Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	**Project Name**	**Unique ID**	**Flight Date (UTC)**	**Day of Year**	**Flight #**
82378	AZ BLACK ROCK Lidar	Day277_90515_1	10/04/2021	277	1

Crew	Equipment	Time			Airports
Pilot	**Aircraft Make / Model / Tail #**	**Hobbs Start**	**Local Start**	**UTC Start**	**Departing**
LaRocque	Cessna 404 Titan - N475RC	2565.2	09:44:00	16:44:00	KTUS
Operator	**Sensor Make / Model / Serial #**	**Hobbs End**	**Local End**	**UTC End**	**Arriving**
Fanning	Leica Terrain Mapper - 90515	2568.9	12:21:00	19:21:00	KTUS

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
160	7	10	12,000	Scattered	26	7	30.07

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	6,998		2,643

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
	8	40	150	1580	100

Verify S-Turns Before Mission Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
1	NE	16:44:00	16:46:00	00:02:00	17	1.1	START BLACK ROCK Lidar
2	SW	16:49:00	16:51:00	00:02:00	16	1.3	
3	NE	16:55:00	16:57:00	00:02:00	16	1.3	
4	SW	17:00:00	17:04:00	00:04:00	17	1.3	
5	NE	17:08:00	17:12:00	00:04:00	17	1.3	
6	SW	17:15:00	17:19:00	00:04:00	16	1.4	
7	NE	17:22:00	17:27:00	00:05:00	16	1.4	
8	SW	17:30:00	17:34:00	00:04:00	15	1.7	
9	NE	17:37:00	17:42:00	00:05:00	17	1.2	
10	SW	17:45:00	17:50:00	00:05:00	17	1.2	
11	NE	17:53:00	17:59:00	00:06:00	16	1.3	
12	SW	18:01:00	18:07:00	00:06:00	15	1.4	
13	NE	18:10:00	18:16:00	00:06:00	15	1.4	
14	SW	18:18:00	18:24:00	00:06:00	14	1.4	
15	NE	18:27:00	18:33:00	00:06:00	14	1.4	
16	SW	18:36:00	18:43:00	00:07:00	15	1.3	
17	NE	18:46:00	18:52:00	00:06:00	15	1.4	
18	SW	18:55:00	19:02:00	00:07:00	16	1.7	
19	NE	19:05:00	19:12:00	00:07:00	17	1.5	
20	SW	19:14:00	19:21:00	00:07:00	17	1.3	END BLACK ROCK Lidar

Page 1 **Verify S-Turns After Mission** Yes

Additional Comments

5025GB WU: 09:09MST WD: 12:52MST ENOHD MODE DISABLED

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
82378	AZ Black Rock	Day279_90513	10/06/2021	279	

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
Connolly	Cessna 404 Titan - N7079F	3282.5	07:47:00	14:47:00	TUS
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
Denham	Leica Terrain Mapper - 90513	3285.9	11:36:00	18:36:00	TUS

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
150	4	10		Clear	18	14	30.05

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150		10,000	2,643

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
55	NE	15:33:00	15:41:00		21	1.2	
56	SW	15:45:00	15:53:00		19	1.5	
57	NE	15:57:00	16:05:00	00:08:00	20	1.2	
58	SW	16:09:00	16:17:00	00:08:00	19	1.3	
59	NE	16:22:00	16:30:00	00:08:00	22	1.1	
60	SW	16:34:00	16:42:00	00:08:00	24	1	
61	NE	16:45:00	16:53:00	00:08:00	20	1.1	
62	SW	16:57:00	17:05:00	00:08:00	20	1.1	
63	NE	17:08:00	17:16:00	00:08:00	19	1.1	
64	SW	17:19:00	17:27:00	00:08:00	17	1.3	
65	NE	17:30:00	17:39:00	00:09:00	19	1.3	Cloud last 6 seconds of line. (1.4 nm)

Verify S-Turns After Mission	Yes

Additional Comments

Clouds surrounding and pushing into mission area.

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	**Project Name**	**Unique ID**	**Flight Date (UTC)**	**Day of Year**	**Flight #**
82378	AZ BLACK ROCK Lidar	Day279_90515_1	10/06/2021	279	1

Crew	Equipment	Time			Airports
Pilot	**Aircraft Make / Model / Tail #**	**Hobbs Start**	**Local Start**	**UTC Start**	**Departing**
LaRocque	Cessna 404 Titan - N475RC	2570.3	09:22:00	16:22:00	KTUS
Operator	**Sensor Make / Model / Serial #**	**Hobbs End**	**Local End**	**UTC End**	**Arriving**
Fanning	Leica Terrain Mapper - 90515	2573.9	11:57:00	18:57:00	KTUS

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
170	4	10	10,000	Scattered	21	12	30.04

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	6,998		2,643

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
	8	40	150	1580	100

Verify S-Turns Before Mission Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
75	NE	16:22:00	16:30:00	00:08:00	22	1.1	
76	SW	16:34:00	16:43:00	00:09:00	24	1	**VARIABLE MSL**
77	NE	16:45:00	16:54:00	00:09:00	20	1.1	
78	SW	16:57:00	17:06:00	00:09:00	20	1.1	
79	NE	17:09:00	17:18:00	00:09:00	19	1.2	**CLOUDS AT END OF LINE**
80	SW	17:20:00	17:29:00	00:09:00	17	1.3	**(^)**
81	NE	17:32:00	17:41:00	00:09:00	19	1.2	
82	SW	17:44:00	17:52:00	00:08:00	19	1.1	
83	NE	17:55:00	18:03:00	00:08:00	16	1.4	
84	SW	18:06:00	18:15:00	00:09:00	16	1.4	
85	NE	18:18:00	18:25:00	00:07:00	17	1.4	
86	SW	18:30:00	18:34:00	00:04:00	15	1.6	
87	NE	18:36:00	18:40:00	00:04:00	15	1.6	
88	SW	18:43:00	18:46:00	00:03:00	15	1.7	
89	NE	18:49:00	18:51:00	00:02:00	17	1.2	
90	SW	18:54:00	18:57:00	00:03:00	16	1.3	

Verify S-Turns After Mission Yes

Additional Comments

4700GB WU: 08:51MST WD: 12:29MST ENOHD MODE DISABLED

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
82378	AZ BlackRock	Day280_90513	10/07/2021	280	

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
Connolly	Cessna 404 Titan - N7079F	3285.9	07:50:00	14:50:00	TUS
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
Denham	Leica Terrain Mapper - 90513	3291.5	01:55:00	20:55:00	TUS

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
130	7	10		Clear	19	5	30.08

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150		10,000	2,643

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
		40	150	1582	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
40	SW	15:36:00	15:43:00		19	1.2	
41	NE	15:47:00	15:55:00		18	1.2	
42	SW	15:58:00	16:05:00	00:07:00	17	1.4	
43	NE	16:10:00	16:17:00	00:07:00	20	1.1	
44	SW	16:21:00	16:28:00	00:07:00	21	1.1	
45	NE	16:31:00	16:38:00	00:07:00	22	1	
46	SW	16:41:00	16:48:00	00:07:00	19	1.1	
47	NE	16:51:00	16:59:00	00:08:00	20	1.1	
48	SW	17:02:00	17:09:00	00:07:00	19	1.1	
49	NE	17:12:00	17:19:00	00:07:00	17	1.2	
50	SW	17:22:00	17:29:00	00:07:00	18	1.1	
51	NE	17:32:00	17:39:00	00:07:00	18	1.1	
52	SW	17:42:00	17:49:00	00:07:00	14	1.3	
53	NE	17:52:00	18:00:00	00:08:00	14	1.3	
54	SW	18:03:00	18:11:00	00:08:00	14	1.3	
66	NE	18:14:00	18:23:00	00:09:00	15	1.3	
67	SW	18:25:00	18:34:00	00:09:00	15	1.3	
68	NE	18:38:00	18:46:00	00:08:00	14	1.5	
69	SW	18:49:00	18:58:00	00:09:00	17	1.2	
70	NE	19:01:00	19:10:00	00:09:00	17	1.2	
71	SW	19:13:00	19:21:00	00:08:00	17	1.3	
72	NE	19:25:00	19:34:00	00:09:00	17	1.3	
73	SW	19:37:00	19:45:00	00:08:00	19	1.2	
74	NE	19:49:00	19:58:00	00:09:00	21	1	

Verify S-Turns After Mission	Yes

Additional Comments

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	**Project Name**	**Unique ID**	**Flight Date (UTC)**	**Day of Year**	**Flight #**
82378	AZ BLACK ROCK Lidar	Day280_90515_1	10/07/2021	280	1

Crew	Equipment	Time			Airports
Pilot	**Aircraft Make / Model / Tail #**	**Hobbs Start**	**Local Start**	**UTC Start**	**Departing**
LaRocque	Cessna 404 Titan - N475RC	2573.9	08:31:00	15:31:00	KTUS
Operator	**Sensor Make / Model / Serial #**	**Hobbs End**	**Local End**	**UTC End**	**Arriving**
Fanning	Leica Terrain Mapper - 90515	2578.1	11:39:00	18:39:00	KTUS

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
110	7	10	12,000	Scattered	17	10	30.06

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	6,998		2,643

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
	8	40	150	1580	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
21	NE	15:31:00	15:37:00	00:06:00	20	1.2	**VARIABLE MSL**
22	SW	15:40:00	15:47:00	00:07:00	17	1.6	
23	NE	15:50:00	15:57:00	00:07:00	18	1.2	
24	SW	16:00:00	16:07:00	00:07:00	17	1.4	
25	NE	16:10:00	16:17:00	00:07:00	19	1.1	
26	SW	16:20:00	16:27:00	00:07:00	20	1.1	
27	NE	16:30:00	16:37:00	00:07:00	21	1	
28	SW	16:40:00	16:47:00	00:07:00	19	1.1	
29	NE	16:50:00	16:57:00	00:07:00	19	1.1	
30	SW	17:00:00	17:07:00	00:07:00	19	1.1	
31	NE	17:10:00	17:17:00	00:07:00	16	1.2	
32	SW	17:20:00	17:28:00	00:08:00	17	1.1	
33	NE	17:30:00	17:37:00	00:07:00	17	1.1	
34	SW	17:40:00	17:48:00	00:08:00	16	1.2	
35	NE	17:51:00	17:58:00	00:07:00	14	1.3	
36	SW	18:01:00	18:08:00	00:07:00	14	1.3	
37	NE	18:11:00	18:19:00	00:08:00	15	1.3	
38	SW	18:21:00	18:28:00	00:07:00	14	1.3	
39	NE	18:31:00	18:39:00	00:08:00	13	1.5	

Page 1	Verify S-Turns After Mission	Yes

Additional Comments

4375GB WU: 08:00MST WD: 12:19MST ENOHD MODE DISABLED

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
82378	AZ Black Rock	Day281_90513	10/08/2021	281	

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
Gebhart	Cessna 404 Titan - N7079F	3291.5	09:50:00	16:50:00	TUS
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
Denham	Leica Terrain Mapper - 90513	3296.8	03:36:00	22:36:00	TUS

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
150	7	10		Clear	22	3	30.09

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150		10,100	2,643

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
		40	150	1582	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
126	NW	17:32:00	17:42:00		18	1.1	
125	SE	17:45:00	17:55:00		15	1.3	
124	NW	17:57:00	18:07:00	00:10:00	15	1.3	
123	SE	18:10:00	18:19:00	00:09:00	14	1.5	
122	NW	18:22:00	18:32:00	00:10:00	16	1.3	18:30 - Laser Safety Fault
121	SE	18:35:00	18:44:00	00:09:00	15	1.5	Eye Mode Switched - NOHD
120	NW	18:46:00	18:56:00	00:10:00	17	1.2	Eye Safe Off
119	SE	18:59:00	19:08:00	00:09:00	18	1.2	
118	NW	19:10:00	19:20:00	00:10:00	18	1.2	
117	SE	19:23:00	19:33:00	00:10:00	18	1.3	
116	NW	19:36:00	19:46:00	00:10:00	20	1.2	
115	SE	19:49:00	19:59:00	00:10:00	22	1	
114	NW	20:01:00	20:12:00	00:11:00	19	1.2	
113	SE	20:15:00	20:25:00	00:10:00	21	1.1	
112	NW	20:28:00	20:38:00	00:10:00	21	1.2	
111	SE	20:41:00	20:52:00	00:11:00	22	1.1	
110	NW	20:54:00	21:02:00	00:08:00	20	1.3	MR 20:54, 20:56
109	SE	21:07:00	21:17:00	00:10:00	20	1.3	
91	NW	21:25:00	21:27:00	00:02:00	20	1.4	Altitude 11,401
92	SE	21:30:00	21:33:00	00:03:00	22	1.2	
93	NW	21:35:00	21:38:00	00:03:00	22	1.2	
94	SE	21:41:00	21:47:00	00:06:00	22	1.2	
95	NW	21:49:00	21:56:00	00:07:00	22	1.2	

Verify S-Turns After Mission	Yes

Additional Comments

MR=Mount Roll

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	**Project Name**	**Unique ID**	**Flight Date (UTC)**	**Day of Year**	**Flight #**
82378	AZ BLACK ROCK Lidar	Day282_90515_1	10/09/2021	282	1

Crew	Equipment	Time			Airports
Pilot	**Aircraft Make / Model / Tail #**	**Hobbs Start**	**Local Start**	**UTC Start**	**Departing**
LaRocque	Cessna 404 Titan - N475RC	2578.1	08:39:00	15:39:00	KTUS
Operator	**Sensor Make / Model / Serial #**	**Hobbs End**	**Local End**	**UTC End**	**Arriving**
Fanning	Leica Terrain Mapper - 90515	2579.6	09:03:00	16:03:00	KTUS

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
180	1	10	12,000	Clear	19	6	30.03

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	6,998		2,643

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
	8	40	150	1580	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
108	SE	15:39:00	15:49:00	00:10:00	19	1.2	**VARIABLE MSL**
107	NW	15:53:00	16:03:00	00:10:00	18	1.3	**CLOUDS ON NW END OF LINE**

Page 1	Verify S-Turns After Mission	Yes

Additional Comments

3948GB WU: 08:09MST WD: 09:38MST ENOHD MODE DISABLED

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	**Project Name**	**Unique ID**	**Flight Date (UTC)**	**Day of Year**	**Flight #**
82378	AZ BLACK ROCK Lidar	Day282_90515_1	10/09/2021	282	1

Crew	Equipment	Time			Airports
Pilot	**Aircraft Make / Model / Tail #**	**Hobbs Start**	**Local Start**	**UTC Start**	**Departing**
LaRocque	Cessna 404 Titan - N475RC	2579.6	08:49:00	15:49:00	KTUS
Operator	**Sensor Make / Model / Serial #**	**Hobbs End**	**Local End**	**UTC End**	**Arriving**
Fanning	Leica Terrain Mapper - 90515	2583.1	11:17:00	18:17:00	KTUS

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
170	6	50	20,000	Clear	13	0	30.03

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	6,998		2,643

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
	8	40	150	1580	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
107	SE	15:49:00	15:59:00	00:10:00	17	1.4	**(107 FLOWN AGAIN DUE TO CLOUDS**
106	NW	16:02:00	16:13:00	00:11:00	19	1.1	**YESTERDAY)**
105	SE	16:16:00	16:26:00	00:10:00	20	1.1	
104	NW	16:29:00	16:39:00	00:10:00	18	1.1	**VARIABLE MSL**
103	SE	16:43:00	16:52:00	00:09:00	18	1.1	
102	NW	16:55:00	17:06:00	00:11:00	17	1.2	
101	SE	17:09:00	17:18:00	00:09:00	17	1.2	
100	NW	17:22:00	17:32:00	00:10:00	17	1.1	
99	SE	17:35:00	17:43:00	00:08:00	16	1.3	
98	NW	17:46:00	17:55:00	00:09:00	15	1.5	
97	SE	17:58:00	18:05:00	00:07:00	15	1.5	
96	NW	18:09:00	18:17:00	00:08:00	13	1.9	**AZ BLACK ROCK COMPLETE!**

Page 1	Verify S-Turns After Mission	Yes

Additional Comments

3878GB WU: 08:13MST WD: 11:43MST ENOHD MODE DISABLED

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
82378	AZ Black Rock	Day288_90513	10/15/2021	288	

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
Gebhart	Cessna 404 Titan - N7079F	3311.3	09:49:00	16:49:00	TUS
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
Denham	Leica Terrain Mapper - 90513	3312.4	01:09:00	20:09:00	TUS

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
		10		Clear	16	-3	30.17

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	6,998	10,174	2,643

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
		40	150	1580	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
122	SE	17:43:00	17:42:00		15	1.3	
1	SW	18:07:00	18:09:00	00:02:00	15	1.5	Supplemental Flight Line
1	NE	18:11:00	18:13:00	00:02:00	17	1.2	Supplemental Flight Line

Page 1	Verify S-Turns After Mission	Yes

Additional Comments