MSB Lidar & Imagery Project

QA/QC Checkpoint Survey 11-103

LOUNSBURY & ASSOCIATES
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MSB Lidar & Imagery Project QA/QC Checkpoint Survey

CERTIFICATION

for

MSB Lidar Imagery Project QA/QC Check Point Survey

This Survey Report is made for the benefit of the Matanuska-Susitna Borough and Lounsbury & Associates, Inc.

I, Dean Cimmiyotti, Alaska Professional Land Surveyor LS #7613, do hereby attest to the above parties, as the date set below, to the best of my knowledge, information and belief, that the data contained herein is a true and a correct representation of a survey performed by me or under my direction in the months of June & July of 2011.

Survey Report

For

MSB Lidar & Imagery Project QA/QC Checkpoint Survey

Dates of Survey:

The control survey for this project was performed previously, in the Months of April, May and June of 2011. This previous survey was performed in conjunction with the MSB Lidar Imagery Acquisition Project. The QA/QC Checkpoint survey began on June 21st, 2011 and concluded on July 14, 2011. Field work was performed by James Hall, PLS, Fred Wagner, PLS and Canyon Spurlock, Survey Tech with oversight and support provided by Dean Cimmiyotti, PLS- all with Lounsbury & Associates, Inc. Data for the Northern Susitna River area as well as the Western Susitna River area was concurrently collected by Global Positioning Services, Inc.

Purpose of Survey:

The purpose of this survey is to provide a survey for an independent review of the vertical accuracies associated with the 2011 Mat-Su Lidar Imagery Project.

Project Control:

For the purposes of this survey, Lounsbury utilized and held the positions of twelve previously established Base Stations. The positions of the twelve stations were determined by and extensive GPS survey and using a constrained network adjustment on all twelve points. The adjustment was performed holding positions of CORS Stations ZAN1 in Anchorage, Alaska and GRNX in Healy, Alaska. Control values are NAD 83(CORS), Epoch date 2003.

ZAN1 – Latitude North 61-13-45.129268; Longitude West 149-46-48.805068; Ellipsoid Height 79.794(m)

GRNX – Latitude North 63-50-07.798878; Longitude West 148-58-41.392948; Ellipsoid Height 597.016(m)

Four supplemental control points were established within the project area to facilitate QC point collection. Two were set in the North Susitna Region, One in Hatchers pass and one along up the Knik River Valley. These four supplemental points were tied to the original control network and are within positional specifications.

Equipment & Methodology:

GPS Control & QC Surveys were performed using Leica 1200 GPS Systems and Trimble R6 and R8 Carrier Phase Receivers. GPS control & QC Surveys were established using Static GPS surveying techniques. Control observations consisted of two sessions with a minimum of 4 hours of data each. Static observations for the QA/QC Checkpoints were collected in either multiple 10-15 minute observations or in a single observation with a minimum observation time of 30 minutes.

Data Processing & Analysis:

Data processing for the control survey was accomplished using Leica Geo-Office software version 5.0. The final control was processed holding ZAN1 & GRNX stations, located in Anchorage and Healy respectively. Both stations were held for horizontal and vertical positions. Coordinates were then network adjusted using Leica MOVE3 software version 3.4. The resulting geodetic coordinates were then translated into Alaska State Plane Zone 4 coordinates in U.S. Survey feet; with orthometric heights computed using Geoid 09.

The QC points were then processed in Trimble Geomatics Office, Version 1.63 Software and Topcon Tools Version 8 Software.

Conclusion/Overview:

The GPS survey, processing and adjustments were performed to meet or exceed the required horizontal and vertical positioning accuracy specified in the scope of work.

Network Adjustment

www.MOVE3.com

(c) 1993-2006 Grontmij
Licensed to Leica Geosystems AG

Created: 06/09/2011 16:09:48

Project Information

Project name:	11-017-PreciseOrbs
Date created:	06/09/2011 09:36:08
Time zone:	-8h 00'
Coordinate system name:	WGS 1984
Application software:	LEICA Geo Office 5.0
Processing kernel:	MOVE3 3.4

General Information

Adjustment

Type:	Constrained	
Dimension:	3D	
Coordinate system:	WGS 1984	
Height mode:	Ellipsoidal	
Number of iterations:	1	
Maximum coord correction in last iteration:	0.0000 m	✓ (tolerance is met)

Stations

Number of (partly) known stations:	2
Number of unknown stations:	10
Total:	12

Observations

GPS coordinate differences:	462 (154 baselines)
Known coordinates:	6
Total:	468

Unknowns

Coordinates:	36
Total:	36
Degrees of freedom:	432

Testing

Alfa (multi dimensional):	0.8257
Alfa 0 (one dimensional):	5.0 %
Beta:	90.0 %
Sigma a-priori (GPS):	10.0

Critical value W-test:	1.96	
Critical value T-test (2-dimensional):	2.49	
Critical value T-test (3-dimensional):	1.91	
Critical value F-test:	0.94	
F-test:	23.36	⚠ (rejected)

Results based on a-posteriori variance factor

Input data

Approximate Coordinates

Station	Latitude	Longitude	Height [m]	
1	61° 48' 37.00723" N	147° 30' 54.95468" W	862.5272	
10	62° 57' 11.81452" N	149° 39' 25.27143" W	515.2994	
2	61° 47' 53.49427" N	148° 15' 18.05219" W	512.9363	
3	61° 37' 40.15767" N	149° 07' 14.91914" W	176.3346	
4	61° 34' 28.41668" N	149° 43' 41.78327" W	71.1412	
5	61° 25' 34.10537" N	150° 01' 08.71046" W	69.1219	
6	61° 45' 09.23765" N	150° 03' 19.28258" W	73.8327	
7	62° 06' 16.67515" N	150° 03' 35.21367" W	89.5473	
8	62° 18' 58.08244" N	150° 14' 03.02754" W	122.5496	
9	62° 42' 18.92391" N	150° 13' 16.44988" W	237.6254	
GRNX	63° 50' 07.79888" N	148° 58' 41.39295" W	594.0157	Known in Position and Height
ZAN1	61° 13' 45.12927" N	149° 46' 48.80507" W	79.7938	Known in Position and Height

Observations

	Station	Target	St. ih	Tg. ih	Reading
DX	GRNX	ZAN1			-242607.7290 m
DY					-95625.1313 m
DZ					-134435.6438 m
DX	10	2			-60305.5263 m
DY					-120984.2885 m
DZ					-59697.2993 m
DX	5	2			79146.2033 m
DY					-61750.2634 m
DZ					20103.5308 m
DX	3	2			37947.3017 m
DY					-30518.1530 m
DZ					9294.2861 m
DX	9	2			-24722.4626 m
DY					-133618.1363 m
DZ					-46825.7991 m
DX	GRNX	2			-153213.7110 m
DY					-136650.1014 m
DZ					-103811.7999 m
DX	ZAN1	2			89394.0122 m
DY					-41024.9781 m
DZ					30623.8188 m

DX	2	8	-8957.8197 m
DY			115118.8248 m
DZ			26704.7015 m
DX	2	7	-22513.4190 m
DY			96875.4247 m
DZ			15685.5875 m
DX	2	6	-52390.6568 m
DY			79397.5767 m
DZ			-2791.7230 m
DX	2	4	-58801.9431 m
DY			55650.0044 m
DZ			-12209.7868 m
DX	1	4	-80408.1859 m
DY			88150.8480 m
DZ			-13154.3802 m
DX	1	4	-80408.1730 m
DY			88150.8398 m
DZ			-13154.3916 m
DX	3	7	15433.8817 m
DY			66357.2733 m
DZ			24979.8781 m
DX	3	7	15433.8851 m
DY			66357.2737 m
DZ			24979.8717 m
DX	GRNX	8	-162171.5298 m
DY			-21531.2704 m
DZ			-77107.1435 m
DX	GRNX	8	-162171.5374 m
DY			-21531.2686 m
DZ			-77107.1294 m
DX	GRNX	7	-175727.1402 m
DY			-39774.6694 m
DZ			-88126.2482 m
DX	GRNX	7	-175727.1289 m
DY			-39774.6748 m
DZ			-88126.2432 m
DX	GRNX	6	-205604.3897 m
DY			-57252.5138 m
DZ			-106603.5495 m
DX	GRNX	6	-205604.3603 m
DY			-57252.4989 m
DZ			-106603.5065 m
DX	GRNX	4	-212015.6738 m
DY			-81000.0841 m
DZ			-116021.6140 m
DX	GRNX	4	-212015.6296 m
DY			-81000.1526 m
DZ			-116021.5753 m
DX	GRNX	3	-191161.0143 m
DY			-106131.9446 m
DZ			-113106.1310 m
DX	GRNX	3	-191161.0147 m
DY			-106131.9420 m

DZ			-113106.1203 m
DX	GRNX	1	-131607.4414 m
DY			-169150.9457 m
DZ			-102867.2431 m
DX	GRNX	1	-131607.4903 m
DY			-169150.9531 m
DZ			-102867.2133 m
DX	ZAN1	8	80436.1934 m
DY			74093.8703 m
DZ			57328.5059 m
DX	ZAN1	8	80436.1961 m
DY			74093.8678 m
DZ			57328.5087 m
DX	ZAN1	7	66880.5936 m
DY			55850.4710 m
DZ			46309.3961 m
DX	ZAN1	7	66880.5923 m
DY			55850.4663 m
DZ			46309.4014 m
DX	ZAN1	6	37003.3544 m
DY			38372.6185 m
DZ			27832.0877 m
DX	ZAN1	6	37003.3570 m
DY			38372.6186 m
DZ			27832.0867 m
DX	ZAN1	4	30592.0684 m
DY			14625.0460 m
DZ			18414.0303 m
DX	ZAN1	4	30592.0708 m
DY			14625.0452 m
DZ			18414.0276 m
DX	ZAN1	3	51446.7121 m
DY			-10506.8027 m
DZ			21329.5197 m
DX	ZAN1	3	51446.7077 m
DY			-10506.8060 m
DZ			21329.5274 m
DX	ZAN1	1	111000.2524 m
DY			-73525.8019 m
DZ			31568.4125 m
DX	ZAN1	1	111000.2543 m
DY			-73525.7966 m
DZ			31568.4073 m
DX	2	1	21606.2355 m
DY			-32500.8481 m
DZ			944.6067 m
DX	2	1	21606.2332 m
DY			-32500.8482 m
DZ			944.6124 m
DX	5	10	139451.7433 m
DY			59234.0310 m
DZ			79800.8050 m
DX	5	10	139451.7236 m

DY			59234.0200 m
DZ			79800.8321 m
DX	GRNX	9	-128491.2469 m
DY			-3031.9588 m
DZ			-56986.0418 m
DX	GRNX	9	-128491.2342 m
DY			-3031.9599 m
DZ			-56986.0485 m
DX	GRNX	5	-232359.9365 m
DY			-74899.8304 m
DZ			-123915.3527 m
DX	GRNX	5	-232359.9230 m
DY			-74899.8228 m
DZ			-123915.3581 m
DX	GRNX	10	-92908.1806 m
DY			-15665.8039 m
DZ			-44114.5464 m
DX	GRNX	10	-92908.1869 m
DY			-15665.8082 m
DZ			-44114.5291 m
DX	ZAN1	9	114116.4787 m
DY			92593.1820 m
DZ			77449.6062 m
DX	ZAN1	9	114116.4629 m
DY			92593.1859 m
DZ			77449.6070 m
DX	ZAN1	5	10247.8040 m
DY			20725.3072 m
DZ			10520.2937 m
DX	ZAN1	5	10247.8064 m
DY			20725.3078 m
DZ			10520.2850 m
DX	ZAN1	10	149699.5475 m
DY			79959.3376 m
DZ			90321.1032 m
DX	ZAN1	10	149699.5191 m
DY			79959.3271 m
DZ			90321.1095 m
DX	10	8	-69263.3490 m
DY			-5865.4645 m
DZ			-32992.5992 m
DX	10	8	-69263.3486 m
DY			-5865.4636 m
DZ			-32992.5951 m
DX	10	8	-69263.3457 m
DY			-5865.4652 m
DZ			-32992.5990 m
DX	10	7	-82818.9517 m
DY			-24108.8668 m
DZ			-44011.7034 m
DX	10	7	-82818.9712 m
DY			-24108.8387 m
DZ			-44011.7102 m

DX	10	7	-82818.9426 m
DY			-24108.8617 m
DZ			-44011.7158 m
DX	10	6	-112696.1922 m
DY			-41586.7188 m
DZ			-62489.0136 m
DX	10	6	-112696.2024 m
DY			-41586.7009 m
DZ			-62489.0118 m
DX	10	6	-112696.1852 m
DY			-41586.7186 m
DZ			-62489.0216 m
DX	10	4	-119107.4794 m
DY			-65334.2910 m
DZ			-71907.0686 m
DX	10	4	-119107.4514 m
DY			-65334.2826 m
DZ			-71907.0798 m
DX	10	4	-119107.4632 m
DY			-65334.2833 m
DZ			-71907.0915 m
DX	10	3	-98252.8457 m
DY			-90466.1374 m
DZ			-68991.5749 m
DX	10	3	-98252.8144 m
DY			-90466.1362 m
DZ			-68991.5871 m
DX	10	3	-98252.8343 m
DY			-90466.1410 m
DZ			-68991.5811 m
DX	10	1	-38699.2944 m
DY			-153485.1381 m
DZ			-58752.6874 m
DX	10	1	-38699.2912 m
DY			-153485.1408 m
DZ			-58752.6862 m
DX	10	1	-38699.2937 m
DY			-153485.1368 m
DZ			-58752.6874 m
DX	5	8	70188.3912 m
DY			53368.5637 m
DZ			46808.2129 m
DX	5	8	70188.3929 m
DY			53368.5651 m
DZ			46808.2117 m
DX	5	8	70188.3810 m
DY			53368.5574 m
DZ			46808.2281 m
DX	5	7	56632.7901 m
DY			35125.1636 m
DZ			35789.1044 m
DX	5	7	56632.7914 m
DY			35125.1659 m

DZ			35789.1081 m
DX	5	7	56632.7820 m
DY			35125.1573 m
DZ			35789.1161 m
DX	5	6	26755.5513 m
DY			17647.3120 m
DZ			17311.7943 m
DX	5	6	26755.5467 m
DY			17647.3098 m
DZ			17311.8056 m
DX	5	6	26755.5478 m
DY			17647.3103 m
DZ			17311.8017 m
DX	5	4	20344.2651 m
DY			-6100.2600 m
DZ			7893.7364 m
DX	5	4	20344.2629 m
DY			-6100.2627 m
DZ			7893.7459 m
DX	5	4	20344.2636 m
DY			-6100.2609 m
DZ			7893.7366 m
DX	5	3	41198.9091 m
DY			-31232.1092 m
DZ			10809.2255 m
DX	5	3	41198.9079 m
DY			-31232.1111 m
DZ			10809.2334 m
DX	5	3	41198.8983 m
DY			-31232.1144 m
DZ			10809.2459 m
DX	5	1	100752.4514 m
DY			-94251.1071 m
DZ			21048.1156 m
DX	5	1	100752.4523 m
DY			-94251.1094 m
DZ			21048.1172 m
DX	5	1	100752.4237 m
DY			-94251.1099 m
DZ			21048.1722 m
DX	1	7	-44119.6569 m
DY			129376.2733 m
DZ			14740.9853 m
DX	1	7	-44119.6351 m
DY			129376.1892 m
DZ			14740.9876 m
DX	1	7	-44119.6522 m
DY			129376.2724 m
DZ			14740.9738 m
DX	1	6	-73996.8979 m
DY			111898.4205 m
DZ			-3736.3250 m
DX	1	6	-73996.8625 m

DY			111898.3663 m
DZ			-3736.3302 m
DX	1	6	-73996.8813 m
DY			111898.4269 m
DZ			-3736.3522 m
DX	7	6	-29877.2388 m
DY			-17477.8517 m
DZ			-18477.3100 m
DX	7	6	-29877.2699 m
DY			-17477.8054 m
DZ			-18477.3314 m
DX	7	6	-29877.2337 m
DY			-17477.8484 m
DZ			-18477.3147 m
DX	7	4	-36288.5255 m
DY			-41225.4241 m
DZ			-27895.3671 m
DX	7	4	-36288.5292 m
DY			-41225.4241 m
DZ			-27895.3640 m
DX	7	4	-36288.5194 m
DY			-41225.4210 m
DZ			-27895.3773 m
DX	3	8	28989.4830 m
DY			84600.6734 m
DZ			35998.9856 m
DX	3	8	28989.4772 m
DY			84600.6750 m
DZ			35998.9823 m
DX	3	8	28989.4841 m
DY			84600.6731 m
DZ			35998.9843 m
DX	3	6	-14443.3566 m
DY			48879.4222 m
DZ			6502.5675 m
DX	3	6	-14443.3654 m
DY			48879.4198 m
DZ			6502.5611 m
DX	3	6	-14443.3503 m
DY			48879.4241 m
DZ			6502.5573 m
DX	3	4	-20854.6434 m
DY			25131.8497 m
DZ			-2915.4895 m
DX	3	4	-20854.6473 m
DY			25131.8479 m
DZ			-2915.4973 m
DX	3	4	-20854.6347 m
DY			25131.8529 m
DZ			-2915.5075 m
DX	3	1	59553.5396 m
DY			-63018.9994 m
DZ			10238.8913 m

DX	3	1	59553.5300 m
DY			-63019.0054 m
DZ			10238.8906 m
DX	3	1	59553.5341 m
DY			-63019.0007 m
DZ			10238.9042 m
DX	9	8	-33680.2819 m
DY			-18499.3105 m
DZ			-20121.1009 m
DX	9	8	-33680.2819 m
DY			-18499.3096 m
DZ			-20121.1039 m
DX	9	8	-33680.2816 m
DY			-18499.3106 m
DZ			-20121.1003 m
DX	9	7	-47235.8833 m
DY			-36742.7110 m
DZ			-31140.2088 m
DX	9	7	-47235.8818 m
DY			-36742.7095 m
DZ			-31140.2040 m
DX	9	7	-47235.8813 m
DY			-36742.7102 m
DZ			-31140.2122 m
DX	9	6	-77113.1218 m
DY			-54220.5620 m
DZ			-49617.5194 m
DX	9	6	-77113.1256 m
DY			-54220.5646 m
DZ			-49617.5094 m
DX	9	6	-77113.1141 m
DY			-54220.5579 m
DZ			-49617.5298 m
DX	9	4	-83524.4096 m
DY			-77968.1347 m
DZ			-59035.5760 m
DX	9	4	-83524.4118 m
DY			-77968.1385 m
DZ			-59035.5664 m
DX	9	4	-83524.3942 m
DY			-77968.1259 m
DZ			-59035.5993 m
DX	9	3	-62669.7655 m
DY			-103099.9844 m
DZ			-56120.0861 m
DX	9	3	-62669.7703 m
DY			-103099.9881 m
DZ			-56120.0752 m
DX	9	3	-62669.7632 m
DY			-103099.9827 m
DZ			-56120.0891 m
DX	9	1	-3116.2283 m
DY			-166118.9848 m

DZ			-45881.1916 m
DX	9	1	-3116.2272 m
DY			-166118.9871 m
DZ			-45881.1787 m
DX	9	1	-3116.2301 m
DY			-166118.9843 m
DZ			-45881.1870 m
DX	6	4	-6411.2860 m
DY			-23747.5721 m
DZ			-9418.0581 m
DX	6	4	-6411.2889 m
DY			-23747.5740 m
DZ			-9418.0576 m
DX	6	4	-6411.2846 m
DY			-23747.5716 m
DZ			-9418.0632 m
DX	8	7	-13555.6009 m
DY			-18243.4000 m
DZ			-11019.1079 m
DX	8	7	-13555.5977 m
DY			-18243.3985 m
DZ			-11019.1027 m
DX	8	7	-13555.5988 m
DY			-18243.3986 m
DZ			-11019.1145 m
DX	8	6	-43432.8393 m
DY			-35721.2515 m
DZ			-29496.4187 m
DX	8	6	-43432.8410 m
DY			-35721.2528 m
DZ			-29496.4099 m
DX	8	6	-43432.8338 m
DY			-35721.2489 m
DZ			-29496.4268 m
DX	8	4	-49844.1264 m
DY			-59468.8240 m
DZ			-38914.4752 m
DX	8	4	-49844.1282 m
DY			-59468.8260 m
DZ			-38914.4738 m
DX	8	4	-49844.1185 m
DY			-59468.8203 m
DZ			-38914.4896 m
DX	8	1	30564.0554 m
DY			-147619.6742 m
DZ			-25760.0905 m
DX	8	1	30564.0550 m
DY			-147619.6751 m
DZ			-25760.0839 m
DX	8	1	30564.0519 m
DY			-147619.6730 m
DZ			-25760.0869 m
DX	10	9	-35583.0655 m

DY			12633.8461 m
DZ			-12871.4962 m
DX	10	9	-35583.0735 m
DY			12633.8937 m
DZ			-12871.5155 m
DX	10	9	-35583.0597 m
DY			12633.8510 m
DZ			-12871.5035 m
DX	5	9	103868.6748 m
DY			71867.8750 m
DZ			66929.3121 m
DX	5	9	103868.6845 m
DY			71867.8625 m
DZ			66929.3125 m
DX	5	9	103868.6615 m
DY			71867.8671 m
DZ			66929.3332 m

Standard deviations

	Station	Target	Sd. abs / Cor	Sd. rel / Cor	Sd. tot / Cor
DX	GRNX	ZAN1	0.0061 m	-	-
DY			0.4077	0.0053 m	-
DZ			-0.3981	-0.3246	0.0108 m
DX	10	2	0.0011 m	-	-
DY			0.5435	0.0010 m	-
DZ			-0.4691	-0.4053	0.0019 m
DX	5	2	0.0018 m	-	-
DY			0.5780	0.0015 m	-
DZ			-0.5431	-0.4404	0.0031 m
DX	3	2	0.0014 m	-	-
DY			0.5318	0.0012 m	-
DZ			-0.4806	-0.3876	0.0023 m
DX	9	2	0.0012 m	-	-
DY			0.5279	0.0010 m	-
DZ			-0.4712	-0.3927	0.0020 m
DX	GRNX	2	0.0192 m	-	-
DY			0.8193	0.0159 m	-
DZ			-0.7529	-0.7550	0.0259 m
DX	ZAN1	2	0.0051 m	-	-
DY			0.6383	0.0042 m	-
DZ			-0.6327	-0.5095	0.0070 m
DX	2	8	0.0013 m	-	-
DY			0.5249	0.0011 m	-
DZ			-0.4960	-0.4103	0.0023 m
DX	2	7	0.0012 m	-	-
DY			0.5343	0.0010 m	-
DZ			-0.4939	-0.4046	0.0020 m
DX	2	6	0.0017 m	-	-
DY			0.5524	0.0014 m	-
DZ			-0.4951	-0.4570	0.0029 m
DX	2	4	0.0017 m	-	-
DY			0.5597	0.0014 m	-
DZ			-0.5001	-0.4304	0.0028 m

DX	1	4	0.0013 m	-	-
DY			0.4727	0.0011 m	-
DZ			-0.3679	-0.2748	0.0024 m
DX	1	4	0.0028 m	-	-
DY			0.4366	0.0023 m	-
DZ			-0.4440	-0.3768	0.0051 m
DX	3	7	0.0013 m	-	-
DY			0.4011	0.0011 m	-
DZ			-0.3857	-0.2499	0.0024 m
DX	3	7	0.0011 m	-	-
DY			0.4366	0.0010 m	-
DZ			-0.4065	-0.3696	0.0021 m
DX	GRNX	8	0.0027 m	-	-
DY			0.4185	0.0022 m	-
DZ			-0.3395	-0.2401	0.0050 m
DX	GRNX	8	0.0013 m	-	-
DY			-0.3736	0.0014 m	-
DZ			-0.4133	-0.1572	0.0013 m
DX	GRNX	7	0.0037 m	-	-
DY			0.4046	0.0034 m	-
DZ			-0.3444	-0.2466	0.0068 m
DX	GRNX	7	0.0040 m	-	-
DY			0.5753	0.0032 m	-
DZ			-0.4853	-0.3109	0.0066 m
DX	GRNX	6	0.0045 m	-	-
DY			0.4272	0.0039 m	-
DZ			-0.3710	-0.2646	0.0076 m
DX	GRNX	6	0.0093 m	-	-
DY			0.6136	0.0104 m	-
DZ			-0.1653	-0.2558	0.0189 m
DX	GRNX	4	0.0051 m	-	-
DY			0.4895	0.0040 m	-
DZ			-0.4344	-0.2674	0.0081 m
DX	GRNX	4	0.0107 m	-	-
DY			0.6248	0.0105 m	-
DZ			-0.4554	-0.3329	0.0191 m
DX	GRNX	3	0.0036 m	-	-
DY			0.4186	0.0032 m	-
DZ			-0.3682	-0.2576	0.0063 m
DX	GRNX	3	0.0018 m	-	-
DY			-0.4432	0.0016 m	-
DZ			-0.4713	-0.0819	0.0015 m
DX	GRNX	1	0.0074 m	-	-
DY			0.2926	0.0058 m	-
DZ			-0.3862	-0.2522	0.0124 m
DX	GRNX	1	0.0058 m	-	-
DY			0.6544	0.0059 m	-
DZ			-0.4665	-0.3611	0.0109 m
DX	ZAN1	8	0.0016 m	-	-
DY			0.3781	0.0013 m	-
DZ			-0.3763	-0.2511	0.0030 m
DX	ZAN1	8	0.0022 m	-	-
DY			0.3838	0.0018 m	-

DZ			-0.2996	-0.3374	0.0045 m
DX	ZAN1	7	0.0013 m	-	-
DY			0.3861	0.0011 m	-
DZ			-0.3783	-0.2654	0.0025 m
DX	ZAN1	7	0.0015 m	-	-
DY			0.5120	0.0013 m	-
DZ			-0.4863	-0.4743	0.0026 m
DX	ZAN1	6	0.0012 m	-	-
DY			0.3915	0.0010 m	-
DZ			-0.3630	-0.2464	0.0022 m
DX	ZAN1	6	0.0014 m	-	-
DY			0.4147	0.0011 m	-
DZ			-0.4558	-0.4042	0.0024 m
DX	ZAN1	4	0.0010 m	-	-
DY			0.4119	0.0009 m	-
DZ			-0.3853	-0.2525	0.0020 m
DX	ZAN1	4	0.0017 m	-	-
DY			0.3909	0.0013 m	-
DZ			-0.4433	-0.4281	0.0030 m
DX	ZAN1	3	0.0014 m	-	-
DY			0.4017	0.0012 m	-
DZ			-0.3839	-0.2466	0.0026 m
DX	ZAN1	3	0.0014 m	-	-
DY			0.4576	0.0011 m	-
DZ			-0.4320	-0.4225	0.0025 m
DX	ZAN1	1	0.0019 m	-	-
DY			0.5031	0.0016 m	-
DZ			-0.3847	-0.3181	0.0034 m
DX	ZAN1	1	0.0052 m	-	-
DY			0.5250	0.0043 m	-
DZ			-0.4222	-0.4288	0.0095 m
DX	2	1	0.0057 m	-	-
DY			0.5958	0.0038 m	-
DZ			-0.4211	-0.5295	0.0081 m
DX	2	1	0.0011 m	-	-
DY			0.5228	0.0009 m	-
DZ			-0.4663	-0.4003	0.0018 m
DX	5	10	0.0018 m	-	-
DY			0.3899	0.0014 m	-
DZ			-0.3453	-0.2586	0.0032 m
DX	5	10	0.0020 m	-	-
DY			0.3889	0.0015 m	-
DZ			-0.4222	-0.2641	0.0038 m
DX	GRNX	9	0.0022 m	-	-
DY			0.3929	0.0018 m	-
DZ			-0.3690	-0.2479	0.0043 m
DX	GRNX	9	0.0094 m	-	-
DY			0.5681	0.0067 m	-
DZ			-0.3467	-0.3968	0.0160 m
DX	GRNX	5	0.0044 m	-	-
DY			0.3310	0.0035 m	-
DZ			-0.4051	-0.2236	0.0080 m
DX	GRNX	5	0.0012 m	-	-

DY			-0.4003	0.0012 m	-
DZ			-0.4570	-0.1345	0.0011 m
DX	GRNX	10	0.0019 m	-	-
DY			0.4139	0.0017 m	-
DZ			-0.3366	-0.2721	0.0039 m
DX	GRNX	10	0.0020 m	-	-
DY			0.4210	0.0017 m	-
DZ			-0.3705	-0.3208	0.0041 m
DX	ZAN1	9	0.0016 m	-	-
DY			0.4114	0.0014 m	-
DZ			-0.3880	-0.2527	0.0031 m
DX	ZAN1	9	0.0047 m	-	-
DY			0.4437	0.0035 m	-
DZ			-0.4168	-0.3744	0.0080 m
DX	ZAN1	5	0.0013 m	-	-
DY			0.3946	0.0011 m	-
DZ			-0.3783	-0.2475	0.0025 m
DX	ZAN1	5	0.0014 m	-	-
DY			0.3801	0.0011 m	-
DZ			-0.3615	-0.3527	0.0027 m
DX	ZAN1	10	0.0023 m	-	-
DY			0.4431	0.0018 m	-
DZ			-0.3372	-0.2977	0.0044 m
DX	ZAN1	10	0.0045 m	-	-
DY			0.5134	0.0038 m	-
DZ			-0.3922	-0.3475	0.0087 m
DX	10	8	0.0016 m	-	-
DY			0.4157	0.0014 m	-
DZ			-0.3444	-0.2766	0.0031 m
DX	10	8	0.0040 m	-	-
DY			0.4521	0.0032 m	-
DZ			-0.4567	-0.2586	0.0071 m
DX	10	8	0.0016 m	-	-
DY			0.3783	0.0013 m	-
DZ			-0.3949	-0.2719	0.0031 m
DX	10	7	0.0015 m	-	-
DY			0.4252	0.0013 m	-
DZ			-0.3521	-0.2895	0.0029 m
DX	10	7	0.0057 m	-	-
DY			-0.4223	0.0056 m	-
DZ			0.1414	-0.4480	0.0047 m
DX	10	7	0.0012 m	-	-
DY			0.4909	0.0011 m	-
DZ			-0.4806	-0.3716	0.0023 m
DX	10	6	0.0018 m	-	-
DY			0.4572	0.0014 m	-
DZ			-0.3790	-0.2932	0.0032 m
DX	10	6	0.0029 m	-	-
DY			-0.5203	0.0037 m	-
DZ			0.1341	-0.5170	0.0027 m
DX	10	6	0.0016 m	-	-
DY			0.4886	0.0014 m	-
DZ			-0.4288	-0.3714	0.0029 m

DX	10	4	0.0019 m	-	-
DY			0.4331	0.0013 m	-
DZ			-0.3959	-0.2819	0.0030 m
DX	10	4	0.0042 m	-	-
DY			0.4698	0.0034 m	-
DZ			-0.3330	-0.3157	0.0083 m
DX	10	4	0.0017 m	-	-
DY			0.4447	0.0014 m	-
DZ			-0.4121	-0.3642	0.0030 m
DX	10	3	0.0026 m	-	-
DY			0.4482	0.0023 m	-
DZ			-0.4221	-0.3428	0.0051 m
DX	10	3	0.0062 m	-	-
DY			0.4786	0.0046 m	-
DZ			-0.4534	-0.2814	0.0102 m
DX	10	3	0.0016 m	-	-
DY			0.4630	0.0012 m	-
DZ			-0.4149	-0.3234	0.0026 m
DX	10	1	0.0014 m	-	-
DY			0.4803	0.0012 m	-
DZ			-0.3485	-0.2098	0.0026 m
DX	10	1	0.0020 m	-	-
DY			0.4373	0.0016 m	-
DZ			-0.3008	-0.3159	0.0038 m
DX	10	1	0.0008 m	-	-
DY			0.4593	0.0007 m	-
DZ			-0.4194	-0.3703	0.0015 m
DX	5	8	0.0015 m	-	-
DY			0.3763	0.0013 m	-
DZ			-0.3750	-0.2570	0.0030 m
DX	5	8	0.0044 m	-	-
DY			0.4573	0.0035 m	-
DZ			-0.4631	-0.2613	0.0077 m
DX	5	8	0.0015 m	-	-
DY			0.3899	0.0013 m	-
DZ			-0.3955	-0.2889	0.0033 m
DX	5	7	0.0013 m	-	-
DY			0.3876	0.0011 m	-
DZ			-0.3842	-0.2689	0.0025 m
DX	5	7	0.0035 m	-	-
DY			0.4435	0.0028 m	-
DZ			-0.3975	-0.2680	0.0065 m
DX	5	7	0.0015 m	-	-
DY			0.5174	0.0013 m	-
DZ			-0.4769	-0.3848	0.0031 m
DX	5	6	0.0012 m	-	-
DY			0.3967	0.0010 m	-
DZ			-0.3792	-0.2530	0.0023 m
DX	5	6	0.0027 m	-	-
DY			0.3517	0.0021 m	-
DZ			-0.3102	-0.1770	0.0055 m
DX	5	6	0.0014 m	-	-
DY			0.4332	0.0011 m	-

DZ			-0.4358	-0.3710	0.0026 m
DX	5	4	0.0011 m	-	-
DY			0.3937	0.0010 m	-
DZ			-0.3778	-0.2457	0.0021 m
DX	5	4	0.0024 m	-	-
DY			0.4466	0.0018 m	-
DZ			-0.3230	-0.2243	0.0047 m
DX	5	4	0.0012 m	-	-
DY			0.4223	0.0010 m	-
DZ			-0.3723	-0.2758	0.0024 m
DX	5	3	0.0014 m	-	-
DY			0.4054	0.0012 m	-
DZ			-0.3818	-0.2530	0.0027 m
DX	5	3	0.0034 m	-	-
DY			0.4141	0.0030 m	-
DZ			-0.4157	-0.2286	0.0066 m
DX	5	3	0.0011 m	-	-
DY			0.4755	0.0009 m	-
DZ			-0.4418	-0.3790	0.0020 m
DX	5	1	0.0017 m	-	-
DY			0.4840	0.0015 m	-
DZ			-0.3669	-0.2939	0.0032 m
DX	5	1	0.0035 m	-	-
DY			0.6057	0.0023 m	-
DZ			-0.4576	-0.4199	0.0052 m
DX	5	1	0.0023 m	-	-
DY			0.5217	0.0020 m	-
DZ			-0.4773	-0.4141	0.0053 m
DX	1	7	0.0014 m	-	-
DY			0.4722	0.0012 m	-
DZ			-0.3791	-0.2902	0.0026 m
DX	1	7	0.0142 m	-	-
DY			-0.8894	0.0407 m	-
DZ			0.2046	-0.4360	0.0085 m
DX	1	7	0.0012 m	-	-
DY			0.4922	0.0010 m	-
DZ			-0.4902	-0.3847	0.0021 m
DX	1	6	0.0015 m	-	-
DY			0.4651	0.0012 m	-
DZ			-0.3630	-0.2723	0.0027 m
DX	1	6	0.0150 m	-	-
DY			-0.3425	0.0272 m	-
DZ			-0.2872	-0.0353	0.0127 m
DX	1	6	0.0017 m	-	-
DY			0.4971	0.0014 m	-
DZ			-0.5128	-0.4172	0.0030 m
DX	7	6	0.0011 m	-	-
DY			0.3981	0.0010 m	-
DZ			-0.3844	-0.2738	0.0021 m
DX	7	6	0.0314 m	-	-
DY			-0.5518	0.0584 m	-
DZ			-0.0350	-0.3511	0.0294 m
DX	7	6	0.0012 m	-	-

DY			0.4962	0.0011 m	-
DZ			-0.4361	-0.4100	0.0021 m
DX	7	4	0.0010 m	-	-
DY			0.3955	0.0009 m	-
DZ			-0.3864	-0.2684	0.0020 m
DX	7	4	0.0041 m	-	-
DY			0.3907	0.0028 m	-
DZ			-0.1445	-0.3198	0.0073 m
DX	7	4	0.0012 m	-	-
DY			0.4855	0.0011 m	-
DZ			-0.4498	-0.4379	0.0023 m
DX	3	8	0.0015 m	-	-
DY			0.3930	0.0013 m	-
DZ			-0.3832	-0.2428	0.0028 m
DX	3	8	0.0110 m	-	-
DY			0.2735	0.0086 m	-
DZ			0.0805	-0.2444	0.0332 m
DX	3	8	0.0012 m	-	-
DY			0.4199	0.0010 m	-
DZ			-0.3989	-0.3174	0.0023 m
DX	3	6	0.0013 m	-	-
DY			0.3990	0.0011 m	-
DZ			-0.3874	-0.2505	0.0024 m
DX	3	6	0.0052 m	-	-
DY			0.3848	0.0034 m	-
DZ			0.1551	-0.0997	0.0143 m
DX	3	6	0.0010 m	-	-
DY			0.4503	0.0008 m	-
DZ			-0.4590	-0.3775	0.0019 m
DX	3	4	0.0012 m	-	-
DY			0.3992	0.0011 m	-
DZ			-0.3878	-0.2422	0.0023 m
DX	3	4	0.0041 m	-	-
DY			0.4463	0.0026 m	-
DZ			-0.0691	-0.2587	0.0074 m
DX	3	4	0.0011 m	-	-
DY			0.4466	0.0009 m	-
DZ			-0.4359	-0.3825	0.0019 m
DX	3	1	0.0016 m	-	-
DY			0.4799	0.0014 m	-
DZ			-0.3811	-0.2896	0.0029 m
DX	3	1	0.0051 m	-	-
DY			0.4304	0.0031 m	-
DZ			-0.2338	-0.3550	0.0086 m
DX	3	1	0.0013 m	-	-
DY			0.4895	0.0011 m	-
DZ			-0.4872	-0.3632	0.0024 m
DX	9	8	0.0014 m	-	-
DY			0.3785	0.0012 m	-
DZ			-0.3811	-0.2368	0.0028 m
DX	9	8	0.0066 m	-	-
DY			0.4065	0.0050 m	-
DZ			-0.3697	-0.2428	0.0117 m

DX	9	8	0.0015 m	-	-
DY			0.3968	0.0012 m	-
DZ			-0.3873	-0.2889	0.0029 m
DX	9	7	0.0012 m	-	-
DY			0.3928	0.0011 m	-
DZ			-0.3880	-0.2453	0.0024 m
DX	9	7	0.0043 m	-	-
DY			0.3745	0.0035 m	-
DZ			-0.2502	-0.2347	0.0092 m
DX	9	7	0.0012 m	-	-
DY			0.4525	0.0011 m	-
DZ			-0.4358	-0.3298	0.0023 m
DX	9	6	0.0013 m	-	-
DY			0.3936	0.0011 m	-
DZ			-0.3923	-0.2485	0.0025 m
DX	9	6	0.0033 m	-	-
DY			0.3845	0.0025 m	-
DZ			-0.1660	-0.1676	0.0072 m
DX	9	6	0.0014 m	-	-
DY			0.4889	0.0012 m	-
DZ			-0.4582	-0.4049	0.0027 m
DX	9	4	0.0013 m	-	-
DY			0.3883	0.0011 m	-
DZ			-0.3910	-0.2419	0.0024 m
DX	9	4	0.0027 m	-	-
DY			0.3300	0.0019 m	-
DZ			-0.1705	-0.1902	0.0060 m
DX	9	4	0.0014 m	-	-
DY			0.4707	0.0012 m	-
DZ			-0.4371	-0.3532	0.0027 m
DX	9	3	0.0014 m	-	-
DY			0.4201	0.0012 m	-
DZ			-0.3979	-0.2503	0.0026 m
DX	9	3	0.0044 m	-	-
DY			0.3943	0.0037 m	-
DZ			-0.3139	-0.2335	0.0088 m
DX	9	3	0.0013 m	-	-
DY			0.4138	0.0010 m	-
DZ			-0.3964	-0.3156	0.0025 m
DX	9	1	0.0015 m	-	-
DY			0.4895	0.0014 m	-
DZ			-0.3615	-0.2206	0.0029 m
DX	9	1	0.0028 m	-	-
DY			0.4507	0.0021 m	-
DZ			-0.2168	-0.3099	0.0053 m
DX	9	1	0.0010 m	-	-
DY			0.4796	0.0009 m	-
DZ			-0.4632	-0.3712	0.0018 m
DX	6	4	0.0009 m	-	-
DY			0.3961	0.0008 m	-
DZ			-0.3726	-0.2440	0.0018 m
DX	6	4	0.0066 m	-	-
DY			0.3870	0.0042 m	-

DZ			-0.2321	-0.4086	0.0108 m
DX	6	4	0.0011 m	-	-
DY			0.4302	0.0009 m	-
DZ			-0.4251	-0.3762	0.0021 m
DX	8	7	0.0013 m	-	-
DY			0.3912	0.0012 m	-
DZ			-0.3859	-0.2644	0.0025 m
DX	8	7	0.0088 m	-	-
DY			0.2551	0.0056 m	-
DZ			0.2694	-0.3511	0.0253 m
DX	8	7	0.0014 m	-	-
DY			0.4530	0.0012 m	-
DZ			-0.4246	-0.3440	0.0027 m
DX	8	6	0.0013 m	-	-
DY			0.3883	0.0012 m	-
DZ			-0.3846	-0.2657	0.0026 m
DX	8	6	0.0040 m	-	-
DY			0.2489	0.0028 m	-
DZ			0.0653	-0.1728	0.0101 m
DX	8	6	0.0013 m	-	-
DY			0.4108	0.0011 m	-
DZ			-0.3836	-0.3345	0.0024 m
DX	8	4	0.0013 m	-	-
DY			0.3820	0.0011 m	-
DZ			-0.3850	-0.2546	0.0025 m
DX	8	4	0.0033 m	-	-
DY			0.2834	0.0022 m	-
DZ			-0.0591	-0.2489	0.0070 m
DX	8	4	0.0013 m	-	-
DY			0.4115	0.0011 m	-
DZ			-0.4037	-0.3320	0.0025 m
DX	8	1	0.0017 m	-	-
DY			0.4851	0.0015 m	-
DZ			-0.3844	-0.2850	0.0031 m
DX	8	1	0.0037 m	-	-
DY			0.4610	0.0025 m	-
DZ			-0.1606	-0.3387	0.0065 m
DX	8	1	0.0012 m	-	-
DY			0.4904	0.0010 m	-
DZ			-0.4857	-0.3872	0.0021 m
DX	10	9	0.0013 m	-	-
DY			0.4099	0.0012 m	-
DZ			-0.3456	-0.2643	0.0027 m
DX	10	9	0.0177 m	-	-
DY			-0.0295	0.0159 m	-
DZ			0.0091	-0.1413	0.0133 m
DX	10	9	0.0012 m	-	-
DY			0.3691	0.0010 m	-
DZ			-0.3764	-0.2829	0.0024 m
DX	5	9	0.0015 m	-	-
DY			0.3832	0.0012 m	-
DZ			-0.3702	-0.2354	0.0029 m
DX	5	9	0.0151 m	-	-

DY			-0.0082	0.0152 m	-
DZ			0.0097	-0.1581	0.0116 m
DX	5	9	0.0021 m	-	-
DY			0.4723	0.0017 m	-
DZ			-0.4518	-0.2577	0.0043 m

Adjustment Results

Coordinates

Station		Coordinate	Corr	Sd	
1	Latitude	61° 48' 37.00792" N	0.0214 m	0.0020 m	
	Longitude	147° 30' 54.95489" W	-0.0030 m	0.0014 m	
	Height	862.5073 m	-0.0198 m	0.0038 m	
10	Latitude	62° 57' 11.81529" N	0.0238 m	0.0020 m	
	Longitude	149° 39' 25.27183" W	-0.0055 m	0.0015 m	
	Height	515.2772 m	-0.0222 m	0.0038 m	
2	Latitude	61° 47' 53.49494" N	0.0208 m	0.0023 m	
	Longitude	148° 15' 18.05244" W	-0.0036 m	0.0017 m	
	Height	512.9204 m	-0.0160 m	0.0046 m	
3	Latitude	61° 37' 40.15839" N	0.0222 m	0.0017 m	
	Longitude	149° 07' 14.91945" W	-0.0046 m	0.0014 m	
	Height	176.3194 m	-0.0152 m	0.0033 m	
4	Latitude	61° 34' 28.41727" N	0.0183 m	0.0018 m	
	Longitude	149° 43' 41.78356" W	-0.0043 m	0.0014 m	
	Height	71.1298 m	-0.0114 m	0.0034 m	
5	Latitude	61° 25' 34.10603" N	0.0203 m	0.0017 m	
	Longitude	150° 01' 08.71085" W	-0.0057 m	0.0014 m	
	Height	69.1184 m	-0.0036 m	0.0032 m	
6	Latitude	61° 45' 09.23825" N	0.0184 m	0.0018 m	
	Longitude	150° 03' 19.28291" W	-0.0048 m	0.0014 m	
	Height	73.8248 m	-0.0079 m	0.0035 m	
7	Latitude	62° 06' 16.67578" N	0.0195 m	0.0018 m	
	Longitude	150° 03' 35.21400" W	-0.0048 m	0.0014 m	
	Height	89.5350 m	-0.0124 m	0.0035 m	
8	Latitude	62° 18' 58.08318" N	0.0231 m	0.0018 m	
	Longitude	150° 14' 03.02794" W	-0.0058 m	0.0014 m	
	Height	122.5348 m	-0.0149 m	0.0034 m	
9	Latitude	62° 42' 18.92453" N	0.0192 m	0.0019 m	
	Longitude	150° 13' 16.45017" W	-0.0042 m	0.0014 m	
	Height	237.6121 m	-0.0133 m	0.0038 m	
GRNX	Latitude	63° 50' 07.79888" N	0.0000 m	-	fixed
	Longitude	148° 58' 41.39295" W	0.0000 m	-	fixed
	Height	594.0157 m	0.0000 m	-	fixed
ZAN1	Latitude	61° 13' 45.12927" N	0.0000 m	-	fixed
	Longitude	149° 46' 48.80507" W	0.0000 m	-	fixed
	Height	79.7938 m	0.0000 m	-	fixed

Observations and Residuals

	Station	Target	Adj obs	Resid	Resid (ENH)	Sd
DX	GRNX	ZAN1	-242607.7557 m	0.0267 m	-0.0296 m	0.0000 m
DY			-95625.1820 m	0.0507 m	0.0429 m	0.0000 m

DZ			-134435.6413 m	-0.0025 m	-0.0238 m	0.0000 m
DX	10	2	-60305.5285 m	0.0022 m	-0.0009 m	0.0025 m
DY			-120984.2909 m	0.0024 m	0.0013 m	0.0021 m
DZ			-59697.2961 m	-0.0032 m	-0.0043 m	0.0043 m
DX	5	2	79146.2053 m	-0.0020 m	-0.0024 m	0.0026 m
DY			-61750.2650 m	0.0016 m	0.0042 m	0.0021 m
DZ			20103.5204 m	0.0104 m	0.0096 m	0.0044 m
DX	3	2	37947.3032 m	-0.0014 m	0.0001 m	0.0025 m
DY			-30518.1521 m	-0.0009 m	-0.0010 m	0.0021 m
DZ			9294.2849 m	0.0012 m	0.0018 m	0.0043 m
DX	9	2	-24722.4627 m	0.0001 m	-0.0001 m	0.0025 m
DY			-133618.1365 m	0.0002 m	-0.0001 m	0.0021 m
DZ			-46825.7985 m	-0.0006 m	-0.0006 m	0.0043 m
DX	GRNX	2	-153213.7300 m	0.0189 m	-0.0101 m	0.0026 m
DY			-136650.1246 m	0.0232 m	0.0383 m	0.0022 m
DZ			-103811.8293 m	0.0294 m	0.0140 m	0.0043 m
DX	ZAN1	2	89394.0257 m	-0.0136 m	0.0239 m	0.0026 m
DY			-41024.9426 m	-0.0356 m	-0.0227 m	0.0022 m
DZ			30623.8120 m	0.0069 m	0.0203 m	0.0043 m
DX	2	8	-8957.8184 m	-0.0013 m	0.0007 m	0.0025 m
DY			115118.8264 m	-0.0016 m	-0.0012 m	0.0021 m
DZ			26704.7005 m	0.0010 m	0.0018 m	0.0043 m
DX	2	7	-22513.4207 m	0.0017 m	0.0008 m	0.0024 m
DY			96875.4246 m	0.0001 m	0.0011 m	0.0020 m
DZ			15685.5880 m	-0.0005 m	-0.0011 m	0.0042 m
DX	2	6	-52390.6585 m	0.0017 m	-0.0018 m	0.0025 m
DY			79397.5735 m	0.0032 m	0.0027 m	0.0021 m
DZ			-2791.7228 m	-0.0002 m	-0.0016 m	0.0043 m
DX	2	4	-58801.9442 m	0.0011 m	-0.0020 m	0.0025 m
DY			55650.0015 m	0.0030 m	0.0004 m	0.0021 m
DZ			-12209.7830 m	-0.0038 m	-0.0045 m	0.0043 m
DX	1	4	-80408.1786 m	-0.0073 m	-0.0031 m	0.0020 m
DY			88150.8490 m	-0.0010 m	0.0000 m	0.0017 m
DZ			-13154.3927 m	0.0125 m	0.0142 m	0.0036 m
DX	1	4	-80408.1786 m	0.0056 m	0.0107 m	0.0020 m
DY			88150.8490 m	-0.0091 m	0.0004 m	0.0017 m
DZ			-13154.3927 m	0.0011 m	0.0010 m	0.0036 m
DX	3	7	15433.8825 m	-0.0008 m	-0.0011 m	0.0018 m
DY			66357.2725 m	0.0008 m	0.0022 m	0.0016 m
DZ			24979.8729 m	0.0052 m	0.0047 m	0.0034 m
DX	3	7	15433.8825 m	0.0026 m	0.0003 m	0.0018 m
DY			66357.2725 m	0.0013 m	0.0020 m	0.0016 m
DZ			24979.8729 m	-0.0012 m	-0.0024 m	0.0034 m
DX	GRNX	8	-162171.5484 m	0.0186 m	-0.0142 m	0.0019 m
DY			-21531.2981 m	0.0277 m	0.0207 m	0.0017 m
DZ			-77107.1288 m	-0.0147 m	-0.0265 m	0.0032 m
DX	GRNX	8	-162171.5484 m	0.0110 m	-0.0197 m	0.0019 m
DY			-21531.2981 m	0.0296 m	0.0219 m	0.0017 m
DZ			-77107.1288 m	-0.0006 m	-0.0114 m	0.0032 m
DX	GRNX	7	-175727.1506 m	0.0105 m	-0.0208 m	0.0019 m
DY			-39774.7000 m	0.0306 m	0.0192 m	0.0017 m
DZ			-88126.2414 m	-0.0068 m	-0.0170 m	0.0033 m
DX	GRNX	7	-175727.1506 m	0.0218 m	-0.0104 m	0.0019 m

DY			-39774.7000 m	0.0252 m	0.0276 m	0.0017 m
DZ			-88126.2414 m	-0.0018 m	-0.0156 m	0.0033 m
DX	GRNX	6	-205604.3885 m	-0.0012 m	-0.0326 m	0.0019 m
DY			-57252.5511 m	0.0373 m	0.0175 m	0.0016 m
DZ			-106603.5521 m	0.0026 m	-0.0057 m	0.0033 m
DX	GRNX	6	-205604.3885 m	0.0282 m	-0.0302 m	0.0019 m
DY			-57252.5511 m	0.0522 m	0.0660 m	0.0016 m
DZ			-106603.5521 m	0.0456 m	0.0184 m	0.0033 m
DX	GRNX	4	-212015.6741 m	0.0003 m	-0.0333 m	0.0019 m
DY			-81000.1231 m	0.0390 m	0.0175 m	0.0016 m
DZ			-116021.6123 m	-0.0017 m	-0.0105 m	0.0033 m
DX	GRNX	4	-212015.6741 m	0.0445 m	0.0482 m	0.0019 m
DY			-81000.1231 m	-0.0295 m	0.0369 m	0.0016 m
DZ			-116021.6123 m	0.0370 m	0.0231 m	0.0033 m
DX	GRNX	3	-191161.0331 m	0.0188 m	-0.0141 m	0.0019 m
DY			-106131.9725 m	0.0278 m	0.0200 m	0.0016 m
DZ			-113106.1143 m	-0.0167 m	-0.0285 m	0.0031 m
DX	GRNX	3	-191161.0331 m	0.0184 m	-0.0166 m	0.0019 m
DY			-106131.9725 m	0.0305 m	0.0256 m	0.0016 m
DZ			-113106.1143 m	-0.0060 m	-0.0193 m	0.0031 m
DX	GRNX	1	-131607.4955 m	0.0542 m	0.0053 m	0.0021 m
DY			-169150.9721 m	0.0264 m	0.0435 m	0.0018 m
DZ			-102867.2196 m	-0.0235 m	-0.0476 m	0.0036 m
DX	GRNX	1	-131607.4955 m	0.0052 m	-0.0135 m	0.0021 m
DY			-169150.9721 m	0.0189 m	0.0156 m	0.0018 m
DZ			-102867.2196 m	0.0063 m	-0.0006 m	0.0036 m
DX	ZAN1	8	80436.2073 m	-0.0139 m	0.0047 m	0.0019 m
DY			74093.8839 m	-0.0136 m	-0.0197 m	0.0017 m
DZ			57328.5125 m	-0.0065 m	0.0034 m	0.0032 m
DX	ZAN1	8	80436.2073 m	-0.0112 m	0.0082 m	0.0019 m
DY			74093.8839 m	-0.0160 m	-0.0174 m	0.0017 m
DZ			57328.5125 m	-0.0037 m	0.0053 m	0.0032 m
DX	ZAN1	7	66880.6051 m	-0.0115 m	0.0037 m	0.0019 m
DY			55850.4820 m	-0.0110 m	-0.0154 m	0.0017 m
DZ			46309.3999 m	-0.0038 m	0.0041 m	0.0033 m
DX	ZAN1	7	66880.6051 m	-0.0128 m	0.0071 m	0.0019 m
DY			55850.4820 m	-0.0157 m	-0.0159 m	0.0017 m
DZ			46309.3999 m	0.0014 m	0.0104 m	0.0033 m
DX	ZAN1	6	37003.3672 m	-0.0128 m	0.0043 m	0.0019 m
DY			38372.6309 m	-0.0125 m	-0.0160 m	0.0016 m
DZ			27832.0892 m	-0.0015 m	0.0070 m	0.0033 m
DX	ZAN1	6	37003.3672 m	-0.0102 m	0.0055 m	0.0019 m
DY			38372.6309 m	-0.0124 m	-0.0144 m	0.0016 m
DZ			27832.0892 m	-0.0025 m	0.0051 m	0.0033 m
DX	ZAN1	4	30592.0816 m	-0.0132 m	0.0045 m	0.0019 m
DY			14625.0589 m	-0.0129 m	-0.0151 m	0.0016 m
DZ			18414.0290 m	0.0013 m	0.0097 m	0.0033 m
DX	ZAN1	4	30592.0816 m	-0.0108 m	0.0064 m	0.0019 m
DY			14625.0589 m	-0.0137 m	-0.0149 m	0.0016 m
DZ			18414.0290 m	-0.0014 m	0.0065 m	0.0033 m
DX	ZAN1	3	51446.7226 m	-0.0105 m	0.0053 m	0.0019 m
DY			-10506.7905 m	-0.0123 m	-0.0169 m	0.0016 m
DZ			21329.5270 m	-0.0073 m	0.0009 m	0.0031 m

DX	ZAN1	3	51446.7226 m	-0.0149 m	0.0059 m	0.0019 m
DY			-10506.7905 m	-0.0155 m	-0.0180 m	0.0016 m
DZ			21329.5270 m	0.0004 m	0.0103 m	0.0031 m
DX	ZAN1	1	111000.2602 m	-0.0078 m	0.0063 m	0.0021 m
DY			-73525.7901 m	-0.0118 m	-0.0155 m	0.0018 m
DZ			31568.4217 m	-0.0093 m	-0.0020 m	0.0036 m
DX	ZAN1	1	111000.2602 m	-0.0059 m	0.0027 m	0.0021 m
DY			-73525.7901 m	-0.0065 m	-0.0143 m	0.0018 m
DZ			31568.4217 m	-0.0144 m	-0.0087 m	0.0036 m
DX	2	1	21606.2344 m	0.0010 m	0.0011 m	0.0025 m
DY			-32500.8475 m	-0.0006 m	-0.0010 m	0.0020 m
DZ			944.6098 m	-0.0031 m	-0.0030 m	0.0042 m
DX	2	1	21606.2344 m	-0.0012 m	-0.0001 m	0.0025 m
DY			-32500.8475 m	-0.0007 m	0.0000 m	0.0020 m
DZ			944.6098 m	0.0026 m	0.0030 m	0.0042 m
DX	5	10	139451.7338 m	0.0095 m	0.0003 m	0.0021 m
DY			59234.0259 m	0.0051 m	0.0040 m	0.0017 m
DZ			79800.8165 m	-0.0115 m	-0.0153 m	0.0038 m
DX	5	10	139451.7338 m	-0.0102 m	0.0000 m	0.0021 m
DY			59234.0259 m	-0.0059 m	-0.0029 m	0.0017 m
DZ			79800.8165 m	0.0156 m	0.0193 m	0.0038 m
DX	GRNX	9	-128491.2673 m	0.0204 m	-0.0146 m	0.0020 m
DY			-3031.9881 m	0.0293 m	0.0244 m	0.0017 m
DZ			-56986.0308 m	-0.0110 m	-0.0242 m	0.0036 m
DX	GRNX	9	-128491.2673 m	0.0331 m	-0.0071 m	0.0020 m
DY			-3031.9881 m	0.0282 m	0.0307 m	0.0017 m
DZ			-56986.0308 m	-0.0176 m	-0.0347 m	0.0036 m
DX	GRNX	5	-232359.9353 m	-0.0013 m	-0.0257 m	0.0019 m
DY			-74899.8595 m	0.0292 m	0.0113 m	0.0016 m
DZ			-123915.3498 m	-0.0029 m	-0.0088 m	0.0030 m
DX	GRNX	5	-232359.9353 m	0.0123 m	-0.0252 m	0.0019 m
DY			-74899.8595 m	0.0367 m	0.0228 m	0.0016 m
DZ			-123915.3498 m	-0.0083 m	-0.0205 m	0.0030 m
DX	GRNX	10	-92908.2014 m	0.0208 m	-0.0148 m	0.0021 m
DY			-15665.8337 m	0.0298 m	0.0240 m	0.0018 m
DZ			-44114.5333 m	-0.0131 m	-0.0264 m	0.0036 m
DX	GRNX	10	-92908.2014 m	0.0146 m	-0.0143 m	0.0021 m
DY			-15665.8337 m	0.0255 m	0.0248 m	0.0018 m
DZ			-44114.5333 m	0.0042 m	-0.0076 m	0.0036 m
DX	ZAN1	9	114116.4884 m	-0.0097 m	0.0055 m	0.0020 m
DY			92593.1939 m	-0.0120 m	-0.0147 m	0.0017 m
DZ			77449.6105 m	-0.0043 m	0.0031 m	0.0036 m
DX	ZAN1	9	114116.4884 m	-0.0255 m	-0.0059 m	0.0020 m
DY			92593.1939 m	-0.0080 m	-0.0245 m	0.0017 m
DZ			77449.6105 m	-0.0035 m	0.0095 m	0.0036 m
DX	ZAN1	5	10247.8204 m	-0.0165 m	0.0049 m	0.0019 m
DY			20725.3225 m	-0.0153 m	-0.0182 m	0.0016 m
DZ			10520.2916 m	0.0021 m	0.0124 m	0.0030 m
DX	ZAN1	5	10247.8204 m	-0.0140 m	0.0056 m	0.0019 m
DY			20725.3225 m	-0.0147 m	-0.0203 m	0.0016 m
DZ			10520.2916 m	-0.0066 m	0.0036 m	0.0030 m
DX	ZAN1	10	149699.5542 m	-0.0067 m	0.0058 m	0.0021 m
DY			79959.3483 m	-0.0107 m	-0.0121 m	0.0018 m

DZ			90321.1080 m	-0.0048 m	0.0011 m	0.0036 m
DX	ZAN1	10	149699.5542 m	-0.0352 m	0.0007 m	0.0021 m
DY			79959.3483 m	-0.0213 m	-0.0353 m	0.0018 m
DZ			90321.1080 m	0.0015 m	0.0211 m	0.0036 m
DX	10	8	-69263.3469 m	-0.0020 m	-0.0010 m	0.0021 m
DY			-5865.4644 m	-0.0001 m	-0.0033 m	0.0017 m
DZ			-32992.5956 m	-0.0037 m	-0.0025 m	0.0037 m
DX	10	8	-69263.3469 m	-0.0016 m	-0.0015 m	0.0021 m
DY			-5865.4644 m	0.0008 m	-0.0007 m	0.0017 m
DZ			-32992.5956 m	0.0005 m	0.0009 m	0.0037 m
DX	10	8	-69263.3469 m	0.0012 m	0.0013 m	0.0021 m
DY			-5865.4644 m	-0.0008 m	-0.0010 m	0.0017 m
DZ			-32992.5956 m	-0.0034 m	-0.0034 m	0.0037 m
DX	10	7	-82818.9492 m	-0.0026 m	-0.0008 m	0.0020 m
DY			-24108.8663 m	-0.0005 m	-0.0001 m	0.0017 m
DZ			-44011.7081 m	0.0047 m	0.0053 m	0.0036 m
DX	10	7	-82818.9492 m	-0.0221 m	-0.0349 m	0.0020 m
DY			-24108.8663 m	0.0276 m	-0.0055 m	0.0017 m
DZ			-44011.7081 m	-0.0021 m	0.0005 m	0.0036 m
DX	10	7	-82818.9492 m	0.0066 m	-0.0006 m	0.0020 m
DY			-24108.8663 m	0.0046 m	0.0036 m	0.0017 m
DZ			-44011.7081 m	-0.0077 m	-0.0105 m	0.0036 m
DX	10	6	-112696.1871 m	-0.0051 m	-0.0014 m	0.0020 m
DY			-41586.7174 m	-0.0014 m	-0.0022 m	0.0017 m
DZ			-62489.0188 m	0.0053 m	0.0070 m	0.0036 m
DX	10	6	-112696.1871 m	-0.0153 m	-0.0220 m	0.0020 m
DY			-41586.7174 m	0.0165 m	-0.0011 m	0.0017 m
DZ			-62489.0188 m	0.0070 m	0.0084 m	0.0036 m
DX	10	6	-112696.1871 m	0.0019 m	0.0020 m	0.0020 m
DY			-41586.7174 m	-0.0012 m	-0.0004 m	0.0017 m
DZ			-62489.0188 m	-0.0028 m	-0.0030 m	0.0036 m
DX	10	4	-119107.4727 m	-0.0068 m	-0.0021 m	0.0020 m
DY			-65334.2894 m	-0.0016 m	-0.0012 m	0.0017 m
DZ			-71907.0790 m	0.0104 m	0.0123 m	0.0037 m
DX	10	4	-119107.4727 m	0.0212 m	0.0049 m	0.0020 m
DY			-65334.2894 m	0.0068 m	0.0190 m	0.0017 m
DZ			-71907.0790 m	-0.0008 m	-0.0106 m	0.0037 m
DX	10	4	-119107.4727 m	0.0094 m	-0.0006 m	0.0020 m
DY			-65334.2894 m	0.0062 m	0.0043 m	0.0017 m
DZ			-71907.0790 m	-0.0125 m	-0.0162 m	0.0037 m
DX	10	3	-98252.8317 m	-0.0140 m	-0.0083 m	0.0020 m
DY			-90466.1388 m	0.0014 m	-0.0074 m	0.0017 m
DZ			-68991.5810 m	0.0061 m	0.0106 m	0.0036 m
DX	10	3	-98252.8317 m	0.0173 m	0.0065 m	0.0020 m
DY			-90466.1388 m	0.0026 m	0.0117 m	0.0017 m
DZ			-68991.5810 m	-0.0061 m	-0.0128 m	0.0036 m
DX	10	3	-98252.8317 m	-0.0026 m	0.0006 m	0.0020 m
DY			-90466.1388 m	-0.0022 m	-0.0030 m	0.0017 m
DZ			-68991.5810 m	-0.0001 m	0.0014 m	0.0036 m
DX	10	1	-38699.2941 m	-0.0003 m	-0.0005 m	0.0019 m
DY			-153485.1384 m	0.0003 m	-0.0006 m	0.0016 m
DZ			-58752.6863 m	-0.0011 m	-0.0010 m	0.0035 m
DX	10	1	-38699.2941 m	0.0029 m	0.0035 m	0.0019 m

DY			-153485.1384 m	-0.0024 m	0.0012 m	0.0016 m
DZ			-58752.6863 m	0.0001 m	-0.0005 m	0.0035 m
DX	10	1	-38699.2941 m	0.0004 m	-0.0011 m	0.0019 m
DY			-153485.1384 m	0.0016 m	0.0005 m	0.0016 m
DZ			-58752.6863 m	-0.0011 m	-0.0015 m	0.0035 m
DX	5	8	70188.3869 m	0.0043 m	0.0002 m	0.0020 m
DY			53368.5614 m	0.0023 m	0.0005 m	0.0017 m
DZ			46808.2209 m	-0.0080 m	-0.0094 m	0.0036 m
DX	5	8	70188.3869 m	0.0060 m	-0.0002 m	0.0020 m
DY			53368.5614 m	0.0037 m	0.0018 m	0.0017 m
DZ			46808.2209 m	-0.0092 m	-0.0115 m	0.0036 m
DX	5	8	70188.3869 m	-0.0059 m	0.0005 m	0.0020 m
DY			53368.5614 m	-0.0040 m	-0.0028 m	0.0017 m
DZ			46808.2209 m	0.0072 m	0.0098 m	0.0036 m
DX	5	7	56632.7846 m	0.0055 m	-0.0008 m	0.0019 m
DY			35125.1596 m	0.0041 m	0.0041 m	0.0016 m
DZ			35789.1084 m	-0.0040 m	-0.0067 m	0.0035 m
DX	5	7	56632.7846 m	0.0067 m	-0.0022 m	0.0019 m
DY			35125.1596 m	0.0064 m	0.0078 m	0.0016 m
DZ			35789.1084 m	-0.0003 m	-0.0046 m	0.0035 m
DX	5	7	56632.7846 m	-0.0027 m	0.0006 m	0.0019 m
DY			35125.1596 m	-0.0023 m	0.0007 m	0.0016 m
DZ			35789.1084 m	0.0077 m	0.0084 m	0.0035 m
DX	5	6	26755.5468 m	0.0046 m	-0.0008 m	0.0019 m
DY			17647.3085 m	0.0035 m	0.0034 m	0.0016 m
DZ			17311.7977 m	-0.0033 m	-0.0056 m	0.0035 m
DX	5	6	26755.5468 m	0.0000 m	-0.0011 m	0.0019 m
DY			17647.3085 m	0.0013 m	0.0043 m	0.0016 m
DZ			17311.7977 m	0.0079 m	0.0067 m	0.0035 m
DX	5	6	26755.5468 m	0.0010 m	-0.0011 m	0.0019 m
DY			17647.3085 m	0.0018 m	0.0035 m	0.0016 m
DZ			17311.7977 m	0.0041 m	0.0027 m	0.0035 m
DX	5	4	20344.2611 m	0.0040 m	-0.0011 m	0.0019 m
DY			-6100.2636 m	0.0036 m	0.0041 m	0.0016 m
DZ			7893.7375 m	-0.0010 m	-0.0034 m	0.0034 m
DX	5	4	20344.2611 m	0.0017 m	0.0001 m	0.0019 m
DY			-6100.2636 m	0.0009 m	0.0058 m	0.0016 m
DZ			7893.7375 m	0.0084 m	0.0065 m	0.0034 m
DX	5	4	20344.2611 m	0.0025 m	-0.0010 m	0.0019 m
DY			-6100.2636 m	0.0026 m	0.0026 m	0.0016 m
DZ			7893.7375 m	-0.0009 m	-0.0024 m	0.0034 m
DX	5	3	41198.9021 m	0.0069 m	0.0003 m	0.0019 m
DY			-31232.1129 m	0.0037 m	0.0021 m	0.0016 m
DZ			10809.2355 m	-0.0100 m	-0.0125 m	0.0034 m
DX	5	3	41198.9021 m	0.0058 m	0.0013 m	0.0019 m
DY			-31232.1129 m	0.0019 m	0.0042 m	0.0016 m
DZ			10809.2355 m	-0.0021 m	-0.0046 m	0.0034 m
DX	5	3	41198.9021 m	-0.0038 m	-0.0006 m	0.0019 m
DY			-31232.1129 m	-0.0015 m	0.0014 m	0.0016 m
DZ			10809.2355 m	0.0104 m	0.0110 m	0.0034 m
DX	5	1	100752.4397 m	0.0117 m	0.0012 m	0.0021 m
DY			-94251.1125 m	0.0054 m	0.0043 m	0.0017 m
DZ			21048.1302 m	-0.0146 m	-0.0190 m	0.0037 m

DX	5	1	100752.4397 m	0.0126 m	0.0035 m	0.0021 m
DY			-94251.1125 m	0.0032 m	0.0048 m	0.0017 m
DZ			21048.1302 m	-0.0130 m	-0.0174 m	0.0037 m
DX	5	1	100752.4397 m	-0.0160 m	-0.0102 m	0.0021 m
DY			-94251.1125 m	0.0026 m	0.0091 m	0.0017 m
DZ			21048.1302 m	0.0420 m	0.0429 m	0.0037 m
DX	1	7	-44119.6551 m	-0.0018 m	-0.0020 m	0.0019 m
DY			129376.2721 m	0.0012 m	0.0026 m	0.0017 m
DZ			14740.9782 m	0.0071 m	0.0066 m	0.0035 m
DX	1	7	-44119.6551 m	0.0200 m	0.0806 m	0.0019 m
DY			129376.2721 m	-0.0829 m	-0.0200 m	0.0017 m
DZ			14740.9782 m	0.0094 m	0.0213 m	0.0035 m
DX	1	7	-44119.6551 m	0.0029 m	0.0012 m	0.0019 m
DY			129376.2721 m	0.0004 m	0.0002 m	0.0017 m
DZ			14740.9782 m	-0.0044 m	-0.0051 m	0.0035 m
DX	1	6	-73996.8930 m	-0.0050 m	-0.0023 m	0.0020 m
DY			111898.4210 m	-0.0005 m	-0.0004 m	0.0017 m
DZ			-3736.3325 m	0.0075 m	0.0087 m	0.0036 m
DX	1	6	-73996.8930 m	0.0304 m	0.0625 m	0.0020 m
DY			111898.4210 m	-0.0547 m	-0.0022 m	0.0017 m
DZ			-3736.3325 m	0.0023 m	0.0038 m	0.0036 m
DX	1	6	-73996.8930 m	0.0117 m	0.0013 m	0.0020 m
DY			111898.4210 m	0.0059 m	0.0022 m	0.0017 m
DZ			-3736.3325 m	-0.0197 m	-0.0235 m	0.0036 m
DX	7	6	-29877.2379 m	-0.0010 m	0.0001 m	0.0018 m
DY			-17477.8511 m	-0.0007 m	-0.0007 m	0.0016 m
DZ			-18477.3108 m	0.0007 m	0.0012 m	0.0034 m
DX	7	6	-29877.2379 m	-0.0320 m	-0.0555 m	0.0018 m
DY			-17477.8511 m	0.0457 m	-0.0140 m	0.0016 m
DZ			-18477.3108 m	-0.0206 m	-0.0159 m	0.0034 m
DX	7	6	-29877.2379 m	0.0042 m	-0.0003 m	0.0018 m
DY			-17477.8511 m	0.0027 m	0.0026 m	0.0016 m
DZ			-18477.3108 m	-0.0039 m	-0.0058 m	0.0034 m
DX	7	4	-36288.5235 m	-0.0021 m	-0.0002 m	0.0018 m
DY			-41225.4231 m	-0.0010 m	-0.0002 m	0.0016 m
DZ			-27895.3709 m	0.0039 m	0.0045 m	0.0034 m
DX	7	4	-36288.5235 m	-0.0057 m	-0.0020 m	0.0018 m
DY			-41225.4231 m	-0.0010 m	-0.0015 m	0.0016 m
DZ			-27895.3709 m	0.0070 m	0.0087 m	0.0034 m
DX	7	4	-36288.5235 m	0.0041 m	0.0002 m	0.0018 m
DY			-41225.4231 m	0.0021 m	0.0011 m	0.0016 m
DZ			-27895.3709 m	-0.0064 m	-0.0078 m	0.0034 m
DX	3	8	28989.4847 m	-0.0017 m	-0.0001 m	0.0019 m
DY			84600.6743 m	-0.0009 m	-0.0017 m	0.0016 m
DZ			35998.9854 m	0.0002 m	0.0011 m	0.0034 m
DX	3	8	28989.4847 m	-0.0075 m	-0.0044 m	0.0019 m
DY			84600.6743 m	0.0007 m	-0.0069 m	0.0016 m
DZ			35998.9854 m	-0.0032 m	0.0001 m	0.0034 m
DX	3	8	28989.4847 m	-0.0006 m	0.0007 m	0.0019 m
DY			84600.6743 m	-0.0012 m	-0.0015 m	0.0016 m
DZ			35998.9854 m	-0.0011 m	-0.0004 m	0.0034 m
DX	3	6	-14443.3554 m	-0.0012 m	-0.0013 m	0.0018 m
DY			48879.4214 m	0.0008 m	0.0020 m	0.0015 m

DZ			6502.5622 m	0.0053 m	0.0050 m	0.0033 m
DX	3	6	-14443.3554 m	-0.0100 m	-0.0038 m	0.0018 m
DY			48879.4214 m	-0.0016 m	-0.0088 m	0.0015 m
DZ			6502.5622 m	-0.0011 m	0.0035 m	0.0033 m
DX	3	6	-14443.3554 m	0.0051 m	0.0003 m	0.0018 m
DY			48879.4214 m	0.0027 m	0.0028 m	0.0015 m
DZ			6502.5622 m	-0.0048 m	-0.0070 m	0.0033 m
DX	3	4	-20854.6410 m	-0.0024 m	-0.0016 m	0.0018 m
DY			25131.8494 m	0.0004 m	0.0024 m	0.0015 m
DZ			-2915.4980 m	0.0086 m	0.0084 m	0.0033 m
DX	3	4	-20854.6410 m	-0.0063 m	-0.0020 m	0.0018 m
DY			25131.8494 m	-0.0014 m	-0.0051 m	0.0015 m
DZ			-2915.4980 m	0.0007 m	0.0036 m	0.0033 m
DX	3	4	-20854.6410 m	0.0063 m	0.0002 m	0.0018 m
DY			25131.8494 m	0.0036 m	0.0019 m	0.0015 m
DZ			-2915.4980 m	-0.0095 m	-0.0118 m	0.0033 m
DX	3	1	59553.5376 m	0.0020 m	0.0008 m	0.0020 m
DY			-63018.9996 m	0.0003 m	0.0000 m	0.0017 m
DZ			10238.8947 m	-0.0034 m	-0.0039 m	0.0035 m
DX	3	1	59553.5376 m	-0.0076 m	0.0011 m	0.0020 m
DY			-63018.9996 m	-0.0058 m	-0.0103 m	0.0017 m
DZ			10238.8947 m	-0.0041 m	0.0009 m	0.0035 m
DX	3	1	59553.5376 m	-0.0035 m	-0.0009 m	0.0020 m
DY			-63018.9996 m	-0.0011 m	0.0014 m	0.0017 m
DZ			10238.8947 m	0.0095 m	0.0101 m	0.0035 m
DX	9	8	-33680.2811 m	-0.0008 m	0.0000 m	0.0020 m
DY			-18499.3101 m	-0.0005 m	-0.0022 m	0.0017 m
DZ			-20121.0980 m	-0.0029 m	-0.0021 m	0.0037 m
DX	9	8	-33680.2811 m	-0.0008 m	-0.0008 m	0.0020 m
DY			-18499.3101 m	0.0005 m	-0.0031 m	0.0017 m
DZ			-20121.0980 m	-0.0059 m	-0.0050 m	0.0037 m
DX	9	8	-33680.2811 m	-0.0004 m	0.0003 m	0.0020 m
DY			-18499.3101 m	-0.0006 m	-0.0016 m	0.0017 m
DZ			-20121.0980 m	-0.0022 m	-0.0017 m	0.0037 m
DX	9	7	-47235.8833 m	0.0000 m	-0.0008 m	0.0019 m
DY			-36742.7119 m	0.0010 m	0.0012 m	0.0016 m
DZ			-31140.2106 m	0.0018 m	0.0013 m	0.0036 m
DX	9	7	-47235.8833 m	0.0015 m	-0.0014 m	0.0019 m
DY			-36742.7119 m	0.0024 m	0.0053 m	0.0016 m
DZ			-31140.2106 m	0.0066 m	0.0047 m	0.0036 m
DX	9	7	-47235.8833 m	0.0021 m	-0.0004 m	0.0019 m
DY			-36742.7119 m	0.0017 m	0.0016 m	0.0016 m
DZ			-31140.2106 m	-0.0016 m	-0.0027 m	0.0036 m
DX	9	6	-77113.1212 m	-0.0006 m	-0.0012 m	0.0019 m
DY			-54220.5630 m	0.0010 m	0.0009 m	0.0016 m
DZ			-49617.5213 m	0.0019 m	0.0017 m	0.0036 m
DX	9	6	-77113.1212 m	-0.0044 m	-0.0008 m	0.0019 m
DY			-54220.5630 m	-0.0016 m	0.0014 m	0.0016 m
DZ			-49617.5213 m	0.0119 m	0.0127 m	0.0036 m
DX	9	6	-77113.1212 m	0.0071 m	-0.0009 m	0.0019 m
DY			-54220.5630 m	0.0051 m	0.0039 m	0.0016 m
DZ			-49617.5213 m	-0.0085 m	-0.0115 m	0.0036 m
DX	9	4	-83524.4068 m	-0.0028 m	-0.0017 m	0.0019 m

DY			-77968.1350 m	0.0003 m	0.0005 m	0.0016 m
DZ			-59035.5815 m	0.0055 m	0.0059 m	0.0036 m
DX	9	4	-83524.4068 m	-0.0049 m	0.0005 m	0.0019 m
DY			-77968.1350 m	-0.0034 m	0.0016 m	0.0016 m
DZ			-59035.5815 m	0.0151 m	0.0162 m	0.0036 m
DX	9	4	-83524.4068 m	0.0126 m	-0.0017 m	0.0019 m
DY			-77968.1350 m	0.0091 m	0.0056 m	0.0016 m
DZ			-59035.5815 m	-0.0179 m	-0.0230 m	0.0036 m
DX	9	3	-62669.7658 m	0.0004 m	0.0002 m	0.0019 m
DY			-103099.9844 m	0.0000 m	-0.0009 m	0.0016 m
DZ			-56120.0835 m	-0.0026 m	-0.0024 m	0.0036 m
DX	9	3	-62669.7658 m	-0.0045 m	0.0010 m	0.0019 m
DY			-103099.9844 m	-0.0037 m	-0.0013 m	0.0016 m
DZ			-56120.0835 m	0.0083 m	0.0100 m	0.0036 m
DX	9	3	-62669.7658 m	0.0026 m	-0.0001 m	0.0019 m
DY			-103099.9844 m	0.0017 m	0.0002 m	0.0016 m
DZ			-56120.0835 m	-0.0056 m	-0.0064 m	0.0036 m
DX	9	1	-3116.2283 m	-0.0001 m	0.0007 m	0.0020 m
DY			-166118.9840 m	-0.0008 m	-0.0017 m	0.0017 m
DZ			-45881.1888 m	-0.0028 m	-0.0023 m	0.0036 m
DX	9	1	-3116.2283 m	0.0011 m	0.0032 m	0.0020 m
DY			-166118.9840 m	-0.0031 m	0.0041 m	0.0017 m
DZ			-45881.1888 m	0.0101 m	0.0092 m	0.0036 m
DX	9	1	-3116.2283 m	-0.0019 m	-0.0006 m	0.0020 m
DY			-166118.9840 m	-0.0003 m	-0.0008 m	0.0017 m
DZ			-45881.1888 m	0.0018 m	0.0024 m	0.0036 m
DX	6	4	-6411.2856 m	-0.0004 m	-0.0002 m	0.0018 m
DY			-23747.5720 m	-0.0001 m	0.0007 m	0.0015 m
DZ			-9418.0602 m	0.0021 m	0.0020 m	0.0033 m
DX	6	4	-6411.2856 m	-0.0033 m	0.0000 m	0.0018 m
DY			-23747.5720 m	-0.0019 m	-0.0022 m	0.0015 m
DZ			-9418.0602 m	0.0026 m	0.0041 m	0.0033 m
DX	6	4	-6411.2856 m	0.0010 m	0.0001 m	0.0018 m
DY			-23747.5720 m	0.0004 m	-0.0005 m	0.0015 m
DZ			-9418.0602 m	-0.0030 m	-0.0032 m	0.0033 m
DX	8	7	-13555.6022 m	0.0013 m	-0.0009 m	0.0019 m
DY			-18243.4019 m	0.0018 m	0.0040 m	0.0017 m
DZ			-11019.1125 m	0.0046 m	0.0031 m	0.0035 m
DX	8	7	-13555.6022 m	0.0046 m	-0.0006 m	0.0019 m
DY			-18243.4019 m	0.0033 m	0.0096 m	0.0017 m
DZ			-11019.1125 m	0.0099 m	0.0061 m	0.0035 m
DX	8	7	-13555.6022 m	0.0035 m	-0.0011 m	0.0019 m
DY			-18243.4019 m	0.0033 m	0.0032 m	0.0017 m
DZ			-11019.1125 m	-0.0020 m	-0.0039 m	0.0035 m
DX	8	6	-43432.8401 m	0.0008 m	-0.0009 m	0.0019 m
DY			-35721.2529 m	0.0015 m	0.0034 m	0.0016 m
DZ			-29496.4233 m	0.0046 m	0.0034 m	0.0035 m
DX	8	6	-43432.8401 m	-0.0009 m	-0.0006 m	0.0019 m
DY			-35721.2529 m	0.0002 m	0.0056 m	0.0016 m
DZ			-29496.4233 m	0.0134 m	0.0122 m	0.0035 m
DX	8	6	-43432.8401 m	0.0063 m	-0.0003 m	0.0019 m
DY			-35721.2529 m	0.0040 m	0.0050 m	0.0016 m
DZ			-29496.4233 m	-0.0035 m	-0.0066 m	0.0035 m

DX	8	4	-49844.1257 m	-0.0007 m	-0.0012 m	0.0019 m
DY			-59468.8250 m	0.0010 m	0.0038 m	0.0016 m
DZ			-38914.4834 m	0.0083 m	0.0074 m	0.0035 m
DX	8	4	-49844.1257 m	-0.0025 m	-0.0003 m	0.0019 m
DY			-59468.8250 m	-0.0010 m	0.0021 m	0.0016 m
DZ			-38914.4834 m	0.0097 m	0.0098 m	0.0035 m
DX	8	4	-49844.1257 m	0.0073 m	-0.0005 m	0.0019 m
DY			-59468.8250 m	0.0047 m	0.0048 m	0.0016 m
DZ			-38914.4834 m	-0.0062 m	-0.0095 m	0.0035 m
DX	8	1	30564.0529 m	0.0026 m	0.0015 m	0.0020 m
DY			-147619.6740 m	-0.0003 m	0.0020 m	0.0017 m
DZ			-25760.0907 m	0.0002 m	-0.0008 m	0.0036 m
DX	8	1	30564.0529 m	0.0021 m	0.0020 m	0.0020 m
DY			-147619.6740 m	-0.0011 m	0.0043 m	0.0017 m
DZ			-25760.0907 m	0.0069 m	0.0055 m	0.0036 m
DX	8	1	30564.0529 m	-0.0009 m	-0.0013 m	0.0020 m
DY			-147619.6740 m	0.0010 m	0.0015 m	0.0017 m
DZ			-25760.0907 m	0.0039 m	0.0036 m	0.0036 m
DX	10	9	-35583.0658 m	0.0003 m	-0.0002 m	0.0020 m
DY			12633.8456 m	0.0004 m	0.0010 m	0.0017 m
DZ			-12871.4975 m	0.0013 m	0.0010 m	0.0037 m
DX	10	9	-35583.0658 m	-0.0076 m	-0.0454 m	0.0020 m
DY			12633.8456 m	0.0481 m	0.0076 m	0.0017 m
DZ			-12871.4975 m	-0.0179 m	-0.0240 m	0.0037 m
DX	10	9	-35583.0658 m	0.0061 m	-0.0016 m	0.0020 m
DY			12633.8456 m	0.0054 m	0.0044 m	0.0017 m
DZ			-12871.4975 m	-0.0060 m	-0.0090 m	0.0037 m
DX	5	9	103868.6680 m	0.0068 m	0.0003 m	0.0020 m
DY			71867.8715 m	0.0036 m	0.0035 m	0.0017 m
DZ			66929.3189 m	-0.0068 m	-0.0097 m	0.0038 m
DX	5	9	103868.6680 m	0.0165 m	0.0161 m	0.0020 m
DY			71867.8715 m	-0.0090 m	0.0055 m	0.0017 m
DZ			66929.3189 m	-0.0065 m	-0.0104 m	0.0038 m
DX	5	9	103868.6680 m	-0.0065 m	0.0005 m	0.0020 m
DY			71867.8715 m	-0.0043 m	0.0000 m	0.0017 m
DZ			66929.3189 m	0.0142 m	0.0162 m	0.0038 m

GPS Baseline Vector Residuals

	Station	Target	Adj vector [m]	Resid [m]	Resid [ppm]
DV	GRNX	ZAN1	293386.5031	0.0573	0.2
DV	10	2	147775.9201	0.0046	0.0
DV	5	2	102378.5553	0.0107	0.1
DV	3	2	49575.5903	0.0021	0.0
DV	9	2	143727.7355	0.0006	0.0
DV	GRNX	2	230053.4710	0.0420	0.2
DV	ZAN1	2	103015.3174	0.0387	0.4
DV	2	8	118514.6731	0.0023	0.0
DV	2	7	100686.3430	0.0017	0.0
DV	2	6	95165.9051	0.0036	0.0
DV	2	4	81875.9433	0.0050	0.1
DV	1	4	120037.8499	0.0145	0.1
DV	1	4	120037.8499	0.0108	0.1
DV	3	7	72563.6713	0.0053	0.1

DV	3	7	72563.6713	0.0031	0.0
DV	GRNX	8	180855.5148	0.0365	0.2
DV	GRNX	8	180855.5148	0.0316	0.2
DV	GRNX	7	200569.9196	0.0330	0.2
DV	GRNX	7	200569.9196	0.0334	0.2
DV	GRNX	6	238569.3536	0.0374	0.2
DV	GRNX	6	238569.3536	0.0749	0.3
DV	GRNX	4	254897.3922	0.0390	0.2
DV	GRNX	4	254897.3922	0.0650	0.3
DV	GRNX	3	246169.7163	0.0375	0.2
DV	GRNX	3	246169.7163	0.0361	0.1
DV	GRNX	1	237727.2578	0.0647	0.3
DV	GRNX	1	237727.2578	0.0206	0.1
DV	ZAN1	8	123476.4974	0.0205	0.2
DV	ZAN1	8	123476.4974	0.0199	0.2
DV	ZAN1	7	98675.4894	0.0163	0.2
DV	ZAN1	7	98675.4894	0.0203	0.2
DV	ZAN1	6	60135.9558	0.0180	0.3
DV	ZAN1	6	60135.9558	0.0162	0.3
DV	ZAN1	4	38585.5448	0.0185	0.5
DV	ZAN1	4	38585.5448	0.0175	0.5
DV	ZAN1	3	56675.4500	0.0177	0.3
DV	ZAN1	3	56675.4500	0.0215	0.4
DV	ZAN1	1	136834.4431	0.0169	0.1
DV	ZAN1	1	136834.4431	0.0169	0.1
DV	2	1	39038.7851	0.0033	0.1
DV	2	1	39038.7851	0.0030	0.1
DV	5	10	171241.4266	0.0158	0.1
DV	5	10	171241.4266	0.0195	0.1
DV	GRNX	9	140593.7638	0.0373	0.3
DV	GRNX	9	140593.7638	0.0469	0.3
DV	GRNX	5	273781.1944	0.0294	0.1
DV	GRNX	5	273781.1944	0.0396	0.1
DV	GRNX	10	104035.7837	0.0387	0.4
DV	GRNX	10	104035.7837	0.0296	0.3
DV	ZAN1	9	166115.9675	0.0160	0.1
DV	ZAN1	9	166115.9675	0.0269	0.2
DV	ZAN1	5	25401.4438	0.0226	0.9
DV	ZAN1	5	25401.4438	0.0214	0.8
DV	ZAN1	10	192253.3653	0.0135	0.1
DV	ZAN1	10	192253.3653	0.0411	0.2
DV	10	8	76943.6564	0.0042	0.1
DV	10	8	76943.6564	0.0019	0.0
DV	10	8	76943.6564	0.0037	0.0
DV	10	7	96836.1824	0.0054	0.1
DV	10	7	96836.1824	0.0354	0.4
DV	10	7	96836.1824	0.0111	0.1
DV	10	6	135405.9198	0.0075	0.1
DV	10	6	135405.9198	0.0236	0.2
DV	10	6	135405.9198	0.0036	0.0
DV	10	4	153706.8230	0.0125	0.1
DV	10	4	153706.8230	0.0223	0.1
DV	10	4	153706.8230	0.0168	0.1

DV	10	3	150324.9129	0.0154	0.1
DV	10	3	150324.9129	0.0185	0.1
DV	10	3	150324.9129	0.0034	0.0
DV	10	1	168840.7570	0.0012	0.0
DV	10	1	168840.7570	0.0037	0.0
DV	10	1	168840.7570	0.0020	0.0
DV	5	8	99827.9647	0.0094	0.1
DV	5	8	99827.9647	0.0116	0.1
DV	5	8	99827.9647	0.0102	0.1
DV	5	7	75643.3038	0.0079	0.1
DV	5	7	75643.3038	0.0093	0.1
DV	5	7	75643.3038	0.0084	0.1
DV	5	6	36427.8069	0.0066	0.2
DV	5	6	36427.8069	0.0080	0.2
DV	5	6	36427.8069	0.0046	0.1
DV	5	4	22658.6246	0.0054	0.2
DV	5	4	22658.6246	0.0087	0.4
DV	5	4	22658.6246	0.0037	0.2
DV	5	3	52816.9858	0.0127	0.2
DV	5	3	52816.9858	0.0064	0.1
DV	5	3	52816.9858	0.0111	0.2
DV	5	1	139561.2773	0.0195	0.1
DV	5	1	139561.2773	0.0183	0.1
DV	5	1	139561.2773	0.0450	0.3
DV	1	7	137484.7635	0.0074	0.1
DV	1	7	137484.7635	0.0857	0.6
DV	1	7	137484.7635	0.0053	0.0
DV	1	6	134204.1615	0.0090	0.1
DV	1	6	134204.1615	0.0627	0.5
DV	1	6	134204.1615	0.0236	0.2
DV	7	6	39236.9167	0.0014	0.0
DV	7	6	39236.9167	0.0594	1.5
DV	7	6	39236.9167	0.0064	0.2
DV	7	4	61599.8715	0.0045	0.1
DV	7	4	61599.8715	0.0090	0.1
DV	7	4	61599.8715	0.0079	0.1
DV	3	8	96403.2742	0.0020	0.0
DV	3	8	96403.2742	0.0081	0.1
DV	3	8	96403.2742	0.0018	0.0
DV	3	6	51381.8223	0.0055	0.1
DV	3	6	51381.8223	0.0102	0.2
DV	3	6	51381.8223	0.0075	0.1
DV	3	4	32787.5896	0.0089	0.3
DV	3	4	32787.5896	0.0065	0.2
DV	3	4	32787.5896	0.0120	0.4
DV	3	1	87308.9521	0.0040	0.0
DV	3	1	87308.9521	0.0104	0.1
DV	3	1	87308.9521	0.0102	0.1
DV	9	8	43375.6198	0.0030	0.1
DV	9	8	43375.6198	0.0060	0.1
DV	9	8	43375.6198	0.0023	0.1
DV	9	7	67460.8647	0.0020	0.0
DV	9	7	67460.8647	0.0072	0.1

DV	9	7	67460.8647	0.0031	0.0
DV	9	6	106527.9369	0.0023	0.0
DV	9	6	106527.9369	0.0128	0.1
DV	9	6	106527.9369	0.0122	0.1
DV	9	4	128610.0948	0.0061	0.0
DV	9	4	128610.0948	0.0163	0.1
DV	9	4	128610.0948	0.0237	0.2
DV	9	3	133066.0366	0.0026	0.0
DV	9	3	133066.0366	0.0101	0.1
DV	9	3	133066.0366	0.0064	0.0
DV	9	1	172366.7926	0.0030	0.0
DV	9	1	172366.7926	0.0106	0.1
DV	9	1	172366.7926	0.0026	0.0
DV	6	4	26339.1651	0.0022	0.1
DV	6	4	26339.1651	0.0046	0.2
DV	6	4	26339.1651	0.0032	0.1
DV	8	7	25258.6006	0.0052	0.2
DV	8	7	25258.6006	0.0114	0.5
DV	8	7	25258.6006	0.0052	0.2
DV	8	6	63501.6417	0.0049	0.1
DV	8	6	63501.6417	0.0134	0.2
DV	8	6	63501.6417	0.0083	0.1
DV	8	4	86806.1924	0.0084	0.1
DV	8	4	86806.1924	0.0100	0.1
DV	8	4	86806.1924	0.0106	0.1
DV	8	1	152935.6457	0.0026	0.0
DV	8	1	152935.6457	0.0073	0.0
DV	8	1	152935.6457	0.0041	0.0
DV	10	9	39892.9076	0.0014	0.0
DV	10	9	39892.9076	0.0519	1.3
DV	10	9	39892.9076	0.0101	0.3
DV	5	9	142944.8316	0.0103	0.1
DV	5	9	142944.8316	0.0199	0.1
DV	5	9	142944.8316	0.0162	0.1

External Reliability

Station		**Ext Rel [m]**		**Station**	**Target**
1	Latitude	0.0014	DX	GRNX	5
	Longitude	-0.0011	DY	ZAN1	1
	Height	0.0027	DZ	GRNX	8
10	Latitude	-0.0014	DZ	10	1
	Longitude	0.0011	DY	10	1
	Height	0.0025	DZ	GRNX	8
2	Latitude	-0.0019	DZ	2	1
	Longitude	0.0017	DY	2	1
	Height	-0.0037	DZ	2	1
3	Latitude	0.0021	DZ	GRNX	3
	Longitude	-0.0014	DY	ZAN1	3
	Height	0.0043	DZ	GRNX	3
4	Latitude	0.0016	DZ	ZAN1	4
	Longitude	-0.0017	DY	ZAN1	4
	Height	0.0030	DZ	ZAN1	4
5	Latitude	0.0031	DZ	GRNX	5

	Longitude	-0.0014	DY	ZAN1	5
	Height	0.0058	DZ	GRNX	5
6	Latitude	0.0015	DZ	ZAN1	6
	Longitude	-0.0015	DY	ZAN1	6
	Height	0.0027	DZ	ZAN1	6
7	Latitude	0.0014	DZ	ZAN1	7
	Longitude	-0.0014	DY	ZAN1	7
	Height	0.0024	DZ	ZAN1	7
8	Latitude	0.0027	DZ	GRNX	8
	Longitude	-0.0012	DY	ZAN1	8
	Height	0.0056	DZ	GRNX	8
9	Latitude	0.0014	DX	GRNX	5
	Longitude	-0.0012	DY	ZAN1	9
	Height	0.0025	DZ	GRNX	8
GRNX	Latitude	0.0000	DX	GRNX	5
	Longitude	0.0000	DY	GRNX	10
	Height	0.0000	DZ	GRNX	5
ZAN1	Latitude	0.0000	DX	GRNX	5
	Longitude	0.0000	DY	GRNX	10
	Height	0.0000	DZ	GRNX	5

Absolute Error Ellipses (2D - 39.4% 1D - 68.3%)

Station	A [m]	B [m]	A/B	Phi	Sd Hgt [m]
1	0.0020	0.0014	1.4	-1°	0.0038
10	0.0020	0.0015	1.4	-1°	0.0038
2	0.0023	0.0017	1.4	-2°	0.0046
3	0.0017	0.0014	1.3	0°	0.0033
4	0.0018	0.0014	1.3	-1°	0.0034
5	0.0017	0.0014	1.2	-1°	0.0032
6	0.0018	0.0014	1.3	-1°	0.0035
7	0.0018	0.0014	1.3	-4°	0.0035
8	0.0018	0.0014	1.2	-2°	0.0034
9	0.0020	0.0014	1.3	-3°	0.0038
GRNX	0.0000	0.0000	1.0	55°	0.0000
ZAN1	0.0000	0.0000	1.0	53°	0.0000

Relative Error Ellipses (2D - 39.4%)

Station	Station	A [m]	B [m]	A/B	Psi	Sd Hgt [m]
GRNX	ZAN1	0.0000	0.0000	1.0	46°	0.0000
10	2	0.0023	0.0016	1.5	27°	0.0046
5	2	0.0024	0.0016	1.5	-68°	0.0047
3	2	0.0023	0.0016	1.5	-70°	0.0046
9	2	0.0023	0.0016	1.5	43°	0.0046
GRNX	2	0.0023	0.0017	1.4	7°	0.0046
ZAN1	2	0.0023	0.0017	1.4	-54°	0.0046
2	8	0.0023	0.0016	1.5	59°	0.0046
2	7	0.0023	0.0015	1.5	67°	0.0045
2	6	0.0023	0.0016	1.5	-89°	0.0046
2	4	0.0023	0.0016	1.5	-74°	0.0046
1	4	0.0020	0.0013	1.5	-78°	0.0038
3	7	0.0018	0.0013	1.4	40°	0.0035
GRNX	8	0.0018	0.0014	1.2	-22°	0.0034

GRNX	7	0.0018	0.0014	1.3	-19°	0.0035
GRNX	6	0.0018	0.0014	1.3	-14°	0.0035
GRNX	4	0.0018	0.0014	1.3	-9°	0.0034
GRNX	3	0.0017	0.0014	1.3	-1°	0.0033
GRNX	1	0.0020	0.0014	1.4	18°	0.0038
ZAN1	8	0.0018	0.0014	1.2	10°	0.0034
ZAN1	7	0.0018	0.0014	1.3	5°	0.0035
ZAN1	6	0.0018	0.0014	1.3	13°	0.0035
ZAN1	4	0.0018	0.0014	1.3	-5°	0.0034
ZAN1	3	0.0017	0.0014	1.3	-38°	0.0033
ZAN1	1	0.0020	0.0014	1.4	-62°	0.0038
2	1	0.0023	0.0015	1.5	90°	0.0045
5	10	0.0021	0.0014	1.4	-8°	0.0039
GRNX	9	0.0020	0.0014	1.3	-29°	0.0038
GRNX	5	0.0017	0.0014	1.2	-12°	0.0032
GRNX	10	0.0020	0.0015	1.4	-20°	0.0038
ZAN1	9	0.0020	0.0014	1.3	5°	0.0038
ZAN1	5	0.0017	0.0014	1.2	30°	0.0032
ZAN1	10	0.0020	0.0015	1.4	-3°	0.0038
10	8	0.0020	0.0014	1.4	-24°	0.0039
10	7	0.0019	0.0014	1.4	-16°	0.0037
10	6	0.0020	0.0014	1.4	-10°	0.0037
10	4	0.0020	0.0014	1.5	-3°	0.0038
10	3	0.0020	0.0014	1.4	9°	0.0038
10	1	0.0019	0.0013	1.5	40°	0.0037
5	8	0.0019	0.0014	1.4	4°	0.0037
5	7	0.0019	0.0013	1.4	-3°	0.0037
5	6	0.0019	0.0013	1.4	1°	0.0036
5	4	0.0019	0.0013	1.4	-45°	0.0036
5	3	0.0018	0.0013	1.4	-66°	0.0035
5	1	0.0020	0.0014	1.5	-73°	0.0039
1	7	0.0019	0.0013	1.5	73°	0.0037
1	6	0.0019	0.0013	1.5	-89°	0.0038
7	6	0.0018	0.0013	1.4	-4°	0.0035
7	4	0.0018	0.0013	1.4	13°	0.0035
3	8	0.0019	0.0013	1.4	36°	0.0036
3	6	0.0018	0.0013	1.4	73°	0.0035
3	4	0.0018	0.0012	1.4	-81°	0.0035
3	1	0.0019	0.0013	1.5	-78°	0.0037
9	8	0.0020	0.0014	1.4	-4°	0.0038
9	7	0.0019	0.0013	1.4	2°	0.0037
9	6	0.0019	0.0013	1.5	1°	0.0037
9	4	0.0019	0.0013	1.5	9°	0.0037
9	3	0.0019	0.0013	1.4	23°	0.0037
9	1	0.0019	0.0013	1.5	53°	0.0038
6	4	0.0018	0.0012	1.4	39°	0.0035
8	7	0.0019	0.0014	1.4	17°	0.0037
8	6	0.0019	0.0013	1.4	6°	0.0036
8	4	0.0019	0.0013	1.4	16°	0.0036
8	1	0.0020	0.0014	1.4	67°	0.0038
10	9	0.0020	0.0014	1.5	-49°	0.0039
5	9	0.0020	0.0014	1.4	1°	0.0039

Testing and Estimated Errors

Coordinate Tests

Station		MDB	BNR	W-Test	T-Test
GRNX	Latitude	0.0087 m	999.9	0.00	0.00
	Longitude	0.0087 m	999.9	0.00	
	Height	0.0163 m	999.9	0.00	
ZAN1	Latitude	0.0087 m	999.9	0.00	0.00
	Longitude	0.0087 m	999.9	0.00	
	Height	0.0163 m	999.9	0.00	

Observation Tests

	Station	Target	MDB	Red	BNR	W-Test	T-Test
DX	GRNX	ZAN1	0.0825 m	99	0.0	0.32	1.48
DY			0.0741 m	99	0.0	1.87	
DZ			0.1518 m	99	0.0	0.70	
DX	10	2	0.0158 m	78	1.7	0.13	0.12
DY			0.0139 m	79	1.7	0.35	
DZ			0.0292 m	77	1.7	-0.13	
DX	5	2	0.0227 m	90	1.1	-0.10	0.31
DY			0.0195 m	90	1.1	0.60	
DZ			0.0422 m	90	1.1	0.82	
DX	3	2	0.0184 m	85	1.3	-0.16	0.02
DY			0.0162 m	86	1.3	-0.07	
DZ			0.0339 m	85	1.3	-0.01	
DX	9	2	0.0166 m	81	1.6	-0.02	0.00
DY			0.0144 m	81	1.6	0.02	
DZ			0.0308 m	80	1.6	-0.06	
DX	GRNX	2	0.1615 m	99	0.1	0.19	0.21
DY			0.1330 m	99	0.2	0.49	
DZ			0.2484 m	99	0.2	0.73	
DX	ZAN1	2	0.0553 m	98	0.4	0.43	1.34
DY			0.0499 m	98	0.4	-1.92	
DZ			0.0847 m	97	0.5	-0.53	
DX	2	8	0.0183 m	84	1.4	-0.07	0.04
DY			0.0155 m	83	1.4	-0.26	
DZ			0.0335 m	84	1.4	-0.06	
DX	2	7	0.0164 m	82	1.5	0.37	0.05
DY			0.0141 m	80	1.6	-0.15	
DZ			0.0303 m	81	1.6	0.08	
DX	2	6	0.0218 m	90	1.1	0.03	0.10
DY			0.0190 m	90	1.1	0.48	
DZ			0.0402 m	90	1.1	0.23	
DX	2	4	0.0218 m	90	1.1	-0.21	0.09
DY			0.0185 m	89	1.1	0.43	
DZ			0.0391 m	89	1.1	-0.17	
DX	1	4	0.0185 m	90	1.1	-0.98	0.76
DY			0.0158 m	90	1.1	0.51	
DZ			0.0365 m	90	1.0	0.80	
DX	1	4	0.0381 m	97	0.5	0.81	0.48
DY			0.0317 m	97	0.5	-1.10	

DZ			0.0705 m	97	0.5	0.00		
DX	3	7	0.0179 m	91	1.0	-0.06	0.10	
DY			0.0162 m	91	1.0	0.29		
DZ			0.0357 m	91	1.0	0.48		
DX	3	7	0.0158 m	87	1.2	0.46	0.10	
DY			0.0142 m	88	1.2	0.09		
DZ			0.0313 m	89	1.1	0.12		
DX	GRNX	8	0.0369 m	97	0.5	0.43	2.32	⚠
DY			0.0319 m	97	0.5	2.19 ⚠		
DZ			0.0739 m	98	0.4	0.13		
DX	GRNX	8	0.0180 m	88	1.5	5.04 ⚠	16.17	⚠
DY			0.0204 m	92	1.2	6.47 ⚠		
DZ			0.0199 m	68	2.2	3.45 ⚠		
DX	GRNX	7	0.0514 m	98	0.3	-0.12	1.20	
DY			0.0485 m	99	0.3	1.80		
DZ			0.1003 m	99	0.3	0.22		
DX	GRNX	7	0.0478 m	98	0.4	0.43	1.06	
DY			0.0406 m	98	0.4	1.27		
DZ			0.0907 m	98	0.4	0.61		
DX	GRNX	6	0.0614 m	99	0.3	-0.85	1.66	
DY			0.0555 m	99	0.3	2.23 ⚠		
DZ			0.1099 m	99	0.3	0.34		
DX	GRNX	6	0.1147 m	99	0.2	0.00	0.57	
DY			0.1256 m	99	0.1	0.97		
DZ			0.2865 m	99	0.1	0.79		
DX	GRNX	4	0.0647 m	99	0.3	-0.99	1.76	
DY			0.0552 m	99	0.3	2.30 ⚠		
DZ			0.1143 m	99	0.3	0.12		
DX	GRNX	4	0.1228 m	99	0.1	1.75	1.15	
DY			0.1277 m	99	0.1	-1.38		
DZ			0.2653 m	99	0.1	0.80		
DX	GRNX	3	0.0494 m	98	0.4	0.36	1.12	
DY			0.0458 m	98	0.3	1.47		
DZ			0.0921 m	99	0.3	0.02		
DX	GRNX	3	0.0224 m	93	1.2	5.21 ⚠	15.23	⚠
DY			0.0215 m	93	1.1	6.31 ⚠		
DZ			0.0213 m	77	1.7	2.66 ⚠		
DX	GRNX	1	0.1045 m	99	0.2	1.32	0.89	
DY			0.0859 m	99	0.2	0.56		
DZ			0.1766 m	99	0.2	0.29		
DX	GRNX	1	0.0656 m	99	0.3	-0.21	0.21	
DY			0.0703 m	99	0.3	0.74		
DZ			0.1502 m	99	0.2	0.30		
DX	ZAN1	8	0.0222 m	93	0.9	-1.59	2.72	⚠
DY			0.0201 m	93	0.9	-1.72		
DZ			0.0443 m	95	0.7	-1.47		
DX	ZAN1	8	0.0317 m	96	0.6	-0.57	1.49	
DY			0.0261 m	96	0.6	-1.75		
DZ			0.0659 m	98	0.5	-0.94		
DX	ZAN1	7	0.0182 m	90	1.1	-1.62	2.68	⚠
DY			0.0167 m	90	1.0	-1.68		
DZ			0.0367 m	92	0.9	-1.38		
DX	ZAN1	7	0.0197 m	92	1.0	-1.11	3.06	⚠

DY			0.0178 m	92	1.0	-2.23 ⚠		
DZ			0.0350 m	92	1.0	-1.53		
DX	ZAN1	6	0.0169 m	88	1.2	-1.83	3.76	⚠
DY			0.0153 m	89	1.1	-2.06 ⚠		
DZ			0.0339 m	91	1.0	-1.33		
DX	ZAN1	6	0.0189 m	91	1.0	-1.19	3.28	⚠
DY			0.0154 m	89	1.1	-2.44 ⚠		
DZ			0.0337 m	91	1.0	-1.69		
DX	ZAN1	4	0.0153 m	85	1.3	-1.95	4.84	⚠
DY			0.0136 m	86	1.3	-2.41 ⚠		
DZ			0.0305 m	88	1.1	-1.26		
DX	ZAN1	4	0.0234 m	94	0.8	-0.97	2.58	⚠
DY			0.0182 m	92	0.9	-2.28 ⚠		
DZ			0.0408 m	94	0.8	-1.46		
DX	ZAN1	3	0.0198 m	92	1.0	-1.26	2.53	⚠
DY			0.0180 m	92	0.9	-1.82		
DZ			0.0387 m	94	0.8	-1.50		
DX	ZAN1	3	0.0188 m	91	1.0	-1.57	4.80	⚠
DY			0.0152 m	89	1.1	-2.75 ⚠		
DZ			0.0345 m	93	0.9	-1.81		
DX	ZAN1	1	0.0258 m	94	0.8	-0.41	1.29	
DY			0.0222 m	94	0.8	-1.48		
DZ			0.0496 m	95	0.7	-1.20		
DX	ZAN1	1	0.0674 m	99	0.3	-0.22	0.13	
DY			0.0555 m	99	0.3	-0.36		
DZ			0.1310 m	99	0.3	-0.53		
DX	2	1	0.0716 m	99	0.3	0.05	0.01	
DY			0.0445 m	98	0.4	-0.10		
DZ			0.1076 m	98	0.4	-0.10		
DX	2	1	0.0154 m	77	1.7	-0.12	0.04	
DY			0.0134 m	78	1.7	0.01		
DZ			0.0282 m	76	1.8	0.23		
DX	5	10	0.0252 m	94	0.8	0.79	0.52	
DY			0.0205 m	93	0.9	0.32		
DZ			0.0486 m	94	0.8	-0.33		
DX	5	10	0.0279 m	95	0.7	-0.59	0.51	
DY			0.0214 m	93	0.8	-0.43		
DZ			0.0551 m	95	0.7	0.40		
DX	GRNX	9	0.0312 m	96	0.6	0.75	4.20	⚠
DY			0.0261 m	96	0.7	2.98 ⚠		
DZ			0.0624 m	97	0.6	0.53		
DX	GRNX	9	0.1193 m	99	0.2	0.31	0.29	
DY			0.0834 m	99	0.2	0.58		
DZ			0.2272 m	99	0.2	0.18		
DX	GRNX	5	0.0610 m	99	0.3	-0.60	1.16	
DY			0.0515 m	99	0.3	1.86		
DZ			0.1138 m	99	0.3	0.08		
DX	GRNX	5	0.0161 m	86	1.7	6.37 ⚠	29.18	⚠
DY			0.0177 m	90	1.4	8.88 ⚠		
DZ			0.0182 m	63	2.4	3.24 ⚠		
DX	GRNX	10	0.0274 m	95	0.7	0.91	4.93	⚠
DY			0.0245 m	95	0.7	3.11 ⚠		

DZ			0.0578 m	96	0.6	0.53		
DX	GRNX	10	0.0278 m	95	0.7	0.62	4.02	⚠
DY			0.0243 m	95	0.7	3.00 ⚠		
DZ			0.0589 m	96	0.6	1.41		
DX	ZAN1	9	0.0229 m	93	0.9	-0.87	1.56	
DY			0.0206 m	93	0.9	-1.54		
DZ			0.0462 m	94	0.8	-1.01		
DX	ZAN1	9	0.0631 m	99	0.3	-1.17	0.56	
DY			0.0480 m	98	0.3	-0.12		
DZ			0.1109 m	99	0.3	-0.63		
DX	ZAN1	5	0.0189 m	90	1.0	-1.99 ⚠	4.13	⚠
DY			0.0172 m	91	1.0	-2.09 ⚠		
DZ			0.0373 m	94	0.8	-1.13		
DX	ZAN1	5	0.0207 m	92	0.9	-1.60	4.52	⚠
DY			0.0163 m	90	1.1	-2.69 ⚠		
DZ			0.0386 m	94	0.8	-1.99 ⚠		
DX	ZAN1	10	0.0317 m	96	0.6	-0.24	0.65	
DY			0.0258 m	95	0.7	-1.17		
DZ			0.0646 m	97	0.5	-0.66		
DX	ZAN1	10	0.0591 m	99	0.3	-1.34	1.09	
DY			0.0509 m	99	0.3	-0.51		
DZ			0.1243 m	99	0.3	-0.73		
DX	10	8	0.0224 m	92	0.9	-0.38	0.07	
DY			0.0197 m	93	0.9	0.06		
DZ			0.0463 m	94	0.8	-0.36		
DX	10	8	0.0520 m	98	0.4	-0.12	0.01	
DY			0.0453 m	98	0.4	0.10		
DZ			0.0996 m	98	0.4	-0.02		
DX	10	8	0.0233 m	93	0.9	0.14	0.04	
DY			0.0188 m	92	0.9	-0.24		
DZ			0.0454 m	93	0.8	-0.22		
DX	10	7	0.0211 m	92	0.9	-0.29	0.07	
DY			0.0188 m	92	0.9	0.12		
DZ			0.0435 m	93	0.8	0.25		
DX	10	7	0.0810 m	99	0.3	-0.39	0.46	
DY			0.0717 m	99	0.3	0.85		
DZ			0.0661 m	97	0.6	0.39		
DX	10	7	0.0161 m	87	1.3	0.80	0.54	
DY			0.0159 m	90	1.1	0.31		
DZ			0.0326 m	88	1.2	-0.12		
DX	10	6	0.0244 m	94	0.8	-0.51	0.13	
DY			0.0204 m	93	0.8	0.10		
DZ			0.0471 m	94	0.8	0.14		
DX	10	6	0.0389 m	97	0.6	-0.51	0.88	
DY			0.0428 m	98	0.6	0.94		
DZ			0.0378 m	90	1.0	1.11		
DX	10	6	0.0222 m	93	0.9	0.31	0.07	
DY			0.0192 m	93	0.9	-0.38		
DZ			0.0421 m	93	0.9	-0.19		
DX	10	4	0.0256 m	95	0.8	-0.54	0.28	
DY			0.0193 m	93	0.9	0.16		
DZ			0.0441 m	93	0.8	0.49		
DX	10	4	0.0563 m	98	0.3	1.03	0.42	

DY			0.0463 m	98	0.3	-0.03	
DZ			0.1206 m	99	0.3	0.34	
DX	10	4	0.0232 m	93	0.8	0.72	0.60
DY			0.0193 m	93	0.9	0.40	
DZ			0.0429 m	93	0.9	-0.34	
DX	10	3	0.0345 m	97	0.5	-1.32	0.62
DY			0.0317 m	97	0.5	0.68	
DZ			0.0719 m	97	0.5	-0.12	
DX	10	3	0.0794 m	99	0.2	0.60	0.13
DY			0.0633 m	99	0.3	-0.17	
DZ			0.1417 m	99	0.2	0.14	
DX	10	3	0.0214 m	92	0.9	-0.26	0.08
DY			0.0173 m	91	1.0	-0.29	
DZ			0.0383 m	91	1.0	-0.22	
DX	10	1	0.0189 m	91	1.0	-0.12	0.01
DY			0.0175 m	92	0.9	0.09	
DZ			0.0398 m	92	0.9	-0.11	
DX	10	1	0.0284 m	96	0.6	0.48	0.12
DY			0.0218 m	95	0.7	-0.50	
DZ			0.0561 m	96	0.6	-0.01	
DX	10	1	0.0126 m	76	1.8	-0.14	0.10
DY			0.0109 m	76	1.8	0.51	
DZ			0.0242 m	76	1.8	-0.02	
DX	5	8	0.0220 m	92	0.9	0.36	0.17
DY			0.0198 m	93	0.9	0.10	
DZ			0.0443 m	94	0.8	-0.36	
DX	5	8	0.0564 m	99	0.3	0.14	0.04
DY			0.0491 m	98	0.3	0.09	
DZ			0.1070 m	99	0.3	-0.13	
DX	5	8	0.0215 m	92	0.9	-0.56	0.28
DY			0.0189 m	92	0.9	-0.36	
DZ			0.0481 m	95	0.7	0.09	
DX	5	7	0.0185 m	90	1.0	0.66	0.36
DY			0.0168 m	91	1.0	0.47	
DZ			0.0373 m	91	1.0	0.08	
DX	5	7	0.0465 m	98	0.4	0.27	0.10
DY			0.0399 m	98	0.4	0.34	
DZ			0.0938 m	98	0.4	0.20	
DX	5	7	0.0196 m	92	1.0	-0.08	0.10
DY			0.0182 m	93	0.9	-0.12	
DZ			0.0436 m	94	0.8	0.36	
DX	5	6	0.0172 m	89	1.1	0.58	0.30
DY			0.0157 m	90	1.1	0.43	
DZ			0.0348 m	90	1.0	0.05	
DX	5	6	0.0380 m	97	0.5	0.04	0.04
DY			0.0306 m	97	0.5	0.16	
DZ			0.0830 m	98	0.4	0.32	
DX	5	6	0.0192 m	91	1.0	0.18	0.14
DY			0.0158 m	90	1.1	0.43	
DZ			0.0375 m	92	1.0	0.54	
DX	5	4	0.0160 m	87	1.2	0.57	0.33
DY			0.0146 m	88	1.1	0.58	
DZ			0.0324 m	88	1.1	0.27	

DX	5	4	0.0335 m	97	0.5	0.23	0.08
DY			0.0257 m	96	0.6	0.08	
DZ			0.0700 m	97	0.5	0.45	
DX	5	4	0.0166 m	88	1.1	0.29	0.15
DY			0.0146 m	88	1.1	0.45	
DZ			0.0363 m	91	1.0	0.16	
DX	5	3	0.0204 m	92	0.9	0.67	0.43
DY			0.0184 m	93	0.9	0.19	
DZ			0.0403 m	93	0.8	-0.40	
DX	5	3	0.0460 m	98	0.4	0.34	0.04
DY			0.0423 m	98	0.4	-0.01	
DZ			0.0939 m	98	0.3	0.09	
DX	5	3	0.0153 m	86	1.3	-0.35	0.49
DY			0.0127 m	84	1.4	0.19	
DZ			0.0291 m	87	1.2	0.93	
DX	5	1	0.0238 m	93	0.8	1.05	0.76
DY			0.0214 m	94	0.8	0.00	
DZ			0.0481 m	94	0.8	-0.46	
DX	5	1	0.0417 m	98	0.5	0.64	0.23
DY			0.0289 m	97	0.6	-0.27	
DZ			0.0719 m	97	0.5	-0.24	
DX	5	1	0.0300 m	96	0.6	-1.26	1.85
DY			0.0267 m	96	0.6	1.49	
DZ			0.0714 m	97	0.5	1.43	
DX	1	7	0.0193 m	91	1.0	-0.24	0.19
DY			0.0173 m	92	1.0	0.47	
DZ			0.0386 m	92	0.9	0.58	
DX	1	7	0.0913 m	99	0.2	-0.18	0.07
DY			0.2406 m	99	0.2	-0.31	
DZ			0.1081 m	99	0.3	-0.04	
DX	1	7	0.0163 m	88	1.2	0.41	0.13
DY			0.0148 m	88	1.2	-0.26	
DZ			0.0301 m	87	1.3	-0.28	
DX	1	6	0.0202 m	92	0.9	-0.64	0.26
DY			0.0177 m	92	0.9	0.34	
DZ			0.0402 m	92	0.9	0.40	
DX	1	6	0.2086 m	99	0.1	0.32	0.09
DY			0.3965 m	99	0.1	-0.27	
DZ			0.1882 m	99	0.2	0.12	
DX	1	6	0.0214 m	93	0.9	0.86	0.92
DY			0.0192 m	93	0.9	0.02	
DZ			0.0413 m	93	0.9	-0.69	
DX	7	6	0.0162 m	88	1.1	-0.14	0.01
DY			0.0147 m	89	1.1	-0.08	
DZ			0.0324 m	89	1.1	-0.01	
DX	7	6	0.3921 m	99	0.1	-0.18	0.02
DY			0.6839 m	99	0.0	-0.02	
DZ			0.4119 m	99	0.1	-0.14	
DX	7	6	0.0162 m	89	1.1	0.55	0.21
DY			0.0152 m	90	1.1	0.17	
DZ			0.0310 m	88	1.2	-0.02	
DX	7	4	0.0150 m	87	1.2	-0.27	0.09
DY			0.0137 m	87	1.2	-0.03	

DZ			0.0301 m	87	1.2	0.28	
DX	7	4	0.0594 m	99	0.3	-0.28	0.04
DY			0.0387 m	98	0.4	0.09	
DZ			0.1094 m	99	0.3	0.18	
DX	7	4	0.0161 m	89	1.1	0.51	0.22
DY			0.0147 m	90	1.1	-0.02	
DZ			0.0322 m	89	1.1	-0.30	
DX	3	8	0.0207 m	92	0.9	-0.23	0.03
DY			0.0186 m	93	0.9	-0.08	
DZ			0.0415 m	93	0.8	-0.10	
DX	3	8	0.1635 m	99	0.1	-0.15	0.01
DY			0.1241 m	99	0.1	0.06	
DZ			0.4973 m	99	0.1	0.01	
DX	3	8	0.0177 m	89	1.1	-0.06	0.04
DY			0.0149 m	88	1.2	-0.28	
DZ			0.0347 m	91	1.0	-0.21	
DX	3	6	0.0184 m	91	1.0	-0.12	0.11
DY			0.0166 m	92	0.9	0.31	
DZ			0.0364 m	92	0.9	0.46	
DX	3	6	0.0731 m	99	0.3	-0.40	0.06
DY			0.0482 m	99	0.3	0.07	
DZ			0.2175 m	99	0.2	0.06	
DX	3	6	0.0145 m	85	1.3	0.83	0.43
DY			0.0125 m	85	1.4	0.23	
DZ			0.0276 m	86	1.3	-0.02	
DX	3	4	0.0177 m	90	1.0	-0.23	0.25
DY			0.0159 m	91	1.0	0.34	
DZ			0.0348 m	91	1.0	0.72	
DX	3	4	0.0574 m	99	0.3	-0.30	0.03
DY			0.0359 m	98	0.4	0.03	
DZ			0.1130 m	99	0.3	0.01	
DX	3	4	0.0152 m	87	1.2	0.79	0.71
DY			0.0129 m	86	1.3	0.22	
DZ			0.0279 m	86	1.3	-0.54	
DX	3	1	0.0217 m	93	0.9	0.23	0.04
DY			0.0199 m	94	0.8	-0.13	
DZ			0.0436 m	93	0.8	-0.17	
DX	3	1	0.0713 m	99	0.3	-0.19	0.08
DY			0.0421 m	98	0.4	-0.35	
DZ			0.1261 m	99	0.3	-0.27	
DX	3	1	0.0179 m	90	1.1	-0.23	0.28
DY			0.0155 m	89	1.1	0.19	
DZ			0.0336 m	89	1.1	0.71	
DX	9	8	0.0204 m	91	1.0	-0.19	0.04
DY			0.0184 m	92	0.9	-0.07	
DZ			0.0417 m	92	0.9	-0.30	
DX	9	8	0.0903 m	99	0.2	-0.07	0.01
DY			0.0707 m	99	0.2	0.02	
DZ			0.1691 m	99	0.2	-0.12	
DX	9	8	0.0210 m	92	0.9	-0.09	0.02
DY			0.0177 m	91	1.0	-0.12	
DZ			0.0431 m	93	0.9	-0.22	
DX	9	7	0.0177 m	90	1.1	-0.01	0.03

DY			0.0160 m	90	1.0	0.23	
DZ			0.0358 m	90	1.0	0.20	
DX	9	7	0.0613 m	99	0.3	0.06	0.02
DY			0.0510 m	99	0.3	0.15	
DZ			0.1377 m	99	0.2	0.20	
DX	9	7	0.0169 m	89	1.1	0.25	0.06
DY			0.0162 m	91	1.0	0.18	
DZ			0.0338 m	89	1.1	0.04	
DX	9	6	0.0189 m	91	1.0	-0.12	0.03
DY			0.0172 m	91	1.0	0.26	
DZ			0.0379 m	91	1.0	0.17	
DX	9	6	0.0479 m	98	0.4	-0.21	0.06
DY			0.0362 m	98	0.4	0.01	
DZ			0.1115 m	99	0.3	0.30	
DX	9	6	0.0184 m	90	1.0	0.71	0.50
DY			0.0162 m	91	1.0	0.42	
DZ			0.0383 m	92	1.0	-0.07	
DX	9	4	0.0181 m	90	1.1	-0.39	0.14
DY			0.0162 m	90	1.0	0.31	
DZ			0.0361 m	90	1.1	0.37	
DX	9	4	0.0396 m	97	0.5	-0.23	0.14
DY			0.0286 m	97	0.5	-0.20	
DZ			0.0924 m	98	0.4	0.43	
DX	9	4	0.0192 m	91	1.0	1.06	1.56
DY			0.0168 m	91	1.0	0.74	
DZ			0.0387 m	91	1.0	-0.51	
DX	9	3	0.0198 m	92	1.0	-0.01	0.02
DY			0.0178 m	92	0.9	-0.05	
DZ			0.0393 m	92	0.9	-0.21	
DX	9	3	0.0611 m	99	0.3	-0.11	0.03
DY			0.0527 m	99	0.3	-0.12	
DZ			0.1300 m	99	0.3	0.12	
DX	9	3	0.0186 m	90	1.0	0.21	0.11
DY			0.0153 m	89	1.1	0.13	
DZ			0.0371 m	91	1.0	-0.31	
DX	9	1	0.0207 m	92	0.9	-0.01	0.02
DY			0.0196 m	94	0.8	-0.15	
DZ			0.0438 m	93	0.8	-0.23	
DX	9	1	0.0396 m	98	0.5	0.28	0.09
DY			0.0288 m	97	0.5	-0.29	
DZ			0.0790 m	98	0.5	0.34	
DX	9	1	0.0143 m	83	1.5	-0.38	0.06
DY			0.0126 m	83	1.5	0.13	
DZ			0.0276 m	82	1.5	0.06	
DX	6	4	0.0140 m	84	1.4	-0.02	0.02
DY			0.0126 m	85	1.3	0.06	
DZ			0.0282 m	85	1.3	0.25	
DX	6	4	0.0946 m	99	0.2	-0.07	0.00
DY			0.0567 m	99	0.3	-0.05	
DZ			0.1536 m	99	0.2	0.01	
DX	6	4	0.0152 m	87	1.2	0.10	0.04
DY			0.0135 m	88	1.2	-0.05	
DZ			0.0304 m	88	1.2	-0.26	

DX	8	7	0.0191 m	91	1.0	0.26	0.15
DY			0.0172 m	91	1.0	0.35	
DZ			0.0378 m	92	0.9	0.56	
DX	8	7	0.1224 m	99	0.2	0.03	0.01
DY			0.0752 m	99	0.2	0.14	
DZ			0.3416 m	99	0.1	0.11	
DX	8	7	0.0199 m	92	0.9	0.32	0.14
DY			0.0178 m	92	0.9	0.40	
DZ			0.0389 m	92	0.9	0.14	
DX	8	6	0.0192 m	91	1.0	0.18	0.11
DY			0.0174 m	91	1.0	0.31	
DZ			0.0381 m	92	0.9	0.51	
DX	8	6	0.0602 m	99	0.3	-0.08	0.03
DY			0.0413 m	98	0.4	0.08	
DZ			0.1552 m	99	0.2	0.29	
DX	8	6	0.0180 m	89	1.1	0.86	0.48
DY			0.0156 m	89	1.1	0.45	
DZ			0.0359 m	91	1.0	0.20	
DX	8	4	0.0185 m	90	1.0	0.05	0.23
DY			0.0167 m	91	1.0	0.36	
DZ			0.0368 m	91	1.0	0.78	
DX	8	4	0.0506 m	98	0.4	-0.13	0.03
DY			0.0326 m	97	0.5	0.01	
DZ			0.1062 m	98	0.3	0.27	
DX	8	4	0.0183 m	90	1.0	0.89	0.59
DY			0.0156 m	90	1.1	0.50	
DZ			0.0366 m	91	1.0	0.06	
DX	8	1	0.0230 m	93	0.8	0.41	0.06
DY			0.0210 m	94	0.8	-0.21	
DZ			0.0464 m	94	0.8	0.12	
DX	8	1	0.0515 m	98	0.4	0.18	0.03
DY			0.0336 m	97	0.5	-0.10	
DZ			0.0967 m	98	0.4	0.20	
DX	8	1	0.0166 m	87	1.2	-0.13	0.12
DY			0.0143 m	87	1.3	0.43	
DZ			0.0307 m	86	1.3	0.44	
DX	10	9	0.0192 m	90	1.0	0.05	0.01
DY			0.0171 m	91	1.0	0.09	
DZ			0.0405 m	91	1.0	0.14	
DX	10	9	0.2765 m	99	0.1	-0.07	0.14
DY			0.2472 m	99	0.1	0.59	
DZ			0.2067 m	99	0.2	-0.19	
DX	10	9	0.0171 m	87	1.2	0.72	0.73
DY			0.0146 m	86	1.2	0.88	
DZ			0.0356 m	89	1.1	0.02	
DX	5	9	0.0209 m	91	0.9	0.75	0.36
DY			0.0186 m	92	0.9	0.24	
DZ			0.0431 m	92	0.9	-0.12	
DX	5	9	0.2372 m	99	0.1	0.23	0.03
DY			0.2351 m	99	0.1	-0.14	
DZ			0.1804 m	99	0.2	-0.14	
DX	5	9	0.0273 m	95	0.7	-0.24	0.23
DY			0.0237 m	95	0.7	-0.25	

DZ	0.0612 m	96	0.6	0.44

Redundancy:

W-Test:

T-Test (3-dimensional):

Estimated Errors (Observations)

Estimated Errors For Observations With Rejected W-Tests (max 10)

	Station	Target	W-Test	Fact	Est err
DX	GRNX	5	6.37	3.3	0.0317 m
DY			8.88	4.5	0.0484 m
DZ			3.24	1.7	0.0182 m
DX	GRNX	3	5.21	2.7	0.0361 m
DY			6.31	3.2	0.0419 m
DX	GRNX	8	5.04	2.6	0.0280 m
DY			6.47	3.3	0.0408 m
DZ			3.45	1.8	0.0212 m

DY	GRNX	10	3.11	1.6	0.0234 m
DY	GRNX	10	3.00	1.5	0.0225 m

Estimated Errors For Observations With Rejected T-Tests (max 10)

	Station	Target	T-Test	Fact	Est err
DX	GRNX	5	29.18	3.9	0.0181 m
DY					0.0422 m
DZ					-0.0074 m
DX	GRNX	8	16.17	2.9	0.0147 m
DY					0.0329 m
DZ					0.0025 m
DX	GRNX	3	15.23	2.8	0.0213 m
DY					0.0333 m
DZ					-0.0051 m
DX	GRNX	10	4.93	1.6	0.0218 m
DY					0.0312 m
DZ					-0.0139 m
DX	ZAN1	4	4.84	1.6	-0.0152 m
DY					-0.0148 m
DZ					0.0019 m
DX	ZAN1	3	4.80	1.6	-0.0162 m
DY					-0.0172 m
DZ					0.0003 m
DX	ZAN1	5	4.52	1.5	-0.0151 m
DY					-0.0162 m
DZ					-0.0067 m
DX	GRNX	9	4.20	1.5	0.0211 m
DY					0.0305 m
DZ					-0.0116 m
DX	ZAN1	5	4.13	1.5	-0.0179 m
DY					-0.0166 m
DZ					0.0027 m
DX	GRNX	10	4.02	1.5	0.0152 m
DY					0.0267 m
DZ					0.0042 m

Global Positioning Services, Inc.
2603 Blueberry Road
Anchorage, Alaska

Phone: 907-569-2000
Fax: 907-569-2002

Project Information		Coordinate System	
Name:	L:\Mat-Su Borough\West Susitna\TBC_Proj \GPSI_11_12_E_19.vce	Name:	US State Plane 1983
Size:	1 MB	Datum:	NAD 1983 (Alaska)
Modified:	7/12/2011 12:29:47 PM	Zone:	Alaska Zone 4 5004
Reference number:		Geoid:	GEOID09 (Alaska)
Description:		Vertical datum:	

Network Adjustment Report

Adjustment Settings

Set-Up Errors

GNSS

Error in Height of Antenna:	0.005 ft
Centering Error:	0.005 ft

Covariance Display

Horizontal:

Propagated Linear Error [E]:	U.S.
Constant Term [C]:	0.000 ft
Scale on Linear Error [S]:	1.960

Three-Dimensional

Propagated Linear Error [E]:	U.S.
Constant Term [C]:	0.000 ft
Scale on Linear Error [S]:	1.960

Adjustment Statistics

Number of Iterations for Successful Adjustment:	2
Network Reference Factor:	1.00
Chi Square Test (95%):	Passed
Precision Confidence Level:	95%
Degrees of Freedom:	79

Post Processed Vector Statistics

Reference Factor:	1.00
Redundancy Number:	79.00
A Priori Scalar:	0.83

Adjusted Grid Coordinates

Point ID	Easting (US survey foot)	Easting Error (US survey foot)	Northing (US survey foot)	Northing Error (US survey foot)	Elevation (US survey foot)	Elevation Error (US survey foot)	Fixed
1	2070103.4121	?	2861832.5929	?	2772.4961	0.038	LL
10	1697521.9789	?	3271673.1417	?	1647.6351	?	LLh
11	1882679.9569	0.008	3228964.7103	0.010	2365.8092	0.044	
12	2049545.7153	0.009	3201362.9384	0.010	4196.1495	0.043	
2	1942323.2578	?	2853252.0258	?	1630.6382	0.037	LL
9	1603269.7966	?	3180896.3029	?	741.5635	0.035	LL
EBASE	1826939.7971	0.008	3199494.9176	0.010	2496.8489	0.047	

Adjusted Geodetic Coordinates

Point ID	Latitude	Longitude	Height (US survey foot)	Height Error (US survey foot)	Fixed
1	N61°48'37.00792"	W147°30'54.95489"	2829.7207	0.038	LL
10	N62°57'11.81529"	W149°39'25.27183"	1690.5390	?	LLh
11	N62°49'45.98795"	W148°33'03.52919"	2414.5530	0.044	
12	N62°44'24.80136"	W147°33'36.13749"	4248.8274	0.043	
2	N61°47'53.49494"	W148°15'18.05244"	1682.8127	0.037	LL
9	N62°42'18.92453"	W150°13'16.45017"	779.7010	0.035	LL
EBASE	N62°45'06.81725"	W148°53'14.38628"	2543.9378	0.047	

Error Ellipse Components

Point ID	Semi-major axis (US survey foot)	Semi-minor axis (US survey foot)	Azimuth
11	0.013	0.010	172°
12	0.012	0.011	171°
EBASE	0.013	0.010	171°

Adjusted GPS Observations

Transformation Parameters

Azimuth Rotation: -0.002 sec **(95%)** 0.002 sec

Scale Factor: 1.00000008 **(95%)** 0.00000001

Observation ID		Observation	A-posteriori Error	Residual	Standardized Residual
9 --> 10 (PV239)	**Az.**	45°52'46"	0.002 sec	0.005 sec	0.285
	ΔHt.	910.838 ft	0.035 ft	0.044 ft	0.856
	Ellip Dist.	130871.304 ft	0.002 ft	0.037 ft	3.746
9 --> 2 (PV294)	**Az.**	133°49'17"	0.002 sec	-0.011 sec	-2.648
	ΔHt.	903.111 ft	0.037 ft	0.013 ft	0.299
	Ellip Dist.	471528.092 ft	0.007 ft	-0.021 ft	-1.304

10 --> 2 (PV293)	**Az.**	149°58'17"	0.002 sec	-0.003 sec	-0.877
	ΔHt.	-7.727 ft	0.037 ft	0.080 ft	1.942
	Ellip Dist.	484799.920 ft	0.007 ft	-0.014 ft	-0.810
11 --> 2 (PV163)	**Az.**	172°15'45"	0.004 sec	-0.004 sec	-0.877
	ΔHt.	-731.741 ft	0.046 ft	-0.074 ft	-1.660
	Ellip Dist.	380423.173 ft	0.011 ft	0.001 ft	0.080
2 --> 9 (PV198)	**Az.**	315°33'42"	0.002 sec	-0.007 sec	-1.637
	ΔHt.	-903.112 ft	0.037 ft	-0.019 ft	-0.326
	Ellip Dist.	471528.092 ft	0.007 ft	0.016 ft	0.992
12 --> 2 (PV187)	**Az.**	199°16'49"	0.005 sec	-0.003 sec	-0.642
	ΔHt.	-2566.015 ft	0.046 ft	0.093 ft	1.591
	Ellip Dist.	364233.349 ft	0.010 ft	0.026 ft	1.556
9 --> 10 (PV265)	**Az.**	45°52'46"	0.002 sec	0.019 sec	1.230
	ΔHt.	910.838 ft	0.035 ft	-0.015 ft	-0.388
	Ellip Dist.	130871.304 ft	0.002 ft	0.014 ft	1.572
12 --> 10 (PV241)	**Az.**	283°27'57"	0.005 sec	0.000 sec	-0.030
	ΔHt.	-2558.289 ft	0.043 ft	0.082 ft	1.537
	Ellip Dist.	358986.113 ft	0.008 ft	-0.014 ft	-1.140
EBASE --> 11 (PV38)	**Az.**	63°07'27"	0.038 sec	-0.016 sec	-0.637
	ΔHt.	-129.385 ft	0.049 ft	-0.002 ft	-0.072
	Ellip Dist.	63054.029 ft	0.010 ft	0.010 ft	1.489
10 --> 9 (PV179)	**Az.**	226°22'53"	0.002 sec	0.018 sec	1.224
	ΔHt.	-910.838 ft	0.035 ft	0.010 ft	0.239
	Ellip Dist.	130871.304 ft	0.002 ft	0.014 ft	1.465
1 --> 2 (PV292)	**Az.**	268°20'54"	0.002 sec	0.023 sec	1.308
	ΔHt.	-1146.908 ft	0.038 ft	0.006 ft	0.171
	Ellip Dist.	128061.029 ft	0.002 ft	-0.008 ft	-0.954
10 --> 2 (PV161)	**Az.**	149°58'17"	0.002 sec	0.002 sec	0.481
	ΔHt.	-7.727 ft	0.037 ft	-0.061 ft	-1.293
	Ellip Dist.	484799.920 ft	0.007 ft	0.012 ft	0.777

9 --> EBASE (PV215)	**Az.**	85°03'00"	0.009 sec	-0.012 sec	-1.288
	ΔHt.	1764.237 ft	0.048 ft	0.023 ft	0.449
	Ellip Dist.	224461.865 ft	0.008 ft	0.005 ft	0.444
12 --> 10 (PV132)	**Az.**	283°27'57"	0.005 sec	0.005 sec	0.959
	ΔHt.	-2558.289 ft	0.043 ft	-0.018 ft	-0.423
	Ellip Dist.	358986.113 ft	0.008 ft	-0.013 ft	-1.182
12 --> 1 (PV104)	**Az.**	178°41'43"	0.005 sec	0.005 sec	1.171
	ΔHt.	-1419.107 ft	0.045 ft	-0.036 ft	-0.839
	Ellip Dist.	340118.039 ft	0.011 ft	0.006 ft	0.353
10 --> 1 (PV286)	**Az.**	138°01'37"	0.002 sec	0.002 sec	0.498
	ΔHt.	1139.181 ft	0.038 ft	0.047 ft	1.109
	Ellip Dist.	553893.564 ft	0.008 ft	-0.008 ft	-0.526
10 --> 1 (PV129)	**Az.**	138°01'37"	0.002 sec	0.002 sec	0.615
	ΔHt.	1139.181 ft	0.038 ft	0.015 ft	0.331
	Ellip Dist.	553893.564 ft	0.008 ft	-0.015 ft	-1.069
9 --> 1 (PV288)	**Az.**	124°09'08"	0.002 sec	-0.002 sec	-0.677
	ΔHt.	2050.019 ft	0.038 ft	0.035 ft	0.817
	Ellip Dist.	565471.428 ft	0.008 ft	-0.015 ft	-1.031
9 --> 1 (PV176)	**Az.**	124°09'08"	0.002 sec	-0.004 sec	-1.005
	ΔHt.	2050.019 ft	0.038 ft	-0.010 ft	-0.225
	Ellip Dist.	565471.428 ft	0.008 ft	-0.004 ft	-0.329
11 --> 10 (PV133)	**Az.**	284°16'42"	0.011 sec	0.008 sec	0.786
	ΔHt.	-724.014 ft	0.044 ft	0.013 ft	0.314
	Ellip Dist.	190033.229 ft	0.009 ft	-0.009 ft	-0.930
2 --> 1 (PV159)	**Az.**	87°41'47"	0.002 sec	-0.010 sec	-0.607
	ΔHt.	1146.908 ft	0.038 ft	-0.013 ft	-0.312
	Ellip Dist.	128061.029 ft	0.002 ft	-0.007 ft	-0.808
2 --> 9 (PV177)	**Az.**	315°33'42"	0.002 sec	-0.003 sec	-0.797
	ΔHt.	-903.112 ft	0.037 ft	0.034 ft	0.716
	Ellip Dist.	471528.092 ft	0.007 ft	0.009 ft	0.620

11 --> 9 (PV181)	**Az.**	261°31'39"	0.007 sec	0.005 sec	0.790
	ΔHt.	-1634.852 ft	0.045 ft	0.024 ft	0.580
	Ellip Dist.	283537.584 ft	0.009 ft	0.002 ft	0.215
12 --> 9 (PV180)	**Az.**	269°32'35"	0.004 sec	0.003 sec	0.733
	ΔHt.	-3469.127 ft	0.045 ft	-0.008 ft	-0.189
	Ellip Dist.	446763.609 ft	0.009 ft	0.004 ft	0.401
EBASE --> 12 (PV42)	**Az.**	90°30'30"	0.011 sec	-0.003 sec	-0.331
	ΔHt.	1704.889 ft	0.050 ft	0.028 ft	0.719
	Ellip Dist.	222612.492 ft	0.010 ft	-0.006 ft	-0.582
2 --> 10 (PV240)	**Az.**	331°12'50"	0.002 sec	0.003 sec	0.702
	ΔHt.	7.726 ft	0.037 ft	0.019 ft	0.315
	Ellip Dist.	484799.920 ft	0.007 ft	0.004 ft	0.205
11 --> 12 (PV45)	**Az.**	100°40'52"	0.014 sec	0.006 sec	0.572
	ΔHt.	1834.274 ft	0.048 ft	0.027 ft	0.698
	Ellip Dist.	169129.244 ft	0.010 ft	0.004 ft	0.380
2 --> EBASE (PV216)	**Az.**	343°06'49"	0.005 sec	0.002 sec	0.333
	ΔHt.	861.125 ft	0.049 ft	0.033 ft	0.583
	Ellip Dist.	364973.547 ft	0.011 ft	0.012 ft	0.668
EBASE --> 1 (PV102)	**Az.**	145°13'27"	0.004 sec	0.001 sec	0.203
	ΔHt.	285.782 ft	0.048 ft	0.000 ft	0.002
	Ellip Dist.	416100.530 ft	0.011 ft	-0.009 ft	-0.659
11 --> 1 (PV105)	**Az.**	154°14'14"	0.004 sec	0.001 sec	0.276
	ΔHt.	415.167 ft	0.046 ft	-0.010 ft	-0.226
	Ellip Dist.	412192.585 ft	0.011 ft	-0.007 ft	-0.436
EBASE --> 10 (PV238)	**Az.**	300°08'20"	0.013 sec	0.001 sec	0.065
	ΔHt.	-853.399 ft	0.047 ft	0.008 ft	0.152
	Ellip Dist.	148196.644 ft	0.009 ft	-0.001 ft	-0.091

Covariance Terms

From Point	To Point		Components	A-posteriori Error	Horiz. Precision (Ratio)	3D Precision (Ratio)
1	9	**Az.**	306°32'50"	0.000 sec	1 : 0	1 : 4046400850
		ΔHt.	-2050.020 ft	0.038 ft		
		ΔElev.	-2030.933 ft	0.038 ft		
		Ellip Dist.	565471.473 ft	0.000 ft		
10	1	**Az.**	138°01'37"	0.000 sec	1 : 0	1 : 7072609445
		ΔHt.	1139.182 ft	0.038 ft		
		ΔElev.	1124.861 ft	0.038 ft		
		Ellip Dist.	553893.608 ft	0.000 ft		
10	2	**Az.**	149°58'17"	0.000 sec	1 : 0	1 : 53479325888
		ΔHt.	-7.726 ft	0.037 ft		
		ΔElev.	-16.997 ft	0.037 ft		
		Ellip Dist.	484799.958 ft	0.000 ft		
10	9	**Az.**	226°22'53"	0.000 sec	1 : 0	1 : 534753541
		ΔHt.	-910.838 ft	0.035 ft		
		ΔElev.	-906.072 ft	0.035 ft		
		Ellip Dist.	130871.314 ft	0.000 ft		
10	EBASE	**Az.**	119°27'15"	0.013 sec	1 : 16786749	1 : 16743832
		ΔHt.	853.399 ft	0.047 ft		
		ΔElev.	849.214 ft	0.047 ft		
		Ellip Dist.	148196.656 ft	0.009 ft		
11	1	**Az.**	154°14'14"	0.004 sec	1 : 41862072	1 : 41757152
		ΔHt.	415.168 ft	0.046 ft		
		ΔElev.	406.687 ft	0.046 ft		
		Ellip Dist.	412192.617 ft	0.010 ft		
11	10	**Az.**	284°16'42"	0.011 sec	1 : 22567760	1 : 22528155
		ΔHt.	-724.014 ft	0.044 ft		
		ΔElev.	-718.174 ft	0.044 ft		
		Ellip Dist.	190033.244 ft	0.008 ft		
11	12	**Az.**	100°40'52"	0.014 sec	1 : 16340394	1 : 16406331
		ΔHt.	1834.274 ft	0.048 ft		
		ΔElev.	1830.340 ft	0.048 ft		

		Ellip Dist.	169129.257 ft	0.010 ft		
11	2	**Az.**	172°15'45"	0.004 sec	1 : 37903860	1 : 37916894
		ΔHt.	-731.740 ft	0.046 ft		
		ΔElev.	-735.171 ft	0.046 ft		
		Ellip Dist.	380423.203 ft	0.010 ft		
11	9	**Az.**	261°31'39"	0.007 sec	1 : 34695350	1 : 34850700
		ΔHt.	-1634.852 ft	0.045 ft		
		ΔElev.	-1624.246 ft	0.045 ft		
		Ellip Dist.	283537.606 ft	0.008 ft		
11	EBASE	**Az.**	243°25'24"	0.038 sec	1 : 6333932	1 : 6353208
		ΔHt.	129.385 ft	0.049 ft		
		ΔElev.	131.040 ft	0.049 ft		
		Ellip Dist.	63054.034 ft	0.010 ft		
12	1	**Az.**	178°41'43"	0.005 sec	1 : 35104561	1 : 35173570
		ΔHt.	-1419.107 ft	0.045 ft		
		ΔElev.	-1423.653 ft	0.045 ft		
		Ellip Dist.	340118.066 ft	0.010 ft		
12	10	**Az.**	283°27'57"	0.006 sec	1 : 41105281	1 : 41049381
		ΔHt.	-2558.288 ft	0.043 ft		
		ΔElev.	-2548.514 ft	0.043 ft		
		Ellip Dist.	358986.141 ft	0.009 ft		
12	2	**Az.**	199°16'49"	0.005 sec	1 : 38364727	1 : 38577100
		ΔHt.	-2566.015 ft	0.046 ft		
		ΔElev.	-2565.511 ft	0.046 ft		
		Ellip Dist.	364233.377 ft	0.009 ft		
12	9	**Az.**	269°32'35"	0.004 sec	1 : 51905659	1 : 52007768
		ΔHt.	-3469.126 ft	0.045 ft		
		ΔElev.	-3454.586 ft	0.045 ft		
		Ellip Dist.	446763.644 ft	0.009 ft		
12	EBASE	**Az.**	271°41'18"	0.011 sec	1 : 21201989	1 : 21231746
		ΔHt.	-1704.890 ft	0.050 ft		
		ΔElev.	-1699.301 ft	0.050 ft		
		Ellip Dist.	222612.510 ft	0.010 ft		

2	1	**Az.**	87°41'47"	0.000 sec	1 : 0	1 : 372350967
		ΔHt.	1146.908 ft	0.038 ft		
		ΔElev.	1141.858 ft	0.038 ft		
		Ellip Dist.	128061.039 ft	0.000 ft		
2	9	**Az.**	315°33'42"	0.000 sec	1 : 0	1 : 6530197230
		ΔHt.	-903.112 ft	0.037 ft		
		ΔElev.	-889.075 ft	0.037 ft		
		Ellip Dist.	471528.129 ft	0.000 ft		
EBASE	1	**Az.**	145°13'27"	0.004 sec	1 : 42758547	1 : 42635646
		ΔHt.	285.783 ft	0.048 ft		
		ΔElev.	275.647 ft	0.048 ft		
		Ellip Dist.	416100.562 ft	0.010 ft		
EBASE	2	**Az.**	162°33'14"	0.005 sec	1 : 36248247	1 : 36231326
		ΔHt.	-861.125 ft	0.049 ft		
		ΔElev.	-866.211 ft	0.049 ft		
		Ellip Dist.	364973.576 ft	0.010 ft		
EBASE	9	**Az.**	266°14'09"	0.009 sec	1 : 28090646	1 : 28056843
		ΔHt.	-1764.237 ft	0.048 ft		
		ΔElev.	-1755.285 ft	0.048 ft		
		Ellip Dist.	224461.882 ft	0.008 ft		

Date: 7/12/2011 2:11:01 PM	Project: L:\Mat-Su Borough\West Susitna\TBC_Proj \GPSI_11_12_E_19.vce	Trimble Business Center

Global Positioning Services, Inc.
2603 Blueberry Road
Anchorage, Alaska

Phone: 907-569-2000
Fax: 907-569-2002

Project Information		Coordinate System	
Name:	L:\Mat-Su Borough\West Susitna \TBC_Proj\Watana Base 1019-b.vce	Name:	US State Plane 1983
Size:	315 KB	Datum:	NAD 1983 (Alaska)
Modified:	7/14/2011 11:45:42 AM	Zone:	Alaska Zone 4 5004
Reference number:		Geoid:	GEOID09 (Alaska)
Description:		Vertical datum:	

Network Adjustment Report

Adjustment Settings

Set-Up Errors

GNSS

Error in Height of Antenna:	0.0080 ft
Centering Error:	0.0090 ft

Covariance Display

Horizontal:

Propagated Linear Error [E]:	U.S.
Constant Term [C]:	0.0000 ft
Scale on Linear Error [S]:	1.960

Three-Dimensional

Propagated Linear Error [E]:	U.S.
Constant Term [C]:	0.0000 ft
Scale on Linear Error [S]:	1.960

Adjustment Statistics

Number of Iterations for Successful Adjustment:	2
Network Reference Factor:	1.00
Chi Square Test (95%):	Passed
Precision Confidence Level:	95%
Degrees of Freedom:	4

Post Processed Vector Statistics

Reference Factor:	1.00
Redundancy Number:	4.00
A Priori Scalar:	0.43

Adjusted Grid Coordinates

Point ID	Easting (US survey foot)	Easting Error (US survey foot)	Northing (US survey foot)	Northing Error (US survey foot)	Elevation (US survey foot)	Elevation Error (US survey foot)	Fixed
1019	1972003.1209	0.0093	3223051.2191	0.0109	2807.1623	0.0457	
11	1882679.9569	?	3228964.7103	?	2365.8096	?	LLh
12	2049545.7153	?	3201362.9384	?	4196.1499	?	LLh

Adjusted Geodetic Coordinates

Point ID	Latitude	Longitude	Height (US survey foot)	Height Error (US survey foot)	Fixed
1019	N62°48'24.37152"	W148°01'05.30804"	2858.4988	0.0457	
11	N62°49'45.98795"	W148°33'03.52919"	2414.5534	?	LLh
12	N62°44'24.80136"	W147°33'36.13749"	4248.8278	?	LLh

Error Ellipse Components

Point ID	Semi-major axis (US survey foot)	Semi-minor axis (US survey foot)	Azimuth
1019	0.0137	0.0116	177°

Adjusted GPS Observations

Transformation Parameters

Azimuth Rotation: 0.015 sec **(95%)** 0.015 sec

Scale Factor: 1.00000018 **(95%)** 0.00000007

Observation ID		Observation	A-posteriori Error	Residual	Standardized Residual
11 --> 12 (PV80)	**Az.**	100°40'52"	0.015 sec	-0.001 sec	-0.189
	ΔHt.	1834.2740 ft	0.0001 ft	0.0039 ft	0.131
	Ellip Dist.	169129.2273 ft	0.0114 ft	-0.0088 ft	-1.950
12 --> 1019 (PV79)	**Az.**	287°47'45"	0.032 sec	0.001 sec	0.084
	ΔHt.	-1390.3287 ft	0.0457 ft	0.0073 ft	0.325
	Ellip Dist.	80513.9695 ft	0.0111 ft	0.0073 ft	1.912
11 --> 1019 (PV81)	**Az.**	95°04'36"	0.029 sec	0.005 sec	0.427
	ΔHt.	443.9454 ft	0.0457 ft	-0.0070 ft	-0.289
	Ellip Dist.	89519.1813 ft	0.0110 ft	0.0072 ft	1.860

Covariance Terms

From Point	To Point		Components	A-posteriori Error	Horiz. Precision (Ratio)	3D Precision (Ratio)
1019	11	**Az.**	275°33'03"	0.025 sec	1 : 9598859	1 : 9554143
		ΔHt.	-443.9455 ft	0.0457 ft		
		ΔElev.	-441.3528 ft	0.0457 ft		
		Ellip Dist.	89519.1973 ft	0.0093 ft		

1019	12	**Az.**	107°23'19"	0.028 sec	1 : 8488622	1 : 8346115
		ΔHt.	1390.3289 ft	0.0457 ft		
		ΔElev.	1388.9875 ft	0.0457 ft		
		Ellip Dist.	80513.9838 ft	0.0095 ft		
11	12	**Az.**	100°40'52"	0.000 sec	1 : 0	1 : 0
		ΔHt.	1834.2744 ft	0.0000 ft		
		ΔElev.	1830.3403 ft	0.0000 ft		
		Ellip Dist.	169129.2574 ft	0.0000 ft		

Project Summary					
Project name: **11-037 BASE 31.ttp**					
Surveyor:					
Comment:					
Linear unit: **USFeet**					
GPS Observations					
Name	**dN (USft)**	**dE (USft)**	**dHt (USft)**	**Horz RMS (USft)**	**Vert RMS (USft)**
3−31	-31529.09	15314.67	-444.86	0.01	0.02
3−31	-31529.09	15314.67	-444.9	0.01	0.02
3−31	-31529.08	15314.66	-444.84	0.04	0.06
4−31	-11124.05	120920.13	-99.72	0.04	0.07
4−31	-11124.05	120920.13	-99.77	0.04	0.07
6−31	-76104.73	177870.31	-108.6	0.06	0.1
6−31	-76104.77	177870.31	-108.59	0.06	0.1
6−31	-76104.76	177870.31	-108.6	0.06	0.11

Project Summary					
Project name: **11-037 base 32 6-25.ttp**					
Surveyor:					
Comment:					
Linear unit: **Meters**					
GPS Observations					
Name	**dN (m)**	**dE (m)**	**dHt (m)**	**Horz RMS (m)**	**Vert RMS (m)**
3−32	15401.495	-22575.859	348.078	0.009	0.016
3−32	15401.491	-22575.858	348.076	0.01	0.015
4−32	21276.436	9501.334	469.135	0.009	0.013
4−32	21276.438	9501.327	469.163	0.008	0.014
4−32	21276.442	9501.337	469.14	0.008	0.014
6−32	1528.909	26772.832	452.729	0.009	0.017
6−32	1528.915	26772.829	452.719	0.012	0.015
6−32	1528.912	26772.82	452.746	0.009	0.016

Job # 11-037

QC POINTS FROM BASE #7, #8, #6

JOB NAME : 6-21-11

PT#	START	STOP	DESC	HI
500	11:55AM	12:15pm	FOREST POINT 1 (2) PHOTOS VIEW SE/NE ±500' WEST OF TALKEETNA SPUR	8 90 2.713m
501	12:20pm	12:35pm	2ND SHOT @ FOREST POINT 1	9 90 3.017m
502	12:40pm	12:55pm	FOREST POINT 2 (2) PHOTOS VIEW SE NE ±700' WEST OF TALK. SPUR	9 90 3.017m
503	1:00pm	1:15pm	2ND SHOT @ FOREST POINT 2	8 90 2.713m

6-21-11

TEMP 64°

LIECA 1200
SERIAL #8513
ROVS W/ BT-POD

J. HALL
C. SPURLOCK

PT#	START	STOP	DESC	HI
504	1:52	2:07	FOREST POINT 3 (2) PHOTOS VIEW S/W ½ MILE WEST ON ROMANO 580'± SOUTH	9 90 3.017m
505	2:12	2:28	2ND SHOT @ FOREST POINT 3	8 90 2.713m
506	2:37	2:52	FOREST POINT 4 (2) PHOTOS VIEW NE/SE ±700' SOUTH OF ROMANO	8 90 2.713m
507	2:57	3:12	2ND SHOT @ FOREST POINT 4	9 90 3.017m

JOB # 11-037
JOB NAME: 6-22-11
QC POINTS - TALKEETNA
BASE #'S 7, #8
JOB NAME: 6-22-11

AT#	START	STOP	DESC	HI
			URBAN #1 // SSMH	5 26
800	11:18 AM	11:33 AM	(2) PHOTOS VIEW E/W STREET INT. "C" ST	1.603m
			↓	
			2ND SHOT @ URBAN	7 26
801	11:38	11:48	POINT 1	2.213m
			URBAN #2 // NO PARKING PAINT	7 26
802	11:50	12	(2) PHOTOS VIEW E/W OUTSIDE MTN HIGH PIZZA	2.213m
	12:15	12:25		
803	~~12:05~~	~~12:15~~	2ND SHOT @ URBAN POINT 2	5 26 1.603m

6-22-11
TEMP 65°
LEICA 1200
SERIAL #8513
ROD W/ BI-POD

J. HALL

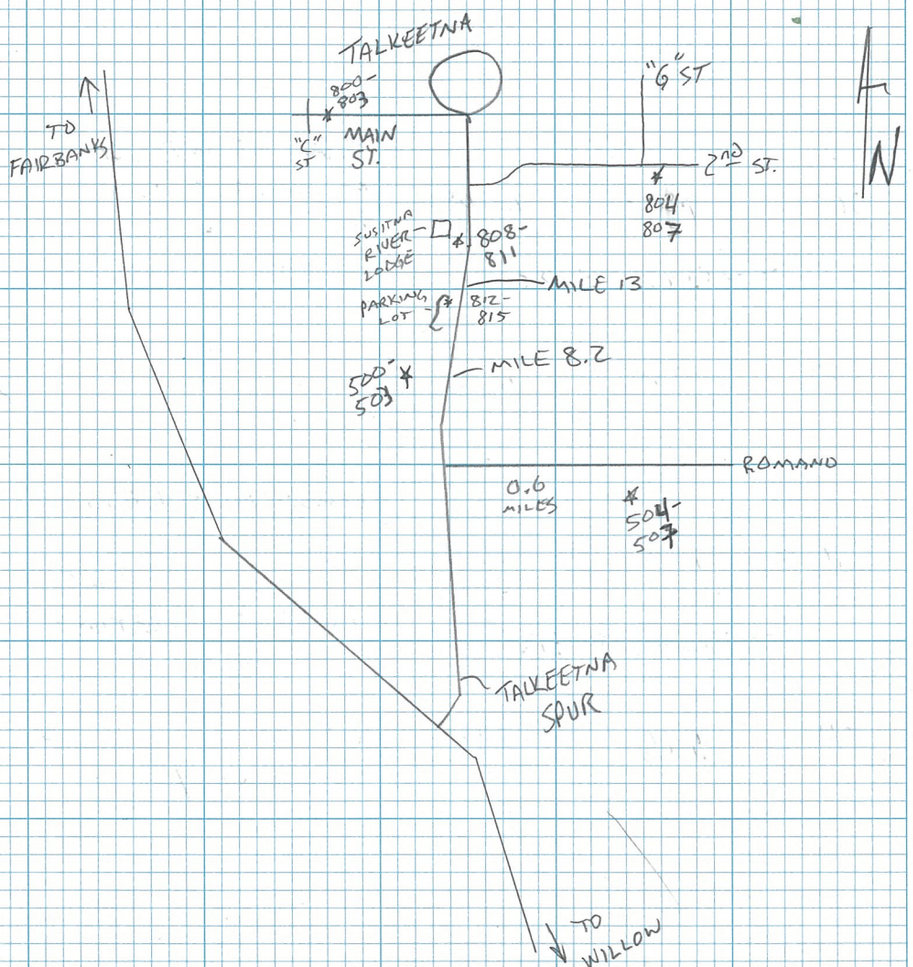
AT#	START	STOP	DESC	HI
			URBAN #3 // SSMH	5 26
804	12:39	12:50	(2) PHOTOS VIEW E/W "G" ST + 2ND ST.	1.603m
			2ND SHOT @ URBAN	7 26
805	12:55	1:05	POINT 3	2.213m
			URBAN #4 // ~~AT~~ TOP MON CASE @	7 26
806	1:07	1:17	INT "G" ST + 2ND ST	2.213
			2ND SHOT @ URBAN	5 26
807	1:27	1:32	POINT 4	1.603m

CONT.

PT	START	STOP	DESC	ΔH
808	1:45	1:56	URBAN AT 5 // INT. OF GAR PAINT SOUTH OF ENTRANCE TO SUSITNA RIVER LODGE (2) PHOTOS VIEW N/S	5 26 1.603m
SERIAL #8513				
809	2:01	2:11	2ND SHOT @ URBAN POINT 5	7 26 2.213m
810	1:55	2:05	URBAN PT 6 // INT. OF GAR PAINT NORTH OF ENTRANCE TO SUSITNA RIVER LODGE (2) PHOTOS VIEW N/S	5 61 1.710m
SERIAL #3058				
811	2:16	2:20	2ND SHOT @ URBAN POINT 6	8 75 2.667m
812	3:08	3:18	URBAN PT 7 // END LARGE PAINT STRIPE NORTH END PARKING @ MILE 13 OF TALKEETNA SPUR HIGHWAY (2) PHOTOS VIEW N/S	5 26 1.603m
SERIAL #8513				
813	3:23	3:33	2ND SHOT @ URBAN POINT 7	7 26 2.213m
814	3:38	3:48	URBAN PT 8 // END LARGE PAINT STRIPE SOUTH END PARKING LOT (2) PHOTOS VIEW N/S	7 26 2.213m

6-22-11 J. HALL

PT	START	STOP	DESC	ΔH
815	3:53	4:03	2ND SHOT @ URBAN POINT 8	5 26 1.603m



JOB# 11-037

JOB NAME: 6-23-17

QC POINTS SOUTH TALKEETNA
NORTH OF WILLOW
BASE #'S 6, 7

PT#	START	STOP	DESC.	HI
508	10:47	11:05	FOREST POINT 5 // HUB	4 95
	SERIAL # 8513		(2) PHOTOS VIEW E/S	1.509m
509	11:~~17~~ 10	11:25	500'± SE OF SEEGO & HIGHWAY	
			2nd SHOT @ FOREST POINT 5	8 09
				2.466m
510	11:04	11:20	FOREST POINT 6 // HUB	5 23
	SERIAL # 7225		(2) PHOTOS VIEW E/S	1.594m
511	11:25	11:40	700'± SE OF SEEGO & HIGHWAY	4 87
			2nd SHOT @ FOREST POINT 6	1.484m

6-23-17
TEMP 65° CLOUDY
LEICA 1200

J. HALL

AT #	START	STOP	DESC	HI
900	11:53	12:03	WETLAND POINT 1	5 26
			(2) PHOTOS VIEW E/S	1.603m
	SERIAL # 8513		NORTH OF SEEGO DR EAST OF HIGHWAY 500'±	
901	12:08	12:18	2nd SHOT @ WETLAND POINT 1	7 26
				2.213m
902	12:20	12:30	WETLAND POINT 2	5 26
			(2) PHOTOS VIEW E/N	1.603m
	SERIAL # 8513		NORTH OF SEEGO DR. EAST OF HIGHWAY 500'±	
903	12:40 ~~12:35~~	12:50 ~~12:45~~	2nd SHOT @ WETLAND POINT 2	7 26
				2.213m
512	1:15	1:30	FOREST POINT 7 // HUB	5 26
~~904~~			(2) PHOTOS VIEW S/W	1.603m
	SERIAL # 8513		HIDDEN HILLS & HIGHWAY 0.1 MILES EAST 500' SOUTH	
513	1:35	1:50	2nd SHOT @ FOREST POINT 7	7 26
~~905~~				2.213m

5

CONT.

PT	START	STOP	DESC	HI
514	1:28	1:43	FOREST POINT 8 //HUB	5 27
			(2) PHOTOS VIEW S/W	
	SERIAL #7225		700' SOUTH HIDDEN HILLS	1.606m
515	1:48	2:03	2ND SHOT @ FOREST	5 63
			POINT 8	1.713m
904	2:31	2:41	WETLAND POINT 3 //HUB	5 26
			(2) PHOTOS VIEW S/W	
	SERIAL #8513		± NORTH OF ~~RIVER~~ SHEEP CREEK	1.603m
905	2:46	2:56	2ND SHOT @ WETLAND	7 26
			POINT 3	2.213m
906	2:42	2:52	WETLAND POINT 4 //HUB	4 50
			(2) PHOTOS VIEW S/W	
	SERIAL #7225		± NORTH OF ~~RIVER~~ SHEEP CREEK WEST HIGHWAY TURNOUT	1.372m
907	2:57	3:07	2ND SHOT @ WETLAND	7 64
			POINT 4	2.329m

11-037

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6-23-11

J. HALL

PT	START	STOP	DESC	HI
516	3:38	3:53	FOREST POINT 9 //HUB	5 26
			(2) PHOTO VIEW N/W	
	SN 7225		500'± WEST HIGHWAY 0.1 MILE NORTH ~~CARIS~~ CREEK GREYS	1.603m
517	3:58	4:13	2ND SHOT @ FOREST	7 26
			POINT 9	2.213m
518	4:19	4:34	FOREST POINT 10 //HUB	5 26
			(2) PHOTO VIEW N/W	
	SN 7225		700'± WEST HIGHWAY 0.1 MILES N - CREEK GREYS	1.603m
519	4:39	4:54	2ND SHOT @ FOREST	7 26
			POINT 10	2.213m
908	5:20	5:35	WETLAND POINT 5 //HUB	5 26
			(2) PHOTOS VIEW S/W	
	SN 7225		700'± WEST HIGHWAY 0.2 MILES N - CREEK GREYS	1.603m
909	5:40	5:56	2ND SHOT @ WETLAND	7 26
			POINT 5	2.213m

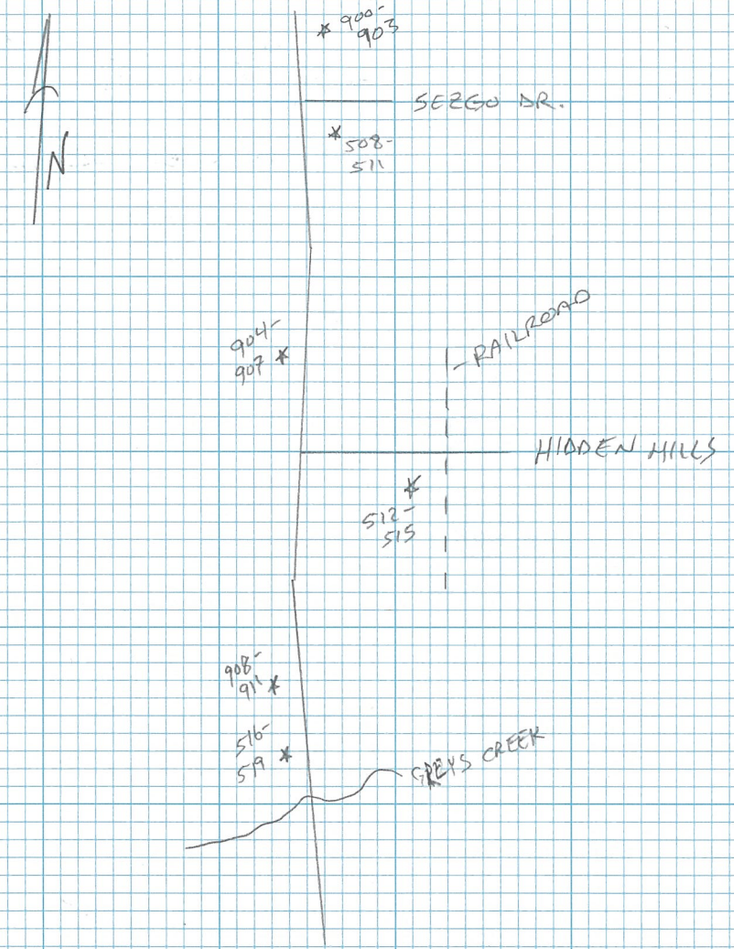
6

CONT.

PT	START / STOP		DESC	HI
910	5:52	6:02	WETLAND POINT 6 HUB SET 900'± WEST OF HIGHWAY (2) PHOTOS VIEW S/W	726 2.213m
SN 7225				
911	6:07	6:17	2ND SHOT @ WETLAND POINT 6	526 1.603m

11-037 6

6-23-11 J. HALL



~~JOB #~~ 11-037
JOB NAME: 6-24-11
QC POINTS WILLOW AREA
BASE'S 6, 4, 3, 7

NOTE: BASE 7 WAS FOR
#520 - #521
STOPED AFTER THESE
POINTS WERE COLLECTED

PT	START	STOP	DESC.	HI.
520	10:08	~~10:23~~	FOREST POINT 11 // HUB	5 26
SN 8513		10:48	(2) PHOTOS VIEW N/E	1.603m
			500'± EAST HIGHWAY	
			600'± NORTH OF CHURCH	
			LONGER OBSERVATIONS IN FOREST	726
	~~10:28~~	~~10:43~~	~~2ND SHOT @ FOREST POINT 11~~	~~2.213m~~
521	10:30	11:00	FOREST POINT 12 // HUB	5 28
			(2) PHOTOS VIEW N/E	1.609m
			600'± EAST HIGHWAY	
SN # 7225			700'± NORTH OF CHURCH	

NORTHEAST OF SPEEDWAY RD
& HIGHWAY

6-24-11
TEMP 69°
LEICA 1200

A. HALL

PT	START/STOP	DESC	HI
816	12:50 / 1:00	URBAN POINT 9 // PAINT STRIPE	5 26
SN 8513	1:05	(YELLOW) END @ PARKING	1.603m
	~~12:56~~	WILLOW SCHOOL	
817	/ 1:15	9TH STRIPE FROM SOUTH	
	~~1:06~~	(2) PHOTOS VIEW N/W	
		2ND SHOT @ URBAN POINT 9	~~5 38~~ 726
			2.213m
			~~1.640m~~
818	12:56 / 1:06	URBAN POINT 10 // PAINT STRIPE	5 38
~~85~~ SN 7225		(YELLOW) END @ PARKING	1.640m
		WILLOW SCHOOL	
		ADJACENT HANDICAP PKING,	
819	1:11 / 1:21	(2) PHOTOS VIEW N/W	8 52
		2ND SHOT @ URBAN POINT 10	2.597m

WEST OF HIGHWAY & SOUTH OF
WILLOW STATION ROAD

8

CONT.

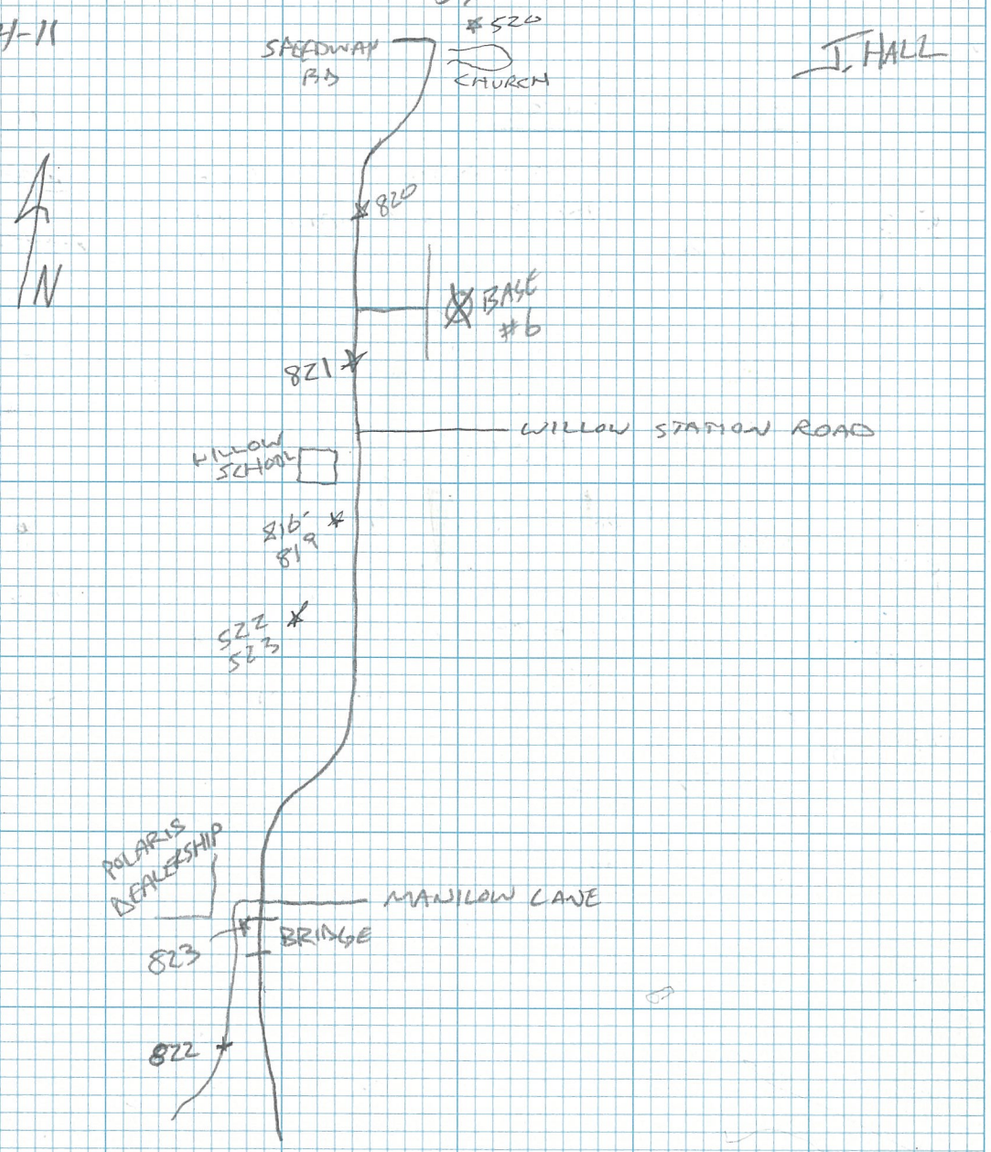
AT	START / STOP	DESC	HI
820 SN 8513 820	1:44 / 1:54	URBAN POINT 11 // TURN ARROW TIP POINTING WEST (2) PHOTOS VIEW N / W 700'± NORTH WILLOW AIRPORT ENTRANCE + BASE #6	5 26 1.603m 7 26 2.213m
820	1:59 / 2:09	2ND SHOT @ URBAN POINT 11	
821 SN 8513 821	2:18 / 2:28	URBAN POINT 12 // TURN ARROW TIP POINTING WEST (2) PHOTOS VIEW NE / SW 200'± SOUTH WILLOW AIRPORT ENTRANCE + BASE #6	5 26 1.603m 7 26 2.213m
	2:33 / 2:43	2ND SHOT @ URBAN POINT 12	
522 SN 7225	2:56 / 3:26	FOREST POINT 13 // HUB 300'± SOUTH OF SCHOOL DIRT PARKING LOT 800'± WEST HIGHWAY (2) PHOTOS VIEW N / W	5 26 1.603m 8 43 2.569m
523 SN 8513	3:08 / 3:38	FOREST POINT 14 // HUB 300'± SOUTH OF SCHOOL DIRT PARKING LOT 900'± WEST HIGHWAY (2) PHOTOS VIEW W / S	

11-037

8

6-24-11

J. HALL



CONT.

PT	START/STOP	DESC	H1
			5 26
~~822~~	~~4:08~~ 4:15 / 4:25	URBAN POINT 13 // MON CASE @ END ASPHALT ON WEST OF HIGHWAY BRIDGE (2) PHOTOS VIEW NE/SW	~~2.569m~~ 1.603m
SN ~~8513~~ 7225			726
822	4:30 / 4:40	2ND SHOT @ URBAN POINT 13	2.213m
823	4:47 / 4:57	URBAN POINT 14 // YELLOW PAINT STRIPE ON BIKE PATH BETWEEN BUCKINGHAM PALACE & HIGHWAY 800'± SOUTH OF MANITOU INTERSECTION (2) PHOTOS VIEW N / W	5 26 1.603m
SN 7225			726
823	5:03 / 5:13	2ND SHOT @ URBAN POINT 14	2.213m

6-24-11

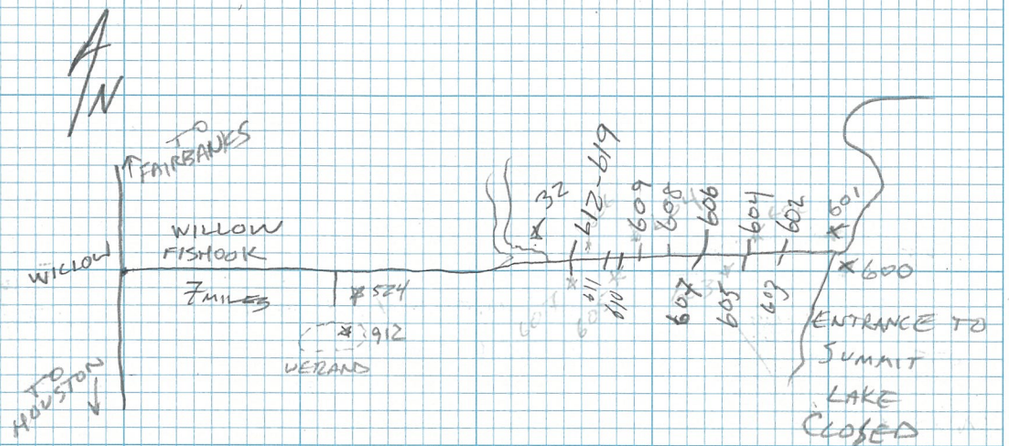
T. HALL

JOB # 11-037
JOB NAME: 6-25-11

QC POINTS HATCHER PASS
BASE #'S 6, 4, 3

PT	START/STOP	DESC.	HI
524 SN 8593	11:48/1:18	FOREST POINT 15 // HUB (2) PHOTOS VIEW N/W	8.16 5.32 1.622m 2.579m
525 SN 7225	12:00/1:26	FOREST POINT 16 // HUB (2) PHOTOS VIEW N/S	8.26 2.518m
912 SN 0578	12:20/1:32	WETLAND POINT 7 // HUB (2) PHOTOS VIEW NE	5.35 1.631m
913 SN 0331	12:30/1:36	WETLAND POINT 8 // HUB (2) PHOTOS VIEW NE/SE	5.09 1.551m
BASE 32 SN 0578	3:17/	BASE // SET HUB + TAC ON HATCHER PASS TURN OUT 20 MILES FROM WILLOW	4.42 SIDE ANT 0.943 w/ hook 0.756m w/hook

6-25-11
J. HALL
TEMP 60° RAIN
LEICA 1200



NOTE: 600 SERIES ARE BRUSH POINTS
0.8 MILES SEPERATION

11
CONT.

AT	START/STOP	DESC.	HI
600 SN 7225	4:45 / 5:15	SHRUB POINT 1 // HUB SET @ ENTRANCE TO SUMMIT LAKE (2) PHOTOS VIEW N/W	4 93 1.503m
601 SN 8513	4:59 / 5:30	SHRUB POINT 2 // HUB SET @ OPPOSITE CORNER TO ENTRANCE @ SUMMIT LAKE N/W	4 85 1.478m
602 SN 8513	5:59 / 6:40	SHRUB POINT 3 // HUB SET NORTH SIDE ROAD (2) PHOTOS VIEW E/W	8 26 2.513m
603 SN 7225	6:17 / 6:47	SHRUB POINT 4 // HUB SET SOUTH SIDE ROAD (2) PHOTOS VIEW SE/SW	7 92 2.474m
604 SN 7225	7:19 / 7:49	SHRUB POINT 5 // HUB SET NORTH SIDE ROAD (2) PHOTOS VIEW E/W	8 26 2.513m
605 SN 8513	7:35 / 8:05	SHRUB POINT 6 // HUB SET SOUTH SIDE ROAD (2) PHOTOS VIEW SE/SW	5 21 1.588m
606 SN 8513	8:25 / 8:55	SHRUB POINT 7 // HUB SET NORTH SIDE ROAD (2) PHOTOS VIEW NW/NE	8 26 2.513m

11-037

11

6-25-11

THALL

PT	START/STOP	DESC	HI
607 SN 7225	8:40 / 9:10	SHRUB POINT 8 // HUB SET SOUTH SIDE ROAD (2) PHOTOS VIEW SE/S	4 88 1.487m
608 SN7225	9:30 / 10:00 PM	SHRUB POINT 9 // HUB SET NORTH SIDE ROAD (2) PHOTOS VIEW W/NE	8 26 2.513m
609 SN 8513	9:40 / 10:10 PM	SHRUB POINT 10 // HUB SET NORTH SIDE ROAD (2) PHOTOS VIEW W/NE	5 26 1.603m
610 SN 8513	10:30 / 11:00 PM	SHRUB POINT 11 // HUB SET SOUTH SIDE ROAD (2) PHOTOS VIEW W/E	8 26 2.513m
611 SN 7225	10:40 / 11:10	SHRUB POINT 12 // HUB SET SOUTH SIDE ROAD (2) PHOTOS VIEW E/S	5 42 1.652m

12

JOB # 11-037
JOBNAME 6-26-11
8C POINTS HATCHER PASS
BASE #'S 6, 4, 3, 32

AT	START/STOP	DESC.	HI
612	11:44 / 12:14	SHRUB POINT 13 // HUB SET NORTH SIDE ROAD	8 26
SN 7225		(2) PHOTOS VIEW W/N	2.513m
613	12:00 / 12:30	SHRUB POINT 14 // HUB SET NORTH SIDE ROAD	5 56
SN 0331		(2) PHOTOS VIEW W/N	1.695m ~~1.603m~~
614	12:49 / 1:19	SHRUB POINT 15 // HUB SET WEST OF SWITCHBACK TOP TIER	7 26
SN 7225		(2) PHOTOS VIEW W/SE	2.213m
615	1:04 / 1:34	SHRUB POINT 16 // HUB SET NORTH OF SWITCHBACK KNUCKLE	4 64
SN 0331		(2) PHOTOS VIEW E/W	1.414m

11-037

12

J. HALL

6-26-11
TEMP 60° cloudy
LEICA 1200

AT	START/STOP	DESC	HI
616	1:54 / 2:24	SHRUB POINT 17 // HUB SET SOUTH SIDE ROAD	8 26
SN 7225		(2) PHOTOS VIEW E/W	2.513m
617	2:05 / 2:35	SHRUB POINT 18 // HUB SET SOUTH SIDE ROAD	4 70
SN 0331		(2) PHOTOS VIEW W/E	1.433m
618	3:05 / 3:35	SHRUB POINT 19 // HUB SET NORTH SIDE ROAD	8 26
SN 7225		(2) PHOTOS VIEW W/E	2.513m
619	3:18 / 3:48	SHRUB POINT 20 // HUB SET NORTH SIDE ROAD	5 12
SN 0331		(2) PHOTOS VIEW W/E	1.561m

13

BEGIN SURVEY

JOB # 11-037
JOB NAME 6-27-11
QC POINTS WILLOW + SOUTH
BASE 6, 4, 3, 5

PT	START / STOP	DESC	HI
700 SN 7225	11:10 / 11:40	BARREN LAND 1 // HUB SET NORTHEAST WILLOW SCHOOL ± 700' EAST HIGHWAY 500' ± (2) PHOTOS VIEW N / S	8 26 2.513m
701 SN 0331	11:12 / 11:42	BARREN LAND 2 // HUB SET NORTHEAST WILLOW SCHOOL ± 600' EAST HIGHWAY 400' ± (2) PHOTOS VIEW E / S	5 02 1.530m
914 SN 7225	12:09 / 12:39	WETLAND POINT 9 // HUB SET NORTH SIDE HIGHWAY ± 300' (2) PHOTOS VIEW N / W	7 26 2.213m
915 ~~SN 7225~~	~~1:01~~ /	~~WETLAND POINT 10 // HUB SET~~ POINT ABANDONED // UN-ACCESSIBLE	~~8 26~~ ~~2.513m~~
916 SN 7225 ~~SN 0331~~	1:01 / 1:31	WETLAND POINT 11 // HUB SET ~~SE~~ CREEK CROSSING ON DIRT RD (2) PHOTOS VIEW S / W	8 26 5 22 2.513m ~~1.591m~~
917 SN 0331	1:15 / 1:45	WETLAND POINT 12 // HUB SET NW CREEK CROSSING ON DIRT RD (2) PHOTOS VIEW N / E	5 22 1.591m

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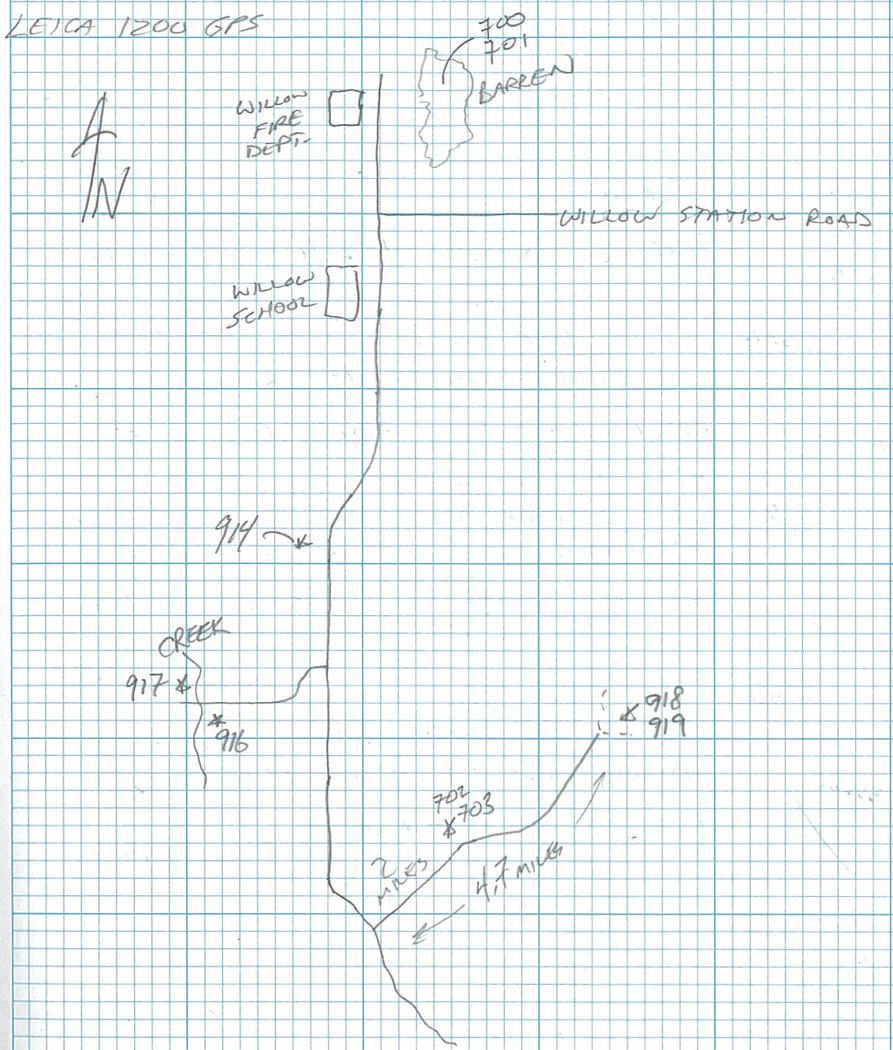
6-27-11
J. HALL
TEMP 60° CLOUDY
LEICA 1200 GPS



14

CONT.

PT	START/STOP	DESC.	HI
		BARREN LAND 3 // NAIL SET	8 26
702	2:26 / ~~2:56~~ 3:00	TURN OUT OFF DIRT ROAD 2 MILES FROM HIGHWAY NORTH (2) PHOTOS VIEW N/W	2.513m
	2:38 / 3:08	BARREN LAND 4 // NAIL SET	8 64
703		TURN OUT FROM DIRT ROAD 2 MILES FROM HIGHWAY NORTH (2) PHOTOS VIEW NE/W	2.633m
		WETLAND POINT 13 // HUB SET	8 26
918	3:44 / ~~4:30~~	END DIRT ROAD 4.7 MILES FROM HIGHWAY (2) PHOTOS VIEW N/E	2.513m
	4:00 / 4:32	WETLAND POINT 14 // HUB SET	5 50
919		END DIRT ROAD 4.7 MILES WEST OF PULL OUT 300' ± (2) PHOTOS VIEW N/W	1.676m

14-037

6-27-11

14

I. HALL

PT	START/STOP	DESC.	HI

JOB # 11-037
JOB NAME: 6-28-11
QC POINTS GLEN HIGHWAY
BASE #'s 2, 1, 3

BASE @ #2
HI = 5.03
1.533m
START : 10:10 AM
STOP : (6:50 AM ON 29TH)
SN : 0578

ROD W/ PVC // MP 84.5 GLEN HWY

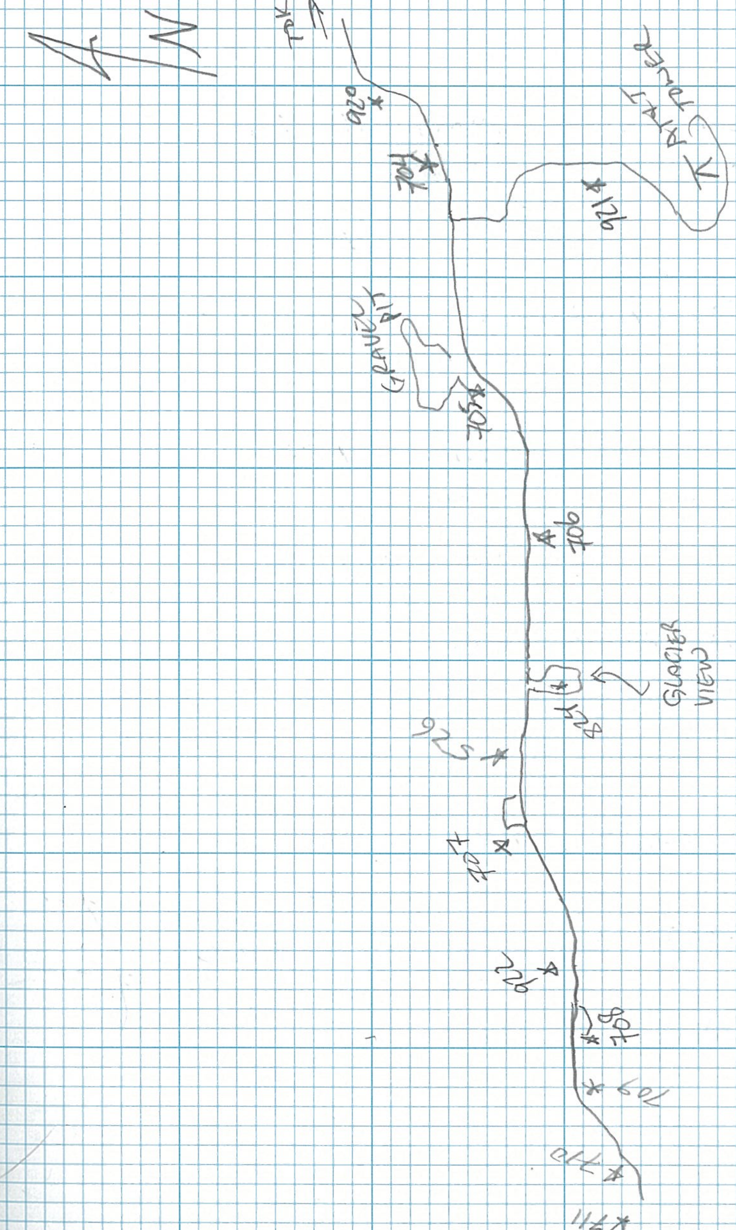
BASE #1
HI = 5.40
1.646m
START : 11:10 AM
STOP : (6:50 AM ON 29TH)
SN 0331

AIRPORT // CAP GPS 16

PT	START/STOP	DESC.	HI
920	12:00 PM / 12:30	WETLAND PT 15 // SPIKE SET	8.26
SN 7225		ASPHALT TURN OUT NORTH SIDE HIGHWAY	2.513m
		(2) PHOTOS VIEW	
704	1:04 PM / 2:04	BARREN LAND 5 // NAIL SET	8.26
SN 7225		GRAVEL LOT NORTH SIDE ROAD	2.513m
		(2) PHOTOS VIEW N/W	

6-28-11
TEMP 60° RAIN
LEICA 1200 GPS

J. HALL



16

CONT.

LEICA 1200 GPS
SN 7225
(TYP)

PT	START/STOP	DESC	HI
921	2:44 / 3:45	WETLAND POINT 16 // HUB SET ALASCOM ROAD SOUTH 2 MILES TURN OUT WITH FIRE RING (2) PHOTOS VIEW W/N	8 26 2.513m
705	4:14 / 5:00 PM	BARREN LAND 6 // NAIL SET AT GRAVEL PIT SOUTH ~~WEST~~ TURN OUT (2) PHOTOS VIEW W/N	8 26 2.513m
706	5:50 PM / 6:30	BARREN LAND 7 // NAIL SET AT ASPHALT TURN-OUT (2) PHOTOS VIEW E/W	8 26 2.513m
824	7:09 / 7:49	URBAN POINT 15 // PAINT STRIPE WHITE - PARKING LOT TO VIEW GLACIER STRIPE SOUTH STRIPE @ ENTRANCE (2) PHOTOS VIEW NW/SE	8 26 2.513m
707 SN 7225	8:18 / 8:58	BARREN LAND 8 // NAIL SET WEST END ASPHALT TURN-OUT MILE 99.8 GLEN HIGHWAY (2) PHOTOS VIEW W/E	8 26 2.513m

11-037

16

6-28-11

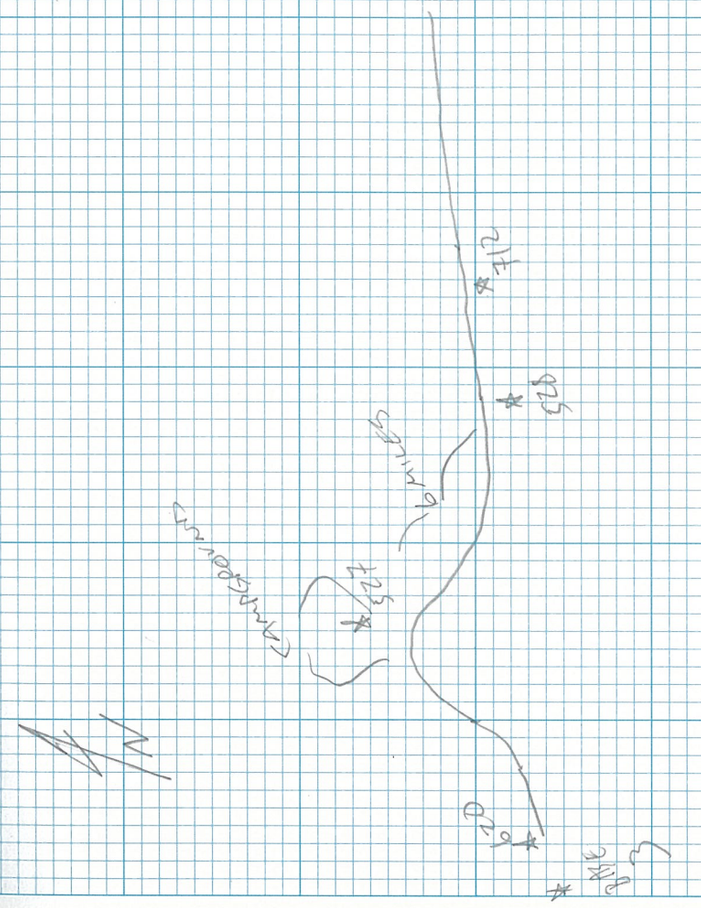
T. HALL

PT	START/STOP	DESC	HI
922	9:28 PM / 10:08 PM	WETLAND POINT 17 // HUB SET NORTH SIDE HIGHWAY (2) PHOTOS VIEW W/NE	8 26 2.513m
708	10:19 PM / 10:59	BARREN LAND 9 // NAIL SET SOUTH SIDE GLEN HIGHWAY (2) PHOTOS VIEW E/W	8 26 2.513m
709	11:20 PM /	BARREN LAND 10 // NAIL SET NORTH SIDE HIGHWAY TURN-OUT MILE 85 (2) PHOTOS VIEW E/SW	8 26 2.513m
710	12 AM (6-29) / 12:40	BARREN LAND 11 // NAIL SET SOUTH SIDE ROAD HIGHWAY TURN OUT (2) PHOTOS VIEW SE/SW	8 26 2.513m
711	1 AM / 1:40	BARREN LAND 12 // NAIL SET NORTH SIDE HIGHWAY (2) PHOTO VIEW E/W	8 26 2.513m
526	2:35 AM / 6:20 AM	FOREST POINT 17 // HUB SET (2) PHOTOS	8 26 2.513m

Job# 11-037
Job NAME 6-29-11
QC MISC. GLEN HIGHWAY
BASE #3, 4

PT	START/STOP	DESC	HI
		FOREST POINT 18 // HUB SET	8.50
527	10:10 AM /	TURN OUT TO CAMP GROUND AREA NORTH SIDE HIGHWAY	
SW 0578		(2) PHOTOS VIEW NW/NE	2.591m
		BARREN LAND 13 // HUB SET	8.26
712	11:50 AM / 1PM	SOUTH SIDE ROAD MEDIAN TURN-OUT	
SW 7225		(2) PHOTOS VIEW E/W	2.513m
		FOREST POINT 19 // HUB SET	S.22
~~SW~~ 528	12:05 PM / 1:05PM	TURN OUT SOUTH SIDE HIGHWAY	
		(2) PHOTOS VIEW ~~W~~ S/E	1.591m
		SHRUB POINT 21 // HUB SET	8.26
620	1:40PM / 2:10PM	NORTH GLEN HIGHWAY WEST FIRE STATION 700'±	2.513m

6-29-11
TEMP 65°
LEICA 1200 GPS
J. HALL



MSB LIDAR Q.C.

1

GPS

TC 851
HI = 1.273 m (2ND OB 1.185)
RCVR = 0263

START = 10:02 / 10:15

STOP = 10:13 / 10:26

TC 852
HI = 1.090 m (2ND OB 1.257)
RCVR # 8361

START = 10:17 / 10:35

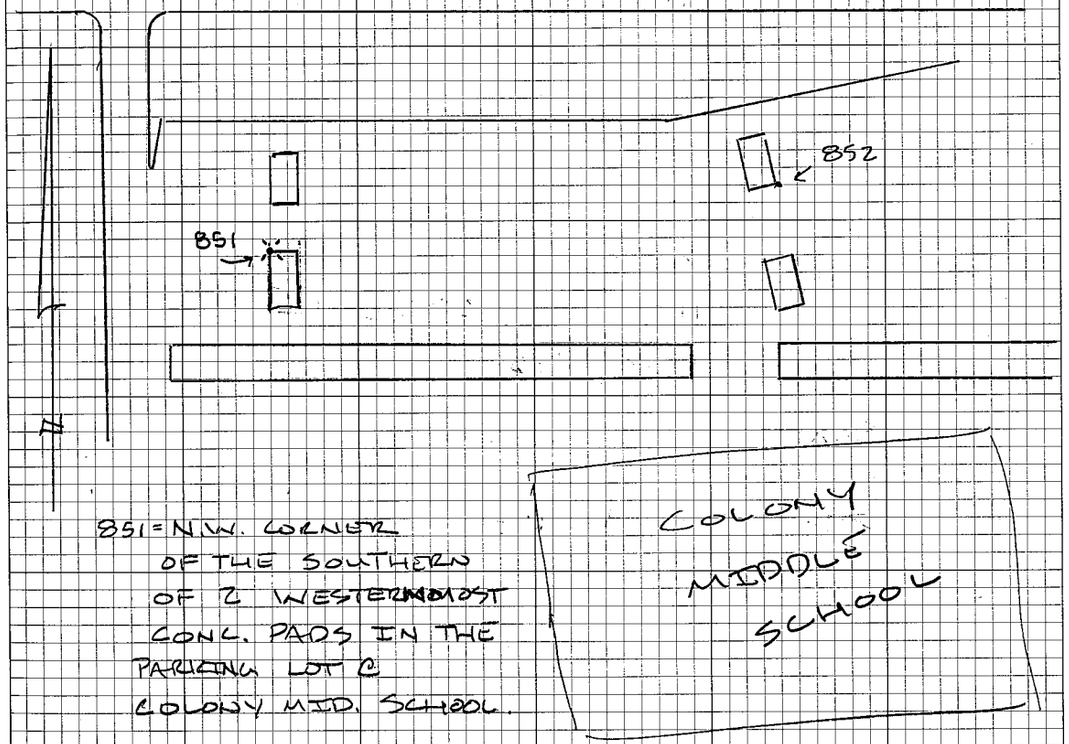
STOP = 10:28 / 10:46

11-037-2

6-24-2011
70° CLEAR

F. WAGNER (1)
C. SPURLOCK

852 = S.E. CORNER OF THE NORTHERN OF 2 PADS IN THE MIDDLE OF COLONY MID. SCHOOL PARKING LOT



851 = N.W. CORNER OF THE SOUTHERN OF 2 WESTERNMOST CONC. PADS IN THE PARKING LOT @ COLONY MID. SCHOOL.

MSB LIDAR Q.C.

(2)

GPS

TC 853

HI = 1.268 M (2ND OB. 1.092)

RCVR # 8361

START = 11:06 / 11:22

STOP = 11:18 / 11:33

TC 854

HI = 1.2 / 2ND OB = 1.315

RCVR # 0263

START = 11:13 / 11:27

STOP = 11:24 / 11:38

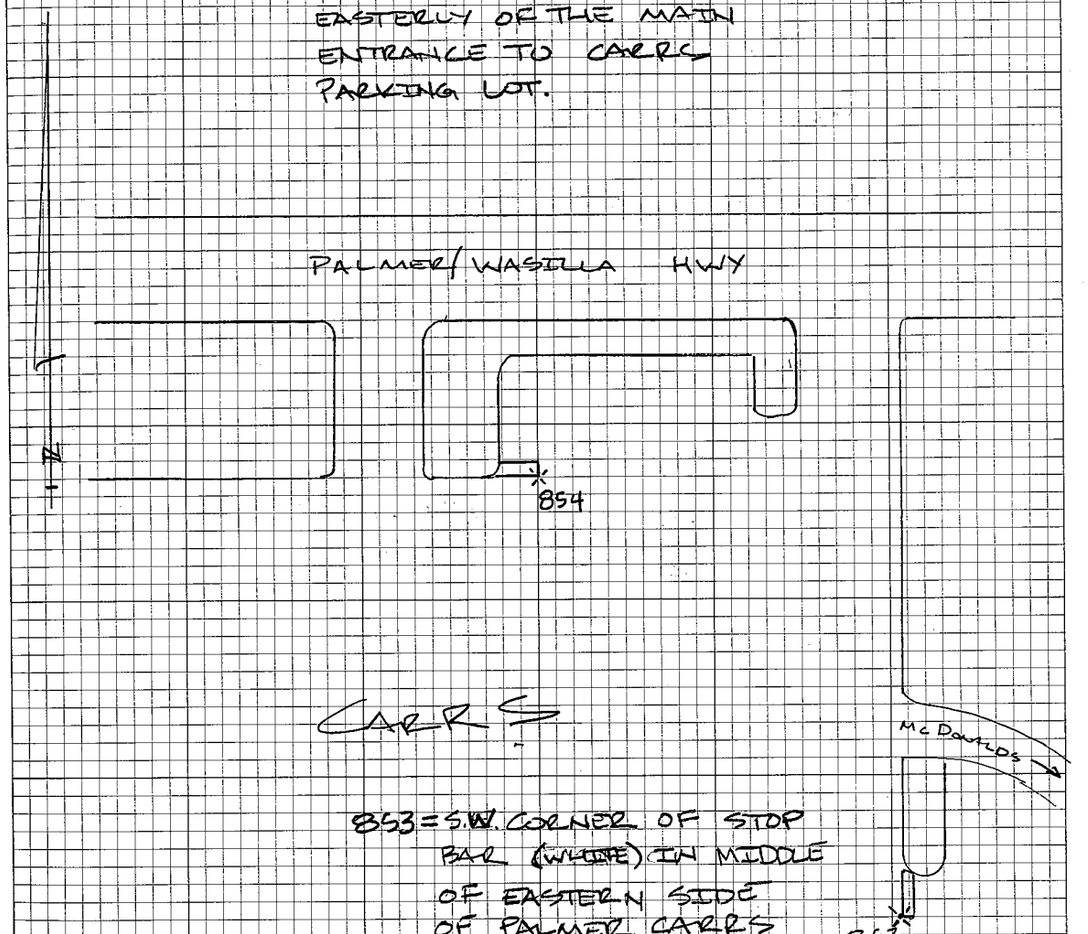
11-037-2

6-24-2011

F. WAGNER
C. SPURLOCK

(8)

854 = S.E. CORNER OF STOP BAR EASTERLY OF THE MAIN ENTRANCE TO CARRS PARKING LOT.



853 = S.W. CORNER OF STOP BAR (WHITE) IN MIDDLE OF EASTERN SIDE OF PALMER CARRS PARKING LOT.

MSB LIDAR Q.C.

11-037-2

(3)

GPS

TC 855

HI = 1.767 M (2ND OB =

RCVR # 8361

START = 12:11 | 12:27

STOP = 12:23 | 12:38

TC 856

HI = 1.169 (2ND OB = 1.317)

RCVR # 0263

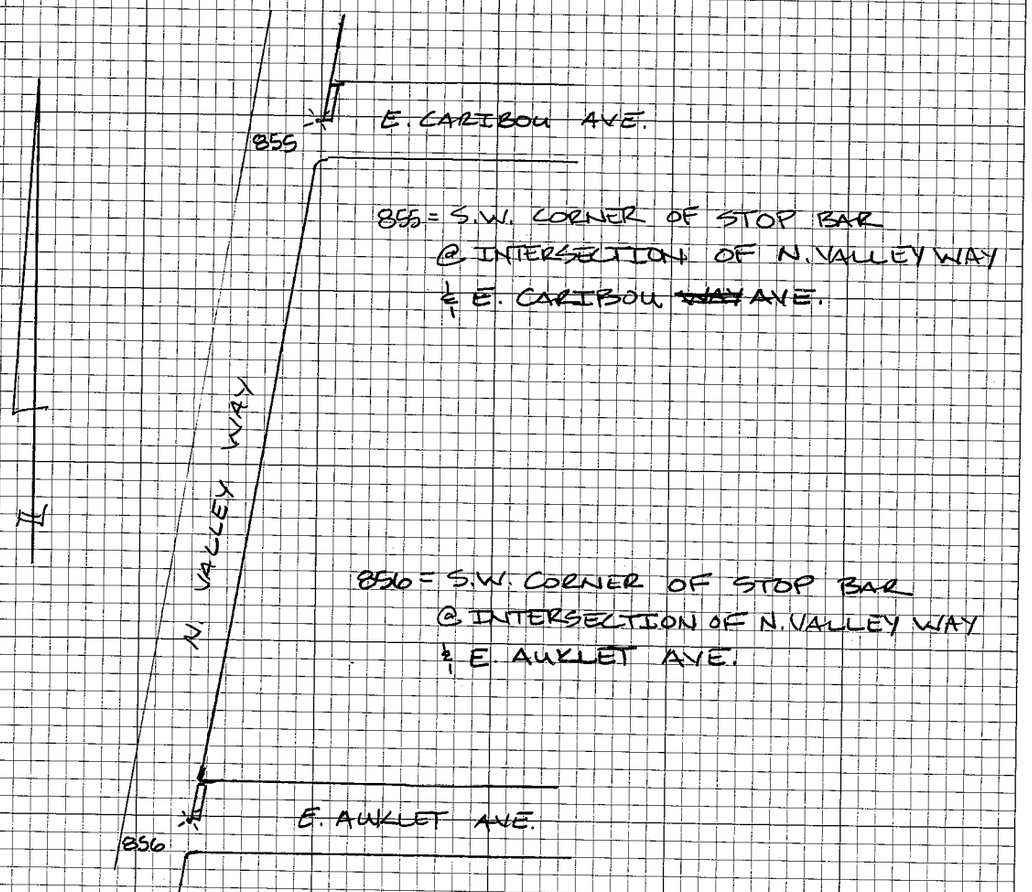
START = 12:12 | 12:27

STOP = 12:26 | 12:43

6-24-2011

F. WAGNER
C. SHERLOCK

(3)



855 = S.W. CORNER OF STOP BAR @ INTERSECTION OF N. VALLEY WAY & E. CARIBOU ~~WAY~~ AVE.

856 = S.W. CORNER OF STOP BAR @ INTERSECTION OF N. VALLEY WAY & E. AUKLET AVE.

MSB LIDAR Q.C.

(4)

GPS

T @ 857

HI= 1.341 M (2ND OB = 1.071)

RCVR # 0263

START = 13:00 / 13:14

STOP = 13:11 / 13:25

T @ 858

HI= (2ND OB = 1.072)

RCVR # 8361

START = 13:02 / 13:14

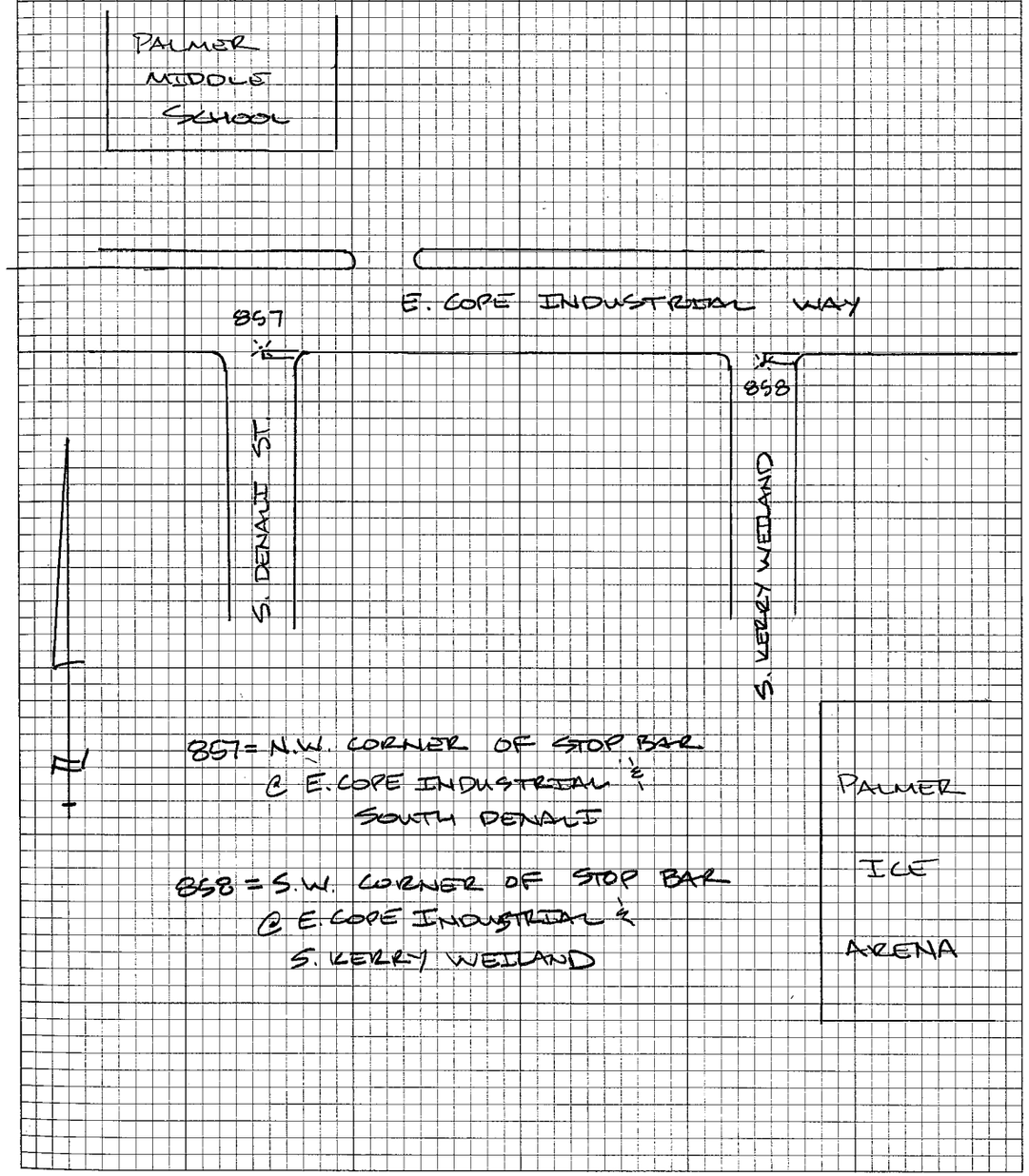
STOP = 13:12 / 13:25

11-037-2

6-24-2011

F. WAGNER
C. SPURLOCK

(4)



MSB LIDAR Q.C.

11-037-2

(5)

GPS

TC 859

HI= 1.122 M (2ND OB= 1.269)

RCVR #8361

START = 14:29 / 14:43

STOP = 14:40 / 14:55

TC 860

HI= 1.358 M (2ND OB= 1.199)

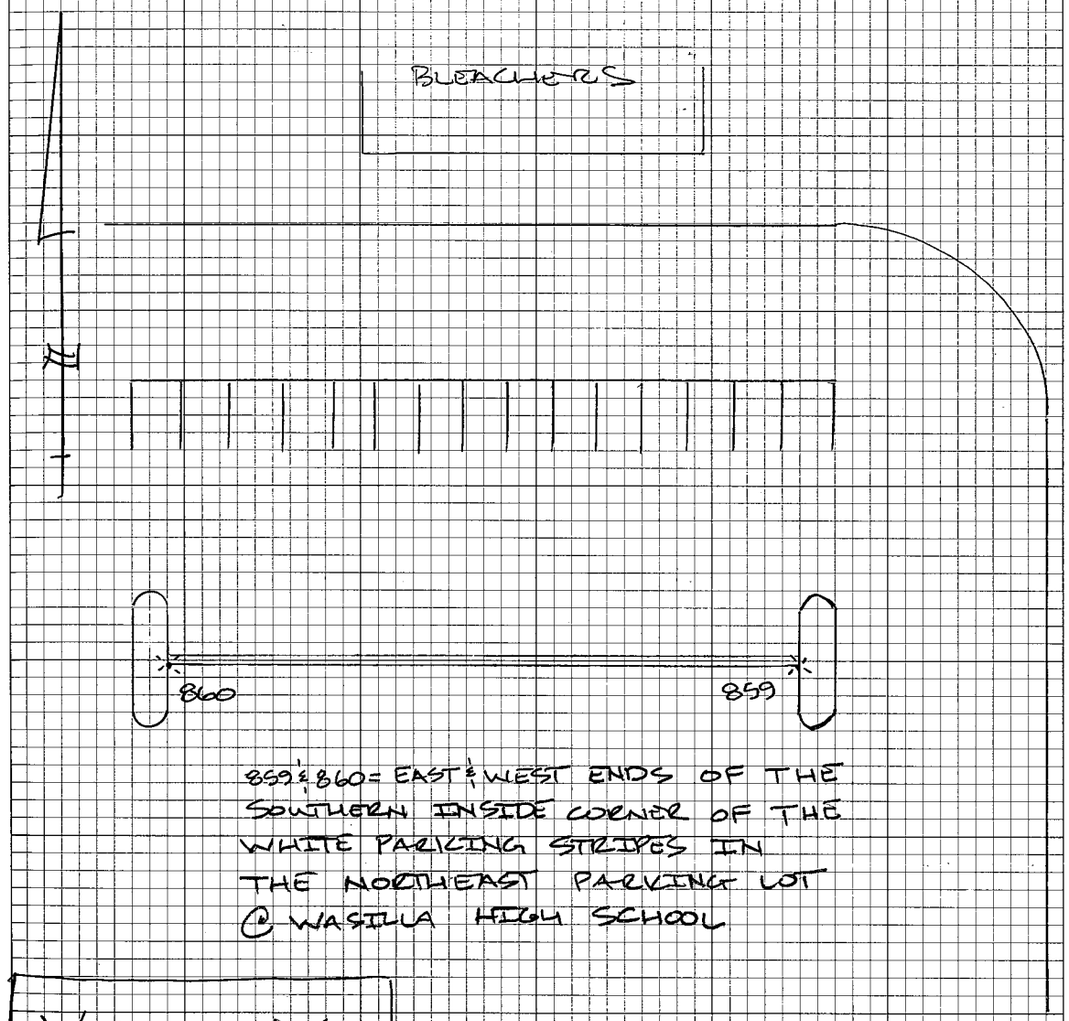
RCVR #0263

START= 14:32 / 14:47

STOP = 14:43 / 14:58

6-24-2011

F. WAGNER (5)
C. SHERLOCK



859 & 860 = EAST & WEST ENDS OF THE SOUTHERN INSIDE CORNER OF THE WHITE PARKING STRIPES IN THE NORTHEAST PARKING LOT @ WASILLA HIGH SCHOOL

MSB LIDAR Q.C.

(6)

GPS

TC 861
HI = 1.50 M (2ND OBS = 1.305)
RCVR # 8361

START = 15:32 / 15:49

STOP = 15:47 / 16:00

TC 862
HI = 1.230 M (2ND OBS = 1.051)
RCVR # 0263

START = 15:35 / 15:53

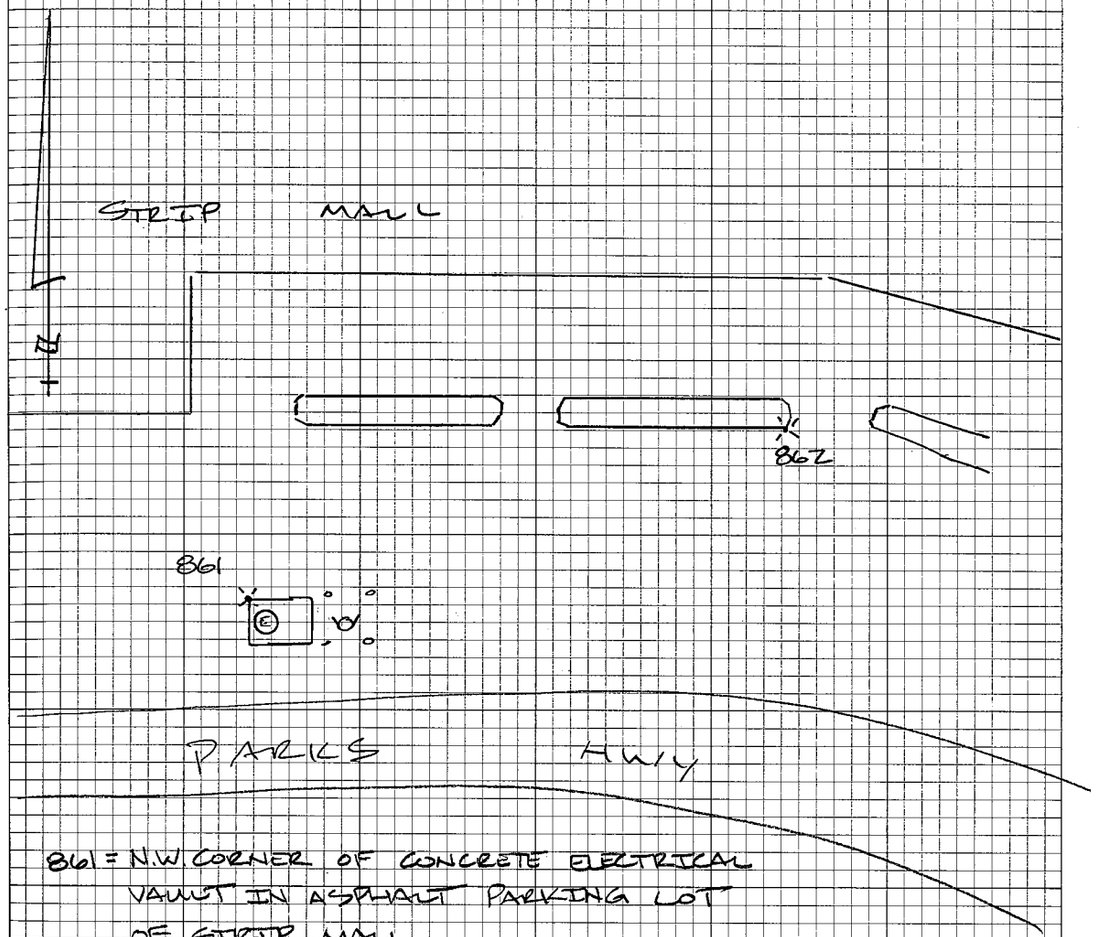
STOP = 15:50 / 16:04

11-037-2

6-24-2021

F. WAGNER
C. SPURLOCK

(6)



861 = N.W. CORNER OF CONCRETE ELECTRICAL VAULT IN ASPHALT PARKING LOT OF STRIP MALL

862 = S.E. CORNER OF PARKING CURB - ELEVATION @ TOP OF CONCRETE

(7)

GPS

TC 863
HI = 1.182 (2ND OB = 1.305)
RCVR # 8361

START = 16:28/16:43

STOP = 16:40/16:56

TC 864
HI = 1.359 (2ND OB = 1.119)
RCVR # 0263

START = 16:28/16:42

STOP = 16:40/16:53

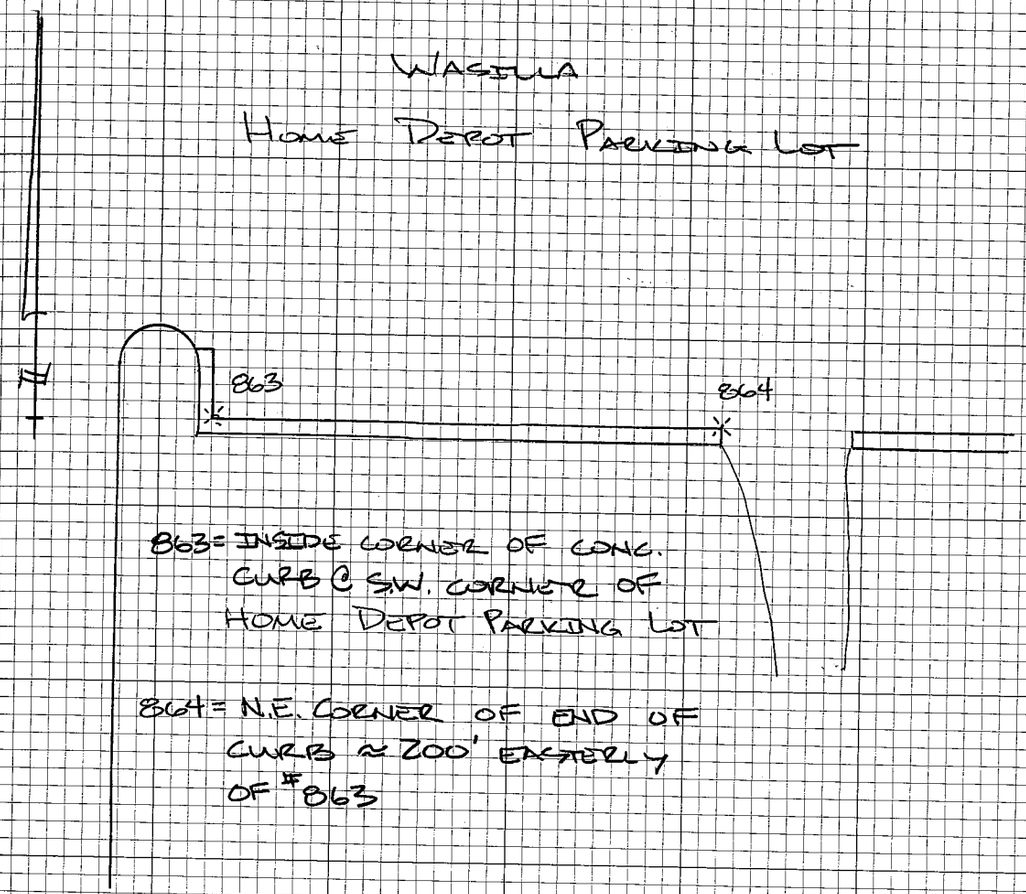
6-24-2011

F. WAGNER
C. SPURLOCK

(7)

WASILLA

HOME DEPOT PARKING LOT



863 = INSIDE CORNER OF CONC. CURB @ S.W. CORNER OF HOME DEPOT PARKING LOT

864 = N.E. CORNER OF END OF CURB ≈ 200' EASTERLY OF #863

MSB LIDAR Q.C.

8

GPS

T @ 865
HI = 1.041 M (2ND OB = 1.120)
RCVR # 0263

START = 17:43 / 17:57

STOP = 17:55 / 18:11

T @ 866
HI = 1.533 M (2ND OB = 1.009)
RCVR # 8361

START = 17:58 / 18:16

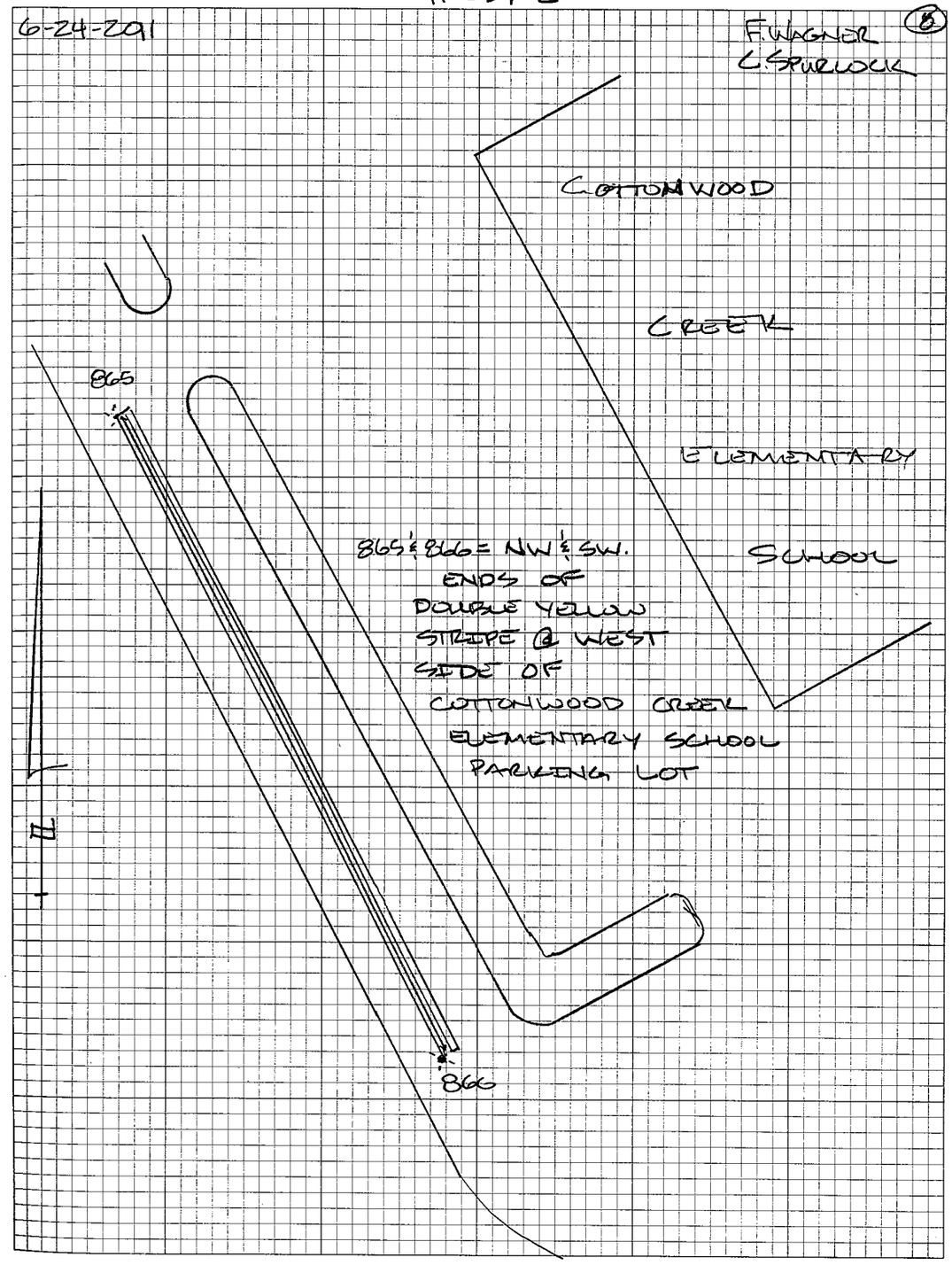
STOP = 18:14 / 18:28

11-037-2

6-24-2011

F. WAGNER
C. SPURLOCK

8



(9)

G.P.S

TC 751 HI = 1.219 START = 11:01 BARREN LAND
RCVR# 0263 STOP = 11:36

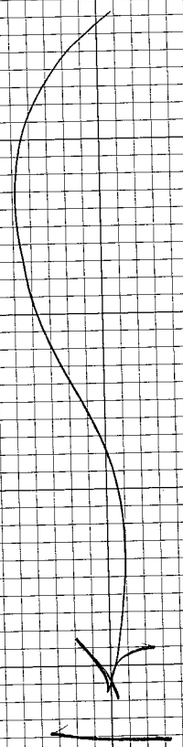
TC 752 HI = 1.087 START = 11:04 BARREN LAND
RCVR# 8361 STOP = 11:36

TC 753 HI = 1.212 START = 11:50
RCVR# 0263 STOP = 12:24

TC 754 HI = 1.147 START = 11:53
RCVR# 8361 STOP = 12:25

TC 755 HI = 1.182 START = 12:47
RCVR# 0263 STOP = 13:22

TC 756 HI = 1.023 START = 12:48
RCVR# 8361 STOP = 13:20



6-25-2011
60° PARTLY

F. WAGNER (9)
C. SPURLOCK

TC 757 HI = 1.229 START = 13:40 BARREN LAND
RCVR# 0263 STOP = 14:16

TC 758 HI = 1.035 START = 13:45
RCVR# 8361 STOP = 14:16

TC 759 HI = 1.267 START = 14:44
RCVR# 0263 STOP = 15:19

TC 760 HI = 0.998 START = 14:47
RCVR# 8361 STOP = 15:19

(10)

GPS

TC 867
HI = 1.588 M ↘
RCVR # 8361

START = 16:57

STOP = 17:42

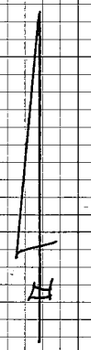
TC 868
HI = 1.368 M ↘
RCVR # 0263

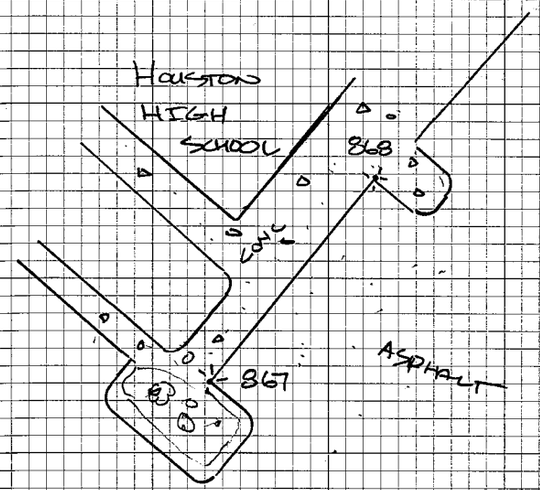
START = 16:56

STOP = 17:46

6-25-2011

F. WAGNER (10)
C. SPURLOCK





867 & 868 = INSIDE CORNERS OF CONC. @ S.E. ENTRANCE TO HOUSTON HIGH SCHOOL

MSB LIDAR Q.C.

(11)

GPS

TC 869
HI = 1.355
RCVR# 7227

START = 17:24

STOP = 17:57

TC 870
HI = 1.168
RCVR# 0609

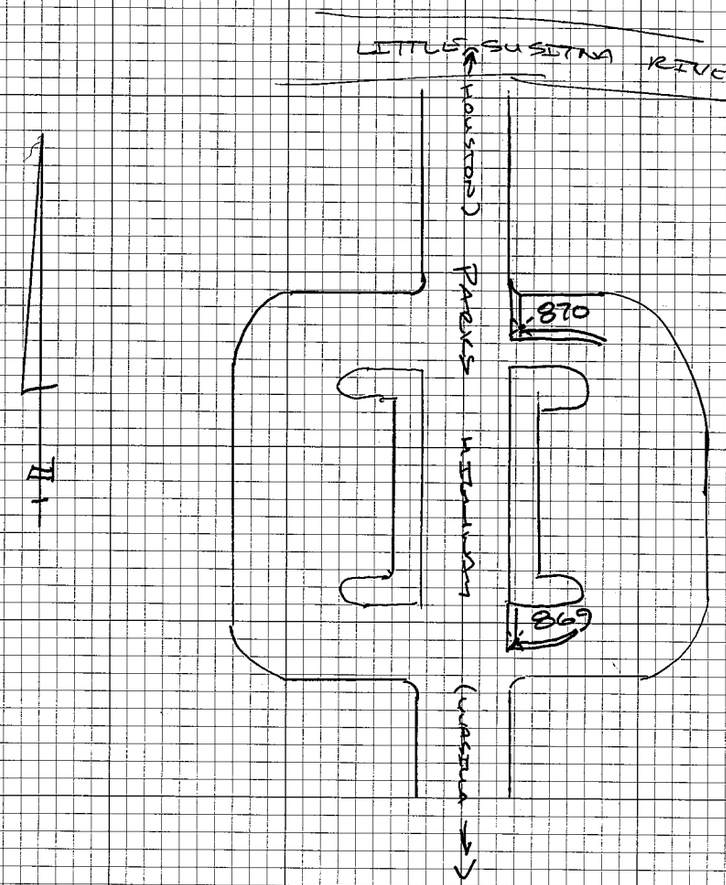
START = 17:37

STOP = 18:09

11-037-2

6-25-2011

F. WAGNER (11)
C. SPURLOCK



869 & 870 = INSIDE CORNER OF STOP BAR & DOUBLE YELLOW LINES ON THE EASTERN PARKING LOT SOUTH OF LITTLE SUSITNA RIVER BRIDGE ON THE PARKS HIGHWAY.

12

GPS

TC 871
HI = 2.950 M
RCVR # 8361

START = 18:45

STOP = 19:41

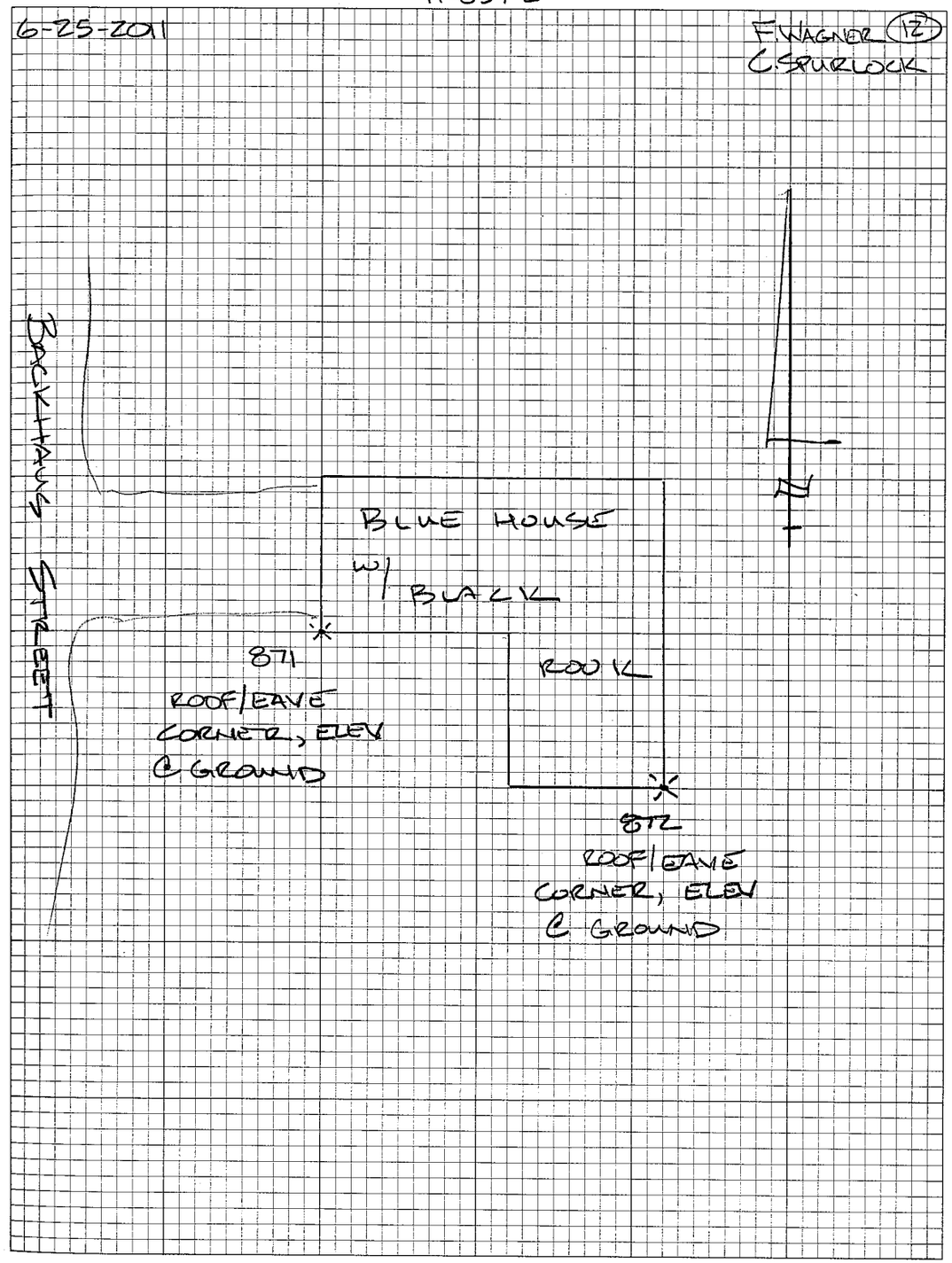
TC 872
HI = 2.253
RCVR # 7227

START = 18:52

STOP = 19:41

6-25-2011

F. WAGNER (12)
C. SPURLOCK



MSB LIDAR Q.C.

11-037-2

13

GPS

TC 873
HI = 2.805
RCVR # 7227

START = 20:03

STOP = 20:37

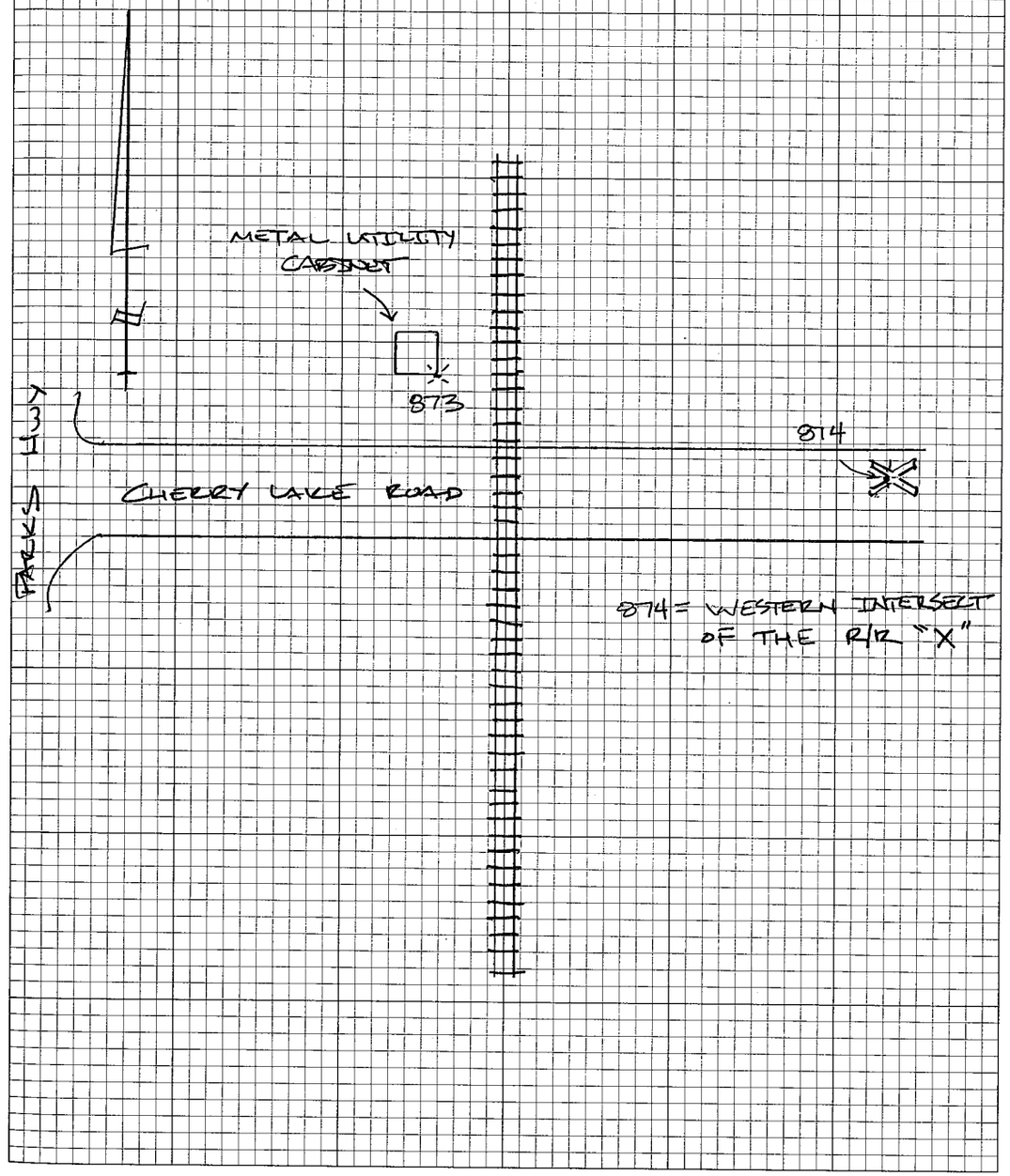
TC 874
HI = 1.663
RCVR # 8361

START = 20:08

STOP = 20:39

6-25-2011

F. WAGNER (13)
C. SHERLOCK



MSB LIDAR Q.C.

14

GPS

TC 651 HI = Z 2.44 START = 12:05 SHRUB
RCVR # 8361 STOP = 12:43

TC 652 HI = Z 1.58 START = 12:12
RCVR # 8513 STOP = 12:44

TC 653 HI = Z 2.64 START = 13:01
RCVR # 8361 STOP = 13:37

TC 654 HI = 3 1.93 START = 13:05
RCVR # 8513 STOP = 13:37

TC 655 4 2.37 START = 14:07
RCVR # 8361 STOP = 14:40

TC 656 HI = 3 1.45 START = 14:04
RCVR # 8513 STOP = 14:39

TC 657 HI = 3 2.97 START = 14:58 SHRUB
RCVR # 8361 STOP = 15:32

11-037-2

6-26-2011
60° PARTLY

F. WAGNER 14
C. SPURLOCK

TC 658 HI = Z 2.94 START = 14:58 SHRUB
RCVR # 8513 STOP = 15:30

TC 659 HI = Z 2.11 START = 15:51
RCVR # 8361 STOP = 16:31

TC 660 HI = 4 0.00 START = 15:58
RCVR # 8513 STOP = 16:30

TC 951 HI = 0 0.977 START = 17:07 WETLANDS
RCVR # 8361 STOP = 17:47

TC 952 HI = 0 0.920 START = 17:15 WETLANDS
RCVR # 8513 STOP = 17:47

TC 761 HI = 1 2.18 START = 18:14 BARREN LAND
RCVR # 8361 STOP = 18:46

TC 762 HI = 1 1.51 START = 18:16 BARREN LAND
RCVR # 8513 STOP = 18:46

(15)

GPS

TC953	HI=1.112	START=10:49	WETLANDS
RCVR#8361		STOP=11:19	
TC954	HI=1.006	START=10:49	WETLANDS
RCVR#8513		STOP=11:19	
TC763	HI=1.217	START=11:34	BARREN LAND
RCVR#8361		STOP=12:07	
TC764	HI=1.209	START=11:35	BARREN LAND
RCVR#8513		STOP=12:06	
TC955	HI=1.085	START=12:47	WETLANDS
RCVR#8361		STOP=13:21	
TC956	HI=1.082	START=12:50	
RCVR#8513		STOP=13:22	
TC957	HI=1.117	START=14:25	
RCVR#8361		STOP=14:57	

6-27-2011
57° PARTLY

F. WAGNER (15)
C. SPURLOCK

TC958	HI=1.013	START=14:27	WETLANDS
RCVR#8513		STOP=14:57	
TC551	HI=1.202	START=15:41	FOREST
RCVR#8361		STOP=16:54	
TC552	HI=1.201	START=15:54	FOREST
RCVR#8513		STOP=16:54	
TC661	HI=2.167	START=17:05	BRUSH
RCVR#8361		STOP=17:39	
TC662	HI=3.146	START=17:07	BRUSH
RCVR#8513		STOP=17:39	
TC959	HI=1.158	START=19:45	WETLANDS
RCVR#8513		STOP=20:18	
TC960	HI=1.195	START=19:46	WETLANDS
RCVR#8361		STOP=20:18	

MSB LIDAR Q.C.

(16)

GPS

BASE

TC 5 HI=1.207 START=9:52

RCVR#05716 STOP = 10:12 (6/29)

TC 553 HI=1.111 START=10:37 FOREST

RCVR#8361 STOP = 11:37

TC 554 HI=1.130 START=10:43 FOREST

RCVR#8513 STOP = 11:37

TC 875 HI=3.183 START=11:47

RCVR#8513 STOP = 12:33

TC 876 HI=3.244 START=12:13

RCVR#8361 STOP = 12:44

11-037-2

6-28-2011

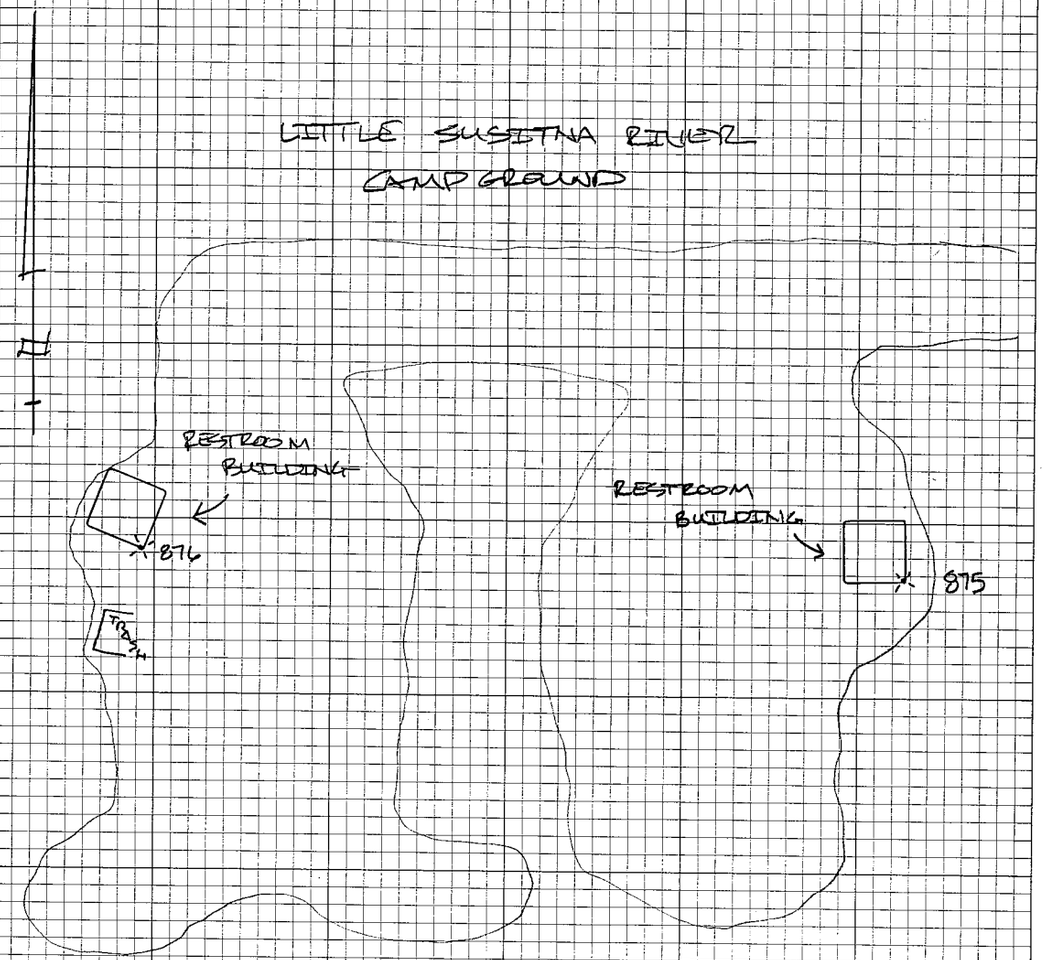
SSP cloudy

F. WAGNER (16)

C. SPURLOCK

LITTLE SUSITNA RIVER

CAMP GROUND



MSB LIDAR Q.C.

(17)

GPS

TC961	HI=1.050	START=13:03	WETLANDS
RCVR#8631		STOP =13:36	
TC962	HI=1.115	START=13:05	
RCVR#8513		STOP =13:36	
TC963	HI=1.182	START=14:26	
RCVR#8631		STOP =15:01	
TC964	HI=1.213	START=14:28	
RCVR#8513		STOP =15:02	
TC765	HI=1.228	START=15:43	BARREN LAND
RCVR#8631		STOP =16:16	
TC766	HI=1.251	START=15:44	BARREN LAND
RCVR#8513		STOP =16:16	

11-037-2

6-28-2011

F.WAGNER
C.SPURLOCK

(17)

TC965	HI=1.050	START=17:29	WETLANDS
RCVR#8631		STOP =18:03	
TC966	HI=0.970	START=17:31	
RCVR#8513		STOP =18:03	
TC967	HI=1.057	START=18:53	
RCVR#8631		STOP =19:24	
TC968	HI=1.177	START=18:54	
RCVR#8513		STOP =19:24	

(18)

GPS

TC 555 HI = 2.117 START = 11:46 FOREST

RCVR #8631 STOP = 13:02

TC 556 HI = 3.206 START = 11:47 FOREST

RCVR #8513 STOP = 13:02

TC 969 HI = 1.173 START = 12:09 WETLANDS

RCVR #0576 STOP = 12:41

TC 970 HI = 1.~~195~~ 174 START = ~~13:15~~ 12:51 WETLANDS

RCVR #8361 STOP = 13:22

TC 767 HI = 1.195 START = 13:15 BARREN LAND

RCVR #8361 STOP = 14:15

TC 768 HI = 1.263 START = 13:16 BARREN LAND

RCVR #8513 STOP = 14:15

6-29-2011

56° PARTLY

F. WAGNER (18)

C. SHERLOCK

MAT-SU BOROUGH

LIDAR IMAGERY PROJECT CHECK POINT SURVEY # 11-103

Sheet No.: 1 of 8

Point No.: 5001	FS HI #1: 6.0	Date: 6/17/11	Crew: STAN SEARS
GPS Designation: 500F	FS HI #2: 5.5	Julian Date: 168 REC DATE 169	TOM MOORE
LAND COVER TYPE: (FOREST) SHRUB BARREN		Weather: ☐ Sunny ☐ Overcast ☒ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 50	Trimble Receiver No.: ☒ R6-7913 ☐ R8-0714 ☐ R6-7931 ☐ R8-2440

☑ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Point No.: 5002	FS HI #1: 6.0	Date: 6/17/11	Crew: STAN SEARS
GPS Designation: 501 F	FS HI #2: 5.5	Julian Date: 168 REC FILE 169	TOM MOORE
LAND COVER TYPE: (FOREST) SHRUB BARREN		Weather: ☐ Sunny ☐ Overcast ☒ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 50	Trimble Receiver No.: ☐ R6-7913 ☐ R8-0714 ☒ R6-7931 ☐ R8-2440

☑ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Point No.: 6001	FS HI #1: 6.0	Date: 6/17/11	Crew: STAN SEARS
GPS Designation: 601 BR	FS HI #2: 5.5	Julian Date: 168 REC FILE 169	TOM MOORE
LAND COVER TYPE: FOREST (SHRUB) BARREN		Weather: ☐ Sunny ☐ Overcast ☒ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 50	Trimble Receiver No.: ☒ R6-7913 ☐ R8-0714 ☐ R6-7931 ☐ R8-2440

☑ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Point No.: 6002	FS HI #1: 6.0	Date: 6/17/11	Crew: S SEARS
GPS Designation: 600 BR	FS HI #2: 5.5	Julian Date: 168 REC FILE 169	TOM MOORE
LAND COVER TYPE: FOREST (SHRUB) BARREN		Weather: ☐ Sunny ☐ Overcast ☒ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 50	Trimble Receiver No.: ☐ R6-7913 ☐ R8-0714 ☒ R6-7931 ☐ R8-2440

☑ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Notes: STANLEY E SEARS
Stanley E. Sears
2087 - S

MAT-SU BOROUGH
LIDAR IMAGERY PROJECT CHECK POINT SURVEY # 11-103

Sheet No.: 2 of 8

Point No.: 7001	FS HI #1: 6.0	Date: 6/17/11	Crew: S STAN SEARS
GPS Designation: 701 B	FS HI #2: 5.5	Julian Date: 168 REC FILE 169	TOM MOORE
LAND COVER TYPE: FOREST SHRUB (BARREN)		Weather: ☐ Sunny ☐ Overcast ☐ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: ____	Trimble Receiver No.: ☐ R6-7913 ☐ R8-0714 ☒ R6-7931 ☐ R8-2440

☐ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☐ **Obtained Photos**
Took representative photos looking North and South

Point No.: 7002	FS HI #1: 6.0	Date: 6/17/11	Crew: S SEARS
GPS Designation: 700 B	FS HI #2: 5.5	Julian Date: 168 REC FILE 169	TOM MOORE
LAND COVER TYPE: FOREST SHRUB (BARREN)		Weather: ☐ Sunny ☐ Overcast ☒ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 50	Trimble Receiver No.: ☐ R6-7913 ☐ R8-0714 ☒ R6-7931 ☐ R8-2440

☑ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Point No.: 6003	FS HI #1: 6.0	Date: 6/18/11	Crew: S SEARS
GPS Designation: 602 BR	FS HI #2: 5.5	Julian Date: 169	TOM MOORE
LAND COVER TYPE: FOREST (SHRUB) BARREN		Weather: ☐ Sunny ☐ Overcast ☒ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 50	Trimble Receiver No.: ☐ R6-7913 ☐ R8-0714 ☒ R6-7931 ☐ R8-2440

☑ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Point No.: 6004	FS HI #1: 6.0	Date: 6/18/11	Crew: S SEARS
GPS Designation: 603 BR	FS HI #2: 5.5	Julian Date: 169	TOM MOORE
LAND COVER TYPE: FOREST (SHRUB) BARREN		Weather: ☐ Sunny ☐ Overcast ☒ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 50	Trimble Receiver No.: ☐ R6-7913 ☒ R8-0714 ☐ R6-7931 ☐ R8-2440

☑ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Notes: _____

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LIDAR IMAGERY PROJECT CHECK POINT SURVEY # 11-103

Sheet No.: 3 of 8

Point No.: 5003	FS HI #1: 6.0	Date: 6/18/11	Crew: S SEARS, TOM MOORE
GPS Designation: 502 F	FS HI #2: 5.5	Julian Date: 169	
LAND COVER TYPE: (FOREST) SHRUB BARREN		Weather: ☐ Sunny ☐ Overcast ☒ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 53	Trimble Receiver No.: ☒ R6-7913 ☐ R8-0714 ☐ R6-7931 ☐ R8-2440

☑ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Point No.: 5004	FS HI #1: 6.0	Date: 6/18/11	Crew: S SEARS, TOM MOORE
GPS Designation: 503 F	FS HI #2: 5.5	Julian Date: 169	
LAND COVER TYPE: (FOREST) SHRUB BARREN		Weather: ☐ Sunny ☐ Overcast ☒ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 54	Trimble Receiver No.: ☐ R6-7913 ☒ R8-0714 ☐ R6-7931 ☐ R8-2440

☑ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Point No.: 7003	FS HI #1: 6.0	Date: 6/18/11	Crew: S SEARS, TOM MOORE
GPS Designation: 702 B	FS HI #2: 5.5	Julian Date: 169	
LAND COVER TYPE: FOREST SHRUB (BARREN)		Weather: ☐ Sunny ☐ Overcast ☒ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 53	Trimble Receiver No.: ☒ R6-7913 ☐ R8-0714 ☐ R6-7931 ☐ R8-2440

☑ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Point No.: 7004	FS HI #1: 6.0	Date: 6/18/11	Crew: S SEARS, TOM MOORE
GPS Designation: 703 B	FS HI #2: 5.5	Julian Date: 169	
LAND COVER TYPE: FOREST SHRUB (BARREN)		Weather: ☐ Sunny ☐ Overcast ☒ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 53	Trimble Receiver No.: ☐ R6-7913 ☒ R8-0714 ☐ R6-7931 ☐ R8-2440

☑ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Notes: STANLEY E SEARS
Stanley E. Sears
2087.5

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LIDAR IMAGERY PROJECT CHECK POINT SURVEY # 11-103

Sheet No.: 4 of 8

Point No.: 6005	FS HI #1: 6.0	Date: 6/18/11	Crew: S SEARS
GPS Designation: 605 BR	FS HI #2: 5.5	Julian Date: 169 REC FILE 170	TOM MOORE
LAND COVER TYPE: FOREST (SHRUB) BARREN		Weather: ☐ Sunny ☐ Overcast ☒ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 53	Trimble Receiver No.: ☐ R6-7913 ☒ R8-0714 ☐ R6-7931 ☐ R8-2440

☑ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Point No.: 6006	FS HI #1: 6.0	Date: 6/18/11	Crew: S SEARS
GPS Designation: 604 BR	FS HI #2: 5.5	Julian Date: 169 REC FILE 170	TOM MOORE
LAND COVER TYPE: FOREST (SHRUB) BARREN		Weather: ☐ Sunny ☐ Overcast ☒ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 53	Trimble Receiver No.: ☒ R6-7913 ☐ R8-0714 ☐ R6-7931 ☐ R8-2440

☑ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Point No.: 5005	FS HI #1: 6.0	Date: 6/18/11	Crew: S SEARS
GPS Designation: 505 F	FS HI #2: 5.5	Julian Date: 169 REC FILE 170	TOM MOORE
LAND COVER TYPE: (FOREST) SHRUB BARREN		Weather: ☐ Sunny ☐ Overcast ☒ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 53	Trimble Receiver No.: ☐ R6-7913 ☒ R8-0714 ☐ R6-7931 ☐ R8-2440

☑ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Point No.: 5006	FS HI #1: 6.0	Date: 6/18/11	Crew: S SEARS
GPS Designation: 504 F	FS HI #2: 5.5	Julian Date: 169 REC FILE 170	TOM MOORE
LAND COVER TYPE: (FOREST) SHRUB BARREN		Weather: ☐ Sunny ☐ Overcast ☒ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 53	Trimble Receiver No.: ☒ R6-7913 ☐ R8-0714 ☐ R6-7931 ☐ R8-2440

☑ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Notes: STANLEY E. SEARS
Stanley E. Sears
2087-S

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LIDAR IMAGERY PROJECT CHECK POINT SURVEY # 11-103

Sheet No.: 5 of 8

Point No.: 7005	FS HI #1: 6.0	Date: 6/18/11	Crew: SS SEARS	
GPS Designation: 704 B	FS HI #2: 5.5	Julian Date: 169 REC FILE 170	TOM MOORE	
LAND COVER TYPE: FOREST SHRUB (BARREN)		Weather: ☐ Sunny ☐ Overcast ☒ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 53	Trimble Receiver No.: ☒ R6-7913 ☐ R8-0714 ☐ R6-7931 ☐ R8-2440	

☑ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Point No.: 7006	FS HI #1: 6.0	Date: 6/18/11	Crew: SS STAN SEARS	
GPS Designation: 705 B	FS HI #2: 5.5	Julian Date: 169 REC FILE 170	TOM MOORE	
LAND COVER TYPE: FOREST SHRUB (BARREN)		Weather: ☐ Sunny ☐ Overcast ☒ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 53	Trimble Receiver No.: ☐ R6-7913 ☒ R8-0714 ☐ R6-7931 ☐ R8-2440	

☑ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Point No.:	FS HI #1:	Date:	Crew: SS	
GPS Designation:	FS HI #2:	Julian Date:		
LAND COVER TYPE: FOREST SHRUB BARREN		Weather: ☐ Sunny ☐ Overcast ☐ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp:	Trimble Receiver No.: ☐ R6-7913 ☐ R8-0714 ☐ R6-7931 ☐ R8-2440	

☐ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☐ **Obtained Photos**
Took representative photos looking North and South

Point No.:	FS HI #1:	Date:	Crew: SS	
GPS Designation:	FS HI #2:	Julian Date:		
LAND COVER TYPE: FOREST SHRUB BARREN		Weather: ☐ Sunny ☐ Overcast ☐ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp:	Trimble Receiver No.: ☐ R6-7913 ☐ R8-0714 ☐ R6-7931 ☐ R8-2440	

☐ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☐ **Obtained Photos**
Took representative photos looking North and South

Notes: STANLEY E SEARS
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Anchorage, AK 99503

MAT-SU BOROUGH
LIDAR IMAGERY PROJECT CHECK POINT SURVEY # 11-103

Sheet No.: 6 of 8

Point No.: 5007	FS HI #1: 6.0	Date: 6/19/11	Crew: S SEARS, TOM MOORE
GPS Designation: 507 F	FS HI #2: 5.0	Julian Date: 170	
LAND COVER TYPE: (FOREST) SHRUB BARREN		Weather: ☐ Sunny ☒ Overcast ☐ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 50	Trimble Receiver No.: ☒ R6-7913 ☐ R8-0714 ☐ R6-7931 ☐ R8-2440

☒ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Point No.: 5008	FS HI #1: 6.0	Date: 6/19/11	Crew: S SEARS, TOM MOORE
GPS Designation: 506 F	FS HI #2: 5.5	Julian Date: 170	
LAND COVER TYPE: (FOREST) SHRUB BARREN		Weather: ☐ Sunny ☒ Overcast ☐ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 50	Trimble Receiver No.: ☐ R6-7913 ☒ R8-0714 ☐ R6-7931 ☐ R8-2440

☑ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Point No.: 5009	FS HI #1: 6.0	Date: 6/19/11	Crew: S SEARS, TOM MOORE
GPS Designation: 508 F	FS HI #2: 5.5	Julian Date: 170	
LAND COVER TYPE: (FOREST) SHRUB BARREN		Weather: ☐ Sunny ☒ Overcast ☐ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 50	Trimble Receiver No.: ☒ R6-7913 ☐ R8-0714 ☐ R6-7931 ☐ R8-2440

☑ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Point No.: 5010	FS HI #1: 6.0	Date: 6/19/11	Crew: S SEARS, TOM MOORE
GPS Designation: 509 F	FS HI #2: 5.5	Julian Date: 170	
LAND COVER TYPE: (FOREST) SHRUB BARREN		Weather: ☐ Sunny ☒ Overcast ☐ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 50	Trimble Receiver No.: ☐ R6-7913 ☒ R8-0714 ☐ R6-7931 ☐ R8-2440

☑ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Notes: STANLEY E SEARS
Stanley E. Sears
2087-S

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Anchorage, AK 99503

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LIDAR IMAGERY PROJECT CHECK POINT SURVEY # 11-103

Sheet No.: 7 of 8

Point No.: 50011	FS HI #1: 6.0	Date: 6/19/11	Crew: STAN SEARS
GPS Designation: 511 F	FS HI #2: 5.5	Julian Date: 170	TOM MOORE
LAND COVER TYPE: (FOREST) SHRUB BARREN		Weather: ☐ Sunny ☒ Overcast ☐ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 50	Trimble Receiver No.: ☒ R6-7913 ☐ R8-0714 ☐ R6-7931 ☐ R8-2440

☑ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Point No.: 50012	FS HI #1: 6.0	Date: 6/19/11	Crew: S SEARS
GPS Designation: 510 F	FS HI #2: 5.5	Julian Date: 170 REC 171	TOM MOORE
LAND COVER TYPE: (FOREST) SHRUB BARREN		Weather: ☐ Sunny ☐ Overcast ☒ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 52	Trimble Receiver No.: ☒ R6-7913 ☒ R8-0714 ☐ R6-7931 ☐ R8-2440

☑ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Point No.: 50013	FS HI #1: 6.0	Date: 6/19/11	Crew: S SEARS
GPS Designation: 512 F	FS HI #2: 5.5	Julian Date: 170 REC 171	TOM MOORE
LAND COVER TYPE: (FOREST) SHRUB BARREN		Weather: ☐ Sunny ☐ Overcast ☒ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 53	Trimble Receiver No.: ☒ R6-7913 ☒ R8-0714 ☐ R6-7931 ☐ R8-2440

☑ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Point No.: 50014	FS HI #1: 6.0	Date: 6/19/11	Crew: S SEARS
GPS Designation: 513 F	FS HI #2: 5.5	Julian Date: 170 REC 171	TOM MOORE
LAND COVER TYPE: (FOREST) SHRUB BARREN		Weather: ☐ Sunny ☐ Overcast ☒ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 53	Trimble Receiver No.: ☐ R6-7913 ☒ R8-0714 ☐ R6-7931 ☐ R8-2440

☑ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Notes: STANLEY SEARS
Stanley I. Seare
20187-S

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LIDAR IMAGERY PROJECT CHECK POINT SURVEY # 11-103

Sheet No: 8 of 8

Point No: 50015	FS HI #1: 6.0	Date: 6/19/11	Crew: STAN SEARS / TOM MOORE	
GPS Designation: 515 F	FS HI #2: 5.5	Julian Date: 170 REC 171		
LAND COVER TYPE: (FOREST) SHRUB BARREN		Weather: ☐ Sunny ☐ Overcast ☒ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 52	Trimble Receiver No.: ☒ R6-7913 ☐ R8-0714 ☐ R6-7931 ☐ R8-2440	

☑ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Point No: 50016	FS HI #1: 6.0	Date: 6/19/11	Crew: S SEARS / TOM MOORE	
GPS Designation: 514 F	FS HI #2: 5.5	Julian Date: 170 REC 171		
LAND COVER TYPE: (FOREST) SHRUB BARREN		Weather: ☐ Sunny ☒ Overcast ☐ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp: 52°F	Trimble Receiver No.: ☐ R6-7913 ☒ R8-0714 ☐ R6-7931 ☐ R8-2440	

☑ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☑ **Obtained Photos**
Took representative photos looking North and South

Point No:	FS HI #1:	Date:	Crew:	
GPS Designation:	FS HI #2:	Julian Date:		
LAND COVER TYPE: FOREST SHRUB BARREN		Weather: ☐ Sunny ☐ Overcast ☐ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp:	Trimble Receiver No.: ☐ R6-7913 ☐ R8-0714 ☐ R6-7931 ☐ R8-2440	

☐ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☐ **Obtained Photos**
Took representative photos looking North and South

Point No:	FS HI #1:	Date:	Crew:	
GPS Designation:	FS HI #2:	Julian Date:		
LAND COVER TYPE: FOREST SHRUB BARREN		Weather: ☐ Sunny ☐ Overcast ☐ Partly Cloudy ☐ Rain ☐ Fog ☐ Snow Temp:	Trimble Receiver No.: ☐ R6-7913 ☐ R8-0714 ☐ R6-7931 ☐ R8-2440	

☐ **Established Position**
Set an alum 60D Nail, flush with the ground
Lath 36" long, 12 ins. in the ground with flagging along side.

☐ **Obtained Photos**
Took representative photos looking North and South

Notes: _____

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T: 907-272-5451 F: 907-272-9065
3161 E. Palmer-Wasilla Hwy · Suite 2 · Wasilla, Alaska 99654
T: 907-357-9129 F: 907-357-9140

JOB _____
SHEET NO. _____ OF _____
CALCULATED BY _____ DATE _____
CHECKED BY _____ DATE _____
REF. F.B. _____
REF. DWG _____

JOB = 7-14-11

908

61 54 09.728
150 04 22.91
160'

913

61 46 44.6
149 51 30.3
565.5'

914

61 43 02.8
150 02 02.8
80.9'

T.C 6 5 1/2" S.S. ROD
RCVR # 7225
HI = 1.166

START = 13:39
STOP = 16:13

T.C 991 WETLANDS
RCVR # 0263
HI = 1.160

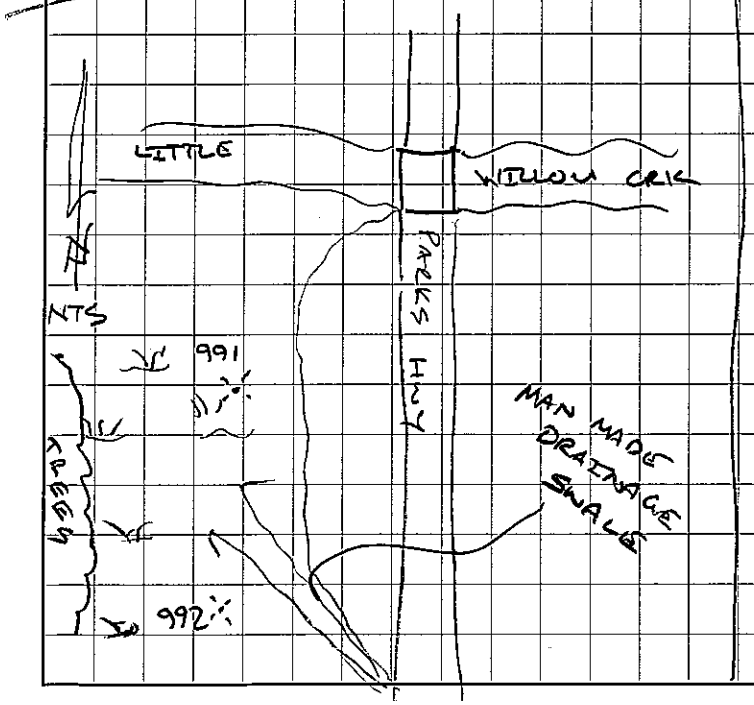
START = 13:58
STOP = 15:49

T.C 992 WETLANDS
RCVR # 0595
HI = 1.104

START = 14:04
STOP = 15:53

T.C 7 3 1/4" B.C.
RCVR # 7227
HI = 1.297

START = 14:39
STOP = 15:11



POINT	LATITUDE	LONGITUDE	Ell-HT_FT	Ortho-HT_FT	SPC-Z4_FT NT	SPC-Z4_FT ET	TYPE	DESCRIPTOR	START TIME	STOP TIME	PICTURE REF	SURVEYOR	FIELD BOOK	BASELINE	HZ-RMS_FT	VT-RMS_FT	HZ-ACC_FT	VT-ACC_FT
1	61 48 37.007920 N	147 30 54.954887 W	2829.74	2772.52	2861832.5928	2070103.4121	BASE STATION	ALASKA DOT/PF CAP			IMAGE\PHOTOS\BASE_STATIONS\BASE_01.pdf							
2	61 47 53.494941 N	148 15 18.052440 W	1682.81	1630.63	2853252.0257	1942323.2578	BASE STATION	STAINLESS STEEL ROD			IMAGE\PHOTOS\BASE_STATIONS\BASE_02.pdf							
3	61 37 40.158390 N	149 07 14.919452 W	578.47	543.18	2787947.8503	1793379.8494	BASE STATION	USGS CAP			IMAGE\PHOTOS\BASE_STATIONS\BASE_03.pdf							
4	61 34 28.417273 N	149 43 41.783559 W	233.37	208.57	2767542.8434	1687774.4219	BASE STATION	NGS CAP "BIG LAKE"			IMAGE\PHOTOS\BASE_STATIONS\BASE_04.pdf							
5	61 25 34.106025 N	150 01 8.710846 W	226.77	206.34	2713186.6085	1637074.3223	BASE STATION	PND CAP "CP 10"			IMAGE\PHOTOS\BASE_STATIONS\BASE_05.pdf							
6	61 45 09.238247 N	150 03 19.282905 W	242.21	217.89	2832523.4925	1630824.2331	BASE STATION	STAINLESS STEEL ROD			IMAGE\PHOTOS\BASE_STATIONS\BASE_06.pdf							
7	62 06 16.675776 N	150 03 35.213997 W	293.75	264.02	2961237.3310	1630175.8931	BASE STATION	USGS CAP			IMAGE\PHOTOS\BASE_STATIONS\BASE_07.pdf							
8	62 18 58.083181 N	150 14 3.027938 W	402.02	371.04	3038631.7502	1600581.5573	BASE STATION	NGS CAP "GPS 10"			IMAGE\PHOTOS\BASE_STATIONS\BASE_08.pdf							
9	62 42 18.924531 N	150 13 16.450171 W	779.57	741.43	3180896.3028	1603269.7966	BASE STATION	NGS CAP "GPS 15"			IMAGE\PHOTOS\BASE_STATIONS\BASE_09.pdf							
10	62 57 11.815288 N	149 39 25.271825 W	1690.54	1647.64	3271673.1417	1697521.9789	BASE STATION	ALASKA DOT/PF CAP			IMAGE\PHOTOS\BASE_STATIONS\BASE_10.pdf							
11	62 49 45.987950 N	148 33 03.529189 W	2414.553	2365.81	3228964.7103	1882679.9569	BASE STATION	R&M CAP "BM 22C"			IMAGE\PHOTOS\BASE_STATIONS\BASE_11.pdf							
12	62 44 24.801357 N	147 33 36.137491 W	4248.827	4196.15	3201362.9384	2049545.7153	BASE STATION	USGS CAP "BM WINDUS"			IMAGE\PHOTOS\BASE_STATIONS\BASE_12.pdf							
31	61 32 27.582500 N	149 02 07.740360 W	133.59	98.07	2756418.7917	1808694.5481	BASE STATION	ALASKA DOT/PF CAP			IMAGE\PHOTOS\BASE_STATIONS\BASE_31.pdf							
32	61 45 55.252804 N	149 32 54.033113 W	1912.11	1878.43	2837463.9143	1718649.2896	BASE STATION	HUB AND TACK			IMAGE\PHOTOS\BASE_STATIONS\BASE_32.pdf							
1019	62 48 24.371512 N	148 01 05.308041 W	2858.50	2807.16	3223051.2191	1972003.1209	BASE STATION	GPSINC CAP "CP 19"			IMAGE\PHOTOS\BASE_STATIONS\BASE_1019.pdf							
EBASE	62 45 06.817244 N	148 53 14.386277 W	2543.94	2496.85	3199494.9176	1826939.7971	BASE STATION	EBASE			IMAGE\PHOTOS\BASE_STATIONS\E_Base.pdf							
GRNX	63 50 07.798878 N	148 58 41.392948 W	1948.87	1905.99	3595442.7928	1805400.7921	BASE STATION	GRNX										
ZAN1	61 13 45.129268 N	149 46 48.805068 W	261.79	238.19	2641258.2608	1679145.4920	BASE STATION	ZAN1										
5001	62 48 09.260819 N	148 02 22.283537 W	2491.96	2440.80	3221407.5780	1968473.0916	FOREST	FOREST - 5001	6/17/2011 5:48:31 PM	6/17/2011 5:56:16 PM	IMAGE\PHOTOS\QC_POINTS\5001-Forest.pdf	STAN SEARS	Field Books\FieldSheets_1.pdf	1019-5001	0.03	0.04	0.02	0.03
5002	62 48 10.074552 N	148 02 22.997912 W	2482.73	2431.57	3221489.1880	1968437.3798	FOREST	FOREST - 5002	6/17/2011 6:02:16 PM	6/17/2011 6:10:00 PM	IMAGE\PHOTOS\QC_POINTS\5002-Forest.pdf	STAN SEARS	Field Books\FieldSheets_1.pdf	1019-5002	0.04	0.06	0.02	0.03
5003	62 50 01.206628 N	148 34 46.603094 W	1913.15	1864.53	3230403.5022	1877859.4847	FOREST	FOREST - 5003	6/18/2011 2:11:31 PM	6/18/2011 2:19:01 PM	IMAGE\PHOTOS\QC_POINTS\5003-Forest.pdf	STAN SEARS	Field Books\FieldSheets_3.pdf	11-5003	0.02	0.03	0.01	0.01
5004	62 50 02.694750 N	148 34 49.033620 W	1905.24	1856.62	3230552.1307	1877743.3036	FOREST	FOREST - 5004	6/18/2011 2:25:31 PM	6/18/2011 2:33:16 PM	IMAGE\PHOTOS\QC_POINTS\5004-Forest.pdf	STAN SEARS	Field Books\FieldSheets_3.pdf	11-5004	0.03	0.05	0.01	0.01
5006	62 46 48.148998 N	148 51 14.600133 W	2025.32	1978.04	3209883.3494	1832334.2379	FOREST	FOREST - 5006	6/18/2011 5:11:16 PM	6/18/2011 5:18:46 PM	IMAGE\PHOTOS\QC_POINTS\5006-Forest.pdf	STAN SEARS	Field Books\FieldSheets_4.pdf	EBASE-5006	0.05	0.04	0.01	0.02
5007	62 26 25.797875 N	150 23 30.184930 W	688.57	656.07	3084230.9070	1574057.6461	FOREST	FOREST - 5007	6/19/2011 2:30:16 PM	6/19/2011 2:38:01 PM	IMAGE\PHOTOS\QC_POINTS\5007-Forest.pdf	STAN SEARS	Field Books\FieldSheets_6.pdf	8-5007	0.03	0.03	0.02	0.05
5009	62 14 09.675111 N	150 28 08.008703 W	464.21	436.43	3009558.7928	1560442.3650	FOREST	FOREST - 5009	6/19/2011 3:44:01 PM	6/19/2011 3:51:46 PM	IMAGE\PHOTOS\QC_POINTS\5009-Forest.pdf	STAN SEARS	Field Books\FieldSheets_6.pdf	8-5009	0.02	0.02	0.01	0.02
50010	62 14 08.966114 N	150 28 09.164022 W	463.92	436.14	3009487.1860	1560387.1073	FOREST	FOREST - 50010	6/19/2011 3:55:16 PM	6/19/2011 4:03:01 PM	IMAGE\PHOTOS\QC_POINTS\50010-Forest.pdf	STAN SEARS	Field Books\FieldSheets_6.pdf	8-50010	0.03	0.03	0.02	0.02
50012	62 03 06.687266 N	150 18 42.017787 W	227.67	202.01	2942066.6173	1586933.8164	FOREST	FOREST - 50012	6/19/2011 4:47:01 PM	6/19/2011 4:54:46 PM	IMAGE\PHOTOS\QC_POINTS\50012-Forest.pdf	STAN SEARS	Field Books\FieldSheets_7.pdf	7-50012	0.03	0.03	0.01	0.03
50013	61 53 58.123919 N	150 10 52.975614 W	169.31	144.50	2886272.6732	1609135.7566	FOREST	FOREST - 50013	6/19/2011 5:53:01 PM	6/19/2011 6:02:46 PM	IMAGE\PHOTOS\QC_POINTS\50013-Forest.pdf	STAN SEARS	Field Books\FieldSheets_7.pdf	6-50013	0.03	0.03	0.01	0.03
50014	61 53 57.428466 N	150 10 55.602064 W	169.66	144.86	2886202.3999	1609009.7383	FOREST	FOREST - 50014	6/19/2011 6:07:46 PM	6/19/2011 6:15:31 PM	IMAGE\PHOTOS\QC_POINTS\50014-Forest.pdf	STAN SEARS	Field Books\FieldSheets_7.pdf	6-50014	0.02	0.02	0.02	0.03
50015	61 40 18.531386 N	150 21 23.905983 W	138.17	117.73	2803167.6873	1578454.5700	FOREST	FOREST - 50015	6/19/2011 7:07:46 PM	6/19/2011 7:15:31 PM	IMAGE\PHOTOS\QC_POINTS\50015-Forest.pdf	STAN SEARS	Field Books\FieldSheets_8.pdf	6-50015	0.03	0.03	0.02	0.03
50017	62 14 31.906149 N	150 05 24.249670 W	410.93	379.59	3011537.6554	1625057.4464	FOREST	FOREST - 500	6/21/2011 11:55:20 AM	6/21/2011 12:15:20 PM	IMAGE\PHOTOS\QC_POINTS\500-Forest.pdf	JAMES HALL	Field Books\11-037_1_1.pdf	8-500	0.07	0.15	0.05	0.08
50018	62 14 31.968797 N	150 05 26.582369 W	400.17	368.84	3011544.1722	1624946.9594	FOREST	FOREST - 502	6/21/2011 12:21:05 PM	6/21/2011 12:36:00 PM	IMAGE\PHOTOS\QC_POINTS\502-Forest.pdf	JAMES HALL	Field Books\11-037_1_1.pdf	7-502	0.06	0.10	0.06	0.13
50019	62 09 41.353557 N	150 00 37.764562 W	446.09	414.69	2982019.1980	1638623.0364	FOREST	FOREST - 504	6/21/2011 1:52:25 PM	6/21/2011 2:07:35 PM	IMAGE\PHOTOS\QC_POINTS\504-Forest.pdf	JAMES HALL	Field Books\11-037_1_1.pdf	7-504	0.03	0.06	0.03	0.06
50020	62 09 39.289656 N	150 00 35.479397 W	448.32	416.92	2981809.5768	1638731.5385	FOREST	FOREST - 506	6/21/2011 2:37:20 PM	6/21/2011 2:52:40 PM	IMAGE\PHOTOS\QC_POINTS\506-Forest.pdf	JAMES HALL	Field Books\11-037_1_1.pdf	7-506	0.03	0.05	0.03	0.05
50021	62 04 33.323054 N	150 00 33.283987 W	341.99	312.71	2950741.1320	1630258.1402	FOREST	FOREST - 508	6/21/2011 2:56:50 PM	6/21/2011 3:12:45 PM	IMAGE\PHOTOS\QC_POINTS\508-Forest.pdf	JAMES HALL	Field Books\11-037_1_4.pdf	7-508	0.07	0.09	0.03	0.06
50022	61 48 57.833264 N	150 05 23.819182 W	214.83	192.72	2855739.6485	1624862.2363	FOREST	FOREST - 520	6/24/2011 10:07:30 AM	6/24/2011 10:48:20 AM	IMAGE\PHOTOS\QC_POINTS\520-Forest.pdf	JAMES HALL	Field Books\11-037_1_7.pdf	6-520	0.03	0.04	0.04	0.04
50023	61 48 57.761439 N	150 05 22.415098 W	223.54	193.49	2855735.2432	1624927.5542	FOREST	FOREST - 521	6/24/2011 10:29:55 AM	6/24/2011 11:02:05 AM	IMAGE\PHOTOS\QC_POINTS\521-Forest.pdf	JAMES HALL	Field Books\11-037_1_7.pdf	6-521	0.03	0.04	0.04	0.04
50024	61 44 27.731235 N	150 02 40.983370 W	257.22	232.98	2828235.9043	1632664.7976	FOREST	FOREST - 522	6/24/2011 2:56:10 PM	6/24/2011 3:26:05 PM	IMAGE\PHOTOS\QC_POINTS\522-Forest.pdf	JAMES HALL	Field Books\11-037_1_8.pdf	6-522	0.03	0.04	0.03	0.04
50025	61 44 26.864427 N	150 02 41.842109 W	256.59	232.31	2828218.9915	1632623.4615	FOREST	FOREST - 523	6/24/2011 3:08:35 PM	6/24/2011 3:38:05 PM	IMAGE\PHOTOS\QC_POINTS\523-Forest.pdf	JAMES HALL	Field Books\11-037_1_8.pdf	6-523	0.03	0.03	0.03	0.03
50026	61 46 45.332488 N	149 51 30.766856 W	606.17	577.06	2842303.9799	1664911.3020	FOREST	FOREST - 524	6/25/2011 11:48:15 AM	6/25/2011 1:19:15 PM	IMAGE\PHOTOS\QC_POINTS\524-Forest.pdf	JAMES HALL	Field Books\11-037_1_10.pdf	6-524	0.03	0.06	0.02	0.02
50027	61 46 45.657545 N	149 51 29.500555 W	607.35	578.22	2842337.1225	1664972.1303	FOREST	FOREST - 525	6/25/2011 12:00:40 PM	6/25/2011 1:19:15 PM	IMAGE\PHOTOS\QC_POINTS\525-Forest.pdf	JAMES HALL	Field Books\11-037_1_10.pdf	524-525	0.03	0.04	0.02	0.03
50028	61 47 43.127265 N	148 02 10.819585 W	2025.34	1971.16	2853278.7716	1980181.2526	FOREST	FOREST - 526	6/29/2011 2:36:20 AM	6/29/2011 6:21:55 AM	IMAGE\PHOTOS\QC_POINTS\526-Forest.pdf	JAMES HALL	Field Books\11-037_1_16.pdf	2-526	0.03	0.04	0.02	0.05
50029	61 40 55.831410 N	149 03 02.069594 W	454.11	415.04	2807987.9129	1805313.3568	FOREST	FOREST - 527	6/29/2011 10:11:05 AM	6/29/2011 1:18:50 PM	IMAGE\PHOTOS\QC_POINTS\527-Forest.pdf	JAMES HALL	Field Books\11-037_1_17.pdf	3-527	0.00	0.02	0.02	0.02
50030	61 42 37.187452 N	148 55 26.081073 W	625.24	583.21	2818621.9891	1827140.2577	FOREST	FOREST - 528	6/29/2011 12:06:55 PM	6/29/2011 1:08:00 PM	IMAGE\PHOTOS\QC_POINTS\528-Forest.pdf	JAMES HALL	Field Books\11-037_1_17.pdf	3-528	0.03	0.04	0.02	0.02
50031	61 35 34.803421 N	149 30 48.264643 W	497.62	467.78	2774501.4958	1725175.6169	FOREST	FOREST - 551	6/27/2011 3:41:45 PM	6/27/2011 4:54:40 PM	IMAGE\PHOTOS\QC_POINTS\551-Forest.pdf	FRED WAGNER	Field Books\11-037_2_15.pdf	4-551	0.03	0.05	0.04	0.05
50032	61 35 35.288472 N	149 30 46.347620 W	495.67	465.81	2774551.4445	1725267.9994	FOREST	FOREST - 552	6/27/2011 3:54:30 PM	6/27/2011 4:54:40 PM	IMAGE\PHOTOS\QC_POINTS\552-Forest.pdf	FRED WAGNER	Field Books\11-037_2_15.pdf	4-552	0.03	0.06	0.04	0.05
50033	61 26 24.150217 N	150 09 16.401358 W	119.21	100.48	2718299.9791	1613363.3468	FOREST	FOREST - 553	6/28/2011 10:37:50 AM	6/28/2011 11:34:50 AM	IMAGE\PHOTOS\QC_POINTS\553-Forest.pdf	FRED WAGNER	Field Books\11-037_2_16.pdf	5-553	0.03	0.05	0.03	0.05
50034	61 26 24.322498 N	150 09 12.707170 W	119.49	100.74	2718317.0494	1613543.0064	FOREST	FOREST - 554	6/28/2011 10:43:40 AM	6/28/2011 11:35:10 AM	IMAGE\PHOTOS\QC_POINTS\554-Forest.pdf	FRED WAGNER	Field Books\11-037_2_16.pdf	5-554	0.02	0.04	0.02	0.04
50035	61 37 16.713695 N	149 47 12.186410 W	284.40	259.63	2784595.1885	1677532.3942	FOREST	FOREST - 555	6/29/2011 11:47:05 AM	6/29/2011 1:02:50 PM	IMAGE\PHOTOS\QC_POINTS\555-Forest.pdf	FRED WAGNER	Field Books\11-037_2_18.pdf	4-555	0.01	0.02	0.01	0.02
50036	61 37 16.765634 N	149 47 07.043323 W	285.73	260.94	2784601.2799	1677780.9905	FOREST	FOREST - 556	6/29/2011 11:47:40 AM	6/29/2011 1:02:20 PM	IMAGE\PHOTOS\QC_POINTS\556-Forest.pdf	FRED WAGNER	Field Books\11-037_2_18.pdf	4-556	0.01	0.02	0.01	0.02

POINT	LATITUDE	LONGITUDE	Ell-HT_FT	Ortho-HT_FT	SPC-Z4_FT NT	SPC-Z4_FT ET	TYPE	DESCRIPTOR	START TIME	STOP TIME	PICTURE REF	SURVEYOR	FIELD BOOK	BASELINE	HZ-RMS_FT	VT-RMS_FT	HZ-ACC_FT	VT-ACC_FT
6001	62 48 14.996102 N	148 01 03.956802 W	2809.44	2758.23	3222101.3237	1972095.1038	SHRUB	SHRUB - 6001	6/17/2011 5:04:46 PM	6/17/2011 5:12:31 PM	IMAGE\PHOTOS\QC POINTS\6001-Shrub.pdf	STAN SEARS	Field Books\FieldSheets 1.pdf	1019-6001	0.03	0.04	0.01	0.02
6002	62 48 15.756600 N	148 01 06.105427 W	2807.44	2756.24	3222175.4682	1971992.8840	SHRUB	SHRUB - 6002	6/17/2011 4:43:46 PM	6/17/2011 4:51:31 PM	IMAGE\PHOTOS\QC POINTS\6002-Shrub.pdf	STAN SEARS	Field Books\FieldSheets 1.pdf	1019-6002	0.02	0.03	0.01	0.02
6003	62 49 48.891938 N	148 33 38.676462 W	2322.64	2273.93	3229223.0003	1881041.2566	SHRUB	SHRUB - 6003	6/18/2011 1:21:46 PM	6/18/2011 1:29:31 PM	IMAGE\PHOTOS\QC POINTS\6003-Shrub.pdf	STAN SEARS	Field Books\FieldSheets 2.pdf	11-6003	0.02	0.03	0.01	0.01
6004	62 49 50.545442 N	148 33 40.341260 W	2317.08	2268.38	3229389.1835	1880960.1996	SHRUB	SHRUB - 6004	6/18/2011 1:33:46 PM	6/18/2011 1:41:31 PM	IMAGE\PHOTOS\QC POINTS\6004-Shrub.pdf	STAN SEARS	Field Books\FieldSheets 2.pdf	11-6004	0.03	0.04	0.01	0.01
6005	62 46 55.434764 N	148 53 52.730335 W	2538.27	2491.30	3210494.9221	1824965.7496	SHRUB	SHRUB - 6005	6/18/2011 4:26:16 PM	6/18/2011 4:34:01 PM	IMAGE\PHOTOS\QC POINTS\6005-Shrub.pdf	STAN SEARS	Field Books\FieldSheets 4.pdf	EBASE-6005	0.04	0.09	0.01	0.02
6006	62 46 57.829145 N	148 53 53.737508 W	2563.43	2516.46	3210737.2834	1824914.7428	SHRUB	SHRUB - 6006	6/18/2011 4:11:01 PM	6/18/2011 4:18:46 PM	IMAGE\PHOTOS\QC POINTS\6006-Shrub.pdf	STAN SEARS	Field Books\FieldSheets 4.pdf	EBASE-6006	0.02	0.06	0.01	0.02
60007	61 46 19.369713 N	149 19 41.243223 W	3411.45	3372.67	2840241.8543	1756771.9547	SHRUB	SHRUB - 600	6/25/2011 4:44:40 PM	6/25/2011 5:16:05 PM	IMAGE\PHOTOS\QC POINTS\600-Shrub.pdf	JAMES HALL	Field Books\11-037_1_11.pdf	32-600	0.03	0.03	0.02	0.02
60008	61 46 20.239484 N	149 19 43.760753 W	3399.16	3360.39	2840328.9270	1756649.9435	SHRUB	SHRUB - 601	6/25/2011 4:59:15 PM	6/25/2011 5:31:30 PM	IMAGE\PHOTOS\QC POINTS\601-Shrub.pdf	JAMES HALL	Field Books\11-037_1_11.pdf	32-601	0.03	0.03	0.02	0.02
60009	61 45 52.671038 N	149 20 41.110961 W	3163.28	3125.00	2837501.2748	1753919.4820	SHRUB	SHRUB - 602	6/25/2011 5:58:55 PM	6/25/2011 6:40:10 PM	IMAGE\PHOTOS\QC POINTS\602-Shrub.pdf	JAMES HALL	Field Books\11-037_1_11.pdf	32-602	0.00	0.02	0.01	0.02
60010	61 45 51.240970 N	149 20 41.739159 W	3121.65	3083.39	2837355.7501	1753890.7196	SHRUB	SHRUB - 603	6/25/2011 6:17:50 PM	6/25/2011 6:48:25 PM	IMAGE\PHOTOS\QC POINTS\603-Shrub.pdf	JAMES HALL	Field Books\11-037_1_11.pdf	32-603	0.00	0.03	0.01	0.02
60011	61 45 53.675031 N	149 22 13.472393 W	3148.67	3110.74	2837559.3287	1749474.5936	SHRUB	SHRUB - 604	6/25/2011 7:21:10 PM	6/25/2011 7:51:15 PM	IMAGE\PHOTOS\QC POINTS\604-Shrub.pdf	JAMES HALL	Field Books\11-037_1_11.pdf	32-604	0.00	0.02	0.01	0.01
60012	61 45 52.820582 N	149 22 14.577777 W	3120.99	3083.08	2837472.0463	1749422.2489	SHRUB	SHRUB - 605	6/25/2011 7:35:55 PM	6/25/2011 8:05:20 PM	IMAGE\PHOTOS\QC POINTS\605-Shrub.pdf	JAMES HALL	Field Books\11-037_1_11.pdf	32-605	0.00	0.02	0.01	0.01
60013	61 46 04.902170 N	149 23 30.145145 W	3072.02	3034.30	2838664.3152	1745774.9013	SHRUB	SHRUB - 606	6/25/2011 8:26:10 PM	6/25/2011 8:55:45 PM	IMAGE\PHOTOS\QC POINTS\606-Shrub.pdf	JAMES HALL	Field Books\11-037_1_11.pdf	32-606	0.03	0.04	0.01	0.02
60014	61 46 04.185458 N	149 23 32.016677 W	3048.42	3010.71	2838590.6923	1745685.5437	SHRUB	SHRUB - 607	6/25/2011 8:39:35 PM	6/25/2011 9:10:30 PM	IMAGE\PHOTOS\QC POINTS\607-Shrub.pdf	JAMES HALL	Field Books\11-037_1_11.pdf	32-607	0.00	0.03	0.01	0.02
60015	61 46 35.758543 N	149 23 55.485445 W	2817.56	2779.68	2841786.3951	1744526.8290	SHRUB	SHRUB - 608	6/25/2011 9:30:00 PM	6/25/2011 10:00:05 PM	IMAGE\PHOTOS\QC POINTS\608-Shrub.pdf	JAMES HALL	Field Books\11-037_1_11.pdf	32-608	0.03	0.02	0.01	0.02
60016	61 46 35.573145 N	149 23 56.922525 W	2822.33	2784.46	2841766.9293	1744457.8855	SHRUB	SHRUB - 609	6/25/2011 9:40:10 PM	6/25/2011 10:10:25 PM	IMAGE\PHOTOS\QC POINTS\609-Shrub.pdf	JAMES HALL	Field Books\11-037_1_11.pdf	32-609	0.00	0.02	0.01	0.01
60017	61 46 14.906483 N	149 24 55.727870 W	2708.46	2671.03	2839642.4779	1741648.4551	SHRUB	SHRUB - 610	6/25/2011 10:31:00 PM	6/25/2011 11:00:30 PM	IMAGE\PHOTOS\QC POINTS\610-Shrub.pdf	JAMES HALL	Field Books\11-037_1_11.pdf	32-610	0.03	0.04	0.02	0.02
60018	61 46 14.652700 N	149 24 54.223291 W	2708.82	2671.38	2839617.3575	1741721.0645	SHRUB	SHRUB - 611	6/25/2011 10:41:00 PM	6/25/2011 11:11:05 PM	IMAGE\PHOTOS\QC POINTS\611-Shrub.pdf	JAMES HALL	Field Books\11-037_1_11.pdf	32-611	0.03	0.03	0.02	0.02
60019	61 46 07.236462 N	149 26 02.673619 W	2693.48	2657.71	2838835.6653	1738430.7036	SHRUB	SHRUB - 612	6/26/2011 11:43:45 AM	6/26/2011 12:14:50 PM	IMAGE\PHOTOS\QC POINTS\612-Shrub.pdf	JAMES HALL	Field Books\11-037_1_12.pdf	32-612	0.00	0.02	0.01	0.02
60020	61 46 07.028134 N	149 26 03.983970 W	2696.41	2660.77	2838813.9662	1738367.8741	SHRUB	SHRUB - 613	6/26/2011 11:59:40 AM	6/26/2011 12:30:40 PM	IMAGE\PHOTOS\QC POINTS\613-Shrub.pdf	JAMES HALL	Field Books\11-037_1_12.pdf	32-613	0.00	0.02	0.01	0.01
60021	61 45 50.327452 N	149 26 50.304352 W	2481.76	2446.46	2837098.9012	1736153.8933	SHRUB	SHRUB - 614	6/26/2011 12:48:40 PM	6/26/2011 1:21:30 PM	IMAGE\PHOTOS\QC POINTS\614-Shrub.pdf	JAMES HALL	Field Books\11-037_1_12.pdf	32-614	0.00	0.02	0.01	0.01
60022	61 45 50.529998 N	149 26 47.356675 W	2509.99	2474.67	2837120.6858	1736295.5590	SHRUB	SHRUB - 615	6/26/2011 1:03:30 PM	6/26/2011 1:33:35 PM	IMAGE\PHOTOS\QC POINTS\615-Shrub.pdf	JAMES HALL	Field Books\11-037_1_12.pdf	32-615	0.00	0.02	0.01	0.01
60023	61 45 46.908838 N	149 28 00.464718 W	2218.37	2183.22	2836723.5421	1732780.9207	SHRUB	SHRUB - 616	6/26/2011 1:53:20 PM	6/26/2011 2:27:20 PM	IMAGE\PHOTOS\QC POINTS\616-Shrub.pdf	JAMES HALL	Field Books\11-037_1_12.pdf	32-616	0.00	0.02	0.01	0.02
60024	61 45 46.153914 N	149 28 00.627922 W	2208.77	2173.65	2836646.8358	1732773.6811	SHRUB	SHRUB - 617	6/26/2011 2:04:50 PM	6/26/2011 2:35:35 PM	IMAGE\PHOTOS\QC POINTS\617-Shrub.pdf	JAMES HALL	Field Books\11-037_1_12.pdf	32-617	0.03	0.04	0.02	0.03
60025	61 45 45.958404 N	149 29 44.745401 W	2123.27	2088.79	2836587.0311	1727763.9502	SHRUB	SHRUB - 618	6/26/2011 3:04:30 PM	6/26/2011 3:34:40 PM	IMAGE\PHOTOS\QC POINTS\618-Shrub.pdf	JAMES HALL	Field Books\11-037_1_12.pdf	32-618	0.00	0.01	0.01	0.01
60026	61 45 44.926772 N	149 29 40.899621 W	2112.71	2078.16	2836483.7021	1727949.7858	SHRUB	SHRUB - 619	6/26/2011 3:17:55 PM	6/26/2011 3:48:00 PM	IMAGE\PHOTOS\QC POINTS\619-Shrub.pdf	JAMES HALL	Field Books\11-037_1_12.pdf	32-619	0.03	0.05	0.01	0.03
60027	61 38 50.562854 N	149 06 58.704732 W	600.77	563.69	2795106.9524	1794070.4817	SHRUB	SHRUB - 620	6/29/2011 1:39:55 PM	6/29/2011 2:10:50 PM	IMAGE\PHOTOS\QC POINTS\620-Shrub.pdf	JAMES HALL	Field Books\11-037_1_17.pdf	3-620	0.03	0.03	0.03	0.03
60028	61 46 23.334911 N	149 16 24.765429 W	2892.47	2854.30	2840746.7076	1766214.3950	SHRUB	SHRUB - 651	6/26/2011 12:06:10 PM	6/26/2011 12:43:55 PM	IMAGE\PHOTOS\QC POINTS\651-Shrub.pdf	FRED WAGNER	Field Books\11-037_2_14.pdf	32-651	0.02	0.03	0.02	0.04
60029	61 46 24.944938 N	149 16 28.729014 W	2916.68	2878.51	2840908.0730	1766021.9164	SHRUB	SHRUB - 652	6/26/2011 12:12:30 PM	6/26/2011 12:44:40 PM	IMAGE\PHOTOS\QC POINTS\652-Shrub.pdf	FRED WAGNER	Field Books\11-037_2_14.pdf	32-652	0.02	0.04	0.02	0.05
60030	61 45 51.992548 N	149 15 30.125205 W	2603.84	2565.83	2837593.6045	1768878.9532	SHRUB	SHRUB - 653	6/26/2011 1:02:00 PM	6/26/2011 1:37:20 PM	IMAGE\PHOTOS\QC POINTS\653-Shrub.pdf	FRED WAGNER	Field Books\11-037_2_14.pdf	32-653	0.02	0.04	0.02	0.05
60031	61 45 53.384566 N	149 15 29.338960 W	2620.26	2582.22	2837735.3945	1768915.1672	SHRUB	SHRUB - 654	6/26/2011 1:05:45 PM	6/26/2011 1:38:05 PM	IMAGE\PHOTOS\QC POINTS\654-Shrub.pdf	FRED WAGNER	Field Books\11-037_2_14.pdf	32-654	0.02	0.04	0.02	0.05
60032	61 46 15.105911 N	149 13 54.810498 W	2273.03	2234.36	2839993.9173	1773437.1488	SHRUB	SHRUB - 655	6/26/2011 2:07:55 PM	6/26/2011 2:40:30 PM	IMAGE\PHOTOS\QC POINTS\655-Shrub.pdf	FRED WAGNER	Field Books\11-037_2_14.pdf	3-655	0.03	0.04	0.02	0.05
60033	61 46 14.202305 N	149 13 56.380341 W	2276.48	2237.81	2839901.2693	1773362.7168	SHRUB	SHRUB - 656	6/26/2011 2:02:35 PM	6/26/2011 2:40:15 PM	IMAGE\PHOTOS\QC POINTS\656-Shrub.pdf	FRED WAGNER	Field Books\11-037_2_14.pdf	32-656	0.02	0.03	0.02	0.04
60034	61 46 34.741360 N	149 12 40.965656 W	2049.62	2010.54	2842030.3420	1776965.1817	SHRUB	SHRUB - 657	6/26/2011 2:59:10 PM	6/26/2011 3:31:20 PM	IMAGE\PHOTOS\QC POINTS\657-Shrub.pdf	FRED WAGNER	Field Books\11-037_2_14.pdf	3-657	0.03	0.04	0.02	0.06
60035	61 46 34.766841 N	149 12 44.275428 W	2063.78	2024.71	2842030.9961	1776805.9622	SHRUB	SHRUB - 658	6/26/2011 2:58:50 PM	6/26/2011 3:30:45 PM	IMAGE\PHOTOS\QC POINTS\658-Shrub.pdf	FRED WAGNER	Field Books\11-037_2_14.pdf	3-658	0.03	0.04	0.02	0.06
60036	61 45 48.916979 N	149 13 21.031378 W	1683.33	1644.90	2837353.8178	1775093.8710	SHRUB	SHRUB - 659	6/26/2011 3:51:25 PM	6/26/2011 4:31:50 PM	IMAGE\PHOTOS\QC POINTS\659-Shrub.pdf	FRED WAGNER	Field Books\11-037_2_14.pdf	3-659	0.02	0.04	0.01	0.05
60037	61 45 47.913690 N	149 13 22.990690 W	1681.53	1643.11	2837250.8099	1775000.8015	SHRUB	SHRUB - 660	6/26/2011 3:58:25 PM	6/26/2011 4:31:00 PM	IMAGE\PHOTOS\QC POINTS\660-Shrub.pdf	FRED WAGNER	Field Books\11-037_2_14.pdf	3-660	0.02	0.04	0.01	0.05
60038	61 35 34.918111 N	149 30 52.373810 W	491.36	461.54	2774511.6588	1724976.7173	SHRUB	SHRUB - 661	6/27/2011 5:04:30 PM	6/27/2011 5:39:45 PM	IMAGE\PHOTOS\QC POINTS\661-Shrub.pdf	FRED WAGNER	Field Books\11-037_2_15.pdf	4-661	0.02	0.03	0.03	0.03
60039	61 35 33.330761 N	149 30 52.390338 W	484.79	454.97	2774350.4624	1724977.1189	SHRUB	SHRUB - 662	6/27/2011 5:07:30 PM	6/27/2011 5:39:40 PM	IMAGE\PHOTOS\QC POINTS\662-Shrub.pdf	FRED WAGNER	Field Books\11-037_2_15.pdf	4-662	0.02	0.03	0.03	0.03
7001	62 47 02.751467 N	148 03 03.203706 W	1682.89	1631.52	3214596.9946	1966775.8585	BARREN LAND	BARREN LAND - 7001	6/17/2011 6:56:16 PM	6/17/2011 7:04:01 PM	IMAGE\PHOTOS\QC POINTS\7001-Barren Land.pdf	STAN SEARS	Field Books\FieldSheets 2.pdf	1019-7001	0.04	0.07	0.02	0.02
7002	62 47 03.600162 N	148 03 05.379099 W	1682.55	1631.18	3214680.1042	1966672.0951	BARREN LAND	BARREN LAND - 7002	6/17/2011 6:39:01 PM	6/17/2011 6:46:46 PM	IMAGE\PHOTOS\QC POINTS\7002-Barren Land.pdf	STAN SEARS	Field Books\FieldSheets 2.pdf	1019-7002	0.03	0.05	0.02	0.02
7003	62 49 20.335218 N	148 35 27.071285 W	1499.23	1450.59	3226211.7574	1876071.3788	BARREN LAND	BARREN LAND - 7003	6/18/2011 3:05:01 PM	6/18/2011 3:12:31 PM	IMAGE\PHOTOS\QC POINTS\7003-Barren Land.pdf	STAN SEARS	Field Books\FieldSheets 3.pdf	11-7003	0.03	0.04	0.01	0.01
7004	62 49 20.234649 N	148 35 30.192187 W	1498.99	1450.35	3226198.3735	1875926.6427	BARREN LAND	BARREN LAND - 7004	6/18/2011 3:18:46 PM	6/18/2011 3:26:31 PM	IMAGE\PHOTOS\QC POINTS\7004-Barren Land.pdf	STAN SEARS	Field Books\FieldSheets 3.pdf	11-7004	0.05	0.06	0.01	0.02
7005	62 46 02.183561 N	148 50 57.630241 W	1367.80	1320.48	3205229.4272	1833207.0030	BARREN LAND	BARREN LAND - 7005	6/18/2011 6:04:01 PM	6/18/2011 6:11:31 PM	IMAGE\PHOTOS\QC POINTS\7005-Barren Land.pdf	STAN SEARS	Field Books\FieldSheets 5.pdf	EBASE-7005	0.03	0.06	0.01	0.02
7006	62 46 02.241125 N	148 51 00.436683 W	1367.77	1320.45	3205232.9414	1833076.2940	BARREN LAND	BARREN LAND - 7006	6/18/2011 6:20:16 PM	6/18/2011 6:28:01 PM	IMAGE\PHOTOS\QC POINTS\7006-Barren Land.pdf	STAN SEARS	Field Books\FieldSheets 5.pdf	EBASE-7006	0.04	0.08	0.01	0.02
70007	61 44 45.210569 N	150 02 45.053578 W	243.51	219.05	2830081.8077	1632470.3382	BARREN LAND	BARREN LAND - 700	6/27/2011 11:10:15 AM	6/27/2011 11:41:45 AM	IMAGE\PHOTOS\QC POINTS\700-Barren Land.pdf	JAMES HALL	Field Books\11-037_1_13.pdf	6-700	0.00	0.01	0.01	0.02
70008	61 44 42.969621 N	150 02 44.742108 W	248.51	224.20	2829854.2769	1632485.1989	BARREN LAND	BARREN LAND - 701	6/27/2011 11:13:00 AM	6/27/2011 11:48:40 AM	IMAGE\PHOTOS\QC POINTS\701-Barren Land.pdf	JAMES HALL	Field Books\11-037_1_13.pdf	6-701	0.00	0.01	0.01	0.02
70009	61 39 07.392980 N	149 49 47.256333 W	401.90	376.91	2795812.2080	1670007.2542	BARREN LAND	BARREN LAND - 702	6/27/2011 2:26:25 PM	6/27/2011 3:00:50 PM	IMAGE\PHOTOS\QC POINTS\702-Barren Land.pdf	JAMES HALL	Field Books\11-037_1_14.pdf	4-702	0.03	0.03	0.02	0.03
70010	61 39 07.432715 N	149 49 49.216047 W	401.88	376.90	2795815.9960	1669912.6061	BARREN LAND	BARREN LAND - 703	6/27/2011 2:38:45 PM	6/27/2011 3:08:50 PM	IMAGE\PHOTOS\QC POINTS\703-Barren Land.pdf	JAMES HALL	Field Books\11-037_1_14.pdf	4-703	0.03	0.04	0.02	0.04
70011	61 52 09.678124 N	147 20 49.475075 W	3252.71	3195.75	2884566.6325	2098295.5257	BARREN LAND	BARREN LAND - 704	6/28/2011 1:04:20 PM	6/28/2011 2:04:25 PM	IMAGE\PHOTOS\QC POINTS\704-Barren Land.pdf	JAMES HALL	Field Books\11-037_1_15.pdf	1-704	0.00	0.02	0.01	0.03
70012	61 49 03.069193 N	147 27 56.177387 W	3031.78	2974.43	2864809.3669	2078584.9486	BARREN LAND	BARREN LAND - 705	6/28/2011 4:13:30 PM	6/28/2011 4:59:45 PM	IMAGE\PHOTOS\QC POINTS\705-Barren Land.pdf	JAMES HALL	Field Books\11-037_1_16.pdf	1-705	0.00	0.01	0.01	0.02
70013	61 48 02.814350 N	147 38 10.978564 W	2399.67	2343.03	2857580.5223	2049291.4652	BARREN LAND	BARREN LAND - 706	6/28/2011 5:50:20 PM	6/28/2011 6:30:35 PM	IMAGE\PHOTOS\QC POINTS\706-Barren Land.pdf	JAMES HALL	Field Books\11-037_1_16.pdf	1-706	0.00	0.02	0.01	0.02
70014	61 48 09.354829 N	147 51 22.918311 W	1721.36	1666.03	2856925.0003	2011225.6716	BARREN LAND	BARREN LAND - 707	6/28/2011 8:18:25 PM	6/28/2011 8:58:30 PM	IMAGE\PHOTOS\QC POINTS\707-Barren Land.pdf	JAMES HALL	Field Books\11-037_1_16.pdf	1-707	0.03	0.04	0.02	0.04
70015	61 48 00.019669 N	148 03 37.447739 W	2154.04	2099.97	2854868.6798	1975967.3650	BARREN LAND	BARREN LAND - 708	6/28/2011 10:18:50 PM	6/28/2011 11:01:15 PM	IMAGE\PHOTOS\QC POINTS\708-Barren Land.pdf	JAMES HALL	Field Books\11-037_1_16.pdf	2-708	0.00	0.03	0.01	0.04
70016	61 48 06.621888 N	148 14 40.248491 W	1618.21	1565.86	2854633.6666	1944103.7801	BARREN LAND	BARREN LAND - 709	6/28/2011 11:20:55 PM	6/28/2011 11:41:00 PM	IMAGE\PHOTOS\QC POINTS\709-Barren Land.pdf	JAMES HALL	Field Books\11-037_1_16.pdf	2-709	0.00	0.01	0.01	0.02
70017	61 47 18.673853 N	148 26 19.663200 W	1147.51	1097.44	2848908.0097	1910616.1696	BARREN LAND	BARREN LAND - 710	6/28/2011 11:59:35 PM	6/29/2011 12:40:55 AM	IMAGE\PHOTOS\QC POINTS\710-Barren Land.pdf	JAMES HALL	Field Books\11-037_1_16.pdf	2-710	0.00	0.02	0.01	0.03
70018	61 45 25.723866 N	148 36 19.309685 W	754.57	707.09	2836784.2920	1882037.3110	BARREN LAND	BARREN LAND - 711	6/29/2011 12:59:20 AM	6/29/2011 1:40:45 AM	IMAGE\PHOTOS\QC POINTS\711-Barren Land.pdf	JAMES HALL	Field Books\11-037_1_16.pdf	2-711	0.03	0.05	0.02	0.06
70019	61 42 38.988041 N	148 55 18.781829 W	600.29	558.20	2818810.6465	1827489.0223	BARREN LAND	BARREN LAND - 712	6/29/2011 11:50:45 AM	6/29/2011 1:01:05 PM	IMAGE\PHOTOS\QC POINTS\712-Barren Land.pdf	JAMES HALL	Field Books\11-037_1_17.pdf	3-712	0.03	0.03	0.02	0.02
70020	61 30 57.344053 N	148 54 44.158087 W	95.30	57.98	2747594.6509	1830343.7044	BARREN LAND	BARREN LAND - 751	6/25/2011 11:02:10 AM	6/25/2011 11:36:20 AM	IMAGE\PHOTOS\QC POINTS\751-Barren Land.pdf	FRED WAGNER	Field Books\11-037_2_9.pdf	31-751	0.01	0.02	0.03	0.03
70021	61 30 58.645955 N	148 54 45.189293 W	95.43	58.11	2747726.0126	1830291.5019	BARREN LAND	BARREN LAND - 752	6/25/2011 11:04:20 AM	6/25/2011 11:36:55 AM	IMAGE\PHOTOS\QC POINTS\752-Barren Land.pdf	FRED WAGNER	Field Books\11-037_2_9.pdf	31-752	0.01	0.02	0.03	0.03
70022	61 31 14.826939 N	148 55 50.305926 W	92.95	55.87	2749316.7559	1827106.4626	BARREN LAND	BARREN LAND - 753	6/25/2011 11:50:45 AM	6/25/2011 12:25:00 PM	IMAGE\PHOTOS\QC POINTS\753-Barren Land.pdf	FRED WAGNER	Field Books\11-037_2_9.pdf	31-753	0.01	0.02	0.03	0.03
70023	61 31 16.405295 N	148 55 49.567477 W	92.99	55.92	2749477.6168	1827139.6547	BARREN LAND	BARREN LAND - 754	6/25/2011 11:53:50 AM	6/25/2011 12:25:25 PM	IMAGE\PHOTOS\QC POINTS\754-Barren Land.pdf	FRED WAGNER	Field Books\11-037_2_9.pdf	31-754	0.01	0.02	0.03	0.03
70024	61 31 18.434558 N	148 57 03.980736 W	89.34	52.62	2749625.0012	1823527.9620	BARREN LAND	BARREN LAND - 755	6/25/2011 12:47:35 PM	6/25/2011 1:22:30 PM	IMAGE\PHOTOS\QC POINTS\755-Barren Land.pdf	FRED WAGNER	Field Books\11-037_2_9.pdf	31-755	0.01	0.01	0.02	0.02
70025	61 31 19.798753 N	148 57 02.868129 W	89.73	53.00	2749764.4006	1823579.6791	BARREN LAND	BARREN LAND - 756	6/25/2011 12:49:15 PM	6/25/2011 1:20:55 PM	IMAGE\PHOTOS\QC POINTS\756-Barren Land.pdf	FRED WAGNER	Field Books\11-037_2_9.pdf	31-756	0.01	0.01	0.02	0.02
70026	61 31 09.935656 N	148 58 27.658131 W	87.49	51.22	2748697.5030	1819483.9747	BARREN LAND	BARREN LAND - 757	6/25/2011 1:41:15 PM	6/25/2011 2:16:45 PM	IMAGE\PHOTOS\QC POINTS\757-Barren Land.pdf	FRED WAGNER	Field Books\11-037_2_9.pdf	31-757	0.01	0.01	0.02	0.02
70027	61 31 08.620417 N	148 58 27.533982 W	88.11	51.84	2748564.0432	1819492.1012	BARREN LAND	BARREN LAND - 758	6/25/2011 1:45:45 PM	6/25/2011 2:16:35 PM	IMAGE\PHOTOS\QC POINTS\758-Barren Land.pdf	FRED WAGNER	Field Books\11-037_2_9.pdf	31-758	0.01	0.01	0.02	0.02
70028	61 30 20.885828 N	149 02 05.134349 W	81.38	46.26	2743555.9147	1809011.3344	BARREN LAND	BARREN LAND - 759	6/25/2011 2:44:40 PM	6/25/2011 3:19:30 PM	IMAGE\PHOTOS\QC POINTS\759-Barren Land.pdf	FRED WAGNER	Field Books\11-037_2_9.pdf	31-759	0.01	0.01	0.02	0.02
70029	61 30 22.062161 N	149 02 05.688550 W	81.15	46.03	2743674.9235	1808982.6864	BARREN LAND	BARREN LAND - 760	6/25/2011 2:47:25 PM	6/25/2011 3:19:40 PM	IMAGE\PHOTOS\QC POINTS\760-Barren Land.pdf	FRED WAGNER	Field Books\11-037_2_9.pdf	31-760	0.01	0.02	0.03	0.03
70030	61 36 26.598966 N	149 03 59.739937 W	229.53	193.43	2780609.7342	1802919.1244	BARREN LAND	BARREN LAND - 761	6/26/2011 6:14:30 PM	6/26/2011 6:47:20 PM	IMAGE\PHOTOS\QC POINTS\761-Barren Land.pdf	FRED WAGNER	Field Books\11-037_2_14.pdf	3-761	0.01	0.01	0.01	0.02
70031	61 36 28.031033 N	149 04 02.333459 W	232.00	195.95	2780753.3336	1802791.6423	BARREN LAND	BARREN LAND - 762	6/26/2011 6:16:25 PM	6/26/2011 6:47:15 PM	IMAGE\PHOTOS\QC POINTS\762-Barren Land.pdf	FRED WAGNER	Field Books\11-037_2_14.pdf	3-762	0.00	0.01	0.01	0.02
70032	61 38 32.355119 N	149 31 41.294272 W	392.28	361.43	2792512.5266	1722479.2554	BARREN LAND	BARREN LAND - 763	6/27/2011 11:34:20 AM	6/27/2011 12:06:55 PM	IMAGE\PHOTOS\QC POINTS\763-Barren Land.pdf	FRED WAGNER	Field Books\11-037_2_15.pdf	4-763	0.02	0.03	0.03	0.03
70033	61 38 31.378423 N	149 31 38.353525 W	394.22	363.37	2792414.3758	1722622.0308	BARREN LAND	BARREN LAND - 764	6/27/2011 11:35:20 AM	6/27/2011 12:06:35 PM	IMAGE\PHOTOS\QC POINTS\764-Barren Land.pdf	FRED WAGNER	Field Books\11-037_2_15.pdf	4-764	0.02	0.04	0.03	0.04
70034	61 17 05.988758 N	149 57 10.346918 W	159.99	138.28	2661592.1834	1648706.4516	BARREN LAND	BARREN LAND - 765	6/28/2011 3:43:20 PM	6/28/2011 4:17:00 PM	IMAGE\PHOTOS\QC POINTS\765-Barren Land.pdf	FRED WAGNER	Field Books\11-037_2_17.pdf	5-765	0.02	0.04	0.02	0.04
70035	61 17 07.013154 N	149 57 07.910600 W	161.94	140.22	2661696.2953	1648825.4209	BARREN LAND	BARREN LAND - 766	6/28/2011 3:44:55 PM	6/28/2011 4:17:00 PM	IMAGE\PHOTOS\QC POINTS\766-Barren Land.pdf	FRED WAGNER	Field Books\11-037_2_17.pdf	5-766	0.02	0.04	0.02	0.04
70036	61 37 50.466719 N	149 48 44.387637 W	280.76	256.06	2788009.0560	1673065.5637	BARREN LAND	BARREN LAND - 767	6/29/2011 1:15:35 PM	6/29/2011 2:15:30 PM	IMAGE\PHOTOS\QC POINTS\767-Barren Land.pdf	FRED WAGNER	Field Books\11-037_2_18.pdf	4-767	0.01	0.02	0.01	0.02
70037	61 37 50.741731 N	149 48 39.233275 W	281.32	256.60	2788037.7222	1673314.5833	BARREN LAND	BARREN LAND - 768	6/29/2011 1:16:40 PM	6/29/2011 2:15:40 PM	IMAGE\PHOTOS\QC POINTS\768-Barren Land.pdf	FRED WAGNER	Field Books\11-037_2_18.pdf	4-768	0.01	0.02	0.01	0.02

POINT	LATITUDE	LONGITUDE	Ell-HT_FT	Ortho-HT_FT	SPC-Z4_FT NT	SPC-Z4_FT ET	TYPE	DESCRIPTOR	START TIME	STOP TIME	PICTURE REF	SURVEYOR	FIELD BOOK	BASELINE	HZ-RMS_FT	VT-RMS_FT	HZ-ACC_FT	VT-ACC_FT
80001	62 19 23.267498 N	150 06 55.725158 W	379.12	346.90	3041134.9019	1620777.1888	DEVELOPED	DEVELOPED - 800	6/22/2011 11:18:25 AM	6/22/2011 11:33:20 AM	IMAGE\PHOTOS\QC POINTS\800-Developed.pdf	JAMES HALL	Field Books\11-037_1_2.pdf	8-800	0.03	0.05	0.03	0.04
80002	62 19 23.533403 N	150 06 54.336824 W	379.85	347.62	3041161.7901	1620842.8239	DEVELOPED	DEVELOPED - 802	6/22/2011 11:50:20 AM	6/22/2011 12:00:20 PM	IMAGE\PHOTOS\QC POINTS\802-Developed.pdf	JAMES HALL	Field Books\11-037_1_2.pdf	8-802	0.07	0.07	0.03	0.05
80003	62 19 17.913550 N	150 06 03.819709 W	385.24	352.89	3040587.0535	1623228.4290	DEVELOPED	DEVELOPED - 804	6/22/2011 12:38:40 PM	6/22/2011 12:50:25 PM	IMAGE\PHOTOS\QC POINTS\804-Developed.pdf	JAMES HALL	Field Books\11-037_1_2.pdf	8-804	0.03	0.05	0.03	0.05
80004	62 19 18.009539 N	150 06 05.003794 W	385.16	352.81	3040596.8896	1623172.5036	DEVELOPED	DEVELOPED - 806	6/22/2011 1:06:40 PM	6/22/2011 1:17:20 PM	IMAGE\PHOTOS\QC POINTS\806-Developed.pdf	JAMES HALL	Field Books\11-037_1_2.pdf	8-806	0.03	0.05	0.03	0.05
80005	62 18 49.820038 N	150 06 22.540896 W	382.37	350.19	3037735.3065	1622339.2831	DEVELOPED	DEVELOPED - 808	6/22/2011 1:45:40 PM	6/22/2011 1:57:00 PM	IMAGE\PHOTOS\QC POINTS\808-Developed.pdf	JAMES HALL	Field Books\11-037_1_3.pdf	8-808	0.03	0.05	0.03	0.05
80006	62 18 18.177653 N	150 06 04.039680 W	434.80	402.69	3034520.3229	1623208.5554	DEVELOPED	DEVELOPED - 812	6/22/2011 3:07:40 PM	6/22/2011 3:18:20 PM	IMAGE\PHOTOS\QC POINTS\812-Developed.pdf	JAMES HALL	Field Books\11-037_1_3.pdf	8-812	0.03	0.04	0.04	0.04
80007	62 18 15.574810 N	150 05 59.866062 W	445.89	413.78	3034255.6733	1623405.4334	DEVELOPED	DEVELOPED - 814	6/22/2011 3:37:25 PM	6/22/2011 3:48:20 PM	IMAGE\PHOTOS\QC POINTS\814-Developed.pdf	JAMES HALL	Field Books\11-037_1_3.pdf	8-814	0.03	0.05	0.03	0.05
80008	61 44 31.269445 N	150 02 41.140570 W	256.28	231.91	2828666.3625	1632657.6212	DEVELOPED	DEVELOPED - 816	6/24/2011 12:50:20 PM	6/24/2011 1:00:25 PM	IMAGE\PHOTOS\QC POINTS\816-Developed.pdf	JAMES HALL	Field Books\11-037_1_7.pdf	6-816	0.00	0.01	0.01	0.01
80009	61 44 31.852087 N	150 02 42.077770 W	255.58	231.17	2828725.5628	1632612.5076	DEVELOPED	DEVELOPED - 818	6/24/2011 12:56:50 PM	6/24/2011 1:06:55 PM	IMAGE\PHOTOS\QC POINTS\818-Developed.pdf	JAMES HALL	Field Books\11-037_1_7.pdf	6-818	0.00	0.01	0.01	0.01
80010	61 45 14.756663 N	150 03 32.872529 W	232.68	208.37	2833084.3965	1630170.6366	DEVELOPED	DEVELOPED - 820	6/24/2011 1:59:25 PM	6/24/2011 2:09:30 PM	IMAGE\PHOTOS\QC POINTS\820-Developed.pdf	JAMES HALL	Field Books\11-037_1_8.pdf	6-820	0.00	0.03	0.01	0.01
80011	61 45 06.467097 N	150 03 22.617834 W	229.00	204.71	2832242.2834	1630663.4577	DEVELOPED	DEVELOPED - 821	6/24/2011 2:33:30 PM	6/24/2011 2:43:40 PM	IMAGE\PHOTOS\QC POINTS\821-Developed.pdf	JAMES HALL	Field Books\11-037_1_8.pdf	6-821	0.00	0.02	0.01	0.01
80012	61 42 16.074224 N	150 00 11.643460 W	271.94	248.07	2814934.5040	1639855.3940	DEVELOPED	DEVELOPED - 822	6/24/2011 4:14:40 PM	6/24/2011 4:25:15 PM	IMAGE\PHOTOS\QC POINTS\822-Developed.pdf	JAMES HALL	Field Books\11-037_1_9.pdf	6-822	0.03	0.05	0.03	0.03
80013	61 42 23.326021 N	150 00 24.077884 W	285.71	261.71	2815670.9308	1639256.0634	DEVELOPED	DEVELOPED - 823	6/24/2011 4:47:20 PM	6/24/2011 4:57:45 PM	IMAGE\PHOTOS\QC POINTS\823-Developed.pdf	JAMES HALL	Field Books\11-037_1_9.pdf	6-823	0.03	0.04	0.03	0.03
80014	61 47 59.021453 N	147 48 52.774438 W	1731.14	1675.60	2856116.2986	2018473.5066	DEVELOPED	DEVELOPED - 824	6/28/2011 7:09:00 PM	6/28/2011 7:49:05 PM	IMAGE\PHOTOS\QC POINTS\824-Developed.pdf	JAMES HALL	Field Books\11-037_1_16.pdf	1-824	0.03	0.03	0.02	0.04
80015	61 36 34.928011 N	149 13 18.574704 W	431.07	397.91	2781100.4552	1775884.7706	DEVELOPED	DEVELOPED - 851	6/24/2011 10:02:40 AM	6/24/2011 10:13:50 AM	IMAGE\PHOTOS\QC POINTS\851-Developed.pdf	FRED WAGNER	Field Books\11-037_2_1.pdf	3-851	0.02	0.04	0.02	0.04
80016	61 36 35.012442 N	149 13 15.248795 W	433.04	399.91	2781110.9152	1776045.5069	DEVELOPED	DEVELOPED - 852	6/24/2011 10:35:55 AM	6/24/2011 10:46:45 AM	IMAGE\PHOTOS\QC POINTS\852-Developed.pdf	FRED WAGNER	Field Books\11-037_2_1.pdf	3-852	0.02	0.04	0.02	0.04
80017	61 35 55.200185 N	149 07 32.640773 W	304.31	269.79	2777278.7929	1792666.4224	DEVELOPED	DEVELOPED - 853	6/24/2011 11:22:55 AM	6/24/2011 11:33:50 AM	IMAGE\PHOTOS\QC POINTS\853-Developed.pdf	FRED WAGNER	Field Books\11-037_2_2.pdf	3-853	0.01	0.01	0.01	0.02
80018	61 35 56.539970 N	149 07 35.787915 W	307.37	273.03	2777412.6595	1792511.6382	DEVELOPED	DEVELOPED - 854	6/24/2011 11:27:20 AM	6/24/2011 11:38:55 AM	IMAGE\PHOTOS\QC POINTS\854-Developed.pdf	FRED WAGNER	Field Books\11-037_2_2.pdf	3-854	0.01	0.02	0.01	0.02
80019	61 36 39.343895 N	149 06 28.455211 W	310.21	275.21	2781803.7700	1795709.8810	DEVELOPED	DEVELOPED - 855	6/24/2011 12:28:00 PM	6/24/2011 12:39:00 PM	IMAGE\PHOTOS\QC POINTS\855-Developed.pdf	FRED WAGNER	Field Books\11-037_2_3.pdf	3-855	0.01	0.01	0.01	0.01
80020	61 36 26.662385 N	149 06 34.520970 W	296.48	262.01	2780511.5854	1795433.9217	DEVELOPED	DEVELOPED - 856	6/24/2011 12:27:30 PM	6/24/2011 12:43:40 PM	IMAGE\PHOTOS\QC POINTS\856-Developed.pdf	FRED WAGNER	Field Books\11-037_2_3.pdf	3-856	0.01	0.01	0.01	0.02
80021	61 35 31.692385 N	149 06 30.713556 W	263.17	228.09	2774932.7798	1795695.3936	DEVELOPED	DEVELOPED - 857	6/24/2011 1:00:35 PM	6/24/2011 1:11:45 PM	IMAGE\PHOTOS\QC POINTS\857-Developed.pdf	FRED WAGNER	Field Books\11-037_2_4.pdf	3-857	0.02	0.03	0.02	0.03
80022	61 35 31.634700 N	149 06 26.619497 W	263.72	228.59	2774929.5389	1795892.9070	DEVELOPED	DEVELOPED - 858	6/24/2011 1:03:10 PM	6/24/2011 1:12:50 PM	IMAGE\PHOTOS\QC POINTS\858-Developed.pdf	FRED WAGNER	Field Books\11-037_2_4.pdf	3-858	0.01	0.02	0.01	0.02
80023	61 35 22.977624 N	149 25 43.582171 W	410.85	381.20	2773421.0395	1739923.3965	DEVELOPED	DEVELOPED - 859	6/24/2011 2:29:30 PM	6/24/2011 2:41:10 PM	IMAGE\PHOTOS\QC POINTS\859-Developed.pdf	FRED WAGNER	Field Books\11-037_2_5.pdf	4-859	0.06	0.11	0.06	0.10
80024	61 35 22.523181 N	149 25 50.533091 W	409.46	379.69	2773371.8228	1739587.4692	DEVELOPED	DEVELOPED - 860	6/24/2011 2:32:25 PM	6/24/2011 2:43:40 PM	IMAGE\PHOTOS\QC POINTS\860-Developed.pdf	FRED WAGNER	Field Books\11-037_2_5.pdf	4-860	0.07	0.12	0.05	0.12
80025	61 34 56.342811 N	149 27 43.481865 W	367.51	338.28	2770666.8500	1734144.1259	DEVELOPED	DEVELOPED - 861	6/24/2011 3:49:35 PM	6/24/2011 4:01:15 PM	IMAGE\PHOTOS\QC POINTS\861-Developed.pdf	FRED WAGNER	Field Books\11-037_2_6.pdf	4-861	0.04	0.08	0.03	0.08
80026	61 34 57.371628 N	149 27 38.729002 W	367.85	338.56	2770773.2096	1734373.2974	DEVELOPED	DEVELOPED - 862	6/24/2011 3:35:35 PM	6/24/2011 3:50:50 PM	IMAGE\PHOTOS\QC POINTS\862-Developed.pdf	FRED WAGNER	Field Books\11-037_2_6.pdf	4-862	0.04	0.08	0.03	0.08
80027	61 34 29.579980 N	149 25 12.439682 W	443.38	413.54	2768011.9926	1741478.5978	DEVELOPED	DEVELOPED - 863	6/24/2011 4:28:15 PM	6/24/2011 4:40:55 PM	IMAGE\PHOTOS\QC POINTS\863-Developed.pdf	FRED WAGNER	Field Books\11-037_2_7.pdf	4-863	0.06	0.10	0.05	0.09
80028	61 35 15.665443 N	149 21 49.899353 W	399.83	368.92	2772783.1888	1751237.9917	DEVELOPED	DEVELOPED - 865	6/24/2011 5:58:00 PM	6/24/2011 6:12:10 PM	IMAGE\PHOTOS\QC POINTS\865-Developed.pdf	FRED WAGNER	Field Books\11-037_2_8.pdf	3-865	0.05	0.08	0.04	0.06
80029	61 35 14.312268 N	149 21 47.096007 W	402.30	371.23	2772647.1662	1751374.9901	DEVELOPED	DEVELOPED - 866	6/24/2011 6:17:10 PM	6/24/2011 6:28:55 PM	IMAGE\PHOTOS\QC POINTS\866-Developed.pdf	FRED WAGNER	Field Books\11-037_2_8.pdf	3-866	0.04	0.07	0.02	0.06
80030	61 35 22.172689 N	149 46 11.309251 W	276.35	251.99	2772973.7866	1680516.2679	DEVELOPED	DEVELOPED - 867	6/25/2011 4:57:40 PM	6/25/2011 5:43:15 PM	IMAGE\PHOTOS\QC POINTS\867-Developed.pdf	FRED WAGNER	Field Books\11-037_2_10.pdf	4-867	0.01	0.01	0.01	0.01
80031	61 35 22.934890 N	149 46 09.722347 W	277.14	252.77	2773051.4584	1680592.7825	DEVELOPED	DEVELOPED - 868	6/25/2011 4:56:50 PM	6/25/2011 5:47:10 PM	IMAGE\PHOTOS\QC POINTS\868-Developed.pdf	FRED WAGNER	Field Books\11-037_2_10.pdf	4-868	0.01	0.01	0.01	0.01
80032	61 37 28.599175 N	149 47 58.444244 W	286.63	261.97	2785795.1023	1675292.6052	DEVELOPED	DEVELOPED - 869	6/25/2011 5:24:05 PM	6/25/2011 5:57:50 PM	IMAGE\PHOTOS\QC POINTS\869-Developed.pdf	FRED WAGNER	Field Books\11-037_2_11.pdf	4-869	0.01	0.02	0.01	0.02
80033	61 37 31.012187 N	149 47 59.656803 W	287.11	262.44	2786039.9611	1675233.2441	DEVELOPED	DEVELOPED - 870	6/25/2011 5:37:40 PM	6/25/2011 6:09:25 PM	IMAGE\PHOTOS\QC POINTS\870-Developed.pdf	FRED WAGNER	Field Books\11-037_2_11.pdf	4-870	0.01	0.02	0.01	0.02
80034	61 36 32.434079 N	149 48 13.233866 W	307.17	282.93	2780089.4206	1674594.9536	DEVELOPED	DEVELOPED - 871	6/25/2011 6:46:10 PM	6/25/2011 7:41:35 PM	IMAGE\PHOTOS\QC POINTS\871-Developed.pdf	FRED WAGNER	Field Books\11-037_2_12.pdf	4-871	0.01	0.01	0.01	0.01
80035	61 36 32.128771 N	149 48 12.170902 W	308.45	284.20	2780058.5720	1674646.4507	DEVELOPED	DEVELOPED - 872	6/25/2011 6:53:10 PM	6/25/2011 7:42:10 PM	IMAGE\PHOTOS\QC POINTS\872-Developed.pdf	FRED WAGNER	Field Books\11-037_2_12.pdf	4-872	0.01	0.01	0.01	0.01
80036	61 36 18.641121 N	149 45 23.431417 W	326.65	301.80	2778716.4911	1682811.5900	DEVELOPED	DEVELOPED - 873	6/25/2011 8:03:40 PM	6/25/2011 8:37:35 PM	IMAGE\PHOTOS\QC POINTS\873-Developed.pdf	FRED WAGNER	Field Books\11-037_2_13.pdf	4-873	0.01	0.01	0.01	0.01
80037	61 36 18.261142 N	149 45 19.420062 W	321.87	297.01	2778678.6317	1683005.7419	DEVELOPED	DEVELOPED - 874	6/25/2011 8:08:30 PM	6/25/2011 8:38:35 PM	IMAGE\PHOTOS\QC POINTS\874-Developed.pdf	FRED WAGNER	Field Books\11-037_2_13.pdf	4-874	0.04	0.06	0.03	0.04
80038	61 26 13.182543 N	150 10 05.628330 W	118.27	99.62	2717395.3558	1610967.4811	DEVELOPED	DEVELOPED - 875	6/28/2011 11:49:00 AM	6/28/2011 12:33:05 PM	IMAGE\PHOTOS\QC POINTS\875-Developed.pdf	FRED WAGNER	Field Books\11-037_2_16.pdf	5-875	0.01	0.02	0.01	0.02
80039	61 26 15.148276 N	150 10 16.365351 W	121.60	103.06	2717393.1450	1610445.3858	DEVELOPED	DEVELOPED - 876	6/28/2011 12:13:45 PM	6/28/2011 12:44:50 PM	IMAGE\PHOTOS\QC POINTS\876-Developed.pdf	FRED WAGNER	Field Books\11-037_2_16.pdf	5-876	0.01	0.02	0.01	0.02
90001	62 04 40.835965 N	150 03 33.240736 W	339.22	309.90	2951504.1116	1630260.8971	WETLANDS	WETLANDS - 900	6/23/2011 11:53:15 AM	6/23/2011 12:03:25 PM	IMAGE\PHOTOS\QC POINTS\900-Wetlands.pdf	JAMES HALL	Field Books\11-037_1_4.pdf	7-900	0.00	0.02	0.01	0.02
90002	62 04 39.986000 N	150 03 33.295726 W	339.11	309.80	2951417.7949	1630258.1993	WETLANDS	WETLANDS - 902	6/23/2011 12:21:20 PM	6/23/2011 12:30:25 PM	IMAGE\PHOTOS\QC POINTS\902-Wetlands.pdf	JAMES HALL	Field Books\11-037_1_4.pdf	7-902	0.00	0.01	0.01	0.01
90003	62 00 07.010861 N	150 03 20.161293 W	229.13	200.98	2923695.1127	1630859.9811	WETLANDS	WETLANDS - 904	6/23/2011 2:31:20 PM	6/23/2011 2:42:15 PM	IMAGE\PHOTOS\QC POINTS\904-Wetlands.pdf	JAMES HALL	Field Books\11-037_1_5.pdf	7-904	0.07	0.08	0.04	0.07
90004	62 00 06.347401 N	150 03 21.654047 W	228.52	200.38	2923627.7963	1630788.6516	WETLANDS	WETLANDS - 906	6/23/2011 2:41:20 PM	6/23/2011 2:52:05 PM	IMAGE\PHOTOS\QC POINTS\906-Wetlands.pdf	JAMES HALL	Field Books\11-037_1_5.pdf	7-906	0.07	0.09	0.04	0.07
90005	61 54 09.728538 N	150 04 22.914826 W	187.11	159.39	2887413.9893	1627827.0597	WETLANDS	WETLANDS - 908	6/23/2011 5:20:40 PM	6/23/2011 5:35:40 PM	IMAGE\PHOTOS\QC POINTS\908-Wetlands.pdf	JAMES HALL	Field Books\11-037_1_5.pdf	6-908	0.07	0.09	0.05	0.09
90006	61 46 44.736510 N	149 51 29.716474 W	594.55	565.44	2842243.5674	1664961.9500	WETLANDS	WETLANDS - 912	6/25/2011 12:19:20 PM	6/25/2011 1:32:40 PM	IMAGE\PHOTOS\QC POINTS\912-Wetlands.pdf	JAMES HALL	Field Books\11-037_1_10.pdf	6-912	0.00	0.02	0.01	0.01
90007	61 46 44.571317 N	149 51 30.258355 W	594.60	565.48	2842226.7351	1664935.9257	WETLANDS	WETLANDS - 913	6/25/2011 12:31:15 PM	6/25/2011 1:37:15 PM	IMAGE\PHOTOS\QC POINTS\913-Wetlands.pdf	JAMES HALL	Field Books\11-037_1_10.pdf	6-913	0.00	0.02	0.01	0.01
90008	61 43 02.771600 N	150 02 02.840131 W	265.50	241.56	2819677.8356	1634497.2805	WETLANDS	WETLANDS - 914	6/27/2011 12:10:30 PM	6/27/2011 12:40:50 PM	IMAGE\PHOTOS\QC POINTS\914-Wetlands.pdf	JAMES HALL	Field Books\11-037_1_13.pdf	6-914	0.00	0.01	0.01	0.02
90009	61 40 15.238741 N	149 59 04.906839 W	244.51	220.98	2802663.5693	1643075.8148	WETLANDS	WETLANDS - 916	6/27/2011 1:01:40 PM	6/27/2011 1:34:30 PM	IMAGE\PHOTOS\QC POINTS\916-Wetlands.pdf	JAMES HALL	Field Books\11-037_1_13.pdf	6-916	0.00	0.02	0.01	0.03
90010	61 40 14.927347 N	149 59 07.179768 W	244.71	221.19	2802631.9221	1642966.1254	WETLANDS	WETLANDS - 917	6/27/2011 1:14:55 PM	6/27/2011 1:45:05 PM	IMAGE\PHOTOS\QC POINTS\917-Wetlands.pdf	JAMES HALL	Field Books\11-037_1_12.pdf	6-917	0.00	0.03	0.01	0.04
90011	61 40 44.200520 N	149 49 04.473606 W	764.95	739.00	2805648.5725	1672045.7956	WETLANDS	WETLANDS - 918	6/27/2011 3:44:10 PM	6/27/2011 4:28:55 PM	IMAGE\PHOTOS\QC POINTS\918-Wetlands.pdf	JAMES HALL	Field Books\11-037_1_14.pdf	4-918	0.00	0.03	0.01	0.03
90012	61 40 44.389770 N	149 49 06.778885 W	771.79	745.85	2805667.4802	1671934.5135	WETLANDS	WETLANDS - 919	6/27/2011 3:59:10 PM	6/27/2011 4:34:50 PM	IMAGE\PHOTOS\QC POINTS\919-Wetlands.pdf	JAMES HALL	Field Books\11-037_1_14.pdf	4-919	0.00	0.03	0.01	0.03
90013	61 52 55.725015 N	147 20 14.412530 W	3068.74	3011.96	2889308.8187	2099784.1729	WETLANDS	WETLANDS - 920	6/28/2011 12:00:15 PM	6/28/2011 12:31:55 PM	IMAGE\PHOTOS\QC POINTS\920-Wetlands.pdf	JAMES HALL	Field Books\11-037_1_15.pdf	1-920	0.03	0.03	0.02	0.04
90014	61 50 29.392839 N	147 20 30.751024 W	3016.62	2959.31	2874425.1678	2099609.5146	WETLANDS	WETLANDS - 921	6/28/2011 2:43:50 PM	6/28/2011 3:46:00 PM	IMAGE\PHOTOS\QC POINTS\921-Wetlands.pdf	JAMES HALL	Field Books\11-037_1_16.pdf	1-921	0.00	0.02	0.01	0.03
90015	61 47 44.314112 N	148 02 59.008773 W	2023.31	1969.21	2853329.5323	1977862.0263	WETLANDS	WETLANDS - 922	6/28/2011 9:28:25 PM	6/28/2011 10:08:35 PM	IMAGE\PHOTOS\QC POINTS\922-Wetlands.pdf	JAMES HALL	Field Books\11-037_1_16.pdf	2-922	0.00	0.03	0.01	0.03
90016	61 39 25.629310 N	149 13 02.027581 W	610.05	575.44	2798443.7212	1776476.5291	WETLANDS	WETLANDS - 951	6/26/2011 5:07:50 PM	6/26/2011 5:47:50 PM	IMAGE\PHOTOS\QC POINTS\951-Wetlands.pdf	FRED WAGNER	Field Books\11-037_2_14.pdf	3-951	0.01	0.02	0.01	0.03
90017	61 39 26.472128 N	149 13 00.152190 W	612.88	578.34	2798530.4640	1776565.7244	WETLANDS	WETLANDS - 952	6/26/2011 5:15:30 PM	6/26/2011 5:46:55 PM	IMAGE\PHOTOS\QC POINTS\952-Wetlands.pdf	FRED WAGNER	Field Books\11-037_2_14.pdf	3-952	0.01	0.02	0.01	0.03
90018	61 37 39.329510 N	149 30 40.419441 W	469.88	439.22	2787149.6033	1725460.2875	WETLANDS	WETLANDS - 953	6/27/2011 10:49:35 AM	6/27/2011 11:20:05 AM	IMAGE\PHOTOS\QC POINTS\953-Wetlands.pdf	FRED WAGNER	Field Books\11-037_2_15.pdf	4-953	0.02	0.04	0.03	0.04
90019	61 37 37.608959 N	149 30 40.563262 W	471.50	440.85	2786974.8336	1725454.6482	WETLANDS	WETLANDS - 954	6/27/2011 10:49:55 AM	6/27/2011 11:20:15 AM	IMAGE\PHOTOS\QC POINTS\954-Wetlands.pdf	FRED WAGNER	Field Books\11-037_2_15.pdf	4-954	0.02	0.04	0.03	0.04
90020	61 33 27.874553 N	149 40 38.034536 W	272.22	245.46	2761434.8786	1696704.6166	WETLANDS	WETLANDS - 955	6/27/2011 12:47:40 PM	6/27/2011 1:21:35 PM	IMAGE\PHOTOS\QC POINTS\955-Wetlands.pdf	FRED WAGNER	Field Books\11-037_2_15.pdf	4-955	0.01	0.01	0.01	0.01
90021	61 30 44.652147 N	149 56 39.508425 W	169.44	146.72	2744724.7220	1650146.4334	WETLANDS	WETLANDS - 956	6/27/2011 12:50:40 PM	6/27/2011 1:22:30 PM	IMAGE\PHOTOS\QC POINTS\956-Wetlands.pdf	FRED WAGNER	Field Books\11-037_2_15.pdf	4-956	0.01	0.01	0.01	0.01
90022	61 30 44.048300 N	149 56 36.529571 W	170.91	148.17	2744663.5271	1650290.9887	WETLANDS	WETLANDS - 958	6/27/2011 2:27:30 PM	6/27/2011 2:58:15 PM	IMAGE\PHOTOS\QC POINTS\958-Wetlands.pdf	FRED WAGNER	Field Books\11-037_2_15.pdf	4-958	0.02	0.03	0.04	0.04
90023	61 27 45.328931 N	149 43 17.576034 W	45.17	19.66	2726614.7502	1689125.2770	WETLANDS	WETLANDS - 959	6/27/2011 7:45:45 PM	6/27/2011 8:18:45 PM	IMAGE\PHOTOS\QC POINTS\959-Wetlands.pdf	FRED WAGNER	Field Books\11-037_2_15.pdf	4-959	0.02	0.03	0.03	0.04
90024	61 27 44.609763 N	149 43 15.129014 W	44.71	19.20	2726542.2296	1689244.4818	WETLANDS	WETLANDS - 960	6/27/2011 7:46:25 PM	6/27/2011 8:18:50 PM	IMAGE\PHOTOS\QC POINTS\960-Wetlands.pdf	FRED WAGNER	Field Books\11-037_2_15.pdf	4-960	0.02	0.03	0.03	0.04
90025	61 26 09.583004 N	150 10 18.981167 W	54.34	35.69	2716828.4136	1610316.6786	WETLANDS	WETLANDS - 961	6/28/2011 1:03:15 PM	6/28/2011 1:36:15 PM	IMAGE\PHOTOS\QC POINTS\961-Wetlands.pdf	FRED WAGNER	Field Books\11-037_2_17.pdf	5-961	0.01	0.02	0.01	0.02
90026	61 26 09.210254 N	150 10 20.969272 W	54.17	35.64	2716790.7508	1610219.9223	WETLANDS	WETLANDS - 962	6/28/2011 1:05:40 PM	6/28/2011 1:37:00 PM	IMAGE\PHOTOS\QC POINTS\962-Wetlands.pdf	FRED WAGNER	Field Books\11-037_2_17.pdf	5-962	0.01	0.02	0.01	0.02
90027	61 18 35.771347 N	150 04 43.622259 W	113.78	94.23	2670714.6990	1626569.0640	WETLANDS	WETLANDS - 963	6/28/2011 2:26:55 PM	6/28/2011 3:01:40 PM	IMAGE\PHOTOS\QC POINTS\963-Wetlands.pdf	FRED WAGNER	Field Books\11-037_2_17.pdf	5-963	0.03	0.05	0.03	0.05
90028	61 18 37.096340 N	150 04 41.264479 W	114.83	94.87	2670849.0900	1626684.1767	WETLANDS	WETLANDS - 964	6/28/2011 2:29:10 PM	6/28/2011 3:02:20 PM	IMAGE\PHOTOS\QC POINTS\964-Wetlands.pdf	FRED WAGNER	Field Books\11-037_2_17.pdf	5-964	0.03	0.05	0.03	0.05
90029	61 23 47.279220 N	149 52 07.369966 W	46.07	23.53	2702361.4533	1663428.9410	WETLANDS	WETLANDS - 965	6/28/2011 5:29:40 PM	6/28/2011 6:03:15 PM	IMAGE\PHOTOS\QC POINTS\965-Wetlands.pdf	FRED WAGNER	Field Books\11-037_2_17.pdf	5-965	0.01	0.02	0.01	0.02
90030	61 23 46.395483 N	149 52 07.986542 W	46.17	23.62	2702271.6386	1663399.0817	WETLANDS	WETLANDS - 966	6/28/2011 5:31:45 PM	6/28/2011 6:03:45 PM	IMAGE\PHOTOS\QC POINTS\966-Wetlands.pdf	FRED WAGNER	Field Books\11-037_2_17.pdf	5-966	0.01	0.02	0.01	0.02
90031	61 32 29.334218 N	149 15 12.008621 W	58.66	26.60	2756097.6814	1770685.4909	WETLANDS	WETLANDS - 967	6/28/2011 6:53:45 PM	6/28/2011 7:24:55 PM	IMAGE\PHOTOS\QC POINTS\967-Wetlands.pdf	FRED WAGNER	Field Books\11-037_2_17.pdf	3-967	0.02	0.03	0.01	0.03
90032	61 32 27.380803 N	149 15 12.017490 W	59.10	27.04	2755899.3244	1770687.3395	WETLANDS	WETLANDS - 968	6/28/2011 6:54:30 PM	6/28/2011 7:24:45 PM	IMAGE\PHOTOS\QC POINTS\968-Wetlands.pdf	FRED WAGNER	Field Books\11-037_2_17.pdf	3-968	0.02	0.03	0.01	0.03
90033	61 38 11.887606 N	149 50 58.753908 W	267.97	243.64	2790167.5144	1666567.3188	WETLANDS	WETLANDS - 969	6/29/2011 12:09:55 PM	6/29/2011 12:41:20 PM	IMAGE\PHOTOS\QC POINTS\969-Wetlands.pdf	FRED WAGNER	Field Books\11-037_2_18.pdf	4-969	0.01	0.02	0.01	0.02
90034	61 38 12.520003 N	149 51 00.506364 W	267.84	243.46	2790231.5236	1666482.5020	WETLANDS	WETLANDS - 970	6/29/2011 12:51:25 PM	6/29/2011 1:22:40 PM	IMAGE\PHOTOS\QC POINTS\970-Wetlands.pdf	FRED WAGNER	Field Books\11-037_2_18.pdf	4-970	0.01	0.02	0.01	0.02
90035	61°48'29.161985"N	150°05'55.478824"W	166.260	141.57	2852834.9730	1623336.6152	WETLANDS	WETLANDS - 991	7/14/2011 1:58:45 PM	7/14/2011 3:50:10 PM	IMAGE\PHOTOS\QC POINTS\991-Wetland.pdf	FRED WAGNER	Field Books\Field Note 991-992.PDF	6-991	0.01	0.01	0.01	0.01
90036	61°48'27.888933"N	150°05'56.795239"W	166.670	141.99	2852705.7882	1623273.1670	WETLANDS	WETLANDS - 992	7/14/2011 2:04:50 PM	7/14/2011 3:54:00 PM	IMAGE\PHOTOS\QC POINTS\992-Wetland-.pdf	FRED WAGNER	Field Books\Field Note 991-992.PDF	6-992	0.01	0.02	0.01	0.01

POINT	LATITUDE	LONGITUDE	Ell-HT_FT	Ortho-HT_FT	SPC-Z4_FT NT	SPC-Z4_FT ET	TYPE	DESCRIPTOR
1	61 48 37.007920 N	147 30 54.954887 W	2829.74	2772.52	2861832.5928	2070103.4121	BASE STATION	ALASKA DOT/PF CAP
2	61 47 53.494941 N	148 15 18.052440 W	1682.81	1630.63	2853252.0257	1942323.2578	BASE STATION	STAINLESS STEEL ROD
3	61 37 40.158390 N	149 07 14.919452 W	578.47	543.18	2787947.8503	1793379.8494	BASE STATION	USGS CAP
4	61 34 28.417273 N	149 43 41.783559 W	233.37	208.57	2767542.8434	1687774.4219	BASE STATION	NGS CAP "BIG LAKE"
5	61 25 34.106025 N	150 01 8.710846 W	226.77	206.34	2713186.6085	1637074.3223	BASE STATION	PND CAP "CP 10"
6	61 45 09.238247 N	150 03 19.282905 W	242.21	217.89	2832523.4925	1630824.2331	BASE STATION	STAINLESS STEEL ROD
7	62 06 16.675776 N	150 03 35.213997 W	293.75	264.02	2961237.3310	1630175.8931	BASE STATION	USGS CAP
8	62 18 58.083181 N	150 14 3.027938 W	402.02	371.04	3038631.7502	1600581.5573	BASE STATION	NGS CAP "GPS 10"
9	62 42 18.924531 N	150 13 16.450171 W	779.57	741.43	3180896.3028	1603269.7966	BASE STATION	NGS CAP "GPS 15"
10	62 57 11.815288 N	149 39 25.271825 W	1690.54	1647.64	3271673.1417	1697521.9789	BASE STATION	ALASKA DOT/PF CAP
11	62 49 45.987950 N	148 33 03.529189 W	2414.553	2365.81	3228964.7103	1882679.9569	BASE STATION	R&M CAP "BM 22C"
12	62 44 24.801357 N	147 33 36.137491 W	4248.827	4196.15	3201362.9384	2049545.7153	BASE STATION	USGS CAP "BM WINDUS"
31	61 32 27.582500 N	149 02 07.740360 W	133.59	98.07	2756418.7917	1808694.5481	BASE STATION	ALASKA DOT/PF CAP
32	61 45 55.252804 N	149 32 54.033113 W	1912.11	1878.43	2837463.9143	1718649.2896	BASE STATION	HUB AND TACK
1019	62 48 24.371512 N	148 01 05.308041 W	2858.50	2807.16	3223051.2191	1972003.1209	BASE STATION	GPSINC CAP "CP 19"
EBASE	62 45 06.817244 N	148 53 14.386277 W	2543.94	2496.85	3199494.9176	1826939.7971	BASE STATION	EBASE
GRNX	63 50 07.798878 N	148 58 41.392948 W	1948.87	1905.99	3595442.7928	1805400.7921	BASE STATION	GRNX
ZAN1	61 13 45.129268 N	149 46 48.805068 W	261.79	238.19	2641258.2608	1679145.4920	BASE STATION	ZAN1