

Project Report Appendices

The following section contains the appendices as listed in the Ottawa National Forest 2017 QL2 LiDAR Project Report.

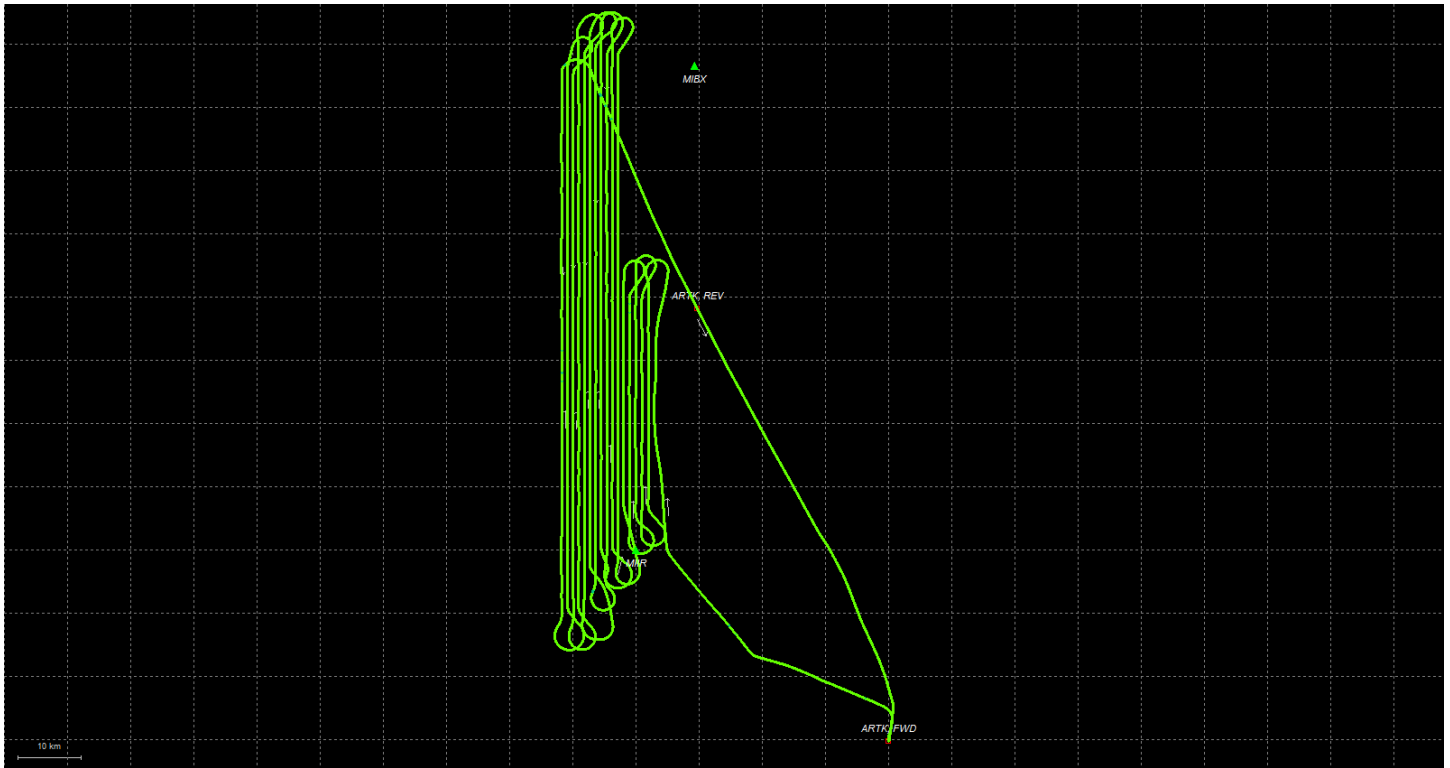
Appendix A

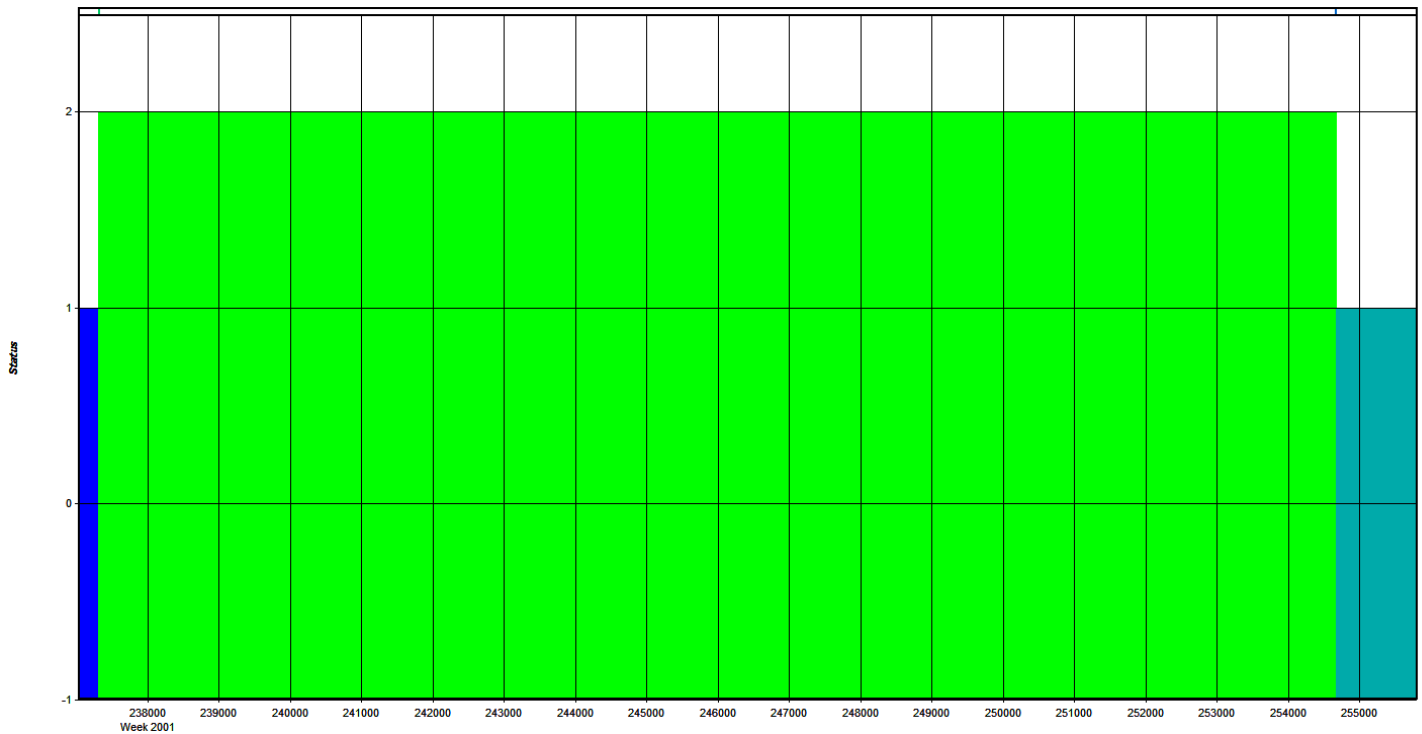
GPS/IMU Processing Statistics Flight Logs Base Station Logs

There were sixteen lifts for which data exist. Flight-related data are found on the following pages.

20180515A (SN8228, N350GB)	1
20180515B (SN8228, N350GB)	10
20180516A (SN7229, C-FQLC)	19
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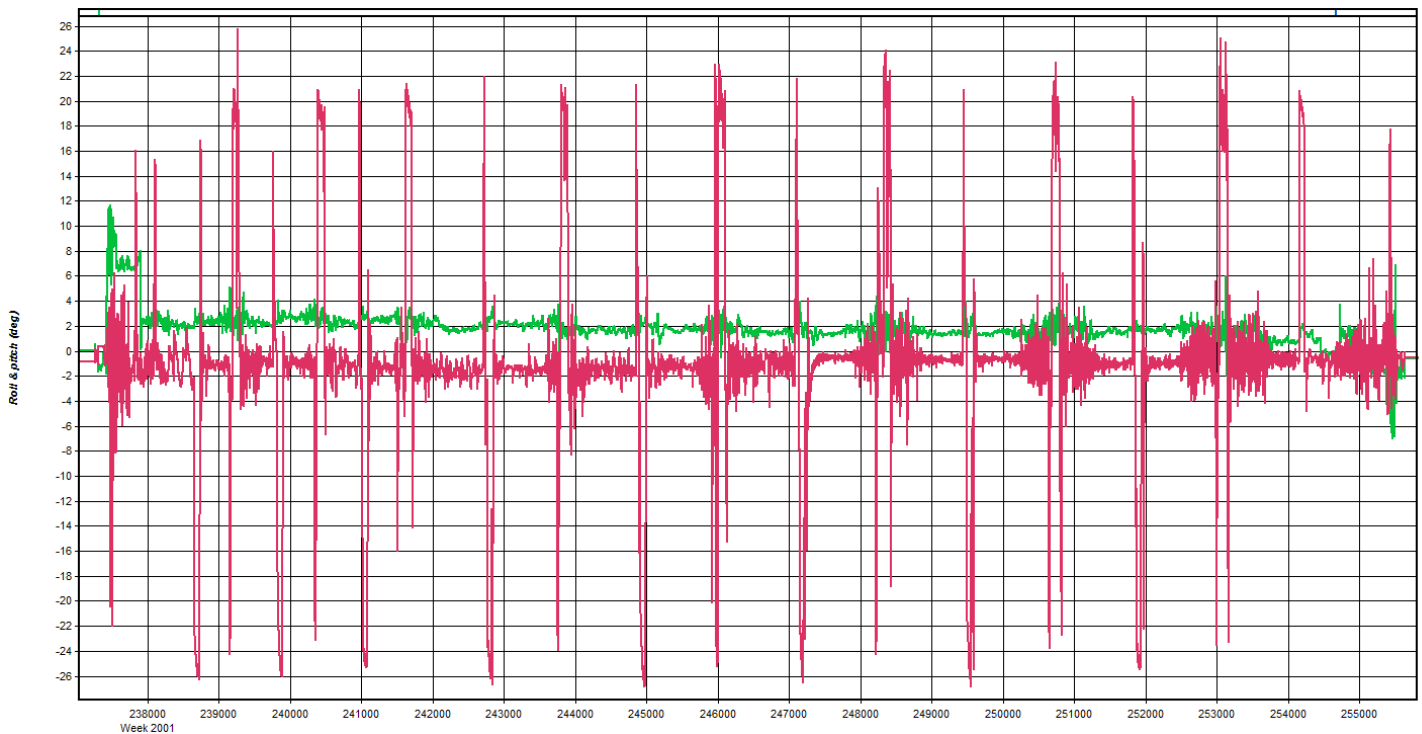
20180515A (SN8228, N350GB)





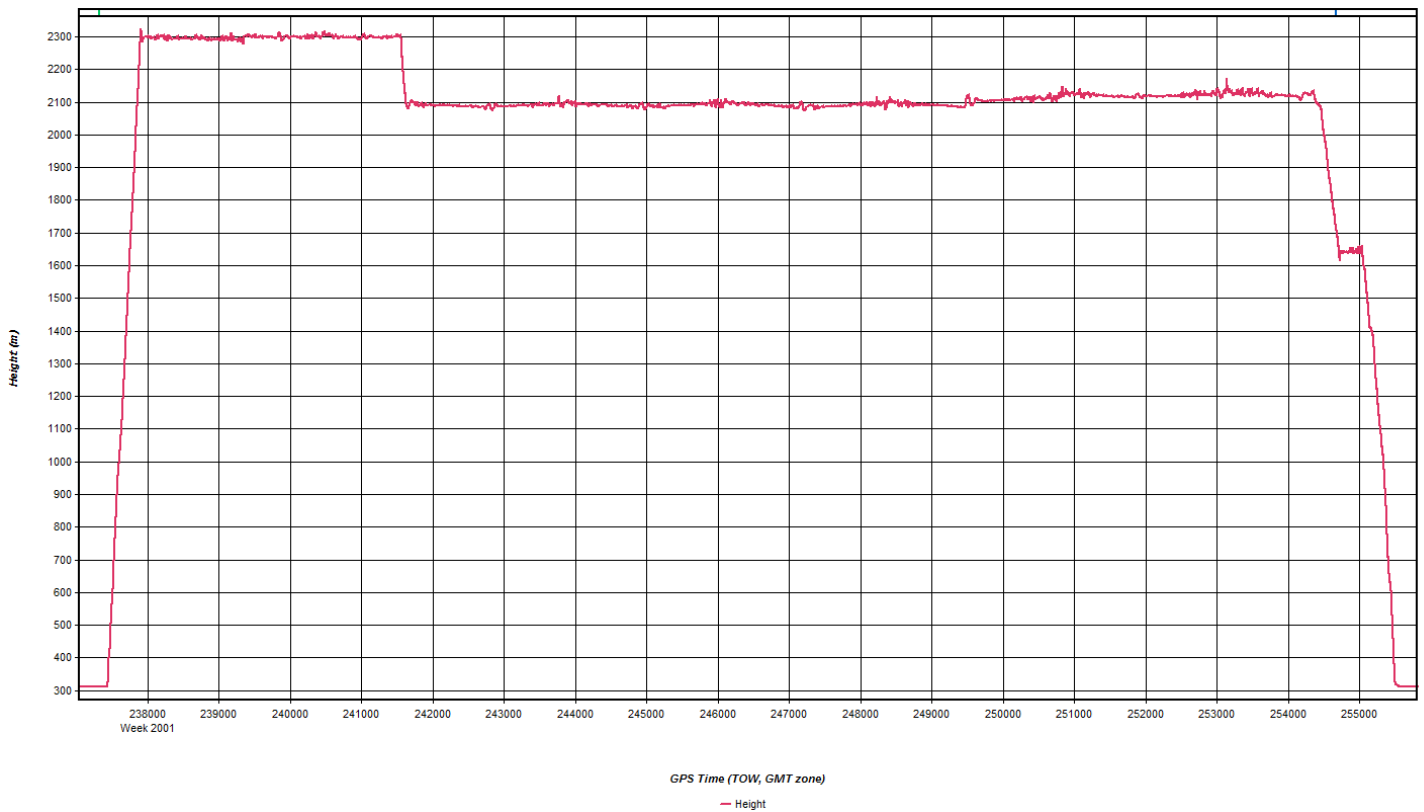
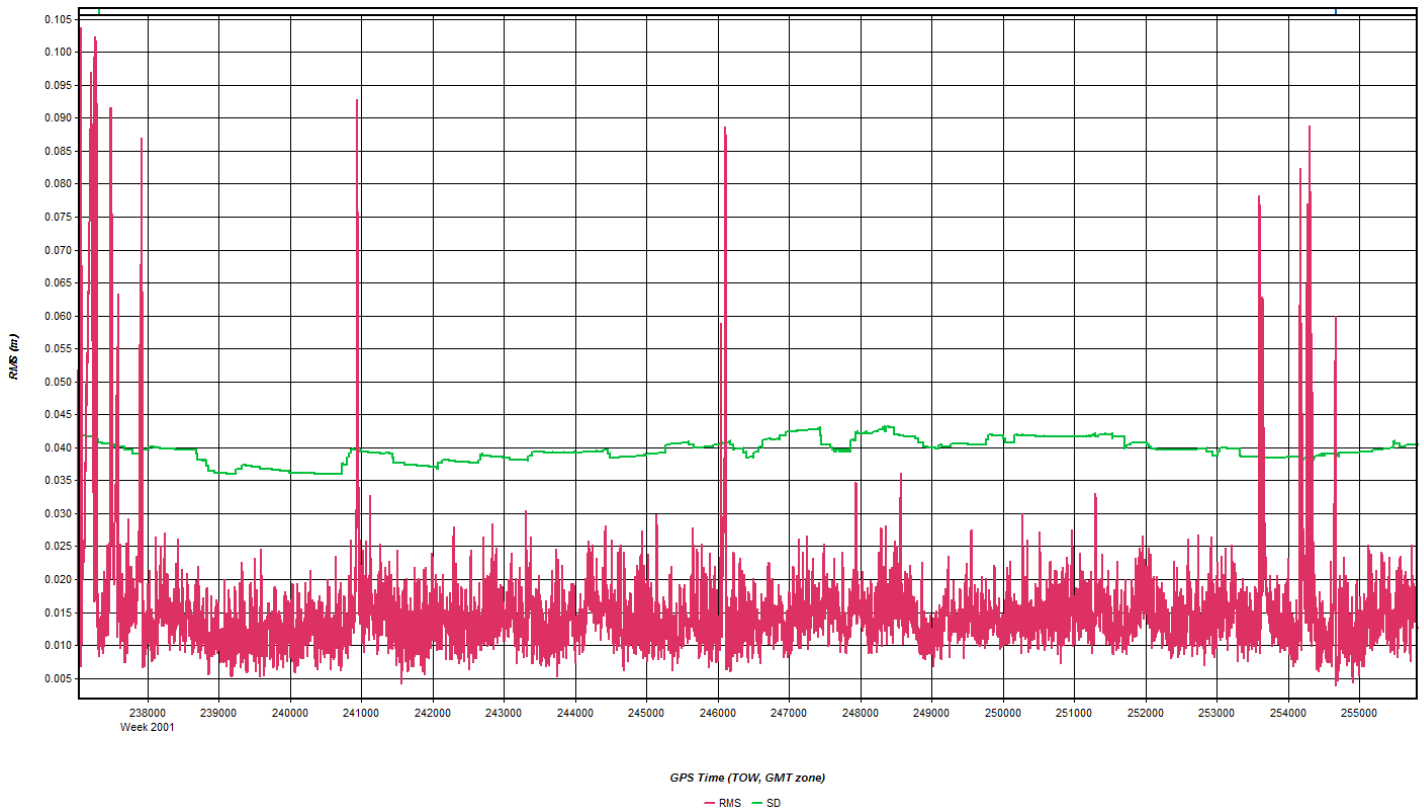
GPS Time (TOW, GMT zone)

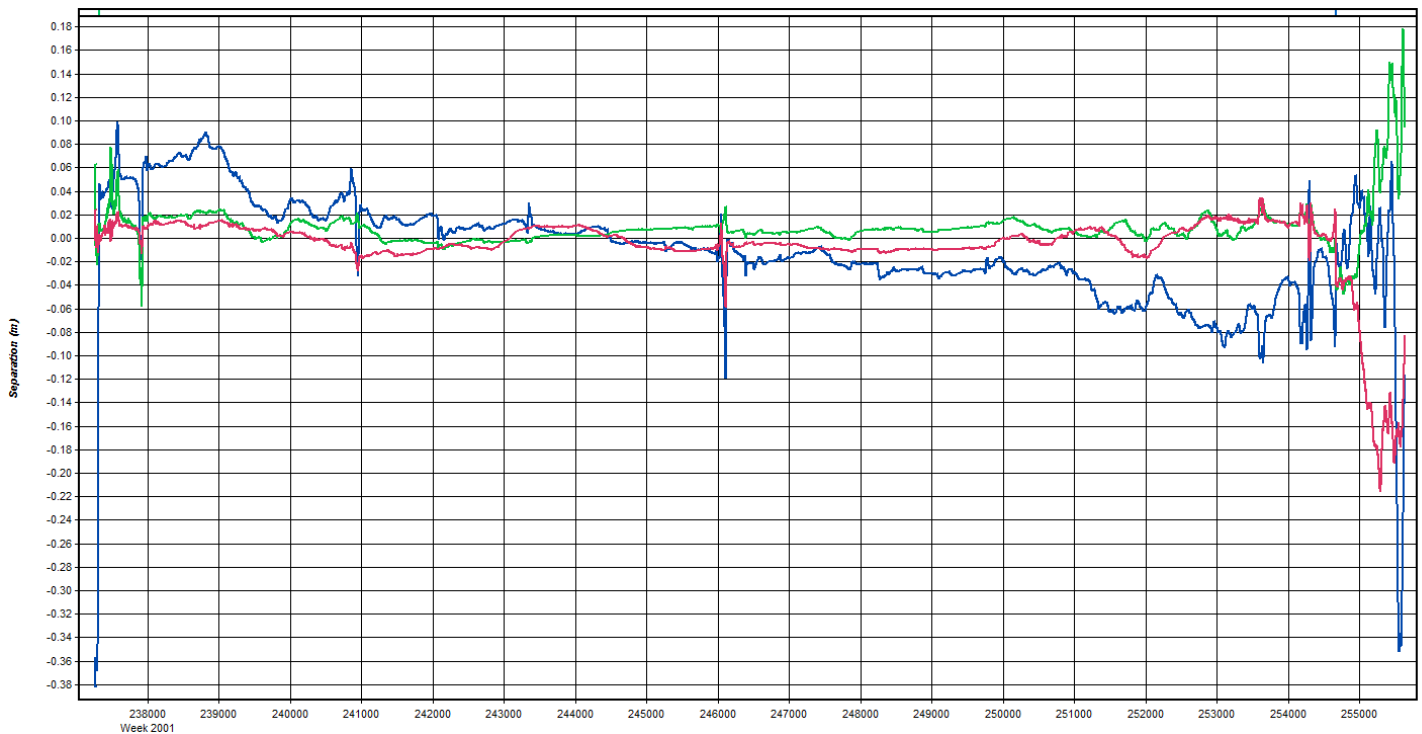
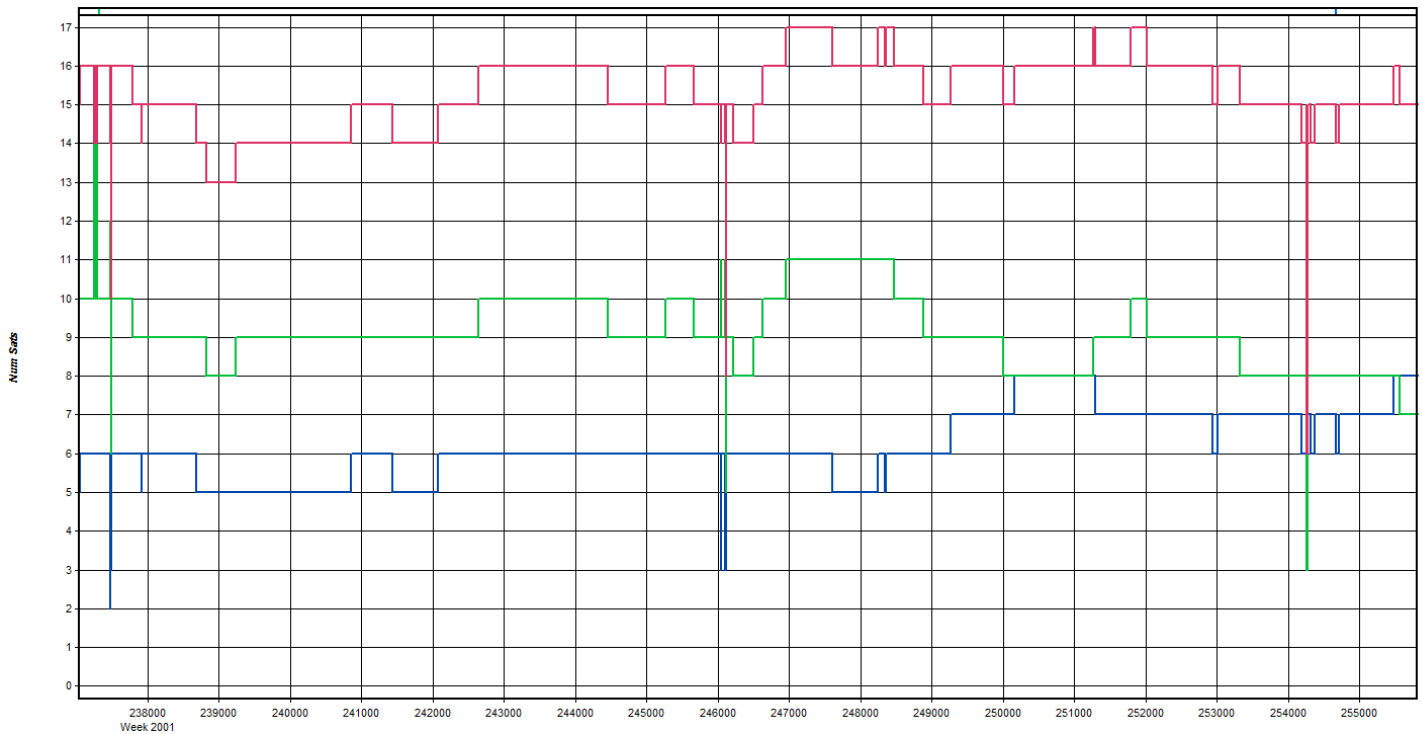
— Float — Forward Fixed — Reverse Fixed — Fixed (2 or more)

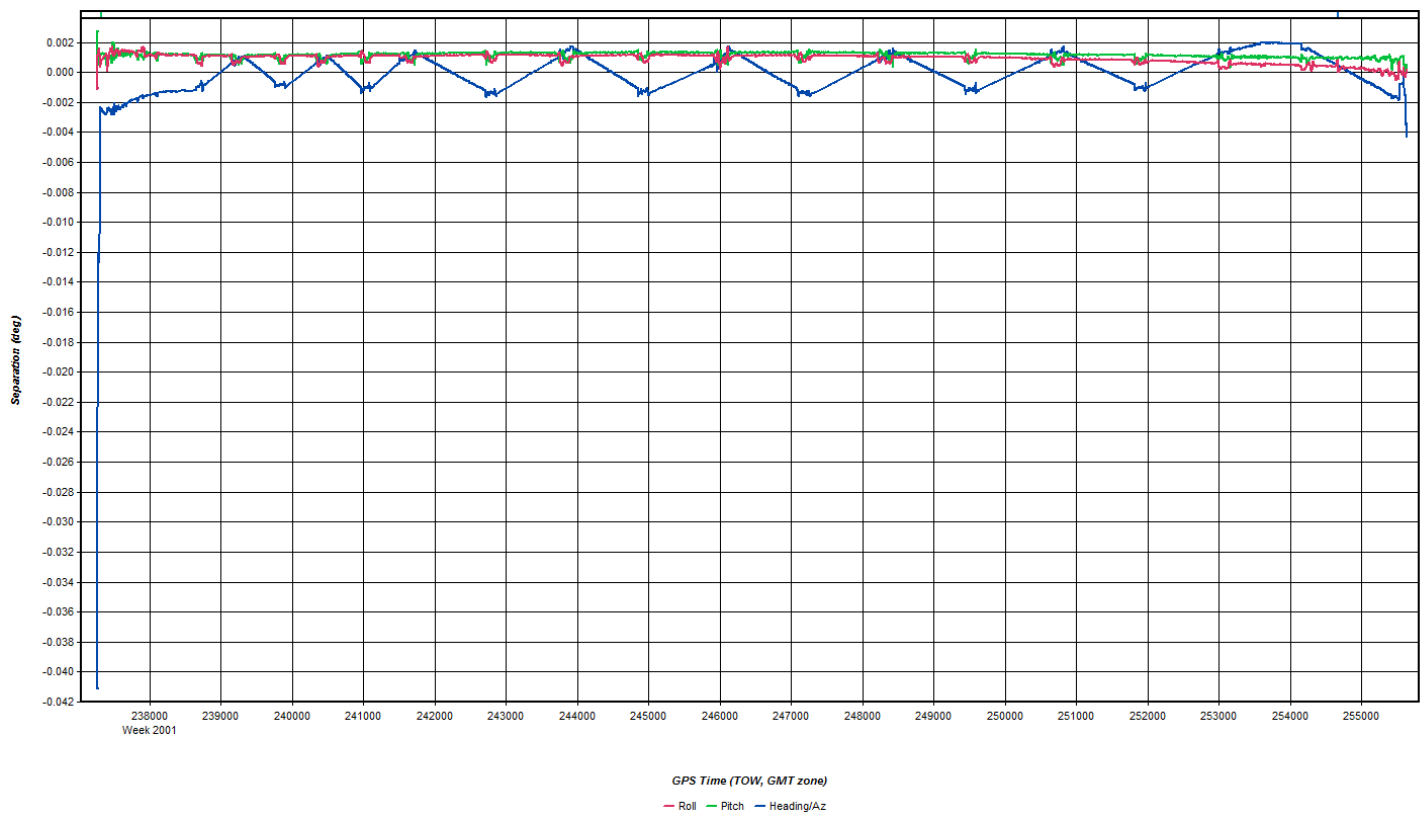
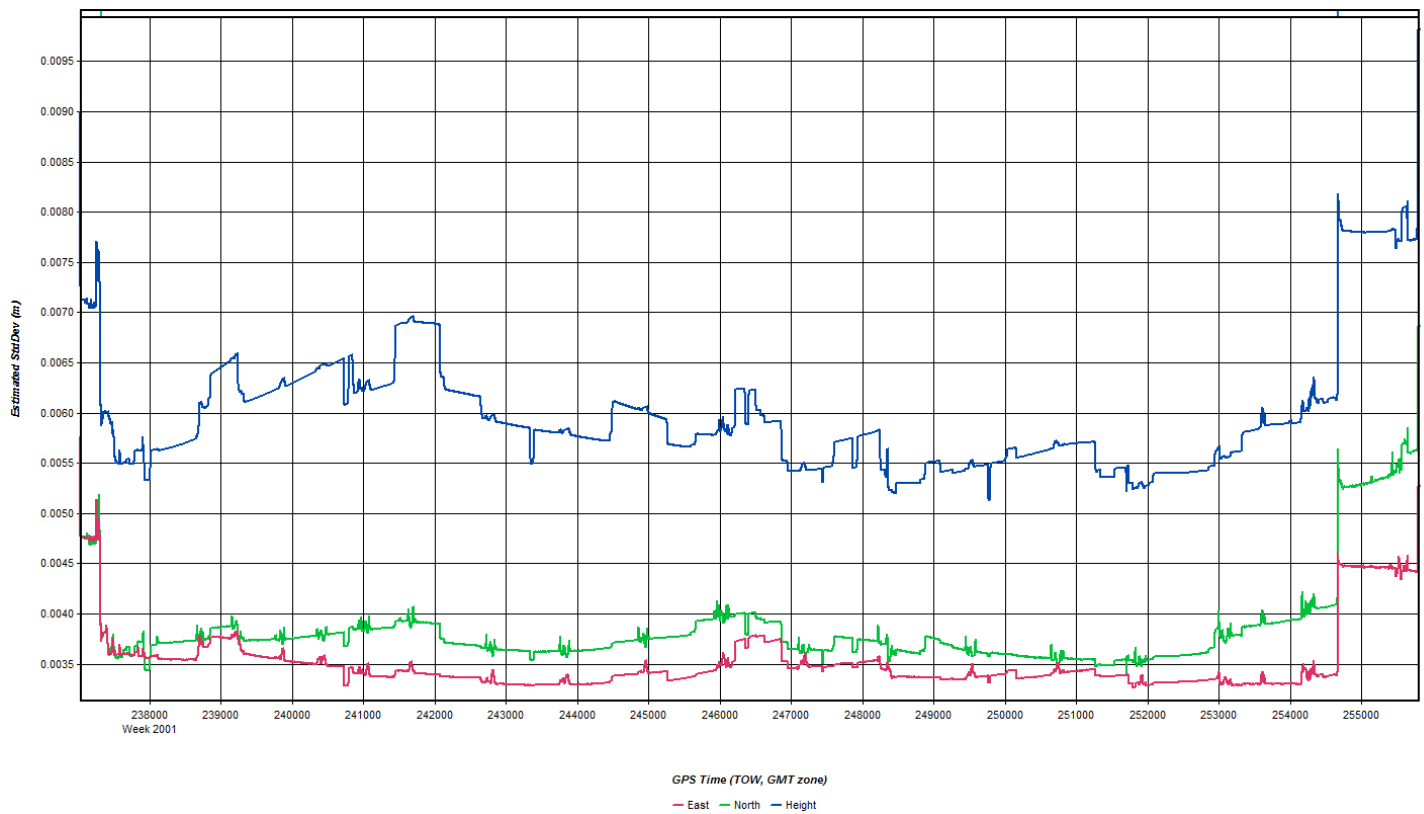


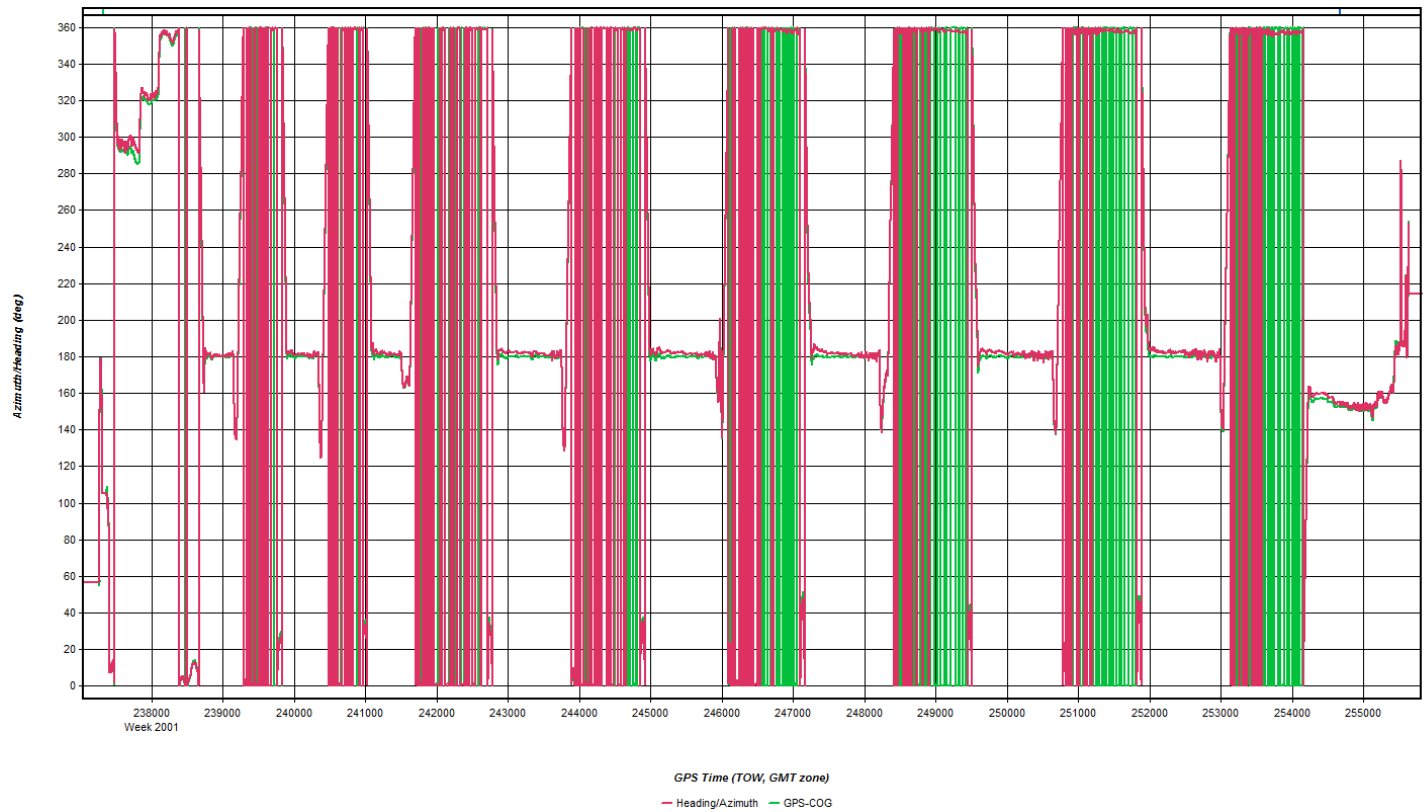
GPS Time (TOW, GMT zone)

— Roll — Pitch









Coordinate/Antenna Settings ? X

Master Remote

Base Station
2: MIBX Name: MIBX ☐ Disabled
File: E:\Proc\30135_Ottawa_NF_MI\From_Kucera_6-12-18\QSI_MI_LID\

Coordinates
Latitude: North 46 45 50.77595 Coord. options
Longitude: West 88 30 46.83926 Save to Favorites
Ellipsoidal height: 194.707 m
Datum: WGS84 Proc Datum: WGS84
Epoch: year

Antenna Height
From station file: LEIAT504, LEIS View STA File
Antenna profile: LEIAT504, LEIS Info
Measured height: 0.000 m Measured to ☒ ARP
ARP to L1 offset: 0.088 m ☐ L1 Phase Centre
Applied height: 0.088 m Compute From Slant

OK Cancel

Coordinate/Antenna Settings ? X

Master Remote

Base Station

1: MIIR Name: MIIR ☐ Disabled

File: E:\Proc\30135_Ottawa_NF_MI\From_Kucera_6-12-18\QSI_MI_LID\

Coordinates

Latitude: North 46 04 49.37197 Coord. options

Longitude: West 88 38 00.11113 Save to Favorites

Ellipsoidal height: 470.982 m

Datum: WGS84 Proc Datum: WGS84

Epoch: year

Antenna Height

From station file: LEIAT504, LEIS View STA File

Antenna profile: LEIAT504, LEIS Info

Measured height: 0.000 m

ARP to L1 offset: 0.088 m

Applied height: 0.088 m

Measured to

☒ ARP

☐ L1 Phase Centre

Compute From Slant

OK Cancel

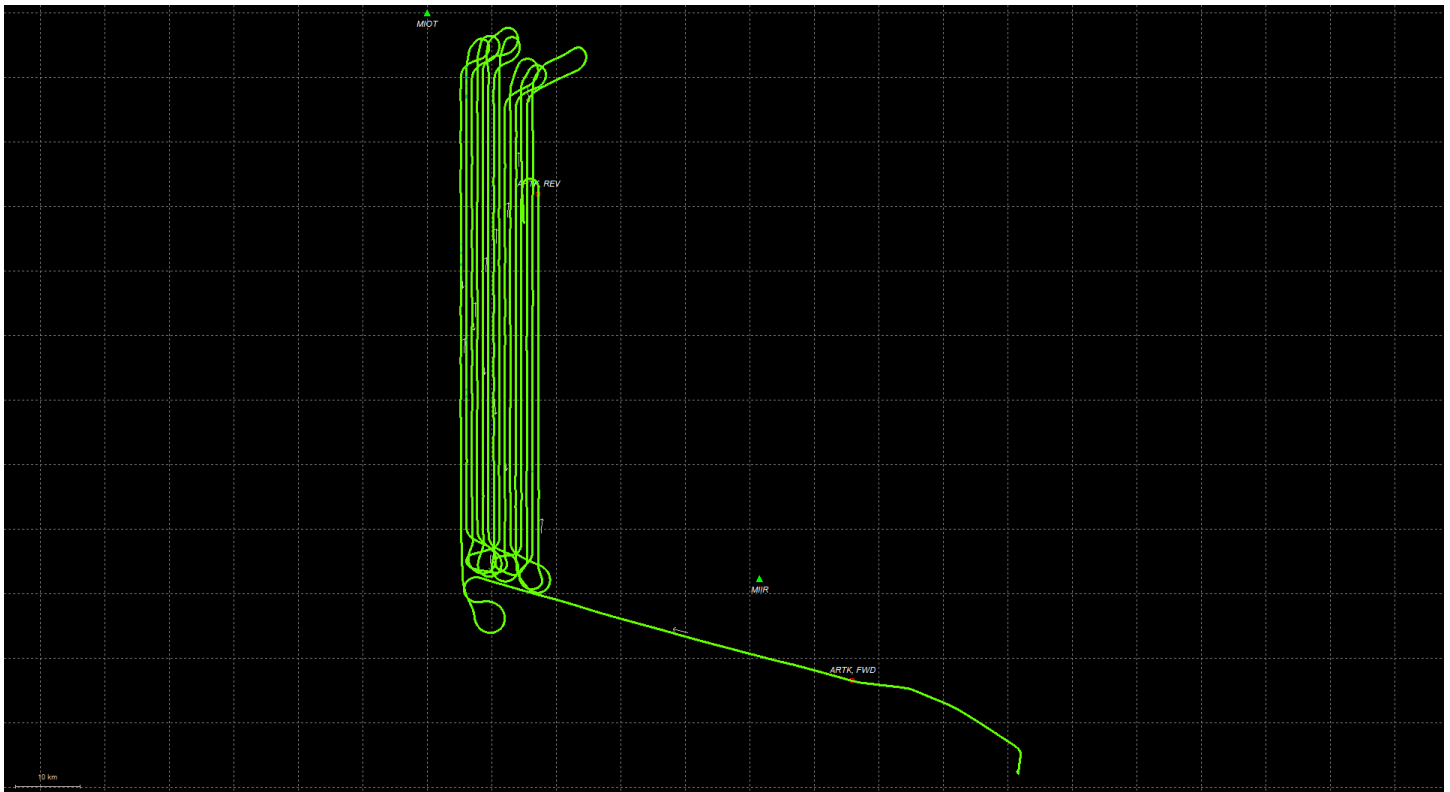
Flight Log

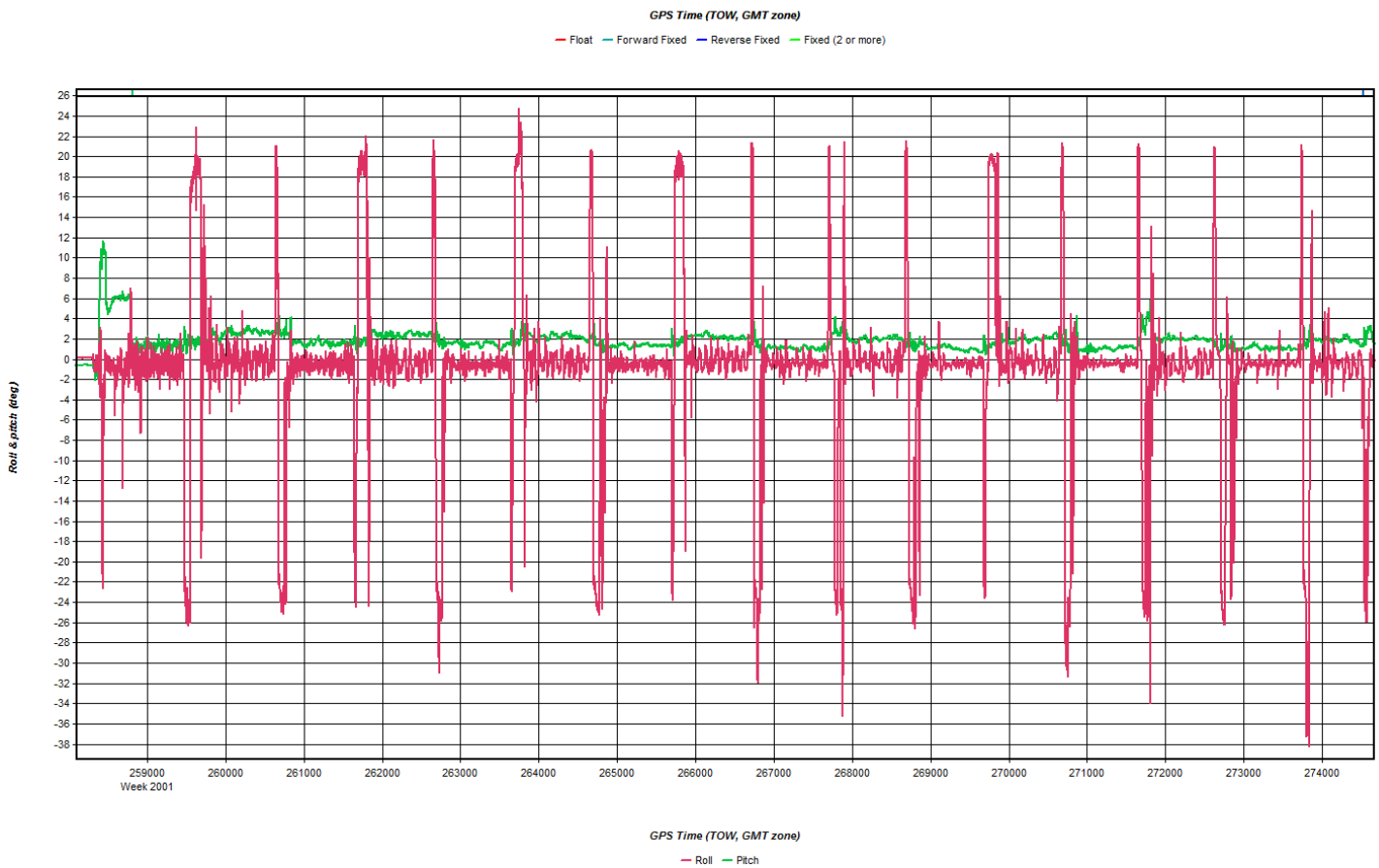
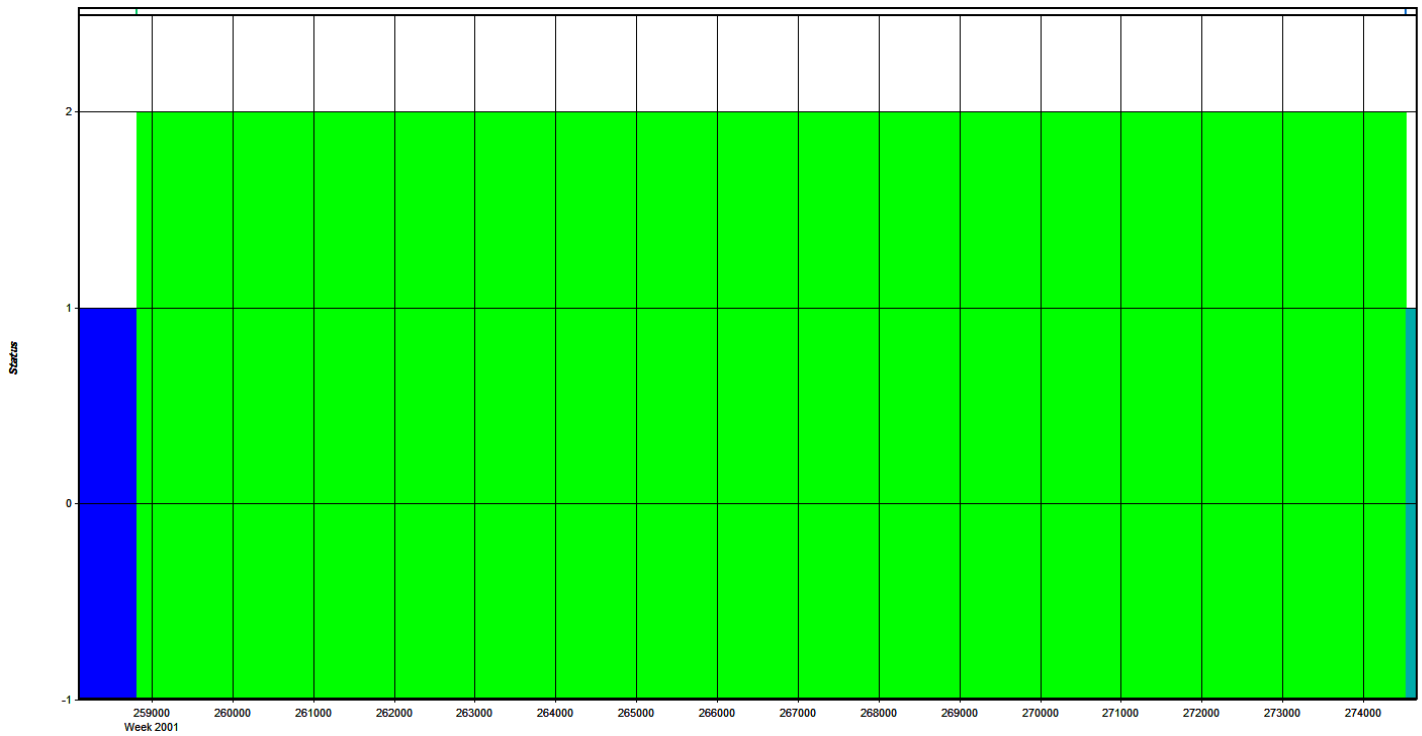
LIDAR

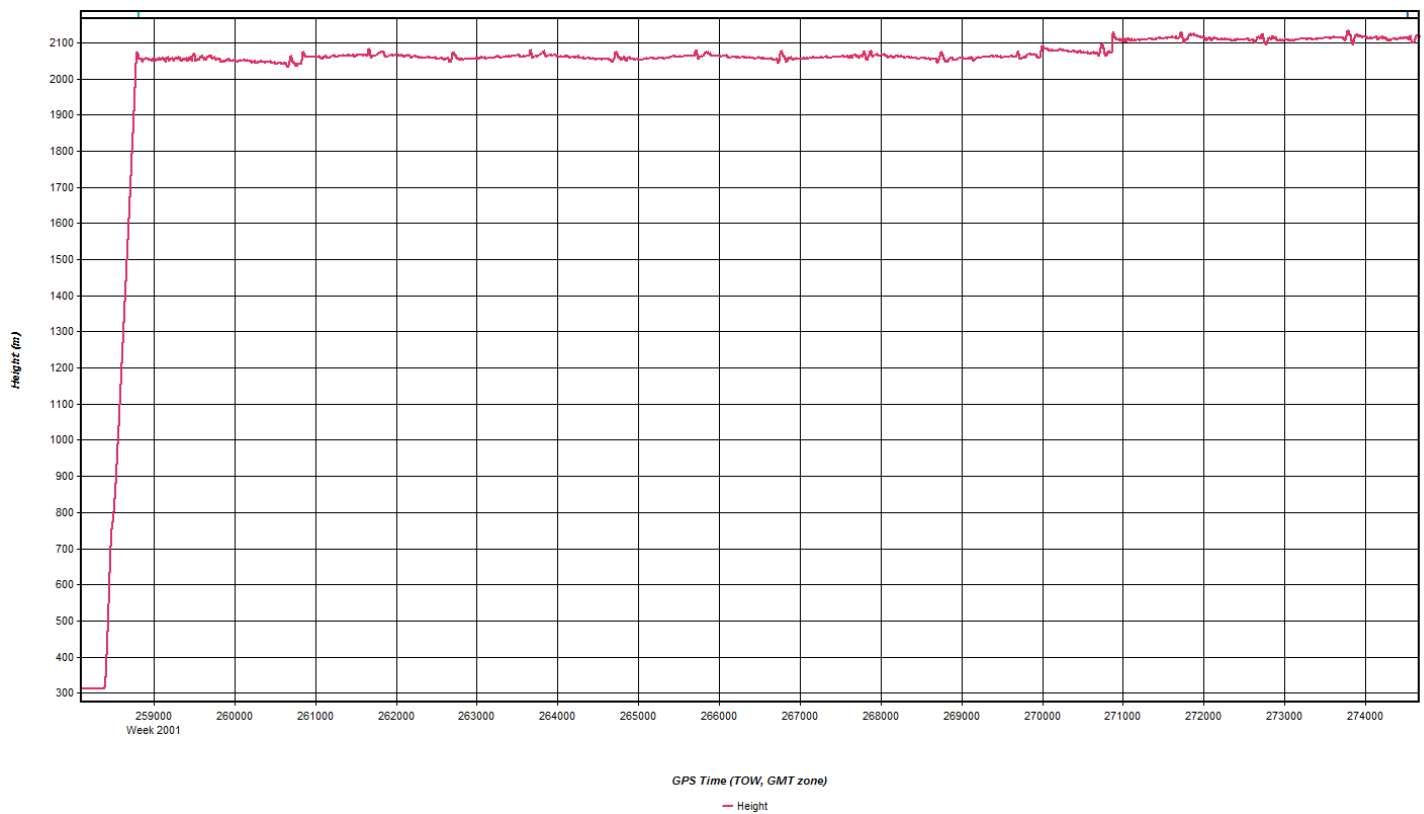
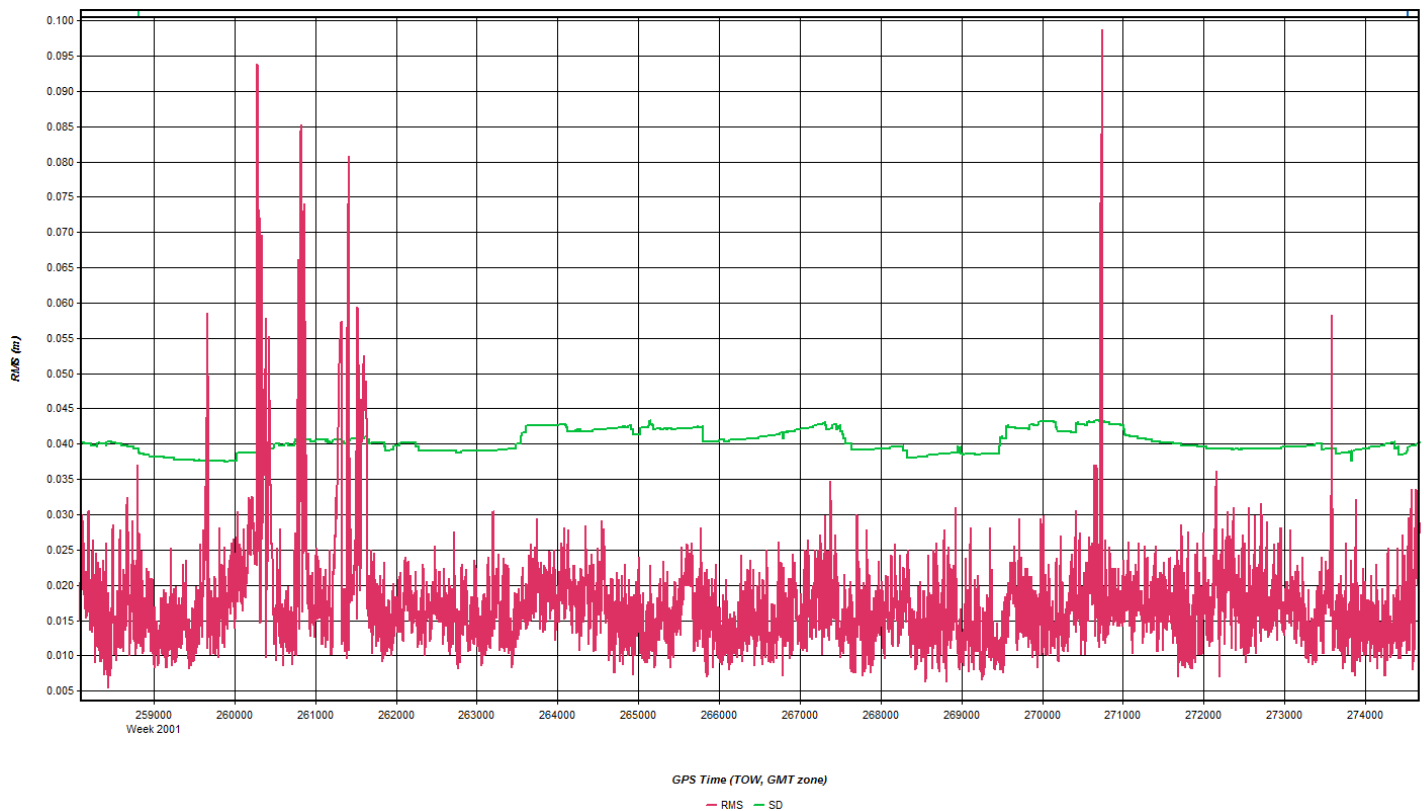
KUCERA INTERNATIONAL INC.									
LIDAR FLIGHT REPORT									
Pilot/Operator Drew/Joe		Tail Number N350GB		AIRCRAFT		Sky conditions, light conditions, horizon, shadowing, visibility/haze, cloud types, wind, turbulence, etc.. Clear			
CREW mm/dd/yy		DATE 5/15/2018		WEATHER					
Camera System 8228		LIDAR S/N fwd/aft		GPS FWD		LIDAR STARTUP CHECKS			
Camera Location (Hole)		FWD		Time 1750 KIMT 2303 KIMT		Lens cleaned All fids uploaded Pilot's screen functional Compact flash drive space SSDs have space Startup beeps & IPAS recording SSD Drive # SSD2 Space Rem. 601GB			
Initials: JP									
Job #	Location/ Site/Block	Line #	Flight Dir.	Crab Angle	Remarks				
60929	UP, Michigan	55	S	1	Battery Power Box Unit #1 Used				
		54	N	1					
		53	S	1					
		52	N	0					
		51	S	1					
		50	N	1					
		49	S	3					
		48	N	1					
		47	S	1					
		46	N	1					
		45	S	2					
		44	N	1					
		43	S	3					
		42	N	2					
		41	S	4					
		40	N	3					

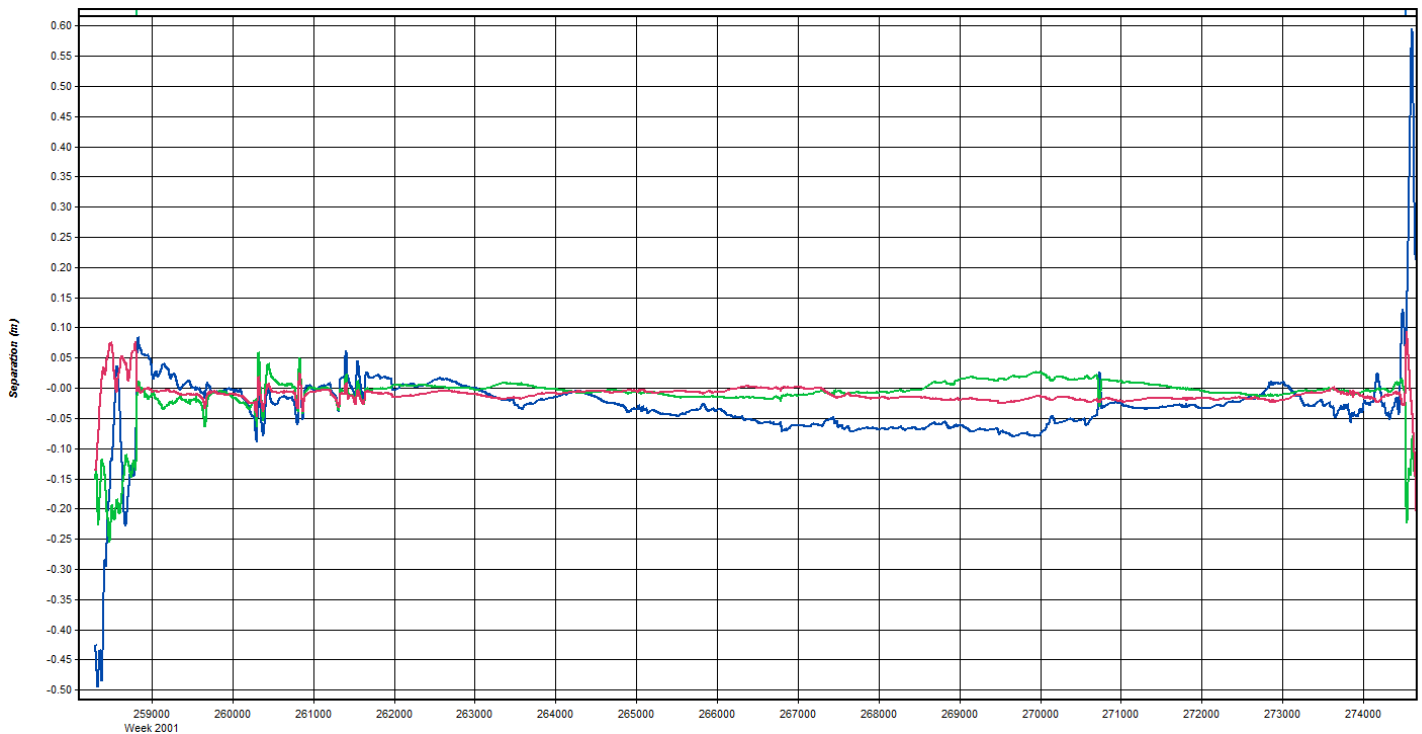
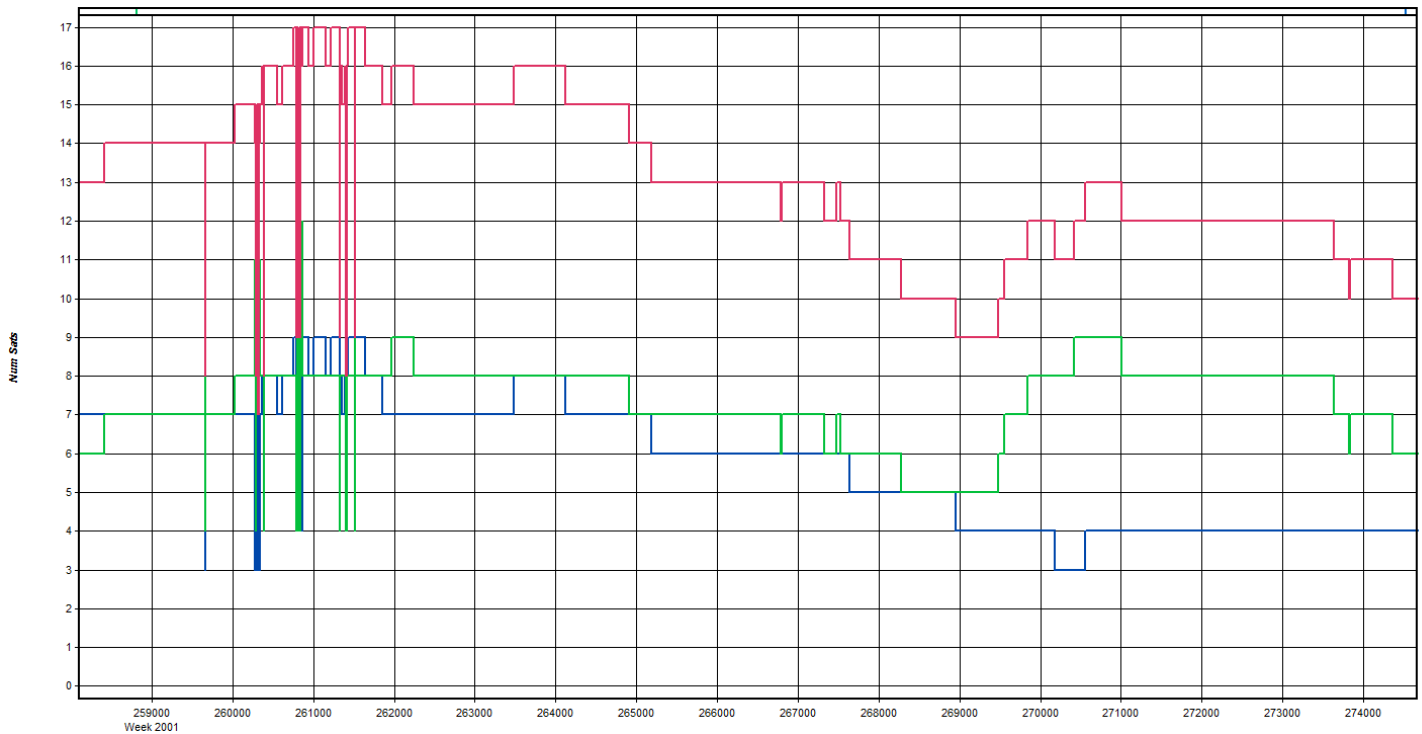
Page 1

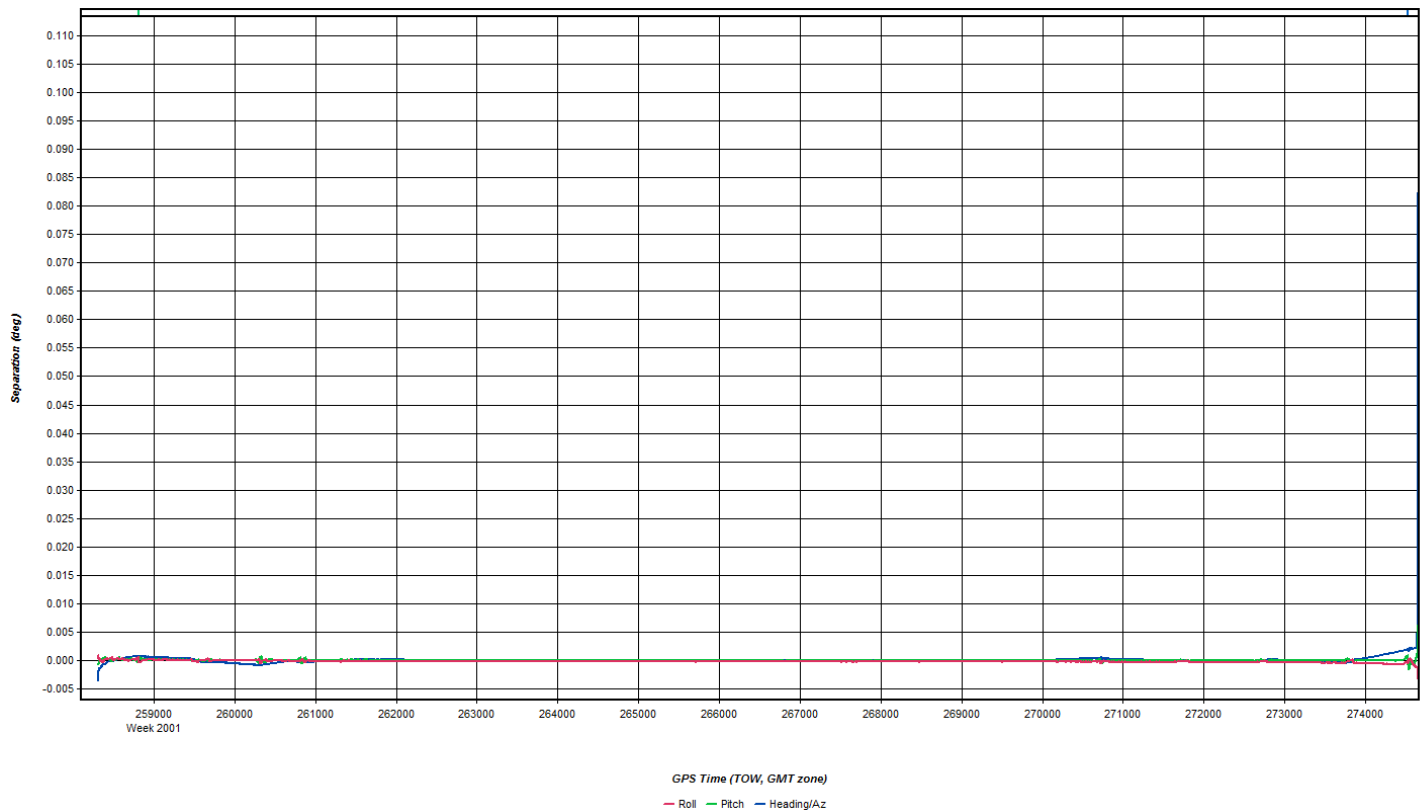
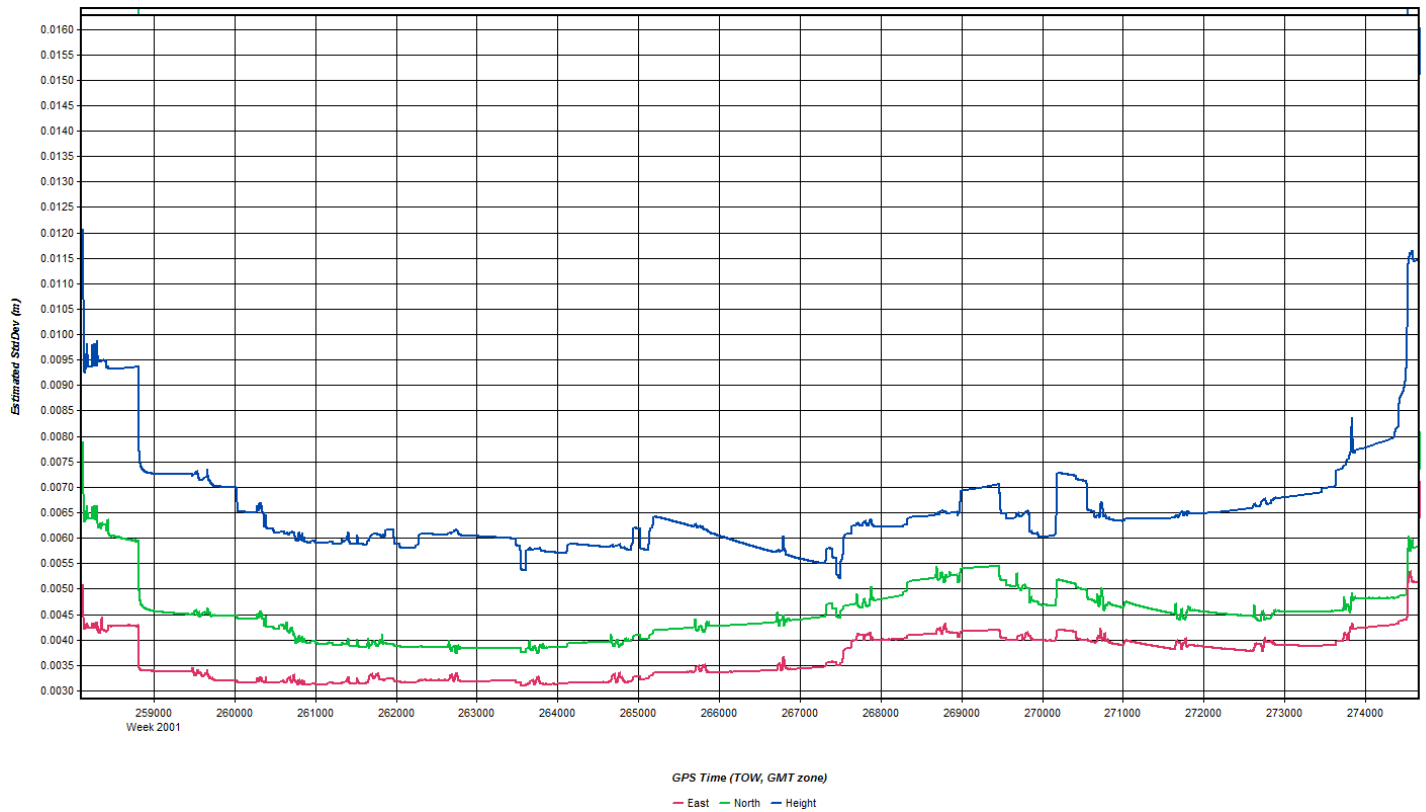
20180515B
(SN8228, N350GB)

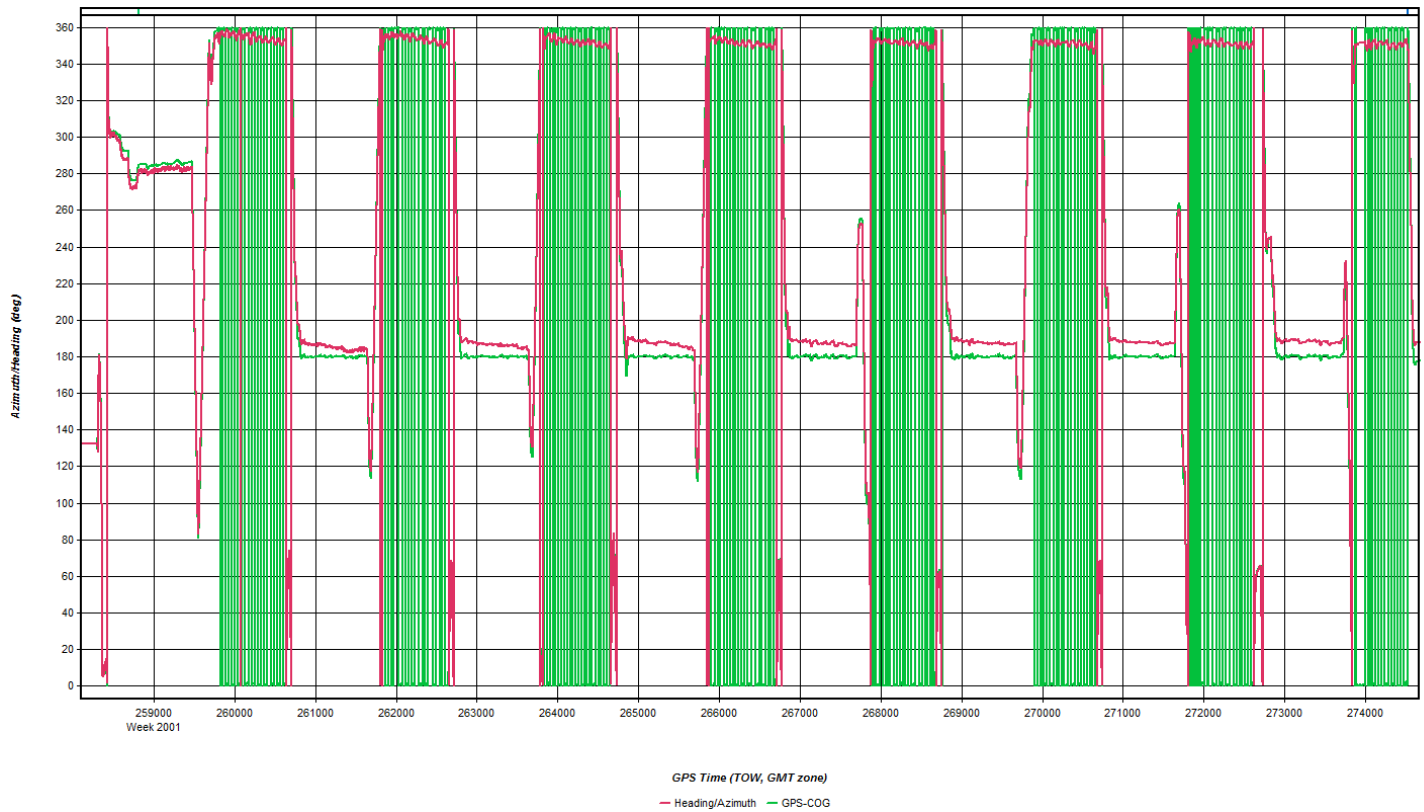












Coordinate/Antenna Settings

Master Remote

Base Station

2: MIIR Name: MIIR Disabled

File: E:\Proc\30135_Ottawa_NF_MI\From_Kucera_6-12-18\QSI_MI_LID\

Coordinates

Latitude: North 46 04 49.37197 Coord. options

Longitude: West 88 38 00.11113 Save to Favorites

Ellipsoidal height: 470.982 m

Datum: WGS84 Proc Datum: WGS84

Epoch: year

Antenna Height

From station file: LEIAT504, LEIS View STA File

Antenna profile: LEIAT504, LEIS Info

Measured height: 0.000 m

ARP to L1 offset: 0.088 m

Applied height: 0.088 m

Measured to

☒ ARP

☐ L1 Phase Centre

Compute From Slant

OK Cancel

Coordinate/Antenna Settings ? X

Master Remote

Base Station

1: MIOT Name: MIOT ☐ Disabled

File: E:\Proc\30135_Ottawa_NF_MI\From_Kucera_6-12-18\QSI_MI_LID\

Coordinates

Latitude: North 46 51 48.57085 Coord. options

Longitude: West 89 17 58.48664 Save to Favorites

Ellipsoidal height: 188.735 m

Datum: WGS84 Proc Datum: WGS84

Epoch: year

Antenna Height

From station file: LEIAT504GG, LEIS View STA File

Antenna profile: LEIAT504GG, LEIS Info

Measured height: 0.000 m

ARP to L1 offset: 0.087 m

Applied height: 0.087 m

Measured to

☒ ARP

☐ L1 Phase Centre

Compute From Slant

OK Cancel

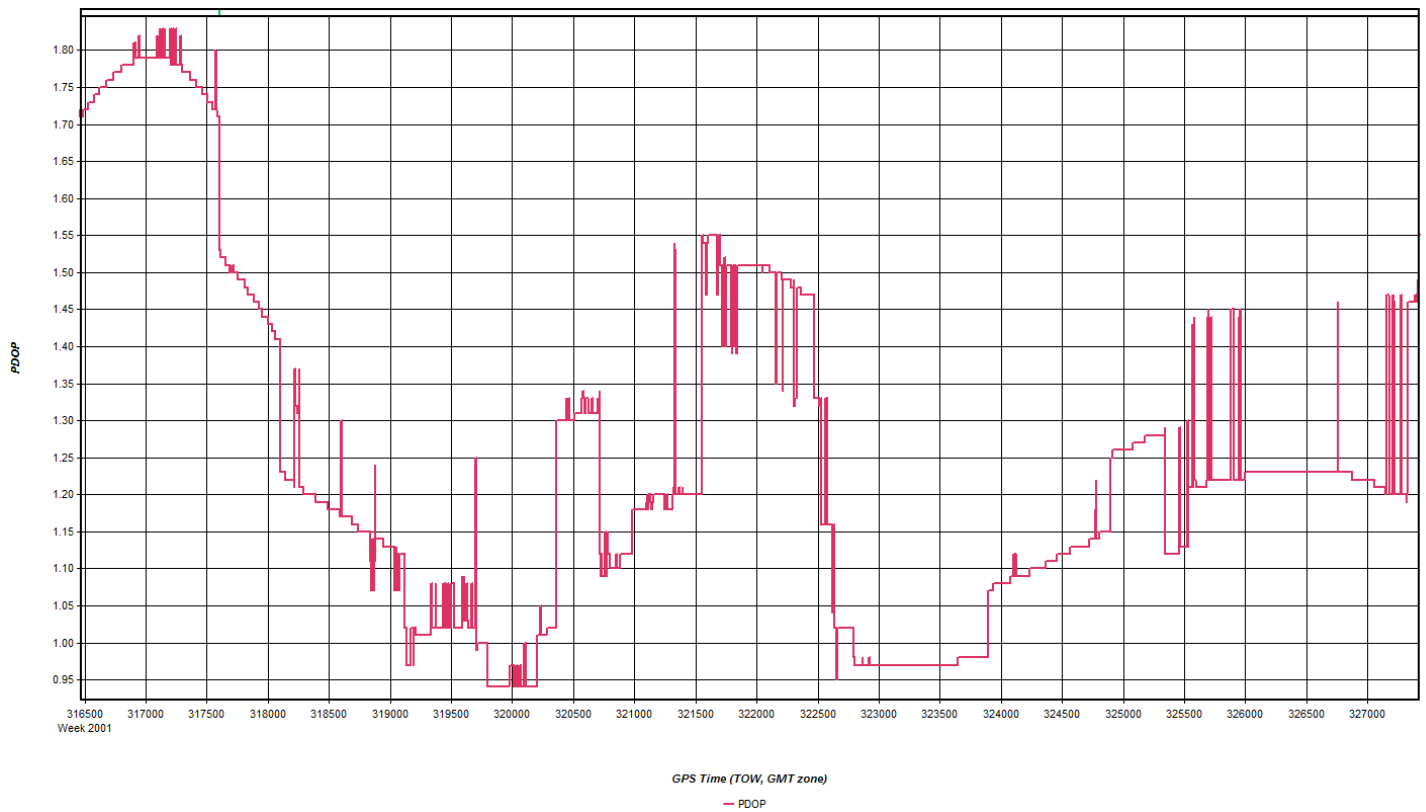
Flight Log

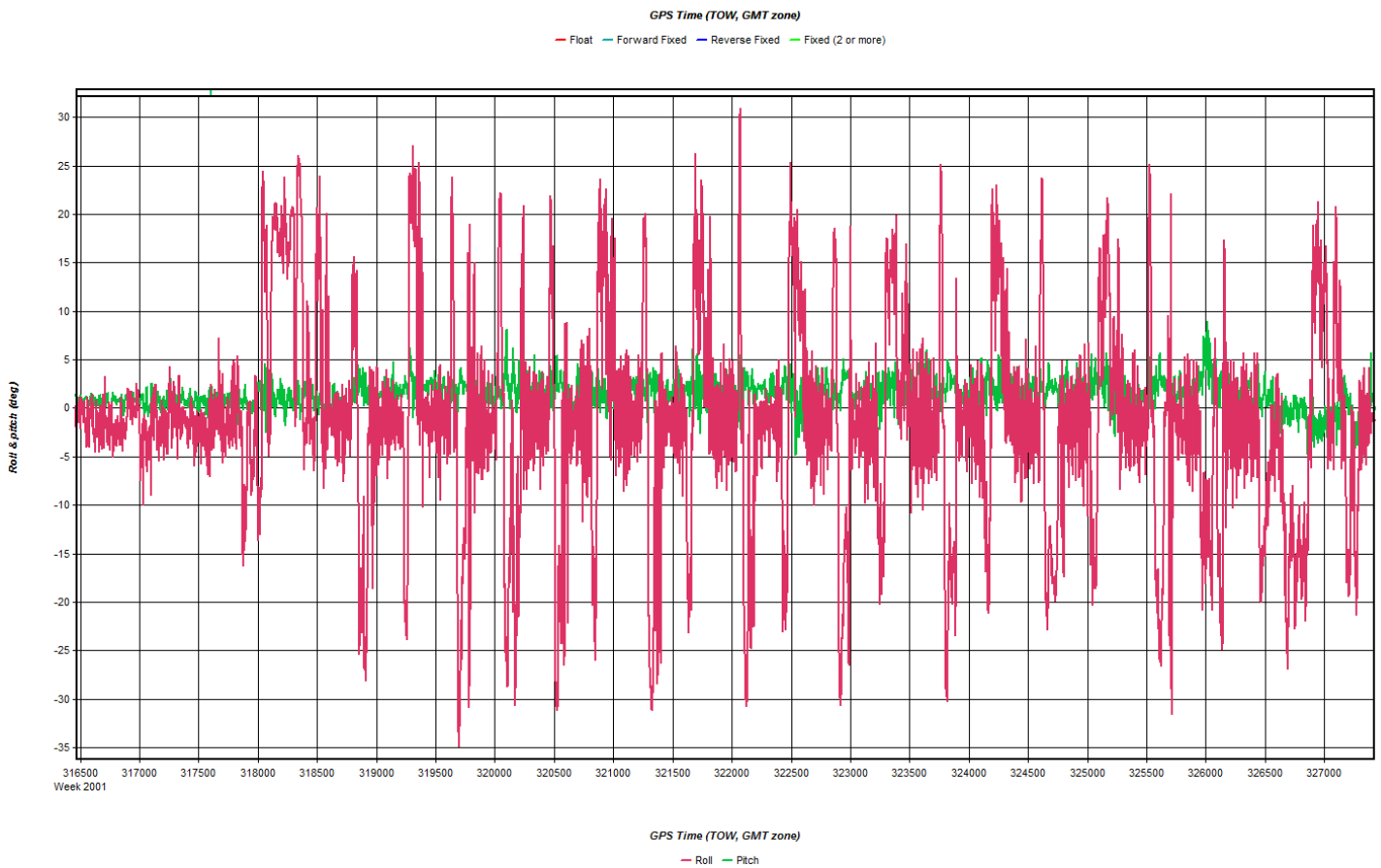
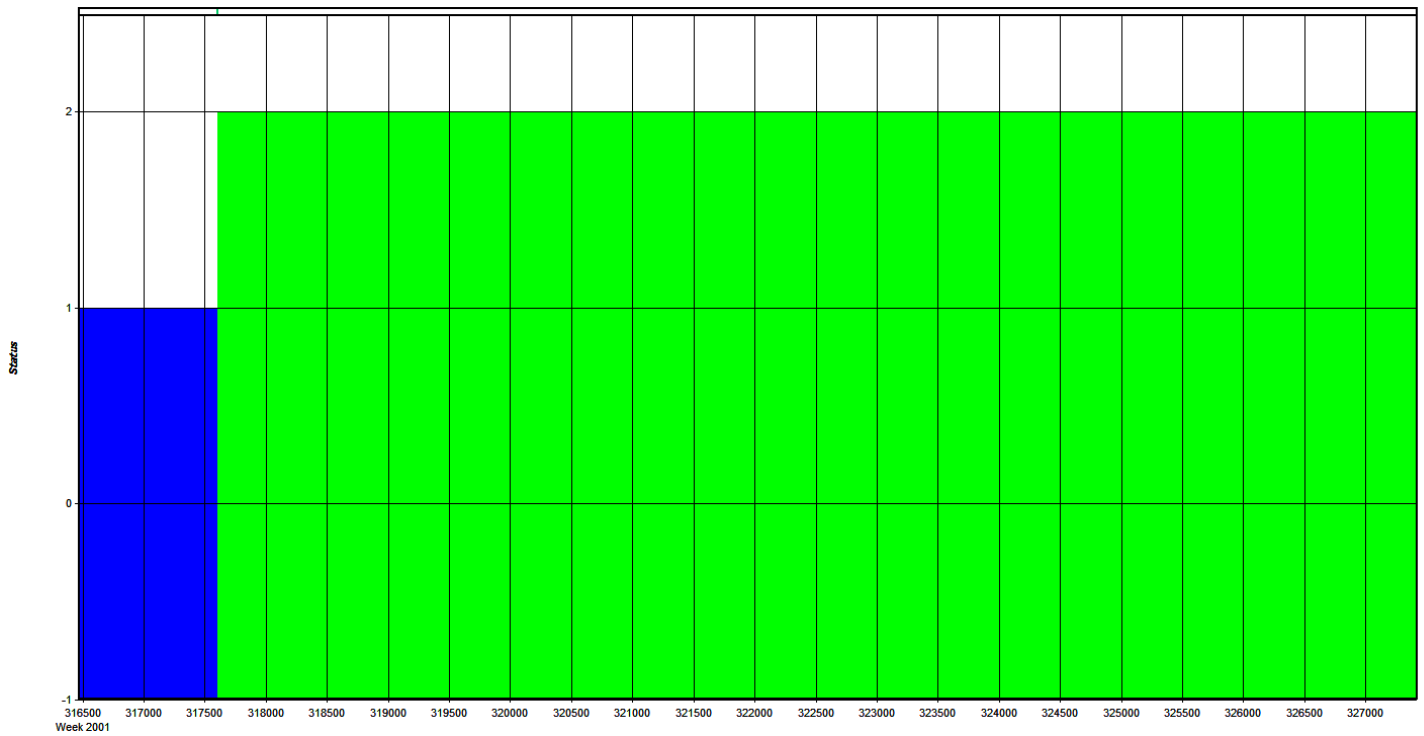
LIDAR

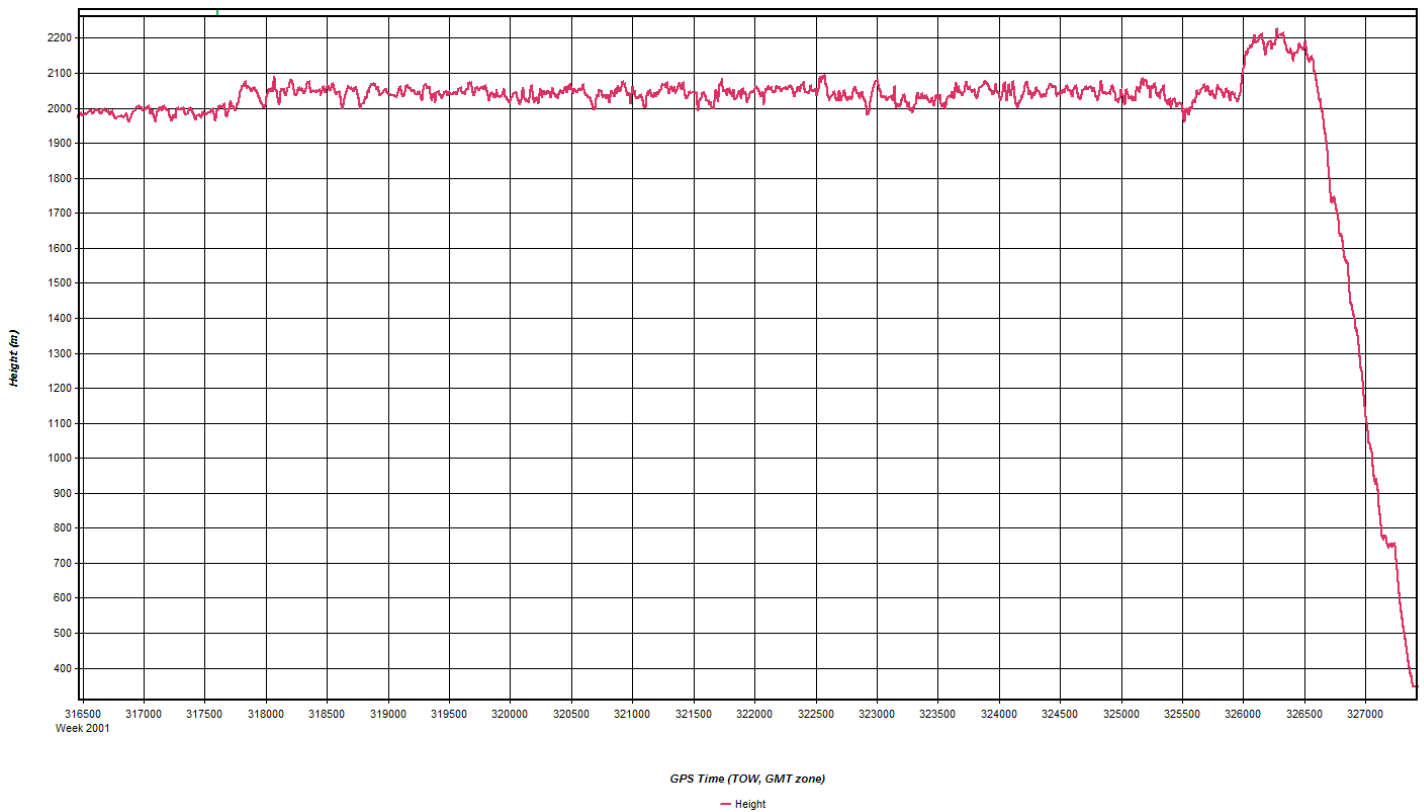
KUCERA INTERNATIONAL INC.																																																															
LIDAR FLIGHT REPORT																																																															
CREW		Pilot/Operator		AIRCRAFT		Tail Number		WEATHER																																																							
George/Casper		mm/dd/yy				350GB		Sky conditions, light conditions, horizon, shadowing, visibility/haze, cloud types, wind, turbulence, etc.																																																							
DATE		5/15/2018		GPS		Source		Fwd																																																							
Camera System		LIDAR SN		GPS		Time		Location																																																							
8228		fwd/alt		Fwd		0:00		KIMT																																																							
Camera Location (Hole)		Fwd		Shut-down		9:15		KIMT																																																							
Battery Box (S/N)		1		LIDAR plugged directly into airplane power without battery box (Y/N) – If yes, why? N																																																											
<table border="1"> <thead> <tr> <th colspan="4">LIDAR STARTUP CHECKS</th> <th colspan="2">SSD</th> </tr> <tr> <th colspan="4"></th> <th>Drive #</th> <th>Space Rem.</th> </tr> </thead> <tbody> <tr> <td colspan="4">Lens cleaned</td> <td>X</td> <td></td> </tr> <tr> <td colspan="4">All fids uploaded</td> <td>X</td> <td></td> </tr> <tr> <td colspan="4">Pilot's screen functional</td> <td>X</td> <td></td> </tr> <tr> <td colspan="4">Compact flash drive space</td> <td>X</td> <td></td> </tr> <tr> <td colspan="4">SSDs have space</td> <td>X</td> <td></td> </tr> <tr> <td colspan="4">Startup beeps & IPAS recording</td> <td>X</td> <td></td> </tr> <tr> <td colspan="4">Initials:</td> <td colspan="2">AF</td> </tr> </tbody> </table>										LIDAR STARTUP CHECKS				SSD						Drive #	Space Rem.	Lens cleaned				X		All fids uploaded				X		Pilot's screen functional				X		Compact flash drive space				X		SSDs have space				X		Startup beeps & IPAS recording				X		Initials:				AF	
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60929	QSI	1	S-N	>10																																																											
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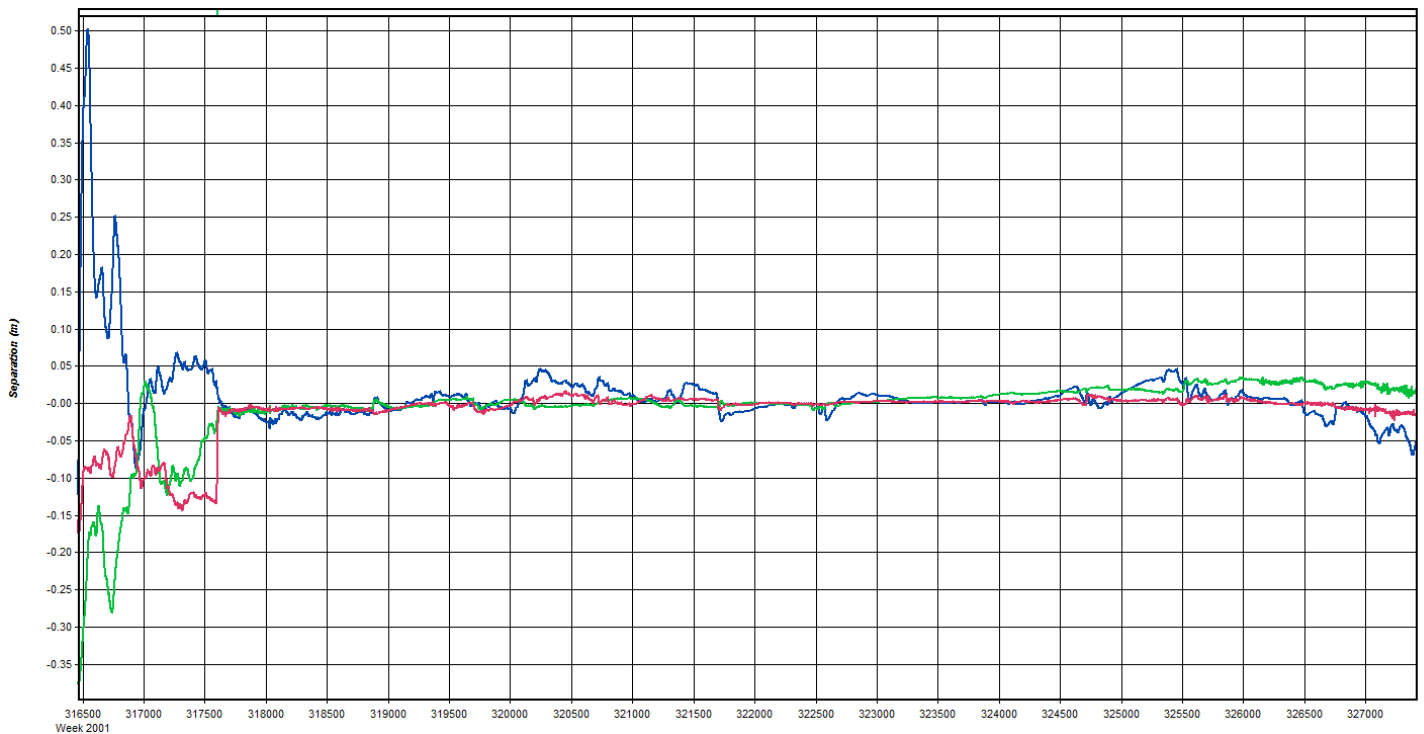
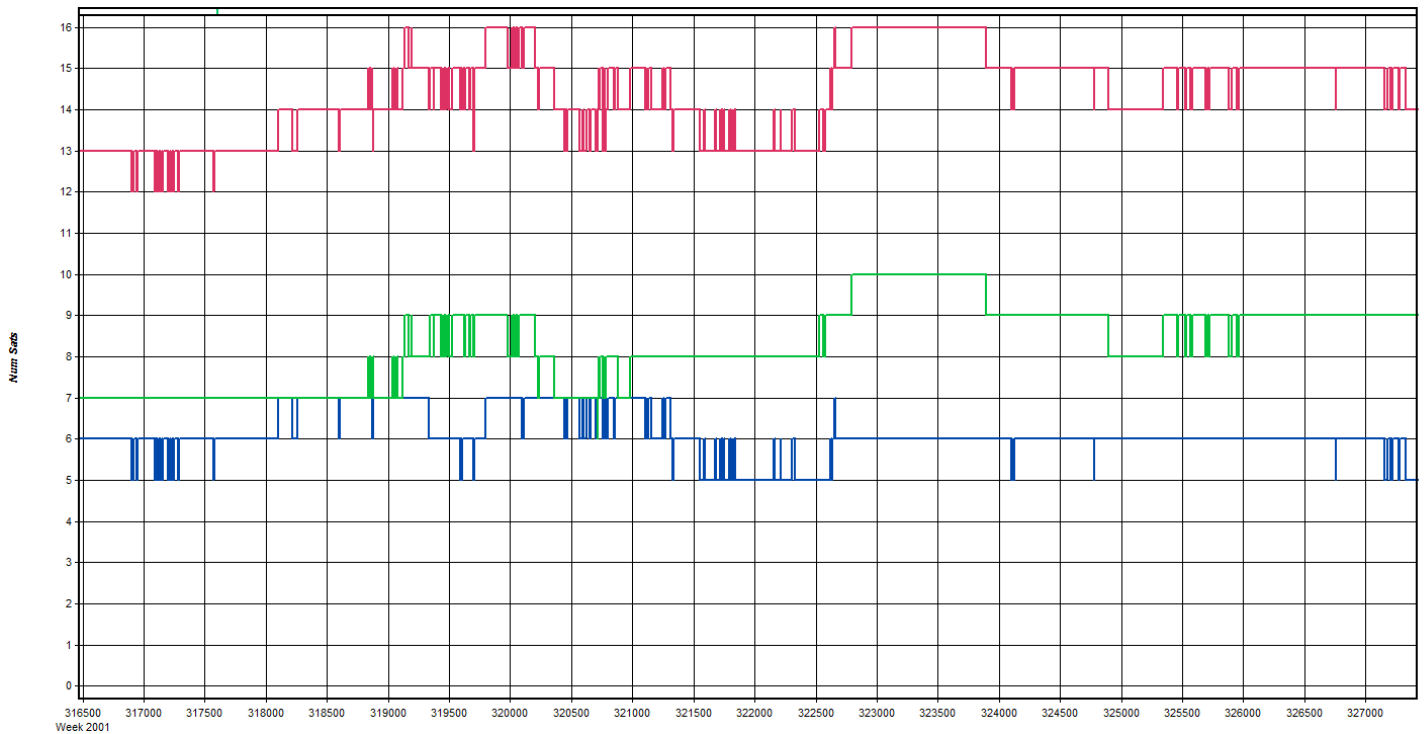
Page 1

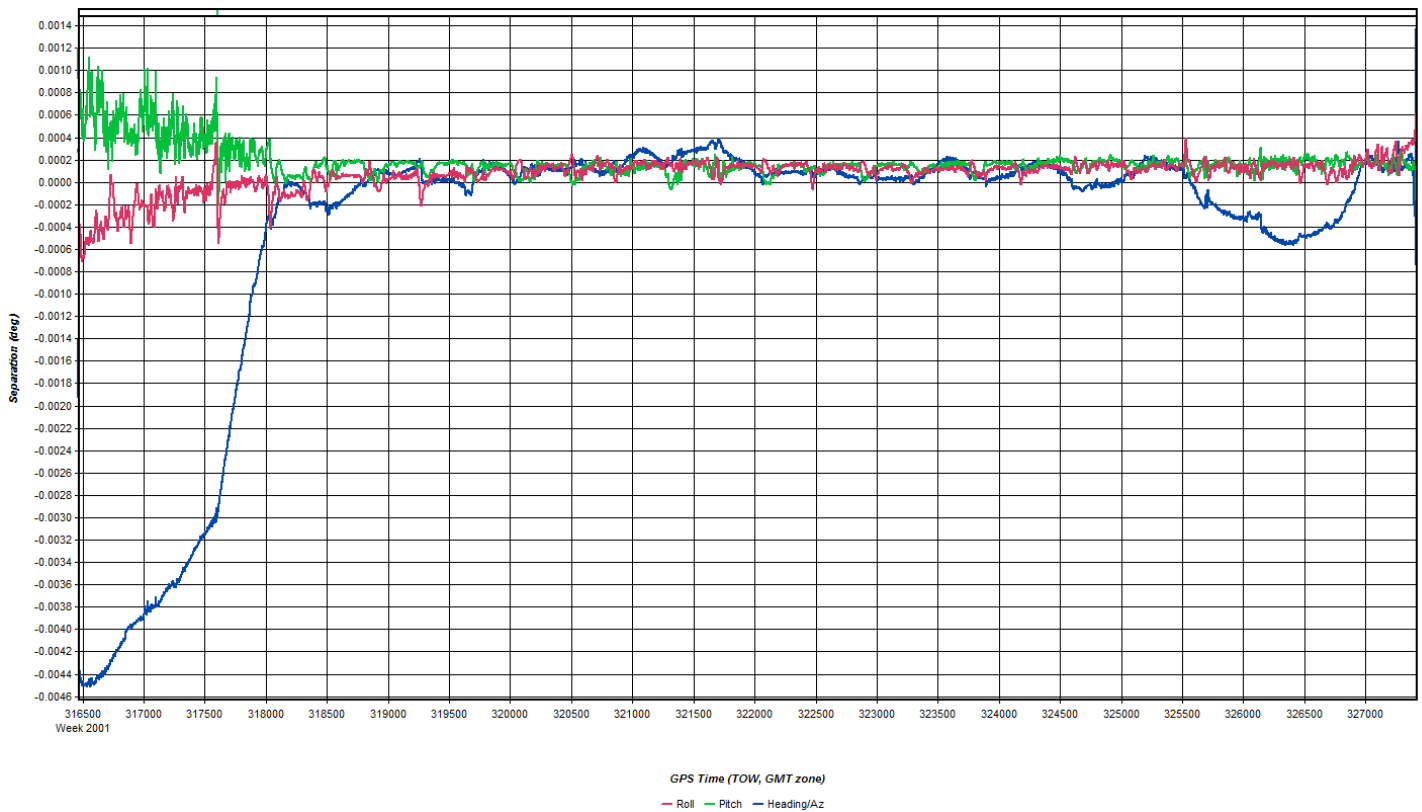
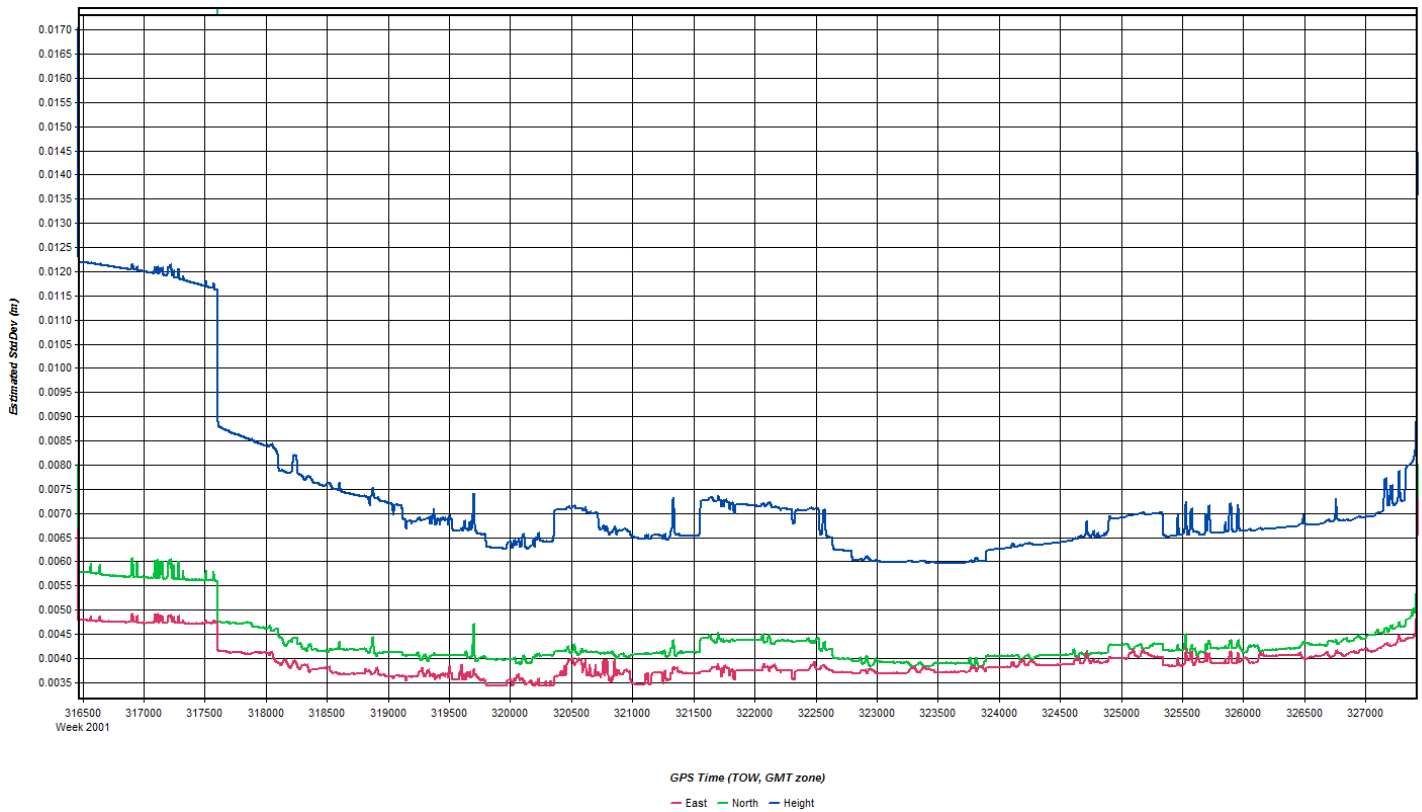
20180516A
(SN7229, C-FQLC)

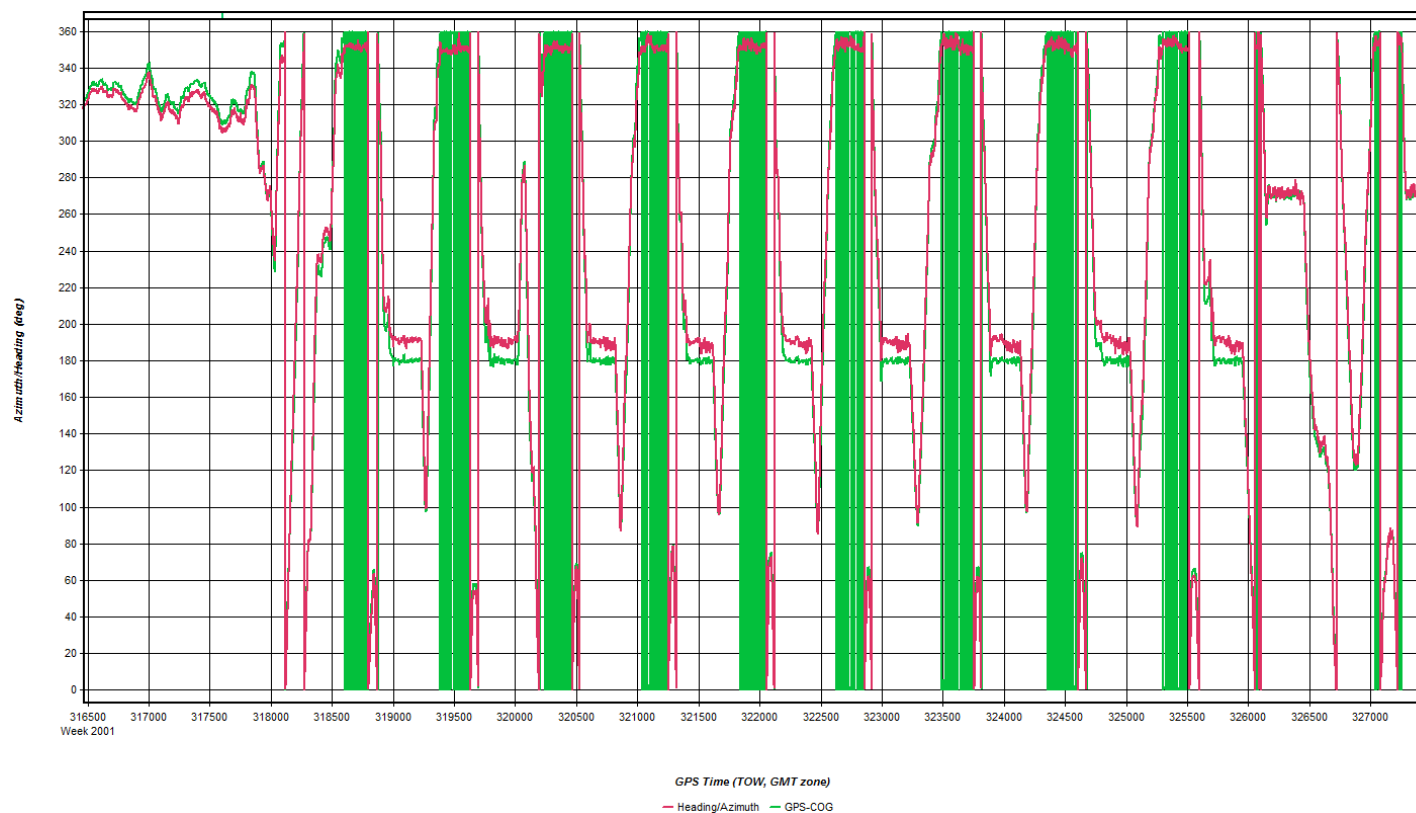








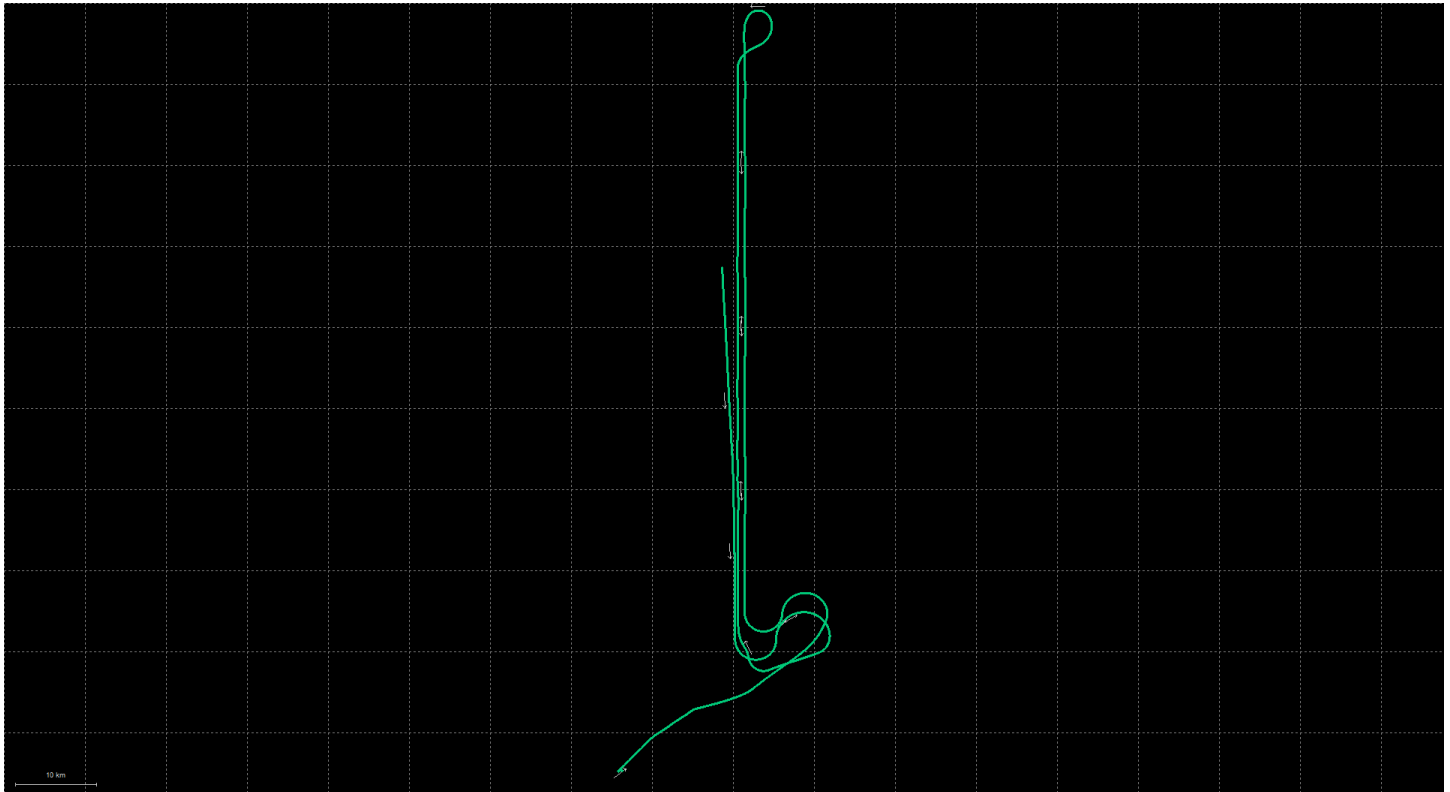


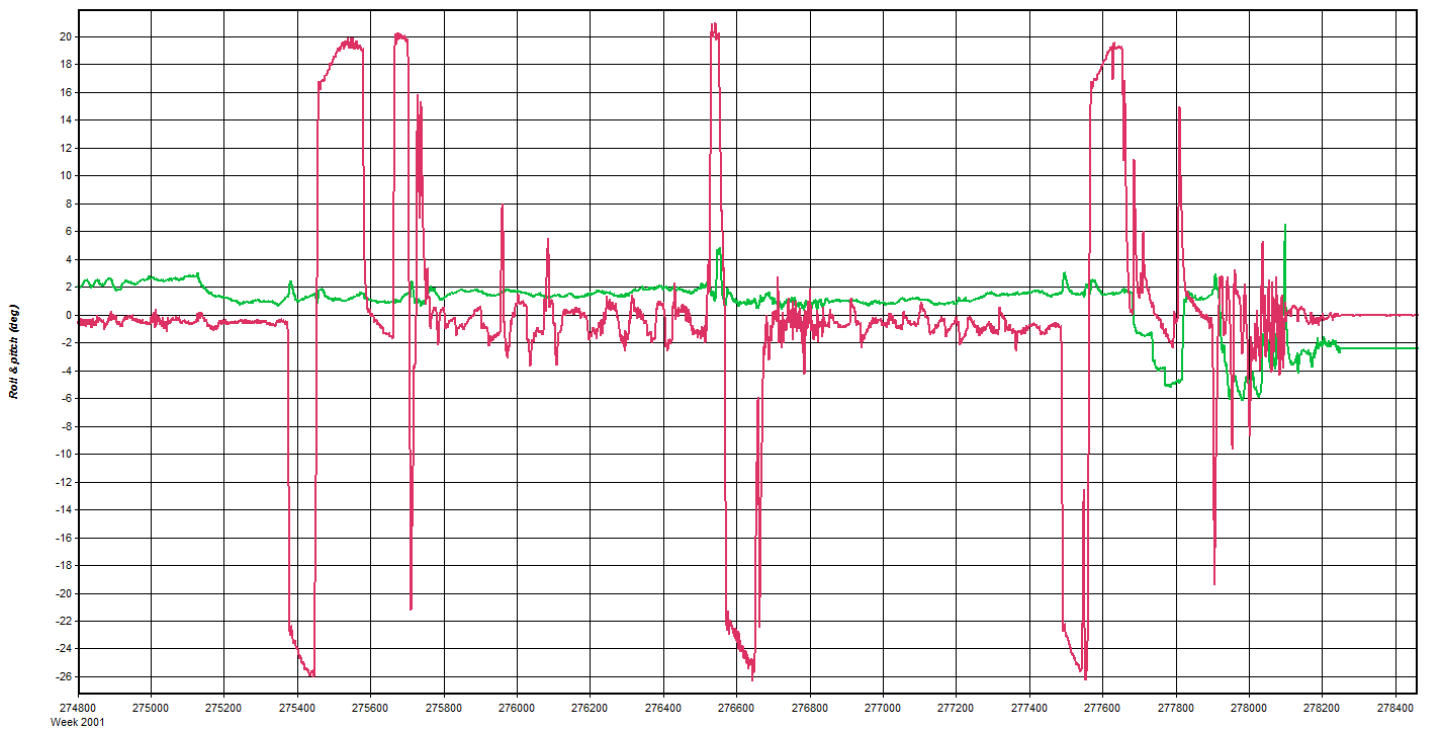
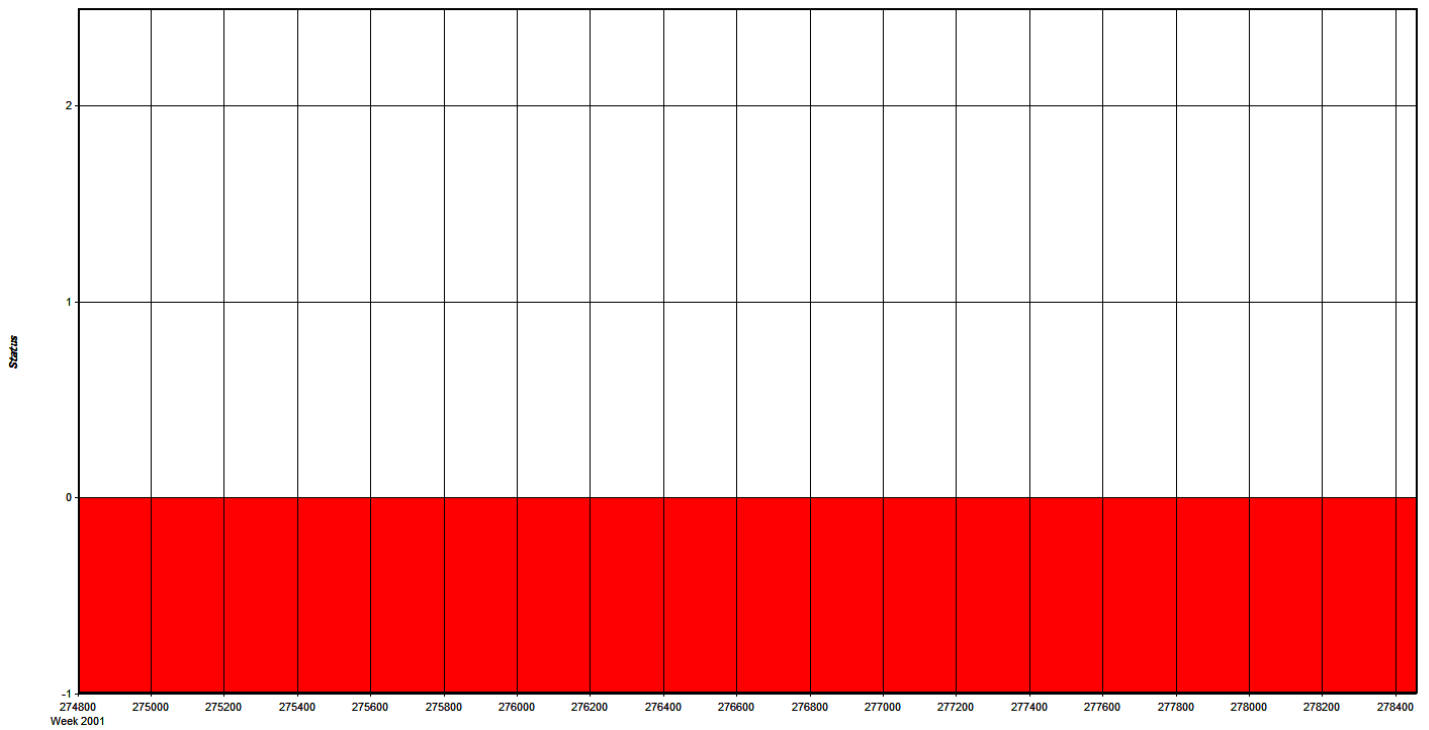


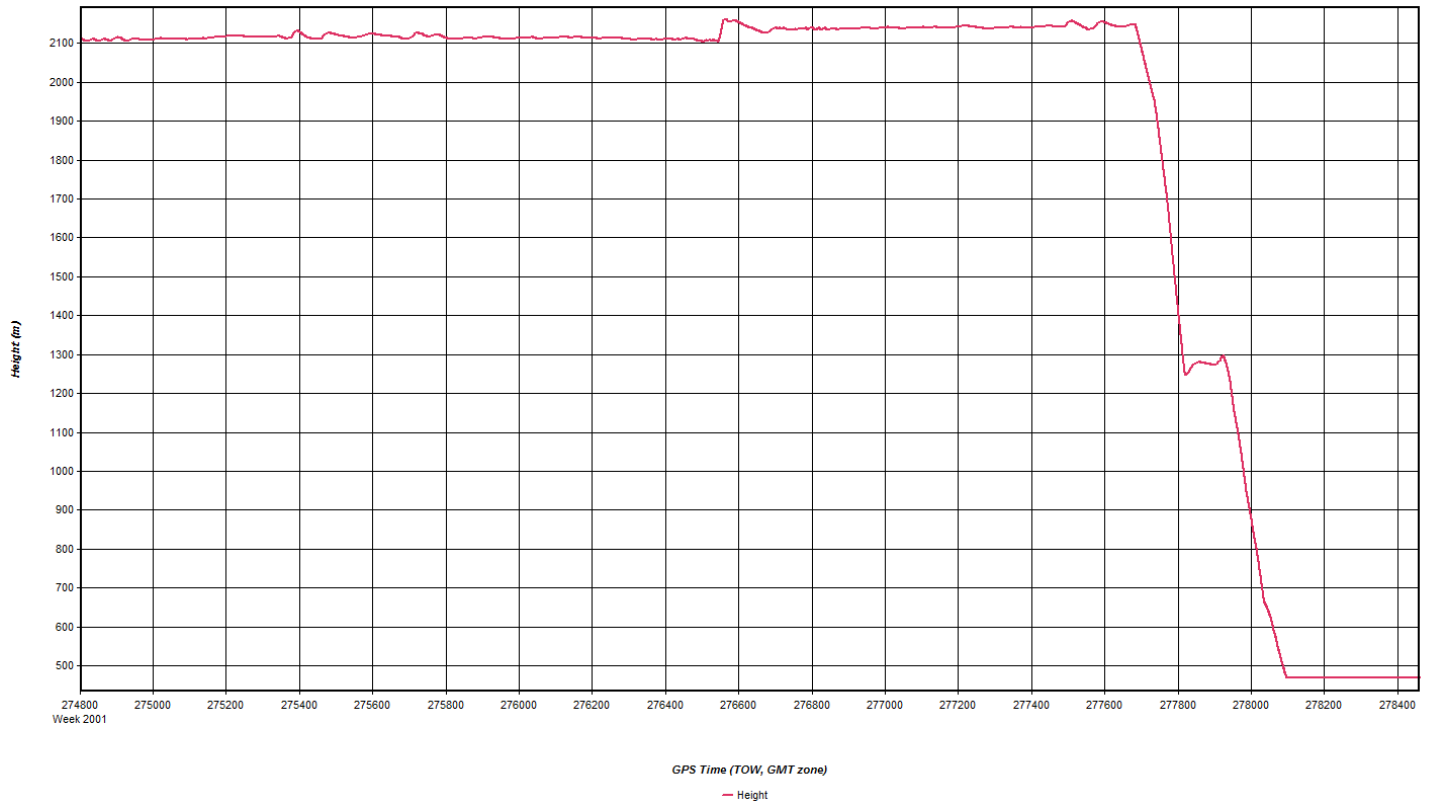
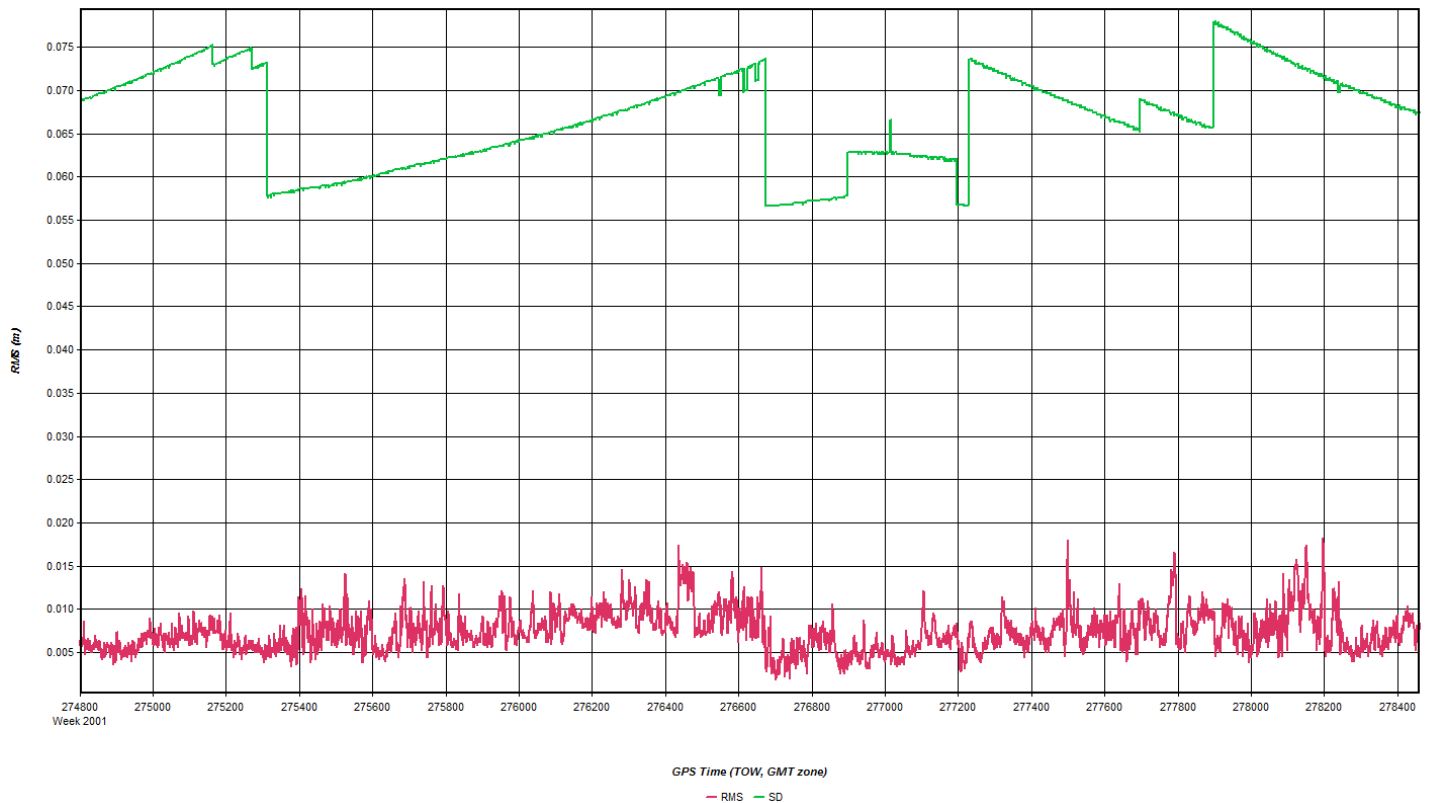
Flight Log

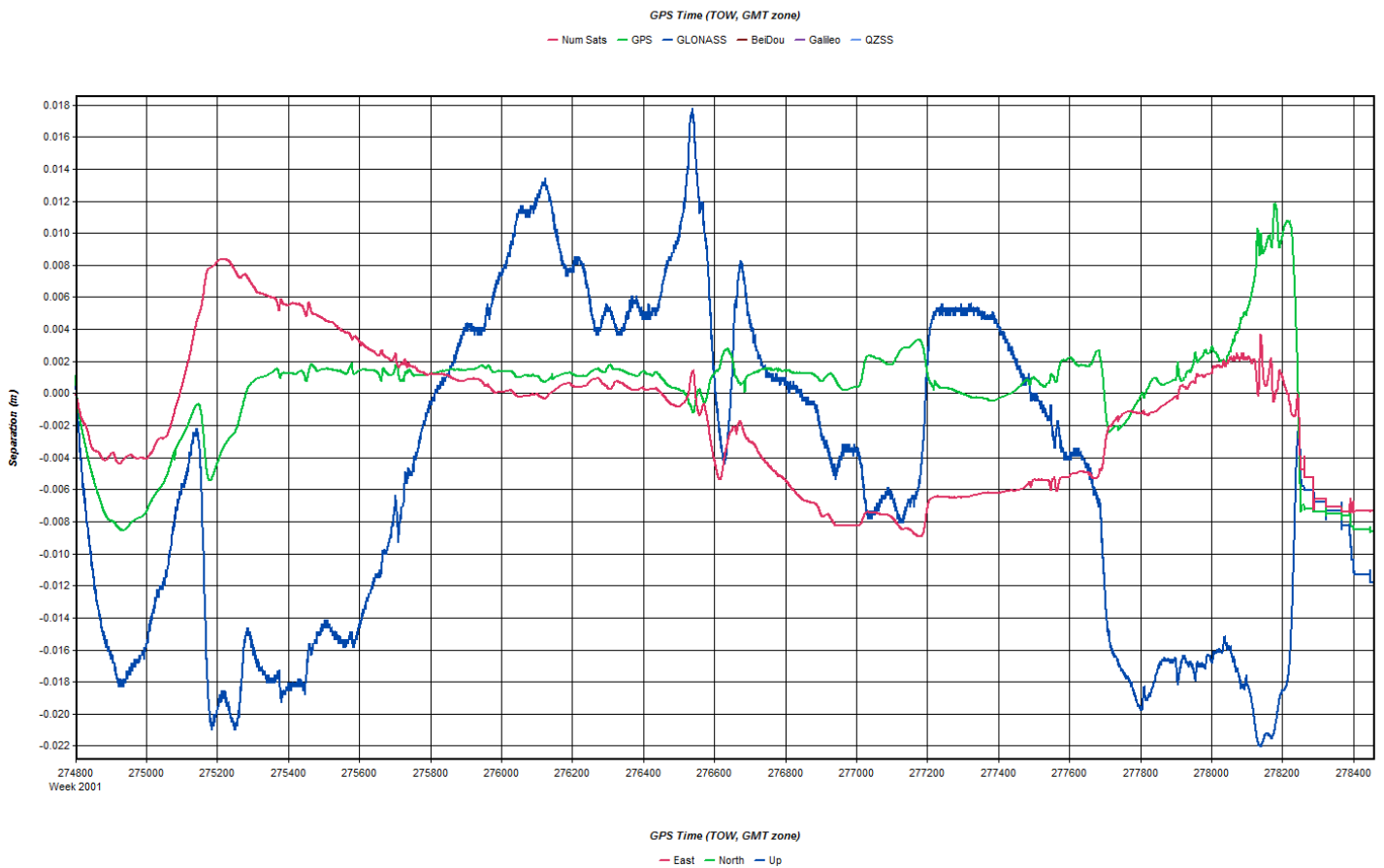
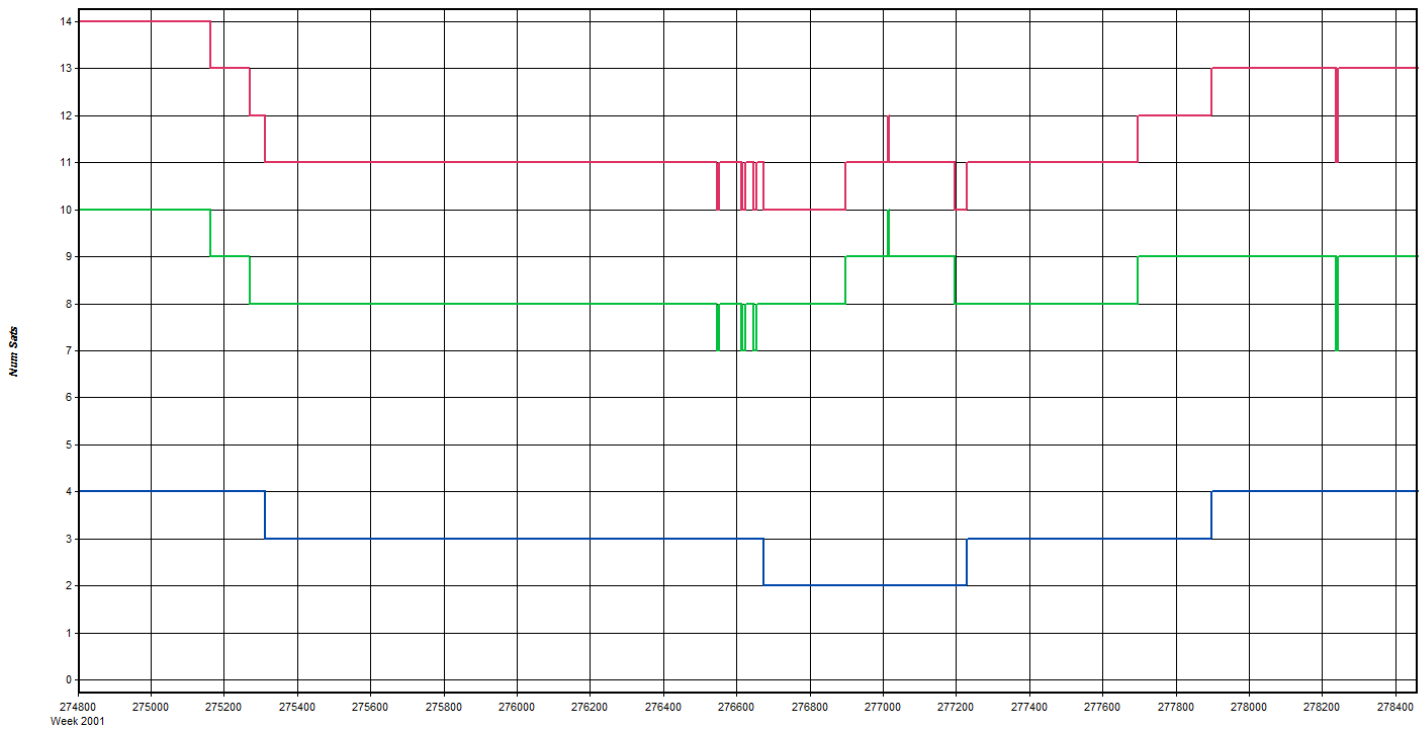
LIDAR & AERIAL PHOTO FLIGHT LOG																
20 YEARS OF EXCELLENCE ATLIS LIDAR + IMAGERY + GEOMATICS				PROJECT NAME		QSI_OttawaForest (Lift#1)		DATE		2018/05/16						
Engine On:		15:04		Takeoff:		15:20		SENSOR OPERATOR		A. Brooker		SENSOR(S)		ALS70-HP / Phase One		
Engine Off:		19:02		Landing:		18:56		PILOT		L. Kim		IMU		Honeywell uIRS		
TOTAL:		4 hrs		TOTAL:		3.6 hrs		AIRCRAFT		C-FQLC		ABGPS		IPAS-CUS6		
								AIRBASE		GBR – Green Bay, WI		DATA DRIVES		LIDAR 2		
AIRCRAFT BLOCK TIME				MISSION DETAILS				GPS TIME				STATIC ALIGNMENT		GPS TIME		
FLIGHT LINE #	SET HISTO	DIRECTION	LIDAR File Name	START	END	1800m	Pulse Rate:	279Hz	150kts	Scan Rate:	53Hz	Pre-Mission	16:17	16:27		
001		002	162944	16:29:44	16:33:10							Post Mission	18:43	18:50		
002		183	163630	16:36:30	16:40:09											
003		002	164303	16:43:03	16:46:49											
004		183	164942	16:49:42	16:53:24											
005		002	165741	16:57:41	17:00:40											
006		183	170334	17:03:34	17:06:40											
007		002	171037	17:10:37	17:13:47											
008		183	171647	17:16:47	17:19:56											
009		002	172359	17:23:59	17:26:10											
010		183	173005	17:30:05	17:33:25											
011		002	173717	17:37:17	17:40:43											
012		183	174330	17:43:30	17:46:45											
013		002	175155	17:51:55	17:55:28											
014		183	175829	17:58:29	18:01:52											
015		002	180600	18:06:00	18:09:40											
016		183	181313	18:13:13	18:16:49											
017		002	182127	18:21:27	18:24:52											
018		183	182826	18:28:26	18:32:10											
CL		273	183549	18:35:49	18:40:36											
SUN ANGLE																
@Start:																
@End:																
@Peak:																
ADDITIONAL NOTES: Sunny/Haze with clouds building up. Very strong winds and high turbulence																
PDOP 1.3																
19 Sats																
KAR turns over MIIW station																

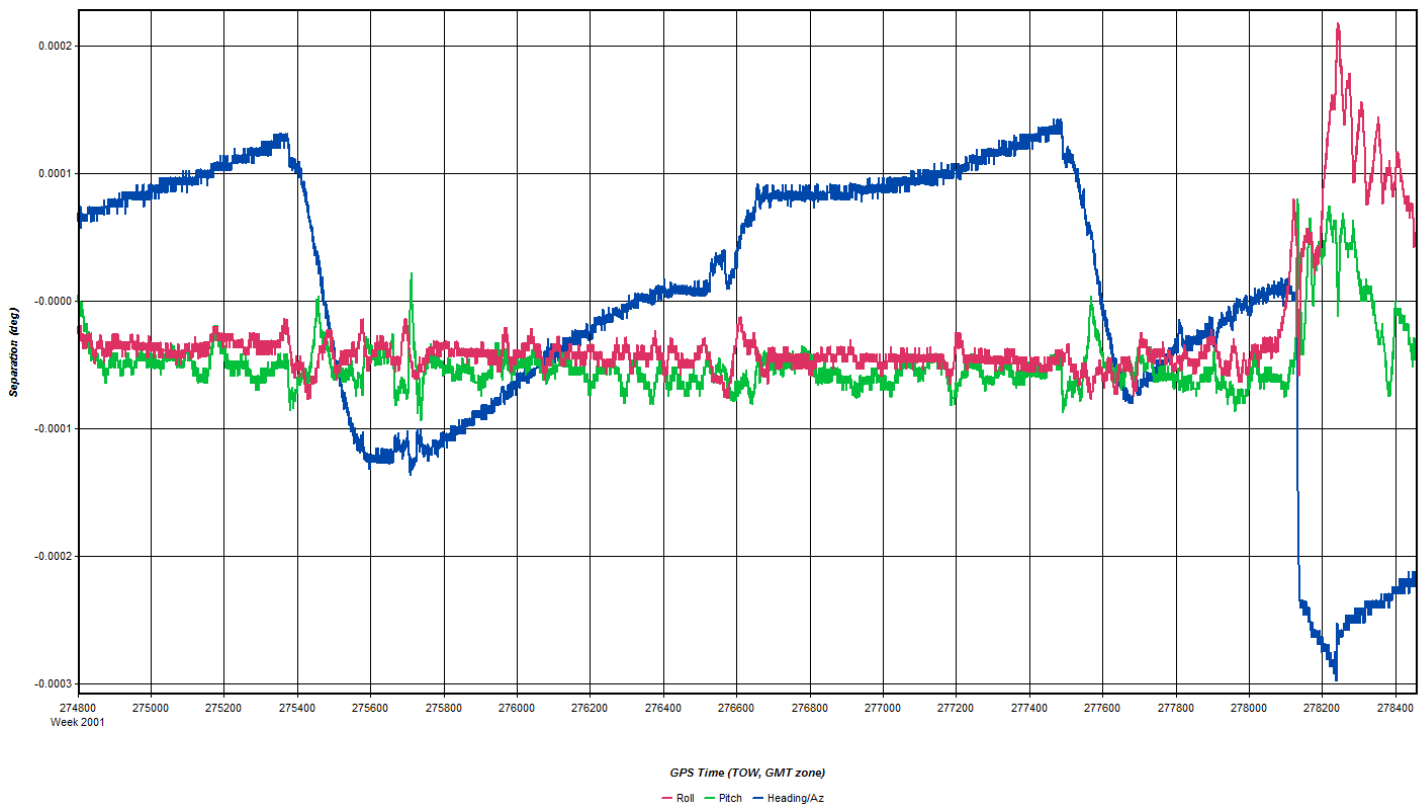
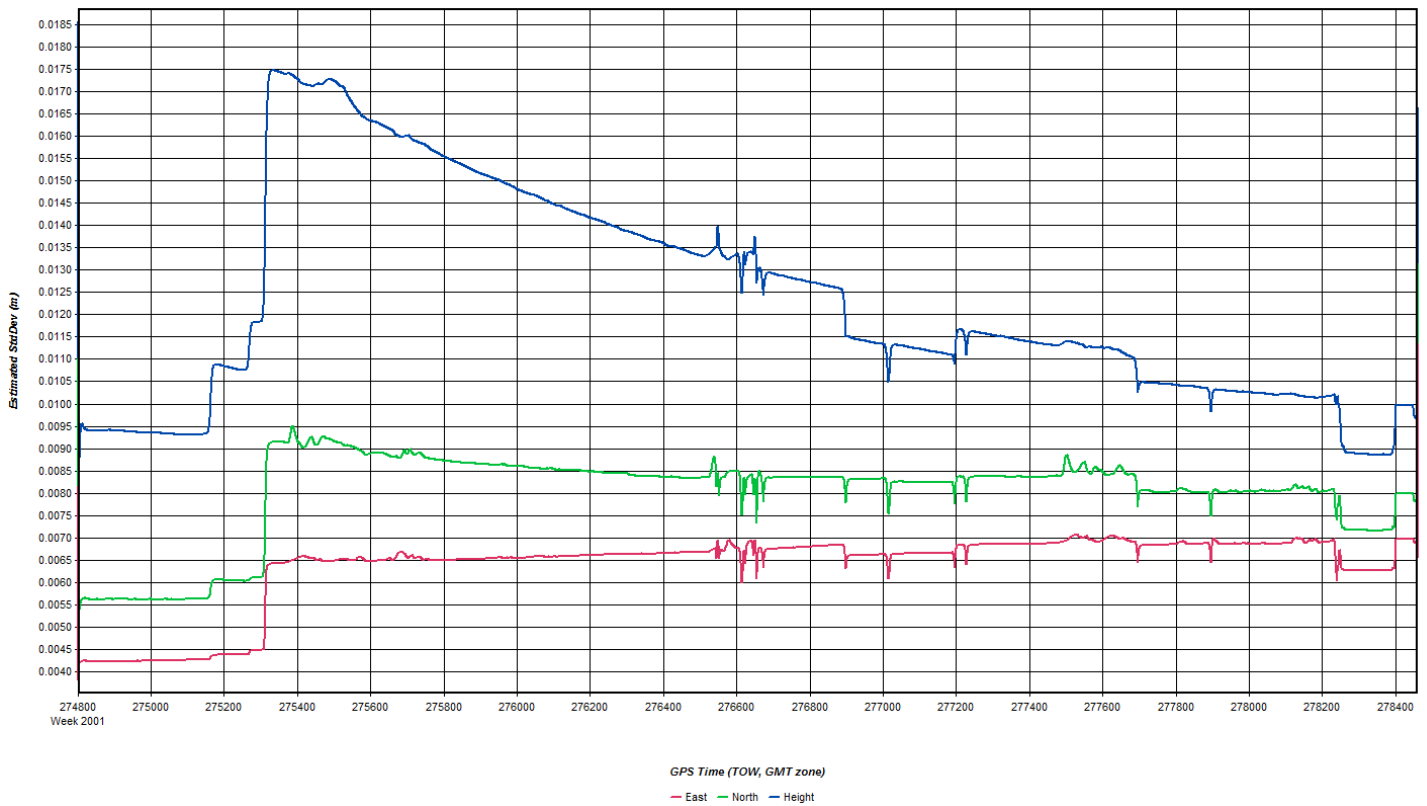
20180516A
(SN8228, N350GB)

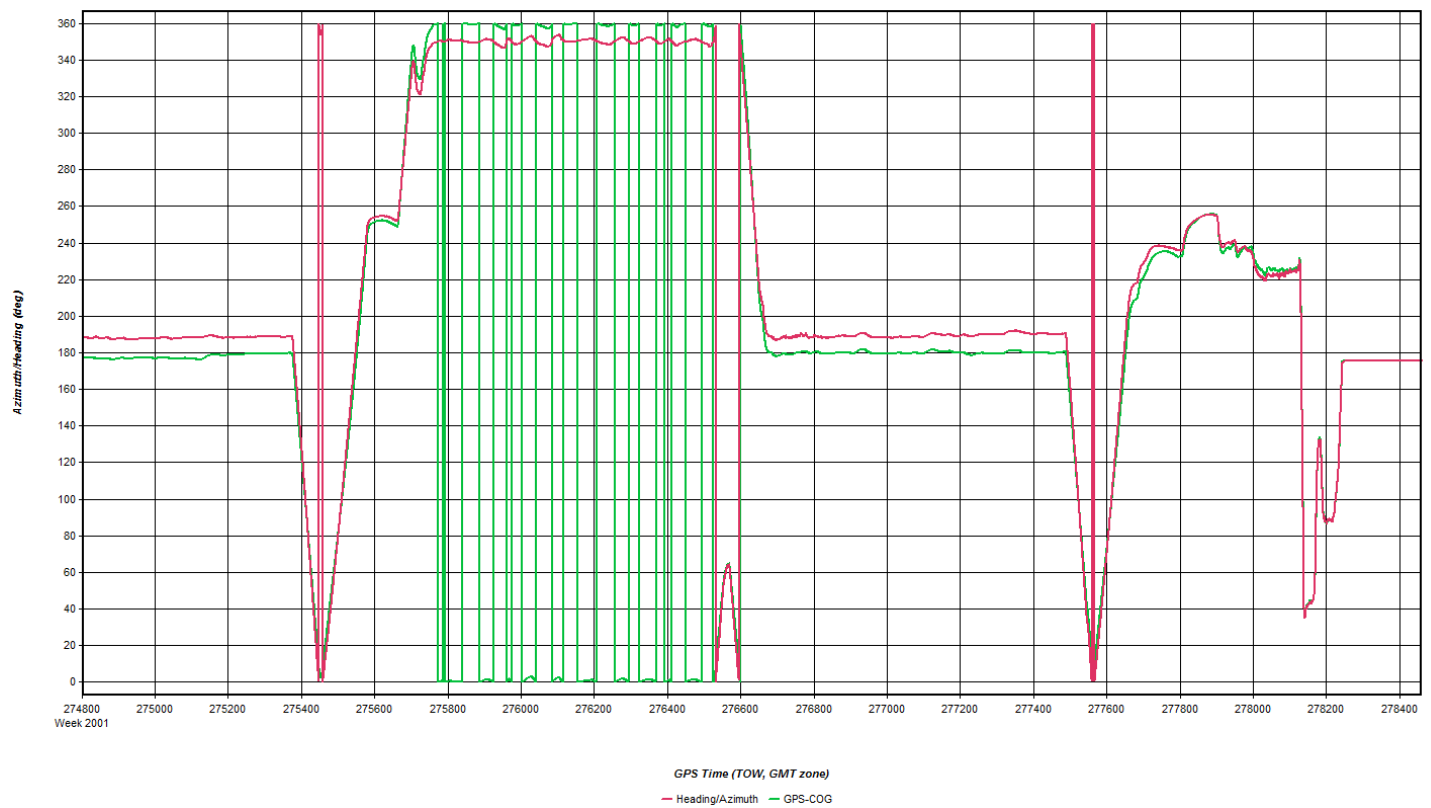




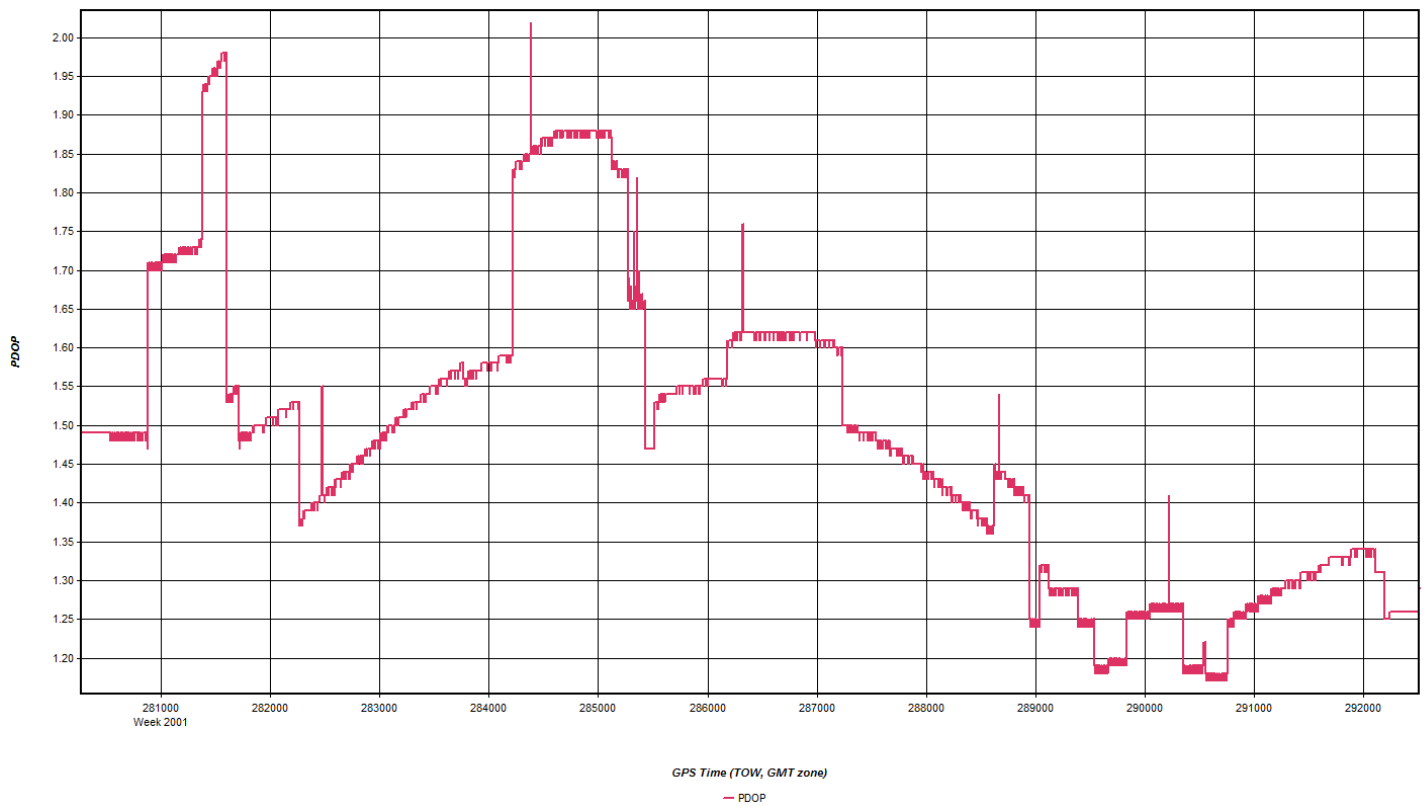
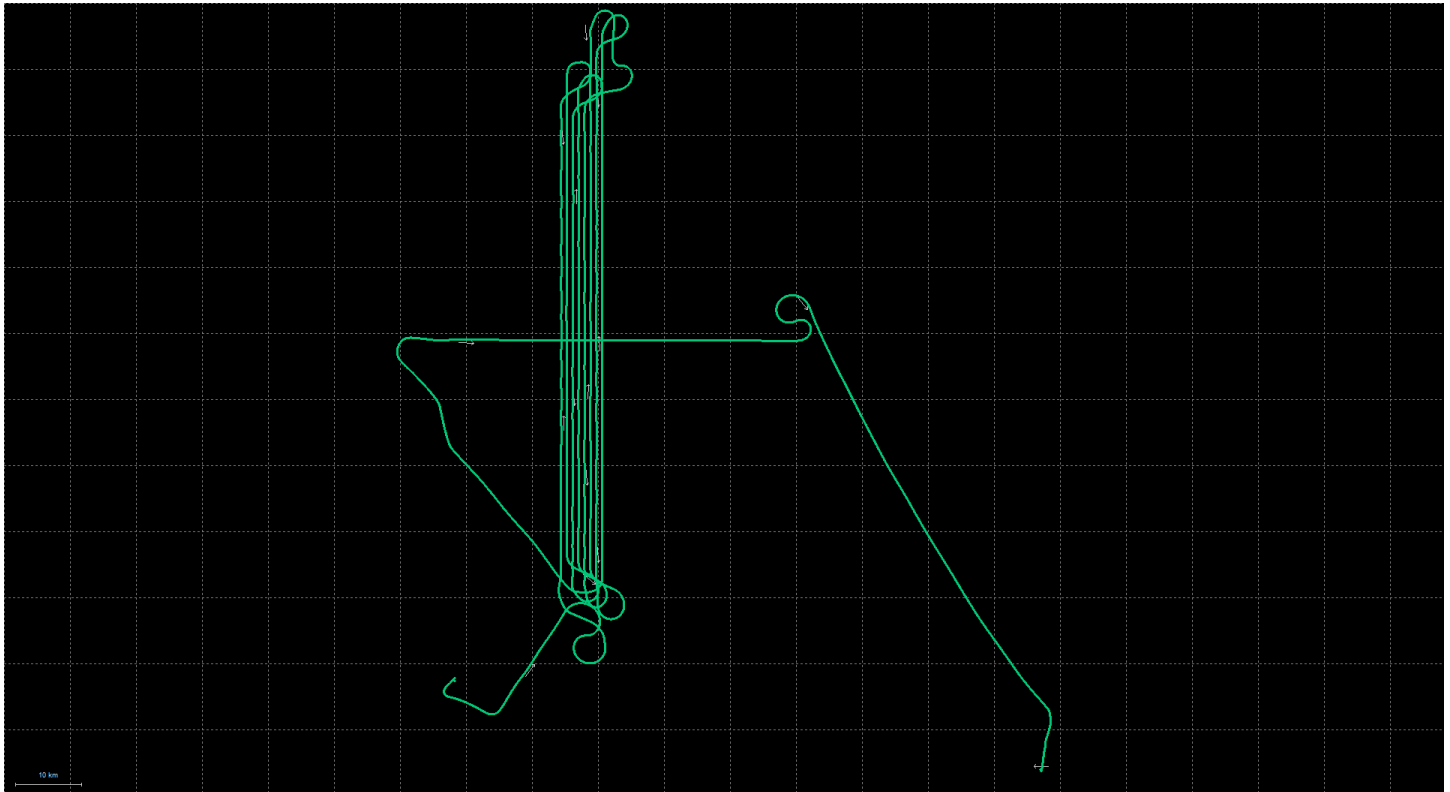


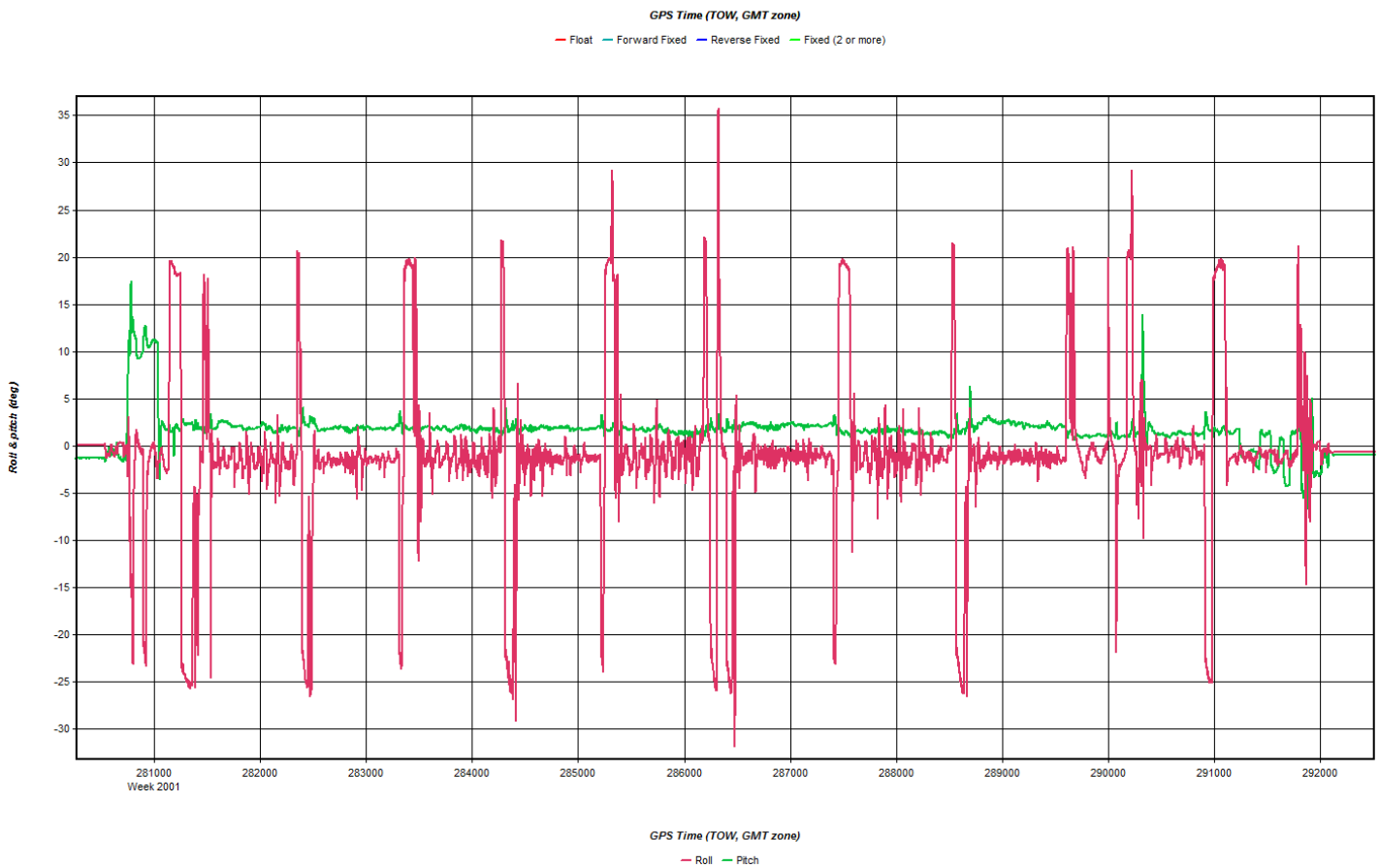
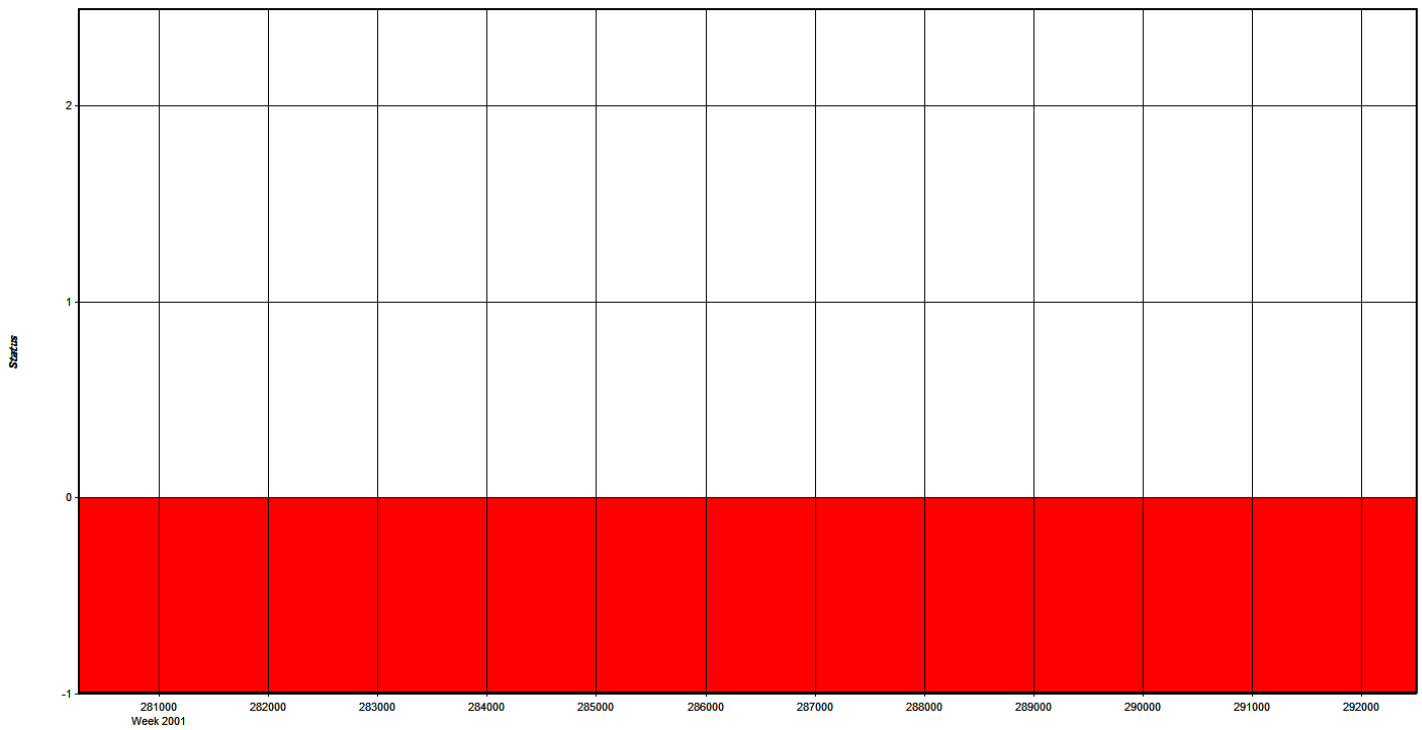


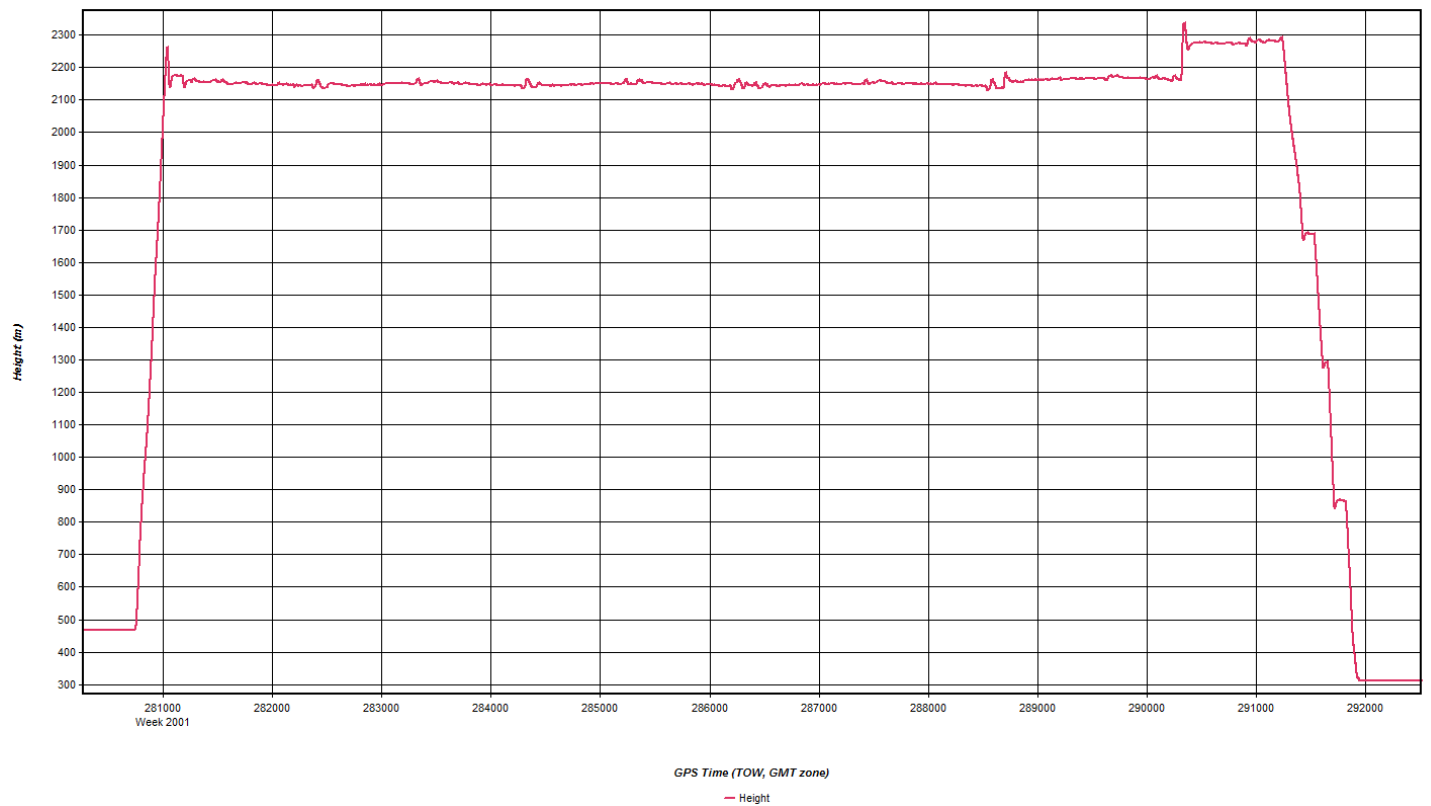
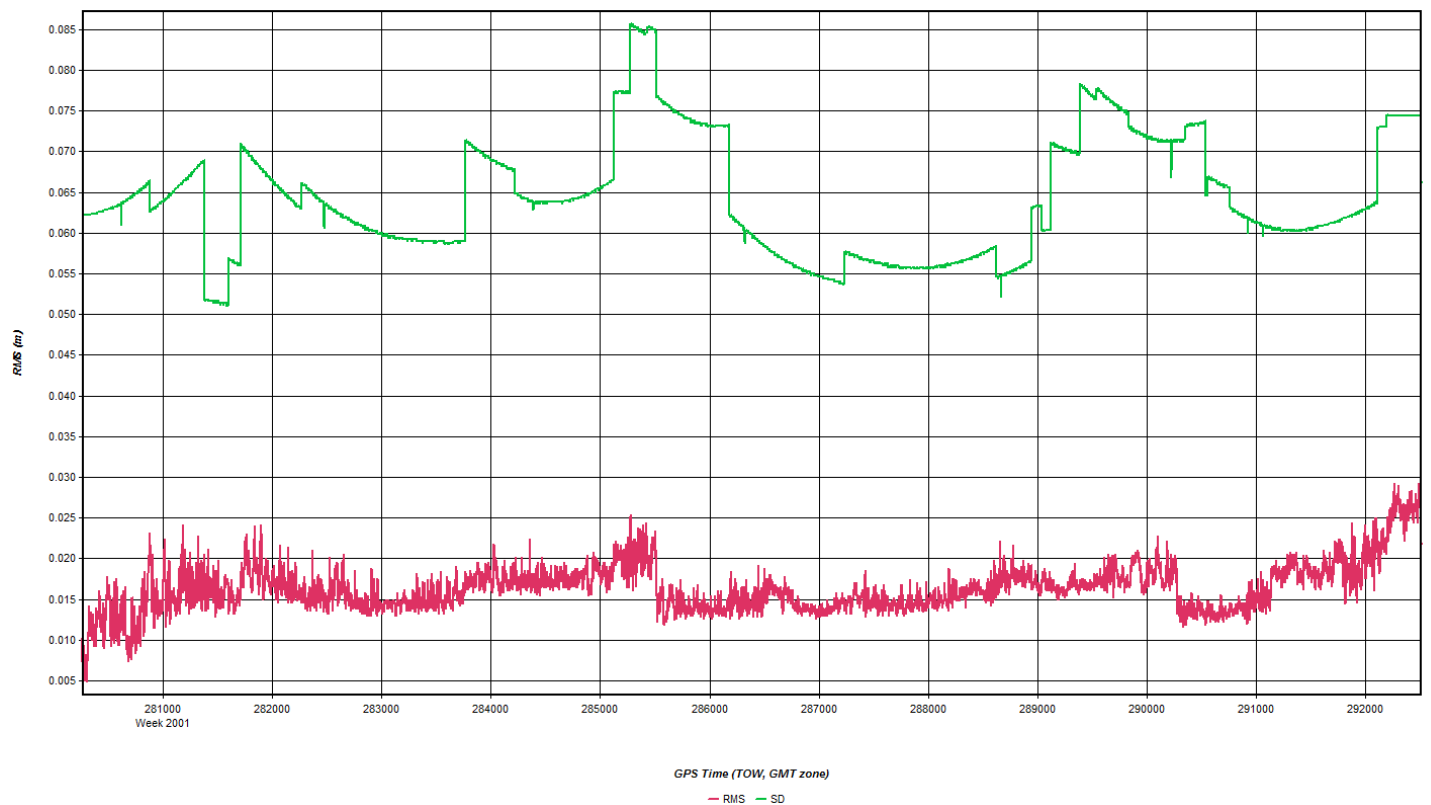


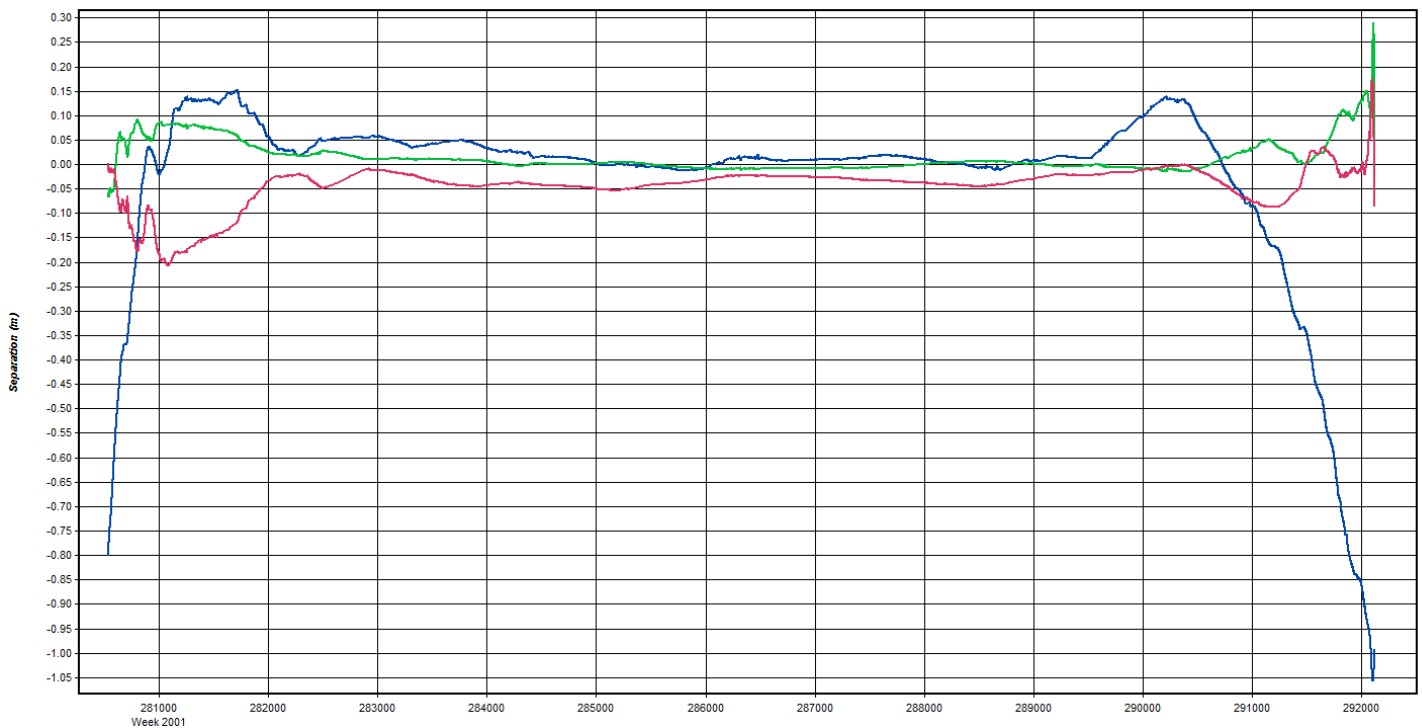
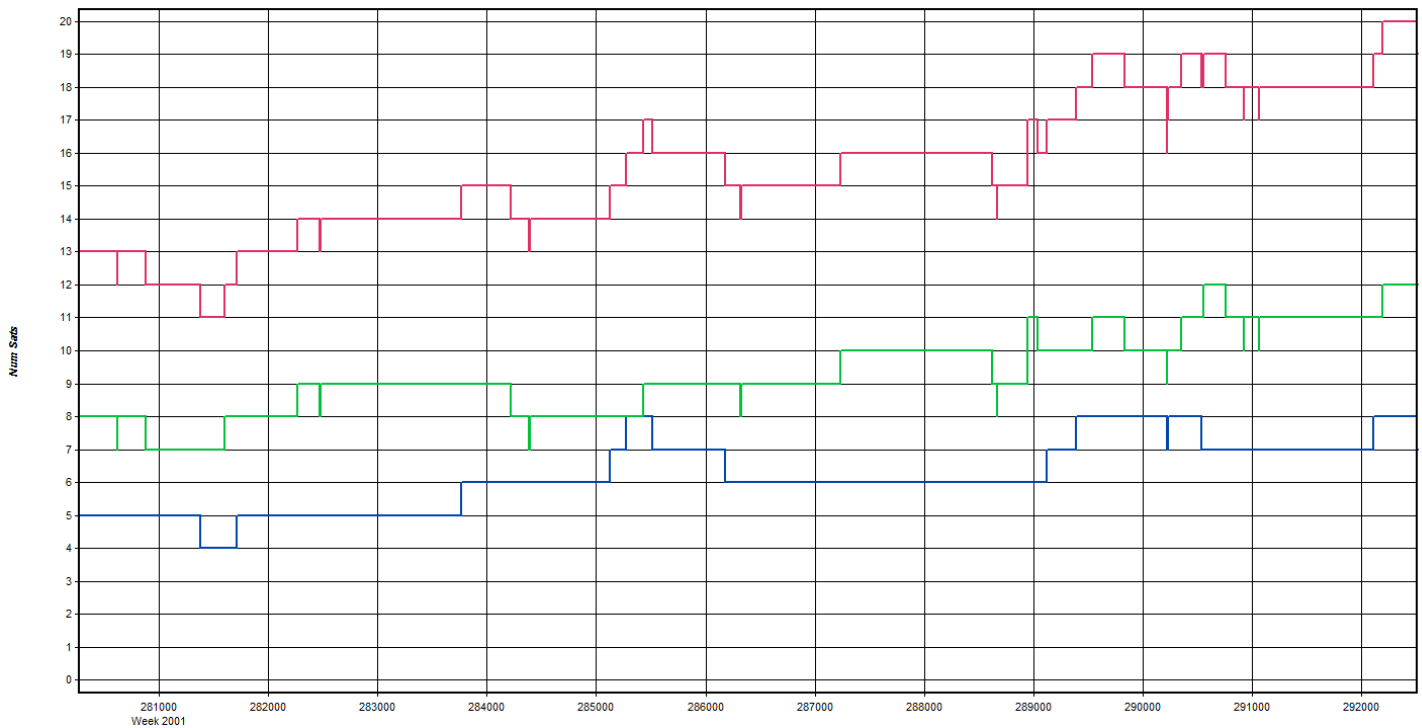


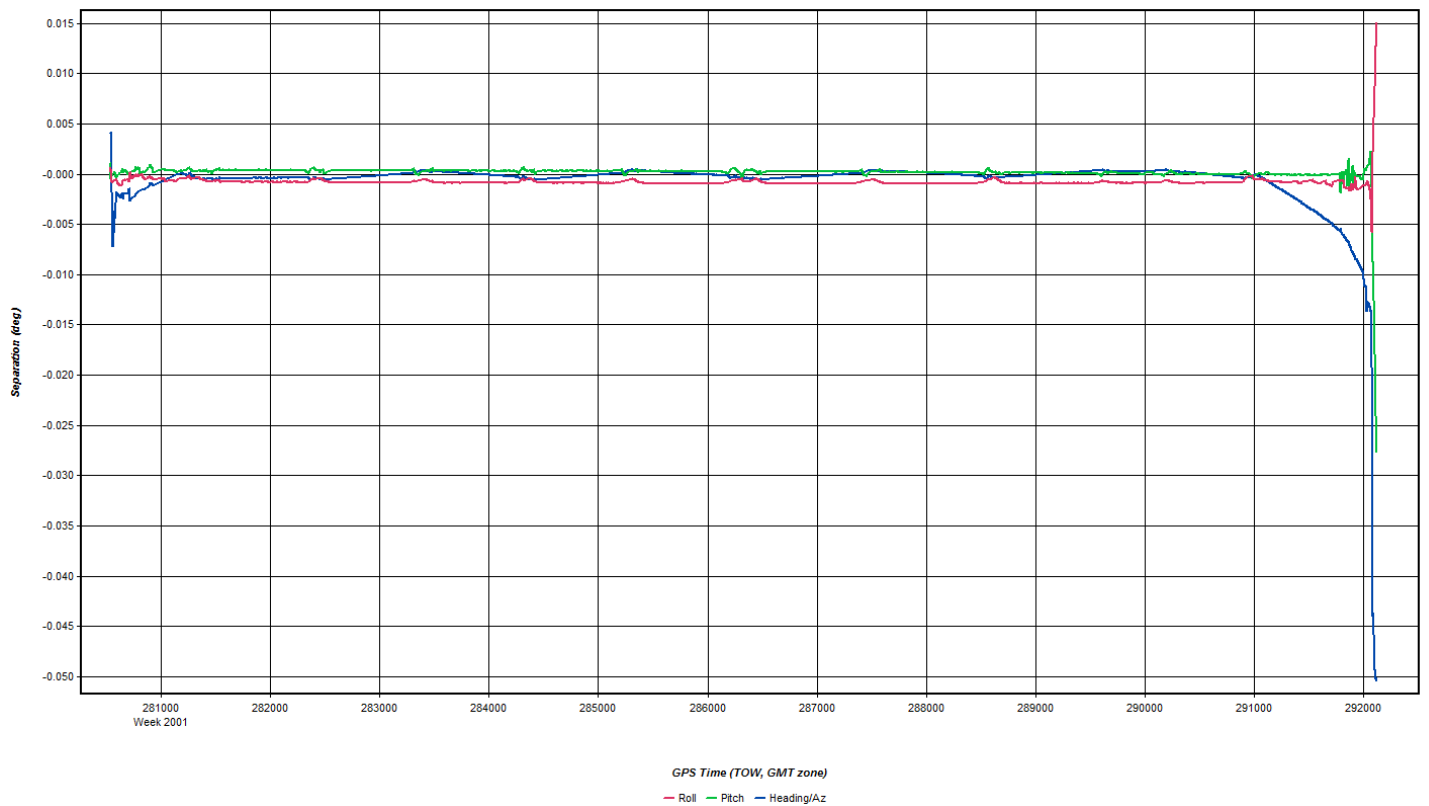
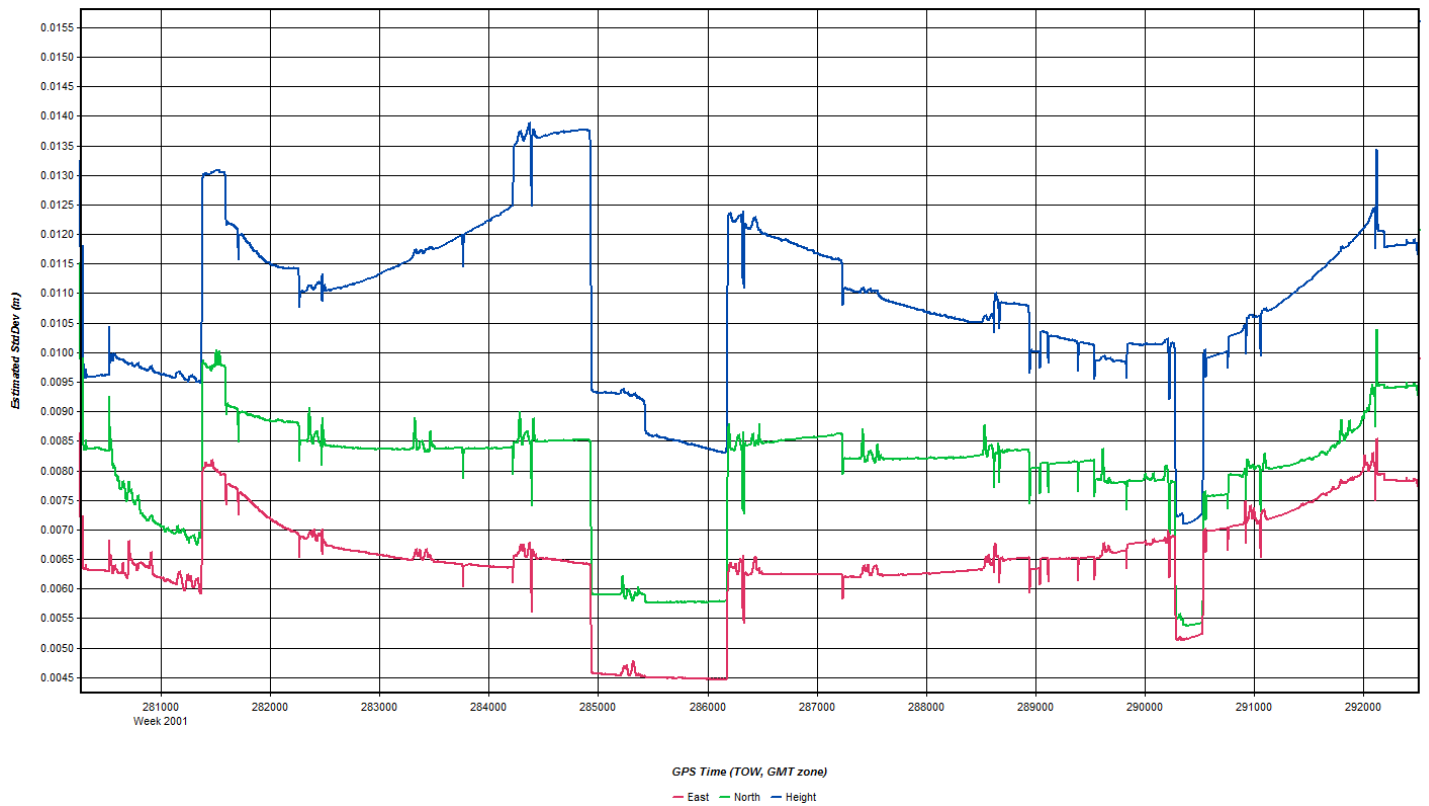
20180516B
(SN8228, N350GB)

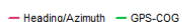




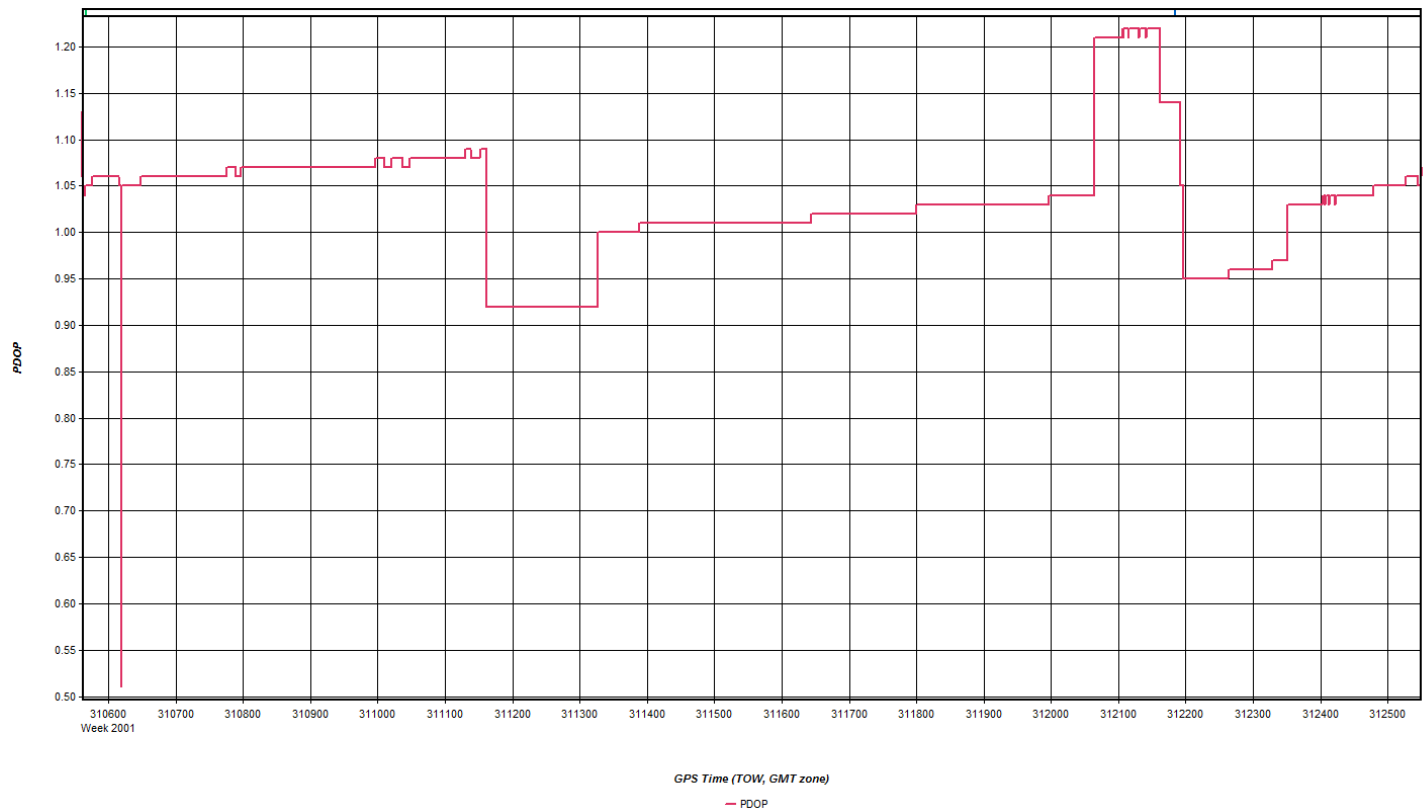


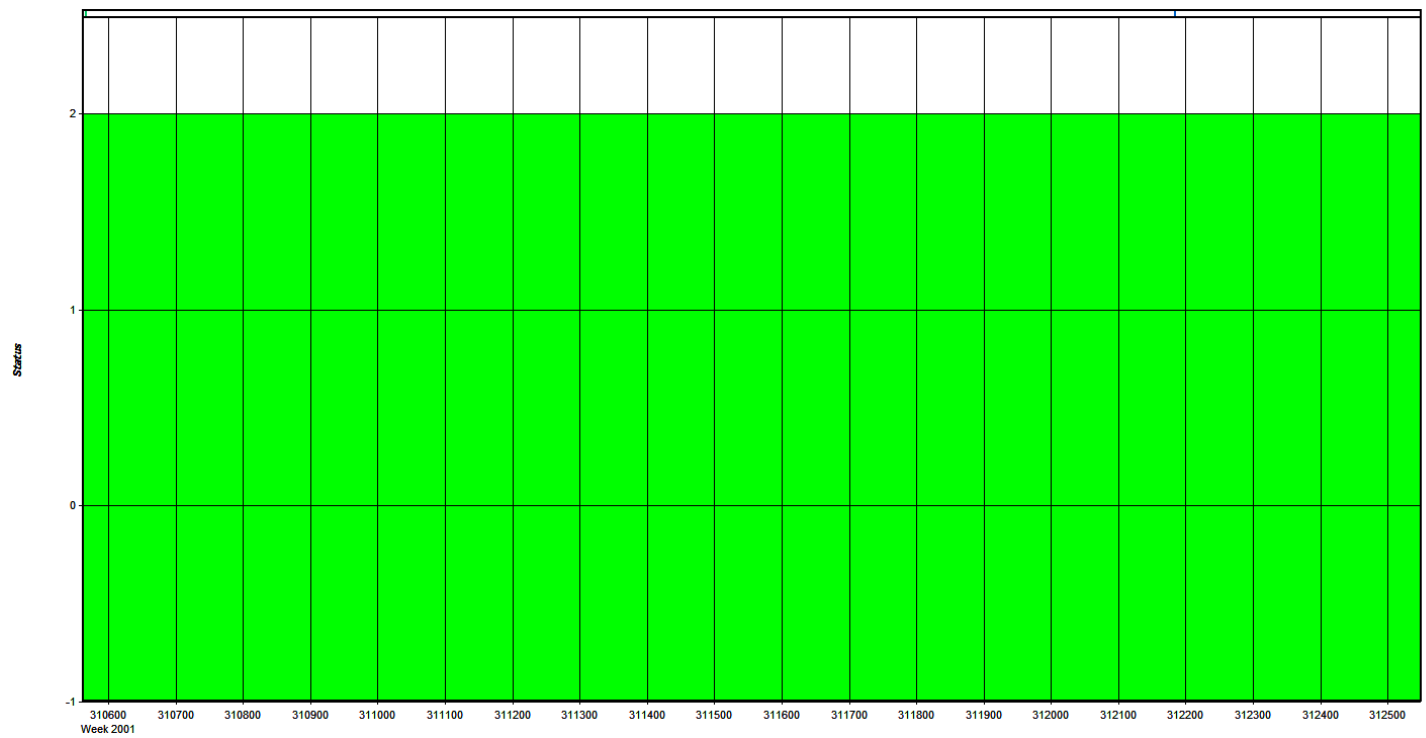


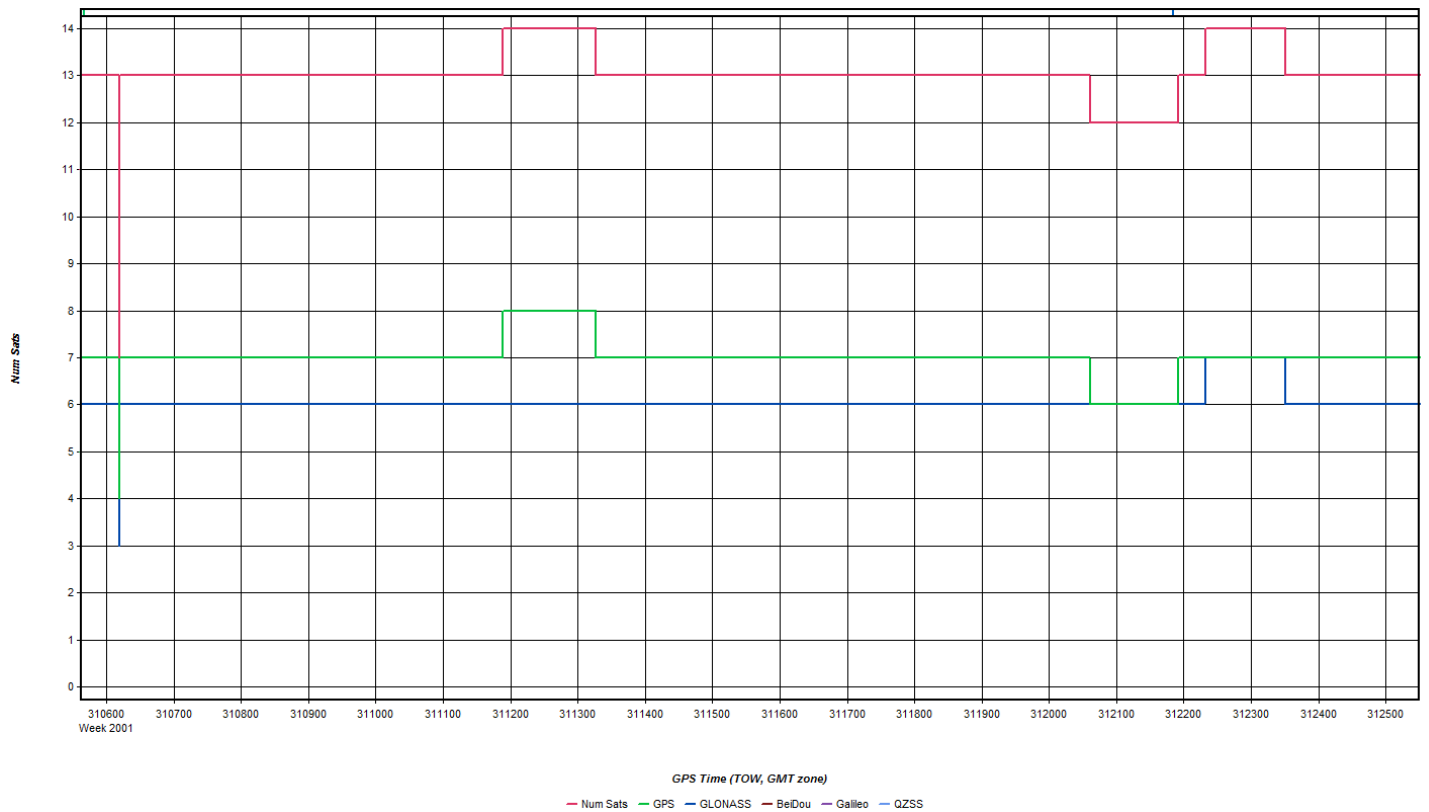
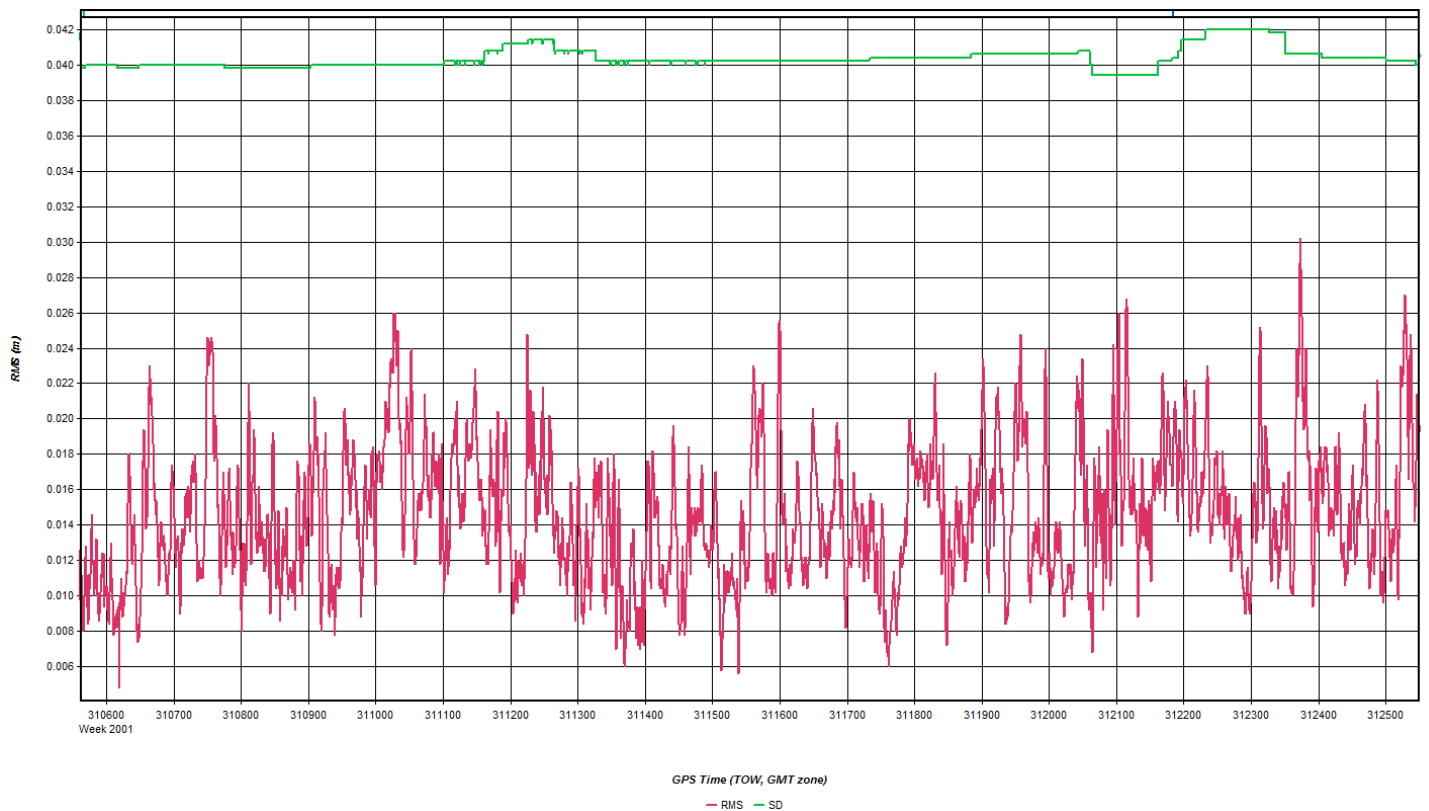


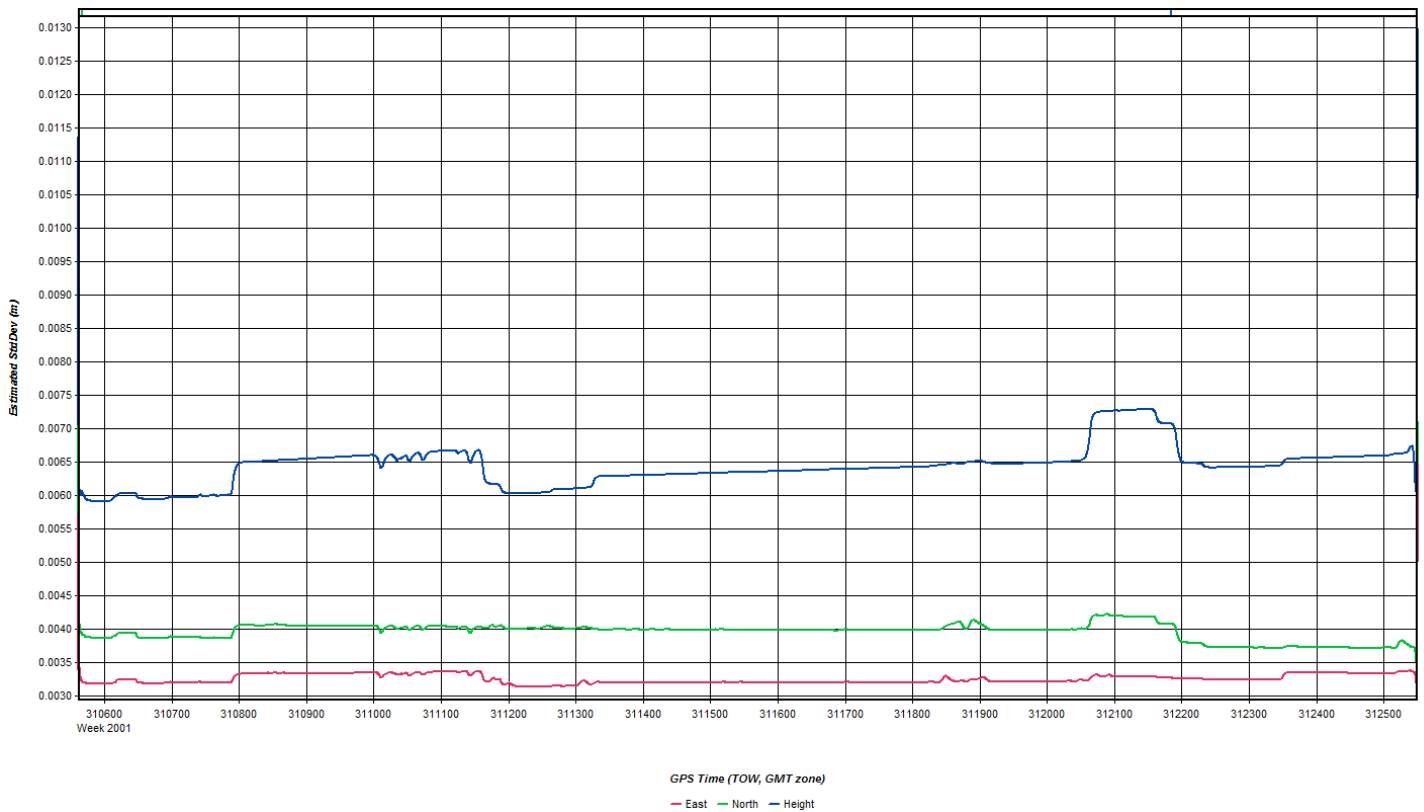
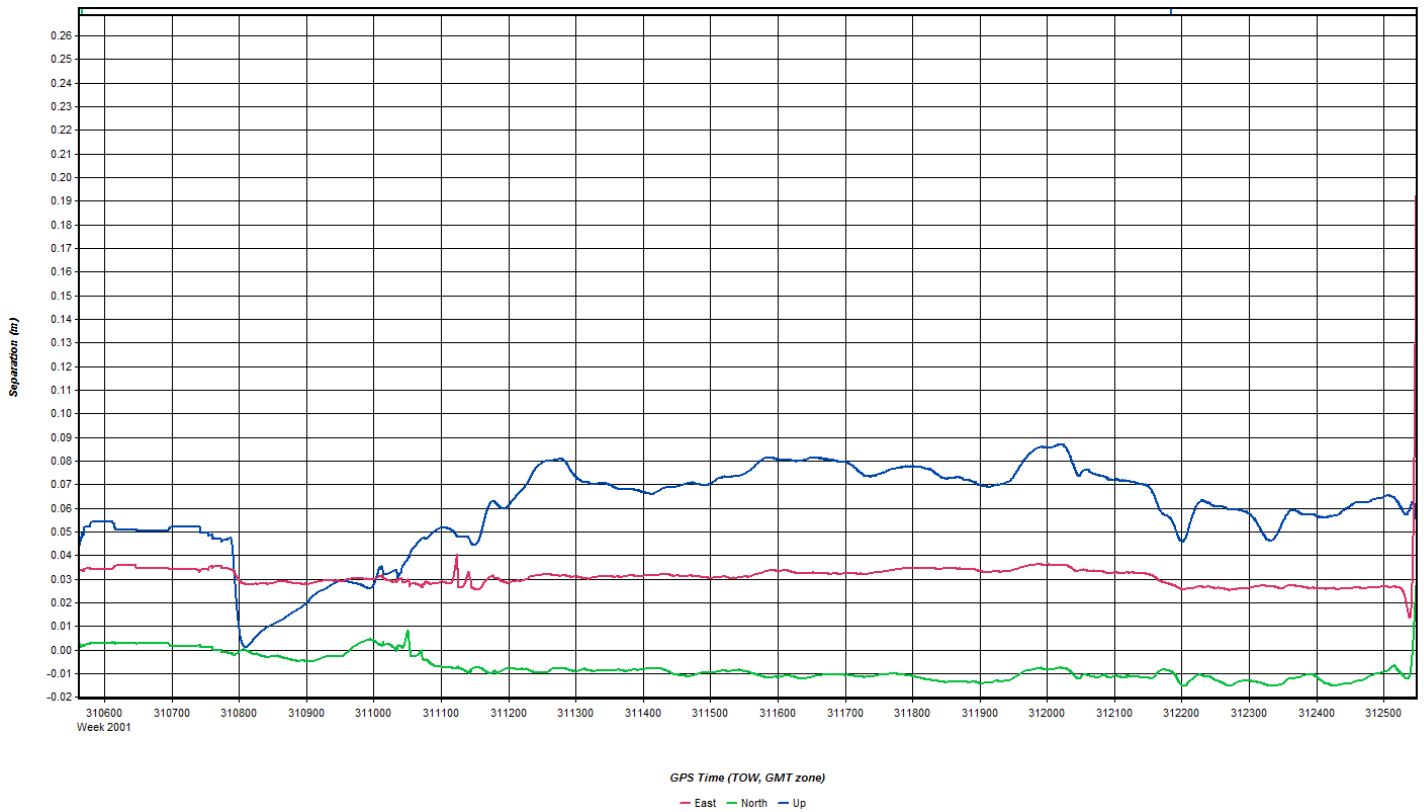


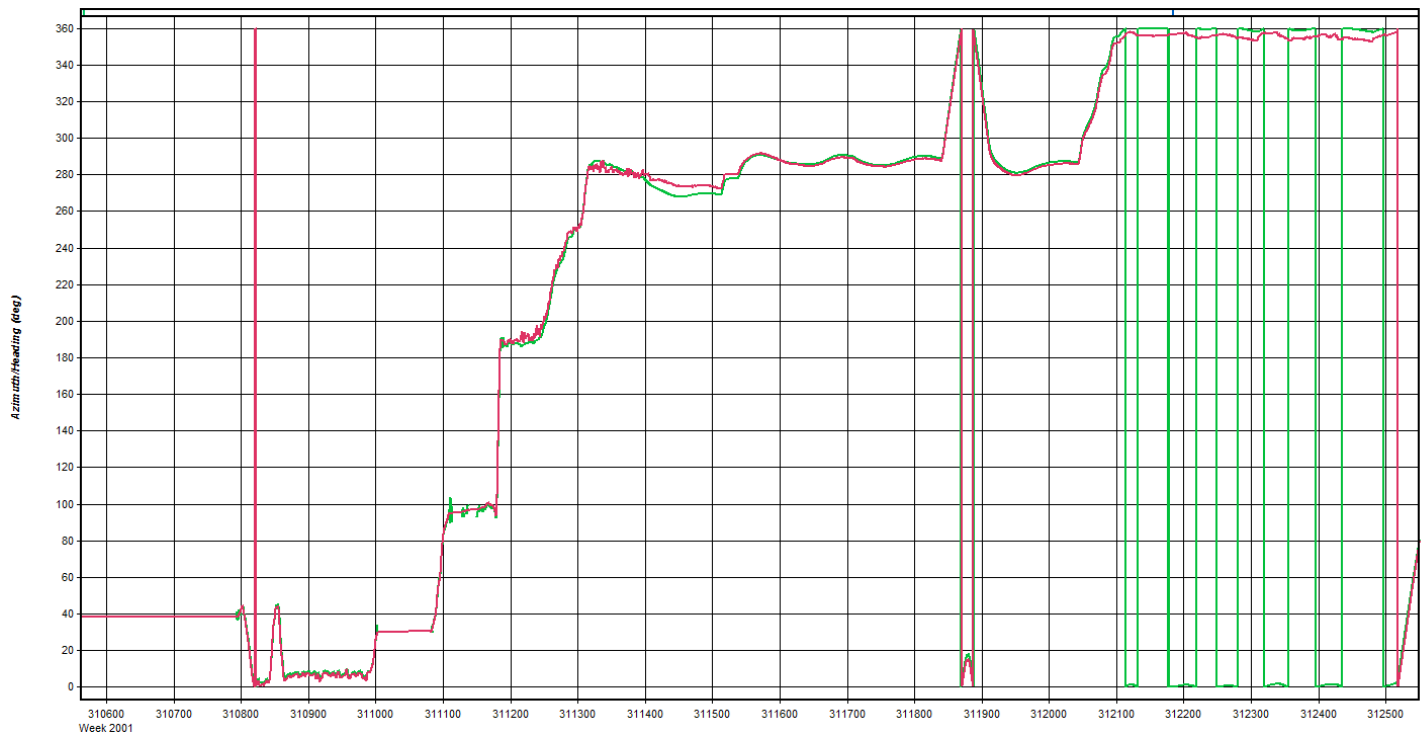
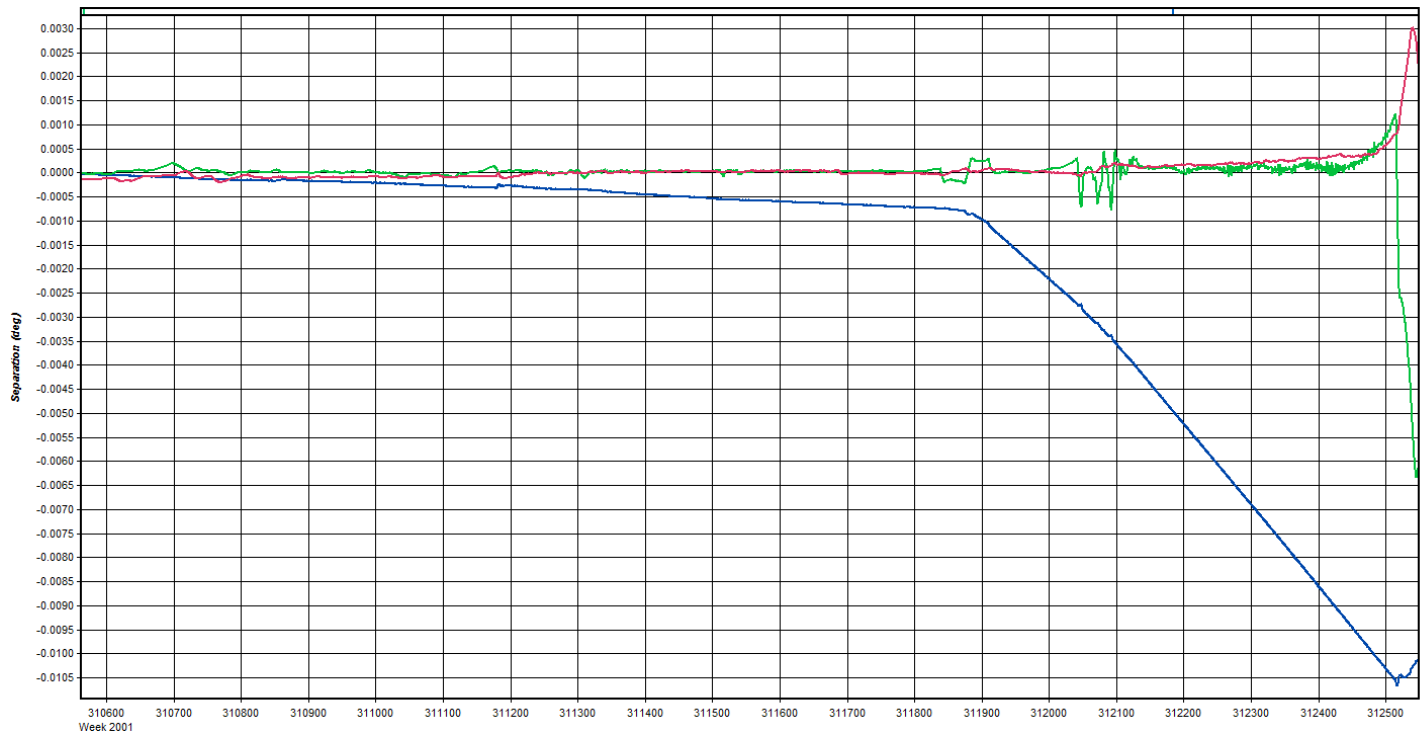
20180516C
(SN8228, N350GB)











Coordinate/Antenna Settings ? X

Master Remote

Base Station
2: MIIR Name: MIIR ☐ Disabled
File: E:\Proc\30135_Ottawa_NF_MI\From_Kucera_6-12-18\QSI_MI_LID\

Coordinates
Latitude: North 46 04 49.37197 Coord. options
Longitude: West 88 38 00.11113 Save to Favorites
Ellipsoidal height: 470.982 m
Datum: WGS84 Proc Datum: WGS84
Epoch: year

Antenna Height
From station file: LEIAT504, LEIS View STA File
Antenna profile: LEIAT504, LEIS Info
Measured height: 0.000 m
ARP to L1 offset: 0.088 m
Applied height: 0.088 m
Measured to
☒ ARP
☐ L1 Phase Centre
Compute From Slant

OK Cancel

Coordinate/Antenna Settings ? X

Master Remote

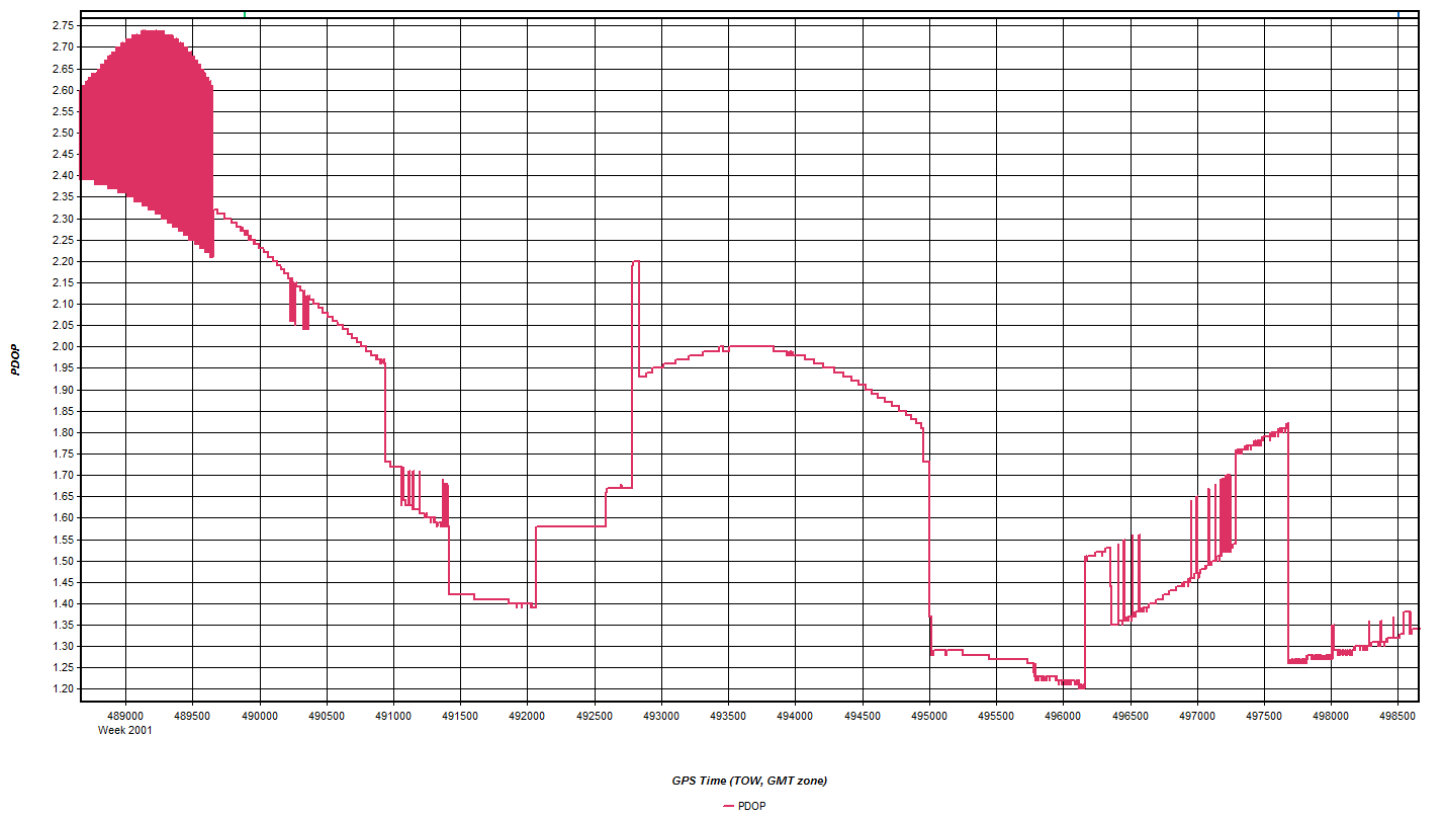
Base Station
1: MINW Name: MINW ☐ Disabled
File: E:\Proc\30135_Ottawa_NF_MI\From_Kucera_6-12-18\QSI_MI_LID\

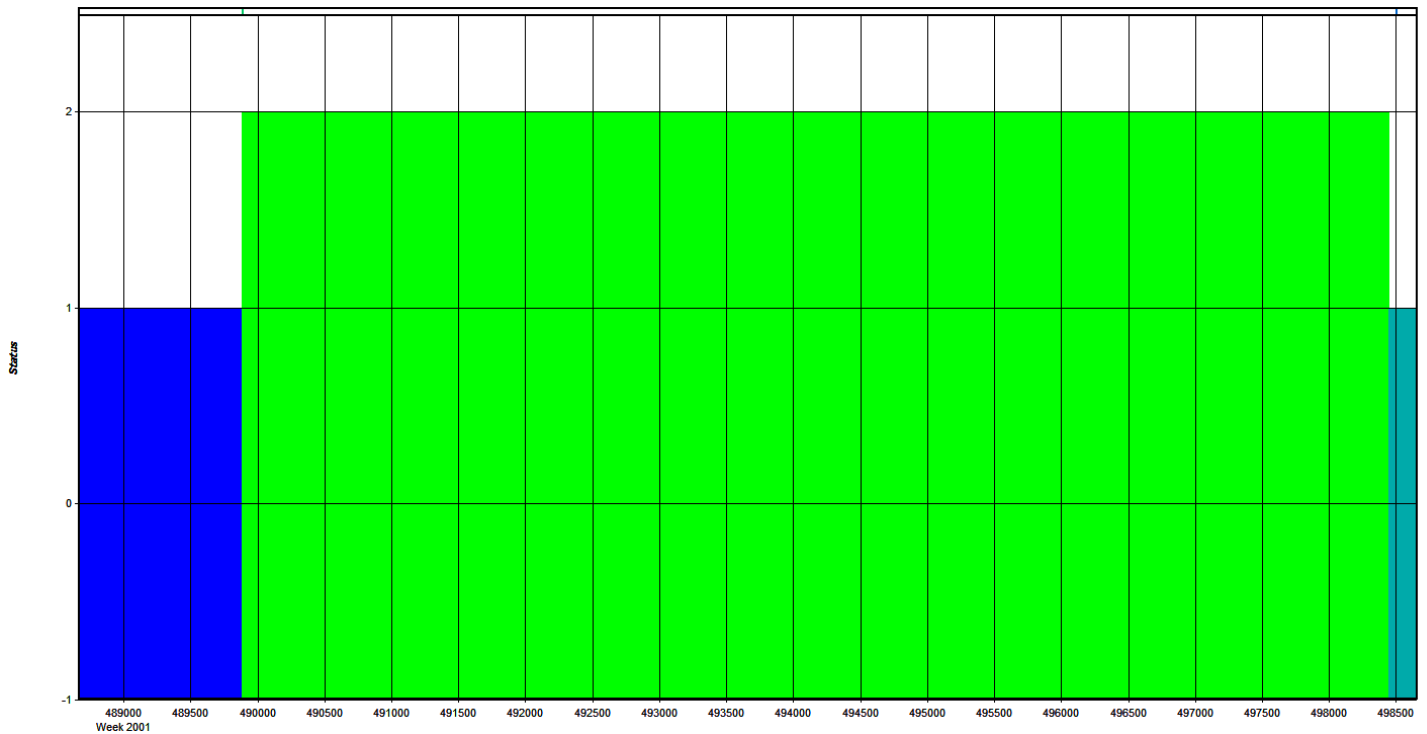
Coordinates
Latitude: North 45 47 24.32831 Coord. options
Longitude: West 87 55 05.74783 Save to Favorites
Ellipsoidal height: 256.855 m
Datum: WGS84 Proc Datum: WGS84
Epoch: year

Antenna Height
From station file: LEIAT504, LEIS View STA File
Antenna profile: LEIAT504, LEIS Info
Measured height: 0.000 m
ARP to L1 offset: 0.088 m
Applied height: 0.088 m
Measured to
☒ ARP
☐ L1 Phase Centre
Compute From Slant

OK Cancel

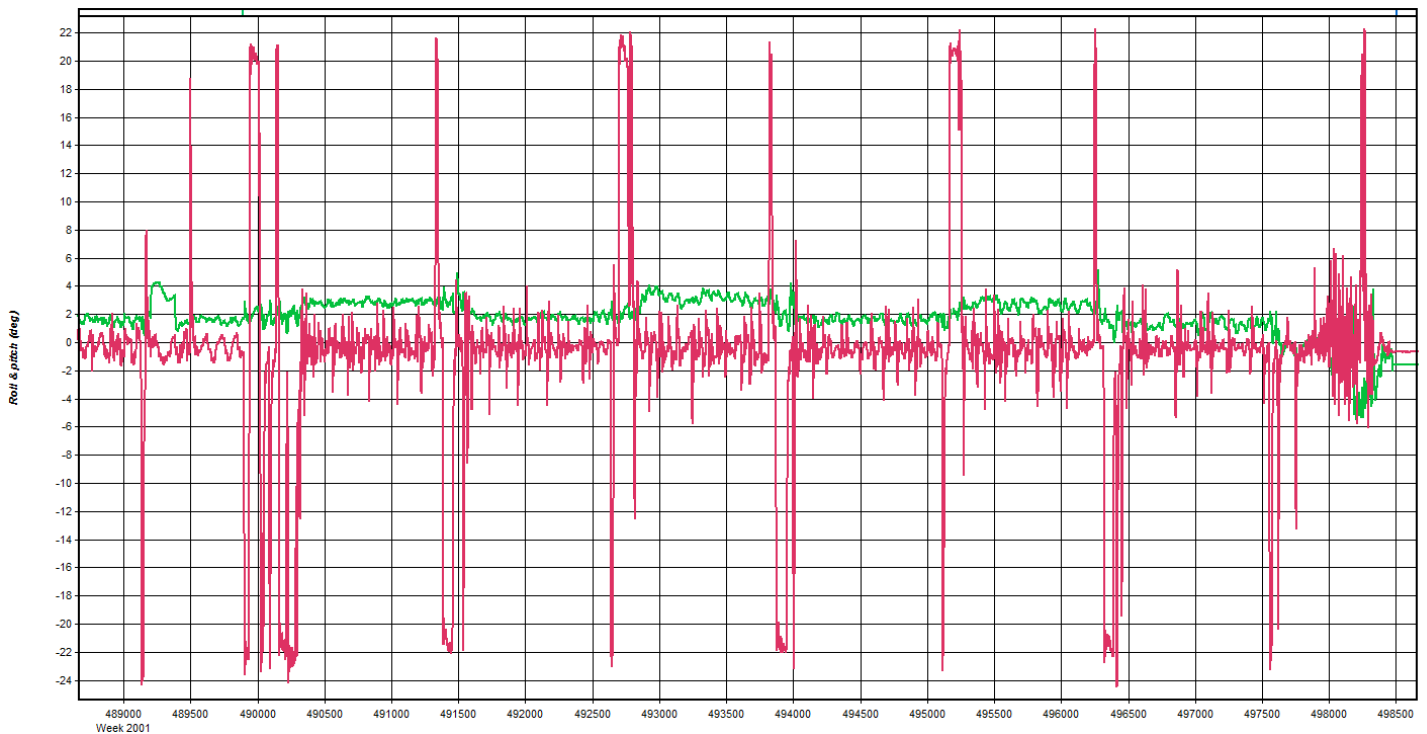
20180518A
(SN7232, N35834)





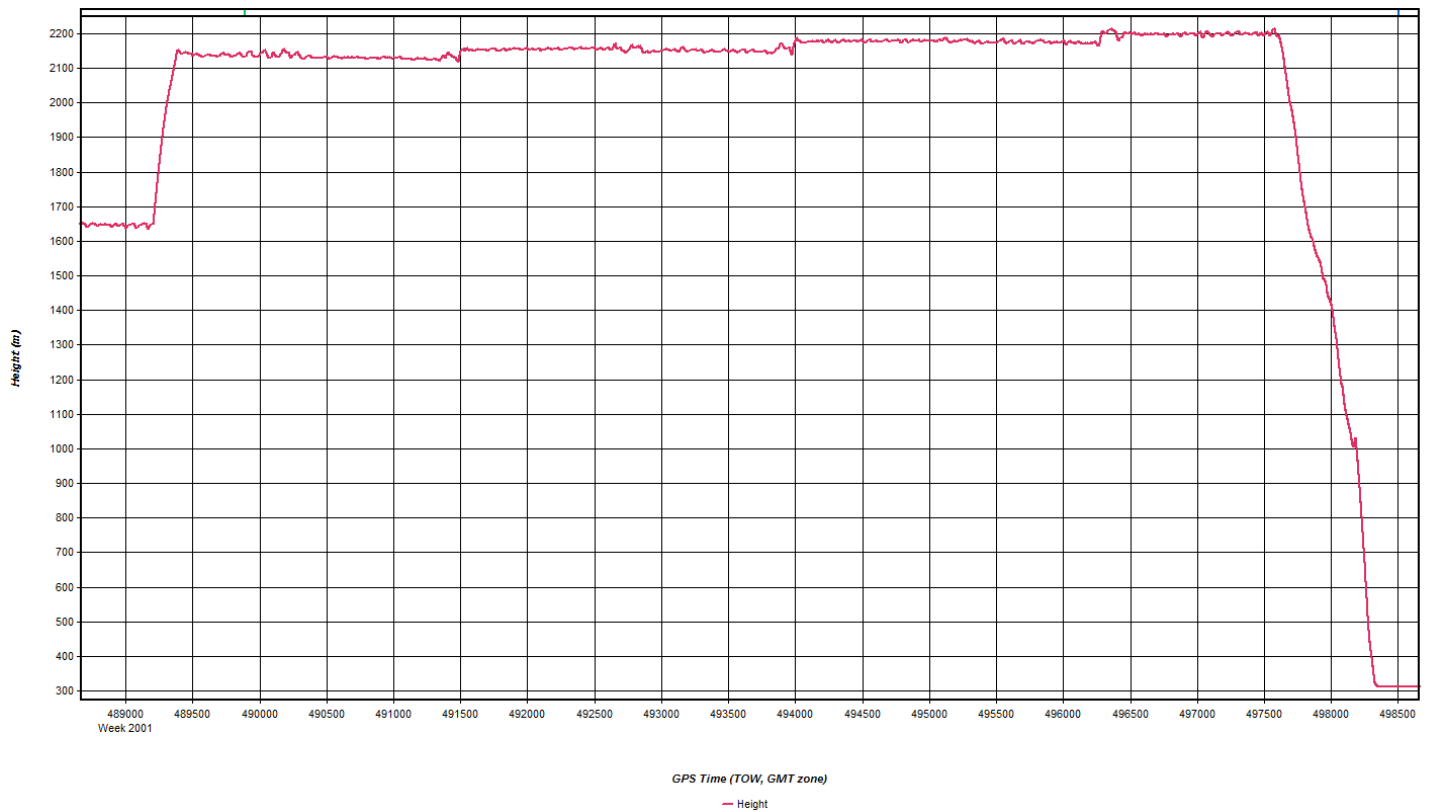
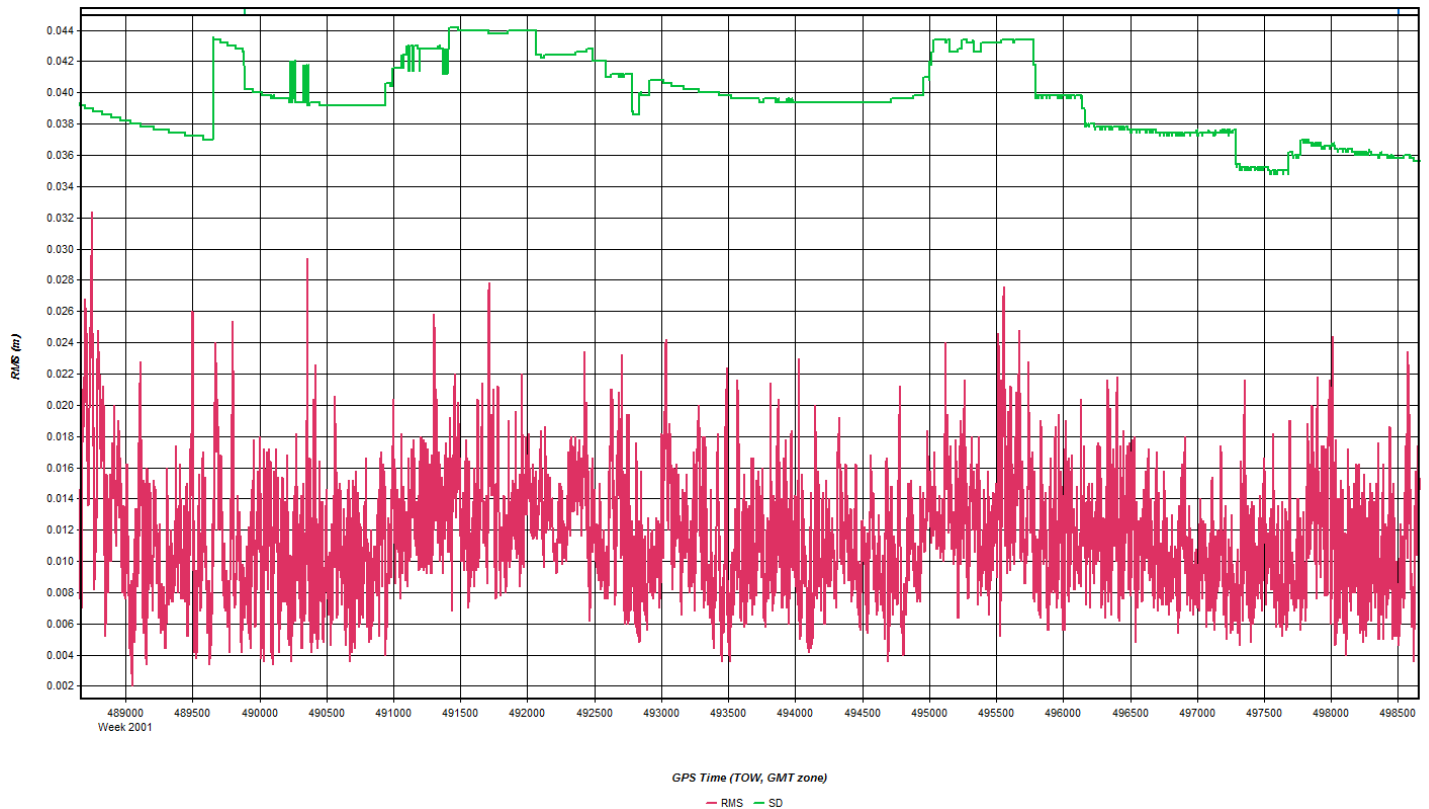
GPS Time (TOW, GMT zone)

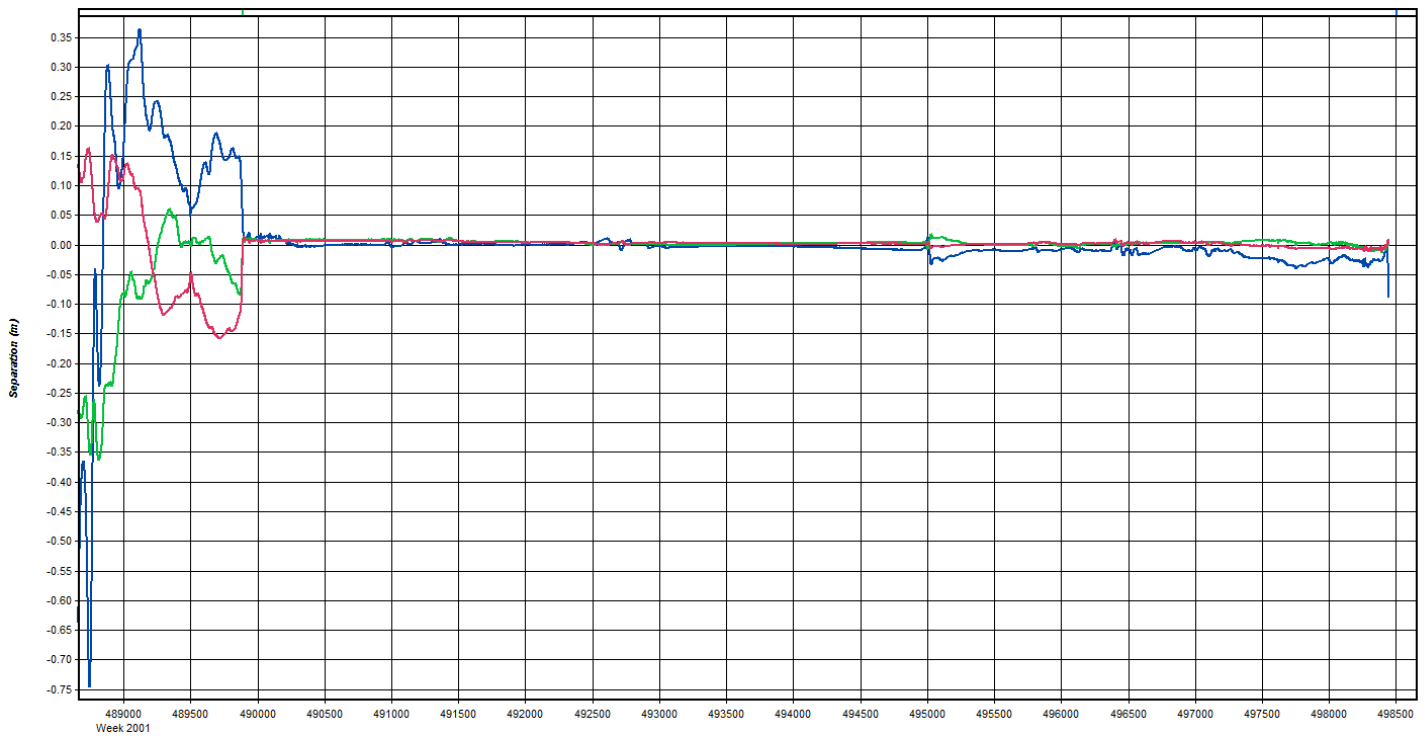
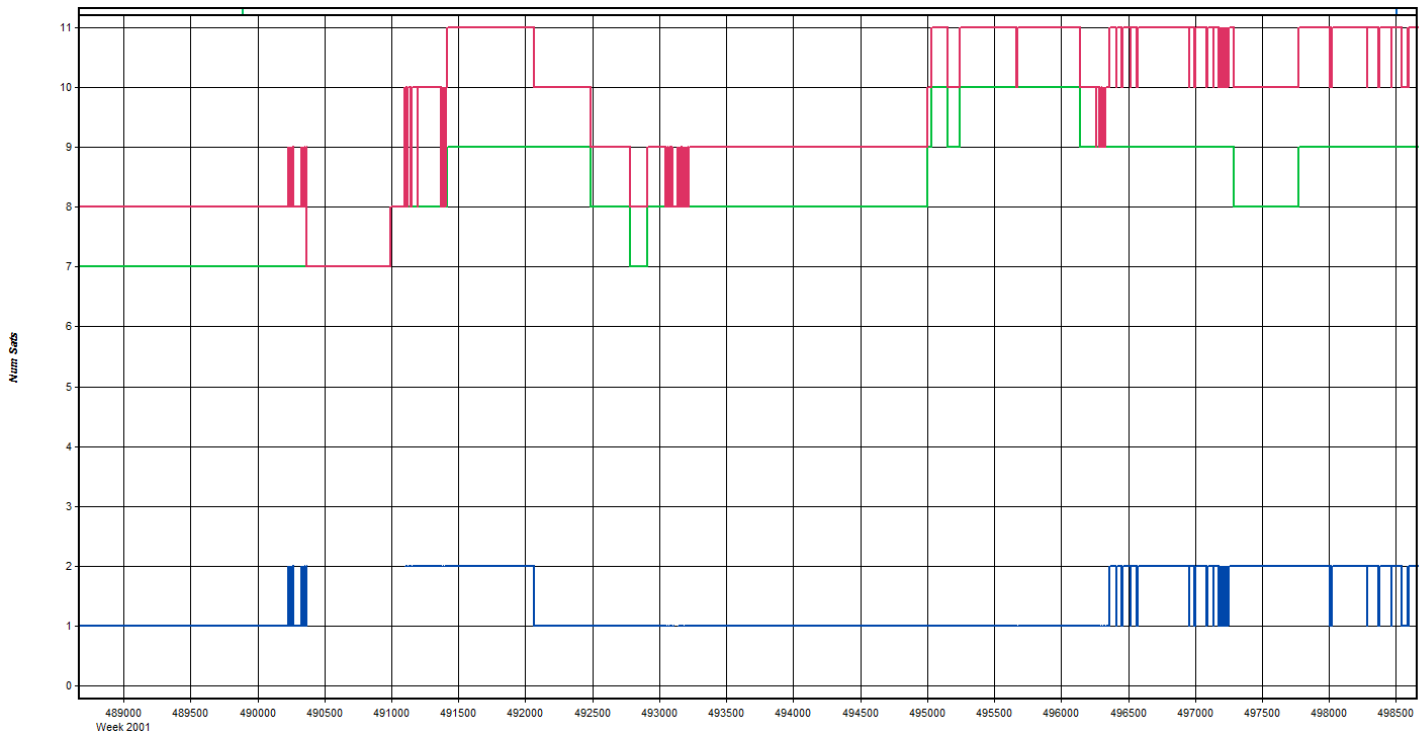
— Float — Forward Fixed — Reverse Fixed — Fixed (2 or more)

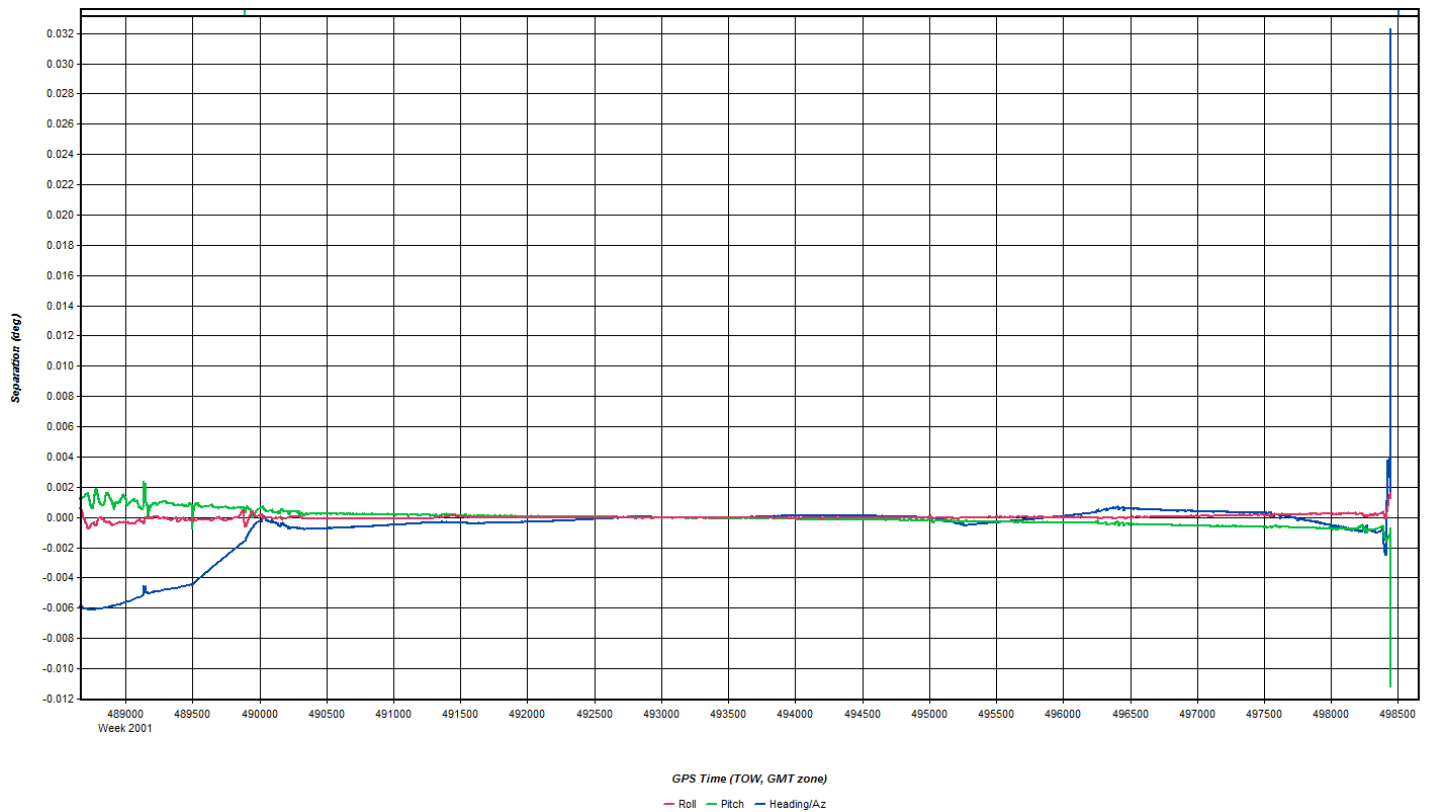
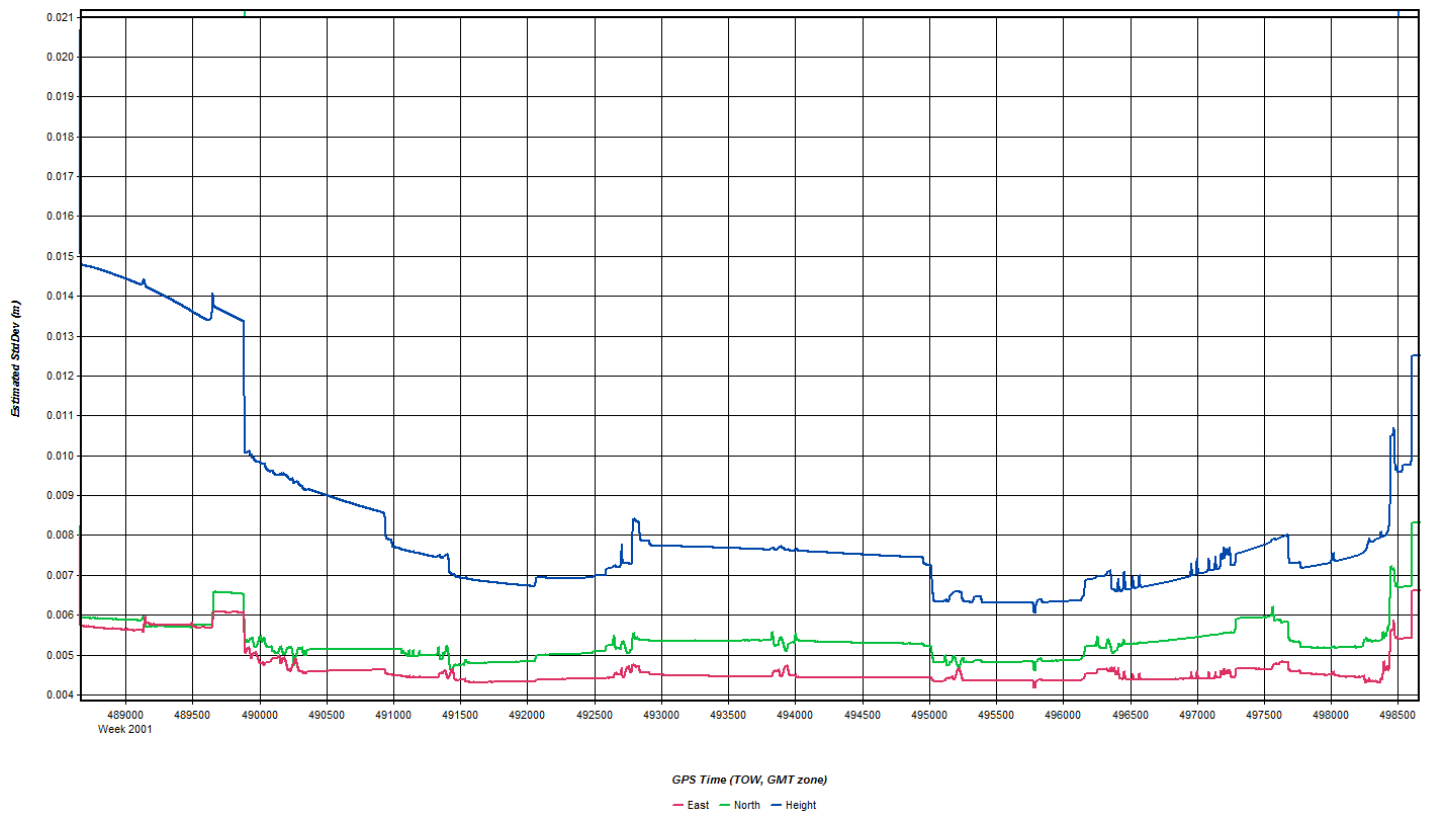


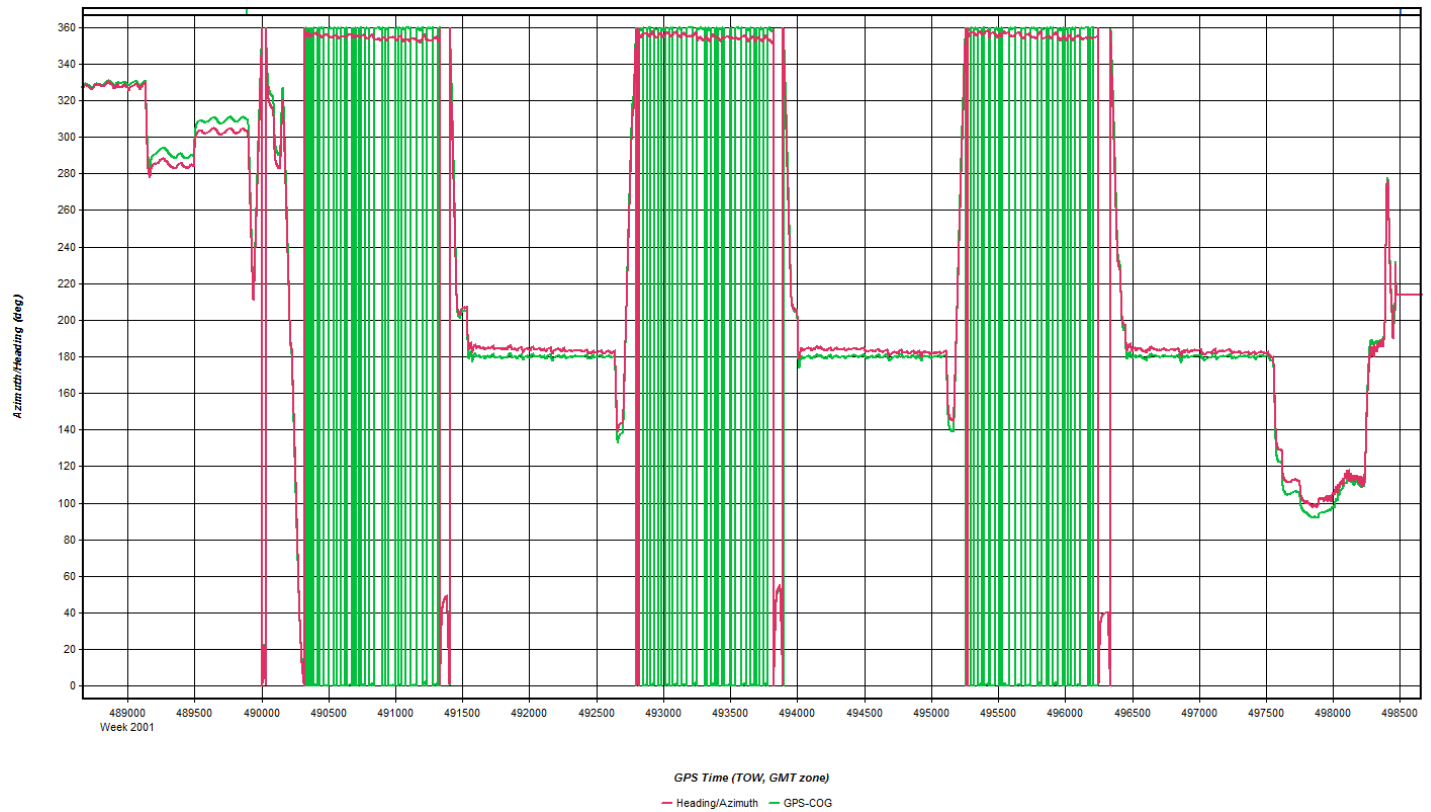
GPS Time (TOW, GMT zone)

— Roll — Pitch









Coordinate/Antenna Settings

Master Remote

Base Station

1: MIBX Name: MIBX Disabled

File: E:\Proc\30135_Ottawa_NF_MI\From_Kucera_6-12-18\QSI_MI_LID\

Coordinates

Latitude: North 46 45 50.77595 Coord. options

Longitude: West 88 30 46.83926 Save to Favorites

Ellipsoidal height: 194.707 m

Datum: WGS84 Proc Datum: WGS84

Epoch: year

Antenna Height

From station file: LEIAT504, LEIS View STA File

Antenna profile: LEIAT504, LEIS Info

Measured height: 0.000 m Measured to ARP

ARP to L1 offset: 0.088 m L1 Phase Centre

Applied height: 0.088 m Compute From Slant

OK Cancel

Coordinate/Antenna Settings ? X

Master Remote

Base Station
 2: MIIR Name: MIIR ☐ Disabled
 File: E:\Proc\30135_Ottawa_NF_MI\From_Kucera_6-12-18\QSI_MI_LID\

Coordinates
 Latitude: North 46 04 49.37197 Coord. options
 Longitude: West 88 38 00.11113 Save to Favorites
 Ellipsoidal height: 470.982 m
 Datum: WGS84 Proc Datum: WGS84
 Epoch: year

Antenna Height
 From station file: LEIAT504, LEIS View STA File
 Antenna profile: LEIAT504, LEIS Info
 Measured height: 0.000 m
 ARP to L1 offset: 0.088 m
 Applied height: 0.088 m

Measured to
☒ ARP
☐ L1 Phase Centre
 Compute From Slant

OK Cancel

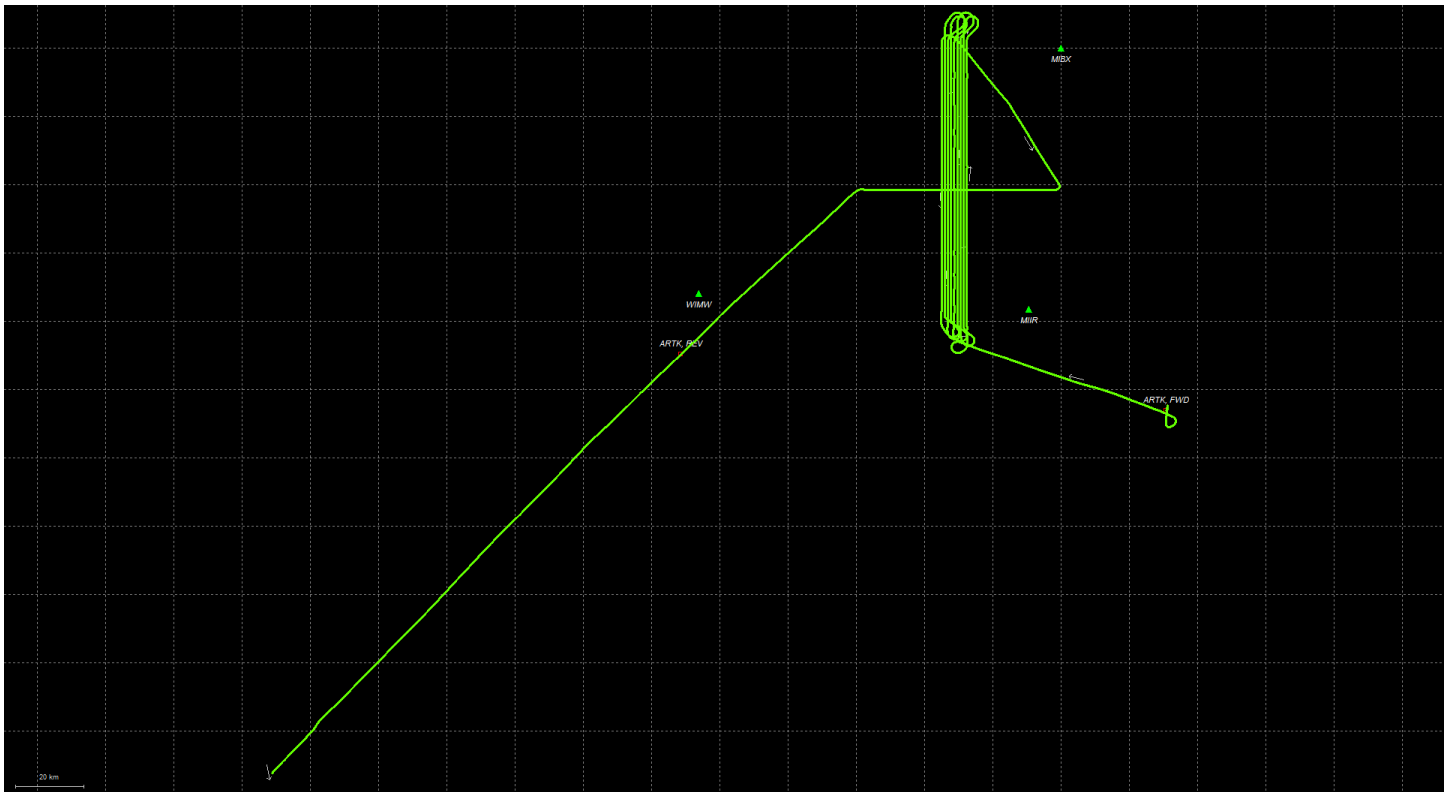
Flight Log

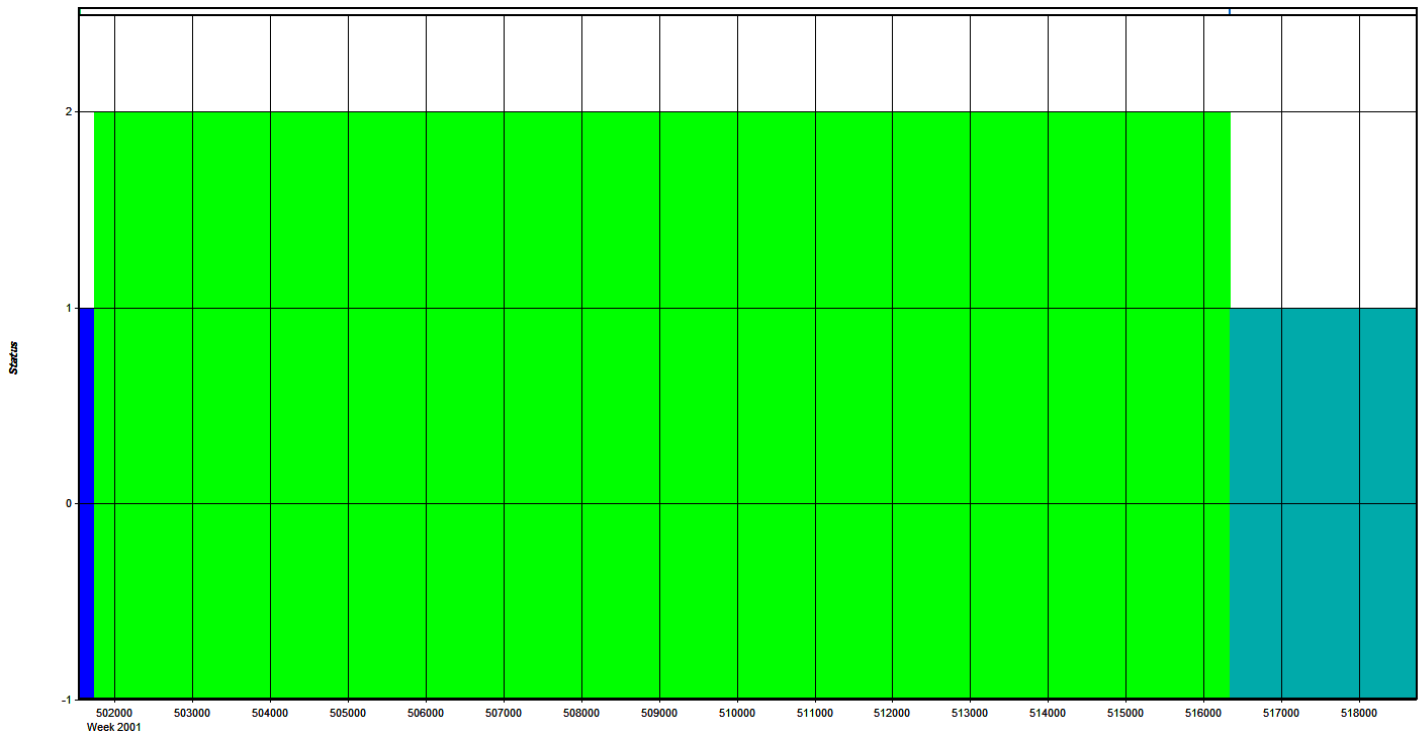
LIDAR

KUCERA INTERNATIONAL INC.									
LIDAR FLIGHT REPORT									
Release: April 2018		Pilot/Operator Bryan Fay mm/dd/yyyy		AIRCRAFT Tail Number 35534		WEATHER Sky conditions, light conditions, horizon, shadowing, visibility/haze, cloud types, wind, turbulence, etc. Clear, light turbulence developed on second mission.			
DATE 5/18/2018		LIDAR SN 7232		GPS Source Fwd		SSD Drive # SSD1 Space Rem.			
Camera System fwd/aft		Camera Location (Hole) Fwd		Start-up Shut-down 13:15 0:05		KLNN KEAU			
Camera Location (Hole) Fwd		Time 13:15 0:05		Location KLNN KEAU		LIDAR STARTUP CHECKS		Initials: AF	
						☒ Lens cleaned ☒ All fpts uploaded ☒ Pilot's screen functional ☒ Compact flash drive space ☒ SSDs have space ☒ Startup beeps & IPAS recording			
LIDAR plugged directly into airplane power without battery box (Y/N) - If yes, why?									
Remarks									
Job #	Location/ StarBlock	Line #	Flight Dir.	Crab Angle					
60919		5	E-W	2					
Hart MI		4	W-E	2					
		3	E-W	2					
		2	W-E	2					
		1	E-W	2					
60920		39	S-N	4					
Ottawa NF		38	N-S	5					
		37	S-N	4					
		36	N-S	5					
		35	S-N	4					
		34	N-S	5					
	END	18:30	KMIT						

Page 1

20180518B
(SN7232, N35834)





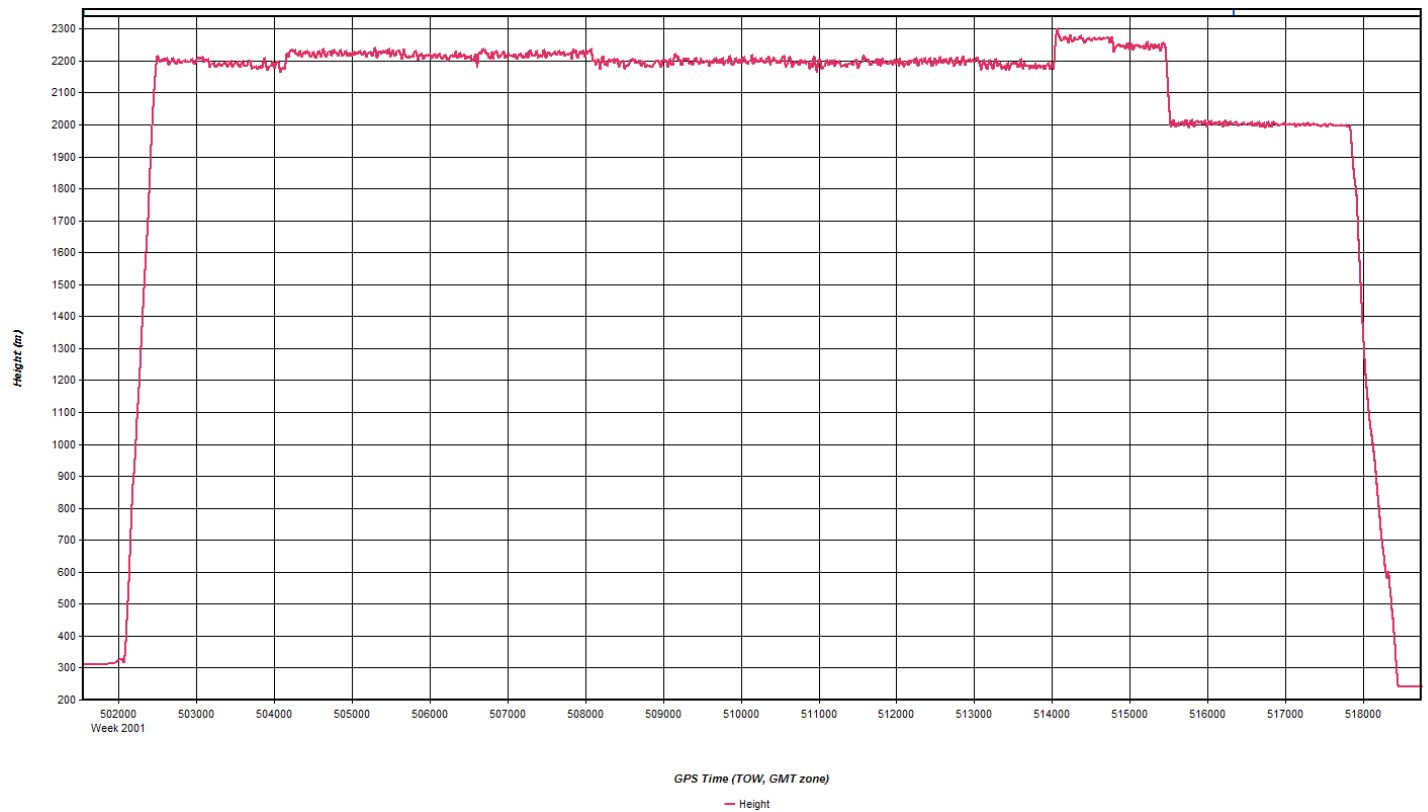
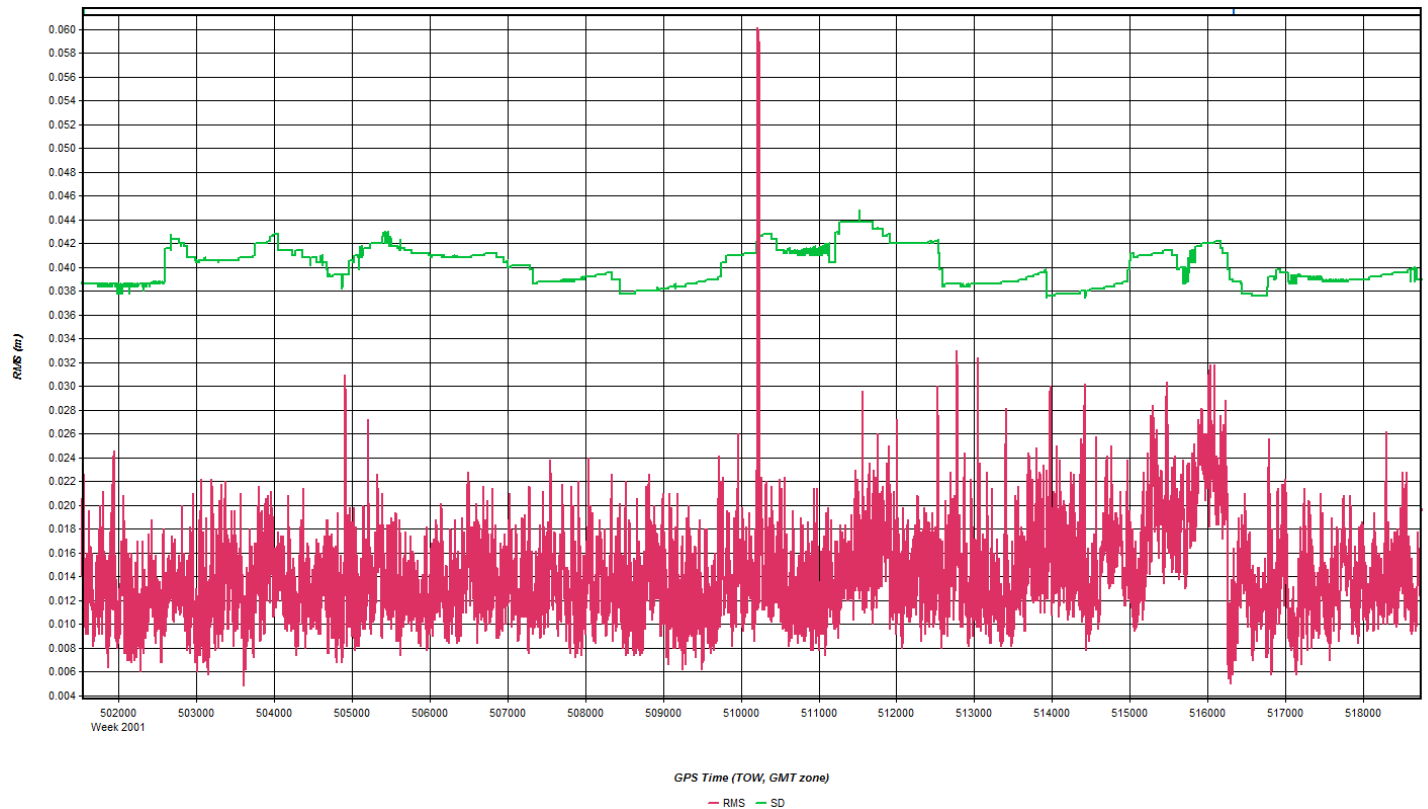
GPS Time (TOW, GMT zone)

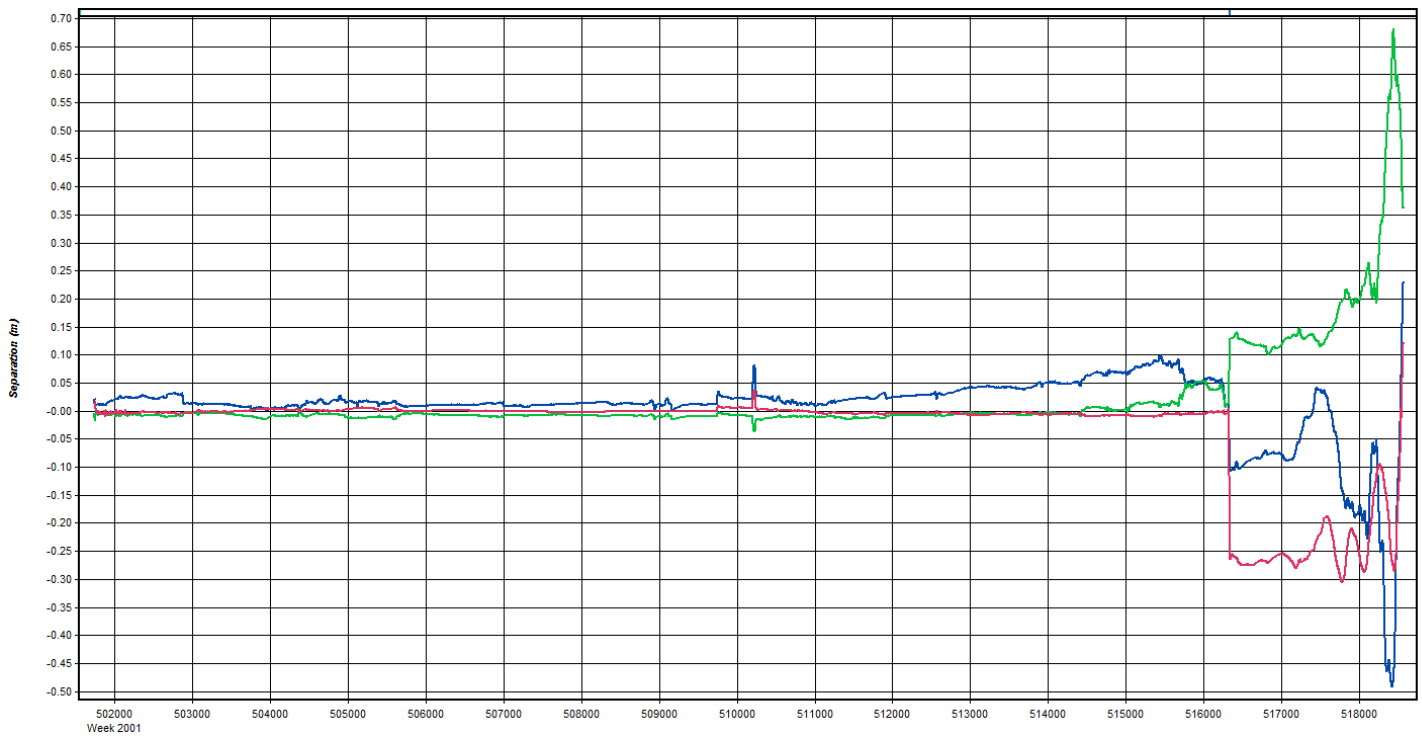
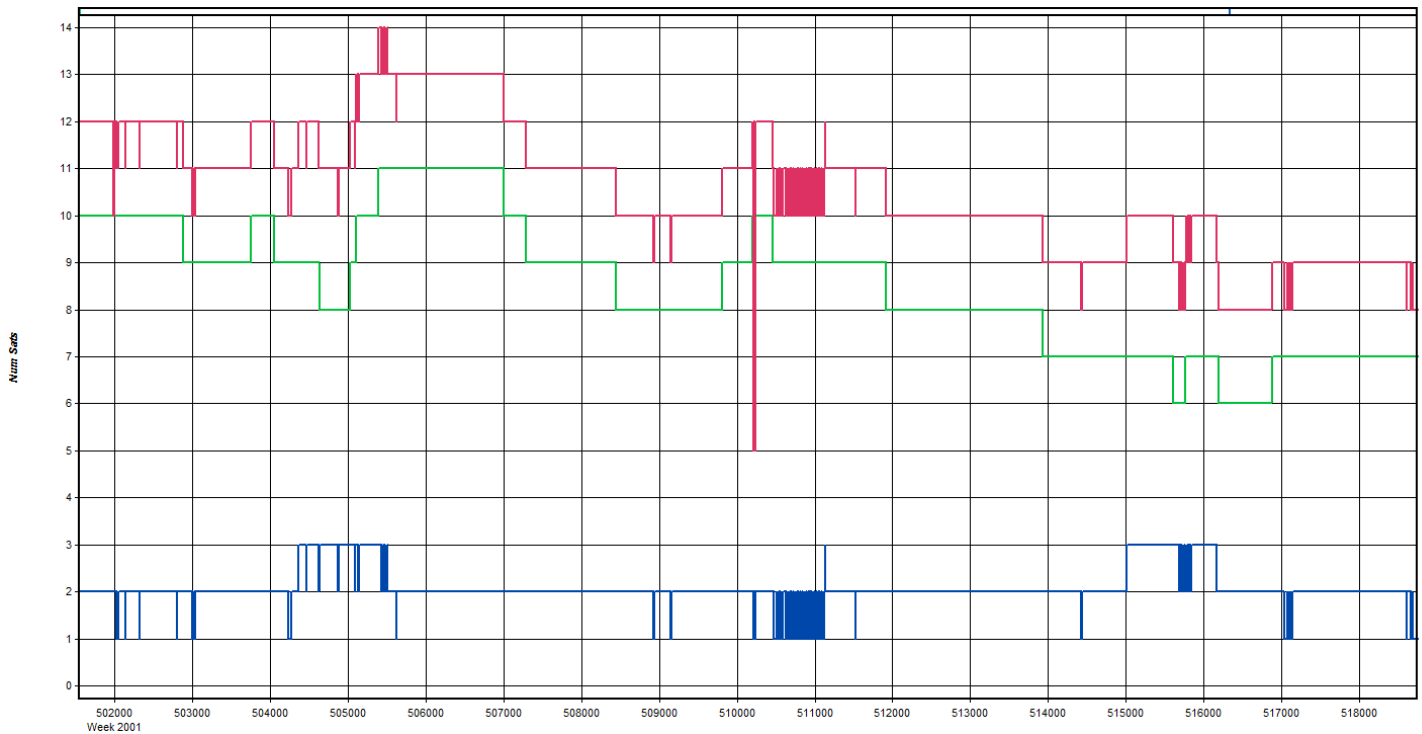
— Float — Forward Fixed — Reverse Fixed — Fixed (2 or more)

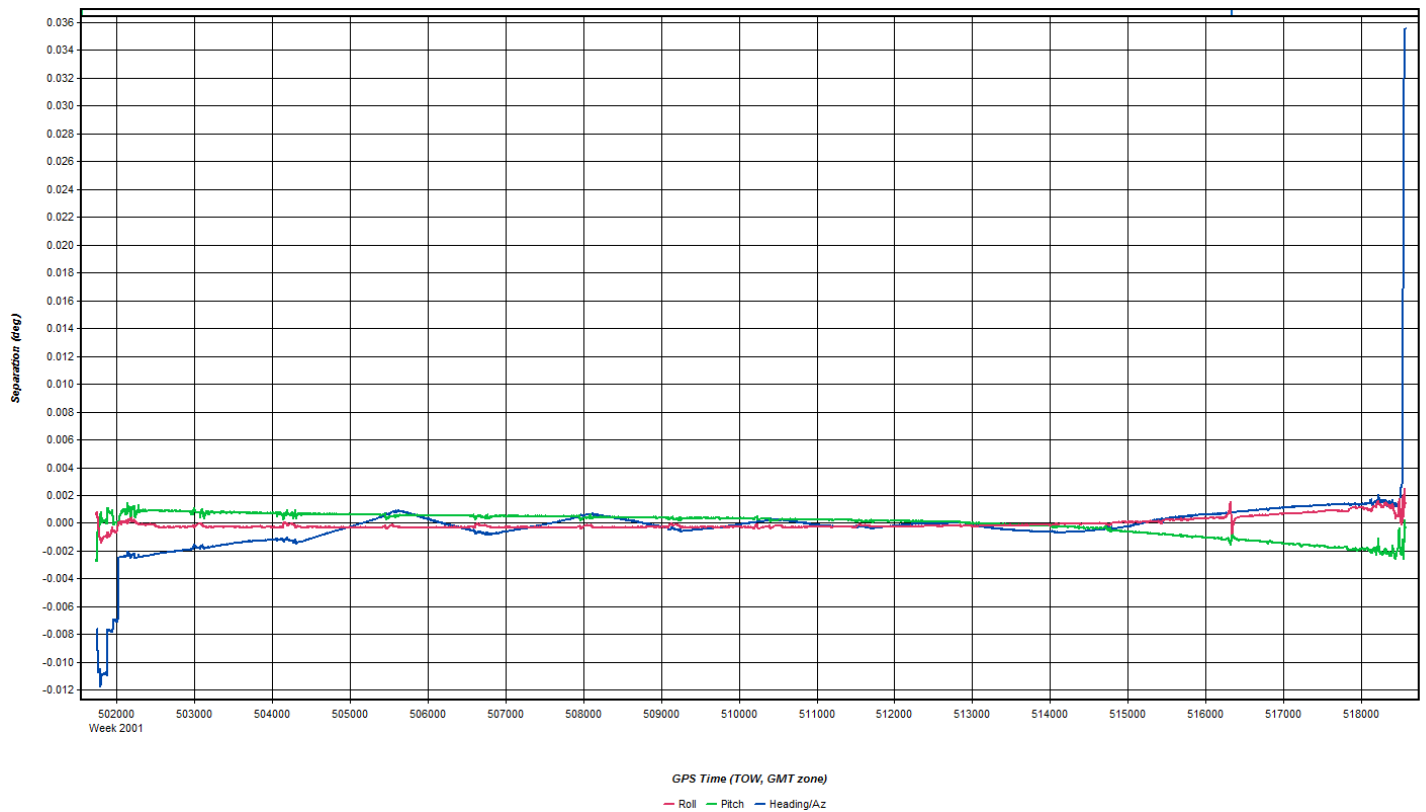
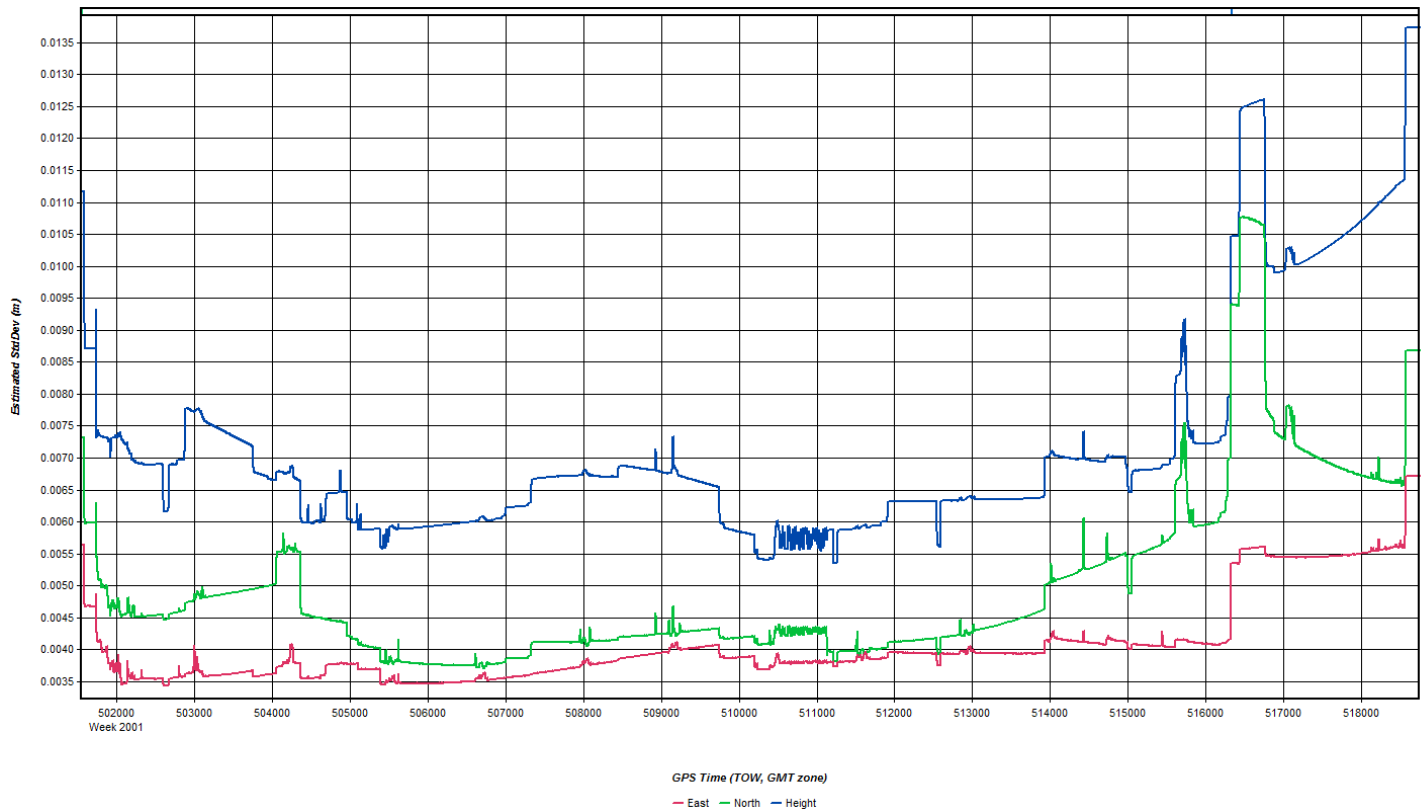


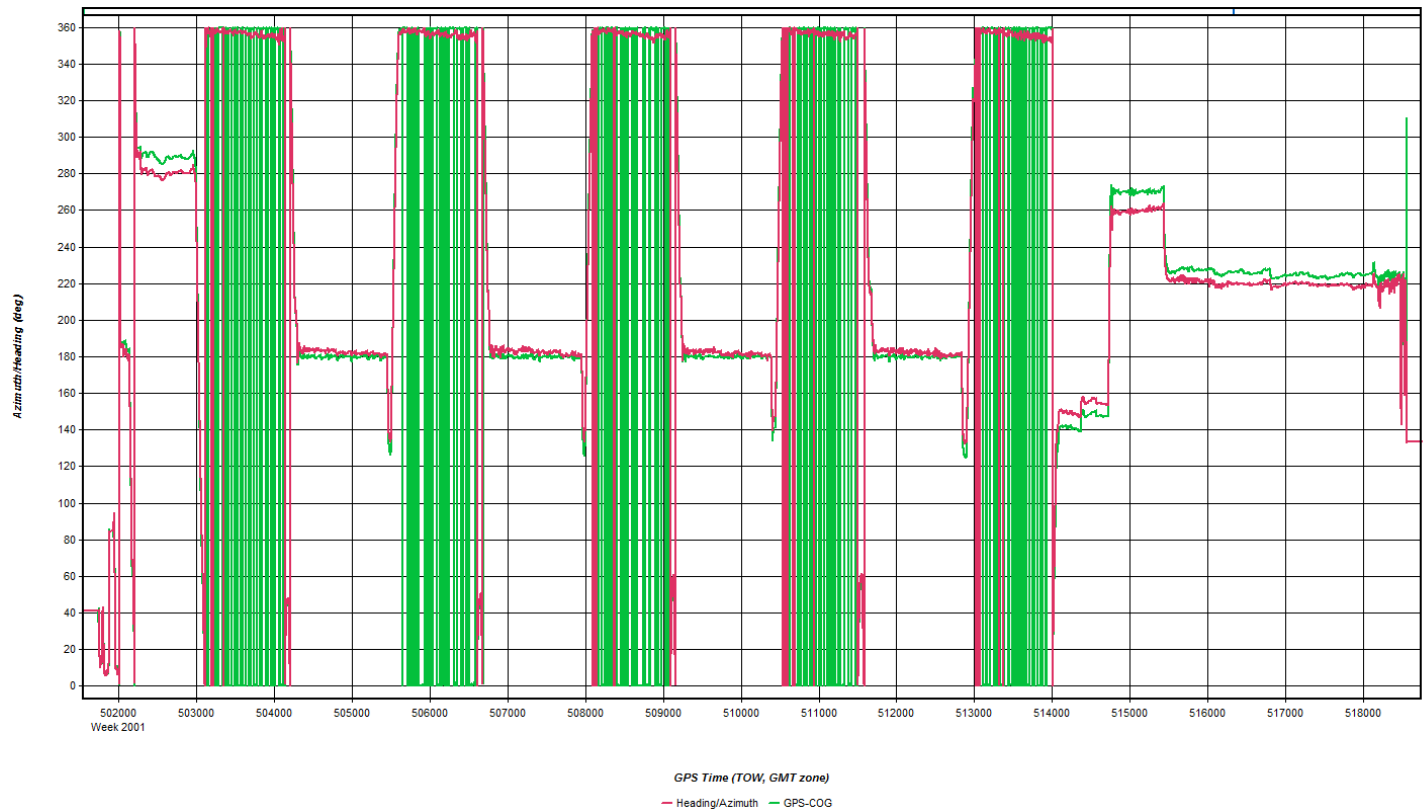
GPS Time (TOW, GMT zone)

— Roll — Pitch









Coordinate/Antenna Settings

Master Remote

Base Station

1: MIBX Name: MIBX Disabled

File: E:\Proc\30135_Ottawa_NF_MI\From_Kucera_6-12-18\QSI_MI_LID\

Coordinates

Latitude: North 46 45 50.77595 Coord. options

Longitude: West 88 30 46.83926 Save to Favorites

Ellipsoidal height: 194.707 m

Datum: WGS84 Proc Datum: WGS84

Epoch: year

Antenna Height

From station file: LEIAT504, LEIS View STA File

Antenna profile: LEIAT504, LEIS Info

Measured height: 0.000 m

ARP to L1 offset: 0.088 m

Applied height: 0.088 m

Measured to

☒ ARP

☐ L1 Phase Centre

Compute From Slant

OK Cancel

Coordinate/Antenna Settings ? X

Master Remote

Base Station
2: MIIR Name: MIIR ☐ Disabled
File: E:\Proc\30135_Ottawa_NF_MI\From_Kucera_6-12-18\QSI_MI_LID\

Coordinates
Latitude: North 46 04 49.37197 Coord. options
Longitude: West 88 38 00.11113 Save to Favorites
Ellipsoidal height: 470.982 m
Datum: WGS84 Proc Datum: WGS84
Epoch: year

Antenna Height
From station file: LEIAT504, LEIS View STA File
Antenna profile: LEIAT504, LEIS Info
Measured height: 0.000 m
ARP to L1 offset: 0.088 m
Applied height: 0.088 m
Measured to:
☒ ARP
☐ L1 Phase Centre
Compute From Slant

OK Cancel

Coordinate/Antenna Settings ? X

Master Remote

Base Station
3: WIMW Name: WIMW ☐ Disabled
File: E:\Proc\30135_Ottawa_NF_MI\From_Kucera_6-12-18\QSI_MI_LID\

Coordinates
Latitude: North 46 07 20.41296 Coord. options
Longitude: West 89 52 34.90754 Save to Favorites
Ellipsoidal height: 462.931 m
Datum: WGS84 Proc Datum: WGS84
Epoch: year

Antenna Height
From station file: TRM57971.00, NONE View STA File
Antenna profile: TRM57971.00 Info
Measured height: 0.000 m
ARP to L1 offset: 0.065 m
Applied height: 0.065 m
Measured to:
☒ ARP
☐ L1 Phase Centre
Compute From Slant

OK Cancel

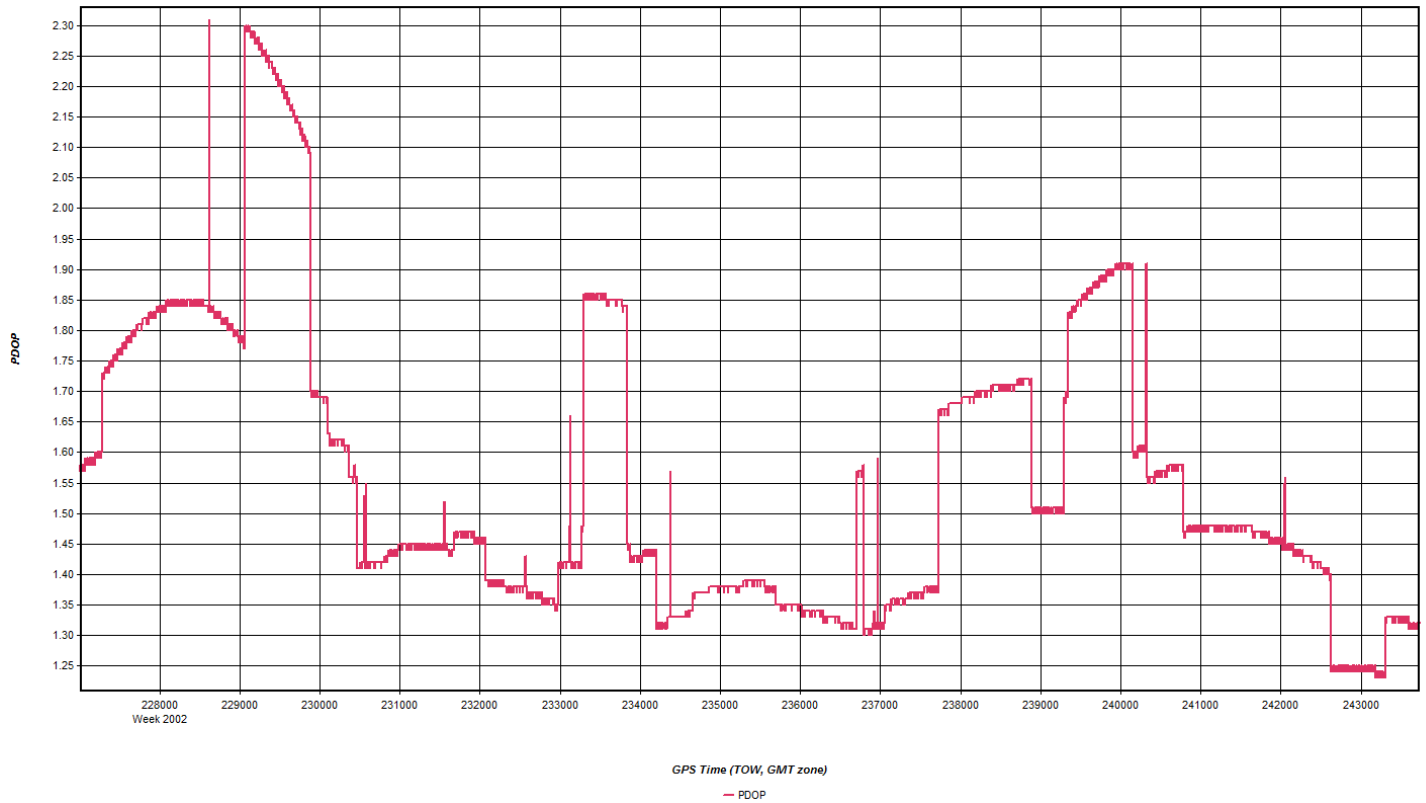
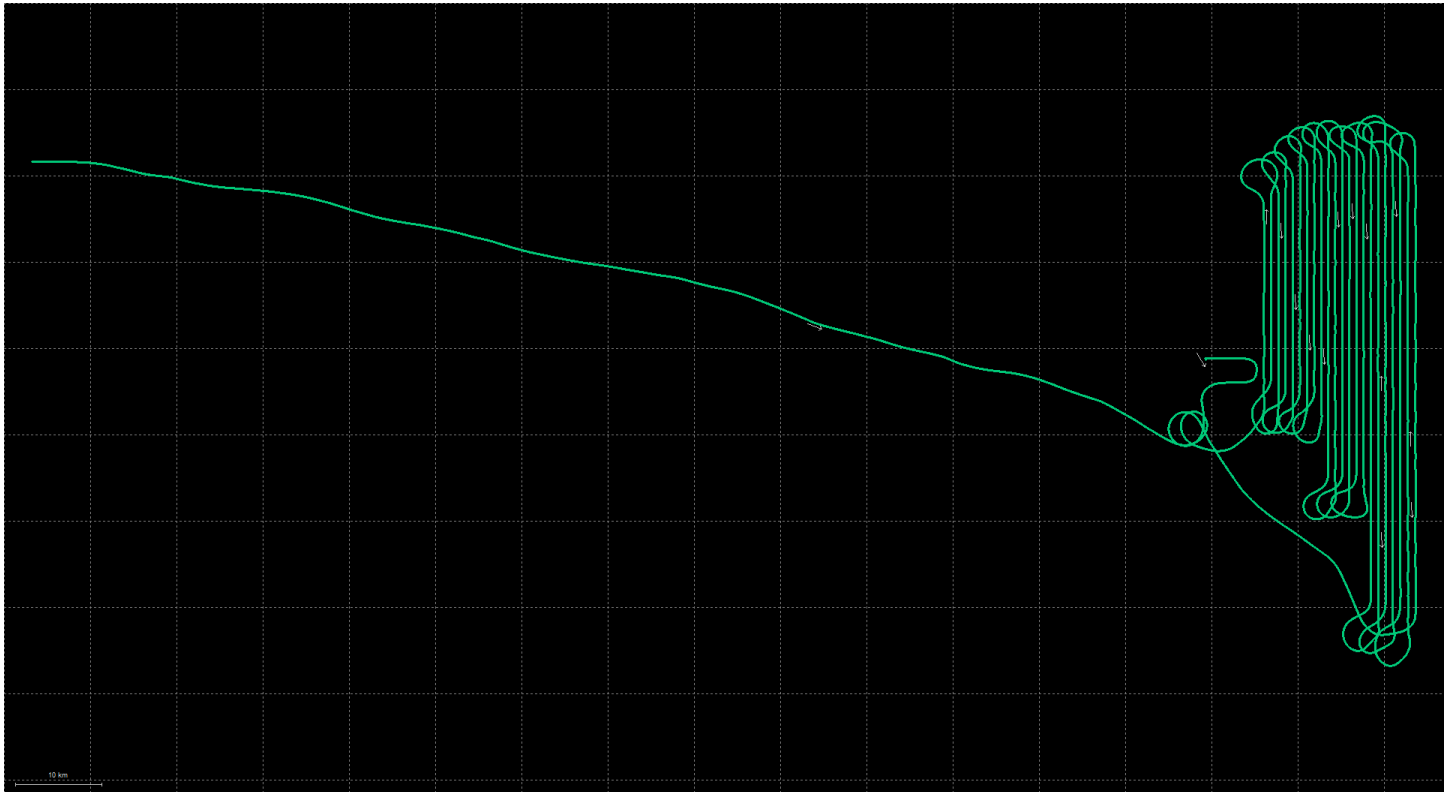
Flight Log

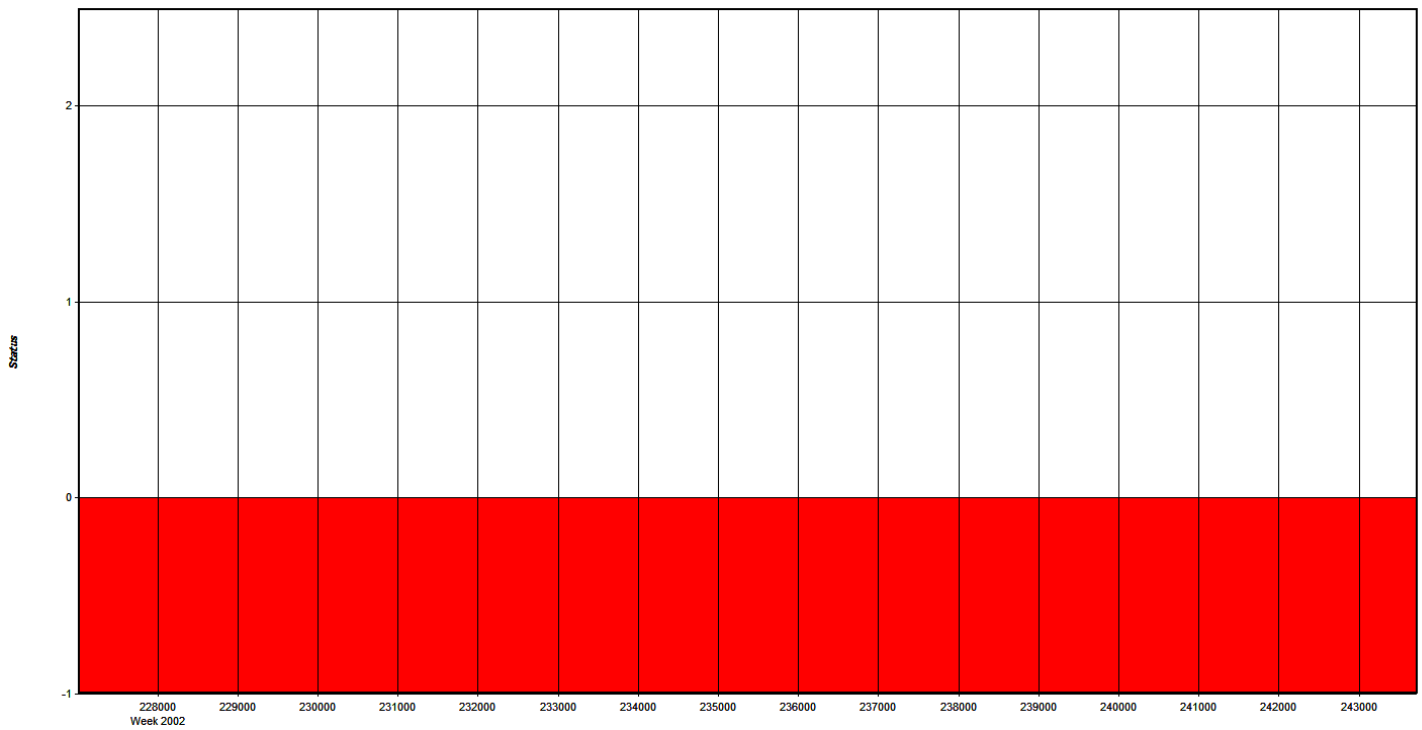
LIDAR

KUCERA INTERNATIONAL INC.									
LIDAR FLIGHT REPORT									
CREW Pilot/Operator Brian Fay mm/dd/yyyy		AIRCRAFT Tail Number 35534		WEATHER Sky conditions, light conditions, horizon, shadowing, visibility/haze, cloud types, wind, turbulence, etc. Clear, light turbulence developed on second mission.					
DATE 5/18/2018		GPS Source Fwd		SSD Drive # SSD1 Space Rem.					
Camera System 7232		LIDAR SN fwd/aft Fwd		LIDAR STARTUP CHECKS					
Camera Location (Hole)		Time 13:15 0:05		☒ Lens cleaned ☒ All fids uploaded ☒ Pilot's screen functional ☒ Compact flash drive space ☒ SSDs have space ☒ Startup beeps & IPAS recording		Initials: AF			
LIDAR plugged directly into airplane power without battery box (Y/N) - If yes, why?									
Remarks									
Job #	Location/StarBlock	Line #	Flight Dir.	Crab Angle					
60929	START	19:15	KMT						
		33	S-N	1					
		32	N-S	3					
		31	S-N	1					
		30	N-S	3					
		29	S-N	1					
		28	N-S	3					
		27	S-N	1					
		26	N-S	3					
		25	S-N	1	Had a GNSS data gap after line. Had to recycle the flight plan.				
		56	E-W	12					

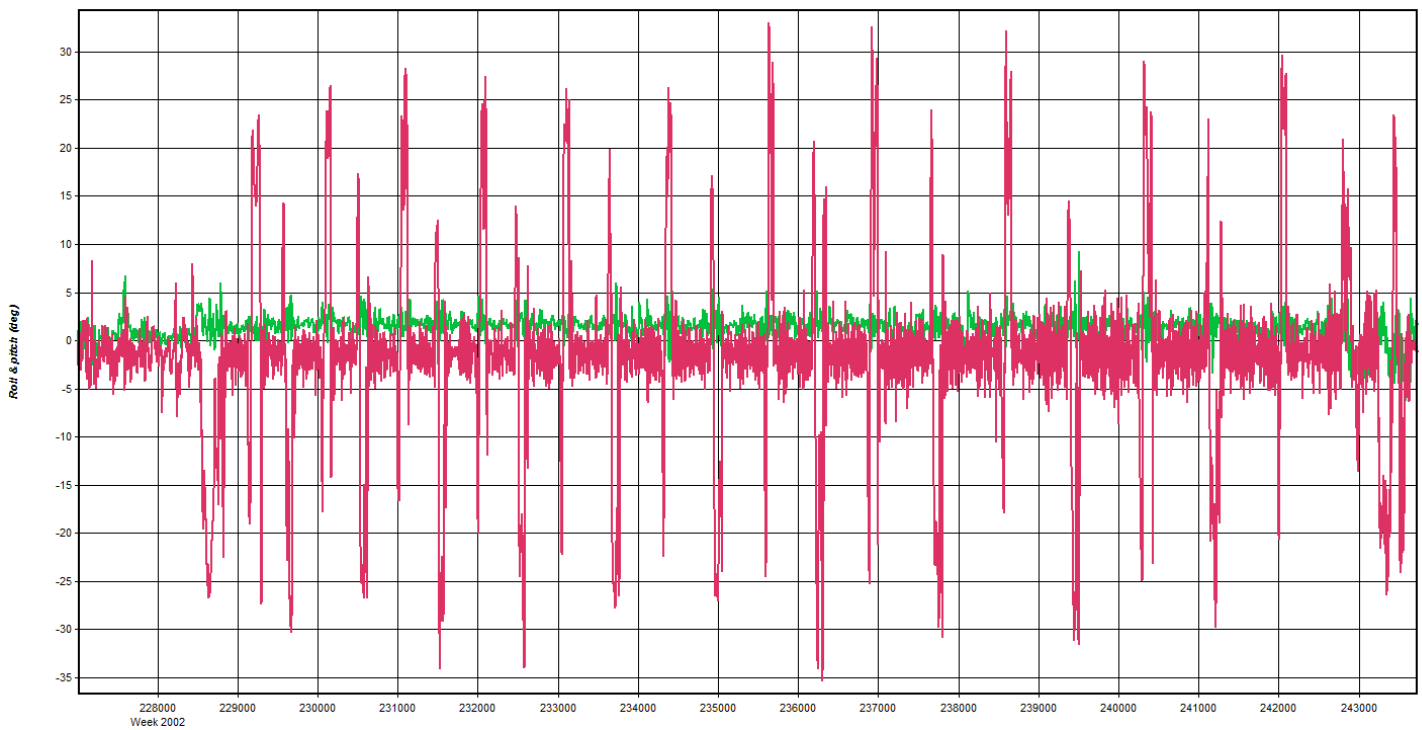
Page 1

20180522A
(SN7229, C-FQLC)

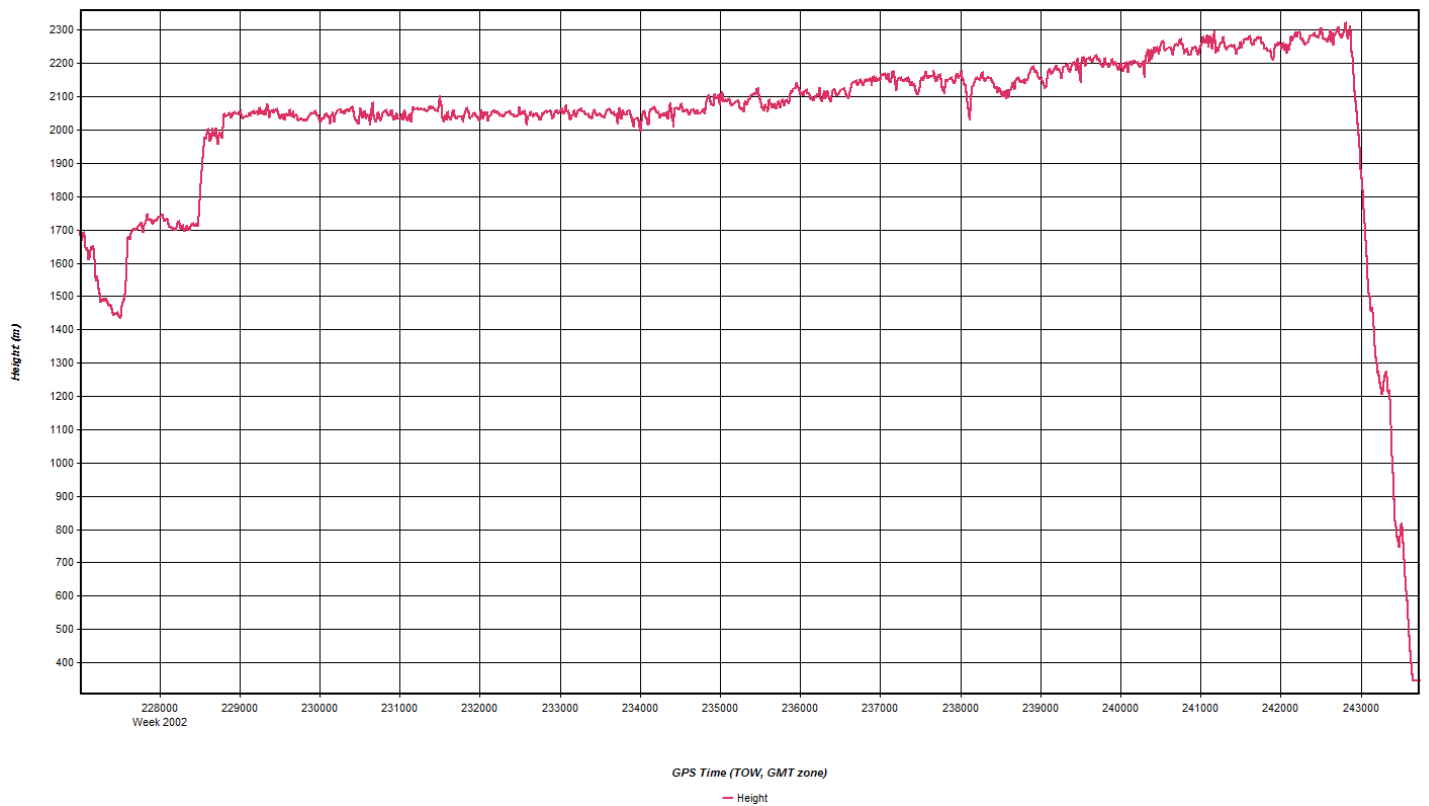
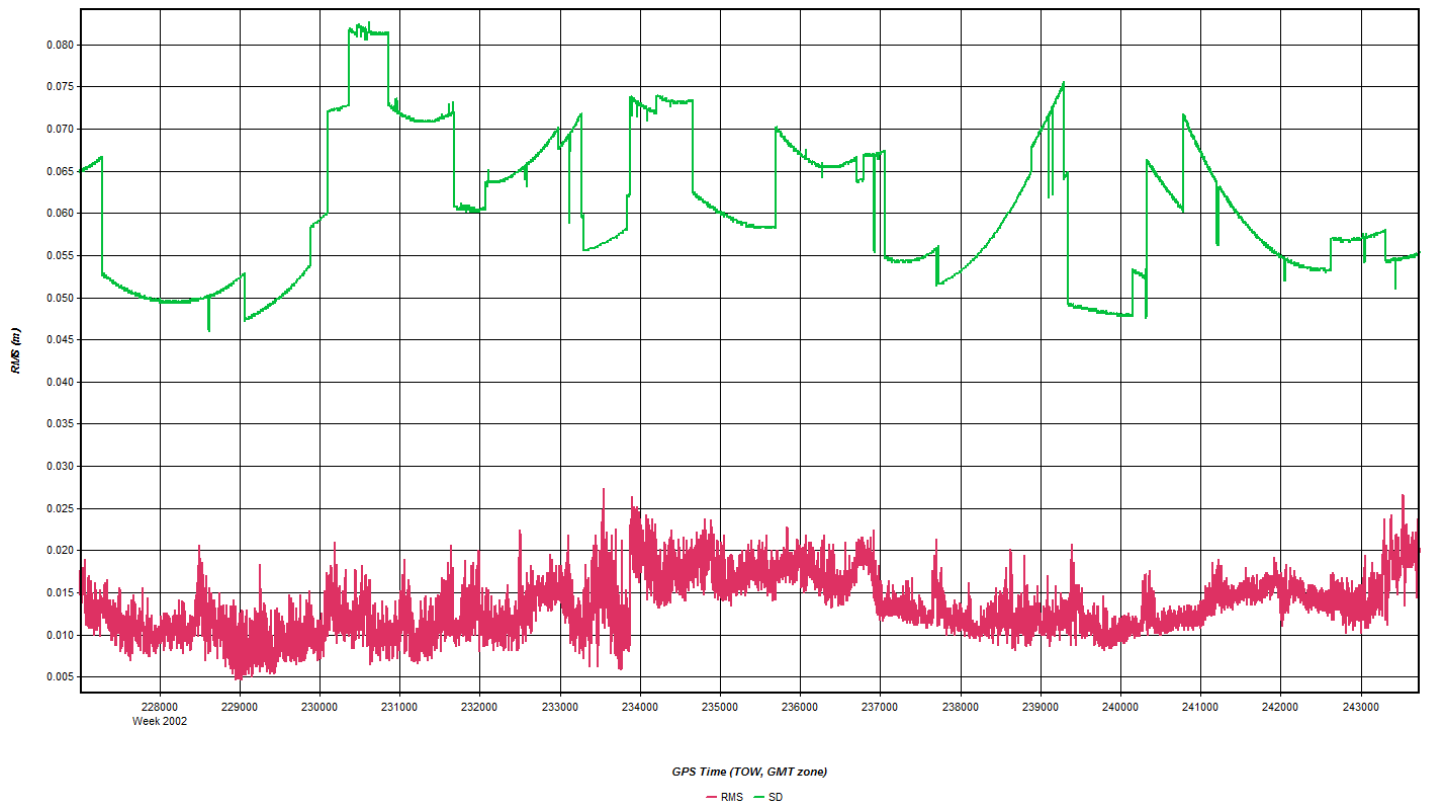


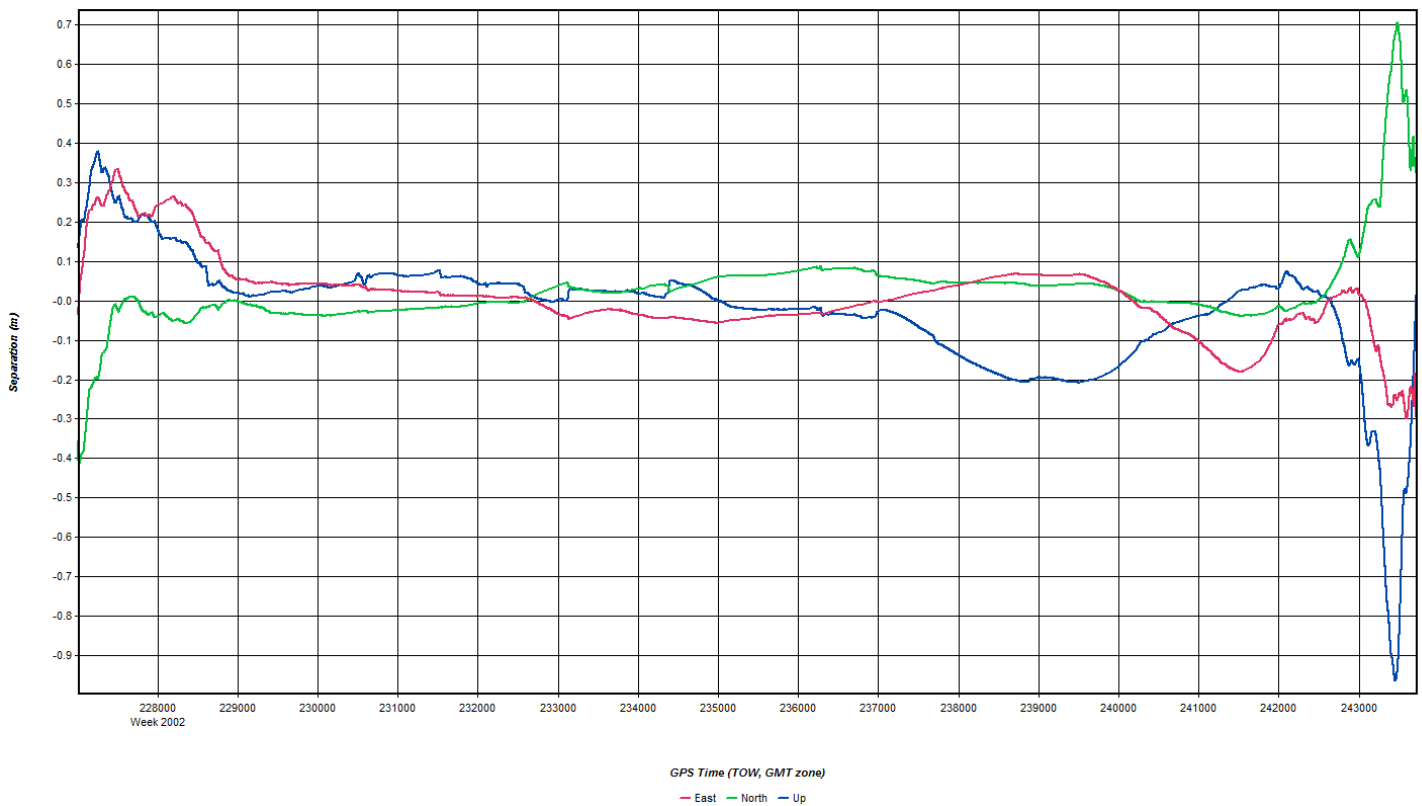
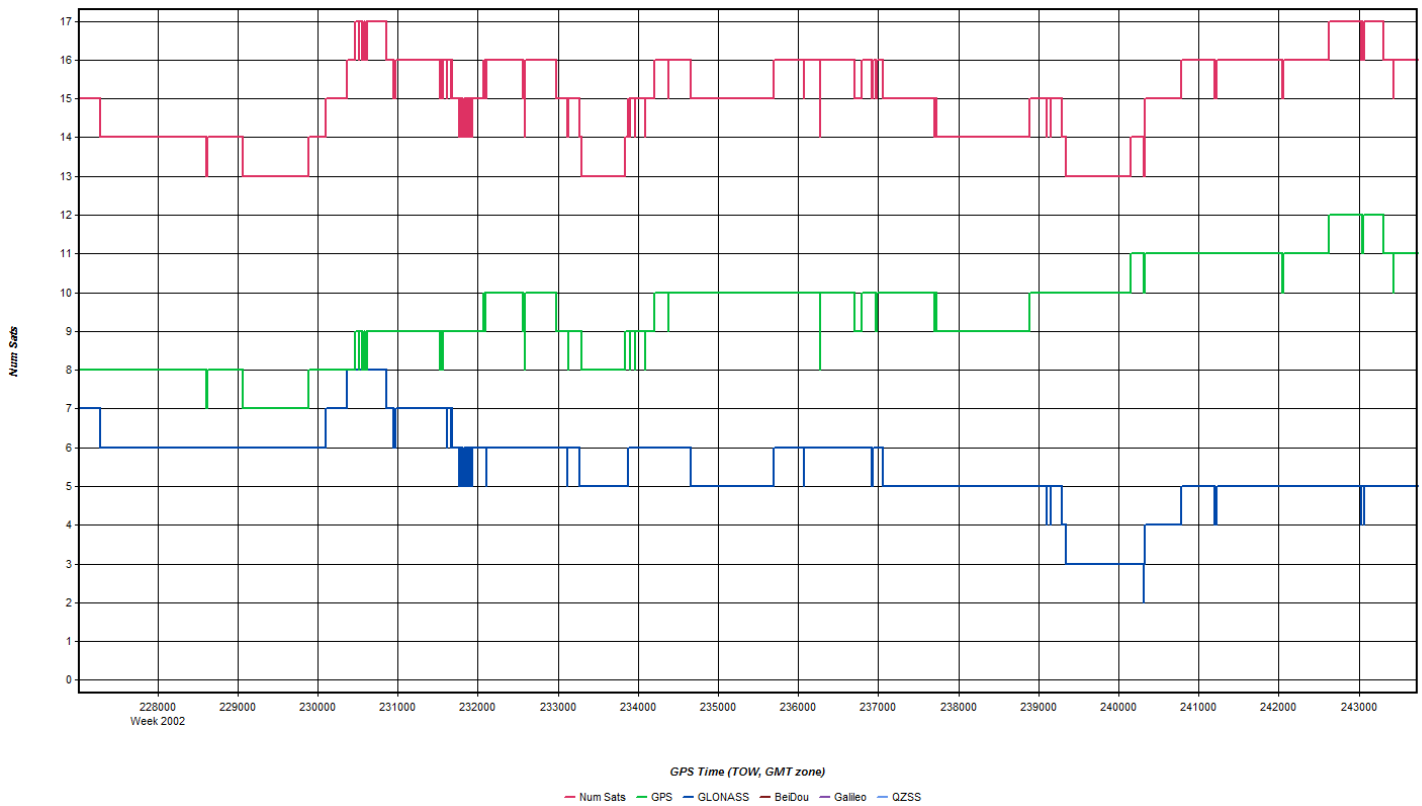


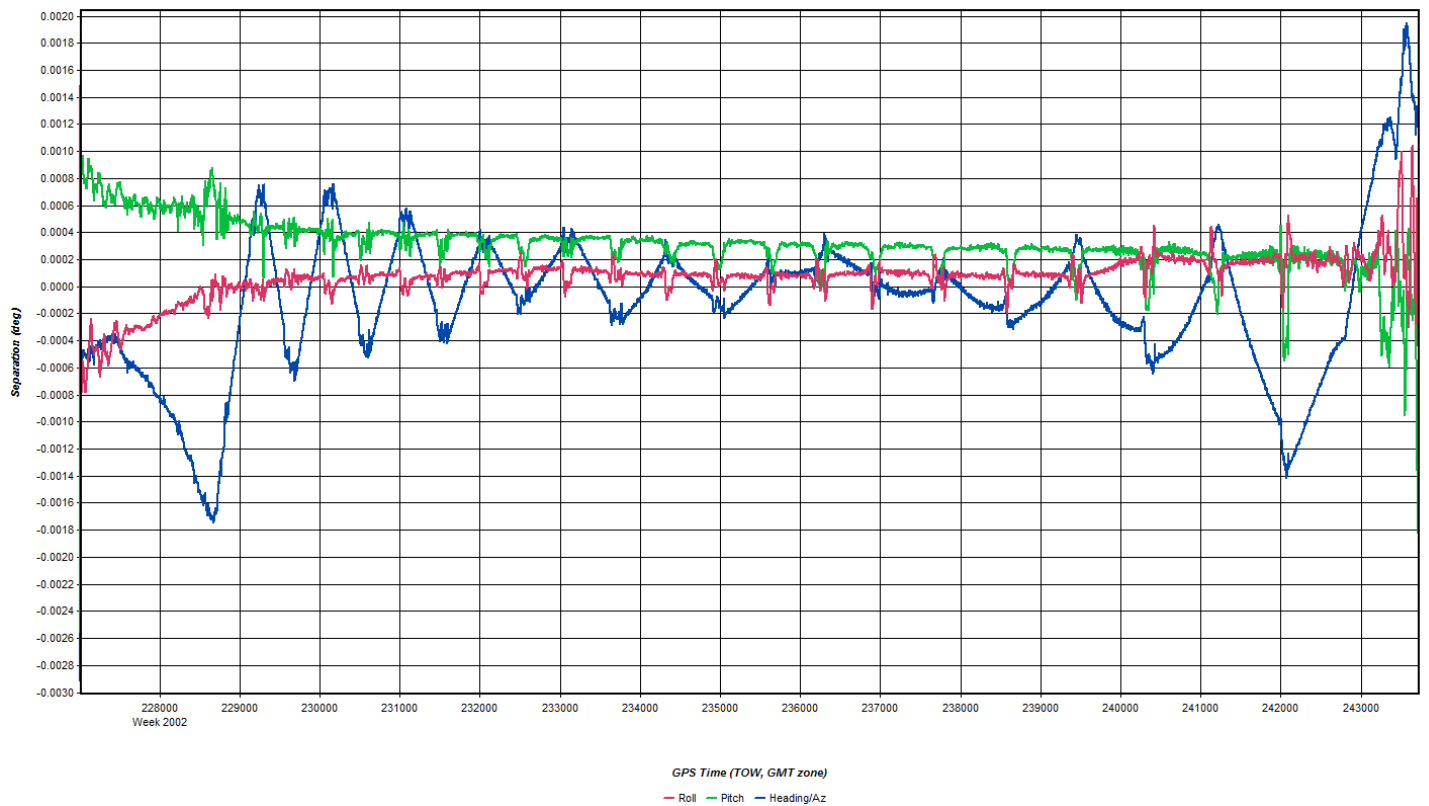
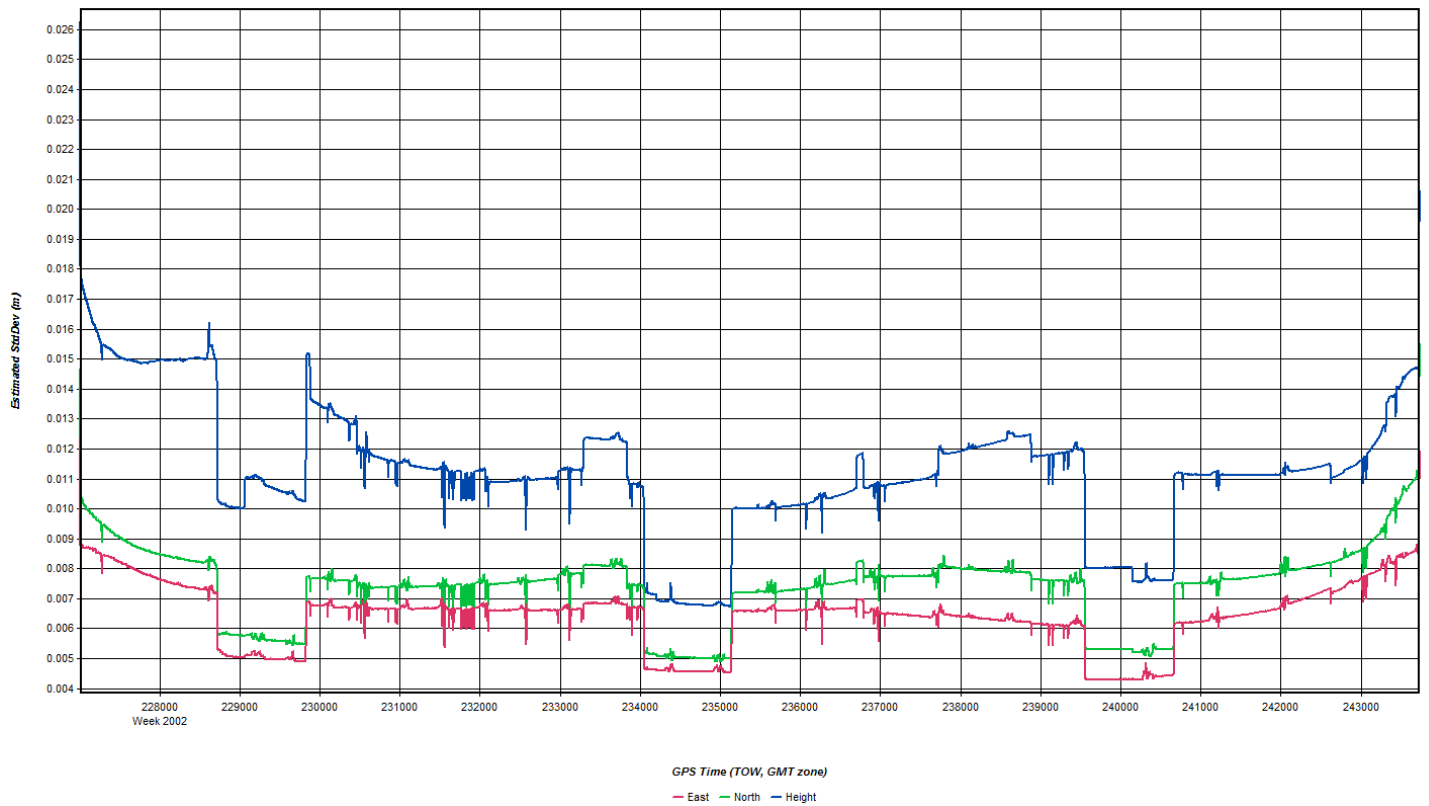
GPS Time (TOW, GMT zone)
— Float — Forward Fixed — Reverse Fixed — Fixed (2 or more)

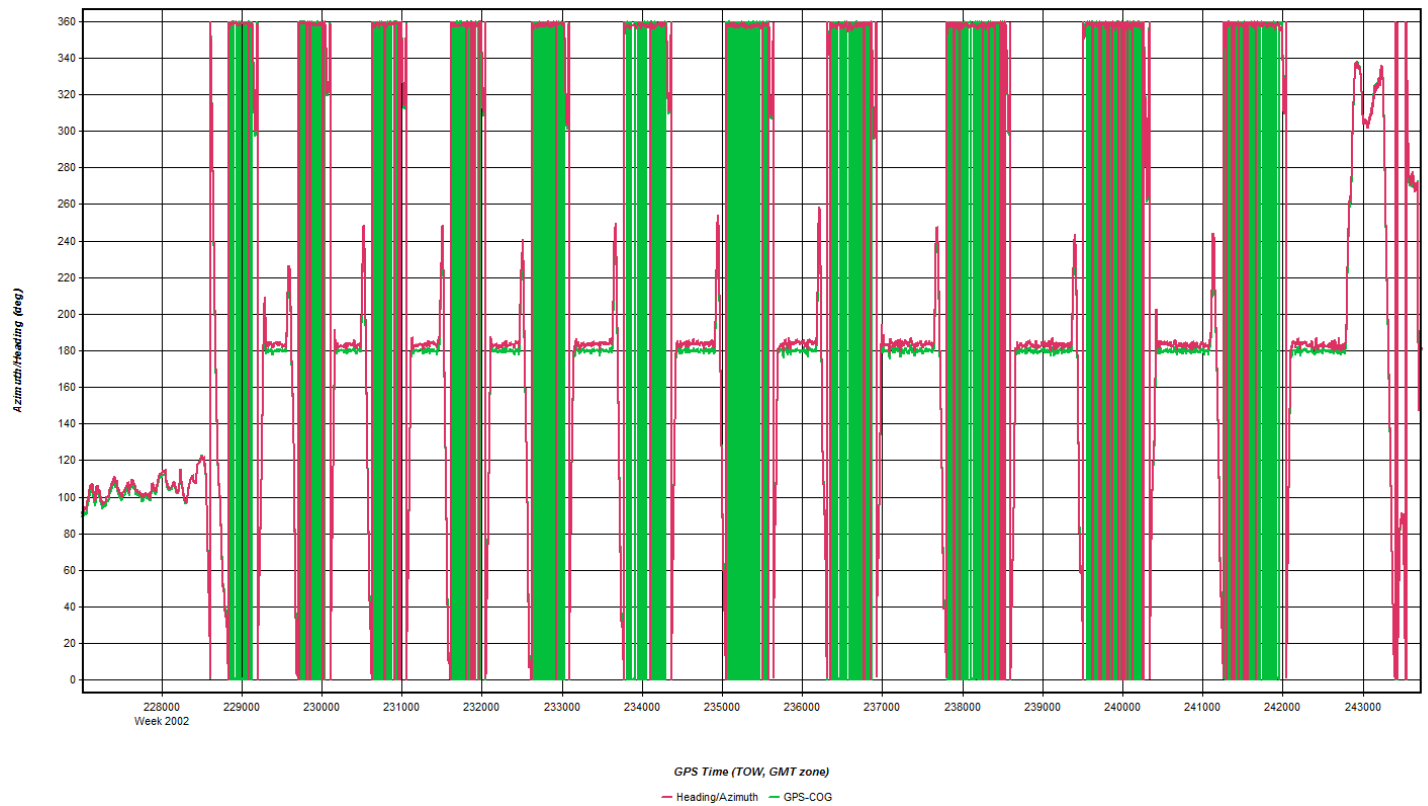


GPS Time (TOW, GMT zone)
— Roll — Pitch





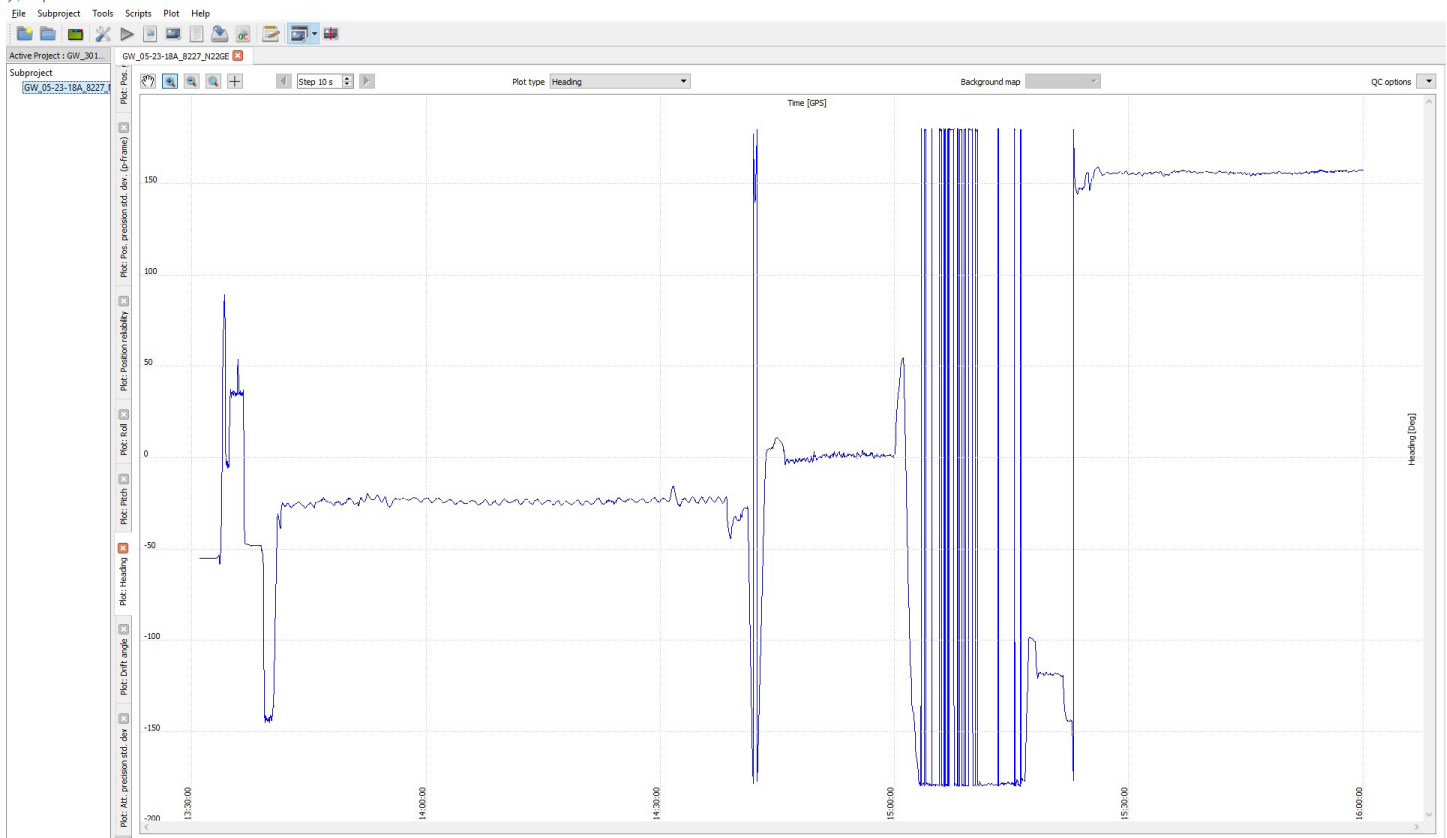


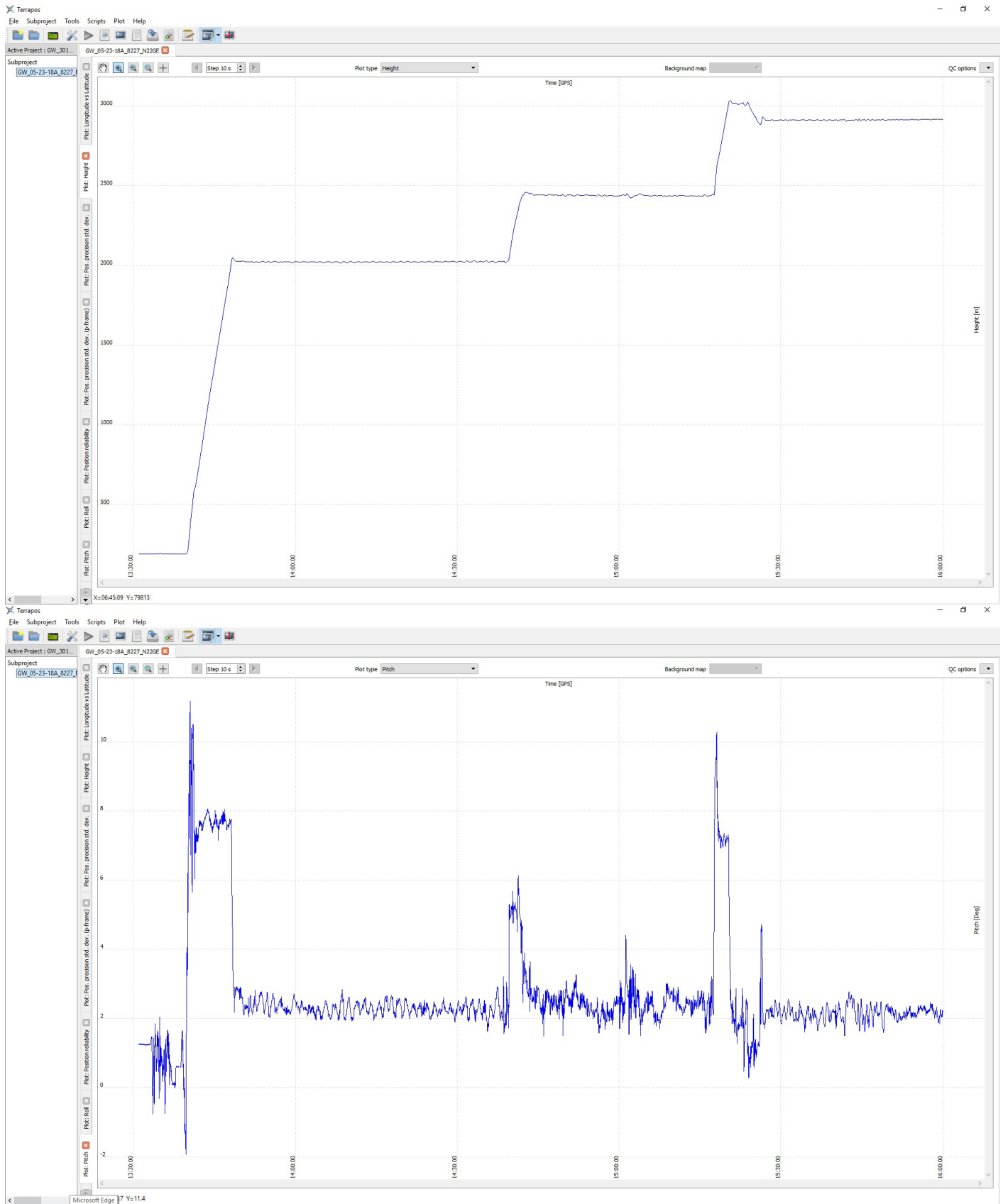


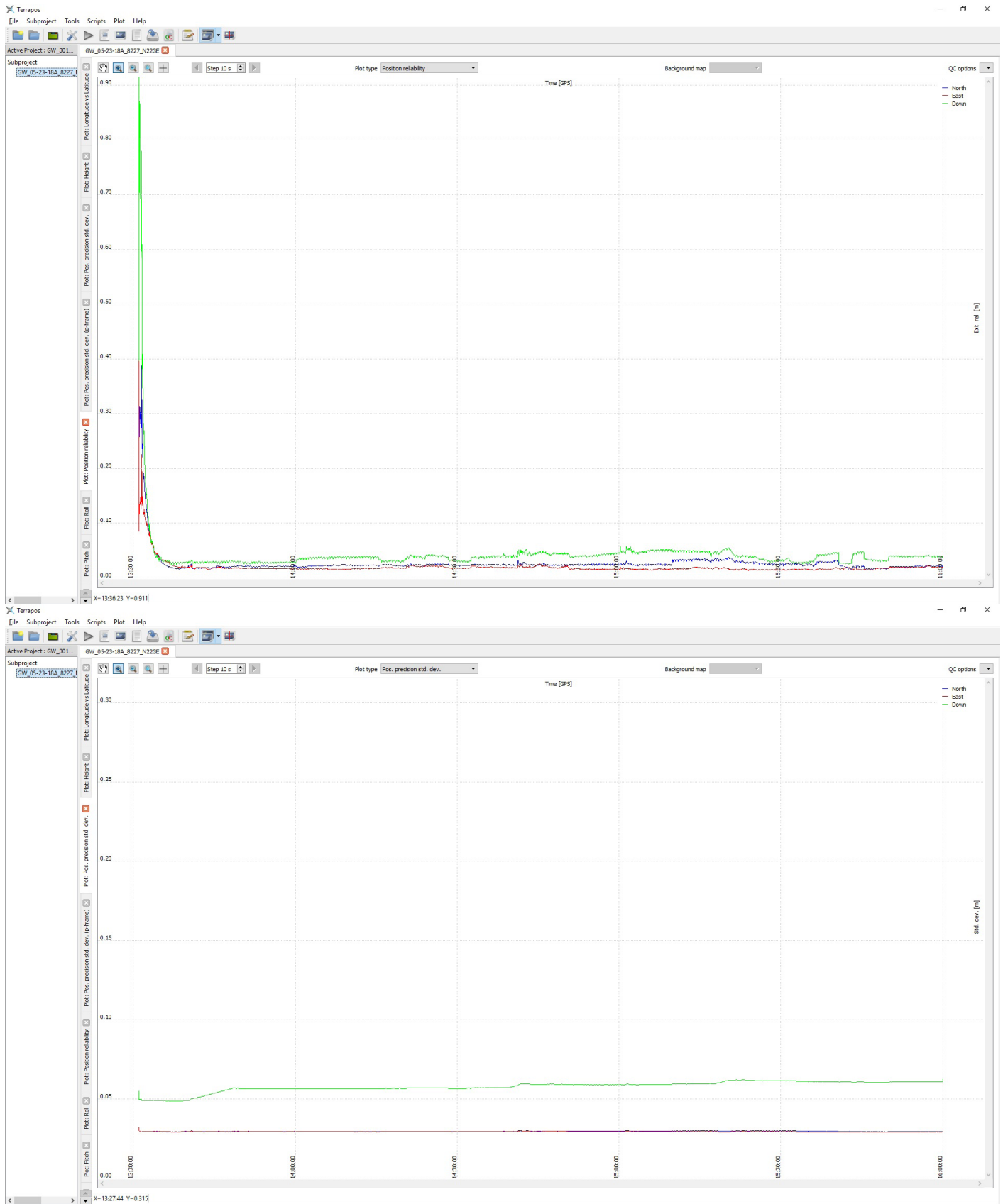
Flight Log

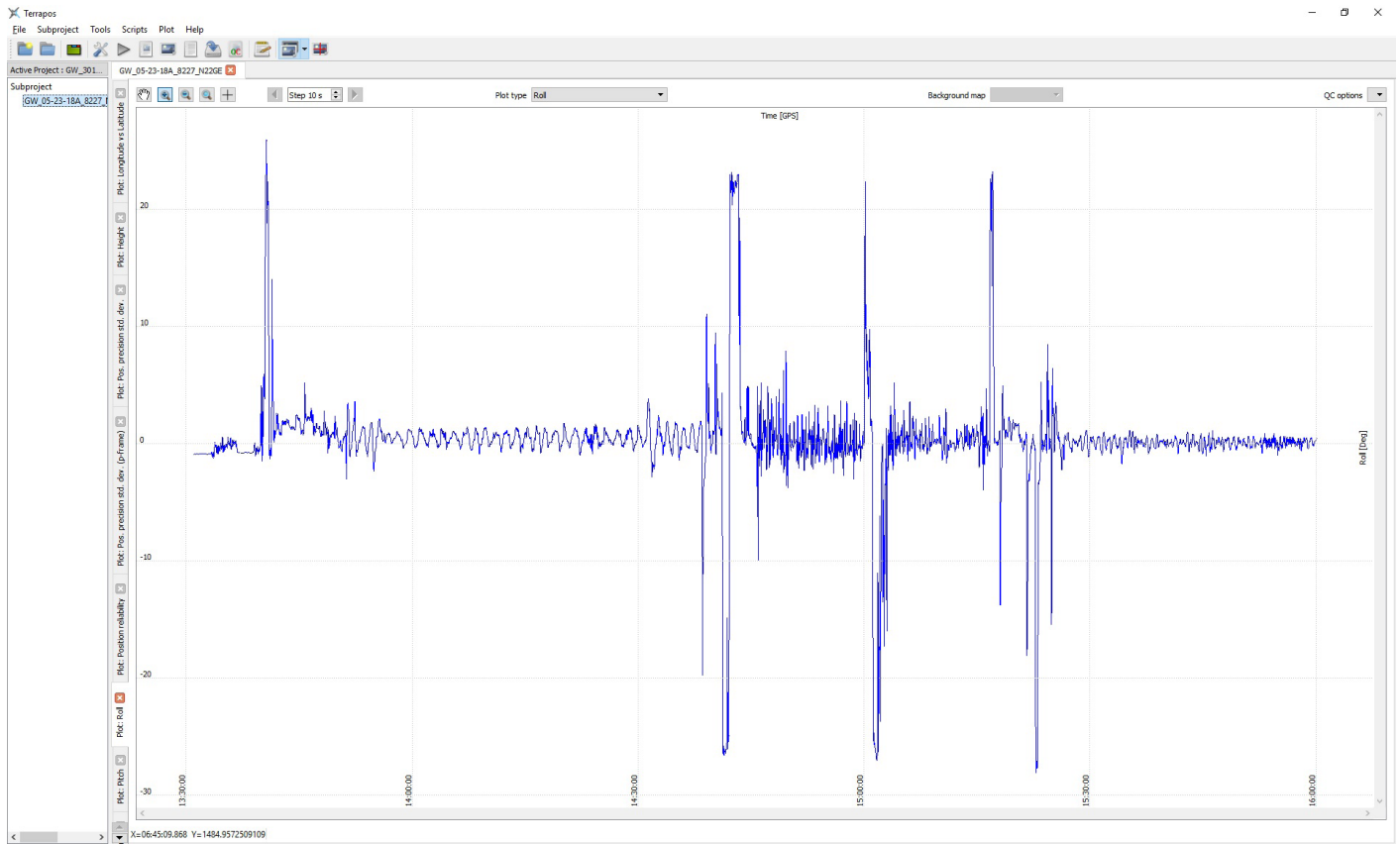
LIDAR & AERIAL PHOTO FLIGHT LOG														
20 YEARS OF EXCELLENCE  LIDAR + IMAGERY + GEOMATICS			PROJECT NAME		QSI_OttawaForest (Lift#2)			DATE		2018/05/22				
			SENSOR OPERATOR		A. Brooker			SENSOR(S)		ALS70-HP				
			PILOT		L. Kim			IMU		Honeywell uIRS				
			AIRCRAFT		C-FQLC			ABGPS		IPAS-CUS6				
			AIRBASE		Duluth, MN – Ironwood, WI			DATA DRIVES		LIDAR 2				
AIRCRAFT BLOCK TIME					MISSION DETAILS					STATIC ALIGNMENT		GPS TIME		“S” TURN
Engine On:	14:37	Takeoff:	14:55		AGL Height:	1800m	Pulse Rate:	279Hz	Pre-Mission	15:26	15:32			
												Engine Off:	19:49	
TOTAL:	4.2 hrs	TOTAL:	4.8 hrs		Laser Power:	100%	FOV:	400						
FLIGHT LINE #	SET HISTO	DIRECTION	LIDAR File Name	START	END	GPS TIME			COMMENTS					
019		003	153421	15:34:21	15:38:37				C					
020		183	154133	15:41:33	15:45:35				C					
021		003	154843	15:48:43	15:53:49				C					
022		183	155621	15:56:21	16:01:07				C					
023		003	160409	16:04:09	16:09:35				C					
024		183	161214	16:12:14	16:17:24				C					
025		003	162020	16:20:20	16:29:12				C					
026		183	162842	16:28:42	16:34:03				C					
027		003	163727	16:37:27	16:43:25				C					
028		183	164603	16:46:03	16:53:24				C					
029		003	165636	16:56:36	17:04:45				C					
030		183	170726	17:07:26	17:14:49				C					
031		003	171755	17:17:55	17:26:01				C					
032		183	172831	17:28:31	17:35:52				C					
033		003	173911	17:39:11	17:47:23				C					
034		183	175011	17:50:11	18:00:25				C					
035		003	180350	18:03:50	18:15:16				C					
036		183	181821	18:18:21	18:28:59				C					
037		003	183222	18:32:22	18:43:54				C					
038		183	184725	18:47:25	18:57:57				C					
039		003	190136	19:01:36	19:12:58				C					
040		183	191520	19:15:20	19:26:05				C					

20180523A
(SN8227, N22GE)





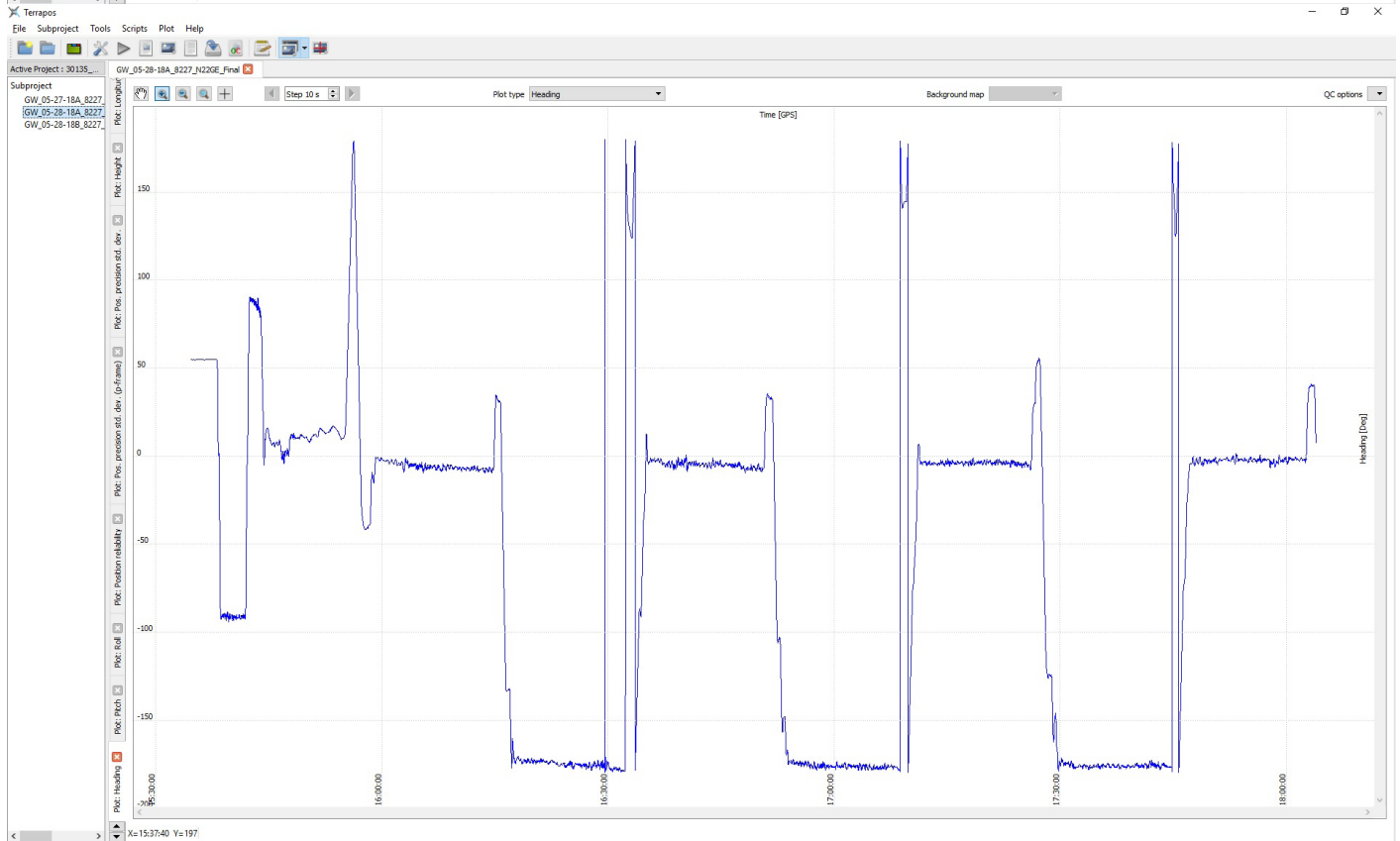
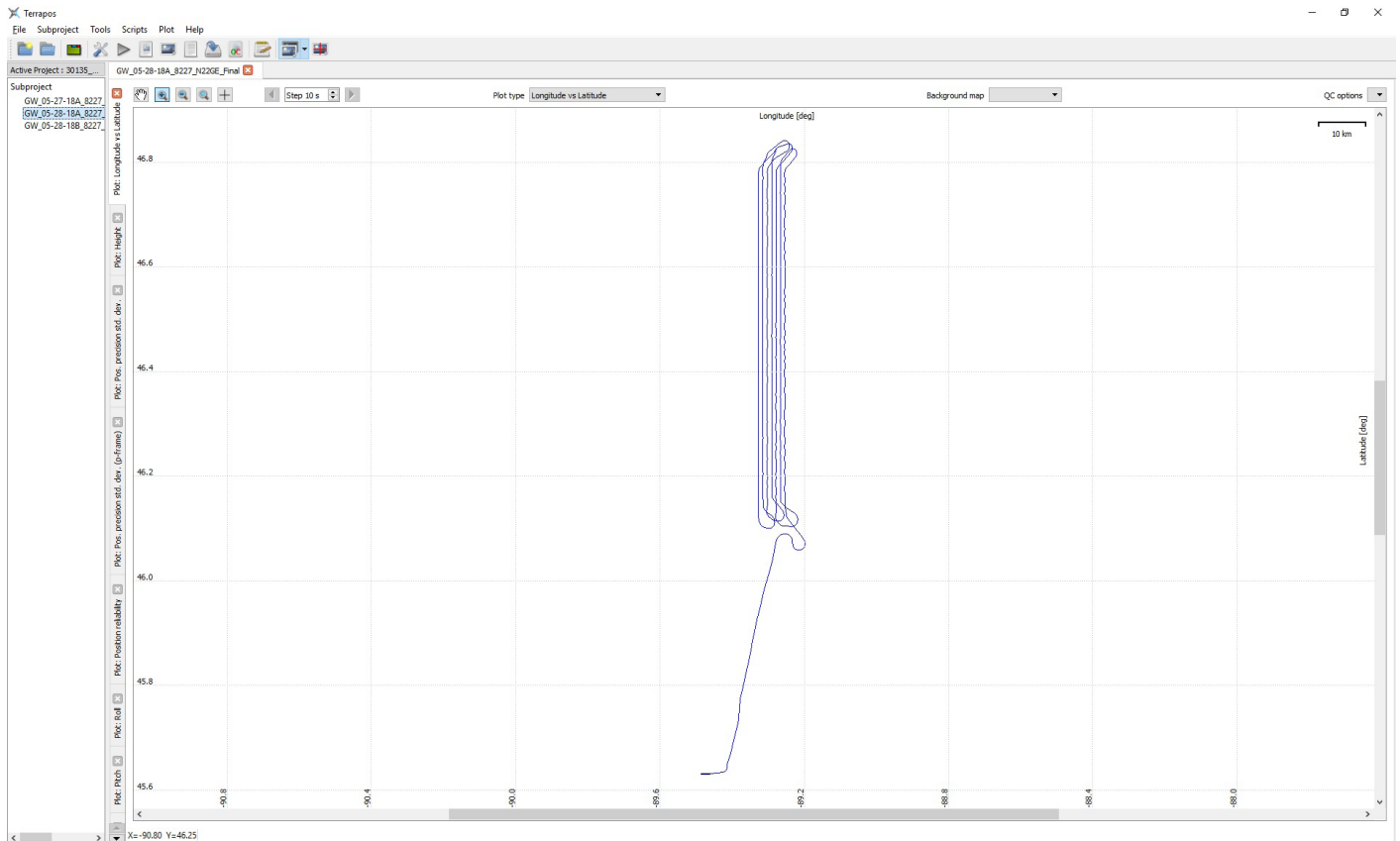


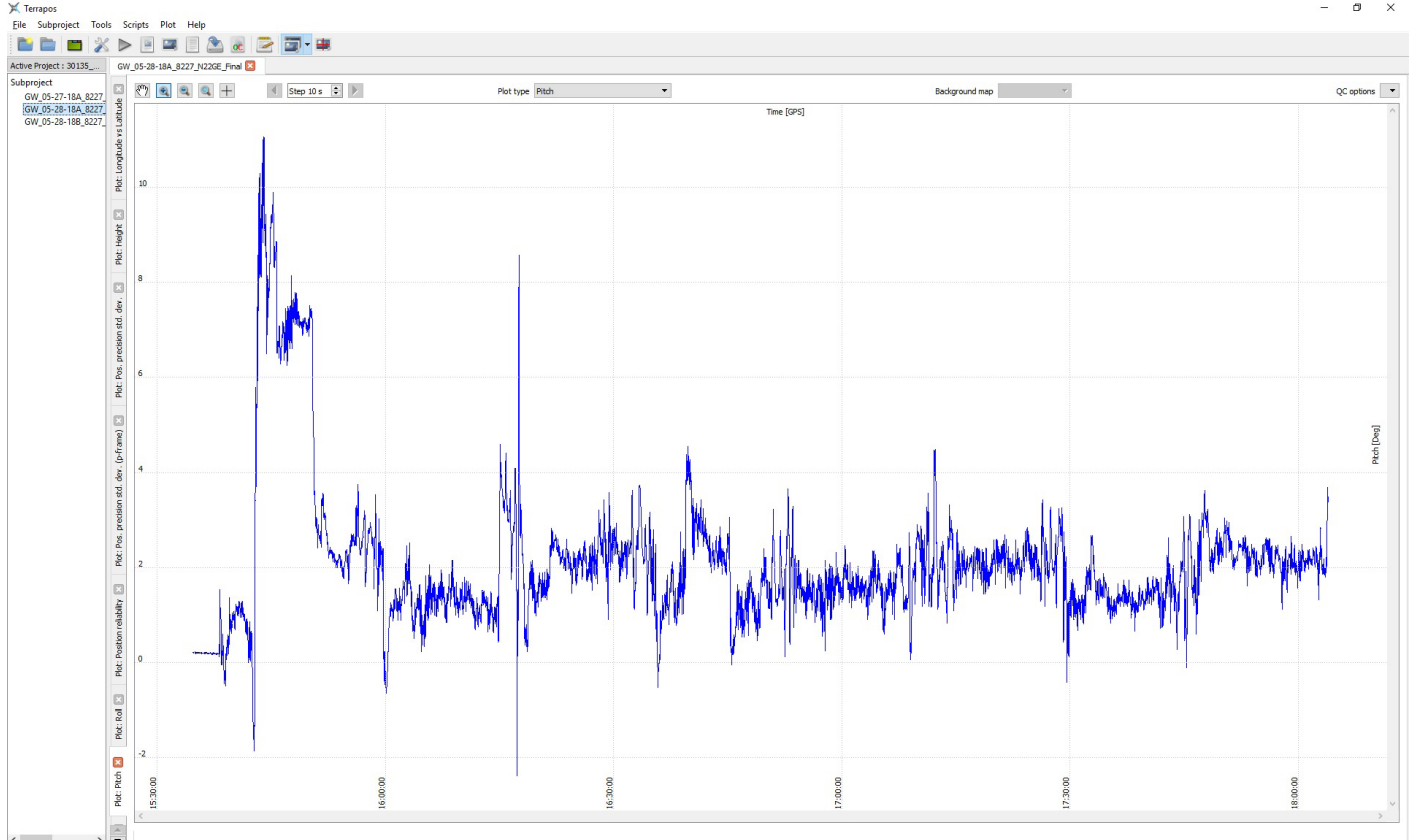
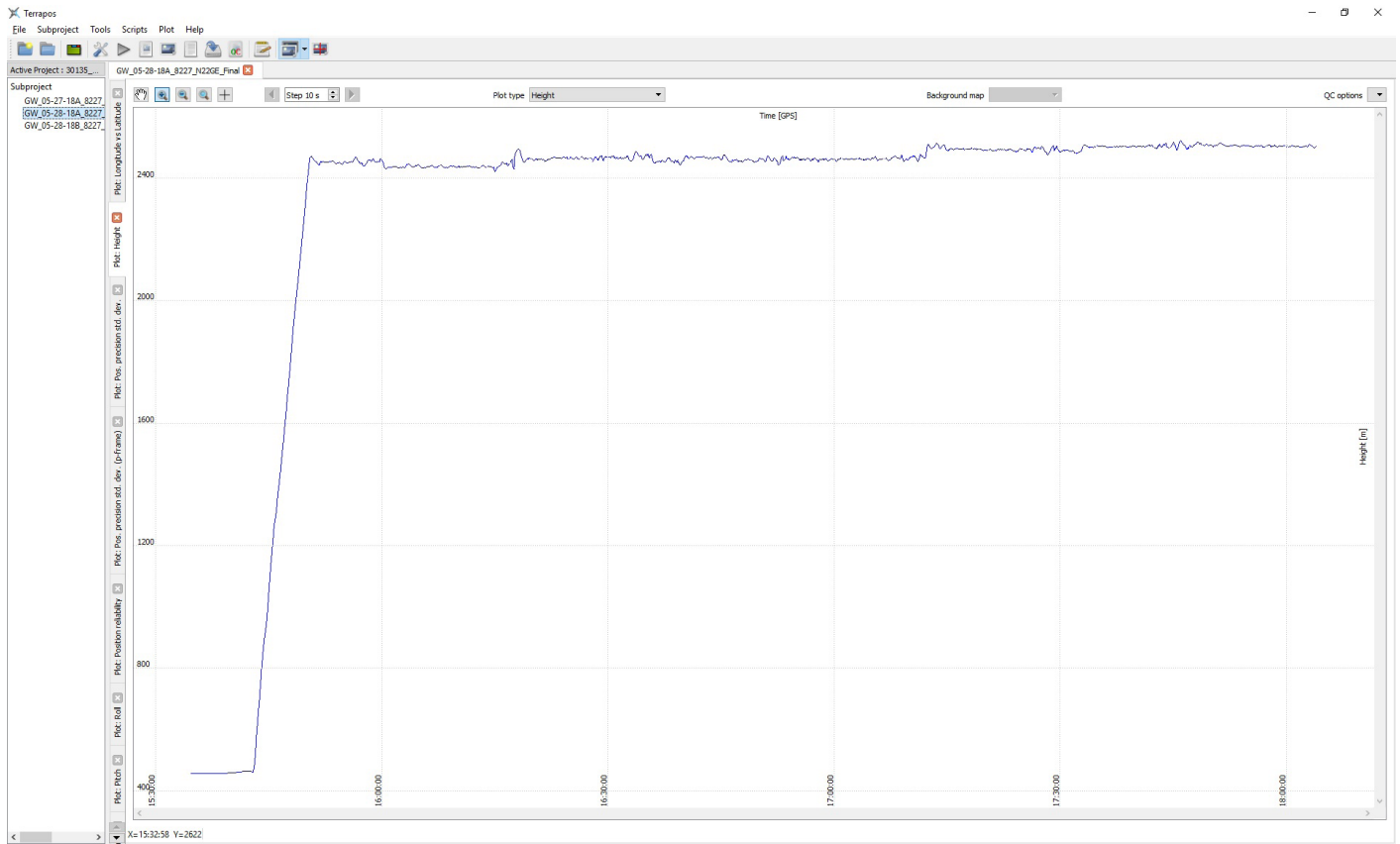


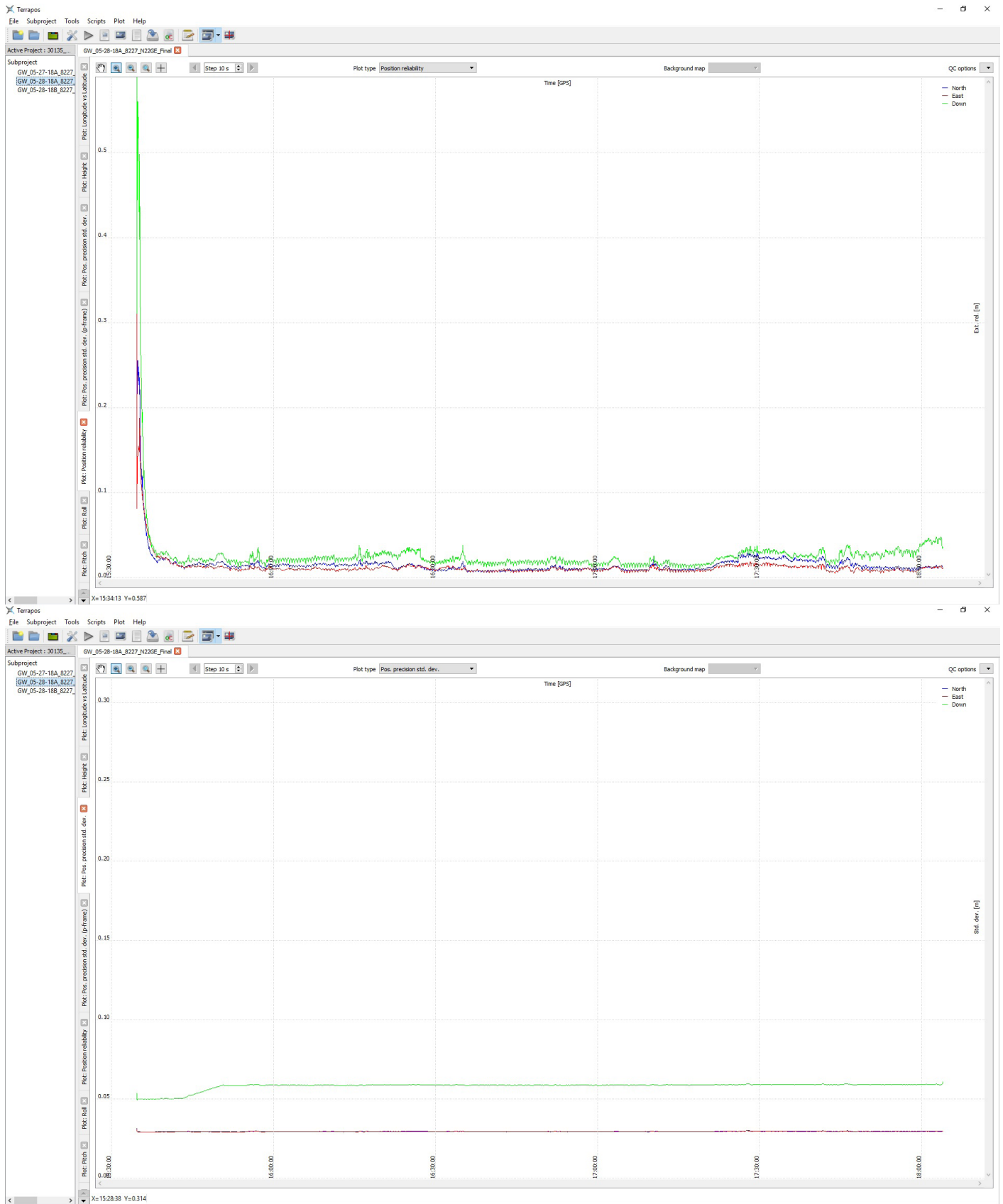
Flight Log

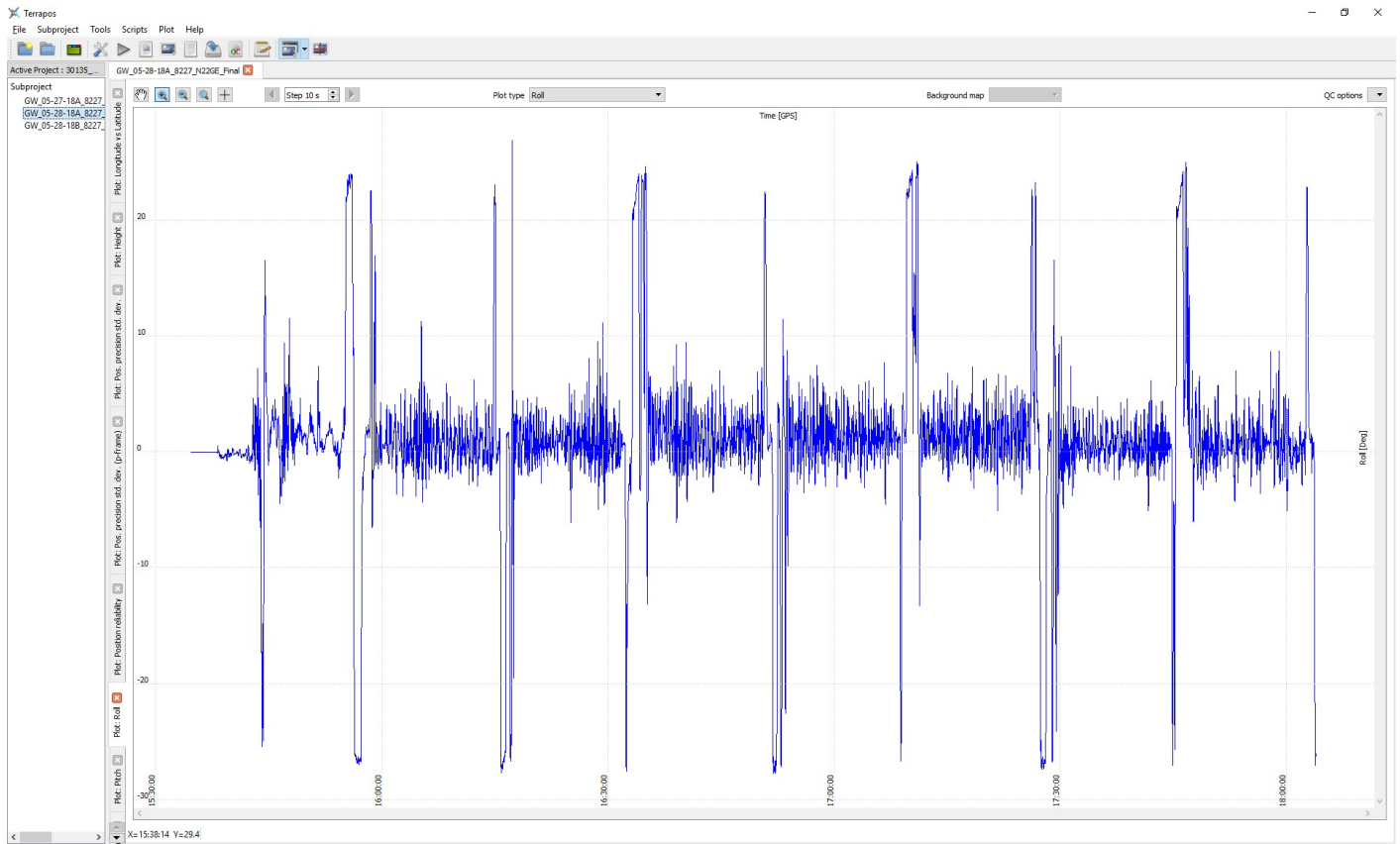
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20180528A
(SN8227, N22GE)





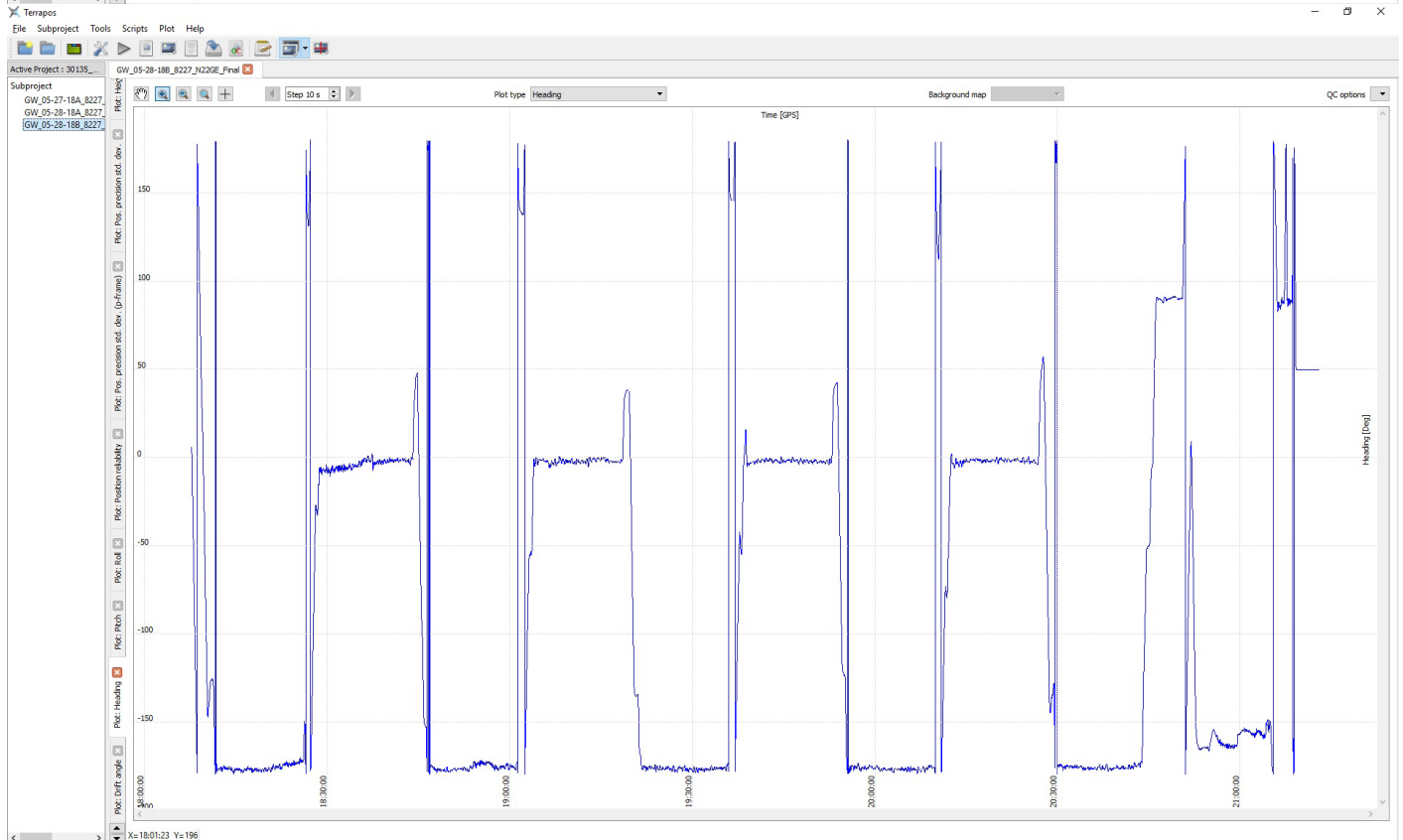
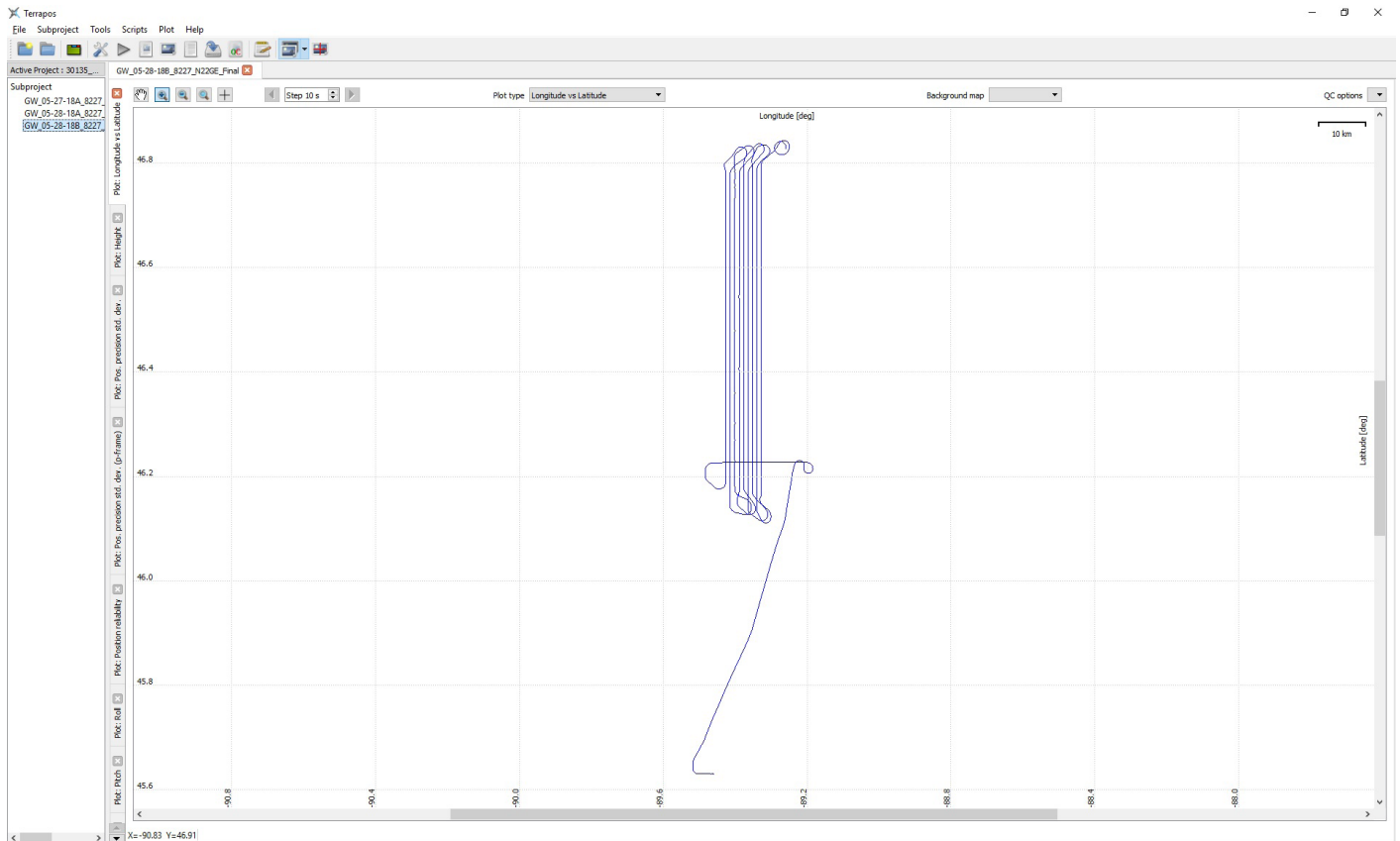


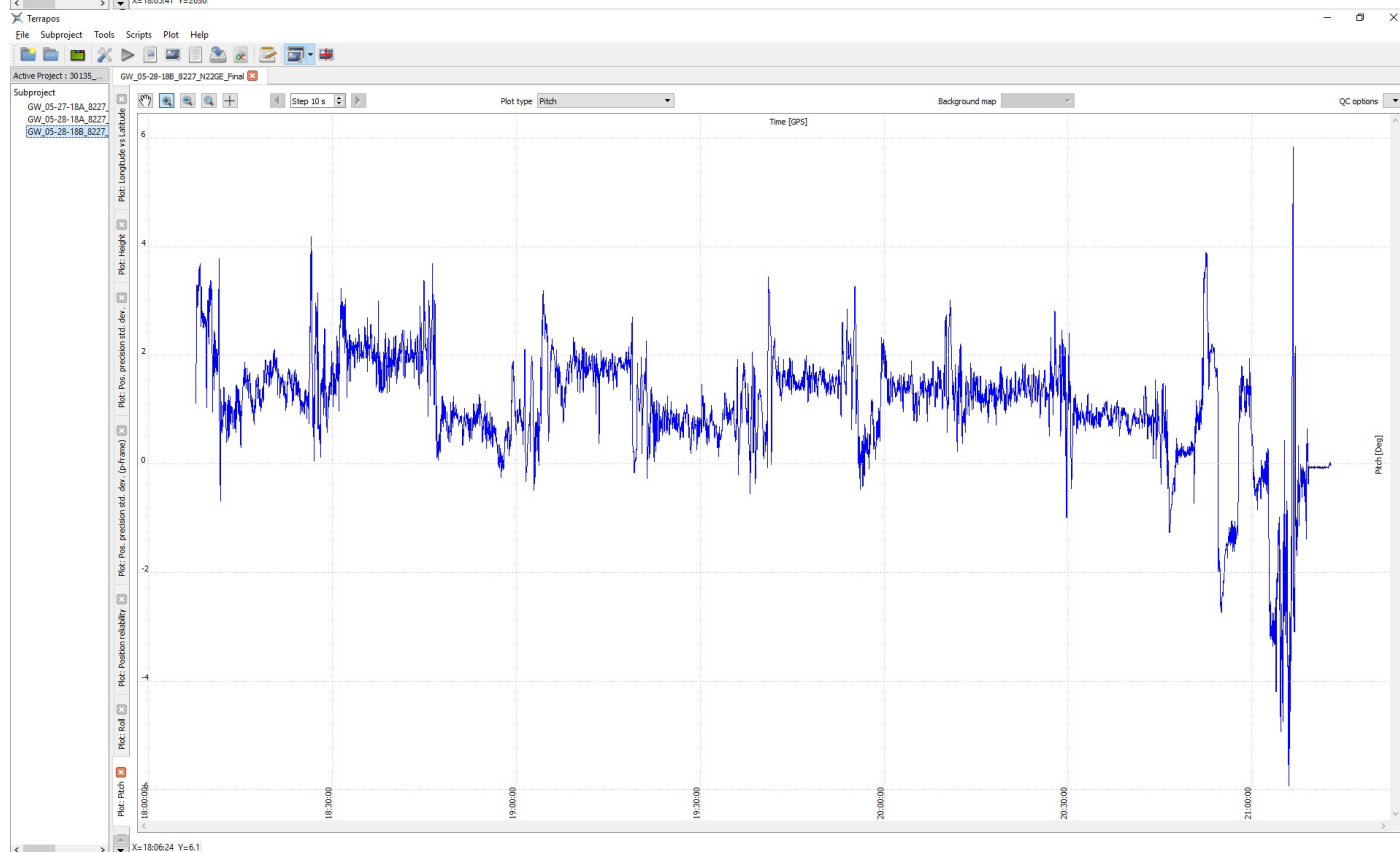


Flight Log

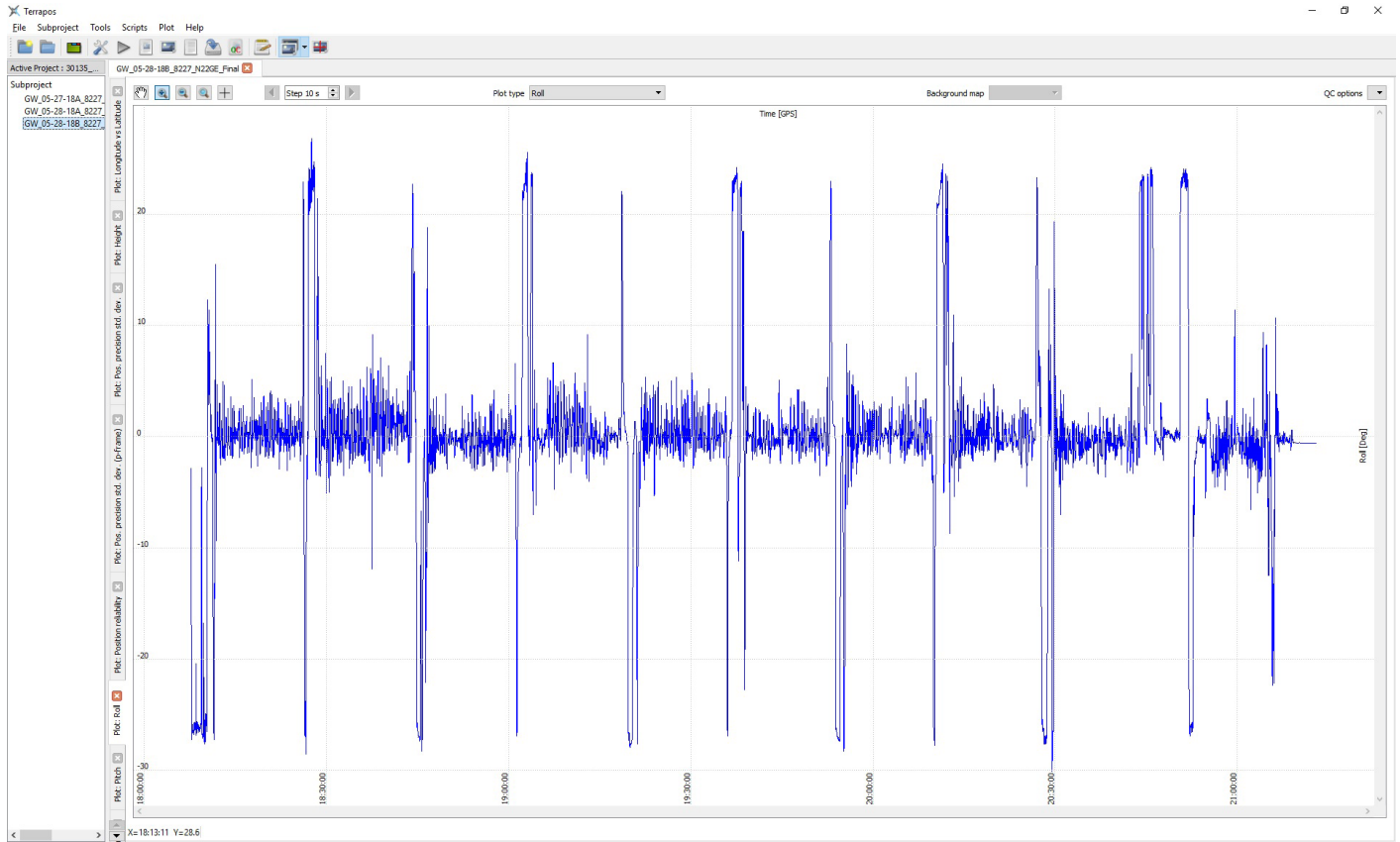
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20180528B
(SN8227, N22GE)





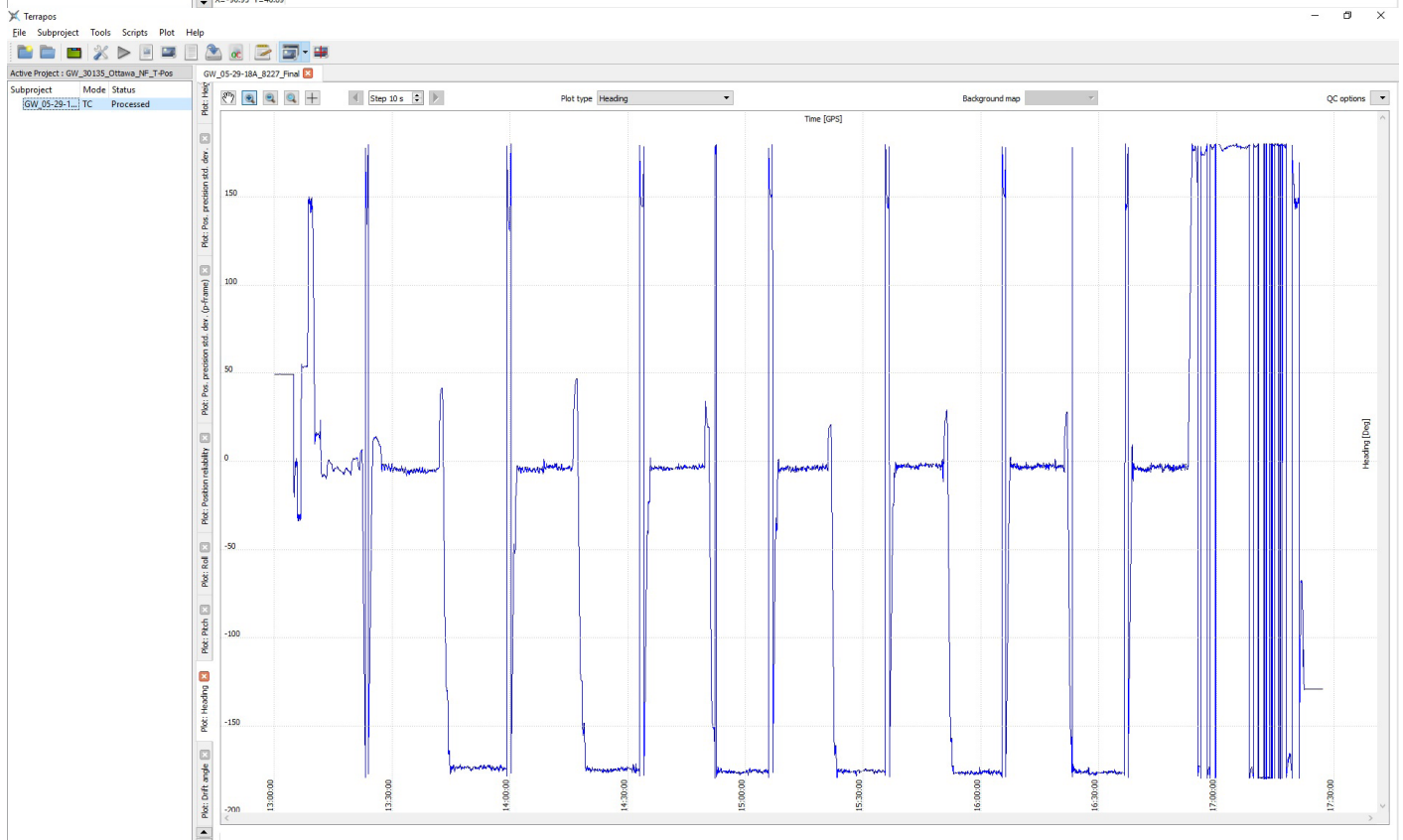
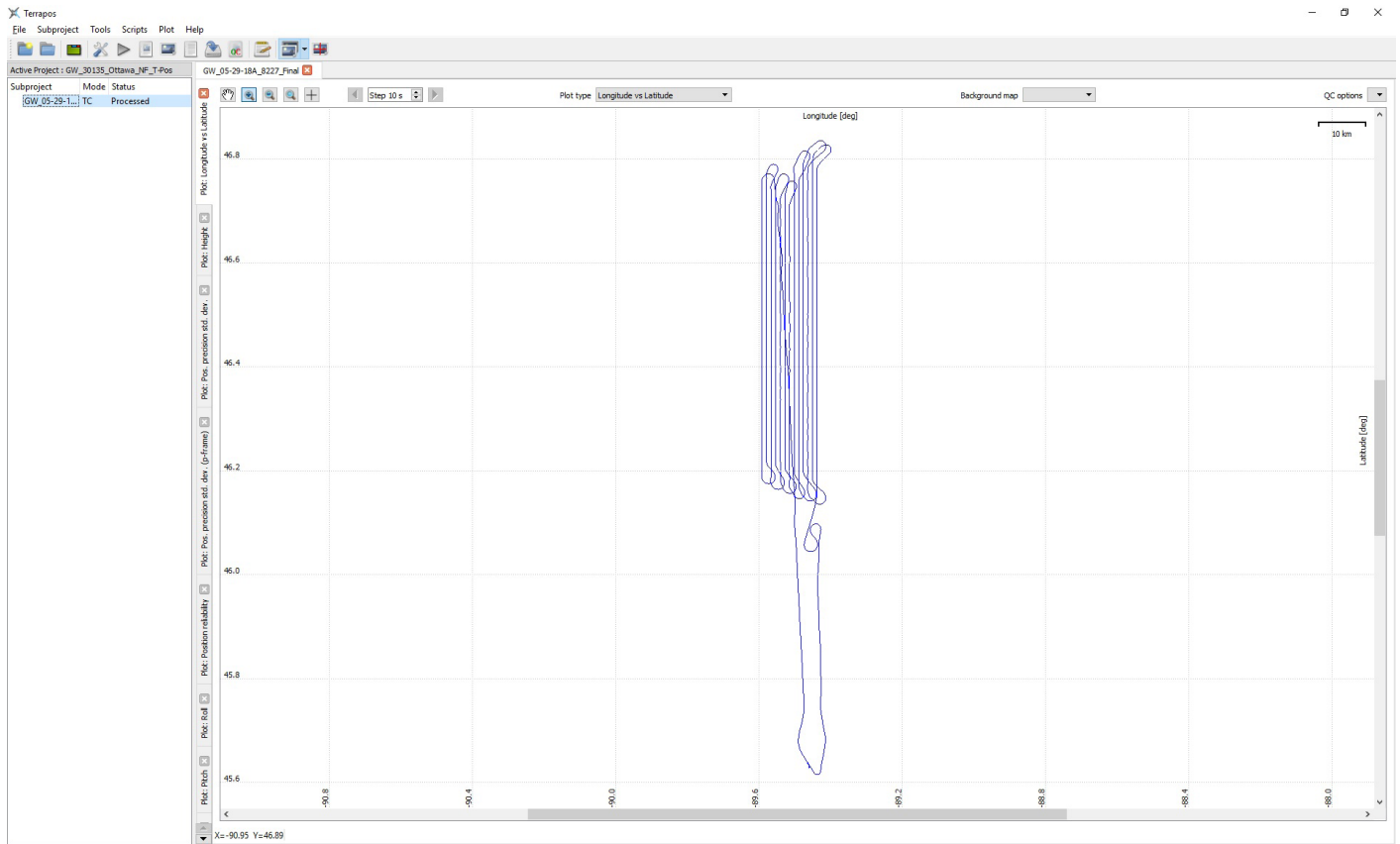


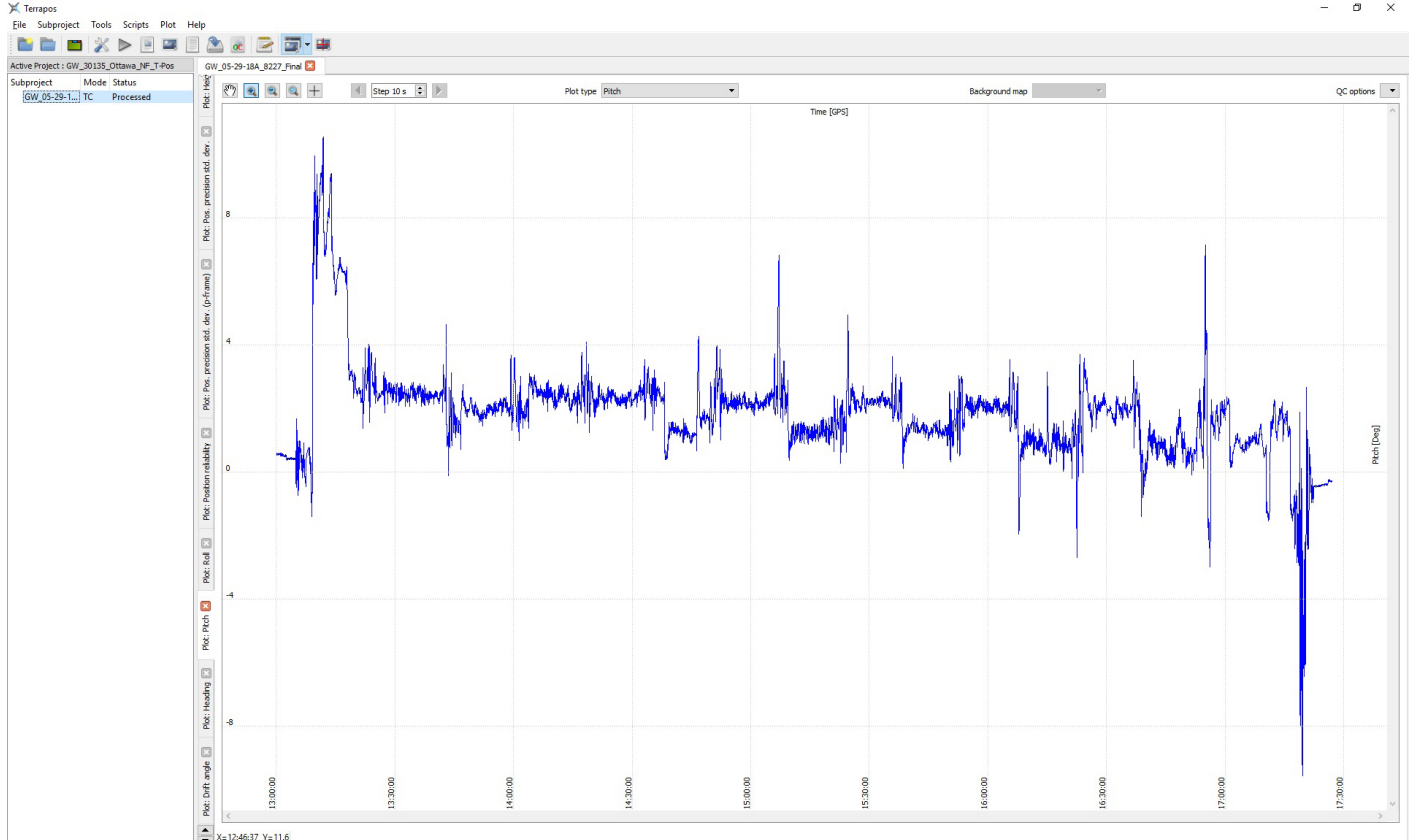
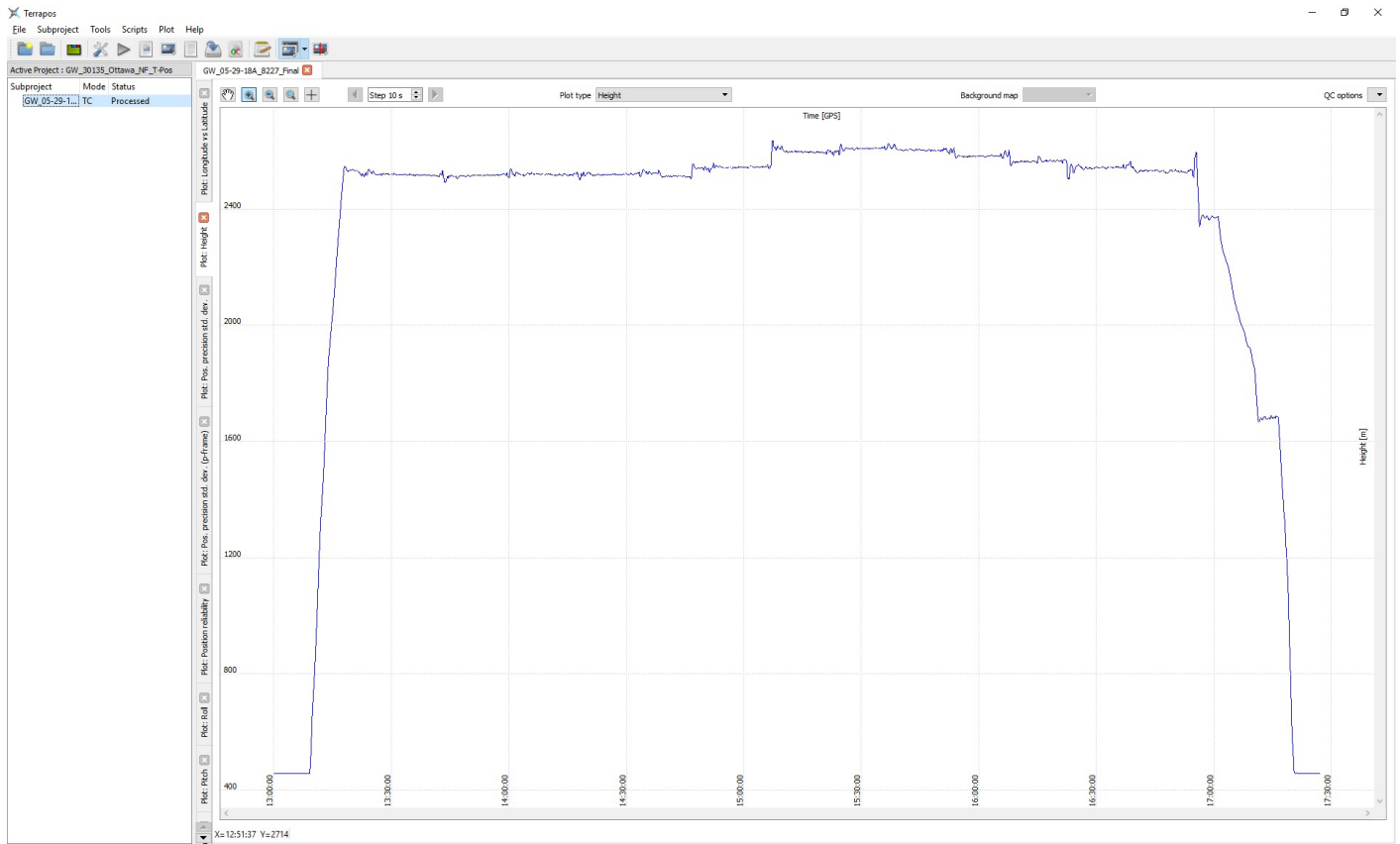


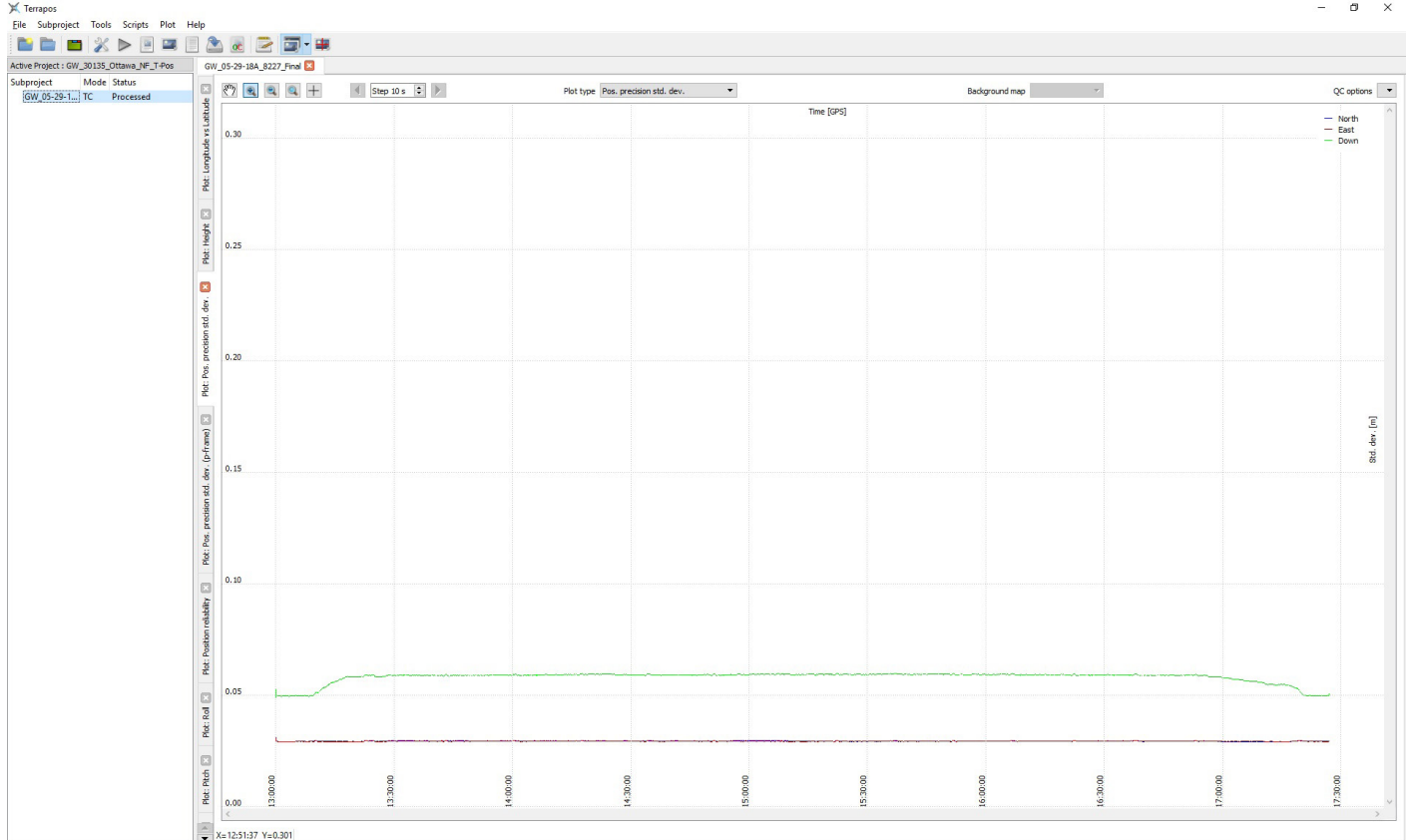
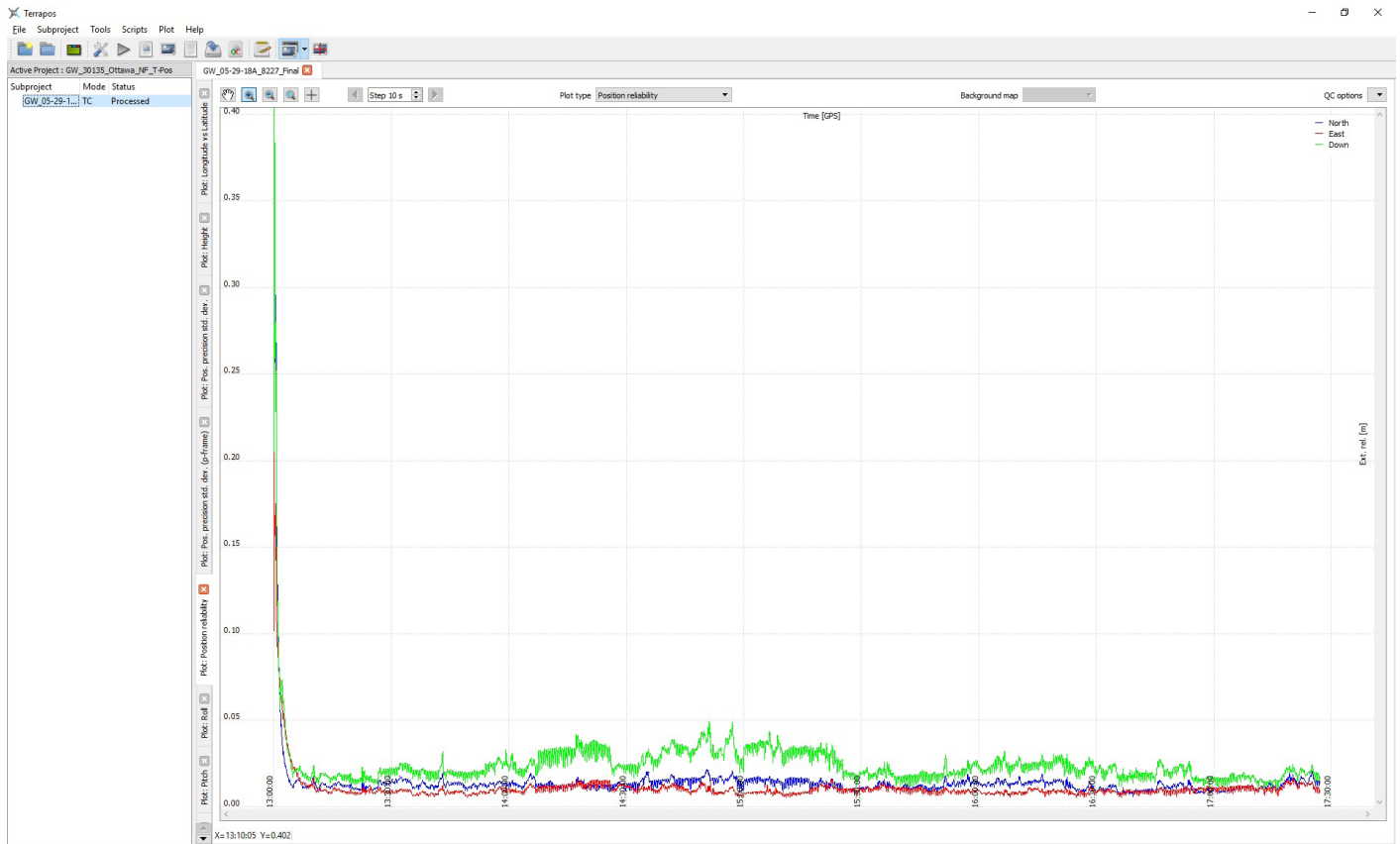
Flight Log

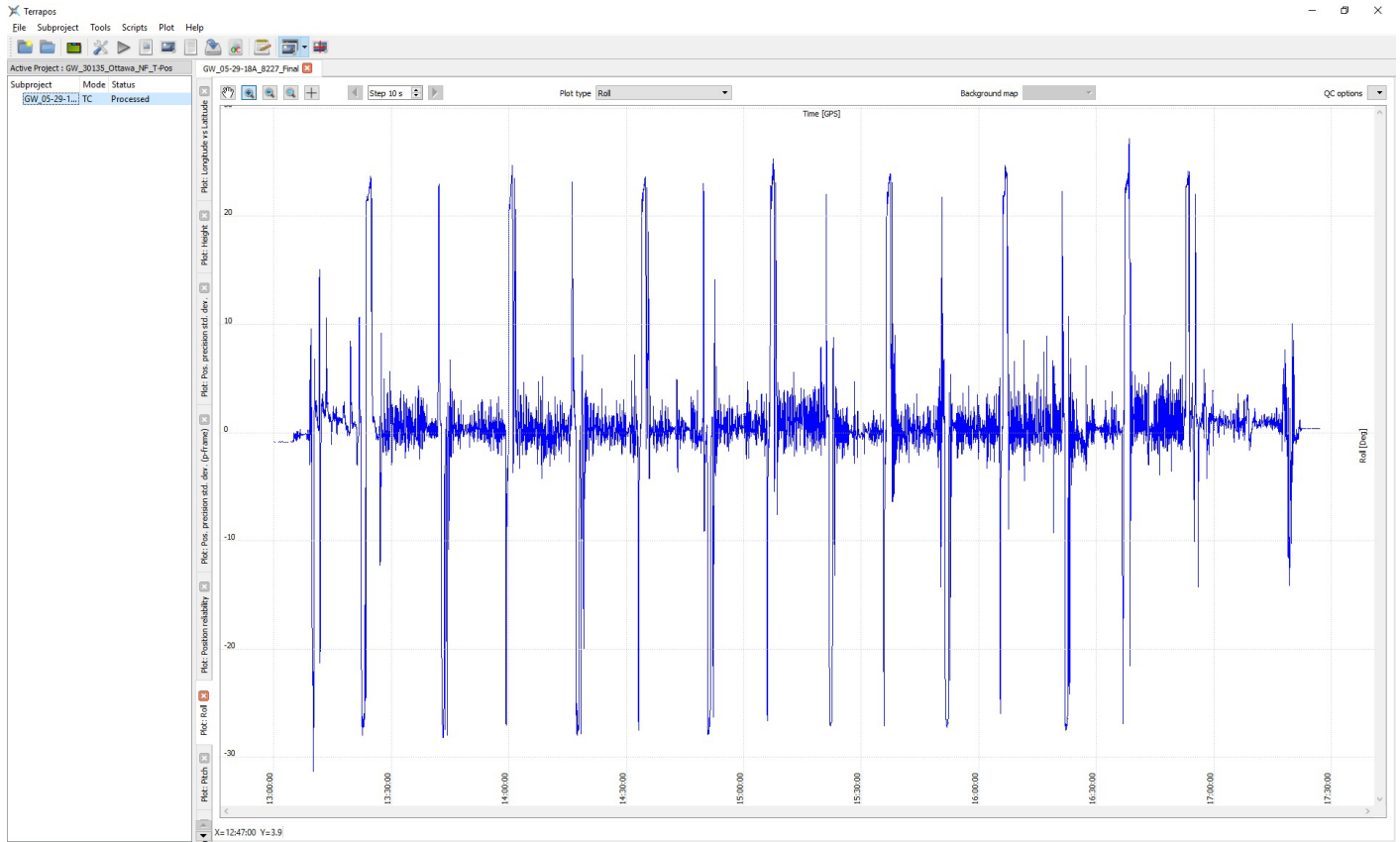
Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc														
(email log daily to flight_log_distribution_list@quantumspatial.com)														
Project: OTTAWA Flight Mgmt File: Proj #: 30135 Date: 5-23-18 UTM Zone: 18N Page: 01 of 01														
Aircraft: ZEE Begin Hobbs: 9607.8 End Hobbs: 9607.8 Total: 5.4 Pilot: DAMON Co-Pilot: Tech: ALST														
Dep Apt: KRRH Dep Time (Local): 10:35Z Arr Apt: KRRH Air Time (Local): 4:10Z Tot Time Aloft: 21:10														
CORS: Y/N Sta 1: Flyovers: Y/N If Y, times: Sta1) Sta2)														
GPS Unit: Y/N Sta 1: Flyovers: Y/N If Y, times: Sta1) Sta2)														
Gd Temp beg: °C End: 32 OAT beg: °C End: 29.77 A/c Temp: 43.2 Storage Name:														
LIDAR Type LS 80 Serial 8227 Alt AGL 9100' Max Glided 150 Avg Pk Spacing 150 Pulse Rate 362 Power 100 PSIM End Cab 43.2 End Cab 43.2 End Cab 43.2														
Line # Hdg Start UTC End UTC Gd Sld DOF/Fix GPS Altitude Crab Turn (D/L)														
1044	N	155.9	1417	162		1120	3053	+	RF light choppy	VERT 1124 - OVERCAST ABOVE				
1043	S	1417	1632	150		1020	8080	+	CHOPPY					
1042	N	1435	1450	154		1120	8050	+						
1041	S	1454	1708	154		1122	8100	+						
1040	N	1711	1726	148		1121	8200	+						
1039	S	1739	1744	159		1121	8170	+						
1038	N	1743	1802	146		1320	8230	+						
1037	S	1811	1826	159		1123	8200	+						
1036	N	1829	1843	144		1240	8210	+						
1035	S	1846	1900	157		1220	8225	+						
1034	N	1904	1918	151		1220	8220	+						
1033	S	1921	1935	153		0924	8220	+						
1032	N	1939	1952	150		1022	8280	+						
1031	S	1953	2009	156		1124	8215	+						
1030	N	2013	2036	158		1123	8260	+						
1029	S	2029	2043	156		1221	8225	+						
1028	N	2046	2050	158		1123	8265	+						
Manual X-TIE														
FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc.														
Online Time: 5 Missed Time: 4 Notes:														

20180529B
(SN8227, N22GE)









Flight Log

Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc

Date: 5-29-18
L I D A R C O E Pg 1 of 1

(Email log daily to flight_log_distribution_Linc@quantumspatial.com)

Project: DITTA WLA 101 Flight Mgmt File:
Aircraft: 2226 Begin Hobbs: 9607.8 End Hobbs: 9612.0 Total: 4.2 Pilot: DMZ Co-Pilot:
Dep Apt: KRAI Dep Time (Lat): 8:00 (Z): 13:00 Arr Apt: RAH Arr Time (Local): 12:25 (Z): 17:20 Tot Time Aloft: 2.5 -
CORS: CO/N Sta 1: Flyovers: Y / N If Y, times: Sta1) Sta2)
GPS Unit: Y / N Sta 1: Sta 2:

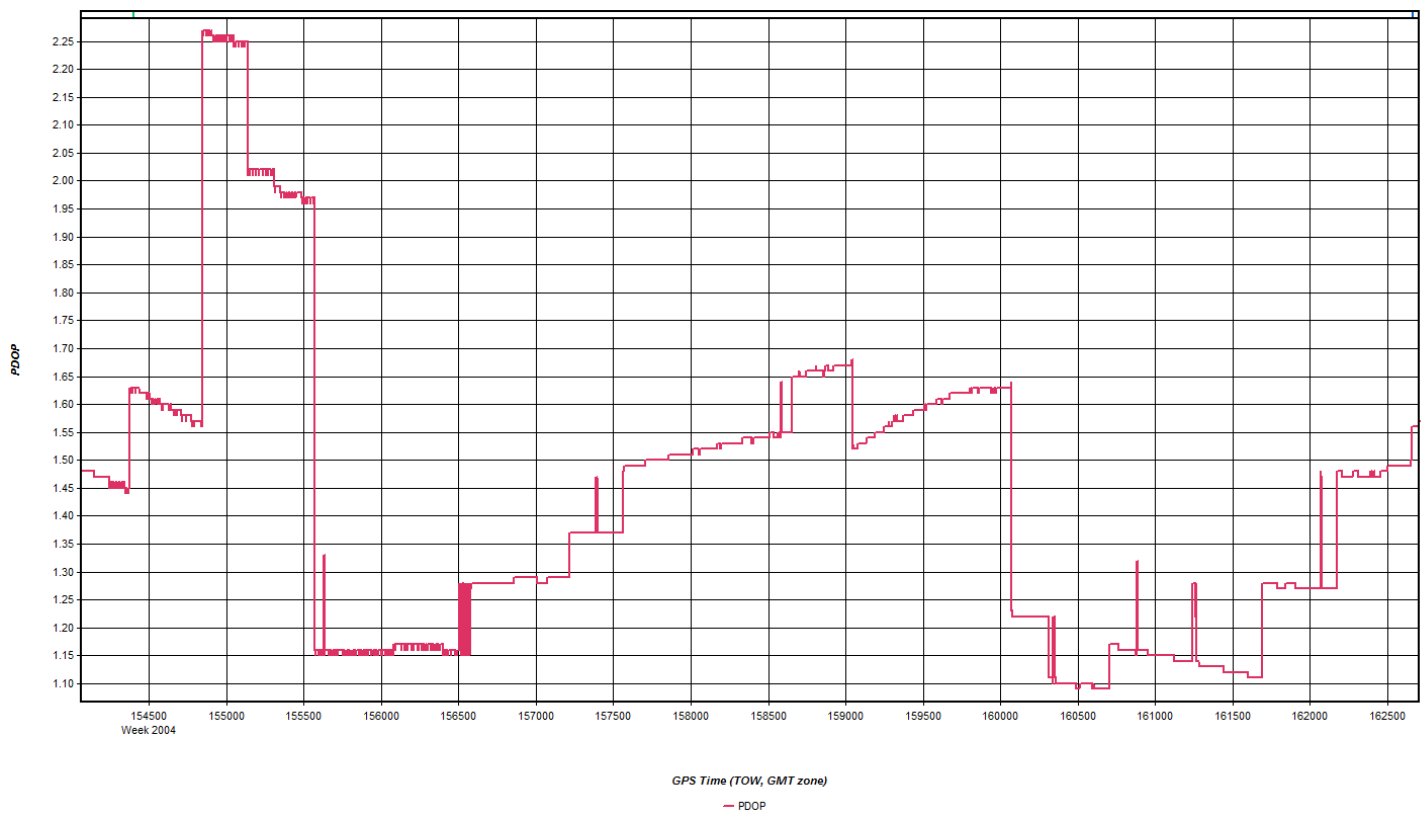
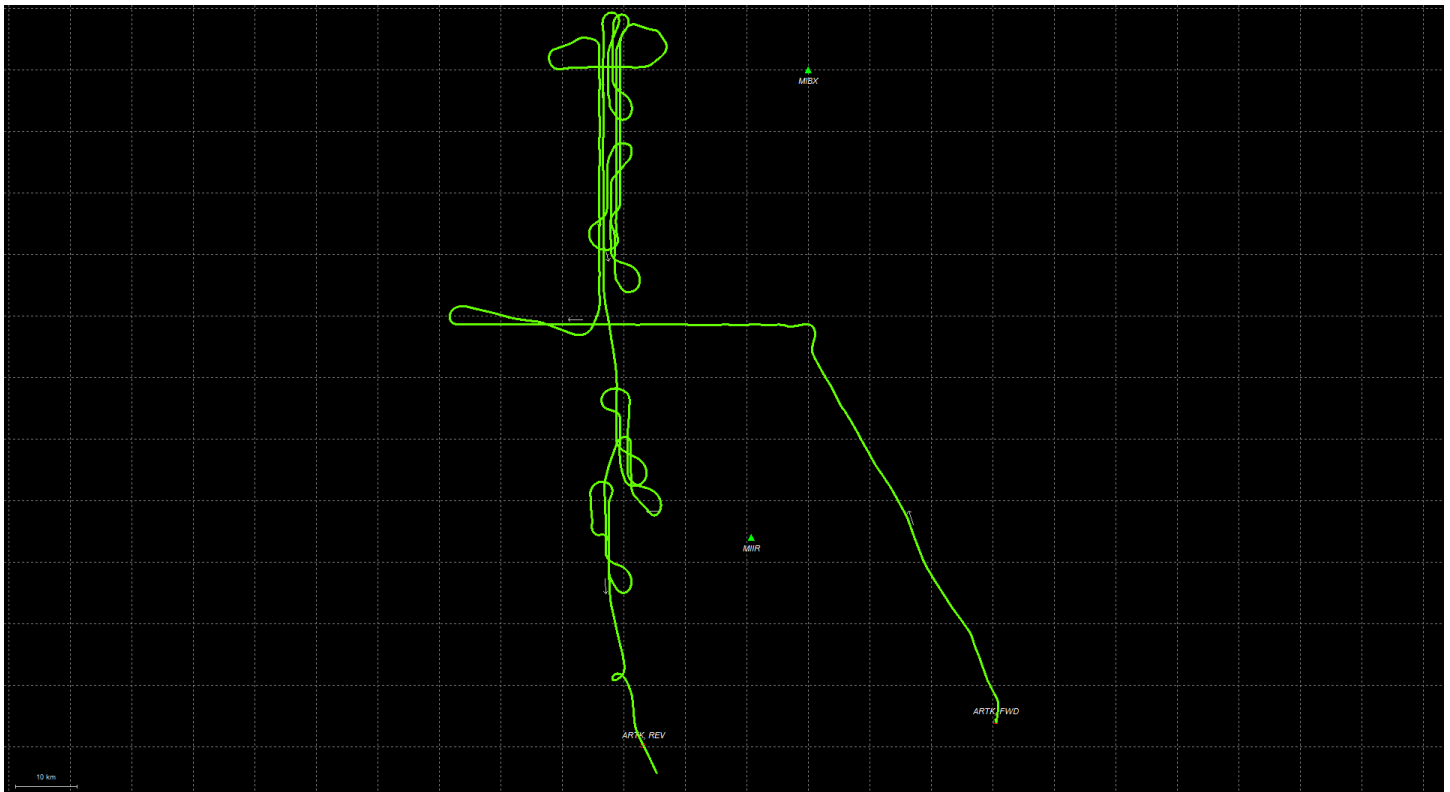
Gd Temp beg:	23 °C	End:	28 °C	OAT beg:	°C	Alt AMSL	°C	End:	°C	Avg Terr HT Rate	Max Gddpd	Pct Spacing	end: 27.9g	Beg GB	End GB	Total GB	Storage Name(s)
LIDAR Type FOV	M/S 3.8	Serial # Scan Freq	8227 S 50	ALT AGL	N/A	In Air	360	Power	1.00								

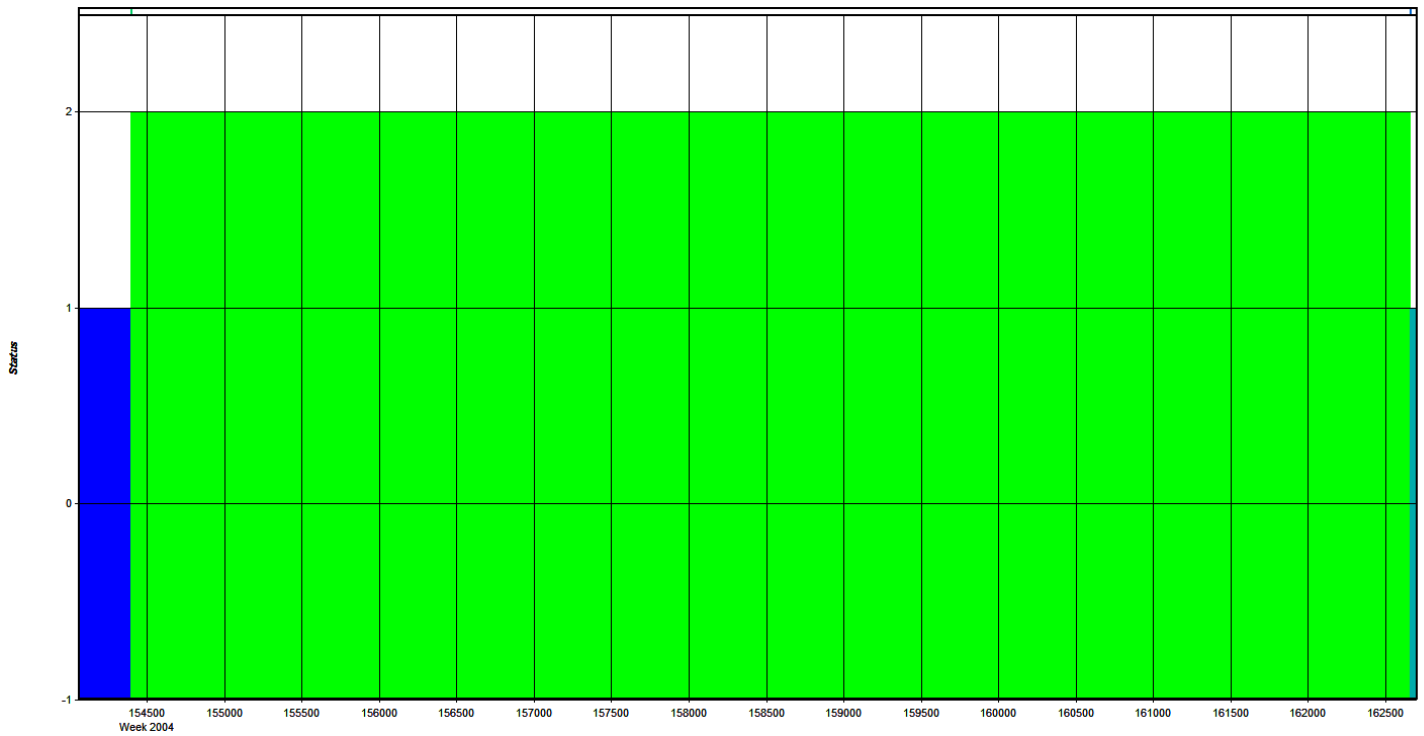
FLIGHT LINE NOTES = visibility, clouds, smoke, partial, etc.

Hazy

RIB NO CROSS FLIGHT

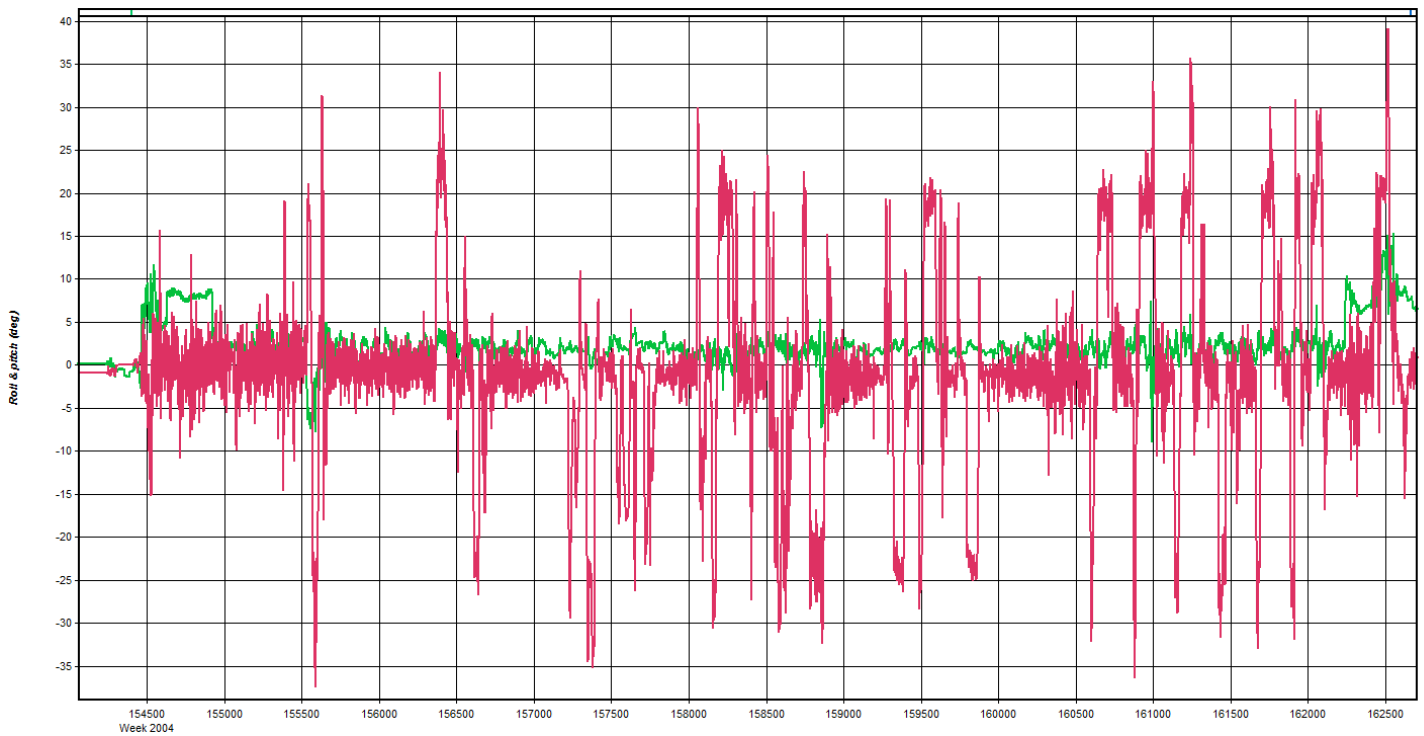
20180604A
(SN8228, N350GB)





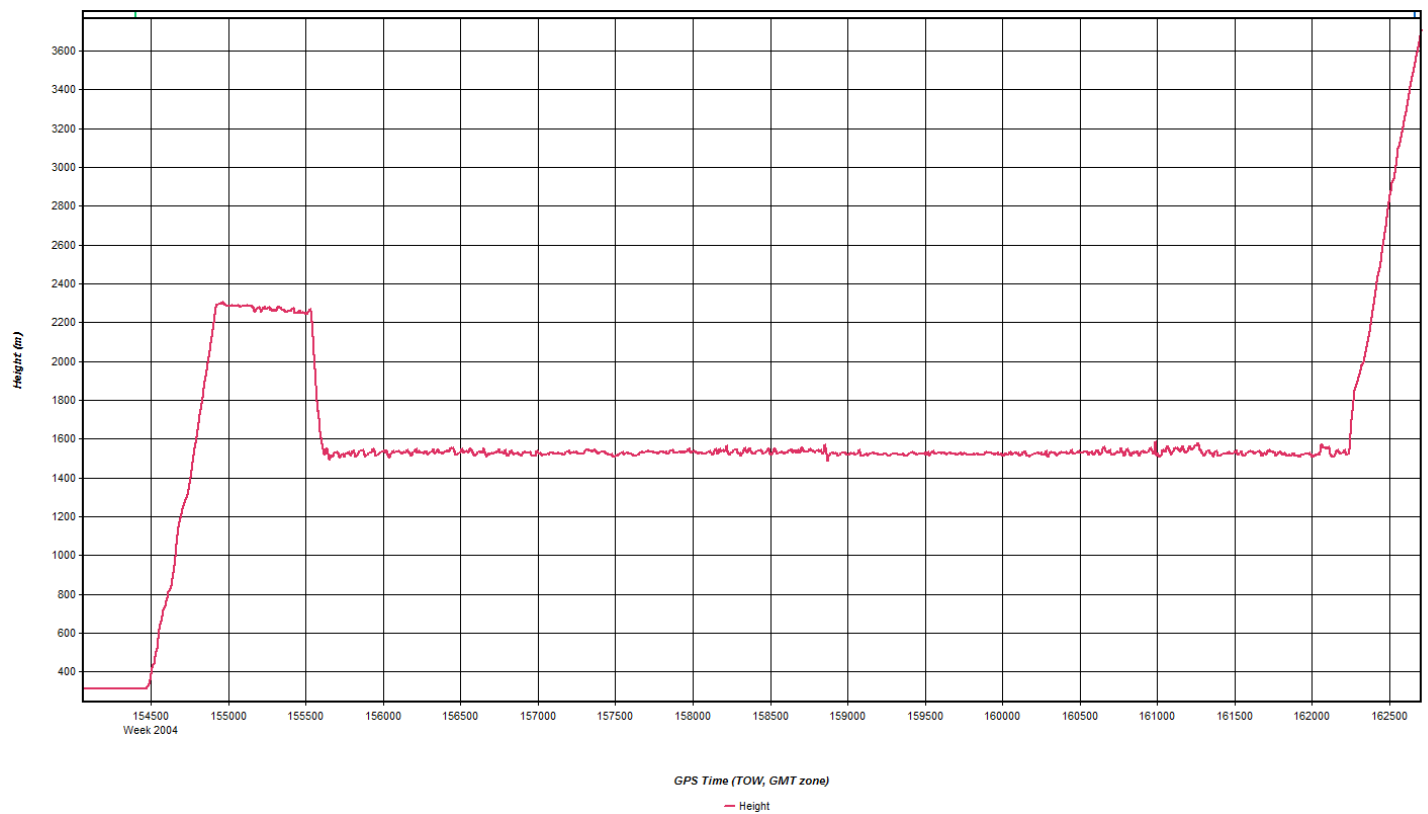
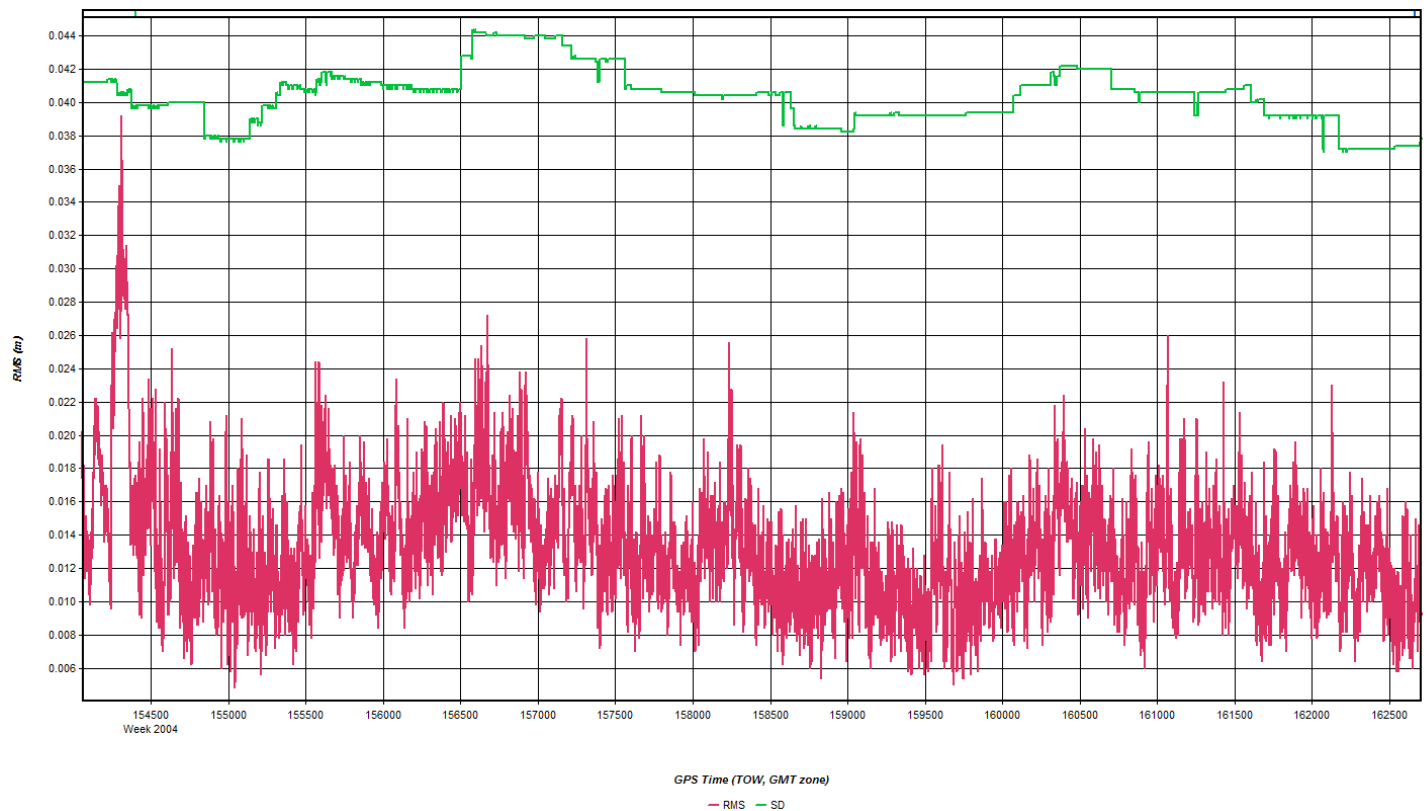
GPS Time (TOW, GMT zone)

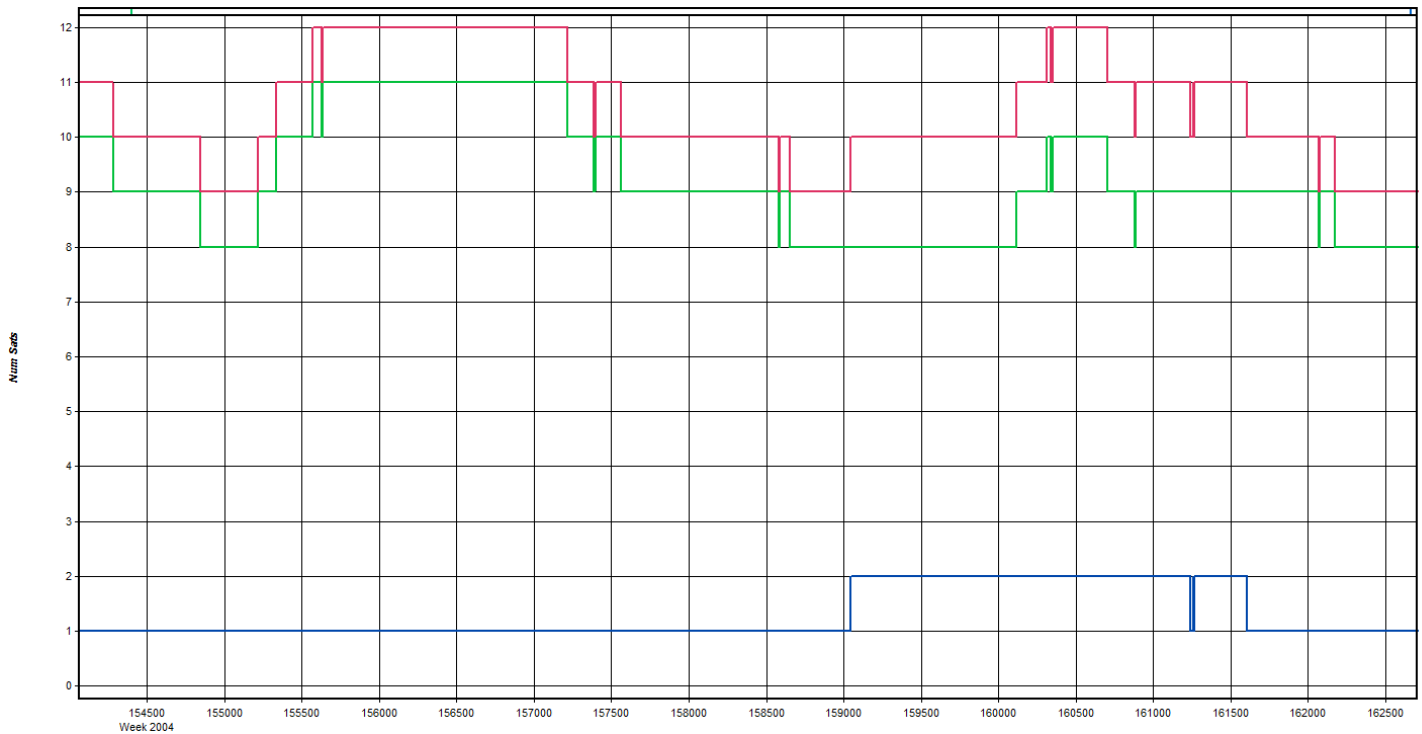
— Float — Forward Fixed — Reverse Fixed — Fixed (2 or more)



GPS Time (TOW, GMT zone)

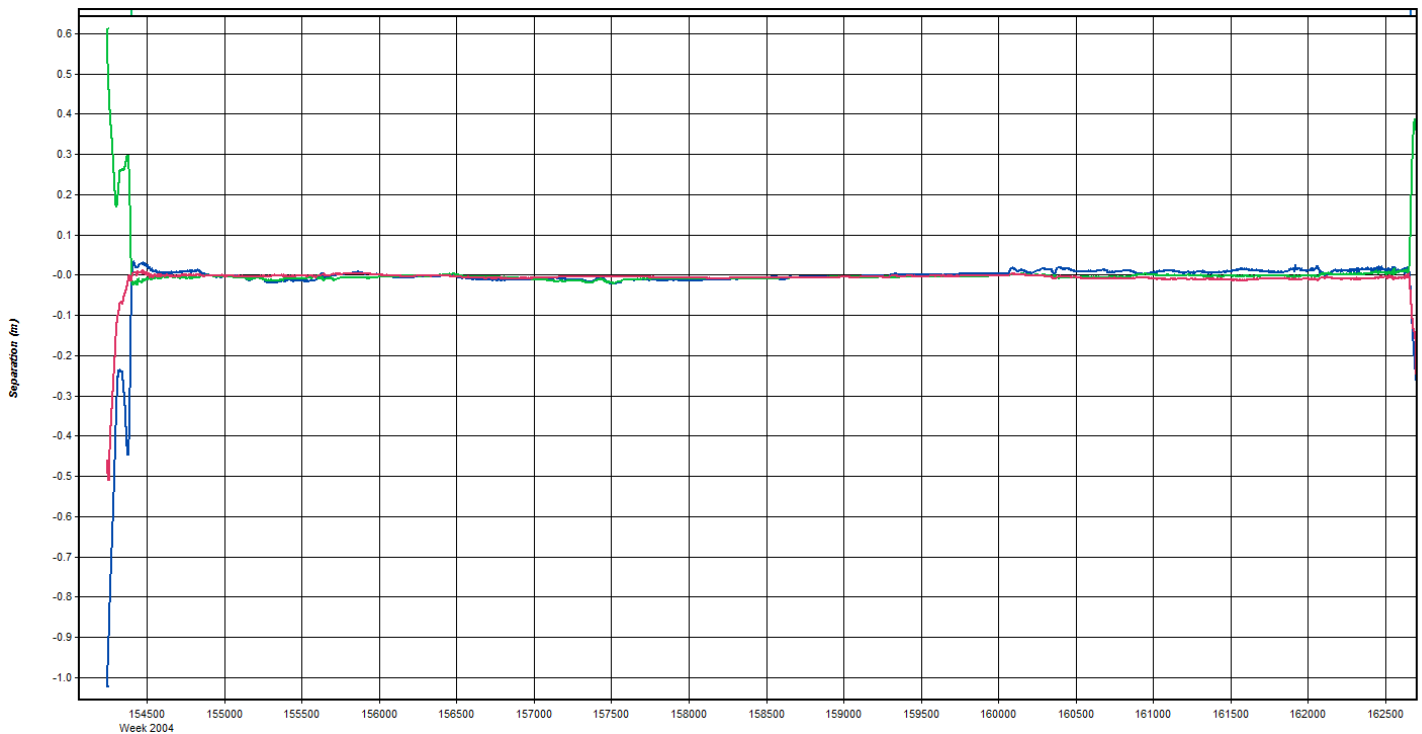
— Roll — Pitch





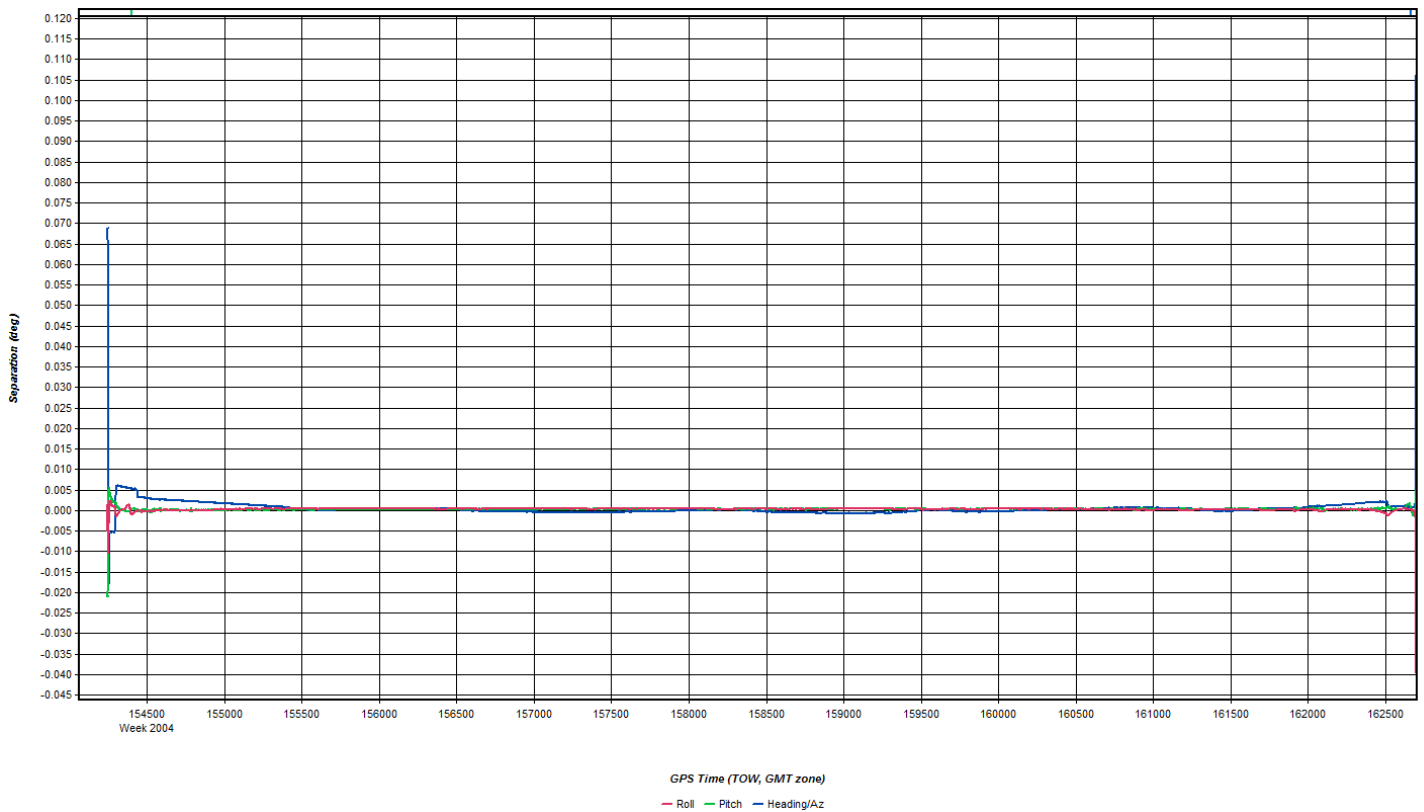
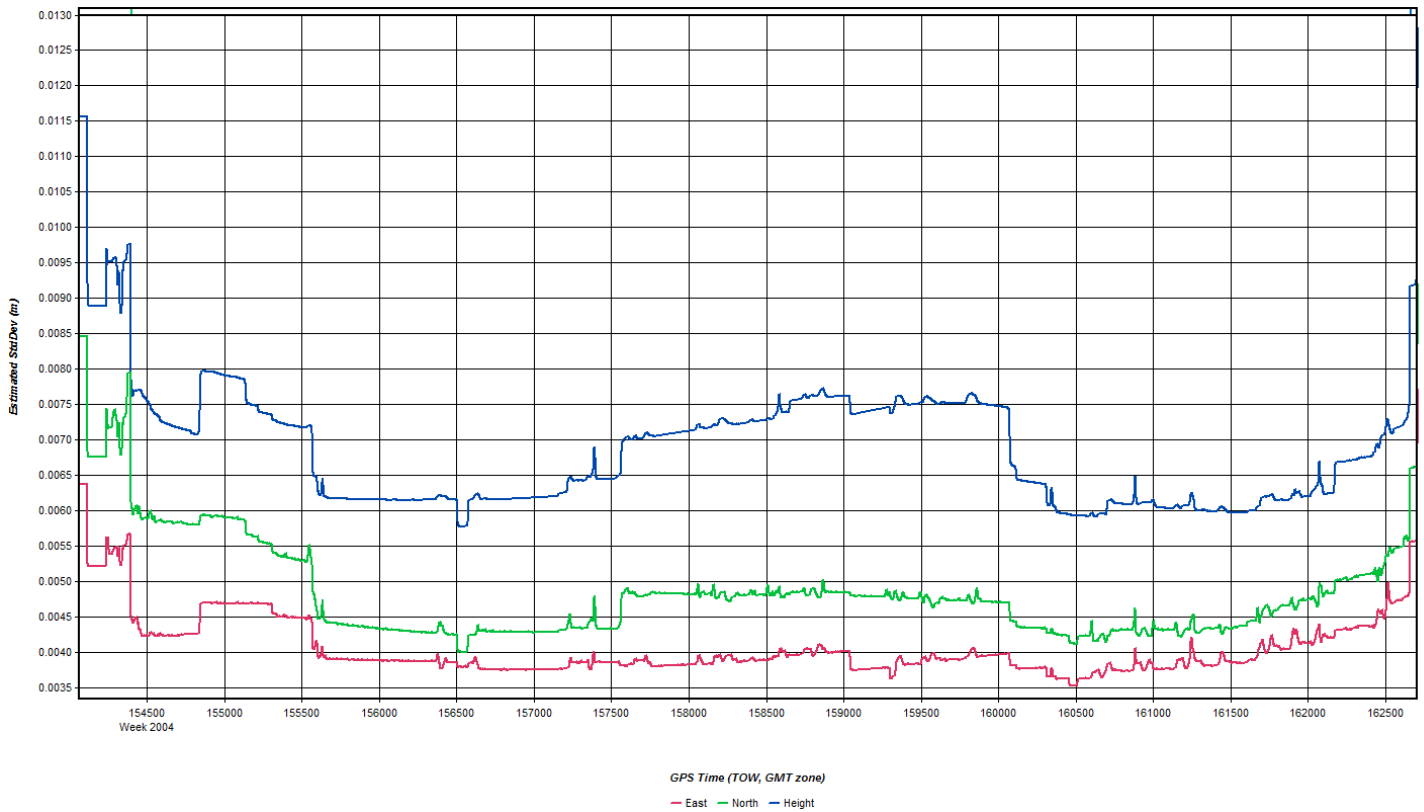
GPS Time (TOW, GMT zone)

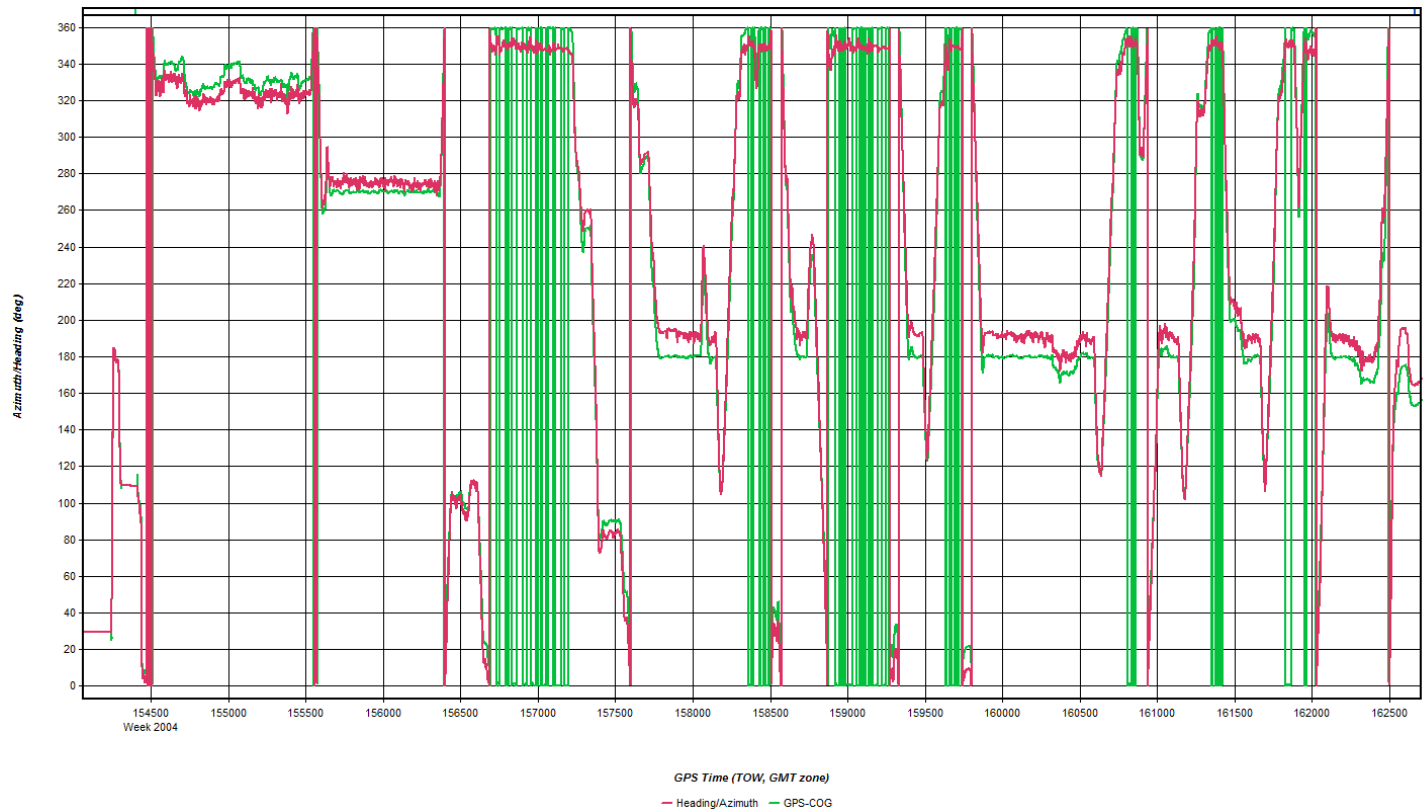
— Num Sats — GPS — GLONASS — BeiDou — Galileo — QZSS



GPS Time (TOW, GMT zone)

— East — North — Up





Coordinate/Antenna Settings

Master Remote

Base Station

1: MIBX Name: MIBX ☐ Disabled

File: E:\Proc\30135_Ottawa_NF_MI\From_Kucera_6-12-18\QSI_MI_LID\

Coordinates

Latitude: North 46 45 50.77595 Coord. options

Longitude: West 88 30 46.83926 Save to Favorites

Ellipsoidal height: 194.707 m

Datum: WGS84 Proc Datum: WGS84

Epoch: year

Antenna Height

From station file: LEIAT504, LEIS View STA File

Antenna profile: LEIAT504, LEIS Info

Measured height: 0.000 m

ARP to L1 offset: 0.088 m

Applied height: 0.088 m

Measured to

☒ ARP

☐ L1 Phase Centre

Compute From Slant

OK Cancel

Coordinate/Antenna Settings ? X

Master Remote

Base Station
 2 MIIR Name: MIIR ☐ Disabled
 File: E:\Proc\30135_Ottawa_NF_MI\From_Kucera_6-12-18\QSI_MI_LID\

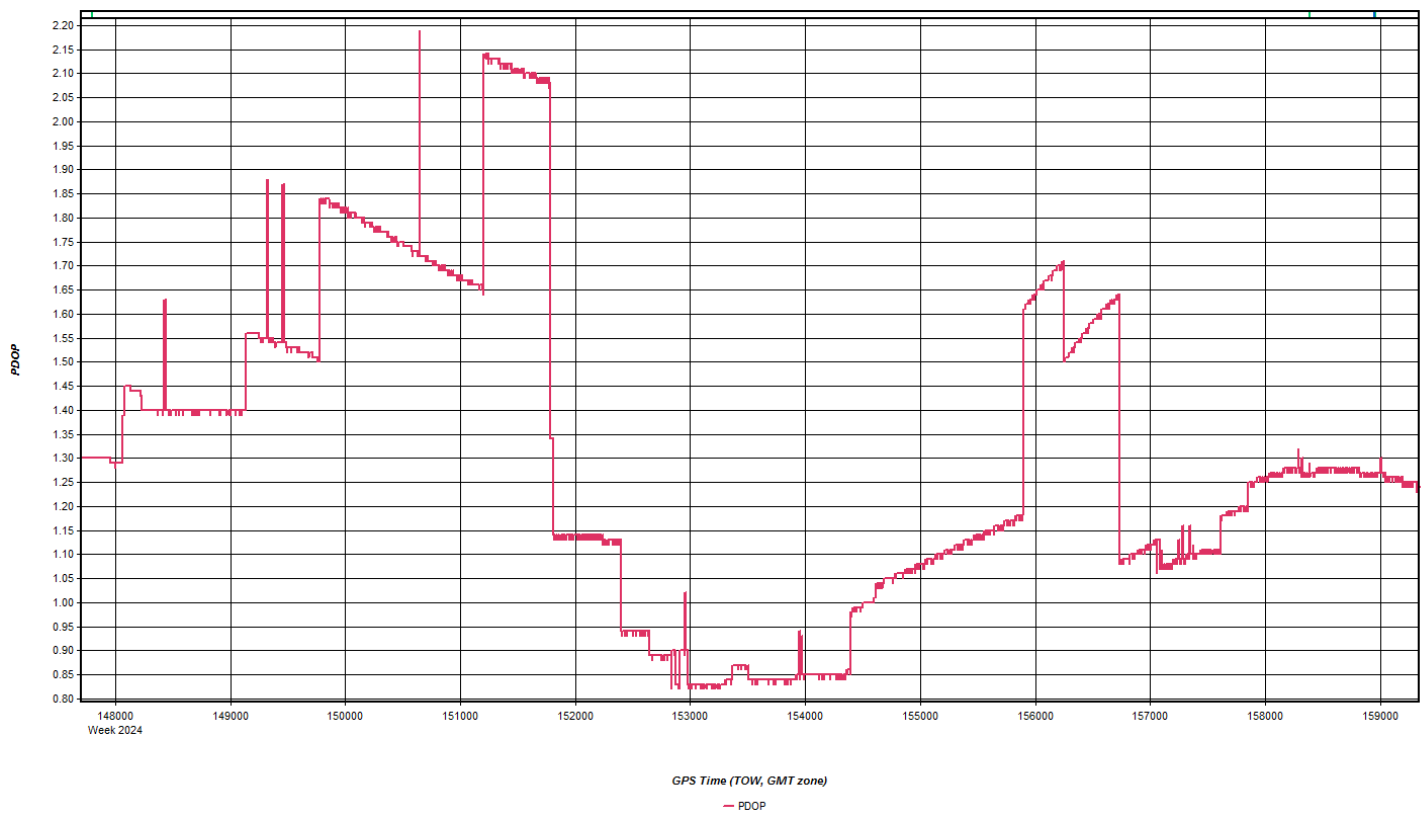
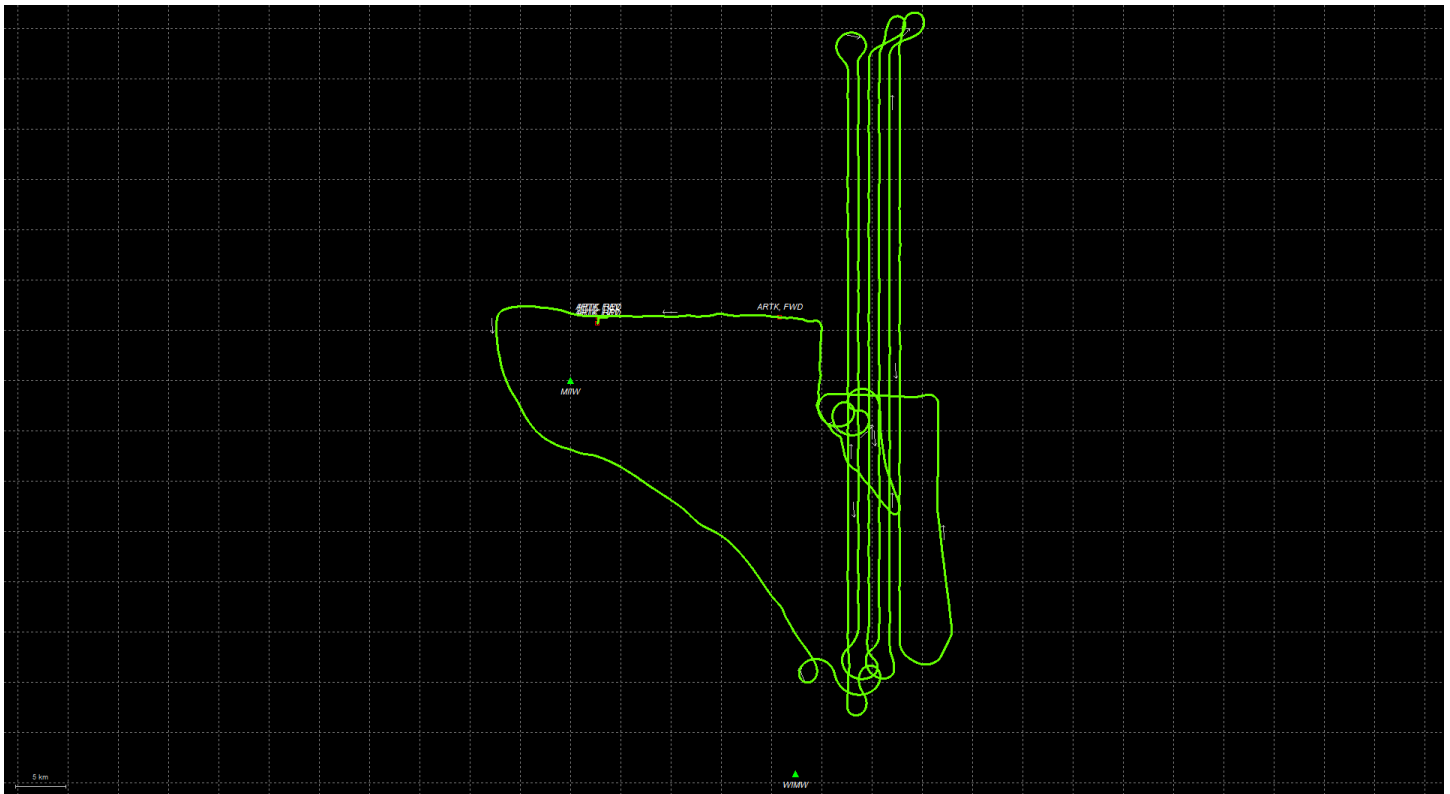
Coordinates
 Latitude: North 46 04 49.37197 Coord. options
 Longitude: West 88 38 00.11113 Save to Favorites
 Ellipsoidal height: 470.982 m
 Datum: WGS84 Proc Datum: WGS84
 Epoch: year

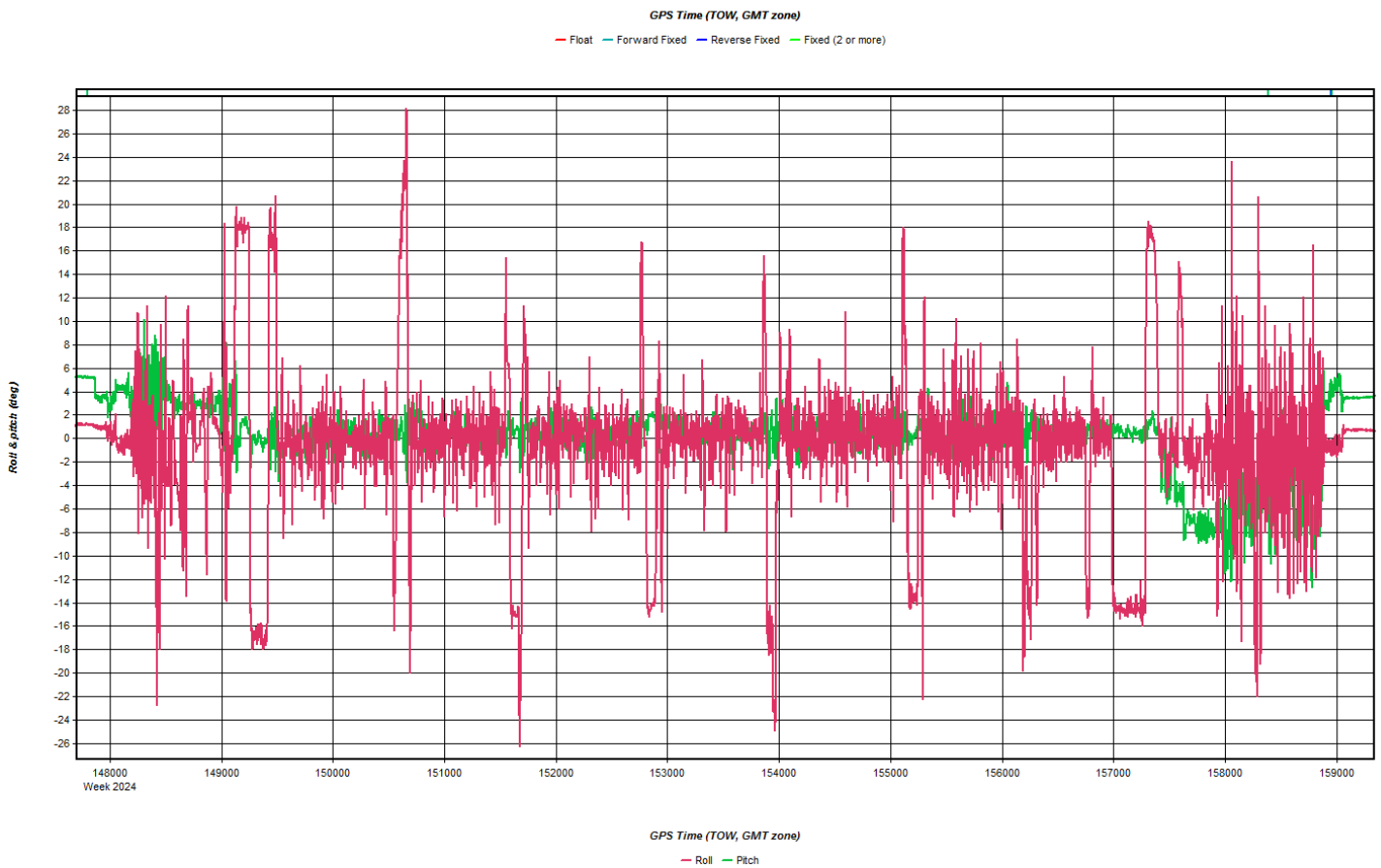
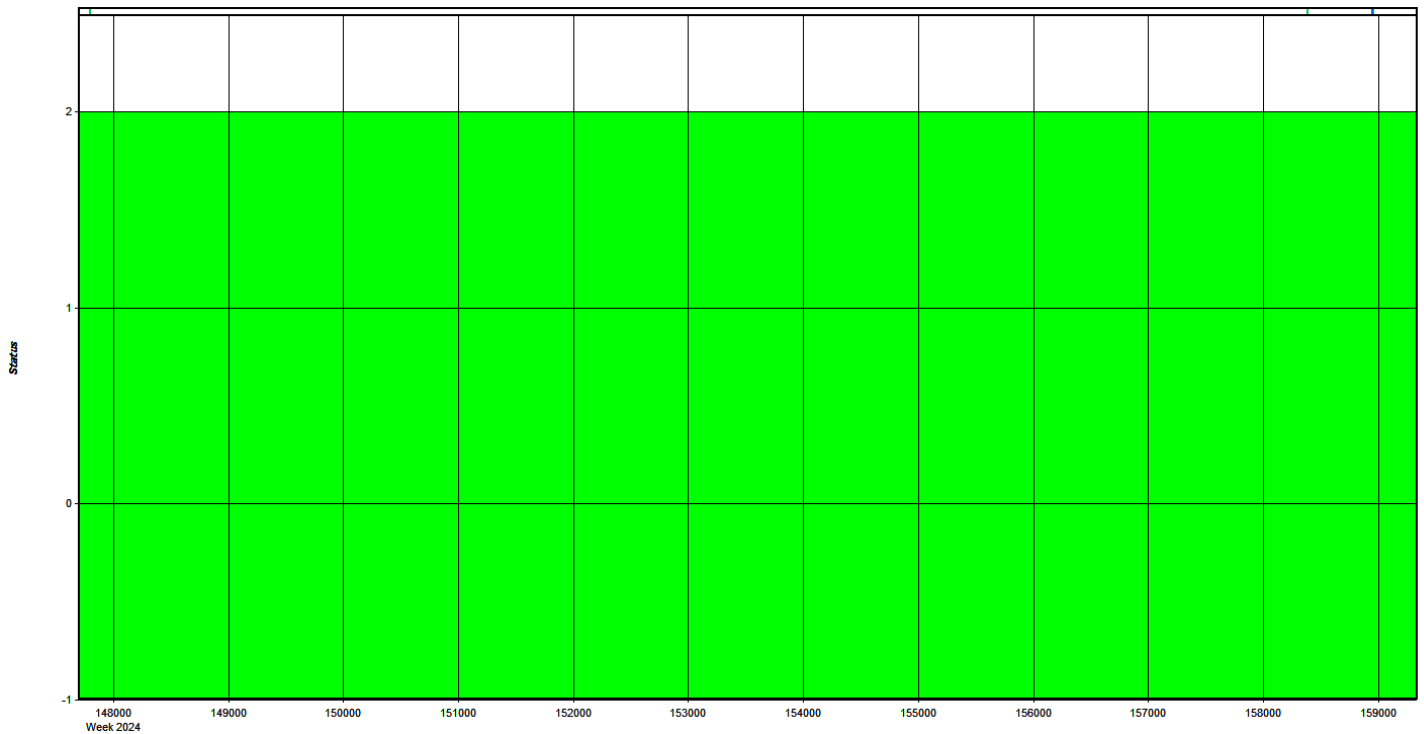
Antenna Height
 From station file: LEIAT504, LEIS View STA File
 Antenna profile: LEIAT504, LEIS Info
 Measured height: 0.000 m
 ARP to L1 offset: 0.088 m
 Applied height: 0.088 m

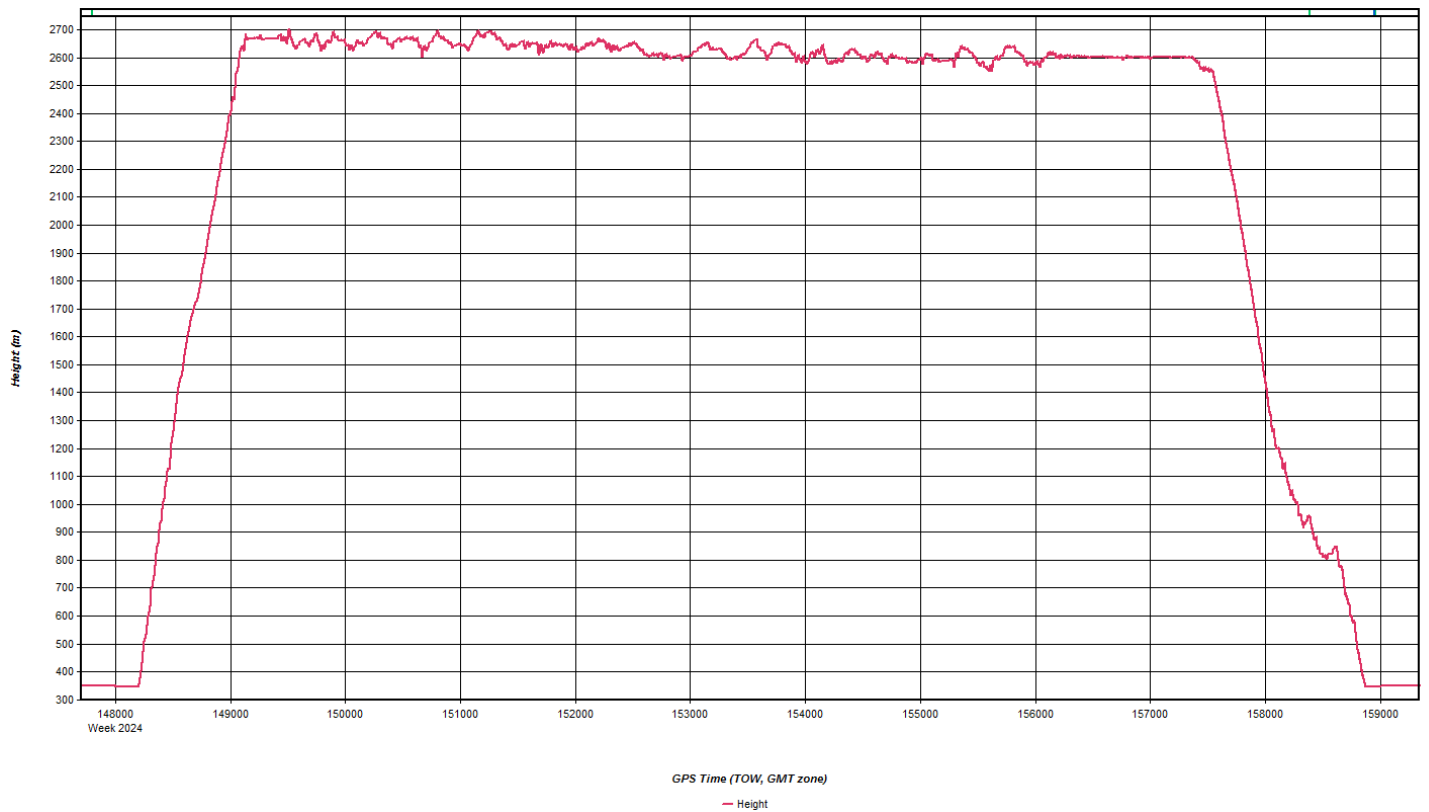
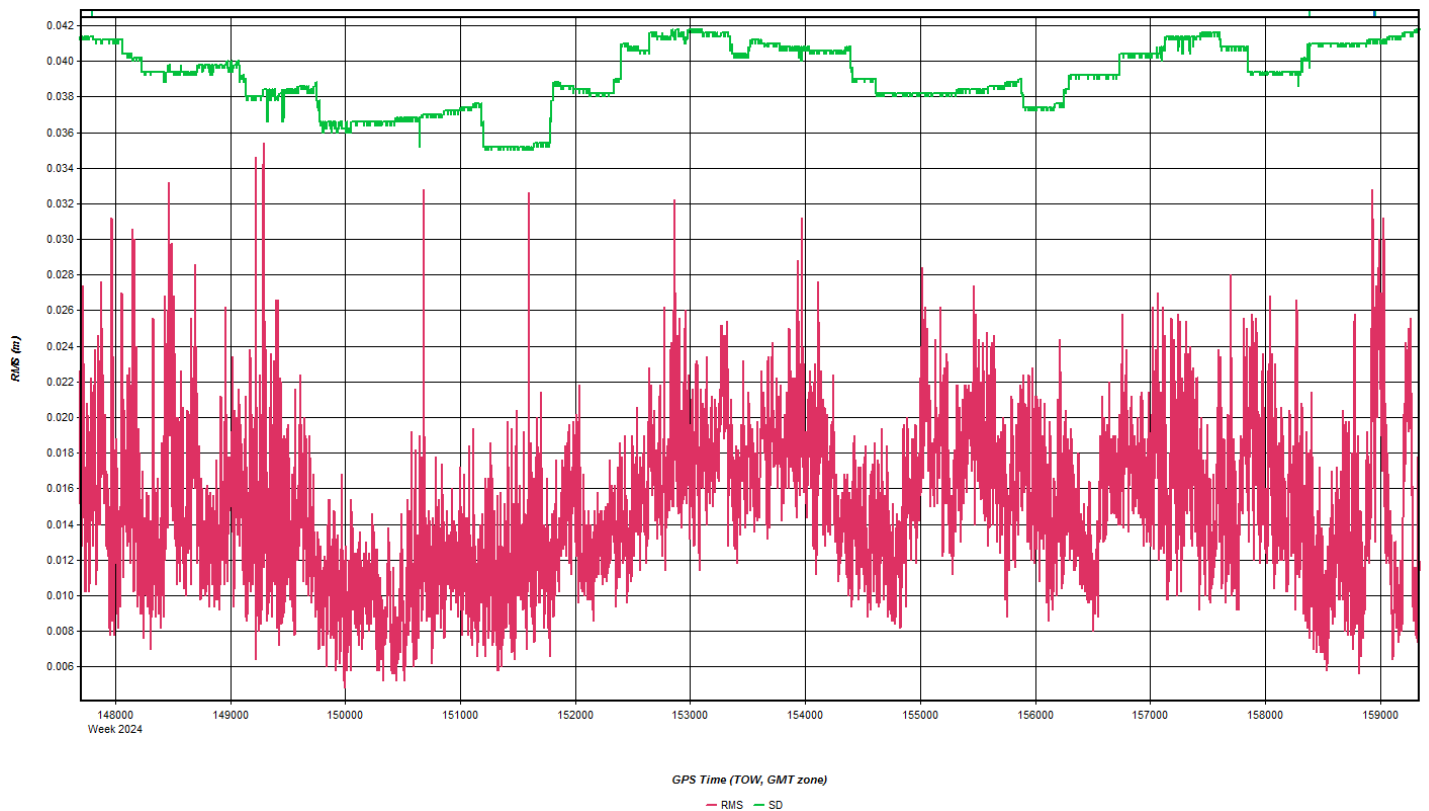
Measured to
☒ ARP
☐ L1 Phase Centre
 Compute From Slant

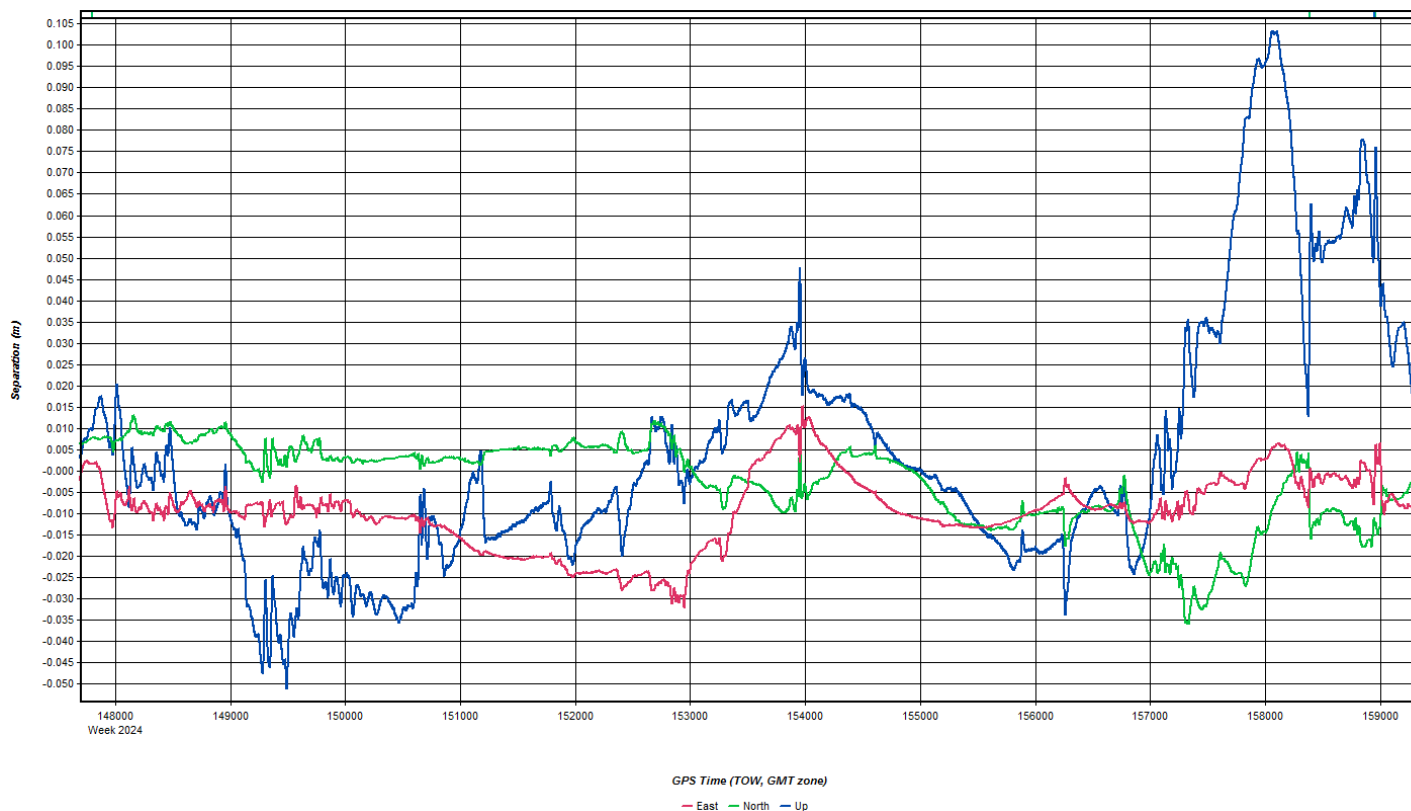
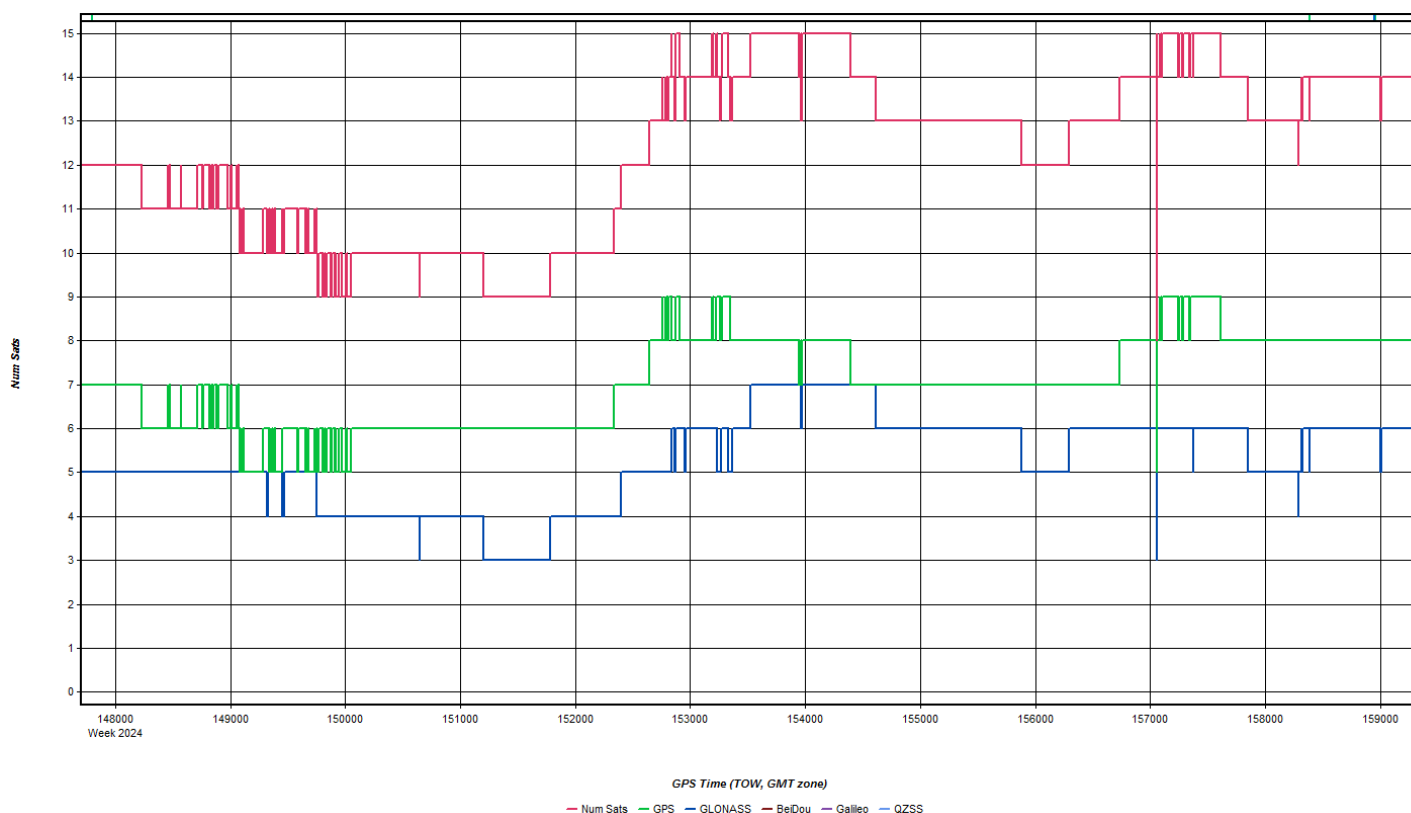
OK Cancel

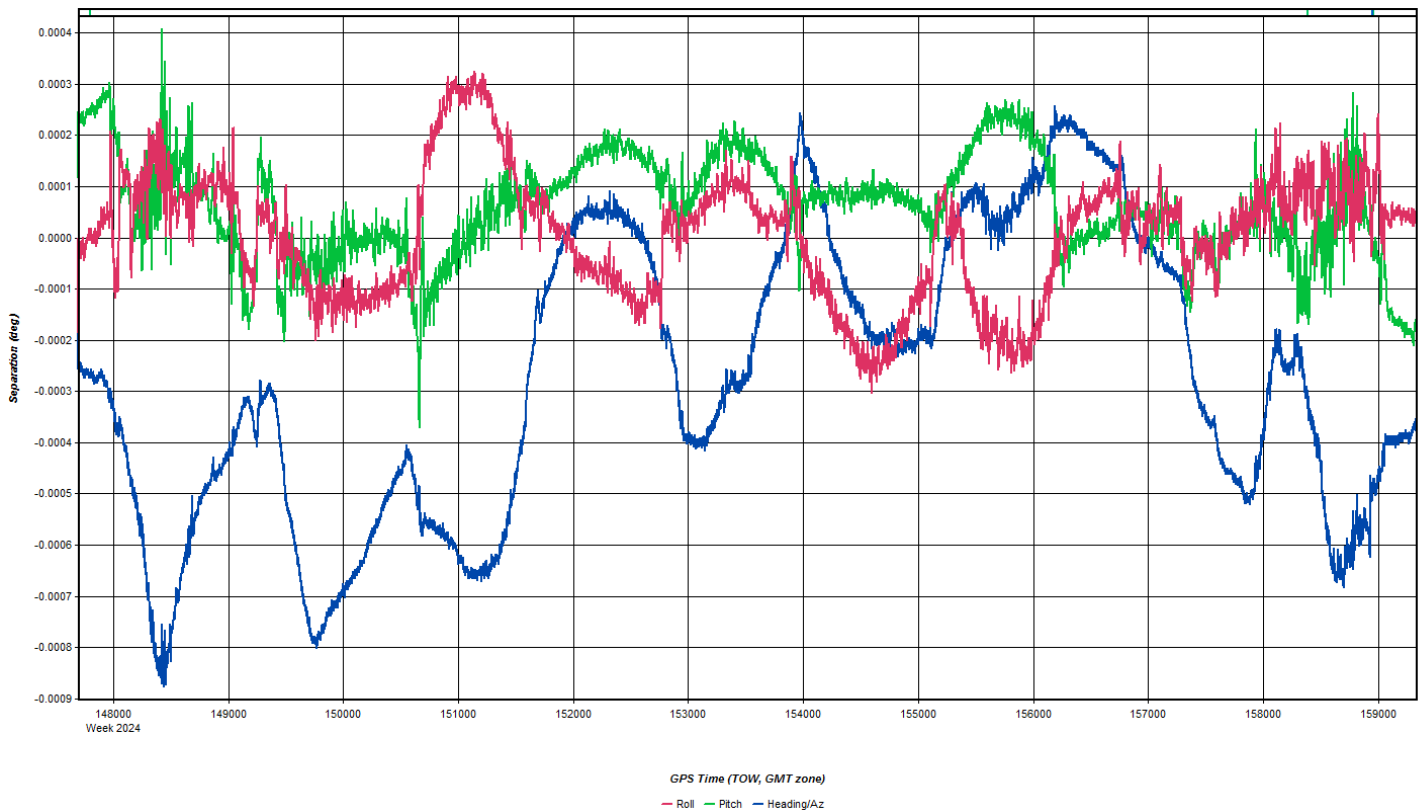
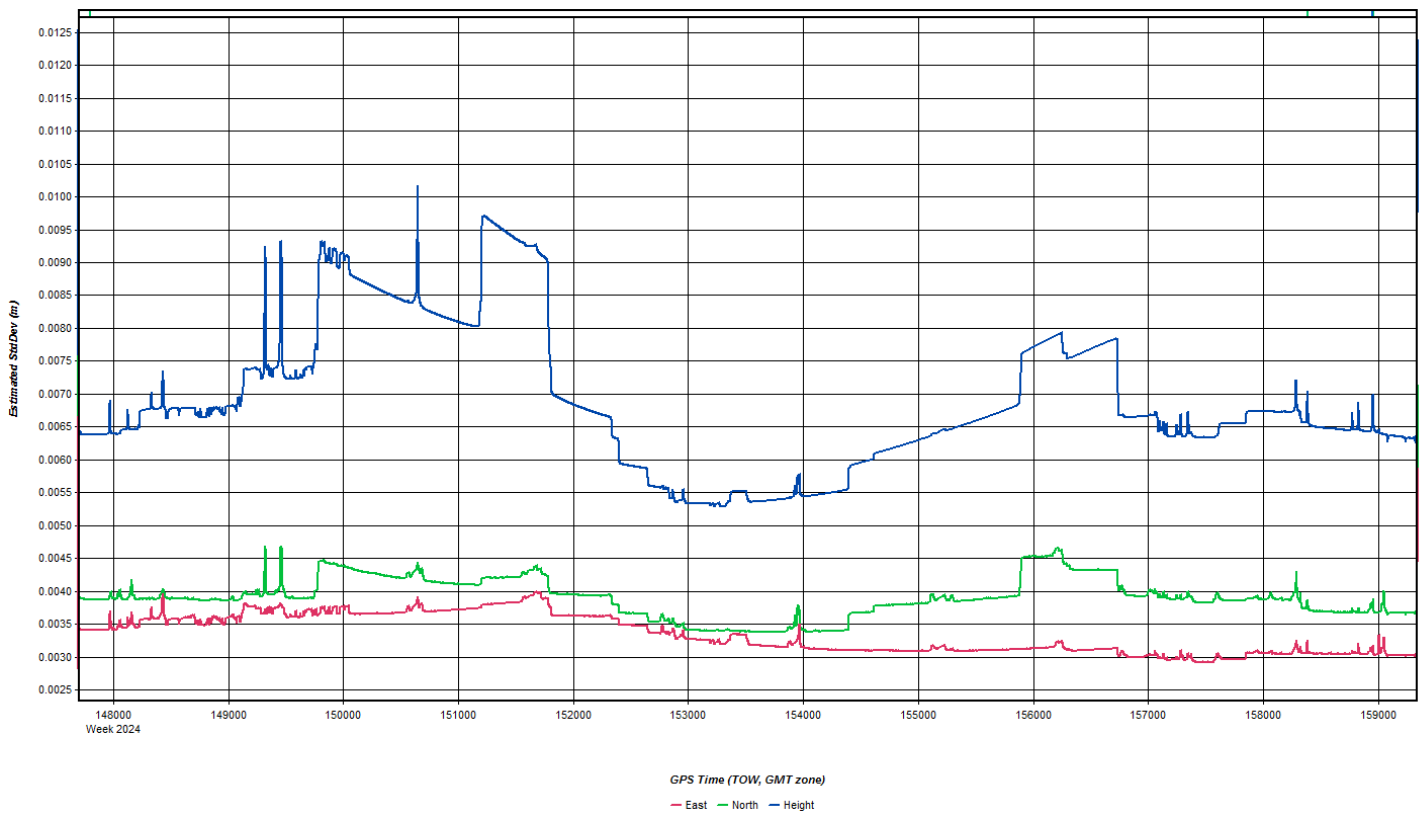
20181022A
(SN8119, N916WC)

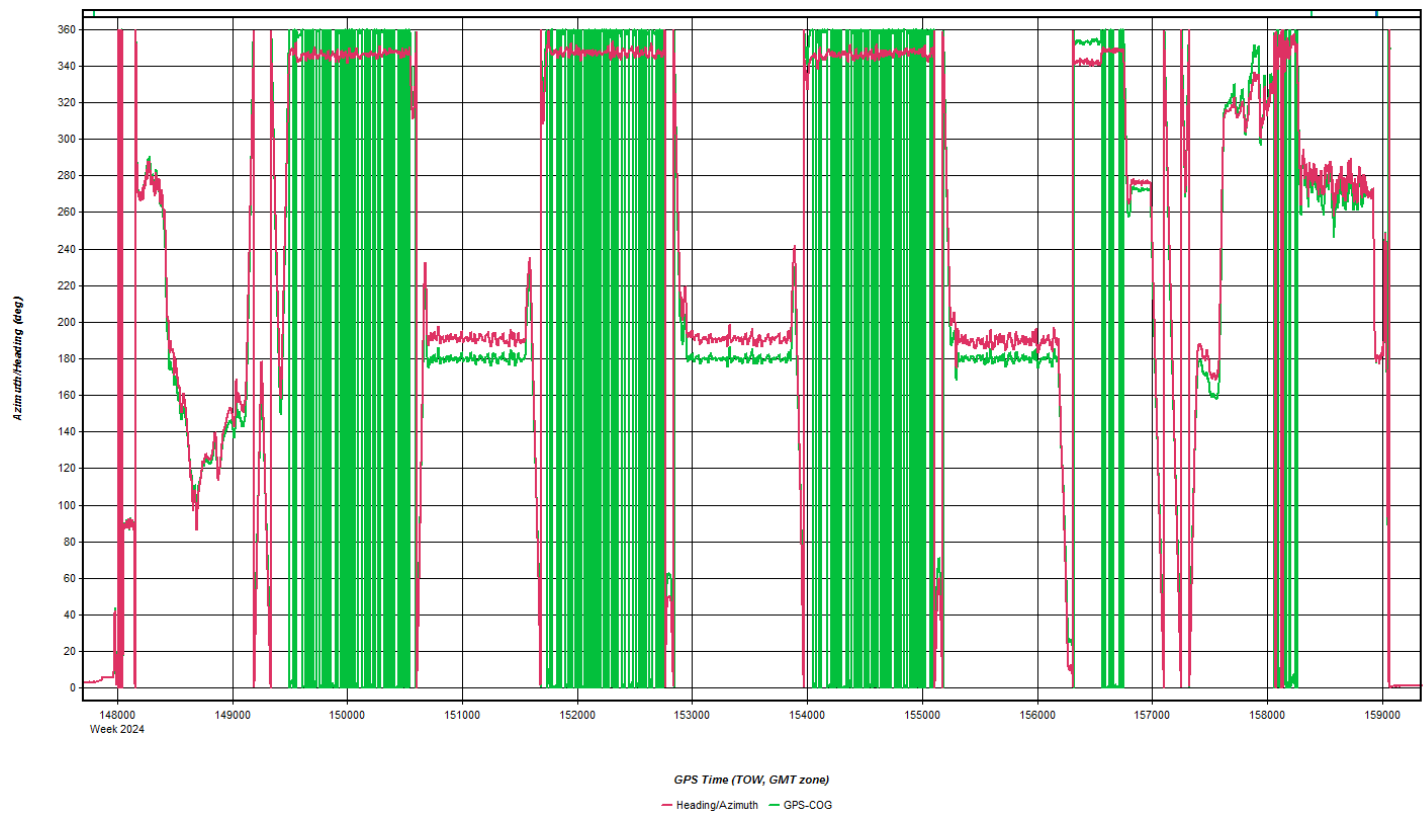












Coordinate/Antenna Settings

Master Remote

Base Station

1: MIIW Name: MIIW Disabled

File: E:\Proc\30135_Ottawa_MIND_Marsh_Recvd_10-24-18\N916WC_8

Coordinates

Latitude: North 46 28 12.86537 Coord. options

Longitude: West 90 09 56.56054 Save to Favorites

Ellipsoidal height: 420.085 m

Datum: WGS84 Proc Datum: WGS84

Epoch: year

Antenna Height

From station file: LEIAT504GG, LEIS View STA File

Antenna profile: LEIAT504GG, LEIS Info

Measured height: 0.000 m

ARP to L1 offset: 0.087 m

Applied height: 0.087 m

Measured to

☒ ARP

☐ L1 Phase Centre

Compute From Slant

OK Cancel

Coordinate/Antenna Settings ? X

Master Remote

Base Station
 2: WIMW Name: WIMW ☐ Disabled
 File: E:\Proc\30135_Ottawa_MIND_Marsh_Recvd_10-24-18\N916WC_8

Coordinates
 Latitude: North 46 07 20.41296 Coord. options
 Longitude: West 89 52 34.90754 Save to Favorites
 Ellipsoidal height: 462.931 m
 Datum: WGS84 Proc Datum: WGS84
 Epoch: year

Antenna Height
 From station file: TRM57971.00, NONE View STA File
 Antenna profile: TRM57971.00 Info
 Measured height: 0.000 m
 ARP to L1 offset: 0.065 m
 Applied height: 0.065 m

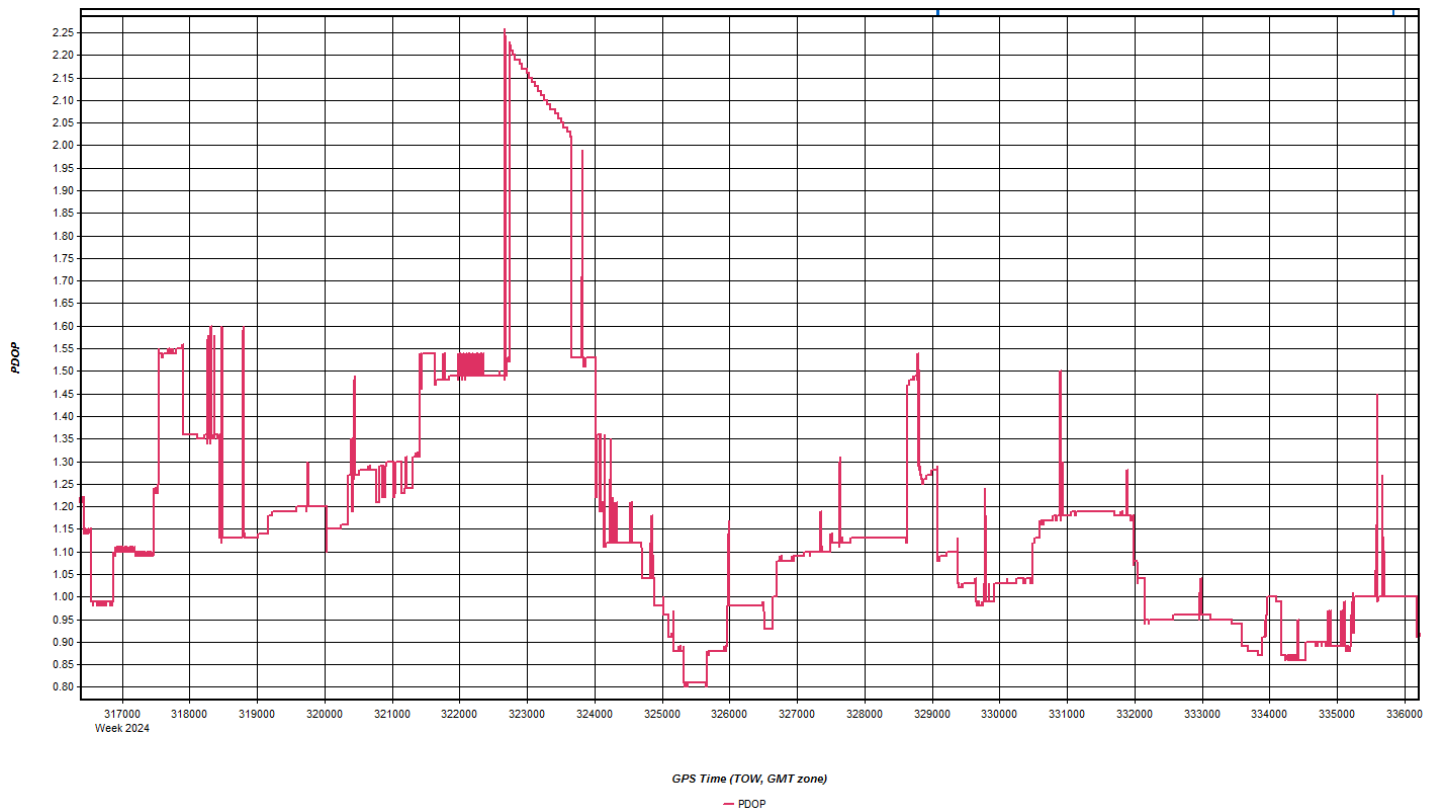
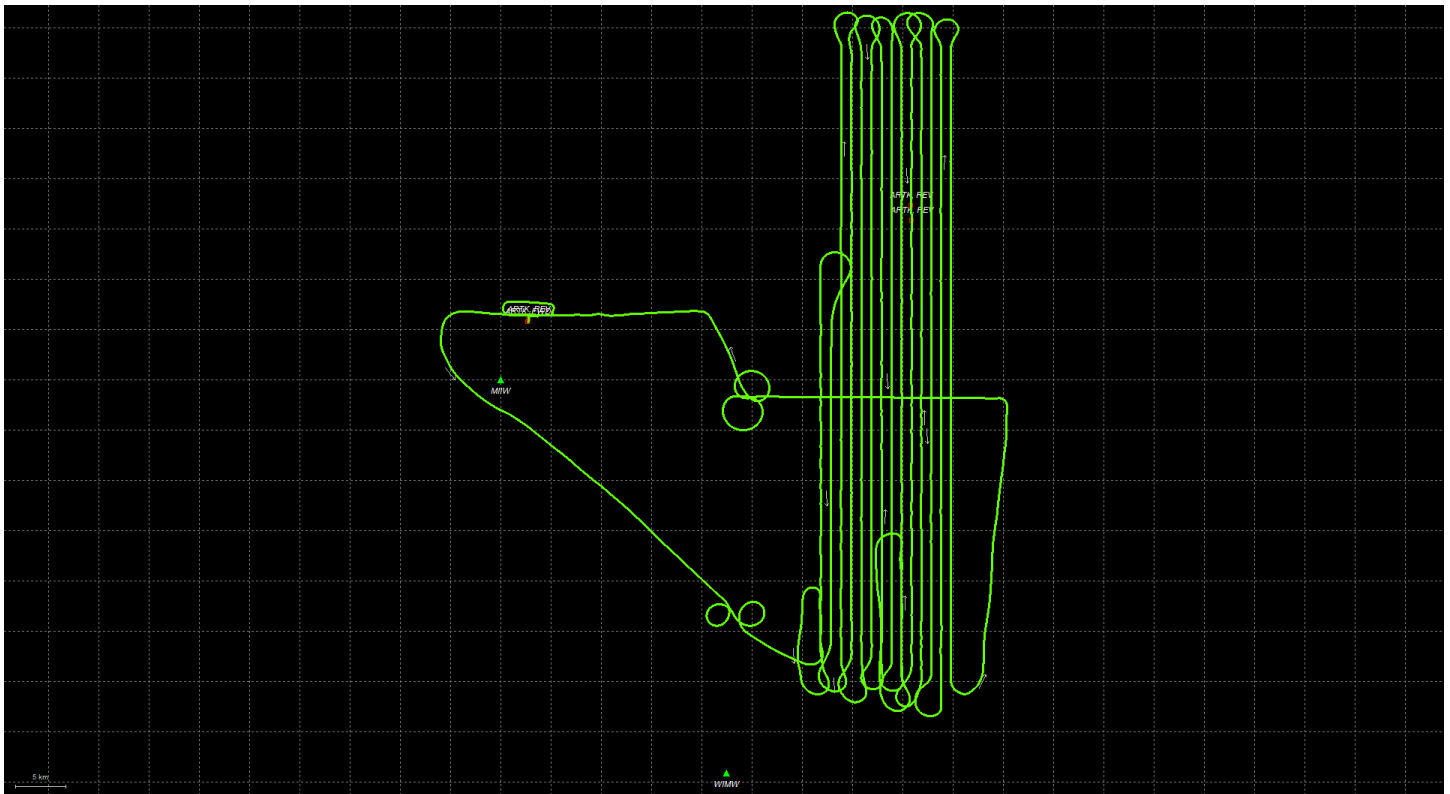
Measured to
☒ ARP
☐ L1 Phase Centre
 Compute From Slant

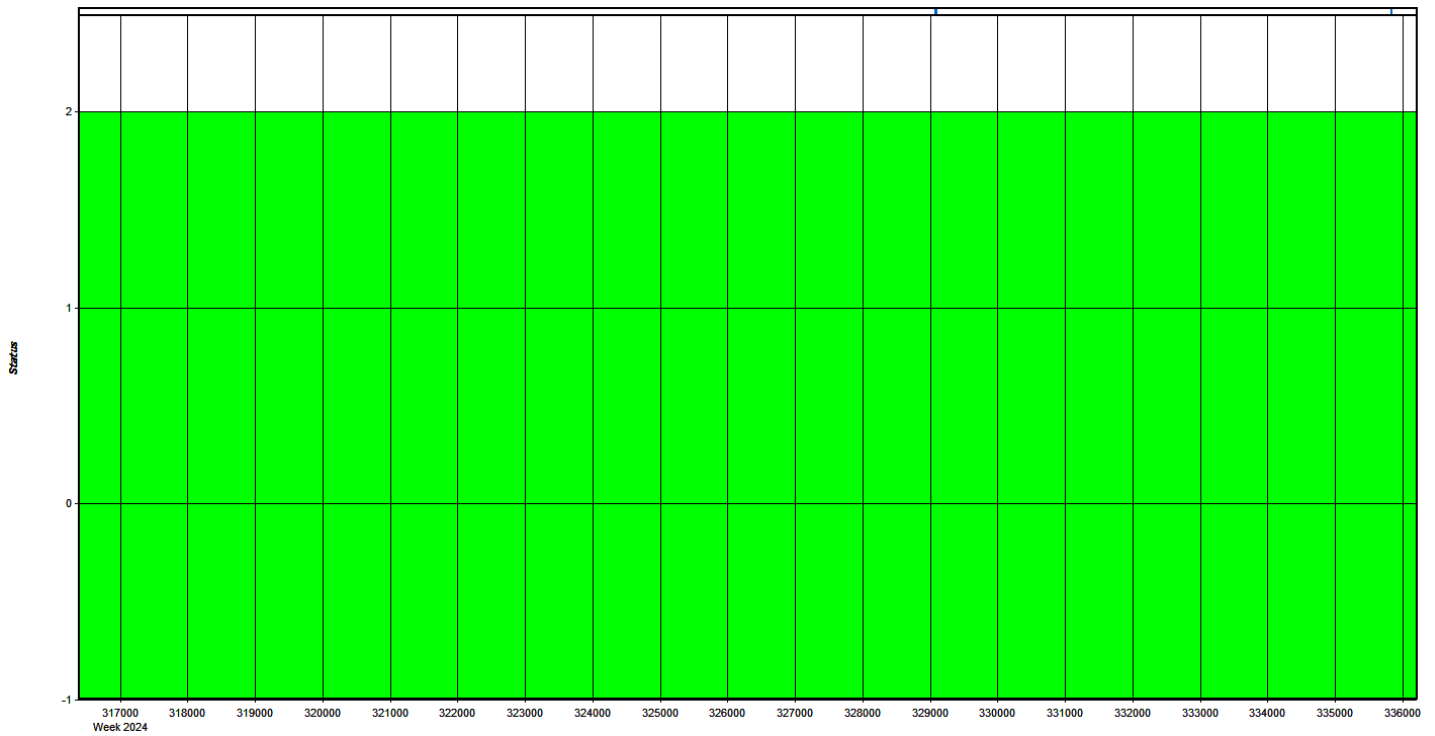
OK Cancel

Flight Log

[illegible]

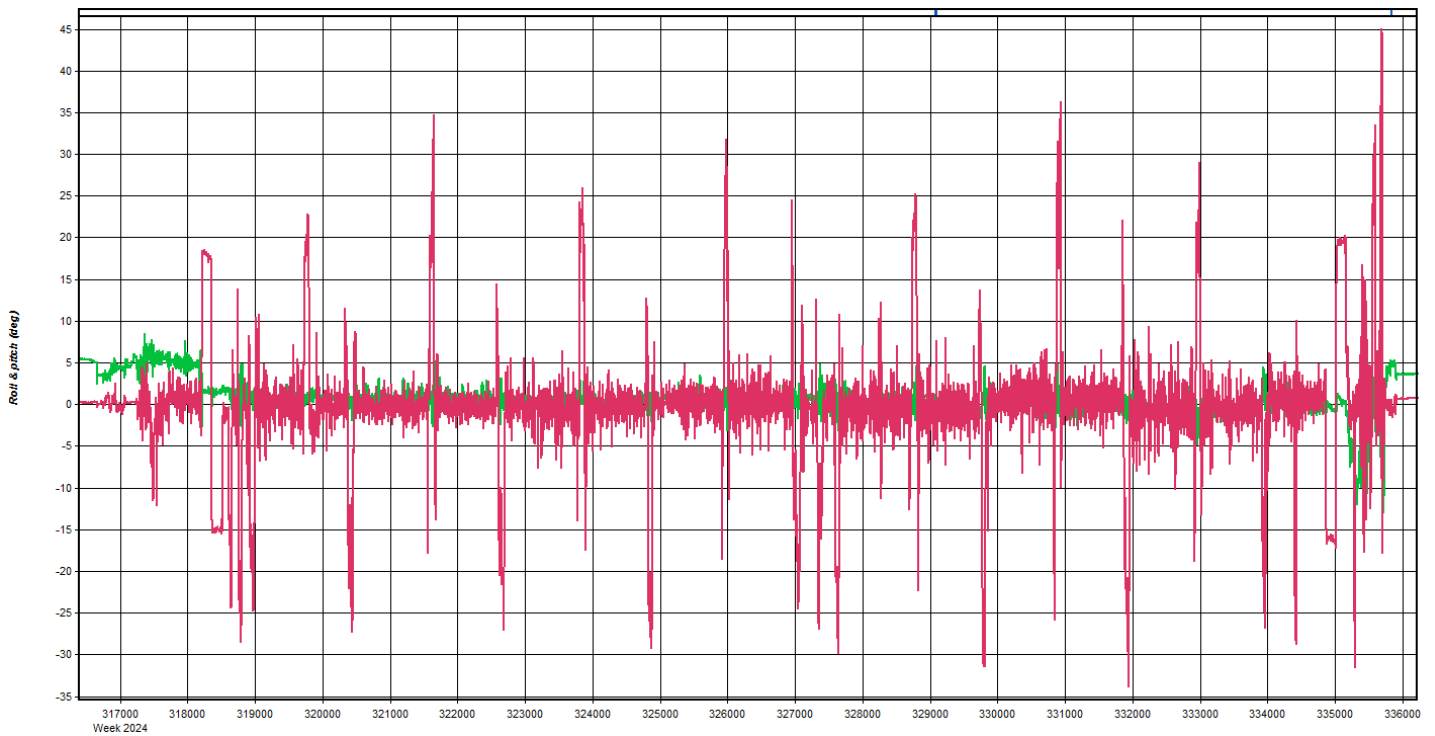
20181024A
(SN8119, N916WC)





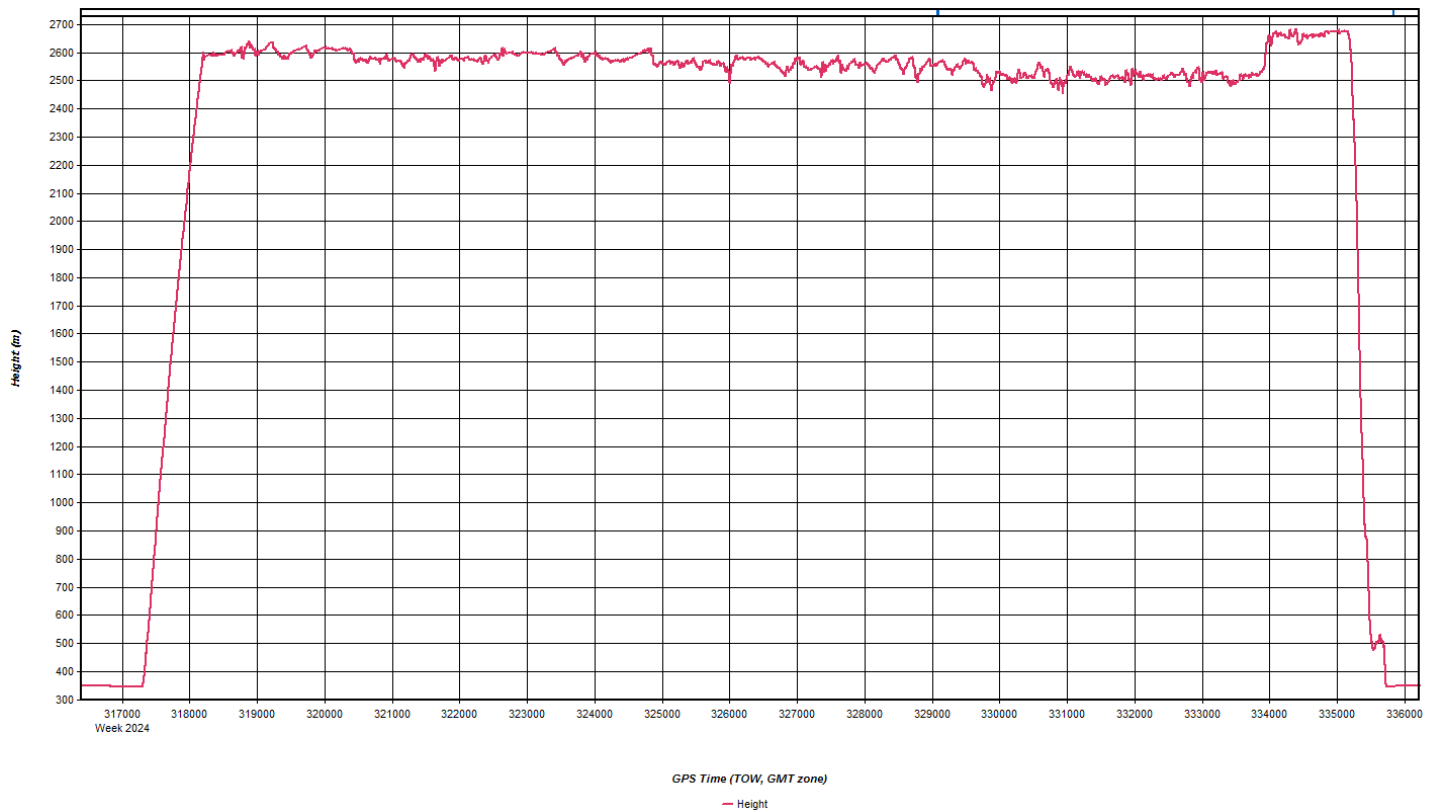
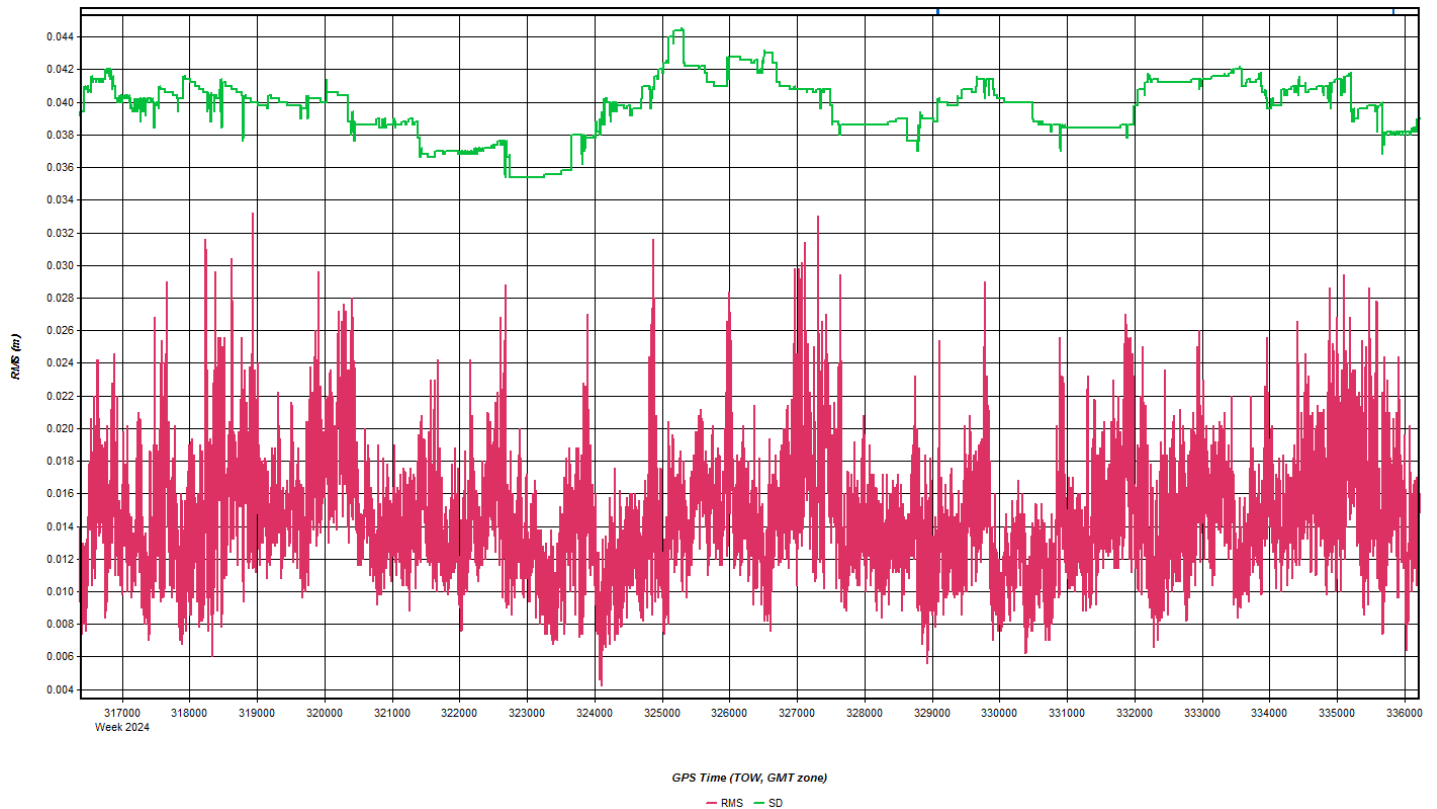
GPS Time (TOW, GMT zone)

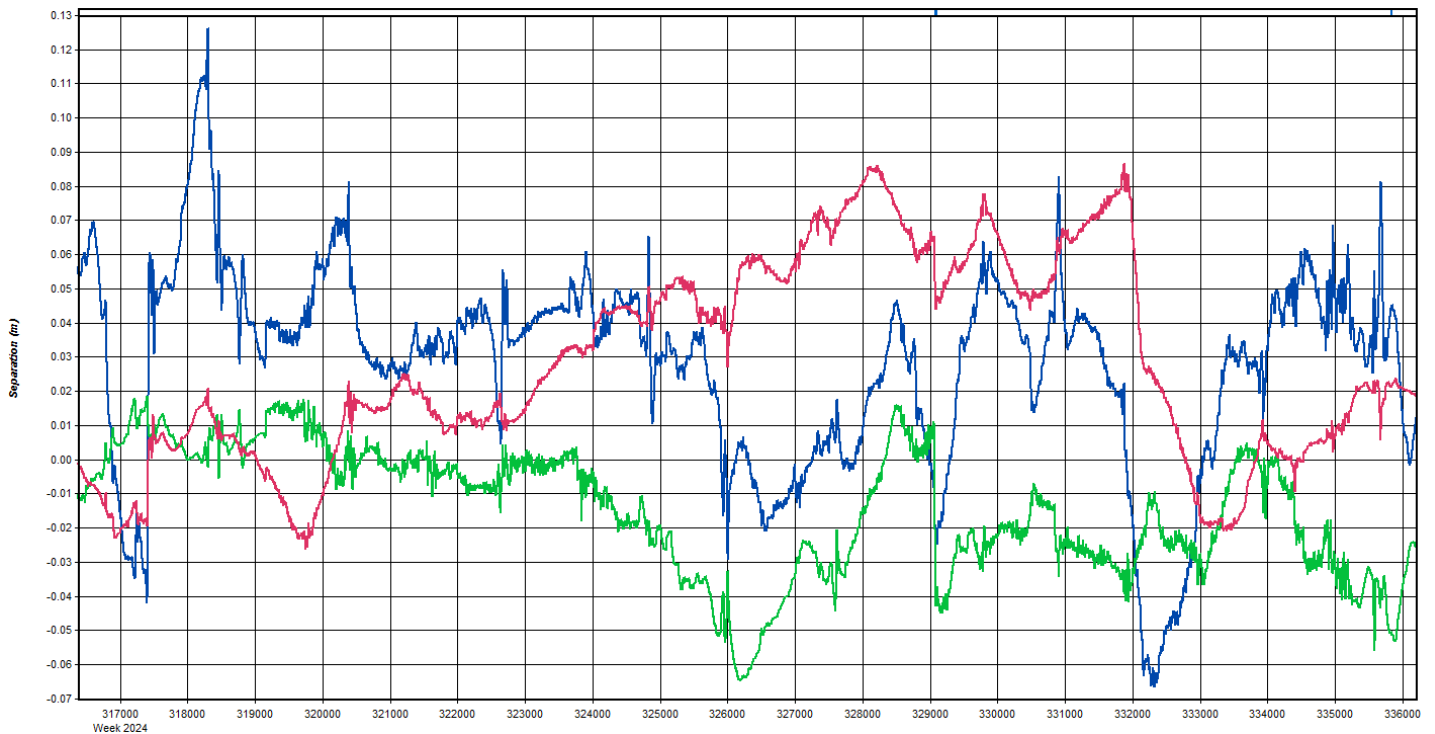
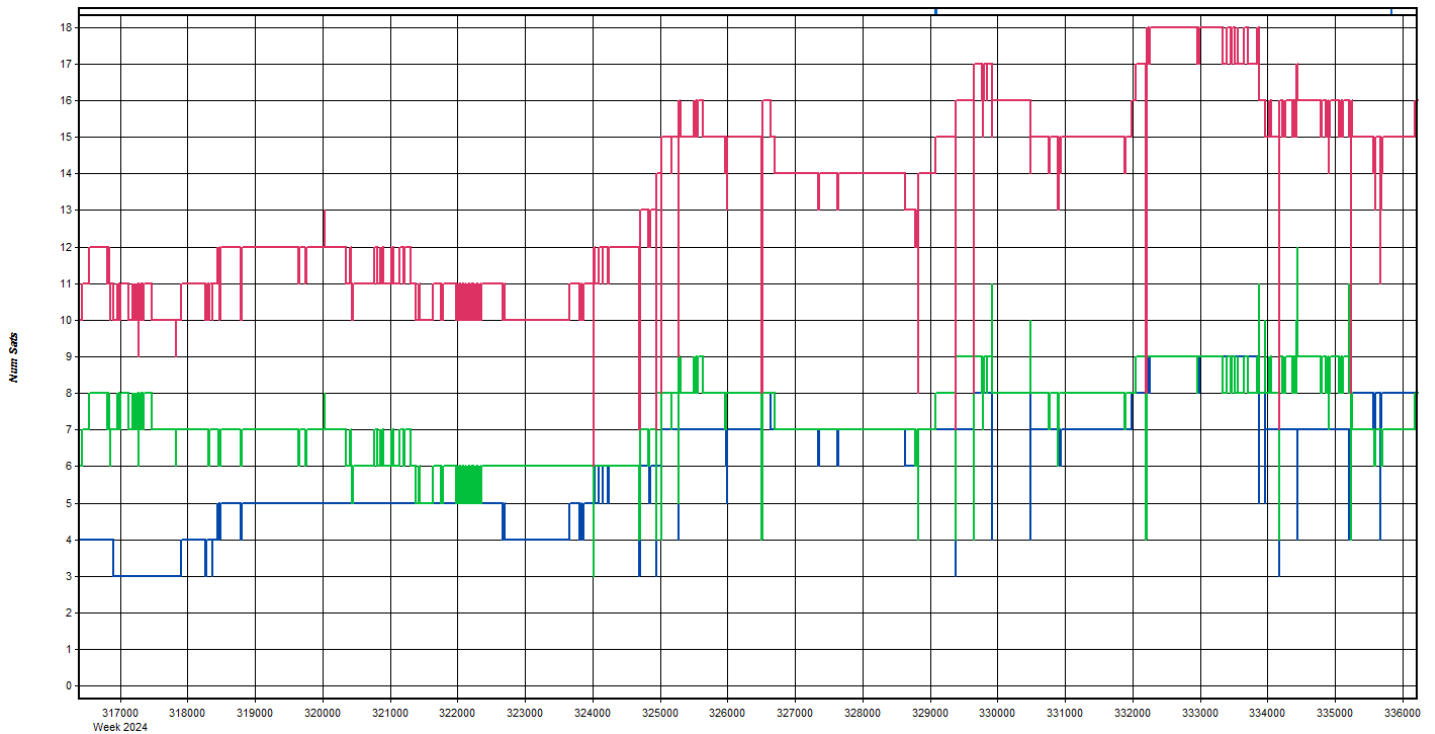
— Float — Forward Fixed — Reverse Fixed — Fixed (2 or more)

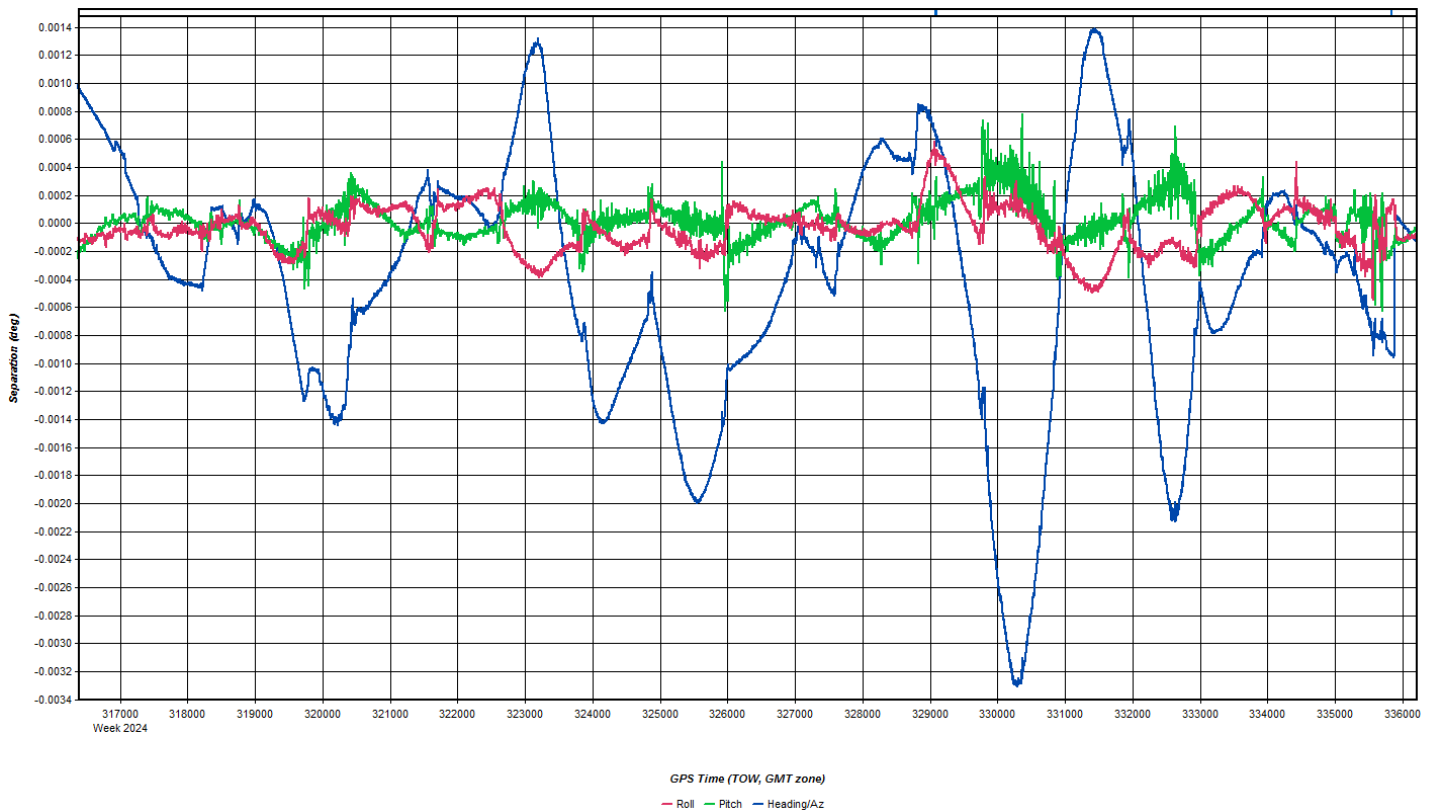
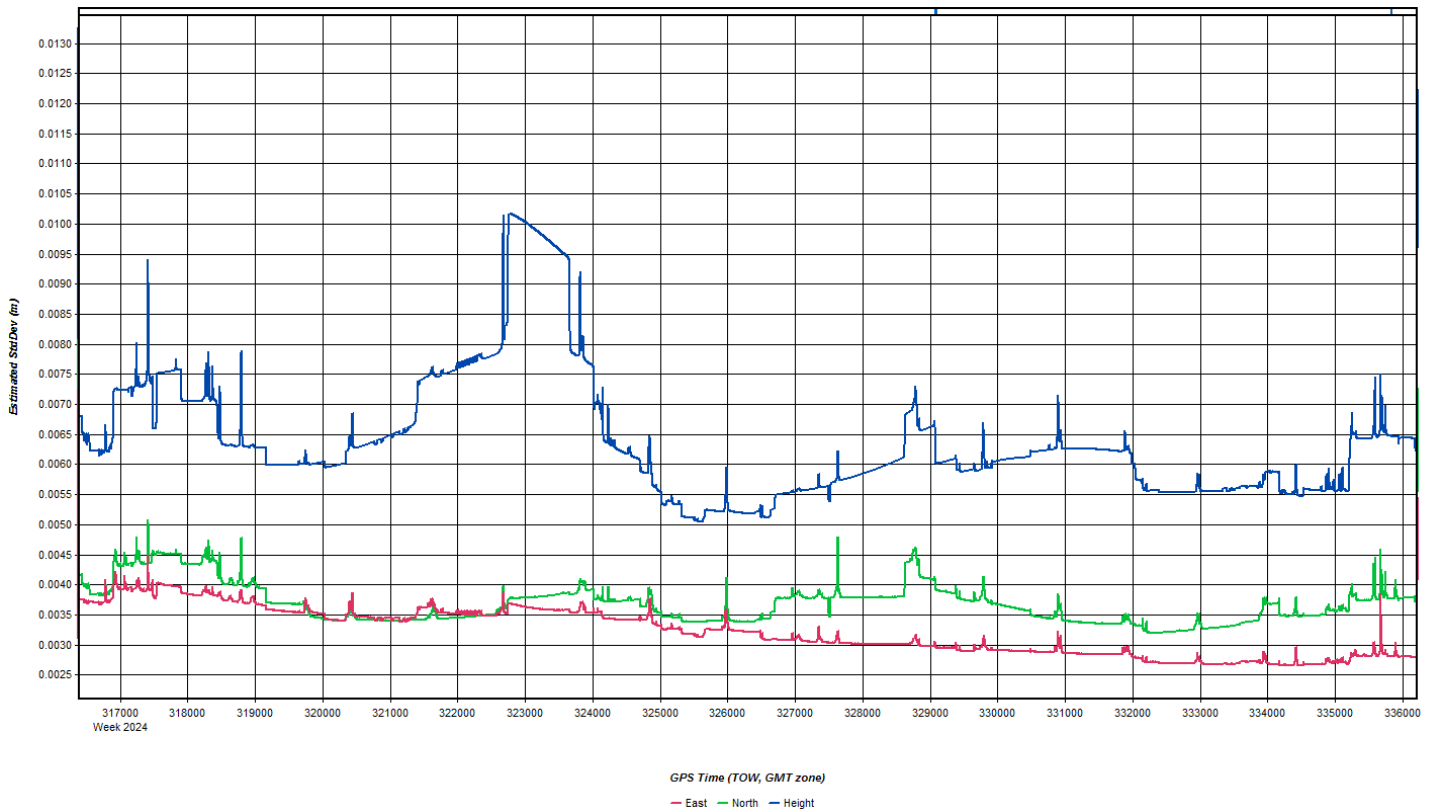


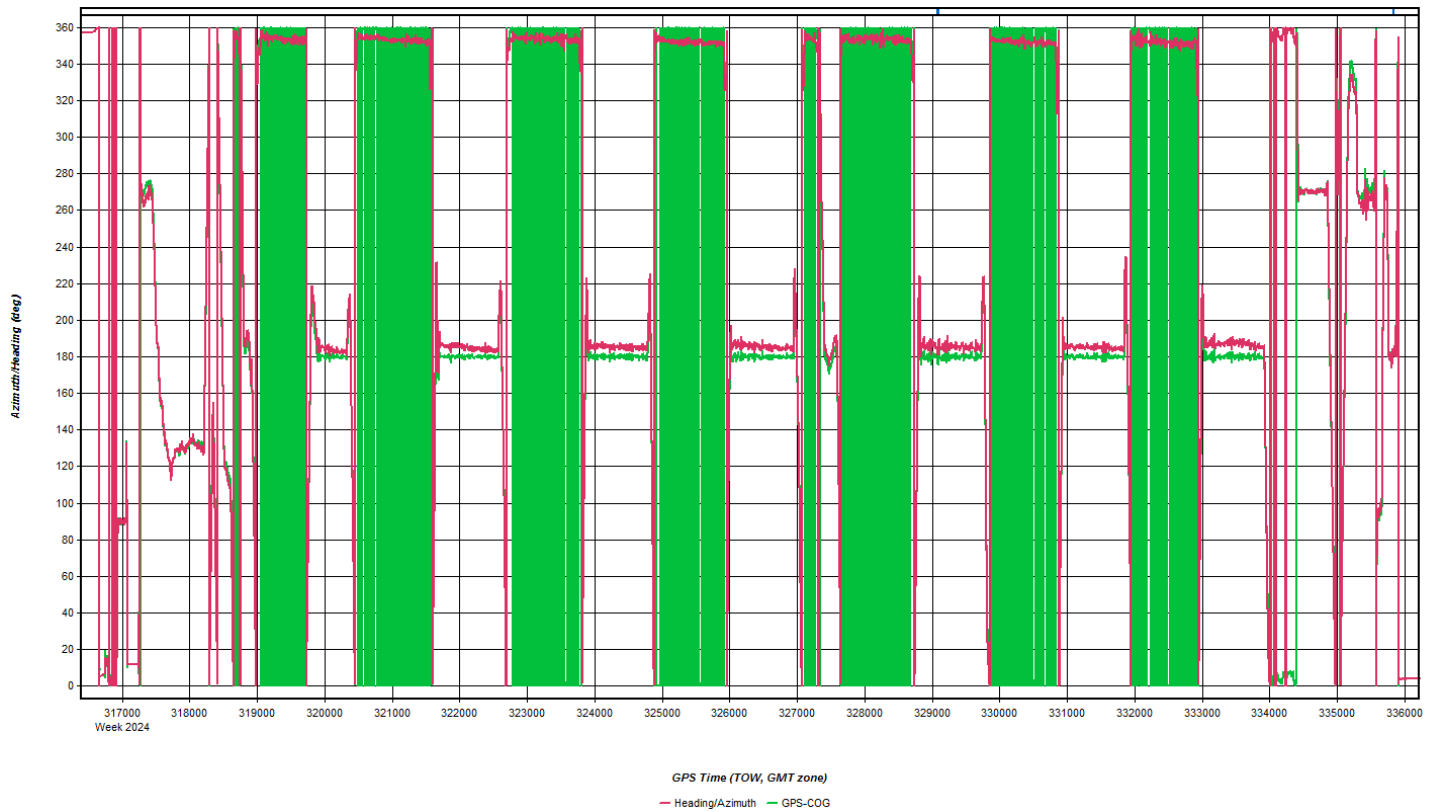
GPS Time (TOW, GMT zone)

— Roll — Pitch









Coordinate/Antenna Settings ? X

Master Remote

Base Station

1: MIIW Name: MIIW Disabled

File: E:\Proc\30135_Ottawa_MIND_Marsh_Recvd_10-29-18\Q_30135_O

Coordinates

Latitude: North 46 28 12.86537 Coord. options

Longitude: West 90 09 56.56054 Save to Favorites

Ellipsoidal height: 420.085 m

Datum: WGS84 Proc Datum: WGS84

Epoch: year

Antenna Height

From station file: LEIAT504GG, LEIS View STA File

Antenna profile: LEIAT504GG, LEIS Info

Measured height: 0.000 m

ARP to L1 offset: 0.087 m

Applied height: 0.087 m

Measured to

☒ ARP

☐ L1 Phase Centre

Compute From Slant

OK Cancel

Coordinate/Antenna Settings ? X

Master Remote

Base Station
 2 WIMW Name: WIMW ☐ Disabled
 File: E:\Proc\30135_Ottawa_MIND_Marsh_Recvd_10-29-18\Q_30135_0

Coordinates
 Latitude: North 46 07 20.41296 Coord. options
 Longitude: West 89 52 34.90754 Save to Favorites
 Ellipsoidal height: 462.931 m
 Datum: WGS84 Proc Datum: WGS84
 Epoch: year

Antenna Height
 From station file: TRM57971.00, NONE View STA File
 Antenna profile: TRM57971.00 Info
 Measured height: 0.000 m
 ARP to L1 offset: 0.065 m
 Applied height: 0.065 m

Measured to
☒ ARP
☐ L1 Phase Centre
 Compute From Slant

OK Cancel

Flight Log

LIDAR

KeyW Aerospace LIDAR FLIGHT REPORT									
CREW Robert R / Eric B		AIRCRAFT N916WC		GPS Kappa 0		WEATHER clear		Sky conditions, light conditions, horizon, shadowing, visibility, haze, cloud types, wind, turbulence, etc.	
UTC DATE 10/24/2018		Camera System 8119		GPS Kappa 0		GPS Kappa 0		GPS Kappa 0	
Camera Location (Note)		Camera Location (Note)		Camera Location (Note)		Camera Location (Note)		Camera Location (Note)	
Job #		Location		Lidar #		Flight		Remarks	
30135		Ottawa		5		N		Initial: DM	
				6		S		refly #2 - Usame	
				7		N		refly - Usame	
				8		S			
				9		N			
				10		S			
				11		N			
				12		S			
				13		S			
				14		N			
				15		S			
				16		S			
				17		S			
				18		N			
				01X		W			

Page 1

Appendix B

Survey Report

Survey Report

Ottawa National Forest LIDAR Control Survey

Ayres Project No. 72-0227.01



Client:	Quantum Spatial – 30135 MI Ottawa NF_2017
Type of Survey:	LIDAR Control Survey (USGS Specs)
Project Manager:	Zach Nienow
Survey Project Manager:	James Cappeart
RLS of Record:	James Cappeart
Crew Chief:	Todd Mrochek
Additional Field Crew:	Garrick Loberger
Project Start Date:	10/03/2017
Report Date:	12/15/2017

Control Summary

Horizontal Datum:	NAD83 (2011)
Vertical Datum:	NAVD88 (2012), Michigan GEOID12B
Rectangular Coordinate System:	State Plane Coordinate System, Michigan North, FIPS2111, Int. Ft.
Used NGS Control?	☒ Yes ☐ No
List any NGS control points used:	RL0979 - G 141 DELTA = -0.05' RL1173 - D 144 DELTA = -0.07' RM0040 - H 155 DELTA = -0.07' RL1227 - N 140 DELTA = -0.02'
Summary of control checks and calibration (if applicable):	(See Field Notes for control checks on NGS monuments – No calibration was needed)
Survey Methods Used:	Static GPS observation with OPUS Position Solutions were used for direct observations and to set control pairs for Robotic Total Station shots under canopy, etc
Equipment Used:	GPS Trimble R8-3 GNSS S/N 5239496998 GPS Trimble R8-3 GNSS S/N 5239497193 GPS Trimble R8-3 GNSS S/N 5220487402 GPS Trimble R8-3 GNSS S/N 5004413097

Utilities

Diggers Hotline Ticket #:	N/A
Locator Contact Info:	N/A
General Notes:	

Crew Chief Notes

Set PK nails or spikes at control points used for total station measurements and for calibration points.

Recorded appropriate: NVA (Bare Earth & Urban) and VVA (Forested, Swamp/Wetland, Tall Weed/Crop).
Took (4) pictures of each point – one from each cardinal direction.

Survey Methods (continued)

Established horizontal and vertical coordinate values on the points by a minimum 30 minute static observation submitted to OPUS for solutions.

Check shots were taken on numerous NGS control points (see field notes) to verify that the values obtained are consistent with the datum/adjustment as described herein and meet the vertical accuracy requirement at the 95% confidence level as stated in our contract.

Points not able to be directly occupied by GPS means were measured using Total Station methods from control point pairs set utilizing GPS methods outlined above.

Traffic Observations

Varied by Site.

Summary of RLS Decisions (Right of Way, Property Lines)

N/A

Survey Data Not Collected



GPS CONTROL
FIELD DATA SHEET

PAGE:

1

JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_01

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 711264.09
EASTING 25500304.42
ELEV. 737.78

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/25/2017	-	-
	DAY OF YEAR	298	-

	OBS. A	OBS. B	
START TIME	14:42	-	U.T.C.
END TIME	15:23	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

2

JOB REFERENCE	30135_MI_Ottawa NF_2017
Project No.	72-0227.01

Point ID

BE_01

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

1

JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_02

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 715172.57
EASTING 25545164.10
ELEV. 1458.65

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/25/2017	-	-
	DAY OF YEAR	298	-

	OBS. A	OBS. B	
START TIME	16:16	-	U.T.C.
END TIME	16:56	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	2.000 Meters	FIXED HGT
	X		

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_02

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_03

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 701779.06
EASTING 25581661.55
ELEV. 987.13

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/27/2017	-	-
	DAY OF YEAR	300	-

	OBS. A	OBS. B	
START TIME	8:40	-	U.T.C.
END TIME	9:20	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	X

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_03

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_04

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 709557.25
EASTING 25599001.10
ELEV. 1036.69

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/27/2017	-	-
	DAY OF YEAR	300	-

	OBS. A	OBS. B	
START TIME	9:58	-	U.T.C.
END TIME	10:48	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE	30135_MI_Ottawa NF_2017
Project No.	72-0227.01

Point ID	BE_04
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PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_05

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 723484.33
EASTING 25627549.49
ELEV. 933.78

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/27/2017	-	-
	DAY OF YEAR	300	-

	OBS. A	OBS. B	
START TIME	11:27	-	U.T.C.
END TIME	12:09	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	X

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_05

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_06

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 721071.57
EASTING 25664186.46
ELEV. 954.16

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/2/2017	-	-
	DAY OF YEAR	306	-

	OBS. A	OBS. B	
START TIME	14:21	-	U.T.C.
END TIME	15:14	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	2.000 Meters	FIXED HGT
	X		

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_06

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_07

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 723748.12
EASTING 25700058.99
ELEV. 1190.81

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/2/2017	-	-
	DAY OF YEAR	306	-

	OBS. A	OBS. B	
START TIME	8:33	-	U.T.C.
END TIME	9:13	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	X

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_07

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_08

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 682364.55
EASTING 25673594.64
ELEV. 1205.11

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/2/2017	-	-
	DAY OF YEAR	306	-

	OBS. A	OBS. B	
START TIME	12:20	-	U.T.C.
END TIME	13:00	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_08

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_09

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 689925.26
EASTING 25729583.21
ELEV. 1024.27

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/7/2017	-	-
	DAY OF YEAR	311	-

	OBS. A	OBS. B	
START TIME	12:22	-	U.T.C.
END TIME	13:07	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	X

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_09

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_10

STATE MI

COUNTY Houghton

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 697185.30
EASTING 25767549.79
ELEV. 1279.26

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/6/2017	-	-
	DAY OF YEAR	310	-

	OBS. A	OBS. B	
START TIME	14:53	-	U.T.C.
END TIME	15:50	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	X

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_10

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_11

STATE MI

COUNTY Houghton

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 712022.54
EASTING 25805025.87
ELEV. 1047.25

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/6/2017	-	-
	DAY OF YEAR	310	-

	OBS. A	OBS. B	
START TIME	11:25	-	U.T.C.
END TIME	12:21	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	X	

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_11

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_12

STATE MI

COUNTY Houghton

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING	678986.15	ELEV.
EASTING	25801585.40	1195.88

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/6/2017	-	-
	DAY OF YEAR	310	-

START TIME	OBS. A	OBS. B	U.T.C.
13:09	-	-	
END TIME	14:06	-	LOCAL
		X	

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.
---------	----------	------------

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
METERS/FEET	ABOVE GROUND
METERS/FEET	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	2.000 Meters	
MEASURED	X	FIXED HGT

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_12

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_13

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 670283.18
EASTING 25437532.97
ELEV. 1151.21

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/24/2017	-	-
	DAY OF YEAR	297	-

	OBS. A	OBS. B	
START TIME	12:07	-	U.T.C.
END TIME	12:41	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_13

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_14

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 686911.06
EASTING 25470676.02
ELEV. 1182.66

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/24/2017	-	-
	DAY OF YEAR	297	-

	OBS. A	OBS. B	
START TIME	15:42	-	U.T.C.
END TIME	16:24	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_14

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_15

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 665338.92
EASTING 25470522.84
ELEV. 1152.80

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/27/2017	-	-
	DAY OF YEAR	294	-

	OBS. A	OBS. B	
START TIME	14:16	-	U.T.C.
END TIME	14:46	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	X

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_15

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_16

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 660476.66
EASTING 25507465.92
ELEV. 1346.38

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/26/2017	-	-
	DAY OF YEAR	299	-

	OBS. A	OBS. B	
START TIME	10:56	-	U.T.C.
END TIME	11:45	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	
	X	

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_16

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_17

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 655138.22
EASTING 25549653.08
ELEV. 1318.05

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/26/2017	-	-
	DAY OF YEAR	299	-

	OBS. A	OBS. B	
START TIME	14:19	-	U.T.C.
END TIME	15:01	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_17

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_18

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 656646.45
EASTING 25585369.75
ELEV. 1308.28

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/26/2017	-	-
	DAY OF YEAR	299	-

	OBS. A	OBS. B	
START TIME	15:49	-	U.T.C.
END TIME	16:44	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_18

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_19

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 658860.10
EASTING 25625351.33
ELEV. 1280.57

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/27/2017	-	-
	DAY OF YEAR	300	-

	OBS. A	OBS. B	
START TIME	16:15	-	U.T.C.
END TIME	17:01	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	X

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

2

JOB REFERENCE	30135_MI_Ottawa NF_2017
Project No.	72-0227.01

Point ID	BE_19
----------	-------

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

PAGE:

1

JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_20

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 649218.72 ELEV. 1222.82
EASTING 25661857.63

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/31/2017	-	-
	DAY OF YEAR	304	-

	OBS. A	OBS. B	
START TIME	14:38	-	U.T.C.
END TIME	15:56	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

2

JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_20

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_21

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 672676.75
EASTING 25701061.08
ELEV. 1091.59

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/2/2017	-	-
	DAY OF YEAR	306	-

	OBS. A	OBS. B	
START TIME	8:11	-	U.T.C.
END TIME	9:03	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	X	

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

2

JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_21

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

PAGE:

1

JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_22

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 647857.67
EASTING 25740340.00
ELEV. 1283.65

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/7/2017	-	-
	DAY OF YEAR	311	-

	OBS. A	OBS. B	
START TIME	10:11	-	U.T.C.
END TIME	11:32	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	X

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

2

JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_22

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

1

JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_23

STATE MI

COUNTY Houghton

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 649826.25
EASTING 25770643.48
ELEV. 1204.70

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/7/2017	-	-
	DAY OF YEAR	311	-

	OBS. A	OBS. B	
START TIME	8:29	-	U.T.C.
END TIME	9:21	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_23

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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1

JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_24

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 620580.93
EASTING 25514183.97
ELEV. 1602.73

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/26/2017	-	-
	DAY OF YEAR	299	-

	OBS. A	OBS. B	
START TIME	8:46	-	U.T.C.
END TIME	9:26	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	X	

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

2

JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_24

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

1

JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_25

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 641532.45
EASTING 25529394.76
ELEV. 1384.68

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/24/2017	-	-
	DAY OF YEAR	297	-

	OBS. A	OBS. B	
START TIME	18:04	-	U.T.C.
END TIME	18:44	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_25

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_26

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 617622.74 ELEV. 1557.81
EASTING 25549073.92

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/25/2017	-	-
	DAY OF YEAR	298	-

	OBS. A	OBS. B	
START TIME	12:51	-	U.T.C.
END TIME	13:31	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_26

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

1

JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_27

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 618690.10
EASTING 25581670.78
ELEV. 1669.30

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/31/2017	-	-
	DAY OF YEAR	304	-

	OBS. A	OBS. B	
START TIME	11:53	-	U.T.C.
END TIME	12:53	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

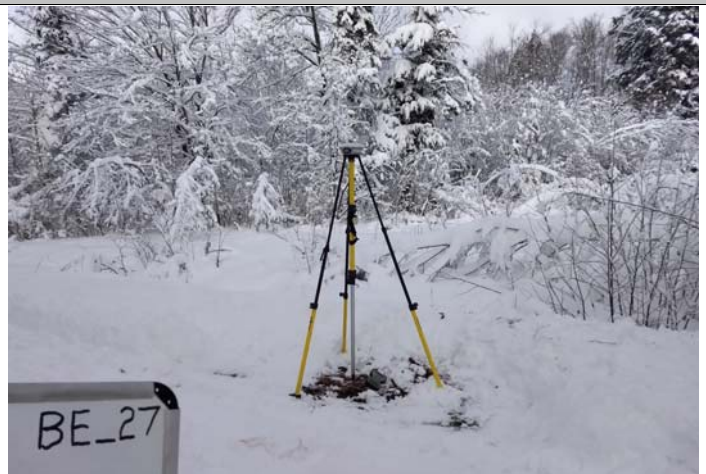
TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

2

JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_27

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

PAGE:

1

JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_28

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 618305.40
EASTING 25625394.87
ELEV. 1404.56

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/1/2017	-	-
	DAY OF YEAR	305	-

	OBS. A	OBS. B	
START TIME	13:53	-	U.T.C.
END TIME	14:39	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	2.000 Meters	FIXED HGT
	X		

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_28

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

PAGE:

1

JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_29

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 618331.50
EASTING 25654154.69
ELEV. 1285.43

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/2/2017	-	-
	DAY OF YEAR	306	-

	OBS. A	OBS. B	
START TIME	17:08	-	U.T.C.
END TIME	17:50	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	X	

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_29

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_30

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 622722.06
EASTING 25697772.22
ELEV. 1257.09

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/8/2017	-	-
	DAY OF YEAR	312	-

	OBS. A	OBS. B	
START TIME	10:23	-	U.T.C.
END TIME	11:05	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

2

JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_30

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

PAGE:

1

JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_31

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 623272.65
EASTING 25729327.71
ELEV. 1198.95

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/7/2017	-	-
	DAY OF YEAR	311	-

	OBS. A	OBS. B	
START TIME	14:21	-	U.T.C.
END TIME	15:15	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

2

JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_31

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_32

STATE MI

COUNTY Houghton

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 616546.99
EASTING 25770955.54
ELEV. 1345.57

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/4/2017	-	-
	DAY OF YEAR	308	-

	OBS. A	OBS. B	
START TIME	16:56	-	U.T.C.
END TIME	17:54	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

2

JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_32

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_33

STATE MI

COUNTY Houghton

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 636078.30
EASTING 25813112.12
ELEV. 1376.34

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5004413097

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/4/2017	-	-
	DAY OF YEAR	308	-

	OBS. A	OBS. B	
START TIME	13:35	-	U.T.C.
END TIME	14:42	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_33

PHOTO: South



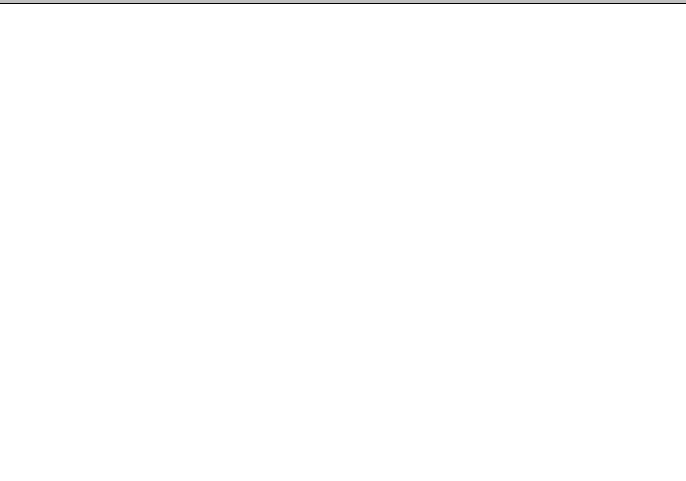
PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_34

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 584315.48
EASTING 25537980.78
ELEV. 1635.12

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/25/2017	-	-
	DAY OF YEAR	298	-

	OBS. A	OBS. B	
START TIME	11:04	-	U.T.C.
END TIME	11:48	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_34

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_35

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 604465.15
EASTING 25544612.40
ELEV. 1510.54

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/25/2017	-	-
	DAY OF YEAR	298	-

	OBS. A	OBS. B	
START TIME	10:51	-	U.T.C.
END TIME	12:20	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_35

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_36

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 585414.97
EASTING 25574403.67
ELEV. 1558.37

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/31/2017	-	-
	DAY OF YEAR	304	-

	OBS. A	OBS. B	
START TIME	9:42	-	U.T.C.
END TIME	10:35	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	2.000 Meters	FIXED HGT
	X		

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_36

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_37

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 583936.15
EASTING 25613635.83
ELEV. 1535.28

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/1/2017	-	-
	DAY OF YEAR	305	-

	OBS. A	OBS. B	
START TIME	10:35	-	U.T.C.
END TIME	11:27	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	X	

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_37

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_38

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 592366.22 ELEV. 1454.48
EASTING 25652581.50

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/8/2017	-	-
	DAY OF YEAR	312	-

	OBS. A	OBS. B	
START TIME	14:21	-	U.T.C.
END TIME	15:31	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_38

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_39

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 596149.79
EASTING 25697101.83
ELEV. 1369.80

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/8/2017	-	-
	DAY OF YEAR	312	-

	OBS. A	OBS. B	
START TIME	12:36	-	U.T.C.
END TIME	13:33	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE	30135_MI_Ottawa NF_2017
Project No.	72-0227.01

Point ID

BE_39

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_40

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 594720.76
EASTING 25744241.02
ELEV. 1588.10

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/3/2017	-	-
	DAY OF YEAR	307	-

	OBS. A	OBS. B	
START TIME	16:09	-	U.T.C.
END TIME	17:10	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH ABOVE GROUND
METERS/FEET	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	2.000 Meters	FIXED HGT
	X		

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_40

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_41

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 597379.32
EASTING 25772740.95
ELEV. 1605.37

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/3/2017	-	-
	DAY OF YEAR	307	-

	OBS. A	OBS. B	
START TIME	14:08	-	U.T.C.
END TIME	14:55	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	
	X	

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_41

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_42

STATE MI

COUNTY Houghton

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 606404.01
EASTING 25812743.42
ELEV. 1540.79

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5004413097

SESSIONS
DATE 11/4/2017
OBS. A -
OBS. B -
STATIC
DAY OF YEAR 308

OBS. A
OBS. B
START TIME 1:17
END TIME 2:27
U.T.C.
LOCAL X

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

TOP OF MONUMENT IS:
FLUSH
METERS/FEET
ABOVE GROUND
METERS/FEET
BELOW GROUND

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X
FIXED HGT

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL
PHOTO I.D.
X NEW CONTROL
BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_42

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_43

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 588650.51
EASTING 25829275.95
ELEV. 1539.94

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5004413097

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/4/2017	-	-
	DAY OF YEAR	308	-

	OBS. A	OBS. B	
START TIME	8:10	-	U.T.C.
END TIME	9:40	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH ABOVE GROUND
METERS/FEET	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	2.000 Meters	FIXED HGT
	X		

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_43

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_44

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 558063.65
EASTING 25553916.88
ELEV. 1655.83

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/23/2017	-	-
	DAY OF YEAR	296	-

	OBS. A	OBS. B	
START TIME	16:20	-	U.T.C.
END TIME	16:59	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE	30135_MI_Ottawa NF_2017
Project No.	72-0227.01

Point ID	BE_44
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PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_45

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 557291.08
EASTING 25593817.92
ELEV. 1637.81

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/1/2017	-	-
	DAY OF YEAR	305	-

	OBS. A	OBS. B	
START TIME	8:38	-	U.T.C.
END TIME	9:36	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_45

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_46

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 558663.31
EASTING 25637200.87
ELEV. 1655.00

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/1/2017	-	-
	DAY OF YEAR	305	-

	OBS. A	OBS. B	
START TIME	15:51	-	U.T.C.
END TIME	16:37	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_46

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_47

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 559857.71 ELEV. 1644.05
EASTING 25671351.06

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/9/2017	-	-
	DAY OF YEAR	313	-

	OBS. A	OBS. B	
START TIME	13:07	-	U.T.C.
END TIME	15:29	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_47

PHOTO: South

PHOTO: East



PHOTO: West

PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_48

STATE MI

COUNTY Gogebic

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 568097.64
EASTING 25697492.76
ELEV. 1656.87

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/31/2017	-	-
	DAY OF YEAR	304	-

	OBS. A	OBS. B	
START TIME	17:30	-	U.T.C.
END TIME	18:43	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	X	

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_48

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_49

STATE MI

COUNTY Gogebic

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 564421.27
EASTING 25728150.44
ELEV. 1565.31

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/1/2017	-	-
	DAY OF YEAR	305	-

	OBS. A	OBS. B	
START TIME	16:01	-	U.T.C.
END TIME	17:27	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE	30135_MI_Ottawa NF_2017
Project No.	72-0227.01

Point ID	BE_49
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PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_50

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 565988.87
EASTING 25775532.35
ELEV. 1617.42

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5004413097

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/3/2017	-	-
	DAY OF YEAR	307	-

	OBS. A	OBS. B	
START TIME	9:56	-	U.T.C.
END TIME	11:09	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	X

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_50

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_51

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 544206.19
EASTING 25786416.73
ELEV. 1597.51

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/1/2017	-	-
	DAY OF YEAR	305	-

	OBS. A	OBS. B	
START TIME	17:33	-	U.T.C.
END TIME	18:40	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_51

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_52

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 563927.23 ELEV. 1546.05
EASTING 25820831.66

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/2/2017	-	-
	DAY OF YEAR	306	-

	OBS. A	OBS. B	
START TIME	13:28	-	U.T.C.
END TIME	14:20	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_52

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_53

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 543558.11
EASTING 25832282.41
ELEV. 1525.23

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS DATE 11/2/2017
STATIC DAY OF YEAR 306

OBS. A OBS. B
START TIME 15:11
END TIME 16:11

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL
PHOTO I.D.
X NEW CONTROL
BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_53

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_54

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 532076.94
EASTING 25641176.31
ELEV. 1740.81

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/1/2017	-	-
	DAY OF YEAR	305	-

	OBS. A	OBS. B	
START TIME	17:43	-	U.T.C.
END TIME	18:18	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_54

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_55

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 529609.25 ELEV. 1708.46
EASTING 25684775.82

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/9/2017	-	-
	DAY OF YEAR	313	-

	OBS. A	OBS. B	
START TIME	10:21	-	U.T.C.
END TIME	11:20	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_55

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_56

STATE MI

COUNTY Gogebic

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 546877.23
EASTING 25695739.38
ELEV. 1615.67

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS DATE 10/31/2017 OBS. A -
STATIC DAY OF YEAR 304 OBS. B -

OBS. A OBS. B
START TIME 12:54 - U.T.C.
END TIME 13:51 - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

AERIAL TARGET
PUB. BENCH MARK X
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_56

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_57

STATE MI

COUNTY Gogebic

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 522477.43
EASTING 25722114.21
ELEV. 1725.52

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5004413097

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/1/2017	-	-
	DAY OF YEAR	305	-

	OBS. A	OBS. B	
START TIME	7:25	-	U.T.C.
END TIME	9:01	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	X

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_57

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_58

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 528503.64
EASTING 25765467.80
ELEV. 1700.39

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/3/2017	-	-
	DAY OF YEAR	307	-

	OBS. A	OBS. B	
START TIME	7:29	-	U.T.C.
END TIME	8:34	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_58

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_59

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 530668.36 ELEV. 1483.08
EASTING 25815218.01

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/2/2017	-	-
	DAY OF YEAR	306	-

	OBS. A	OBS. B	
START TIME	11:28	-	U.T.C.
END TIME	12:11	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE	30135_MI_Ottawa NF_2017
Project No.	72-0227.01

Point ID	BE_59
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PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_60

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 522185.55
EASTING 25831516.75
ELEV. 1520.51

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/2/2017	-	-
	DAY OF YEAR	306	-

	OBS. A	OBS. B	
START TIME	17:11	-	U.T.C.
END TIME	18:15	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_60

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_61

STATE MI

COUNTY Gogebic

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 512497.56
EASTING 25683066.07
ELEV. 1708.91

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/1/2017	-	-
	DAY OF YEAR	305	-

	OBS. A	OBS. B	
START TIME	12:26	-	U.T.C.
END TIME	13:51	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_61

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_62

STATE MI

COUNTY Gogebic

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 505592.67
EASTING 25716965.52
ELEV. 1699.46

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/1/2017	-	-
	DAY OF YEAR	305	-

	OBS. A	OBS. B	
START TIME	9:48	-	U.T.C.
END TIME	11:23	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_62

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_63

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 511721.93
EASTING 25756964.20
ELEV. 1735.44

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/31/2017	-	-
	DAY OF YEAR	304	-

	OBS. A	OBS. B	
START TIME	10:15	-	U.T.C.
END TIME	11:41	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	X	

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_63

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_64

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 506837.15
EASTING 25792330.59
ELEV. 1659.75

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5004413097

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/30/2017	-	-
	DAY OF YEAR	303	-

	OBS. A	OBS. B	
START TIME	14:01	-	U.T.C.
END TIME	15:20	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	2.000 Meters	FIXED HGT
	X		

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE	30135_MI_Ottawa NF_2017
Project No.	72-0227.01

Point ID

BE_64

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_65

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 486200.30
EASTING 25762662.88
ELEV. 1711.86

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5004413097

SESSIONS DATE 10/31/2017 OBS. A -
STATIC DAY OF YEAR 304 OBS. B -

OBS. A OBS. B
START TIME 7:53 - U.T.C.
END TIME 8:58 - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET
PUB. BENCH MARK X
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





**GPS CONTROL
FIELD DATA SHEET**

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_65

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_66

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 487045.12
EASTING 25810718.35
ELEV. 1533.55

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5004413097

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/30/2017	-	-
	DAY OF YEAR	303	-

	OBS. A	OBS. B	
START TIME	11:01	-	U.T.C.
END TIME	12:03	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH ABOVE GROUND
METERS/FEET	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	2.000 Meters	FIXED HGT
		X	

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_66

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_67

STATE WI

COUNTY Forest

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 456874.85
EASTING 25789964.20
ELEV. 1551.00

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/30/2017	-	-
	DAY OF YEAR	303	-

	OBS. A	OBS. B	
START TIME	6:58	-	U.T.C.
END TIME	8:32	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	X	

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE	30135_MI_Ottawa NF_2017
Project No.	72-0227.01

Point ID

BE_67

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_68

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 687078.97
EASTING 25538224.87
ELEV. 1503.81

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/26/2017	-	-
	DAY OF YEAR	299	-

	OBS. A	OBS. B	
START TIME	12:55	-	U.T.C.
END TIME	13:41	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_68

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_69

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 690075.42 ELEV. 1154.76
EASTING 25626575.54

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/27/2017	-	-
	DAY OF YEAR	300	-

	OBS. A	OBS. B	
START TIME	14:31	-	U.T.C.
END TIME	15:23	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE	30135_MI_Ottawa NF_2017
Project No.	72-0227.01

Point ID

BE_69

PHOTO: South

PHOTO: East



PHOTO: West

PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_70

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 724815.38
EASTING 25760163.82
ELEV. 1176.88

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/6/2017	-	-
	DAY OF YEAR	310	-

	OBS. A	OBS. B	
START TIME	9:35	-	U.T.C.
END TIME	10:36	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_70

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_71

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 468520.68
EASTING 25780103.99
ELEV. 1563.46

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/30/2017	-	-
	DAY OF YEAR	303	-

	OBS. A	OBS. B	
START TIME	17:42	-	U.T.C.
END TIME	18:46	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH ABOVE GROUND
METERS/FEET	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	
	X	

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_71

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID BE_72

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 507404.61
EASTING 25834362.30
ELEV. 1559.34

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5004413097

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/2/2017	-	-
	DAY OF YEAR	306	-

	OBS. A	OBS. B	
START TIME	9:11	-	U.T.C.
END TIME	10:28	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: BARE EARTH

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

BE_72

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_01

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 711322.35
EASTING 25500414.68
ELEV. 739.04

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/25/2017	-	-
	DAY OF YEAR	298	-

	OBS. A	OBS. B	
START TIME	14:38	-	U.T.C.
END TIME	15:25	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_01

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_02

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 715165.94
EASTING 25545196.36
ELEV. 1458.86

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/25/2017	-	-
	DAY OF YEAR	298	-

	OBS. A	OBS. B	
START TIME	16:12	-	U.T.C.
END TIME	16:58	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	X	

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_02

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_03

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 701665.96
EASTING 25581787.80
ELEV. 992.66

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/30/2017	-	-
	DAY OF YEAR	303	-

	OBS. A	OBS. B	
START TIME	12:27	-	U.T.C.
END TIME	13:30	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_03

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_04

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 723439.59
EASTING 25627621.57
ELEV. 932.91

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/27/2017	-	-
	DAY OF YEAR	300	-

	OBS. A	OBS. B	
START TIME	11:23	-	U.T.C.
END TIME	12:12	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_04

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_05

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 721101.39
EASTING 25664211.25
ELEV. 954.44

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/2/2017	-	-
	DAY OF YEAR	306	-

	OBS. A	OBS. B	
START TIME	14:15	-	U.T.C.
END TIME	15:07	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	2.000 Meters	FIXED HGT
	X		

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_05

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_06

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 720248.89 ELEV. 1180.11
EASTING 25700549.67

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/2/2017	-	-
	DAY OF YEAR	306	-

	OBS. A	OBS. B	
START TIME	9:52	-	U.T.C.
END TIME	10:33	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_06

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_07

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 689881.08
EASTING 25729551.44
ELEV. 1025.18

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/7/2017	-	-
	DAY OF YEAR	311	-

	OBS. A	OBS. B	
START TIME	12:17	-	U.T.C.
END TIME	13:09	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_07

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_08

STATE MI

COUNTY Houghton

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 697189.80
EASTING 25767419.82
ELEV. 1284.33

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/6/2017	-	-
	DAY OF YEAR	310	-

	OBS. A	OBS. B	
START TIME	14:47	-	U.T.C.
END TIME	15:53	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_08

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_09

STATE MI

COUNTY Houghton

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 712134.61
EASTING 25805059.65
ELEV. 1046.77

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/6/2017	-	-
	DAY OF YEAR	310	-

	OBS. A	OBS. B	
START TIME	11:20	-	U.T.C.
END TIME	12:22	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	X	

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_09

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_10

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING

ELEV.

EASTING

RECEIVER MODEL Trimble R8-3 Integrated Antenna

RECEIVER S/N

SESSIONS

DATE

OBS. A

OBS. B

STATIC

DAY OF
YEAR

-

-

START
TIME

OBS. A

OBS. B

-

U.T.C.

END TIME

-

X

LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT

MEASURED

FIXED HGT.

ANTENNA HEIGHT (VERTICAL)

MTRS/FT

2.000 Meters

MEASURED

X

FIXED HGT

TOP OF MONUMENT IS:

FLUSH

METERS/FEET

ABOVE GROUND

METERS/FEET

BELOW GROUND

AERIAL TARGET

PHOTO I.D.

PUB. BENCH MARK

X

NEW CONTROL

PUB. CONTROL

BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_10

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_11

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 665259.41
EASTING 25470542.55
ELEV. 1154.12

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/27/2017	-	-
	DAY OF YEAR	297	-

	OBS. A	OBS. B	
START TIME	14:06	-	U.T.C.
END TIME	14:37	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_11

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_12

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 667102.29
EASTING 25506402.19
ELEV. 1320.43

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/25/2017	-	-
	DAY OF YEAR	298	-

	OBS. A	OBS. B	
START TIME	17:38	-	U.T.C.
END TIME	18:18	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_12

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_13

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 655330.43
EASTING 25549528.06
ELEV. 1318.29

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/26/2017	-	-
	DAY OF YEAR	299	-

	OBS. A	OBS. B	
START TIME	14:14	-	U.T.C.
END TIME	15:08	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	2.000 Meters	FIXED HGT
	X		

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_13

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_14

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 656560.37
EASTING 25585343.18
ELEV. 1309.58

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/26/2016	-	-
	DAY OF YEAR	299	-

	OBS. A	OBS. B	
START TIME	15:42	-	U.T.C.
END TIME	16:45	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
METERS/FEET
BELOW GROUND

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_14

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_15

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 658874.20 ELEV. 1282.18
EASTING 25625671.51

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/27/2017	-	-
	DAY OF YEAR	300	-

	OBS. A	OBS. B	
START TIME	16:11	-	U.T.C.
END TIME	17:05	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_15

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_16

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 649206.81
EASTING 25661905.39
ELEV. 1223.43

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/31/2017	-	-
	DAY OF YEAR	304	-

	OBS. A	OBS. B	
START TIME	14:33	-	U.T.C.
END TIME	15:53	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE	30135_MI_Ottawa NF_2017
Project No.	72-0227.01

Point ID	CA_16
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PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_17

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 646257.73
EASTING 25698892.41
ELEV. 1147.96

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/31/2017	-	-
	DAY OF YEAR	304	-

	OBS. A	OBS. B	
START TIME	17:09	-	U.T.C.
END TIME	17:55	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	X	

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_17

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_18

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 647839.90
EASTING 25740423.04
ELEV. 1287.88

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/7/2017	-	-
	DAY OF YEAR	311	-

	OBS. A	OBS. B	
START TIME	10:06	-	U.T.C.
END TIME	11:33	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	X

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_18

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_19

STATE MI

COUNTY Houghton

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 649821.10
EASTING 25771280.59
ELEV. 1207.46

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/7/2017	-	-
	DAY OF YEAR	311	-

	OBS. A	OBS. B	
START TIME	8:23	-	U.T.C.
END TIME	9:27	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	X

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_19

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_20

STATE MI

COUNTY Houghton

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 635983.48
EASTING 25813361.64
ELEV. 1374.05

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/4/2017	-	-
	DAY OF YEAR	308	-

	OBS. A	OBS. B	
START TIME	13:25	-	U.T.C.
END TIME	14:29	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	X

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_20

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_21

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 620571.20
EASTING 25514207.61
ELEV. 1602.04

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/26/2017	-	-
	DAY OF YEAR	299	-

	OBS. A	OBS. B	
START TIME	8:36	-	U.T.C.
END TIME	9:27	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_21

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_22

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 617496.94
EASTING 25549094.88
ELEV. 1555.61

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/25/2017	-	-
	DAY OF YEAR	298	-

	OBS. A	OBS. B	
START TIME	12:46	-	U.T.C.
END TIME	13:33	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_22

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_23

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 618319.76
EASTING 25582141.50
ELEV. 1673.86

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/31/2017	-	-
	DAY OF YEAR	304	-

	OBS. A	OBS. B	
START TIME	11:44	-	U.T.C.
END TIME	12:56	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_23

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_24

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 618370.49
EASTING 25625359.47
ELEV. 1405.29

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/1/2017	-	-
	DAY OF YEAR	305	-

	OBS. A	OBS. B	
START TIME	13:37	-	U.T.C.
END TIME	14:41	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH ABOVE GROUND
METERS/FEET	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	2.000 Meters	FIXED HGT
	X		

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_24

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_25

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 618353.41
EASTING 25654112.13
ELEV. 1283.70

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/2/2017	-	-
	DAY OF YEAR	306	-

	OBS. A	OBS. B	
START TIME	17:04	-	U.T.C.
END TIME	17:52	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH ABOVE GROUND
METERS/FEET	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	2.000 Meters	FIXED HGT
		X	

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE	30135_MI_Ottawa NF_2017
Project No.	72-0227.01

Point ID	CA_25
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PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_26

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 622784.10
EASTING 25692559.42
ELEV. 1338.39

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/8/2017	-	-
	DAY OF YEAR	312	-

	OBS. A	OBS. B	
START TIME	10:33	-	U.T.C.
END TIME	11:42	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	X	

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_26

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_27

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 623434.87
EASTING 25729288.86
ELEV. 1197.38

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/7/2017	-	-
	DAY OF YEAR	311	-

	OBS. A	OBS. B	
START TIME	14:11	-	U.T.C.
END TIME	15:18	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	2.000 Meters	FIXED HGT
	X		

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE	30135_MI_Ottawa NF_2017
Project No.	72-0227.01

Point ID

CA_27

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_28

STATE MI

COUNTY Houghton

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 616559.66
EASTING 25770911.61
ELEV. 1346.66

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5004413097

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/4/2017	-	-
	DAY OF YEAR	308	-

	OBS. A	OBS. B	
START TIME	16:58	-	U.T.C.
END TIME	18:20	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	X	

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE	30135_MI_Ottawa NF_2017
Project No.	72-0227.01

Point ID	CA_28
----------	-------

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_29

STATE MI

COUNTY Houghton

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 606666.01
EASTING 25812743.94
ELEV. 1536.48

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/4/2017	-	-
	DAY OF YEAR	308	-

	OBS. A	OBS. B	
START TIME	11:08	-	U.T.C.
END TIME	11:48	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_29

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_30

STATE MI

COUNTY Gobeibic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 584252.59
EASTING 25537984.13
ELEV. 1635.18

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 10/25/2017 OBS. A -
STATIC DAY OF YEAR 298 OBS. B -

OBS. A OBS. B
START TIME 8:59 - U.T.C.
END TIME 9:41 - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET
PUB. BENCH MARK X
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_30

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_31

STATE MI

COUNTY Gobeic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 585574.68
EASTING 25574524.18
ELEV. 1563.51

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/31/2017	-	-
	DAY OF YEAR	304	-

	OBS. A	OBS. B	
START TIME	9:37	-	U.T.C.
END TIME	10:38	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	X

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_31

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_32

STATE MI

COUNTY Gobeic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 583731.54
EASTING 25614111.64
ELEV. 1530.57

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/1/2017	-	-
	DAY OF YEAR	305	-

	OBS. A	OBS. B	
START TIME	10:27	-	U.T.C.
END TIME	11:35	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	X

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_32

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_33

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 593519.83
EASTING 25654477.25
ELEV. 1429.60

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/8/2017	-	-
	DAY OF YEAR	312	-

	OBS. A	OBS. B	
START TIME	14:12	-	U.T.C.
END TIME	15:03	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	X

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_33

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_34

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 596077.87
EASTING 25697110.86
ELEV. 1369.57

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/8/2017	-	-
	DAY OF YEAR	312	-

	OBS. A	OBS. B	
START TIME	12:31	-	U.T.C.
END TIME	13:29	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE	30135_MI_Ottawa NF_2017
Project No.	72-0227.01

Point ID

CA_34

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_35

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 594687.63
EASTING 25744183.87
ELEV. 1584.34

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5004413097

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/3/2017	-	-
	DAY OF YEAR	307	-

	OBS. A	OBS. B	
START TIME	16:14	-	U.T.C.
END TIME	17:28	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	X

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_35

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_36

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 588132.62
EASTING 25780444.38
ELEV. 1629.14

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/3/2017	-	-
	DAY OF YEAR	307	-

	OBS. A	OBS. B	
START TIME	12:02	-	U.T.C.
END TIME	12:46	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE	30135_MI_Ottawa NF_2017
Project No.	72-0227.01

Point ID

CA_36

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_37

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 588718.19

ELEV.

EASTING 25829254.17

1542.75

RECEIVER MODEL Trimble R8-3 Integrated Antenna

RECEIVER S/N 5220487402

SESSIONS

DATE

11/4/2017

OBS. A

OBS. B

STATIC

DAY OF
YEAR

308

-

-

START
TIME

8:04

OBS. A

OBS. B

-

-

U.T.C.

END TIME

9:15

-

-

X

LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT

MEASURED

FIXED HGT.

ANTENNA HEIGHT (VERTICAL)

MTRS/FT

2.000 Meters

MEASURED

X

FIXED HGT

TOP OF MONUMENT IS:

FLUSH

METERS/FEET

ABOVE GROUND

METERS/FEET

BELOW GROUND

AERIAL TARGET

PHOTO I.D.

PUB. BENCH MARK

X

NEW CONTROL

PUB. CONTROL

BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_37

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_38

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 558049.96
EASTING 25553920.07
ELEV. 1656.30

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/11/2017	-	-
	DAY OF YEAR	315	-

	OBS. A	OBS. B	
START TIME	10:26	-	U.T.C.
END TIME	11:31	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	X	FIXED HGT

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_38

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_39

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 557424.94
EASTING 25593679.09
ELEV. 1645.46

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/1/2017	-	-
	DAY OF YEAR	305	-

	OBS. A	OBS. B	
START TIME	8:32	-	U.T.C.
END TIME	9:40	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	2.000 Meters	FIXED HGT
	X		

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_39

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_40

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 558784.23
EASTING 25637331.95
ELEV. 1662.64

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/1/2017	-	-
	DAY OF YEAR	305	-

	OBS. A	OBS. B	
START TIME	15:44	-	U.T.C.
END TIME	16:40	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	X	

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_40

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_41

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 563045.78
EASTING 25670265.72
ELEV. 1663.37

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/9/2017	-	-
	DAY OF YEAR	313	-

	OBS. A	OBS. B	
START TIME	13:18	-	U.T.C.
END TIME	14:18	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_41

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_42

STATE MI

COUNTY Gogebic

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 564649.19
EASTING 25698685.26
ELEV. 1623.85

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5004413097

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/31/2017	-	-
	DAY OF YEAR	304	-

	OBS. A	OBS. B	
START TIME	16:05	-	U.T.C.
END TIME	17:23	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	X

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_42

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_43

STATE MI

COUNTY Gogebic

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 564423.02
EASTING 25728211.29
ELEV. 1567.80

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5004413097

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/1/2017	-	-
	DAY OF YEAR	305	-

	OBS. A	OBS. B	
START TIME	15:08	-	U.T.C.
END TIME	16:24	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	X

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE	30135_MI_Ottawa NF_2017
Project No.	72-0227.01

Point ID	CA_43
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PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_44

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 565997.89
EASTING 25775422.67
ELEV. 1621.65

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/3/2017	-	-
	DAY OF YEAR	307	-

	OBS. A	OBS. B	
START TIME	9:52	-	U.T.C.
END TIME	10:51	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH ABOVE GROUND
METERS/FEET	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	2.000 Meters	FIXED HGT
	X		

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE	30135_MI_Ottawa NF_2017
Project No.	72-0227.01

Point ID	CA_44
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PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_45

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 563956.98
EASTING 25820870.72
ELEV. 1543.14

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5004413097

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/2/2017	-	-
	DAY OF YEAR	306	-

	OBS. A	OBS. B	
START TIME	13:30	-	U.T.C.
END TIME	14:40	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE	30135_MI_Ottawa NF_2017
Project No.	72-0227.01

Point ID	CA_45
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PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_46

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 531931.28
EASTING 25641188.73
ELEV. 1742.08

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/1/2017	-	-
	DAY OF YEAR	305	-

	OBS. A	OBS. B	
START TIME	17:38	-	U.T.C.
END TIME	18:20	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
METERS/FEET
BELOW GROUND

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_46

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_47

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 525231.76
EASTING 25679899.59
ELEV. 1717.29

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/9/2017	-	-
	DAY OF YEAR	313	-

	OBS. A	OBS. B	
START TIME	9:13	-	U.T.C.
END TIME	10:03	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	2.000 Meters	FIXED HGT
	X		

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_47

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_48

STATE MI

COUNTY Gogebic

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 522439.84
EASTING 25722070.88
ELEV. 1724.77

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/1/2017	-	-
	DAY OF YEAR	305	-

	OBS. A	OBS. B	
START TIME	7:23	-	U.T.C.
END TIME	8:49	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	X	

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_48

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_49

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 528584.80
EASTING 25765521.00
ELEV. 1697.28

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5004413097

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/3/2017	-	-
	DAY OF YEAR	307	-

	OBS. A	OBS. B	
START TIME	7:33	-	U.T.C.
END TIME	8:50	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	X

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE	30135_MI_Ottawa NF_2017
Project No.	72-0227.01

Point ID	CA_49
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PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_50

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 530646.73
EASTING 25815342.09
ELEV. 1482.76

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5004413097

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/2/2017	-	-
	DAY OF YEAR	306	-

	OBS. A	OBS. B	
START TIME	11:35	-	U.T.C.
END TIME	12:39	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	2.000 Meters	FIXED HGT
	X		

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_50

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_51

STATE MI

COUNTY Gogebic

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 505286.12
EASTING 25717085.28
ELEV. 1696.82

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5004413097

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/1/2017	-	-
	DAY OF YEAR	305	-

	OBS. A	OBS. B	
START TIME	9:57	-	U.T.C.
END TIME	11:19	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	X

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_51

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_52

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 511633.30
EASTING 25756938.07
ELEV. 1737.74

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5004413097

SESSIONS DATE 10/31/2017 OBS. A -
STATIC DAY OF YEAR 304 OBS. B -

OBS. A OBS. B
START TIME 10:25 - U.T.C.
END TIME 11:38 - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET
PUB. BENCH MARK X
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_52

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_53

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 506935.63
EASTING 25792333.09
ELEV. 1653.05

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/30/2017	-	-
	DAY OF YEAR	303	-

	OBS. A	OBS. B	
START TIME	13:54	-	U.T.C.
END TIME	15:20	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	
	X	

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_53

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_54

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 507339.28
EASTING 25834402.73
ELEV. 1561.40

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/2/2017	-	-
	DAY OF YEAR	306	-

	OBS. A	OBS. B	
START TIME	9:04	-	U.T.C.
END TIME	9:56	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	2.000 Meters	FIXED HGT
	X		

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_54

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_55

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 486311.02
EASTING 25762606.61
ELEV. 1715.37

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS DATE 10/31/2017 OBS. A -
STATIC DAY OF YEAR 304 OBS. B -

OBS. A OBS. B
START TIME 7:34 - U.T.C.
END TIME 9:01 - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET
PUB. BENCH MARK X
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_55

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_56

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 486966.80
EASTING 25810867.50
ELEV. 1530.80

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS DATE 10/30/2017 OBS. A -
STATIC DAY OF YEAR 303 OBS. B -

OBS. A OBS. B
START TIME 10:54 - U.T.C.
END TIME 12:00 - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_56

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_57

STATE WI

COUNTY Forest

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 456823.98
EASTING 25791446.20
ELEV. 1557.26

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/30/2017	-	-
	DAY OF YEAR	303	-

	OBS. A	OBS. B	
START TIME	7:36	-	U.T.C.
END TIME	8:46	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_57

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_58

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 682390.51
EASTING 25673470.52
ELEV. 1204.34

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/2/2017	-	-
	DAY OF YEAR	306	-

	OBS. A	OBS. B	
START TIME	11:37	-	U.T.C.
END TIME	12:18	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_58

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID CA_59

STATE MI

COUNTY Houghton

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 679023.65
EASTING 25801606.15
ELEV. 1196.46

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/6/2017	-	-
	DAY OF YEAR	310	-

	OBS. A	OBS. B	
START TIME	13:05	-	U.T.C.
END TIME	14:01	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	X

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: CALIBRATION POINT

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

CA_59

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_01

STATE MI

COUNTY Gobeic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 711221.04
EASTING 25500172.09
ELEV. 737.45

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 10/25/2017 OBS. A -
Conventional DAY OF YEAR 298 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_01

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_02

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 715303.95
EASTING 25545208.24
ELEV. 1463.89

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 10/25/2017 OBS. A -
Conventional DAY OF YEAR 298 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_02

PHOTO: South

PHOTO: East



PHOTO: West

PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_03

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 701756.42
EASTING 25581958.37
ELEV. 996.27

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 10/27/2017 OBS. A -
Conventional DAY OF YEAR 300 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_03

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_04

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 709581.25
EASTING 25598869.11
ELEV. 1032.61

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 10/27/2017 OBS. A -
Conventional DAY OF YEAR 300 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

2

JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_04

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_05

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 723445.39
EASTING 25627718.12
ELEV. 929.84

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 10/27/2017 OBS. A -
Conventional DAY OF YEAR 300 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_05

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_06

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 721002.85
EASTING 25664092.71
ELEV. 950.54

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/2/2017 OBS. A -
Conventional DAY OF YEAR 306 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_06

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_07

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 720175.74
EASTING 25701510.12
ELEV. 1243.88

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/2/2017 OBS. A -
Conventional DAY OF YEAR 306 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_07

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_08

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 724839.97
EASTING 25760027.41
ELEV. 1177.20

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/6/2017 OBS. A -
Conventional DAY OF YEAR 310 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_08

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_09

STATE MI

COUNTY Houghton

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 712053.36
EASTING 25805172.74
ELEV. 1047.92

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/6/2017 OBS. A -
Conventional DAY OF YEAR 310 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_09

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_10

STATE MI

COUNTY Houghton

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 671418.63
EASTING 25437442.20
ELEV. 1143.93

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 10/24/2017 OBS. A -
Conventional DAY OF YEAR 297 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_10

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_11

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 665436.31
EASTING 25470477.05
ELEV. 1155.90

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 10/24/2017 OBS. A -
Conventional DAY OF YEAR 297 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_11

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_12

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 660407.65 ELEV. 1343.20
EASTING 25507606.00

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 10/26/2017 OBS. A -
Conventional DAY OF YEAR 299 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

2

JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_12

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_13

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 655163.34
EASTING 25549452.58
ELEV. 1315.94

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 10/26/2017 OBS. A -
Conventional DAY OF YEAR 299 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_13

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_14

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 656627.95
EASTING 25585224.74
ELEV. 1307.02

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS	DATE	OBS. A	OBS. B
Conventional	10/26/2017	-	-
	DAY OF YEAR	299	-

	OBS. A	OBS. B	
START TIME	Conventional	-	U.T.C.
END TIME	Conventional	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

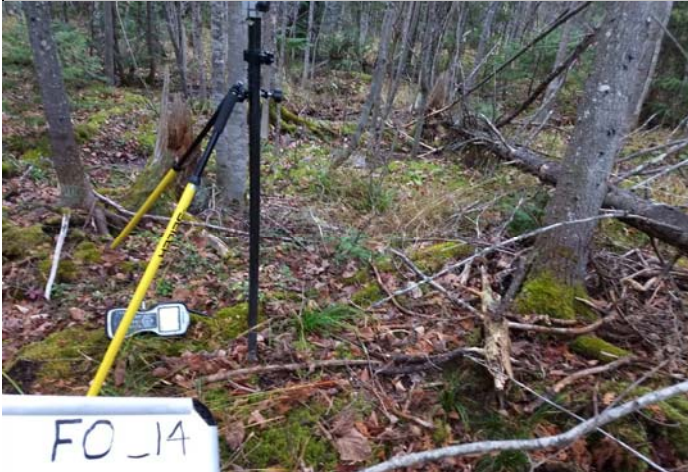
TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_14

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

PAGE:

1

JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_15

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 689975.71 ELEV. 1158.11
EASTING 25626545.37

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS	DATE	OBS. A	OBS. B
Conventional	10/27/2017	-	-
	DAY OF YEAR	300	-

	OBS. A	OBS. B	
START TIME	Conventional	-	U.T.C.
END TIME	Conventional	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

	AERIAL TARGET		PHOTO I.D.
	PUB. BENCH MARK	X	NEW CONTROL
	PUB. CONTROL		BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_15

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

1

JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_16

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 682681.26
EASTING 25678684.56
ELEV. 1200.58

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/8/2017 OBS. A -
Conventional DAY OF YEAR 312 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_16

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_17

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 689910.65
EASTING 25729446.55
ELEV. 1024.58

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/7/2017 OBS. A -
Conventional DAY OF YEAR 311 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL
PHOTO I.D.
X NEW CONTROL
BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_17

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_18

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 697265.21
EASTING 25767539.80
ELEV. 1285.25

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/6/2017 OBS. A -
Conventional DAY OF YEAR 310 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_18

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_19

STATE MI

COUNTY Houghton

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 679111.09
EASTING 25801696.45
ELEV. 1196.75

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/6/2017 OBS. A -
Conventional DAY OF YEAR 310 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET
PUB. BENCH MARK X
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_19

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_20

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 619557.39
EASTING 25514235.89
ELEV. 1540.22

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 10/26/2017 OBS. A -
Conventional DAY OF YEAR 299 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

AERIAL TARGET
PUB. BENCH MARK X
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

2

JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_20

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_21

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 617529.15
EASTING 25549198.53
ELEV. 1536.07

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 10/25/2017 OBS. A -
Conventional DAY OF YEAR 298 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL
PHOTO I.D.
X NEW CONTROL
BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_21

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_22

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 618272.78
EASTING 25582080.30
ELEV. 1671.58

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 10/31/2017 OBS. A -
Conventional DAY OF YEAR 304 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_22

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_23

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 618267.36
EASTING 25625229.74
ELEV. 1403.78

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/1/2017 OBS. A -
Conventional DAY OF YEAR 305 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_23

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_24

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 622884.43
EASTING 25693073.88
ELEV. 1292.44

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/8/2017 OBS. A -
Conventional DAY OF YEAR 312 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_24

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_25

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 623692.02
EASTING 25730120.24
ELEV. 1189.21

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/7/2017 OBS. A -
Conventional DAY OF YEAR 311 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_25

PHOTO: South

PHOTO: East



PHOTO: West

PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_26

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 647935.31
EASTING 25740332.78
ELEV. 1281.58

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/7/2017 OBS. A -
Conventional DAY OF YEAR 311 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_26

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_27

STATE MI

COUNTY Houghton

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 649735.57
EASTING 25770624.11
ELEV. 1206.26

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/7/2017 OBS. A -
Conventional DAY OF YEAR 311 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_27

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_28

STATE MI

COUNTY Houghton

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 636093.80
EASTING 25813342.54
ELEV. 1375.47

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/4/2017 OBS. A -
Conventional DAY OF YEAR 304 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

2

JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_28

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:
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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_29

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 604997.20 ELEV. 1508.53

EASTING 25544261.62

RECEIVER MODEL Trimble R8-3 Integrated Antenna

RECEIVER S/N

OBS. A OBS. B

SESSIONS

DATE

10/25/2017

-

Conventional

DAY OF YEAR

298

-

OBS. A

OBS. B

START TIME

Conventional

-

U.T.C.

END TIME

Conventional

-

X

LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT

MEASURED

FIXED HGT.

ANTENNA HEIGHT (VERTICAL)

MTRS/FT

5.00 ft.

MEASURED

X

FIXED HGT

TOP OF MONUMENT IS:

FLUSH

METERS/FEET

ABOVE GROUND

METERS/FEET

BELOW GROUND

AERIAL TARGET

PHOTO I.D.

PUB. BENCH MARK

X

NEW CONTROL

PUB. CONTROL

BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_29

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_30

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 593585.03
EASTING 25654389.37
ELEV. 1423.51

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/8/2017 OBS. A -
Conventional DAY OF YEAR 312 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

2

JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_30

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_31

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 596114.23
EASTING 25697259.52
ELEV. 1381.37

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/8/2017 OBS. A -
Conventional DAY OF YEAR 312 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_31

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_32

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 594703.27
EASTING 25744305.65
ELEV. 1595.63

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/3/2017 OBS. A -
Conventional DAY OF YEAR 307 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

2

JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_32

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_33

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 597290.56
EASTING 25772654.60
ELEV. 1617.31

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/3/2017 OBS. A -
Conventional DAY OF YEAR 307 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL
PHOTO I.D.
X NEW CONTROL
BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_33

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_34

STATE MI

COUNTY Houghton

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 606830.61
EASTING 25812829.26
ELEV. 1537.68

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/4/2017 OBS. A -
Conventional DAY OF YEAR 308 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_34

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_35

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 584258.22 ELEV. 1635.35
EASTING 25538076.79

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS	DATE	OBS. A	OBS. B
Conventional	10/25/2017	-	-
	DAY OF YEAR	298	-

	OBS. A	OBS. B	
START TIME	Conventional	-	U.T.C.
END TIME	Conventional	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_35

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

1

JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_36

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 585530.86
EASTING 25574428.95
ELEV. 1563.25

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 10/31/2017 OBS. A -
Conventional DAY OF YEAR 304 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_36

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_37

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 583831.85
EASTING 25613562.27
ELEV. 1530.82

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/1/2017 OBS. A -
Conventional DAY OF YEAR 305 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET
PUB. BENCH MARK X
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_37

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_38

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING	588203.86	ELEV.
EASTING	25780455.95	1628.82

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS	DATE	OBS. A	OBS. B
Conventional	11/3/2017	-	-
	DAY OF YEAR	307	-

	OBS. A	OBS. B	
START TIME	Conventional	-	U.T.C.
END TIME	Conventional	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

	AERIAL TARGET		PHOTO I.D.
	PUB. BENCH MARK	X	NEW CONTROL
	PUB. CONTROL		BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_38

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_39

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 588709.57
EASTING 25829307.02
ELEV. 1535.72

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/4/2017 OBS. A -
Conventional DAY OF YEAR 308 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_39

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_40

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 557962.82
EASTING 25553792.48
ELEV. 1652.82

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/11/2017 OBS. A -
Conventional DAY OF YEAR 315 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North



JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_40

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_41

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 557431.13
EASTING 25593757.80
ELEV. 1643.67

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/1/2017 OBS. A -
Conventional DAY OF YEAR 305 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_41

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_42

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 558920.73
EASTING 25637516.55
ELEV. 1666.61

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/1/2017 OBS. A -
Conventional DAY OF YEAR 305 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET
PUB. BENCH MARK X
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_42

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_43

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 559721.33
EASTING 25671369.03
ELEV. 1644.30

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/9/2017 OBS. A -
Conventional DAY OF YEAR 313 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_43

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_44

STATE MI

COUNTY Gogebic

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 564573.78
EASTING 25698647.39
ELEV. 1618.20

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 10/31/2017 OBS. A -
Conventional DAY OF YEAR 304 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_44

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_45

STATE MI

COUNTY Gogebic

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 564476.75
EASTING 25728141.77
ELEV. 1567.31

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/1/2017 OBS. A -
Conventional DAY OF YEAR 305 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET
PUB. BENCH MARK X
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_45

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_46

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 565909.50
EASTING 25775414.66
ELEV. 1630.73

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/3/2017 OBS. A -
Conventional DAY OF YEAR 307 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_46

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_47

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 563855.42
EASTING 25820865.44
ELEV. 1549.46

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/2/2017 OBS. A -
Conventional DAY OF YEAR 306 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE	30135_MI_Ottawa NF_2017
Project No.	72-0227.01

Point ID

FO_47

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_48

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 531978.48
EASTING 25641068.89
ELEV. 1742.25

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS	DATE	OBS. A	OBS. B
Conventional	11/8/2017	-	-
	DAY OF YEAR	312	-

	OBS. A	OBS. B	
START TIME	Conventional	-	U.T.C.
END TIME	Conventional	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

	AERIAL TARGET		PHOTO I.D.
	PUB. BENCH MARK	X	NEW CONTROL
	PUB. CONTROL		BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_48

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_49

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 529675.49
EASTING 25684585.99
ELEV. 1722.32

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS	DATE	OBS. A	OBS. B
Conventional	11/9/2017	-	-
	DAY OF YEAR	313	-

	OBS. A	OBS. B	
START TIME	Conventional	-	U.T.C.
END TIME	Conventional	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

	AERIAL TARGET		PHOTO I.D.
	PUB. BENCH MARK	X	NEW CONTROL
	PUB. CONTROL		BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_49

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_50

STATE MI

COUNTY Gogebic

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 522379.13
EASTING 25722069.44
ELEV. 1725.02

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/1/2017 OBS. A -
Conventional DAY OF YEAR 305 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_50

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

1

JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_51

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 528566.62
EASTING 25765413.35
ELEV. 1704.69

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/3/2017 OBS. A -
Conventional DAY OF YEAR 304 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL
PHOTO I.D.
X NEW CONTROL
BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

2

JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_51

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_52

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 530752.09
EASTING 25815191.55
ELEV. 1482.65

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/2/2017 OBS. A -
Conventional DAY OF YEAR 306 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_52

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_53

STATE MI

COUNTY Gogebic

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 505580.79
EASTING 25716893.51
ELEV. 1701.88

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/1/2017 OBS. A -
Conventional DAY OF YEAR 305 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE	30135_MI_Ottawa NF_2017
Project No.	72-0227.01

Point ID

FO_53

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_54

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 511784.44
EASTING 25756942.33
ELEV. 1733.32

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 10/31/2017 OBS. A -
Conventional DAY OF YEAR 304 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_54

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

PAGE:
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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_55

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 506823.04
EASTING 25792383.57
ELEV. 1663.61

RECEIVER MODEL Trimble R8-3 Integrated Antenna

RECEIVER S/N

SESSIONS	DATE	OBS. A	OBS. B
Conventional	10/30/2017	-	-
	DAY OF YEAR	303	-

	OBS. A	OBS. B		
START TIME	Conventional	-		U.T.C.
END TIME	Conventional	-	X	LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	5.00 ft.	
	X	

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

AERIAL TARGET

PUB. BENCH MARK

PUB. CONTROL

PHOTO I.D.

X NEW CONTROL

BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_55

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_56

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 507302.93
EASTING 25834460.43
ELEV. 1568.96

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 11/2/2017 OBS. A -
Conventional DAY OF YEAR 306 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_56

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_57

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 486375.19
EASTING 25762581.01
ELEV. 1714.98

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 10/31/2017 OBS. A -
Conventional DAY OF YEAR 304 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_57

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_58

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 487027.05
EASTING 25810928.26
ELEV. 1529.82

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 10/30/2017 OBS. A -
Conventional DAY OF YEAR 303 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft.
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_58

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID FO_59

STATE MI

COUNTY Forest

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 456901.86
EASTING 25791532.34
ELEV. 1562.29

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N

SESSIONS DATE 10/30/2017 OBS. A -
Conventional DAY OF YEAR 303 OBS. B -

OBS. A OBS. B
START TIME Conventional - U.T.C.
END TIME Conventional - X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 5.00 ft
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

Type: FOREST

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

FO_59

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID SH_01

STATE MI

COUNTY Gobeic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 675068.58
EASTING 25654717.27
ELEV. 1197.20

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/8/2017	-	-
	DAY OF YEAR	312	-

	OBS. A	OBS. B	
START TIME	9:12	-	U.T.C.
END TIME	9:52	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	X	

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: SHRUB

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

SH_01

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID TW_02

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 467471.46
EASTING 25790186.94
ELEV. 1572.93

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/30/2017	-	-
	DAY OF YEAR	303	-

	OBS. A	OBS. B		U.T.C.
START TIME	16:22	-		
END TIME	17:24	-	X	LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	
	X	

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

	AERIAL TARGET	PHOTO I.D.
	PUB. BENCH MARK	X NEW CONTROL
	PUB. CONTROL	BASE STATION

Type: TALL WEEDS

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

TW_02

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID UA_01

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 670137.65
EASTING 25599782.91
ELEV. 1325.60

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/26/2017	-	-
	DAY OF YEAR	299	-

	OBS. A	OBS. B	
START TIME	17:22	-	U.T.C.
END TIME	18:02	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: URBAN AREA

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

UA_01

PHOTO: South



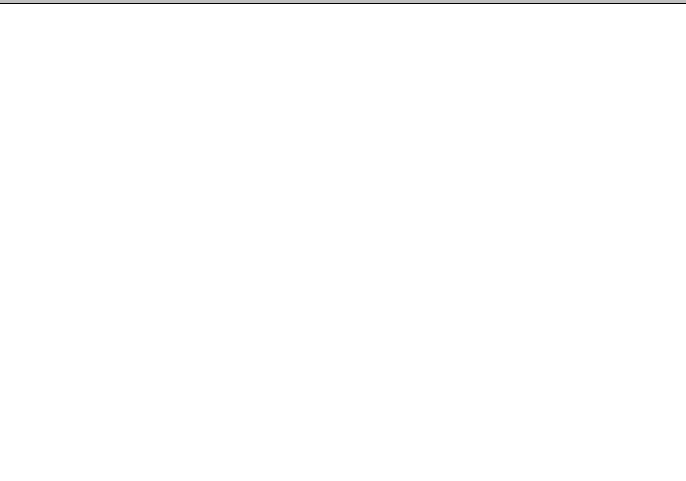
PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID UA_02

STATE MI

COUNTY Houghton

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 626625.37
EASTING 25770479.31
ELEV. 1179.52

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/4/2017	-	-
	DAY OF YEAR	308	-

	OBS. A	OBS. B	
START TIME	15:30	-	U.T.C.
END TIME	16:17	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	X	

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: URBAN AREA

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

UA_02

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID UA_03

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 594352.19
EASTING 25565945.67
ELEV. 1543.22

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239497193

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/30/2017	-	-
	DAY OF YEAR	303	-

	OBS. A	OBS. B	
START TIME	15:33	-	U.T.C.
END TIME	16:30	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	2.000 Meters	X

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: URBAN AREA

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

UA_03

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID UA_04

STATE MI

COUNTY Gogebic

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 549233.17
EASTING 25696006.82
ELEV. 1598.38

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/31/2017	-	-
	DAY OF YEAR	304	-

	OBS. A	OBS. B	
START TIME	13:12	-	U.T.C.
END TIME	14:20	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: URBAN AREA

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

UA_04

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID UA_05

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 647024.55
EASTING 25672404.41
ELEV. 1145.47

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/31/2017	-	-
	DAY OF YEAR	304	-

	OBS. A	OBS. B	
START TIME	16:15	-	U.T.C.
END TIME	16:57	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	FIXED HGT
	X	

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: URBAN AREA

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

PAGE:

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

UA_05

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID UA_06

STATE MI

COUNTY Gogebic

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 638773.05
EASTING 25513877.02
ELEV. 1374.33

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/24/2017	-	-
	DAY OF YEAR	297	-

	OBS. A	OBS. B	
START TIME	17:01	-	U.T.C.
END TIME	17:41	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: URBAN AREA

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

UA_06

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:



GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID UA_07

STATE MI

COUNTY Gogebic

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 511066.17
EASTING 25688062.30
ELEV. 1712.89

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5004413097

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/1/2017	-	-
	DAY OF YEAR	305	-

	OBS. A	OBS. B	
START TIME	12:39	-	U.T.C.
END TIME	13:41	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH ABOVE GROUND
METERS/FEET	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	2.000 Meters	FIXED HGT
	X		

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: URBAN AREA

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE	30135_MI_Ottawa NF_2017
Project No.	72-0227.01

Point ID	UA_07
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PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID UA_08

STATE MI

COUNTY Iron

Country USA

OPERATOR G. Loberger

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 503416.08
EASTING 25821824.16
ELEV. 1541.08

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5220487402

SESSIONS	DATE	OBS. A	OBS. B
STATIC	11/2/2017	-	-
	DAY OF YEAR	306	-

	OBS. A	OBS. B	
START TIME	7:10	-	U.T.C.
END TIME	7:44	-	X LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED
FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000 Meters
MEASURED X FIXED HGT

TOP OF MONUMENT IS:
METERS/FEET
FLUSH
ABOVE GROUND
BELOW GROUND

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: URBAN AREA

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

UA_08

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017
Project No. 72-0227.01

Point ID UA_09

STATE MI

COUNTY Ontonagon

Country USA

OPERATOR T. Mrochek

PROJECT COORDINATE/ELEVATION SYSTEM
NAD83(2011),SPCS Michigan North, FIPS2111, Int. Ft; NAVD88, GEOID12b, Int. Ft.

NORTHING 646142.29
EASTING 25699248.23
ELEV. 1150.52

RECEIVER MODEL Trimble R8-3 Integrated Antenna
RECEIVER S/N 5239496998

SESSIONS	DATE	OBS. A	OBS. B
STATIC	10/31/2017	-	-
	DAY OF YEAR	304	-

	OBS. A	OBS. B	
START TIME	17:15	-	U.T.C.
END TIME	17:47	-	X LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.

TOP OF MONUMENT IS:

METERS/FEET	FLUSH
	ABOVE GROUND
	BELOW GROUND

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	MEASURED	2.000 Meters	FIXED HGT
	X		

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	X NEW CONTROL
PUB. CONTROL	BASE STATION

Type: URBAN AREA

PHOTO:

PHOTO: North





GPS CONTROL
FIELD DATA SHEET

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JOB REFERENCE 30135_MI_Ottawa NF_2017

Project No. 72-0227.01

Point ID

UA_09

PHOTO: South



PHOTO: East



PHOTO: West



PHOTO:

