BALL MOUNTAIN DAM
JAMAICA, VERMONT

VOLUME II: APPENDICES

Output from INTERGRAPHS'
Geodetic Network Analysis (GNA)
Program for Epochs I, II, AND III

Prepared by:
Boston Survey Consultants
1-1654.00

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GEOTECHNICAL
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*  BOSTON SURVEY CONSULTANTS - BALL MOUNTAIN DAM - PROJECT 1-1654.00        *
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PROJECT INFORMATION:

EPOCH 1 ANALYSIS OF HEIGHTS
DATABASE BALLZALL.DBS
1165400Z

GEODETIC NETWORK ANALYSIS
SLAP #797
INTERGRAPH CORPORATION
ONE MADISON INDUSTRIAL PARK
HUNTSVILLE, ALABAMA USA 35805

1.0 OPTIONS REPORT

O P T I O N S I N E F F E C T

PROGRAM CONTROL:

- PREANALYSIS OR ADJUSTMENT ..... ADJUSTMENT
- PERFORM VARIANCE COMPONENT ESTIMATION ..... NO
- ANGULAR I/O IN DEGREES OF GRADS ..... DEGREES
- LINEAR I/O IN METERS OR FEET ..... METERS
- MAXIMUM CPU TIME ..... 9999.0 SECONDS
- MAXIMUM NUMBER OF LEAST-SQUARES ITERATIONS 10
- ITERATION CONVERGENCE BOUNDARY VALUE 0.000100
- NUMBER OF EIGENVALUES COMPUTED ..... NONE

DEFAULT STANDARD DEVIATIONS:

MEASUREMENT TYPE	STANDARD DEVIATION
DIRECTIONS	0.00100 SEC
AZIMUTHS	0.00100 SEC
ANGULAR TARGET ECCENTRICITY	0.00000 CM
CONSTANT PART OF EDM MEASUREMENT	0.22000 CM
VARIABLE PART OF EDM MEASUREMENT	4.00000 PPM
ZENITH DISTANCE	0.50000 SEC
HEIGHT DIFFERENCE	0.10000 CM
WEIGHTED STATIONS	0.00000 CM

EDM RELATED FACTORS:

- MEAN RADIUS OF EARTH ..... 6378.0 KM
- EDM PHASE SHIFT ..... 0.00000 DEG
- EDM WAVELENGTH ..... 10.00000 METERS
- EDM ZERO ERROR ..... 0.00000 CM
- NETWORK SCALE FACTOR ..... 0.00000 PPM
- EDM CYCLIC ERROR (AMPLITUDE) ..... 0.00000 CM
- REFRACTION COEFFICIENT ..... SOLVING FOR

2.1 FIXED STATIONS INPUT REPORT

STATION NAME	FIXED COORDINATES EASTING (METERS)	STD. DEV. (CM)	NORTHING (METERS)	STD. DEV. (CM)	ELEVATION (METERS)	STD. DEV. (CM)
166	10000.0377		9999.9561		1000.0000	

2.2 FREE STATIONS INPUT REPORT

STATION NAME	PRELIMINARY COORDINATES EASTING (METERS)	STD. DEV. (CM)	NORTHING (METERS)	STD. DEV. (CM)	ELEVATION (METERS)	STD. DEV. (CM)
11	9977.1192	FIXED	10173.6777	FIXED	1000.3707	
12	9979.0467	FIXED	10174.9262	FIXED	1000.4116	
13	9980.7113	FIXED	10173.6617	FIXED	1000.1974	
14	9995.5502	FIXED	10177.1434	FIXED	992.6496	
15	10022.2472	FIXED	10176.3899	FIXED	977.7854	
16	10026.6273	FIXED	10176.3835	FIXED	975.2260	
161	9884.6202	FIXED	9926.4518	FIXED	1000.9763	
16111	9884.6202	FIXED	9926.4518	FIXED	1001.1973	
16121	9884.6202	FIXED	9926.4518	FIXED	1001.0233	
162	10087.6880	FIXED	9917.4346	FIXED	1014.7728	
16211	10087.6880	FIXED	9917.4346	FIXED	1014.9926	
16231	10087.6880	FIXED	9917.4346	FIXED	1015.0611	
163	10203.6869	FIXED	10080.8551	FIXED	925.0730	
16311	10203.6869	FIXED	10080.8551	FIXED	925.2987	
16321	10203.6869	FIXED	10080.8551	FIXED	925.1232	
16341	10203.6869	FIXED	10080.8551	FIXED	925.2958	
164	10000.0377	FIXED	10273.8091	FIXED	1006.1912	
16411	10000.0377	FIXED	10273.8091	FIXED	1006.4061	
16421	10000.0377	FIXED	10273.8091	FIXED	1006.2308	
16431	10000.0377	FIXED	10273.8091	FIXED	1006.4717	
16451	10000.0377	FIXED	10273.8091	FIXED	1006.1752	
165	9843.3682	FIXED	10241.7497	FIXED	1009.5775	
16511	9843.3682	FIXED	10241.7497	FIXED	1009.7971	
16521	9843.3682	FIXED	10241.7497	FIXED	1009.6185	
16611	10000.0377	FIXED	9999.9561	FIXED	1001.5565	
16621	10000.0377	FIXED	9999.9561	FIXED	1001.4410	
16631	10000.0377	FIXED	9999.9561	FIXED	1001.4725	
17	10039.5999	FIXED	10175.6059	FIXED	966.9011	
18	10050.7145	FIXED	10174.8444	FIXED	960.4798	
19	10076.4310	FIXED	10173.1724	FIXED	946.8272	
21	9977.1005	FIXED	10124.0793	FIXED	1000.2721	
22	9979.5689	FIXED	10123.5307	FIXED	1000.3990	
23	9981.5818	FIXED	10124.0299	FIXED	1000.2415	
24	9996.6703	FIXED	10128.3890	FIXED	991.8380	
25	10020.8889	FIXED	10129.7551	FIXED	978.2108	
26	10028.1531	FIXED	10129.6703	FIXED	974.0488	
27	10040.6822	FIXED	10130.6486	FIXED	965.8854	
28	10050.4780	FIXED	10130.9387	FIXED	960.6544	
29	10075.9146	FIXED	10132.3600	FIXED	946.7501	
31	9981.3281	FIXED	10075.7317	FIXED	1000.4713	
32	9983.6879	FIXED	10076.4455	FIXED	1000.4773	
33	9986.1737	FIXED	10076.5779	FIXED	1000.0987	
34	10000.9422	FIXED	10074.1680	FIXED	992.1019	
35	10025.8939	FIXED	10077.3707	FIXED	977.7919	
36	10032.7422	FIXED	10077.9094	FIXED	973.9531	
37	10046.3977	FIXED	10079.8491	FIXED	965.3939	
38	10055.2805	FIXED	10081.0761	FIXED	960.6659	
39	10080.0094	FIXED	10084.1935	FIXED	946.9513	

2.3 WEIGHTED STATIONS INPUT REPORT

STATION NAME	WEIGHTED COORDINATES EASTING (METERS)	STD. DEV. (CM)	NORTHING (METERS)	STD. DEV. (CM)	ELEVATION (METERS)	STD. DEV. (CM)

THERE ARE NO WEIGHTED STATIONS

2.4 OBSERVED DIRECTIONS INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)

THERE ARE NO DIRECTION OBSERVATIONS

2.5 OBSERVED AZIMUTH INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)

THERE ARE NO AZIMUTH OBSERVATIONS

2.6 OBSERVED HORIZONTAL DISTANCE INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (METERS)	STAN. DEV. (CM)	MISCLOSURE (CM)

THERE ARE NO HORIZONTAL DISTANCE OBSERVATIONS

2.7 OBSERVED SLOPE DISTANCE INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (METERS)	STAN. DEV. (CM)	MISCLOSURE (CM)

THERE ARE NO SLOPE DISTANCE OBSERVATIONS

2.8 OBSERVED SCALE DISTANCE INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (METERS)	STAN. DEV. (CM)	MISCLOSURE (CM)

THERE ARE NO SCALED DISTANCE OBSERVATIONS

2.9 OBSERVED ZENITH DISTANCE INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)
16111	16521	88-29- 2.600	0.500	-0.638
16111	16421	89-12-47.800	0.500	-1.059
16111	11	90-10-48.800	0.500	-0.828
16111	12	90-10-12.500	0.500	-0.926
16111	13	90-13- 0.500	0.500	-0.837
16111	21	90-14-36.800	0.500	-0.876
16111	22	90-12-34.800	0.500	-0.981
16111	23	90-14-58.300	0.500	-0.560
16111	31	90-14- 4.000	0.500	-0.406
16111	32	90-13-49.000	0.500	0.300
16111	33	90-20-53.500	0.500	0.733
16611	31	90-47-48.600	0.500	-0.156
16611	32	90-47-26.000	0.500	-0.850
16611	33	91- 4-21.600	0.500	-0.716
16611	34	97-15-35.700	0.500	-0.768
16611	35	106-14- 3.300	0.500	0.376
16611	36	108- 5- 0.800	0.500	-0.514
16611	37	111-22-51.000	0.500	0.648
16611	38	112-37- 7.800	0.500	-0.289
16611	29	109-45-21.200	0.500	0.102
16611	28	106-14-50.200	0.500	0.192
16611	27	104-36-30.400	0.500	0.272
16611	26	101-42-33.300	0.500	-0.487
16611	25	100- 4-13.100	0.500	-0.084
16611	24	94-19-34.000	0.500	-0.817
16611	23	90-36- 3.400	0.500	-0.598
16611	22	90-31-47.900	0.500	0.119
16611	12	90-22-21.200	0.500	-1.325
16611	13	90-26-45.500	0.500	-0.878
16611	14	92-52-38.600	0.500	-0.434
16611	15	97-36-52.100	0.500	-0.570
16611	16	98-23-43.400	0.500	-0.727
16611	17	100-53-44.600	0.500	0.597
16611	18	102-42-48.400	0.500	-0.111
16611	19	106- 7-30.300	0.500	0.553
16611	16341	109-11-22.000	0.500	-0.624
16631	16341	109-10-11.800	0.500	-0.288
16511	11	93-35-40.000	0.500	-0.688
16511	12	93-33- 5.100	0.500	-0.669
16511	13	93-35- 1.900	0.500	-0.277
16511	21	93- 3-40.800	0.500	-0.580
16511	22	92-59- 0.800	0.500	-0.514
16511	23	93- 0-49.100	0.500	0.219
16511	31	92-28-28.000	0.500	-0.817
16511	32	92-27-43.000	0.500	-0.297

2.9 OBSERVED ZENITH DISTANCE INPUT REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)
16511	33	92-32-38.600	0.500	-0.221
16511	16231	89-15-30.600	0.500	-1.228
16411	19	115-14-47.000	0.500	-0.845
16411	18	112-26-37.600	0.500	-1.008
16411	17	110-27-45.300	0.500	-0.791
16411	16	107- 9-30.000	0.500	-0.077
16411	15	105-59- 3.000	0.500	-0.129
16411	14	98- 5-27.800	0.500	-0.379
16411	24	95-43-11.200	0.500	-0.138
16411	25	100-57-48.800	0.500	0.277
16411	26	102-25-34.800	0.500	0.197
16411	27	105-13-55.000	0.500	-0.205
16411	28	106-48-10.900	0.500	-0.267
16411	29	110-23-17.600	0.500	-0.522
16411	39	106- 6-55.000	0.500	-0.214
16411	38	102-51- 7.600	0.500	-0.196
16411	37	101-37-17.200	0.500	-1.460
16411	36	99-16-50.700	0.500	-0.505
16411	35	98-13- 6.300	0.500	-0.567
16411	34	94- 5-55.600	0.500	-0.631
16411	33	91-49-40.000	0.500	-0.607
16411	32	91-42-55.900	0.500	-0.082
16411	31	91-42-32.400	0.500	-1.300
16411	23	92-20-22.600	0.500	-0.547
16411	22	92-16- 7.400	0.500	-0.085
16411	21	92-19-10.000	0.500	-0.208
16411	13	93-29- 2.200	0.500	0.385
16411	12	93-23-39.400	0.500	0.620
16411	11	93-21-46.400	0.500	-0.300
16411	16121	90-50-37.300	0.500	-0.936
16411	16231	88-39- 0.500	0.500	-1.134
16411	16521	88-50-59.000	0.500	-0.351
16411	16321	106- 9-33.400	0.500	0.211
16311	16231	65-52-22.500	0.500	0.078
16311	39	80- 4-25.000	0.500	-0.390
16311	38	76-35-46.000	0.500	-0.609
16311	37	75-41-59.000	0.500	-0.916
16311	36	74- 6-55.600	0.500	-0.046
16311	35	73-33-15.000	0.500	-1.204
16311	34	71-46-24.000	0.500	0.129
16311	33	71- 1-36.200	0.500	-0.349
16311	23	71-40-29.500	0.500	-0.333
16311	24	72-36-23.800	0.500	-0.406
16311	25	74-22-41.800	0.500	-0.611
16311	26	75- 1-14.800	0.500	-0.567
16311	27	76-36-22.200	0.500	-0.728

2.9 OBSERVED ZENITH DISTANCE INPUT REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)
16311	28	77-37-44.100	0.500	-0.248
16311	29	81- 8-59.800	0.500	0.076
16311	19	82-12-11.100	0.500	-0.478
16311	18	78-54-50.500	0.500	0.170
16311	17	77-37- 1.700	0.500	-0.407
16311	16	76- 3-48.500	0.500	-0.244
16311	15	75-38-36.000	0.500	-0.069
16311	14	73-38- 3.200	0.500	0.234
16311	13	72-46-16.400	0.500	-0.838
16311	16431	73-51-48.800	0.500	-0.457
16211	31	94-21-18.300	0.500	0.190
16211	32	94-22- 9.900	0.500	0.011
16211	33	94-30-43.500	0.500	-0.284
16211	34	97-16-58.100	0.500	0.522
16211	35	102-14-31.200	0.500	-0.628
16211	36	103-36- 6.600	0.500	-0.289
16211	37	106-29-15.400	0.500	-0.533
16211	38	108- 2-20.800	0.500	0.118
16211	29	107-35-28.400	0.500	-1.481
16211	28	104- 4-33.300	0.500	-1.380
16211	27	102-40-35.400	0.500	-0.902
16211	26	100-31-24.000	0.500	-0.452
16211	25	99-23- 1.600	0.500	-1.839
16211	24	95-45-20.800	0.500	-0.021
16211	23	93-38- 6.200	0.500	-0.163
16211	22	93-35-19.400	0.500	-0.783
16211	21	93-35-41.200	0.500	-0.074
16211	11	93- 0- 1.100	0.500	0.192
16211	12	92-59-15.200	0.500	-0.498
16211	13	93- 3- 3.500	0.500	-0.816
16211	14	94-38-10.800	0.500	-0.450
16211	15	97-55-52.200	0.500	-1.068
16211	16	98-30- 7.000	0.500	-0.584
16211	17	100-22-41.900	0.500	-0.668
16211	18	101-50-24.200	0.500	-0.180
16211	19	104-54-42.600	0.500	-0.838
16211	16421	91-22- 7.900	0.500	-0.784
16211	16321	114- 9-14.000	0.500	-0.925
16511	16231	89-15-30.900	0.500	-0.928
16411	16231	88-39- 1.100	0.500	-0.534
16511	16121	91-34-53.600	0.500	-0.660

2.10 OBSERVED HEIGHT DIFFERENCE INPUT REPORT

FROM STATION	TO STATION	OBSERVED VALUE (METERS)	STAN. DEV. (CM)	MISCLOSURE (CM)
166	16611	1.5570	0.1000	0.05
166	16621	1.4410	0.1000	0.00
166	16631	1.4720	0.1000	-0.05
165	16521	0.0410	0.1000	0.00
164	16411	0.2150	0.1000	0.01
164	16431	0.2810	0.1000	0.05
164	16421	0.0390	0.1000	-0.06
164	16451	-0.0160	0.1000	0.00
163	16311	0.2250	0.1000	-0.07
163	16321	0.0510	0.1000	0.08
162	16211	0.2190	0.1000	-0.08
162	16231	0.2890	0.1000	0.07
161	16111	0.2210	0.1000	0.00

2.11 OBSERVED RELATIVE POSITIONS INPUT REPORT

FROM STATION	TO STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAN. DEV. (SEC)

THERE ARE NO RELATIVE POSITION OBSERVATIONS

2.12 OBSERVED COORDINATE DIFFERENCE INPUT REPORT

FROM STATION	TO STATION	OBSERVED VALUES (METERS) DX	DY	DZ	COVARIANCES (CM SQUARED) XX	XY	YY	XZ	YZ	ZZ

THERE ARE NO COORDINATE DIFFERENCE OBSERVATIONS

3.0 SOLVABILITY OF NETWORK REPORT

STATION NAME	NUMBER OF TIMES OBSERVED
16621	1
16451	1
161	1
165	1

********** POINT 16621 ONLY 1TIMES OBSERVED
********** POINT 16451 ONLY 1TIMES OBSERVED
********** POINT 161 ONLY 1TIMES OBSERVED
********** POINT 165 ONLY 1TIMES OBSERVED

3.1 ARRAY USAGE REPORT

FACTOR	MAXIMUM ALLOWED	ACTUAL
OBSERVATIONS	9000	145
POINTS	1000	49
FIXED & WEIGHTED POINTS	99	1
ORIENTATION UNKNOWNS	1500	0
MATRIX ELEMENTS	99998	1275

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
16111	16521	O:	88-29- 2.60	0.50		74.49	COM:	0.0 SEC	0.0 CM	317.9851
		C:	88-29- 2.56	0.25			BND:	2.4 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.04	0.43	-0.09					
16111	16421	O:	89-12-47.80	0.50		57.95	COM:	-0.5 SEC	0.0 CM	366.0305
		C:	89-12-48.08	0.32			BND:	2.7 SEC	0.2 CM	
		V=C-O:	0- 0- 0.28	0.38	0.73					
16111	11	O:	90-10-48.80	0.50		83.58	COM:	-0.3 SEC	0.0 CM	263.9635
		C:	90-10-49.05	0.20			BND:	2.3 SEC	0.0 CM	
		V=C-O:	0- 0- 0.25	0.46	0.55					
16111	12	O:	90-10-12.50	0.50		85.45	COM:	-0.4 SEC	0.0 CM	265.8118
		C:	90-10-12.87	0.19			BND:	2.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.37	0.46	0.80					
16111	13	O:	90-13- 0.50	0.50		85.97	COM:	-0.3 SEC	0.0 CM	265.2286
		C:	90-13- 0.80	0.19			BND:	2.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.30	0.46	0.64					
16111	21	O:	90-14-36.80	0.50		73.69	COM:	-0.6 SEC	0.0 CM	218.1954
		C:	90-14-37.23	0.26			BND:	2.4 SEC	0.1 CM	
		V=C-O:	0- 0- 0.43	0.43	1.00					
16111	22	O:	90-12-34.80	0.50		79.52	COM:	-0.7 SEC	0.0 CM	218.7587
		C:	90-12-35.36	0.23			BND:	2.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.56	0.45	1.26					
16111	23	O:	90-14-58.30	0.50		80.46	COM:	-0.2 SEC	0.0 CM	220.0878
		C:	90-14-58.45	0.22			BND:	2.3 SEC	0.0 CM	
		V=C-O:	0- 0- 0.15	0.45	0.32					
16111	31	O:	90-14- 4.00	0.50		74.31	COM:	0.0 SEC	0.0 CM	177.8677
		C:	90-14- 4.02	0.25			BND:	2.4 SEC	0.1 CM	
		V=C-O:	0- 0- 0.02	0.43	0.04					
16111	32	O:	90-13-49.00	0.50		74.79	COM:	0.9 SEC	0.0 CM	179.7568
		C:	90-13-48.36	0.25			BND:	2.4 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.64	0.43	-1.47					
16111	33	O:	90-20-53.50	0.50		75.57	COM:	1.4 SEC	0.0 CM	181.2483
		C:	90-20-52.44	0.25			BND:	2.4 SEC	0.1 CM	
		V=C-O:	- 0- 0- 1.06	0.43	-2.44					
16611	31	O:	90-47-48.60	0.50		34.96	COM:	0.5 SEC	0.0 CM	78.0512
		C:	90-47-48.44	0.40			BND:	3.5 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.16	0.30	-0.55					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
16611	32	O:	90-47-26.00	0.50		35.01	COM:	-1.9 SEC	0.0 CM	78.2173
		C:	90-47-26.66	0.40			BND:	3.5 SEC	0.1 CM	
		V=C-O:	0- 0- 0.66	0.30	2.23					
16611	33	O:	91- 4-21.60	0.50		37.93	COM:	-1.5 SEC	0.0 CM	77.8660
		C:	91- 4-22.15	0.39			BND:	3.4 SEC	0.1 CM	
		V=C-O:	0- 0- 0.55	0.31	1.80					
16611	34	O:	97-15-35.70	0.50		27.49	COM:	-1.9 SEC	0.0 CM	74.2174
		C:	97-15-36.21	0.43			BND:	3.9 SEC	0.1 CM	
		V=C-O:	0- 0- 0.51	0.26	1.95					
16611	35	O:	106-14- 3.30	0.50		36.53	COM:	1.6 SEC	0.0 CM	81.6184
		C:	106-14- 2.72	0.40			BND:	3.4 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.58	0.30	-1.92					
16611	36	O:	108- 5- 0.80	0.50		39.72	COM:	-0.5 SEC	0.0 CM	84.5358
		C:	108- 5- 1.02	0.39			BND:	3.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.22	0.32	0.69					
16611	37	O:	111-22-51.00	0.50		47.30	COM:	2.0 SEC	0.1 CM	92.3696
		C:	111-22-50.05	0.36			BND:	3.0 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.95	0.34	-2.75 ..					
16611	38	O:	112-37- 7.80	0.50		52.06	COM:	-0.2 SEC	0.0 CM	98.1439
		C:	112-37- 7.91	0.35			BND:	2.9 SEC	0.1 CM	
		V=C-O:	0- 0- 0.11	0.36	0.31					
16611	29	O:	109-45-21.20	0.50		71.44	COM:	0.7 SEC	0.0 CM	152.6044
		C:	109-45-20.73	0.27			BND:	2.4 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.47	0.42	-1.11					
16611	28	O:	106-14-50.20	0.50		65.19	COM:	0.8 SEC	0.0 CM	140.3591
		C:	106-14-49.69	0.29			BND:	2.6 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.51	0.40	-1.27					
16611	27	O:	104-36-30.40	0.50		63.05	COM:	0.9 SEC	0.0 CM	136.8667
		C:	104-36-29.84	0.30			BND:	2.6 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.56	0.40	-1.41					
16611	26	O:	101-42-33.30	0.50		60.20	COM:	-0.4 SEC	0.0 CM	132.7262
		C:	101-42-33.53	0.32			BND:	2.7 SEC	0.1 CM	
		V=C-O:	0- 0- 0.23	0.39	0.60					
16611	25	O:	100- 4-13.10	0.50		59.05	COM:	0.5 SEC	0.0 CM	131.4631
		C:	100- 4-12.79	0.32			BND:	2.7 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.31	0.38	-0.80					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
16611	24	O:	94-19-34.00	0.50		55.66	COM:	-0.9 SEC	0.0 CM	128.4770
		C:	94-19-34.48	0.33			BND:	2.8 SEC	0.1 CM	
		V=C-O:	0- 0- 0.48	0.37	1.28					
16611	23	O:	90-36- 3.40	0.50		63.23	COM:	-0.6 SEC	0.0 CM	125.4389
		C:	90-36- 3.75	0.30			BND:	2.6 SEC	0.1 CM	
		V=C-O:	0- 0- 0.35	0.40	0.88					
16611	22	O:	90-31-47.90	0.50		60.19	COM:	0.6 SEC	0.0 CM	125.2583
		C:	90-31-47.52	0.32			BND:	2.7 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.38	0.39	-0.98					
16611	12	O:	90-22-21.20	0.50		79.53	COM:	-1.2 SEC	0.0 CM	176.2247
		C:	90-22-22.12	0.23			BND:	2.3 SEC	0.0 CM	
		V=C-O:	0- 0- 0.92	0.45	2.06					
16611	13	O:	90-26-45.50	0.50		80.69	COM:	-0.6 SEC	0.0 CM	174.7774
		C:	90-26-45.99	0.22			BND:	2.3 SEC	0.0 CM	
		V=C-O:	0- 0- 0.49	0.45	1.10					
16611	14	O:	92-52-38.60	0.50		77.03	COM:	-0.1 SEC	0.0 CM	177.2441
		C:	92-52-38.67	0.24			BND:	2.4 SEC	0.0 CM	
		V=C-O:	0- 0- 0.07	0.44	0.16					
16611	15	O:	97-36-52.10	0.50		76.45	COM:	-0.2 SEC	0.0 CM	177.8262
		C:	97-36-52.24	0.24			BND:	2.4 SEC	0.0 CM	
		V=C-O:	0- 0- 0.14	0.44	0.33					
16611	16	O:	98-23-43.40	0.50		76.37	COM:	-0.4 SEC	0.0 CM	178.4198
		C:	98-23-43.72	0.24			BND:	2.4 SEC	0.0 CM	
		V=C-O:	0- 0- 0.32	0.44	0.73					
16611	17	O:	100-53-44.60	0.50		76.00	COM:	1.3 SEC	0.0 CM	180.0500
		C:	100-53-43.59	0.24			BND:	2.4 SEC	0.1 CM	
		V=C-O:	- 0- 0- 1.01	0.44	-2.31					
16611	18	O:	102-42-48.40	0.50		75.94	COM:	0.4 SEC	0.0 CM	182.0826
		C:	102-42-48.09	0.25			BND:	2.4 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.31	0.44	-0.72					
16611	19	O:	106- 7-30.30	0.50		76.94	COM:	1.3 SEC	0.0 CM	189.3141
		C:	106- 7-29.27	0.24			BND:	2.4 SEC	0.1 CM	
		V=C-O:	- 0- 0- 1.03	0.44	-2.35					
16611	16341	O:	109-11-22.00	0.50		13.09	COM:	-1.2 SEC	-0.1 CM	219.1293
		C:	109-11-22.15	0.47			BND:	5.7 SEC	0.6 CM	
		V=C-O:	0- 0- 0.15	0.18	0.85					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
16631	16341	O:	109-10-11.80	0.50		13.08	COM:	1.2 SEC	0.1 CM	219.1293
		C:	109-10-11.65	0.47			BND:	5.7 SEC	0.6 CM	
		V=C-O:	- 0- 0- 0.15	0.18	-0.85					
16511	11	O:	93-35-40.00	0.50		62.95	COM:	-0.4 SEC	0.0 CM	150.0771
		C:	93-35-40.25	0.30			BND:	2.6 SEC	0.1 CM	
		V=C-O:	0- 0- 0.25	0.40	0.63					
16511	12	O:	93-33- 5.10	0.50		66.73	COM:	-0.4 SEC	0.0 CM	151.2416
		C:	93-33- 5.38	0.29			BND:	2.5 SEC	0.1 CM	
		V=C-O:	0- 0- 0.28	0.41	0.68					
16511	13	O:	93-35- 1.90	0.50		68.14	COM:	0.1 SEC	0.0 CM	153.2942
		C:	93-35- 1.80	0.28			BND:	2.5 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.10	0.41	-0.24					
16511	21	O:	93- 3-40.80	0.50		65.40	COM:	-0.2 SEC	0.0 CM	178.1310
		C:	93- 3-40.93	0.29			BND:	2.6 SEC	0.1 CM	
		V=C-O:	0- 0- 0.13	0.40	0.32					
16511	22	O:	92-59- 0.80	0.50		74.07	COM:	-0.1 SEC	0.0 CM	180.3507
		C:	92-59- 0.89	0.25			BND:	2.4 SEC	0.1 CM	
		V=C-O:	0- 0- 0.09	0.43	0.22					
16511	23	O:	93- 0-49.10	0.50		75.42	COM:	0.8 SEC	0.0 CM	181.5515
		C:	93- 0-48.47	0.25			BND:	2.4 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.63	0.43	-1.46					
16511	31	O:	92-28-28.00	0.50		83.41	COM:	-0.3 SEC	0.0 CM	215.8585
		C:	92-28-28.26	0.20			BND:	2.3 SEC	0.0 CM	
		V=C-O:	0- 0- 0.26	0.46	0.57					
16511	32	O:	92-27-43.00	0.50		83.49	COM:	0.3 SEC	0.0 CM	216.8296
		C:	92-27-42.78	0.20			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.22	0.46	-0.47					
16511	33	O:	92-32-38.60	0.50		84.24	COM:	0.3 SEC	0.0 CM	218.3464
		C:	92-32-38.31	0.20			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.29	0.46	-0.62					
16511	16231	O:	89-15-30.60	0.50		83.12	COM:	-0.4 SEC	0.0 CM	406.0449
		C:	89-15-30.92	0.21			BND:	2.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.32	0.46	0.70					
16411	19	O:	115-14-47.00	0.50		61.72	COM:	-0.9 SEC	0.0 CM	126.3475
		C:	115-14-47.53	0.31			BND:	2.6 SEC	0.1 CM	
		V=C-O:	0- 0- 0.53	0.39	1.35					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
16411	18	O: 112-26-37.60	0.50		51.04	COM:	-1.5 SEC	0.0 CM	111.1852
		C: 112-26-38.38	0.35			BND:	2.9 SEC	0.1 CM	
		V=C-O: 0- 0- 0.78	0.36	2.18					
16411	17	O: 110-27-45.30	0.50		46.32	COM:	-1.3 SEC	0.0 CM	105.8727
		C: 110-27-45.89	0.37			BND:	3.0 SEC	0.1 CM	
		V=C-O: 0- 0- 0.59	0.34	1.74					
16411	16	O: 107- 9-30.00	0.50		41.07	COM:	0.3 SEC	0.0 CM	100.9889
		C: 107- 9-29.89	0.38			BND:	3.2 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.11	0.32	-0.34					
16411	15	O: 105-59- 3.00	0.50		39.70	COM:	0.2 SEC	0.0 CM	99.9188
		C: 105-59- 2.91	0.39			BND:	3.3 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.09	0.32	-0.28					
16411	14	O: 98- 5-27.80	0.50		33.62	COM:	-0.8 SEC	0.0 CM	96.7698
		C: 98- 5-28.08	0.41			BND:	3.6 SEC	0.1 CM	
		V=C-O: 0- 0- 0.28	0.29	0.96					
16411	24	O: 95-43-11.20	0.50		64.80	COM:	0.3 SEC	0.0 CM	145.4591
		C: 95-43-11.01	0.30			BND:	2.6 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.19	0.40	-0.47					
16411	25	O: 100-57-48.80	0.50		66.23	COM:	1.0 SEC	0.0 CM	145.5552
		C: 100-57-48.15	0.29			BND:	2.5 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.65	0.41	-1.59					
16411	26	O: 102-25-34.80	0.50		67.13	COM:	0.7 SEC	0.0 CM	146.8553
		C: 102-25-34.35	0.29			BND:	2.5 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.45	0.41	-1.09					
16411	27	O: 105-13-55.00	0.50		68.53	COM:	0.1 SEC	0.0 CM	148.8184
		C: 105-13-54.93	0.28			BND:	2.5 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.07	0.41	-0.17					
16411	28	O: 106-48-10.90	0.50		69.97	COM:	0.1 SEC	0.0 CM	151.5130
		C: 106-48-10.86	0.27			BND:	2.5 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.04	0.42	-0.09					
16411	29	O: 110-23-17.60	0.50		74.33	COM:	-0.2 SEC	0.0 CM	160.5153
		C: 110-23-17.77	0.25			BND:	2.4 SEC	0.1 CM	
		V=C-O: 0- 0- 0.17	0.43	0.41					
16411	39	O: 106- 6-55.00	0.50		69.81	COM:	0.4 SEC	0.0 CM	205.7901
		C: 106- 6-54.76	0.27			BND:	2.5 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.24	0.42	-0.59					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
16411	38	O: 102-51- 7.60	0.50		82.42	COM:	0.2 SEC	0.0 CM	200.4938
		C: 102-51- 7.40	0.21			BND:	2.3 SEC	0.0 CM	
		V=C-O: - 0- 0- 0.20	0.45	-0.43					
16411	37	O: 101-37-17.20	0.50		82.70	COM:	-1.2 SEC	0.0 CM	199.4235
		C: 101-37-18.20	0.21			BND:	2.3 SEC	0.0 CM	
		V=C-O: 0- 0- 1.00	0.45	2.20					
16411	36	O: 99-16-50.70	0.50		83.46	COM:	-0.1 SEC	0.0 CM	198.6109
		C: 99-16-50.75	0.20			BND:	2.3 SEC	0.0 CM	
		V=C-O: 0- 0- 0.05	0.46	0.10					
16411	35	O: 98-13- 6.30	0.50		83.81	COM:	-0.2 SEC	0.0 CM	198.1328
		C: 98-13- 6.45	0.20			BND:	2.3 SEC	0.0 CM	
		V=C-O: 0- 0- 0.15	0.46	0.33					
16411	34	O: 94- 5-55.60	0.50		85.12	COM:	-0.2 SEC	0.0 CM	199.6431
		C: 94- 5-55.79	0.19			BND:	2.2 SEC	0.0 CM	
		V=C-O: 0- 0- 0.19	0.46	0.40					
16411	33	O: 91-49-40.00	0.50		86.48	COM:	-0.2 SEC	0.0 CM	197.7179
		C: 91-49-40.20	0.18			BND:	2.2 SEC	0.0 CM	
		V=C-O: 0- 0- 0.20	0.46	0.44					
16411	32	O: 91-42-55.90	0.50		85.55	COM:	0.4 SEC	0.0 CM	198.0397
		C: 91-42-55.57	0.19			BND:	2.2 SEC	0.0 CM	
		V=C-O: - 0- 0- 0.33	0.46	-0.72					
16411	31	O: 91-42-32.40	0.50		85.63	COM:	-1.0 SEC	0.0 CM	198.9591
		C: 91-42-33.23	0.19			BND:	2.2 SEC	0.0 CM	
		V=C-O: 0- 0- 0.83	0.46	1.80					
16411	23	O: 92-20-22.60	0.50		73.89	COM:	-0.4 SEC	0.0 CM	150.9120
		C: 92-20-22.88	0.26			BND:	2.4 SEC	0.0 CM	
		V=C-O: 0- 0- 0.28	0.43	0.65					
16411	22	O: 92-16- 7.40	0.50		72.01	COM:	0.3 SEC	0.0 CM	151.6660
		C: 92-16- 7.20	0.26			BND:	2.4 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.20	0.42	-0.46					
16411	21	O: 92-19-10.00	0.50		58.16	COM:	0.2 SEC	0.0 CM	151.4765
		C: 92-19- 9.89	0.32			BND:	2.7 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.11	0.38	-0.30					
16411	13	O: 93-29- 2.20	0.50		49.33	COM:	1.1 SEC	0.0 CM	101.9952
		C: 93-29- 1.65	0.36			BND:	2.9 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.55	0.35	-1.56					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
16411	12	O:	93-23-39.40	0.50		46.13	COM:	1.8 SEC	0.0 CM	101.0863
		C:	93-23-38.59	0.37			BND:	3.0 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.81	0.34	-2.39					
16411	11	O:	93-21-46.40	0.50		38.33	COM:	-0.1 SEC	0.0 CM	102.7208
		C:	93-21-46.44	0.39			BND:	3.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.04	0.31	0.12					
16411	16121	O:	90-50-37.30	0.50		55.18	COM:	-0.2 SEC	0.0 CM	366.0305
		C:	90-50-37.41	0.33			BND:	2.8 SEC	0.2 CM	
		V=C-O:	0- 0- 0.11	0.37	0.30					
16411	16231	O:	88-39- 0.50	0.50		82.02	COM:	-0.4 SEC	0.0 CM	366.9950
		C:	88-39- 0.84	0.21			BND:	2.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.34	0.45	0.76					
16411	16521	O:	88-50-59.00	0.50		18.83	COM:	-0.1 SEC	0.0 CM	159.9160
		C:	88-50-59.02	0.45			BND:	4.8 SEC	0.3 CM	
		V=C-O:	0- 0- 0.02	0.22	0.09					
16411	16321	O:	106- 9-33.40	0.50		61.26	COM:	1.4 SEC	0.1 CM	280.5428
		C:	106- 9-32.55	0.31			BND:	2.6 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.85	0.39	-2.16					
16311	16231	O:	65-52-22.50	0.50		54.66	COM:	0.9 SEC	0.0 CM	200.4046
		C:	65-52-22.03	0.34			BND:	2.8 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.47	0.37	-1.28					
16311	39	O:	80- 4-25.00	0.50		22.83	COM:	-0.6 SEC	0.0 CM	123.7225
		C:	80- 4-25.14	0.44			BND:	4.3 SEC	0.2 CM	
		V=C-O:	0- 0- 0.14	0.24	0.59					
16311	38	O:	76-35-46.00	0.50		70.43	COM:	-0.5 SEC	0.0 CM	148.4066
		C:	76-35-46.37	0.27			BND:	2.5 SEC	0.1 CM	
		V=C-O:	0- 0- 0.37	0.42	0.89					
16311	37	O:	75-41-59.00	0.50		74.71	COM:	-0.8 SEC	0.0 CM	157.2924
		C:	75-41-59.57	0.25			BND:	2.4 SEC	0.0 CM	
		V=C-O:	0- 0- 0.57	0.43	1.31					
16311	36	O:	74- 6-55.60	0.50		80.30	COM:	0.4 SEC	0.0 CM	170.9701
		C:	74- 6-55.26	0.22			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.34	0.45	-0.75					
16311	35	O:	73-33-15.00	0.50		82.34	COM:	-1.0 SEC	0.0 CM	177.8271
		C:	73-33-15.85	0.21			BND:	2.3 SEC	0.0 CM	
		V=C-O:	0- 0- 0.85	0.45	1.88					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
16311	34	O:	71-46-24.00	0.50		87.17	COM:	0.6 SEC	0.0 CM	202.8549
		C:	71-46-23.43	0.18			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.57	0.47	-1.21					
16311	33	O:	71- 1-36.20	0.50		89.13	COM:	0.1 SEC	0.0 CM	217.5552
		C:	71- 1-36.11	0.16			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.09	0.47	-0.19					
16311	23	O:	71-40-29.50	0.50		87.61	COM:	0.1 SEC	0.0 CM	226.2625
		C:	71-40-29.39	0.18			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.11	0.47	-0.24					
16311	24	O:	72-36-23.80	0.50		83.64	COM:	0.1 SEC	0.0 CM	212.4037
		C:	72-36-23.75	0.20			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.05	0.46	-0.12					
16311	25	O:	74-22-41.80	0.50		79.34	COM:	-0.2 SEC	0.0 CM	189.2256
		C:	74-22-41.97	0.23			BND:	2.3 SEC	0.0 CM	
		V=C-O:	0- 0- 0.17	0.45	0.39					
16311	26	O:	75- 1-14.80	0.50		77.45	COM:	-0.3 SEC	0.0 CM	182.1951
		C:	75- 1-15.04	0.24			BND:	2.3 SEC	0.0 CM	
		V=C-O:	0- 0- 0.24	0.44	0.55					
16311	27	O:	76-36-22.20	0.50		73.23	COM:	-0.6 SEC	0.0 CM	170.4404
		C:	76-36-22.62	0.26			BND:	2.4 SEC	0.1 CM	
		V=C-O:	0- 0- 0.42	0.43	0.98					
16311	28	O:	77-37-44.10	0.50		69.43	COM:	0.1 SEC	0.0 CM	161.1873
		C:	77-37-44.04	0.28			BND:	2.5 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.06	0.42	-0.14					
16311	29	O:	81- 8-59.80	0.50		56.68	COM:	0.6 SEC	0.0 CM	137.7625
		C:	81- 8-59.45	0.33			BND:	2.7 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.35	0.38	-0.92					
16311	19	O:	82-12-11.10	0.50		62.50	COM:	-0.2 SEC	0.0 CM	157.2150
		C:	82-12-11.22	0.31			BND:	2.6 SEC	0.1 CM	
		V=C-O:	0- 0- 0.12	0.40	0.30					
16311	18	O:	78-54-50.50	0.50		73.75	COM:	0.7 SEC	0.0 CM	179.5398
		C:	78-54-49.96	0.26			BND:	2.4 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.54	0.43	-1.25					
16311	17	O:	77-37- 1.70	0.50		77.61	COM:	0.0 SEC	0.0 CM	189.4789
		C:	77-37- 1.73	0.24			BND:	2.3 SEC	0.0 CM	
		V=C-O:	0- 0- 0.03	0.44	0.06					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
16311	16	O:	76- 3-48.50	0.50		81.28	COM:	0.2 SEC	0.0 CM	201.1859
		C:	76- 3-48.34	0.22			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.16	0.45	-0.37					
16311	15	O:	75-38-36.00	0.50		82.22	COM:	0.4 SEC	0.0 CM	205.0543
		C:	75-38-35.63	0.21			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.37	0.45	-0.81					
16311	14	O:	73-38- 3.20	0.50		85.93	COM:	0.8 SEC	0.0 CM	229.3302
		C:	73-38- 2.52	0.19			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.68	0.46	-1.47					
16311	13	O:	72-46-16.40	0.50		88.50	COM:	-0.4 SEC	0.0 CM	241.5185
		C:	72-46-16.74	0.17			BND:	2.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.34	0.47	0.73					
16311	16431	O:	73-51-48.80	0.50		25.29	COM:	0.7 SEC	0.1 CM	280.5428
		C:	73-51-48.63	0.43			BND:	4.1 SEC	0.4 CM	
		V=C-O:	- 0- 0- 0.17	0.25	-0.69					
16211	31	O:	94-21-18.30	0.50		84.78	COM:	0.8 SEC	0.0 CM	190.7103
		C:	94-21-17.64	0.20			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.66	0.46	-1.43					
16211	32	O:	94-22- 9.90	0.50		84.63	COM:	0.5 SEC	0.0 CM	190.0013
		C:	94-22- 9.48	0.20			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.42	0.46	-0.92					
16211	33	O:	94-30-43.50	0.50		85.05	COM:	0.1 SEC	0.0 CM	188.7637
		C:	94-30-43.38	0.19			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.12	0.46	-0.25					
16211	34	O:	97-16-58.10	0.50		82.25	COM:	1.1 SEC	0.0 CM	179.1374
		C:	97-16-57.16	0.21			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.94	0.45	-2.08					
16211	35	O:	102-14-31.20	0.50		79.56	COM:	-0.3 SEC	0.0 CM	171.4586
		C:	102-14-31.45	0.23			BND:	2.3 SEC	0.0 CM	
		V=C-O:	0- 0- 0.25	0.45	0.57					
16211	36	O:	103-36- 6.60	0.50		78.80	COM:	0.2 SEC	0.0 CM	169.6208
		C:	103-36- 6.47	0.23			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.13	0.44	-0.29					
16211	37	O:	106-29-15.40	0.50		77.70	COM:	-0.2 SEC	0.0 CM	167.5809
		C:	106-29-15.52	0.24			BND:	2.3 SEC	0.0 CM	
		V=C-O:	0- 0- 0.12	0.44	0.28					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
16211	38	O: 108- 2-20.80	0.50		77.38	COM:	0.6 SEC	0.0 CM	166.8196
		C: 108- 2-20.35	0.24			BND:	2.3 SEC	0.0 CM	
		V=C-O: - 0- 0- 0.45	0.44	-1.02					
16211	29	O: 107-35-28.40	0.50		83.35	COM:	-1.2 SEC	0.0 CM	215.2476
		C: 107-35-29.40	0.20			BND:	2.3 SEC	0.0 CM	
		V=C-O: 0- 0- 1.00	0.46	2.18					
16211	28	O: 104- 4-33.30	0.50		82.83	COM:	-1.1 SEC	0.0 CM	216.7224
		C: 104- 4-34.21	0.21			BND:	2.3 SEC	0.0 CM	
		V=C-O: 0- 0- 0.91	0.46	1.99					
16211	27	O: 102-40-35.40	0.50		82.94	COM:	-0.5 SEC	0.0 CM	218.3340
		C: 102-40-35.84	0.21			BND:	2.3 SEC	0.0 CM	
		V=C-O: 0- 0- 0.44	0.46	0.97					
16211	26	O: 100-31-24.00	0.50		83.15	COM:	0.0 SEC	0.0 CM	220.4278
		C: 100-31-24.00	0.21			BND:	2.3 SEC	0.0 CM	
		V=C-O: - 0- 0- 0.00	0.46	0.00					
16211	25	O: 99-23- 1.60	0.50		83.39	COM:	-1.6 SEC	0.0 CM	222.5806
		C: 99-23- 2.90	0.20			BND:	2.3 SEC	0.0 CM	
		V=C-O: 0- 0- 1.30	0.46	2.85 ..					
16211	24	O: 95-45-20.80	0.50		84.00	COM:	0.6 SEC	0.0 CM	229.7520
		C: 95-45-20.29	0.20			BND:	2.3 SEC	0.0 CM	
		V=C-O: - 0- 0- 0.51	0.46	-1.11					
16211	23	O: 93-38- 6.20	0.50		87.08	COM:	0.4 SEC	0.0 CM	232.2502
		C: 93-38- 5.88	0.18			BND:	2.2 SEC	0.0 CM	
		V=C-O: - 0- 0- 0.32	0.47	-0.69					
16211	22	O: 93-35-19.40	0.50		86.20	COM:	-0.3 SEC	0.0 CM	232.7345
		C: 93-35-19.69	0.19			BND:	2.2 SEC	0.0 CM	
		V=C-O: 0- 0- 0.29	0.46	0.62					
16211	21	O: 93-35-41.20	0.50		80.43	COM:	0.6 SEC	0.0 CM	234.3750
		C: 93-35-40.75	0.22			BND:	2.3 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.45	0.45	-1.01					
16211	11	O: 93- 0- 1.10	0.50		87.54	COM:	1.0 SEC	0.0 CM	279.0806
		C: 93- 0- 0.26	0.18			BND:	2.2 SEC	0.0 CM	
		V=C-O: - 0- 0- 0.84	0.47	-1.79					
16211	12	O: 92-59-15.20	0.50		89.40	COM:	0.1 SEC	0.0 CM	279.4725
		C: 92-59-15.08	0.16			BND:	2.2 SEC	0.0 CM	
		V=C-O: - 0- 0- 0.12	0.47	-0.26					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
16211	13	O:	93- 3- 3.50	0.50		90.04	COM:	-0.2 SEC	0.0 CM	277.6623
		C:	93- 3- 3.71	0.16			BND:	2.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.21	0.47	0.45					
16211	14	O:	94-38-10.80	0.50		88.37	COM:	0.2 SEC	0.0 CM	275.5686
		C:	94-38-10.67	0.17			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.13	0.47	-0.28					
16211	15	O:	97-55-52.20	0.50		87.70	COM:	-0.5 SEC	0.0 CM	267.0961
		C:	97-55-52.66	0.18			BND:	2.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.46	0.47	0.99					
16211	16	O:	98-30- 7.00	0.50		87.54	COM:	0.0 SEC	0.0 CM	266.0506
		C:	98-30- 7.00	0.18			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.00	0.47	-0.01					
16211	17	O:	100-22-41.90	0.50		86.96	COM:	-0.1 SEC	0.0 CM	262.6117
		C:	100-22-41.99	0.18			BND:	2.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.09	0.47	0.19					
16211	18	O:	101-50-24.20	0.50		86.50	COM:	0.5 SEC	0.0 CM	260.0516
		C:	101-50-23.80	0.18			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.40	0.47	-0.86					
16211	19	O:	104-54-42.60	0.50		85.86	COM:	-0.3 SEC	0.0 CM	255.9854
		C:	104-54-42.84	0.19			BND:	2.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.24	0.46	0.51					
16211	16421	O:	91-22- 7.90	0.50		58.61	COM:	0.0 SEC	0.0 CM	366.9950
		C:	91-22- 7.88	0.32			BND:	2.7 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.02	0.38	-0.06					
16211	16321	O:	114- 9-14.00	0.50		42.63	COM:	-1.1 SEC	-0.1 CM	200.4046
		C:	114- 9-14.45	0.38			BND:	3.2 SEC	0.2 CM	
		V=C-O:	0- 0- 0.45	0.33	1.38					
16511	16231	O:	89-15-30.90	0.50		83.12	COM:	0.0 SEC	0.0 CM	406.0449
		C:	89-15-30.92	0.21			BND:	2.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.02	0.46	0.04					
16411	16231	O:	88-39- 1.10	0.50		82.02	COM:	0.3 SEC	0.0 CM	366.9950
		C:	88-39- 0.84	0.21			BND:	2.3 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.26	0.45	-0.57					
16511	16121	O:	91-34-53.60	0.50		41.69	COM:	0.2 SEC	0.0 CM	317.9851
		C:	91-34-53.50	0.38			BND:	3.2 SEC	0.3 CM	
		V=C-O:	- 0- 0- 0.10	0.32	-0.30					

4.7 ANALYSIS OF ELEVATION DIFFERENCE OBSERVATIONS REPORT

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (METERS)	STD. DEV. (CM)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
166	16611	O:	1.55700	0.10		36.91	COM:	0.1 CM	0.1 CM	0.0000
		C:	1.55648	0.08			BND:	0.7 CM	0.4 CM	
		V=C-O:	-0.00052	0.06	-0.85					
166	16621	O:	1.44100	0.10		0.00	COM:	NOT		0.0000
		C:	1.44100	0.10			BND:	CONTROLLED		
		V=C-O:	0.00000	0.00	0.00					
166	16631	O:	1.47200	0.10		36.91	COM:	-0.1 CM	-0.1 CM	0.0000
		C:	1.47252	0.08			BND:	0.7 CM	0.4 CM	
		V=C-O:	0.00052	0.06	0.85					
165	16521	O:	0.04100	0.10		0.00	COM:	NOT		0.0000
		C:	0.04100	0.10			BND:	CONTROLLED		
		V=C-O:	0.00000	0.00	0.00					
164	16411	O:	0.21500	0.10		55.42	COM:	0.0 CM	0.0 CM	0.0000
		C:	0.21490	0.07			BND:	0.6 CM	0.2 CM	
		V=C-O:	-0.00010	0.07	-0.14					
164	16431	O:	0.28100	0.10		46.57	COM:	0.1 CM	0.1 CM	0.0000
		C:	0.28053	0.07			BND:	0.6 CM	0.3 CM	
		V=C-O:	-0.00047	0.07	-0.69					
164	16421	O:	0.03900	0.10		48.55	COM:	-0.1 CM	-0.1 CM	0.0000
		C:	0.03957	0.07			BND:	0.6 CM	0.3 CM	
		V=C-O:	0.00057	0.07	0.82					
164	16451	O:	-0.01600	0.10		0.00	COM:	NOT		0.0000
		C:	-0.01600	0.10			BND:	CONTROLLED		
		V=C-O:	0.00000	0.00	0.00					
163	16311	O:	0.22500	0.10		44.46	COM:	-0.2 CM	-0.1 CM	0.0000
		C:	0.22575	0.07			BND:	0.6 CM	0.3 CM	
		V=C-O:	0.00075	0.07	1.12					
163	16321	O:	0.05100	0.10		44.46	COM:	0.2 CM	0.1 CM	0.0000
		C:	0.05025	0.07			BND:	0.6 CM	0.3 CM	
		V=C-O:	-0.00075	0.07	-1.12					
162	16211	O:	0.21900	0.10		43.87	COM:	-0.2 CM	-0.1 CM	0.0000
		C:	0.21976	0.07			BND:	0.6 CM	0.3 CM	
		V=C-O:	0.00076	0.07	1.15					
162	16231	O:	0.28900	0.10		43.87	COM:	0.2 CM	0.1 CM	0.0000
		C:	0.28824	0.07			BND:	0.6 CM	0.3 CM	
		V=C-O:	-0.00076	0.07	-1.15					

4.7 ANALYSIS OF ELEVATION DIFFERENCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (METERS)	STD. DEV. (CM)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
161	16111	O:	0.22100	0.10		0.00	COM: NOT		0.0000
		C:	0.22100	0.10			BND: CONTROLLED		
		V=C-O:	0.00000	0.00	0.00				

5.1 ADJUSTED COORDINATES AND ABSOLUTE ERROR ELLIPSE REPORT

STATION NAME	TYPE	ADJUSTED COORDINATES (METERS)		STANDARD CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	95% CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	MARGINAL STANDARD DEVIATIONS
11	FREE	EAST.: 9977.1192	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.: 10173.6777	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.: 1000.3707		ELEV. STD. DEV.:	0.09 CM			CORR.: 0.0000
12	FREE	EAST.: 9979.0467	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.: 10174.9262	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.: 1000.4116		ELEV. STD. DEV.:	0.09 CM			CORR.: 0.0000
13	FREE	EAST.: 9980.7113	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.: 10173.6617	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.: 1000.1974		ELEV. STD. DEV.:	0.09 CM			CORR.: 0.0000
14	FREE	EAST.: 9995.5502	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.: 10177.1434	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.: 992.6496		ELEV. STD. DEV.:	0.09 CM			CORR.: 0.0000
15	FREE	EAST.: 10022.2472	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.: 10176.3899	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.: 977.7854		ELEV. STD. DEV.:	0.09 CM			CORR.: 0.0000
16	FREE	EAST.: 10026.6273	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.: 10176.3835	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.: 975.2260		ELEV. STD. DEV.:	0.09 CM			CORR.: 0.0000
161	FREE	EAST.: 9884.6202	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.: 9926.4518	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.: 1000.9763		ELEV. STD. DEV.:	0.14 CM			CORR.: 0.0000
16111	FREE	EAST.: 9884.6202	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.: 9926.4518	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.: 1001.1973		ELEV. STD. DEV.:	0.09 CM			CORR.: 0.0000
16121	FREE	EAST.: 9884.6202	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.: 9926.4518	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.: 1001.0233		ELEV. STD. DEV.:	0.11 CM			CORR.: 0.0000
162	FREE	EAST.: 10087.6880	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.: 9917.4346	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.: 1014.7728		ELEV. STD. DEV.:	0.12 CM			CORR.: 0.0000
16211	FREE	EAST.: 10087.6880	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.: 9917.4346	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.: 1014.9926		ELEV. STD. DEV.:	0.09 CM			CORR.: 0.0000
16231	FREE	EAST.: 10087.6880	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.: 9917.4346	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.: 1015.0611		ELEV. STD. DEV.:	0.10 CM			CORR.: 0.0000

5.1 ADJUSTED COORDINATES AND ABSOLUTE ERROR ELLIPSE REPORT (CON'D)

STATION NAME	TYPE	ADJUSTED COORDINATES (METERS)			STANDARD CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	95% CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	MARGINAL STANDARD DEVIATIONS	
163	FREE	EAST.:	10203.6869	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10080.8551	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	925.0730		ELEV. STD. DEV.:	0.12 CM			CORR.:	0.0000
16311	FREE	EAST.:	10203.6869	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10080.8551	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	925.2987		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000
16321	FREE	EAST.:	10203.6869	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10080.8551	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	925.1232		ELEV. STD. DEV.:	0.10 CM			CORR.:	0.0000
16341	FREE	EAST.:	10203.6869	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10080.8551	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	925.2958		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000
164	FREE	EAST.:	10000.0377	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10273.8091	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1006.1912		ELEV. STD. DEV.:	0.11 CM			CORR.:	0.0000
16411	FREE	EAST.:	10000.0377	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10273.8091	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1006.4061		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000
16421	FREE	EAST.:	10000.0377	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10273.8091	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1006.2308		ELEV. STD. DEV.:	0.11 CM			CORR.:	0.0000
16431	FREE	EAST.:	10000.0377	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10273.8091	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1006.4717		ELEV. STD. DEV.:	0.11 CM			CORR.:	0.0000
16451	FREE	EAST.:	10000.0377	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10273.8091	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1006.1752		ELEV. STD. DEV.:	0.16 CM			CORR.:	0.0000
165	FREE	EAST.:	9843.3682	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10241.7497	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1009.5775		ELEV. STD. DEV.:	0.14 CM			CORR.:	0.0000
16511	FREE	EAST.:	9843.3682	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10241.7497	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1009.7971		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000
16521	FREE	EAST.:	9843.3682	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10241.7497	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1009.6185		ELEV. STD. DEV.:	0.10 CM			CORR.:	0.0000

5.1 ADJUSTED COORDINATES AND ABSOLUTE ERROR ELLIPSE REPORT (CON'D)

STATION NAME	TYPE	ADJUSTED COORDINATES (METERS)			STANDARD CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	95% CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	MARGINAL STANDARD DEVIATIONS	
166	FIXED	EAST.:	10000.0377	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	9999.9561	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.0000	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.0000
16611	FREE	EAST.:	10000.0377	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	9999.9561	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1001.5565		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000
16621	FREE	EAST.:	10000.0377	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	9999.9561	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1001.4410		ELEV. STD. DEV.:	0.11 CM			CORR.:	0.0000
16631	FREE	EAST.:	10000.0377	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	9999.9561	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1001.4725		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000
17	FREE	EAST.:	10039.5999	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10175.6059	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	966.9011		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000
18	FREE	EAST.:	10050.7145	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10174.8444	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	960.4798		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000
19	FREE	EAST.:	10076.4310	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10173.1724	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	946.8272		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000
21	FREE	EAST.:	9977.1005	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10124.0793	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.2721		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000
22	FREE	EAST.:	9979.5689	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10123.5307	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.3990		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000
23	FREE	EAST.:	9981.5818	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10124.0299	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.2415		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000
24	FREE	EAST.:	9996.6703	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10128.3890	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	991.8380		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000
25	FREE	EAST.:	10020.8889	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10129.7551	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	978.2108		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000

5.1 ADJUSTED COORDINATES AND ABSOLUTE ERROR ELLIPSE REPORT (CON'D)

STATION NAME	TYPE	ADJUSTED COORDINATES (METERS)			STANDARD CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	95% CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	MARGINAL STANDARD DEVIATIONS	
26	FREE	EAST.:	10028.1531	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10129.6703	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	974.0488		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000
27	FREE	EAST.:	10040.6822	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10130.6486	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	965.8854		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000
28	FREE	EAST.:	10050.4780	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10130.9387	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	960.6544		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000
29	FREE	EAST.:	10075.9146	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10132.3600	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	946.7501		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000
31	FREE	EAST.:	9981.3281	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10075.7317	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.4713		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000
32	FREE	EAST.:	9983.6879	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10076.4455	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.4773		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000
33	FREE	EAST.:	9986.1737	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10076.5779	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.0987		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000
34	FREE	EAST.:	10000.9422	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10074.1680	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	992.1019		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000
35	FREE	EAST.:	10025.8939	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10077.3707	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	977.7919		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000
36	FREE	EAST.:	10032.7422	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10077.9094	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	973.9531		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000
37	FREE	EAST.:	10046.3977	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10079.8491	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	965.3939		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000
38	FREE	EAST.:	10055.2805	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10081.0761	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	960.6659		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000

5.1 ADJUSTED COORDINATES AND ABSOLUTE ERROR ELLIPSE REPORT (CON'D)

STATION NAME	TYPE	ADJUSTED COORDINATES (METERS)		STANDARD CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	STANDARD CONFIDENCE ERROR ELLIPSE SEMI-MINOR	95% CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	95% CONFIDENCE ERROR ELLIPSE SEMI-MINOR	MARGINAL STANDARD DEVIATIONS	
39	FREE	EAST.:	10080.0094 FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10084.1935 FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	946.9513	ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000

5.2 ESTIMATED EDM QUANTITIES REPORT

FACTOR	ESTIMATED VALUE	STANDARD DEVIATION
ADDITIVE CONSTANT	NOT ESTIMATED	
SCALE OF DISTANCES	NOT ESTIMATED	
AMPLITUDE OF CYCLIC	NOT ESTIMATED	
PHASE OF CYCLIC	NOT ESTIMATED	
REFRACTION COEFFICIENT	0.26705	+/- 0.03741

CORRELATION COEFFICIENT MATRIX OF ESTIMATED EDM QUANTITIES:

ADDITIVE CONSTANT	0.000000	0.000000	0.000000	0.000000	0.000000
SCALE OF DISTANCES		0.000000	0.000000	0.000000	0.000000
AMPLITUDE OF CYCLIC			0.000000	0.000000	0.000000
PHASE OF CYCLIC				0.000000	0.000000
REFRACTION COEFFICIENT					1.000000

5.3 RELATIVE ERROR ELLIPSE REPORT

STATION NAME	STATION NAME	HORIZONTAL LINE INFORMATION		STANDARD RELATIVE ERROR ELLIPSE SEMI-MAJOR	STANDARD RELATIVE ERROR ELLIPSE SEMI-MINOR	95% RELATIVE ERROR ELLIPSE SEMI-MAJOR	95% RELATIVE ERROR ELLIPSE SEMI-MINOR	ELEV. DIFF. (METERS)	ELE. DIF. STD. DEV. (CM)	95% RELATIVE PRECISION
16611	16621	LTH:	0.0000 M	0.00 CM	0.00 CM	0.00 CM	0.00 CM	-0.1155	0.14	HOR.:
		AZI:	315- 0- 0	0- 0- 0	90- 0- 0					VER.: 1 / 42

5.4 SUMMARY REPORT

OBSERVATION TYPE	NUMBER	WEIGHTED SUM OF RESIDUALS SQUARED	REDUNDANCY	STD. DEV. OF UNIT WEIGHT
DIRECTIONS	0	0.000000D+00	0.000000D+00	1.00000
AZIMUTHS	0	0.000000D+00	0.000000D+00	1.00000
HORIZONTAL DISTANCE	0	0.000000D+00	0.000000D+00	1.00000
SLOPE DISTANCE	0	0.000000D+00	0.000000D+00	1.00000
SCALED DISTANCE	0	0.000000D+00	0.000000D+00	1.00000
ZENITH DISTANCE	132	0.109791D+03	0.919897D+02	1.09248
HEIGHT DIFFERENCE	13	0.337395D+01	0.401033D+01	0.91723
OBSERVED COORDINATES	0	0.000000D+00	0.000000D+00	1.00000
COORDINATE DIFF.	0	0.000000D+00	0.000000D+00	1.00000
TOTAL	145	0.113165D+03	96	1.08572

STATIONS:		
	FIXED	1
	FREE	48
	WEIGHTED	0
	TOTAL	49

CONVERGENCE:		
	ITERATIONS USED	2
	TOLERANCE	0.000100
	COMPUTATION TIME	124.941 SEC

GEODETIC NETWORK ANALYSIS GNA GEODETIC NETWORK ANALYSIS GNA GEODETIC NETWORK ANALYSIS GNA GEODETIC NETWORK ANALYSIS GNA
NETWORK ANALYSIS GNA GEODETIC NETWORK ANALYSIS GNA GEODETIC NETWORK ANALYSIS GNA GEODETIC NETWORK ANALYSIS GNA GEODETIC
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TIME: 15:36:28 DATE: 9-JAN-87

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*  BOSTON SURVEY CONSULTANTS - BALL MOUNTAIN DAM - PROJECT 1-1654.00        *
*                                                                           *
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PROJECT INFORMATION:

EPOCH 2 ANALYSIS OF HEIGHTS
DATABASE 11654002Z.DBS
1165400Z

GEODETIC NETWORK ANALYSIS
SLAP #797
INTERGRAPH CORPORATION
ONE MADISON INDUSTRIAL PARK
HUNTSVILLE, ALABAMA USA 35805

1.0 OPTIONS REPORT

O P T I O N S I N E F F E C T

PROGRAM CONTROL:

- PREANALYSIS OR ADJUSTMENT ..... ADJUSTMENT
- PERFORM VARIANCE COMPONENT ESTIMATION ..... NO
- ANGULAR I/O IN DEGREES OF GRADS ..... DEGREES
- LINEAR I/O IN METERS OR FEET ..... METERS
- MAXIMUM CPU TIME ..... 9999.0 SECONDS
- MAXIMUM NUMBER OF LEAST-SQUARES ITERATIONS 10
- ITERATION CONVERGENCE BOUNDARY VALUE 0.000100
- NUMBER OF EIGENVALUES COMPUTED ..... NONE

DEFAULT STANDARD DEVIATIONS:

MEASUREMENT TYPE	STANDARD DEVIATION
DIRECTIONS	0.00100 SEC
AZIMUTHS	0.00100 SEC
ANGULAR TARGET ECCENTRICITY	0.00000 CM
CONSTANT PART OF EDM MEASUREMENT	0.22000 CM
VARIABLE PART OF EDM MEASUREMENT	4.00000 PPM
ZENITH DISTANCE	0.50000 SEC
HEIGHT DIFFERENCE	0.10000 CM
WEIGHTED STATIONS	0.00100 CM

EDM RELATED FACTORS:

- MEAN RADIUS OF EARTH ..... 6378.0 KM
- EDM PHASE SHIFT ..... 0.00000 DEG
- EDM WAVELENGTH ..... 10.00000 METERS
- EDM ZERO ERROR ..... 0.00000 CM
- NETWORK SCALE FACTOR ..... 0.00000 PPM
- EDM CYCLIC ERROR (AMPLITUDE) ..... 0.00000 CM
- REFRACTION COEFFICIENT ..... SOLVING FOR

2.1 FIXED STATIONS INPUT REPORT

STATION NAME	FIXED COORDINATES					
	EASTING (METERS)	STD. DEV. (CM)	NORTHING (METERS)	STD. DEV. (CM)	ELEVATION (METERS)	STD. DEV. (CM)
166	10000.0376		9999.9562		1000.0000	

2.2 FREE STATIONS INPUT REPORT

STATION NAME	PRELIMINARY COORDINATES EASTING (METERS)	STD. DEV. (CM)	NORTHING (METERS)	STD. DEV. (CM)	ELEVATION (METERS)	STD. DEV. (CM)
11	9977.1179	FIXED	10173.6816	FIXED	1000.3700	
12	9979.0457	FIXED	10174.9294	FIXED	1000.4120	
12182	9846.1370	FIXED	10015.5770	FIXED	1015.0000	
13	9980.7108	FIXED	10173.6666	FIXED	1000.1974	
14	9995.5498	FIXED	10177.1489	FIXED	992.6490	
15	10022.2479	FIXED	10176.3930	FIXED	977.7848	
16	10026.6264	FIXED	10176.3901	FIXED	975.2262	
161	9884.6181	FIXED	9926.4512	FIXED	1000.9756	
16112	9884.6181	FIXED	9926.4512	FIXED	1001.2001	
16122	9884.6181	FIXED	9926.4512	FIXED	1001.1144	
16132	9884.6181	FIXED	9926.4512	FIXED	1000.9633	
162	10087.6908	FIXED	9917.4356	FIXED	1014.7739	
16212	10087.6908	FIXED	9917.4356	FIXED	1014.9964	
16222	10087.6908	FIXED	9917.4356	FIXED	1014.9122	
16232	10087.6908	FIXED	9917.4356	FIXED	1014.7613	
163	10203.6898	FIXED	10080.8577	FIXED	925.0753	
16312	10203.6898	FIXED	10080.8577	FIXED	925.2978	
16322	10203.6898	FIXED	10080.8577	FIXED	925.2144	
16332	10203.6898	FIXED	10080.8577	FIXED	925.0626	
164	10000.0376	FIXED	10273.8144	FIXED	1006.1912	
16412	10000.0376	FIXED	10273.8144	FIXED	1006.4067	
16422	10000.0376	FIXED	10273.8144	FIXED	1006.3228	
16432	10000.0376	FIXED	10273.8144	FIXED	1006.1719	
165	9843.3643	FIXED	10241.7547	FIXED	1009.5787	
16512	9843.3643	FIXED	10241.7547	FIXED	1009.7972	
16522	9843.3643	FIXED	10241.7547	FIXED	1009.7123	
16532	9843.3643	FIXED	10241.7547	FIXED	1009.5609	
16612	10000.0376	FIXED	9999.9562	FIXED	1001.4814	
16622	10000.0376	FIXED	9999.9562	FIXED	1001.4791	
17	10039.5986	FIXED	10175.6126	FIXED	966.9019	
18	10050.7138	FIXED	10174.8519	FIXED	960.4790	
19	10076.4320	FIXED	10173.1754	FIXED	946.8264	
21	9977.1002	FIXED	10124.0840	FIXED	1000.2725	
22	9979.5686	FIXED	10123.5342	FIXED	1000.3994	
23	9981.5820	FIXED	10124.0350	FIXED	1000.2414	
24	9996.6705	FIXED	10128.3926	FIXED	991.8381	
25	10020.8892	FIXED	10129.7589	FIXED	978.2101	
26	10028.1527	FIXED	10129.6742	FIXED	974.0487	
27	10040.6825	FIXED	10130.6526	FIXED	965.8859	
28	10050.4782	FIXED	10130.9430	FIXED	960.6543	
29	10075.9162	FIXED	10132.3641	FIXED	946.7490	
31	9981.3291	FIXED	10075.7328	FIXED	1000.4721	
32	9983.6871	FIXED	10076.4487	FIXED	1000.4774	
33	9986.1726	FIXED	10076.5801	FIXED	1000.0985	
34	10000.9407	FIXED	10074.1712	FIXED	992.1016	
35	10025.8935	FIXED	10077.3735	FIXED	977.7923	
36	10032.7422	FIXED	10077.9120	FIXED	973.9532	
37	10046.3973	FIXED	10079.8532	FIXED	965.3944	

2.2 FREE STATIONS INPUT REPORT (CON'D)

STATION NAME	PRELIMINARY COORDINATES					
	EASTING (METERS)	STD. DEV. (CM)	NORTHING (METERS)	STD. DEV. (CM)	ELEVATION (METERS)	STD. DEV. (CM)
38	10055.2812	FIXED	10081.0789	FIXED	960.6658	
39	10080.0085	FIXED	10084.1965	FIXED	946.9498	

2.3 WEIGHTED STATIONS INPUT REPORT

STATION NAME	WEIGHTED COORDINATES EASTING (METERS)	STD. DEV. (CM)	NORTHING (METERS)	STD. DEV. (CM)	ELEVATION (METERS)	STD. DEV. (CM)

THERE ARE NO WEIGHTED STATIONS

2.4 OBSERVED DIRECTIONS INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)

THERE ARE NO DIRECTION OBSERVATIONS

2.5 OBSERVED AZIMUTH INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)

THERE ARE NO AZIMUTH OBSERVATIONS

2.6 OBSERVED HORIZONTAL DISTANCE INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (METERS)	STAN. DEV. (CM)	MISCLOSURE (CM)

THERE ARE NO HORIZONTAL DISTANCE OBSERVATIONS

2.7 OBSERVED SLOPE DISTANCE INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (METERS)	STAN. DEV. (CM)	MISCLOSURE (CM)

THERE ARE NO SLOPE DISTANCE OBSERVATIONS

2.8 OBSERVED SCALE DISTANCE INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (METERS)	STAN. DEV. (CM)	MISCLOSURE (CM)

THERE ARE NO SCALED DISTANCE OBSERVATIONS

2.9 OBSERVED ZENITH DISTANCE INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)
16112	16522	88-28- 3.200	0.500	-1.152
16112	16422	89-11-58.200	0.500	-0.452
16112	11	90-10-51.400	0.500	-0.952
16112	12	90-10-14.800	0.500	-0.479
16112	13	90-13- 3.200	0.500	-0.297
16112	21	90-14-39.500	0.500	-0.422
16112	22	90-12-37.700	0.500	-0.329
16112	23	90-15- 0.700	0.500	-0.853
16112	31	90-14- 6.800	0.500	0.090
16112	32	90-13-51.600	0.500	-0.180
16112	33	90-20-56.300	0.500	0.139
16612	16522	88-21-53.000	0.500	-0.159
16612	31	90-44-27.500	0.500	-0.688
16612	32	90-44- 8.400	0.500	-0.070
16612	33	91- 1- 3.600	0.500	-0.268
16612	34	97-12-10.200	0.500	-0.612
16612	35	106-11- 4.600	0.500	-0.721
16612	36	108- 2-13.400	0.500	-0.380
16612	37	111-20-21.900	0.500	0.475
16612	38	112-34-51.500	0.500	-0.244
16612	39	115- 8-57.900	0.500	0.062
16612	29	109-43-51.000	0.500	0.363
16612	28	106-13- 5.900	0.500	-0.917
16612	26	101-40-40.800	0.500	-0.096
16612	25	100- 2-18.600	0.500	-0.408
16612	24	94-17-33.900	0.500	-0.450
16612	23	90-34- 1.100	0.500	0.494
16612	22	90-29-43.200	0.500	-0.215
16612	11	90-21-51.400	0.500	0.719
16612	12	90-20-53.600	0.500	-0.536
16612	13	90-25-17.700	0.500	-0.012
16612	14	92-51-11.900	0.500	-0.340
16612	15	97-35-26.300	0.500	-1.001
16612	16	98-22-18.200	0.500	0.324
16612	17	100-52-19.400	0.500	0.558
16612	18	102-41-27.300	0.500	0.572
16612	19	106- 6-13.400	0.500	-0.732
16612	16322	109-11-26.200	0.500	-0.629
16612	16222	83-38- 4.800	0.500	0.207
16612	16122	90- 9-15.200	0.500	0.073
16612	16422	88-59-17.300	0.500	-0.482
16512	11	93-35-41.600	0.500	0.059
16512	12	93-33- 5.700	0.500	0.624
16512	13	93-35- 2.200	0.500	0.148
16512	21	93- 3-40.200	0.500	-0.655
16512	22	92-59- 0.600	0.500	-0.151

2.9 OBSERVED ZENITH DISTANCE INPUT REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)
16512	23	93- 0-48.300	0.500	-0.625
16512	31	92-28-27.700	0.500	-0.197
16512	32	92-27-42.600	0.500	-0.559
16512	33	92-32-38.200	0.500	-0.739
16512	16122	91-33-53.700	0.500	-1.474
16512	16422	91-14-42.800	0.500	-0.031
16512	16222	89-16-46.200	0.500	-1.351
16412	19	115-14-48.400	0.500	0.258
16412	17	110-27-46.200	0.500	-0.664
16412	16	107- 9-31.200	0.500	-0.466
16412	15	105-59- 4.300	0.500	0.151
16412	14	98- 5-30.700	0.500	-0.041
16412	13	93-29- 2.400	0.500	-0.567
16412	12	93-23-38.500	0.500	-0.416
16412	11	93-21-48.700	0.500	-0.410
16412	21	92-19-10.500	0.500	0.055
16412	22	92-16- 7.400	0.500	-0.259
16412	23	92-20-23.900	0.500	-0.193
16412	24	95-43-11.700	0.500	-0.102
16412	25	100-57-49.800	0.500	-0.091
16412	26	102-25-34.500	0.500	-0.652
16412	27	105-13-54.700	0.500	-0.157
16412	28	106-48-11.400	0.500	-0.248
16412	29	110-23-18.600	0.500	-0.661
16412	39	106- 6-56.400	0.500	-0.273
16412	38	102-51- 7.800	0.500	-0.095
16412	37	101-37-18.000	0.500	-0.536
16412	36	99-16-51.400	0.500	0.132
16412	35	98-13- 6.900	0.500	0.189
16412	34	94- 5-56.800	0.500	-0.202
16412	33	91-49-41.600	0.500	0.265
16412	32	91-42-56.100	0.500	-0.335
16412	31	91-42-33.200	0.500	-0.167
16412	16122	90-49-46.900	0.500	-0.298
16412	16222	88-40-25.200	0.500	-0.476
16412	16322	106- 8-31.500	0.500	0.562
16312	16222	65-54-29.300	0.500	-0.554
16312	39	80- 4-27.200	0.500	-0.239
16312	38	76-35-46.200	0.500	-0.046
16312	37	75-41-58.100	0.500	-1.125
16312	36	74- 6-55.100	0.500	-0.351
16312	35	73-33-15.900	0.500	0.045
16312	34	71-46-24.600	0.500	-0.044
16312	33	71- 1-36.700	0.500	-0.424
16312	23	71-40-29.500	0.500	-0.526
16312	24	72-36-23.800	0.500	-0.312

2.9 OBSERVED ZENITH DISTANCE INPUT REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)
16312	25	74-22-42.900	0.500	-0.106
16312	26	75- 1-15.400	0.500	-0.119
16312	27	76-36-22.000	0.500	-0.115
16312	28	77-37-44.700	0.500	0.500
16312	29	81- 9- 0.600	0.500	0.182
16312	19	82-12-11.400	0.500	-0.361
16312	18	78-54-50.400	0.500	-1.041
16312	17	77-37- 1.200	0.500	-0.439
16312	16	76- 3-48.300	0.500	-0.639
16312	15	75-38-36.300	0.500	-0.013
16312	14	73-38- 3.600	0.500	-0.142
16312	13	72-46-17.200	0.500	-0.308
16312	16422	73-53-30.300	0.500	-0.171
16312	16622	70-49-51.000	0.500	-0.297
16212	31	94-21-21.300	0.500	0.053
16212	32	94-22-13.300	0.500	-0.268
16212	33	94-30-47.800	0.500	-0.062
16212	34	97-17- 2.100	0.500	0.457
16212	35	102-14-35.000	0.500	-0.028
16212	36	103-36-10.400	0.500	-0.066
16212	37	106-29-18.400	0.500	0.003
16212	38	108- 2-23.600	0.500	-0.650
16212	29	107-35-32.000	0.500	-1.275
16212	28	104- 4-37.400	0.500	0.058
16212	27	102-40-38.200	0.500	-0.368
16212	26	100-31-27.200	0.500	-0.165
16212	25	99-23- 6.400	0.500	-0.588
16212	24	95-45-23.600	0.500	-0.203
16212	23	93-38- 9.400	0.500	-0.141
16212	22	93-35-22.800	0.500	-0.182
16212	21	93-35-44.000	0.500	0.006
16212	11	93- 0- 2.900	0.500	-1.159
16212	12	92-59-17.800	0.500	-0.266
16212	13	93- 3- 5.900	0.500	-1.039
16212	14	94-38-13.500	0.500	-0.701
16212	15	97-55-55.600	0.500	-0.732
16212	16	98-30- 9.800	0.500	0.200
16212	17	100-22-43.500	0.500	-0.464
16212	18	101-50-26.400	0.500	-0.371
16212	16422	91-21-17.800	0.500	-1.275
16212	16322	114- 7-58.600	0.500	-0.895
16212	16522	90-44-49.500	0.500	-0.258

2.10 OBSERVED HEIGHT DIFFERENCE INPUT REPORT

FROM STATION	TO STATION	OBSERVED VALUE (METERS)	STAN. DEV. (CM)	MISCLOSURE (CM)
166	16612	1.4813	0.1000	-0.01
166	16622	1.4792	0.1000	0.01
165	16512	0.2185	0.1000	0.00
16532	16522	0.1514	0.1000	0.00
164	16412	0.2155	0.1000	0.00
16432	16422	0.1509	0.1000	0.00
163	16312	0.2225	0.1000	0.00
16332	16322	0.1518	0.1000	0.00
162	16212	0.2225	0.1000	0.00
16232	16222	0.1509	0.1000	0.00
161	16112	0.2245	0.1000	0.00
16132	16122	0.1511	0.1000	0.00

2.11 OBSERVED RELATIVE POSITIONS INPUT REPORT

FROM STATION	TO STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAN. DEV. (SEC)

THERE ARE NO RELATIVE POSITION OBSERVATIONS

2.12 OBSERVED COORDINATE DIFFERENCE INPUT REPORT

FROM STATION	TO STATION	OBSERVED VALUES (METERS) DX	DY	DZ	COVARIANCES (CM SQUARED) XX	XY	YY	XZ	YZ	ZZ

THERE ARE NO COORDINATE DIFFERENCE OBSERVATIONS

3.0 SOLVABILITY OF NETWORK REPORT

STATION NAME	NUMBER OF TIMES OBSERVED
161	1
16132	1
162	1
16232	1
163	1
16332	1
164	1
16432	1
165	1
16532	1
12182	0

```
**********     POINT 161        ONLY    1TIMES OBSERVED
**********     POINT 16132      ONLY    1TIMES OBSERVED
**********     POINT 162        ONLY    1TIMES OBSERVED
**********     POINT 16232      ONLY    1TIMES OBSERVED
**********     POINT 163        ONLY    1TIMES OBSERVED
**********     POINT 16332      ONLY    1TIMES OBSERVED
**********     POINT 164        ONLY    1TIMES OBSERVED
**********     POINT 16432      ONLY    1TIMES OBSERVED
**********     POINT 165        ONLY    1TIMES OBSERVED
**********     POINT 16532      ONLY    1TIMES OBSERVED
**********     POINT 12182      ONLY    0TIMES OBSERVED
```

3.1 ARRAY USAGE REPORT

FACTOR	MAXIMUM ALLOWED	ACTUAL
OBSERVATIONS	9000	146
POINTS	1000	51
FIXED & WEIGHTED POINTS	99	1
ORIENTATION UNKNOWNS	1500	0
MATRIX ELEMENTS	99998	1326

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
16112	16522	O:	88-28- 3.20	0.50		61.97	COM:	-1.0 SEC	-0.1 CM	317.9908
		C:	88-28- 3.82	0.31			BND:	2.6 SEC	0.2 CM	
		V=C-O:	0- 0- 0.62	0.39	1.59					
16112	16422	O:	89-11-58.20	0.50		84.57	COM:	0.2 SEC	0.0 CM	366.0367
		C:	89-11-58.06	0.20			BND:	2.2 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.14	0.46	-0.30					
16112	11	O:	90-10-51.40	0.50		85.32	COM:	-0.6 SEC	0.0 CM	263.9680
		C:	90-10-51.91	0.19			BND:	2.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.51	0.46	1.10					
16112	12	O:	90-10-14.80	0.50		85.48	COM:	-0.1 SEC	0.0 CM	265.8157
		C:	90-10-14.86	0.19			BND:	2.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.06	0.46	0.13					
16112	13	O:	90-13- 3.20	0.50		85.98	COM:	0.2 SEC	0.0 CM	265.2344
		C:	90-13- 3.01	0.19			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.19	0.46	-0.40					
16112	21	O:	90-14-39.50	0.50		73.76	COM:	-0.1 SEC	0.0 CM	218.2010
		C:	90-14-39.58	0.26			BND:	2.4 SEC	0.1 CM	
		V=C-O:	0- 0- 0.08	0.43	0.19					
16112	22	O:	90-12-37.70	0.50		79.59	COM:	0.0 SEC	0.0 CM	218.7631
		C:	90-12-37.68	0.23			BND:	2.3 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.02	0.45	-0.05					
16112	23	O:	90-15- 0.70	0.50		80.54	COM:	-0.6 SEC	0.0 CM	220.0940
		C:	90-15- 1.21	0.22			BND:	2.3 SEC	0.0 CM	
		V=C-O:	0- 0- 0.51	0.45	1.14					
16112	31	O:	90-14- 6.80	0.50		74.66	COM:	0.6 SEC	0.0 CM	177.8708
		C:	90-14- 6.35	0.25			BND:	2.4 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.45	0.43	-1.05					
16112	32	O:	90-13-51.60	0.50		75.12	COM:	0.2 SEC	0.0 CM	179.7607
		C:	90-13-51.46	0.25			BND:	2.4 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.14	0.43	-0.32					
16112	33	O:	90-20-56.30	0.50		75.93	COM:	0.6 SEC	0.0 CM	181.2512
		C:	90-20-55.88	0.25			BND:	2.4 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.42	0.44	-0.96					
16612	16522	O:	88-21-53.00	0.50		55.87	COM:	0.5 SEC	0.0 CM	288.1198
		C:	88-21-52.70	0.33			BND:	2.8 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.30	0.37	-0.80					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
16612	31	O:	90-44-27.50	0.50		35.29	COM:	-1.4 SEC	0.0 CM	78.0519
		C:	90-44-27.98	0.40			BND:	3.5 SEC	0.1 CM	
		V=C-O:	0- 0- 0.48	0.30	1.62					
16612	32	O:	90-44- 8.40	0.50		35.34	COM:	0.1 SEC	0.0 CM	78.2205
		C:	90-44- 8.37	0.40			BND:	3.5 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.03	0.30	-0.11					
16612	33	O:	91- 1- 3.60	0.50		38.39	COM:	-0.7 SEC	0.0 CM	77.8682
		C:	91- 1- 3.86	0.39			BND:	3.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.26	0.31	0.85					
16612	34	O:	97-12-10.20	0.50		27.78	COM:	-1.6 SEC	0.0 CM	74.2205
		C:	97-12-10.65	0.42			BND:	3.9 SEC	0.1 CM	
		V=C-O:	0- 0- 0.45	0.26	1.70					
16612	35	O:	106-11- 4.60	0.50		36.79	COM:	-1.4 SEC	0.0 CM	81.6209
		C:	106-11- 5.12	0.40			BND:	3.4 SEC	0.1 CM	
		V=C-O:	0- 0- 0.52	0.30	1.70					
16612	36	O:	108- 2-13.40	0.50		39.97	COM:	-0.6 SEC	0.0 CM	84.5381
		C:	108- 2-13.64	0.39			BND:	3.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.24	0.32	0.77					
16612	37	O:	111-20-21.90	0.50		47.52	COM:	1.2 SEC	0.0 CM	92.3729
		C:	111-20-21.32	0.36			BND:	3.0 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.58	0.34	-1.69					
16612	38	O:	112-34-51.50	0.50		52.27	COM:	-0.1 SEC	0.0 CM	98.1466
		C:	112-34-51.54	0.35			BND:	2.9 SEC	0.1 CM	
		V=C-O:	0- 0- 0.04	0.36	0.11					
16612	39	O:	115- 8-57.90	0.50		58.65	COM:	0.3 SEC	0.0 CM	116.1541
		C:	115- 8-57.73	0.32			BND:	2.7 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.17	0.38	-0.45					
16612	29	O:	109-43-51.00	0.50		71.57	COM:	0.9 SEC	0.0 CM	152.6087
		C:	109-43-50.39	0.27			BND:	2.4 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.61	0.42	-1.45					
16612	28	O:	106-13- 5.90	0.50		65.32	COM:	-1.2 SEC	0.0 CM	140.3631
		C:	106-13- 6.66	0.29			BND:	2.6 SEC	0.1 CM	
		V=C-O:	0- 0- 0.76	0.40	1.88					
16612	26	O:	101-40-40.80	0.50		60.36	COM:	0.2 SEC	0.0 CM	132.7299
		C:	101-40-40.66	0.31			BND:	2.7 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.14	0.39	-0.36					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
16612	25	O:	100- 2-18.60	0.50		59.23	COM:	-0.3 SEC	0.0 CM	131.4668
		C:	100- 2-18.75	0.32			BND:	2.7 SEC	0.1 CM	
		V=C-O:	0- 0- 0.15	0.38	0.40					
16612	24	O:	94-17-33.90	0.50		55.87	COM:	-0.4 SEC	0.0 CM	128.4805
		C:	94-17-34.12	0.33			BND:	2.8 SEC	0.1 CM	
		V=C-O:	0- 0- 0.22	0.37	0.59					
16612	23	O:	90-34- 1.10	0.50		63.62	COM:	1.0 SEC	0.0 CM	125.4438
		C:	90-34- 0.49	0.30			BND:	2.6 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.61	0.40	-1.53					
16612	22	O:	90-29-43.20	0.50		60.54	COM:	-0.1 SEC	0.0 CM	125.2617
		C:	90-29-43.28	0.31			BND:	2.7 SEC	0.1 CM	
		V=C-O:	0- 0- 0.08	0.39	0.20					
16612	11	O:	90-21-51.40	0.50		79.63	COM:	1.2 SEC	0.0 CM	175.2308
		C:	90-21-50.41	0.23			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.99	0.45	-2.21					
16612	12	O:	90-20-53.60	0.50		79.94	COM:	-0.4 SEC	0.0 CM	176.2279
		C:	90-20-53.91	0.22			BND:	2.3 SEC	0.0 CM	
		V=C-O:	0- 0- 0.31	0.45	0.69					
16612	13	O:	90-25-17.70	0.50		81.04	COM:	0.4 SEC	0.0 CM	174.7822
		C:	90-25-17.39	0.22			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.31	0.45	-0.69					
16612	14	O:	92-51-11.90	0.50		77.11	COM:	-0.1 SEC	0.0 CM	177.2495
		C:	92-51-11.97	0.24			BND:	2.4 SEC	0.0 CM	
		V=C-O:	0- 0- 0.07	0.44	0.16					
16612	15	O:	97-35-26.30	0.50		76.53	COM:	-0.9 SEC	0.0 CM	177.8292
		C:	97-35-26.97	0.24			BND:	2.4 SEC	0.0 CM	
		V=C-O:	0- 0- 0.67	0.44	1.54					
16612	16	O:	98-22-18.20	0.50		76.45	COM:	0.7 SEC	0.0 CM	178.4261
		C:	98-22-17.63	0.24			BND:	2.4 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.57	0.44	-1.31					
16612	17	O:	100-52-19.40	0.50		76.09	COM:	1.2 SEC	0.0 CM	180.0562
		C:	100-52-18.52	0.24			BND:	2.4 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.88	0.44	-2.01					
16612	18	O:	102-41-27.30	0.50		58.94	COM:	1.4 SEC	0.1 CM	182.0895
		C:	102-41-26.47	0.32			BND:	2.7 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.83	0.38	-2.16					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
16612	19	O:	106- 6-13.40	0.50		74.18	COM:	-0.6 SEC	0.0 CM	189.3172
		C:	106- 6-13.82	0.25			BND:	2.4 SEC	0.1 CM	
		V=C-O:	0- 0- 0.42	0.43	0.99					
16612	16322	O:	109-11-26.20	0.50		61.78	COM:	-0.4 SEC	0.0 CM	219.1330
		C:	109-11-26.45	0.31			BND:	2.6 SEC	0.1 CM	
		V=C-O:	0- 0- 0.25	0.39	0.63					
16612	16222	O:	83-38- 4.80	0.50		27.86	COM:	1.2 SEC	0.0 CM	120.3858
		C:	83-38- 4.48	0.42			BND:	3.9 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.32	0.26	-1.23					
16612	16122	O:	90- 9-15.20	0.50		21.51	COM:	1.4 SEC	0.1 CM	136.8380
		C:	90- 9-14.90	0.44			BND:	4.5 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.30	0.23	-1.29					
16612	16422	O:	88-59-17.30	0.50		79.88	COM:	-0.1 SEC	0.0 CM	273.8582
		C:	88-59-17.37	0.22			BND:	2.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.07	0.45	0.15					
16512	11	O:	93-35-41.60	0.50		67.30	COM:	0.4 SEC	0.0 CM	150.0799
		C:	93-35-41.32	0.29			BND:	2.5 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.28	0.41	-0.67					
16512	12	O:	93-33- 5.70	0.50		67.87	COM:	1.2 SEC	0.0 CM	151.2450
		C:	93-33- 4.90	0.28			BND:	2.5 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.80	0.41	-1.93					
16512	13	O:	93-35- 2.20	0.50		69.42	COM:	0.6 SEC	0.0 CM	153.2973
		C:	93-35- 1.77	0.28			BND:	2.5 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.43	0.42	-1.04					
16512	21	O:	93- 3-40.20	0.50		65.94	COM:	-0.6 SEC	0.0 CM	178.1339
		C:	93- 3-40.63	0.29			BND:	2.5 SEC	0.1 CM	
		V=C-O:	0- 0- 0.43	0.41	1.05					
16512	22	O:	92-59- 0.60	0.50		74.87	COM:	0.1 SEC	0.0 CM	180.3544
		C:	92-59- 0.51	0.25			BND:	2.4 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.09	0.43	-0.21					
16512	23	O:	93- 0-48.30	0.50		76.27	COM:	-0.5 SEC	0.0 CM	181.5546
		C:	93- 0-48.69	0.24			BND:	2.4 SEC	0.0 CM	
		V=C-O:	0- 0- 0.39	0.44	0.90					
16512	31	O:	92-28-27.70	0.50		84.09	COM:	0.2 SEC	0.0 CM	215.8647
		C:	92-28-27.52	0.20			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.18	0.46	-0.40					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
16512	32	O:	92-27-42.60	0.50		84.16	COM:	-0.3 SEC	0.0 CM	216.8330
		C:	92-27-42.82	0.20			BND:	2.3 SEC	0.0 CM	
		V=C-O:	0- 0- 0.22	0.46	0.47					
16512	33	O:	92-32-38.20	0.50		84.88	COM:	-0.5 SEC	0.0 CM	218.3503
		C:	92-32-38.63	0.19			BND:	2.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.43	0.46	0.93					
16512	16122	O:	91-33-53.70	0.50		80.99	COM:	-1.2 SEC	0.0 CM	317.9908
		C:	91-33-54.65	0.22			BND:	2.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.95	0.45	2.12					
16512	16422	O:	91-14-42.80	0.50		40.81	COM:	0.4 SEC	0.0 CM	159.9198
		C:	91-14-42.64	0.38			BND:	3.2 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.16	0.32	-0.51					
16512	16222	O:	89-16-46.20	0.50		83.55	COM:	-0.9 SEC	0.0 CM	406.0521
		C:	89-16-46.91	0.20			BND:	2.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.71	0.46	1.56					
16412	19	O:	115-14-48.40	0.50		57.28	COM:	0.8 SEC	0.0 CM	126.3500
		C:	115-14-47.95	0.33			BND:	2.7 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.45	0.38	-1.18					
16412	17	O:	110-27-46.20	0.50		46.35	COM:	-1.0 SEC	0.0 CM	105.8710
		C:	110-27-46.67	0.37			BND:	3.0 SEC	0.1 CM	
		V=C-O:	0- 0- 0.47	0.34	1.38					
16412	16	O:	107- 9-31.20	0.50		41.15	COM:	-1.0 SEC	0.0 CM	100.9874
		C:	107- 9-31.59	0.38			BND:	3.2 SEC	0.1 CM	
		V=C-O:	0- 0- 0.39	0.32	1.23					
16412	15	O:	105-59- 4.30	0.50		39.78	COM:	0.9 SEC	0.0 CM	99.9211
		C:	105-59- 3.95	0.39			BND:	3.3 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.35	0.32	-1.12					
16412	14	O:	98- 5-30.70	0.50		33.76	COM:	0.2 SEC	0.0 CM	96.7696
		C:	98- 5-30.64	0.41			BND:	3.6 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.06	0.29	-0.21					
16412	13	O:	93-29- 2.40	0.50		49.04	COM:	-0.7 SEC	0.0 CM	101.9956
		C:	93-29- 2.76	0.36			BND:	2.9 SEC	0.1 CM	
		V=C-O:	0- 0- 0.36	0.35	1.03					
16412	12	O:	93-23-38.50	0.50		45.84	COM:	-0.8 SEC	0.0 CM	101.0886
		C:	93-23-38.88	0.37			BND:	3.0 SEC	0.1 CM	
		V=C-O:	0- 0- 0.38	0.34	1.12					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
16412	11	O:	93-21-48.70	0.50		46.96	COM:	-0.6 SEC	0.0 CM	102.7224
		C:	93-21-49.00	0.36			BND:	3.0 SEC	0.1 CM	
		V=C-O:	0- 0- 0.30	0.34	0.87					
16412	21	O:	92-19-10.50	0.50		58.10	COM:	0.4 SEC	0.0 CM	151.4771
		C:	92-19-10.28	0.32			BND:	2.7 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.22	0.38	-0.57					
16412	22	O:	92-16- 7.40	0.50		71.90	COM:	-0.1 SEC	0.0 CM	151.6678
		C:	92-16- 7.48	0.27			BND:	2.4 SEC	0.1 CM	
		V=C-O:	0- 0- 0.08	0.42	0.19					
16412	23	O:	92-20-23.90	0.50		73.70	COM:	0.0 SEC	0.0 CM	150.9122
		C:	92-20-23.93	0.26			BND:	2.4 SEC	0.0 CM	
		V=C-O:	0- 0- 0.03	0.43	0.08					
16412	24	O:	95-43-11.70	0.50		64.72	COM:	0.2 SEC	0.0 CM	145.4608
		C:	95-43-11.56	0.30			BND:	2.6 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.14	0.40	-0.34					
16412	25	O:	100-57-49.80	0.50		66.15	COM:	0.3 SEC	0.0 CM	145.5568
		C:	100-57-49.63	0.29			BND:	2.5 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.17	0.41	-0.42					
16412	26	O:	102-25-34.50	0.50		67.05	COM:	-0.6 SEC	0.0 CM	146.8566
		C:	102-25-34.91	0.29			BND:	2.5 SEC	0.1 CM	
		V=C-O:	0- 0- 0.41	0.41	1.00					
16412	27	O:	105-13-54.70	0.50		53.66	COM:	0.0 SEC	0.0 CM	148.8197
		C:	105-13-54.70	0.34			BND:	2.8 SEC	0.1 CM	
		V=C-O:	0- 0- 0.00	0.37	0.00					
16412	28	O:	106-48-11.40	0.50		69.90	COM:	-0.1 SEC	0.0 CM	151.5140
		C:	106-48-11.48	0.27			BND:	2.5 SEC	0.1 CM	
		V=C-O:	0- 0- 0.08	0.42	0.19					
16412	29	O:	110-23-18.60	0.50		74.31	COM:	-0.5 SEC	0.0 CM	160.5171
		C:	110-23-19.01	0.25			BND:	2.4 SEC	0.1 CM	
		V=C-O:	0- 0- 0.41	0.43	0.95					
16412	39	O:	106- 6-56.40	0.50		80.65	COM:	0.0 SEC	0.0 CM	205.7919
		C:	106- 6-56.40	0.22			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.00	0.45	-0.01					
16412	38	O:	102-51- 7.80	0.50		82.82	COM:	0.3 SEC	0.0 CM	200.4965
		C:	102-51- 7.55	0.21			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.25	0.46	-0.54					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
16412	37	O:	101-37-18.00	0.50		83.12	COM:	-0.3 SEC	0.0 CM	199.4246
		C:	101-37-18.24	0.21			BND:	2.3 SEC	0.0 CM	
		V=C-O:	0- 0- 0.24	0.46	0.53					
16412	36	O:	99-16-51.40	0.50		83.93	COM:	0.5 SEC	0.0 CM	198.6135
		C:	99-16-50.95	0.20			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.45	0.46	-0.97					
16412	35	O:	98-13- 6.90	0.50		84.30	COM:	0.6 SEC	0.0 CM	198.1352
		C:	98-13- 6.37	0.20			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.53	0.46	-1.17					
16412	34	O:	94- 5-56.80	0.50		85.71	COM:	0.2 SEC	0.0 CM	199.6452
		C:	94- 5-56.67	0.19			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.13	0.46	-0.28					
16412	33	O:	91-49-41.60	0.50		86.98	COM:	0.6 SEC	0.0 CM	197.7210
		C:	91-49-41.07	0.18			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.53	0.47	-1.14					
16412	32	O:	91-42-56.10	0.50		86.16	COM:	0.0 SEC	0.0 CM	198.0418
		C:	91-42-56.13	0.19			BND:	2.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.03	0.46	0.07					
16412	31	O:	91-42-33.20	0.50		86.26	COM:	0.2 SEC	0.0 CM	198.9631
		C:	91-42-33.02	0.19			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.18	0.46	-0.39					
16412	16122	O:	90-49-46.90	0.50		82.65	COM:	0.4 SEC	0.0 CM	366.0367
		C:	90-49-46.60	0.21			BND:	2.3 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.30	0.45	-0.65					
16412	16222	O:	88-40-25.20	0.50		84.84	COM:	0.1 SEC	0.0 CM	366.9999
		C:	88-40-25.11	0.19			BND:	2.2 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.09	0.46	-0.20					
16412	16322	O:	106- 8-31.50	0.50		73.45	COM:	1.4 SEC	0.1 CM	280.5468
		C:	106- 8-30.47	0.26			BND:	2.4 SEC	0.1 CM	
		V=C-O:	- 0- 0- 1.03	0.43	-2.41					
16312	16222	O:	65-54-29.30	0.50		79.65	COM:	-0.4 SEC	0.0 CM	200.4060
		C:	65-54-29.58	0.23			BND:	2.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.28	0.45	0.63					
16312	39	O:	80- 4-27.20	0.50		48.18	COM:	-0.3 SEC	0.0 CM	123.7264
		C:	80- 4-27.36	0.36			BND:	3.0 SEC	0.1 CM	
		V=C-O:	0- 0- 0.16	0.35	0.45					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
16312	38	O:	76-35-46.20	0.50		70.63	COM:	0.3 SEC	0.0 CM	148.4088
		C:	76-35-46.00	0.27			BND:	2.5 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.20	0.42	-0.48					
16312	37	O:	75-41-58.10	0.50		74.95	COM:	-1.2 SEC	0.0 CM	157.2957
		C:	75-41-59.02	0.25			BND:	2.4 SEC	0.0 CM	
		V=C-O:	0- 0- 0.92	0.43	2.12					
16312	36	O:	74- 6-55.10	0.50		80.62	COM:	-0.1 SEC	0.0 CM	170.9730
		C:	74- 6-55.19	0.22			BND:	2.3 SEC	0.0 CM	
		V=C-O:	0- 0- 0.09	0.45	0.21					
16312	35	O:	73-33-15.90	0.50		82.73	COM:	0.4 SEC	0.0 CM	177.8304
		C:	73-33-15.55	0.21			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.35	0.45	-0.77					
16312	34	O:	71-46-24.60	0.50		87.77	COM:	0.3 SEC	0.0 CM	202.8593
		C:	71-46-24.31	0.17			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.29	0.47	-0.61					
16312	33	O:	71- 1-36.70	0.50		89.82	COM:	-0.1 SEC	0.0 CM	217.5593
		C:	71- 1-36.82	0.16			BND:	2.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.12	0.47	0.26					
16312	23	O:	71-40-29.50	0.50		88.10	COM:	-0.2 SEC	0.0 CM	226.2657
		C:	71-40-29.71	0.17			BND:	2.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.21	0.47	0.46					
16312	24	O:	72-36-23.80	0.50		83.93	COM:	0.0 SEC	0.0 CM	212.4066
		C:	72-36-23.77	0.20			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.03	0.46	-0.06					
16312	25	O:	74-22-42.90	0.50		79.51	COM:	0.3 SEC	0.0 CM	189.2284
		C:	74-22-42.69	0.23			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.21	0.45	-0.47					
16312	26	O:	75- 1-15.40	0.50		77.59	COM:	0.2 SEC	0.0 CM	182.1986
		C:	75- 1-15.23	0.24			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.17	0.44	-0.39					
16312	27	O:	76-36-22.00	0.50		62.13	COM:	0.1 SEC	0.0 CM	170.4433
		C:	76-36-21.92	0.31			BND:	2.6 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.08	0.39	-0.19					
16312	28	O:	77-37-44.70	0.50		69.53	COM:	1.0 SEC	0.0 CM	161.1904
		C:	77-37-44.02	0.28			BND:	2.5 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.68	0.42	-1.62					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
16312	29	O:	81- 9- 0.60	0.50		56.82	COM:	0.7 SEC	0.0 CM	137.7643
		C:	81- 9- 0.22	0.33			BND:	2.7 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.38	0.38	-1.01					
16312	19	O:	82-12-11.40	0.50		58.91	COM:	-0.2 SEC	0.0 CM	157.2167
		C:	82-12-11.53	0.32			BND:	2.7 SEC	0.1 CM	
		V=C-O:	0- 0- 0.13	0.38	0.34					
16312	18	O:	78-54-50.40	0.50		55.98	COM:	-1.4 SEC	-0.1 CM	179.5454
		C:	78-54-51.21	0.33			BND:	2.8 SEC	0.1 CM	
		V=C-O:	0- 0- 0.81	0.37	2.16					
16312	17	O:	77-37- 1.20	0.50		77.68	COM:	-0.2 SEC	0.0 CM	189.4846
		C:	77-37- 1.33	0.24			BND:	2.3 SEC	0.0 CM	
		V=C-O:	0- 0- 0.13	0.44	0.28					
16312	16	O:	76- 3-48.30	0.50		81.42	COM:	-0.4 SEC	0.0 CM	201.1912
		C:	76- 3-48.66	0.22			BND:	2.3 SEC	0.0 CM	
		V=C-O:	0- 0- 0.36	0.45	0.81					
16312	15	O:	75-38-36.30	0.50		82.38	COM:	0.4 SEC	0.0 CM	205.0565
		C:	75-38-35.96	0.21			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.34	0.45	-0.74					
16312	14	O:	73-38- 3.60	0.50		86.27	COM:	0.2 SEC	0.0 CM	229.3344
		C:	73-38- 3.40	0.19			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.20	0.46	-0.44					
16312	13	O:	72-46-17.20	0.50		89.12	COM:	0.1 SEC	0.0 CM	241.5225
		C:	72-46-17.10	0.16			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.10	0.47	-0.20					
16312	16422	O:	73-53-30.30	0.50		82.93	COM:	0.3 SEC	0.0 CM	280.5468
		C:	73-53-30.06	0.21			BND:	2.3 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.24	0.46	-0.54					
16312	16622	O:	70-49-51.00	0.50		14.92	COM:	0.2 SEC	0.0 CM	219.1330
		C:	70-49-50.97	0.46			BND:	5.3 SEC	0.5 CM	
		V=C-O:	- 0- 0- 0.03	0.19	-0.17					
16212	31	O:	94-21-21.30	0.50		84.71	COM:	0.4 SEC	0.0 CM	190.7113
		C:	94-21-20.94	0.20			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.36	0.46	-0.78					
16212	32	O:	94-22-13.30	0.50		84.56	COM:	0.0 SEC	0.0 CM	190.0051
		C:	94-22-13.31	0.20			BND:	2.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.01	0.46	0.02					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
16212	33	O:	94-30-47.80	0.50		84.98	COM:	0.2 SEC	0.0 CM	188.7668
		C:	94-30-47.64	0.19			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.16	0.46	-0.34					
16212	34	O:	97-17- 2.10	0.50		82.24	COM:	0.9 SEC	0.0 CM	179.1414
		C:	97-17- 1.37	0.21			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.73	0.45	-1.60					
16212	35	O:	102-14-35.00	0.50		79.58	COM:	0.3 SEC	0.0 CM	171.4615
		C:	102-14-34.75	0.23			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.25	0.45	-0.55					
16212	36	O:	103-36-10.40	0.50		78.83	COM:	0.2 SEC	0.0 CM	169.6232
		C:	103-36-10.23	0.23			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.17	0.44	-0.38					
16212	37	O:	106-29-18.40	0.50		77.75	COM:	0.3 SEC	0.0 CM	167.5847
		C:	106-29-18.19	0.24			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.21	0.44	-0.48					
16212	38	O:	108- 2-23.60	0.50		77.43	COM:	-0.5 SEC	0.0 CM	166.8218
		C:	108- 2-23.99	0.24			BND:	2.3 SEC	0.0 CM	
		V=C-O:	0- 0- 0.39	0.44	0.89					
16212	29	O:	107-35-32.00	0.50		83.31	COM:	-1.1 SEC	0.0 CM	215.2508
		C:	107-35-32.95	0.20			BND:	2.3 SEC	0.0 CM	
		V=C-O:	0- 0- 0.95	0.46	2.09					
16212	28	O:	104- 4-37.40	0.50		82.78	COM:	0.4 SEC	0.0 CM	216.7261
		C:	104- 4-37.07	0.21			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.33	0.45	-0.73					
16212	27	O:	102-40-38.20	0.50		75.63	COM:	-0.1 SEC	0.0 CM	218.3375
		C:	102-40-38.30	0.25			BND:	2.4 SEC	0.1 CM	
		V=C-O:	0- 0- 0.10	0.43	0.22					
16212	26	O:	100-31-27.20	0.50		83.10	COM:	0.2 SEC	0.0 CM	220.4314
		C:	100-31-27.03	0.21			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.17	0.46	-0.38					
16212	25	O:	99-23- 6.40	0.50		83.33	COM:	-0.3 SEC	0.0 CM	222.5840
		C:	99-23- 6.63	0.20			BND:	2.3 SEC	0.0 CM	
		V=C-O:	0- 0- 0.23	0.46	0.51					
16212	24	O:	95-45-23.60	0.50		83.95	COM:	0.2 SEC	0.0 CM	229.7554
		C:	95-45-23.45	0.20			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.15	0.46	-0.33					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
16212	23	O:	93-38- 9.40	0.50		87.06	COM:	0.2 SEC	0.0 CM	232.2550
		C:	93-38- 9.24	0.18			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.16	0.47	-0.34					
16212	22	O:	93-35-22.80	0.50		86.21	COM:	0.2 SEC	0.0 CM	232.7381
		C:	93-35-22.67	0.19			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.13	0.46	-0.28					
16212	21	O:	93-35-44.00	0.50		80.49	COM:	0.4 SEC	0.0 CM	234.3797
		C:	93-35-43.69	0.22			BND:	2.3 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.31	0.45	-0.70					
16212	11	O:	93- 0- 2.90	0.50		89.69	COM:	-0.8 SEC	0.0 CM	279.0849
		C:	93- 0- 3.64	0.16			BND:	2.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.74	0.47	1.57					
16212	12	O:	92-59-17.80	0.50		89.74	COM:	0.1 SEC	0.0 CM	279.4760
		C:	92-59-17.67	0.16			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.13	0.47	-0.27					
16212	13	O:	93- 3- 5.90	0.50		90.30	COM:	-0.7 SEC	0.0 CM	277.6671
		C:	93- 3- 6.49	0.16			BND:	2.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.59	0.48	1.24					
16212	14	O:	94-38-13.50	0.50		88.48	COM:	-0.3 SEC	0.0 CM	275.5739
		C:	94-38-13.79	0.17			BND:	2.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.29	0.47	0.62					
16212	15	O:	97-55-55.60	0.50		87.76	COM:	-0.3 SEC	0.0 CM	267.0987
		C:	97-55-55.90	0.17			BND:	2.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.30	0.47	0.64					
16212	16	O:	98-30- 9.80	0.50		87.60	COM:	0.7 SEC	0.0 CM	266.0569
		C:	98-30- 9.22	0.18			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.58	0.47	-1.23					
16212	17	O:	100-22-43.50	0.50		87.00	COM:	-0.1 SEC	0.0 CM	262.6180
		C:	100-22-43.55	0.18			BND:	2.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.05	0.47	0.10					
16212	18	O:	101-50-26.40	0.50		78.20	COM:	0.0 SEC	0.0 CM	260.0586
		C:	101-50-26.40	0.23			BND:	2.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.00	0.44	0.00					
16212	16422	O:	91-21-17.80	0.50		86.36	COM:	-0.8 SEC	0.0 CM	366.9999
		C:	91-21-18.52	0.18			BND:	2.2 SEC	0.1 CM	
		V=C-O:	0- 0- 0.72	0.46	1.55					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
16212	16322	O: 114- 7-58.60	0.50		58.21	COM:	-1.0 SEC	0.0 CM	200.4060
		C: 114- 7-59.18	0.32			BND:	2.7 SEC	0.1 CM	
		V=C-O: 0- 0- 0.58	0.38	1.51					
16212	16522	O: 90-44-49.50	0.50		76.05	COM:	0.5 SEC	0.0 CM	406.0521
		C: 90-44-49.12	0.24			BND:	2.4 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.38	0.44	-0.87					

4.7 ANALYSIS OF ELEVATION DIFFERENCE OBSERVATIONS REPORT

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (METERS)	STD. DEV. (CM)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
166	16612	O:	1.48130	0.10		42.08	COM:	0.0 CM	0.0 CM	0.0000
		C:	1.48141	0.08			BND:	0.6 CM	0.4 CM	
		V=C-O:	0.00011	0.06	0.17					
166	16622	O:	1.47920	0.10		42.08	COM:	0.0 CM	0.0 CM	0.0000
		C:	1.47909	0.08			BND:	0.6 CM	0.4 CM	
		V=C-O:	-0.00011	0.06	-0.17					
165	16512	O:	0.21850	0.10		0.00	COM:	NOT		0.0000
		C:	0.21850	0.10			BND:	CONTROLLED		
		V=C-O:	0.00000	0.00	0.00					
16532	16522	O:	0.15140	0.10		0.00	COM:	NOT		0.0000
		C:	0.15140	0.10			BND:	CONTROLLED		
		V=C-O:	0.00000	0.00	0.00					
164	16412	O:	0.21550	0.10		0.00	COM:	NOT		0.0000
		C:	0.21550	0.10			BND:	CONTROLLED		
		V=C-O:	0.00000	0.00	0.00					
16432	16422	O:	0.15090	0.10		0.00	COM:	NOT		0.0000
		C:	0.15090	0.10			BND:	CONTROLLED		
		V=C-O:	0.00000	0.00	0.00					
163	16312	O:	0.22250	0.10		0.00	COM:	NOT		0.0000
		C:	0.22250	0.10			BND:	CONTROLLED		
		V=C-O:	0.00000	0.00	0.00					
16332	16322	O:	0.15180	0.10		0.00	COM:	NOT		0.0000
		C:	0.15180	0.10			BND:	CONTROLLED		
		V=C-O:	0.00000	0.00	0.00					
162	16212	O:	0.22250	0.10		0.00	COM:	NOT		0.0000
		C:	0.22250	0.10			BND:	CONTROLLED		
		V=C-O:	0.00000	0.00	0.00					
16232	16222	O:	0.15090	0.10		0.00	COM:	NOT		0.0000
		C:	0.15090	0.10			BND:	CONTROLLED		
		V=C-O:	0.00000	0.00	0.00					
161	16112	O:	0.22450	0.10		0.00	COM:	NOT		0.0000
		C:	0.22450	0.10			BND:	CONTROLLED		
		V=C-O:	0.00000	0.00	0.00					
16132	16122	O:	0.15110	0.10		0.00	COM:	NOT		0.0000
		C:	0.15110	0.10			BND:	CONTROLLED		
		V=C-O:	0.00000	0.00	0.00					

5.1 ADJUSTED COORDINATES AND ABSOLUTE ERROR ELLIPSE REPORT

STATION NAME	TYPE	ADJUSTED COORDINATES (METERS)			STANDARD CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	95% CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	MARGINAL STANDARD DEVIATIONS	
11	FREE	EAST.:	9977.1179	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10173.6816	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.3700		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
12	FREE	EAST.:	9979.0457	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10174.9294	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.4120		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
12182	FREE	EAST.:	9846.1370	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10015.5770	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1015.0000		ELEV. STD. DEV.:	0.00 CM			CORR.:	0.0000
13	FREE	EAST.:	9980.7108	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10173.6666	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.1974		ELEV. STD. DEV.:	0.07 CM			CORR.:	0.0000
14	FREE	EAST.:	9995.5498	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10177.1489	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	992.6490		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
15	FREE	EAST.:	10022.2479	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10176.3930	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	977.7848		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
16	FREE	EAST.:	10026.6264	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10176.3901	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	975.2262		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
161	FREE	EAST.:	9884.6181	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	9926.4512	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.9756		ELEV. STD. DEV.:	0.12 CM			CORR.:	0.0000
16112	FREE	EAST.:	9884.6181	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	9926.4512	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1001.2001		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
16122	FREE	EAST.:	9884.6181	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	9926.4512	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1001.1144		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
16132	FREE	EAST.:	9884.6181	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	9926.4512	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.9633		ELEV. STD. DEV.:	0.12 CM			CORR.:	0.0000
162	FREE	EAST.:	10087.6908	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	9917.4356	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1014.7739		ELEV. STD. DEV.:	0.12 CM			CORR.:	0.0000

5.1 ADJUSTED COORDINATES AND ABSOLUTE ERROR ELLIPSE REPORT (CON'D)

STATION NAME	TYPE	ADJUSTED COORDINATES (METERS)			STANDARD CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	95% CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	MARGINAL STANDARD DEVIATIONS	
16212	FREE	EAST.:	10087.6908	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	9917.4356	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1014.9964		ELEV. STD. DEV.:	0.07 CM			CORR.:	0.0000
16222	FREE	EAST.:	10087.6908	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	9917.4356	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1014.9122		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
16232	FREE	EAST.:	10087.6908	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	9917.4356	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1014.7613		ELEV. STD. DEV.:	0.12 CM			CORR.:	0.0000
163	FREE	EAST.:	10203.6898	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10080.8577	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	925.0753		ELEV. STD. DEV.:	0.12 CM			CORR.:	0.0000
16312	FREE	EAST.:	10203.6898	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10080.8577	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	925.2978		ELEV. STD. DEV.:	0.07 CM			CORR.:	0.0000
16322	FREE	EAST.:	10203.6898	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10080.8577	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	925.2144		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
16332	FREE	EAST.:	10203.6898	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10080.8577	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	925.0626		ELEV. STD. DEV.:	0.13 CM			CORR.:	0.0000
164	FREE	EAST.:	10000.0376	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10273.8144	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1006.1912		ELEV. STD. DEV.:	0.12 CM			CORR.:	0.0000
16412	FREE	EAST.:	10000.0376	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10273.8144	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1006.4067		ELEV. STD. DEV.:	0.07 CM			CORR.:	0.0000
16422	FREE	EAST.:	10000.0376	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10273.8144	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1006.3228		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
16432	FREE	EAST.:	10000.0376	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10273.8144	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1006.1719		ELEV. STD. DEV.:	0.12 CM			CORR.:	0.0000
165	FREE	EAST.:	9843.3643	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10241.7547	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1009.5787		ELEV. STD. DEV.:	0.12 CM			CORR.:	0.0000

5.1 ADJUSTED COORDINATES AND ABSOLUTE ERROR ELLIPSE REPORT (CON'D)

STATION NAME	TYPE	ADJUSTED COORDINATES (METERS)		STANDARD CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	95% CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	MARGINAL STANDARD DEVIATIONS
16512	FREE	EAST.: 9843.3643	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.: 10241.7547	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.: 1009.7972		ELEV. STD. DEV.:	0.07 CM			CORR.: 0.0000
16522	FREE	EAST.: 9843.3643	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.: 10241.7547	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.: 1009.7123		ELEV. STD. DEV.:	0.09 CM			CORR.: 0.0000
16532	FREE	EAST.: 9843.3643	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.: 10241.7547	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.: 1009.5609		ELEV. STD. DEV.:	0.13 CM			CORR.: 0.0000
166	FIXED	EAST.: 10000.0376	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.: 9999.9562	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.: 1000.0000	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.0000
16612	FREE	EAST.: 10000.0376	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.: 9999.9562	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.: 1001.4814		ELEV. STD. DEV.:	0.07 CM			CORR.: 0.0000
16622	FREE	EAST.: 10000.0376	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.: 9999.9562	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.: 1001.4791		ELEV. STD. DEV.:	0.07 CM			CORR.: 0.0000
17	FREE	EAST.: 10039.5986	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.: 10175.6126	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.: 966.9019		ELEV. STD. DEV.:	0.08 CM			CORR.: 0.0000
18	FREE	EAST.: 10050.7138	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.: 10174.8519	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.: 960.4790		ELEV. STD. DEV.:	0.08 CM			CORR.: 0.0000
19	FREE	EAST.: 10076.4320	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.: 10173.1754	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.: 946.8264		ELEV. STD. DEV.:	0.08 CM			CORR.: 0.0000
21	FREE	EAST.: 9977.1002	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.: 10124.0840	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.: 1000.2725		ELEV. STD. DEV.:	0.08 CM			CORR.: 0.0000
22	FREE	EAST.: 9979.5686	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.: 10123.5342	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.: 1000.3994		ELEV. STD. DEV.:	0.08 CM			CORR.: 0.0000
23	FREE	EAST.: 9981.5820	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.: 10124.0350	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.: 1000.2414		ELEV. STD. DEV.:	0.07 CM			CORR.: 0.0000

5.1 ADJUSTED COORDINATES AND ABSOLUTE ERROR ELLIPSE REPORT (CON'D)

STATION NAME	TYPE	ADJUSTED COORDINATES (METERS)			STANDARD CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	95% CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	MARGINAL STANDARD DEVIATIONS	
24	FREE	EAST.:	9996.6705	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10128.3926	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	991.8381		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
25	FREE	EAST.:	10020.8892	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10129.7589	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	978.2101		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
26	FREE	EAST.:	10028.1527	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10129.6742	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	974.0487		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
27	FREE	EAST.:	10040.6825	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10130.6526	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	965.8859		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
28	FREE	EAST.:	10050.4782	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10130.9430	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	960.6543		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
29	FREE	EAST.:	10075.9162	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10132.3641	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	946.7490		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
31	FREE	EAST.:	9981.3291	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10075.7328	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.4721		ELEV. STD. DEV.:	0.07 CM			CORR.:	0.0000
32	FREE	EAST.:	9983.6871	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10076.4487	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.4774		ELEV. STD. DEV.:	0.07 CM			CORR.:	0.0000
33	FREE	EAST.:	9986.1726	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10076.5801	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.0985		ELEV. STD. DEV.:	0.07 CM			CORR.:	0.0000
34	FREE	EAST.:	10000.9407	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10074.1712	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	992.1016		ELEV. STD. DEV.:	0.07 CM			CORR.:	0.0000
35	FREE	EAST.:	10025.8935	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10077.3735	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	977.7923		ELEV. STD. DEV.:	0.07 CM			CORR.:	0.0000
36	FREE	EAST.:	10032.7422	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10077.9120	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	973.9532		ELEV. STD. DEV.:	0.07 CM			CORR.:	0.0000

5.1 ADJUSTED COORDINATES AND ABSOLUTE ERROR ELLIPSE REPORT (CON'D)

STATION NAME	TYPE	ADJUSTED COORDINATES (METERS)		STANDARD CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	95% CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	MARGINAL STANDARD DEVIATIONS
37	FREE	EAST.:	10046.3973 FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.:	10079.8532 FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.:	965.3944	ELEV. STD. DEV.:	0.08 CM			CORR.: 0.0000
38	FREE	EAST.:	10055.2812 FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.:	10081.0789 FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.:	960.6658	ELEV. STD. DEV.:	0.08 CM			CORR.: 0.0000
39	FREE	EAST.:	10080.0085 FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.:	10084.1965 FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.:	946.9498	ELEV. STD. DEV.:	0.08 CM			CORR.: 0.0000

5.2 ESTIMATED EDM QUANTITIES REPORT

FACTOR	ESTIMATED VALUE	STANDARD DEVIATION
ADDITIVE CONSTANT	NOT ESTIMATED	
SCALE OF DISTANCES	NOT ESTIMATED	
AMPLITUDE OF CYCLIC	NOT ESTIMATED	
PHASE OF CYCLIC	NOT ESTIMATED	
REFRACTION COEFFICIENT	0.23155	+/- 0.02999

CORRELATION COEFFICIENT MATRIX OF ESTIMATED EDM QUANTITIES:

ADDITIVE CONSTANT	0.000000	0.000000	0.000000	0.000000	0.000000
SCALE OF DISTANCES		0.000000	0.000000	0.000000	0.000000
AMPLITUDE OF CYCLIC			0.000000	0.000000	0.000000
PHASE OF CYCLIC				0.000000	0.000000
REFRACTION COEFFICIENT					1.000000

5.3 RELATIVE ERROR ELLIPSE REPORT

STATION NAME	STATION NAME	HORIZONTAL LINE INFORMATION		STANDARD RELATIVE ERROR ELLIPSE SEMI-MAJOR	STANDARD RELATIVE ERROR ELLIPSE SEMI-MINOR	95% RELATIVE ERROR ELLIPSE SEMI-MAJOR	95% RELATIVE ERROR ELLIPSE SEMI-MINOR	ELEV. DIFF. (METERS)	ELE. DIF. STD. DEV. (CM)	95% RELATIVE PRECISION	
161	16112	LTH:	0.0000 M	0.00 CM	0.00 CM	0.00 CM	0.00 CM	0.2245	0.12	HOR.:	
		AZI:	315- 0- 0	0- 0- 0	90- 0- 0					VER.: 1 /	93

5.4 SUMMARY REPORT

OBSERVATION TYPE	NUMBER	WEIGHTED SUM OF RESIDUALS SQUARED	REDUNDANCY	STD. DEV. OF UNIT WEIGHT
DIRECTIONS	0	0.000000D+00	0.000000D+00	1.00000
AZIMUTHS	0	0.000000D+00	0.000000D+00	1.00000
HORIZONTAL DISTANCE	0	0.000000D+00	0.000000D+00	1.00000
SLOPE DISTANCE	0	0.000000D+00	0.000000D+00	1.00000
SCALED DISTANCE	0	0.000000D+00	0.000000D+00	1.00000
ZENITH DISTANCE	134	0.885879D+02	0.951584D+02	0.96486
HEIGHT DIFFERENCE	12	0.235715D-01	0.841642D+00	0.16735
OBSERVED COORDINATES	0	0.000000D+00	0.000000D+00	1.00000
COORDINATE DIFF.	0	0.000000D+00	0.000000D+00	1.00000
TOTAL	146	0.886115D+02	96	0.96075

STATIONS:		
	FIXED	1
	FREE	50
	WEIGHTED	0
	TOTAL	51

CONVERGENCE:		
	ITERATIONS USED	2
	TOLERANCE	0.000100
	COMPUTATION TIME	132.551 SEC

GEODETIC NETWORK ANALYSIS GNA GEODETIC NETWORK ANALYSIS GNA GEODETIC NETWORK ANALYSIS GNA GEODETIC NETWORK ANALYSIS GNA
NETWORK ANALYSIS GNA GEODETIC NETWORK ANALYSIS GNA GEODETIC NETWORK ANALYSIS GNA GEODETIC NETWORK ANALYSIS GNA GEODETIC
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TIME: 15:40:27 DATE: 9-JAN-87

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*  BOSTON SURVEY CONSULTANTS - BALL MOUNTAIN DAM - PROJECT 1-1654.00                *
*                                                                                   *
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PROJECT INFORMATION:

EPOCH 3 ANALYSIS OF HEIGHTS
DATABASE 11654003Z.DBS
1165400Z

GEODETIC NETWORK ANALYSIS
SLAP #797
INTERGRAPH CORPORATION
ONE MADISON INDUSTRIAL PARK
HUNTSVILLE, ALABAMA USA 35805

1.0 OPTIONS REPORT

O P T I O N S I N E F F E C T

PROGRAM CONTROL:

- PREANALYSIS OR ADJUSTMENT ..... ADJUSTMENT
- PERFORM VARIANCE COMPONENT ESTIMATION ..... NO
- ANGULAR I/O IN DEGREES OF GRADS ..... DEGREES
- LINEAR I/O IN METERS OR FEET ..... METERS
- MAXIMUM CPU TIME ..... 9999.0 SECONDS
- MAXIMUM NUMBER OF LEAST-SQUARES ITERATIONS 10
- ITERATION CONVERGENCE BOUNDARY VALUE 0.000100
- NUMBER OF EIGENVALUES COMPUTED ..... NONE

DEFAULT STANDARD DEVIATIONS:

MEASUREMENT TYPE	STANDARD DEVIATION
DIRECTIONS	0.00100 SEC
AZIMUTHS	0.00100 SEC
ANGULAR TARGET ECCENTRICITY	0.00000 CM
CONSTANT PART OF EDM MEASUREMENT	0.22000 CM
VARIABLE PART OF EDM MEASUREMENT	4.00000 PPM
ZENITH DISTANCE	0.60000 SEC
HEIGHT DIFFERENCE	0.10000 CM
WEIGHTED STATIONS	0.00100 CM

EDM RELATED FACTORS:

- MEAN RADIUS OF EARTH ..... 6378.0 KM
- EDM PHASE SHIFT ..... 0.00000 DEG
- EDM WAVELENGTH ..... 10.00000 METERS
- EDM ZERO ERROR ..... 0.00000 CM
- NETWORK SCALE FACTOR ..... 0.00000 PPM
- EDM CYCLIC ERROR (AMPLITUDE) ..... 0.00000 CM
- REFRACTION COEFFICIENT ..... SOLVING FOR

2.1 FIXED STATIONS INPUT REPORT

STATION NAME	FIXED COORDINATES EASTING (METERS)	STD. DEV. (CM)	NORTHING (METERS)	STD. DEV. (CM)	ELEVATION (METERS)	STD. DEV. (CM)
166	10000.0376		9999.9562		1000.0000	

2.2 FREE STATIONS INPUT REPORT

STATION NAME	PRELIMINARY COORDINATES EASTING (METERS)	STD. DEV. (CM)	NORTHING (METERS)	STD. DEV. (CM)	ELEVATION (METERS)	STD. DEV. (CM)
11	9977.1172	FIXED	10173.6877	FIXED	1000.3732	
12	9979.0451	FIXED	10174.9374	FIXED	1000.4154	
12183	9846.9425	FIXED	10016.2121	FIXED	1010.9065	
13	9980.7103	FIXED	10173.6725	FIXED	1000.1998	
14	9995.5499	FIXED	10177.1530	FIXED	992.6504	
15	10022.2476	FIXED	10176.3998	FIXED	977.7869	
16	10026.6277	FIXED	10176.3942	FIXED	975.2279	
161	9884.6165	FIXED	9926.4538	FIXED	1000.9760	
16113	9884.6165	FIXED	9926.4538	FIXED	1001.2550	
16123	9884.6165	FIXED	9926.4538	FIXED	1001.1171	
16133	9884.6165	FIXED	9926.4538	FIXED	1001.1510	
162	10087.6923	FIXED	9917.4407	FIXED	1014.7738	
16213	10087.6923	FIXED	9917.4407	FIXED	1015.0483	
16223	10087.6923	FIXED	9917.4407	FIXED	1014.9146	
16233	10087.6923	FIXED	9917.4407	FIXED	1015.1510	
163	10203.6906	FIXED	10080.8608	FIXED	925.0741	
16313	10203.6906	FIXED	10080.8608	FIXED	925.3516	
16323	10203.6906	FIXED	10080.8608	FIXED	925.2176	
16333	10203.6906	FIXED	10080.8608	FIXED	925.0658	
164	10000.0376	FIXED	10273.8214	FIXED	1006.1901	
16413	10000.0376	FIXED	10273.8214	FIXED	1006.4631	
16423	10000.0376	FIXED	10273.8214	FIXED	1006.3269	
16433	10000.0376	FIXED	10273.8214	FIXED	1006.1760	
165	9843.3615	FIXED	10241.7614	FIXED	1009.5797	
16513	9843.3615	FIXED	10241.7614	FIXED	1009.8557	
16523	9843.3615	FIXED	10241.7614	FIXED	1009.7149	
16533	9843.3615	FIXED	10241.7614	FIXED	1009.5635	
16613	10000.0376	FIXED	9999.9562	FIXED	1001.6687	
16623	10000.0376	FIXED	9999.9562	FIXED	1001.5093	
17	10039.6007	FIXED	10175.6162	FIXED	966.9041	
18	10050.7168	FIXED	10174.8548	FIXED	960.4814	
19	10076.4323	FIXED	10173.1814	FIXED	946.8291	
21	9977.0994	FIXED	10124.0894	FIXED	1000.2752	
22	9979.5674	FIXED	10123.5400	FIXED	1000.4024	
23	9981.5825	FIXED	10124.0405	FIXED	1000.2441	
24	9996.6704	FIXED	10128.3981	FIXED	991.8396	
25	10020.8893	FIXED	10129.7642	FIXED	978.2128	
26	10028.1539	FIXED	10129.6781	FIXED	974.0533	
27	10040.6833	FIXED	10130.6563	FIXED	965.8881	
28	10050.4796	FIXED	10130.9475	FIXED	960.6558	
29	10075.9160	FIXED	10132.3685	FIXED	946.7550	
31	9981.3276	FIXED	10075.7375	FIXED	1000.4755	
32	9983.6881	FIXED	10076.4549	FIXED	1000.4806	
33	9986.1746	FIXED	10076.5864	FIXED	1000.1003	
34	10000.9424	FIXED	10074.1756	FIXED	992.1034	
35	10025.8948	FIXED	10077.3785	FIXED	977.7935	
36	10032.7426	FIXED	10077.9167	FIXED	973.9545	
37	10046.3985	FIXED	10079.8569	FIXED	965.3973	

2.2 FREE STATIONS INPUT REPORT (CON'D)

STATION NAME	PRELIMINARY COORDINATES					
	EASTING (METERS)	STD. DEV. (CM)	NORTHING (METERS)	STD. DEV. (CM)	ELEVATION (METERS)	STD. DEV. (CM)
38	10055.2827	FIXED	10081.0833	FIXED	960.6688	
39	10080.0113	FIXED	10084.2006	FIXED	946.9522	

2.3 WEIGHTED STATIONS INPUT REPORT

STATION NAME	WEIGHTED COORDINATES EASTING (METERS)	STD. DEV. (CM)	NORTHING (METERS)	STD. DEV. (CM)	ELEVATION (METERS)	STD. DEV. (CM)

THERE ARE NO WEIGHTED STATIONS

2.4 OBSERVED DIRECTIONS INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)

THERE ARE NO DIRECTION OBSERVATIONS

2.5 OBSERVED AZIMUTH INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)

THERE ARE NO AZIMUTH OBSERVATIONS

2.6 OBSERVED HORIZONTAL DISTANCE INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (METERS)	STAN. DEV. (CM)	MISCLOSURE (CM)

THERE ARE NO HORIZONTAL DISTANCE OBSERVATIONS

2.7 OBSERVED SLOPE DISTANCE INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (METERS)	STAN. DEV. (CM)	MISCLOSURE (CM)

THERE ARE NO SLOPE DISTANCE OBSERVATIONS

2.8 OBSERVED SCALE DISTANCE INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (METERS)	STAN. DEV. (CM)	MISCLOSURE (CM)

THERE ARE NO SCALED DISTANCE OBSERVATIONS

2.9 OBSERVED ZENITH DISTANCE INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)
16113	16523	88-28-37.200	0.400	-1.125
16113	16423	89-12-26.300	0.400	-1.010
16113	11	90-11-31.500	0.400	-1.241
16113	12	90-10-53.800	0.400	-1.428
16113	13	90-13-43.000	0.400	-1.314
16113	21	90-15-29.000	0.400	-0.254
16113	22	90-13-26.500	0.400	-0.452
16113	23	90-15-49.500	0.400	-0.957
16113	31	90-15- 6.500	0.400	0.079
16113	32	90-14-50.200	0.400	-0.880
16113	33	90-21-56.200	0.400	-0.350
16113	12183	84-20-16.500	0.400	-0.699
16113	16623	89-53-38.200	0.400	-0.403
16613	31	90-52-32.700	0.600	-1.178
16613	32	90-52-14.000	0.600	0.394
16613	33	91- 9-14.000	0.600	-0.750
16613	34	97-20-36.300	0.600	-0.212
16613	35	106-18-14.800	0.600	-0.504
16613	36	108- 9- 0.700	0.600	0.114
16613	37	111-26-15.700	0.600	0.169
16613	38	112-40-18.500	0.600	0.109
16613	39	115-13-23.800	0.600	0.439
16613	28	106-17-15.200	0.600	-1.404
16613	27	104-39- 0.000	0.600	-1.816
16613	25	100- 6-58.500	0.600	0.155
16613	24	94-22-30.200	0.600	-0.062
16613	23	90-39- 2.700	0.600	-1.305
16613	22	90-34-45.500	0.600	-1.272
16613	13	90-28-55.700	0.600	-0.144
16613	16	98-25-45.700	0.600	-1.443
16613	17	100-55-41.800	0.500	-0.656
16613	18	102-44-44.800	0.600	-0.343
16613	19	106- 9-17.200	0.600	-0.902
16613	16323	109-13-59.300	0.600	-1.502
16613	12183	86-34- 0.800	0.600	0.313
16513	11	93-36-56.500	0.400	-0.558
16513	12	93-34-19.700	0.400	-0.111
16513	13	93-36-16.700	0.400	-0.335
16513	21	93- 4-44.200	0.400	-0.935
16513	22	93- 0- 3.500	0.400	-0.444
16513	23	93- 1-51.200	0.400	-0.746
16513	31	92-29-19.800	0.400	-0.550
16513	32	92-28-34.500	0.400	-1.050
16513	16123	91-34-30.200	0.400	-1.066
16513	12183	89-44- 1.500	0.400	-0.845
16513	16423	91-15-52.200	0.400	-0.683

2.9 OBSERVED ZENITH DISTANCE INPUT REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)
16513	16223	89-17-14.800	0.400	-1.269
16513	16623	91-39-36.200	0.400	-1.217
16413	18	112-28- 4.400	0.500	-0.163
16413	16	107-11-12.000	0.500	0.160
16413	15	106- 0-47.600	0.500	-0.055
16413	14	98- 7-24.400	0.500	-0.380
16413	13	93-30-51.500	0.500	-0.118
16413	12	93-25-26.500	0.500	-0.281
16413	11	93-23-35.500	0.500	0.059
16413	21	92-20-22.900	0.500	-0.453
16413	22	92-17-19.600	0.500	-0.494
16413	23	92-21-37.100	0.500	-0.186
16413	24	95-44-27.800	0.500	-0.863
16413	25	100-59- 1.600	0.500	-1.181
16413	26	102-26-43.200	0.500	-0.366
16413	27	105-15- 3.900	0.500	0.307
16413	28	106-49-18.600	0.500	-0.469
16413	29	110-24-15.000	0.500	-0.237
16413	39	106- 7-44.500	0.500	-1.119
16413	38	102-51-58.500	0.500	-0.960
16413	37	101-38- 9.900	0.500	-1.010
16413	32	91-43-51.100	0.500	-0.672
16413	31	91-43-27.100	0.500	-1.087
16413	16523	88-50- 8.100	0.500	-0.625
16413	16323	106- 9- 6.400	0.500	0.014
16313	16223	65-55-12.400	0.600	-0.764
16313	39	80- 5-49.600	0.600	-0.431
16313	38	76-36-52.500	0.600	-0.343
16313	37	75-43- 1.900	0.600	0.124
16313	36	74- 7-53.200	0.600	-0.966
16313	35	73-34-12.000	0.600	0.189
16313	34	71-47-11.500	0.600	-0.563
16313	33	71- 2-19.900	0.600	-0.948
16313	23	71-41-11.800	0.400	-0.412
16313	24	72-37-10.000	0.400	-0.756
16313	25	74-23-34.000	0.400	-1.023
16313	26	75- 2- 6.900	0.400	-0.551
16313	27	76-37-20.900	0.400	-0.360
16313	28	77-38-47.900	0.400	-0.121
16313	29	81-10-10.000	0.400	-0.616
16313	19	82-13-17.400	0.500	-0.543
16313	18	78-55-47.100	0.500	-0.781
16313	17	77-37-54.200	0.500	-0.829
16313	16	76- 4-38.200	0.500	-1.065
16313	15	75-39-24.400	0.500	-1.374
16313	14	73-38-46.500	0.500	-0.888

2.9 OBSERVED ZENITH DISTANCE INPUT REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)
16313	13	72-46-56.500	0.500	-1.606
16313	16423	73-54- 4.500	0.500	-0.339
16213	31	94-22-13.400	0.500	0.112
16213	33	94-31-41.900	0.500	-0.302
16213	34	97-17-57.500	0.500	-1.002
16213	35	102-15-32.200	0.500	-1.078
16213	36	103-37- 7.400	0.500	-1.196
16213	37	106-30-13.100	0.500	-1.175
16213	38	108- 3-18.100	0.500	-1.059
16213	39	112-11-30.000	0.500	-1.094
16213	28	104- 5-21.900	0.600	-0.699
16213	27	102-41-22.800	0.600	-0.703
16213	25	99-23-51.800	0.600	0.524
16213	24	95-46- 7.800	0.600	-0.704
16213	23	93-38-52.800	0.600	-0.214
16213	22	93-36- 5.400	0.600	-0.645
16213	21	93-36-26.400	0.600	-0.647
16213	12	92-59-52.600	0.500	-1.029
16213	13	93- 3-42.400	0.500	-1.146
16213	14	94-38-51.800	0.500	0.019
16213	15	97-56-33.500	0.500	-0.336
16213	16	98-30-46.900	0.500	-0.872
16213	17	100-23-21.500	0.500	-0.452
16213	18	101-51- 3.200	0.500	-1.558
16213	19	104-55-22.600	0.500	-0.709
16213	16423	91-21-44.100	0.500	-1.796
16213	16323	114- 8-41.300	0.500	-0.719
16213	16523	90-45-14.200	0.500	-0.571

2.10 OBSERVED HEIGHT DIFFERENCE INPUT REPORT

FROM STATION	TO STATION	OBSERVED VALUE (METERS)	STAN. DEV. (CM)	MISCLOSURE (CM)
166	16613	1.6680	0.1000	-0.07
166	16623	1.5100	0.1000	0.07
165	16513	0.2760	0.1000	0.00
16533	16523	0.1514	0.1000	0.00
164	16413	0.2730	0.1000	0.00
16433	16423	0.1509	0.1000	0.00
163	16313	0.2775	0.1000	0.00
16333	16323	0.1518	0.1000	0.00
162	16213	0.2745	0.1000	0.00
161	16113	0.2790	0.1000	0.00

2.11 OBSERVED RELATIVE POSITIONS INPUT REPORT

FROM STATION	TO STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAN. DEV. (SEC)

THERE ARE NO RELATIVE POSITION OBSERVATIONS

2.12 OBSERVED COORDINATE DIFFERENCE INPUT REPORT

FROM STATION	TO STATION	OBSERVED VALUES (METERS) DX	DY	DZ	COVARIANCES (CM SQUARED) XX	XY	YY	XZ	YZ	ZZ

THERE ARE NO COORDINATE DIFFERENCE OBSERVATIONS

3.0 SOLVABILITY OF NETWORK REPORT

STATION NAME	NUMBER OF TIMES OBSERVED
161	1
16123	1
16133	0
162	1
16233	0
163	1
16333	1
164	1
16433	1
165	1
16533	1

```
**********     POINT 161        ONLY    1TIMES OBSERVED
**********     POINT 16123      ONLY    1TIMES OBSERVED
**********     POINT 16133      ONLY    0TIMES OBSERVED
**********     POINT 162        ONLY    1TIMES OBSERVED
**********     POINT 16233      ONLY    0TIMES OBSERVED
**********     POINT 163        ONLY    1TIMES OBSERVED
**********     POINT 16333      ONLY    1TIMES OBSERVED
**********     POINT 164        ONLY    1TIMES OBSERVED
**********     POINT 16433      ONLY    1TIMES OBSERVED
**********     POINT 165        ONLY    1TIMES OBSERVED
**********     POINT 16533      ONLY    1TIMES OBSERVED
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3.1 ARRAY USAGE REPORT

FACTOR	MAXIMUM ALLOWED	ACTUAL
OBSERVATIONS	9000	130
POINTS	1000	51
FIXED & WEIGHTED POINTS	99	1
ORIENTATION UNKNOWNS	1500	0
MATRIX ELEMENTS	99998	1275

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
16113	16523	O:	88-28-37.20	0.40		69.92	COM:	-0.1 SEC	0.0 CM	317.9951
		C:	88-28-37.29	0.22			BND:	2.0 SEC	0.1 CM	
		V=C-O:	0- 0- 0.09	0.33	0.27					
16113	16423	O:	89-12-26.30	0.40		77.29	COM:	0.3 SEC	0.0 CM	366.0414
		C:	89-12-26.09	0.19			BND:	1.9 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.21	0.35	-0.61					
16113	11	O:	90-11-31.50	0.40		79.56	COM:	-0.5 SEC	0.0 CM	263.9716
		C:	90-11-31.86	0.18			BND:	1.9 SEC	0.0 CM	
		V=C-O:	0- 0- 0.36	0.36	1.01					
16113	12	O:	90-10-53.80	0.40		80.86	COM:	-0.7 SEC	0.0 CM	265.8211
		C:	90-10-54.34	0.17			BND:	1.8 SEC	0.0 CM	
		V=C-O:	0- 0- 0.54	0.36	1.50					
16113	13	O:	90-13-43.00	0.40		83.05	COM:	-0.5 SEC	0.0 CM	265.2378
		C:	90-13-43.40	0.16			BND:	1.8 SEC	0.0 CM	
		V=C-O:	0- 0- 0.40	0.36	1.10					
16113	21	O:	90-15-29.00	0.40		69.95	COM:	0.6 SEC	0.0 CM	218.2038
		C:	90-15-28.55	0.22			BND:	2.0 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.45	0.33	-1.36					
16113	22	O:	90-13-26.50	0.40		75.31	COM:	0.4 SEC	0.0 CM	218.7662
		C:	90-13-26.19	0.20			BND:	1.9 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.31	0.35	-0.88					
16113	23	O:	90-15-49.50	0.40		77.29	COM:	-0.2 SEC	0.0 CM	220.0975
		C:	90-15-49.68	0.19			BND:	1.9 SEC	0.0 CM	
		V=C-O:	0- 0- 0.18	0.35	0.50					
16113	31	O:	90-15- 6.50	0.40		69.98	COM:	0.9 SEC	0.0 CM	177.8726
		C:	90-15- 5.86	0.22			BND:	2.0 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.64	0.33	-1.92					
16113	32	O:	90-14-50.20	0.40		68.49	COM:	-0.5 SEC	0.0 CM	179.7652
		C:	90-14-50.52	0.22			BND:	2.0 SEC	0.1 CM	
		V=C-O:	0- 0- 0.32	0.33	0.96					
16113	33	O:	90-21-56.20	0.40		66.28	COM:	0.4 SEC	0.0 CM	181.2563
		C:	90-21-55.94	0.23			BND:	2.0 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.26	0.33	-0.81					
16113	12183	O:	84-20-16.50	0.40		20.76	COM:	-1.2 SEC	0.0 CM	97.3441
		C:	84-20-16.75	0.36			BND:	3.6 SEC	0.1 CM	
		V=C-O:	0- 0- 0.25	0.18	1.39					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
16113	16623	O:	89-53-38.20	0.40		17.73	COM:	0.9 SEC	0.1 CM	136.8380
		C:	89-53-38.04	0.36			BND:	3.9 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.16	0.17	-0.98					
16613	31	O:	90-52-32.70	0.60		47.39	COM:	-1.9 SEC	0.0 CM	78.0568
		C:	90-52-33.59	0.44			BND:	3.6 SEC	0.1 CM	
		V=C-O:	0- 0- 0.89	0.41	2.15					
16613	32	O:	90-52-14.00	0.60		41.66	COM:	1.6 SEC	0.0 CM	78.2263
		C:	90-52-13.34	0.46			BND:	3.8 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.66	0.39	-1.71					
16613	33	O:	91- 9-14.00	0.60		38.79	COM:	-1.0 SEC	0.0 CM	77.8741
		C:	91- 9-14.38	0.47			BND:	4.0 SEC	0.1 CM	
		V=C-O:	0- 0- 0.38	0.37	1.01					
16613	34	O:	97-20-36.30	0.60		24.52	COM:	0.8 SEC	0.0 CM	74.2249
		C:	97-20-36.11	0.52			BND:	5.0 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.19	0.30	-0.63					
16613	35	O:	106-18-14.80	0.60		33.43	COM:	-0.1 SEC	0.0 CM	81.6260
		C:	106-18-14.85	0.49			BND:	4.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.05	0.35	0.14					
16613	36	O:	108- 9- 0.70	0.60		36.66	COM:	1.6 SEC	0.0 CM	84.5426
		C:	108- 9- 0.10	0.48			BND:	4.1 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.60	0.36	-1.65					
16613	37	O:	111-26-15.70	0.60		52.63	COM:	0.9 SEC	0.0 CM	92.3767
		C:	111-26-15.21	0.41			BND:	3.4 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.49	0.44	-1.12					
16613	38	O:	112-40-18.50	0.60		57.10	COM:	1.0 SEC	0.0 CM	98.1510
		C:	112-40-17.95	0.39			BND:	3.3 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.55	0.45	-1.21					
16613	39	O:	115-13-23.80	0.60		68.70	COM:	1.3 SEC	0.0 CM	116.1590
		C:	115-13-22.87	0.34			BND:	3.0 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.93	0.50	-1.86					
16613	28	O:	106-17-15.20	0.60		74.16	COM:	-1.2 SEC	0.0 CM	140.3678
		C:	106-17-16.06	0.30			BND:	2.9 SEC	0.1 CM	
		V=C-O:	0- 0- 0.86	0.52	1.67					
16613	27	O:	104-39- 0.00	0.60		72.05	COM:	-1.8 SEC	0.0 CM	136.8744
		C:	104-39- 1.31	0.32			BND:	2.9 SEC	0.1 CM	
		V=C-O:	0- 0- 1.31	0.51	2.58 ..					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
16613	25	O:	100- 6-58.50	0.60		67.91	COM:	1.0 SEC	0.0 CM	131.4721
		C:	100- 6-57.79	0.34			BND:	3.0 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.71	0.49	-1.43					
16613	24	O:	94-22-30.20	0.60		64.25	COM:	0.8 SEC	0.0 CM	128.4860
		C:	94-22-29.71	0.36			BND:	3.1 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.49	0.48	-1.02					
16613	23	O:	90-39- 2.70	0.60		73.51	COM:	-1.0 SEC	0.0 CM	125.4492
		C:	90-39- 3.45	0.31			BND:	2.9 SEC	0.0 CM	
		V=C-O:	0- 0- 0.75	0.51	1.46					
16613	22	O:	90-34-45.50	0.60		70.47	COM:	-1.1 SEC	0.0 CM	125.2677
		C:	90-34-46.25	0.33			BND:	3.0 SEC	0.1 CM	
		V=C-O:	0- 0- 0.75	0.50	1.48					
16613	13	O:	90-28-55.70	0.60		86.38	COM:	0.6 SEC	0.0 CM	174.7882
		C:	90-28-55.18	0.22			BND:	2.7 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.52	0.56	-0.94					
16613	16	O:	98-25-45.70	0.60		81.48	COM:	-0.9 SEC	0.0 CM	178.4304
		C:	98-25-46.45	0.26			BND:	2.7 SEC	0.0 CM	
		V=C-O:	0- 0- 0.75	0.54	1.38					
16613	17	O:	100-55-41.80	0.50		55.47	COM:	-0.1 SEC	0.0 CM	180.0602
		C:	100-55-41.85	0.33			BND:	2.8 SEC	0.1 CM	
		V=C-O:	0- 0- 0.05	0.37	0.14					
16613	18	O:	102-44-44.80	0.60		81.29	COM:	0.5 SEC	0.0 CM	182.0931
		C:	102-44-44.43	0.26			BND:	2.7 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.37	0.54	-0.69					
16613	19	O:	106- 9-17.20	0.60		73.25	COM:	-0.3 SEC	0.0 CM	189.3228
		C:	106- 9-17.40	0.31			BND:	2.9 SEC	0.1 CM	
		V=C-O:	0- 0- 0.20	0.51	0.40					
16613	16323	O:	109-13-59.30	0.60		69.63	COM:	-1.2 SEC	0.0 CM	219.1349
		C:	109-14- 0.11	0.33			BND:	3.0 SEC	0.1 CM	
		V=C-O:	0- 0- 0.81	0.50	1.62					
16613	12183	O:	86-34- 0.80	0.60		77.26	COM:	1.2 SEC	0.0 CM	153.9557
		C:	86-33-59.85	0.29			BND:	2.8 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.95	0.53	-1.80					
16513	11	O:	93-36-56.50	0.40		54.18	COM:	-0.1 SEC	0.0 CM	150.0820
		C:	93-36-56.55	0.27			BND:	2.2 SEC	0.1 CM	
		V=C-O:	0- 0- 0.05	0.29	0.17					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
16513	12	O:	93-34-19.70	0.40		56.68	COM:	0.7 SEC	0.0 CM	151.2464
		C:	93-34-19.30	0.26			BND:	2.2 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.40	0.30	-1.34					
16513	13	O:	93-36-16.70	0.40		61.02	COM:	0.4 SEC	0.0 CM	153.2997
		C:	93-36-16.47	0.25			BND:	2.1 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.23	0.31	-0.74					
16513	21	O:	93- 4-44.20	0.40		58.58	COM:	-0.6 SEC	0.0 CM	178.1363
		C:	93- 4-44.56	0.26			BND:	2.2 SEC	0.1 CM	
		V=C-O:	0- 0- 0.36	0.31	1.18					
16513	22	O:	93- 0- 3.50	0.40		66.27	COM:	0.3 SEC	0.0 CM	180.3562
		C:	93- 0- 3.30	0.23			BND:	2.0 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.20	0.33	-0.60					
16513	23	O:	93- 1-51.20	0.40		68.94	COM:	-0.1 SEC	0.0 CM	181.5579
		C:	93- 1-51.28	0.22			BND:	2.0 SEC	0.1 CM	
		V=C-O:	0- 0- 0.08	0.33	0.24					
16513	31	O:	92-29-19.80	0.40		77.87	COM:	0.2 SEC	0.0 CM	215.8670
		C:	92-29-19.65	0.19			BND:	1.9 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.15	0.35	-0.43					
16513	32	O:	92-28-34.50	0.40		76.63	COM:	-0.5 SEC	0.0 CM	216.8359
		C:	92-28-34.85	0.19			BND:	1.9 SEC	0.0 CM	
		V=C-O:	0- 0- 0.35	0.35	1.01					
16513	16123	O:	91-34-30.20	0.40		0.00	COM:	NOT		317.9951
		C:	91-34-30.20	0.40			BND:	CONTROLLED		
		V=C-O:	- 0- 0- 0.00	0.00	0.00					
16513	12183	O:	89-44- 1.50	0.40		72.74	COM:	-0.1 SEC	0.0 CM	225.5777
		C:	89-44- 1.54	0.21			BND:	1.9 SEC	0.1 CM	
		V=C-O:	0- 0- 0.04	0.34	0.11					
16513	16423	O:	91-15-52.20	0.40		25.87	COM:	-0.5 SEC	0.0 CM	159.9226
		C:	91-15-52.33	0.34			BND:	3.2 SEC	0.2 CM	
		V=C-O:	0- 0- 0.13	0.20	0.66					
16513	16223	O:	89-17-14.80	0.40		50.07	COM:	0.2 SEC	0.0 CM	406.0560
		C:	89-17-14.72	0.28			BND:	2.3 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.08	0.28	-0.29					
16513	16623	O:	91-39-36.20	0.40		69.60	COM:	-0.3 SEC	0.0 CM	288.1270
		C:	91-39-36.40	0.22			BND:	2.0 SEC	0.1 CM	
		V=C-O:	0- 0- 0.20	0.33	0.61					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
16413	18	O:	112-28- 4.40	0.50		47.77	COM:	0.4 SEC	0.0 CM	111.1880
		C:	112-28- 4.19	0.36			BND:	3.0 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.21	0.35	-0.61					
16413	16	O:	107-11-12.00	0.50		37.62	COM:	1.3 SEC	0.0 CM	100.9906
		C:	107-11-11.52	0.39			BND:	3.4 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.48	0.31	-1.55					
16413	15	O:	106- 0-47.60	0.50		26.76	COM:	0.5 SEC	0.0 CM	99.9212
		C:	106- 0-47.47	0.43			BND:	4.0 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.13	0.26	-0.52					
16413	14	O:	98- 7-24.40	0.50		20.42	COM:	-1.3 SEC	0.0 CM	96.7725
		C:	98- 7-24.66	0.45			BND:	4.6 SEC	0.2 CM	
		V=C-O:	0- 0- 0.26	0.23	1.16					
16413	13	O:	93-30-51.50	0.50		52.08	COM:	0.3 SEC	0.0 CM	101.9968
		C:	93-30-51.34	0.35			BND:	2.9 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.16	0.36	-0.46					
16413	12	O:	93-25-26.50	0.50		44.75	COM:	-0.1 SEC	0.0 CM	101.0877
		C:	93-25-26.57	0.37			BND:	3.1 SEC	0.1 CM	
		V=C-O:	0- 0- 0.07	0.33	0.20					
16413	11	O:	93-23-35.50	0.50		42.61	COM:	0.6 SEC	0.0 CM	102.7234
		C:	93-23-35.23	0.38			BND:	3.2 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.27	0.33	-0.84					
16413	21	O:	92-20-22.90	0.50		63.70	COM:	-0.1 SEC	0.0 CM	151.4788
		C:	92-20-22.96	0.30			BND:	2.6 SEC	0.1 CM	
		V=C-O:	0- 0- 0.06	0.40	0.16					
16413	22	O:	92-17-19.60	0.50		71.29	COM:	0.0 SEC	0.0 CM	151.6691
		C:	92-17-19.63	0.27			BND:	2.4 SEC	0.1 CM	
		V=C-O:	0- 0- 0.03	0.42	0.08					
16413	23	O:	92-21-37.10	0.50		74.13	COM:	0.4 SEC	0.0 CM	150.9136
		C:	92-21-36.80	0.25			BND:	2.4 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.30	0.43	-0.69					
16413	24	O:	95-44-27.80	0.50		60.64	COM:	-0.7 SEC	0.0 CM	145.4623
		C:	95-44-28.21	0.31			BND:	2.7 SEC	0.1 CM	
		V=C-O:	0- 0- 0.41	0.39	1.05					
16413	25	O:	100-59- 1.60	0.50		63.20	COM:	-1.2 SEC	0.0 CM	145.5585
		C:	100-59- 2.33	0.30			BND:	2.6 SEC	0.1 CM	
		V=C-O:	0- 0- 0.73	0.40	1.83					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
16413	26	O:	102-26-43.20	0.50		46.22	COM:	0.0 SEC	0.0 CM	146.8599
		C:	102-26-43.21	0.37			BND:	3.0 SEC	0.1 CM	
		V=C-O:	0- 0- 0.01	0.34	0.03					
16413	27	O:	105-15- 3.90	0.50		66.73	COM:	1.1 SEC	0.0 CM	148.8231
		C:	105-15- 3.18	0.29			BND:	2.5 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.72	0.41	-1.75					
16413	28	O:	106-49-18.60	0.50		68.76	COM:	0.0 SEC	0.0 CM	151.5168
		C:	106-49-18.62	0.28			BND:	2.5 SEC	0.1 CM	
		V=C-O:	0- 0- 0.02	0.41	0.05					
16413	29	O:	110-24-15.00	0.50		66.56	COM:	0.4 SEC	0.0 CM	160.5193
		C:	110-24-14.74	0.29			BND:	2.5 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.26	0.41	-0.63					
16413	39	O:	106- 7-44.50	0.50		78.65	COM:	-0.6 SEC	0.0 CM	205.7956
		C:	106- 7-44.96	0.23			BND:	2.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.46	0.44	1.04					
16413	38	O:	102-51-58.50	0.50		78.06	COM:	-0.4 SEC	0.0 CM	200.4994
		C:	102-51-58.83	0.23			BND:	2.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.33	0.44	0.74					
16413	37	O:	101-38- 9.90	0.50		78.28	COM:	-0.6 SEC	0.0 CM	199.4281
		C:	101-38-10.34	0.23			BND:	2.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.44	0.44	0.99					
16413	32	O:	91-43-51.10	0.50		82.90	COM:	-0.1 SEC	0.0 CM	198.0425
		C:	91-43-51.21	0.21			BND:	2.3 SEC	0.0 CM	
		V=C-O:	0- 0- 0.11	0.46	0.25					
16413	31	O:	91-43-27.10	0.50		84.25	COM:	-0.6 SEC	0.0 CM	198.9656
		C:	91-43-27.62	0.20			BND:	2.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.52	0.46	1.12					
16413	16523	O:	88-50- 8.10	0.50		31.71	COM:	-0.7 SEC	0.0 CM	159.9226
		C:	88-50- 8.33	0.41			BND:	3.7 SEC	0.2 CM	
		V=C-O:	0- 0- 0.23	0.28	0.81					
16413	16323	O:	106- 9- 6.40	0.50		69.49	COM:	1.2 SEC	0.1 CM	280.5501
		C:	106- 9- 5.55	0.28			BND:	2.5 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.85	0.42	-2.04					
16313	16223	O:	65-55-12.40	0.60		39.49	COM:	-0.3 SEC	0.0 CM	200.4039
		C:	65-55-12.51	0.47			BND:	3.9 SEC	0.3 CM	
		V=C-O:	0- 0- 0.11	0.38	0.29					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
16313	39	O:	80- 5-49.60	0.60		60.37	COM:	0.0 SEC	0.0 CM	123.7244
		C:	80- 5-49.58	0.38			BND:	3.2 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.02	0.47	-0.05					
16313	38	O:	76-36-52.50	0.60		74.34	COM:	0.2 SEC	0.0 CM	148.4081
		C:	76-36-52.32	0.30			BND:	2.9 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.18	0.52	-0.35					
16313	37	O:	75-43- 1.90	0.60		78.13	COM:	0.8 SEC	0.0 CM	157.2953
		C:	75-43- 1.30	0.28			BND:	2.8 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.60	0.53	-1.13					
16313	36	O:	74- 7-53.20	0.60		80.31	COM:	-0.4 SEC	0.0 CM	170.9734
		C:	74- 7-53.54	0.27			BND:	2.8 SEC	0.0 CM	
		V=C-O:	0- 0- 0.34	0.54	0.64					
16313	35	O:	73-34-12.00	0.60		82.47	COM:	1.0 SEC	0.0 CM	177.8299
		C:	73-34-11.18	0.25			BND:	2.7 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.82	0.54	-1.50					
16313	34	O:	71-47-11.50	0.60		87.76	COM:	0.1 SEC	0.0 CM	202.8584
		C:	71-47-11.38	0.21			BND:	2.6 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.12	0.56	-0.22					
16313	33	O:	71- 2-19.90	0.60		90.31	COM:	-0.2 SEC	0.0 CM	217.5580
		C:	71- 2-20.12	0.19			BND:	2.6 SEC	0.0 CM	
		V=C-O:	0- 0- 0.22	0.57	0.39					
16313	23	O:	71-41-11.80	0.40		82.06	COM:	0.5 SEC	0.0 CM	226.2664
		C:	71-41-11.42	0.17			BND:	1.8 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.38	0.36	-1.04					
16313	24	O:	72-37-10.00	0.40		73.44	COM:	0.0 SEC	0.0 CM	212.4080
		C:	72-37-10.02	0.21			BND:	1.9 SEC	0.1 CM	
		V=C-O:	0- 0- 0.02	0.34	0.06					
16313	25	O:	74-23-34.00	0.40		67.18	COM:	-0.5 SEC	0.0 CM	189.2296
		C:	74-23-34.36	0.23			BND:	2.0 SEC	0.1 CM	
		V=C-O:	0- 0- 0.36	0.33	1.10					
16313	26	O:	75- 2- 6.90	0.40		47.53	COM:	0.0 SEC	0.0 CM	182.1984
		C:	75- 2- 6.89	0.29			BND:	2.4 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.01	0.28	-0.03					
16313	27	O:	76-37-20.90	0.40		59.15	COM:	0.3 SEC	0.0 CM	170.4435
		C:	76-37-20.70	0.26			BND:	2.1 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.20	0.31	-0.64					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
16313	28	O:	77-38-47.90	0.40		54.55	COM:	0.8 SEC	0.0 CM	161.1902
		C:	77-38-47.47	0.27			BND:	2.2 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.43	0.30	-1.45					
16313	29	O:	81-10-10.00	0.40		25.40	COM:	-0.5 SEC	0.0 CM	137.7657
		C:	81-10-10.13	0.35			BND:	3.3 SEC	0.2 CM	
		V=C-O:	0- 0- 0.13	0.20	0.63					
16313	19	O:	82-13-17.40	0.50		40.62	COM:	0.0 SEC	0.0 CM	157.2189
		C:	82-13-17.39	0.39			BND:	3.2 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.01	0.32	-0.04					
16313	18	O:	78-55-47.10	0.50		72.04	COM:	-0.2 SEC	0.0 CM	179.5435
		C:	78-55-47.22	0.26			BND:	2.4 SEC	0.1 CM	
		V=C-O:	0- 0- 0.12	0.42	0.28					
16313	17	O:	77-37-54.20	0.50		59.58	COM:	-0.4 SEC	0.0 CM	189.4837
		C:	77-37-54.44	0.32			BND:	2.7 SEC	0.1 CM	
		V=C-O:	0- 0- 0.24	0.39	0.62					
16313	16	O:	76- 4-38.20	0.50		80.18	COM:	-0.4 SEC	0.0 CM	201.1912
		C:	76- 4-38.55	0.22			BND:	2.3 SEC	0.0 CM	
		V=C-O:	0- 0- 0.35	0.45	0.79					
16313	15	O:	75-39-24.40	0.50		78.33	COM:	-0.9 SEC	0.0 CM	205.0592
		C:	75-39-25.11	0.23			BND:	2.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.71	0.44	1.60					
16313	14	O:	73-38-46.50	0.50		83.29	COM:	-0.2 SEC	0.0 CM	229.3354
		C:	73-38-46.66	0.20			BND:	2.3 SEC	0.0 CM	
		V=C-O:	0- 0- 0.16	0.46	0.35					
16313	13	O:	72-46-56.50	0.50		89.33	COM:	-0.9 SEC	0.0 CM	241.5248
		C:	72-46-57.28	0.16			BND:	2.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.78	0.47	1.65					
16313	16423	O:	73-54- 4.50	0.50		83.49	COM:	0.7 SEC	0.0 CM	280.5501
		C:	73-54- 3.91	0.20			BND:	2.3 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.59	0.46	-1.30					
16213	31	O:	94-22-13.40	0.50		82.70	COM:	0.9 SEC	0.0 CM	190.7127
		C:	94-22-12.68	0.21			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.72	0.45	-1.58					
16213	33	O:	94-31-41.90	0.50		80.08	COM:	0.4 SEC	0.0 CM	188.7676
		C:	94-31-41.57	0.22			BND:	2.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.33	0.45	-0.75					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
16213	34	O:	97-17-57.50	0.50		75.53	COM:	-0.5 SEC	0.0 CM	179.1407
		C:	97-17-57.88	0.25			BND:	2.4 SEC	0.1 CM	
		V=C-O:	0- 0- 0.38	0.43	0.88					
16213	35	O:	102-15-32.20	0.50		71.78	COM:	-0.6 SEC	0.0 CM	171.4615
		C:	102-15-32.66	0.27			BND:	2.4 SEC	0.1 CM	
		V=C-O:	0- 0- 0.46	0.42	1.08					
16213	36	O:	103-37- 7.40	0.50		70.71	COM:	-0.8 SEC	0.0 CM	169.6232
		C:	103-37- 7.97	0.27			BND:	2.5 SEC	0.1 CM	
		V=C-O:	0- 0- 0.57	0.42	1.35					
16213	37	O:	106-30-13.10	0.50		72.69	COM:	-0.9 SEC	0.0 CM	167.5834
		C:	106-30-13.75	0.26			BND:	2.4 SEC	0.1 CM	
		V=C-O:	0- 0- 0.65	0.43	1.52					
16213	38	O:	108- 3-18.10	0.50		72.36	COM:	-0.7 SEC	0.0 CM	166.8211
		C:	108- 3-18.57	0.26			BND:	2.4 SEC	0.1 CM	
		V=C-O:	0- 0- 0.47	0.43	1.11					
16213	39	O:	112-11-30.00	0.50		73.72	COM:	-0.7 SEC	0.0 CM	166.9367
		C:	112-11-30.50	0.26			BND:	2.4 SEC	0.1 CM	
		V=C-O:	0- 0- 0.50	0.43	1.17					
16213	28	O:	104- 5-21.90	0.60		87.27	COM:	0.0 SEC	0.0 CM	216.7255
		C:	104- 5-21.86	0.21			BND:	2.7 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.04	0.56	-0.07					
16213	27	O:	102-41-22.80	0.60		87.12	COM:	0.0 SEC	0.0 CM	218.3363
		C:	102-41-22.78	0.22			BND:	2.7 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.02	0.56	-0.04					
16213	25	O:	99-23-51.80	0.60		87.07	COM:	1.5 SEC	0.0 CM	222.5846
		C:	99-23-50.50	0.22			BND:	2.7 SEC	0.0 CM	
		V=C-O:	- 0- 0- 1.30	0.56	-2.32					
16213	24	O:	95-46- 7.80	0.60		87.26	COM:	0.1 SEC	0.0 CM	229.7564
		C:	95-46- 7.70	0.21			BND:	2.7 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.10	0.56	-0.17					
16213	23	O:	93-38-52.80	0.60		90.63	COM:	0.7 SEC	0.0 CM	232.2558
		C:	93-38-52.20	0.18			BND:	2.6 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.60	0.57	-1.06					
16213	22	O:	93-36- 5.40	0.60		89.73	COM:	0.2 SEC	0.0 CM	232.7400
		C:	93-36- 5.24	0.19			BND:	2.6 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.16	0.57	-0.28					

4.6 ANALYSIS OF ZENITH DISTANCE OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
16213	21	O:	93-36-26.40	0.60		87.35	COM:	0.1 SEC	0.0 CM	234.3810
		C:	93-36-26.29	0.21			BND:	2.7 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.11	0.56	-0.20					
16213	12	O:	92-59-52.60	0.50		88.73	COM:	-0.1 SEC	0.0 CM	279.4795
		C:	92-59-52.70	0.17			BND:	2.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.10	0.47	0.20					
16213	13	O:	93- 3-42.40	0.50		90.19	COM:	-0.2 SEC	0.0 CM	277.6687
		C:	93- 3-42.59	0.16			BND:	2.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.19	0.47	0.41					
16213	14	O:	94-38-51.80	0.50		85.64	COM:	1.1 SEC	0.0 CM	275.5734
		C:	94-38-50.89	0.19			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.91	0.46	-1.97					
16213	15	O:	97-56-33.50	0.50		84.60	COM:	0.6 SEC	0.0 CM	267.1008
		C:	97-56-32.95	0.20			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.55	0.46	-1.19					
16213	16	O:	98-30-46.90	0.50		86.46	COM:	0.1 SEC	0.0 CM	266.0560
		C:	98-30-46.85	0.18			BND:	2.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.05	0.46	-0.12					
16213	17	O:	100-23-21.50	0.50		77.34	COM:	0.5 SEC	0.0 CM	262.6164
		C:	100-23-21.10	0.24			BND:	2.3 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.40	0.44	-0.91					
16213	18	O:	101-51- 3.20	0.50		85.32	COM:	-0.8 SEC	0.0 CM	260.0562
		C:	101-51- 3.84	0.19			BND:	2.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.64	0.46	1.39					
16213	19	O:	104-55-22.60	0.50		77.54	COM:	0.2 SEC	0.0 CM	255.9885
		C:	104-55-22.43	0.24			BND:	2.3 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.17	0.44	-0.38					
16213	16423	O:	91-21-44.10	0.50		85.98	COM:	-0.7 SEC	0.0 CM	367.0021
		C:	91-21-44.67	0.19			BND:	2.2 SEC	0.1 CM	
		V=C-O:	0- 0- 0.57	0.46	1.23					
16213	16323	O:	114- 8-41.30	0.50		53.13	COM:	-0.2 SEC	0.0 CM	200.4039
		C:	114- 8-41.42	0.34			BND:	2.8 SEC	0.1 CM	
		V=C-O:	0- 0- 0.12	0.36	0.33					
16213	16523	O:	90-45-14.20	0.50		83.95	COM:	0.9 SEC	0.0 CM	406.0560
		C:	90-45-13.44	0.20			BND:	2.3 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.76	0.46	-1.66					

4.7 ANALYSIS OF ELEVATION DIFFERENCE OBSERVATIONS REPORT

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (METERS)	STD. DEV. (CM)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
166	16613	O:	1.66800	0.10		48.14	COM:	-0.1 CM	-0.1 CM	0.0000
		C:	1.66865	0.07			BND:	0.6 CM	0.3 CM	
		V=C-O:	0.00065	0.07	0.93					
166	16623	O:	1.51000	0.10		48.14	COM:	0.1 CM	0.1 CM	0.0000
		C:	1.50935	0.07			BND:	0.6 CM	0.3 CM	
		V=C-O:	-0.00065	0.07	-0.93					
165	16513	O:	0.27600	0.10		0.00	COM:	NOT		0.0000
		C:	0.27600	0.10			BND:	CONTROLLED		
		V=C-O:	0.00000	0.00	0.00					
16533	16523	O:	0.15140	0.10		0.00	COM:	NOT		0.0000
		C:	0.15140	0.10			BND:	CONTROLLED		
		V=C-O:	0.00000	0.00	0.00					
164	16413	O:	0.27300	0.10		0.00	COM:	NOT		0.0000
		C:	0.27300	0.10			BND:	CONTROLLED		
		V=C-O:	0.00000	0.00	0.00					
16433	16423	O:	0.15090	0.10		0.00	COM:	NOT		0.0000
		C:	0.15090	0.10			BND:	CONTROLLED		
		V=C-O:	0.00000	0.00	0.00					
163	16313	O:	0.27750	0.10		0.00	COM:	NOT		0.0000
		C:	0.27750	0.10			BND:	CONTROLLED		
		V=C-O:	0.00000	0.00	0.00					
16333	16323	O:	0.15180	0.10		0.00	COM:	NOT		0.0000
		C:	0.15180	0.10			BND:	CONTROLLED		
		V=C-O:	0.00000	0.00	0.00					
162	16213	O:	0.27450	0.10		0.00	COM:	NOT		0.0000
		C:	0.27450	0.10			BND:	CONTROLLED		
		V=C-O:	0.00000	0.00	0.00					
161	16113	O:	0.27900	0.10		0.00	COM:	NOT		0.0000
		C:	0.27900	0.10			BND:	CONTROLLED		
		V=C-O:	0.00000	0.00	0.00					

5.1 ADJUSTED COORDINATES AND ABSOLUTE ERROR ELLIPSE REPORT

STATION NAME	TYPE	ADJUSTED COORDINATES (METERS)		STANDARD CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	95% CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	MARGINAL STANDARD DEVIATIONS	
11	FREE	EAST.:	9977.1172 FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10173.6877 FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.3732	ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
12	FREE	EAST.:	9979.0451 FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10174.9374 FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.4154	ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
12183	FREE	EAST.:	9846.9425 FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10016.2121 FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1010.9065	ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
13	FREE	EAST.:	9980.7103 FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10173.6725 FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.1998	ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
14	FREE	EAST.:	9995.5499 FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10177.1530 FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	992.6503	ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
15	FREE	EAST.:	10022.2476 FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10176.3998 FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	977.7869	ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
16	FREE	EAST.:	10026.6277 FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10176.3942 FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	975.2279	ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
161	FREE	EAST.:	9884.6165 FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	9926.4538 FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.9760	ELEV. STD. DEV.:	0.13 CM			CORR.:	0.0000
16113	FREE	EAST.:	9884.6165 FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	9926.4538 FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1001.2550	ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
16123	FREE	EAST.:	9884.6165 FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	9926.4538 FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1001.1171	ELEV. STD. DEV.:	0.11 CM			CORR.:	0.0000
16133	FREE	EAST.:	9884.6165 FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	9926.4538 FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1001.1510	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.0000
162	FREE	EAST.:	10087.6923 FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	9917.4407 FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1014.7738	ELEV. STD. DEV.:	0.13 CM			CORR.:	0.0000

5.1 ADJUSTED COORDINATES AND ABSOLUTE ERROR ELLIPSE REPORT (CON'D)

STATION NAME	TYPE	ADJUSTED COORDINATES (METERS)			STANDARD CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	95% CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	MARGINAL STANDARD DEVIATIONS	
16213	FREE	EAST.:	10087.6923	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	9917.4407	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1015.0483		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
16223	FREE	EAST.:	10087.6923	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	9917.4407	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1014.9146		ELEV. STD. DEV.:	0.10 CM			CORR.:	0.0000
16233	FREE	EAST.:	10087.6923	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	9917.4407	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1015.1510		ELEV. STD. DEV.:	0.00 CM			CORR.:	0.0000
163	FREE	EAST.:	10203.6906	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10080.8608	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	925.0741		ELEV. STD. DEV.:	0.13 CM			CORR.:	0.0000
16313	FREE	EAST.:	10203.6906	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10080.8608	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	925.3516		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
16323	FREE	EAST.:	10203.6906	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10080.8608	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	925.2175		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000
16333	FREE	EAST.:	10203.6906	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10080.8608	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	925.0657		ELEV. STD. DEV.:	0.14 CM			CORR.:	0.0000
164	FREE	EAST.:	10000.0376	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10273.8214	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1006.1901		ELEV. STD. DEV.:	0.13 CM			CORR.:	0.0000
16413	FREE	EAST.:	10000.0376	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10273.8214	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1006.4631		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
16423	FREE	EAST.:	10000.0376	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10273.8214	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1006.3269		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
16433	FREE	EAST.:	10000.0376	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10273.8214	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1006.1760		ELEV. STD. DEV.:	0.14 CM			CORR.:	0.0000
165	FREE	EAST.:	9843.3615	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10241.7614	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1009.5797		ELEV. STD. DEV.:	0.13 CM			CORR.:	0.0000

5.1 ADJUSTED COORDINATES AND ABSOLUTE ERROR ELLIPSE REPORT (CON'D)

STATION NAME	TYPE	ADJUSTED COORDINATES (METERS)			STANDARD CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	95% CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	MARGINAL STANDARD DEVIATIONS	
16513	FREE	EAST.:	9843.3615	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10241.7614	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1009.8557		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
16523	FREE	EAST.:	9843.3615	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10241.7614	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1009.7148		ELEV. STD. DEV.:	0.09 CM			CORR.:	0.0000
16533	FREE	EAST.:	9843.3615	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10241.7614	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1009.5634		ELEV. STD. DEV.:	0.14 CM			CORR.:	0.0000
166	FIXED	EAST.:	10000.0376	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	9999.9562	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.0000	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.0000
16613	FREE	EAST.:	10000.0376	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	9999.9562	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1001.6686		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
16623	FREE	EAST.:	10000.0376	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	9999.9562	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1001.5094		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
17	FREE	EAST.:	10039.6007	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10175.6162	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	966.9041		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
18	FREE	EAST.:	10050.7168	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10174.8548	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	960.4814		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
19	FREE	EAST.:	10076.4323	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10173.1814	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	946.8291		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
21	FREE	EAST.:	9977.0994	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10124.0894	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.2752		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
22	FREE	EAST.:	9979.5674	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10123.5400	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.4024		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
23	FREE	EAST.:	9981.5825	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10124.0405	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.2441		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000

5.1 ADJUSTED COORDINATES AND ABSOLUTE ERROR ELLIPSE REPORT (CON'D)

STATION NAME	TYPE	ADJUSTED COORDINATES (METERS)			STANDARD CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	95% CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	MARGINAL STANDARD DEVIATIONS	
24	FREE	EAST.:	9996.6704	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10128.3981	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	991.8396		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
25	FREE	EAST.:	10020.8893	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10129.7642	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	978.2128		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
26	FREE	EAST.:	10028.1539	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10129.6781	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	974.0532		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
27	FREE	EAST.:	10040.6833	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10130.6563	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	965.8881		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
28	FREE	EAST.:	10050.4796	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10130.9475	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	960.6558		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
29	FREE	EAST.:	10075.9160	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10132.3685	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	946.7550		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
31	FREE	EAST.:	9981.3276	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10075.7375	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.4755		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
32	FREE	EAST.:	9983.6881	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10076.4549	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.4805		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
33	FREE	EAST.:	9986.1746	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10076.5864	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.1003		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
34	FREE	EAST.:	10000.9424	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10074.1756	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	992.1034		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
35	FREE	EAST.:	10025.8948	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10077.3785	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	977.7935		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
36	FREE	EAST.:	10032.7426	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10077.9167	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	973.9545		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000

5.1 ADJUSTED COORDINATES AND ABSOLUTE ERROR ELLIPSE REPORT (CON'D)

STATION NAME	TYPE	ADJUSTED COORDINATES (METERS)			STANDARD CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	STANDARD CONFIDENCE ERROR ELLIPSE SEMI-MINOR	95% CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	95% CONFIDENCE ERROR ELLIPSE SEMI-MINOR	MARGINAL STANDARD DEVIATIONS	
37	FREE	EAST.:	10046.3985	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10079.8569	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	965.3973		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
38	FREE	EAST.:	10055.2827	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10081.0833	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	960.6688		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000
39	FREE	EAST.:	10080.0113	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	10084.2006	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	946.9522		ELEV. STD. DEV.:	0.08 CM			CORR.:	0.0000

5.2 ESTIMATED EDM QUANTITIES REPORT

FACTOR	ESTIMATED VALUE	STANDARD DEVIATION
ADDITIVE CONSTANT	NOT ESTIMATED	
SCALE OF DISTANCES	NOT ESTIMATED	
AMPLITUDE OF CYCLIC	NOT ESTIMATED	
PHASE OF CYCLIC	NOT ESTIMATED	
REFRACTION COEFFICIENT	0.33596	+/- 0.03472

CORRELATION COEFFICIENT MATRIX OF ESTIMATED EDM QUANTITIES:

ADDITIVE CONSTANT	0.000000	0.000000	0.000000	0.000000	0.000000
SCALE OF DISTANCES		0.000000	0.000000	0.000000	0.000000
AMPLITUDE OF CYCLIC			0.000000	0.000000	0.000000
PHASE OF CYCLIC				0.000000	0.000000
REFRACTION COEFFICIENT					1.000000

5.3 RELATIVE ERROR ELLIPSE REPORT

STATION NAME	STATION NAME	HORIZONTAL LINE INFORMATION		STANDARD RELATIVE ERROR ELLIPSE SEMI-MAJOR	STANDARD RELATIVE ERROR ELLIPSE SEMI-MINOR	95% RELATIVE ERROR ELLIPSE SEMI-MAJOR	95% RELATIVE ERROR ELLIPSE SEMI-MINOR	ELEV. DIFF. (METERS)	ELE. DIF. STD. DEV. (CM)	95% RELATIVE PRECISION
161	16113	LTH:	0.0000 M	0.00 CM	0.00 CM	0.00 CM	0.00 CM	0.2790	0.13	HOR.:
		AZI:	315- 0- 0	0- 0- 0	90- 0- 0					VER.: 1 / 106

5.4 SUMMARY REPORT

OBSERVATION TYPE	NUMBER	WEIGHTED SUM OF RESIDUALS SQUARED	REDUNDANCY	STD. DEV. OF UNIT WEIGHT
DIRECTIONS	0	0.000000D+00	0.000000D+00	1.00000
AZIMUTHS	0	0.000000D+00	0.000000D+00	1.00000
HORIZONTAL DISTANCE	0	0.000000D+00	0.000000D+00	1.00000
SLOPE DISTANCE	0	0.000000D+00	0.000000D+00	1.00000
SCALED DISTANCE	0	0.000000D+00	0.000000D+00	1.00000
ZENITH DISTANCE	120	0.945190D+02	0.800372D+02	1.08671
HEIGHT DIFFERENCE	10	0.834129D+00	0.962835D+00	0.93077
OBSERVED COORDINATES	0	0.000000D+00	0.000000D+00	1.00000
COORDINATE DIFF.	0	0.000000D+00	0.000000D+00	1.00000
TOTAL	130	0.953531D+02	81	1.08499

STATIONS:	FIXED	1
	FREE	50
	WEIGHTED	0
	TOTAL	51

CONVERGENCE:	ITERATIONS USED	2
	TOLERANCE	0.000100
	COMPUTATION TIME	133.980 SEC

GEODETIC NETWORK ANALYSIS GNA GEODETIC NETWORK ANALYSIS GNA GEODETIC NETWORK ANALYSIS GNA GEODETIC NETWORK ANALYSIS GNA
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TIME: 08:36:05 DATE: 7-JAN-87

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*                                                                           *
*  BOSTON SURVEY CONSULTANTS - BALL MOUNTAIN DAM - PROJECT CODE 1-1654.00   *
*                                                                           *
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PROJECT INFORMATION:

EPOCH 1 HORIZONTAL ANALYSIS
DATABASE 11654001.DBS
1165400H

GEODETIC NETWORK ANALYSIS
SLAP #797
INTERGRAPH CORPORATION
ONE MADISON INDUSTRIAL PARK
HUNTSVILLE, ALABAMA USA 35805

1.0 OPTIONS REPORT

O P T I O N S I N E F F E C T

PROGRAM CONTROL:

- PREANALYSIS OR ADJUSTMENT ..... ADJUSTMENT
- PERFORM VARIANCE COMPONENT ESTIMATION ..... NO
- ANGULAR I/O IN DEGREES OF GRADS ..... DEGREES
- LINEAR I/O IN METERS OR FEET ..... METERS
- MAXIMUM CPU TIME ..... 9999.0 SECONDS
- MAXIMUM NUMBER OF LEAST-SQUARES ITERATIONS 10
- ITERATION CONVERGENCE BOUNDARY VALUE 0.000100
- NUMBER OF EIGENVALUES COMPUTED ..... NONE

DEFAULT STANDARD DEVIATIONS:

MEASUREMENT TYPE	STANDARD DEVIATION
DIRECTIONS	0.00100 SEC
AZIMUTHS	0.00100 SEC
ANGULAR TARGET ECCENTRICITY	0.00000 CM
CONSTANT PART OF EDM MEASUREMENT	0.30000 CM
VARIABLE PART OF EDM MEASUREMENT	4.60000 PPM
ZENITH DISTANCE	0.60000 SEC
HEIGHT DIFFERENCE	0.10000 CM
WEIGHTED STATIONS	0.00000 CM

EDM RELATED FACTORS:

- MEAN RADIUS OF EARTH ..... 6378.0 KM
- EDM PHASE SHIFT ..... 0.00000 DEG
- EDM WAVELENGTH ..... 10.00000 METERS
- EDM ZERO ERROR ..... -0.10000 CM
- NETWORK SCALE FACTOR ..... 0.00000 PPM
- EDM CYCLIC ERROR (AMPLITUDE) ..... 0.00000 CM
- REFRACTION COEFFICIENT 0.130

2.1 FIXED STATIONS INPUT REPORT

STATION NAME	FIXED COORDINATES EASTING (METERS)	STD. DEV. (CM)	NORTHING (METERS)	STD. DEV. (CM)	ELEVATION (METERS)	STD. DEV. (CM)
166	10000.0377		9999.9561		1000.0000	

2.2 FREE STATIONS INPUT REPORT

STATION NAME	PRELIMINARY COORDINATES EASTING (METERS)	STD. DEV. (CM)	NORTHING (METERS)	STD. DEV. (CM)	ELEVATION (METERS)	STD. DEV. (CM)
11	9977.1193		10173.6770		1000.3702	FIXED
12	9979.0468		10174.9254		1000.4113	FIXED
13	9980.7114		10173.6609		1000.1971	FIXED
14	9995.5502		10177.1426		992.6488	FIXED
15	10022.2471		10176.3891		977.7838	FIXED
16	10026.6272		10176.3827		975.2242	FIXED
161	9884.6212		9926.4521		1000.9704	FIXED
162	10087.6876		9917.4350		1014.7672	FIXED
163	10203.6859		10080.8547		925.0641	FIXED
164	10000.0377		10273.8078		1006.1799	FIXED
165	9843.3689		10241.7486		1009.5622	FIXED
17	10039.5997		10175.6051		966.8988	FIXED
18	10050.7142		10174.8436		960.4771	FIXED
19	10076.4307		10173.1716		946.8237	FIXED
21	9977.1006		10124.0788		1000.2713	FIXED
22	9979.5690		10123.5301		1000.3987	FIXED
23	9981.5818		10124.0294		1000.2412	FIXED
24	9996.6703		10128.3884		991.8373	FIXED
25	10020.8888		10129.7545		978.2093	FIXED
26	10028.1530		10129.6698		974.0470	FIXED
27	10040.6820		10130.6480		965.8831	FIXED
28	10050.4778		10130.9381		960.6518	FIXED
29	10075.9142		10132.3594		946.7466	FIXED
31	9981.3282		10075.7313		1000.4710	FIXED
32	9983.6880		10076.4452		1000.4770	FIXED
33	9986.1737		10076.5776		1000.0984	FIXED
34	10000.9421		10074.1677		992.1012	FIXED
35	10025.8938		10077.3704		977.7904	FIXED
36	10032.7420		10077.9091		973.9514	FIXED
37	10046.3974		10079.8488		965.3917	FIXED
38	10055.2803		10081.0757		960.6633	FIXED
39	10080.0090		10084.1931		946.9470	FIXED

2.3 WEIGHTED STATIONS INPUT REPORT

STATION NAME	WEIGHTED COORDINATES					
	EASTING (METERS)	STD. DEV. (CM)	NORTHING (METERS)	STD. DEV. (CM)	ELEVATION (METERS)	STD. DEV. (CM)

THERE ARE NO WEIGHTED STATIONS

2.4 OBSERVED DIRECTIONS INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)
161	165	0- 0- 0.000	0.600	0.000
161	164	25-50- 3.800	0.600	0.566
161	11	27-58- 2.300	0.600	0.548
161	12	28-15-43.800	0.600	0.640
161	13	28-41-43.300	0.600	0.680
161	21	32-31-53.600	0.600	0.990
161	22	33-10-40.600	0.600	0.614
161	23	33-35-37.100	0.600	0.758
161	31	40-23-25.700	0.600	0.727
161	32	40-53-52.700	0.600	0.500
161	33	41-31-50.100	0.600	0.466
161	166	64-57-46.600	0.600	1.010
162	166	0- 0- 0.000	0.600	0.000
162	31	12-49-46.100	0.600	1.203
162	32	13-32-23.300	0.600	-0.288
162	33	14-11-36.900	0.600	0.923
162	34	17-45-48.800	0.600	0.253
162	21	18-34-21.300	0.600	0.231
162	22	19- 2-40.800	0.600	0.331
162	23	19-32-29.200	0.600	-0.294
162	11	23-23-10.900	0.600	0.775
162	24	23-23-18.400	0.600	0.864
162	12	23-51- 2.300	0.600	0.927
162	13	24- 3-55.700	0.600	0.171
162	35	25-36- 6.100	0.600	0.983
162	14	27-11-35.600	0.600	0.876
162	36	27-49-31.700	0.600	0.439
162	25	29-15-44.400	0.600	1.245
162	26	31- 3-25.100	0.600	0.524
162	37	32-27-44.000	0.600	-0.232
162	15	32-32-39.100	0.600	0.740
162	164	32-54-31.600	0.600	0.349
162	16	33-27-29.700	0.600	0.081
162	27	34-17-38.300	0.600	1.357
162	38	35-31-28.600	0.600	0.601
162	17	36-10-31.100	0.600	0.846
162	28	36-50-23.600	0.600	-0.335
162	18	38-33-10.000	0.600	1.239
162	29	43-35-28.000	0.600	0.999
162	19	44-12-21.300	0.600	-0.038
162	163	82- 5-40.100	0.600	1.154
162	166	0- 0- 0.000	0.600	0.000
162	165	9-44- 2.800	0.600	0.002
163	162	0- 0- 0.000	0.600	0.000
163	34	52-44-35.700	0.600	0.559
163	33	53-30-20.600	0.600	0.204

2.4 OBSERVED DIRECTIONS INPUT REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)
163	35	53-30-34.200	0.600	0.172
163	36	53-38-42.400	0.600	0.469
163	37	54-15-57.600	0.600	0.890
163	38	54-43- 3.100	0.600	0.131
163	39	56-10-42.000	0.600	-0.144
163	23	65-37-58.200	0.600	0.570
163	24	67-33-50.400	0.600	0.246
163	25	69-36-31.300	0.600	0.289
163	26	70-10-24.000	0.600	0.350
163	27	71-37- 7.600	0.600	0.392
163	28	72-44- 5.200	0.600	0.545
163	29	76-35-11.300	0.600	-0.116
163	13	77-13-49.100	0.600	0.488
163	14	79-27-30.500	0.600	0.222
163	15	82-24- 2.800	0.600	0.378
163	16	82-58-49.300	0.600	0.432
163	17	84-38-10.400	0.600	0.274
163	18	86-11-59.200	0.600	0.734
163	19	90-35-28.300	0.600	0.471
163	164	98- 5-15.500	0.600	0.663
163	166	0- 0- 0.000	0.600	0.000
164	163	0- 0- 0.000	0.600	0.000
164	162	32-43-38.100	0.600	0.632
164	162	0- 0- 0.000	0.600	0.000
164	166	13-49- 4.300	0.600	0.797
164	33	17-50-20.100	0.600	1.333
164	32	18-33-11.800	0.600	0.058
164	31	19-12-49.500	0.600	0.697
164	23	20-50-32.500	0.600	0.241
164	22	21-34-26.900	0.600	0.754
164	21	22-31-37.400	0.600	-0.216
164	13	24-44-25.000	0.600	-0.015
164	12	25-48- 9.700	0.600	0.492
164	11	26-42-34.700	0.600	-0.197
164	161	32-11-52.600	0.600	0.407
164	162	0- 0- 0.000	0.600	0.000
164	37	0-22-30.500	0.600	0.082
164	15	0-58-30.000	0.600	0.322
164	26	2-46-49.100	0.600	0.316
164	36	4-20-23.600	0.600	0.305
164	25	5-34-54.100	0.600	0.622
164	35	6-19- 9.800	0.600	0.750
164	34	13-33-28.600	0.600	-0.498
164	24	15- 8-39.400	0.600	0.386
164	14	16-28-32.300	0.600	0.212
164	19	336-36-56.100	0.600	0.356
164	29	345-36-26.500	0.600	-0.159

2.4 OBSERVED DIRECTIONS INPUT REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)
164	18	346-42- 8.100	0.600	0.682
164	39	350-56-58.400	0.600	-0.596
164	17	351-52-30.400	0.600	0.128
164	28	354-22-19.400	0.600	-0.079
164	38	357-49-25.700	0.600	0.005
164	27	357-58- 5.400	0.600	0.821
164	16	358-33- 7.600	0.600	0.000
164	162	0- 0- 0.000	0.600	0.000
164	165	92-15-11.000	0.600	0.786
165	162	0- 0- 0.000	0.600	0.000
165	164	295-25-38.200	0.600	-0.466
165	161	0- 0- 0.000	0.600	0.000
165	12	303-40-29.300	0.600	-0.375
165	13	303-49-25.700	0.600	-0.725
165	11	304-25-38.800	0.600	-0.676
165	23	317-52-32.400	0.600	-0.707
165	22	318-24-40.100	0.600	-0.423
165	21	318-47-53.100	0.600	-1.189
165	33	326-36-28.200	0.600	0.289
165	32	327- 7-37.900	0.600	-1.151
165	31	327-43-39.700	0.600	0.057
165	162	330-27-42.000	0.600	0.000
165	166	334-30-46.400	0.600	0.445
166	165	0- 0- 0.000	0.600	0.000
166	32	20-52-31.400	0.600	-0.735
166	21	22-28-15.200	0.600	-1.550
166	33	22-41- 5.600	0.600	-0.046
166	22	23-32- 9.500	0.600	-0.375
166	23	24-28-49.000	0.600	-0.454
166	11	25-25-30.700	0.600	-1.737
166	12	26- 5-59.800	0.600	-0.510
166	13	26-35-31.900	0.600	-1.187
166	24	31-26-20.400	0.600	-0.729
166	14	31-29-24.600	0.600	-0.568
166	34	33-38-20.900	0.600	-0.679
166	15	40- 6-56.200	0.600	-0.577
166	16	41-30-41.800	0.600	-0.450
166	25	42- 4- 1.600	0.600	-0.541
166	26	45-10-14.000	0.600	-0.641
166	17	45-38- 2.300	0.600	-0.877
166	18	49- 6- 2.700	0.600	-0.602
166	27	50-12-58.500	0.600	-0.731
166	35	51-24-36.100	0.600	-0.788
166	28	54- 0- 8.200	0.600	-0.439
166	36	55-42- 3.100	0.600	-0.665
166	19	56-44-23.500	0.600	-0.375

2.4 OBSERVED DIRECTIONS INPUT REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)
166	29	62-45-23.600	0.600	-1.187
166	37	63- 3-59.700	0.600	-0.109
166	38	67-11-44.800	0.600	-0.973
166	39	76-27- 9.700	0.600	-1.288
166	163	101-16-31.800	0.600	-1.146
166	162	166-12-53.300	0.600	0.053
166	163	0- 0- 0.000	0.600	0.000
166	162	64-56-19.600	0.600	-0.701
166	161	169-10-24.900	0.600	-1.200
166	164	291-39-54.000	0.600	-1.055
166	16	300-14- 8.400	0.600	-0.904

2.5 OBSERVED AZIMUTH INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)
166	164	0- 0- 0.000	0.001	0.000

2.6 OBSERVED HORIZONTAL DISTANCE INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (METERS)	STAN. DEV. (CM)	MISCLOSURE (CM)
166	161	136.8337	0.3629	-0.03
166	162	120.3850	0.3554	0.23
166	163	219.1256	0.4008	-0.16
166	164	273.8510	0.4260	0.03
166	165	288.1155	0.4325	0.42

2.7 OBSERVED SLOPE DISTANCE INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (METERS)	STAN. DEV. (CM)	MISCLOSURE (CM)

THERE ARE NO SLOPE DISTANCE OBSERVATIONS

2.8 OBSERVED SCALE DISTANCE INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (METERS)	STAN. DEV. (CM)	MISCLOSURE (CM)

THERE ARE NO SCALED DISTANCE OBSERVATIONS

2.9 OBSERVED ZENITH DISTANCE INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)

THERE ARE NO ZENITH DISTANCE OBSERVATIONS

2.10 OBSERVED HEIGHT DIFFERENCE INPUT REPORT

FROM STATION	TO STATION	OBSERVED VALUE (METERS)	STAN. DEV. (CM)	MISCLOSURE (CM)

THERE ARE NO HEIGHT DIFFERENCE OBSERVATIONS

2.11 OBSERVED RELATIVE POSITIONS INPUT REPORT

FROM STATION	TO STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAN. DEV. (SEC)

THERE ARE NO RELATIVE POSITION OBSERVATIONS

2.12 OBSERVED COORDINATE DIFFERENCE INPUT REPORT

FROM STATION	TO STATION	OBSERVED VALUES (METERS) DX	DY	DZ	COVARIANCES (CM SQUARED) XX	XY	YY	XZ	YZ	ZZ

THERE ARE NO COORDINATE DIFFERENCE OBSERVATIONS

3.0 SOLVABILITY OF NETWORK REPORT

STATION NAME	NUMBER OF TIMES OBSERVED

ALL STATIONS ARE INVOLVED IN AT LEAST TWO OBSERVATIONS

3.1 ARRAY USAGE REPORT

FACTOR	MAXIMUM ALLOWED	ACTUAL
OBSERVATIONS	9000	156
POINTS	1000	33
FIXED & WEIGHTED POINTS	99	1
ORIENTATION UNKNOWNS	1500	14
MATRIX ELEMENTS	99998	2145

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
161	165	O:	0- 0- 0.00	0.60		49.12	COM:	-1.3 SEC	-0.1 CM	317.9851
		C:	0- 0- 0.63	0.43			BND:	3.5 SEC	0.2 CM	
		V=C-O:	0- 0- 0.63	0.42	1.49					
161	164	O:	25-50- 3.80	0.60		79.06	COM:	0.0 SEC	0.0 CM	366.0303
		C:	25-50- 3.83	0.27			BND:	2.8 SEC	0.0 CM	
		V=C-O:	0- 0- 0.03	0.53	0.05					
161	11	O:	27-58- 2.30	0.60		77.38	COM:	-0.1 SEC	0.0 CM	263.9634
		C:	27-58- 2.39	0.29			BND:	2.8 SEC	0.0 CM	
		V=C-O:	0- 0- 0.09	0.53	0.18					
161	12	O:	28-15-43.80	0.60		77.60	COM:	0.0 SEC	0.0 CM	265.8116
		C:	28-15-43.79	0.28			BND:	2.8 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.01	0.53	-0.03					
161	13	O:	28-41-43.30	0.60		77.86	COM:	0.1 SEC	0.0 CM	265.2285
		C:	28-41-43.24	0.28			BND:	2.8 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.06	0.53	-0.11					
161	21	O:	32-31-53.60	0.60		57.83	COM:	0.6 SEC	0.0 CM	218.1953
		C:	32-31-53.26	0.39			BND:	3.3 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.34	0.46	-0.74					
161	22	O:	33-10-40.60	0.60		57.47	COM:	0.1 SEC	0.0 CM	218.7585
		C:	33-10-40.56	0.39			BND:	3.3 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.04	0.45	-0.09					
161	23	O:	33-35-37.10	0.60		65.86	COM:	0.2 SEC	0.0 CM	220.0877
		C:	33-35-37.00	0.35			BND:	3.1 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.10	0.49	-0.21					
161	31	O:	40-23-25.70	0.60		23.75	COM:	0.6 SEC	0.0 CM	177.8674
		C:	40-23-25.57	0.52			BND:	5.1 SEC	0.3 CM	
		V=C-O:	- 0- 0- 0.13	0.29	-0.45					
161	32	O:	40-53-52.70	0.60		31.13	COM:	-0.4 SEC	0.0 CM	179.7566
		C:	40-53-52.83	0.50			BND:	4.4 SEC	0.3 CM	
		V=C-O:	0- 0- 0.13	0.33	0.40					
161	33	O:	41-31-50.10	0.60		52.78	COM:	-0.4 SEC	0.0 CM	181.2481
		C:	41-31-50.29	0.41			BND:	3.4 SEC	0.1 CM	
		V=C-O:	0- 0- 0.19	0.44	0.45					
161	166	O:	64-57-46.60	0.60		40.33	COM:	1.0 SEC	0.0 CM	136.8356
		C:	64-57-46.21	0.46			BND:	3.9 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.39	0.38	-1.03					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
162	166	O:	0- 0- 0.00	0.60		66.28	COM:	-0.9 SEC	0.0 CM	120.3843
		C:	0- 0- 0.57	0.35			BND:	3.0 SEC	0.0 CM	
		V=C-O:	0- 0- 0.57	0.49	1.17					
162	31	O:	12-49-46.10	0.60		44.81	COM:	1.5 SEC	0.1 CM	190.7103
		C:	12-49-45.45	0.45			BND:	3.7 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.65	0.40	-1.62					
162	32	O:	13-32-23.30	0.60		69.06	COM:	-1.2 SEC	0.0 CM	190.0013
		C:	13-32-24.11	0.33			BND:	3.0 SEC	0.1 CM	
		V=C-O:	0- 0- 0.81	0.50	1.63					
162	33	O:	14-11-36.90	0.60		77.15	COM:	0.4 SEC	0.0 CM	188.7638
		C:	14-11-36.56	0.29			BND:	2.8 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.34	0.53	-0.65					
162	34	O:	17-45-48.80	0.60		65.79	COM:	-0.5 SEC	0.0 CM	179.1374
		C:	17-45-49.14	0.35			BND:	3.1 SEC	0.1 CM	
		V=C-O:	0- 0- 0.34	0.49	0.70					
162	21	O:	18-34-21.30	0.60		76.24	COM:	-0.4 SEC	0.0 CM	234.3750
		C:	18-34-21.61	0.29			BND:	2.8 SEC	0.1 CM	
		V=C-O:	0- 0- 0.31	0.52	0.59					
162	22	O:	19- 2-40.80	0.60		76.06	COM:	-0.3 SEC	0.0 CM	232.7345
		C:	19- 2-41.00	0.29			BND:	2.8 SEC	0.1 CM	
		V=C-O:	0- 0- 0.20	0.52	0.39					
162	23	O:	19-32-29.20	0.60		81.25	COM:	-1.1 SEC	0.0 CM	232.2503
		C:	19-32-30.07	0.26			BND:	2.7 SEC	0.0 CM	
		V=C-O:	0- 0- 0.87	0.54	1.60					
162	11	O:	23-23-10.90	0.60		82.81	COM:	0.3 SEC	0.0 CM	279.0806
		C:	23-23-10.67	0.25			BND:	2.7 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.23	0.55	-0.42					
162	24	O:	23-23-18.40	0.60		75.84	COM:	0.4 SEC	0.0 CM	229.7520
		C:	23-23-18.08	0.29			BND:	2.8 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.32	0.52	-0.62					
162	12	O:	23-51- 2.30	0.60		83.01	COM:	0.4 SEC	0.0 CM	279.4725
		C:	23-51- 1.94	0.25			BND:	2.7 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.36	0.55	-0.65					
162	13	O:	24- 3-55.70	0.60		85.25	COM:	-0.5 SEC	0.0 CM	277.6623
		C:	24- 3-56.10	0.23			BND:	2.7 SEC	0.0 CM	
		V=C-O:	0- 0- 0.40	0.55	0.72					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
162	35	O:	25-36- 6.10	0.60		59.81	COM:	0.9 SEC	0.0 CM	171.4587
		C:	25-36- 5.59	0.38			BND:	3.2 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.51	0.46	-1.11					
162	14	O:	27-11-35.60	0.60		80.82	COM:	0.4 SEC	0.0 CM	275.5685
		C:	27-11-35.30	0.26			BND:	2.8 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.30	0.54	-0.56					
162	36	O:	27-49-31.70	0.60		58.53	COM:	-0.1 SEC	0.0 CM	169.6208
		C:	27-49-31.77	0.39			BND:	3.2 SEC	0.1 CM	
		V=C-O:	0- 0- 0.07	0.46	0.16					
162	25	O:	29-15-44.40	0.60		78.30	COM:	0.8 SEC	0.0 CM	222.5806
		C:	29-15-43.74	0.28			BND:	2.8 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.66	0.53	-1.25					
162	26	O:	31- 3-25.10	0.60		78.41	COM:	0.0 SEC	0.0 CM	220.4278
		C:	31- 3-25.10	0.28			BND:	2.8 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.00	0.53	-0.01					
162	37	O:	32-27-44.00	0.60		56.52	COM:	-1.4 SEC	-0.1 CM	167.5810
		C:	32-27-44.81	0.40			BND:	3.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.81	0.45	1.79					
162	15	O:	32-32-39.10	0.60		86.20	COM:	0.2 SEC	0.0 CM	267.0961
		C:	32-32-38.91	0.22			BND:	2.7 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.19	0.56	-0.33					
162	164	O:	32-54-31.60	0.60		87.08	COM:	-0.2 SEC	0.0 CM	366.9950
		C:	32-54-31.81	0.22			BND:	2.7 SEC	0.0 CM	
		V=C-O:	0- 0- 0.21	0.56	0.37					
162	16	O:	33-27-29.70	0.60		87.23	COM:	-0.6 SEC	0.0 CM	266.0507
		C:	33-27-30.20	0.21			BND:	2.7 SEC	0.0 CM	
		V=C-O:	0- 0- 0.50	0.56	0.88					
162	27	O:	34-17-38.30	0.60		77.88	COM:	1.1 SEC	0.0 CM	218.3341
		C:	34-17-37.46	0.28			BND:	2.8 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.84	0.53	-1.58					
162	38	O:	35-31-28.60	0.60		54.98	COM:	0.2 SEC	0.0 CM	166.8196
		C:	35-31-28.48	0.40			BND:	3.3 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.12	0.44	-0.26					
162	17	O:	36-10-31.10	0.60		83.77	COM:	0.3 SEC	0.0 CM	262.6117
		C:	36-10-30.82	0.24			BND:	2.7 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.28	0.55	-0.52					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
162	28	O:	36-50-23.60	0.60		76.52	COM:	-1.1 SEC	0.0 CM	216.7224
		C:	36-50-24.47	0.29			BND:	2.8 SEC	0.1 CM	
		V=C-O:	0- 0- 0.87	0.52	1.66					
162	18	O:	38-33-10.00	0.60		80.69	COM:	0.8 SEC	0.0 CM	260.0516
		C:	38-33- 9.32	0.26			BND:	2.8 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.68	0.54	-1.26					
162	29	O:	43-35-28.00	0.60		70.57	COM:	0.6 SEC	0.0 CM	215.2476
		C:	43-35-27.55	0.33			BND:	2.9 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.45	0.50	-0.90					
162	19	O:	44-12-21.30	0.60		72.79	COM:	-0.7 SEC	0.0 CM	255.9854
		C:	44-12-21.84	0.31			BND:	2.9 SEC	0.1 CM	
		V=C-O:	0- 0- 0.54	0.51	1.06					
162	163	O:	82- 5-40.10	0.60		57.83	COM:	1.0 SEC	0.0 CM	200.4046
		C:	82- 5-39.53	0.39			BND:	3.3 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.57	0.46	-1.24					
162	166	O:	0- 0- 0.00	0.60		41.09	COM:	0.0 SEC	0.0 CM	120.3843
		C:	- 0- 0- 0.00	0.46			BND:	3.9 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.00	0.38	0.00					
162	165	O:	9-44- 2.80	0.60		41.09	COM:	0.0 SEC	0.0 CM	406.0449
		C:	9-44- 2.80	0.46			BND:	3.9 SEC	0.1 CM	
		V=C-O:	0- 0- 0.00	0.38	0.00					
163	162	O:	0- 0- 0.00	0.60		30.84	COM:	-1.3 SEC	0.0 CM	200.4046
		C:	0- 0- 0.40	0.50			BND:	4.5 SEC	0.1 CM	
		V=C-O:	0- 0- 0.40	0.33	1.19					
163	34	O:	52-44-35.70	0.60		20.57	COM:	0.9 SEC	0.1 CM	202.8550
		C:	52-44-35.52	0.53			BND:	5.5 SEC	0.4 CM	
		V=C-O:	- 0- 0- 0.18	0.27	-0.67					
163	33	O:	53-30-20.60	0.60		47.22	COM:	-0.4 SEC	0.0 CM	217.5553
		C:	53-30-20.77	0.44			BND:	3.6 SEC	0.2 CM	
		V=C-O:	0- 0- 0.17	0.41	0.42					
163	35	O:	53-30-34.20	0.60		28.97	COM:	-0.5 SEC	0.0 CM	177.8272
		C:	53-30-34.35	0.51			BND:	4.6 SEC	0.3 CM	
		V=C-O:	0- 0- 0.15	0.32	0.47					
163	36	O:	53-38-42.40	0.60		30.83	COM:	0.3 SEC	0.0 CM	170.9702
		C:	53-38-42.31	0.50			BND:	4.5 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.09	0.33	-0.28					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
163	37	O:	54-15-57.60	0.60		32.37	COM:	1.7 SEC	0.1 CM	157.2925
		C:	54-15-57.04	0.49			BND:	4.4 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.56	0.34	-1.64					
163	38	O:	54-43- 3.10	0.60		32.18	COM:	-0.8 SEC	0.0 CM	148.4066
		C:	54-43- 3.35	0.49			BND:	4.4 SEC	0.2 CM	
		V=C-O:	0- 0- 0.25	0.34	0.74					
163	39	O:	56-10-42.00	0.60		24.13	COM:	-2.4 SEC	-0.1 CM	123.7226
		C:	56-10-42.58	0.52			BND:	5.0 SEC	0.2 CM	
		V=C-O:	0- 0- 0.58	0.29	1.98					
163	23	O:	65-37-58.20	0.60		48.78	COM:	0.4 SEC	0.0 CM	226.2626
		C:	65-37-57.98	0.43			BND:	3.5 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.22	0.42	-0.51					
163	24	O:	67-33-50.40	0.60		10.64	COM:	-1.2 SEC	-0.1 CM	212.4038
		C:	67-33-50.53	0.57			BND:	7.6 SEC	0.7 CM	
		V=C-O:	0- 0- 0.13	0.20	0.65					
163	25	O:	69-36-31.30	0.60		13.23	COM:	-0.5 SEC	0.0 CM	189.2255
		C:	69-36-31.36	0.56			BND:	6.8 SEC	0.5 CM	
		V=C-O:	0- 0- 0.06	0.22	0.29					
163	26	O:	70-10-24.00	0.60		16.21	COM:	0.2 SEC	0.0 CM	182.1951
		C:	70-10-23.96	0.55			BND:	6.2 SEC	0.4 CM	
		V=C-O:	- 0- 0- 0.04	0.24	-0.16					
163	27	O:	71-37- 7.60	0.60		21.14	COM:	0.2 SEC	0.0 CM	170.4404
		C:	71-37- 7.56	0.53			BND:	5.4 SEC	0.3 CM	
		V=C-O:	- 0- 0- 0.04	0.28	-0.16					
163	28	O:	72-44- 5.20	0.60		24.04	COM:	0.6 SEC	0.0 CM	161.1873
		C:	72-44- 5.06	0.52			BND:	5.1 SEC	0.3 CM	
		V=C-O:	- 0- 0- 0.14	0.29	-0.48					
163	29	O:	76-35-11.30	0.60		26.05	COM:	-1.6 SEC	-0.1 CM	137.7626
		C:	76-35-11.73	0.52			BND:	4.9 SEC	0.3 CM	
		V=C-O:	0- 0- 0.43	0.31	1.40					
163	13	O:	77-13-49.10	0.60		58.33	COM:	0.2 SEC	0.0 CM	241.5185
		C:	77-13-48.98	0.39			BND:	3.2 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.12	0.46	-0.27					
163	14	O:	79-27-30.50	0.60		9.08	COM:	-1.2 SEC	-0.1 CM	229.3301
		C:	79-27-30.61	0.57			BND:	8.2 SEC	0.8 CM	
		V=C-O:	0- 0- 0.11	0.18	0.61					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
163	15	O:	82-24- 2.80	0.60		15.11	COM:	0.3 SEC	0.0 CM	205.0543
		C:	82-24- 2.75	0.55			BND:	6.4 SEC	0.5 CM	
		V=C-O:	- 0- 0- 0.05	0.23	-0.20					
163	16	O:	82-58-49.30	0.60		25.04	COM:	0.2 SEC	0.0 CM	201.1859
		C:	82-58-49.26	0.52			BND:	5.0 SEC	0.3 CM	
		V=C-O:	- 0- 0- 0.04	0.30	-0.13					
163	17	O:	84-38-10.40	0.60		30.92	COM:	-0.4 SEC	0.0 CM	189.4790
		C:	84-38-10.51	0.50			BND:	4.5 SEC	0.3 CM	
		V=C-O:	0- 0- 0.11	0.33	0.34					
163	18	O:	86-11-59.20	0.60		37.78	COM:	1.0 SEC	0.1 CM	179.5399
		C:	86-11-58.82	0.47			BND:	4.0 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.38	0.37	-1.04					
163	19	O:	90-35-28.30	0.60		40.54	COM:	0.5 SEC	0.0 CM	157.2150
		C:	90-35-28.08	0.46			BND:	3.9 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.22	0.38	-0.57					
163	164	O:	98- 5-15.50	0.60		70.36	COM:	0.4 SEC	0.0 CM	280.5428
		C:	98- 5-15.19	0.33			BND:	3.0 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.31	0.50	-0.62					
163	166	O:	0- 0- 0.00	0.60		0.00	COM:	NOT		219.1293
		C:	0- 0- 0.00	0.60			BND:	CONTROLLED		
		V=C-O:	0- 0- 0.00	0.00	0.00					
164	163	O:	0- 0- 0.00	0.60		40.46	COM:	-0.8 SEC	0.0 CM	280.5428
		C:	0- 0- 0.31	0.46			BND:	3.9 SEC	0.1 CM	
		V=C-O:	0- 0- 0.31	0.38	0.81					
164	162	O:	32-43-38.10	0.60		40.46	COM:	0.8 SEC	0.0 CM	366.9950
		C:	32-43-37.79	0.46			BND:	3.9 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.31	0.38	-0.81					
164	162	O:	0- 0- 0.00	0.60		71.26	COM:	-0.5 SEC	0.0 CM	366.9950
		C:	0- 0- 0.37	0.32			BND:	2.9 SEC	0.1 CM	
		V=C-O:	0- 0- 0.37	0.51	0.72					
164	166	O:	13-49- 4.30	0.60		80.19	COM:	0.5 SEC	0.0 CM	273.8530
		C:	13-49- 3.88	0.27			BND:	2.8 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.42	0.54	-0.78					
164	33	O:	17-50-20.10	0.60		76.40	COM:	1.3 SEC	0.0 CM	197.7178
		C:	17-50-19.11	0.29			BND:	2.8 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.99	0.52	-1.89					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
164	32	O:	18-33-11.80	0.60		73.95	COM:	-0.4 SEC	0.0 CM	198.0396
		C:	18-33-12.13	0.31			BND:	2.9 SEC	0.0 CM	
		V=C-O:	0- 0- 0.33	0.52	0.64					
164	31	O:	19-12-49.50	0.60		58.28	COM:	0.5 SEC	0.0 CM	198.9591
		C:	19-12-49.20	0.39			BND:	3.2 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.30	0.46	-0.65					
164	23	O:	20-50-32.50	0.60		57.51	COM:	-0.1 SEC	0.0 CM	150.9119
		C:	20-50-32.58	0.39			BND:	3.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.08	0.45	0.18					
164	22	O:	21-34-26.90	0.60		54.27	COM:	0.6 SEC	0.0 CM	151.6660
		C:	21-34-26.58	0.41			BND:	3.4 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.32	0.44	-0.73					
164	21	O:	22-31-37.40	0.60		52.55	COM:	-1.1 SEC	0.0 CM	151.4765
		C:	22-31-37.97	0.41			BND:	3.4 SEC	0.1 CM	
		V=C-O:	0- 0- 0.57	0.43	1.30					
164	13	O:	24-44-25.00	0.60		27.85	COM:	-1.2 SEC	0.0 CM	101.9951
		C:	24-44-25.34	0.51			BND:	4.7 SEC	0.2 CM	
		V=C-O:	0- 0- 0.34	0.32	1.09					
164	12	O:	25-48- 9.70	0.60		26.35	COM:	0.6 SEC	0.0 CM	101.0863
		C:	25-48- 9.53	0.51			BND:	4.8 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.17	0.31	-0.55					
164	11	O:	26-42-34.70	0.60		26.48	COM:	-1.9 SEC	-0.1 CM	102.7207
		C:	26-42-35.20	0.51			BND:	4.8 SEC	0.2 CM	
		V=C-O:	0- 0- 0.50	0.31	1.63					
164	161	O:	32-11-52.60	0.60		63.44	COM:	0.0 SEC	0.0 CM	366.0303
		C:	32-11-52.60	0.36			BND:	3.1 SEC	0.1 CM	
		V=C-O:	0- 0- 0.00	0.48	0.01					
164	162	O:	0- 0- 0.00	0.60		72.74	COM:	-0.2 SEC	0.0 CM	366.9950
		C:	0- 0- 0.18	0.31			BND:	2.9 SEC	0.1 CM	
		V=C-O:	0- 0- 0.18	0.51	0.35					
164	37	O:	0-22-30.50	0.60		68.55	COM:	-0.1 SEC	0.0 CM	199.4234
		C:	0-22-30.58	0.34			BND:	3.0 SEC	0.1 CM	
		V=C-O:	0- 0- 0.08	0.50	0.17					
164	15	O:	0-58-30.00	0.60		30.97	COM:	0.4 SEC	0.0 CM	99.9188
		C:	0-58-29.86	0.50			BND:	4.5 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.14	0.33	-0.41					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
164	26	O:	2-46-49.10	0.60		57.35	COM:	0.1 SEC	0.0 CM	146.8552
		C:	2-46-49.02	0.39			BND:	3.3 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.08	0.45	-0.18					
164	36	O:	4-20-23.60	0.60		71.86	COM:	0.1 SEC	0.0 CM	198.6108
		C:	4-20-23.52	0.32			BND:	2.9 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.08	0.51	-0.16					
164	25	O:	5-34-54.10	0.60		57.44	COM:	0.8 SEC	0.0 CM	145.5552
		C:	5-34-53.61	0.39			BND:	3.3 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.49	0.45	-1.07					
164	35	O:	6-19- 9.80	0.60		73.49	COM:	0.7 SEC	0.0 CM	198.1327
		C:	6-19- 9.30	0.31			BND:	2.9 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.50	0.51	-0.97					
164	34	O:	13-33-28.60	0.60		75.50	COM:	-0.9 SEC	0.0 CM	199.6431
		C:	13-33-29.24	0.30			BND:	2.9 SEC	0.0 CM	
		V=C-O:	0- 0- 0.64	0.52	1.24					
164	24	O:	15- 8-39.40	0.60		52.01	COM:	0.3 SEC	0.0 CM	145.4590
		C:	15- 8-39.23	0.42			BND:	3.4 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.17	0.43	-0.38					
164	14	O:	16-28-32.30	0.60		21.63	COM:	0.6 SEC	0.0 CM	96.7698
		C:	16-28-32.18	0.53			BND:	5.3 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.12	0.28	-0.44					
164	19	O:	336-36-56.10	0.60		35.47	COM:	0.2 SEC	0.0 CM	126.3475
		C:	336-36-56.04	0.48			BND:	4.2 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.06	0.36	-0.16					
164	29	O:	345-36-26.50	0.60		53.90	COM:	-0.7 SEC	0.0 CM	160.5152
		C:	345-36-26.87	0.41			BND:	3.4 SEC	0.1 CM	
		V=C-O:	0- 0- 0.37	0.44	0.83					
164	18	O:	346-42- 8.10	0.60		33.74	COM:	1.5 SEC	0.1 CM	111.1852
		C:	346-42- 7.59	0.49			BND:	4.3 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.51	0.35	-1.46					
164	39	O:	350-56-58.40	0.60		43.96	COM:	-1.8 SEC	-0.1 CM	205.7900
		C:	350-56-59.19	0.45			BND:	3.7 SEC	0.2 CM	
		V=C-O:	0- 0- 0.79	0.40	1.98					
164	17	O:	351-52-30.40	0.60		32.95	COM:	-0.1 SEC	0.0 CM	105.8727
		C:	351-52-30.43	0.49			BND:	4.3 SEC	0.2 CM	
		V=C-O:	0- 0- 0.03	0.34	0.08					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
164	28	O:	354-22-19.40	0.60		55.15	COM:	-0.5 SEC	0.0 CM	151.5129
		C:	354-22-19.68	0.40			BND:	3.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.28	0.45	0.62					
164	38	O:	357-49-25.70	0.60		66.61	COM:	-0.4 SEC	0.0 CM	200.4938
		C:	357-49-25.93	0.35			BND:	3.0 SEC	0.1 CM	
		V=C-O:	0- 0- 0.23	0.49	0.48					
164	27	O:	357-58- 5.40	0.60		56.00	COM:	1.1 SEC	0.0 CM	148.8183
		C:	357-58- 4.81	0.40			BND:	3.3 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.59	0.45	-1.31					
164	16	O:	358-33- 7.60	0.60		37.48	COM:	-0.3 SEC	0.0 CM	100.9888
		C:	358-33- 7.73	0.47			BND:	4.0 SEC	0.1 CM	
		V=C-O:	0- 0- 0.13	0.37	0.35					
164	162	O:	0- 0- 0.00	0.60		25.84	COM:	-1.6 SEC	0.0 CM	366.9950
		C:	0- 0- 0.42	0.52			BND:	4.9 SEC	0.0 CM	
		V=C-O:	0- 0- 0.42	0.30	1.38					
164	165	O:	92-15-11.00	0.60		25.84	COM:	1.6 SEC	0.1 CM	159.9160
		C:	92-15-10.58	0.52			BND:	4.9 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.42	0.30	-1.38					
165	162	O:	0- 0- 0.00	0.60		27.17	COM:	0.7 SEC	0.0 CM	406.0449
		C:	- 0- 0- 0.20	0.51			BND:	4.8 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.20	0.31	-0.63					
165	164	O:	295-25-38.20	0.60		27.17	COM:	-0.7 SEC	0.0 CM	159.9160
		C:	295-25-38.40	0.51			BND:	4.8 SEC	0.1 CM	
		V=C-O:	0- 0- 0.20	0.31	0.63					
165	161	O:	0- 0- 0.00	0.60		29.94	COM:	1.5 SEC	0.1 CM	317.9851
		C:	- 0- 0- 0.45	0.50			BND:	4.5 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.45	0.33	-1.36					
165	12	O:	303-40-29.30	0.60		12.96	COM:	1.2 SEC	0.1 CM	151.2416
		C:	303-40-29.14	0.56			BND:	6.9 SEC	0.4 CM	
		V=C-O:	- 0- 0- 0.16	0.22	-0.73					
165	13	O:	303-49-25.70	0.60		30.10	COM:	-0.6 SEC	0.0 CM	153.2942
		C:	303-49-25.89	0.50			BND:	4.5 SEC	0.2 CM	
		V=C-O:	0- 0- 0.19	0.33	0.58					
165	11	O:	304-25-38.80	0.60		13.75	COM:	-1.7 SEC	-0.1 CM	150.0770
		C:	304-25-39.04	0.56			BND:	6.7 SEC	0.4 CM	
		V=C-O:	0- 0- 0.24	0.22	1.08					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
165	23	O:	317-52-32.40	0.60		50.81	COM:	-0.4 SEC	0.0 CM	181.5514
		C:	317-52-32.60	0.42			BND:	3.5 SEC	0.1 CM	
		V=C-O:	0- 0- 0.20	0.43	0.46					
165	22	O:	318-24-40.10	0.60		32.76	COM:	0.2 SEC	0.0 CM	180.3506
		C:	318-24-40.03	0.49			BND:	4.3 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.07	0.34	-0.21					
165	21	O:	318-47-53.10	0.60		33.31	COM:	-2.2 SEC	-0.1 CM	178.1310
		C:	318-47-53.83	0.49			BND:	4.3 SEC	0.2 CM	
		V=C-O:	0- 0- 0.73	0.35	2.11					
165	33	O:	326-36-28.20	0.60		66.52	COM:	1.2 SEC	0.0 CM	218.3463
		C:	326-36-27.39	0.35			BND:	3.0 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.81	0.49	-1.65					
165	32	O:	327- 7-37.90	0.60		60.57	COM:	-1.1 SEC	0.0 CM	216.8296
		C:	327- 7-38.58	0.38			BND:	3.2 SEC	0.1 CM	
		V=C-O:	0- 0- 0.68	0.47	1.46					
165	31	O:	327-43-39.70	0.60		48.83	COM:	1.1 SEC	0.0 CM	215.8585
		C:	327-43-39.15	0.43			BND:	3.5 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.55	0.42	-1.32					
165	162	O:	330-27-42.00	0.60		47.98	COM:	-0.5 SEC	0.0 CM	406.0449
		C:	330-27-42.22	0.43			BND:	3.6 SEC	0.0 CM	
		V=C-O:	0- 0- 0.22	0.42	0.52					
165	166	O:	334-30-46.40	0.60		47.98	COM:	0.5 SEC	0.0 CM	288.1136
		C:	334-30-46.18	0.43			BND:	3.6 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.22	0.42	-0.52					
166	165	O:	0- 0- 0.00	0.60		52.08	COM:	1.3 SEC	0.1 CM	288.1136
		C:	- 0- 0- 0.68	0.42			BND:	3.4 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.68	0.43	-1.57					
166	32	O:	20-52-31.40	0.60		28.21	COM:	0.0 SEC	0.0 CM	78.2173
		C:	20-52-31.39	0.51			BND:	4.7 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.01	0.32	-0.04					
166	21	O:	22-28-15.20	0.60		53.13	COM:	-1.6 SEC	0.0 CM	126.2247
		C:	22-28-16.05	0.41			BND:	3.4 SEC	0.1 CM	
		V=C-O:	0- 0- 0.85	0.44	1.95					
166	33	O:	22-41- 5.60	0.60		28.31	COM:	2.0 SEC	0.1 CM	77.8660
		C:	22-41- 5.03	0.51			BND:	4.7 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.57	0.32	-1.77					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
166	22	O: 23-32- 9.50	0.60		52.87	COM:	0.7 SEC	0.0 CM	125.2583
		C: 23-32- 9.12	0.41			BND:	3.4 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.38	0.44	-0.87					
166	23	O: 24-28-49.00	0.60		53.18	COM:	0.4 SEC	0.0 CM	125.4390
		C: 24-28-48.81	0.41			BND:	3.4 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.19	0.44	-0.43					
166	11	O: 25-25-30.70	0.60		70.70	COM:	-1.5 SEC	0.0 CM	175.2269
		C: 25-25-31.75	0.32			BND:	2.9 SEC	0.1 CM	
		V=C-O: 0- 0- 1.05	0.50	2.08					
166	12	O: 26- 5-59.80	0.60		71.23	COM:	0.2 SEC	0.0 CM	176.2247
		C: 26- 5-59.64	0.32			BND:	2.9 SEC	0.0 CM	
		V=C-O: - 0- 0- 0.16	0.51	-0.31					
166	13	O: 26-35-31.90	0.60		71.53	COM:	-0.7 SEC	0.0 CM	174.7774
		C: 26-35-32.42	0.32			BND:	2.9 SEC	0.0 CM	
		V=C-O: 0- 0- 0.52	0.51	1.02					
166	24	O: 31-26-20.40	0.60		45.50	COM:	0.0 SEC	0.0 CM	128.4770
		C: 31-26-20.40	0.44			BND:	3.7 SEC	0.1 CM	
		V=C-O: 0- 0- 0.00	0.40	0.01					
166	14	O: 31-29-24.60	0.60		70.19	COM:	0.1 SEC	0.0 CM	177.2441
		C: 31-29-24.52	0.33			BND:	3.0 SEC	0.0 CM	
		V=C-O: - 0- 0- 0.08	0.50	-0.15					
166	34	O: 33-38-20.90	0.60		17.19	COM:	-0.7 SEC	0.0 CM	74.2174
		C: 33-38-21.01	0.55			BND:	6.0 SEC	0.2 CM	
		V=C-O: 0- 0- 0.11	0.25	0.46					
166	15	O: 40- 6-56.20	0.60		54.50	COM:	0.2 SEC	0.0 CM	177.8261
		C: 40- 6-56.10	0.40			BND:	3.4 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.10	0.44	-0.22					
166	16	O: 41-30-41.80	0.60		61.18	COM:	0.4 SEC	0.0 CM	178.4199
		C: 41-30-41.58	0.37			BND:	3.2 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.22	0.47	-0.47					
166	25	O: 42- 4- 1.60	0.60		40.15	COM:	0.2 SEC	0.0 CM	131.4631
		C: 42- 4- 1.53	0.46			BND:	3.9 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.07	0.38	-0.20					
166	26	O: 45-10-14.00	0.60		37.87	COM:	0.2 SEC	0.0 CM	132.7263
		C: 45-10-13.93	0.47			BND:	4.0 SEC	0.2 CM	
		V=C-O: - 0- 0- 0.07	0.37	-0.18					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
166	17	O:	45-38- 2.30	0.60		38.40	COM:	-0.5 SEC	0.0 CM	180.0501
		C:	45-38- 2.48	0.47			BND:	4.0 SEC	0.2 CM	
		V=C-O:	0- 0- 0.18	0.37	0.50					
166	18	O:	49- 6- 2.70	0.60		31.49	COM:	0.2 SEC	0.0 CM	182.0825
		C:	49- 6- 2.63	0.50			BND:	4.4 SEC	0.3 CM	
		V=C-O:	- 0- 0- 0.07	0.34	-0.21					
166	27	O:	50-12-58.50	0.60		34.96	COM:	0.0 SEC	0.0 CM	136.8667
		C:	50-12-58.50	0.48			BND:	4.2 SEC	0.2 CM	
		V=C-O:	0- 0- 0.00	0.35	0.01					
166	35	O:	51-24-36.10	0.60		18.01	COM:	-0.2 SEC	0.0 CM	81.6184
		C:	51-24-36.13	0.54			BND:	5.8 SEC	0.2 CM	
		V=C-O:	0- 0- 0.03	0.25	0.11					
166	28	O:	54- 0- 8.20	0.60		33.32	COM:	0.9 SEC	0.0 CM	140.3591
		C:	54- 0- 7.90	0.49			BND:	4.3 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.30	0.35	-0.85					
166	36	O:	55-42- 3.10	0.60		18.83	COM:	0.4 SEC	0.0 CM	84.5358
		C:	55-42- 3.03	0.54			BND:	5.7 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.07	0.26	-0.29					
166	19	O:	56-44-23.50	0.60		24.83	COM:	1.4 SEC	0.1 CM	189.3140
		C:	56-44-23.15	0.52			BND:	5.0 SEC	0.3 CM	
		V=C-O:	- 0- 0- 0.35	0.30	-1.16					
166	29	O:	62-45-23.60	0.60		31.84	COM:	-1.6 SEC	-0.1 CM	152.6043
		C:	62-45-24.12	0.50			BND:	4.4 SEC	0.2 CM	
		V=C-O:	0- 0- 0.52	0.34	1.54					
166	37	O:	63- 3-59.70	0.60		21.83	COM:	2.1 SEC	0.1 CM	92.3696
		C:	63- 3-59.24	0.53			BND:	5.3 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.46	0.28	-1.63					
166	38	O:	67-11-44.80	0.60		24.48	COM:	-0.9 SEC	0.0 CM	98.1439
		C:	67-11-45.01	0.52			BND:	5.0 SEC	0.2 CM	
		V=C-O:	0- 0- 0.21	0.30	0.72					
166	39	O:	76-27- 9.70	0.60		21.00	COM:	-2.6 SEC	-0.1 CM	116.1525
		C:	76-27-10.25	0.53			BND:	5.4 SEC	0.2 CM	
		V=C-O:	0- 0- 0.55	0.27	1.98					
166	163	O:	101-16-31.80	0.60		63.26	COM:	-0.8 SEC	0.0 CM	219.1293
		C:	101-16-32.28	0.36			BND:	3.1 SEC	0.1 CM	
		V=C-O:	0- 0- 0.48	0.48	1.01					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
166	162	O: 166-12-53.30	0.60		55.60	COM:	1.3 SEC	0.0 CM	120.3843
		C: 166-12-52.55	0.40			BND:	3.3 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.75	0.45	-1.67					
166	163	O: 0- 0- 0.00	0.60		55.79	COM:	1.4 SEC	0.0 CM	219.1293
		C: - 0- 0- 0.76	0.40			BND:	3.3 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.76	0.45	-1.70					
166	162	O: 64-56-19.60	0.60		55.16	COM:	0.2 SEC	0.0 CM	120.3843
		C: 64-56-19.51	0.40			BND:	3.3 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.09	0.45	-0.20					
166	161	O: 169-10-24.90	0.60		29.32	COM:	-1.6 SEC	-0.1 CM	136.8356
		C: 169-10-25.36	0.50			BND:	4.6 SEC	0.2 CM	
		V=C-O: 0- 0- 0.46	0.32	1.42					
166	164	O: 291-39-54.00	0.60		66.43	COM:	-0.4 SEC	0.0 CM	273.8530
		C: 291-39-54.26	0.35			BND:	3.0 SEC	0.0 CM	
		V=C-O: 0- 0- 0.26	0.49	0.53					
166	16	O: 300-14- 8.40	0.60		52.10	COM:	-0.3 SEC	0.0 CM	178.4199
		C: 300-14- 8.53	0.42			BND:	3.4 SEC	0.1 CM	
		V=C-O: 0- 0- 0.13	0.43	0.31					

4.2 ANALYSIS OF AZIMUTH OBSERVATIONS REPORT

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
166	164	O:	0- 0- 0.00	0.00		0.00	COM: NOT		273.8530
		C:	0- 0- 0.00	0.00			BND: CONTROLLED		
		V=C-O:	0- 0- 0.00	0.00	0.00				

4.3 ANALYSIS OF HORIZONTAL DISTANCE OBSERVATIONS REPORT

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (METERS)	STD. DEV. (CM)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
166	161	O:	136.83370	0.36		85.88	COM:	-0.1 CM	0.0 CM	136.8356
		C:	136.83463	0.14			BND:	1.6 CM	0.2 CM	
		V=C-O:	0.00093	0.34	0.28					
166	162	O:	120.38500	0.36		89.13	COM:	0.2 CM	0.0 CM	120.3843
		C:	120.38331	0.12			BND:	1.6 CM	0.2 CM	
		V=C-O:	-0.00169	0.34	-0.50					
166	163	O:	219.12560	0.40		77.11	COM:	-0.3 CM	-0.1 CM	219.1293
		C:	219.12828	0.19			BND:	1.9 CM	0.4 CM	
		V=C-O:	0.00268	0.35	0.76					
166	164	O:	273.85100	0.43		70.10	COM:	-0.1 CM	0.0 CM	273.8530
		C:	273.85196	0.23			BND:	2.1 CM	0.6 CM	
		V=C-O:	0.00096	0.36	0.27					
166	165	O:	288.11550	0.43		67.33	COM:	0.4 CM	0.1 CM	288.1136
		C:	288.11261	0.25			BND:	2.2 CM	0.7 CM	
		V=C-O:	-0.00289	0.35	-0.81					

5.1 ADJUSTED COORDINATES AND ABSOLUTE ERROR ELLIPSE REPORT

STATION NAME	TYPE	ADJUSTED COORDINATES (METERS)		STANDARD CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	95% CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	MARGINAL STANDARD DEVIATIONS
11	FREE	EAST.: 9977.1192		LTH: 0.15 CM	0.03 CM	0.36 CM	0.06 CM	EAST.: 0.03 CM
		NORT.: 10173.6777		AZI: 173-26- 3	263-26- 3			NORT.: 0.15 CM
		ELEV.: 1000.3702	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.5217
12	FREE	EAST.: 9979.0467		LTH: 0.15 CM	0.03 CM	0.36 CM	0.06 CM	EAST.: 0.03 CM
		NORT.: 10174.9262		AZI: 174- 3-14	264- 3-14			NORT.: 0.15 CM
		ELEV.: 1000.4113	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.4930
13	FREE	EAST.: 9980.7113		LTH: 0.14 CM	0.03 CM	0.35 CM	0.06 CM	EAST.: 0.03 CM
		NORT.: 10173.6617		AZI: 174- 2-58	264- 2-58			NORT.: 0.14 CM
		ELEV.: 1000.1971	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.4975
14	FREE	EAST.: 9995.5502		LTH: 0.16 CM	0.03 CM	0.38 CM	0.06 CM	EAST.: 0.03 CM
		NORT.: 10177.1434		AZI: 178-27-46	268-27-46			NORT.: 0.16 CM
		ELEV.: 992.6488	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.1576
15	FREE	EAST.: 10022.2472		LTH: 0.15 CM	0.03 CM	0.38 CM	0.08 CM	EAST.: 0.03 CM
		NORT.: 10176.3899		AZI: 183-37-30	273-37-30			NORT.: 0.15 CM
		ELEV.: 977.7838	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.2708
16	FREE	EAST.: 10026.6273		LTH: 0.15 CM	0.03 CM	0.37 CM	0.07 CM	EAST.: 0.03 CM
		NORT.: 10176.3835		AZI: 185-43-17	275-43-17			NORT.: 0.15 CM
		ELEV.: 975.2242	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.4297
161	FREE	EAST.: 9884.6206		LTH: 0.13 CM	0.03 CM	0.31 CM	0.08 CM	EAST.: 0.11 CM
		NORT.: 9926.4518		AZI: 238-22-24	328-22-24			NORT.: 0.07 CM
		ELEV.: 1000.9704	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.8432
162	FREE	EAST.: 10087.6880		LTH: 0.11 CM	0.02 CM	0.27 CM	0.05 CM	EAST.: 0.08 CM
		NORT.: 9917.4346		AZI: 132-50-28	222-50-28			NORT.: 0.08 CM
		ELEV.: 1014.7672	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.9256
163	FREE	EAST.: 10203.6869		LTH: 0.18 CM	0.04 CM	0.44 CM	0.09 CM	EAST.: 0.17 CM
		NORT.: 10080.8551		AZI: 247-39-30	337-39-30			NORT.: 0.08 CM
		ELEV.: 925.0641	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.8457
164	FREE	EAST.: 10000.0377		LTH: 0.22 CM	0.00 CM	0.53 CM	0.00 CM	EAST.: 0.00 CM
		NORT.: 10273.8091		AZI: 180- 0- 0	270- 0- 0			NORT.: 0.22 CM
		ELEV.: 1006.1799	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.0000
165	FREE	EAST.: 9843.3682		LTH: 0.23 CM	0.06 CM	0.56 CM	0.14 CM	EAST.: 0.13 CM
		NORT.: 10241.7497		AZI: 146-39-12	236-39-12			NORT.: 0.19 CM
		ELEV.: 1009.5622	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.8640
166	FIXED	EAST.: 10000.0377	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.: 0.00 CM
		NORT.: 9999.9561	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.: 0.00 CM
		ELEV.: 1000.0000	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.0000

5.1 ADJUSTED COORDINATES AND ABSOLUTE ERROR ELLIPSE REPORT (CON'D)

STATION NAME	TYPE	ADJUSTED COORDINATES (METERS)			STANDARD CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	95% CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	MARGINAL STANDARD DEVIATIONS	
17	FREE	EAST.:	10039.5999		LTH: 0.15 CM	0.04 CM	0.37 CM	0.10 CM	EAST.:	0.05 CM
		NORT.:	10175.6059		AZI: 188-29- 6	278-29- 6			NORT.:	0.15 CM
		ELEV.:	966.8988	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.4543
18	FREE	EAST.:	10050.7145		LTH: 0.15 CM	0.04 CM	0.37 CM	0.11 CM	EAST.:	0.05 CM
		NORT.:	10174.8444		AZI: 192-12-20	282-12-20			NORT.:	0.15 CM
		ELEV.:	960.4771	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.5457
19	FREE	EAST.:	10076.4310		LTH: 0.15 CM	0.05 CM	0.38 CM	0.12 CM	EAST.:	0.07 CM
		NORT.:	10173.1724		AZI: 201- 9- 0	291- 9- 0			NORT.:	0.14 CM
		ELEV.:	946.8237	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.6873
21	FREE	EAST.:	9977.1005		LTH: 0.12 CM	0.03 CM	0.29 CM	0.06 CM	EAST.:	0.03 CM
		NORT.:	10124.0793		AZI: 170-16- 0	260-16- 0			NORT.:	0.12 CM
		ELEV.:	1000.2713	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	-0.5801
22	FREE	EAST.:	9979.5689		LTH: 0.12 CM	0.03 CM	0.29 CM	0.06 CM	EAST.:	0.03 CM
		NORT.:	10123.5307		AZI: 171- 9-53	261- 9-53			NORT.:	0.12 CM
		ELEV.:	1000.3987	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	-0.5454
23	FREE	EAST.:	9981.5818		LTH: 0.11 CM	0.03 CM	0.27 CM	0.06 CM	EAST.:	0.03 CM
		NORT.:	10124.0299		AZI: 171-23-35	261-23-35			NORT.:	0.11 CM
		ELEV.:	1000.2412	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	-0.5145
24	FREE	EAST.:	9996.6703		LTH: 0.12 CM	0.03 CM	0.29 CM	0.07 CM	EAST.:	0.03 CM
		NORT.:	10128.3890		AZI: 177-21- 4	267-21- 4			NORT.:	0.12 CM
		ELEV.:	991.8373	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	-0.1786
25	FREE	EAST.:	10020.8889		LTH: 0.12 CM	0.03 CM	0.29 CM	0.07 CM	EAST.:	0.03 CM
		NORT.:	10129.7551		AZI: 186-37- 3	276-37- 3			NORT.:	0.12 CM
		ELEV.:	978.2093	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.3774
26	FREE	EAST.:	10028.1531		LTH: 0.12 CM	0.03 CM	0.28 CM	0.08 CM	EAST.:	0.04 CM
		NORT.:	10129.6703		AZI: 189-36-53	279-36-53			NORT.:	0.11 CM
		ELEV.:	974.0470	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.4905
27	FREE	EAST.:	10040.6822		LTH: 0.12 CM	0.03 CM	0.29 CM	0.08 CM	EAST.:	0.04 CM
		NORT.:	10130.6486		AZI: 194-45- 3	284-45- 3			NORT.:	0.11 CM
		ELEV.:	965.8831	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.6212
28	FREE	EAST.:	10050.4780		LTH: 0.12 CM	0.03 CM	0.29 CM	0.08 CM	EAST.:	0.05 CM
		NORT.:	10130.9387		AZI: 198-48-47	288-48-47			NORT.:	0.11 CM
		ELEV.:	960.6518	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.6872
29	FREE	EAST.:	10075.9146		LTH: 0.12 CM	0.04 CM	0.31 CM	0.09 CM	EAST.:	0.07 CM
		NORT.:	10132.3600		AZI: 208-34-10	298-34-10			NORT.:	0.11 CM
		ELEV.:	946.7466	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.7758

5.1 ADJUSTED COORDINATES AND ABSOLUTE ERROR ELLIPSE REPORT (CON'D)

STATION NAME	TYPE	ADJUSTED COORDINATES (METERS)		STANDARD CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	95% CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	MARGINAL STANDARD DEVIATIONS	
31	FREE	EAST.:	9981.3281	LTH: 0.09 CM	0.03 CM	0.21 CM	0.08 CM	EAST.:	0.04 CM
		NORT.:	10075.7317	AZI: 169- 6-50	259- 6-50			NORT.:	0.09 CM
		ELEV.:	1000.4710 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	-0.3636
32	FREE	EAST.:	9983.6879	LTH: 0.09 CM	0.02 CM	0.21 CM	0.05 CM	EAST.:	0.03 CM
		NORT.:	10076.4455	AZI: 168-32-13	258-32-13			NORT.:	0.08 CM
		ELEV.:	1000.4770 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	-0.6203
33	FREE	EAST.:	9986.1737	LTH: 0.08 CM	0.02 CM	0.19 CM	0.05 CM	EAST.:	0.02 CM
		NORT.:	10076.5779	AZI: 169-43-10	259-43-10			NORT.:	0.08 CM
		ELEV.:	1000.0984 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	-0.5370
34	FREE	EAST.:	10000.9422	LTH: 0.08 CM	0.02 CM	0.20 CM	0.05 CM	EAST.:	0.02 CM
		NORT.:	10074.1680	AZI: 179- 3-29	269- 3-29			NORT.:	0.08 CM
		ELEV.:	992.1012 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	-0.0603
35	FREE	EAST.:	10025.8939	LTH: 0.08 CM	0.02 CM	0.19 CM	0.05 CM	EAST.:	0.03 CM
		NORT.:	10077.3707	AZI: 196-48-23	286-48-23			NORT.:	0.08 CM
		ELEV.:	977.7904 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.6641
36	FREE	EAST.:	10032.7421	LTH: 0.08 CM	0.02 CM	0.19 CM	0.06 CM	EAST.:	0.04 CM
		NORT.:	10077.9094	AZI: 201-16- 7	291-16- 7			NORT.:	0.07 CM
		ELEV.:	973.9514 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.7260
37	FREE	EAST.:	10046.3977	LTH: 0.08 CM	0.03 CM	0.20 CM	0.06 CM	EAST.:	0.05 CM
		NORT.:	10079.8491	AZI: 209- 6-14	299- 6-14			NORT.:	0.07 CM
		ELEV.:	965.3917 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.7882
38	FREE	EAST.:	10055.2805	LTH: 0.09 CM	0.03 CM	0.21 CM	0.06 CM	EAST.:	0.05 CM
		NORT.:	10081.0761	AZI: 213-35-48	303-35-48			NORT.:	0.07 CM
		ELEV.:	960.6633 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.8090
39	FREE	EAST.:	10080.0094	LTH: 0.10 CM	0.03 CM	0.25 CM	0.08 CM	EAST.:	0.08 CM
		NORT.:	10084.1935	AZI: 225-42-46	315-42-46			NORT.:	0.07 CM
		ELEV.:	946.9470 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.8237

5.3 RELATIVE ERROR ELLIPSE REPORT

STATION NAME	STATION NAME	HORIZONTAL LINE INFORMATION	STANDARD RELATIVE ERROR ELLIPSE SEMI-MAJOR	STANDARD RELATIVE ERROR ELLIPSE SEMI-MINOR	95% RELATIVE ERROR ELLIPSE SEMI-MAJOR	95% RELATIVE ERROR ELLIPSE SEMI-MINOR	ELEV. DIFF. (METERS)	ELE. DIF. STD. DEV. (CM)	95% RELATIVE PRECISION
164	14	LTH: 96.7698 M AZI: 267-20-31	0.10 CM 181- 7-36	0.03 CM 271- 7-36	0.26 CM	0.06 CM	-13.5311	0.00	HOR.: 1 / 148166 VER.:
164	12	LTH: 101.0863 M AZI: 258- 0-54	0.10 CM 189-33-26	0.03 CM 279-33-26	0.23 CM	0.06 CM	-5.7686	0.00	HOR.: 1 / 97225 VER.:
12	14	LTH: 16.6518 M AZI: 7-39- 5	0.08 CM 178-31-19	0.03 CM 268-31-19	0.21 CM	0.09 CM	-7.7625	0.00	HOR.: 1 / 8156 VER.:
164	15	LTH: 99.9188 M AZI: 282-50-33	0.11 CM 167-34-35	0.03 CM 257-34-35	0.26 CM	0.06 CM	-28.3961	0.00	HOR.: 1 / 78763 VER.:
14	15	LTH: 26.7076 M AZI: 358-23- 0	0.09 CM 170-51- 7	0.04 CM 260-51- 7	0.23 CM	0.09 CM	-14.8650	0.00	HOR.: 1 / 11790 VER.:
164	11	LTH: 102.7207 M AZI: 257- 6-28	0.10 CM 190-22-47	0.03 CM 280-22-47	0.23 CM	0.06 CM	-5.8097	0.00	HOR.: 1 / 93320 VER.:
11	12	LTH: 2.2965 M AZI: 32-55-54	0.06 CM 179-21-16	0.03 CM 269-21-16	0.14 CM	0.07 CM	0.0411	0.00	HOR.: 1 / 1843 VER.:
12	13	LTH: 2.0904 M AZI: 322-46-41	0.06 CM 178- 2-46	0.03 CM 268- 2-46	0.14 CM	0.07 CM	-0.2142	0.00	HOR.: 1 / 1760 VER.:
13	14	LTH: 15.2419 M AZI: 13-12-16	0.08 CM 177- 5-48	0.03 CM 267- 5-48	0.19 CM	0.08 CM	-7.5483	0.00	HOR.: 1 / 8158 VER.:
164	16	LTH: 100.9888 M AZI: 285-15-55	0.10 CM 166-46-11	0.02 CM 256-46-11	0.26 CM	0.06 CM	-30.9557	0.00	HOR.: 1 / 75868 VER.:
15	16	LTH: 4.3801 M AZI: 359-55- 1	0.09 CM 166-57-32	0.03 CM 256-57-32	0.21 CM	0.07 CM	-2.5596	0.00	HOR.: 1 / 2095 VER.:
14	25	LTH: 53.7373 M AZI: 298- 8- 0	0.09 CM 170-25-18	0.04 CM 260-25-18	0.23 CM	0.09 CM	-14.4395	0.00	HOR.: 1 / 34591 VER.:
15	25	LTH: 46.6546 M AZI: 268-19-54	0.09 CM 171-13- 2	0.03 CM 261-13- 2	0.22 CM	0.08 CM	0.4255	0.00	HOR.: 1 / 53818 VER.:
164	165	LTH: 159.9160 M AZI: 191-33-53	0.14 CM 257-18-24	0.04 CM 347-18-24	0.34 CM	0.11 CM	3.3823	0.00	HOR.: 1 / 93754 VER.:
165	11	LTH: 150.0770 M AZI: 333- 1-34	0.13 CM 114-34-57	0.06 CM 204-34-57	0.32 CM	0.14 CM	-9.1920	0.00	HOR.: 1 / 57357 VER.:
11	13	LTH: 3.5922 M AZI: 359-44-39	0.06 CM 177-56-52	0.03 CM 267-56-52	0.13 CM	0.07 CM	-0.1731	0.00	HOR.: 1 / 2664 VER.:

5.3 RELATIVE ERROR ELLIPSE REPORT

STATION NAME	STATION NAME	HORIZONTAL LINE INFORMATION	STANDARD RELATIVE ERROR ELLIPSE SEMI-MAJOR	STANDARD RELATIVE ERROR ELLIPSE SEMI-MINOR	95% RELATIVE ERROR ELLIPSE SEMI-MAJOR	95% RELATIVE ERROR ELLIPSE SEMI-MINOR	ELEV. DIFF. (METERS)	ELE. DIF. STD. DEV. (CM)	95% RELATIVE PRECISION
13	24	LTH: 48.0032 M AZI: 289-25- 4	0.08 CM 170-19-56	0.03 CM 260-19-56	0.20 CM	0.08 CM	-8.3598	0.00	HOR.: 1 / 39857 VER.:
14	24	LTH: 48.7672 M AZI: 271-18-57	0.10 CM 175-58-54	0.03 CM 265-58-54	0.23 CM	0.08 CM	-0.8115	0.00	HOR.: 1 / 58982 VER.:
164	17	LTH: 105.8727 M AZI: 291-56-33	0.11 CM 159-25-12	0.03 CM 249-25-12	0.26 CM	0.07 CM	-39.2811	0.00	HOR.: 1 / 57094 VER.:
16	17	LTH: 12.9958 M AZI: 356-34-10	0.08 CM 163-26-46	0.03 CM 253-26-46	0.20 CM	0.08 CM	-8.3254	0.00	HOR.: 1 / 6541 VER.:
16	25	LTH: 46.9802 M AZI: 262-59- 2	0.08 CM 173-42- 0	0.03 CM 263-42- 0	0.21 CM	0.08 CM	2.9851	0.00	HOR.: 1 / 56946 VER.:
24	25	LTH: 24.2572 M AZI: 3-13-42	0.08 CM 173- 3-23	0.04 CM 263- 3-23	0.19 CM	0.10 CM	-13.6280	0.00	HOR.: 1 / 13140 VER.:
165	21	LTH: 178.1310 M AZI: 318-39-20	0.15 CM 132-57-40	0.06 CM 222-57-40	0.37 CM	0.15 CM	-9.2909	0.00	HOR.: 1 / 47917 VER.:
11	21	LTH: 49.5984 M AZI: 269-58-42	0.08 CM 175-32- 9	0.03 CM 265-32- 9	0.19 CM	0.08 CM	-0.0989	0.00	HOR.: 1 / 63221 VER.:
13	21	LTH: 49.7137 M AZI: 265-50- 5	0.08 CM 175-50-58	0.03 CM 265-50-58	0.19 CM	0.08 CM	0.0742	0.00	HOR.: 1 / 64352 VER.:
13	23	LTH: 49.6394 M AZI: 271- 0-17	0.07 CM 174-26-22	0.03 CM 264-26-22	0.17 CM	0.08 CM	0.0441	0.00	HOR.: 1 / 63906 VER.:
23	24	LTH: 15.7056 M AZI: 16- 6-50	0.07 CM 171-35- 1	0.04 CM 261-35- 1	0.18 CM	0.09 CM	-8.4039	0.00	HOR.: 1 / 9442 VER.:
164	18	LTH: 111.1852 M AZI: 297- 6-56	0.11 CM 154-34-19	0.03 CM 244-34-19	0.27 CM	0.07 CM	-45.7028	0.00	HOR.: 1 / 51466 VER.:
17	18	LTH: 11.1406 M AZI: 356- 4-49	0.08 CM 157-43-38	0.03 CM 247-43-38	0.20 CM	0.08 CM	-6.4217	0.00	HOR.: 1 / 5871 VER.:
16	26	LTH: 46.7381 M AZI: 271-52-14	0.08 CM 171-41-31	0.03 CM 261-41-31	0.20 CM	0.08 CM	-1.1772	0.00	HOR.: 1 / 53734 VER.:
17	26	LTH: 47.3403 M AZI: 256- 0-26	0.08 CM 170-53-12	0.04 CM 260-53-12	0.20 CM	0.09 CM	7.1482	0.00	HOR.: 1 / 49933 VER.:
25	26	LTH: 7.2647 M AZI: 359-19-54	0.07 CM 173-29-42	0.03 CM 263-29-42	0.17 CM	0.09 CM	-4.1623	0.00	HOR.: 1 / 4327 VER.:

5.3 RELATIVE ERROR ELLIPSE REPORT

STATION NAME	STATION NAME	HORIZONTAL LINE INFORMATION	STANDARD RELATIVE ERROR ELLIPSE SEMI-MAJOR	STANDARD RELATIVE ERROR ELLIPSE SEMI-MINOR	95% RELATIVE ERROR ELLIPSE SEMI-MAJOR	95% RELATIVE ERROR ELLIPSE SEMI-MINOR	ELEV. DIFF. (METERS)	ELE. DIF. STD. DEV. (CM)	95% RELATIVE PRECISION
24	35	LTH: 58.7953 M AZI: 299-48-15	0.08 CM 168-51-44	0.04 CM 258-51-44	0.20 CM	0.09 CM	-14.0469	0.00	HOR.: 1 / 39662 VER.:
25	35	LTH: 52.6229 M AZI: 275-27-27	0.08 CM 178-28-19	0.03 CM 268-28-19	0.19 CM	0.08 CM	-0.4189	0.00	HOR.: 1 / 63695 VER.:
165	31	LTH: 215.8585 M AZI: 309-43-34	0.18 CM 141-12-20	0.07 CM 231-12-20	0.44 CM	0.17 CM	-9.0912	0.00	HOR.: 1 / 49697 VER.:
21	31	LTH: 48.5321 M AZI: 274-59-50	0.09 CM 172-31-45	0.04 CM 262-31-45	0.21 CM	0.09 CM	0.1997	0.00	HOR.: 1 / 47735 VER.:
21	23	LTH: 4.4815 M AZI: 359-22- 7	0.07 CM 170-14- 4	0.03 CM 260-14- 4	0.17 CM	0.08 CM	-0.0301	0.00	HOR.: 1 / 2671 VER.:
23	33	LTH: 47.6737 M AZI: 275-31-38	0.07 CM 171- 6-10	0.03 CM 261- 6-10	0.17 CM	0.07 CM	-0.1428	0.00	HOR.: 1 / 60404 VER.:
24	33	LTH: 52.8636 M AZI: 258-32-50	0.08 CM 177-15- 4	0.03 CM 267-15- 4	0.20 CM	0.08 CM	8.2611	0.00	HOR.: 1 / 61819 VER.:
164	19	LTH: 126.3475 M AZI: 307-12- 7	0.12 CM 144-43-49	0.03 CM 234-43-49	0.28 CM	0.08 CM	-59.3562	0.00	HOR.: 1 / 46662 VER.:
18	19	LTH: 25.7709 M AZI: 356-16-47	0.08 CM 149-58-24	0.04 CM 239-58-24	0.18 CM	0.09 CM	-13.6534	0.00	HOR.: 1 / 15089 VER.:
17	27	LTH: 44.9704 M AZI: 271-22-44	0.08 CM 166-43-29	0.04 CM 256-43-29	0.20 CM	0.09 CM	-1.0157	0.00	HOR.: 1 / 45763 VER.:
18	27	LTH: 45.3201 M AZI: 257-12-38	0.08 CM 168-31-22	0.04 CM 258-31-22	0.19 CM	0.10 CM	5.4060	0.00	HOR.: 1 / 47081 VER.:
26	27	LTH: 12.5672 M AZI: 4-27-52	0.06 CM 172-36-56	0.04 CM 262-36-56	0.16 CM	0.09 CM	-8.1639	0.00	HOR.: 1 / 8118 VER.:
26	35	LTH: 52.3484 M AZI: 267-31-35	0.07 CM 181-42- 4	0.03 CM 271-42- 4	0.18 CM	0.08 CM	3.7434	0.00	HOR.: 1 / 64734 VER.:
24	34	LTH: 54.3890 M AZI: 274-30-17	0.09 CM 175- 2-22	0.03 CM 265- 2-22	0.21 CM	0.07 CM	0.2639	0.00	HOR.: 1 / 66955 VER.:
34	35	LTH: 25.1564 M AZI: 7-18-51	0.06 CM 183-41-36	0.03 CM 273-41-36	0.16 CM	0.08 CM	-14.3108	0.00	HOR.: 1 / 16215 VER.:
161	165	LTH: 317.9851 M AZI: 97-27-14	0.25 CM 173-47-53	0.09 CM 263-47-53	0.62 CM	0.22 CM	8.5918	0.00	HOR.: 1 / 122484 VER.:

5.3 RELATIVE ERROR ELLIPSE REPORT

STATION NAME	STATION NAME	HORIZONTAL LINE INFORMATION	STANDARD RELATIVE ERROR ELLIPSE SEMI-MAJOR	STANDARD RELATIVE ERROR ELLIPSE SEMI-MINOR	95% RELATIVE ERROR ELLIPSE SEMI-MAJOR	95% RELATIVE ERROR ELLIPSE SEMI-MINOR	ELEV. DIFF. (METERS)	ELE. DIF. STD. DEV. (CM)	95% RELATIVE PRECISION
161	31	LTH: 177.8674 M AZI: 57- 3-49	0.16 CM 212-57- 6	0.06 CM 302-57- 6	0.39 CM	0.14 CM	-0.4994	0.00	HOR.: 1 / 49522 VER.:
21	22	LTH: 2.5286 M AZI: 347-28- 8	0.08 CM 171- 2-18	0.03 CM 261- 2-18	0.19 CM	0.08 CM	0.1274	0.00	HOR.: 1 / 1361 VER.:
22	31	LTH: 47.8314 M AZI: 272- 6-28	0.09 CM 173-19-47	0.04 CM 263-19-47	0.21 CM	0.09 CM	0.0723	0.00	HOR.: 1 / 48925 VER.:
22	23	LTH: 2.0739 M AZI: 13-55-48	0.07 CM 170-33-23	0.03 CM 260-33-23	0.17 CM	0.08 CM	-0.1575	0.00	HOR.: 1 / 1302 VER.:
22	33	LTH: 47.4150 M AZI: 278- 0-25	0.08 CM 171-20-36	0.03 CM 261-20-36	0.19 CM	0.07 CM	-0.3003	0.00	HOR.: 1 / 55024 VER.:
33	34	LTH: 14.9638 M AZI: 350-43-55	0.06 CM 173-10-40	0.03 CM 263-10-40	0.16 CM	0.07 CM	-7.9972	0.00	HOR.: 1 / 9523 VER.:
164	163	LTH: 280.5428 M AZI: 316-32-41	0.22 CM 134-17-44	0.06 CM 224-17-44	0.55 CM	0.15 CM	-81.1158	0.00	HOR.: 1 / 51509 VER.:
163	19	LTH: 157.2150 M AZI: 144- 2-28	0.14 CM 127- 4-52	0.06 CM 217- 4-52	0.34 CM	0.13 CM	21.7596	0.00	HOR.: 1 / 48659 VER.:
18	29	LTH: 49.3961 M AZI: 300-40-29	0.08 CM 153-46- 3	0.04 CM 243-46- 3	0.19 CM	0.09 CM	-13.7305	0.00	HOR.: 1 / 29908 VER.:
19	29	LTH: 40.8156 M AZI: 269-16-30	0.07 CM 158-13-34	0.04 CM 248-13-34	0.17 CM	0.10 CM	-0.0771	0.00	HOR.: 1 / 37331 VER.:
18	28	LTH: 43.9063 M AZI: 269-41-29	0.08 CM 164-47- 0	0.04 CM 254-47- 0	0.19 CM	0.09 CM	0.1747	0.00	HOR.: 1 / 43741 VER.:
27	28	LTH: 9.8002 M AZI: 1-41-47	0.06 CM 170-34-27	0.04 CM 260-34-27	0.14 CM	0.09 CM	-5.2313	0.00	HOR.: 1 / 6841 VER.:
26	37	LTH: 53.0567 M AZI: 290- 6-45	0.07 CM 172-34-28	0.04 CM 262-34-28	0.17 CM	0.09 CM	-8.6553	0.00	HOR.: 1 / 46807 VER.:
27	37	LTH: 51.1200 M AZI: 276-25- 9	0.07 CM 178-43-32	0.04 CM 268-43-32	0.17 CM	0.09 CM	-0.4914	0.00	HOR.: 1 / 57112 VER.:
26	36	LTH: 51.9639 M AZI: 275- 3-59	0.07 CM 179-11-33	0.03 CM 269-11-33	0.18 CM	0.08 CM	-0.0956	0.00	HOR.: 1 / 61959 VER.:
35	36	LTH: 6.8694 M AZI: 4-29-53	0.06 CM 194- 3-12	0.03 CM 284- 3-12	0.14 CM	0.07 CM	-3.8390	0.00	HOR.: 1 / 5090 VER.:

5.3 RELATIVE ERROR ELLIPSE REPORT

STATION NAME	STATION NAME	HORIZONTAL LINE INFORMATION	STANDARD RELATIVE ERROR ELLIPSE SEMI-MAJOR	STANDARD RELATIVE ERROR ELLIPSE SEMI-MINOR	95% RELATIVE ERROR ELLIPSE SEMI-MAJOR	95% RELATIVE ERROR ELLIPSE SEMI-MINOR	ELEV. DIFF. (METERS)	ELE. DIF. STD. DEV. (CM)	95% RELATIVE PRECISION
34	166	LTH: 74.2174 M AZI: 269-18- 6	0.08 CM 179- 3-29	0.02 CM 269- 3-29	0.20 CM	0.05 CM	7.8988	0.00	HOR.: 1 / 148376 VER.:
35	166	LTH: 81.6184 M AZI: 251-31-51	0.08 CM 196-48-23	0.02 CM 286-48-23	0.19 CM	0.05 CM	22.2096	0.00	HOR.: 1 / 68180 VER.:
161	166	LTH: 136.8356 M AZI: 32-29-28	0.13 CM 238-22-24	0.03 CM 328-22-24	0.31 CM	0.08 CM	-0.9704	0.00	HOR.: 1 / 48704 VER.:
31	166	LTH: 78.0512 M AZI: 283-52- 9	0.09 CM 169- 6-50	0.03 CM 259- 6-50	0.21 CM	0.08 CM	-0.4710	0.00	HOR.: 1 / 66646 VER.:
22	32	LTH: 47.2650 M AZI: 274-59-58	0.08 CM 171-28- 0	0.03 CM 261-28- 0	0.21 CM	0.07 CM	0.0783	0.00	HOR.: 1 / 56747 VER.:
31	32	LTH: 2.4654 M AZI: 16-49-50	0.07 CM 170-59- 8	0.04 CM 260-59- 8	0.18 CM	0.09 CM	0.0060	0.00	HOR.: 1 / 1459 VER.:
32	33	LTH: 2.4893 M AZI: 3- 2-58	0.07 CM 169-14-36	0.02 CM 259-14-36	0.16 CM	0.06 CM	-0.3786	0.00	HOR.: 1 / 1548 VER.:
31	33	LTH: 4.9189 M AZI: 9-54-24	0.07 CM 171-18- 7	0.04 CM 261-18- 7	0.16 CM	0.09 CM	-0.3726	0.00	HOR.: 1 / 3099 VER.:
31	34	LTH: 19.6763 M AZI: 355-26-31	0.08 CM 173-14-17	0.04 CM 263-14-17	0.19 CM	0.10 CM	-8.3698	0.00	HOR.: 1 / 10499 VER.:
163	29	LTH: 137.7626 M AZI: 158- 2-44	0.12 CM 110-57-20	0.05 CM 200-57-20	0.29 CM	0.12 CM	21.6825	0.00	HOR.: 1 / 63699 VER.:
28	29	LTH: 25.4762 M AZI: 3-11-52	0.05 CM 159-40- 7	0.04 CM 249-40- 7	0.13 CM	0.10 CM	-13.9052	0.00	HOR.: 1 / 19790 VER.:
28	37	LTH: 51.2523 M AZI: 265-26- 1	0.07 CM 184-17- 2	0.04 CM 274-17- 2	0.16 CM	0.09 CM	4.7399	0.00	HOR.: 1 / 56679 VER.:
36	37	LTH: 13.7926 M AZI: 8- 5- 3	0.05 CM 200-23-16	0.03 CM 290-23-16	0.13 CM	0.08 CM	-8.5597	0.00	HOR.: 1 / 10878 VER.:
36	166	LTH: 84.5358 M AZI: 247-14-24	0.08 CM 201-16- 7	0.02 CM 291-16- 7	0.19 CM	0.06 CM	26.0486	0.00	HOR.: 1 / 60019 VER.:
161	162	LTH: 203.2675 M AZI: 357-27-26	0.17 CM 91-20-36	0.07 CM 181-20-36	0.42 CM	0.16 CM	13.7968	0.00	HOR.: 1 / 121790 VER.:
162	166	LTH: 120.3843 M AZI: 136-43-34	0.11 CM 132-50-28	0.02 CM 222-50-28	0.27 CM	0.05 CM	-14.7672	0.00	HOR.: 1 / 45361 VER.:

5.3 RELATIVE ERROR ELLIPSE REPORT

STATION NAME	STATION NAME	HORIZONTAL LINE INFORMATION	STANDARD RELATIVE ERROR ELLIPSE SEMI-MAJOR	STANDARD RELATIVE ERROR ELLIPSE SEMI-MINOR	95% RELATIVE ERROR ELLIPSE SEMI-MAJOR	95% RELATIVE ERROR ELLIPSE SEMI-MINOR	ELEV. DIFF. (METERS)	ELE. DIF. STD. DEV. (CM)	95% RELATIVE PRECISION
163	39	LTH: 123.7226 M AZI: 178-27-13	0.11 CM 265-55-21	0.04 CM 355-55-21	0.28 CM	0.10 CM	21.8829	0.00	HOR.: 1 / 117189 VER.:
29	39	LTH: 48.3402 M AZI: 274-51-33	0.06 CM 182- 5-20	0.05 CM 272- 5-20	0.14 CM	0.12 CM	0.2004	0.00	HOR.: 1 / 40974 VER.:
28	39	LTH: 55.2921 M AZI: 302-16-57	0.06 CM 155- 5-10	0.05 CM 245- 5-10	0.16 CM	0.12 CM	-13.7048	0.00	HOR.: 1 / 37613 VER.:
28	38	LTH: 50.0934 M AZI: 275-30- 5	0.06 CM 178-51-25	0.04 CM 268-51-25	0.16 CM	0.09 CM	0.0115	0.00	HOR.: 1 / 54385 VER.:
37	38	LTH: 8.9672 M AZI: 7-51-51	0.05 CM 206- 7-57	0.03 CM 296- 7-57	0.12 CM	0.08 CM	-4.7284	0.00	HOR.: 1 / 7657 VER.:
37	166	LTH: 92.3696 M AZI: 239-52-28	0.08 CM 209- 6-14	0.03 CM 299- 6-14	0.20 CM	0.06 CM	34.6083	0.00	HOR.: 1 / 52137 VER.:
162	39	LTH: 166.9356 M AZI: 92-38-11	0.14 CM 175- 4- 8	0.06 CM 265- 4- 8	0.34 CM	0.14 CM	-67.8202	0.00	HOR.: 1 / 111333 VER.:
39	166	LTH: 116.1525 M AZI: 226-29-17	0.10 CM 225-42-46	0.03 CM 315-42-46	0.25 CM	0.08 CM	53.0530	0.00	HOR.: 1 / 46792 VER.:
162	163	LTH: 200.4046 M AZI: 54-37-55	0.17 CM 212-42-16	0.05 CM 302-42-16	0.40 CM	0.12 CM	-89.7031	0.00	HOR.: 1 / 53065 VER.:
38	39	LTH: 24.9246 M AZI: 7-11- 6	0.05 CM 237-27-49	0.04 CM 327-27-49	0.13 CM	0.09 CM	-13.7163	0.00	HOR.: 1 / 22673 VER.:
38	166	LTH: 98.1439 M AZI: 235-44-42	0.09 CM 213-35-48	0.03 CM 303-35-48	0.21 CM	0.06 CM	39.3367	0.00	HOR.: 1 / 49804 VER.:

5.4 SUMMARY REPORT

OBSERVATION TYPE	NUMBER	WEIGHTED SUM OF RESIDUALS SQUARED	REDUNDANCY	STD. DEV. OF UNIT WEIGHT
DIRECTIONS	150	0.659136D+02	0.741045D+02	0.94312
AZIMUTHS	1	0.000000D+00	0.000000D+00	1.00000
HORIZONTAL DISTANCE	5	0.123737D+01	0.389550D+01	0.56360
SLOPE DISTANCE	0	0.000000D+00	0.000000D+00	1.00000
SCALED DISTANCE	0	0.000000D+00	0.000000D+00	1.00000
ZENITH DISTANCE	0	0.000000D+00	0.000000D+00	1.00000
HEIGHT DIFFERENCE	0	0.000000D+00	0.000000D+00	1.00000
OBSERVED COORDINATES	0	0.000000D+00	0.000000D+00	1.00000
COORDINATE DIFF.	0	0.000000D+00	0.000000D+00	1.00000
TOTAL	156	0.671510D+02	78	0.92785

STATIONS:		
	FIXED	1
	FREE	32
	WEIGHTED	0
	TOTAL	33

CONVERGENCE:		
	ITERATIONS USED	3
	TOLERANCE	0.000100
	COMPUTATION TIME	38.830 SEC

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TIME: 17:20:21 DATE: 16-DEC-86

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*  BOSTON SURVEY CONSULTANTS - BALL MOUNTAIN DAM - PROJECT CODE 1-1654.00  *
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PROJECT INFORMATION:

EPOCH 2 HORIZONTAL ANALYSIS
DATABASE 11654002.DBS
1165400H

GEODETIC NETWORK ANALYSIS
SLAP #797
INTERGRAPH CORPORATION
ONE MADISON INDUSTRIAL PARK
HUNTSVILLE, ALABAMA USA 35805

1.0 OPTIONS REPORT

OPTIONS IN EFFECT

PROGRAM CONTROL:

- PREANALYSIS OR ADJUSTMENT ..... ADJUSTMENT
- PERFORM VARIANCE COMPONENT ESTIMATION ..... NO
- ANGULAR I/O IN DEGREES OF GRADS ..... DEGREES
- LINEAR I/O IN METERS OR FEET ..... METERS
- MAXIMUM CPU TIME ..... 9999.0 SECONDS
- MAXIMUM NUMBER OF LEAST-SQUARES ITERATIONS 10
- ITERATION CONVERGENCE BOUNDARY VALUE 0.000100
- NUMBER OF EIGENVALUES COMPUTED ..... NONE

DEFAULT STANDARD DEVIATIONS:

MEASUREMENT TYPE	STANDARD DEVIATION
DIRECTIONS	0.00100 SEC
AZIMUTHS	0.00100 SEC
ANGULAR TARGET ECCENTRICITY	0.00000 CM
CONSTANT PART OF EDM MEASUREMENT	0.30000 CM
VARIABLE PART OF EDM MEASUREMENT	4.60000 PPM
ZENITH DISTANCE	0.60000 SEC
HEIGHT DIFFERENCE	0.10000 CM
WEIGHTED STATIONS	0.00100 CM

EDM RELATED FACTORS:

- MEAN RADIUS OF EARTH ..... 6378.0 KM
- EDM PHASE SHIFT ..... 0.00000 DEG
- EDM WAVELENGTH ..... 10.00000 METERS
- EDM ZERO ERROR ..... -0.10000 CM
- NETWORK SCALE FACTOR ..... 0.00000 PPM
- EDM CYCLIC ERROR (AMPLITUDE) ..... 0.00000 CM
- REFRACTION COEFFICIENT 0.130

2.1 FIXED STATIONS INPUT REPORT

STATION NAME	FIXED COORDINATES					
	EASTING (METERS)	STD. DEV. (CM)	NORTHING (METERS)	STD. DEV. (CM)	ELEVATION (METERS)	STD. DEV. (CM)
1662	10000.0376		9999.9562		1000.0000	

2.2 FREE STATIONS INPUT REPORT

STATION NAME	PRELIMINARY COORDINATES EASTING (METERS)	STD. DEV. (CM)	NORTHING (METERS)	STD. DEV. (CM)	ELEVATION (METERS)	STD. DEV. (CM)
11	9977.1179		10173.6822		1000.3652	FIXED
12	9979.0457		10174.9300		1000.4073	FIXED
1218	9846.9507		10016.2126		1010.9505	FIXED
13	9980.7108		10173.6672		1000.1920	FIXED
14	9995.5499		10177.1495		992.6119	FIXED
15	10022.2481		10176.3935		977.6857	FIXED
16	10026.6266		10176.3906		975.1160	FIXED
161	9884.6181		9926.4514		1000.9619	FIXED
162	10087.6910		9917.4354		1014.8176	FIXED
163	10203.6904		10080.8577		924.7435	FIXED
164	10000.0376		10273.8153		1006.2115	FIXED
165	9843.3640		10241.7555		1009.5959	FIXED
17	10039.5988		10175.6131		966.7571	FIXED
18	10050.7141		10174.8524		960.3082	FIXED
19	10076.4323		10173.1760		946.5979	FIXED
21	9977.1002		10124.0845		1000.2669	FIXED
22	9979.5686		10123.5347		1000.3948	FIXED
23	9981.5821		10124.0354		1000.2361	FIXED
24	9996.6706		10128.3930		991.7977	FIXED
25	10020.8893		10129.7592		978.1127	FIXED
26	10028.1528		10129.6746		973.9339	FIXED
27	10040.6828		10130.6530		965.7364	FIXED
28	10050.4785		10130.9433		960.4833	FIXED
29	10075.9160		10132.3642		946.5199	FIXED
31	9981.3287		10075.7336		1000.4678	FIXED
32	9983.6871		10076.4490		1000.4731	FIXED
33	9986.1726		10076.5804		1000.0926	FIXED
34	10000.9408		10074.1715		992.0623	FIXED
35	10025.8936		10077.3737		977.6932	FIXED
36	10032.7424		10077.9122		973.8380	FIXED
37	10046.3975		10079.8534		965.2433	FIXED
38	10055.2814		10081.0791		960.4949	FIXED
39	10080.0089		10084.1968		946.7214	FIXED

2.3 WEIGHTED STATIONS INPUT REPORT

STATION NAME	WEIGHTED COORDINATES					
	EASTING (METERS)	STD. DEV. (CM)	NORTHING (METERS)	STD. DEV. (CM)	ELEVATION (METERS)	STD. DEV. (CM)

THERE ARE NO WEIGHTED STATIONS

2.4 OBSERVED DIRECTIONS INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)
161	165	0- 0- 0.000	0.700	0.000
161	164	25-50- 3.200	0.700	-0.700
161	11	27-58- 1.800	0.700	-0.099
161	12	28-15-43.700	0.700	0.032
161	13	28-41-43.000	0.700	0.022
161	21	32-31-52.700	0.700	-0.176
161	22	33-10-41.000	0.700	0.372
161	23	33-35-36.500	0.700	-0.454
161	31	40-23-27.400	0.700	0.297
161	32	40-53-52.300	0.700	0.321
161	33	41-31-49.800	0.700	-0.005
161	1218	344-41-21.400	0.700	-0.111
162	165	0- 0- 0.000	0.700	0.000
162	31	3- 5-42.900	0.700	0.878
162	32	3-48-21.000	0.700	0.716
162	33	4-27-33.000	0.700	1.176
162	34	8- 1-45.200	0.700	0.909
162	35	15-52- 1.400	0.700	0.483
162	36	18- 5-28.100	0.700	0.643
162	37	22-43-40.800	0.700	0.648
162	38	25-47-24.600	0.700	0.087
162	29	33-51-24.600	0.700	0.316
162	28	27- 6-21.500	0.700	0.729
162	27	24-33-34.700	0.700	0.637
162	26	21-19-21.600	0.700	0.572
162	25	19-31-40.500	0.700	0.130
162	24	13-39-14.800	0.700	-0.258
162	23	9-48-28.100	0.700	0.200
162	22	9-18-37.700	0.700	-0.099
162	21	8-50-19.800	0.700	0.896
162	11	13-39- 7.200	0.700	0.344
162	12	14- 6-58.200	0.700	0.099
162	13	14-19-53.000	0.700	-0.059
162	14	17-27-32.400	0.700	0.076
162	15	22-48-36.300	0.700	0.397
162	16	23-43-27.200	0.700	0.682
162	17	26-26-27.800	0.700	1.191
162	18	28-49- 7.000	0.700	1.456
162	19	34-28-19.000	0.700	0.386
162	164	23-10-29.100	0.700	0.224
162	163	72-21-37.200	0.700	0.297
163	162	0- 0- 0.000	0.700	0.000
163	39	56-10-43.300	0.700	-0.430
163	38	54-43- 5.200	0.700	1.056
163	37	54-15-59.000	0.700	-0.470
163	36	53-38-42.900	0.700	0.137

2.4 OBSERVED DIRECTIONS INPUT REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)
163	35	53-30-35.400	0.700	0.292
163	34	52-44-36.800	0.700	0.026
163	33	53-30-21.500	0.700	0.564
163	23	65-38- 1.000	0.700	0.790
163	24	67-33-51.900	0.700	0.518
163	25	69-36-33.000	0.700	0.700
163	26	70-10-24.900	0.700	0.086
163	27	71-37- 9.600	0.700	0.760
163	28	72-44- 6.800	0.700	0.354
163	29	76-35-14.200	0.700	1.170
163	18	86-12- 1.600	0.700	-0.403
163	17	84-38-12.200	0.700	-0.326
163	16	82-58-51.200	0.700	-0.233
163	15	82-24- 3.400	0.700	0.746
163	14	79-27-32.600	0.700	0.325
163	13	77-13-50.300	0.700	0.134
163	164	98- 5-16.000	0.700	0.462
163	1662	32-58- 1.800	0.700	1.360
164	162	0- 0- 0.000	0.700	0.000
164	39	350-57- 0.000	0.700	-1.433
164	38	357-49-26.600	0.700	-0.027
164	37	0-22-30.100	0.700	-1.772
164	36	4-20-23.800	0.700	-0.693
164	35	6-19-10.000	0.700	-0.681
164	34	13-33-29.700	0.700	-1.613
164	33	17-50-18.500	0.700	-1.921
164	32	18-33-11.800	0.700	-1.412
164	31	19-12-49.500	0.700	0.866
164	21	22-31-37.500	0.700	-1.106
164	22	21-34-27.000	0.700	0.025
164	23	20-50-32.100	0.700	-0.323
164	24	15- 8-39.400	0.700	0.091
164	25	5-34-54.100	0.700	-0.062
164	26	2-46-49.600	0.700	-1.005
164	27	357-58- 5.700	0.700	0.417
164	28	354-22-20.100	0.700	-0.352
164	29	345-36-27.800	0.700	0.695
164	19	336-36-57.000	0.700	-0.551
164	18	346-42- 6.500	0.700	-0.776
164	17	351-52-31.200	0.700	-1.111
164	16	358-33- 8.200	0.700	-1.128
164	15	0-58-29.800	0.700	-0.044
164	14	16-28-33.400	0.700	-0.012
164	13	24-44-25.700	0.700	-0.805
164	11	26-42-37.000	0.700	-0.368
164	161	32-11-53.200	0.700	-0.097
164	1218	44-32-23.000	0.700	-0.539

2.4 OBSERVED DIRECTIONS INPUT REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)
164	165	92-15-10.800	0.700	-0.854
164	163	327-16-23.200	0.700	-0.365
165	162	0- 0- 0.000	0.700	0.000
165	161	29-32-18.100	0.700	-0.174
165	1218	36- 4-53.600	0.700	0.117
165	164	295-25-40.800	0.700	0.270
165	11	333-57-58.500	0.700	0.332
165	12	333-12-49.000	0.700	0.009
165	13	333-21-43.200	0.700	-0.170
165	21	348-20-10.800	0.700	0.118
165	22	347-56-57.900	0.700	-0.027
165	23	347-24-49.700	0.700	0.853
165	31	357-15-58.300	0.700	1.025
165	32	356-39-55.900	0.700	-0.951
165	33	356- 8-46.800	0.700	0.280
1662	162	0- 0- 0.000	0.700	0.000
1662	31	212-51-33.600	0.700	1.207
1662	32	214-39-43.100	0.700	-0.249
1662	33	216-28-15.200	0.700	-0.351
1662	34	227-25-29.200	0.700	-0.157
1662	35	245-11-45.800	0.700	0.475
1662	36	249-29-13.600	0.700	0.304
1662	37	256-51- 6.200	0.700	-0.190
1662	38	260-58-56.400	0.700	1.209
1662	39	270-14-17.700	0.700	-0.124
1662	29	256-32-36.400	0.700	1.306
1662	27	244- 0-10.600	0.700	1.029
1662	26	238-57-24.400	0.700	0.221
1662	25	235-51-14.300	0.700	1.137
1662	24	225-13-34.500	0.700	1.302
1662	23	218-16- 4.000	0.700	1.231
1662	22	217-19-22.700	0.700	0.864
1662	21	216-15-29.200	0.700	0.032
1662	11	219-12-44.200	0.700	1.257
1662	12	219-53-11.600	0.700	0.587
1662	13	220-22-45.000	0.700	0.452
1662	14	225-16-38.000	0.700	1.627
1662	15	233-54-10.000	0.700	1.343
1662	16	235-17-51.200	0.700	-0.372
1662	17	239-25-11.200	0.700	-0.332
1662	18	242-53-11.400	0.700	-0.396
1662	19	250-31-35.500	0.700	0.583
1662	163	295- 3-43.800	0.700	0.555
1662	161	104-14-11.800	0.700	0.104
1662	164	226-43-39.600	0.700	0.362
1662	165	193-47-12.000	0.700	0.999

2.5 OBSERVED AZIMUTH INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)
1662	164	0- 0- 0.000	0.001	0.000

2.6 OBSERVED HORIZONTAL DISTANCE INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (METERS)	STAN. DEV. (CM)	MISCLOSURE (CM)
164	163	280.5501	0.4291	0.32
164	165	159.9226	0.3736	0.35
164	162	366.9980	0.4688	-0.20
164	161	366.0331	0.4684	-0.32

2.7 OBSERVED SLOPE DISTANCE INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (METERS)	STAN. DEV. (CM)	MISCLOSURE (CM)

THERE ARE NO SLOPE DISTANCE OBSERVATIONS

2.8 OBSERVED SCALE DISTANCE INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (METERS)	STAN. DEV. (CM)	MISCLOSURE (CM)

THERE ARE NO SCALED DISTANCE OBSERVATIONS

2.9 OBSERVED ZENITH DISTANCE INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)

THERE ARE NO ZENITH DISTANCE OBSERVATIONS

2.10 OBSERVED HEIGHT DIFFERENCE INPUT REPORT

FROM STATION	TO STATION	OBSERVED VALUE (METERS)	STAN. DEV. (CM)	MISCLOSURE (CM)

THERE ARE NO HEIGHT DIFFERENCE OBSERVATIONS

2.11 OBSERVED RELATIVE POSITIONS INPUT REPORT

FROM STATION	TO STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAN. DEV. (SEC)

THERE ARE NO RELATIVE POSITION OBSERVATIONS

2.12 OBSERVED COORDINATE DIFFERENCE INPUT REPORT

FROM STATION	TO STATION	OBSERVED VALUES (METERS) DX	DY	DZ	COVARIANCES (CM SQUARED) XX	XY	YY	XZ	YZ	ZZ

THERE ARE NO COORDINATE DIFFERENCE OBSERVATIONS

3.0 SOLVABILITY OF NETWORK REPORT

STATION NAME	NUMBER OF TIMES OBSERVED

ALL STATIONS ARE INVOLVED IN AT LEAST TWO OBSERVATIONS

3.1 ARRAY USAGE REPORT

FACTOR	MAXIMUM ALLOWED	ACTUAL
OBSERVATIONS	9000	144
POINTS	1000	34
FIXED & WEIGHTED POINTS	99	1
ORIENTATION UNKNOWNS	1500	6
MATRIX ELEMENTS	99998	2278

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
161	165	O:	0- 0- 0.00	0.70		59.65	COM:	0.1 SEC	0.0 CM	317.9915
		C:	- 0- 0- 0.04	0.44			BND:	3.7 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.04	0.54	-0.07					
161	164	O:	25-50- 3.20	0.70		78.59	COM:	-0.8 SEC	0.0 CM	366.0374
		C:	25-50- 3.86	0.32			BND:	3.3 SEC	-0.1 CM	
		V=C-O:	0- 0- 0.66	0.62	1.07					
161	11	O:	27-58- 1.80	0.70		76.89	COM:	-0.1 SEC	0.0 CM	263.9683
		C:	27-58- 1.90	0.34			BND:	3.3 SEC	0.0 CM	
		V=C-O:	0- 0- 0.10	0.61	0.16					
161	12	O:	28-15-43.70	0.70		55.14	COM:	0.2 SEC	0.0 CM	265.8161
		C:	28-15-43.60	0.47			BND:	3.9 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.10	0.52	-0.19					
161	13	O:	28-41-43.00	0.70		77.20	COM:	0.0 SEC	0.0 CM	265.2347
		C:	28-41-42.98	0.33			BND:	3.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.02	0.62	-0.04					
161	21	O:	32-31-52.70	0.70		57.82	COM:	-0.3 SEC	0.0 CM	218.2012
		C:	32-31-52.88	0.45			BND:	3.8 SEC	0.2 CM	
		V=C-O:	0- 0- 0.18	0.53	0.34					
161	22	O:	33-10-41.00	0.70		57.44	COM:	0.7 SEC	0.0 CM	218.7633
		C:	33-10-40.58	0.46			BND:	3.8 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.42	0.53	-0.78					
161	23	O:	33-35-36.50	0.70		65.38	COM:	-0.6 SEC	0.0 CM	220.0942
		C:	33-35-36.87	0.41			BND:	3.6 SEC	0.1 CM	
		V=C-O:	0- 0- 0.37	0.57	0.66					
161	31	O:	40-23-27.40	0.70		30.44	COM:	1.0 SEC	0.1 CM	177.8711
		C:	40-23-27.10	0.58			BND:	5.2 SEC	0.3 CM	
		V=C-O:	- 0- 0- 0.30	0.39	-0.78					
161	32	O:	40-53-52.30	0.70		31.87	COM:	1.1 SEC	0.1 CM	179.7608
		C:	40-53-51.94	0.58			BND:	5.1 SEC	0.3 CM	
		V=C-O:	- 0- 0- 0.36	0.40	-0.92					
161	33	O:	41-31-49.80	0.70		52.24	COM:	0.1 SEC	0.0 CM	181.2513
		C:	41-31-49.72	0.48			BND:	4.0 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.08	0.51	-0.15					
161	1218	O:	344-41-21.40	0.70		3.77	COM:	-0.2 SEC	0.0 CM	97.3443
		C:	344-41-21.41	0.69			BND:	14.9 SEC	0.7 CM	
		V=C-O:	0- 0- 0.01	0.14	0.06					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
162	165	O:	0- 0- 0.00	0.70		76.54	COM:	-0.6 SEC	0.0 CM	406.0532
		C:	0- 0- 0.48	0.34			BND:	3.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.48	0.61	0.78					
162	31	O:	3- 5-42.90	0.70		68.86	COM:	0.6 SEC	0.0 CM	190.7125
		C:	3- 5-42.52	0.39			BND:	3.5 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.38	0.58	-0.65					
162	32	O:	3-48-21.00	0.70		67.96	COM:	0.3 SEC	0.0 CM	190.0056
		C:	3-48-20.79	0.40			BND:	3.5 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.21	0.58	-0.36					
162	33	O:	4-27-33.00	0.70		76.00	COM:	0.9 SEC	0.0 CM	188.7674
		C:	4-27-32.28	0.34			BND:	3.3 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.72	0.61	-1.18					
162	34	O:	8- 1-45.20	0.70		65.52	COM:	0.7 SEC	0.0 CM	179.1419
		C:	8- 1-44.71	0.41			BND:	3.6 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.49	0.57	-0.86					
162	35	O:	15-52- 1.40	0.70		60.45	COM:	0.0 SEC	0.0 CM	171.4619
		C:	15-52- 1.40	0.44			BND:	3.7 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.00	0.54	-0.01					
162	36	O:	18- 5-28.10	0.70		59.29	COM:	0.3 SEC	0.0 CM	169.6236
		C:	18- 5-27.91	0.45			BND:	3.8 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.19	0.54	-0.35					
162	37	O:	22-43-40.80	0.70		57.34	COM:	0.2 SEC	0.0 CM	167.5851
		C:	22-43-40.66	0.46			BND:	3.8 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.14	0.53	-0.26					
162	38	O:	25-47-24.60	0.70		55.76	COM:	-0.8 SEC	0.0 CM	166.8222
		C:	25-47-25.03	0.47			BND:	3.9 SEC	0.2 CM	
		V=C-O:	0- 0- 0.43	0.52	0.83					
162	29	O:	33-51-24.60	0.70		70.49	COM:	-0.2 SEC	0.0 CM	215.2511
		C:	33-51-24.73	0.38			BND:	3.4 SEC	0.1 CM	
		V=C-O:	0- 0- 0.13	0.59	0.21					
162	28	O:	27- 6-21.50	0.70		57.93	COM:	0.4 SEC	0.0 CM	216.7265
		C:	27- 6-21.25	0.45			BND:	3.8 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.25	0.53	-0.46					
162	27	O:	24-33-34.70	0.70		77.94	COM:	0.3 SEC	0.0 CM	218.3381
		C:	24-33-34.49	0.33			BND:	3.3 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.21	0.62	-0.34					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
162	26	O:	21-19-21.60	0.70		78.51	COM:	0.1 SEC	0.0 CM	220.4320
		C:	21-19-21.53	0.32			BND:	3.3 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.07	0.62	-0.11					
162	25	O:	19-31-40.50	0.70		78.40	COM:	-0.5 SEC	0.0 CM	222.5845
		C:	19-31-40.86	0.33			BND:	3.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.36	0.62	0.58					
162	24	O:	13-39-14.80	0.70		75.79	COM:	-0.9 SEC	0.0 CM	229.7560
		C:	13-39-15.49	0.34			BND:	3.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.69	0.61	1.14					
162	23	O:	9-48-28.10	0.70		81.23	COM:	-0.3 SEC	0.0 CM	232.2556
		C:	9-48-28.36	0.30			BND:	3.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.26	0.63	0.42					
162	22	O:	9-18-37.70	0.70		76.27	COM:	-0.7 SEC	0.0 CM	232.7388
		C:	9-18-38.24	0.34			BND:	3.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.54	0.61	0.88					
162	21	O:	8-50-19.80	0.70		76.45	COM:	0.5 SEC	0.0 CM	234.3804
		C:	8-50-19.39	0.34			BND:	3.3 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.41	0.61	-0.67					
162	11	O:	13-39- 7.20	0.70		83.46	COM:	-0.2 SEC	0.0 CM	279.0857
		C:	13-39- 7.35	0.28			BND:	3.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.15	0.64	0.23					
162	12	O:	14- 6-58.20	0.70		77.70	COM:	-0.5 SEC	0.0 CM	279.4768
		C:	14- 6-58.57	0.33			BND:	3.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.37	0.62	0.59					
162	13	O:	14-19-53.00	0.70		85.62	COM:	-0.6 SEC	0.0 CM	277.6679
		C:	14-19-53.55	0.27			BND:	3.1 SEC	0.0 CM	
		V=C-O:	0- 0- 0.55	0.65	0.84					
162	14	O:	17-27-32.40	0.70		80.94	COM:	-0.5 SEC	0.0 CM	275.5746
		C:	17-27-32.78	0.31			BND:	3.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.38	0.63	0.60					
162	15	O:	22-48-36.30	0.70		86.37	COM:	-0.1 SEC	0.0 CM	267.0993
		C:	22-48-36.39	0.26			BND:	3.1 SEC	0.0 CM	
		V=C-O:	0- 0- 0.09	0.65	0.14					
162	16	O:	23-43-27.20	0.70		86.15	COM:	0.2 SEC	0.0 CM	266.0576
		C:	23-43-27.00	0.26			BND:	3.1 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.20	0.65	-0.31					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
162	17	O:	26-26-27.80	0.70		83.80	COM:	0.8 SEC	0.0 CM	262.6187
		C:	26-26-27.13	0.28			BND:	3.2 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.67	0.64	-1.05					
162	18	O:	28-49- 7.00	0.70		80.66	COM:	1.3 SEC	0.0 CM	260.0592
		C:	28-49- 5.98	0.31			BND:	3.2 SEC	0.1 CM	
		V=C-O:	- 0- 0- 1.02	0.63	-1.62					
162	19	O:	34-28-19.00	0.70		72.50	COM:	-0.1 SEC	0.0 CM	255.9883
		C:	34-28-19.10	0.37			BND:	3.4 SEC	0.1 CM	
		V=C-O:	0- 0- 0.10	0.60	0.17					
162	164	O:	23-10-29.10	0.70		88.73	COM:	-0.3 SEC	0.0 CM	367.0011
		C:	23-10-29.36	0.23			BND:	3.1 SEC	0.0 CM	
		V=C-O:	0- 0- 0.26	0.66	0.40					
162	163	O:	72-21-37.20	0.70		50.11	COM:	-0.3 SEC	0.0 CM	200.4064
		C:	72-21-37.37	0.49			BND:	4.1 SEC	0.2 CM	
		V=C-O:	0- 0- 0.17	0.50	0.35					
163	162	O:	0- 0- 0.00	0.70		34.03	COM:	-1.0 SEC	0.0 CM	200.4064
		C:	0- 0- 0.33	0.57			BND:	5.0 SEC	0.2 CM	
		V=C-O:	0- 0- 0.33	0.41	0.80					
163	39	O:	56-10-43.30	0.70		23.98	COM:	-2.9 SEC	-0.1 CM	123.7266
		C:	56-10-44.00	0.61			BND:	5.9 SEC	0.3 CM	
		V=C-O:	0- 0- 0.70	0.34	2.03					
163	38	O:	54-43- 5.20	0.70		32.52	COM:	2.2 SEC	0.1 CM	148.4091
		C:	54-43- 4.49	0.58			BND:	5.1 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.71	0.40	-1.79					
163	37	O:	54-15-59.00	0.70		32.95	COM:	-2.6 SEC	-0.1 CM	157.2961
		C:	54-15-59.86	0.57			BND:	5.0 SEC	0.3 CM	
		V=C-O:	0- 0- 0.86	0.40	2.14					
163	36	O:	53-38-42.90	0.70		31.54	COM:	-0.7 SEC	0.0 CM	170.9734
		C:	53-38-43.12	0.58			BND:	5.1 SEC	0.3 CM	
		V=C-O:	0- 0- 0.22	0.39	0.56					
163	35	O:	53-30-35.40	0.70		29.58	COM:	-0.2 SEC	0.0 CM	177.8309
		C:	53-30-35.46	0.59			BND:	5.3 SEC	0.3 CM	
		V=C-O:	0- 0- 0.06	0.38	0.15					
163	34	O:	52-44-36.80	0.70		20.48	COM:	-1.4 SEC	-0.1 CM	202.8599
		C:	52-44-37.09	0.62			BND:	6.4 SEC	0.5 CM	
		V=C-O:	0- 0- 0.29	0.32	0.92					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
163	33	O:	53-30-21.50	0.70		46.96	COM:	0.4 SEC	0.0 CM	217.5599
		C:	53-30-21.29	0.51			BND:	4.2 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.21	0.48	-0.43					
163	23	O:	65-38- 1.00	0.70		49.21	COM:	0.9 SEC	0.0 CM	226.2663
		C:	65-38- 0.58	0.50			BND:	4.1 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.42	0.49	-0.86					
163	24	O:	67-33-51.90	0.70		10.68	COM:	1.9 SEC	0.2 CM	212.4072
		C:	67-33-51.70	0.66			BND:	8.8 SEC	0.8 CM	
		V=C-O:	- 0- 0- 0.20	0.23	-0.89					
163	25	O:	69-36-33.00	0.70		13.30	COM:	2.5 SEC	0.2 CM	189.2289
		C:	69-36-32.67	0.65			BND:	7.9 SEC	0.6 CM	
		V=C-O:	- 0- 0- 0.33	0.26	-1.31					
163	26	O:	70-10-24.90	0.70		16.29	COM:	-1.4 SEC	-0.1 CM	182.1991
		C:	70-10-25.13	0.64			BND:	7.2 SEC	0.5 CM	
		V=C-O:	0- 0- 0.23	0.28	0.82					
163	27	O:	71-37- 9.60	0.70		21.15	COM:	2.2 SEC	0.1 CM	170.4437
		C:	71-37- 9.13	0.62			BND:	6.3 SEC	0.4 CM	
		V=C-O:	- 0- 0- 0.47	0.32	-1.46					
163	28	O:	72-44- 6.80	0.70		1.41	COM:	2.7 SEC	0.2 CM	161.1907
		C:	72-44- 6.76	0.70			BND:	24.4 SEC	1.9 CM	
		V=C-O:	- 0- 0- 0.04	0.08	-0.46					
163	29	O:	76-35-14.20	0.70		25.87	COM:	3.5 SEC	0.2 CM	137.7651
		C:	76-35-13.30	0.60			BND:	5.7 SEC	0.3 CM	
		V=C-O:	- 0- 0- 0.90	0.36	-2.53					
163	18	O:	86-12- 1.60	0.70		37.01	COM:	-1.9 SEC	-0.1 CM	179.5460
		C:	86-12- 2.30	0.56			BND:	4.8 SEC	0.3 CM	
		V=C-O:	0- 0- 0.70	0.43	1.63					
163	17	O:	84-38-12.20	0.70		30.47	COM:	-2.3 SEC	-0.1 CM	189.4852
		C:	84-38-12.91	0.58			BND:	5.2 SEC	0.3 CM	
		V=C-O:	0- 0- 0.71	0.39	1.85					
163	16	O:	82-58-51.20	0.70		19.18	COM:	-2.9 SEC	-0.2 CM	201.1917
		C:	82-58-51.76	0.63			BND:	6.6 SEC	0.5 CM	
		V=C-O:	0- 0- 0.56	0.31	1.83					
163	15	O:	82-24- 3.40	0.70		15.11	COM:	2.8 SEC	0.2 CM	205.0570
		C:	82-24- 2.98	0.64			BND:	7.4 SEC	0.6 CM	
		V=C-O:	- 0- 0- 0.42	0.27	-1.53					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
163	14	O:	79-27-32.60	0.70		9.15	COM:	0.2 SEC	0.0 CM	229.3351
		C:	79-27-32.58	0.67			BND:	9.6 SEC	1.0 CM	
		V=C-O:	- 0- 0- 0.02	0.21	-0.07					
163	13	O:	77-13-50.30	0.70		59.68	COM:	-0.3 SEC	0.0 CM	241.5233
		C:	77-13-50.49	0.44			BND:	3.7 SEC	0.2 CM	
		V=C-O:	0- 0- 0.19	0.54	0.35					
163	164	O:	98- 5-16.00	0.70		70.29	COM:	0.1 SEC	0.0 CM	280.5479
		C:	98- 5-15.90	0.38			BND:	3.4 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.10	0.59	-0.17					
163	1662	O:	32-58- 1.80	0.70		66.70	COM:	1.5 SEC	0.0 CM	219.1336
		C:	32-58- 0.78	0.40			BND:	3.5 SEC	0.0 CM	
		V=C-O:	- 0- 0- 1.02	0.57	-1.78					
164	162	O:	0- 0- 0.00	0.70		80.39	COM:	0.7 SEC	0.0 CM	367.0011
		C:	- 0- 0- 0.56	0.31			BND:	3.2 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.56	0.63	-0.89					
164	39	O:	350-57- 0.00	0.70		43.70	COM:	-2.2 SEC	-0.1 CM	205.7926
		C:	350-57- 0.94	0.53			BND:	4.4 SEC	0.2 CM	
		V=C-O:	0- 0- 0.94	0.46	2.03					
164	38	O:	357-49-26.60	0.70		67.85	COM:	0.8 SEC	0.0 CM	200.4972
		C:	357-49-26.04	0.40			BND:	3.5 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.56	0.58	-0.96					
164	37	O:	0-22-30.10	0.70		70.22	COM:	-1.7 SEC	0.0 CM	199.4253
		C:	0-22-31.30	0.38			BND:	3.4 SEC	0.1 CM	
		V=C-O:	0- 0- 1.20	0.59	2.04					
164	36	O:	4-20-23.80	0.70		74.54	COM:	-0.2 SEC	0.0 CM	198.6143
		C:	4-20-23.96	0.35			BND:	3.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.16	0.60	0.27					
164	35	O:	6-19-10.00	0.70		76.83	COM:	-0.2 SEC	0.0 CM	198.1359
		C:	6-19-10.13	0.34			BND:	3.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.13	0.61	0.21					
164	34	O:	13-33-29.70	0.70		81.65	COM:	-1.3 SEC	0.0 CM	199.6459
		C:	13-33-30.80	0.30			BND:	3.2 SEC	0.0 CM	
		V=C-O:	0- 0- 1.10	0.63	1.74					
164	33	O:	17-50-18.50	0.70		79.40	COM:	-1.8 SEC	0.0 CM	197.7216
		C:	17-50-19.91	0.32			BND:	3.2 SEC	0.0 CM	
		V=C-O:	0- 0- 1.41	0.62	2.25					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
164	32	O: 18-33-11.80	0.70		75.85	COM:	-1.1 SEC	0.0 CM	198.0424
		C: 18-33-12.64	0.34			BND:	3.3 SEC	0.1 CM	
		V=C-O: 0- 0- 0.84	0.61	1.39					
164	31	O: 19-12-49.50	0.70		74.61	COM:	1.9 SEC	0.0 CM	198.9633
		C: 19-12-48.05	0.35			BND:	3.3 SEC	0.1 CM	
		V=C-O: - 0- 0- 1.45	0.60	-2.40					
164	21	O: 22-31-37.50	0.70		53.27	COM:	-0.9 SEC	0.0 CM	151.4776
		C: 22-31-38.00	0.48			BND:	4.0 SEC	0.1 CM	
		V=C-O: 0- 0- 0.50	0.51	0.98					
164	22	O: 21-34-27.00	0.70		55.15	COM:	1.0 SEC	0.0 CM	151.6683
		C: 21-34-26.45	0.47			BND:	3.9 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.55	0.52	-1.06					
164	23	O: 20-50-32.10	0.70		58.73	COM:	0.3 SEC	0.0 CM	150.9126
		C: 20-50-31.92	0.45			BND:	3.8 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.18	0.54	-0.33					
164	24	O: 15- 8-39.40	0.70		54.64	COM:	1.1 SEC	0.0 CM	145.4613
		C: 15- 8-38.82	0.47			BND:	3.9 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.58	0.52	-1.13					
164	25	O: 5-34-54.10	0.70		58.63	COM:	0.9 SEC	0.0 CM	145.5574
		C: 5-34-53.60	0.45			BND:	3.8 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.50	0.54	-0.94					
164	26	O: 2-46-49.60	0.70		58.14	COM:	-0.7 SEC	0.0 CM	146.8572
		C: 2-46-50.02	0.45			BND:	3.8 SEC	0.1 CM	
		V=C-O: 0- 0- 0.42	0.53	0.78					
164	27	O: 357-58- 5.70	0.70		56.23	COM:	1.6 SEC	0.0 CM	148.8203
		C: 357-58- 4.82	0.46			BND:	3.9 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.88	0.52	-1.68					
164	28	O: 354-22-20.10	0.70		35.12	COM:	0.5 SEC	0.0 CM	151.5147
		C: 354-22-19.91	0.56			BND:	4.9 SEC	0.2 CM	
		V=C-O: - 0- 0- 0.19	0.41	-0.46					
164	29	O: 345-36-27.80	0.70		53.89	COM:	2.2 SEC	0.1 CM	160.5178
		C: 345-36-26.63	0.48			BND:	3.9 SEC	0.1 CM	
		V=C-O: - 0- 0- 1.17	0.51	-2.27					
164	19	O: 336-36-57.00	0.70		4.54	COM:	-0.6 SEC	0.0 CM	126.3504
		C: 336-36-57.03	0.68			BND:	13.6 SEC	0.8 CM	
		V=C-O: 0- 0- 0.03	0.15	0.17					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
164	18	O: 346-42- 6.50	0.70		33.06	COM:	-1.0 SEC	0.0 CM	111.1835
		C: 346-42- 6.84	0.57			BND:	5.0 SEC	0.2 CM	
		V=C-O: 0- 0- 0.34	0.40	0.86					
164	17	O: 351-52-31.20	0.70		32.47	COM:	-1.5 SEC	-0.1 CM	105.8715
		C: 351-52-31.68	0.58			BND:	5.1 SEC	0.2 CM	
		V=C-O: 0- 0- 0.48	0.40	1.21					
164	16	O: 358-33- 8.20	0.70		31.49	COM:	-1.9 SEC	-0.1 CM	100.9879
		C: 358-33- 8.79	0.58			BND:	5.2 SEC	0.2 CM	
		V=C-O: 0- 0- 0.59	0.39	1.49					
164	15	O: 0-58-29.80	0.70		31.03	COM:	1.7 SEC	0.1 CM	99.9216
		C: 0-58-29.28	0.58			BND:	5.2 SEC	0.2 CM	
		V=C-O: - 0- 0- 0.52	0.39	-1.33					
164	14	O: 16-28-33.40	0.70		22.33	COM:	2.2 SEC	0.1 CM	96.7700
		C: 16-28-32.90	0.62			BND:	6.1 SEC	0.2 CM	
		V=C-O: - 0- 0- 0.50	0.33	-1.50					
164	13	O: 24-44-25.70	0.70		28.21	COM:	-0.6 SEC	0.0 CM	101.9960
		C: 24-44-25.87	0.59			BND:	5.4 SEC	0.2 CM	
		V=C-O: 0- 0- 0.17	0.37	0.46					
164	11	O: 26-42-37.00	0.70		26.86	COM:	1.0 SEC	0.0 CM	102.7227
		C: 26-42-36.72	0.60			BND:	5.6 SEC	0.2 CM	
		V=C-O: - 0- 0- 0.28	0.36	-0.76					
164	161	O: 32-11-53.20	0.70		65.25	COM:	0.7 SEC	0.0 CM	366.0374
		C: 32-11-52.73	0.41			BND:	3.6 SEC	0.2 CM	
		V=C-O: - 0- 0- 0.47	0.57	-0.82					
164	1218	O: 44-32-23.00	0.70		17.99	COM:	0.1 SEC	0.0 CM	299.6578
		C: 44-32-22.98	0.63			BND:	6.8 SEC	0.8 CM	
		V=C-O: - 0- 0- 0.02	0.30	-0.06					
164	165	O: 92-15-10.80	0.70		37.43	COM:	-0.7 SEC	0.0 CM	159.9201
		C: 92-15-11.06	0.55			BND:	4.7 SEC	0.2 CM	
		V=C-O: 0- 0- 0.26	0.43	0.61					
164	163	O: 327-16-23.20	0.70		56.52	COM:	0.3 SEC	0.0 CM	280.5479
		C: 327-16-23.03	0.46			BND:	3.8 SEC	0.2 CM	
		V=C-O: - 0- 0- 0.17	0.53	-0.33					
165	162	O: 0- 0- 0.00	0.70		71.55	COM:	-0.2 SEC	0.0 CM	406.0532
		C: 0- 0- 0.12	0.37			BND:	3.4 SEC	0.0 CM	
		V=C-O: 0- 0- 0.12	0.59	0.21					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
165	161	O:	29-32-18.10	0.70		44.73	COM:	-0.7 SEC	0.0 CM	317.9915
		C:	29-32-18.40	0.52			BND:	4.3 SEC	0.3 CM	
		V=C-O:	0- 0- 0.30	0.47	0.63					
165	1218	O:	36- 4-53.60	0.70		47.52	COM:	-0.1 SEC	0.0 CM	225.5714
		C:	36- 4-53.63	0.51			BND:	4.2 SEC	0.2 CM	
		V=C-O:	0- 0- 0.03	0.48	0.06					
165	164	O:	295-25-40.80	0.70		38.78	COM:	0.5 SEC	0.0 CM	159.9201
		C:	295-25-40.62	0.55			BND:	4.6 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.18	0.44	-0.41					
165	11	O:	333-57-58.50	0.70		14.08	COM:	1.3 SEC	0.1 CM	150.0803
		C:	333-57-58.32	0.65			BND:	7.7 SEC	0.5 CM	
		V=C-O:	- 0- 0- 0.18	0.26	-0.68					
165	12	O:	333-12-49.00	0.70		9.50	COM:	-1.0 SEC	-0.1 CM	151.2454
		C:	333-12-49.10	0.67			BND:	9.4 SEC	0.6 CM	
		V=C-O:	0- 0- 0.10	0.22	0.45					
165	13	O:	333-21-43.20	0.70		31.29	COM:	-1.0 SEC	-0.1 CM	153.2977
		C:	333-21-43.52	0.58			BND:	5.2 SEC	0.3 CM	
		V=C-O:	0- 0- 0.32	0.39	0.82					
165	21	O:	348-20-10.80	0.70		33.91	COM:	-0.1 SEC	0.0 CM	178.1344
		C:	348-20-10.82	0.57			BND:	5.0 SEC	0.3 CM	
		V=C-O:	0- 0- 0.02	0.41	0.05					
165	22	O:	347-56-57.90	0.70		33.36	COM:	-0.6 SEC	0.0 CM	180.3548
		C:	347-56-58.11	0.57			BND:	5.0 SEC	0.3 CM	
		V=C-O:	0- 0- 0.21	0.40	0.52					
165	23	O:	347-24-49.70	0.70		52.15	COM:	1.4 SEC	0.1 CM	181.5551
		C:	347-24-48.97	0.48			BND:	4.0 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.73	0.51	-1.45					
165	31	O:	357-15-58.30	0.70		64.37	COM:	1.4 SEC	0.0 CM	215.8646
		C:	357-15-57.38	0.42			BND:	3.6 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.92	0.56	-1.63					
165	32	O:	356-39-55.90	0.70		63.20	COM:	-1.7 SEC	0.0 CM	216.8336
		C:	356-39-56.95	0.42			BND:	3.6 SEC	0.1 CM	
		V=C-O:	0- 0- 1.05	0.56	1.88					
165	33	O:	356- 8-46.80	0.70		69.55	COM:	0.2 SEC	0.0 CM	218.3508
		C:	356- 8-46.66	0.39			BND:	3.5 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.14	0.58	-0.24					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
1662	162	O: 0- 0- 0.00	0.70		24.44	COM:	-1.9 SEC	-0.1 CM	120.3861
		C: 0- 0- 0.47	0.61			BND:	5.8 SEC	0.2 CM	
		V=C-O: 0- 0- 0.47	0.35	1.36					
1662	31	O: 212-51-33.60	0.70		28.01	COM:	2.1 SEC	0.1 CM	78.0528
		C: 212-51-33.00	0.59			BND:	5.5 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.60	0.37	-1.62					
1662	32	O: 214-39-43.10	0.70		28.55	COM:	-3.0 SEC	-0.1 CM	78.2208
		C: 214-39-43.94	0.59			BND:	5.4 SEC	0.1 CM	
		V=C-O: 0- 0- 0.84	0.37	2.25					
1662	33	O: 216-28-15.20	0.70		28.73	COM:	-2.8 SEC	-0.1 CM	77.8685
		C: 216-28-16.00	0.59			BND:	5.4 SEC	0.1 CM	
		V=C-O: 0- 0- 0.80	0.38	2.14					
1662	34	O: 227-25-29.20	0.70		17.89	COM:	-3.3 SEC	-0.1 CM	74.2208
		C: 227-25-29.79	0.63			BND:	6.8 SEC	0.2 CM	
		V=C-O: 0- 0- 0.59	0.30	1.99					
1662	35	O: 245-11-45.80	0.70		18.59	COM:	-0.3 SEC	0.0 CM	81.6211
		C: 245-11-45.86	0.63			BND:	6.7 SEC	0.2 CM	
		V=C-O: 0- 0- 0.06	0.30	0.19					
1662	36	O: 249-29-13.60	0.70		19.36	COM:	-0.9 SEC	0.0 CM	84.5384
		C: 249-29-13.77	0.63			BND:	6.6 SEC	0.2 CM	
		V=C-O: 0- 0- 0.17	0.31	0.56					
1662	37	O: 256-51- 6.20	0.70		22.23	COM:	-3.2 SEC	-0.1 CM	92.3732
		C: 256-51- 6.91	0.62			BND:	6.1 SEC	0.2 CM	
		V=C-O: 0- 0- 0.71	0.33	2.16					
1662	38	O: 260-58-56.40	0.70		24.73	COM:	2.5 SEC	0.1 CM	98.1469
		C: 260-58-55.78	0.61			BND:	5.8 SEC	0.2 CM	
		V=C-O: - 0- 0- 0.62	0.35	-1.77					
1662	39	O: 270-14-17.70	0.70		20.88	COM:	-3.1 SEC	-0.1 CM	116.1545
		C: 270-14-18.35	0.62			BND:	6.3 SEC	0.3 CM	
		V=C-O: 0- 0- 0.65	0.32	2.03					
1662	29	O: 256-32-36.40	0.70		31.56	COM:	2.5 SEC	0.1 CM	152.6086
		C: 256-32-35.60	0.58			BND:	5.1 SEC	0.3 CM	
		V=C-O: - 0- 0- 0.80	0.39	-2.03					
1662	27	O: 244- 0-10.60	0.70		34.96	COM:	1.6 SEC	0.1 CM	136.8710
		C: 244- 0-10.04	0.56			BND:	4.9 SEC	0.2 CM	
		V=C-O: - 0- 0- 0.56	0.41	-1.36					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
1662	26	O: 238-57-24.40	0.70		38.14	COM:	-1.0 SEC	0.0 CM	132.7303
		C: 238-57-24.77	0.55			BND:	4.7 SEC	0.2 CM	
		V=C-O: 0- 0- 0.37	0.43	0.86					
1662	25	O: 235-51-14.30	0.70		40.65	COM:	1.5 SEC	0.1 CM	131.4672
		C: 235-51-13.70	0.54			BND:	4.5 SEC	0.2 CM	
		V=C-O: - 0- 0- 0.60	0.45	-1.35					
1662	24	O: 225-13-34.50	0.70		47.13	COM:	1.8 SEC	0.1 CM	128.4809
		C: 225-13-33.65	0.51			BND:	4.2 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.85	0.48	-1.76					
1662	23	O: 218-16- 4.00	0.70		54.20	COM:	1.4 SEC	0.0 CM	125.4443
		C: 218-16- 3.24	0.47			BND:	3.9 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.76	0.52	-1.47					
1662	22	O: 217-19-22.70	0.70		53.82	COM:	0.7 SEC	0.0 CM	125.2622
		C: 217-19-22.30	0.48			BND:	3.9 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.40	0.51	-0.78					
1662	21	O: 216-15-29.20	0.70		54.02	COM:	-1.0 SEC	0.0 CM	126.2297
		C: 216-15-29.73	0.47			BND:	3.9 SEC	0.1 CM	
		V=C-O: 0- 0- 0.53	0.51	1.03					
1662	11	O: 219-12-44.20	0.70		72.40	COM:	1.0 SEC	0.0 CM	175.2313
		C: 219-12-43.49	0.37			BND:	3.4 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.71	0.60	-1.19					
1662	12	O: 219-53-11.60	0.70		42.31	COM:	0.2 SEC	0.0 CM	176.2286
		C: 219-53-11.50	0.53			BND:	4.4 SEC	0.2 CM	
		V=C-O: - 0- 0- 0.10	0.46	-0.22					
1662	13	O: 220-22-45.00	0.70		73.22	COM:	-0.1 SEC	0.0 CM	174.7828
		C: 220-22-45.10	0.36			BND:	3.4 SEC	0.1 CM	
		V=C-O: 0- 0- 0.10	0.60	0.16					
1662	14	O: 225-16-38.00	0.70		72.25	COM:	1.6 SEC	0.0 CM	177.2501
		C: 225-16-36.87	0.37			BND:	3.4 SEC	0.1 CM	
		V=C-O: - 0- 0- 1.13	0.60	-1.91					
1662	15	O: 233-54-10.00	0.70		54.51	COM:	1.5 SEC	0.0 CM	177.8298
		C: 233-54- 9.20	0.47			BND:	3.9 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.80	0.52	-1.54					
1662	16	O: 235-17-51.20	0.70		49.89	COM:	-1.8 SEC	-0.1 CM	178.4266
		C: 235-17-52.10	0.50			BND:	4.1 SEC	0.2 CM	
		V=C-O: 0- 0- 0.90	0.49	1.83					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
1662	17	O:	239-25-11.20	0.70		38.01	COM:	-2.4 SEC	-0.1 CM	180.0568
		C:	239-25-12.10	0.55			BND:	4.7 SEC	0.2 CM	
		V=C-O:	0- 0- 0.90	0.43	2.08					
1662	18	O:	242-53-11.40	0.70		31.14	COM:	-2.8 SEC	-0.2 CM	182.0900
		C:	242-53-12.27	0.58			BND:	5.2 SEC	0.3 CM	
		V=C-O:	0- 0- 0.87	0.39	2.23					
1662	19	O:	250-31-35.50	0.70		16.78	COM:	0.3 SEC	0.0 CM	189.3179
		C:	250-31-35.45	0.64			BND:	7.1 SEC	0.5 CM	
		V=C-O:	- 0- 0- 0.05	0.29	-0.17					
1662	163	O:	295- 3-43.80	0.70		55.64	COM:	0.1 SEC	0.0 CM	219.1336
		C:	295- 3-43.75	0.47			BND:	3.9 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.05	0.52	-0.10					
1662	161	O:	104-14-11.80	0.70		13.54	COM:	-2.8 SEC	-0.2 CM	136.8379
		C:	104-14-12.18	0.65			BND:	7.9 SEC	0.4 CM	
		V=C-O:	0- 0- 0.38	0.26	1.48					
1662	164	O:	226-43-39.60	0.70		83.57	COM:	-0.2 SEC	0.0 CM	273.8591
		C:	226-43-39.75	0.28			BND:	3.2 SEC	0.0 CM	
		V=C-O:	0- 0- 0.15	0.64	0.24					
1662	165	O:	193-47-12.00	0.70		65.35	COM:	0.7 SEC	0.0 CM	288.1207
		C:	193-47-11.51	0.41			BND:	3.6 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.49	0.57	-0.87					

4.2 ANALYSIS OF AZIMUTH OBSERVATIONS REPORT

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
1662	164	O:	0- 0- 0.00	0.00		0.00	COM: NOT		273.8591
		C:	0- 0- 0.00	0.00			BND: CONTROLLED		
		V=C-O:	0- 0- 0.00	0.00	0.00				

4.3 ANALYSIS OF HORIZONTAL DISTANCE OBSERVATIONS REPORT

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (METERS)	STD. DEV. (CM)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
164	163	O:	280.55010	0.43		75.38	COM:	0.4 CM	0.1 CM	280.5479
		C:	280.54687	0.21			BND:	2.0 CM	0.5 CM	
		V=C-O:	-0.00323	0.37	-0.87					
164	165	O:	159.92260	0.37		87.81	COM:	0.4 CM	0.0 CM	159.9201
		C:	159.91914	0.13			BND:	1.6 CM	0.2 CM	
		V=C-O:	-0.00346	0.35	-0.99					
164	162	O:	366.99800	0.47		65.28	COM:	-0.3 CM	-0.1 CM	367.0011
		C:	367.00005	0.28			BND:	2.4 CM	0.8 CM	
		V=C-O:	0.00205	0.38	0.54					
164	161	O:	366.03310	0.47		64.26	COM:	-0.5 CM	-0.2 CM	366.0374
		C:	366.03637	0.28			BND:	2.4 CM	0.9 CM	
		V=C-O:	0.00327	0.38	0.87					

5.1 ADJUSTED COORDINATES AND ABSOLUTE ERROR ELLIPSE REPORT

STATION NAME	TYPE	ADJUSTED COORDINATES (METERS)		STANDARD CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	95% CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	MARGINAL STANDARD DEVIATIONS
11	FREE	EAST.:	9977.1179	LTH: 0.16 CM	0.03 CM	0.39 CM	0.09 CM	EAST.: 0.04 CM
		NORT.:	10173.6822	AZI: 173-55- 6	263-55- 6			NORT.: 0.16 CM
		ELEV.:	1000.3652 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.4160
12	FREE	EAST.:	9979.0457	LTH: 0.17 CM	0.05 CM	0.41 CM	0.13 CM	EAST.: 0.06 CM
		NORT.:	10174.9300	AZI: 170-27- 4	260-27- 4			NORT.: 0.16 CM
		ELEV.:	1000.4073 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.4133
1218	FREE	EAST.:	9846.9507	LTH: 0.17 CM	0.14 CM	0.42 CM	0.34 CM	EAST.: 0.14 CM
		NORT.:	10016.2126	AZI: 166-38- 0	256-38- 0			NORT.: 0.17 CM
		ELEV.:	1010.9505 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.0914
13	FREE	EAST.:	9980.7108	LTH: 0.16 CM	0.03 CM	0.38 CM	0.08 CM	EAST.: 0.04 CM
		NORT.:	10173.6672	AZI: 174-19-21	264-19-21			NORT.: 0.15 CM
		ELEV.:	1000.1920 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.3970
14	FREE	EAST.:	9995.5499	LTH: 0.17 CM	0.03 CM	0.43 CM	0.08 CM	EAST.: 0.03 CM
		NORT.:	10177.1495	AZI: 178-30-33	268-30-33			NORT.: 0.17 CM
		ELEV.:	992.6119 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.1299
15	FREE	EAST.:	10022.2481	LTH: 0.17 CM	0.04 CM	0.42 CM	0.11 CM	EAST.: 0.04 CM
		NORT.:	10176.3935	AZI: 181-42-59	271-42-59			NORT.: 0.17 CM
		ELEV.:	977.6857 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.1104
16	FREE	EAST.:	10026.6266	LTH: 0.17 CM	0.05 CM	0.42 CM	0.11 CM	EAST.: 0.05 CM
		NORT.:	10176.3906	AZI: 182-33-23	272-33-23			NORT.: 0.17 CM
		ELEV.:	975.1160 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.1515
161	FREE	EAST.:	9884.6181	LTH: 0.16 CM	0.05 CM	0.38 CM	0.12 CM	EAST.: 0.13 CM
		NORT.:	9926.4514	AZI: 233-59-10	323-59-10			NORT.: 0.10 CM
		ELEV.:	1000.9619 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.8126
162	FREE	EAST.:	10087.6910	LTH: 0.12 CM	0.04 CM	0.29 CM	0.10 CM	EAST.: 0.09 CM
		NORT.:	9917.4354	AZI: 133-57-11	223-57-11			NORT.: 0.09 CM
		ELEV.:	1014.8176 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.8103
163	FREE	EAST.:	10203.6904	LTH: 0.19 CM	0.06 CM	0.46 CM	0.14 CM	EAST.: 0.18 CM
		NORT.:	10080.8577	AZI: 246-41-56	336-41-56			NORT.: 0.09 CM
		ELEV.:	924.7435 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.7485
164	FREE	EAST.:	10000.0376	LTH: 0.22 CM	0.00 CM	0.55 CM	0.00 CM	EAST.: 0.00 CM
		NORT.:	10273.8153	AZI: 180- 0- 0	270- 0- 0			NORT.: 0.22 CM
		ELEV.:	1006.2115 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.0000
165	FREE	EAST.:	9843.3640	LTH: 0.24 CM	0.07 CM	0.58 CM	0.16 CM	EAST.: 0.14 CM
		NORT.:	10241.7555	AZI: 147-33- 2	237-33- 2			NORT.: 0.20 CM
		ELEV.:	1009.5959 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.8348

5.1 ADJUSTED COORDINATES AND ABSOLUTE ERROR ELLIPSE REPORT (CON'D)

STATION NAME	TYPE	ADJUSTED COORDINATES (METERS)		STANDARD CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	95% CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	MARGINAL STANDARD DEVIATIONS	
1662	FIXED	EAST.:	10000.0376 FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	9999.9562 FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.0000 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.0000
17	FREE	EAST.:	10039.5988	LTH: 0.17 CM	0.05 CM	0.41 CM	0.13 CM	EAST.:	0.06 CM
		NORT.:	10175.6131	AZI: 185-55-54	275-55-54			NORT.:	0.17 CM
		ELEV.:	966.7571 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.2778
18	FREE	EAST.:	10050.7141	LTH: 0.16 CM	0.06 CM	0.40 CM	0.14 CM	EAST.:	0.06 CM
		NORT.:	10174.8524	AZI: 189-37- 8	279-37- 8			NORT.:	0.16 CM
		ELEV.:	960.3082 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.3773
19	FREE	EAST.:	10076.4323	LTH: 0.17 CM	0.07 CM	0.42 CM	0.16 CM	EAST.:	0.08 CM
		NORT.:	10173.1760	AZI: 197-27-56	287-27-56			NORT.:	0.16 CM
		ELEV.:	946.5979 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.5204
21	FREE	EAST.:	9977.1002	LTH: 0.13 CM	0.04 CM	0.33 CM	0.09 CM	EAST.:	0.04 CM
		NORT.:	10124.0845	AZI: 170-48- 0	260-48- 0			NORT.:	0.13 CM
		ELEV.:	1000.2669 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	-0.4908
22	FREE	EAST.:	9979.5686	LTH: 0.13 CM	0.03 CM	0.33 CM	0.09 CM	EAST.:	0.04 CM
		NORT.:	10123.5347	AZI: 171-36-56	261-36-56			NORT.:	0.13 CM
		ELEV.:	1000.3948 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	-0.4600
23	FREE	EAST.:	9981.5821	LTH: 0.12 CM	0.03 CM	0.30 CM	0.08 CM	EAST.:	0.04 CM
		NORT.:	10124.0354	AZI: 171-37-24	261-37-24			NORT.:	0.12 CM
		ELEV.:	1000.2361 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	-0.4252
24	FREE	EAST.:	9996.6706	LTH: 0.14 CM	0.04 CM	0.33 CM	0.09 CM	EAST.:	0.04 CM
		NORT.:	10128.3930	AZI: 177- 0-23	267- 0-23			NORT.:	0.13 CM
		ELEV.:	991.7977 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	-0.1708
25	FREE	EAST.:	10020.8893	LTH: 0.13 CM	0.04 CM	0.32 CM	0.10 CM	EAST.:	0.04 CM
		NORT.:	10129.7592	AZI: 185-21-46	275-21-46			NORT.:	0.13 CM
		ELEV.:	978.1127 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.2637
26	FREE	EAST.:	10028.1528	LTH: 0.13 CM	0.04 CM	0.32 CM	0.10 CM	EAST.:	0.05 CM
		NORT.:	10129.6746	AZI: 188-12-26	278-12-26			NORT.:	0.13 CM
		ELEV.:	973.9339 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.3665
27	FREE	EAST.:	10040.6828	LTH: 0.13 CM	0.04 CM	0.32 CM	0.11 CM	EAST.:	0.05 CM
		NORT.:	10130.6530	AZI: 193-13-25	283-13-25			NORT.:	0.13 CM
		ELEV.:	965.7364 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.4967
28	FREE	EAST.:	10050.4785	LTH: 0.13 CM	0.07 CM	0.33 CM	0.17 CM	EAST.:	0.07 CM
		NORT.:	10130.9433	AZI: 188-34-57	278-34-57			NORT.:	0.13 CM
		ELEV.:	960.4833 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.1959

5.1 ADJUSTED COORDINATES AND ABSOLUTE ERROR ELLIPSE REPORT (CON'D)

STATION NAME	TYPE	ADJUSTED COORDINATES (METERS)		STANDARD CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	95% CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	MARGINAL STANDARD DEVIATIONS
29	FREE	EAST.:	10075.9160	LTH: 0.13 CM	0.05 CM	0.33 CM	0.13 CM	EAST.: 0.08 CM
		NORT.:	10132.3642	AZI: 207-31-55	297-31-55			NORT.: 0.12 CM
		ELEV.:	946.5199 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.6748
31	FREE	EAST.:	9981.3287	LTH: 0.11 CM	0.03 CM	0.26 CM	0.07 CM	EAST.: 0.03 CM
		NORT.:	10075.7336	AZI: 167-32-59	257-32-59			NORT.: 0.10 CM
		ELEV.:	1000.4678 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.6068
32	FREE	EAST.:	9983.6871	LTH: 0.11 CM	0.03 CM	0.26 CM	0.07 CM	EAST.: 0.03 CM
		NORT.:	10076.4490	AZI: 169- 4-50	259- 4-50			NORT.: 0.10 CM
		ELEV.:	1000.4731 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.5636
33	FREE	EAST.:	9986.1726	LTH: 0.09 CM	0.03 CM	0.22 CM	0.07 CM	EAST.: 0.03 CM
		NORT.:	10076.5804	AZI: 170- 5-50	260- 5-50			NORT.: 0.09 CM
		ELEV.:	1000.0926 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.4634
34	FREE	EAST.:	10000.9408	LTH: 0.10 CM	0.03 CM	0.24 CM	0.07 CM	EAST.: 0.03 CM
		NORT.:	10074.1715	AZI: 178-47-12	268-47-12			NORT.: 0.10 CM
		ELEV.:	992.0623 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.0684
35	FREE	EAST.:	10025.8936	LTH: 0.09 CM	0.03 CM	0.22 CM	0.07 CM	EAST.: 0.04 CM
		NORT.:	10077.3737	AZI: 196-12-31	286-12-31			NORT.: 0.09 CM
		ELEV.:	977.6932 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.5889
36	FREE	EAST.:	10032.7424	LTH: 0.09 CM	0.03 CM	0.22 CM	0.08 CM	EAST.: 0.04 CM
		NORT.:	10077.9122	AZI: 200-38-43	290-38-43			NORT.: 0.09 CM
		ELEV.:	973.8380 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.6528
37	FREE	EAST.:	10046.3975	LTH: 0.09 CM	0.03 CM	0.23 CM	0.08 CM	EAST.: 0.05 CM
		NORT.:	10079.8534	AZI: 208-30-28	298-30-28			NORT.: 0.08 CM
		ELEV.:	965.2433 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.7180
38	FREE	EAST.:	10055.2814	LTH: 0.10 CM	0.04 CM	0.24 CM	0.09 CM	EAST.: 0.06 CM
		NORT.:	10081.0791	AZI: 213- 4-18	303- 4-18			NORT.: 0.08 CM
		ELEV.:	960.4949 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.7399
39	FREE	EAST.:	10080.0089	LTH: 0.11 CM	0.04 CM	0.28 CM	0.10 CM	EAST.: 0.09 CM
		NORT.:	10084.1968	AZI: 226-29-25	316-29-25			NORT.: 0.08 CM
		ELEV.:	946.7214 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.7589

5.3 RELATIVE ERROR ELLIPSE REPORT

STATION NAME	STATION NAME	HORIZONTAL LINE INFORMATION		STANDARD RELATIVE ERROR ELLIPSE SEMI-MAJOR	STANDARD RELATIVE ERROR ELLIPSE SEMI-MINOR	95% RELATIVE ERROR ELLIPSE SEMI-MAJOR	95% RELATIVE ERROR ELLIPSE SEMI-MINOR	ELEV. DIFF. (METERS)	ELE. DIF. STD. DEV. (CM)	95% RELATIVE PRECISION
161	1218	LTH:	97.3443 M	0.17 CM	0.05 CM	0.41 CM	0.12 CM	9.9886	0.00	HOR.: 1 / 31235
		AZI:	112-45-53	156-14-28	246-14-28					VER.:
161	1662	LTH:	136.8379 M	0.16 CM	0.05 CM	0.38 CM	0.12 CM	-0.9619	0.00	HOR.: 1 / 38008
		AZI:	32-29-27	233-59-10	323-59-10					VER.:
1218	1662	LTH:	153.9476 M	0.17 CM	0.14 CM	0.42 CM	0.34 CM	-10.9505	0.00	HOR.: 1 / 36662
		AZI:	353-56-18	166-38- 0	256-38- 0					VER.:
161	162	LTH:	203.2730 M	0.19 CM	0.11 CM	0.46 CM	0.26 CM	13.8557	0.00	HOR.: 1 / 76713
		AZI:	357-27-28	264-12- 5	354-12- 5					VER.:
162	1662	LTH:	120.3861 M	0.12 CM	0.04 CM	0.29 CM	0.10 CM	-14.8176	0.00	HOR.: 1 / 40957
		AZI:	136-43-39	133-57-11	223-57-11					VER.:
1218	31	LTH:	146.9701 M	0.19 CM	0.13 CM	0.46 CM	0.31 CM	-10.4827	0.00	HOR.: 1 / 32762
		AZI:	23-53-25	190-14- 8	280-14- 8					VER.:
31	1662	LTH:	78.0528 M	0.11 CM	0.03 CM	0.26 CM	0.07 CM	-0.4678	0.00	HOR.: 1 / 60618
		AZI:	283-52- 6	167-32-59	257-32-59					VER.:
162	39	LTH:	166.9382 M	0.15 CM	0.08 CM	0.37 CM	0.19 CM	-68.0962	0.00	HOR.: 1 / 85292
		AZI:	92-38-15	175- 1-42	265- 1-42					VER.:
39	1662	LTH:	116.1545 M	0.11 CM	0.04 CM	0.28 CM	0.10 CM	53.2786	0.00	HOR.: 1 / 41675
		AZI:	226-29-21	226-29-25	316-29-25					VER.:
1218	21	LTH:	169.0421 M	0.20 CM	0.12 CM	0.50 CM	0.29 CM	-10.6836	0.00	HOR.: 1 / 35854
		AZI:	39-39-10	196- 4-20	286- 4-20					VER.:
21	31	LTH:	48.5354 M	0.11 CM	0.04 CM	0.27 CM	0.10 CM	0.2009	0.00	HOR.: 1 / 42093
		AZI:	274-59-53	170-21-34	260-21-34					VER.:
31	34	LTH:	19.6741 M	0.10 CM	0.04 CM	0.26 CM	0.09 CM	-8.4055	0.00	HOR.: 1 / 7680
		AZI:	355-26-45	171-11-45	261-11-45					VER.:
34	1662	LTH:	74.2208 M	0.10 CM	0.03 CM	0.24 CM	0.07 CM	7.9377	0.00	HOR.: 1 / 111102
		AZI:	269-18- 9	178-47-12	268-47-12					VER.:
162	163	LTH:	200.4064 M	0.18 CM	0.07 CM	0.44 CM	0.17 CM	-90.0741	0.00	HOR.: 1 / 48796
		AZI:	54-37-56	211-38-32	301-38-32					VER.:
163	39	LTH:	123.7266 M	0.13 CM	0.06 CM	0.31 CM	0.14 CM	21.9779	0.00	HOR.: 1 / 89546
		AZI:	178-27-12	265-37-35	355-37-35					VER.:
38	39	LTH:	24.9232 M	0.07 CM	0.05 CM	0.18 CM	0.12 CM	-13.7735	0.00	HOR.: 1 / 16533
		AZI:	7-11- 9	234-48-16	324-48-16					VER.:

5.3 RELATIVE ERROR ELLIPSE REPORT

STATION NAME	STATION NAME	HORIZONTAL LINE INFORMATION		STANDARD RELATIVE ERROR ELLIPSE SEMI-MAJOR	STANDARD RELATIVE ERROR ELLIPSE SEMI-MINOR	95% RELATIVE ERROR ELLIPSE SEMI-MAJOR	95% RELATIVE ERROR ELLIPSE SEMI-MINOR	ELEV. DIFF. (METERS)	ELE. DIF. STD. DEV. (CM)	95% RELATIVE PRECISION
38	1662	LTH:	98.1469 M	0.10 CM	0.04 CM	0.24 CM	0.09 CM	39.5051	0.00	HOR.: 1 / 44357
		AZI:	235-44-43	213- 4-18	303- 4-18					VER.:
165	1218	LTH:	225.5714 M	0.25 CM	0.08 CM	0.61 CM	0.20 CM	1.3546	0.00	HOR.: 1 / 110103
		AZI:	270-54-39	180-56-58	270-56-58					VER.:
165	21	LTH:	178.1344 M	0.16 CM	0.07 CM	0.40 CM	0.18 CM	-9.3290	0.00	HOR.: 1 / 44480
		AZI:	318-39-22	136-15-10	226-15-10					VER.:
21	22	LTH:	2.5288 M	0.10 CM	0.04 CM	0.26 CM	0.10 CM	0.1279	0.00	HOR.: 1 / 992
		AZI:	347-26-34	171- 2-43	261- 2-43					VER.:
22	31	LTH:	47.8335 M	0.11 CM	0.04 CM	0.27 CM	0.10 CM	0.0730	0.00	HOR.: 1 / 44270
		AZI:	272- 6-31	170-55-32	260-55-32					VER.:
31	33	LTH:	4.9173 M	0.09 CM	0.03 CM	0.22 CM	0.08 CM	-0.3752	0.00	HOR.: 1 / 2327
		AZI:	9-54-59	168-21-32	258-21-32					VER.:
33	34	LTH:	14.9634 M	0.09 CM	0.04 CM	0.22 CM	0.09 CM	-8.0303	0.00	HOR.: 1 / 6928
		AZI:	350-44- 8	173-28-24	263-28-24					VER.:
34	35	LTH:	25.1575 M	0.09 CM	0.04 CM	0.21 CM	0.11 CM	-14.3691	0.00	HOR.: 1 / 11874
		AZI:	7-18-46	183-14-52	273-14-52					VER.:
35	1662	LTH:	81.6211 M	0.09 CM	0.03 CM	0.22 CM	0.07 CM	22.3068	0.00	HOR.: 1 / 58017
		AZI:	251-31-53	196-12-31	286-12-31					VER.:
163	29	LTH:	137.7651 M	0.13 CM	0.06 CM	0.32 CM	0.15 CM	21.7764	0.00	HOR.: 1 / 55412
		AZI:	158- 2-43	112-29-26	202-29-26					VER.:
29	39	LTH:	48.3410 M	0.07 CM	0.07 CM	0.18 CM	0.16 CM	0.2015	0.00	HOR.: 1 / 29957
		AZI:	274-51-24	188-40-51	278-40-51					VER.:
28	38	LTH:	50.0949 M	0.10 CM	0.06 CM	0.24 CM	0.15 CM	0.0116	0.00	HOR.: 1 / 28749
		AZI:	275-30- 6	157-40-14	247-40-14					VER.:
28	39	LTH:	55.2927 M	0.10 CM	0.07 CM	0.25 CM	0.17 CM	-13.7619	0.00	HOR.: 1 / 22937
		AZI:	302-16-52	142-30-30	232-30-30					VER.:
37	38	LTH:	8.9681 M	0.07 CM	0.04 CM	0.17 CM	0.10 CM	-4.7484	0.00	HOR.: 1 / 5583
		AZI:	7-51-18	205-45-21	295-45-21					VER.:
37	1662	LTH:	92.3732 M	0.09 CM	0.03 CM	0.23 CM	0.08 CM	34.7567	0.00	HOR.: 1 / 45975
		AZI:	239-52-32	208-30-28	298-30-28					VER.:
165	11	LTH:	150.0803 M	0.14 CM	0.07 CM	0.33 CM	0.16 CM	-9.2307	0.00	HOR.: 1 / 52353
		AZI:	333- 1-35	117-37-41	207-37-41					VER.:

5.3 RELATIVE ERROR ELLIPSE REPORT

STATION NAME	STATION NAME	HORIZONTAL LINE INFORMATION	STANDARD RELATIVE ERROR ELLIPSE SEMI-MAJOR	STANDARD RELATIVE ERROR ELLIPSE SEMI-MINOR	95% RELATIVE ERROR ELLIPSE SEMI-MAJOR	95% RELATIVE ERROR ELLIPSE SEMI-MINOR	ELEV. DIFF. (METERS)	ELE. DIF. STD. DEV. (CM)	95% RELATIVE PRECISION
11	21	LTH: 49.5977 M AZI: 269-58-46	0.10 CM 174-50-51	0.04 CM 264-50-51	0.25 CM	0.11 CM	-0.0983	0.00	HOR.: 1 / 46175 VER.:
21	23	LTH: 4.4821 M AZI: 359-22-24	0.09 CM 170-13-41	0.04 CM 260-13-41	0.23 CM	0.10 CM	-0.0308	0.00	HOR.: 1 / 1948 VER.:
22	23	LTH: 2.0748 M AZI: 13-58- 0	0.10 CM 170-32-27	0.04 CM 260-32-27	0.23 CM	0.10 CM	-0.1587	0.00	HOR.: 1 / 950 VER.:
22	32	LTH: 47.2654 M AZI: 274-59-56	0.11 CM 170-59-39	0.04 CM 260-59-39	0.27 CM	0.10 CM	0.0783	0.00	HOR.: 1 / 41612 VER.:
31	32	LTH: 2.4645 M AZI: 16-52-32	0.10 CM 168-27-53	0.03 CM 258-27-53	0.25 CM	0.08 CM	0.0053	0.00	HOR.: 1 / 1105 VER.:
32	33	LTH: 2.4889 M AZI: 3- 1-33	0.09 CM 169-13-19	0.03 CM 259-13-19	0.23 CM	0.08 CM	-0.3805	0.00	HOR.: 1 / 1128 VER.:
24	33	LTH: 52.8654 M AZI: 258-32-45	0.11 CM 175-32- 8	0.04 CM 265-32- 8	0.26 CM	0.11 CM	8.2949	0.00	HOR.: 1 / 48157 VER.:
24	34	LTH: 54.3894 M AZI: 274-30-10	0.11 CM 175- 4-23	0.04 CM 265- 4-23	0.27 CM	0.10 CM	0.2646	0.00	HOR.: 1 / 49523 VER.:
24	35	LTH: 58.7959 M AZI: 299-48-12	0.11 CM 172-26-15	0.05 CM 262-26-15	0.26 CM	0.12 CM	-14.1045	0.00	HOR.: 1 / 32093 VER.:
35	36	LTH: 6.8699 M AZI: 4-29-44	0.08 CM 193-57-59	0.04 CM 283-57-59	0.19 CM	0.09 CM	-3.8552	0.00	HOR.: 1 / 3710 VER.:
36	1662	LTH: 84.5384 M AZI: 247-14-25	0.09 CM 200-38-43	0.03 CM 290-38-43	0.22 CM	0.08 CM	26.1620	0.00	HOR.: 1 / 51818 VER.:
163	19	LTH: 157.2173 M AZI: 144- 2-28	0.15 CM 133-13-50	0.09 CM 223-13-50	0.37 CM	0.21 CM	21.8544	0.00	HOR.: 1 / 42449 VER.:
19	29	LTH: 40.8151 M AZI: 269-16-30	0.10 CM 164-21-26	0.06 CM 254-21-26	0.25 CM	0.14 CM	-0.0780	0.00	HOR.: 1 / 27239 VER.:
28	29	LTH: 25.4771 M AZI: 3-11-49	0.10 CM 145- 1-31	0.06 CM 235- 1-31	0.24 CM	0.14 CM	-13.9634	0.00	HOR.: 1 / 12360 VER.:
28	37	LTH: 51.2526 M AZI: 265-25-58	0.10 CM 161-28-20	0.06 CM 251-28-20	0.24 CM	0.15 CM	4.7600	0.00	HOR.: 1 / 32206 VER.:
36	37	LTH: 13.7924 M AZI: 8- 5-27	0.07 CM 199-45-39	0.04 CM 289-45-39	0.18 CM	0.10 CM	-8.5947	0.00	HOR.: 1 / 7936 VER.:

5.3 RELATIVE ERROR ELLIPSE REPORT

STATION NAME	STATION NAME	HORIZONTAL LINE INFORMATION		STANDARD RELATIVE ERROR ELLIPSE SEMI-MAJOR	STANDARD RELATIVE ERROR ELLIPSE SEMI-MINOR	95% RELATIVE ERROR ELLIPSE SEMI-MAJOR	95% RELATIVE ERROR ELLIPSE SEMI-MINOR	ELEV. DIFF. (METERS)	ELE. DIF. STD. DEV. (CM)	95% RELATIVE PRECISION
164	165	LTH:	159.9201 M	0.14 CM	0.05 CM	0.35 CM	0.12 CM	3.3844	0.00	HOR.: 1 / 89587
		AZI:	191-33-52	257-39-40	347-39-40					VER.:
164	11	LTH:	102.7227 M	0.10 CM	0.04 CM	0.25 CM	0.09 CM	-5.8463	0.00	HOR.: 1 / 82076
		AZI:	257- 6-27	189-31-40	279-31-40					VER.:
11	13	LTH:	3.5929 M	0.08 CM	0.04 CM	0.18 CM	0.10 CM	-0.1732	0.00	HOR.: 1 / 1943
		AZI:	359-45-39	177-53-49	267-53-49					VER.:
13	21	LTH:	49.7140 M	0.10 CM	0.04 CM	0.24 CM	0.11 CM	0.0749	0.00	HOR.: 1 / 47273
		AZI:	265-50- 6	174-34-19	264-34-19					VER.:
13	23	LTH:	49.6394 M	0.09 CM	0.04 CM	0.21 CM	0.10 CM	0.0441	0.00	HOR.: 1 / 46642
		AZI:	271- 0-20	173-26- 0	263-26- 0					VER.:
22	33	LTH:	47.4164 M	0.10 CM	0.04 CM	0.25 CM	0.09 CM	-0.3022	0.00	HOR.: 1 / 40906
		AZI:	278- 0-21	171-14-13	261-14-13					VER.:
23	33	LTH:	47.6765 M	0.09 CM	0.04 CM	0.22 CM	0.09 CM	-0.1435	0.00	HOR.: 1 / 44527
		AZI:	275-31-30	170-29-35	260-29-35					VER.:
23	24	LTH:	15.7051 M	0.10 CM	0.05 CM	0.24 CM	0.11 CM	-8.4384	0.00	HOR.: 1 / 6916
		AZI:	16- 6-31	172- 3- 6	262- 3- 6					VER.:
24	25	LTH:	24.2573 M	0.10 CM	0.05 CM	0.26 CM	0.12 CM	-13.6850	0.00	HOR.: 1 / 9601
		AZI:	3-13-43	173-14-30	263-14-30					VER.:
25	35	LTH:	52.6240 M	0.10 CM	0.04 CM	0.24 CM	0.11 CM	-0.4195	0.00	HOR.: 1 / 46998
		AZI:	275-27-24	179-13- 1	269-13- 1					VER.:
26	35	LTH:	52.3496 M	0.10 CM	0.04 CM	0.23 CM	0.11 CM	3.7593	0.00	HOR.: 1 / 47336
		AZI:	267-31-35	181-34-58	271-34-58					VER.:
26	36	LTH:	51.9654 M	0.09 CM	0.05 CM	0.23 CM	0.11 CM	-0.0959	0.00	HOR.: 1 / 45582
		AZI:	275- 4- 0	180- 4-14	270- 4-14					VER.:
163	164	LTH:	280.5479 M	0.23 CM	0.07 CM	0.57 CM	0.18 CM	81.4680	0.00	HOR.: 1 / 49400
		AZI:	136-32-40	133-49- 3	223-49- 3					VER.:
164	19	LTH:	126.3504 M	0.13 CM	0.05 CM	0.33 CM	0.12 CM	-59.6136	0.00	HOR.: 1 / 40727
		AZI:	307-12- 6	147-47-22	237-47-22					VER.:
18	19	LTH:	25.7728 M	0.12 CM	0.06 CM	0.28 CM	0.14 CM	-13.7103	0.00	HOR.: 1 / 9473
		AZI:	356-16-14	158-12-28	248-12-28					VER.:
18	29	LTH:	49.4003 M	0.10 CM	0.05 CM	0.24 CM	0.12 CM	-13.7883	0.00	HOR.: 1 / 23083
		AZI:	300-40-27	154-18-21	244-18-21					VER.:

5.3 RELATIVE ERROR ELLIPSE REPORT

STATION NAME	STATION NAME	HORIZONTAL LINE INFORMATION		STANDARD RELATIVE ERROR ELLIPSE SEMI-MAJOR	STANDARD RELATIVE ERROR ELLIPSE SEMI-MINOR	95% RELATIVE ERROR ELLIPSE SEMI-MAJOR	95% RELATIVE ERROR ELLIPSE SEMI-MINOR	ELEV. DIFF. (METERS)	ELE. DIF. STD. DEV. (CM)	95% RELATIVE PRECISION
18	28	LTH:	43.9097 M	0.12 CM	0.06 CM	0.28 CM	0.14 CM	0.1751	0.00	HOR.: 1 / 25142
		AZI:	269-41-33	153-41- 2	243-41- 2					VER.:
27	28	LTH:	9.8001 M	0.10 CM	0.06 CM	0.24 CM	0.14 CM	-5.2531	0.00	HOR.: 1 / 4355
		AZI:	1-41-51	153-12- 3	243-12- 3					VER.:
27	37	LTH:	51.1200 M	0.09 CM	0.05 CM	0.21 CM	0.12 CM	-0.4931	0.00	HOR.: 1 / 42124
		AZI:	276-25- 6	180- 1- 9	270- 1- 9					VER.:
26	37	LTH:	53.0567 M	0.09 CM	0.05 CM	0.22 CM	0.12 CM	-8.6906	0.00	HOR.: 1 / 36790
		AZI:	290- 6-46	175-34-44	265-34-44					VER.:
164	12	LTH:	101.0889 M	0.11 CM	0.06 CM	0.27 CM	0.15 CM	-5.8042	0.00	HOR.: 1 / 67205
		AZI:	258- 0-53	178- 8-12	268- 8-12					VER.:
11	12	LTH:	2.2964 M	0.09 CM	0.06 CM	0.22 CM	0.14 CM	0.0421	0.00	HOR.: 1 / 1340
		AZI:	32-54-57	159-55- 2	249-55- 2					VER.:
12	13	LTH:	2.0899 M	0.09 CM	0.05 CM	0.21 CM	0.13 CM	-0.2153	0.00	HOR.: 1 / 997
		AZI:	322-49-23	157-15-40	247-15-40					VER.:
13	24	LTH:	48.0048 M	0.10 CM	0.05 CM	0.26 CM	0.11 CM	-8.3943	0.00	HOR.: 1 / 31210
		AZI:	289-25- 5	171-43-47	261-43-47					VER.:
14	24	LTH:	48.7694 M	0.13 CM	0.04 CM	0.31 CM	0.11 CM	-0.8142	0.00	HOR.: 1 / 43062
		AZI:	271-19- 0	175-46-39	265-46-39					VER.:
14	25	LTH:	53.7394 M	0.12 CM	0.05 CM	0.30 CM	0.12 CM	-14.4992	0.00	HOR.: 1 / 27123
		AZI:	298- 7-59	172-28-59	262-28-59					VER.:
25	26	LTH:	7.2640 M	0.09 CM	0.05 CM	0.23 CM	0.12 CM	-4.1788	0.00	HOR.: 1 / 3153
		AZI:	359-19-56	173-31-28	263-31-28					VER.:
164	18	LTH:	111.1835 M	0.13 CM	0.04 CM	0.31 CM	0.09 CM	-45.9033	0.00	HOR.: 1 / 44503
		AZI:	297- 6-57	154-36-25	244-36-25					VER.:
18	27	LTH:	45.3234 M	0.10 CM	0.05 CM	0.25 CM	0.13 CM	5.4282	0.00	HOR.: 1 / 35591
		AZI:	257-12-46	165-32-49	255-32-49					VER.:
26	27	LTH:	12.5681 M	0.09 CM	0.05 CM	0.22 CM	0.12 CM	-8.1975	0.00	HOR.: 1 / 5920
		AZI:	4-27-53	172-39-35	262-39-35					VER.:
164	14	LTH:	96.7700 M	0.13 CM	0.03 CM	0.31 CM	0.08 CM	-13.5996	0.00	HOR.: 1 / 115730
		AZI:	267-20-31	180- 0-40	270- 0-40					VER.:
12	14	LTH:	16.6528 M	0.12 CM	0.06 CM	0.30 CM	0.15 CM	-7.7954	0.00	HOR.: 1 / 5807
		AZI:	7-39-32	170- 5-38	260- 5-38					VER.:

5.3 RELATIVE ERROR ELLIPSE REPORT

STATION NAME	STATION NAME	HORIZONTAL LINE INFORMATION	STANDARD RELATIVE ERROR ELLIPSE SEMI-MAJOR	STANDARD RELATIVE ERROR ELLIPSE SEMI-MINOR	95% RELATIVE ERROR ELLIPSE SEMI-MAJOR	95% RELATIVE ERROR ELLIPSE SEMI-MINOR	ELEV. DIFF. (METERS)	ELE. DIF. STD. DEV. (CM)	95% RELATIVE PRECISION
13	14	LTH: 15.2422 M	0.11 CM	0.04 CM	0.26 CM	0.11 CM	-7.5801	0.00	HOR.: 1 / 5981
		AZI: 13-12-24	177- 7-48	267- 7-48					VER.:
14	15	LTH: 26.7089 M	0.13 CM	0.05 CM	0.31 CM	0.12 CM	-14.9262	0.00	HOR.: 1 / 8622
		AZI: 358-22-40	171-12-35	261-12-35					VER.:
15	25	LTH: 46.6540 M	0.12 CM	0.05 CM	0.29 CM	0.11 CM	0.4270	0.00	HOR.: 1 / 39246
		AZI: 268-19-51	170-14- 0	260-14- 0					VER.:
16	25	LTH: 46.9830 M	0.12 CM	0.05 CM	0.29 CM	0.12 CM	2.9967	0.00	HOR.: 1 / 40336
		AZI: 262-59- 9	169-56-52	259-56-52					VER.:
16	26	LTH: 46.7409 M	0.12 CM	0.05 CM	0.28 CM	0.11 CM	-1.1821	0.00	HOR.: 1 / 36492
		AZI: 271-52-16	168-38-52	258-38-52					VER.:
164	17	LTH: 105.8715 M	0.13 CM	0.04 CM	0.31 CM	0.09 CM	-39.4544	0.00	HOR.: 1 / 48408
		AZI: 291-56-32	159-18-32	249-18-32					VER.:
17	18	LTH: 11.1412 M	0.11 CM	0.05 CM	0.27 CM	0.11 CM	-6.4489	0.00	HOR.: 1 / 4279
		AZI: 356- 5- 4	157-51-35	247-51-35					VER.:
17	27	LTH: 44.9732 M	0.11 CM	0.05 CM	0.26 CM	0.12 CM	-1.0207	0.00	HOR.: 1 / 33375
		AZI: 271-22-51	165-21-13	255-21-13					VER.:
17	26	LTH: 47.3430 M	0.11 CM	0.05 CM	0.27 CM	0.12 CM	7.1768	0.00	HOR.: 1 / 38179
		AZI: 256- 0-32	168-21-24	258-21-24					VER.:
164	15	LTH: 99.9216 M	0.13 CM	0.03 CM	0.32 CM	0.08 CM	-28.5258	0.00	HOR.: 1 / 64048
		AZI: 282-50-34	167- 7-41	257- 7-41					VER.:
15	16	LTH: 4.3785 M	0.12 CM	0.04 CM	0.30 CM	0.10 CM	-2.5697	0.00	HOR.: 1 / 1479
		AZI: 359-57-43	165-29-44	255-29-44					VER.:
16	17	LTH: 12.9955 M	0.12 CM	0.04 CM	0.29 CM	0.11 CM	-8.3589	0.00	HOR.: 1 / 4586
		AZI: 356-34-12	162-16-25	252-16-25					VER.:
164	16	LTH: 100.9879 M	0.13 CM	0.03 CM	0.31 CM	0.08 CM	-31.0955	0.00	HOR.: 1 / 58179
		AZI: 285-15-55	165- 5-20	255- 5-20					VER.:

5.4 SUMMARY REPORT

OBSERVATION TYPE	NUMBER	WEIGHTED SUM OF RESIDUALS SQUARED	REDUNDANCY	STD. DEV. OF UNIT WEIGHT
DIRECTIONS	139	0.836418D+02	0.690727D+02	1.10042
AZIMUTHS	1	0.000000D+00	0.000000D+00	1.00000
HORIZONTAL DISTANCE	4	0.210583D+01	0.292734D+01	0.84816
SLOPE DISTANCE	0	0.000000D+00	0.000000D+00	1.00000
SCALED DISTANCE	0	0.000000D+00	0.000000D+00	1.00000
ZENITH DISTANCE	0	0.000000D+00	0.000000D+00	1.00000
HEIGHT DIFFERENCE	0	0.000000D+00	0.000000D+00	1.00000
OBSERVED COORDINATES	0	0.000000D+00	0.000000D+00	1.00000
COORDINATE DIFF.	0	0.000000D+00	0.000000D+00	1.00000
TOTAL	144	0.857477D+02	72	1.09130

STATIONS:	FIXED	1
	FREE	33
	WEIGHTED	0
	TOTAL	34

CONVERGENCE:	ITERATIONS USED	2
	TOLERANCE	0.000100
	COMPUTATION TIME	99.559 SEC

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TIME: 17:25:00 DATE: 16-DEC-86

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*                                                                           *
*  BOSTON SURVEY CONSULTANTS - BALL MOUNTAIN DAM - PROJECT 1-1654.00        *
*                                                                           *
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PROJECT INFORMATION:

EPOCH 3 HORIZONTAL ANALYSIS
DATABASE 11654003.DBS
1165400H

GEODETIC NETWORK ANALYSIS
SLAP #797
INTERGRAPH CORPORATION
ONE MADISON INDUSTRIAL PARK
HUNTSVILLE, ALABAMA USA 35805

1.0 OPTIONS REPORT

OPTIONS IN EFFECT

PROGRAM CONTROL:

- PREANALYSIS OR ADJUSTMENT ..... ADJUSTMENT
- PERFORM VARIANCE COMPONENT ESTIMATION ..... NO
- ANGULAR I/O IN DEGREES OF GRADS ..... DEGREES
- LINEAR I/O IN METERS OR FEET ..... METERS
- MAXIMUM CPU TIME ..... 9999.0 SECONDS
- MAXIMUM NUMBER OF LEAST-SQUARES ITERATIONS 10
- ITERATION CONVERGENCE BOUNDARY VALUE 0.000100
- NUMBER OF EIGENVALUES COMPUTED ..... NONE

DEFAULT STANDARD DEVIATIONS:

MEASUREMENT TYPE	STANDARD DEVIATION
DIRECTIONS	0.00100 SEC
AZIMUTHS	0.00100 SEC
ANGULAR TARGET ECCENTRICITY	0.00000 CM
CONSTANT PART OF EDM MEASUREMENT	0.20000 CM
VARIABLE PART OF EDM MEASUREMENT	3.00000 PPM
ZENITH DISTANCE	0.60000 SEC
HEIGHT DIFFERENCE	0.10000 CM
WEIGHTED STATIONS	0.00100 CM

EDM RELATED FACTORS:

- MEAN RADIUS OF EARTH ..... 6378.0 KM
- EDM PHASE SHIFT ..... 0.00000 DEG
- EDM WAVELENGTH ..... 10.00000 METERS
- EDM ZERO ERROR ..... 0.00000 CM
- NETWORK SCALE FACTOR ..... 0.00000 PPM
- EDM CYCLIC ERROR (AMPLITUDE) ..... 0.00000 CM
- REFRACTION COEFFICIENT 0.130

2.1 FIXED STATIONS INPUT REPORT

STATION NAME	FIXED COORDINATES					
	EASTING (METERS)	STD. DEV. (CM)	NORTHING (METERS)	STD. DEV. (CM)	ELEVATION (METERS)	STD. DEV. (CM)
1663	10000.0376		9999.9562		1000.0000	

2.2 FREE STATIONS INPUT REPORT

STATION NAME	PRELIMINARY COORDINATES EASTING (METERS)	STD. DEV. (CM)	NORTHING (METERS)	STD. DEV. (CM)	ELEVATION (METERS)	STD. DEV. (CM)
11	9977.1172		10173.6877		1000.2730	FIXED
12	9979.0451		10174.9374		1000.3150	FIXED
1218	9846.9425		10016.2121		1015.0000	FIXED
13	9980.7103		10173.6725		1000.1030	FIXED
14	9995.5499		10177.1530		992.5700	FIXED
15	10022.2476		10176.3998		977.7050	FIXED
16	10026.6277		10176.3942		975.1380	FIXED
161	9884.6165		9926.4538		1001.4850	FIXED
162	10087.6923		9917.4407		1014.9810	FIXED
163	10203.6906		10080.8608		925.3040	FIXED
164	10000.0376		10273.8214		1006.4650	FIXED
165	9843.3615		10241.7614		1009.7800	FIXED
17	10039.6007		10175.6162		966.8130	FIXED
18	10050.7168		10174.8548		960.3930	FIXED
19	10076.4323		10173.1814		946.7430	FIXED
21	9977.0994		10124.0894		1000.1760	FIXED
22	9979.5674		10123.5400		1000.3040	FIXED
23	9981.5825		10124.0405		1000.1480	FIXED
24	9996.6704		10128.3981		990.2490	FIXED
25	10020.8893		10129.7642		978.1230	FIXED
26	10028.1539		10129.6781		973.9620	FIXED
27	10040.6833		10130.6563		965.8000	FIXED
28	10050.4796		10130.9475		960.5700	FIXED
29	10075.9160		10132.3685		946.6670	FIXED
31	9981.3276		10075.7375		1000.3780	FIXED
32	9983.6881		10076.4549		1000.3840	FIXED
33	9986.1746		10076.5864		1000.0010	FIXED
34	10000.9424		10074.1756		992.0120	FIXED
35	10025.8948		10077.3785		977.7070	FIXED
36	10032.7426		10077.9167		973.8690	FIXED
37	10046.3985		10079.8569		965.3180	FIXED
38	10055.2827		10081.0833		960.5840	FIXED
39	10080.0113		10084.2006		946.8710	FIXED

2.3 WEIGHTED STATIONS INPUT REPORT

STATION NAME	WEIGHTED COORDINATES					
	EASTING (METERS)	STD. DEV. (CM)	NORTHING (METERS)	STD. DEV. (CM)	ELEVATION (METERS)	STD. DEV. (CM)

THERE ARE NO WEIGHTED STATIONS

2.4 OBSERVED DIRECTIONS INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)
161	165	0- 0- 0.000	0.800	0.000
161	164	25-50- 4.700	0.800	0.318
161	11	27-58- 1.500	0.800	-0.493
161	12	28-15-42.000	0.800	-1.300
161	13	28-41-43.500	0.800	0.257
161	21	32-31-51.500	0.800	-1.344
161	22	33-10-39.700	0.800	-0.366
161	23	33-35-36.500	0.800	-1.307
161	31	40-23-25.700	0.800	-1.228
161	32	40-53-51.800	0.800	-0.739
161	33	41-31-50.300	0.800	-0.888
161	1218	344-41- 5.200	0.800	-1.323
162	165	0- 0- 0.000	0.600	0.000
162	164	23-10-30.400	0.600	0.767
162	31	3- 5-40.800	0.300	0.418
162	32	3-48-22.500	0.300	0.773
162	33	4-27-34.900	0.300	0.661
162	34	8- 1-46.100	0.300	0.818
162	35	15-52- 2.400	0.300	0.453
162	36	18- 5-28.000	0.300	0.766
162	37	22-43-41.100	0.300	0.494
162	38	25-47-26.100	0.300	0.493
162	39	34-21-21.600	0.300	0.800
162	29	33-51-25.200	0.300	0.854
162	28	27- 6-22.500	0.300	0.738
162	27	24-33-34.800	0.300	0.523
162	26	21-19-22.100	0.300	0.349
162	25	19-31-40.800	0.300	0.304
162	24	13-39-15.800	0.300	0.692
162	23	9-48-29.900	0.300	1.434
162	22	9-18-37.500	0.300	0.305
162	21	8-50-18.900	0.300	0.433
162	11	13-39- 7.600	0.300	0.684
162	12	14- 6-59.500	0.300	0.730
162	13	14-19-53.900	0.300	0.717
162	14	17-27-33.000	0.300	0.686
162	15	22-48-36.600	0.300	0.497
162	16	23-43-28.100	0.300	0.677
162	17	26-26-29.100	0.300	0.985
162	18	28-49- 8.600	0.300	0.926
162	19	34-28-19.600	0.300	0.671
162	163	72-21-38.400	0.600	-0.249
163	162	0- 0- 0.000	0.400	0.000
163	34	52-44-37.000	0.400	-0.356
163	33	53-30-23.200	0.400	-0.064
163	35	53-30-36.600	0.400	-0.070

2.4 OBSERVED DIRECTIONS INPUT REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)
163	36	53-38-43.900	0.400	-0.164
163	37	54-15-59.500	0.400	-0.101
163	38	54-43- 5.200	0.400	-0.087
163	39	56-10-44.400	0.400	-0.208
163	23	65-38- 1.000	0.400	-0.647
163	24	67-33-52.600	0.400	-0.200
163	25	69-36-33.900	0.400	0.043
163	26	70-10-25.200	0.400	0.064
163	27	71-37- 8.700	0.400	-0.090
163	28	72-44- 7.600	0.400	-0.154
163	29	76-35-14.200	0.400	0.003
163	14	79-27-31.900	0.600	-0.238
163	15	82-24- 5.000	0.600	0.214
163	16	82-58-51.600	0.600	-0.334
163	17	84-38-12.600	0.600	-0.464
163	18	86-12- 2.200	0.600	-0.234
163	19	90-35-29.400	0.600	-0.208
163	164	98- 5-15.900	0.600	-0.751
164	165	0- 0- 0.000	1.000	0.000
164	163	235- 1-12.800	1.000	-0.217
164	39	258-41-48.600	0.600	0.535
164	38	265-34-13.500	0.600	-0.333
164	37	268- 7-19.200	0.600	-0.243
164	36	272- 5-12.800	0.600	0.286
164	35	274- 3-56.900	0.600	-0.671
164	34	281-18-18.000	0.600	0.379
164	33	285-35- 6.200	0.600	-0.085
164	32	286-17-59.600	0.600	-0.509
164	31	286-57-37.600	0.600	0.092
164	21	290-16-27.400	0.900	0.012
164	22	289-19-16.500	0.900	0.102
164	23	288-35-21.400	0.900	1.735
164	24	282-53-28.100	0.900	0.588
164	25	273-19-42.900	0.900	0.562
164	26	270-31-38.100	0.900	0.360
164	27	265-42-53.200	0.900	-0.429
164	28	262- 7- 8.400	0.900	0.547
164	29	253-21-17.900	0.900	1.749
164	19	244-21-46.100	1.000	-0.094
164	18	254-26-54.400	1.000	0.501
164	17	259-37-19.500	1.000	0.486
164	16	266-17-56.400	1.000	-0.057
164	15	268-43-19.200	1.000	0.489
164	14	284-13-21.400	1.000	0.292
164	13	292-29-15.900	1.000	0.756
164	12	293-32-59.500	1.000	-1.134
164	11	294-27-26.200	1.000	-0.222

2.4 OBSERVED DIRECTIONS INPUT REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)
164	161	299-56-42.900	1.000	1.452
164	1218	312-17-13.600	1.000	-0.423
164	162	267-44-48.100	1.000	0.750
165	162	0- 0- 0.000	0.700	0.000
165	12	333-12-47.400	0.700	0.031
165	11	333-57-59.000	0.700	0.106
165	23	347-24-49.600	0.700	0.839
165	22	347-56-58.100	0.700	-0.729
165	21	348-20-11.700	0.700	0.091
165	33	356- 8-45.700	0.700	1.099
165	32	356-39-55.800	0.700	0.129
165	31	357-15-59.000	0.700	0.174
165	161	29-32-20.100	0.700	0.752
165	164	295-25-42.800	0.700	0.518
165	1218	36- 4-59.800	0.700	-0.346
1663	164	0- 0- 0.000	1.000	0.000
1663	31	346- 7-54.800	1.000	1.997
1663	32	347-56-10.500	1.000	0.559
1663	34	0-41-55.500	1.000	1.074
1663	36	22-45-31.700	1.000	1.440
1663	37	30- 7-27.300	1.000	2.139
1663	38	34-15-15.100	1.000	1.857
1663	39	43-30-38.000	1.000	0.969
1663	27	17-16-31.300	1.000	1.725
1663	26	12-13-49.000	1.000	3.541
1663	25	9- 7-36.200	1.000	3.519
1663	23	351-32-25.800	1.000	0.385
1663	22	350-35-44.100	1.000	2.025
1663	21	349-31-53.200	1.000	3.101
1663	11	352-29- 3.700	1.000	-0.034
1663	12	353- 9-31.500	1.000	-0.610
1663	13	353-39- 6.300	1.000	0.885
1663	14	358-32-58.600	1.000	1.362
1663	15	7-10-31.000	1.000	3.069
1663	16	8-34-13.500	1.000	0.529
1663	17	12-41-33.300	1.000	-0.337
1663	18	16- 9-35.000	1.000	0.261
1663	19	23-47-54.500	1.000	1.195
1663	163	68-20- 3.300	1.000	1.935
1663	161	237-30-38.500	1.000	1.696
1663	165	327- 3-35.200	1.000	2.643
1663	1218	276- 3-41.800	1.000	2.007

2.5 OBSERVED AZIMUTH INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)
1663	164	0- 0- 0.000	0.001	0.000

2.6 OBSERVED HORIZONTAL DISTANCE INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (METERS)	STAN. DEV. (CM)	MISCLOSURE (CM)
164	165	159.9216	0.2480	-0.10
164	163	280.5467	0.2842	-0.34
164	161	366.0451	0.3098	0.37

2.7 OBSERVED SLOPE DISTANCE INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (METERS)	STAN. DEV. (CM)	MISCLOSURE (CM)

THERE ARE NO SLOPE DISTANCE OBSERVATIONS

2.8 OBSERVED SCALE DISTANCE INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (METERS)	STAN. DEV. (CM)	MISCLOSURE (CM)

THERE ARE NO SCALED DISTANCE OBSERVATIONS

2.9 OBSERVED ZENITH DISTANCE INPUT REPORT

INSTRUMENT STATION	TARGET STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAND. DEV. (SEC)	MISCLOSURE (SEC)

THERE ARE NO ZENITH DISTANCE OBSERVATIONS

2.10 OBSERVED HEIGHT DIFFERENCE INPUT REPORT

FROM STATION	TO STATION	OBSERVED VALUE (METERS)	STAN. DEV. (CM)	MISCLOSURE (CM)

THERE ARE NO HEIGHT DIFFERENCE OBSERVATIONS

2.11 OBSERVED RELATIVE POSITIONS INPUT REPORT

FROM STATION	TO STATION	OBSERVED VALUE (DEG-MIN-SEC)	STAN. DEV. (SEC)

THERE ARE NO RELATIVE POSITION OBSERVATIONS

2.12 OBSERVED COORDINATE DIFFERENCE INPUT REPORT

FROM STATION	TO STATION	OBSERVED VALUES (METERS) DX	DY	DZ	COVARIANCES (CM SQUARED) XX	XY	YY	XZ	YZ	ZZ

THERE ARE NO COORDINATE DIFFERENCE OBSERVATIONS

3.0 SOLVABILITY OF NETWORK REPORT

STATION NAME	NUMBER OF TIMES OBSERVED

ALL STATIONS ARE INVOLVED IN AT LEAST TWO OBSERVATIONS

3.1 ARRAY USAGE REPORT

FACTOR	MAXIMUM ALLOWED	ACTUAL
OBSERVATIONS	9000	139
POINTS	1000	34
FIXED & WEIGHTED POINTS	99	1
ORIENTATION UNKNOWNS	1500	6
MATRIX ELEMENTS	99998	2278

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
161	165	O:	0- 0- 0.00	0.80		61.68	COM:	1.0 SEC	0.0 CM	317.9951
		C:	- 0- 0- 0.64	0.50			BND:	4.2 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.64	0.63	-1.02					
161	164	O:	25-50- 4.70	0.80		79.20	COM:	1.3 SEC	0.0 CM	366.0414
		C:	25-50- 3.71	0.36			BND:	3.7 SEC	-0.1 CM	
		V=C-O:	- 0- 0- 0.99	0.71	-1.39					
161	11	O:	27-58- 1.50	0.80		75.02	COM:	0.3 SEC	0.0 CM	263.9716
		C:	27-58- 1.29	0.40			BND:	3.8 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.21	0.69	-0.30					
161	12	O:	28-15-42.00	0.80		75.23	COM:	-0.8 SEC	0.0 CM	265.8212
		C:	28-15-42.63	0.40			BND:	3.8 SEC	0.0 CM	
		V=C-O:	0- 0- 0.63	0.69	0.90					
161	13	O:	28-41-43.50	0.80		65.90	COM:	1.5 SEC	0.0 CM	265.2379
		C:	28-41-42.54	0.47			BND:	4.1 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.96	0.65	-1.47					
161	21	O:	32-31-51.50	0.80		55.41	COM:	-1.2 SEC	-0.1 CM	218.2039
		C:	32-31-52.18	0.53			BND:	4.4 SEC	0.2 CM	
		V=C-O:	0- 0- 0.68	0.60	1.14					
161	22	O:	33-10-39.70	0.80		55.14	COM:	0.6 SEC	0.0 CM	218.7662
		C:	33-10-39.35	0.54			BND:	4.4 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.35	0.59	-0.59					
161	23	O:	33-35-36.50	0.80		69.58	COM:	-0.9 SEC	0.0 CM	220.0975
		C:	33-35-37.12	0.44			BND:	4.0 SEC	0.1 CM	
		V=C-O:	0- 0- 0.62	0.67	0.93					
161	31	O:	40-23-25.70	0.80		41.49	COM:	-1.2 SEC	-0.1 CM	177.8725
		C:	40-23-26.20	0.61			BND:	5.1 SEC	0.3 CM	
		V=C-O:	0- 0- 0.50	0.52	0.97					
161	32	O:	40-53-51.80	0.80		42.43	COM:	-0.2 SEC	0.0 CM	179.7652
		C:	40-53-51.88	0.61			BND:	5.1 SEC	0.3 CM	
		V=C-O:	0- 0- 0.08	0.52	0.15					
161	33	O:	41-31-50.30	0.80		58.40	COM:	-0.2 SEC	0.0 CM	181.2563
		C:	41-31-50.43	0.52			BND:	4.3 SEC	0.1 CM	
		V=C-O:	0- 0- 0.13	0.61	0.22					
161	1218	O:	344-41- 5.20	0.80		10.33	COM:	-5.0 SEC	-0.2 CM	97.3442
		C:	344-41- 5.72	0.76			BND:	10.3 SEC	0.5 CM	
		V=C-O:	0- 0- 0.52	0.26	2.02					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
162	165	O:	0- 0- 0.00	0.60		71.60	COM:	-0.9 SEC	0.0 CM	406.0560
		C:	0- 0- 0.65	0.32			BND:	2.9 SEC	0.1 CM	
		V=C-O:	0- 0- 0.65	0.51	1.28					
162	164	O:	23-10-30.40	0.60		86.60	COM:	0.2 SEC	0.0 CM	367.0021
		C:	23-10-30.26	0.22			BND:	2.7 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.14	0.56	-0.25					
162	31	O:	3- 5-40.80	0.30		23.42	COM:	-0.7 SEC	-0.1 CM	190.7127
		C:	3- 5-40.96	0.26			BND:	2.6 SEC	0.2 CM	
		V=C-O:	0- 0- 0.16	0.15	1.09					
162	32	O:	3-48-22.50	0.30		23.13	COM:	0.4 SEC	0.0 CM	190.0063
		C:	3-48-22.42	0.26			BND:	2.6 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.08	0.14	-0.57					
162	33	O:	4-27-34.90	0.30		25.20	COM:	0.2 SEC	0.0 CM	188.7676
		C:	4-27-34.84	0.26			BND:	2.5 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.06	0.15	-0.38					
162	34	O:	8- 1-46.10	0.30		30.74	COM:	0.5 SEC	0.0 CM	179.1406
		C:	8- 1-45.94	0.25			BND:	2.2 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.16	0.17	-0.98					
162	35	O:	15-52- 2.40	0.30		15.47	COM:	-1.2 SEC	-0.1 CM	171.4615
		C:	15-52- 2.59	0.28			BND:	3.1 SEC	0.2 CM	
		V=C-O:	0- 0- 0.19	0.12	1.62					
162	36	O:	18- 5-28.00	0.30		25.74	COM:	0.2 SEC	0.0 CM	169.6232
		C:	18- 5-27.95	0.26			BND:	2.4 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.05	0.15	-0.35					
162	37	O:	22-43-41.10	0.30		22.98	COM:	-0.7 SEC	-0.1 CM	167.5834
		C:	22-43-41.27	0.26			BND:	2.6 SEC	0.2 CM	
		V=C-O:	0- 0- 0.17	0.14	1.18					
162	38	O:	25-47-26.10	0.30		21.08	COM:	-0.7 SEC	-0.1 CM	166.8211
		C:	25-47-26.26	0.27			BND:	2.7 SEC	0.2 CM	
		V=C-O:	0- 0- 0.16	0.14	1.13					
162	39	O:	34-21-21.60	0.30		15.85	COM:	0.8 SEC	0.1 CM	166.9367
		C:	34-21-21.48	0.28			BND:	3.1 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.12	0.12	-1.03					
162	29	O:	33-51-25.20	0.30		7.95	COM:	2.2 SEC	0.2 CM	215.2502
		C:	33-51-25.03	0.29			BND:	4.4 SEC	0.4 CM	
		V=C-O:	- 0- 0- 0.17	0.08	-2.05					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
162	28	O: 27- 6-22.50	0.30		14.62	COM:	0.4 SEC	0.0 CM	216.7255
		C: 27- 6-22.44	0.28			BND:	3.2 SEC	0.3 CM	
		V=C-O: - 0- 0- 0.06	0.11	-0.54					
162	27	O: 24-33-34.80	0.30		31.95	COM:	-0.4 SEC	0.0 CM	218.3363
		C: 24-33-34.93	0.25			BND:	2.2 SEC	0.2 CM	
		V=C-O: 0- 0- 0.13	0.17	0.80					
162	26	O: 21-19-22.10	0.30		34.75	COM:	-0.9 SEC	-0.1 CM	220.4303
		C: 21-19-22.42	0.24			BND:	2.1 SEC	0.1 CM	
		V=C-O: 0- 0- 0.32	0.18	1.78					
162	25	O: 19-31-40.80	0.30		36.08	COM:	-0.9 SEC	-0.1 CM	222.5846
		C: 19-31-41.11	0.24			BND:	2.1 SEC	0.1 CM	
		V=C-O: 0- 0- 0.31	0.18	1.72					
162	24	O: 13-39-15.80	0.30		24.80	COM:	0.3 SEC	0.0 CM	229.7565
		C: 13-39-15.72	0.26			BND:	2.5 SEC	0.2 CM	
		V=C-O: - 0- 0- 0.08	0.15	-0.52					
162	23	O: 9-48-29.90	0.30		45.09	COM:	1.7 SEC	0.1 CM	232.2558
		C: 9-48-29.13	0.22			BND:	1.8 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.77	0.20	-3.82 ..					
162	22	O: 9-18-37.50	0.30		35.11	COM:	-1.0 SEC	-0.1 CM	232.7401
		C: 9-18-37.84	0.24			BND:	2.1 SEC	0.1 CM	
		V=C-O: 0- 0- 0.34	0.18	1.93					
162	21	O: 8-50-18.90	0.30		35.38	COM:	-0.7 SEC	0.0 CM	234.3810
		C: 8-50-19.14	0.24			BND:	2.1 SEC	0.1 CM	
		V=C-O: 0- 0- 0.24	0.18	1.32					
162	11	O: 13-39- 7.60	0.30		45.56	COM:	0.1 SEC	0.0 CM	279.0867
		C: 13-39- 7.54	0.22			BND:	1.8 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.06	0.20	-0.29					
162	12	O: 14- 6-59.50	0.30		45.77	COM:	0.1 SEC	0.0 CM	279.4795
		C: 14- 6-59.44	0.22			BND:	1.8 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.06	0.20	-0.31					
162	13	O: 14-19-53.90	0.30		7.04	COM:	1.2 SEC	0.1 CM	277.6687
		C: 14-19-53.81	0.29			BND:	4.7 SEC	0.6 CM	
		V=C-O: - 0- 0- 0.09	0.08	-1.08					
162	14	O: 17-27-33.00	0.30		42.79	COM:	0.1 SEC	0.0 CM	275.5734
		C: 17-27-32.95	0.23			BND:	1.9 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.05	0.20	-0.27					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
162	15	O:	22-48-36.60	0.30		44.51	COM:	-0.4 SEC	0.0 CM	267.1008
		C:	22-48-36.77	0.22			BND:	1.9 SEC	0.1 CM	
		V=C-O:	0- 0- 0.17	0.20	0.85					
162	16	O:	23-43-28.10	0.30		43.07	COM:	0.2 SEC	0.0 CM	266.0561
		C:	23-43-28.03	0.23			BND:	1.9 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.07	0.20	-0.38					
162	17	O:	26-26-29.10	0.30		36.82	COM:	1.0 SEC	0.1 CM	262.6164
		C:	26-26-28.75	0.24			BND:	2.0 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.35	0.18	-1.93					
162	18	O:	28-49- 8.60	0.30		31.04	COM:	0.8 SEC	0.1 CM	260.0562
		C:	28-49- 8.34	0.25			BND:	2.2 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.26	0.17	-1.53					
162	19	O:	34-28-19.60	0.30		21.11	COM:	0.1 SEC	0.0 CM	255.9885
		C:	34-28-19.58	0.27			BND:	2.7 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.02	0.14	-0.16					
162	163	O:	72-21-38.40	0.60		39.73	COM:	-2.1 SEC	-0.1 CM	200.4039
		C:	72-21-39.25	0.47			BND:	3.9 SEC	0.2 CM	
		V=C-O:	0- 0- 0.85	0.38	2.25					
163	162	O:	0- 0- 0.00	0.40		10.13	COM:	2.1 SEC	0.1 CM	200.4039
		C:	- 0- 0- 0.21	0.38			BND:	5.2 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.21	0.13	-1.65					
163	34	O:	52-44-37.00	0.40		16.88	COM:	-0.9 SEC	-0.1 CM	202.8583
		C:	52-44-37.16	0.36			BND:	4.0 SEC	0.3 CM	
		V=C-O:	0- 0- 0.16	0.16	0.97					
163	33	O:	53-30-23.20	0.40		27.18	COM:	0.4 SEC	0.0 CM	217.5580
		C:	53-30-23.10	0.34			BND:	3.2 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.10	0.21	-0.50					
163	35	O:	53-30-36.60	0.40		1.66	COM:	5.0 SEC	0.4 CM	177.8299
		C:	53-30-36.52	0.40			BND:	12.8 SEC	1.1 CM	
		V=C-O:	- 0- 0- 0.08	0.05	-1.62					
163	36	O:	53-38-43.90	0.40		15.92	COM:	-0.2 SEC	0.0 CM	170.9733
		C:	53-38-43.93	0.37			BND:	4.1 SEC	0.3 CM	
		V=C-O:	0- 0- 0.03	0.16	0.17					
163	37	O:	54-15-59.50	0.40		13.72	COM:	0.9 SEC	0.1 CM	157.2952
		C:	54-15-59.38	0.37			BND:	4.5 SEC	0.3 CM	
		V=C-O:	- 0- 0- 0.12	0.15	-0.83					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
163	38	O:	54-43- 5.20	0.40		12.12	COM:	0.5 SEC	0.0 CM	148.4080
		C:	54-43- 5.14	0.37			BND:	4.7 SEC	0.3 CM	
		V=C-O:	- 0- 0- 0.06	0.14	-0.46					
163	39	O:	56-10-44.40	0.40		8.20	COM:	-0.3 SEC	0.0 CM	123.7243
		C:	56-10-44.43	0.38			BND:	5.8 SEC	0.3 CM	
		V=C-O:	0- 0- 0.03	0.11	0.23					
163	23	O:	65-38- 1.00	0.40		27.02	COM:	-1.9 SEC	-0.2 CM	226.2664
		C:	65-38- 1.50	0.34			BND:	3.2 SEC	0.3 CM	
		V=C-O:	0- 0- 0.50	0.21	2.42					
163	24	O:	67-33-52.60	0.40		6.84	COM:	-0.8 SEC	-0.1 CM	212.4080
		C:	67-33-52.65	0.39			BND:	6.3 SEC	0.6 CM	
		V=C-O:	0- 0- 0.05	0.10	0.52					
163	25	O:	69-36-33.90	0.40		6.19	COM:	3.9 SEC	0.3 CM	189.2296
		C:	69-36-33.66	0.39			BND:	6.6 SEC	0.6 CM	
		V=C-O:	- 0- 0- 0.24	0.10	-2.41					
163	26	O:	70-10-25.20	0.40		6.03	COM:	4.0 SEC	0.3 CM	182.1983
		C:	70-10-24.96	0.39			BND:	6.7 SEC	0.6 CM	
		V=C-O:	- 0- 0- 0.24	0.10	-2.45					
163	27	O:	71-37- 8.70	0.40		6.09	COM:	0.4 SEC	0.0 CM	170.4434
		C:	71-37- 8.68	0.39			BND:	6.7 SEC	0.5 CM	
		V=C-O:	- 0- 0- 0.02	0.10	-0.25					
163	28	O:	72-44- 7.60	0.40		0.63	COM:	2.7 SEC	0.2 CM	161.1901
		C:	72-44- 7.58	0.40			BND:	20.8 SEC	1.6 CM	
		V=C-O:	- 0- 0- 0.02	0.03	-0.54					
163	29	O:	76-35-14.20	0.40		2.53	COM:	5.1 SEC	0.3 CM	137.7656
		C:	76-35-14.07	0.39			BND:	10.4 SEC	0.7 CM	
		V=C-O:	- 0- 0- 0.13	0.06	-2.05					
163	14	O:	79-27-31.90	0.60		18.44	COM:	-0.4 SEC	0.0 CM	229.3354
		C:	79-27-31.97	0.54			BND:	5.8 SEC	0.6 CM	
		V=C-O:	0- 0- 0.07	0.26	0.27					
163	15	O:	82-24- 5.00	0.60		7.89	COM:	4.0 SEC	0.4 CM	205.0591
		C:	82-24- 4.68	0.58			BND:	8.8 SEC	0.8 CM	
		V=C-O:	- 0- 0- 0.32	0.17	-1.88					
163	16	O:	82-58-51.60	0.60		8.96	COM:	-2.0 SEC	-0.2 CM	201.1912
		C:	82-58-51.78	0.57			BND:	8.3 SEC	0.7 CM	
		V=C-O:	0- 0- 0.18	0.18	1.00					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
163	17	O:	84-38-12.60	0.60		14.47	COM:	-2.0 SEC	-0.2 CM	189.4837
		C:	84-38-12.90	0.55			BND:	6.5 SEC	0.5 CM	
		V=C-O:	0- 0- 0.30	0.23	1.29					
163	18	O:	86-12- 2.20	0.60		19.12	COM:	-0.7 SEC	0.0 CM	179.5434
		C:	86-12- 2.32	0.54			BND:	5.7 SEC	0.4 CM	
		V=C-O:	0- 0- 0.12	0.26	0.48					
163	19	O:	90-35-29.40	0.60		23.08	COM:	-0.5 SEC	0.0 CM	157.2188
		C:	90-35-29.51	0.53			BND:	5.2 SEC	0.3 CM	
		V=C-O:	0- 0- 0.11	0.29	0.37					
163	164	O:	98- 5-15.90	0.60		62.52	COM:	-0.9 SEC	0.0 CM	280.5500
		C:	98- 5-16.49	0.37			BND:	3.1 SEC	0.0 CM	
		V=C-O:	0- 0- 0.59	0.47	1.24					
164	165	O:	0- 0- 0.00	1.00		52.68	COM:	-0.3 SEC	0.0 CM	159.9226
		C:	0- 0- 0.16	0.69			BND:	5.7 SEC	0.2 CM	
		V=C-O:	0- 0- 0.16	0.73	0.23					
164	163	O:	235- 1-12.80	1.00		75.84	COM:	-0.5 SEC	0.0 CM	280.5500
		C:	235- 1-13.20	0.49			BND:	4.7 SEC	0.1 CM	
		V=C-O:	0- 0- 0.40	0.87	0.46					
164	39	O:	258-41-48.60	0.60		74.21	COM:	0.5 SEC	0.0 CM	205.7957
		C:	258-41-48.20	0.30			BND:	2.9 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.40	0.52	-0.77					
164	38	O:	265-34-13.50	0.60		79.13	COM:	-0.6 SEC	0.0 CM	200.4994
		C:	265-34-13.99	0.27			BND:	2.8 SEC	0.0 CM	
		V=C-O:	0- 0- 0.49	0.53	0.91					
164	37	O:	268- 7-19.20	0.60		79.83	COM:	-0.5 SEC	0.0 CM	199.4281
		C:	268- 7-19.58	0.27			BND:	2.8 SEC	0.0 CM	
		V=C-O:	0- 0- 0.38	0.54	0.72					
164	36	O:	272- 5-12.80	0.60		79.89	COM:	0.2 SEC	0.0 CM	198.6159
		C:	272- 5-12.62	0.27			BND:	2.8 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.18	0.54	-0.34					
164	35	O:	274- 3-56.90	0.60		73.88	COM:	-1.1 SEC	0.0 CM	198.1373
		C:	274- 3-57.73	0.31			BND:	2.9 SEC	0.1 CM	
		V=C-O:	0- 0- 0.83	0.52	1.62					
164	34	O:	281-18-18.00	0.60		74.68	COM:	0.3 SEC	0.0 CM	199.6479
		C:	281-18-17.76	0.30			BND:	2.9 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.24	0.52	-0.47					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
164	33	O: 285-35- 6.20	0.60		64.75	COM:	-0.5 SEC	0.0 CM	197.7216
		C: 285-35- 6.49	0.36			BND:	3.1 SEC	0.1 CM	
		V=C-O: 0- 0- 0.29	0.48	0.61					
164	32	O: 286-17-59.60	0.60		60.34	COM:	-1.0 SEC	0.0 CM	198.0425
		C: 286-18- 0.22	0.38			BND:	3.2 SEC	0.1 CM	
		V=C-O: 0- 0- 0.62	0.47	1.32					
164	31	O: 286-57-37.60	0.60		58.95	COM:	-0.2 SEC	0.0 CM	198.9656
		C: 286-57-37.71	0.38			BND:	3.2 SEC	0.1 CM	
		V=C-O: 0- 0- 0.11	0.46	0.25					
164	21	O: 290-16-27.40	0.90		58.05	COM:	-0.2 SEC	0.0 CM	151.4788
		C: 290-16-27.50	0.58			BND:	4.9 SEC	0.1 CM	
		V=C-O: 0- 0- 0.10	0.69	0.14					
164	22	O: 289-19-16.50	0.90		59.96	COM:	-0.1 SEC	0.0 CM	151.6691
		C: 289-19-16.57	0.57			BND:	4.8 SEC	0.1 CM	
		V=C-O: 0- 0- 0.07	0.70	0.11					
164	23	O: 288-35-21.40	0.90		70.05	COM:	2.3 SEC	0.0 CM	150.9136
		C: 288-35-19.80	0.49			BND:	4.4 SEC	0.1 CM	
		V=C-O: - 0- 0- 1.60	0.75	-2.12					
164	24	O: 282-53-28.10	0.90		60.61	COM:	0.6 SEC	0.0 CM	145.4622
		C: 282-53-27.73	0.56			BND:	4.8 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.37	0.70	-0.52					
164	25	O: 273-19-42.90	0.90		77.87	COM:	0.5 SEC	0.0 CM	145.5585
		C: 273-19-42.53	0.42			BND:	4.2 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.37	0.79	-0.47					
164	26	O: 270-31-38.10	0.90		79.69	COM:	0.3 SEC	0.0 CM	146.8599
		C: 270-31-37.86	0.41			BND:	4.2 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.24	0.80	-0.30					
164	27	O: 265-42-53.20	0.90		81.34	COM:	-0.7 SEC	0.0 CM	148.8231
		C: 265-42-53.75	0.39			BND:	4.1 SEC	0.1 CM	
		V=C-O: 0- 0- 0.55	0.81	0.68					
164	28	O: 262- 7- 8.40	0.90		79.80	COM:	0.5 SEC	0.0 CM	151.5169
		C: 262- 7- 7.96	0.40			BND:	4.2 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.44	0.80	-0.54					
164	29	O: 253-21-17.90	0.90		79.51	COM:	2.1 SEC	0.0 CM	160.5194
		C: 253-21-16.26	0.41			BND:	4.2 SEC	0.1 CM	
		V=C-O: - 0- 0- 1.64	0.80	-2.05					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
164	19	O: 244-21-46.10	1.00		61.70	COM:	-0.3 SEC	0.0 CM	126.3509
		C: 244-21-46.30	0.62			BND:	5.3 SEC	0.1 CM	
		V=C-O: 0- 0- 0.20	0.79	0.26					
164	18	O: 254-26-54.40	1.00		64.40	COM:	0.7 SEC	0.0 CM	111.1880
		C: 254-26-53.97	0.60			BND:	5.1 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.43	0.80	-0.53					
164	17	O: 259-37-19.50	1.00		64.64	COM:	0.5 SEC	0.0 CM	105.8749
		C: 259-37-19.18	0.59			BND:	5.1 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.32	0.80	-0.40					
164	16	O: 266-17-56.40	1.00		61.94	COM:	-0.5 SEC	0.0 CM	100.9905
		C: 266-17-56.70	0.62			BND:	5.2 SEC	0.1 CM	
		V=C-O: 0- 0- 0.30	0.79	0.38					
164	15	O: 268-43-19.20	1.00		60.05	COM:	0.7 SEC	0.0 CM	99.9212
		C: 268-43-18.78	0.63			BND:	5.3 SEC	0.1 CM	
		V=C-O: - 0- 0- 0.42	0.77	-0.54					
164	14	O: 284-13-21.40	1.00		39.02	COM:	0.3 SEC	0.0 CM	96.7725
		C: 284-13-21.27	0.78			BND:	6.6 SEC	0.2 CM	
		V=C-O: - 0- 0- 0.13	0.62	-0.20					
164	13	O: 292-29-15.90	1.00		27.88	COM:	2.0 SEC	0.1 CM	101.9968
		C: 292-29-15.34	0.85			BND:	7.8 SEC	0.3 CM	
		V=C-O: - 0- 0- 0.56	0.53	-1.07					
164	12	O: 293-32-59.50	1.00		41.98	COM:	-3.0 SEC	-0.1 CM	101.0877
		C: 293-33- 0.75	0.76			BND:	6.4 SEC	0.2 CM	
		V=C-O: 0- 0- 1.25	0.65	1.92					
164	11	O: 294-27-26.20	1.00		41.68	COM:	-1.0 SEC	0.0 CM	102.7234
		C: 294-27-26.63	0.76			BND:	6.4 SEC	0.2 CM	
		V=C-O: 0- 0- 0.43	0.65	0.66					
164	161	O: 299-56-42.90	1.00		81.71	COM:	1.6 SEC	0.0 CM	366.0414
		C: 299-56-41.58	0.43			BND:	4.6 SEC	0.1 CM	
		V=C-O: - 0- 0- 1.32	0.90	-1.46					
164	1218	O: 312-17-13.60	1.00		69.18	COM:	-0.8 SEC	0.0 CM	299.6676
		C: 312-17-14.19	0.56			BND:	5.0 SEC	0.2 CM	
		V=C-O: 0- 0- 0.59	0.83	0.71					
164	162	O: 267-44-48.10	1.00		90.88	COM:	0.6 SEC	0.0 CM	367.0021
		C: 267-44-47.52	0.30			BND:	4.3 SEC	0.0 CM	
		V=C-O: - 0- 0- 0.58	0.95	-0.61					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
165	162	O:	0- 0- 0.00	0.70		70.89	COM:	-0.3 SEC	0.0 CM	406.0560
		C:	0- 0- 0.23	0.38			BND:	3.4 SEC	0.0 CM	
		V=C-O:	0- 0- 0.23	0.59	0.38					
165	12	O:	333-12-47.40	0.70		24.74	COM:	-0.6 SEC	0.0 CM	151.2464
		C:	333-12-47.54	0.61			BND:	5.8 SEC	0.3 CM	
		V=C-O:	0- 0- 0.14	0.35	0.40					
165	11	O:	333-57-59.00	0.70		25.62	COM:	-0.5 SEC	0.0 CM	150.0820
		C:	333-57-59.13	0.60			BND:	5.7 SEC	0.3 CM	
		V=C-O:	0- 0- 0.13	0.35	0.35					
165	23	O:	347-24-49.60	0.70		67.94	COM:	0.9 SEC	0.0 CM	181.5578
		C:	347-24-48.96	0.40			BND:	3.5 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.64	0.58	-1.11					
165	22	O:	347-56-58.10	0.70		51.36	COM:	-1.8 SEC	-0.1 CM	180.3561
		C:	347-56-59.04	0.49			BND:	4.0 SEC	0.2 CM	
		V=C-O:	0- 0- 0.94	0.50	1.87					
165	21	O:	348-20-11.70	0.70		51.50	COM:	-0.2 SEC	0.0 CM	178.1363
		C:	348-20-11.82	0.49			BND:	4.0 SEC	0.2 CM	
		V=C-O:	0- 0- 0.12	0.50	0.23					
165	33	O:	356- 8-45.70	0.70		76.63	COM:	1.1 SEC	0.0 CM	218.3537
		C:	356- 8-44.86	0.34			BND:	3.3 SEC	0.0 CM	
		V=C-O:	- 0- 0- 0.84	0.61	-1.37					
165	32	O:	356-39-55.80	0.70		73.85	COM:	-0.1 SEC	0.0 CM	216.8359
		C:	356-39-55.86	0.36			BND:	3.4 SEC	0.1 CM	
		V=C-O:	0- 0- 0.06	0.60	0.11					
165	31	O:	357-15-59.00	0.70		74.04	COM:	-0.2 SEC	0.0 CM	215.8670
		C:	357-15-59.12	0.36			BND:	3.4 SEC	0.1 CM	
		V=C-O:	0- 0- 0.12	0.60	0.20					
165	161	O:	29-32-20.10	0.70		55.00	COM:	1.0 SEC	0.0 CM	317.9951
		C:	29-32-19.55	0.47			BND:	3.9 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.55	0.52	-1.06					
165	164	O:	295-25-42.80	0.70		31.64	COM:	1.0 SEC	0.0 CM	159.9226
		C:	295-25-42.48	0.58			BND:	5.1 SEC	0.2 CM	
		V=C-O:	- 0- 0- 0.32	0.39	-0.80					
165	1218	O:	36- 4-59.80	0.70		40.62	COM:	-1.5 SEC	-0.1 CM	225.5778
		C:	36- 5- 0.41	0.54			BND:	4.5 SEC	0.3 CM	
		V=C-O:	0- 0- 0.61	0.45	1.38					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
1663	164	O:	0- 0- 0.00	1.00		85.66	COM:	-1.7 SEC	0.0 CM	273.8652
		C:	0- 0- 1.43	0.38			BND:	4.5 SEC	0.0 CM	
		V=C-O:	0- 0- 1.43	0.93	1.55					
1663	31	O:	346- 7-54.80	1.00		50.21	COM:	1.4 SEC	0.0 CM	78.0568
		C:	346- 7-54.09	0.71			BND:	5.8 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.71	0.71	-1.01					
1663	32	O:	347-56-10.50	1.00		50.70	COM:	-2.0 SEC	0.0 CM	78.2263
		C:	347-56-11.50	0.70			BND:	5.8 SEC	0.1 CM	
		V=C-O:	0- 0- 1.00	0.71	1.41					
1663	34	O:	0-41-55.50	1.00		45.52	COM:	-0.9 SEC	0.0 CM	74.2249
		C:	0-41-55.92	0.74			BND:	6.1 SEC	0.1 CM	
		V=C-O:	0- 0- 0.42	0.67	0.62					
1663	36	O:	22-45-31.70	1.00		52.60	COM:	-0.1 SEC	0.0 CM	84.5427
		C:	22-45-31.77	0.69			BND:	5.7 SEC	0.1 CM	
		V=C-O:	0- 0- 0.07	0.73	0.10					
1663	37	O:	30- 7-27.30	1.00		57.29	COM:	1.1 SEC	0.0 CM	92.3767
		C:	30- 7-26.68	0.65			BND:	5.5 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.62	0.76	-0.81					
1663	38	O:	34-15-15.10	1.00		60.26	COM:	0.7 SEC	0.0 CM	98.1511
		C:	34-15-14.66	0.63			BND:	5.3 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.44	0.78	-0.57					
1663	39	O:	43-30-38.00	1.00		66.72	COM:	-0.8 SEC	0.0 CM	116.1590
		C:	43-30-38.51	0.58			BND:	5.1 SEC	0.1 CM	
		V=C-O:	0- 0- 0.51	0.82	0.63					
1663	27	O:	17-16-31.30	1.00		71.06	COM:	0.4 SEC	0.0 CM	136.8744
		C:	17-16-31.01	0.54			BND:	4.9 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.29	0.84	-0.34					
1663	26	O:	12-13-49.00	1.00		70.62	COM:	2.9 SEC	0.1 CM	132.7339
		C:	12-13-46.95	0.54			BND:	4.9 SEC	0.1 CM	
		V=C-O:	- 0- 0- 2.05	0.84	-2.44					
1663	25	O:	9- 7-36.20	1.00		70.66	COM:	3.0 SEC	0.1 CM	131.4721
		C:	9- 7-34.09	0.54			BND:	4.9 SEC	0.1 CM	
		V=C-O:	- 0- 0- 2.11	0.84	-2.51					
1663	23	O:	351-32-25.80	1.00		73.68	COM:	-1.5 SEC	0.0 CM	125.4492
		C:	351-32-26.88	0.51			BND:	4.8 SEC	0.1 CM	
		V=C-O:	0- 0- 1.08	0.86	1.26					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
1663	22	O:	350-35-44.10	1.00		72.38	COM:	0.8 SEC	0.0 CM	125.2677
		C:	350-35-43.50	0.53			BND:	4.9 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.60	0.85	-0.70					
1663	21	O:	349-31-53.20	1.00		72.89	COM:	2.2 SEC	0.0 CM	126.2348
		C:	349-31-51.59	0.52			BND:	4.8 SEC	0.1 CM	
		V=C-O:	- 0- 0- 1.61	0.85	-1.89					
1663	11	O:	352-29- 3.70	1.00		82.53	COM:	-1.7 SEC	0.0 CM	175.2369
		C:	352-29- 5.14	0.42			BND:	4.5 SEC	0.0 CM	
		V=C-O:	0- 0- 1.44	0.91	1.59					
1663	12	O:	353- 9-31.50	1.00		82.71	COM:	-2.5 SEC	0.0 CM	176.2360
		C:	353- 9-33.58	0.42			BND:	4.5 SEC	0.0 CM	
		V=C-O:	0- 0- 2.08	0.91	2.29					
1663	13	O:	353-39- 6.30	1.00		82.27	COM:	-0.6 SEC	0.0 CM	174.7882
		C:	353-39- 6.83	0.42			BND:	4.6 SEC	0.0 CM	
		V=C-O:	0- 0- 0.53	0.91	0.59					
1663	14	O:	358-32-58.60	1.00		80.73	COM:	-0.1 SEC	0.0 CM	177.2536
		C:	358-32-58.66	0.44			BND:	4.6 SEC	0.0 CM	
		V=C-O:	0- 0- 0.06	0.90	0.07					
1663	15	O:	7-10-31.00	1.00		72.69	COM:	2.2 SEC	0.0 CM	177.8360
		C:	7-10-29.39	0.52			BND:	4.8 SEC	0.1 CM	
		V=C-O:	- 0- 0- 1.61	0.85	-1.89					
1663	16	O:	8-34-13.50	1.00		71.32	COM:	-1.2 SEC	0.0 CM	178.4304
		C:	8-34-14.34	0.54			BND:	4.9 SEC	0.1 CM	
		V=C-O:	0- 0- 0.84	0.84	0.99					
1663	17	O:	12-41-33.30	1.00		68.57	COM:	-2.6 SEC	-0.1 CM	180.0602
		C:	12-41-35.07	0.56			BND:	5.0 SEC	0.1 CM	
		V=C-O:	0- 0- 1.77	0.83	2.14					
1663	18	O:	16- 9-35.00	1.00		67.79	COM:	-1.8 SEC	0.0 CM	182.0931
		C:	16- 9-36.21	0.57			BND:	5.0 SEC	0.1 CM	
		V=C-O:	0- 0- 1.21	0.82	1.47					
1663	19	O:	23-47-54.50	1.00		68.54	COM:	-0.3 SEC	0.0 CM	189.3228
		C:	23-47-54.74	0.56			BND:	5.0 SEC	0.1 CM	
		V=C-O:	0- 0- 0.24	0.83	0.29					
1663	163	O:	68-20- 3.30	1.00		62.74	COM:	0.8 SEC	0.0 CM	219.1348
		C:	68-20- 2.79	0.61			BND:	5.2 SEC	0.1 CM	
		V=C-O:	- 0- 0- 0.51	0.79	-0.64					

4.1 ANALYSIS OF DIRECTION OBSERVATIONS REPORT (CON'D)

INSTRUMENT STATION	TARGET STATION	OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY	INTERNAL	EXTERNAL	HORIZONTAL DISTANCE (METERS)
1663	161	O: 237-30-38.50	1.00		24.56	COM:	1.4 SEC	0.1 CM	136.8380
		C: 237-30-38.16	0.87			BND:	8.3 SEC	0.4 CM	
		V=C-O: - 0- 0- 0.34	0.50	-0.68					
1663	165	O: 327- 3-35.20	1.00		73.94	COM:	1.6 SEC	0.0 CM	288.1270
		C: 327- 3-34.02	0.51			BND:	4.8 SEC	0.1 CM	
		V=C-O: - 0- 0- 1.18	0.86	-1.37					
1663	1218	O: 276- 3-41.80	1.00		12.78	COM:	5.0 SEC	0.3 CM	153.9558
		C: 276- 3-41.16	0.93			BND:	11.6 SEC	0.7 CM	
		V=C-O: - 0- 0- 0.64	0.36	-1.79					

4.2 ANALYSIS OF AZIMUTH OBSERVATIONS REPORT

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (DEG-MIN-SEC)	STD. DEV. (SEC)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)	RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
1663	164	O:	0- 0- 0.00	0.00		0.00	COM: NOT		273.8652
		C:	0- 0- 0.00	0.00			BND: CONTROLLED		
		V=C-O:	0- 0- 0.00	0.00	0.00				

4.3 ANALYSIS OF HORIZONTAL DISTANCE OBSERVATIONS REPORT

INSTRUMENT STATION	TARGET STATION		OBSERVATION DATA (METERS)	STD. DEV. (CM)	NORMALIZED RESIDUAL	REDUNDANCY NUMBER (%)		RELIABILITY INTERNAL	RELIABILITY EXTERNAL	HORIZONTAL DISTANCE (METERS)
164	165	O:	159.92160	0.25		80.06	COM:	-0.1 CM	0.0 CM	159.9226
		C:	159.92258	0.11			BND:	1.1 CM	0.2 CM	
		V=C-O:	0.00098	0.22	0.44					
164	163	O:	280.54670	0.28		61.00	COM:	-0.5 CM	-0.2 CM	280.5500
		C:	280.55005	0.18			BND:	1.5 CM	0.6 CM	
		V=C-O:	0.00335	0.22	1.51					
164	161	O:	366.04510	0.31		47.12	COM:	0.8 CM	0.4 CM	366.0414
		C:	366.04139	0.23			BND:	1.9 CM	1.0 CM	
		V=C-O:	-0.00371	0.21	-1.75					

5.1 ADJUSTED COORDINATES AND ABSOLUTE ERROR ELLIPSE REPORT

STATION NAME	TYPE	ADJUSTED COORDINATES (METERS)		STANDARD CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	95% CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	MARGINAL STANDARD DEVIATIONS
11	FREE	EAST.:	9977.1172	LTH: 0.15 CM	0.04 CM	0.37 CM	0.10 CM	EAST.: 0.05 CM
		NORT.:	10173.6877	AZI: 173- 6-40	263- 6-40			NORT.: 0.15 CM
		ELEV.:	1000.2730 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.3652
12	FREE	EAST.:	9979.0451	LTH: 0.15 CM	0.04 CM	0.37 CM	0.10 CM	EAST.: 0.04 CM
		NORT.:	10174.9374	AZI: 173-41-38	263-41-38			NORT.: 0.15 CM
		ELEV.:	1000.3150 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.3421
1218	FREE	EAST.:	9846.9425	LTH: 0.14 CM	0.09 CM	0.33 CM	0.21 CM	EAST.: 0.13 CM
		NORT.:	10016.2121	AZI: 99-14-48	189-14-48			NORT.: 0.09 CM
		ELEV.:	1015.0000 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.1449
13	FREE	EAST.:	9980.7103	LTH: 0.18 CM	0.04 CM	0.44 CM	0.10 CM	EAST.: 0.04 CM
		NORT.:	10173.6725	AZI: 175- 8-51	265- 8-51			NORT.: 0.18 CM
		ELEV.:	1000.1030 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.3236
14	FREE	EAST.:	9995.5499	LTH: 0.16 CM	0.04 CM	0.39 CM	0.11 CM	EAST.: 0.04 CM
		NORT.:	10177.1530	AZI: 176-15-53	266-15-53			NORT.: 0.16 CM
		ELEV.:	992.5700 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.2173
15	FREE	EAST.:	10022.2476	LTH: 0.16 CM	0.05 CM	0.40 CM	0.13 CM	EAST.: 0.05 CM
		NORT.:	10176.3998	AZI: 179-59-14	269-59-14			NORT.: 0.16 CM
		ELEV.:	977.7050 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.0006
16	FREE	EAST.:	10026.6277	LTH: 0.16 CM	0.05 CM	0.40 CM	0.13 CM	EAST.: 0.05 CM
		NORT.:	10176.3942	AZI: 180-53-38	270-53-38			NORT.: 0.16 CM
		ELEV.:	975.1380 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.0414
161	FREE	EAST.:	9884.6165	LTH: 0.14 CM	0.07 CM	0.35 CM	0.17 CM	EAST.: 0.12 CM
		NORT.:	9926.4538	AZI: 235- 3-35	325- 3-35			NORT.: 0.10 CM
		ELEV.:	1001.4850 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.6082
162	FREE	EAST.:	10087.6923	LTH: 0.12 CM	0.07 CM	0.28 CM	0.18 CM	EAST.: 0.10 CM
		NORT.:	9917.4407	AZI: 131-48-26	221-48-26			NORT.: 0.10 CM
		ELEV.:	1014.9810 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.4181
163	FREE	EAST.:	10203.6906	LTH: 0.18 CM	0.07 CM	0.44 CM	0.16 CM	EAST.: 0.16 CM
		NORT.:	10080.8608	AZI: 243- 2-28	333- 2-28			NORT.: 0.10 CM
		ELEV.:	925.3040 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.6808
164	FREE	EAST.:	10000.0376	LTH: 0.20 CM	0.00 CM	0.49 CM	0.00 CM	EAST.: 0.00 CM
		NORT.:	10273.8214	AZI: 180- 0- 0	270- 0- 0			NORT.: 0.20 CM
		ELEV.:	1006.4650 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.0000
165	FREE	EAST.:	9843.3615	LTH: 0.21 CM	0.08 CM	0.52 CM	0.19 CM	EAST.: 0.13 CM
		NORT.:	10241.7614	AZI: 149-50-37	239-50-37			NORT.: 0.19 CM
		ELEV.:	1009.7800 FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.7116

5.1 ADJUSTED COORDINATES AND ABSOLUTE ERROR ELLIPSE REPORT (CON'D)

STATION NAME	TYPE	ADJUSTED COORDINATES (METERS)			STANDARD CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	95% CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	MARGINAL STANDARD DEVIATIONS	
1663	FIXED	EAST.:	10000.0376	FIXED	LTH: 0.00 CM	0.00 CM	0.00 CM	0.00 CM	EAST.:	0.00 CM
		NORT.:	9999.9562	FIXED	AZI: 0- 0- 0	90- 0- 0			NORT.:	0.00 CM
		ELEV.:	1000.0000	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.0000
17	FREE	EAST.:	10039.6007		LTH: 0.16 CM	0.06 CM	0.39 CM	0.14 CM	EAST.:	0.06 CM
		NORT.:	10175.6162		AZI: 184-28-47	274-28-47			NORT.:	0.16 CM
		ELEV.:	966.8130	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.1798
18	FREE	EAST.:	10050.7168		LTH: 0.16 CM	0.06 CM	0.38 CM	0.15 CM	EAST.:	0.06 CM
		NORT.:	10174.8548		AZI: 188-21-45	278-21-45			NORT.:	0.15 CM
		ELEV.:	960.3930	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.2993
19	FREE	EAST.:	10076.4323		LTH: 0.16 CM	0.06 CM	0.38 CM	0.15 CM	EAST.:	0.08 CM
		NORT.:	10173.1814		AZI: 198- 3-45	288- 3-45			NORT.:	0.15 CM
		ELEV.:	946.7430	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.5166
21	FREE	EAST.:	9977.0994		LTH: 0.13 CM	0.04 CM	0.33 CM	0.10 CM	EAST.:	0.05 CM
		NORT.:	10124.0894		AZI: 168-18-35	258-18-35			NORT.:	0.13 CM
		ELEV.:	1000.1760	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	-0.4962
22	FREE	EAST.:	9979.5674		LTH: 0.13 CM	0.04 CM	0.33 CM	0.10 CM	EAST.:	0.05 CM
		NORT.:	10123.5400		AZI: 168-58-29	258-58-29			NORT.:	0.13 CM
		ELEV.:	1000.3040	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	-0.4757
23	FREE	EAST.:	9981.5825		LTH: 0.11 CM	0.04 CM	0.28 CM	0.10 CM	EAST.:	0.05 CM
		NORT.:	10124.0405		AZI: 170-51-42	260-51-42			NORT.:	0.11 CM
		ELEV.:	1000.1480	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	-0.3399
24	FREE	EAST.:	9996.6704		LTH: 0.12 CM	0.05 CM	0.28 CM	0.12 CM	EAST.:	0.05 CM
		NORT.:	10128.3981		AZI: 174-13-34	264-13-34			NORT.:	0.12 CM
		ELEV.:	990.2490	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	-0.1871
25	FREE	EAST.:	10020.8893		LTH: 0.11 CM	0.05 CM	0.28 CM	0.11 CM	EAST.:	0.05 CM
		NORT.:	10129.7642		AZI: 185-28-12	275-28-12			NORT.:	0.11 CM
		ELEV.:	978.1230	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.1936
26	FREE	EAST.:	10028.1539		LTH: 0.11 CM	0.05 CM	0.28 CM	0.11 CM	EAST.:	0.05 CM
		NORT.:	10129.6781		AZI: 188-36- 5	278-36- 5			NORT.:	0.11 CM
		ELEV.:	973.9620	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.2898
27	FREE	EAST.:	10040.6833		LTH: 0.12 CM	0.05 CM	0.28 CM	0.12 CM	EAST.:	0.05 CM
		NORT.:	10130.6563		AZI: 193-52-17	283-52-17			NORT.:	0.11 CM
		ELEV.:	965.8000	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.4261
28	FREE	EAST.:	10050.4796		LTH: 0.12 CM	0.05 CM	0.29 CM	0.13 CM	EAST.:	0.06 CM
		NORT.:	10130.9475		AZI: 196-15-25	286-15-25			NORT.:	0.12 CM
		ELEV.:	960.5700	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.:	0.4271

5.1 ADJUSTED COORDINATES AND ABSOLUTE ERROR ELLIPSE REPORT (CON'D)

STATION NAME	TYPE	ADJUSTED COORDINATES (METERS)		STANDARD CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	95% CONFIDENCE ERROR ELLIPSE SEMI-MAJOR	SEMI-MINOR	MARGINAL STANDARD DEVIATIONS
29	FREE	EAST.: 10075.9160		LTH: 0.13 CM	0.06 CM	0.31 CM	0.14 CM	EAST.: 0.07 CM
		NORT.: 10132.3685		AZI: 206-18- 1	296-18- 1			NORT.: 0.12 CM
		ELEV.: 946.6670	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.5897
31	FREE	EAST.: 9981.3276		LTH: 0.11 CM	0.04 CM	0.26 CM	0.09 CM	EAST.: 0.04 CM
		NORT.: 10075.7375		AZI: 166-53-34	256-53-34			NORT.: 0.10 CM
		ELEV.: 1000.3780	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.4966
32	FREE	EAST.: 9983.6881		LTH: 0.11 CM	0.04 CM	0.26 CM	0.09 CM	EAST.: 0.04 CM
		NORT.: 10076.4549		AZI: 168- 4-37	258- 4-37			NORT.: 0.10 CM
		ELEV.: 1000.3840	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.4678
33	FREE	EAST.: 9986.1746		LTH: 0.08 CM	0.04 CM	0.21 CM	0.11 CM	EAST.: 0.05 CM
		NORT.: 10076.5864		AZI: 171- 3-11	261- 3-11			NORT.: 0.08 CM
		ELEV.: 1000.0010	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.2016
34	FREE	EAST.: 10000.9424		LTH: 0.08 CM	0.04 CM	0.20 CM	0.09 CM	EAST.: 0.04 CM
		NORT.: 10074.1756		AZI: 179- 3-25	269- 3-25			NORT.: 0.08 CM
		ELEV.: 992.0120	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: -0.0298
35	FREE	EAST.: 10025.8948		LTH: 0.08 CM	0.05 CM	0.20 CM	0.12 CM	EAST.: 0.05 CM
		NORT.: 10077.3785		AZI: 191-11-56	281-11-56			NORT.: 0.08 CM
		ELEV.: 977.7070	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.2098
36	FREE	EAST.: 10032.7426		LTH: 0.08 CM	0.04 CM	0.20 CM	0.10 CM	EAST.: 0.05 CM
		NORT.: 10077.9167		AZI: 200-27-36	290-27-36			NORT.: 0.08 CM
		ELEV.: 973.8690	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.4802
37	FREE	EAST.: 10046.3985		LTH: 0.09 CM	0.04 CM	0.21 CM	0.10 CM	EAST.: 0.05 CM
		NORT.: 10079.8569		AZI: 207-58-34	297-58-34			NORT.: 0.08 CM
		ELEV.: 965.3180	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.5773
38	FREE	EAST.: 10055.2827		LTH: 0.09 CM	0.04 CM	0.22 CM	0.10 CM	EAST.: 0.06 CM
		NORT.: 10081.0833		AZI: 212-12-15	302-12-15			NORT.: 0.08 CM
		ELEV.: 960.5840	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.6214
39	FREE	EAST.: 10080.0113		LTH: 0.10 CM	0.04 CM	0.25 CM	0.10 CM	EAST.: 0.08 CM
		NORT.: 10084.2006		AZI: 221-33-23	311-33-23			NORT.: 0.08 CM
		ELEV.: 946.8710	FIXED	ELEV. STD. DEV.:	0.00 CM			CORR.: 0.7007

5.3 RELATIVE ERROR ELLIPSE REPORT

STATION NAME	STATION NAME	HORIZONTAL LINE INFORMATION		STANDARD RELATIVE ERROR ELLIPSE SEMI-MAJOR	STANDARD RELATIVE ERROR ELLIPSE SEMI-MINOR	95% RELATIVE ERROR ELLIPSE SEMI-MAJOR	95% RELATIVE ERROR ELLIPSE SEMI-MINOR	ELEV. DIFF. (METERS)	ELE. DIF. STD. DEV. (CM)	95% RELATIVE PRECISION
161	1218	LTH:	97.3442 M	0.13 CM	0.06 CM	0.31 CM	0.15 CM	13.5150	0.00	HOR.: 1 / 39620
		AZI:	112-46- 8	156-54-40	246-54-40					VER.:
161	1663	LTH:	136.8380 M	0.14 CM	0.07 CM	0.35 CM	0.17 CM	-1.4850	0.00	HOR.: 1 / 41506
		AZI:	32-29-23	235- 3-35	325- 3-35					VER.:
1218	1663	LTH:	153.9558 M	0.14 CM	0.09 CM	0.33 CM	0.21 CM	-15.0000	0.00	HOR.: 1 / 68960
		AZI:	353-56-20	99-14-48	189-14-48					VER.:
161	162	LTH:	203.2757 M	0.17 CM	0.11 CM	0.42 CM	0.27 CM	13.4960	0.00	HOR.: 1 / 75229
		AZI:	357-27-31	91-54-13	181-54-13					VER.:
162	1663	LTH:	120.3834 M	0.12 CM	0.07 CM	0.28 CM	0.18 CM	-14.9810	0.00	HOR.: 1 / 42366
		AZI:	136-43-47	131-48-26	221-48-26					VER.:
1218	31	LTH:	146.9783 M	0.13 CM	0.13 CM	0.31 CM	0.31 CM	-14.6220	0.00	HOR.: 1 / 47605
		AZI:	23-53-26	232-34-13	322-34-13					VER.:
31	1663	LTH:	78.0568 M	0.11 CM	0.04 CM	0.26 CM	0.09 CM	-0.3780	0.00	HOR.: 1 / 55035
		AZI:	283-52- 7	166-53-34	256-53-34					VER.:
162	39	LTH:	166.9367 M	0.14 CM	0.05 CM	0.35 CM	0.13 CM	-68.1100	0.00	HOR.: 1 / 119958
		AZI:	92-38-13	175-22- 1	265-22- 1					VER.:
39	1663	LTH:	116.1590 M	0.10 CM	0.04 CM	0.25 CM	0.10 CM	53.1290	0.00	HOR.: 1 / 46366
		AZI:	226-29-22	221-33-23	311-33-23					VER.:
1218	21	LTH:	169.0514 M	0.15 CM	0.12 CM	0.37 CM	0.30 CM	-14.8240	0.00	HOR.: 1 / 46952
		AZI:	39-39-10	200-50-16	290-50-16					VER.:
21	31	LTH:	48.5365 M	0.11 CM	0.04 CM	0.28 CM	0.10 CM	0.2020	0.00	HOR.: 1 / 33737
		AZI:	274-59-50	160-44-26	250-44-26					VER.:
31	34	LTH:	19.6770 M	0.09 CM	0.04 CM	0.22 CM	0.09 CM	-8.3660	0.00	HOR.: 1 / 9506
		AZI:	355-26-50	157-14- 0	247-14- 0					VER.:
34	1663	LTH:	74.2249 M	0.08 CM	0.04 CM	0.20 CM	0.09 CM	7.9880	0.00	HOR.: 1 / 82541
		AZI:	269-18- 5	179- 3-25	269- 3-25					VER.:
162	163	LTH:	200.4039 M	0.17 CM	0.07 CM	0.42 CM	0.17 CM	-89.6770	0.00	HOR.: 1 / 52018
		AZI:	54-37-56	207-33-22	297-33-22					VER.:
163	39	LTH:	123.7243 M	0.10 CM	0.05 CM	0.25 CM	0.13 CM	21.5670	0.00	HOR.: 1 / 95005
		AZI:	178-27-11	265-36- 0	355-36- 0					VER.:
38	39	LTH:	24.9243 M	0.04 CM	0.04 CM	0.10 CM	0.10 CM	-13.7130	0.00	HOR.: 1 / 24432
		AZI:	7-11- 5	160-14-24	250-14-24					VER.:

5.3 RELATIVE ERROR ELLIPSE REPORT

STATION NAME	STATION NAME	HORIZONTAL LINE INFORMATION		STANDARD RELATIVE ERROR ELLIPSE SEMI-MAJOR	STANDARD RELATIVE ERROR ELLIPSE SEMI-MINOR	95% RELATIVE ERROR ELLIPSE SEMI-MAJOR	95% RELATIVE ERROR ELLIPSE SEMI-MINOR	ELEV. DIFF. (METERS)	ELE. DIF. STD. DEV. (CM)	95% RELATIVE PRECISION
38	1663	LTH:	98.1511 M	0.09 CM	0.04 CM	0.22 CM	0.10 CM	39.4160	0.00	HOR.: 1 / 47352
		AZI:	235-44-46	212-12-15	302-12-15					VER.:
165	1218	LTH:	225.5778 M	0.19 CM	0.10 CM	0.47 CM	0.25 CM	5.2200	0.00	HOR.: 1 / 89229
		AZI:	270-54-34	182-43- 4	272-43- 4					VER.:
165	21	LTH:	178.1363 M	0.15 CM	0.08 CM	0.38 CM	0.19 CM	-9.6040	0.00	HOR.: 1 / 47001
		AZI:	318-39-23	138-43-23	228-43-23					VER.:
21	22	LTH:	2.5284 M	0.11 CM	0.04 CM	0.28 CM	0.10 CM	0.1280	0.00	HOR.: 1 / 911
		AZI:	347-27- 2	159- 5-49	249- 5-49					VER.:
22	31	LTH:	47.8350 M	0.11 CM	0.04 CM	0.27 CM	0.10 CM	0.0740	0.00	HOR.: 1 / 35562
		AZI:	272- 6-31	161- 8-13	251- 8-13					VER.:
31	33	LTH:	4.9208 M	0.09 CM	0.04 CM	0.21 CM	0.09 CM	-0.3770	0.00	HOR.: 1 / 2734
		AZI:	9-56- 4	154-41-48	244-41-48					VER.:
33	34	LTH:	14.9634 M	0.06 CM	0.04 CM	0.16 CM	0.09 CM	-7.9890	0.00	HOR.: 1 / 10068
		AZI:	350-43-42	149-13-16	239-13-16					VER.:
34	35	LTH:	25.1571 M	0.06 CM	0.04 CM	0.15 CM	0.10 CM	-14.3050	0.00	HOR.: 1 / 18500
		AZI:	7-18-52	150-33-53	240-33-53					VER.:
35	1663	LTH:	81.6260 M	0.08 CM	0.05 CM	0.20 CM	0.12 CM	22.2930	0.00	HOR.: 1 / 56239
		AZI:	251-31-54	191-11-56	281-11-56					VER.:
163	29	LTH:	137.7656 M	0.12 CM	0.06 CM	0.29 CM	0.15 CM	21.3630	0.00	HOR.: 1 / 60787
		AZI:	158- 2-41	111-55-58	201-55-58					VER.:
29	39	LTH:	48.3417 M	0.06 CM	0.04 CM	0.15 CM	0.10 CM	0.2040	0.00	HOR.: 1 / 41282
		AZI:	274-51-34	154-58-10	244-58-10					VER.:
28	38	LTH:	50.0949 M	0.07 CM	0.04 CM	0.17 CM	0.10 CM	0.0140	0.00	HOR.: 1 / 41488
		AZI:	275-30- 6	157- 9-33	247- 9-33					VER.:
28	39	LTH:	55.2937 M	0.07 CM	0.04 CM	0.17 CM	0.10 CM	-13.6990	0.00	HOR.: 1 / 33622
		AZI:	302-16-55	144-58-23	234-58-23					VER.:
37	38	LTH:	8.9684 M	0.05 CM	0.04 CM	0.11 CM	0.09 CM	-4.7340	0.00	HOR.: 1 / 8264
		AZI:	7-51-35	166- 7-21	256- 7-21					VER.:
37	1663	LTH:	92.3767 M	0.09 CM	0.04 CM	0.21 CM	0.10 CM	34.6820	0.00	HOR.: 1 / 48967
		AZI:	239-52-34	207-58-34	297-58-34					VER.:
165	11	LTH:	150.0820 M	0.13 CM	0.07 CM	0.31 CM	0.18 CM	-9.5070	0.00	HOR.: 1 / 53717
		AZI:	333- 1-35	120- 9- 1	210- 9- 1					VER.:

5.3 RELATIVE ERROR ELLIPSE REPORT

STATION NAME	STATION NAME	HORIZONTAL LINE INFORMATION	STANDARD RELATIVE ERROR ELLIPSE SEMI-MAJOR	STANDARD RELATIVE ERROR ELLIPSE SEMI-MINOR	95% RELATIVE ERROR ELLIPSE SEMI-MAJOR	95% RELATIVE ERROR ELLIPSE SEMI-MINOR	ELEV. DIFF. (METERS)	ELE. DIF. STD. DEV. (CM)	95% RELATIVE PRECISION
11	21	LTH: 49.5983 M AZI: 269-58-46	0.11 CM 162-37-50	0.05 CM 252-37-50	0.27 CM	0.11 CM	-0.0970	0.00	HOR.: 1 / 37040 VER.:
21	23	LTH: 4.4834 M AZI: 359-22-31	0.10 CM 157-15-20	0.04 CM 247-15-20	0.24 CM	0.10 CM	-0.0280	0.00	HOR.: 1 / 1962 VER.:
22	23	LTH: 2.0763 M AZI: 13-56-52	0.10 CM 157-35- 2	0.04 CM 247-35- 2	0.24 CM	0.10 CM	-0.1560	0.00	HOR.: 1 / 1012 VER.:
22	32	LTH: 47.2651 M AZI: 275- 0- 5	0.11 CM 161- 8-29	0.04 CM 251- 8-29	0.28 CM	0.10 CM	0.0800	0.00	HOR.: 1 / 33193 VER.:
31	32	LTH: 2.4672 M AZI: 16-54-19	0.10 CM 158-27-22	0.03 CM 248-27-22	0.24 CM	0.08 CM	0.0060	0.00	HOR.: 1 / 1276 VER.:
32	33	LTH: 2.4899 M AZI: 3- 1-38	0.09 CM 155-19-33	0.04 CM 245-19-33	0.21 CM	0.09 CM	-0.3830	0.00	HOR.: 1 / 1297 VER.:
24	33	LTH: 52.8641 M AZI: 258-32-53	0.08 CM 155-54- 7	0.05 CM 245-54- 7	0.20 CM	0.12 CM	9.7520	0.00	HOR.: 1 / 41813 VER.:
24	34	LTH: 54.3906 M AZI: 274-30-17	0.08 CM 157- 1-50	0.04 CM 247- 1-50	0.20 CM	0.11 CM	1.7630	0.00	HOR.: 1 / 40831 VER.:
24	35	LTH: 58.7968 M AZI: 299-48-15	0.09 CM 147-36-43	0.04 CM 237-36-43	0.21 CM	0.11 CM	-12.5420	0.00	HOR.: 1 / 30523 VER.:
35	36	LTH: 6.8690 M AZI: 4-29-38	0.06 CM 154- 7- 8	0.04 CM 244- 7- 8	0.14 CM	0.09 CM	-3.8380	0.00	HOR.: 1 / 5379 VER.:
36	1663	LTH: 84.5427 M AZI: 247-14-29	0.08 CM 200-27-36	0.04 CM 290-27-36	0.20 CM	0.10 CM	26.1310	0.00	HOR.: 1 / 54135 VER.:
163	19	LTH: 157.2188 M AZI: 144- 2-26	0.14 CM 132- 3- 3	0.08 CM 222- 3- 3	0.34 CM	0.18 CM	21.4390	0.00	HOR.: 1 / 47001 VER.:
19	29	LTH: 40.8162 M AZI: 269-16-30	0.09 CM 156-51-24	0.05 CM 246-51-24	0.21 CM	0.11 CM	-0.0760	0.00	HOR.: 1 / 31040 VER.:
28	29	LTH: 25.4761 M AZI: 3-11-51	0.07 CM 137-22-55	0.04 CM 227-22-55	0.17 CM	0.10 CM	-13.9030	0.00	HOR.: 1 / 18522 VER.:
28	37	LTH: 51.2534 M AZI: 265-25-58	0.07 CM 161-31-46	0.04 CM 251-31-46	0.17 CM	0.11 CM	4.7480	0.00	HOR.: 1 / 46060 VER.:
36	37	LTH: 13.7930 M AZI: 8- 5- 9	0.05 CM 165- 4-35	0.04 CM 255- 4-35	0.12 CM	0.09 CM	-8.5510	0.00	HOR.: 1 / 12022 VER.:

5.3 RELATIVE ERROR ELLIPSE REPORT

STATION NAME	STATION NAME	HORIZONTAL LINE INFORMATION		STANDARD RELATIVE ERROR ELLIPSE SEMI-MAJOR	STANDARD RELATIVE ERROR ELLIPSE SEMI-MINOR	95% RELATIVE ERROR ELLIPSE SEMI-MAJOR	95% RELATIVE ERROR ELLIPSE SEMI-MINOR	ELEV. DIFF. (METERS)	ELE. DIF. STD. DEV. (CM)	95% RELATIVE PRECISION
164	165	LTH:	159.9226 M	0.13 CM	0.07 CM	0.32 CM	0.16 CM	3.3150	0.00	HOR.: 1 / 78178
		AZI:	191-33-52	253-42-12	343-42-12					VER.:
164	11	LTH:	102.7234 M	0.10 CM	0.05 CM	0.24 CM	0.11 CM	-6.1920	0.00	HOR.: 1 / 82366
		AZI:	257- 6-25	182- 0- 7	272- 0- 7					VER.:
11	13	LTH:	3.5931 M	0.13 CM	0.05 CM	0.33 CM	0.12 CM	-0.1700	0.00	HOR.: 1 / 1104
		AZI:	359-45-27	171-19-18	261-19-18					VER.:
13	21	LTH:	49.7144 M	0.15 CM	0.05 CM	0.36 CM	0.12 CM	0.0730	0.00	HOR.: 1 / 39515
		AZI:	265-50- 5	170- 3-18	260- 3-18					VER.:
13	23	LTH:	49.6397 M	0.13 CM	0.05 CM	0.33 CM	0.12 CM	0.0450	0.00	HOR.: 1 / 38548
		AZI:	271- 0-24	171-20-34	261-20-34					VER.:
22	33	LTH:	47.4162 M	0.10 CM	0.04 CM	0.25 CM	0.11 CM	-0.3030	0.00	HOR.: 1 / 31261
		AZI:	278- 0-35	159-19-18	249-19-18					VER.:
23	33	LTH:	47.6758 M	0.07 CM	0.04 CM	0.18 CM	0.10 CM	-0.1470	0.00	HOR.: 1 / 36537
		AZI:	275-31-37	154- 1-45	244- 1-45					VER.:
23	24	LTH:	15.7045 M	0.08 CM	0.04 CM	0.19 CM	0.11 CM	-9.8990	0.00	HOR.: 1 / 10442
		AZI:	16- 6-34	146-36-13	236-36-13					VER.:
24	25	LTH:	24.2574 M	0.08 CM	0.05 CM	0.19 CM	0.11 CM	-12.1260	0.00	HOR.: 1 / 14382
		AZI:	3-13-41	146-36-16	236-36-16					VER.:
25	35	LTH:	52.6243 M	0.08 CM	0.04 CM	0.19 CM	0.10 CM	-0.4160	0.00	HOR.: 1 / 41420
		AZI:	275-27-29	157-53-51	247-53-51					VER.:
26	35	LTH:	52.3483 M	0.08 CM	0.04 CM	0.18 CM	0.11 CM	3.7450	0.00	HOR.: 1 / 45213
		AZI:	267-31-35	160-22-49	250-22-49					VER.:
26	36	LTH:	51.9643 M	0.07 CM	0.04 CM	0.17 CM	0.10 CM	-0.0930	0.00	HOR.: 1 / 46328
		AZI:	275- 3-57	163- 6-33	253- 6-33					VER.:
163	164	LTH:	280.5500 M	0.21 CM	0.09 CM	0.51 CM	0.21 CM	81.1610	0.00	HOR.: 1 / 55355
		AZI:	136-32-39	133- 8- 0	223- 8- 0					VER.:
164	19	LTH:	126.3509 M	0.12 CM	0.05 CM	0.30 CM	0.12 CM	-59.7220	0.00	HOR.: 1 / 44755
		AZI:	307-12- 6	148-10-40	238-10-40					VER.:
18	19	LTH:	25.7699 M	0.10 CM	0.05 CM	0.26 CM	0.12 CM	-13.6500	0.00	HOR.: 1 / 10482
		AZI:	356-16-36	157-39-56	247-39-56					VER.:
18	29	LTH:	49.3972 M	0.10 CM	0.05 CM	0.24 CM	0.11 CM	-13.7260	0.00	HOR.: 1 / 23654
		AZI:	300-40-21	154- 6- 2	244- 6- 2					VER.:

5.3 RELATIVE ERROR ELLIPSE REPORT

STATION NAME	STATION NAME	HORIZONTAL LINE INFORMATION		STANDARD RELATIVE ERROR ELLIPSE SEMI-MAJOR	STANDARD RELATIVE ERROR ELLIPSE SEMI-MINOR	95% RELATIVE ERROR ELLIPSE SEMI-MAJOR	95% RELATIVE ERROR ELLIPSE SEMI-MINOR	ELEV. DIFF. (METERS)	ELE. DIF. STD. DEV. (CM)	95% RELATIVE PRECISION
18	28	LTH:	43.9080 M	0.10 CM	0.05 CM	0.24 CM	0.11 CM	0.1770	0.00	HOR.: 1 / 31834
		AZI:	269-41-25	157-56-36	247-56-36					VER.:
27	28	LTH:	9.8007 M	0.07 CM	0.04 CM	0.17 CM	0.10 CM	-5.2300	0.00	HOR.: 1 / 6734
		AZI:	1-42- 8	145-21-38	235-21-38					VER.:
27	37	LTH:	51.1200 M	0.07 CM	0.04 CM	0.17 CM	0.10 CM	-0.4820	0.00	HOR.: 1 / 45356
		AZI:	276-25- 8	162-17- 4	252-17- 4					VER.:
26	37	LTH:	53.0568 M	0.07 CM	0.04 CM	0.17 CM	0.10 CM	-8.6440	0.00	HOR.: 1 / 38264
		AZI:	290- 6-46	156-47-20	246-47-20					VER.:
164	12	LTH:	101.0877 M	0.10 CM	0.04 CM	0.24 CM	0.11 CM	-6.1500	0.00	HOR.: 1 / 83722
		AZI:	258- 0-51	181-23-31	271-23-31					VER.:
11	12	LTH:	2.2976 M	0.09 CM	0.05 CM	0.22 CM	0.11 CM	0.0420	0.00	HOR.: 1 / 1406
		AZI:	32-57- 6	162-20-50	252-20-50					VER.:
12	13	LTH:	2.0911 M	0.13 CM	0.05 CM	0.33 CM	0.12 CM	-0.2120	0.00	HOR.: 1 / 711
		AZI:	322-46-41	171-26-11	261-26-11					VER.:
13	24	LTH:	48.0051 M	0.14 CM	0.05 CM	0.35 CM	0.13 CM	-9.8540	0.00	HOR.: 1 / 22901
		AZI:	289-25- 6	168-25-58	258-25-58					VER.:
14	24	LTH:	48.7677 M	0.11 CM	0.05 CM	0.27 CM	0.12 CM	-2.3210	0.00	HOR.: 1 / 33446
		AZI:	271-18-59	162- 1-11	252- 1-11					VER.:
14	25	LTH:	53.7381 M	0.11 CM	0.05 CM	0.26 CM	0.11 CM	-14.4470	0.00	HOR.: 1 / 25883
		AZI:	298- 8- 2	161-19- 3	251-19- 3					VER.:
25	26	LTH:	7.2652 M	0.07 CM	0.04 CM	0.17 CM	0.10 CM	-4.1610	0.00	HOR.: 1 / 4608
		AZI:	359-19-15	151-33-30	241-33-30					VER.:
164	18	LTH:	111.1880 M	0.12 CM	0.04 CM	0.30 CM	0.11 CM	-46.0720	0.00	HOR.: 1 / 45622
		AZI:	297- 6-58	155-42-22	245-42-22					VER.:
18	27	LTH:	45.3230 M	0.10 CM	0.05 CM	0.23 CM	0.12 CM	5.4070	0.00	HOR.: 1 / 38543
		AZI:	257-12-36	161- 3-23	251- 3-23					VER.:
26	27	LTH:	12.5675 M	0.07 CM	0.04 CM	0.16 CM	0.10 CM	-8.1620	0.00	HOR.: 1 / 8583
		AZI:	4-27-51	150-16-45	240-16-45					VER.:
164	14	LTH:	96.7725 M	0.12 CM	0.04 CM	0.28 CM	0.10 CM	-13.8950	0.00	HOR.: 1 / 90943
		AZI:	267-20-31	172-46-14	262-46-14					VER.:
12	14	LTH:	16.6528 M	0.12 CM	0.05 CM	0.28 CM	0.12 CM	-7.7450	0.00	HOR.: 1 / 6272
		AZI:	7-38-43	165-51-18	255-51-18					VER.:

5.3 RELATIVE ERROR ELLIPSE REPORT

STATION NAME	STATION NAME	HORIZONTAL LINE INFORMATION	STANDARD RELATIVE ERROR ELLIPSE SEMI-MAJOR	STANDARD RELATIVE ERROR ELLIPSE SEMI-MINOR	95% RELATIVE ERROR ELLIPSE SEMI-MAJOR	95% RELATIVE ERROR ELLIPSE SEMI-MINOR	ELEV. DIFF. (METERS)	ELE. DIF. STD. DEV. (CM)	95% RELATIVE PRECISION
13	14	LTH: 15.2423 M AZI: 13-11-58	0.15 CM 170-36- 5	0.05 CM 260-36- 5	0.37 CM	0.12 CM	-7.5330	0.00	HOR.: 1 / 4451 VER.:
14	15	LTH: 26.7084 M AZI: 358-23- 2	0.13 CM 162-57-40	0.05 CM 252-57-40	0.31 CM	0.12 CM	-14.8650	0.00	HOR.: 1 / 8889 VER.:
15	25	LTH: 46.6555 M AZI: 268-19-53	0.11 CM 162-10-30	0.05 CM 252-10-30	0.27 CM	0.11 CM	0.4180	0.00	HOR.: 1 / 35840 VER.:
16	25	LTH: 46.9818 M AZI: 262-59- 3	0.11 CM 162-13-27	0.05 CM 252-13-27	0.26 CM	0.11 CM	2.9850	0.00	HOR.: 1 / 38574 VER.:
16	26	LTH: 46.7411 M AZI: 271-52-16	0.11 CM 161-28-24	0.05 CM 251-28-24	0.26 CM	0.11 CM	-1.1760	0.00	HOR.: 1 / 33866 VER.:
164	17	LTH: 105.8749 M AZI: 291-56-33	0.12 CM 158-49-26	0.04 CM 248-49-26	0.30 CM	0.10 CM	-39.6520	0.00	HOR.: 1 / 47911 VER.:
17	18	LTH: 11.1422 M AZI: 356- 4-54	0.12 CM 159-16-45	0.05 CM 249-16-45	0.28 CM	0.11 CM	-6.4200	0.00	HOR.: 1 / 4094 VER.:
17	27	LTH: 44.9729 M AZI: 271-22-45	0.10 CM 160-17-13	0.04 CM 250-17-13	0.25 CM	0.11 CM	-1.0130	0.00	HOR.: 1 / 33054 VER.:
17	26	LTH: 47.3428 M AZI: 256- 0-29	0.10 CM 161-52-29	0.05 CM 251-52-29	0.25 CM	0.12 CM	7.1490	0.00	HOR.: 1 / 40230 VER.:
164	15	LTH: 99.9212 M AZI: 282-50-33	0.13 CM 163-45-36	0.04 CM 253-45-36	0.31 CM	0.10 CM	-28.7600	0.00	HOR.: 1 / 57816 VER.:
15	16	LTH: 4.3800 M AZI: 359-55-35	0.13 CM 161-24- 3	0.05 CM 251-24- 3	0.31 CM	0.11 CM	-2.5670	0.00	HOR.: 1 / 1474 VER.:
16	17	LTH: 12.9964 M AZI: 356-34- 4	0.12 CM 160-22-12	0.05 CM 250-22-12	0.30 CM	0.11 CM	-8.3250	0.00	HOR.: 1 / 4470 VER.:
164	16	LTH: 100.9905 M AZI: 285-15-55	0.13 CM 162-28-12	0.04 CM 252-28-12	0.31 CM	0.10 CM	-31.3270	0.00	HOR.: 1 / 54132 VER.:

5.4 SUMMARY REPORT

OBSERVATION TYPE	NUMBER	WEIGHTED SUM OF RESIDUALS SQUARED	REDUNDANCY	STD. DEV. OF UNIT WEIGHT
DIRECTIONS	135	0.885519D+02	0.651182D+02	1.16613
AZIMUTHS	1	0.000000D+00	0.000000D+00	1.00000
HORIZONTAL DISTANCE	3	0.297731D+01	0.188182D+01	1.25783
LOPE DISTANCE	0	0.000000D+00	0.000000D+00	1.00000
SCALED DISTANCE	0	0.000000D+00	0.000000D+00	1.00000
ZENITH DISTANCE	0	0.000000D+00	0.000000D+00	1.00000
HEIGHT DIFFERENCE	0	0.000000D+00	0.000000D+00	1.00000
OBSERVED COORDINATES	0	0.000000D+00	0.000000D+00	1.00000
COORDINATE DIFF.	0	0.000000D+00	0.000000D+00	1.00000
TOTAL	139	0.915292D+02	67	1.16881

STATIONS:	FIXED	1
	FREE	33
	WEIGHTED	0
	TOTAL	34

CONVERGENCE:	ITERATIONS USED	2
	TOLERANCE	0.000100
	COMPUTATION TIME	100.453 SEC