GPR Operations Log - FAN 2014-322-FA

Date	10/23/2014	**Day of Year**	296
Field Crew	Alisha Ellis, Cathryn Wheaton		
GPR GPS Used	Z-Xtreme Rover B	**Handheld GPS**	Garmin GPSMap 76
"Sherpa 1"		**GPS Offset**	
"Sherpa 2"		**GPS Offset**	

Record line number and direction on survey map!
Make sure to fill out the GPS log, including GPS session info and corresponding GPR lines!
Clearly indicate when "sherpa" changes affecting GPS offsets or antenna changes occur!

Notes (include photos if any and camera used)

Starting setup: A. Ellis with GPR, C. Wheaton with GPS backpack; antenna height = 2.22 m
Line 136: horizontal offset to center of GPR antenna = 149 cm
Beginning line 137: shorten straps to prevent GPR from flipping in vegetation; horizontal offset = 1.16 m
Battery died at 14:00
Beginning line 148: modified setiings - range, dielectrics, and gain based on sediment type

Start-of-Day Preferred Settings (enter default values in highlighted boxes)

RADAR	**Antenna:**	200 MHz	**T_Rate:**	100 kHz	**Mode:**	Distance	Distance Calibration Value:		**393.7**		**GPS:**	SDR				
SCAN	**Samples:**	1024	**Format:**	16 bit	**Range:**	200	**Dielectric:**	15.00	**Rate:**	(max)	**Scan/Unit:**	20.00				
GAIN	**(AUTO initialize then MANU**		**Points:**	5	**GP1:**	-20	**GP2:**	19	**GP3:**	54	**GP4:**	57	**GP5:**	65		
POSITION	**AUTO**		**Offset:**	(auto)	**Surface:**	(auto)										
FILTERS	**LP_IIR:**	600	**HP:IIR:**	50	**LP_FIR:**	0	**HP_FIR:**	0	**Stacking:**	0	**BGR_RMVL:**	0				

										Settings (if different from start-of-day)						
Planned Line	**GPR Line #**	**Start Time**	**Start Waypoin**	**Start Latitude**	**Start Longitud**	**End Time**	**End Waypoint**	**End Latitude**	**End Longitude**	**Range/Sample**	**Dielectric**	**GP1**	**GP2**	**GP3**	**GP4**	**GP5**
16	136	11:47	11	38 07.1999	75 10.9604	11:56	13			Hit vegetation, GPR flipped, start new line						
16	137			38 07.2160	75 11.0094					Shorten straps, new offsets						
16	138	12:06		38 047.2163	75 11.0100	12:11	14			Move out of vegetation						
16	139	12:12	15	38 07.2438	75 11.0709	12:17		38 07.2561	75 11.1082	Saltwater attenuation beginning around waypoint 14, going to rerun line 16						
16	140	12:28	16	38 07.2568	75 11.1072	12:36				Timed out						
16	141	12:37	17	38 07.2261	75 11.0300	12:41	18			End line 16						
17	142	13:21	19	38 07.1435	75 10.9875	13:28	21			Heading west						
18	143	14:35	22	38 07.0900	75 11.0140	14:43	23			Heading west						
18	144	14:45	24	38 07.1314	75 11.1379	14:47	25			Heading east						
18	145	14:49	26	38 07.1305	75 11.1165	14:54	28			Heading east						
15A	146	15:27	29	38 07.1045	75 11.0559	15:36	31			Heading north						
14A	147	15:42	32	38 07.2010	75 10.9587	15:56	35			Heading south						
NEW SETTINGS										100	23.00	-20	-1	31	50	54
19	148	16:21	36	38 07.0298	75 11.0441	16:26	37			Large dunes - cannot get GPR through; heading west						
19	149	16:27	38	38 07.0567	75 11.1038	16:34	39			EOL at toe of overwash - sandy with Spartina vegetation; heading west						
19	150	16:38	40	38 07.0761	75 11.2026	16:53	42			Heading east						
15B	151	17:00	43	38 07.0472	75 11.0786	17:14	46			Heading north						

GPR Operations Log - FAN 2014-322-FA

Date	10/24/2014	**Day of Year**	297
Field Crew	Alisha Ellis, Cathryn Wheaton		
GPR GPS Used	Z-Xtreme Rover B	**Handheld GPS**	Garmin GPSMap 76
"Sherpa 1"		**GPS Offset**	
"Sherpa 2"		**GPS Offset**	

Record line number and direction on survey map!
Make sure to fill out the GPS log, including GPS session info and corresponding GPR lines!
Clearly indicate when "sherpa" changes affecting GPS offsets or antenna changes occur!

Notes (include photos if any and camera used)

Starting setup: C. Wheaton with GPR, A. Ellis with GPS backpack; antenna height = 2.08 m; horizontal offset 1.39 m

Start-of-Day Preferred Settings (enter default values in highlighted boxes)

RADAR	**Antenna:**	200 MHz	**T_Rate:**	100 kHz	**Mode:**	Distance	Distance Calibration Value:		**393.7**		**GPS:**	SDR				
SCAN	**Samples:**	1024	**Format:**	16 bit	**Range:**	175	**Dielectric:**	15.00	**Rate:**	(max) 64	**Scan/Unit:**	20.00				
GAIN	**(AUTO initialize then MANU**		**Points:**	5	**GP1:**	-20	**GP2:**	11	**GP3:**	47	**GP4:**	56	**GP5:**	57		
POSITION	**AUTO**		**Offset:**	(auto) -10	**Surface:**	(auto) 10										
FILTERS	**LP_IIR:**	600	**HP:IIR:**	50	**LP_FIR:**	0	**HP_FIR:**	0	**Stacking:**	0	**BGR_RMVL:**	0				

										Settings (if different from start-of-day)						
Planned Line	**GPR Line #**	**Start Time**	**Start Waypoin**	**Start Latitude**	**Start Longitud**	**End Time**	**End Waypoint**	**End Latitude**	**End Longitude**	**Range/Sample**	**Dielectric**	**GP1**	**GP2**	**GP3**	**GP4**	**GP5**
22	152	10:30	52	38 06.72229	75 11.1066	10:40	54			Start of planned line located on dune, SOL south of this; heading west						
21	153	10:57	57	38 06.7389	75 11.3169	11:06	60			Heading east						
21B	154	11:55	60	38 06.7585	75 11.1736	11:57	61			Heading east; extension of line 21 towards coast to get out of dunes for line 14						
14B	155	11:59	62	38 06.7514	75 11.1571	12:09	64			Heading south						
23	156	12:10	65	38 06.5782	75 11.2537	12:16	66			Heading west						
14C	157	12:38	67	38 06.7520	75 11.1581	12:50	68			Heading north						
20	158	13:16	68	38 06.8925	75 11.0999	13:21	70			Heading west						
14D	159	14:45	68	38 06.8935	75 11.0986	14:54	71			Heading north						
19	160	14:57	71	38 07.0314	75 11.0422	15:13	72			Re-run line 19 with consistent settings; heading west						
15	161	15:56	73	38 07.2100	75 10.9064	16:19	74			Re-run line 15 with consistent settings; heading south						

GPR Operations Log - FAN 2014-322-FA

Date	10/25/2014	**Day of Year**	298
Field Crew	Alisha Ellis, Cathryn Wheaton		
GPR GPS Used	Z-Xtreme Rover B	**Handheld GPS**	Garmin GPSMap 76
"Sherpa 1"		**GPS Offset**	
"Sherpa 2"		**GPS Offset**	

Notes (include photos if any and camera used)

Starting setup: A. Ellis with GPR, C. Wheaton with GPS backpack; antenna height = 2.16 m; horizontal offset 1.4 m

Beginning line 167: C. Wheaton with GPR, A. Ellis with GPS backpack; antenna height = 2.08 m; horizontal offset 1.39 m

Record line number and direction on survey map!
Make sure to fill out the GPS log, including GPS session info and corresponding GPR lines!
Clearly indicate when "sherpa" changes affecting GPS offsets or antenna changes occur!

Start-of-Day Preferred Settings (enter default values in highlighted boxes)

RADAR	**Antenna:**	200 MHz	**T_Rate:**	100 kHz	**Mode:**	Distance	Distance Calibration Value:		**393.7**		**GPS:**	SDR				
SCAN	**Samples:**	1024	**Format:**	16 bit	**Range:**	175	**Dielectric:**	15.00	**Rate:**	(max) 64	**Scan/Unit:**	20.00				
GAIN	**(AUTO initialize then MANU**		**Points:**	5	**GP1:**	-20	**GP2:**	-9	**GP3:**	27	**GP4:**	35	**GP5:**	35		
POSITION	**AUTO**		**Offset:**	(auto) -9.7	**Surface:**	(auto) 10										
FILTERS	**LP_IIR:**	600	**HP:IIR:**	50	**LP_FIR:**	0	**HP_FIR:**	0	**Stacking:**	0	**BGR_RMVL:**	0				

										Settings (if different from start-of-day)						
Planned Line	**GPR Line #**	**Start Time**	**Start Waypoin**	**Start Latitude**	**Start Longitud**	**End Time**	**End Waypoint**	**End Latitude**	**End Longitude**	**Range/Sample**	**Dielectric**	**GP1**	**GP2**	**GP3**	**GP4**	**GP5**
13	162	10:27	75	38 14.9609	75 07.8235	10:42	78			Heading west; waypoint 76 - GPR flipped; waypoint 77 - adjusted path south of planned line/dune						
12	163	10:55	79	38 14.9763	75 07.9880	11:06	83			Heading east						
11	164	11:19	84	38 14.9197	75 07.8450	11:32	87			Heading west; could not follow exact planned line (on dune)						
10	165	12:16	88	38 14.8532	75 07.8761	12:24	91			Heading west						
8	166	12:38	110	38 14.7844	75 07.9067	12:45	94			Heading west						
A. Ellis and C. Wheaton switch GPR/GPS, new antenna height and horizontal offset																
7	167	13:55	95	38 14.7354	75 07.9358	14:01	97			Heading west						
6	168	14:04	98	38 14.7486	75 08.0635	14:11	102			Heading east						
4	169	15:00	103	38 14.6387	75 07.9757	15:08	106			Heading not recorded (west?); EOL at beginning of thick vegetation; waypoint 105 - GPR flipped						
5	170	15:11	107	38 14.6934	75 08.0919	15:17	108			Heading not recorded						
1	171	15:26	109	38 14.5804	75 08.0062	15:53	111			Heading not recorded						

GPR Operations Log - FAN 2014-322-FA

Date	10/26/2014	**Day of Year**	299
Field Crew	Alisha Ellis, Cathryn Wheaton		
GPR GPS Used	Z-Xtreme Rover B	**Handheld GPS**	Garmin GPSMap 76
"Sherpa 1"		**GPS Offset**	
"Sherpa 2"		**GPS Offset**	

Record line number and direction on survey map!
Make sure to fill out the GPS log, including GPS session info and corresponding GPR lines!
Clearly indicate when "sherpa" changes affecting GPS offsets or antenna changes occur!

Notes (include photos if any and camera used)

Re-run WTx1 lines with 400 MHz antenna

Starting setup: C. Wheaton with GPR, A. Ellis with GPS backpack; antenna height = 2.08 m; horizontal offset 1.39 m

Start-of-Day Preferred Settings (enter default values in highlighted boxes)

RADAR	**Antenna:**	400 MHz	**T_Rate:**	100 kHz	**Mode:**	Distance	Distance Calibration Value:		**395**		**GPS:**	SDR				
SCAN	**Samples:**	1024	**Format:**	16 bit	**Range:**	150	**Dielectric:**	15.00	**Rate:**	(max)	**Scan/Unit:**	20.00				
GAIN	**(AUTO initialize then MANU**		**Points:**	5	**GP1:**	-20	**GP2:**	7	**GP3:**	51	**GP4:**	51	**GP5:**	58		
POSITION	**AUTO**		**Offset:**	(auto)	**Surface:**	(auto)										
FILTERS	**LP_IIR:**	600	**HP:IIR:**	50	**LP_FIR:**	0	**HP_FIR:**	0	**Stacking:**	0	**BGR_RMVL:**	0				

										Settings (if different from start-of-day)						
Planned Line	**GPR Line #**	**Start Time**	**Start Waypoin**	**Start Latitude**	**Start Longitud**	**End Time**	**End Waypoint**	**End Latitude**	**End Longitude**	**Range/Sample**	**Dielectric**	**GP1**	**GP2**	**GP3**	**GP4**	**GP5**
8	172	15:35	118	38 14.7859	75 07.9064	15:40	119			Heading west						
6	173	15:47	120	38 14.7113	75 07.9481	15:56	122			Heading west; waypoint 121 - GPR flipped						
4	174	16:04	123	38 14.6370	75 07.9766	16:10	124			Heading west						
1	175	16:23	125	38 14.5804	75 08.0051	16:42	126			Heading north						
13	176	16:55	126	38 14.9610	75 07.8228	16:51	127			Heading west						
12	177	16:55	128	38 14.5762	75 07.9873	17:03	129			Heading east						
11	178	17:04	130	38 14.9196	75 07.8444	17:11	131			Heading west						
10	179	17:28	133	38 14.8553	75 07.5793	17:33	134			Heading west						