	13966.0651 13967.7913	0.44	0.0312	2.2317
120	121	N30-50-00.06W	8425.2735 8426.2914	0.50	0.0265	3.1470
120	4HH2	S23-59-31.93W	17679.8877 17681.9452	0.40	0.0316	1.7859
120	4IG2	S60-44-42.42E	4511.9659 4512.5110	1.02	0.0243	5.3760
121	126	N02-18-29.68E	39981.6245 39986.6741	0.22	0.0417	1.0424
121	127	N00-44-19.26E	43572.8985 43578.3957	0.14	0.0453	1.0406
121	4HH2	S06-59-51.37W	23562.3292 23565.0795	0.27	0.0316	1.3414

121	4IG2	S41-10-11.02E	12539.7232 12541.2437	0.37	0.0264	2.1089
121	4JF2	N75-04-44.06E	25066.3707 25069.5241	0.28	0.0263	1.0503
121	4JH5	N33-43-18.55W	8487.3120 8488.3269	0.60	0.0320	3.7719
121	4LH2	N07-02-44.71E	42471.6854 42477.1461	0.11	0.0247	0.5815
122	124	S69-10-13.18W	10978.8821 10980.1814	0.57	0.0304	2.7708
122	4GG2	S30-05-58.75E	7060.3472 7061.2328	0.75	0.0284	4.0242
123	124	N76-35-55.28W	10142.7997 10144.0213	0.49	0.0236	2.3234
123	4GG2	N87-52-05.32E	3938.2321 3938.7335	1.52	0.0208	5.2874
123	4HF3	N52-00-30.62E	17837.7126 17839.9465	0.32	0.0266	1.4926
124	4HF3	N70-09-59.92E	25433.1652 25436.1921	0.21	0.0239	0.9407
124	4HH2	N21-35-33.44W	10819.3469 10820.5737	0.54	0.0319	2.9456
124	4IG2	N16-34-16.11E	25047.7953 25050.7509	0.22	0.0261	1.0426
125	4JF2	S00-10-49.26W	12470.6520 12472.3244	0.55	0.0343	2.7470
125	4LE2	N48-00-09.12E	24750.2781 24753.8936	0.31	0.0393	1.5877
125	4LH2	N39-21-34.91W	30039.6694 30043.7731	0.24	0.0339	1.1287
126	4LH2	N58-32-43.51E	4219.3990 4219.9630	1.85	0.0393	9.3047
127	4JH5	S08-13-08.62W	36888.9129 36893.5118	0.21	0.0501	1.3581
127	4LH2	S73-01-49.32E	4859.4965 4860.1452	1.68	0.0318	6.5541
128	4KE1	S22-36-21.95W	12101.0976 12102.9067	0.42	0.0284	2.3454
128	4LE2	N46-43-13.96W	3151.3586 3151.8460	1.58	0.0212	6.7372
129	4LD2	S49-01-16.90E	17927.7774 17930.7222	0.33	0.0291	1.6230
129	4LE2	S26-20-50.01W	8862.8393 8864.2707	0.60	0.0272	3.0650
130	1IA1	S01-16-49.74E	7968.9083 7970.0605	0.46	0.0219	2.7435
130	1KA2	N26-35-07.69E	21087.3407 21090.4408	0.23	0.0246	1.1674
131	1IA1	S54-05-37.87E	14677.7840 14679.8848	0.42	0.0270	1.8374
131	1KA2	N49-15-30.53E	27912.0385 27916.1040	0.18	0.0281	1.0061
131	4IC1	S65-39-32.76W	20933.3171 20936.2589	0.31	0.0297	1.4194
131	4JB3	N39-33-27.07W	5492.8667 5493.6601	1.02	0.0233	4.2356

132	133	N89-53-52.02W	14856.6029 14858.8600	0.64	0.0313	2.1082
132	1KA2	N86-13-59.63E	26882.2638 26886.3180	0.31	0.0312	1.1617
132	4LB2	N07-20-08.76E	14322.9440 14325.2191	0.43	0.0392	2.7392
133	4IC1	S03-19-44.78E	25147.6103 25151.2319	0.23	0.0287	1.1417
133	4JB3	S54-17-47.48E	20977.5066 20980.6047	0.30	0.0316	1.5072
133	4JD2	S58-08-09.53W	17631.7128 17634.2763	0.28	0.0225	1.2746
133	4LD2	N33-35-19.39W	19372.1289 19375.1429	0.18	0.0170	0.8777
134	1KA2	S57-06-45.58E	24743.7614 24747.5990	0.27	0.0328	1.3236
134	4LB2	S76-42-44.39W	4333.0636 4333.7687	1.52	0.0275	6.3437
137	1IA1	N01-31-04.95E	8386.7912 8387.9746	0.77	0.0306	3.6507
245	4JD2	S13-01-09.33W	13800.7323 13802.7384	0.37	0.0216	1.5676
245	4KE1	N82-25-47.56W	18841.1458 18843.9139	0.29	0.0276	1.4624
245	4LD2	N05-28-01.65E	12054.2974 12056.1714	0.43	0.0245	2.0350
13002	133	S04-41-20.27W	11747.5193 11749.3295	0.62	0.0372	3.1662
13002	4LB2	N81-04-10.88E	15918.0277 15920.5803	0.44	0.0334	2.0976
1IA1	1KA2	N19-02-36.14E	28377.7068 28381.8316	0.12	0.0174	0.6149
1IA1	Q366	N89-00-38.52W	10953.0855 10954.6471	0.98	0.0481	4.3877
1KA2	4JB3	S60-26-00.81W	28335.7976 28339.9491	0.16	0.0232	0.8187
1KA2	4LB2	N63-32-29.18W	27919.7908 27924.1329	0.13	0.0176	0.6313
4GC1	4HB1	N41-49-30.96E	23112.0836 23115.1611	0.43	0.0407	1.7612
4GG2	4HF3	N43-03-24.69E	14826.5417 14828.4098	0.44	0.0290	1.9587
4HD1	FRIA	S40-01-40.63W	17621.7045 17624.0547	0.40	0.0341	1.9326
4HF3	4IE2	N47-22-00.70E	21705.2891 21708.0482	0.16	0.0164	0.7541
4HF3	4IG2	N47-29-49.27W	22761.5620 22764.3522	0.18	0.0215	0.9435
4HH2	4IG2	N38-34-41.36E	17841.0410 17843.1252	0.36	0.0278	1.5591
4IC1	4JD2	N46-08-00.46W	22796.1566 22799.3301	0.19	0.0218	0.9570
4IE2	4JD2	N42-16-53.08E	22088.4467 22091.4426	0.29	0.0300	1.3597
4JB3	4LB2	N00-45-27.18W	26423.7884 26427.8691	0.19	0.0228	0.8621

4JD2	4KE1	N44-20-41.35W	22272.5080	0.19	0.0205	0.9214
			22275.6843			
4JF2	4JH5	N88-48-07.86W	28939.3166	0.31	0.0317	1.0958
			28942.9129			
4JF2	4KE1	N45-40-44.20E	22469.7805	0.33	0.0370	1.6458
			22472.8725			
4KE1	4LE2	N10-01-38.74E	13538.6077	0.30	0.0233	1.7177
			13540.6377			
4LB2	4LD2	N85-54-44.03W	27472.4715	0.20	0.0264	0.9608
			27476.9218			
4LD2	4LE2	N77-40-54.57W	17879.6927	0.20	0.0171	0.9538
			17882.5143			
4LE2	4LH2	N79-54-22.30W	38033.2085	0.16	0.0305	0.8026
			38038.7420			

Error Propagation

Station Coordinate Standard Deviations (FeetInt)

Station	N	E	Elev
112	0.026786	0.026299	0.068142
113	0.030373	0.026745	0.069839
114	0.030979	0.027129	0.072127
115	0.020835	0.020597	0.046683
116	0.027915	0.025053	0.062526
117	0.026310	0.025404	0.062949
118	0.027304	0.026308	0.066929
119	0.028452	0.027659	0.070888
120	0.027523	0.025828	0.068433
121	0.026603	0.025122	0.067124
122	0.029546	0.028166	0.072075
123	0.028143	0.026718	0.070340
124	0.027587	0.026206	0.068479
125	0.028220	0.027131	0.070456
126	0.030285	0.029546	0.073518
127	0.031332	0.026916	0.074700
128	0.025848	0.024403	0.067159
129	0.026589	0.024710	0.064938
130	0.023031	0.020864	0.048941
131	0.023363	0.022211	0.052303
132	0.027153	0.023612	0.059113
133	0.023985	0.022507	0.057791
134	0.025985	0.023693	0.059182
137	0.023809	0.021971	0.050207
245	0.024885	0.023856	0.060790
13002	0.026096	0.024828	0.060766
1IA1	0.021327	0.019616	0.045387
1KA2	0.022082	0.020484	0.050979
4GC1	0.023819	0.023383	0.067222
4GG2	0.028871	0.027232	0.071226
4HB1	0.025957	0.025550	0.059686
4HD1	0.026388	0.025226	0.062257
4HF3	0.026101	0.024817	0.064875
4HH2	0.028209	0.026830	0.069666

4IC1	0.023763	0.022706	0.056369
4IE2	0.026127	0.024980	0.065127
4IG2	0.026628	0.025282	0.067521
4JB3	0.023225	0.022061	0.053173
4JD2	0.023790	0.022621	0.058187
4JF2	0.027857	0.025881	0.068699
4JH5	0.029307	0.026610	0.071254
4KE1	0.024699	0.023348	0.063520
4LB2	0.022781	0.021305	0.054417
4LD2	0.023812	0.022527	0.058745
4LE2	0.024436	0.023071	0.062510
4LH2	0.026552	0.025267	0.068016
FRIA	0.027064	0.025413	0.065001
Q366	0.000000	0.000000	0.000000

Station Coordinate Error Ellipses (FeetInt)
Confidence Region = 95%

Station	Semi-Major Axis	Semi-Minor Axis	Azimuth of Major Axis	Elev
112	0.065702	0.064235	162-09	0.133557
113	0.075010	0.064701	164-47	0.136882
114	0.076477	0.065656	165-19	0.141367
115	0.051473	0.049933	33-54	0.091497
116	0.068898	0.060683	164-17	0.122550
117	0.065229	0.061313	152-16	0.123379
118	0.067183	0.064031	160-20	0.131178
119	0.070730	0.066565	148-54	0.138937
120	0.067976	0.062568	160-03	0.134127
121	0.065561	0.061019	161-30	0.131560
122	0.072811	0.068427	160-13	0.141266
123	0.069275	0.064986	162-13	0.137865
124	0.068062	0.063575	159-27	0.134217
125	0.069161	0.066322	169-57	0.138092
126	0.074512	0.071927	157-12	0.144093
127	0.077851	0.064509	162-07	0.146409
128	0.063358	0.059638	170-58	0.131630
129	0.065380	0.060164	165-57	0.127277
130	0.056634	0.050781	167-32	0.095923
131	0.057216	0.054335	174-05	0.102513
132	0.066479	0.057776	177-24	0.115859
133	0.058977	0.054807	165-06	0.113269
134	0.063936	0.057628	166-25	0.115995
137	0.058773	0.053240	162-13	0.098404
245	0.061862	0.057387	152-09	0.119146
13002	0.064207	0.060424	162-35	0.119100
1IA1	0.052496	0.047696	165-24	0.088958
1KA2	0.054351	0.049815	164-48	0.099918
4GC1	0.058425	0.057110	162-09	0.131753
4GG2	0.071332	0.065947	159-07	0.139602
4HB1	0.064199	0.061860	147-36	0.116983
4HD1	0.065078	0.061235	158-53	0.122022
4HF3	0.064317	0.060291	160-39	0.127154
4HH2	0.069789	0.064885	156-45	0.136542
4IC1	0.058490	0.055239	161-22	0.110481
4IE2	0.064324	0.060754	160-55	0.127646

4IG2	0.065666	0.061366	160-02	0.132339
4JB3	0.057093	0.053741	164-06	0.104216
4JD2	0.058536	0.055049	162-34	0.114045
4JF2	0.068340	0.063187	169-55	0.134647
4JH5	0.072362	0.064437	163-14	0.139655
4KE1	0.060665	0.056931	166-10	0.124498
4LB2	0.056077	0.051809	163-56	0.106656
4LD2	0.058665	0.054736	161-36	0.115137
4LE2	0.060151	0.056113	162-55	0.122517
4LH2	0.065523	0.061285	158-58	0.133310
FRIA	0.066436	0.062002	167-51	0.127400
Q366	0.000000	0.000000	0-00	0.000000

Relative Error Ellipses (FeetInt)
Confidence Region = 95%

Stations From	To	Semi-Major Axis	Semi-Minor Axis	Azimuth of Major Axis	Vertical
112	4GC1	0.048143	0.042134	108-59	0.087516
112	FRIA	0.044580	0.034395	13-56	0.080415
113	114	0.028372	0.024966	132-10	0.056026
113	FRIA	0.039846	0.025502	161-20	0.059418
114	4HF3	0.060563	0.040759	165-17	0.106375
114	FRIA	0.044369	0.033157	160-02	0.076115
115	137	0.055384	0.043302	159-42	0.097594
115	4GC1	0.034383	0.029498	140-01	0.110516
115	4HB1	0.040995	0.035531	139-00	0.078486
115	4IC1	0.053082	0.046240	151-22	0.108253
115	Q366	0.051473	0.049933	33-54	0.091497
116	4HD1	0.041873	0.037409	140-56	0.073341
116	4IC1	0.042763	0.028145	164-36	0.067994
117	4HD1	0.032728	0.028945	127-32	0.055961
117	4HF3	0.042380	0.037050	140-26	0.084100
117	4JD2	0.036851	0.031768	139-16	0.068481
118	4HF3	0.025515	0.025044	54-24	0.056290
118	4IE2	0.020957	0.020094	83-01	0.033644
119	4HF3	0.033425	0.029454	115-29	0.067118
119	4IG2	0.032429	0.028202	119-25	0.061489
120	121	0.026682	0.020270	159-04	0.039804
120	4HH2	0.035282	0.030087	145-19	0.058398
120	4IG2	0.025576	0.020680	151-52	0.038185
121	126	0.042244	0.041604	72-30	0.077739
121	127	0.046887	0.027297	162-29	0.081398
121	4HH2	0.033621	0.028960	144-51	0.056197
121	4IG2	0.026743	0.022085	154-09	0.042670
121	4JF2	0.034299	0.026273	169-26	0.059850
121	4JH5	0.032671	0.023657	163-06	0.053639
121	4LH2	0.025183	0.021996	163-23	0.063377
122	124	0.030974	0.029907	22-51	0.054235
122	4GG2	0.028426	0.025493	145-48	0.044369
123	124	0.024092	0.023560	7-29	0.049527
123	4GG2	0.029279	0.020369	166-00	0.050549
123	4HF3	0.027805	0.026202	172-29	0.061560
124	4HF3	0.025762	0.023898	153-15	0.056451
124	4HH2	0.032108	0.028049	143-57	0.054895
124	4IG2	0.027621	0.025294	142-23	0.056497

125	4JF2	0.034276	0.032959	7-07	0.059472
125	4LE2	0.039302	0.037639	44-26	0.078254
125	4LH2	0.035118	0.033905	51-57	0.066905
126	4LH2	0.039458	0.037602	77-49	0.064866
127	4JH5	0.053267	0.031994	163-05	0.088702
127	4LH2	0.044580	0.024252	163-28	0.071222
128	4KE1	0.028398	0.024695	26-31	0.063003
128	4LE2	0.024471	0.020847	24-59	0.052387
129	4LD2	0.030681	0.026539	170-12	0.062567
129	4LE2	0.028443	0.024184	172-04	0.048272
130	1IA1	0.021886	0.017754	174-15	0.037399
130	1KA2	0.025913	0.021879	170-56	0.053809
131	1IA1	0.029896	0.026873	45-57	0.058002
131	1KA2	0.028082	0.024987	48-25	0.052448
131	4IC1	0.031285	0.029692	149-01	0.057146
131	4JB3	0.027058	0.023263	51-49	0.044609
132	133	0.045869	0.031186	5-03	0.068947
132	1KA2	0.040188	0.031043	3-53	0.065970
132	4LB2	0.039255	0.029676	4-28	0.060436
133	4IC1	0.028971	0.027296	153-06	0.073596
133	4JB3	0.031900	0.029874	147-59	0.065310
133	4JD2	0.023600	0.022404	161-53	0.057726
133	4LD2	0.017814	0.016156	11-28	0.060236
134	1KA2	0.035409	0.030041	168-47	0.065998
134	4LB2	0.031938	0.027478	169-20	0.051234
137	1IA1	0.032290	0.029783	126-12	0.052999
245	4JD2	0.025393	0.020707	128-16	0.051405
245	4KE1	0.028397	0.025383	130-13	0.065930
245	4LD2	0.027315	0.022279	135-59	0.053851
13002	133	0.037201	0.035274	1-27	0.066953
13002	4LB2	0.034153	0.032946	134-02	0.059222
1IA1	1KA2	0.017917	0.016578	162-18	0.050899
1IA1	Q366	0.052496	0.047696	165-24	0.088958
1KA2	4JB3	0.023368	0.022286	83-53	0.046704
1KA2	4LB2	0.018106	0.016929	156-39	0.049196
4GC1	4HB1	0.048043	0.040571	139-13	0.109640
4GG2	4HF3	0.032472	0.028424	155-21	0.065247
4HD1	FRIA	0.037155	0.030546	175-24	0.070152
4HF3	4IE2	0.016851	0.016005	177-58	0.049494
4HF3	4IG2	0.021487	0.020003	127-31	0.060246
4HH2	4IG2	0.031146	0.027544	144-01	0.053707
4IC1	4JD2	0.021929	0.020661	151-25	0.069586
4IE2	4JD2	0.030818	0.030034	132-24	0.067596
4JB3	4LB2	0.023931	0.022719	102-02	0.049369
4JD2	4KE1	0.021033	0.020043	2-00	0.066148
4JF2	4JH5	0.044299	0.030811	167-33	0.071886
4JF2	4KE1	0.038478	0.033884	10-01	0.076405
4KE1	4LE2	0.023275	0.019678	14-26	0.047816
4LB2	4LD2	0.027567	0.025522	143-47	0.058959
4LD2	4LE2	0.018145	0.016295	153-17	0.055042
4LE2	4LH2	0.031459	0.029362	142-27	0.068197

Elapsed Time = 00:00:01

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01 00000000 Top of File
01 00000006 Summary of Files Used and Option Settings
02 00000009 Project Folder and Data Files
02 00000016 Project Option Settings
01 00000038 Summary of Unadjusted Input Observations
02 00000041 Entered Stations
03 00000043 Fixed Positions
02 00000046 GPS Vector Observations
01 00000532 Adjustment Statistical Summary
01 00000552 Adjusted Station Information
02 00000555 Adjusted Coordinates
02 00000607 Adjusted Positions and Ellipsoid Heights
02 00000660 Convergence Angles and Grid Factors at Stations
01 00000716 Adjusted Observations and Residuals
02 00000719 Adjusted GPS Vector Observations
02 00001324 GPS Vector Residual Summary
01 00001449 Adjusted Bearings and Horizontal Distances
01 00001634 Error Propagation
02 00001637 Station Coordinate Standard Deviations
02 00001689 Station Coordinate Error Ellipses
02 00001743 Relative Error Ellipses
01 00001837 End of File
0001E78A
STARPLUS
0003103B
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STAR*NET-PRO Version 6.0.23e
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Run Date: Wed Jul 24 2002 13:29:42

Summary of Files Used and Option Settings

Project Folder and Data Files

Project Name	WITTMANN NAD 83 (92)
Project Folder	D:\GPS PROJECTS\WITTMANN\WITTMANN MAIN
Data File List	Wittmann NAD 83 (92).dat
	Wittmann NAD 83 (92).gps

Project Option Settings

STAR*NET Run Mode	: Adjust with Error Propagation
Type of Adjustment	: 3D
Project Units	: FeetInt; DMS
Coordinate System	: Mercator NAD83; AZ Central 0202
Geoid Height	: 0.0000 (Default, Meters)
Vertical Deflection	: N=0.00 E=0.00 (Defaults, Seconds)
Longitude Sign Convention	: Positive West
Input/Output Coordinate Order	: North-East
Angle Data Station Order	: At-From-To
Distance/Vertical Data Type	: Slope/Zenith
Convergence Limit; Max Iterations	: 0.010000; 10
Default Coefficient of Refraction	: 0.070000
Create Coordinate File	: Yes
Create Geodetic Position File	: Yes
Create Ground Scale Coordinate File	: No
Create Dump File	: No
GPS Vector Standard Error Factors	: 7.8400
GPS Vector Centering (Meters)	: 0.00100
GPS Vector Transformations	: Solve for Scale and Rotations

Summary of Unadjusted Input Observations

Number of Entered Stations (FeetInt) = 25

Fixed Stations	Latitude	Longitude	Elev	Description
Q366	33-43-31.441170	112-20-39.650430	1294.8200	
FRIA	33-38-42.119980	112-29-46.862490	1495.5400	
115	33-42-07.793580	112-21-19.785620	1214.5100	
112	33-38-00.810930	112-26-32.249730	1200.0700	
113	33-38-02.861820	112-30-36.128300	1987.3600	
4GC1	33-38-04.791470	112-24-11.967230	1153.8700	
4HB1	33-40-55.865770	112-21-10.531750	1177.6200	
4HD1	33-40-56.225170	112-27-33.636280	1294.9500	
4LH2	33-51-56.293120	112-37-55.133520	1881.3000	

4LE2	33-50-52.704250	112-30-30.620080	1923.1600
4JD2	33-46-03.955080	112-27-52.138850	1514.7300
4JB3	33-45-36.445160	112-21-32.808300	1379.0400
4GG2	33-39-07.248390	112-35-53.959810	1618.4700
4HF3	33-40-55.070040	112-33-55.019670	1428.2800
1KA2	33-47-55.724570	112-16-41.457300	1287.3400
1IA1	33-43-30.000490	112-18-29.974210	1233.6300
4KE1	33-48-40.676830	112-30-57.649770	1721.8800
4JF2	33-46-04.398330	112-34-06.995100	1581.7600
4IE2	33-43-21.462930	112-30-47.052780	1423.6900
4LD2	33-50-15.913090	112-27-03.269280	1901.8000
4LB2	33-49-57.827210	112-21-38.295270	1758.6900
4JH5	33-46-08.440570	112-39-49.771080	1609.0200
4HH2	33-41-07.370600	112-39-25.371660	1467.6800
4IC1	33-43-28.488690	112-24-36.556790	1325.8500
4IG2	33-43-26.121980	112-37-14.839000	1544.0900

Number of GPS Vector Observations (FeetInt) = 120

From To	DeltaX DeltaY DeltaZ	StdErrX StdErrY StdErrZ	CorrelXY CorrelXZ CorrelYZ
(V1 Postprocessed 12-APR-2002 08:52:20.000 network control.asc)			
FRIA	14415.9492	0.0195	0.5384
112	-8199.4065	0.0335	-0.3690
	-3640.2506	0.0332	-0.6915
(V2 Postprocessed 12-APR-2002 09:51:30.000 network control.asc)			
FRIA	-4846.6484	0.0153	0.5138
113	-815.0348	0.0236	-0.5935
	-3031.6075	0.0270	-0.5499
(V3 Postprocessed 12-APR-2002 11:49:05.000 network control.asc)			
FRIA	13342.9353	0.0335	0.5745
4HD1	2792.3781	0.0451	-0.4590
	11172.0963	0.0375	-0.7166
(V4 Postprocessed 12-APR-2002 01:14:25.000 network control.asc)			
115	-799.2065	0.0291	0.5370
4HB1	-3999.4340	0.0478	-0.4469
	-6070.2222	0.0310	-0.5135
(V5 Postprocessed 15-APR-2002 12:23:50.000 network control.asc)			
115	-799.1712	0.0446	0.7277
4HB1	-3999.3924	0.0603	-0.7689
	-6070.2797	0.0515	-0.7699
(V6 Postprocessed 18-APR-2002 07:58:41.000 network control.asc)			
4JD2	-11163.0071	0.0225	0.8713
4KE1	13971.8573	0.0494	-0.8476
	13282.4494	0.0365	-0.9330
(V7 Postprocessed 18-APR-2002 09:47:25.000 network control.asc)			
4IC1	19447.2799	0.0188	0.4409
131	-2767.7818	0.0296	-0.3952
	7243.7299	0.0214	-0.5329
(V8 Postprocessed 18-APR-2002 12:15:00.000 network control.asc)			
4IC1	3770.4795	0.0523	0.5720
133	13289.6310	0.0834	-0.6628
	21019.7286	0.0710	-0.7440
(V9 Postprocessed 18-APR-2002 12:15:00.000 network control.asc)			
4JD2	15764.7196	0.0446	0.5463

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133                          -938.8890          0.0700          -0.6781
                             7846.5331          0.0636          -0.6987
(V10 Postprocessed 30-APR-2002 10:54:10.000 network control.asc)
4JD2                        15764.7147          0.0337           0.5444
133                          -938.8823          0.0524          -0.5440
                             7846.4801          0.0452          -0.7584
(V11 Postprocessed 30-APR-2002 01:27:15.000 network control.asc)
4JD2                        15764.7049          0.0306           0.6059
133                          -938.8895          0.0493          -0.3733
                             7846.4621          0.0359          -0.6386
(V12 Postprocessed 19-APR-2002 12:09:00.000 network control.asc)
117                        -26910.8794          0.0424           0.5712
4HF3                         5808.2661          0.0660          -0.6490
                            -7270.6647          0.0576          -0.7455
(V13 Postprocessed 18-APR-2002 08:01:04.000 network control.asc)
4JD2                        11994.2288          0.0211           0.8653
4IC1                       -14228.5388          0.0457          -0.8498
                           -13173.1822          0.0340          -0.9301
(V14 Postprocessed 18-APR-2002 01:36:15.000 network control.asc)
4JD2                         -8016.5762          0.0402           0.6049
117                        -10019.2336          0.0707          -0.4834
                           -18748.0226          0.0409          -0.5747
(V15 Postprocessed 23-APR-2002 12:23:15.000 network control.asc)
4JD2                         -8016.5799          0.0302           0.5287
117                        -10019.2872          0.0472          -0.5936
                           -18748.0189          0.0350          -0.6170
(V17 Postprocessed 16-APR-2002 11:08:15.000 network control.asc)
4IE2                          -761.3355          0.0302           0.4974
118                          -1441.3464          0.0444          -0.3366
                             -2456.1564          0.0364          -0.6629
(V18 Postprocessed 22-APR-2002 10:21:45.000 network control.asc)
4IE2                          -761.3925          0.0113           0.4053
118                          -1441.3167          0.0159          -0.3781
                             -2456.1506          0.0124          -0.5365
(V19 Postprocessed 15-APR-2002 11:00:25.000 network control.asc)
115                           4895.2701          0.0327           0.4564
Q366                          2989.7099          0.0488          -0.3141
                              7078.3559          0.0348          -0.6071
(V20 Postprocessed 15-APR-2002 10:47:30.000 network control.asc)
4GC1                       -11064.8389          0.0225           0.2341
112                           4283.0726          0.0453          -0.2649
                              -309.4765          0.0300          -0.6858
(V21 Postprocessed 15-APR-2002 09:26:40.000 network control.asc)
115                         13097.0757          0.0373           0.6561
137                         -5375.3899          0.0587          -0.7159
                              -93.7193          0.0795          -0.7060
(V22 Postprocessed 15-APR-2002 09:02:20.000 network control.asc)
4GC1                        18623.2272          0.0395           0.9135
115                          7004.7973          0.0856          -0.9151
                            20477.9707          0.0644          -0.9539
(V24 Postprocessed 15-APR-2002 12:48:25.000 network control.asc)
4IC1                        13682.1074          0.1008           0.8592
115                        -10431.1246          0.1301          -0.8781
                            -6847.2833          0.1075          -0.8626
(V25 Postprocessed 15-APR-2002 12:23:50.000 network control.asc)
4GC1                        17824.0880          0.0368           0.4961
```

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4HB1                        3005.3875          0.0602          -0.5686
                           14407.6746          0.0465          -0.6091
(V27 Postprocessed 12-APR-2002 12:03:50.000 network control.asc)
FRIA                       -5044.1111          0.0578           0.5621
114                         1367.1549          0.0927          -0.4909
                            -950.5149          0.0852          -0.7784
(V30 Postprocessed 22-APR-2002 08:57:35.000 network control.asc)
4HF3                      -23922.6741          0.0433           0.7344
124                         4642.6182          0.0705          -0.7655
                           -7290.5929          0.1052          -0.8040
(V31 Postprocessed 19-APR-2002 12:09:00.000 network control.asc)
117                         2931.7643          0.0458           0.5639
4HD1                       -6370.2922          0.0689          -0.6875
                           -7247.4207          0.0636          -0.6911
(V32 Postprocessed 19-APR-2002 08:03:05.000 network control.asc)
4HF3                      -15336.5700          0.0240           0.6505
123                         -447.9213          0.0428          -0.5480
                           -9104.5415          0.0332          -0.7699
(V33 Postprocessed 19-APR-2002 09:06:50.000 network control.asc)
114                       -11455.6208          0.0341           0.6881
4HF3                       13603.6670          0.0562          -0.7307
                           12099.4500          0.0800          -0.7576
(V34 Postprocessed 22-APR-2002 08:29:45.000 network control.asc)
4KE1                        4887.7352          0.0146           0.4977
4LE2                        5836.8361          0.0246          -0.3046
                           11199.5658          0.0268          -0.6640
(V35 Postprocessed 22-APR-2002 07:42:15.000 network control.asc)
4KE1                        6572.6151          0.0259           0.7210
128                         3876.4512          0.0454          -0.6104
                            9395.8072          0.0306          -0.7965
(V36 Postprocessed 22-APR-2002 09:58:15.000 network control.asc)
4KE1                       16780.1144          0.0339           0.5083
245                        -8337.5120          0.0569          -0.4861
                           -2002.1965          0.0334          -0.6727
(V37 Postprocessed 22-APR-2002 07:42:58.000 network control.asc)
4IE2                      -17817.8084          0.0177           0.5998
4HF3                       -1500.1679          0.0306          -0.5218
                          -12309.1367          0.0273          -0.7227
(V38 Postprocessed 22-APR-2002 10:45:45.000 network control.asc)
4IE2                      -17817.8025          0.0175           0.8599
4HF3                       -1500.1674          0.0374          -0.8419
                          -12309.1349          0.0279          -0.9277
(V39 Postprocessed 22-APR-2002 10:45:45.000 network control.asc)
118                       -17056.3954          0.0332           0.4779
4HF3                         -58.8387          0.0472          -0.3266
                           -9852.9622          0.0397          -0.6289
(V40 Postprocessed 23-APR-2002 10:30:20.000 network control.asc)
124                        10274.9627          0.0205           0.4609
122                        -1952.9294          0.0295          -0.3024
                            3343.5261          0.0225          -0.5997
(V41 Postprocessed 23-APR-2002 09:41:45.000 network control.asc)
4GG2                       -1983.6515          0.0144           0.4070
122                         4554.3385          0.0226          -0.3997
                            5019.0613          0.0161          -0.4721
(V42 Postprocessed 23-APR-2002 08:44:05.000 network control.asc)
123                         3672.5096          0.0141           0.6541
```

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4GG2                        -1416.7480          0.0222          -0.6933
                              138.4265          0.0304          -0.7474
(V43 Postprocessed 23-APR-2002 11:20:20.000 network control.asc)
124                          8586.1093          0.0159           0.5218
123                         -5090.5190          0.0247          -0.4945
                            -1813.9785          0.0219          -0.7349
(V44 Postprocessed 23-APR-2002 07:49:00.000 network control.asc)
4LE2                         1684.8651          0.0139           0.6370
128                         -1960.3940          0.0239          -0.4907
                            -1803.7460          0.0184          -0.7219
(V45 Postprocessed 23-APR-2002 11:57:30.000 network control.asc)
245                          3484.7613          0.0175           0.5090
4LD2                         5588.8031          0.0275          -0.6328
                            10100.6653          0.0251          -0.6614
(V46 Postprocessed 23-APR-2002 09:57:45.000 network control.asc)
4LD2                        25003.6295          0.0292           0.4902
4LB2                       -11281.2531          0.0480          -0.4756
                            -1598.4641          0.0290          -0.6460
(V47 Postprocessed 23-APR-2002 08:55:35.000 network control.asc)
4LD2                       -15377.1191          0.0276           0.6372
4LE2                         8585.5586          0.0511          -0.6652
                             3101.1211          0.0720          -0.7364
(V48 Postprocessed 23-APR-2002 11:57:30.000 network control.asc)
4JD2                         5617.0885          0.0159           0.5329
245                          5634.3161          0.0250          -0.6309
                            11280.2563          0.0211          -0.7034
(V49 Postprocessed 23-APR-2002 09:00:05.000 network control.asc)
4IC1                       -12984.7953          0.0177           0.5849
116                          5340.2420          0.0288          -0.6357
                               49.1517          0.0383          -0.6548
(V50 Postprocessed 24-APR-2002 12:13:10.000 network control.asc)
119                        -13117.9927          0.0277           0.5677
4IG2                         4695.6645          0.0424          -0.6435
                             -984.4399          0.0323          -0.6718
(V51 Postprocessed 24-APR-2002 10:17:35.000 network control.asc)
119                        -13118.0202          0.0307           0.4798
4IG2                         4695.6560          0.0445          -0.4518
                             -984.4083          0.0325          -0.5726
(V52 Postprocessed 24-APR-2002 09:33:05.000 network control.asc)
4IG2                         -3188.8877          0.0141           0.4036
120                          2621.6355          0.0220          -0.4195
                             1822.4291          0.0167          -0.4673
(V53 Postprocessed 25-APR-2002 09:20:20.000 network control.asc)
120                          3188.8623          0.0311           0.4826
4IG2                        -2621.6537          0.0485          -0.5465
                            -1822.4390          0.0564          -0.5006
(V54 Postprocessed 24-APR-2002 11:25:40.000 network control.asc)
124                         11553.4063          0.0339           0.5609
4IG2                         9577.5630          0.0547          -0.5788
                            20058.2901          0.0490          -0.7758
(V55 Postprocessed 25-APR-2002 09:20:20.000 network control.asc)
4IG2                       -11553.3566          0.0369           0.4411
124                         -9577.5499          0.0613          -0.4552
                           -20058.3413          0.0480          -0.4968
(V56 Postprocessed 24-APR-2002 09:23:10.000 network control.asc)
4IG2                        12369.3818          0.0270           0.8924
```

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4HF3                        -14220.1337          0.0576          -0.8875
                            -12767.7794          0.0431          -0.9489
(V57 Postprocessed 24-APR-2002 10:28:25.000 network control.asc)
4HH2                         13150.6063          0.0426           0.5006
4IG2                          2879.8582          0.0617          -0.3313
                             11711.1147          0.0469          -0.6399
(V58 Postprocessed 25-APR-2002 09:30:55.000 network control.asc)
4HH2                         13150.5885          0.0338           0.4441
4IG2                          2879.8577          0.0507          -0.4969
                             11711.1537          0.0426          -0.4560
(V59 Postprocessed 24-APR-2002 12:13:10.000 network control.asc)
119                           -748.6688          0.0396           0.6569
4HF3                         -9524.4676          0.0613          -0.7180
                            -13752.2366          0.0444          -0.7658
(V60 Postprocessed 24-APR-2002 10:17:35.000 network control.asc)
119                           -748.6912          0.0341           0.4723
4HF3                         -9524.4265          0.0492          -0.3621
                            -13752.2247          0.0342          -0.5730
(V61 Postprocessed 24-APR-2002 11:25:40.000 network control.asc)
124                          23922.7854          0.0301           0.5863
4HF3                         -4642.5652          0.0506          -0.5762
                              7290.5174          0.0461          -0.7835
(V62 Postprocessed 24-APR-2002 11:41:50.000 network control.asc)
4GG2                         11663.9911          0.0298           0.5733
4HF3                          1864.6864          0.0453          -0.6403
                              8966.0543          0.0399          -0.7325
(V63 Postprocessed 25-APR-2002 10:07:30.000 network control.asc)
121                          -2887.0495          0.0247           0.5160
4JH5                          5448.2915          0.0353          -0.4979
                              5833.8215          0.0280          -0.6434
(V64 Postprocessed 26-APR-2002 08:49:05.000 network control.asc)
121                          -2886.9825          0.0200           0.5699
4JH5                          5448.2604          0.0326          -0.6301
                              5833.7873          0.0426          -0.6392
(V65 Postprocessed 25-APR-2002 12:18:55.000 network control.asc)
121                           2511.1671          0.0279           0.5670
120                          -5330.2221          0.0419          -0.5835
                             -6024.0285          0.0281          -0.5847
(V66 Postprocessed 25-APR-2002 09:02:40.000 network control.asc)
121                           2511.1680          0.0139           0.4431
120                          -5330.2108          0.0236          -0.4560
                             -6024.0154          0.0302          -0.5281
(V67 Postprocessed 25-APR-2002 12:21:15.000 network control.asc)
120                          -9961.6878          0.0465           0.5874
4HH2                         -5501.5219          0.0683          -0.6428
                            -13533.6054          0.0467          -0.6438
(V68 Postprocessed 25-APR-2002 09:30:55.000 network control.asc)
121                          -7450.5933          0.0417           0.4519
4HH2                        -10831.7673          0.0643          -0.5095
                            -19557.5721          0.0508          -0.4879
(V69 Postprocessed 25-APR-2002 12:21:15.000 network control.asc)
4HH2                          7450.5664          0.0322           0.5771
121                          10831.7319          0.0481          -0.5547
                             19557.6219          0.0315          -0.5580
(V70 Postprocessed 25-APR-2002 09:20:20.000 network control.asc)
121                           5700.0209          0.0189           0.4341
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4IG2                        -7951.8641          0.0306          -0.4264
                            -7846.4369          0.0237          -0.4921
(V71 Postprocessed 25-APR-2002 09:30:55.000 network control.asc)
124                         -1597.2230          0.0276           0.4384
4HH2                         6697.6495          0.0443          -0.4562
                             8347.1774          0.0326          -0.4865
(V72 Postprocessed 25-APR-2002 12:21:15.000 network control.asc)
124                         -1597.2312          0.0279           0.5551
4HH2                         6697.6360          0.0424          -0.5225
                             8347.1496          0.0277          -0.5350
(V73 Postprocessed 26-APR-2002 08:07:45.000 network control.asc)
121                         13489.4779          0.0314           0.9040
4LH2                        19576.8980          0.0678          -0.8908
                            35201.6304          0.0534          -0.9485
(V75 Postprocessed 26-APR-2002 10:18:45.000 network control.asc)
4LH2                        12842.3591          0.0269           0.5341
125                        -19128.4936          0.0364          -0.4509
                           -19282.8798          0.0295          -0.6600
(V76 Postprocessed 26-APR-2002 09:58:25.000 network control.asc)
126                          3767.3139          0.0220           0.4440
4LH2                         -278.6363          0.0332          -0.3485
                             1881.7787          0.0216          -0.5552
(V77 Postprocessed 26-APR-2002 08:44:05.000 network control.asc)
127                          3985.7105          0.0177           0.6288
4LH2                        -2545.3733          0.0274          -0.6922
                            -1121.9537          0.0368          -0.6904
(V78 Postprocessed 26-APR-2002 10:55:30.000 network control.asc)
4LE2                       -33232.1388          0.0369           0.5466
4LH2                        17729.0785          0.0583          -0.4740
                             5315.1467          0.0510          -0.7672
(V79 Postprocessed 30-APR-2002 11:22:05.000 network control.asc)
4LE2                       -33232.1661          0.0284           0.5511
4LH2                        17729.1550          0.0439          -0.6655
                             5315.1530          0.0402          -0.7011
(V80 Postprocessed 26-APR-2002 09:58:25.000 network control.asc)
121                          9722.1051          0.0365           0.4475
126                         19855.5021          0.0547          -0.3062
                            33319.8719          0.0361          -0.5190
(V81 Postprocessed 26-APR-2002 08:44:05.000 network control.asc)
121                          9503.7168          0.0376           0.7074
127                         22122.2331          0.0538          -0.7843
                            36323.6545          0.0728          -0.7388
(V82 Postprocessed 26-APR-2002 08:40:30.000 network control.asc)
4JF2                       -23748.8983          0.0239           0.6081
121                          5869.6140          0.0383          -0.6645
                            -5479.0011          0.0513          -0.6746
(V83 Postprocessed 26-APR-2002 10:13:30.000 network control.asc)
4JF2                       -23748.9096          0.0434           0.4842
121                          5869.5872          0.0623          -0.3515
                            -5479.0009          0.0477          -0.6108
(V84 Postprocessed 26-APR-2002 10:18:45.000 network control.asc)
4JF2                         2582.8893          0.0208           0.4627
125                          6317.9117          0.0289          -0.4017
                            10439.7746          0.0246          -0.5590
(V85 Postprocessed 26-APR-2002 10:55:30.000 network control.asc)
4LE2                       -20389.7817          0.0402           0.5668
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125                          -1399.4380          0.0653          -0.5001
                            -13967.7230          0.0596          -0.7871
(V86 Postprocessed 26-APR-2002 08:49:05.000 network control.asc)
4JH5                         12390.7660          0.0356           0.6429
127                          16673.9833          0.0558          -0.7044
                             30489.8183          0.0739          -0.6875
(V87 Postprocessed 26-APR-2002 08:49:05.000 network control.asc)
4JF2                        -26635.9402          0.0270           0.5351
4JH5                         11317.8681          0.0508          -0.5730
                               354.8315          0.0650          -0.6191
(V88 Postprocessed 30-APR-2002 08:05:35.000 network control.asc)
FRIA                         13342.9610          0.0242           0.6497
4HD1                          2792.2951          0.0400          -0.6398
                             11172.0790          0.0518          -0.7564
(V89 Postprocessed 30-APR-2002 09:25:00.000 network control.asc)
116                          -4094.1555          0.0261           0.4540
4HD1                         -7501.2384          0.0413          -0.4346
                            -12871.4352          0.0256          -0.5757
(V90 Postprocessed 30-APR-2002 09:24:10.000 network control.asc)
117                           2931.7610          0.0196           0.4457
4HD1                         -6370.2912          0.0310          -0.4192
                             -7247.4524          0.0193          -0.5642
(V91 Postprocessed 30-APR-2002 08:46:40.000 network control.asc)
4LD2                        -10159.0990          0.0382           0.6014
129                          11020.7432          0.0516          -0.7048
                              9844.3097          0.0647          -0.6167
(V92 Postprocessed 30-APR-2002 10:23:45.000 network control.asc)
4LD2                        -10159.1080          0.0349           0.5447
129                          11020.7387          0.0501          -0.3839
                              9844.3144          0.0444          -0.7166
(V93 Postprocessed 30-APR-2002 08:46:40.000 network control.asc)
4LE2                          5218.0361          0.0201           0.5451
129                           2435.2082          0.0271          -0.6218
                              6743.1541          0.0359          -0.5767
(V94 Postprocessed 30-APR-2002 10:23:45.000 network control.asc)
4LE2                          5218.0222          0.0229           0.4837
129                           2435.2008          0.0305          -0.3209
                              6743.1522          0.0270          -0.6433
(V95 Postprocessed 30-APR-2002 01:06:30.000 network control.asc)
133                           3273.3222          0.0260           0.5513
13002                         5565.6473          0.0429          -0.3391
                              9817.1913          0.0270          -0.5481
(V96 Postprocessed 30-APR-2002 03:49:00.000 network control.asc)
133                          13754.3552          0.0290           0.7093
132                          -5621.6213          0.0498           0.2001
                                22.5846          0.0513          -0.0414
(V97 Postprocessed 30-APR-2002 10:33:15.000 network control.asc)
133                          -6662.7693          0.0184           0.8971
4LD2                         12162.0920          0.0409          -0.8648
                             13534.4011          0.0299          -0.9420
(V98 Postprocessed 30-APR-2002 10:54:10.000 network control.asc)
4IE2                         17109.6441          0.0288           0.5415
4JD2                          2710.8563          0.0433          -0.5456
                             13709.5032          0.0354          -0.7515
(V99 Postprocessed 30-APR-2002 01:28:35.000 network control.asc)
4JD2                        -17109.7079          0.0342           0.5359
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4IE2                        -2710.8514          0.0580          -0.3809
                           -13709.5411          0.0441          -0.6432
(V100 Postprocessed 30-APR-2002 11:44:50.000 network control.asc)
4LB2                       -25003.5668          0.0307           0.5574
4LD2                        11281.2486          0.0476          -0.6497
                             1598.4285          0.0382          -0.6847
(V101 Postprocessed 30-APR-2002 08:23:15.000 network control.asc)
4LE2                        15377.1393          0.0205           0.8841
4LD2                        -8585.5214          0.0439          -0.8839
                            -3101.1284          0.0337          -0.9448
(V102 Postprocessed 01-MAY-2002 09:00:35.000 network control.asc)
1IA1                       -10121.1308          0.0279           0.4458
Q366                         4188.8461          0.0469          -0.3674
                              155.1047          0.0349          -0.5416
(V103 Postprocessed 01-MAY-2002 08:10:35.000 network control.asc)
1IA1                         1464.7665          0.0134           0.5843
130                          4118.8608          0.0236          -0.5664
                             6664.5579          0.0313          -0.7247
(V104 Postprocessed 01-MAY-2002 12:43:25.000 network control.asc)
1IA1                         1464.7315          0.0177           0.6186
130                          4118.8165          0.0302          -0.4252
                             6664.5566          0.0167          -0.5757
(V105 Postprocessed 01-MAY-2002 08:18:00.000 network control.asc)
1KA2                       -12659.0215          0.0370           0.7163
130                         -6176.7662          0.0601          -0.7582
                           -15697.2095          0.0891          -0.7833
(V106 Postprocessed 01-MAY-2002 12:43:25.000 network control.asc)
1KA2                       -12659.0688          0.0298           0.5949
130                         -6176.8000          0.0481          -0.3949
                           -15697.2233          0.0287          -0.4937
(V107 Postprocessed 01-MAY-2002 10:18:55.000 network control.asc)
1IA1                         -9251.3567          0.0251           0.4927
131                           8862.3905          0.0332          -0.3207
                              7167.7159          0.0296          -0.6407
(V108 Postprocessed 01-MAY-2002 10:18:55.000 network control.asc)
131                         23375.1673          0.0352           0.5367
1KA2                         1433.1951          0.0511          -0.3787
                            15194.0420          0.0457          -0.7196
(V109 Postprocessed 01-MAY-2002 10:18:55.000 network control.asc)
4JB3                         2379.0928          0.0167           0.4772
131                         -3460.8241          0.0216          -0.2979
                            -3542.0691          0.0186          -0.6107
(V110 Postprocessed 01-MAY-2002 12:35:15.000 network control.asc)
132                         25297.5373          0.0311           0.6049
1KA2                        -9002.4669          0.0492          -0.4263
                             1395.4446          0.0284          -0.4868
(V111 Postprocessed 01-MAY-2002 12:35:15.000 network control.asc)
4LB2                        -4586.3993          0.0247           0.5986
132                         -6502.4428          0.0394          -0.4081
                           -11913.3743          0.0223          -0.4820
(V112 Postprocessed 01-MAY-2002 11:22:45.000 network control.asc)
4JB3                       -13297.6701          0.0386           0.5556
133                         12596.5337          0.0598          -0.6736
                            10233.9149          0.0547          -0.7014
(V113 Postprocessed 01-MAY-2002 09:44:05.000 network control.asc)
1IA1                        -1919.3198          0.0163           0.4338
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137                          -4176.2919          0.0243          -0.4172
                             -7017.0200          0.0175          -0.5603
(V114 Postprocessed 01-MAY-2002 01:53:35.000 network control.asc)
1IA1                         14123.7811          0.0373           0.7595
1KA2                         10295.6907          0.0551          -0.6497
                             22361.7796          0.0420          -0.7164
(V115 Postprocessed 01-MAY-2002 08:18:00.000 network control.asc)
1IA1                         14123.7682          0.0193           0.8797
1KA2                         10295.6203          0.0409          -0.8710
                             22361.8226          0.0311          -0.9353
(V116 Postprocessed 01-MAY-2002 01:55:05.000 network control.asc)
4LB2                         20711.0854          0.0399           0.7611
1KA2                        -15504.8999          0.0582          -0.6568
                            -10517.9196          0.0447          -0.7116
(V117 Postprocessed 01-MAY-2002 08:27:35.000 network control.asc)
4LB2                         20711.0857          0.0203           0.8753
1KA2                        -15504.9739          0.0428          -0.8656
                            -10517.9119          0.0328          -0.9335
(V118 Postprocessed 01-MAY-2002 09:34:45.000 network control.asc)
4JB3                         25754.2628          0.0239           0.4759
1KA2                         -2027.6439          0.0349          -0.3656
                             11651.9827          0.0258          -0.6180
(V119 Postprocessed 01-MAY-2002 11:09:05.000 network control.asc)
4JB3                         25754.2542          0.0310           0.5667
1KA2                         -2027.6150          0.0490          -0.6383
                             11651.9878          0.0421          -0.7474
(V120 Postprocessed 01-MAY-2002 09:34:45.000 network control.asc)
4JB3                          5043.1868          0.0248           0.4695
4LB2                         13477.3574          0.0363          -0.3666
                             22169.8812          0.0269          -0.6235
(V121 Postprocessed 01-MAY-2002 11:09:05.000 network control.asc)
4JB3                          5043.1859          0.0301           0.5576
4LB2                         13477.3693          0.0488          -0.6330
                             22169.8783          0.0420          -0.7556
(V122 Postprocessed 02-MAY-2002 08:58:15.000 network control.asc)
4LB2                          4125.8584          0.0146           0.4194
134                          -1045.5885          0.0248          -0.3262
                               817.0792          0.0181          -0.5312
(V123 Postprocessed 02-MAY-2002 09:43:45.000 network control.asc)
4LB2                        -15067.4448          0.0205           0.4632
13002                         4684.8343          0.0300          -0.4500
                             -2118.7072          0.0216          -0.5622
(V124 Postprocessed 02-MAY-2002 08:07:45.000 network control.asc)
1KA2                        -16585.2179          0.0313           0.6316
134                          14459.3880          0.0575          -0.6200
                             11334.9909          0.0780          -0.7458
(V125 Postprocessed 03-MAY-2002 01:16:50.000 network control.asc)
4KE1                        -18084.8602          0.0300           0.5865
4JF2                         -1880.4530          0.0522          -0.3734
                            -13207.9496          0.0389          -0.6798
(V126 Postprocessed 03-MAY-2002 11:01:45.000 network control.asc)
114                            197.4178          0.0153           0.5418
113                          -2182.1823          0.0232          -0.5883
                             -2081.0750          0.0206          -0.7197
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Maricopa County

stewart geo technologies

Adjustment Statistical Summary

Convergence Iterations = 2

Number of Stations = 48

Number of Observations = 360
Number of Unknowns = 73
Number of Redundant Obs = 287

Observation	Count	Sum Squares of StdRes	Error Factor
GPS Deltas	360	519.920	1.346
Total	360	519.920	1.346

Warning: The Chi-Square Test at 5.00% Level Exceeded Upper Bound
Lower/Upper Bounds (0.918/1.082)

Adjusted Station Information

Adjusted Coordinates (FeetInt)

Station	N	E	Elev	Description
112	958452.9489	540017.5341	1200.0700	
113	958771.7679	519399.4536	1987.3600	
114	961584.6043	518397.8835	1524.7184	
115	983293.3395	566541.3958	1214.5100	
116	991625.2287	535919.4089	1368.8886	
117	984909.9768	529823.8459	1349.8887	
118	988037.1432	518493.2330	1410.2257	
119	992775.5659	499833.4269	1503.8343	
120	993862.0589	481975.7352	1563.7528	
121	1001096.5489	477657.4075	1622.6207	
122	971553.5749	489029.7783	1535.4380	
123	965298.7897	488635.0673	1628.0858	
124	967649.5839	478768.4450	1471.9419	
125	1020021.4816	501917.8397	1714.3216	
126	1041045.7801	479267.6951	1823.3165	
127	1044665.8760	478219.1504	1829.8200	
128	1034421.4160	522605.8693	1887.1637	
129	1044524.0363	524245.0344	2153.4941	
130	999511.6072	580740.4206	1303.6390	
131	1000152.6110	569029.8046	1319.8755	
132	1016603.3118	563353.5000	1575.2328	
133	1016629.8041	548496.8972	1597.1705	
134	1031804.9336	569399.3837	1713.4597	
137	983160.8230	580696.3221	1158.8673	
245	1020767.9064	536631.2218	1676.5357	
13002	1028338.0142	549457.2382	1747.6975	
1IA1	991544.6796	580918.5004	1233.6300	
1KA2	1018369.3623	590177.6892	1287.3400	
4GC1	958797.2439	551879.8905	1153.8700	

4GG2	965445.2765	492570.5886	1618.4700
4HB1	976019.9616	567292.4508	1177.6200
4HD1	976209.6620	534920.5515	1294.9500
4HF3	976278.7166	502692.9814	1428.2800
4HH2	977709.6749	474786.8867	1467.6800
4IC1	991524.6549	549957.2192	1325.8500
4IE2	990979.7611	518661.7101	1423.6900
4IG2	991657.0595	485912.2331	1544.0900
4JB3	1004387.5212	565531.6806	1379.0400
4JD2	1007321.9167	533522.2118	1514.7300
4JF2	1007550.8762	501878.5801	1581.7600
4JH5	1008155.8380	472945.5408	1609.0200
4KE1	1023250.0307	517954.2859	1721.8800
4LB2	1030809.0192	565182.3307	1758.6900
4LD2	1032767.3820	537779.6881	1901.8000
4LE2	1036581.8603	520311.6185	1923.1600
4LH2	1043247.5662	482867.0755	1881.3000
FRIA	962716.1481	523586.9641	1495.5400
Q366	991733.7744	569967.0277	1294.8200

Adjusted Positions and Ellipsoid Heights (FeetInt)
(Average Geoid Height = 0.000 Meters, 0.000 FeetInt)

Station	Latitude	Longitude	Ellip Ht
112	33-38-00.810930	112-26-32.249730	1200.0700
113	33-38-02.861820	112-30-36.128300	1987.3600
114	33-38-30.633211	112-30-48.166164	1524.7184
115	33-42-07.793580	112-21-19.785620	1214.5100
116	33-43-28.788495	112-27-22.769224	1368.8886
117	33-42-22.031296	112-28-34.508743	1349.8887
118	33-42-52.341311	112-30-48.845975	1410.2257
119	33-43-38.096639	112-34-30.103808	1503.8343
120	33-43-47.667816	112-38-01.626133	1563.7528
121	33-44-58.938193	112-38-53.363292	1622.6207
122	33-40-07.445660	112-36-36.330870	1535.4380
123	33-39-05.540040	112-36-40.503750	1628.0858
124	33-39-28.125543	112-38-37.416079	1471.9419
125	33-48-07.772673	112-34-07.464963	1714.3216
126	33-51-34.261647	112-38-37.633495	1823.3165
127	33-52-10.000730	112-38-50.372216	1829.8200
128	33-50-31.460635	112-30-03.272212	1887.1637
129	33-52-11.497896	112-29-44.512714	2153.4941
130	33-44-48.814626	112-18-32.441446	1303.6390
131	33-44-54.693976	112-20-51.163645	1319.8755
132	33-47-37.207206	112-21-59.240191	1575.2328
133	33-47-36.792629	112-24-55.284639	1597.1705
134	33-50-07.857271	112-20-48.351713	1713.4597
137	33-42-07.046123	112-18-32.227604	1158.8673
245	33-48-17.141132	112-27-16.141590	1676.5357
13002	33-49-32.670688	112-24-44.573062	1747.6975
1IA1	33-43-30.000490	112-18-29.974210	1233.6300
1KA2	33-47-55.724570	112-16-41.457300	1287.3400
4GC1	33-38-04.791470	112-24-11.967230	1153.8700
4GG2	33-39-07.248390	112-35-53.959810	1618.4700
4HB1	33-40-55.865770	112-21-10.531750	1177.6200
4HD1	33-40-56.225170	112-27-33.636280	1294.9500

4HF3	33-40-55.070040	112-33-55.019670	1428.2800
4HH2	33-41-07.370600	112-39-25.371660	1467.6800
4IC1	33-43-28.488690	112-24-36.556790	1325.8500
4IE2	33-43-21.462930	112-30-47.052780	1423.6900
4IG2	33-43-26.121980	112-37-14.839000	1544.0900
4JB3	33-45-36.445160	112-21-32.808300	1379.0400
4JD2	33-46-03.955080	112-27-52.138850	1514.7300
4JF2	33-46-04.398330	112-34-06.995100	1581.7600
4JH5	33-46-08.440570	112-39-49.771080	1609.0200
4KE1	33-48-40.676830	112-30-57.649770	1721.8800
4LB2	33-49-57.827210	112-21-38.295270	1758.6900
4LD2	33-50-15.913090	112-27-03.269280	1901.8000
4LE2	33-50-52.704250	112-30-30.620080	1923.1600
4LH2	33-51-56.293120	112-37-55.133520	1881.3000
FRIA	33-38-42.119980	112-29-46.862490	1495.5400
Q366	33-43-31.441170	112-20-39.650430	1294.8200

Convergence Angles (DMS) and Grid Factors at Stations
(Grid Azimuth = Geodetic Azimuth - Convergence)
(Elevation Factor Includes a 0.00 Meter Geoid Height Correction)

Station	Convergence Angle	------- Factors ------- Scale	x Elevation	= Combined
112	-0-17-28.10	0.99992930	0.99994258	0.99987189
113	-0-19-43.20	0.99993734	0.99990491	0.99984226
114	-0-19-50.11	0.99993776	0.99992705	0.99986481
115	-0-14-36.60	0.99992039	0.99994189	0.99986229
116	-0-17-58.65	0.99993082	0.99993450	0.99986533
117	-0-18-37.94	0.99993316	0.99993541	0.99986857
118	-0-19-52.76	0.99993772	0.99993253	0.99987025
119	-0-21-56.02	0.99994587	0.99992805	0.99987392
120	-0-23-53.57	0.99995442	0.99992518	0.99987961
121	-0-24-23.06	0.99995660	0.99992236	0.99987897
122	-0-23-03.99	0.99995096	0.99992653	0.99987750
123	-0-23-05.68	0.99995115	0.99992210	0.99987326
124	-0-24-10.71	0.99995604	0.99992957	0.99988561
125	-0-21-46.00	0.99994492	0.99991798	0.99986290
126	-0-24-18.49	0.99995578	0.99991276	0.99986855
127	-0-24-25.97	0.99995631	0.99991245	0.99986877
128	-0-19-31.35	0.99993603	0.99990971	0.99984574
129	-0-19-21.74	0.99993537	0.99989697	0.99983234
130	-0-13-04.66	0.99991628	0.99993762	0.99985391
131	-0-14-21.76	0.99991964	0.99993685	0.99985649
132	-0-15-00.64	0.99992138	0.99992463	0.99984602
133	-0-16-38.56	0.99992628	0.99992358	0.99984987
134	-0-14-22.15	0.99991953	0.99991802	0.99983755
137	-0-13-03.62	0.99991630	0.99994455	0.99986085
245	-0-17-57.22	0.99993056	0.99991978	0.99985035
13002	-0-16-33.43	0.99992595	0.99991638	0.99984233
1IA1	-0-13-02.84	0.99991624	0.99994097	0.99985721
1KA2	-0-12-03.98	0.99991381	0.99993840	0.99985222
4GC1	-0-16-10.42	0.99992512	0.99994479	0.99986991
4GG2	-0-22-39.90	0.99994926	0.99992256	0.99987183
4HB1	-0-14-31.01	0.99992016	0.99994365	0.99986382
4HD1	-0-18-03.48	0.99993120	0.99993804	0.99986925
4HF3	-0-21-35.00	0.99994457	0.99993166	0.99987624

4HH2	-0-24-38.36	0.99995807	0.99992978	0.99988785
4IC1	-0-16-26.36	0.99992578	0.99993656	0.99986234
4IE2	-0-19-52.02	0.99993765	0.99993188	0.99986953
4IG2	-0-23-27.37	0.99995248	0.99992612	0.99987860
4JB3	-0-14-45.16	0.99992070	0.99993402	0.99985472
4JD2	-0-18-16.19	0.99993173	0.99992753	0.99985926
4JF2	-0-21-44.57	0.99994494	0.99992432	0.99986926
4JH5	-0-24-55.16	0.99995903	0.99992301	0.99988204
4KE1	-0-20-00.68	0.99993794	0.99991762	0.99985556
4LB2	-0-14-49.90	0.99992081	0.99991585	0.99983667
4LD2	-0-17-50.98	0.99993013	0.99990901	0.99983914
4LE2	-0-19-46.77	0.99993697	0.99990799	0.99984496
4LH2	-0-23-55.04	0.99995398	0.99990999	0.99986397
FRIA	-0-19-16.25	0.99993563	0.99992844	0.99986408
Q366	-0-14-14.85	0.99991936	0.99993805	0.99985741
Project Averages:	-0-18-59.01	0.99993565	0.99992634	0.99986200

Adjusted Observations and Residuals

Adjusted GPS Vector Observations Sorted by Residuals (FeetInt)

Datum Transformations			StdDev	
Scale Factor 0.999999365116	:	0.634884 PPM	0.0886	(Solved)
Rotation Around North Axis	:	0.135116 Sec	0.0817	(Solved)
Rotation Around East Axis	:	0.121259 Sec	0.0808	(Solved)
Rotation Around Vert Axis	:	-0.019451 Sec	0.0182	(Solved)

From To	Component	Adj Value	Residual	StdErr	StdRes
(V24 Postprocessed 15-APR-2002 12:48:25.000 network control.asc)					
4IC1	Delta-N	-8153.0358	-0.0188	0.0413	0.5
115	Delta-E	16625.5680	0.0524	0.0566	0.9
	Delta-U	-119.5470	-0.1516	0.1837	0.8
	Length	18517.4457			
(V114 Postprocessed 01-MAY-2002 01:53:35.000 network control.asc)					
1IA1	Delta-N	26863.5789	0.0027	0.0255	0.1
1KA2	Delta-E	9158.5540	0.0209	0.0231	0.9
	Delta-U	34.4130	0.1512	0.0708	2.1
	Length	28381.8986			
(V61 Postprocessed 24-APR-2002 11:25:40.000 network control.asc)					
124	Delta-N	8798.2659	0.0081	0.0232	0.3
4HF3	Delta-E	23866.0314	-0.0925	0.0227	4.1*
	Delta-U	-59.1235	0.0970	0.0673	1.4
	Length	25436.2032			
(V22 Postprocessed 15-APR-2002 09:02:20.000 network control.asc)					
4GC1	Delta-N	24568.1663	-0.0104	0.0152	0.7
115	Delta-E	14547.9532	0.0307	0.0149	2.1
	Delta-U	41.1193	-0.1227	0.1121	1.1
	Length	28552.3980			
(V106 Postprocessed 01-MAY-2002 12:43:25.000 network control.asc)					
1KA2	Delta-N	-18893.5108	-0.0090	0.0266	0.3
130	Delta-E	-9372.4407	0.0326	0.0222	1.5
	Delta-U	5.6378	-0.1168	0.0532	2.2
	Length	21090.4582			

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(V88 Postprocessed 30-APR-2002 08:05:35.000 network control.asc)
FRIA                Delta-N          13558.5974        0.0668   0.0287   2.3
4HD1                Delta-E          11259.1724       -0.0406   0.0170   2.4
                    Delta-U           -208.0234       -0.0834   0.0613   1.4
                    Length           17625.2036
(V33 Postprocessed 19-APR-2002 09:06:50.000 network control.asc)
114                 Delta-N          14605.0539        0.0156   0.0447   0.3
4HF3                Delta-E         -15791.4611       -0.0388   0.0228   1.7
                    Delta-U           -107.4864       -0.1019   0.0906   1.1
                    Length           21510.2161
(V116 Postprocessed 01-MAY-2002 01:55:05.000 network control.asc)
4LB2                Delta-N         -12333.5215        0.0008   0.0272   0.0
1KA2                Delta-E          25052.3614       -0.0165   0.0246   0.7
                    Delta-U           -490.0009        0.1027   0.0751   1.4
                    Length           27928.0623
(V105 Postprocessed 01-MAY-2002 08:18:00.000 network control.asc)
1KA2                Delta-N         -18893.5108       -0.0478   0.0488   1.0
130                 Delta-E          -9372.4407        0.0016   0.0240   0.1
                    Delta-U              5.6378       -0.0836   0.0998   0.8
                    Length           21090.4582
(V64 Postprocessed 26-APR-2002 08:49:05.000 network control.asc)
121                 Delta-N           7026.5158        0.0446   0.0262   1.7
4JH5                Delta-E          -4762.3958       -0.0697   0.0153   4.6*
                    Delta-U            -15.3187        0.0352   0.0485   0.7
                    Length            8488.3787
(V89 Postprocessed 30-APR-2002 09:25:00.000 network control.asc)
116                 Delta-N         -15422.5871       -0.0470   0.0204   2.3
4HD1                Delta-E           -918.3948       -0.0112   0.0220   0.5
                    Delta-U            -79.6707        0.0733   0.0462   1.6
                    Length           15450.1130
(V8 Postprocessed 18-APR-2002 12:15:00.000 network control.asc)
4IC1                Delta-N          25101.6295       -0.0724   0.0368   2.0
133                 Delta-E          -1580.7004        0.0347   0.0399   0.9
                    Delta-U            256.1675       -0.0299   0.1086   0.3
                    Length           25152.6547
(V99 Postprocessed 30-APR-2002 01:28:35.000 network control.asc)
4JD2                Delta-N         -16423.0327       -0.0063   0.0302   0.2
4IE2                Delta-E         -14775.4537        0.0657   0.0272   2.4
                    Delta-U           -102.7180        0.0536   0.0696   0.8
                    Length           22091.6407
(V25 Postprocessed 15-APR-2002 12:23:50.000 network control.asc)
4GC1                Delta-N          17297.3820        0.0069   0.0309   0.2
4HB1                Delta-E          15333.3503       -0.0201   0.0301   0.7
                    Delta-U             10.9636       -0.0807   0.0727   1.1
                    Length           23115.1720
(V56 Postprocessed 24-APR-2002 09:23:10.000 network control.asc)
4IG2                Delta-N         -15265.3716        0.0265   0.0109   2.4
4HF3                Delta-E          16887.2351       -0.0729   0.0112   6.5*
                    Delta-U           -128.2245        0.0305   0.0752   0.4
                    Length           22764.5936
(V68 Postprocessed 25-APR-2002 09:30:55.000 network control.asc)
121                 Delta-N         -23409.2565       -0.0374   0.0384   1.0
4HH2                Delta-E          -2705.0088        0.0451   0.0351   1.3
                    Delta-U           -168.2675       -0.0591   0.0758   0.8
                    Length           23565.6249
(V110 Postprocessed 01-MAY-2002 12:35:15.000 network control.asc)
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132	Delta-N	1883.4338	-0.0022	0.0270	0.1
1KA2	Delta-E	26820.0591	-0.0186	0.0229	0.8
	Delta-U	-305.1628	0.0801	0.0543	1.5
	Length	26887.8414			
(V20 Postprocessed 15-APR-2002 10:47:30.000 network control.asc)					
4GC1	Delta-N	-400.1504	0.0177	0.0195	0.9
112	Delta-E	-11862.1404	-0.0503	0.0237	2.1
	Delta-U	42.8452	0.0610	0.0502	1.2
	Length	11868.9650			
(V14 Postprocessed 18-APR-2002 01:36:15.000 network control.asc)					
4JD2	Delta-N	-22434.2116	-0.0297	0.0350	0.8
117	Delta-E	-3579.7743	0.0207	0.0299	0.7
	Delta-U	-177.2264	0.0721	0.0785	0.9
	Length	22718.7157			
(V107 Postprocessed 01-MAY-2002 10:18:55.000 network control.asc)					
1IA1	Delta-N	8563.9739	0.0460	0.0198	2.3
131	Delta-E	-11923.0107	0.0044	0.0202	0.2
	Delta-U	81.1066	0.0652	0.0425	1.5
	Length	14680.1366			
(V82 Postprocessed 26-APR-2002 08:40:30.000 network control.asc)					
4JF2	Delta-N	-6608.1849	-0.0247	0.0305	0.8
121	Delta-E	-24182.9223	-0.0038	0.0176	0.2
	Delta-U	25.8676	0.0739	0.0585	1.3
	Length	25069.5534			
(V100 Postprocessed 30-APR-2002 11:44:50.000 network control.asc)					
4LB2	Delta-N	1840.4179	0.0108	0.0222	0.5
4LD2	Delta-E	-27415.3476	-0.0755	0.0237	3.2*
	Delta-U	125.1092	-0.0122	0.0601	0.2
	Length	27477.3374			
(V11 Postprocessed 30-APR-2002 01:27:15.000 network control.asc)					
4JD2	Delta-N	9388.7417	0.0283	0.0258	1.1
133	Delta-E	14927.1794	-0.0054	0.0225	0.2
	Delta-U	75.0042	0.0713	0.0590	1.2
	Length	17634.4771			
(V13 Postprocessed 18-APR-2002 08:01:04.000 network control.asc)					
4JD2	Delta-N	-15711.8510	0.0392	0.0101	3.9*
4IC1	Delta-E	16520.8917	-0.0502	0.0098	5.1*
	Delta-U	-201.3340	0.0414	0.0590	0.7
	Length	22800.0584			
(V62 Postprocessed 24-APR-2002 11:41:50.000 network control.asc)					
4GG2	Delta-N	10901.2833	0.0532	0.0212	2.5
4HF3	Delta-E	10051.9338	0.0266	0.0226	1.2
	Delta-U	-195.4514	0.0410	0.0597	0.7
	Length	14829.6174			
(V54 Postprocessed 24-APR-2002 11:25:40.000 network control.asc)					
124	Delta-N	24060.0280	-0.0105	0.0247	0.4
4IG2	Delta-E	6975.4473	-0.0242	0.0261	0.9
	Delta-U	57.1150	0.0669	0.0724	0.9
	Length	25050.8498			
(V79 Postprocessed 30-APR-2002 11:22:05.000 network control.asc)					
4LE2	Delta-N	6451.0321	-0.0160	0.0220	0.7
4LH2	Delta-E	-37487.6599	0.0553	0.0220	2.5
	Delta-U	-76.3705	0.0420	0.0581	0.7
	Length	38038.7472			
(V10 Postprocessed 30-APR-2002 10:54:10.000 network control.asc)					
4JD2	Delta-N	9388.7417	0.0075	0.0239	0.3

133	Delta-E	14927.1794	-0.0117	0.0263	0.4
	Delta-U	75.0042	0.0699	0.0682	1.0
	Length	17634.4771			
(V115 Postprocessed 01-MAY-2002 08:18:00.000 network control.asc)					
1IA1	Delta-N	26863.5789	0.0059	0.0088	0.7
1KA2	Delta-E	9158.5540	0.0061	0.0085	0.7
	Delta-U	34.4130	0.0691	0.0535	1.3
	Length	28381.8986			
(V118 Postprocessed 01-MAY-2002 09:34:45.000 network control.asc)					
4JB3	Delta-N	14089.5492	0.0372	0.0184	2.0
1KA2	Delta-E	24589.2783	-0.0577	0.0196	2.9
	Delta-U	-110.8994	0.0115	0.0416	0.3
	Length	28340.0830			
(V98 Postprocessed 30-APR-2002 10:54:10.000 network control.asc)					
4IE2	Delta-N	16430.0629	0.0488	0.0191	2.6
4JD2	Delta-E	14767.7799	-0.0050	0.0225	0.2
	Delta-U	79.3615	-0.0491	0.0555	0.9
	Length	22091.6407			
(V117 Postprocessed 01-MAY-2002 08:27:35.000 network control.asc)					
4LB2	Delta-N	-12333.5215	0.0325	0.0094	3.5*
1KA2	Delta-E	25052.3614	-0.0449	0.0091	4.9*
	Delta-U	-490.0009	0.0417	0.0561	0.7
	Length	27928.0623			
(V95 Postprocessed 30-APR-2002 01:06:30.000 network control.asc)					
133	Delta-N	11714.5629	0.0448	0.0230	2.0
13002	Delta-E	903.7677	0.0475	0.0203	2.3
	Delta-U	147.2231	0.0184	0.0480	0.4
	Length	11750.2959			
(V57 Postprocessed 24-APR-2002 10:28:25.000 network control.asc)					
4HH2	Delta-N	14028.4581	0.0370	0.0328	1.1
4IG2	Delta-E	11026.3462	-0.0273	0.0343	0.8
	Delta-U	68.7900	0.0483	0.0746	0.6
	Length	17843.2811			
(V34 Postprocessed 22-APR-2002 08:29:45.000 network control.asc)					
4KE1	Delta-N	13347.3881	0.0380	0.0170	2.2
4LE2	Delta-E	2280.0028	0.0148	0.0120	1.2
	Delta-U	196.8903	-0.0506	0.0332	1.5
	Length	13542.1544			
(V87 Postprocessed 26-APR-2002 08:49:05.000 network control.asc)					
4JF2	Delta-N	422.0083	-0.0018	0.0411	0.0
4JH5	Delta-E	-28939.8762	-0.0211	0.0219	1.0
	Delta-U	7.2855	0.0601	0.0732	0.8
	Length	28942.9538			
(V111 Postprocessed 01-MAY-2002 12:35:15.000 network control.asc)					
4LB2	Delta-N	-14215.6466	0.0054	0.0216	0.2
132	Delta-E	-1767.8296	-0.0503	0.0183	2.7
	Delta-U	-188.3845	0.0373	0.0431	0.9
	Length	14326.3854			
(V108 Postprocessed 01-MAY-2002 10:18:55.000 network control.asc)					
131	Delta-N	18307.6381	0.0225	0.0273	0.8
1KA2	Delta-E	21074.5785	-0.0507	0.0275	1.8
	Delta-U	-51.1763	0.0265	0.0666	0.4
	Length	27916.1260			
(V1 Postprocessed 12-APR-2002 08:52:20.000 network control.asc)					
FRIA	Delta-N	-4171.5629	-0.0102	0.0203	0.5
112	Delta-E	16456.2482	0.0019	0.0155	0.1

	Delta-U	-302.3641	-0.0585	0.0441	1.3
	Length	16979.4424			
(V96 Postprocessed 30-APR-2002 03:49:00.000 network control.asc)					
133	Delta-N	45.4361	0.0184	0.0524	0.4
132	Delta-E	14858.7959	0.0403	0.0189	2.1
	Delta-U	-27.2171	0.0386	0.0534	0.7
	Length	14858.8902			
(V124 Postprocessed 02-MAY-2002 08:07:45.000 network control.asc)					
1KA2	Delta-N	13364.7234	-0.0326	0.0445	0.7
134	Delta-E	-20828.7809	0.0285	0.0227	1.3
	Delta-U	411.5035	-0.0388	0.0888	0.4
	Length	24751.2279			
(V17 Postprocessed 16-APR-2002 11:08:15.000 network control.asc)					
4IE2	Delta-N	-2943.9229	0.0025	0.0240	0.1
118	Delta-E	-151.4905	-0.0578	0.0244	2.4
	Delta-U	-13.6743	-0.0014	0.0551	0.0
	Length	2947.8498			
(V73 Postprocessed 26-APR-2002 08:07:45.000 network control.asc)					
121	Delta-N	42192.5984	0.0192	0.0137	1.4
4LH2	Delta-E	4910.7659	0.0018	0.0124	0.1
	Delta-U	215.4383	0.0502	0.0900	0.6
	Length	42477.9636			
(V9 Postprocessed 18-APR-2002 12:15:00.000 network control.asc)					
4JD2	Delta-N	9388.7417	-0.0341	0.0348	1.0
133	Delta-E	14927.1794	-0.0188	0.0348	0.5
	Delta-U	75.0042	0.0369	0.0922	0.4
	Length	17634.4771			
(V70 Postprocessed 25-APR-2002 09:20:20.000 network control.asc)					
121	Delta-N	-9381.8352	-0.0422	0.0183	2.3
4IG2	Delta-E	8322.5358	0.0278	0.0163	1.7
	Delta-U	-82.3054	0.0149	0.0355	0.4
	Length	12541.5392			
(V119 Postprocessed 01-MAY-2002 11:09:05.000 network control.asc)					
4JB3	Delta-N	14089.5492	0.0199	0.0219	0.9
1KA2	Delta-E	24589.2783	-0.0387	0.0237	1.6
	Delta-U	-110.8994	0.0282	0.0640	0.4
	Length	28340.0830			
(V46 Postprocessed 23-APR-2002 09:57:45.000 network control.asc)					
4LD2	Delta-N	-1816.3544	0.0078	0.0216	0.4
4LB2	Delta-E	27416.7642	0.0158	0.0241	0.7
	Delta-U	-161.1487	0.0484	0.0543	0.9
	Length	27477.3374			
(V83 Postprocessed 26-APR-2002 10:13:30.000 network control.asc)					
4JF2	Delta-N	-6608.1849	-0.0087	0.0340	0.3
121	Delta-E	-24182.9223	-0.0037	0.0354	0.1
	Delta-U	25.8676	0.0497	0.0750	0.7
	Length	25069.5534			
(V59 Postprocessed 24-APR-2002 12:13:10.000 network control.asc)					
119	Delta-N	-16480.2998	0.0392	0.0234	1.7
4HF3	Delta-E	2965.0480	-0.0237	0.0276	0.9
	Delta-U	-82.2884	0.0200	0.0774	0.3
	Length	16745.1056			
(V51 Postprocessed 24-APR-2002 10:17:35.000 network control.asc)					
119	Delta-N	-1207.4485	-0.0292	0.0239	1.2
4IG2	Delta-E	-13915.4981	0.0172	0.0251	0.7
	Delta-U	35.6074	-0.0357	0.0527	0.7

	Length	13967.8304			
(V7 Postprocessed 18-APR-2002 09:47:25.000 network control.asc)					
4IC1	Delta-N	8720.3075	-0.0398	0.0165	2.4
131	Delta-E	19033.7532	-0.0118	0.0160	0.7
	Delta-U	-16.4524	-0.0213	0.0340	0.6
	Length	20936.2794			
(V102 Postprocessed 01-MAY-2002 09:00:35.000 network control.asc)					
1IA1	Delta-N	147.5513	-0.0194	0.0265	0.7
Q366	Delta-E	-10953.6816	-0.0246	0.0239	1.0
	Delta-U	58.3330	0.0334	0.0540	0.6
	Length	10954.8307			
(V39 Postprocessed 22-APR-2002 10:45:45.000 network control.asc)					
118	Delta-N	-11851.0564	-0.0321	0.0270	1.2
4HF3	Delta-E	-15734.0109	-0.0319	0.0271	1.2
	Delta-U	8.7812	-0.0061	0.0586	0.1
	Length	19697.8861			
(V49 Postprocessed 23-APR-2002 09:00:05.000 network control.asc)					
4IC1	Delta-N	33.4494	-0.0413	0.0233	1.8
116	Delta-E	-14040.0453	0.0016	0.0133	0.1
	Delta-U	38.3429	-0.0160	0.0434	0.4
	Length	14040.1375			
(V6 Postprocessed 18-APR-2002 07:58:41.000 network control.asc)					
4JD2	Delta-N	15847.4350	0.0143	0.0108	1.3
4KE1	Delta-E	-15654.6981	0.0174	0.0102	1.7
	Delta-U	195.2983	0.0379	0.0637	0.6
	Length	22276.6449			
(V101 Postprocessed 30-APR-2002 08:23:15.000 network control.asc)					
4LE2	Delta-N	-3714.5093	-0.0215	0.0087	2.5
4LD2	Delta-E	17492.4622	-0.0027	0.0088	0.3
	Delta-U	-29.0075	0.0378	0.0577	0.7
	Length	17882.5237			
(V3 Postprocessed 12-APR-2002 11:49:05.000 network control.asc)					
FRIA	Delta-N	13558.5974	0.0154	0.0226	0.7
4HD1	Delta-E	11259.1724	0.0149	0.0253	0.6
	Delta-U	-208.0234	-0.0373	0.0584	0.6
	Length	17625.2036			
(V86 Postprocessed 26-APR-2002 08:49:05.000 network control.asc)					
4JH5	Delta-N	36552.0646	-0.0270	0.0431	0.6
127	Delta-E	5009.1251	0.0325	0.0251	1.3
	Delta-U	188.1827	-0.0074	0.0858	0.1
	Length	36894.1753			
(V4 Postprocessed 12-APR-2002 01:14:25.000 network control.asc)					
115	Delta-N	-7271.1068	-0.0175	0.0260	0.7
4HB1	Delta-E	782.0560	0.0023	0.0230	0.1
	Delta-U	-38.1771	-0.0389	0.0537	0.7
	Length	7313.1431			
(V125 Postprocessed 03-MAY-2002 01:16:50.000 network control.asc)					
4KE1	Delta-N	-15794.5205	-0.0069	0.0260	0.3
4JF2	Delta-E	-15986.2340	-0.0406	0.0228	1.8
	Delta-U	-152.2001	-0.0110	0.0629	0.2
	Length	22473.3113			
(V60 Postprocessed 24-APR-2002 10:17:35.000 network control.asc)					
119	Delta-N	-16480.2998	0.0131	0.0265	0.5
4HF3	Delta-E	2965.0480	0.0127	0.0281	0.5
	Delta-U	-82.2884	0.0378	0.0572	0.7
	Length	16745.1056			

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(V55 Postprocessed 25-APR-2002 09:20:20.000 network control.asc)
4IG2               Delta-N        -24058.3950        0.0359   0.0365   1.0
124                Delta-E         -6980.7663       -0.0166   0.0318   0.5
                   Delta-U           -87.1999       -0.0125   0.0713   0.2
                   Length          25050.8498
(V35 Postprocessed 22-APR-2002 07:42:15.000 network control.asc)
4KE1               Delta-N         11199.9946        0.0285   0.0170   1.7
128                Delta-E          4587.1503        0.0035   0.0166   0.2
                   Delta-U           161.7771       -0.0285   0.0557   0.5
                   Length          12104.0488
(V80 Postprocessed 26-APR-2002 09:58:25.000 network control.asc)
121                Delta-N         39964.8567        0.0239   0.0305   0.8
126                Delta-E          1326.6549        0.0322   0.0307   1.0
                   Delta-U           162.3780       -0.0034   0.0613   0.1
                   Length          39987.1998
(V12 Postprocessed 19-APR-2002 12:09:00.000 network control.asc)
117                Delta-N         -8779.2609       -0.0150   0.0299   0.5
4HF3               Delta-E        -27087.1827       -0.0028   0.0323   0.1
                   Delta-U            59.0435        0.0369   0.0869   0.4
                   Length          28474.4512
(V27 Postprocessed 12-APR-2002 12:03:50.000 network control.asc)
FRIA               Delta-N         -1160.7699        0.0033   0.0446   0.1
114                Delta-E         -5183.3585        0.0226   0.0445   0.5
                   Delta-U            28.5076       -0.0327   0.1234   0.3
                   Length           5311.8174
(V69 Postprocessed 25-APR-2002 12:21:15.000 network control.asc)
4HH2               Delta-N         23409.6634        0.0199   0.0248   0.8
121                Delta-E          2703.0123       -0.0340   0.0243   1.4
                   Delta-U           141.6373       -0.0043   0.0560   0.1
                   Length          23565.6249
(V5 Postprocessed 15-APR-2002 12:23:50.000 network control.asc)
115                Delta-N         -7271.1068        0.0015   0.0254   0.1
4HB1               Delta-E           782.0560       -0.0145   0.0292   0.5
                   Delta-U           -38.1771        0.0362   0.0823   0.4
                   Length           7313.1431
(V52 Postprocessed 24-APR-2002 09:33:05.000 network control.asc)
4IG2               Delta-N          2178.3506        0.0229   0.0132   1.7
120                Delta-E         -3951.9285        0.0007   0.0124   0.1
                   Delta-U            19.1801       -0.0298   0.0252   1.2
                   Length           4512.5734
(V92 Postprocessed 30-APR-2002 10:23:45.000 network control.asc)
4LD2               Delta-N         11688.1759       -0.0080   0.0268   0.3
129                Delta-E        -13597.8419        0.0063   0.0271   0.2
                   Delta-U           244.0211       -0.0362   0.0652   0.6
                   Length          17932.4930
(V123 Postprocessed 02-MAY-2002 09:43:45.000 network control.asc)
4LB2               Delta-N         -2539.2231       -0.0200   0.0161   1.2
13002              Delta-E        -15716.7913       -0.0282   0.0170   1.7
                   Delta-U           -17.0339       -0.0140   0.0352   0.4
                   Length          15920.5990
(V21 Postprocessed 15-APR-2002 09:26:40.000 network control.asc)
115                Delta-N           -72.3704       -0.0151   0.0458   0.3
137                Delta-E         14157.2912        0.0278   0.0260   1.1
                   Delta-U           -60.4360       -0.0179   0.0916   0.2
                   Length          14157.6051
(V71 Postprocessed 25-APR-2002 09:30:55.000 network control.asc)
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124	Delta-N	10032.9594	-0.0161	0.0256	0.6
4HH2	Delta-E	-4052.6943	0.0031	0.0236	0.1
	Delta-U	-7.0591	-0.0324	0.0507	0.6
	Length	10820.5663			
(V81 Postprocessed 26-APR-2002 08:44:05.000 network control.asc)					
121	Delta-N	43577.8802	-0.0034	0.0396	0.1
127	Delta-E	252.2425	0.0202	0.0248	0.8
	Delta-U	161.6872	-0.0288	0.0861	0.3
	Length	43578.9102			
(V112 Postprocessed 01-MAY-2002 11:22:45.000 network control.asc)					
4JB3	Delta-N	12170.8897	0.0157	0.0300	0.5
133	Delta-E	-17089.7830	-0.0080	0.0298	0.3
	Delta-U	207.6260	-0.0299	0.0792	0.4
	Length	20981.7623			
(V72 Postprocessed 25-APR-2002 12:21:15.000 network control.asc)					
124	Delta-N	10032.9594	0.0157	0.0224	0.7
4HH2	Delta-E	-4052.6943	0.0054	0.0215	0.3
	Delta-U	-7.0591	-0.0300	0.0487	0.6
	Length	10820.5663			
(V45 Postprocessed 23-APR-2002 11:57:30.000 network control.asc)					
245	Delta-N	12007.2351	0.0164	0.0146	1.1
4LD2	Delta-E	1085.9312	0.0130	0.0141	0.9
	Delta-U	221.7853	-0.0263	0.0358	0.7
	Length	12058.2806			
(V104 Postprocessed 01-MAY-2002 12:43:25.000 network control.asc)					
1IA1	Delta-N	7967.3541	0.0274	0.0151	1.8
130	Delta-E	-208.3535	0.0075	0.0129	0.6
	Delta-U	68.4906	-0.0168	0.0334	0.5
	Length	7970.3723			
(V66 Postprocessed 25-APR-2002 09:02:40.000 network control.asc)					
121	Delta-N	-7204.5422	-0.0296	0.0207	1.4
120	Delta-E	4370.0376	0.0033	0.0120	0.3
	Delta-U	-60.5754	0.0141	0.0330	0.4
	Length	8426.5252			
(V85 Postprocessed 26-APR-2002 10:55:30.000 network control.asc)					
4LE2	Delta-N	-16668.2094	0.0040	0.0306	0.1
125	Delta-E	-18300.8170	-0.0072	0.0309	0.2
	Delta-U	-223.4915	-0.0316	0.0869	0.4
	Length	24754.7784			
(V19 Postprocessed 15-APR-2002 11:00:25.000 network control.asc)					
115	Delta-N	8456.1180	0.0245	0.0258	1.0
Q366	Delta-E	3390.1993	-0.0083	0.0273	0.3
	Delta-U	78.3237	0.0154	0.0570	0.3
	Length	9110.7364			
(V103 Postprocessed 01-MAY-2002 08:10:35.000 network control.asc)					
1IA1	Delta-N	7967.3541	-0.0038	0.0182	0.2
130	Delta-E	-208.3535	-0.0080	0.0102	0.8
	Delta-U	68.4906	0.0276	0.0358	0.8
	Length	7970.3723			
(V32 Postprocessed 19-APR-2002 08:03:05.000 network control.asc)					
4HF3	Delta-N	-11069.3670	-0.0000	0.0181	0.0
123	Delta-E	-13990.5374	0.0258	0.0170	1.5
	Delta-U	192.1985	-0.0125	0.0538	0.2
	Length	17841.0471			
(V91 Postprocessed 30-APR-2002 08:46:40.000 network control.asc)					
4LD2	Delta-N	11688.1759	-0.0083	0.0393	0.2

129	Delta-E	-13597.8419	-0.0003	0.0282	0.0
	Delta-U	244.0211	-0.0272	0.0772	0.4
	Length	17932.4930			
(V40 Postprocessed 23-APR-2002 10:30:20.000 network control.asc)					
124	Delta-N	3976.5483	0.0029	0.0164	0.2
122	Delta-E	10234.8379	0.0262	0.0170	1.5
	Delta-U	60.6122	-0.0106	0.0351	0.3
	Length	10980.3696			
(V15 Postprocessed 23-APR-2002 12:23:15.000 network control.asc)					
4JD2	Delta-N	-22434.2116	-0.0044	0.0234	0.2
117	Delta-E	-3579.7743	0.0036	0.0239	0.2
	Delta-U	-177.2264	0.0277	0.0570	0.5
	Length	22718.7157			
(V36 Postprocessed 22-APR-2002 09:58:15.000 network control.asc)					
4KE1	Delta-N	-2373.7200	-0.0141	0.0246	0.6
245	Delta-E	18693.7784	-0.0110	0.0276	0.4
	Delta-U	-53.8337	-0.0218	0.0643	0.3
	Length	18843.9591			
(V31 Postprocessed 19-APR-2002 12:09:00.000 network control.asc)					
117	Delta-N	-8673.6935	-0.0239	0.0352	0.7
4HD1	Delta-E	5144.4337	0.0061	0.0350	0.2
	Delta-U	-57.3828	-0.0073	0.0918	0.1
	Length	10084.7137			
(V48 Postprocessed 23-APR-2002 11:57:30.000 network control.asc)					
4JD2	Delta-N	13464.3300	0.0164	0.0118	1.4
245	Delta-E	3037.9250	0.0127	0.0126	1.0
	Delta-U	157.2441	-0.0142	0.0320	0.4
	Length	13803.6914			
(V58 Postprocessed 25-APR-2002 09:30:55.000 network control.asc)					
4HH2	Delta-N	14028.4581	0.0086	0.0325	0.3
4IG2	Delta-E	11026.3462	-0.0111	0.0285	0.4
	Delta-U	68.7900	0.0206	0.0605	0.3
	Length	17843.2811			
(V63 Postprocessed 25-APR-2002 10:07:30.000 network control.asc)					
121	Delta-N	7026.5158	0.0145	0.0182	0.8
4JH5	Delta-E	-4762.3958	0.0041	0.0196	0.2
	Delta-U	-15.3187	0.0186	0.0438	0.4
	Length	8488.3787			
(V30 Postprocessed 22-APR-2002 08:57:35.000 network control.asc)					
4HF3	Delta-N	-8780.1666	0.0039	0.0568	0.1
124	Delta-E	-23872.7525	0.0102	0.0272	0.4
	Delta-U	28.2213	0.0212	0.1181	0.2
	Length	25436.2032			
(V78 Postprocessed 26-APR-2002 10:55:30.000 network control.asc)					
4LE2	Delta-N	6451.0321	0.0228	0.0274	0.8
4LH2	Delta-E	-37487.6599	0.0008	0.0288	0.0
	Delta-U	-76.3705	-0.0045	0.0761	0.1
	Length	38038.7472			
(V75 Postprocessed 26-APR-2002 10:18:45.000 network control.asc)					
4LH2	Delta-N	-23096.1370	-0.0226	0.0191	1.2
125	Delta-E	19214.2862	-0.0011	0.0210	0.1
	Delta-U	-188.6068	-0.0033	0.0459	0.1
	Length	30044.2325			
(V126 Postprocessed 03-MAY-2002 11:01:45.000 network control.asc)					
114	Delta-N	-2807.4528	-0.0041	0.0114	0.4
113	Delta-E	1017.9407	0.0123	0.0119	1.0

	Delta-U	462.4253	0.0181	0.0304	0.6
	Length	3021.8921			
(V97 Postprocessed 30-APR-2002 10:33:15.000 network control.asc)					
133	Delta-N	16088.0853	-0.0080	0.0084	1.0
4LD2	Delta-E	-10796.9992	-0.0164	0.0075	2.2
	Delta-U	295.6573	0.0120	0.0527	0.2
	Length	19377.5410			
(V38 Postprocessed 22-APR-2002 10:45:45.000 network control.asc)					
4IE2	Delta-N	-14794.9045	-0.0099	0.0085	1.2
4HF3	Delta-E	-15885.5586	-0.0168	0.0083	2.0
	Delta-U	-6.6801	-0.0077	0.0484	0.2
	Length	21708.0680			
(V43 Postprocessed 23-APR-2002 11:20:20.000 network control.asc)					
124	Delta-N	-2281.6317	0.0094	0.0122	0.8
123	Delta-E	9884.1307	0.0187	0.0127	1.5
	Delta-U	153.6794	0.0002	0.0321	0.0
	Length	10145.2206			
(V53 Postprocessed 25-APR-2002 09:20:20.000 network control.asc)					
120	Delta-N	-2177.8508	0.0001	0.0389	0.0
4IG2	Delta-E	3952.1991	0.0157	0.0256	0.6
	Delta-U	-20.1532	0.0132	0.0658	0.2
	Length	4512.5734			
(V42 Postprocessed 23-APR-2002 08:44:05.000 network control.asc)					
123	Delta-N	172.9437	0.0034	0.0169	0.2
4GG2	Delta-E	3934.9458	0.0182	0.0099	1.8
	Delta-U	-9.9886	-0.0039	0.0350	0.1
	Length	3938.7571			
(V84 Postprocessed 26-APR-2002 10:18:45.000 network control.asc)					
4JF2	Delta-N	12472.3077	0.0164	0.0175	0.9
125	Delta-E	-39.6532	0.0015	0.0172	0.1
	Delta-U	128.8387	0.0092	0.0356	0.3
	Length	12473.0361			
(V65 Postprocessed 25-APR-2002 12:18:55.000 network control.asc)					
121	Delta-N	-7204.5422	-0.0127	0.0209	0.6
120	Delta-E	4370.0376	-0.0003	0.0212	0.0
	Delta-U	-60.5754	0.0124	0.0493	0.3
	Length	8426.5252			
(V37 Postprocessed 22-APR-2002 07:42:58.000 network control.asc)					
4IE2	Delta-N	-14794.9045	-0.0069	0.0156	0.4
4HF3	Delta-E	-15885.5586	-0.0116	0.0132	0.9
	Delta-U	-6.6801	-0.0089	0.0397	0.2
	Length	21708.0680			
(V109 Postprocessed 01-MAY-2002 10:18:55.000 network control.asc)					
4JB3	Delta-N	-4220.4634	0.0157	0.0130	1.2
131	Delta-E	3516.7623	0.0012	0.0136	0.1
	Delta-U	-59.8916	0.0010	0.0271	0.0
	Length	5493.9526			
(V77 Postprocessed 26-APR-2002 08:44:05.000 network control.asc)					
127	Delta-N	-1385.4288	-0.0055	0.0214	0.3
4LH2	Delta-E	4658.5116	0.0136	0.0127	1.1
	Delta-U	50.9121	-0.0056	0.0424	0.1
	Length	4860.4254			
(V41 Postprocessed 23-APR-2002 09:41:45.000 network control.asc)					
4GG2	Delta-N	6085.5642	0.0026	0.0131	0.2
122	Delta-E	-3581.4521	-0.0146	0.0126	1.2
	Delta-U	-84.2203	0.0045	0.0254	0.2

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                    Length            7061.7267
(V93 Postprocessed 30-APR-2002 08:46:40.000 network control.asc)
4LE2                Delta-N           7966.0074        0.0006   0.0230   0.0
129                 Delta-E           3888.2882       -0.0043   0.0156   0.3
                    Delta-U            228.4537        0.0139   0.0407   0.3
                    Length            8867.2572
(V50 Postprocessed 24-APR-2002 12:13:10.000 network control.asc)
119                 Delta-N          -1207.4485       -0.0131   0.0196   0.7
4IG2                Delta-E         -13915.4981       -0.0049   0.0212   0.2
                    Delta-U             35.6074       -0.0028   0.0527   0.1
                    Length           13967.8304
(V90 Postprocessed 30-APR-2002 09:24:10.000 network control.asc)
117                 Delta-N          -8673.6935        0.0027   0.0156   0.2
4HD1                Delta-E           5144.4337        0.0096   0.0167   0.6
                    Delta-U            -57.3828        0.0100   0.0346   0.3
                    Length           10084.7137
(V121 Postprocessed 01-MAY-2002 11:09:05.000 network control.asc)
4JB3                Delta-N          26424.0520       -0.0038   0.0215   0.2
4LB2                Delta-E           -462.9113       -0.0060   0.0233   0.3
                    Delta-U            362.9179        0.0120   0.0636   0.2
                    Length           26430.5982
(V76 Postprocessed 26-APR-2002 09:58:25.000 network control.asc)
126                 Delta-N           2227.4836        0.0076   0.0175   0.4
4LH2                Delta-E           3584.2020        0.0116   0.0186   0.6
                    Delta-U             57.5568       -0.0012   0.0374   0.0
                    Length            4220.3673
(V67 Postprocessed 25-APR-2002 12:21:15.000 network control.asc)
120                 Delta-N         -16203.7650       -0.0008   0.0315   0.0
4HH2                Delta-E          -7077.2819       -0.0126   0.0348   0.4
                    Delta-U           -103.5690        0.0039   0.0825   0.0
                    Length           17682.2127
(V2 Postprocessed 12-APR-2002 09:51:30.000 network control.asc)
FRIA                Delta-N          -3968.4160        0.0081   0.0178   0.5
113                 Delta-E          -4165.9945       -0.0094   0.0122   0.8
                    Delta-U            491.0283        0.0038   0.0325   0.1
                    Length            5774.5082
(V44 Postprocessed 23-APR-2002 07:49:00.000 network control.asc)
4LE2                Delta-N          -2147.5390       -0.0121   0.0111   1.1
128                 Delta-E           2306.9947       -0.0011   0.0100   0.1
                    Delta-U            -36.2367        0.0034   0.0297   0.1
                    Length            3152.0567
(V94 Postprocessed 30-APR-2002 10:23:45.000 network control.asc)
4LE2                Delta-N           7966.0074        0.0090   0.0180   0.5
129                 Delta-E           3888.2882        0.0057   0.0186   0.3
                    Delta-U            228.4537        0.0049   0.0389   0.1
                    Length            8867.2572
(V120 Postprocessed 01-MAY-2002 09:34:45.000 network control.asc)
4JB3                Delta-N          26424.0520       -0.0003   0.0190   0.0
4LB2                Delta-E           -462.9113       -0.0113   0.0205   0.6
                    Delta-U            362.9179        0.0015   0.0433   0.0
                    Length           26430.5982
(V122 Postprocessed 02-MAY-2002 08:58:15.000 network control.asc)
4LB2                Delta-N           1014.2628        0.0030   0.0140   0.2
134                 Delta-E           4213.3952       -0.0087   0.0128   0.7
                    Delta-U            -45.6808       -0.0023   0.0282   0.1
                    Length            4333.9952
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(V18 Postprocessed 22-APR-2002 10:21:45.000 network control.asc)

4IE2	Delta-N	-2943.9229	-0.0054	0.0093	0.6
118	Delta-E	-151.4905	0.0062	0.0097	0.6
	Delta-U	-13.6743	0.0001	0.0188	0.0
	Length	2947.8498			

(V113 Postprocessed 01-MAY-2002 09:44:05.000 network control.asc)

1IA1	Delta-N	-8385.8017	0.0005	0.0131	0.0
137	Delta-E	-190.3943	-0.0080	0.0139	0.6
	Delta-U	-76.4546	-0.0001	0.0283	0.0
	Length	8388.3113			

(V47 Postprocessed 23-APR-2002 08:55:35.000 network control.asc)

4LD2	Delta-N	3724.3056	0.0041	0.0414	0.1
4LE2	Delta-E	-17490.3977	-0.0018	0.0199	0.1
	Delta-U	13.7398	0.0012	0.0803	0.0
	Length	17882.5237			

GPS Vector Residual Summary (FeetInt)
(Sorted by 3D Residual Length)

From	To	N	E	Up	2D	3D	Length	VectID
4IC1	115	-0.019	0.052	-0.152	0.056	0.162	18517	24
1IA1	1KA2	0.003	0.021	0.151	0.021	0.153	28382	114
124	4HF3	0.008	-0.092	0.097	0.093	0.134	25436	61
4GC1	115	-0.010	0.031	-0.123	0.032	0.127	28552	22
1KA2	130	-0.009	0.033	-0.117	0.034	0.122	21090	106
FRIA	4HD1	0.067	-0.041	-0.083	0.078	0.114	17625	88
114	4HF3	0.016	-0.039	-0.102	0.042	0.110	21510	33
4LB2	1KA2	0.001	-0.016	0.103	0.016	0.104	27928	116
1KA2	130	-0.048	0.002	-0.084	0.048	0.096	21090	105
121	4JH5	0.045	-0.070	0.035	0.083	0.090	8488	64
116	4HD1	-0.047	-0.011	0.073	0.048	0.088	15450	89
4IC1	133	-0.072	0.035	-0.030	0.080	0.086	25153	8
4JD2	4IE2	-0.006	0.066	0.054	0.066	0.085	22092	99
4GC1	4HB1	0.007	-0.020	-0.081	0.021	0.083	23115	25
4IG2	4HF3	0.026	-0.073	0.030	0.078	0.083	22765	56
121	4HH2	-0.037	0.045	-0.059	0.059	0.083	23566	68
132	1KA2	-0.002	-0.019	0.080	0.019	0.082	26888	110
4GC1	112	0.018	-0.050	0.061	0.053	0.081	11869	20
4JD2	117	-0.030	0.021	0.072	0.036	0.081	22719	14
1IA1	131	0.046	0.004	0.065	0.046	0.080	14680	107
4JF2	121	-0.025	-0.004	0.074	0.025	0.078	25070	82
4LB2	4LD2	0.011	-0.075	-0.012	0.076	0.077	27477	100
4JD2	133	0.028	-0.005	0.071	0.029	0.077	17634	11
4JD2	4IC1	0.039	-0.050	0.041	0.064	0.076	22800	13
4GG2	4HF3	0.053	0.027	0.041	0.059	0.072	14830	62
124	4IG2	-0.011	-0.024	0.067	0.026	0.072	25051	54
4LE2	4LH2	-0.016	0.055	0.042	0.058	0.071	38039	79
4JD2	133	0.008	-0.012	0.070	0.014	0.071	17634	10
1IA1	1KA2	0.006	0.006	0.069	0.008	0.070	28382	115
4JB3	1KA2	0.037	-0.058	0.012	0.069	0.070	28340	118
4IE2	4JD2	0.049	-0.005	-0.049	0.049	0.069	22092	98
4LB2	1KA2	0.032	-0.045	0.042	0.055	0.069	27928	117
133	13002	0.045	0.048	0.018	0.065	0.068	11750	95
4HH2	4IG2	0.037	-0.027	0.048	0.046	0.067	17843	57
4KE1	4LE2	0.038	0.015	-0.051	0.041	0.065	13542	34
4JF2	4JH5	-0.002	-0.021	0.060	0.021	0.064	28943	87

4LB2	132	0.005	-0.050	0.037	0.051	0.063	14326	111
131	1KA2	0.023	-0.051	0.027	0.055	0.061	27916	108
FRIA	112	-0.010	0.002	-0.058	0.010	0.059	16979	1
133	132	0.018	0.040	0.039	0.044	0.059	14859	96
1KA2	134	-0.033	0.029	-0.039	0.043	0.058	24751	124
4IE2	118	0.002	-0.058	-0.001	0.058	0.058	2948	17
121	4LH2	0.019	0.002	0.050	0.019	0.054	42478	73
4JD2	133	-0.034	-0.019	0.037	0.039	0.054	17634	9
121	4IG2	-0.042	0.028	0.015	0.051	0.053	12542	70
4JB3	1KA2	0.020	-0.039	0.028	0.044	0.052	28340	119
4LD2	4LB2	0.008	0.016	0.048	0.018	0.052	27477	46
4JF2	121	-0.009	-0.004	0.050	0.009	0.051	25070	83
119	4HF3	0.039	-0.024	0.020	0.046	0.050	16745	59
119	4IG2	-0.029	0.017	-0.036	0.034	0.049	13968	51
4IC1	131	-0.040	-0.012	-0.021	0.041	0.047	20936	7
1IA1	Q366	-0.019	-0.025	0.033	0.031	0.046	10955	102
118	4HF3	-0.032	-0.032	-0.006	0.045	0.046	19698	39
4IC1	116	-0.041	0.002	-0.016	0.041	0.044	14040	49
4JD2	4KE1	0.014	0.017	0.038	0.023	0.044	22277	6
4LE2	4LD2	-0.022	-0.003	0.038	0.022	0.044	17883	101
FRIA	4HD1	0.015	0.015	-0.037	0.021	0.043	17625	3
4JH5	127	-0.027	0.032	-0.007	0.042	0.043	36894	86
115	4HB1	-0.018	0.002	-0.039	0.018	0.043	7313	4
4KE1	4JF2	-0.007	-0.041	-0.011	0.041	0.043	22473	125
119	4HF3	0.013	0.013	0.038	0.018	0.042	16745	60
4IG2	124	0.036	-0.017	-0.012	0.040	0.041	25051	55
4KE1	128	0.029	0.004	-0.028	0.029	0.040	12104	35
121	126	0.024	0.032	-0.003	0.040	0.040	39987	80
117	4HF3	-0.015	-0.003	0.037	0.015	0.040	28474	12
FRIA	114	0.003	0.023	-0.033	0.023	0.040	5312	27
4HH2	121	0.020	-0.034	-0.004	0.039	0.040	23566	69
115	4HB1	0.001	-0.015	0.036	0.015	0.039	7313	5
4IG2	120	0.023	0.001	-0.030	0.023	0.038	4513	52
4LD2	129	-0.008	0.006	-0.036	0.010	0.038	17932	92
4LB2	13002	-0.020	-0.028	-0.014	0.035	0.037	15921	123
115	137	-0.015	0.028	-0.018	0.032	0.036	14158	21
124	4HH2	-0.016	0.003	-0.032	0.016	0.036	10821	71
121	127	-0.003	0.020	-0.029	0.021	0.035	43579	81
4JB3	133	0.016	-0.008	-0.030	0.018	0.035	20982	112
124	4HH2	0.016	0.005	-0.030	0.017	0.034	10821	72
245	4LD2	0.016	0.013	-0.026	0.021	0.034	12058	45
1IA1	130	0.027	0.008	-0.017	0.028	0.033	7970	104
121	120	-0.030	0.003	0.014	0.030	0.033	8427	66
4LE2	125	0.004	-0.007	-0.032	0.008	0.033	24755	85
115	Q366	0.025	-0.008	0.015	0.026	0.030	9111	19
1IA1	130	-0.004	-0.008	0.028	0.009	0.029	7970	103
4HF3	123	-0.000	0.026	-0.012	0.026	0.029	17841	32
4LD2	129	-0.008	-0.000	-0.027	0.008	0.028	17932	91
124	122	0.003	0.026	-0.011	0.026	0.028	10980	40
4JD2	117	-0.004	0.004	0.028	0.006	0.028	22719	15
4KE1	245	-0.014	-0.011	-0.022	0.018	0.028	18844	36
117	4HD1	-0.024	0.006	-0.007	0.025	0.026	10085	31
4JD2	245	0.016	0.013	-0.014	0.021	0.025	13804	48
4HH2	4IG2	0.009	-0.011	0.021	0.014	0.025	17843	58
121	4JH5	0.015	0.004	0.019	0.015	0.024	8488	63
4HF3	124	0.004	0.010	0.021	0.011	0.024	25436	30

4LE2	4LH2	0.023	0.001	-0.004	0.023	0.023	38039	78
4LH2	125	-0.023	-0.001	-0.003	0.023	0.023	30044	75
114	113	-0.004	0.012	0.018	0.013	0.022	3022	126
133	4LD2	-0.008	-0.016	0.012	0.018	0.022	19378	97
4IE2	4HF3	-0.010	-0.017	-0.008	0.020	0.021	21708	38
124	123	0.009	0.019	0.000	0.021	0.021	10145	43
120	4IG2	0.000	0.016	0.013	0.016	0.021	4513	53
123	4GG2	0.003	0.018	-0.004	0.018	0.019	3939	42
4JF2	125	0.016	0.002	0.009	0.016	0.019	12473	84
121	120	-0.013	-0.000	0.012	0.013	0.018	8427	65
4IE2	4HF3	-0.007	-0.012	-0.009	0.013	0.016	21708	37
4JB3	131	0.016	0.001	0.001	0.016	0.016	5494	109
127	4LH2	-0.006	0.014	-0.006	0.015	0.016	4860	77
4GG2	122	0.003	-0.015	0.004	0.015	0.015	7062	41
4LE2	129	0.001	-0.004	0.014	0.004	0.015	8867	93
119	4IG2	-0.013	-0.005	-0.003	0.014	0.014	13968	50
117	4HD1	0.003	0.010	0.010	0.010	0.014	10085	90
4JB3	4LB2	-0.004	-0.006	0.012	0.007	0.014	26431	121
126	4LH2	0.008	0.012	-0.001	0.014	0.014	4220	76
120	4HH2	-0.001	-0.013	0.004	0.013	0.013	17682	67
FRIA	113	0.008	-0.009	0.004	0.012	0.013	5775	2
4LE2	128	-0.012	-0.001	0.003	0.012	0.013	3152	44
4LE2	129	0.009	0.006	0.005	0.011	0.012	8867	94
4JB3	4LB2	-0.000	-0.011	0.001	0.011	0.011	26431	120
4LB2	134	0.003	-0.009	-0.002	0.009	0.009	4334	122
4IE2	118	-0.005	0.006	0.000	0.008	0.008	2948	18
1IA1	137	0.001	-0.008	-0.000	0.008	0.008	8388	113
4LD2	4LE2	0.004	-0.002	0.001	0.004	0.005	17883	47

Adjusted Bearings (DMS) and Horizontal Distances (FeetInt)

(Relative Confidence of Bearing is in Seconds)
NOTE - Adjustment Failed the Chi-Square Test
Angular and Distance Errors are Scaled by Total Error Factor

From	To	Grid Bearing	Grid Dist Grnd Dist	95% RelConfidence Brg	 Dist	 PPM
112	4GC1	N88-20-15.02E	11867.3518 11868.8827	0.00	0.0000	0.0000
112	FRIA	N75-27-15.71W	16974.6428 16976.8822	0.00	0.0000	0.0000
113	114	N19-35-57.66W	2985.8317 2986.2696	2.23	0.0361	12.0933
113	FRIA	N46-42-45.15E	5752.6846 5753.5293	0.00	0.0000	0.0001
114	4HF3	N46-54-15.93W	21507.2288 21510.0136	0.31	0.0364	1.6925
114	FRIA	N77-41-54.64E	5311.0214 5311.7407	1.39	0.0327	6.1499
115	137	S89-27-49.03E	14155.5465 14157.5048	0.59	0.0399	2.8190
115	4GC1	S30-54-05.55W	28548.5278 28552.3517	0.00	0.0000	0.0000
115	4HB1	S05-53-43.85E	7312.0523 7313.0547	0.00	0.0000	0.0001

115	4IC1	N63-36-11.39W	18514.5745	0.00	0.0000	0.0000
			18517.1228			
115	Q366	N22-05-24.89E	9109.1105	0.00	0.0000	0.0001
			9110.3882			
116	4HD1	S03-42-26.35W	15447.8936	0.50	0.0453	2.9349
			15449.9459			
116	4IC1	S89-35-22.24E	14038.1706	0.67	0.0373	2.6557
			14040.0805			
117	4HD1	S30-21-43.46E	10083.2478	0.69	0.0370	3.6698
			10084.5704			
117	4HF3	S72-21-08.44W	28470.7300	0.26	0.0345	1.2130
			28474.3614			
117	4JD2	N09-22-13.33E	22715.0382	0.33	0.0338	1.4886
			22718.1321			
118	4HF3	S53-20-37.17W	19695.3941	0.29	0.0279	1.4150
			19697.8903			
118	4IE2	N03-16-36.64E	2947.4369	1.97	0.0270	9.1633
			2947.8209			
119	4HF3	S09-50-02.05E	16742.8519	0.49	0.0385	2.3010
			16744.9458			
119	4IG2	S85-24-23.06W	13966.0550	0.56	0.0405	2.8987
			13967.7813			
120	121	N30-49-59.99W	8425.3070	0.62	0.0325	3.8530
			8426.3249			
120	4HH2	S23-59-31.69W	17679.9054	0.34	0.0278	1.5711
			17681.9629			
120	4IG2	S60-44-41.87E	4511.9883	1.24	0.0295	6.5321
			4512.5334			
121	126	N02-18-29.70E	39981.6721	0.28	0.0528	1.3217
			39986.7216			
121	127	N00-44-19.24E	43572.9483	0.18	0.0595	1.3649
			43578.4453			
121	4HH2	S06-59-51.08W	23562.3803	0.17	0.0215	0.9123
			23565.1304			
121	4IG2	S41-10-10.81E	12539.7809	0.31	0.0219	1.7485
			12541.3014			
121	4JF2	N75-04-43.89E	25066.3827	0.18	0.0183	0.7312
			25069.5360			
121	4JH5	N33-43-18.98W	8487.3583	0.45	0.0222	2.6138
			8488.3732			
121	4LH2	N07-02-44.73E	42471.7424	0.09	0.0215	0.5061
			42477.2029			
122	124	S69-10-13.29W	10978.8937	0.70	0.0370	3.3744
			10980.1930			
122	4GG2	S30-05-58.82E	7060.3574	0.98	0.0360	5.0928
			7061.2431			
123	124	N76-35-55.39W	10142.8039	0.63	0.0294	2.9035
			10144.0254			
123	4GG2	N87-52-06.02E	3938.2466	1.60	0.0242	6.1419
			3938.7479			
123	4HF3	N52-00-30.25E	17837.7057	0.34	0.0256	1.4331
			17839.9396			
124	4HF3	N70-09-59.67E	25433.1550	0.22	0.0254	1.0004
			25436.1818			
124	4HH2	N21-35-33.17W	10819.3455	0.48	0.0276	2.5522
			10820.5723			

124	4IG2	N16-34-16.22E	25047.8062	0.22	0.0265	1.0590
			25050.7617			
125	4JF2	S00-10-49.36W	12470.6673	0.66	0.0390	3.1280
			12472.3396			
125	4LE2	N48-00-09.01E	24750.2978	0.32	0.0406	1.6399
			24753.9132			
125	4LH2	N39-21-34.85W	30039.6842	0.28	0.0385	1.2818
			30043.7877			
126	4LH2	N58-32-43.26E	4219.4076	2.47	0.0525	12.4501
			4219.9716			
127	4JH5	S08-13-08.81W	36888.9391	0.21	0.0549	1.4884
			36893.5379			
127	4LH2	S73-01-49.74E	4859.5072	2.20	0.0416	8.5685
			4860.1558			
128	4KE1	S22-36-21.79W	12101.1188	0.46	0.0315	2.6017
			12102.9279			
128	4LE2	N46-43-13.75W	3151.3657	2.04	0.0274	8.6966
			3151.8531			
129	4LD2	S49-01-16.76E	17927.7932	0.40	0.0353	1.9707
			17930.7380			
129	4LE2	S26-20-50.00W	8862.8393	0.79	0.0361	4.0681
			8864.2708			
130	1IA1	S01-16-49.74E	7968.9176	0.61	0.0290	3.6440
			7970.0698			
130	1KA2	N26-35-07.60E	21087.3651	0.25	0.0276	1.3070
			21090.4653			
131	1IA1	S54-05-37.79E	14677.7918	0.42	0.0265	1.8028
			14679.8926			
131	1KA2	N49-15-30.41E	27912.0592	0.19	0.0302	1.0825
			27916.1248			
131	4IC1	S65-39-33.14W	20933.3500	0.26	0.0299	1.4287
			20936.2918			
131	4JB3	N39-33-26.70W	5492.8441	1.13	0.0262	4.7780
			5493.6375			
132	133	N89-53-52.19W	14856.6264	0.77	0.0386	2.6000
			14858.8835			
132	1KA2	N86-13-59.51E	26882.2629	0.40	0.0378	1.4069
			26886.3172			
132	4LB2	N07-20-09.10E	14322.9447	0.54	0.0520	3.6286
			14325.2198			
133	4IC1	S03-19-44.55E	25147.5856	0.17	0.0221	0.8805
			25151.2073			
133	4JB3	S54-17-47.63E	20977.5436	0.22	0.0205	0.9784
			20980.6417			
133	4JD2	S58-08-09.44W	17631.7320	0.25	0.0211	1.1965
			17634.2955			
133	4LD2	N33-35-19.45W	19372.1447	0.23	0.0213	1.0972
			19375.1586			
134	1KA2	S57-06-45.62E	24743.7377	0.33	0.0396	1.6017
			24747.5753			
134	4LB2	S76-42-44.23W	4333.0568	2.03	0.0366	8.4438
			4333.7619			
137	1IA1	N01-31-04.89E	8386.7999	0.98	0.0402	4.7888
			8387.9834			
245	4JD2	S13-01-09.30W	13800.7457	0.45	0.0264	1.9109
			13802.7518			

245	4KE1	N82-25-47.55W	18841.1485	0.29	0.0299	1.5872
			18843.9166			
245	4LD2	N05-28-01.59E	12054.3100	0.51	0.0272	2.2546
			12056.1839			
13002	133	S04-41-20.64W	11747.5290	0.78	0.0459	3.9059
			11749.3392			
13002	4LB2	N81-04-10.91E	15918.0527	0.57	0.0434	2.7294
			15920.6053			
1IA1	1KA2	N19-02-36.07E	28377.7409	0.00	0.0000	0.0000
			28381.8658			
1IA1	Q366	N89-00-38.86W	10953.1051	0.00	0.0000	0.0000
			10954.6668			
1KA2	4JB3	S60-26-00.51W	28335.8010	0.00	0.0000	0.0000
			28339.9526			
1KA2	4LB2	N63-32-29.22W	27919.7601	0.00	0.0000	0.0000
			27924.1023			
4GC1	4HB1	N41-49-30.97E	23112.0969	0.00	0.0000	0.0000
			23115.1745			
4GG2	4HF3	N43-03-23.96E	14826.5391	0.00	0.0000	0.0000
			14828.4071			
4HD1	FRIA	S40-01-40.29W	17621.7229	0.00	0.0000	0.0000
			17624.0732			
4HF3	4IE2	N47-22-00.76E	21705.3221	0.00	0.0000	0.0000
			21708.0813			
4HF3	4IG2	N47-29-49.18W	22761.5233	0.00	0.0000	0.0000
			22764.3135			
4HH2	4IG2	N38-34-41.35E	17841.0446	0.00	0.0000	0.0000
			17843.1287			
4IC1	4JD2	N46-08-00.61W	22796.1170	0.00	0.0000	0.0000
			22799.2905			
4IE2	4JD2	N42-16-52.90E	22088.4712	0.00	0.0000	0.0000
			22091.4671			
4JB3	4LB2	N00-45-27.11W	26423.8075	0.00	0.0000	0.0000
			26427.8882			
4JD2	4KE1	N44-20-41.26W	22272.5197	0.00	0.0000	0.0000
			22275.6960			
4JF2	4JH5	N88-48-07.83W	28939.3632	0.00	0.0000	0.0000
			28942.9594			
4JF2	4KE1	N45-40-44.25E	22469.7968	0.00	0.0000	0.0000
			22472.8887			
4KE1	4LE2	N10-01-38.60E	13538.6372	0.00	0.0000	0.0000
			13540.6671			
4LB2	4LD2	N85-54-44.06W	27472.5319	0.00	0.0000	0.0000
			27476.9822			
4LD2	4LE2	N77-40-54.36W	17879.7007	0.00	0.0000	0.0000
			17882.5223			
4LE2	4LH2	N79-54-22.33W	38033.2150	0.00	0.0000	0.0000
			38038.7484			

Error Propagation

Station Coordinate Standard Deviations (FeetInt)
NOTE - Adjustment Failed the Chi-Square Test
Standard Deviations are Scaled by Total Error Factor

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Station	N	E	Elev
112	0.000000	0.000000	0.000000
113	0.000000	0.000000	0.000000
114	0.014237	0.013722	0.036910
115	0.000000	0.000000	0.000000
116	0.018712	0.015207	0.038455
117	0.014122	0.014730	0.033313
118	0.011025	0.011483	0.022954
119	0.015384	0.016688	0.039169
120	0.012378	0.010727	0.024064
121	0.008927	0.007707	0.020396
122	0.014354	0.014000	0.029083
123	0.012486	0.009921	0.029514
124	0.011087	0.010593	0.026028
125	0.015934	0.016402	0.036042
126	0.020578	0.021517	0.043634
127	0.023295	0.013998	0.047435
128	0.012501	0.011483	0.035171
129	0.015369	0.013139	0.032241
130	0.011855	0.009619	0.024659
131	0.011447	0.011674	0.024473
132	0.021209	0.015346	0.039394
133	0.009066	0.008244	0.031602
134	0.017372	0.015039	0.034842
137	0.016451	0.016287	0.035428
245	0.011360	0.011891	0.029623
13002	0.017962	0.017801	0.040094
1IA1	0.000000	0.000000	0.000000
1KA2	0.000000	0.000000	0.000000
4GC1	0.000000	0.000000	0.000000
4GG2	0.000000	0.000000	0.000000
4HB1	0.000000	0.000000	0.000000
4HD1	0.000000	0.000000	0.000000
4HF3	0.000000	0.000000	0.000000
4HH2	0.000000	0.000000	0.000000
4IC1	0.000000	0.000000	0.000000
4IE2	0.000000	0.000000	0.000000
4IG2	0.000000	0.000000	0.000000
4JB3	0.000000	0.000000	0.000000
4JD2	0.000000	0.000000	0.000000
4JF2	0.000000	0.000000	0.000000
4JH5	0.000000	0.000000	0.000000
4KE1	0.000000	0.000000	0.000000
4LB2	0.000000	0.000000	0.000000
4LD2	0.000000	0.000000	0.000000
4LE2	0.000000	0.000000	0.000000
4LH2	0.000000	0.000000	0.000000
FRIA	0.000000	0.000000	0.000000
Q366	0.000000	0.000000	0.000000

Station Coordinate Error Ellipses (FeetInt)
NOTE - Adjustment Failed the Chi-Square Test
Error Ellipses are Scaled by Total Error Factor
Confidence Region = 95%

Maricopa County

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Station	Semi-Major Axis	Semi-Minor Axis	Azimuth of Major Axis	Elev
112	0.000000	0.000000	0-00	0.000000
113	0.000000	0.000000	0-00	0.000000
114	0.036524	0.031758	142-40	0.072343
115	0.000000	0.000000	0-00	0.000000
116	0.047023	0.035670	159-41	0.075370
117	0.037742	0.032718	126-22	0.065293
118	0.028131	0.026961	81-48	0.044990
119	0.041935	0.036441	117-13	0.076770
120	0.031452	0.024861	154-00	0.047164
121	0.022353	0.018270	158-34	0.039976
122	0.035977	0.033383	144-44	0.057002
123	0.030779	0.024010	169-07	0.057846
124	0.027647	0.025386	151-10	0.051015
125	0.040688	0.038439	60-19	0.070641
126	0.052788	0.050242	77-15	0.085522
127	0.058798	0.031112	163-17	0.092971
128	0.031519	0.027071	27-55	0.068933
129	0.037707	0.032059	172-34	0.063191
130	0.029074	0.023474	173-56	0.048331
131	0.030214	0.026242	49-01	0.047966
132	0.051998	0.037446	4-43	0.077210
133	0.022254	0.020108	10-08	0.061940
134	0.042724	0.036575	169-09	0.068289
137	0.042004	0.038034	137-53	0.069438
245	0.031610	0.024922	129-21	0.058059
13002	0.044245	0.043288	147-08	0.078583
1IA1	0.000000	0.000000	0-00	0.000000
1KA2	0.000000	0.000000	0-00	0.000000
4GC1	0.000000	0.000000	0-00	0.000000
4GG2	0.000000	0.000000	0-00	0.000000
4HB1	0.000000	0.000000	0-00	0.000000
4HD1	0.000000	0.000000	0-00	0.000000
4HF3	0.000000	0.000000	0-00	0.000000
4HH2	0.000000	0.000000	0-00	0.000000
4IC1	0.000000	0.000000	0-00	0.000000
4IE2	0.000000	0.000000	0-00	0.000000
4IG2	0.000000	0.000000	0-00	0.000000
4JB3	0.000000	0.000000	0-00	0.000000
4JD2	0.000000	0.000000	0-00	0.000000
4JF2	0.000000	0.000000	0-00	0.000000
4JH5	0.000000	0.000000	0-00	0.000000
4KE1	0.000000	0.000000	0-00	0.000000
4LB2	0.000000	0.000000	0-00	0.000000
4LD2	0.000000	0.000000	0-00	0.000000
4LE2	0.000000	0.000000	0-00	0.000000
4LH2	0.000000	0.000000	0-00	0.000000
FRIA	0.000000	0.000000	0-00	0.000000
Q366	0.000000	0.000000	0-00	0.000000

Relative Error Ellipses (FeetInt)
NOTE - Adjustment Failed the Chi-Square Test
Relative Error Ellipses are Scaled by Total Error Factor
Confidence Region = 95%

Maricopa County

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Stations From	To	Semi-Major Axis	Semi-Minor Axis	Azimuth of Major Axis	Vertical
112	4GC1	0.000000	0.000000	0-00	0.000000
112	FRIA	0.000000	0.000000	0-00	0.000000
113	114	0.036524	0.031758	142-40	0.072343
113	FRIA	0.000000	0.000000	0-00	0.000000
114	4HF3	0.036524	0.031758	142-40	0.072343
114	FRIA	0.036524	0.031758	142-40	0.072343
115	137	0.042004	0.038034	137-53	0.069438
115	4GC1	0.000000	0.000000	0-00	0.000000
115	4HB1	0.000000	0.000000	0-00	0.000000
115	4IC1	0.000000	0.000000	0-00	0.000000
115	Q366	0.000000	0.000000	0-00	0.000000
116	4HD1	0.047023	0.035670	159-41	0.075370
116	4IC1	0.047023	0.035670	159-41	0.075370
117	4HD1	0.037742	0.032718	126-22	0.065293
117	4HF3	0.037742	0.032718	126-22	0.065293
117	4JD2	0.037742	0.032718	126-22	0.065293
118	4HF3	0.028131	0.026961	81-48	0.044990
118	4IE2	0.028131	0.026961	81-48	0.044990
119	4HF3	0.041935	0.036441	117-13	0.076770
119	4IG2	0.041935	0.036441	117-13	0.076770
120	121	0.032641	0.024918	158-27	0.049181
120	4HH2	0.031452	0.024861	154-00	0.047164
120	4IG2	0.031452	0.024861	154-00	0.047164
121	126	0.054375	0.052760	79-15	0.089525
121	127	0.061533	0.034523	162-40	0.098395
121	4HH2	0.022353	0.018270	158-34	0.039976
121	4IG2	0.022353	0.018270	158-34	0.039976
121	4JF2	0.022353	0.018270	158-34	0.039976
121	4JH5	0.022353	0.018270	158-34	0.039976
121	4LH2	0.022353	0.018270	158-34	0.039976
122	124	0.037396	0.037027	172-44	0.064611
122	4GG2	0.035977	0.033383	144-44	0.057002
123	124	0.031289	0.028973	166-52	0.062151
123	4GG2	0.030779	0.024010	169-07	0.057846
123	4HF3	0.030779	0.024010	169-07	0.057846
124	4HF3	0.027647	0.025386	151-10	0.051015
124	4HH2	0.027647	0.025386	151-10	0.051015
124	4IG2	0.027647	0.025386	151-10	0.051015
125	4JF2	0.040688	0.038439	60-19	0.070641
125	4LE2	0.040688	0.038439	60-19	0.070641
125	4LH2	0.040688	0.038439	60-19	0.070641
126	4LH2	0.052788	0.050242	77-15	0.085522
127	4JH5	0.058798	0.031112	163-17	0.092971
127	4LH2	0.058798	0.031112	163-17	0.092971
128	4KE1	0.031519	0.027071	27-55	0.068933
128	4LE2	0.031519	0.027071	27-55	0.068933
129	4LD2	0.037707	0.032059	172-34	0.063191
129	4LE2	0.037707	0.032059	172-34	0.063191
130	1IA1	0.029074	0.023474	173-56	0.048331
130	1KA2	0.029074	0.023474	173-56	0.048331
131	1IA1	0.030214	0.026242	49-01	0.047966
131	1KA2	0.030214	0.026242	49-01	0.047966
131	4IC1	0.030214	0.026242	49-01	0.047966
131	4JB3	0.030214	0.026242	49-01	0.047966

132	133	0.055723	0.038418	5-48	0.087225
132	1KA2	0.051998	0.037446	4-43	0.077210
132	4LB2	0.051998	0.037446	4-43	0.077210
133	4IC1	0.022254	0.020108	10-08	0.061940
133	4JB3	0.022254	0.020108	10-08	0.061940
133	4JD2	0.022254	0.020108	10-08	0.061940
133	4LD2	0.022254	0.020108	10-08	0.061940
134	1KA2	0.042724	0.036575	169-09	0.068289
134	4LB2	0.042724	0.036575	169-09	0.068289
137	1IA1	0.042004	0.038034	137-53	0.069438
245	4JD2	0.031610	0.024922	129-21	0.058059
245	4KE1	0.031610	0.024922	129-21	0.058059
245	4LD2	0.031610	0.024922	129-21	0.058059
13002	133	0.045893	0.044583	0-18	0.085116
13002	4LB2	0.044245	0.043288	147-08	0.078583
1IA1	1KA2	0.000000	0.000000	0-00	0.000000
1IA1	Q366	0.000000	0.000000	0-00	0.000000
1KA2	4JB3	0.000000	0.000000	0-00	0.000000
1KA2	4LB2	0.000000	0.000000	0-00	0.000000
4GC1	4HB1	0.000000	0.000000	0-00	0.000000
4GG2	4HF3	0.000000	0.000000	0-00	0.000000
4HD1	FRIA	0.000000	0.000000	0-00	0.000000
4HF3	4IE2	0.000000	0.000000	0-00	0.000000
4HF3	4IG2	0.000000	0.000000	0-00	0.000000
4HH2	4IG2	0.000000	0.000000	0-00	0.000000
4IC1	4JD2	0.000000	0.000000	0-00	0.000000
4IE2	4JD2	0.000000	0.000000	0-00	0.000000
4JB3	4LB2	0.000000	0.000000	0-00	0.000000
4JD2	4KE1	0.000000	0.000000	0-00	0.000000
4JF2	4JH5	0.000000	0.000000	0-00	0.000000
4JF2	4KE1	0.000000	0.000000	0-00	0.000000
4KE1	4LE2	0.000000	0.000000	0-00	0.000000
4LB2	4LD2	0.000000	0.000000	0-00	0.000000
4LD2	4LE2	0.000000	0.000000	0-00	0.000000
4LE2	4LH2	0.000000	0.000000	0-00	0.000000

Elapsed Time = 00:00:00

```
 22
47
01 00000000 Top of File
01 00000006 Summary of Files Used and Option Settings
02 00000009 Project Folder and Data Files
02 00000016 Project Option Settings
01 00000038 Summary of Unadjusted Input Observations
02 00000041 Entered Stations
03 00000043 Fixed Positions
02 00000070 GPS Vector Observations
01 00000556 Adjustment Statistical Summary
01 00000576 Adjusted Station Information
02 00000579 Adjusted Coordinates
02 00000631 Adjusted Positions and Ellipsoid Heights
02 00000684 Convergence Angles and Grid Factors at Stations
01 00000740 Adjusted Observations and Residuals
02 00000743 Adjusted GPS Vector Observations
02 00001354 GPS Vector Residual Summary
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01 00001479 Adjusted Bearings and Horizontal Distances
01 00001666 Error Propagation
02 00001669 Station Coordinate Standard Deviations
02 00001723 Station Coordinate Error Ellipses
02 00001779 Relative Error Ellipses
01 00001875 End of File
0001F14E
STARPLUS
00031BA7
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Run Date: Wed Jul 24 2002 13:50:39

Summary of Files Used and Option Settings

Project Folder and Data Files

Project Name	WITTMANN NAVD 88
Project Folder	D:\GPS PROJECTS\WITTMANN\WITTMANN MAIN
Data File List	Wittmann NAVD 88.dat
	Wittmann NAVD 88.gps

Project Option Settings

STAR*NET Run Mode	: Adjust with Error Propagation
Type of Adjustment	: 3D
Project Units	: FeetInt; DMS
Coordinate System	: Mercator NAD83; AZ Central 0202
Geoid Height Model	: GEOID99CONUS.GHT
Vertical Deflection	: N=0.00 E=0.00 (Defaults, Seconds)
Longitude Sign Convention	: Positive West
Input/Output Coordinate Order	: North-East
Angle Data Station Order	: At-From-To
Distance/Vertical Data Type	: Slope/Zenith
Convergence Limit; Max Iterations	: 0.010000; 10
Default Coefficient of Refraction	: 0.070000
Create Coordinate File	: Yes
Create Geodetic Position File	: Yes
Create Ground Scale Coordinate File	: No
Create Dump File	: No
GPS Vector Standard Error Factors	: 7.8400
GPS Vector Centering (Meters)	: 0.00100
GPS Vector Transformations	: Custom
Scale	: Solve
Rotation North	: Solve
Rotation East	: None
Rotation Up	: None

Summary of Unadjusted Input Observations

Number of Entered Stations (FeetInt) = 25

Fixed Stations	Latitude	Longitude	Elev	Description
Q366	33-43-31.441170	112-20-39.650430	1392.5300	
4LH2	33-51-56.293120	112-37-55.133520	1978.8000	

Partially Fixed	Latitude N-StdErr	Longitude E-StdErr	Elev StdErr	Description
FRIA	33-38-42.119980	112-29-46.862490	1593.8000	

	FREE	FREE	FIXED
115	33-42-07.793580	112-21-19.785620	1312.6000
	FREE	FREE	FIXED
112	33-38-00.810930	112-26-32.249730	1298.7000
	FREE	FREE	FIXED
113	33-38-02.861820	112-30-36.128300	2085.6000
	FREE	FREE	FIXED
4GC1	33-38-04.791470	112-24-11.967230	1252.6000
	FREE	FREE	FIXED
4HB1	33-40-55.865770	112-21-10.531750	1275.9000
	FREE	FREE	FIXED
4HD1	33-40-56.225170	112-27-33.636280	1393.3000
	FREE	FREE	FIXED
4LE2	33-50-52.704250	112-30-30.620080	2020.2000
	FREE	FREE	FIXED
4JD2	33-46-03.955080	112-27-52.138850	1612.5000
	FREE	FREE	FIXED
4JB3	33-45-36.445160	112-21-32.808300	1476.4000
	FREE	FREE	FIXED
4GG2	33-39-07.248390	112-35-53.959810	1717.0000
	FREE	FREE	FIXED
4HF3	33-40-55.070040	112-33-55.019670	1526.7000
	FREE	FREE	FIXED
1KA2	33-47-55.724570	112-16-41.457300	1384.1000
	FREE	FREE	FIXED
1IA1	33-43-30.000490	112-18-29.974210	1331.2000
	FREE	FREE	FIXED
4KE1	33-48-40.676830	112-30-57.649770	1819.4000
	FREE	FREE	FIXED
4JF2	33-46-04.398330	112-34-06.995100	1679.9000
	FREE	FREE	FIXED
4IE2	33-43-21.462930	112-30-47.052780	1521.9000
	FREE	FREE	FIXED
4LD2	33-50-15.913090	112-27-03.269280	1998.7000
	FREE	FREE	FIXED
4LB2	33-49-57.827210	112-21-38.295270	1855.3000
	FREE	FREE	FIXED
4JH5	33-46-08.440570	112-39-49.771080	1707.5000
	FREE	FREE	FIXED
4HH2	33-41-07.370600	112-39-25.371660	1566.6000
	FREE	FREE	FIXED
4IC1	33-43-28.488690	112-24-36.556790	1423.8000
	FREE	FREE	FIXED
4IG2	33-43-26.121980	112-37-14.839000	1642.6000
	FREE	FREE	FIXED

Number of GPS Vector Observations (FeetInt) = 120

From To	DeltaX DeltaY DeltaZ	StdErrX StdErrY StdErrZ	CorrelXY CorrelXZ CorrelYZ
(V1 Postprocessed 12-APR-2002 08:52:20.000 network control.asc)			
FRIA	14415.9492	0.0195	0.5384
112	-8199.4065	0.0335	-0.3690
	-3640.2506	0.0332	-0.6915
(V2 Postprocessed 12-APR-2002 09:51:30.000 network control.asc)			

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FRIA                        -4846.6484          0.0153          0.5138
113                          -815.0348          0.0236         -0.5935
                            -3031.6075          0.0270         -0.5499
(V3 Postprocessed 12-APR-2002 11:49:05.000 network control.asc)
FRIA                        13342.9353          0.0335          0.5745
4HD1                         2792.3781          0.0451         -0.4590
                            11172.0963          0.0375         -0.7166
(V4 Postprocessed 12-APR-2002 01:14:25.000 network control.asc)
115                          -799.2065          0.0291          0.5370
4HB1                        -3999.4340          0.0478         -0.4469
                            -6070.2222          0.0310         -0.5135
(V5 Postprocessed 15-APR-2002 12:23:50.000 network control.asc)
115                          -799.1712          0.0446          0.7277
4HB1                        -3999.3924          0.0603         -0.7689
                            -6070.2797          0.0515         -0.7699
(V6 Postprocessed 18-APR-2002 07:58:41.000 network control.asc)
4JD2                       -11163.0071          0.0225          0.8713
4KE1                        13971.8573          0.0494         -0.8476
                            13282.4494          0.0365         -0.9330
(V7 Postprocessed 18-APR-2002 09:47:25.000 network control.asc)
4IC1                        19447.2799          0.0188          0.4409
131                         -2767.7818          0.0296         -0.3952
                             7243.7299          0.0214         -0.5329
(V8 Postprocessed 18-APR-2002 12:15:00.000 network control.asc)
4IC1                         3770.4795          0.0523          0.5720
133                         13289.6310          0.0834         -0.6628
                            21019.7286          0.0710         -0.7440
(V9 Postprocessed 18-APR-2002 12:15:00.000 network control.asc)
4JD2                        15764.7196          0.0446          0.5463
133                          -938.8890          0.0700         -0.6781
                             7846.5331          0.0636         -0.6987
(V10 Postprocessed 30-APR-2002 10:54:10.000 network control.asc)
4JD2                        15764.7147          0.0337          0.5444
133                          -938.8823          0.0524         -0.5440
                             7846.4801          0.0452         -0.7584
(V11 Postprocessed 30-APR-2002 01:27:15.000 network control.asc)
4JD2                        15764.7049          0.0306          0.6059
133                          -938.8895          0.0493         -0.3733
                             7846.4621          0.0359         -0.6386
(V12 Postprocessed 19-APR-2002 12:09:00.000 network control.asc)
117                        -26910.8794          0.0424          0.5712
4HF3                         5808.2661          0.0660         -0.6490
                            -7270.6647          0.0576         -0.7455
(V13 Postprocessed 18-APR-2002 08:01:04.000 network control.asc)
4JD2                        11994.2288          0.0211          0.8653
4IC1                       -14228.5388          0.0457         -0.8498
                           -13173.1822          0.0340         -0.9301
(V14 Postprocessed 18-APR-2002 01:36:15.000 network control.asc)
4JD2                        -8016.5762          0.0402          0.6049
117                        -10019.2336          0.0707         -0.4834
                           -18748.0226          0.0409         -0.5747
(V15 Postprocessed 23-APR-2002 12:23:15.000 network control.asc)
4JD2                        -8016.5799          0.0302          0.5287
117                        -10019.2872          0.0472         -0.5936
                           -18748.0189          0.0350         -0.6170
(V17 Postprocessed 16-APR-2002 11:08:15.000 network control.asc)
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4IE2                        -761.3355          0.0302          0.4974
118                        -1441.3464          0.0444         -0.3366
                           -2456.1564          0.0364         -0.6629
(V18 Postprocessed 22-APR-2002 10:21:45.000 network control.asc)
4IE2                        -761.3925          0.0113          0.4053
118                        -1441.3167          0.0159         -0.3781
                           -2456.1506          0.0124         -0.5365
(V19 Postprocessed 15-APR-2002 11:00:25.000 network control.asc)
115                         4895.2701          0.0327          0.4564
Q366                        2989.7099          0.0488         -0.3141
                            7078.3559          0.0348         -0.6071
(V20 Postprocessed 15-APR-2002 10:47:30.000 network control.asc)
4GC1                      -11064.8389          0.0225          0.2341
112                         4283.0726          0.0453         -0.2649
                            -309.4765          0.0300         -0.6858
(V21 Postprocessed 15-APR-2002 09:26:40.000 network control.asc)
115                        13097.0757          0.0373          0.6561
137                        -5375.3899          0.0587         -0.7159
                             -93.7193          0.0795         -0.7060
(V22 Postprocessed 15-APR-2002 09:02:20.000 network control.asc)
4GC1                       18623.2272          0.0395          0.9135
115                         7004.7973          0.0856         -0.9151
                           20477.9707          0.0644         -0.9539
(V24 Postprocessed 15-APR-2002 12:48:25.000 network control.asc)
4IC1                       13682.1074          0.1008          0.8592
115                       -10431.1246          0.1301         -0.8781
                           -6847.2833          0.1075         -0.8626
(V25 Postprocessed 15-APR-2002 12:23:50.000 network control.asc)
4GC1                       17824.0880          0.0368          0.4961
4HB1                        3005.3875          0.0602         -0.5686
                           14407.6746          0.0465         -0.6091
(V27 Postprocessed 12-APR-2002 12:03:50.000 network control.asc)
FRIA                       -5044.1111          0.0578          0.5621
114                         1367.1549          0.0927         -0.4909
                            -950.5149          0.0852         -0.7784
(V30 Postprocessed 22-APR-2002 08:57:35.000 network control.asc)
4HF3                      -23922.6741          0.0433          0.7344
124                         4642.6182          0.0705         -0.7655
                           -7290.5929          0.1052         -0.8040
(V31 Postprocessed 19-APR-2002 12:09:00.000 network control.asc)
117                         2931.7643          0.0458          0.5639
4HD1                       -6370.2922          0.0689         -0.6875
                           -7247.4207          0.0636         -0.6911
(V32 Postprocessed 19-APR-2002 08:03:05.000 network control.asc)
4HF3                      -15336.5700          0.0240          0.6505
123                         -447.9213          0.0428         -0.5480
                           -9104.5415          0.0332         -0.7699
(V33 Postprocessed 19-APR-2002 09:06:50.000 network control.asc)
114                       -11455.6208          0.0341          0.6881
4HF3                       13603.6670          0.0562         -0.7307
                           12099.4500          0.0800         -0.7576
(V34 Postprocessed 22-APR-2002 08:29:45.000 network control.asc)
4KE1                        4887.7352          0.0146          0.4977
4LE2                        5836.8361          0.0246         -0.3046
                           11199.5658          0.0268         -0.6640
(V35 Postprocessed 22-APR-2002 07:42:15.000 network control.asc)
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4KE1                          6572.6151          0.0259          0.7210
128                           3876.4512          0.0454         -0.6104
                              9395.8072          0.0306         -0.7965
(V36 Postprocessed 22-APR-2002 09:58:15.000 network control.asc)
4KE1                         16780.1144          0.0339          0.5083
245                          -8337.5120          0.0569         -0.4861
                             -2002.1965          0.0334         -0.6727
(V37 Postprocessed 22-APR-2002 07:42:58.000 network control.asc)
4IE2                        -17817.8084          0.0177          0.5998
4HF3                         -1500.1679          0.0306         -0.5218
                            -12309.1367          0.0273         -0.7227
(V38 Postprocessed 22-APR-2002 10:45:45.000 network control.asc)
4IE2                        -17817.8025          0.0175          0.8599
4HF3                         -1500.1674          0.0374         -0.8419
                            -12309.1349          0.0279         -0.9277
(V39 Postprocessed 22-APR-2002 10:45:45.000 network control.asc)
118                         -17056.3954          0.0332          0.4779
4HF3                            -58.8387          0.0472         -0.3266
                             -9852.9622          0.0397         -0.6289
(V40 Postprocessed 23-APR-2002 10:30:20.000 network control.asc)
124                          10274.9627          0.0205          0.4609
122                          -1952.9294          0.0295         -0.3024
                              3343.5261          0.0225         -0.5997
(V41 Postprocessed 23-APR-2002 09:41:45.000 network control.asc)
4GG2                         -1983.6515          0.0144          0.4070
122                           4554.3385          0.0226         -0.3997
                              5019.0613          0.0161         -0.4721
(V42 Postprocessed 23-APR-2002 08:44:05.000 network control.asc)
123                           3672.5096          0.0141          0.6541
4GG2                         -1416.7480          0.0222         -0.6933
                               138.4265          0.0304         -0.7474
(V43 Postprocessed 23-APR-2002 11:20:20.000 network control.asc)
124                           8586.1093          0.0159          0.5218
123                          -5090.5190          0.0247         -0.4945
                             -1813.9785          0.0219         -0.7349
(V44 Postprocessed 23-APR-2002 07:49:00.000 network control.asc)
4LE2                          1684.8651          0.0139          0.6370
128                          -1960.3940          0.0239         -0.4907
                             -1803.7460          0.0184         -0.7219
(V45 Postprocessed 23-APR-2002 11:57:30.000 network control.asc)
245                           3484.7613          0.0175          0.5090
4LD2                          5588.8031          0.0275         -0.6328
                             10100.6653          0.0251         -0.6614
(V46 Postprocessed 23-APR-2002 09:57:45.000 network control.asc)
4LD2                         25003.6295          0.0292          0.4902
4LB2                        -11281.2531          0.0480         -0.4756
                             -1598.4641          0.0290         -0.6460
(V47 Postprocessed 23-APR-2002 08:55:35.000 network control.asc)
4LD2                        -15377.1191          0.0276          0.6372
4LE2                          8585.5586          0.0511         -0.6652
                              3101.1211          0.0720         -0.7364
(V48 Postprocessed 23-APR-2002 11:57:30.000 network control.asc)
4JD2                          5617.0885          0.0159          0.5329
245                           5634.3161          0.0250         -0.6309
                             11280.2563          0.0211         -0.7034
(V49 Postprocessed 23-APR-2002 09:00:05.000 network control.asc)
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4IC1                        -12984.7953          0.0177           0.5849
116                           5340.2420          0.0288          -0.6357
                                49.1517          0.0383          -0.6548
(V50 Postprocessed 24-APR-2002 12:13:10.000 network control.asc)
119                         -13117.9927          0.0277           0.5677
4IG2                          4695.6645          0.0424          -0.6435
                              -984.4399          0.0323          -0.6718
(V51 Postprocessed 24-APR-2002 10:17:35.000 network control.asc)
119                         -13118.0202          0.0307           0.4798
4IG2                          4695.6560          0.0445          -0.4518
                              -984.4083          0.0325          -0.5726
(V52 Postprocessed 24-APR-2002 09:33:05.000 network control.asc)
4IG2                         -3188.8877          0.0141           0.4036
120                           2621.6355          0.0220          -0.4195
                              1822.4291          0.0167          -0.4673
(V53 Postprocessed 25-APR-2002 09:20:20.000 network control.asc)
120                           3188.8623          0.0311           0.4826
4IG2                         -2621.6537          0.0485          -0.5465
                             -1822.4390          0.0564          -0.5006
(V54 Postprocessed 24-APR-2002 11:25:40.000 network control.asc)
124                          11553.4063          0.0339           0.5609
4IG2                          9577.5630          0.0547          -0.5788
                             20058.2901          0.0490          -0.7758
(V55 Postprocessed 25-APR-2002 09:20:20.000 network control.asc)
4IG2                        -11553.3566          0.0369           0.4411
124                          -9577.5499          0.0613          -0.4552
                            -20058.3413          0.0480          -0.4968
(V56 Postprocessed 24-APR-2002 09:23:10.000 network control.asc)
4IG2                         12369.3818          0.0270           0.8924
4HF3                        -14220.1337          0.0576          -0.8875
                            -12767.7794          0.0431          -0.9489
(V57 Postprocessed 24-APR-2002 10:28:25.000 network control.asc)
4HH2                         13150.6063          0.0426           0.5006
4IG2                          2879.8582          0.0617          -0.3313
                             11711.1147          0.0469          -0.6399
(V58 Postprocessed 25-APR-2002 09:30:55.000 network control.asc)
4HH2                         13150.5885          0.0338           0.4441
4IG2                          2879.8577          0.0507          -0.4969
                             11711.1537          0.0426          -0.4560
(V59 Postprocessed 24-APR-2002 12:13:10.000 network control.asc)
119                           -748.6688          0.0396           0.6569
4HF3                         -9524.4676          0.0613          -0.7180
                            -13752.2366          0.0444          -0.7658
(V60 Postprocessed 24-APR-2002 10:17:35.000 network control.asc)
119                           -748.6912          0.0341           0.4723
4HF3                         -9524.4265          0.0492          -0.3621
                            -13752.2247          0.0342          -0.5730
(V61 Postprocessed 24-APR-2002 11:25:40.000 network control.asc)
124                          23922.7854          0.0301           0.5863
4HF3                         -4642.5652          0.0506          -0.5762
                              7290.5174          0.0461          -0.7835
(V62 Postprocessed 24-APR-2002 11:41:50.000 network control.asc)
4GG2                         11663.9911          0.0298           0.5733
4HF3                          1864.6864          0.0453          -0.6403
                              8966.0543          0.0399          -0.7325
(V63 Postprocessed 25-APR-2002 10:07:30.000 network control.asc)
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121                          -2887.0495          0.0247          0.5160
4JH5                          5448.2915          0.0353         -0.4979
                              5833.8215          0.0280         -0.6434
(V64 Postprocessed 26-APR-2002 08:49:05.000 network control.asc)
121                          -2886.9825          0.0200          0.5699
4JH5                          5448.2604          0.0326         -0.6301
                              5833.7873          0.0426         -0.6392
(V65 Postprocessed 25-APR-2002 12:18:55.000 network control.asc)
121                           2511.1671          0.0279          0.5670
120                          -5330.2221          0.0419         -0.5835
                             -6024.0285          0.0281         -0.5847
(V66 Postprocessed 25-APR-2002 09:02:40.000 network control.asc)
121                           2511.1680          0.0139          0.4431
120                          -5330.2108          0.0236         -0.4560
                             -6024.0154          0.0302         -0.5281
(V67 Postprocessed 25-APR-2002 12:21:15.000 network control.asc)
120                          -9961.6878          0.0465          0.5874
4HH2                         -5501.5219          0.0683         -0.6428
                            -13533.6054          0.0467         -0.6438
(V68 Postprocessed 25-APR-2002 09:30:55.000 network control.asc)
121                          -7450.5933          0.0417          0.4519
4HH2                        -10831.7673          0.0643         -0.5095
                            -19557.5721          0.0508         -0.4879
(V69 Postprocessed 25-APR-2002 12:21:15.000 network control.asc)
4HH2                          7450.5664          0.0322          0.5771
121                          10831.7319          0.0481         -0.5547
                             19557.6219          0.0315         -0.5580
(V70 Postprocessed 25-APR-2002 09:20:20.000 network control.asc)
121                           5700.0209          0.0189          0.4341
4IG2                         -7951.8641          0.0306         -0.4264
                             -7846.4369          0.0237         -0.4921
(V71 Postprocessed 25-APR-2002 09:30:55.000 network control.asc)
124                          -1597.2230          0.0276          0.4384
4HH2                          6697.6495          0.0443         -0.4562
                              8347.1774          0.0326         -0.4865
(V72 Postprocessed 25-APR-2002 12:21:15.000 network control.asc)
124                          -1597.2312          0.0279          0.5551
4HH2                          6697.6360          0.0424         -0.5225
                              8347.1496          0.0277         -0.5350
(V73 Postprocessed 26-APR-2002 08:07:45.000 network control.asc)
121                          13489.4779          0.0314          0.9040
4LH2                         19576.8980          0.0678         -0.8908
                             35201.6304          0.0534         -0.9485
(V75 Postprocessed 26-APR-2002 10:18:45.000 network control.asc)
4LH2                         12842.3591          0.0269          0.5341
125                         -19128.4936          0.0364         -0.4509
                            -19282.8798          0.0295         -0.6600
(V76 Postprocessed 26-APR-2002 09:58:25.000 network control.asc)
126                           3767.3139          0.0220          0.4440
4LH2                           -278.6363          0.0332         -0.3485
                              1881.7787          0.0216         -0.5552
(V77 Postprocessed 26-APR-2002 08:44:05.000 network control.asc)
127                           3985.7105          0.0177          0.6288
4LH2                         -2545.3733          0.0274         -0.6922
                             -1121.9537          0.0368         -0.6904
(V78 Postprocessed 26-APR-2002 10:55:30.000 network control.asc)
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4LE2                        -33232.1388          0.0369          0.5466
4LH2                         17729.0785          0.0583         -0.4740
                              5315.1467          0.0510         -0.7672
(V79 Postprocessed 30-APR-2002 11:22:05.000 network control.asc)
4LE2                        -33232.1661          0.0284          0.5511
4LH2                         17729.1550          0.0439         -0.6655
                              5315.1530          0.0402         -0.7011
(V80 Postprocessed 26-APR-2002 09:58:25.000 network control.asc)
121                           9722.1051          0.0365          0.4475
126                          19855.5021          0.0547         -0.3062
                             33319.8719          0.0361         -0.5190
(V81 Postprocessed 26-APR-2002 08:44:05.000 network control.asc)
121                           9503.7168          0.0376          0.7074
127                          22122.2331          0.0538         -0.7843
                             36323.6545          0.0728         -0.7388
(V82 Postprocessed 26-APR-2002 08:40:30.000 network control.asc)
4JF2                        -23748.8983          0.0239          0.6081
121                           5869.6140          0.0383         -0.6645
                             -5479.0011          0.0513         -0.6746
(V83 Postprocessed 26-APR-2002 10:13:30.000 network control.asc)
4JF2                        -23748.9096          0.0434          0.4842
121                           5869.5872          0.0623         -0.3515
                             -5479.0009          0.0477         -0.6108
(V84 Postprocessed 26-APR-2002 10:18:45.000 network control.asc)
4JF2                          2582.8893          0.0208          0.4627
125                           6317.9117          0.0289         -0.4017
                             10439.7746          0.0246         -0.5590
(V85 Postprocessed 26-APR-2002 10:55:30.000 network control.asc)
4LE2                        -20389.7817          0.0402          0.5668
125                          -1399.4380          0.0653         -0.5001
                            -13967.7230          0.0596         -0.7871
(V86 Postprocessed 26-APR-2002 08:49:05.000 network control.asc)
4JH5                         12390.7660          0.0356          0.6429
127                          16673.9833          0.0558         -0.7044
                             30489.8183          0.0739         -0.6875
(V87 Postprocessed 26-APR-2002 08:49:05.000 network control.asc)
4JF2                        -26635.9402          0.0270          0.5351
4JH5                         11317.8681          0.0508         -0.5730
                               354.8315          0.0650         -0.6191
(V88 Postprocessed 30-APR-2002 08:05:35.000 network control.asc)
FRIA                         13342.9610          0.0242          0.6497
4HD1                          2792.2951          0.0400         -0.6398
                             11172.0790          0.0518         -0.7564
(V89 Postprocessed 30-APR-2002 09:25:00.000 network control.asc)
116                          -4094.1555          0.0261          0.4540
4HD1                         -7501.2384          0.0413         -0.4346
                            -12871.4352          0.0256         -0.5757
(V90 Postprocessed 30-APR-2002 09:24:10.000 network control.asc)
117                           2931.7610          0.0196          0.4457
4HD1                         -6370.2912          0.0310         -0.4192
                             -7247.4524          0.0193         -0.5642
(V91 Postprocessed 30-APR-2002 08:46:40.000 network control.asc)
4LD2                        -10159.0990          0.0382          0.6014
129                          11020.7432          0.0516         -0.7048
                              9844.3097          0.0647         -0.6167
(V92 Postprocessed 30-APR-2002 10:23:45.000 network control.asc)
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4LD2                        -10159.1080          0.0349          0.5447
129                          11020.7387          0.0501         -0.3839
                              9844.3144          0.0444         -0.7166
(V93 Postprocessed 30-APR-2002 08:46:40.000 network control.asc)
4LE2                          5218.0361          0.0201          0.5451
129                           2435.2082          0.0271         -0.6218
                              6743.1541          0.0359         -0.5767
(V94 Postprocessed 30-APR-2002 10:23:45.000 network control.asc)
4LE2                          5218.0222          0.0229          0.4837
129                           2435.2008          0.0305         -0.3209
                              6743.1522          0.0270         -0.6433
(V95 Postprocessed 30-APR-2002 01:06:30.000 network control.asc)
133                           3273.3222          0.0260          0.5513
13002                         5565.6473          0.0429         -0.3391
                              9817.1913          0.0270         -0.5481
(V96 Postprocessed 30-APR-2002 03:49:00.000 network control.asc)
133                          13754.3552          0.0290          0.7093
132                          -5621.6213          0.0498          0.2001
                                22.5846          0.0513         -0.0414
(V97 Postprocessed 30-APR-2002 10:33:15.000 network control.asc)
133                          -6662.7693          0.0184          0.8971
4LD2                         12162.0920          0.0409         -0.8648
                             13534.4011          0.0299         -0.9420
(V98 Postprocessed 30-APR-2002 10:54:10.000 network control.asc)
4IE2                         17109.6441          0.0288          0.5415
4JD2                          2710.8563          0.0433         -0.5456
                             13709.5032          0.0354         -0.7515
(V99 Postprocessed 30-APR-2002 01:28:35.000 network control.asc)
4JD2                        -17109.7079          0.0342          0.5359
4IE2                         -2710.8514          0.0580         -0.3809
                            -13709.5411          0.0441         -0.6432
(V100 Postprocessed 30-APR-2002 11:44:50.000 network control.asc)
4LB2                        -25003.5668          0.0307          0.5574
4LD2                         11281.2486          0.0476         -0.6497
                              1598.4285          0.0382         -0.6847
(V101 Postprocessed 30-APR-2002 08:23:15.000 network control.asc)
4LE2                         15377.1393          0.0205          0.8841
4LD2                         -8585.5214          0.0439         -0.8839
                             -3101.1284          0.0337         -0.9448
(V102 Postprocessed 01-MAY-2002 09:00:35.000 network control.asc)
1IA1                        -10121.1308          0.0279          0.4458
Q366                          4188.8461          0.0469         -0.3674
                               155.1047          0.0349         -0.5416
(V103 Postprocessed 01-MAY-2002 08:10:35.000 network control.asc)
1IA1                          1464.7665          0.0134          0.5843
130                           4118.8608          0.0236         -0.5664
                              6664.5579          0.0313         -0.7247
(V104 Postprocessed 01-MAY-2002 12:43:25.000 network control.asc)
1IA1                          1464.7315          0.0177          0.6186
130                           4118.8165          0.0302         -0.4252
                              6664.5566          0.0167         -0.5757
(V105 Postprocessed 01-MAY-2002 08:18:00.000 network control.asc)
1KA2                        -12659.0215          0.0370          0.7163
130                          -6176.7662          0.0601         -0.7582
                            -15697.2095          0.0891         -0.7833
(V106 Postprocessed 01-MAY-2002 12:43:25.000 network control.asc)
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1KA2                        -12659.0688          0.0298          0.5949
130                          -6176.8000          0.0481         -0.3949
                            -15697.2233          0.0287         -0.4937
(V107 Postprocessed 01-MAY-2002 10:18:55.000 network control.asc)
1IA1                         -9251.3567          0.0251          0.4927
131                           8862.3905          0.0332         -0.3207
                              7167.7159          0.0296         -0.6407
(V108 Postprocessed 01-MAY-2002 10:18:55.000 network control.asc)
131                         23375.1673           0.0352          0.5367
1KA2                         1433.1951           0.0511         -0.3787
                            15194.0420           0.0457         -0.7196
(V109 Postprocessed 01-MAY-2002 10:18:55.000 network control.asc)
4JB3                         2379.0928           0.0167          0.4772
131                         -3460.8241           0.0216         -0.2979
                            -3542.0691           0.0186         -0.6107
(V110 Postprocessed 01-MAY-2002 12:35:15.000 network control.asc)
132                         25297.5373           0.0311          0.6049
1KA2                        -9002.4669           0.0492         -0.4263
                             1395.4446           0.0284         -0.4868
(V111 Postprocessed 01-MAY-2002 12:35:15.000 network control.asc)
4LB2                        -4586.3993           0.0247          0.5986
132                         -6502.4428           0.0394         -0.4081
                           -11913.3743           0.0223         -0.4820
(V112 Postprocessed 01-MAY-2002 11:22:45.000 network control.asc)
4JB3                       -13297.6701           0.0386          0.5556
133                         12596.5337           0.0598         -0.6736
                            10233.9149           0.0547         -0.7014
(V113 Postprocessed 01-MAY-2002 09:44:05.000 network control.asc)
1IA1                        -1919.3198           0.0163          0.4338
137                         -4176.2919           0.0243         -0.4172
                            -7017.0200           0.0175         -0.5603
(V114 Postprocessed 01-MAY-2002 01:53:35.000 network control.asc)
1IA1                        14123.7811           0.0373          0.7595
1KA2                        10295.6907           0.0551         -0.6497
                            22361.7796           0.0420         -0.7164
(V115 Postprocessed 01-MAY-2002 08:18:00.000 network control.asc)
1IA1                        14123.7682           0.0193          0.8797
1KA2                        10295.6203           0.0409         -0.8710
                            22361.8226           0.0311         -0.9353
(V116 Postprocessed 01-MAY-2002 01:55:05.000 network control.asc)
4LB2                        20711.0854           0.0399          0.7611
1KA2                       -15504.8999           0.0582         -0.6568
                           -10517.9196           0.0447         -0.7116
(V117 Postprocessed 01-MAY-2002 08:27:35.000 network control.asc)
4LB2                        20711.0857           0.0203          0.8753
1KA2                       -15504.9739           0.0428         -0.8656
                           -10517.9119           0.0328         -0.9335
(V118 Postprocessed 01-MAY-2002 09:34:45.000 network control.asc)
4JB3                        25754.2628           0.0239          0.4759
1KA2                        -2027.6439           0.0349         -0.3656
                            11651.9827           0.0258         -0.6180
(V119 Postprocessed 01-MAY-2002 11:09:05.000 network control.asc)
4JB3                        25754.2542           0.0310          0.5667
1KA2                        -2027.6150           0.0490         -0.6383
                            11651.9878           0.0421         -0.7474
(V120 Postprocessed 01-MAY-2002 09:34:45.000 network control.asc)
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4JB3	5043.1868	0.0248	0.4695
4LB2	13477.3574	0.0363	-0.3666
	22169.8812	0.0269	-0.6235

(V121 Postprocessed 01-MAY-2002 11:09:05.000 network control.asc)

4JB3	5043.1859	0.0301	0.5576
4LB2	13477.3693	0.0488	-0.6330
	22169.8783	0.0420	-0.7556

(V122 Postprocessed 02-MAY-2002 08:58:15.000 network control.asc)

4LB2	4125.8584	0.0146	0.4194
134	-1045.5885	0.0248	-0.3262
	817.0792	0.0181	-0.5312

(V123 Postprocessed 02-MAY-2002 09:43:45.000 network control.asc)

4LB2	-15067.4448	0.0205	0.4632
13002	4684.8343	0.0300	-0.4500
	-2118.7072	0.0216	-0.5622

(V124 Postprocessed 02-MAY-2002 08:07:45.000 network control.asc)

1KA2	-16585.2179	0.0313	0.6316
134	14459.3880	0.0575	-0.6200
	11334.9909	0.0780	-0.7458

(V125 Postprocessed 03-MAY-2002 01:16:50.000 network control.asc)

4KE1	-18084.8602	0.0300	0.5865
4JF2	-1880.4530	0.0522	-0.3734
	-13207.9496	0.0389	-0.6798

(V126 Postprocessed 03-MAY-2002 11:01:45.000 network control.asc)

114	197.4178	0.0153	0.5418
113	-2182.1823	0.0232	-0.5883
	-2081.0750	0.0206	-0.7197

Adjustment Statistical Summary

Convergence Iterations = 2

Number of Stations = 48

Number of Observations = 360
Number of Unknowns = 117
Number of Redundant Obs = 243

Observation	Count	Sum Squares of StdRes	Error Factor
GPS Deltas	360	283.115	1.079
Total	360	283.115	1.079

The Chi-Square Test at 5.00% Level Passed
Lower/Upper Bounds (0.911/1.089)

Adjusted Station Information

Adjusted Coordinates (FeetInt)

Station	N	E	Elev	Description

112	958452.9960	540017.5486	1298.7000
113	958771.8269	519399.4563	2085.6000
114	961584.6607	518397.8902	1622.9573
115	983293.3729	566541.3766	1312.6000
116	991625.2274	535919.4359	1467.0064
117	984910.0051	529823.8620	1448.1465
118	988037.1860	518493.2369	1508.4732
119	992775.6330	499833.4254	1602.2026
120	993862.1207	481975.7288	1662.3216
121	1001096.5852	477657.4140	1721.1727
122	971553.6519	489029.7626	1634.0614
123	965298.8593	488635.0586	1726.6832
124	967649.6584	478768.4371	1570.7933
125	1020021.4849	501917.8457	1812.1601
126	1041045.7879	479267.6979	1920.9418
127	1044665.8832	478219.1610	1927.3621
128	1034421.4074	522605.8744	1984.2376
129	1044524.0239	524245.0429	2250.2023
130	999511.5974	580740.4177	1400.9972
131	1000152.6048	569029.7975	1417.3515
132	1016603.3018	563353.4830	1672.2833
133	1016629.8084	548496.8980	1694.4110
134	1031804.9307	569399.3530	1810.0205
137	983160.8182	580696.3158	1256.6848
245	1020767.9158	536631.2290	1773.8399
13002	1028338.0148	549457.2164	1844.5377
1IA1	991544.6740	580918.4971	1331.2000
1KA2	1018369.3364	590177.6854	1384.1000
4GC1	958797.2890	551879.8803	1252.6000
4GG2	965445.3579	492570.5672	1717.0000
4HB1	976020.0056	567292.4403	1275.9000
4HD1	976209.6910	534920.5711	1393.3000
4HF3	976278.7705	502693.0044	1526.7000
4HH2	977709.7495	474786.8627	1566.6000
4IC1	991524.6223	549957.2499	1423.8000
4IE2	990979.8030	518661.7124	1521.9000
4IG2	991657.1406	485912.2147	1642.6000
4JB3	1004387.5275	565531.6504	1476.4000
4JD2	1007321.9331	533522.2188	1612.5000
4JF2	1007550.8878	501878.5916	1679.9000
4JH5	1008155.8504	472945.5854	1707.5000
4KE1	1023250.0408	517954.2879	1819.4000
4LB2	1030809.0185	565182.2908	1855.3000
4LD2	1032767.3842	537779.6974	1998.7000
4LE2	1036581.8440	520311.6252	2020.2000
4LH2	1043247.5662	482867.0755	1978.8000
FRIA	962716.2020	523586.9692	1593.8000
Q366	991733.7744	569967.0277	1392.5300

Adjusted Positions and Ellipsoid Heights (FeetInt)

Station	Latitude	Longitude	Ellip Ht	Geoid Ht
112	33-38-00.811397	112-26-32.249561	1200.1455	-98.5545
113	33-38-02.862404	112-30-36.128272	1987.3991	-98.2009
114	33-38-30.633769	112-30-48.166089	1524.7732	-98.1841
115	33-42-07.793910	112-21-19.785850	1214.7174	-97.8826

116	33-43-28.788483	112-27-22.768904	1369.0523	-97.9541
117	33-42-22.031577	112-28-34.508555	1350.0306	-98.1159
118	33-42-52.341734	112-30-48.845932	1410.3358	-98.1374
119	33-43-38.097303	112-34-30.103830	1503.9675	-98.2352
120	33-43-47.668426	112-38-01.626214	1563.8883	-98.4334
121	33-44-58.938552	112-38-53.363219	1622.7685	-98.4042
122	33-40-07.446421	112-36-36.331063	1535.6148	-98.4466
123	33-39-05.540729	112-36-40.503858	1628.2441	-98.4391
124	33-39-28.126278	112-38-37.416179	1472.1053	-98.6881
125	33-48-07.772705	112-34-07.464892	1714.4795	-97.6806
126	33-51-34.261724	112-38-37.633463	1823.4708	-97.4710
127	33-52-10.000802	112-38-50.372090	1829.9759	-97.3862
128	33-50-31.460551	112-30-03.272150	1887.3516	-96.8860
129	33-52-11.497774	112-29-44.512613	2153.6939	-96.5084
130	33-44-48.814529	112-18-32.441480	1303.7346	-97.2626
131	33-44-54.693915	112-20-51.163729	1319.9773	-97.3742
132	33-47-37.207106	112-21-59.240391	1575.3800	-96.9032
133	33-47-36.792671	112-24-55.284630	1597.3442	-97.0669
134	33-50-07.857241	112-20-48.352077	1713.6219	-96.3986
137	33-42-07.046075	112-18-32.227678	1158.9606	-97.7242
245	33-48-17.141226	112-27-16.141506	1676.7411	-97.0988
13002	33-49-32.670693	112-24-44.573320	1747.8617	-96.6760
1IA1	33-43-30.000435	112-18-29.974249	1233.7178	-97.4822
1KA2	33-47-55.724313	112-16-41.457343	1287.4616	-96.6384
4GC1	33-38-04.791916	112-24-11.967354	1153.9572	-98.6428
4GG2	33-39-07.249194	112-35-53.960070	1618.6480	-98.3520
4HB1	33-40-55.866205	112-21-10.531877	1177.8138	-98.0862
4HD1	33-40-56.225459	112-27-33.636050	1295.0713	-98.2287
4HF3	33-40-55.070574	112-33-55.019402	1428.4333	-98.2667
4HH2	33-41-07.371336	112-39-25.371950	1467.8750	-98.7250
4IC1	33-43-28.488369	112-24-36.556425	1325.9935	-97.8065
4IE2	33-43-21.463346	112-30-47.052756	1423.7973	-98.1027
4IG2	33-43-26.122780	112-37-14.839225	1544.2031	-98.3969
4JB3	33-45-36.445222	112-21-32.808658	1379.1266	-97.2734
4JD2	33-46-03.955242	112-27-52.138768	1514.9222	-97.5778
4JF2	33-46-04.398446	112-34-06.994964	1581.9194	-97.9806
4JH5	33-46-08.440696	112-39-49.770552	1609.1552	-98.3448
4KE1	33-48-40.676930	112-30-57.649747	1722.0663	-97.3337
4LB2	33-49-57.827201	112-21-38.295743	1758.8504	-96.4496
4LD2	33-50-15.913113	112-27-03.269169	1902.0243	-96.6757
4LE2	33-50-52.704089	112-30-30.620000	1923.3447	-96.8553
4LH2	33-51-56.293120	112-37-55.133520	1881.4495	-97.3505
FRIA	33-38-42.120514	112-29-46.862434	1495.5501	-98.2499
Q366	33-43-31.441170	112-20-39.650430	1294.9190	-97.6110
			Average:	-97.7196

Convergence Angles (DMS) and Grid Factors at Stations
(Grid Azimuth = Geodetic Azimuth - Convergence)
(Elevation Factor Includes a Geoid Height Correction at Each Station))

Station	Convergence Angle	------- Factors ------- Scale	x	Elevation	=	Combined
112	-0-17-28.10	0.99992930		0.99994258		0.99987188
113	-0-19-43.20	0.99993734		0.99990491		0.99984226
114	-0-19-50.11	0.99993776		0.99992704		0.99986481
115	-0-14-36.60	0.99992039		0.99994188		0.99986228

116	-0-17-58.65	0.99993082	0.99993450	0.99986532
117	-0-18-37.94	0.99993316	0.99993540	0.99986857
118	-0-19-52.76	0.99993772	0.99993252	0.99987024
119	-0-21-56.02	0.99994587	0.99992804	0.99987392
120	-0-23-53.57	0.99995442	0.99992517	0.99987960
121	-0-24-23.06	0.99995660	0.99992236	0.99987896
122	-0-23-03.99	0.99995096	0.99992653	0.99987749
123	-0-23-05.68	0.99995115	0.99992209	0.99987325
124	-0-24-10.71	0.99995604	0.99992956	0.99988561
125	-0-21-46.00	0.99994492	0.99991797	0.99986290
126	-0-24-18.49	0.99995578	0.99991276	0.99986854
127	-0-24-25.97	0.99995631	0.99991244	0.99986876
128	-0-19-31.35	0.99993603	0.99990970	0.99984573
129	-0-19-21.74	0.99993537	0.99989696	0.99983233
130	-0-13-04.66	0.99991628	0.99993762	0.99985391
131	-0-14-21.76	0.99991964	0.99993684	0.99985649
132	-0-15-00.64	0.99992138	0.99992462	0.99984601
133	-0-16-38.56	0.99992628	0.99992357	0.99984986
134	-0-14-22.15	0.99991953	0.99991801	0.99983755
137	-0-13-03.62	0.99991630	0.99994455	0.99986085
245	-0-17-57.22	0.99993056	0.99991977	0.99985034
13002	-0-16-33.43	0.99992595	0.99991637	0.99984233
1IA1	-0-13-02.84	0.99991624	0.99994097	0.99985721
1KA2	-0-12-03.98	0.99991381	0.99993840	0.99985221
4GC1	-0-16-10.42	0.99992512	0.99994479	0.99986991
4GG2	-0-22-39.90	0.99994926	0.99992255	0.99987182
4HB1	-0-14-31.01	0.99992016	0.99994364	0.99986381
4HD1	-0-18-03.48	0.99993120	0.99993803	0.99986924
4HF3	-0-21-35.00	0.99994457	0.99993165	0.99987623
4HH2	-0-24-38.36	0.99995807	0.99992977	0.99988784
4IC1	-0-16-26.36	0.99992578	0.99993656	0.99986234
4IE2	-0-19-52.02	0.99993765	0.99993188	0.99986953
4IG2	-0-23-27.37	0.99995248	0.99992612	0.99987860
4JB3	-0-14-45.16	0.99992070	0.99993401	0.99985472
4JD2	-0-18-16.19	0.99993173	0.99992752	0.99985925
4JF2	-0-21-44.57	0.99994494	0.99992431	0.99986926
4JH5	-0-24-55.16	0.99995903	0.99992301	0.99988204
4KE1	-0-20-00.68	0.99993794	0.99991761	0.99985555
4LB2	-0-14-49.90	0.99992081	0.99991585	0.99983666
4LD2	-0-17-50.98	0.99993013	0.99990900	0.99983913
4LE2	-0-19-46.77	0.99993697	0.99990798	0.99984495
4LH2	-0-23-55.04	0.99995398	0.99990998	0.99986396
FRIA	-0-19-16.25	0.99993563	0.99992844	0.99986408
Q366	-0-14-14.85	0.99991936	0.99993804	0.99985741
Project Averages:	-0-18-59.01	0.99993565	0.99992633	0.99986199

Adjusted Observations and Residuals

Adjusted GPS Vector Observations Sorted by Residuals (FeetInt)

Datum Transformations			StdDev	
Scale Factor 0.999999519377	:	0.480623 PPM	0.2554	(Solved)
Rotation Around North Axis	:	0.155558 Sec	0.0822	(Solved)
Rotation Around East Axis	:	0.000000 Sec	0.0000	(None)

Rotation Around Vert Axis : 0.000000 Sec 0.0000 (None)

From To	Component	Adj Value	Residual	StdErr	StdRes
(V114 Postprocessed 01-MAY-2002 01:53:35.000 network control.asc)					
1IA1	Delta-N	26863.5636	-0.0125	0.0255	0.5
1KA2	Delta-E	9158.5526	0.0195	0.0231	0.8
	Delta-U	34.4302	0.1684	0.0708	2.4
	Length	28381.8837			
(V21 Postprocessed 15-APR-2002 09:26:40.000 network control.asc)					
115	Delta-N	-72.4073	-0.0520	0.0458	1.1
137	Delta-E	14157.3066	0.0432	0.0260	1.7
	Delta-U	-60.5515	-0.1334	0.0916	1.5
	Length	14157.6212			
(V106 Postprocessed 01-MAY-2002 12:43:25.000 network control.asc)					
1KA2	Delta-N	-18893.4986	0.0033	0.0266	0.1
130	Delta-E	-9372.4396	0.0337	0.0222	1.5
	Delta-U	5.6238	-0.1308	0.0532	2.5
	Length	21090.4467			
(V105 Postprocessed 01-MAY-2002 08:18:00.000 network control.asc)					
1KA2	Delta-N	-18893.4986	-0.0355	0.0488	0.7
130	Delta-E	-9372.4396	0.0027	0.0240	0.1
	Delta-U	5.6238	-0.0976	0.0998	1.0
	Length	21090.4467			
(V19 Postprocessed 15-APR-2002 11:00:25.000 network control.asc)					
115	Delta-N	8456.0864	-0.0071	0.0258	0.3
Q366	Delta-E	3390.2185	0.0109	0.0273	0.4
	Delta-U	78.2099	-0.0983	0.0570	1.7
	Length	9110.7132			
(V61 Postprocessed 24-APR-2002 11:25:40.000 network control.asc)					
124	Delta-N	8798.2493	-0.0086	0.0232	0.4
4HF3	Delta-E	23866.0654	-0.0584	0.0227	2.6
	Delta-U	-59.1411	0.0794	0.0673	1.2
	Length	25436.2294			
(V24 Postprocessed 15-APR-2002 12:48:25.000 network control.asc)					
4IC1	Delta-N	-8152.9699	0.0472	0.0413	1.1
115	Delta-E	16625.5212	0.0056	0.0566	0.1
	Delta-U	-119.4798	-0.0845	0.1837	0.5
	Length	18517.3742			
(V107 Postprocessed 01-MAY-2002 10:18:55.000 network control.asc)					
1IA1	Delta-N	8563.9735	0.0456	0.0198	2.3
131	Delta-E	-11923.0172	-0.0021	0.0202	0.1
	Delta-U	81.1168	0.0754	0.0425	1.8
	Length	14680.1418			
(V115 Postprocessed 01-MAY-2002 08:18:00.000 network control.asc)					
1IA1	Delta-N	26863.5636	-0.0094	0.0088	1.1
1KA2	Delta-E	9158.5526	0.0047	0.0085	0.6
	Delta-U	34.4302	0.0863	0.0535	1.6
	Length	28381.8837			
(V7 Postprocessed 18-APR-2002 09:47:25.000 network control.asc)					
4IC1	Delta-N	8720.3369	-0.0103	0.0165	0.6
131	Delta-E	19033.7174	-0.0475	0.0160	3.0
	Delta-U	-16.5009	-0.0699	0.0340	2.1
	Length	20936.2592			
(V56 Postprocessed 24-APR-2002 09:23:10.000 network control.asc)					
4IG2	Delta-N	-15265.3994	-0.0014	0.0109	0.1

4HF3	Delta-E	16887.2809	-0.0271	0.0112	2.4
	Delta-U	-128.1769	0.0781	0.0752	1.0
	Length	22764.6459			
(V67 Postprocessed 25-APR-2002 12:21:15.000 network control.asc)					
120	Delta-N	-16203.7556	0.0086	0.0315	0.3
4HH2	Delta-E	-7077.2993	-0.0300	0.0348	0.9
	Delta-U	-103.4993	0.0736	0.0825	0.9
	Length	17682.2106			
(V60 Postprocessed 24-APR-2002 10:17:35.000 network control.asc)					
119	Delta-N	-16480.3153	-0.0024	0.0265	0.1
4HF3	Delta-E	2965.0746	0.0394	0.0281	1.4
	Delta-U	-82.2588	0.0674	0.0572	1.2
	Length	16745.1254			
(V101 Postprocessed 30-APR-2002 08:23:15.000 network control.asc)					
4LE2	Delta-N	-3714.4896	-0.0019	0.0087	0.2
4LD2	Delta-E	17492.4680	0.0032	0.0088	0.4
	Delta-U	-28.9674	0.0779	0.0577	1.4
	Length	17882.5253			
(V62 Postprocessed 24-APR-2002 11:41:50.000 network control.asc)					
4GG2	Delta-N	10901.2586	0.0285	0.0212	1.3
4HF3	Delta-E	10051.9789	0.0718	0.0226	3.2*
	Delta-U	-195.4835	0.0089	0.0597	0.1
	Length	14829.6303			
(V116 Postprocessed 01-MAY-2002 01:55:05.000 network control.asc)					
4LB2	Delta-N	-12333.5464	-0.0242	0.0272	0.9
1KA2	Delta-E	25052.4029	0.0250	0.0246	1.0
	Delta-U	-490.0351	0.0686	0.0751	0.9
	Length	27928.1111			
(V58 Postprocessed 25-APR-2002 09:30:55.000 network control.asc)					
4HH2	Delta-N	14028.4679	0.0184	0.0325	0.6
4IG2	Delta-E	11026.3522	-0.0051	0.0285	0.2
	Delta-U	68.6988	-0.0706	0.0605	1.2
	Length	17843.2921			
(V121 Postprocessed 01-MAY-2002 11:09:05.000 network control.asc)					
4JB3	Delta-N	26424.0494	-0.0065	0.0215	0.3
4LB2	Delta-E	-462.9235	-0.0182	0.0233	0.8
	Delta-U	362.9763	0.0704	0.0636	1.1
	Length	26430.5966			
(V3 Postprocessed 12-APR-2002 11:49:05.000 network control.asc)					
FRIA	Delta-N	13558.5758	-0.0063	0.0226	0.3
4HD1	Delta-E	11259.1876	0.0301	0.0253	1.2
	Delta-U	-207.9213	0.0647	0.0584	1.1
	Length	17625.1954			
(V92 Postprocessed 30-APR-2002 10:23:45.000 network control.asc)					
4LD2	Delta-N	11688.1620	-0.0219	0.0268	0.8
129	Delta-E	-13597.8460	0.0021	0.0271	0.1
	Delta-U	243.9910	-0.0662	0.0652	1.0
	Length	17932.4867			
(V82 Postprocessed 26-APR-2002 08:40:30.000 network control.asc)					
4JF2	Delta-N	-6608.1636	-0.0034	0.0305	0.1
121	Delta-E	-24182.9308	-0.0124	0.0176	0.7
	Delta-U	25.8621	0.0685	0.0585	1.2
	Length	25069.5560			
(V69 Postprocessed 25-APR-2002 12:21:15.000 network control.asc)					
4HH2	Delta-N	23409.6294	-0.0141	0.0248	0.6
121	Delta-E	2703.0413	-0.0050	0.0243	0.2

	Delta-U	141.5762	-0.0656	0.0560	1.2
	Length	23565.5940			
(V57 Postprocessed 24-APR-2002 10:28:25.000 network control.asc)					
4HH2	Delta-N	14028.4679	0.0468	0.0328	1.4
4IG2	Delta-E	11026.3522	-0.0214	0.0343	0.6
	Delta-U	68.6988	-0.0429	0.0746	0.6
	Length	17843.2921			
(V99 Postprocessed 30-APR-2002 01:28:35.000 network control.asc)					
4JD2	Delta-N	-16423.0112	0.0153	0.0302	0.5
4IE2	Delta-E	-14775.4594	0.0601	0.0272	2.2
	Delta-U	-102.7918	-0.0202	0.0696	0.3
	Length	22091.6288			
(V34 Postprocessed 22-APR-2002 08:29:45.000 network control.asc)					
4KE1	Delta-N	13347.3642	0.0141	0.0170	0.8
4LE2	Delta-E	2280.0067	0.0187	0.0120	1.6
	Delta-U	196.8807	-0.0603	0.0332	1.8
	Length	13542.1314			
(V120 Postprocessed 01-MAY-2002 09:34:45.000 network control.asc)					
4JB3	Delta-N	26424.0494	-0.0030	0.0190	0.2
4LB2	Delta-E	-462.9235	-0.0235	0.0205	1.1
	Delta-U	362.9763	0.0599	0.0433	1.4
	Length	26430.5966			
(V100 Postprocessed 30-APR-2002 11:44:50.000 network control.asc)					
4LB2	Delta-N	1840.4189	0.0119	0.0222	0.5
4LD2	Delta-E	-27415.3030	-0.0309	0.0237	1.3
	Delta-U	125.1747	0.0532	0.0601	0.9
	Length	27477.2933			
(V91 Postprocessed 30-APR-2002 08:46:40.000 network control.asc)					
4LD2	Delta-N	11688.1620	-0.0222	0.0393	0.6
129	Delta-E	-13597.8460	-0.0045	0.0282	0.2
	Delta-U	243.9910	-0.0573	0.0772	0.7
	Length	17932.4867			
(V20 Postprocessed 15-APR-2002 10:47:30.000 network control.asc)					
4GC1	Delta-N	-400.1495	0.0186	0.0195	1.0
112	Delta-E	-11862.1175	-0.0274	0.0237	1.2
	Delta-U	42.8349	0.0508	0.0502	1.0
	Length	11868.9420			
(V55 Postprocessed 25-APR-2002 09:20:20.000 network control.asc)					
4IG2	Delta-N	-24058.4062	0.0247	0.0365	0.7
124	Delta-E	-6980.7545	-0.0049	0.0318	0.2
	Delta-U	-87.1348	0.0527	0.0713	0.7
	Length	25050.8570			
(V108 Postprocessed 01-MAY-2002 10:18:55.000 network control.asc)					
131	Delta-N	18307.6232	0.0076	0.0273	0.3
1KA2	Delta-E	21074.5837	-0.0455	0.0275	1.7
	Delta-U	-51.1694	0.0335	0.0666	0.5
	Length	27916.1201			
(V112 Postprocessed 01-MAY-2002 11:22:45.000 network control.asc)					
4JB3	Delta-N	12170.8882	0.0142	0.0300	0.5
133	Delta-E	-17089.7560	0.0190	0.0298	0.6
	Delta-U	207.7076	0.0517	0.0792	0.7
	Length	20981.7402			
(V81 Postprocessed 26-APR-2002 08:44:05.000 network control.asc)					
121	Delta-N	43577.8583	-0.0253	0.0396	0.6
127	Delta-E	252.2429	0.0206	0.0248	0.8
	Delta-U	161.6697	-0.0464	0.0861	0.5

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                    Length          43578.8882
(V12 Postprocessed 19-APR-2002 12:09:00.000 network control.asc)
117                 Delta-N         -8779.2391        0.0067   0.0299   0.2
4HF3                Delta-E        -27087.1794        0.0004   0.0323   0.0
                    Delta-U            59.0627        0.0561   0.0869   0.6
                    Length          28474.4415
(V51 Postprocessed 24-APR-2002 10:17:35.000 network control.asc)
119                 Delta-N         -1207.4362       -0.0169   0.0239   0.7
4IG2                Delta-E        -13915.5172       -0.0019   0.0251   0.1
                    Delta-U            35.5893       -0.0537   0.0527   1.0
                    Length          13967.8484
(V17 Postprocessed 16-APR-2002 11:08:15.000 network control.asc)
4IE2                Delta-N         -2943.9226        0.0028   0.0240   0.1
118                 Delta-E          -151.4886       -0.0560   0.0244   2.3
                    Delta-U           -13.6697        0.0033   0.0551   0.1
                    Length           2947.8494
(V97 Postprocessed 30-APR-2002 10:33:15.000 network control.asc)
133                 Delta-N         16088.0852       -0.0081   0.0084   1.0
4LD2                Delta-E        -10796.9938       -0.0110   0.0075   1.5
                    Delta-U           295.6996        0.0542   0.0527   1.0
                    Length          19377.5385
(V78 Postprocessed 26-APR-2002 10:55:30.000 network control.asc)
4LE2                Delta-N          6451.0459        0.0365   0.0274   1.3
4LH2                Delta-E        -37487.6733       -0.0126   0.0288   0.4
                    Delta-U           -76.4060       -0.0400   0.0761   0.5
                    Length          38038.7629
(V88 Postprocessed 30-APR-2002 08:05:35.000 network control.asc)
FRIA                Delta-N         13558.5758        0.0452   0.0287   1.6
4HD1                Delta-E         11259.1876       -0.0255   0.0170   1.5
                    Delta-U          -207.9213        0.0187   0.0613   0.3
                    Length          17625.1954
(V59 Postprocessed 24-APR-2002 12:13:10.000 network control.asc)
119                 Delta-N        -16480.3153        0.0237   0.0234   1.0
4HF3                Delta-E          2965.0746        0.0029   0.0276   0.1
                    Delta-U           -82.2588        0.0496   0.0774   0.6
                    Length          16745.1254
(V119 Postprocessed 01-MAY-2002 11:09:05.000 network control.asc)
4JB3                Delta-N         14089.5215       -0.0078   0.0219   0.4
1KA2                Delta-E         24589.3075       -0.0095   0.0237   0.4
                    Delta-U          -110.8751        0.0525   0.0640   0.8
                    Length          28340.0944
(V39 Postprocessed 22-APR-2002 10:45:45.000 network control.asc)
118                 Delta-N        -11851.0486       -0.0242   0.0270   0.9
4HF3                Delta-E        -15733.9933       -0.0143   0.0271   0.5
                    Delta-U             8.8329        0.0456   0.0586   0.8
                    Length          19697.8673
(V102 Postprocessed 01-MAY-2002 09:00:35.000 network control.asc)
1IA1                Delta-N           147.5559       -0.0148   0.0265   0.6
Q366                Delta-E        -10953.6801       -0.0231   0.0239   1.0
                    Delta-U            58.3452        0.0456   0.0540   0.8
                    Length          10954.8293
(V110 Postprocessed 01-MAY-2002 12:35:15.000 network control.asc)
132                 Delta-N          1883.4206       -0.0154   0.0270   0.6
1KA2                Delta-E         26820.0765       -0.0011   0.0229   0.0
                    Delta-U          -305.1922        0.0507   0.0543   0.9
                    Length          26887.8582
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(V14 Postprocessed 18-APR-2002 01:36:15.000 network control.asc)
4JD2               Delta-N        -22434.2037       -0.0218   0.0350   0.6
117                Delta-E         -3579.7638        0.0312   0.0299   1.0
                   Delta-U          -177.2631        0.0354   0.0785   0.5
                   Length          22718.7066
(V85 Postprocessed 26-APR-2002 10:55:30.000 network control.asc)
4LE2               Delta-N        -16668.1944        0.0190   0.0306   0.6
125                Delta-E        -18300.8192       -0.0094   0.0309   0.3
                   Delta-U          -223.5068       -0.0469   0.0869   0.5
                   Length          24754.7701
(V11 Postprocessed 30-APR-2002 01:27:15.000 network control.asc)
4JD2               Delta-N          9388.7325        0.0191   0.0258   0.7
133                Delta-E         14927.1747       -0.0101   0.0225   0.4
                   Delta-U            74.9788        0.0458   0.0590   0.8
                   Length          17634.4681
(V9 Postprocessed 18-APR-2002 12:15:00.000 network control.asc)
4JD2               Delta-N          9388.7325       -0.0433   0.0348   1.2
133                Delta-E         14927.1747       -0.0235   0.0348   0.7
                   Delta-U            74.9788        0.0114   0.0922   0.1
                   Length          17634.4681
(V4 Postprocessed 12-APR-2002 01:14:25.000 network control.asc)
115                Delta-N         -7271.0973       -0.0081   0.0260   0.3
4HB1               Delta-E           782.0655        0.0118   0.0230   0.5
                   Delta-U           -38.1866       -0.0483   0.0537   0.9
                   Length           7313.1348
(V30 Postprocessed 22-APR-2002 08:57:35.000 network control.asc)
4HF3               Delta-N         -8780.1499        0.0206   0.0568   0.4
124                Delta-E        -23872.7866       -0.0239   0.0272   0.9
                   Delta-U            28.2388        0.0388   0.1181   0.3
                   Length          25436.2294
(V95 Postprocessed 30-APR-2002 01:06:30.000 network control.asc)
133                Delta-N         11714.5612        0.0431   0.0230   1.9
13002              Delta-E           903.7443        0.0241   0.0203   1.2
                   Delta-U           147.2066        0.0019   0.0480   0.0
                   Length          11750.2922
(V38 Postprocessed 22-APR-2002 10:45:45.000 network control.asc)
4IE2               Delta-N        -14794.8964       -0.0018   0.0085   0.2
4HF3               Delta-E        -15885.5392        0.0026   0.0083   0.3
                   Delta-U            -6.6237        0.0487   0.0484   1.0
                   Length          21708.0482
(V37 Postprocessed 22-APR-2002 07:42:58.000 network control.asc)
4IE2               Delta-N        -14794.8964        0.0012   0.0156   0.1
4HF3               Delta-E        -15885.5392        0.0079   0.0132   0.6
                   Delta-U            -6.6237        0.0474   0.0397   1.2
                   Length          21708.0482
(V89 Postprocessed 30-APR-2002 09:25:00.000 network control.asc)
116                Delta-N        -15422.5594       -0.0193   0.0204   0.9
4HD1               Delta-E          -918.4010       -0.0174   0.0220   0.8
                   Delta-U           -79.7040        0.0400   0.0462   0.9
                   Length          15450.0858
(V83 Postprocessed 26-APR-2002 10:13:30.000 network control.asc)
4JF2               Delta-N         -6608.1636        0.0126   0.0340   0.4
121                Delta-E        -24182.9308       -0.0122   0.0354   0.3
                   Delta-U            25.8621        0.0442   0.0750   0.6
                   Length          25069.5560
(V10 Postprocessed 30-APR-2002 10:54:10.000 network control.asc)
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4JD2	Delta-N	9388.7325	-0.0017	0.0239	0.1
133	Delta-E	14927.1747	-0.0164	0.0263	0.6
	Delta-U	74.9788	0.0445	0.0682	0.7
	Length	17634.4681			

(V118 Postprocessed 01-MAY-2002 09:34:45.000 network control.asc)

4JB3	Delta-N	14089.5215	0.0095	0.0184	0.5
1KA2	Delta-E	24589.3075	-0.0285	0.0196	1.4
	Delta-U	-110.8751	0.0358	0.0416	0.9
	Length	28340.0944			

(V64 Postprocessed 26-APR-2002 08:49:05.000 network control.asc)

121	Delta-N	7026.4928	0.0216	0.0262	0.8
4JH5	Delta-E	-4762.3589	-0.0328	0.0153	2.1
	Delta-U	-15.3349	0.0190	0.0485	0.4
	Length	8488.3390			

(V125 Postprocessed 03-MAY-2002 01:16:50.000 network control.asc)

4KE1	Delta-N	-15794.5232	-0.0095	0.0260	0.4
4JF2	Delta-E	-15986.2256	-0.0322	0.0228	1.4
	Delta-U	-152.2162	-0.0271	0.0629	0.4
	Length	22473.3073			

(V47 Postprocessed 23-APR-2002 08:55:35.000 network control.asc)

4LD2	Delta-N	3724.2860	-0.0155	0.0414	0.4
4LE2	Delta-E	-17490.4035	-0.0076	0.0199	0.4
	Delta-U	13.6997	-0.0388	0.0803	0.5
	Length	17882.5253			

(V79 Postprocessed 30-APR-2002 11:22:05.000 network control.asc)

4LE2	Delta-N	6451.0459	-0.0022	0.0220	0.1
4LH2	Delta-E	-37487.6733	0.0419	0.0220	1.9
	Delta-U	-76.4060	0.0066	0.0581	0.1
	Length	38038.7629			

(V111 Postprocessed 01-MAY-2002 12:35:15.000 network control.asc)

4LB2	Delta-N	-14215.6584	-0.0064	0.0216	0.3
132	Delta-E	-1767.8056	-0.0263	0.0183	1.4
	Delta-U	-188.3892	0.0326	0.0431	0.8
	Length	14326.3942			

(V63 Postprocessed 25-APR-2002 10:07:30.000 network control.asc)

121	Delta-N	7026.4928	-0.0084	0.0182	0.5
4JH5	Delta-E	-4762.3589	0.0410	0.0196	2.1
	Delta-U	-15.3349	0.0024	0.0438	0.1
	Length	8488.3390			

(V2 Postprocessed 12-APR-2002 09:51:30.000 network control.asc)

FRIA	Delta-N	-3968.4117	0.0125	0.0178	0.7
113	Delta-E	-4165.9970	-0.0120	0.0122	1.0
	Delta-U	491.0601	0.0357	0.0325	1.1
	Length	5774.5097			

(V87 Postprocessed 26-APR-2002 08:49:05.000 network control.asc)

4JF2	Delta-N	422.0067	-0.0035	0.0411	0.1
4JH5	Delta-E	-28939.8478	0.0073	0.0219	0.3
	Delta-U	7.2639	0.0385	0.0732	0.5
	Length	28942.9254			

(V98 Postprocessed 30-APR-2002 10:54:10.000 network control.asc)

4IE2	Delta-N	16430.0414	0.0273	0.0191	1.4
4JD2	Delta-E	14767.7856	0.0008	0.0225	0.0
	Delta-U	79.4354	0.0247	0.0555	0.4
	Length	22091.6288			

(V35 Postprocessed 22-APR-2002 07:42:15.000 network control.asc)

4KE1	Delta-N	11199.9783	0.0122	0.0170	0.7

128	Delta-E	4587.1532	0.0065	0.0166	0.4
	Delta-U	161.7717	-0.0339	0.0557	0.6
	Length	12104.0348			
(V54 Postprocessed 24-APR-2002 11:25:40.000 network control.asc)					
124	Delta-N	24060.0390	0.0005	0.0247	0.0
4IG2	Delta-E	6975.4356	-0.0360	0.0261	1.4
	Delta-U	57.0499	0.0017	0.0724	0.0
	Length	25050.8570			
(V31 Postprocessed 19-APR-2002 12:09:00.000 network control.asc)					
117	Delta-N	-8673.6936	-0.0240	0.0352	0.7
4HD1	Delta-E	5144.4389	0.0113	0.0350	0.3
	Delta-U	-57.3989	-0.0234	0.0918	0.3
	Length	10084.7165			
(V8 Postprocessed 18-APR-2002 12:15:00.000 network control.asc)					
4IC1	Delta-N	25101.6703	-0.0316	0.0368	0.9
133	Delta-E	-1580.7331	0.0019	0.0399	0.0
	Delta-U	256.1831	-0.0143	0.1086	0.1
	Length	25152.6976			
(V46 Postprocessed 23-APR-2002 09:57:45.000 network control.asc)					
4LD2	Delta-N	-1816.3554	0.0067	0.0216	0.3
4LB2	Delta-E	27416.7195	-0.0288	0.0241	1.2
	Delta-U	-161.2141	-0.0170	0.0543	0.3
	Length	27477.2933			
(V22 Postprocessed 15-APR-2002 09:02:20.000 network control.asc)					
4GC1	Delta-N	24568.1599	-0.0168	0.0152	1.1
115	Delta-E	14547.9444	0.0218	0.0149	1.5
	Delta-U	41.2237	-0.0184	0.1121	0.2
	Length	28552.3881			
(V103 Postprocessed 01-MAY-2002 08:10:35.000 network control.asc)					
1IA1	Delta-N	7967.3512	-0.0068	0.0182	0.4
130	Delta-E	-208.3538	-0.0084	0.0102	0.8
	Delta-U	68.4937	0.0308	0.0358	0.9
	Length	7970.3693			
(V80 Postprocessed 26-APR-2002 09:58:25.000 network control.asc)					
121	Delta-N	39964.8348	0.0020	0.0305	0.1
126	Delta-E	1326.6478	0.0252	0.0307	0.8
	Delta-U	162.3610	-0.0205	0.0613	0.3
	Length	39987.1777			
(V50 Postprocessed 24-APR-2002 12:13:10.000 network control.asc)					
119	Delta-N	-1207.4362	-0.0008	0.0196	0.0
4IG2	Delta-E	-13915.5172	-0.0240	0.0212	1.1
	Delta-U	35.5893	-0.0208	0.0527	0.4
	Length	13967.8484			
(V33 Postprocessed 19-APR-2002 09:06:50.000 network control.asc)					
114	Delta-N	14605.0523	0.0140	0.0447	0.3
4HF3	Delta-E	-15791.4487	-0.0264	0.0228	1.2
	Delta-U	-107.3949	-0.0104	0.0906	0.1
	Length	21510.2054			
(V109 Postprocessed 01-MAY-2002 10:18:55.000 network control.asc)					
4JB3	Delta-N	-4220.4762	0.0029	0.0130	0.2
131	Delta-E	3516.7863	0.0252	0.0136	1.9
	Delta-U	-59.8742	0.0184	0.0271	0.7
	Length	5493.9776			
(V5 Postprocessed 15-APR-2002 12:23:50.000 network control.asc)					
115	Delta-N	-7271.0973	0.0109	0.0254	0.4
4HB1	Delta-E	782.0655	-0.0050	0.0292	0.2

	Delta-U	-38.1866	0.0268	0.0823	0.3
	Length	7313.1348			
(V73 Postprocessed 26-APR-2002 08:07:45.000 network control.asc)					
121	Delta-N	42192.5695	-0.0097	0.0137	0.7
4LH2	Delta-E	4910.7565	-0.0075	0.0124	0.6
	Delta-U	215.4148	0.0266	0.0900	0.3
	Length	42477.9337			
(V75 Postprocessed 26-APR-2002 10:18:45.000 network control.asc)					
4LH2	Delta-N	-23096.1357	-0.0213	0.0191	1.1
125	Delta-E	19214.2974	0.0101	0.0210	0.5
	Delta-U	-188.5866	0.0168	0.0459	0.4
	Length	30044.2386			
(V104 Postprocessed 01-MAY-2002 12:43:25.000 network control.asc)					
1IA1	Delta-N	7967.3512	0.0245	0.0151	1.6
130	Delta-E	-208.3538	0.0072	0.0129	0.6
	Delta-U	68.4937	-0.0137	0.0334	0.4
	Length	7970.3693			
(V96 Postprocessed 30-APR-2002 03:49:00.000 network control.asc)					
133	Delta-N	45.4232	0.0054	0.0524	0.1
132	Delta-E	14858.7806	0.0250	0.0189	1.3
	Delta-U	-27.2449	0.0107	0.0534	0.2
	Length	14858.8750			
(V86 Postprocessed 26-APR-2002 08:49:05.000 network control.asc)					
4JH5	Delta-N	36552.0656	-0.0259	0.0431	0.6
127	Delta-E	5009.0885	-0.0041	0.0251	0.2
	Delta-U	188.1814	-0.0088	0.0858	0.1
	Length	36894.1714			
(V27 Postprocessed 12-APR-2002 12:03:50.000 network control.asc)					
FRIA	Delta-N	-1160.7681	0.0052	0.0446	0.1
114	Delta-E	-5183.3576	0.0235	0.0445	0.5
	Delta-U	28.5534	0.0132	0.1234	0.1
	Length	5311.8164			
(V6 Postprocessed 18-APR-2002 07:58:41.000 network control.asc)					
4JD2	Delta-N	15847.4300	0.0093	0.0108	0.9
4KE1	Delta-E	-15654.7071	0.0084	0.0102	0.8
	Delta-U	195.2846	0.0242	0.0637	0.4
	Length	22276.6475			
(V25 Postprocessed 15-APR-2002 12:23:50.000 network control.asc)					
4GC1	Delta-N	17297.3851	0.0100	0.0309	0.3
4HB1	Delta-E	15333.3510	-0.0194	0.0301	0.6
	Delta-U	11.0585	0.0142	0.0727	0.2
	Length	23115.1748			
(V123 Postprocessed 02-MAY-2002 09:43:45.000 network control.asc)					
4LB2	Delta-N	-2539.2236	-0.0206	0.0161	1.3
13002	Delta-E	-15716.7755	-0.0124	0.0170	0.7
	Delta-U	-17.0272	-0.0073	0.0352	0.2
	Length	15920.5835			
(V93 Postprocessed 30-APR-2002 08:46:40.000 network control.asc)					
4LE2	Delta-N	7966.0132	0.0064	0.0230	0.3
129	Delta-E	3888.2899	-0.0026	0.0156	0.2
	Delta-U	228.4637	0.0240	0.0407	0.6
	Length	8867.2634			
(V13 Postprocessed 18-APR-2002 08:01:04.000 network control.asc)					
4JD2	Delta-N	-15711.9010	-0.0107	0.0101	1.1
4IC1	Delta-E	16520.9198	-0.0221	0.0098	2.3
	Delta-U	-201.3751	0.0003	0.0590	0.0

	Length	22800.1135			
(V45 Postprocessed 23-APR-2002 11:57:30.000 network control.asc)					
245	Delta-N	12007.2302	0.0114	0.0146	0.8
4LD2	Delta-E	1085.9325	0.0143	0.0141	1.0
	Delta-U	221.7971	-0.0145	0.0358	0.4
	Length	12058.2760			
(V1 Postprocessed 12-APR-2002 08:52:20.000 network control.asc)					
FRIA	Delta-N	-4171.5689	-0.0162	0.0203	0.8
112	Delta-E	16456.2607	0.0144	0.0155	0.9
	Delta-U	-302.2978	0.0078	0.0441	0.2
	Length	16979.4548			
(V42 Postprocessed 23-APR-2002 08:44:05.000 network control.asc)					
123	Delta-N	172.9558	0.0155	0.0169	0.9
4GG2	Delta-E	3934.9336	0.0060	0.0099	0.6
	Delta-U	-9.9694	0.0153	0.0350	0.4
	Length	3938.7454			
(V94 Postprocessed 30-APR-2002 10:23:45.000 network control.asc)					
4LE2	Delta-N	7966.0132	0.0147	0.0180	0.8
129	Delta-E	3888.2899	0.0074	0.0186	0.4
	Delta-U	228.4637	0.0149	0.0389	0.4
	Length	8867.2634			
(V71 Postprocessed 25-APR-2002 09:30:55.000 network control.asc)					
124	Delta-N	10032.9607	-0.0147	0.0256	0.6
4HH2	Delta-E	-4052.7120	-0.0147	0.0236	0.6
	Delta-U	-7.0331	-0.0064	0.0507	0.1
	Length	10820.5741			
(V53 Postprocessed 25-APR-2002 09:20:20.000 network control.asc)					
120	Delta-N	-2177.8316	0.0193	0.0389	0.5
4IG2	Delta-E	3952.1878	0.0044	0.0256	0.2
	Delta-U	-20.1747	-0.0083	0.0658	0.1
	Length	4512.5543			
(V72 Postprocessed 25-APR-2002 12:21:15.000 network control.asc)					
124	Delta-N	10032.9607	0.0171	0.0224	0.8
4HH2	Delta-E	-4052.7120	-0.0123	0.0215	0.6
	Delta-U	-7.0331	-0.0040	0.0487	0.1
	Length	10820.5741			
(V43 Postprocessed 23-APR-2002 11:20:20.000 network control.asc)					
124	Delta-N	-2281.6358	0.0053	0.0122	0.4
123	Delta-E	9884.1318	0.0198	0.0127	1.6
	Delta-U	153.6747	-0.0044	0.0321	0.1
	Length	10145.2225			
(V40 Postprocessed 23-APR-2002 10:30:20.000 network control.asc)					
124	Delta-N	3976.5525	0.0071	0.0164	0.4
122	Delta-E	10234.8314	0.0197	0.0170	1.2
	Delta-U	60.6224	-0.0005	0.0351	0.0
	Length	10980.3651			
(V48 Postprocessed 23-APR-2002 11:57:30.000 network control.asc)					
4JD2	Delta-N	13464.3257	0.0120	0.0118	1.0
245	Delta-E	3037.9245	0.0121	0.0126	1.0
	Delta-U	157.2492	-0.0092	0.0320	0.3
	Length	13803.6871			
(V77 Postprocessed 26-APR-2002 08:44:05.000 network control.asc)					
127	Delta-N	-1385.4358	-0.0125	0.0214	0.6
4LH2	Delta-E	4658.5018	0.0039	0.0127	0.3
	Delta-U	50.9061	-0.0116	0.0424	0.3
	Length	4860.4180			

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(V65 Postprocessed 25-APR-2002 12:18:55.000 network control.asc)
121                Delta-N          -7204.5176        0.0119   0.0209   0.6
120                Delta-E           4370.0259       -0.0119   0.0212   0.6
                   Delta-U            -60.5839        0.0040   0.0493   0.1
                   Length            8426.4981
(V15 Postprocessed 23-APR-2002 12:23:15.000 network control.asc)
4JD2               Delta-N         -22434.2037        0.0035   0.0234   0.1
117                Delta-E          -3579.7638        0.0141   0.0239   0.6
                   Delta-U           -177.2631       -0.0090   0.0570   0.2
                   Length           22718.7066
(V68 Postprocessed 25-APR-2002 09:30:55.000 network control.asc)
121                Delta-N         -23409.2225       -0.0034   0.0384   0.1
4HH2               Delta-E          -2705.0379        0.0161   0.0351   0.5
                   Delta-U           -168.2062        0.0021   0.0758   0.0
                   Length           23565.5940
(V90 Postprocessed 30-APR-2002 09:24:10.000 network control.asc)
117                Delta-N          -8673.6936        0.0025   0.0156   0.2
4HD1               Delta-E           5144.4389        0.0147   0.0167   0.9
                   Delta-U            -57.3989       -0.0060   0.0346   0.2
                   Length           10084.7165
(V70 Postprocessed 25-APR-2002 09:20:20.000 network control.asc)
121                Delta-N          -9381.7913        0.0016   0.0183   0.1
4IG2               Delta-E           8322.5128        0.0048   0.0163   0.3
                   Delta-U            -82.3353       -0.0150   0.0355   0.4
                   Length           12541.4914
(V52 Postprocessed 24-APR-2002 09:33:05.000 network control.asc)
4IG2               Delta-N           2178.3314        0.0037   0.0132   0.3
120                Delta-E          -3951.9172        0.0120   0.0124   1.0
                   Delta-U             19.2016       -0.0083   0.0252   0.3
                   Length            4512.5543
(V113 Postprocessed 01-MAY-2002 09:44:05.000 network control.asc)
1IA1               Delta-N          -8385.8024       -0.0001   0.0131   0.0
137                Delta-E           -190.3965       -0.0102   0.0139   0.7
                   Delta-U            -76.4441        0.0104   0.0283   0.4
                   Length            8388.3119
(V32 Postprocessed 19-APR-2002 08:03:05.000 network control.asc)
4HF3               Delta-N         -11069.3544        0.0126   0.0181   0.7
123                Delta-E         -13990.5704       -0.0072   0.0170   0.4
                   Delta-U            192.2113        0.0004   0.0538   0.0
                   Length           17841.0653
(V36 Postprocessed 22-APR-2002 09:58:15.000 network control.asc)
4KE1               Delta-N          -2373.7193       -0.0134   0.0246   0.5
245                Delta-E          18693.7868       -0.0025   0.0276   0.1
                   Delta-U            -53.8151       -0.0031   0.0643   0.0
                   Length           18843.9674
(V49 Postprocessed 23-APR-2002 09:00:05.000 network control.asc)
4IC1               Delta-N             33.4794       -0.0113   0.0233   0.5
116                Delta-E         -14040.0515       -0.0046   0.0133   0.3
                   Delta-U             38.3645        0.0056   0.0434   0.1
                   Length           14040.1438
(V76 Postprocessed 26-APR-2002 09:58:25.000 network control.asc)
126                Delta-N           2227.4766        0.0006   0.0175   0.0
4LH2               Delta-E           3584.1997        0.0092   0.0186   0.5
                   Delta-U             57.5503       -0.0077   0.0374   0.2
                   Length            4220.3615
(V84 Postprocessed 26-APR-2002 10:18:45.000 network control.asc)
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4JF2	Delta-N	12472.3014	0.0101	0.0175	0.6
125	Delta-E	-39.6599	-0.0052	0.0172	0.3
	Delta-U	128.8299	0.0003	0.0356	0.0
	Length	12473.0297			
(V66 Postprocessed 25-APR-2002 09:02:40.000 network control.asc)					
121	Delta-N	-7204.5176	-0.0050	0.0207	0.2
120	Delta-E	4370.0259	-0.0084	0.0120	0.7
	Delta-U	-60.5839	0.0057	0.0330	0.2
	Length	8426.4981			
(V117 Postprocessed 01-MAY-2002 08:27:35.000 network control.asc)					
4LB2	Delta-N	-12333.5464	0.0075	0.0094	0.8
1KA2	Delta-E	25052.4029	-0.0035	0.0091	0.4
	Delta-U	-490.0351	0.0075	0.0561	0.1
	Length	27928.1111			
(V18 Postprocessed 22-APR-2002 10:21:45.000 network control.asc)					
4IE2	Delta-N	-2943.9226	-0.0052	0.0093	0.6
118	Delta-E	-151.4886	0.0081	0.0097	0.8
	Delta-U	-13.6697	0.0047	0.0188	0.3
	Length	2947.8494			
(V124 Postprocessed 02-MAY-2002 08:07:45.000 network control.asc)					
1KA2	Delta-N	13364.7469	-0.0092	0.0445	0.2
134	Delta-E	-20828.8126	-0.0032	0.0227	0.1
	Delta-U	411.5383	-0.0040	0.0888	0.0
	Length	24751.2678			
(V41 Postprocessed 23-APR-2002 09:41:45.000 network control.asc)					
4GG2	Delta-N	6085.5604	-0.0012	0.0131	0.1
122	Delta-E	-3581.4476	-0.0101	0.0126	0.8
	Delta-U	-84.2247	0.0001	0.0254	0.0
	Length	7061.7212			
(V126 Postprocessed 03-MAY-2002 11:01:45.000 network control.asc)					
114	Delta-N	-2807.4503	-0.0016	0.0114	0.1
113	Delta-E	1017.9372	0.0089	0.0119	0.7
	Delta-U	462.4112	0.0041	0.0304	0.1
	Length	3021.8864			
(V44 Postprocessed 23-APR-2002 07:49:00.000 network control.asc)					
4LE2	Delta-N	-2147.5314	-0.0045	0.0111	0.4
128	Delta-E	2306.9937	-0.0021	0.0100	0.2
	Delta-U	-36.2324	0.0077	0.0297	0.3
	Length	3152.0507			
(V122 Postprocessed 02-MAY-2002 08:58:15.000 network control.asc)					
4LB2	Delta-N	1014.2612	0.0014	0.0140	0.1
134	Delta-E	4213.4049	0.0011	0.0128	0.1
	Delta-U	-45.6800	-0.0015	0.0282	0.1
	Length	4334.0043			

GPS Vector Residual Summary (FeetInt)
(Sorted by 3D Residual Length)

From	To	N	E	Up	2D	3D	Length	VectID
1IA1	1KA2	-0.013	0.020	0.168	0.023	0.170	28382	114
115	137	-0.052	0.043	-0.133	0.068	0.150	14158	21
1KA2	130	0.003	0.034	-0.131	0.034	0.135	21090	106
1KA2	130	-0.036	0.003	-0.098	0.036	0.104	21090	105
115	Q366	-0.007	0.011	-0.098	0.013	0.099	9111	19
124	4HF3	-0.009	-0.058	0.079	0.059	0.099	25436	61
4IC1	115	0.047	0.006	-0.084	0.047	0.097	18517	24

1IA1	131	0.046	-0.002	0.075	0.046	0.088	14680	107
1IA1	1KA2	-0.009	0.005	0.086	0.011	0.087	28382	115
4IC1	131	-0.010	-0.048	-0.070	0.049	0.085	20936	7
4IG2	4HF3	-0.001	-0.027	0.078	0.027	0.083	22765	56
120	4HH2	0.009	-0.030	0.074	0.031	0.080	17682	67
119	4HF3	-0.002	0.039	0.067	0.039	0.078	16745	60
4LE2	4LD2	-0.002	0.003	0.078	0.004	0.078	17883	101
4GG2	4HF3	0.028	0.072	0.009	0.077	0.078	14830	62
4LB2	1KA2	-0.024	0.025	0.069	0.035	0.077	27928	116
4HH2	4IG2	0.018	-0.005	-0.071	0.019	0.073	17843	58
4JB3	4LB2	-0.007	-0.018	0.070	0.019	0.073	26431	121
FRIA	4HD1	-0.006	0.030	0.065	0.031	0.072	17625	3
4LD2	129	-0.022	0.002	-0.066	0.022	0.070	17932	92
4JF2	121	-0.003	-0.012	0.068	0.013	0.070	25070	82
4HH2	121	-0.014	-0.005	-0.066	0.015	0.067	23566	69
4HH2	4IG2	0.047	-0.021	-0.043	0.051	0.067	17843	57
4JD2	4IE2	0.015	0.060	-0.020	0.062	0.065	22092	99
4KE1	4LE2	0.014	0.019	-0.060	0.023	0.065	13542	34
4JB3	4LB2	-0.003	-0.024	0.060	0.024	0.064	26431	120
4LB2	4LD2	0.012	-0.031	0.053	0.033	0.063	27477	100
4LD2	129	-0.022	-0.004	-0.057	0.023	0.062	17932	91
4GC1	112	0.019	-0.027	0.051	0.033	0.061	11869	20
4IG2	124	0.025	-0.005	0.053	0.025	0.058	25051	55
131	1KA2	0.008	-0.046	0.033	0.046	0.057	27916	108
4JB3	133	0.014	0.019	0.052	0.024	0.057	20982	112
121	127	-0.025	0.021	-0.046	0.033	0.057	43579	81
117	4HF3	0.007	0.000	0.056	0.007	0.057	28474	12
119	4IG2	-0.017	-0.002	-0.054	0.017	0.056	13968	51
4IE2	118	0.003	-0.056	0.003	0.056	0.056	2948	17
133	4LD2	-0.008	-0.011	0.054	0.014	0.056	19378	97
4LE2	4LH2	0.037	-0.013	-0.040	0.039	0.056	38039	78
FRIA	4HD1	0.045	-0.025	0.019	0.052	0.055	17625	88
119	4HF3	0.024	0.003	0.050	0.024	0.055	16745	59
4JB3	1KA2	-0.008	-0.010	0.052	0.012	0.054	28340	119
118	4HF3	-0.024	-0.014	0.046	0.028	0.054	19698	39
1IA1	Q366	-0.015	-0.023	0.046	0.027	0.053	10955	102
132	1KA2	-0.015	-0.001	0.051	0.015	0.053	26888	110
4JD2	117	-0.022	0.031	0.035	0.038	0.052	22719	14
4LE2	125	0.019	-0.009	-0.047	0.021	0.052	24755	85
4JD2	133	0.019	-0.010	0.046	0.022	0.051	17634	11
4JD2	133	-0.043	-0.023	0.011	0.049	0.051	17634	9
115	4HB1	-0.008	0.012	-0.048	0.014	0.050	7313	4
4HF3	124	0.021	-0.024	0.039	0.032	0.050	25436	30
133	13002	0.043	0.024	0.002	0.049	0.049	11750	95
4IE2	4HF3	-0.002	0.003	0.049	0.003	0.049	21708	38
4IE2	4HF3	0.001	0.008	0.047	0.008	0.048	21708	37
116	4HD1	-0.019	-0.017	0.040	0.026	0.048	15450	89
4JF2	121	0.013	-0.012	0.044	0.018	0.048	25070	83
4JD2	133	-0.002	-0.016	0.044	0.016	0.047	17634	10
4JB3	1KA2	0.009	-0.028	0.036	0.030	0.047	28340	118
121	4JH5	0.022	-0.033	0.019	0.039	0.044	8488	64
4KE1	4JF2	-0.010	-0.032	-0.027	0.034	0.043	22473	125
4LD2	4LE2	-0.016	-0.008	-0.039	0.017	0.043	17883	47
4LE2	4LH2	-0.002	0.042	0.007	0.042	0.042	38039	79
4LB2	132	-0.006	-0.026	0.033	0.027	0.042	14326	111
121	4JH5	-0.008	0.041	0.002	0.042	0.042	8488	63

FRIA	113	0.012	-0.012	0.036	0.017	0.040	5775	2
4JF2	4JH5	-0.003	0.007	0.039	0.008	0.039	28943	87
4IE2	4JD2	0.027	0.001	0.025	0.027	0.037	22092	98
4KE1	128	0.012	0.006	-0.034	0.014	0.037	12104	35
124	4IG2	0.001	-0.036	0.002	0.036	0.036	25051	54
117	4HD1	-0.024	0.011	-0.023	0.027	0.035	10085	31
4IC1	133	-0.032	0.002	-0.014	0.032	0.035	25153	8
4LD2	4LB2	0.007	-0.029	-0.017	0.030	0.034	27477	46
4GC1	115	-0.017	0.022	-0.018	0.028	0.033	28552	22
1IA1	130	-0.007	-0.008	0.031	0.011	0.033	7970	103
121	126	0.002	0.025	-0.021	0.025	0.033	39987	80
119	4IG2	-0.001	-0.024	-0.021	0.024	0.032	13968	50
114	4HF3	0.014	-0.026	-0.010	0.030	0.032	21510	33
4JB3	131	0.003	0.025	0.018	0.025	0.031	5494	109
115	4HB1	0.011	-0.005	0.027	0.012	0.029	7313	5
121	4LH2	-0.010	-0.008	0.027	0.012	0.029	42478	73
4LH2	125	-0.021	0.010	0.017	0.024	0.029	30044	75
1IA1	130	0.024	0.007	-0.014	0.025	0.029	7970	104
133	132	0.005	0.025	0.011	0.026	0.028	14859	96
4JH5	127	-0.026	-0.004	-0.009	0.026	0.028	36894	86
FRIA	114	0.005	0.023	0.013	0.024	0.027	5312	27
4JD2	4KE1	0.009	0.008	0.024	0.013	0.027	22277	6
4GC1	4HB1	0.010	-0.019	0.014	0.022	0.026	23115	25
4LB2	13002	-0.021	-0.012	-0.007	0.024	0.025	15921	123
4LE2	129	0.006	-0.003	0.024	0.007	0.025	8867	93
4JD2	4IC1	-0.011	-0.022	0.000	0.025	0.025	22800	13
245	4LD2	0.011	0.014	-0.014	0.018	0.023	12058	45
FRIA	112	-0.016	0.014	0.008	0.022	0.023	16979	1
123	4GG2	0.016	0.006	0.015	0.017	0.023	3939	42
4LE2	129	0.015	0.007	0.015	0.016	0.022	8867	94
124	4HH2	-0.015	-0.015	-0.006	0.021	0.022	10821	71
120	4IG2	0.019	0.004	-0.008	0.020	0.021	4513	53
124	4HH2	0.017	-0.012	-0.004	0.021	0.021	10821	72
124	123	0.005	0.020	-0.004	0.020	0.021	10145	43
124	122	0.007	0.020	-0.001	0.021	0.021	10980	40
4JD2	245	0.012	0.012	-0.009	0.017	0.019	13804	48
127	4LH2	-0.013	0.004	-0.012	0.013	0.018	4860	77
121	120	0.012	-0.012	0.004	0.017	0.017	8426	65
4JD2	117	0.003	0.014	-0.009	0.015	0.017	22719	15
121	4HH2	-0.003	0.016	0.002	0.017	0.017	23566	68
117	4HD1	0.003	0.015	-0.006	0.015	0.016	10085	90
121	4IG2	0.002	0.005	-0.015	0.005	0.016	12541	70
4IG2	120	0.004	0.012	-0.008	0.013	0.015	4513	52
1IA1	137	-0.000	-0.010	0.010	0.010	0.015	8388	113
4HF3	123	0.013	-0.007	0.000	0.014	0.014	17841	32
4KE1	245	-0.013	-0.003	-0.003	0.014	0.014	18844	36
4IC1	116	-0.011	-0.005	0.006	0.012	0.013	14040	49
126	4LH2	0.001	0.009	-0.008	0.009	0.012	4220	76
4JF2	125	0.010	-0.005	0.000	0.011	0.011	12473	84
121	120	-0.005	-0.008	0.006	0.010	0.011	8426	66
4LB2	1KA2	0.007	-0.003	0.008	0.008	0.011	27928	117
4IE2	118	-0.005	0.008	0.005	0.010	0.011	2948	18
1KA2	134	-0.009	-0.003	-0.004	0.010	0.010	24751	124
4GG2	122	-0.001	-0.010	0.000	0.010	0.010	7062	41
114	113	-0.002	0.009	0.004	0.009	0.010	3022	126
4LE2	128	-0.005	-0.002	0.008	0.005	0.009	3152	44

4LB2	134	0.001	0.001	-0.002	0.002	0.002	4334	122

Adjusted Bearings (DMS) and Horizontal Distances (FeetInt)

(Relative Confidence of Bearing is in Seconds)

From	To	Grid Bearing	Grid Dist Grnd Dist	95% RelConfidence Brg	Dist	PPM
112	4GC1	N88-20-15.04E	11867.3270 11868.8579	0.73	0.0450	3.7906
112	FRIA	N75-27-15.66W	16974.6537 16976.8931	0.52	0.0346	2.0397
113	114	N19-35-57.46W	2985.8280 2986.2658	1.78	0.0276	9.2545
113	FRIA	N46-42-45.34E	5752.6828 5753.5275	1.27	0.0279	4.8528
114	4HF3	N46-54-15.84W	21507.2151 21510.0001	0.43	0.0522	2.4274
114	FRIA	N77-41-54.72E	5311.0193 5311.7385	1.63	0.0333	6.2642
115	137	S89-27-48.48E	14155.5599 14157.5183	0.76	0.0467	3.2999
115	4GC1	S30-54-05.53W	28548.5131 28552.3372	0.24	0.0350	1.2261
115	4HB1	S05-53-44.13E	7312.0427 7313.0452	1.04	0.0393	5.3762
115	4IC1	N63-36-11.80W	18514.5004 18517.0488	0.50	0.0464	2.5036
115	Q366	N22-05-25.58E	9109.0868 9110.3646	1.12	0.0437	4.8015
116	4HD1	S03-42-26.47W	15447.8637 15449.9161	0.53	0.0395	2.5583
116	4IC1	S89-35-21.78E	14038.1745 14040.0845	0.59	0.0307	2.1871
117	4HD1	S30-21-43.53E	10083.2489 10084.5716	0.60	0.0324	3.2130
117	4HF3	S72-21-08.60W	28470.7156 28474.3472	0.30	0.0399	1.4013
117	4JD2	N09-22-13.27E	22715.0250 22718.1191	0.32	0.0363	1.5974
118	4HF3	S53-20-37.15W	19695.3721 19697.8684	0.26	0.0282	1.4331
118	4IE2	N03-16-36.53E	2947.4360 2947.8201	1.46	0.0202	6.8565
119	4HF3	S09-50-02.32E	16742.8691 16744.9631	0.40	0.0323	1.9289
119	4IG2	S85-24-23.28W	13966.0708 13967.7971	0.44	0.0321	2.3004
120	121	N30-50-00.04W	8425.2786 8426.2965	0.50	0.0266	3.1617
120	4HH2	S23-59-31.94W	17679.9007 17681.9584	0.40	0.0330	1.8670
120	4IG2	S60-44-42.37E	4511.9684 4512.5135	1.01	0.0242	5.3648
121	126	N02-18-29.68E	39981.6434	0.22	0.0475	1.1886

			39986.6932			
121	127	N00-44-19.26E	43572.9192	0.14	0.0519	1.1911
			43578.4166			
121	4HH2	S06-59-51.39W	23562.3459	0.27	0.0338	1.4347
			23565.0963			
121	4IG2	S41-10-10.98E	12539.7308	0.37	0.0265	2.1112
			12541.2514			
121	4JF2	N75-04-44.09E	25066.3813	0.28	0.0300	1.1955
			25069.5347			
121	4JH5	N33-43-18.53W	8487.3173	0.59	0.0315	3.7153
			8488.3322			
121	4LH2	N07-02-44.72E	42471.7056	0.11	0.0344	0.8094
			42477.1665			
122	124	S69-10-13.19W	10978.8873	0.57	0.0311	2.8357
			10980.1867			
122	4GG2	S30-05-58.75E	7060.3508	0.75	0.0287	4.0608
			7061.2364			
123	124	N76-35-55.29W	10142.8042	0.49	0.0243	2.3928
			10144.0258			
123	4GG2	N87-52-05.37E	3938.2343	1.48	0.0209	5.3108
			3938.7357			
123	4HF3	N52-00-30.61E	17837.7209	0.32	0.0287	1.6090
			17839.9550			
124	4HF3	N70-09-59.91E	25433.1771	0.21	0.0282	1.1093
			25436.2041			
124	4HH2	N21-35-33.46W	10819.3516	0.53	0.0320	2.9602
			10820.5785			
124	4IG2	N16-34-16.12E	25047.8095	0.22	0.0303	1.2094
			25050.7652			
125	4JF2	S00-10-49.26W	12470.6589	0.55	0.0348	2.7869
			12472.3313			
125	4LE2	N48-00-09.13E	24750.2852	0.31	0.0407	1.6427
			24753.9008			
125	4LH2	N39-21-34.89W	30039.6855	0.24	0.0361	1.2016
			30043.7892			
126	4LH2	N58-32-43.52E	4219.4012	1.85	0.0394	9.3323
			4219.9653			
127	4JH5	S08-13-08.62W	36888.9291	0.20	0.0540	1.4638
			36893.5282			
127	4LH2	S73-01-49.32E	4859.4991	1.67	0.0321	6.6104
			4860.1478			
128	4KE1	S22-36-21.96W	12101.1028	0.42	0.0293	2.4192
			12102.9120			
128	4LE2	N46-43-14.05W	3151.3593	1.58	0.0213	6.7520
			3151.8468			
129	4LD2	S49-01-16.90E	17927.7843	0.32	0.0304	1.6968
			17930.7293			
129	4LE2	S26-20-50.00W	8862.8436	0.60	0.0277	3.1286
			8864.2751			
130	1IA1	S01-16-49.73E	7968.9133	0.46	0.0224	2.8053
			7970.0656			
130	1KA2	N26-35-07.66E	21087.3503	0.23	0.0277	1.3158
			21090.4506			
131	1IA1	S54-05-37.83E	14677.7945	0.41	0.0268	1.8275
			14679.8954			
131	1KA2	N49-15-30.54E	27912.0489	0.18	0.0324	1.1596

			27916.1146			
131	4IC1	S65-39-32.75W	20933.3264	0.31	0.0311	1.4869
			20936.2683			
131	4JB3	N39-33-27.06W	5492.8684	1.02	0.0235	4.2715
			5493.6618			
132	133	N89-53-51.99W	14856.6087	0.63	0.0316	2.1294
			14858.8659			
132	1KA2	N86-13-59.64E	26882.2751	0.31	0.0336	1.2514
			26886.3296			
132	4LB2	N07-20-08.75E	14322.9510	0.43	0.0401	2.8031
			14325.2262			
133	4IC1	S03-19-44.78E	25147.6241	0.23	0.0321	1.2755
			25151.2460			
133	4JB3	S54-17-47.47E	20977.5173	0.29	0.0317	1.5095
			20980.6155			
133	4JD2	S58-08-09.52W	17631.7203	0.27	0.0246	1.3968
			17634.2840			
133	4LD2	N33-35-19.39W	19372.1383	0.18	0.0203	1.0468
			19375.1524			
134	1KA2	S57-06-45.58E	24743.7729	0.27	0.0353	1.4274
			24747.6106			
134	4LB2	S76-42-44.43W	4333.0652	1.52	0.0276	6.3610
			4333.7704			
137	1IA1	N01-31-04.96E	8386.7993	0.77	0.0307	3.6561
			8387.9828			
245	4JD2	S13-01-09.33W	13800.7390	0.37	0.0232	1.6799
			13802.7452			
245	4KE1	N82-25-47.55W	18841.1537	0.29	0.0293	1.5547
			18843.9219			
245	4LD2	N05-28-01.64E	12054.3031	0.43	0.0256	2.1205
			12056.1771			
13002	133	S04-41-20.25W	11747.5235	0.62	0.0379	3.2294
			11749.3338			
13002	4LB2	N81-04-10.89E	15918.0346	0.44	0.0342	2.1514
			15920.5874			
1IA1	1KA2	N19-02-36.12E	28377.7215	0.12	0.0243	0.8578
			28381.8465			
1IA1	Q366	N89-00-38.75W	10953.1019	0.75	0.0501	4.5784
			10954.6636			
1KA2	4JB3	S60-26-00.81W	28335.8081	0.16	0.0284	1.0013
			28339.9598			
1KA2	4LB2	N63-32-29.17W	27919.8038	0.13	0.0231	0.8258
			27924.1461			
4GC1	4HB1	N41-49-30.98E	23112.0958	0.43	0.0424	1.8361
			23115.1736			
4GG2	4HF3	N43-03-24.68E	14826.5492	0.44	0.0303	2.0468
			14828.4174			
4HD1	FRIA	S40-01-40.61W	17621.7133	0.38	0.0348	1.9732
			17624.0636			
4HF3	4IE2	N47-22-00.71E	21705.2988	0.16	0.0211	0.9737
			21708.0581			
4HF3	4IG2	N47-29-49.25W	22761.5722	0.18	0.0244	1.0728
			22764.3626			
4HH2	4IG2	N38-34-41.36E	17841.0531	0.36	0.0296	1.6574
			17843.1374			
4IC1	4JD2	N46-08-00.44W	22796.1680	0.19	0.0245	1.0762

			22799.3417			
4IE2	4JD2	N42-16-53.09E	22088.4554	0.29	0.0322	1.4596
			22091.4515			
4JB3	4LB2	N00-45-27.19W	26423.8005	0.19	0.0278	1.0535
			26427.8814			
4JD2	4KE1	N44-20-41.34W	22272.5187	0.19	0.0237	1.0621
			22275.6952			
4JF2	4JH5	N88-48-07.82W	28939.3301	0.30	0.0356	1.2304
			28942.9265			
4JF2	4KE1	N45-40-44.20E	22469.7890	0.32	0.0380	1.6904
			22472.8811			
4KE1	4LE2	N10-01-38.74E	13538.6120	0.30	0.0244	1.7991
			13540.6420			
4LB2	4LD2	N85-54-44.01W	27472.4830	0.19	0.0277	1.0079
			27476.9335			
4LD2	4LE2	N77-40-54.58W	17879.6994	0.20	0.0189	1.0556
			17882.5212			
4LE2	4LH2	N79-54-22.25W	38033.2244	0.15	0.0300	0.7888
			38038.7581			

Error Propagation

Station Coordinate Standard Deviations (FeetInt)

Station	N	E	Elev
112	0.026888	0.021421	0.000000
113	0.028528	0.019470	0.000000
114	0.028699	0.019540	0.027663
115	0.018940	0.019179	0.000000
116	0.021826	0.018613	0.029418
117	0.020560	0.017969	0.024806
118	0.019859	0.016641	0.017039
119	0.020114	0.016986	0.029001
120	0.017660	0.012198	0.017955
121	0.013900	0.009371	0.015306
122	0.024797	0.018046	0.021585
123	0.024300	0.015810	0.022368
124	0.023087	0.015103	0.019372
125	0.014660	0.014318	0.026761
126	0.015389	0.016136	0.032207
127	0.017666	0.010940	0.034792
128	0.014446	0.014881	0.026146
129	0.016266	0.015752	0.023701
130	0.017619	0.021537	0.018296
131	0.016580	0.020506	0.018224
132	0.020727	0.021058	0.029163
133	0.013644	0.016642	0.023495
134	0.019090	0.022267	0.025895
137	0.020512	0.022631	0.026369
245	0.014333	0.016373	0.022055
13002	0.018348	0.020396	0.029779
1IA1	0.016370	0.020381	0.000000
1KA2	0.014359	0.023004	0.000000
4GC1	0.024515	0.020588	0.000000

4GG2	0.025073	0.016563	0.000000
4HB1	0.024822	0.024336	0.000000
4HD1	0.022315	0.018575	0.000000
4HF3	0.019978	0.012835	0.000000
4HH2	0.021548	0.015343	0.000000
4IC1	0.016815	0.017313	0.000000
4IE2	0.017765	0.014497	0.000000
4IG2	0.017276	0.012159	0.000000
4JB3	0.016032	0.019787	0.000000
4JD2	0.013681	0.014109	0.000000
4JF2	0.016044	0.012469	0.000000
4JH5	0.017192	0.013040	0.000000
4KE1	0.013055	0.012847	0.000000
4LB2	0.014254	0.018896	0.000000
4LD2	0.012212	0.014632	0.000000
4LE2	0.011439	0.012250	0.000000
4LH2	0.000000	0.000000	0.000000
FRIA	0.025287	0.018320	0.000000
Q366	0.000000	0.000000	0.000000

Station Coordinate Error Ellipses (FeetInt)
Confidence Region = 95%

Station	Semi-Major Axis	Semi-Minor Axis	Azimuth of Major Axis	Elev
112	0.067506	0.050238	160-33	0.000000
113	0.070856	0.046116	167-05	0.000000
114	0.071404	0.046083	166-25	0.054219
115	0.050277	0.042723	132-47	0.000000
116	0.056659	0.041471	150-45	0.057657
117	0.053901	0.039520	148-13	0.048619
118	0.050577	0.038262	155-01	0.033396
119	0.050063	0.040576	161-58	0.056842
120	0.043251	0.029825	2-33	0.035191
121	0.034444	0.022301	11-48	0.029999
122	0.060713	0.044150	1-53	0.042305
123	0.059528	0.038627	3-00	0.043840
124	0.056984	0.036236	9-35	0.037969
125	0.036161	0.034761	153-21	0.052451
126	0.039587	0.037575	77-37	0.063124
127	0.044590	0.024470	163-02	0.068192
128	0.036624	0.035153	68-12	0.051245
129	0.039991	0.038375	19-27	0.046453
130	0.055511	0.039465	116-27	0.035860
131	0.052638	0.037357	115-19	0.035719
132	0.052643	0.049593	127-17	0.057158
133	0.041994	0.031798	111-51	0.046049
134	0.054510	0.046723	88-36	0.050754
137	0.061596	0.042373	127-03	0.051683
245	0.041756	0.033069	117-22	0.043227
13002	0.049958	0.044874	94-46	0.058366
1IA1	0.054104	0.034163	119-57	0.000000
1KA2	0.056521	0.034803	96-20	0.000000
4GC1	0.062201	0.047658	155-49	0.000000
4GG2	0.061385	0.040521	178-23	0.000000
4HB1	0.065853	0.053882	137-52	0.000000

4HD1	0.058023	0.041038	151-30	0.000000
4HF3	0.049197	0.030949	171-53	0.000000
4HH2	0.053195	0.036915	10-23	0.000000
4IC1	0.049042	0.032938	132-47	0.000000
4IE2	0.045694	0.032592	154-00	0.000000
4IG2	0.042313	0.029726	2-48	0.000000
4JB3	0.050621	0.036379	114-43	0.000000
4JD2	0.038236	0.029190	131-39	0.000000
4JF2	0.039777	0.029859	166-05	0.000000
4JH5	0.042112	0.031879	3-19	0.000000
4KE1	0.032685	0.030687	142-24	0.000000
4LB2	0.046266	0.034873	87-53	0.000000
4LD2	0.035846	0.029854	94-17	0.000000
4LE2	0.030010	0.027974	96-22	0.000000
4LH2	0.000000	0.000000	0-00	0.000000
FRIA	0.062854	0.043490	166-04	0.000000
Q366	0.000000	0.000000	0-00	0.000000

Relative Error Ellipses (FeetInt)
Confidence Region = 95%

Stations From	To	Semi-Major Axis	Semi-Minor Axis	Azimuth of Major Axis	Vertical
112	4GC1	0.045489	0.041671	110-06	0.000000
112	FRIA	0.042786	0.034617	16-03	0.000000
113	114	0.028329	0.024962	132-36	0.054219
113	FRIA	0.037172	0.025566	161-16	0.000000
114	4HF3	0.055703	0.040462	163-35	0.054219
114	FRIA	0.042188	0.033009	158-36	0.054219
115	137	0.054473	0.044263	152-30	0.051683
115	4GC1	0.036797	0.031685	173-33	0.000000
115	4HB1	0.041242	0.034572	140-25	0.000000
115	4IC1	0.047965	0.043027	151-59	0.000000
115	Q366	0.050277	0.042723	132-47	0.000000
116	4HD1	0.041597	0.037265	139-06	0.057657
116	4IC1	0.041353	0.029317	162-11	0.057657
117	4HD1	0.032848	0.028967	129-09	0.048619
117	4HF3	0.041527	0.039421	134-18	0.048619
117	4JD2	0.037762	0.033132	154-08	0.048619
118	4HF3	0.028229	0.025010	51-13	0.033396
118	4IE2	0.020958	0.020179	82-09	0.033396
119	4HF3	0.033837	0.030504	126-35	0.056842
119	4IG2	0.033041	0.028547	113-02	0.056842
120	121	0.026808	0.020221	159-01	0.036545
120	4HH2	0.035594	0.031209	152-54	0.035191
120	4IG2	0.025495	0.020624	151-32	0.035191
121	126	0.047691	0.041943	12-30	0.066196
121	127	0.052566	0.028544	169-52	0.072380
121	4HH2	0.034680	0.030055	160-24	0.029999
121	4IG2	0.026760	0.021890	153-30	0.029999
121	4JF2	0.033695	0.029755	178-06	0.029999
121	4JH5	0.032028	0.023669	161-20	0.029999
121	4LH2	0.034444	0.022301	11-48	0.029999
122	124	0.031395	0.030056	42-41	0.047646
122	4GG2	0.028682	0.025495	146-20	0.042305
123	124	0.024271	0.023997	106-46	0.046768

123	4GG2	0.028601	0.020508	165-59	0.043840
123	4HF3	0.029076	0.026964	26-43	0.043840
124	4HF3	0.028216	0.025556	68-13	0.037969
124	4HH2	0.032308	0.027703	143-36	0.037969
124	4IG2	0.030428	0.026644	5-17	0.037969
125	4JF2	0.034794	0.032933	8-42	0.052451
125	4LE2	0.041043	0.037000	29-33	0.052451
125	4LH2	0.036161	0.034761	153-21	0.052451
126	4LH2	0.039587	0.037575	77-37	0.063124
127	4JH5	0.055912	0.033603	169-17	0.068192
127	4LH2	0.044590	0.024470	163-02	0.068192
128	4KE1	0.029297	0.024672	26-45	0.051245
128	4LE2	0.024408	0.020908	25-00	0.051245
129	4LD2	0.031524	0.026948	161-21	0.046453
129	4LE2	0.028887	0.024294	175-08	0.046453
130	1IA1	0.022368	0.017762	175-30	0.035860
130	1KA2	0.028033	0.022919	12-16	0.035860
131	1IA1	0.029345	0.026768	44-09	0.035719
131	1KA2	0.032397	0.024880	45-25	0.035719
131	4IC1	0.031547	0.030635	22-38	0.035719
131	4JB3	0.027035	0.023460	51-57	0.035719
132	133	0.045581	0.031451	6-01	0.064693
132	1KA2	0.040261	0.033287	8-38	0.057158
132	4LB2	0.040189	0.029635	3-30	0.057158
133	4IC1	0.032096	0.027498	172-37	0.046049
133	4JB3	0.031865	0.029349	142-23	0.046049
133	4JD2	0.024786	0.023297	38-51	0.046049
133	4LD2	0.020513	0.016690	161-24	0.046049
134	1KA2	0.036785	0.031168	154-39	0.050754
134	4LB2	0.031833	0.027555	169-05	0.050754
137	1IA1	0.032174	0.029930	125-53	0.051683
245	4JD2	0.025648	0.021998	136-44	0.043227
245	4KE1	0.029677	0.025782	116-29	0.043227
245	4LD2	0.027728	0.022883	142-08	0.043227
13002	133	0.038012	0.035170	175-10	0.063224
13002	4LB2	0.034441	0.033489	108-08	0.058366
1IA1	1KA2	0.024389	0.016869	23-54	0.000000
1IA1	Q366	0.054104	0.034163	119-57	0.000000
1KA2	4JB3	0.028376	0.022420	59-14	0.000000
1KA2	4LB2	0.023092	0.017181	121-09	0.000000
4GC1	4HB1	0.048186	0.042038	146-06	0.000000
4GG2	4HF3	0.032251	0.029418	167-21	0.000000
4HD1	FRIA	0.035775	0.031268	11-04	0.000000
4HF3	4IE2	0.021201	0.016372	40-09	0.000000
4HF3	4IG2	0.024419	0.019876	133-36	0.000000
4HH2	4IG2	0.031399	0.029026	156-41	0.000000
4IC1	4JD2	0.024582	0.020553	140-26	0.000000
4IE2	4JD2	0.032568	0.030333	19-24	0.000000
4JB3	4LB2	0.027841	0.023810	177-16	0.000000
4JD2	4KE1	0.023754	0.020377	145-54	0.000000
4JF2	4JH5	0.042506	0.034648	161-44	0.000000
4JF2	4KE1	0.039904	0.033173	12-13	0.000000
4KE1	4LE2	0.024389	0.019648	14-59	0.000000
4LB2	4LD2	0.027786	0.025718	106-43	0.000000
4LD2	4LE2	0.019005	0.016904	117-10	0.000000
4LE2	4LH2	0.030010	0.027974	96-22	0.000000

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 23
47
01 00000000 Top of File
01 00000006 Summary of Files Used and Option Settings
02 00000009 Project Folder and Data Files
02 00000016 Project Option Settings
01 00000042 Summary of Unadjusted Input Observations
02 00000045 Entered Stations
03 00000047 Fixed Positions
03 00000051 Partially Fixed Positions
02 00000100 GPS Vector Observations
01 00000586 Adjustment Statistical Summary
01 00000606 Adjusted Station Information
02 00000609 Adjusted Coordinates
02 00000661 Adjusted Positions and Ellipsoid Heights
02 00000714 Convergence Angles and Grid Factors at Stations
01 00000770 Adjusted Observations and Residuals
02 00000773 Adjusted GPS Vector Observations
02 00001384 GPS Vector Residual Summary
01 00001509 Adjusted Bearings and Horizontal Distances
01 00001694 Error Propagation
02 00001697 Station Coordinate Standard Deviations
02 00001749 Station Coordinate Error Ellipses
02 00001803 Relative Error Ellipses
01 00001897 End of File
0001F869
STARPLUS
00032E5B
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