

Project Report Appendices

The following section contains the appendices as listed in the Utah 2016 - Washington County AOI Project Report.

Appendix A

Flight Logs

There were nine total lifts. Flight logs are found on the following pages

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Jan 8, 2017-A (N604MD, SN8239)

Date: 11/20/2016	Aircraft:	Sensor:
Project: Utah 2016 LiDAR		Project #: R029083
Flight Mgmt File: FMSL_Utah_WACounty_SN8239		
Pilot: Bob Cale		Sensor Operator: Charlie Oncea

	Flight 1	Flight 2	Flight 3	Flight 4
Wheels Up	3:14:00 PM			
Wheels Down	5:19:00 PM			
Begin Hobbs	11972.8			
End Hobbs	11974.8			
On-line Hobbs: 1.8		Mob Hobbs: 0.2		

Notes

Went to the airport early and waited all day for the clouds to lift. they stayed just below the project height until late in the day, and we got a chance for a short evening flight.

Flt Mgmt File: FMSL_Utah_WACounty_SN8239

Name	StartTime (UTC)	Start AGL (m)	End Time (UTC)
26	10:35:00 PM	2053.2178	10:39:00 PM
25	10:41:00 PM	1896.709	10:46:00 PM
24	10:48:00 PM	2024.0305	10:52:00 PM
23	10:54:00 PM	1826.4469	10:59:00 PM
22	11:01:00 PM	1978.5013	11:05:00 PM
21	11:06:00 PM	1892.3292	11:10:00 PM
20	11:13:00 PM	1965.6786	11:16:00 PM
19	11:19:00 PM	1904.408	11:23:00 PM
18	11:25:00 PM	1894.822	11:29:00 PM
17	11:31:00 PM	1843.6351	11:37:00 PM
16	11:39:00 PM	1825.5376	11:47:00 PM
15	11:49:00 PM	1471.9822	11:59:00 PM
UL001	12:02:00 AM	1935.3015	12:07:00 AM

Jan 10, 2017-A (N604MD, SN8239)

Date: 1/10/2017	Aircraft: N604MD	Sensor: 8239
Project: Utah 2016 LiDAR		Project #: R029083
Flight Mgmt File: FMSL_Utah_WACounty_SN8239		
Pilot: Bob Cale		Sensor Operator: Charlie Oncea

	Flight 1	Flight 2	Flight 3	Flight 4
Wheels Up	9:17:00 AM			
Wheels Down	2:18:00 AM			
Begin Hobbs	11975.2			
End Hobbs	11980.1			
On-line Hobbs: 4.1		Mob Hobbs: 0.8		

Notes

Finally got a chance at a good flight, cut it a bit short due to turbulence. Some snow scouting, a few areas still have snow but melting fast. No WA county DEM available, still waiting on it for INS2KML processing

Flt Mgmt File: FMSL_Utah_WACounty_SN8239

Name	StartTime (UTC)	Start AGL (m)	End Time (UTC)
129	5:35:01 PM	1657.807007	5:36:33 PM
128	5:38:37 PM	2053.199463	5:40:03 PM
127	5:42:16 PM	1663.133789	5:43:44 PM
14	5:47:39 PM	1725.480713	5:49:24 PM
14	5:53:17 PM	1504.791748	6:01:57 PM
13	6:04:08 PM	1693.159424	6:12:50 PM
12	6:15:34 PM	1519.195557	6:25:21 PM
11	6:27:28 PM	1823.555664	6:37:13 PM
10	6:39:29 PM	1577.410767	6:49:23 PM
9	6:51:25 PM	1870.961914	7:01:08 PM
8	7:05:29 PM	1678.911255	7:15:18 PM
7	7:17:10 PM	1805.286377	7:26:49 PM
6	7:29:36 PM	1709.731079	7:36:05 PM
5	7:39:58 PM	1831.113159	7:44:10 PM
4	7:46:49 PM	1781.921143	7:51:03 PM
3	7:53:11 PM	1737.742798	7:57:08 PM
2	7:59:10 PM	1894.985107	8:02:23 PM
1	8:03:58 PM	1814.487915	8:04:49 PM
130	8:19:03 PM	2015.191162	8:21:11 PM
UL002	8:08:37 PM	2005.675415	8:12:11 PM

Jan 10, 2017-B (N604MD, SN8239)

Date: 1/10/2017	Aircraft: N604MD	Sensor: 8239
Project: Utah 2016 LiDAR		Project #: R029083
Flight Mgmt File: FMSL_Utah_WACounty_SN8239		
Pilot: Bob Cale		Sensor Operator: Charlie Oncea

	Flight 1	Flight 2	Flight 3	Flight 4
Wheels Up				
Wheels Down				
Begin Hobbs				
End Hobbs				
On-line Hobbs:		Mob Hobbs:		

Notes

Flt Mgmt File: FMSL_Utah_WACounty_SN8239

Name	StartTime (UTC)	Start AGL (m)	End Time (UTC)
130	8:43:33 PM	1496.664673	8:41:18 PM
131	8:49:23 PM	2047.178955	8:46:14 PM
132	8:55:22 PM	1456.033813	8:51:45 PM
133	9:01:13 PM	2085.202637	8:57:29 PM
134	9:06:47 PM	1395.109375	9:03:00 PM
134	9:13:10 PM	2079.142334	9:09:29 PM
135	9:18:18 PM	1395.893311	9:14:34 PM
UL003	9:23:16 PM	1937.08374	9:22:14 PM

Jan 13, 2017-A (N604MD, SN8239)

Date: 1/13/2017	Aircraft: N604MD	Sensor: 8239
Project: Utah 2016 LiDAR		Project #: R029083
Flight Mgmt File: FMSL_Utah_WACounty_SN8239		
Pilot: Eric Petersen		Sensor Operator: Scott White

	Flight 1	Flight 2	Flight 3	Flight 4
Wheels Up	3:21:00 PM			
Wheels Down	5:30:00 PM			
Begin Hobbs	11980.1			
End Hobbs	11982.2			
On-line Hobbs: 0.9		Mob Hobbs: 1.2		

Notes

Monitored weather and waited for our opportunity to come in the afternoon. Saw some clouds clearing so we took a chance and was able to get a small block in. We wanted to get some lines in EG's base range but they were clouded out. Fortunately there were some COR's type stations that we could fly off of according to SV and was able to get a small block in thus avoiding the clouds. Heading back to KSHH in order to be in an area where LR can swap out sensors from 604MD to 208NR. After backing up the data, CloudPro wouldn't work properly, it was clipping the edges off. Will have to try to troubleshoot more tomorrow.

Flt Mgmt File: FMSL_Utah_WACounty_SN8239

Name	StartTime (UTC)	Start AGL (m)	End Time (UTC)
144	12:12:05 AM	1893.503906	12:14:40 AM
143	12:17:06 AM	2090.370605	12:20:11 AM
142	12:22:35 AM	1893.415161	12:25:47 AM
141	12:28:06 AM	2095.03125	12:31:03 AM
140	12:33:14 AM	1996.337769	12:36:18 AM
139	12:38:26 AM	1947.512695	12:41:22 AM
UL002	12:43:48 AM	1991.856812	12:45:06 AM

Jan 16, 2017-A (N604MD, SN8239)

Date: 1/16/2017	Aircraft: N604MD	Sensor: 8239
Project: Utah 2016 LiDAR		Project #: R029083
Flight Mgmt File: FMSL_Utah_WACounty_SN8239		
Pilot: Eric Petersen		Sensor Operator: Scott White

	Flight 1	Flight 2	Flight 3	Flight 4
Wheels Up	1:07:00 PM			
Wheels Down	5:49:00 PM			
Begin Hobbs	4471.2			
End Hobbs	4474.9			
On-line Hobbs: 2.7		Mob Hobbs: 1		

Notes

LR was out early and we wired and put our finishing touches on the install. Got 208NR filled up with Os since we are flying lines up to 13,000 feet. Tested the Phase one and POS on the ground and everything seemed to be in working order. Got wheels up and headed over to our AOI. Everything went smooth, and we landed at KSGU right after sunset. Cloudpro/LasOverlap still isn't working properly. Will continue to troubleshoot.

Flt Mgmt File: FMSL_Utah_WACounty_SN8239

Name	StartTime (UTC)	Start AGL (m)	End Time (UTC)
71	10:07:03 PM	1545.542847	10:08:47 PM
72	10:10:56 PM	2043.262451	10:12:40 PM
73	10:14:36 PM	1797.277344	10:16:23 PM
74	10:18:14 PM	2056.122559	10:20:00 PM
75	10:22:02 PM	1767.947144	10:23:50 PM
76	10:25:42 PM	2102.282715	10:27:30 PM
77	10:29:42 PM	1880.231445	10:31:26 PM
78	10:34:06 PM	2014.43689	10:35:51 PM
79	10:38:20 PM	1789.104736	10:41:04 PM
80	10:43:19 PM	2014.935059	10:46:07 PM
81	10:48:16 PM	1870.160522	10:51:07 PM
82	10:53:16 PM	1950.103149	10:56:09 PM
83	10:58:13 PM	1459.966431	11:01:05 PM
84	11:02:55 PM	1920.874634	11:05:44 PM
85	11:08:24 PM	2004.483765	11:10:35 PM
126	11:16:05 PM	2107.072754	11:19:22 PM
125	11:21:32 PM	1914.307617	11:24:51 PM
124	11:26:58 PM	2045.442261	11:30:50 PM
123	11:32:52 PM	1869.517456	11:36:35 PM
123	11:39:02 PM	0	11:42:46 PM
122	11:45:25 PM	1792.422485	11:49:10 PM
121	11:51:29 PM	2096.605957	11:55:17 PM
120	11:57:12 PM	1775.695557	12:00:54 AM
119	12:08:19 AM	0	12:09:51 AM
118	12:12:02 AM	1786.326904	12:13:49 AM
117	12:16:20 AM	2105.2146	12:18:08 AM
116	12:19:50 AM	1651.669434	12:21:37 AM
115	12:23:36 AM	1705.480347	12:24:58 AM
114	12:26:51 AM	1874.776733	12:28:05 AM
UL001	12:33:39 AM	1958.256592	12:35:07 AM

Jan 17, 2017-A (N604MD, SN8239)

Date: 1/17/2017	Aircraft: N604MD	Sensor: 8239
Project: Utah 2016 LiDAR		Project #: R029083
Flight Mgmt File: FMSL_Utah_WACounty_SN8239		
Pilot: Eric Petersen		Sensor Operator: Scott White

	Flight 1	Flight 2	Flight 3	Flight 4
Wheels Up	10:43:00 AM			
Wheels Down	4:22:00 PM			
Begin Hobbs	4474.9			
End Hobbs	4480.5			
On-line Hobbs: 5.4		Mob Hobbs: 0.2		

Notes

Got a good lift today after some frost melted off 208NR that was present in the morning. We got lucky with snow, with multiple blocks that had snow just outside of the buffered AOI. I flew what was snow free, and made a snow KML and took Pictures of what isn't. Overall we got the most done we have in a day for this project.

Flt Mgmt File: FMSL_Utah_WACounty_SN8239

Name	StartTime (UTC)	Start AGL (m)	End Time (UTC)
112	6:10:00 PM	0	6:11:00 PM
111	6:12:00 PM	2120.916504	6:17:00 PM
110	6:19:00 PM	1724.387939	6:24:00 PM
109	6:26:00 PM	2108.335205	6:32:00 PM
108	6:34:00 PM	1842.457031	6:40:00 PM
107	6:42:00 PM	2096.730957	6:48:00 PM
106	6:51:00 PM	1564.759277	6:56:00 PM
105	6:58:00 PM	1660.822388	7:04:00 PM
104	7:06:00 PM	1914.840088	7:11:00 PM
113	7:16:00 PM	1531.220215	7:18:00 PM
103	7:21:00 PM	1430.161987	7:22:00 PM
102	7:24:00 PM	1891.166138	7:25:00 PM
101	7:27:00 PM	1926.796143	7:28:00 PM
100	7:31:00 PM	2073.029541	7:33:00 PM
99	7:36:00 PM	1490.038333	7:38:00 PM
98	7:40:00 PM	2138.995605	7:43:00 PM
97	7:45:00 PM	1571.67395	7:47:00 PM
96	7:50:00 PM	2012.883301	7:52:00 PM
95	7:54:00 PM	1475.873779	7:55:00 PM
94	8:04:00 PM	2086.017334	8:05:00 PM
93	8:07:00 PM	1900.590332	8:09:00 PM
92	8:11:00 PM	2115.168701	8:13:00 PM
91	8:15:00 PM	1884.067627	8:17:00 PM
90	8:19:00 PM	2105.510986	8:21:00 PM
89	8:23:00 PM	1699.329224	8:25:00 PM
88	8:27:00 PM	2093.920898	8:29:00 PM
87	8:31:00 PM	1584.920898	8:33:00 PM
86	8:35:00 PM	2147.880371	8:37:00 PM
70	8:42:00 PM	1425.903198	8:45:00 PM
70	8:48:00 PM	2072.453613	8:51:00 PM
69	8:54:00 PM	1649.715332	8:57:00 PM
68	9:10:00 PM	2041.874146	9:13:00 PM
67	9:15:00 PM	1749.58728	9:19:00 PM
66	9:21:00 PM	2096.771729	9:25:00 PM
65	9:27:00 PM	1858.795044	9:31:00 PM

Name	StartTime (UTC)	Start AGL (m)	End Time (UTC)
64	9:33:00 PM	1972.563965	9:36:00 PM
63	9:39:00 PM	1859.664795	9:41:00 PM
62	9:45:00 PM	2102.90625	9:48:00 PM
61	9:49:00 PM	1561.720215	9:53:00 PM
60	9:56:00 PM	1680.026367	10:00:00 PM
59	10:01:00 PM	1680.789063	10:05:00 PM
58	10:08:00 PM	1625.091919	10:11:00 PM
57	10:14:00 PM	1808.301025	10:17:00 PM
56	10:19:00 PM	1847.973511	10:22:00 PM
55	10:24:00 PM	1699.771729	10:27:00 PM
54	10:29:00 PM	1932.793701	10:31:00 PM
53	10:33:00 PM	1979.743408	10:34:00 PM
52	10:37:00 PM	1726.783325	10:38:00 PM
191	10:47:00 PM	1977.496704	10:48:00 PM
190	10:51:00 PM	2118.955322	10:52:00 PM
189	10:54:00 PM	2057.638184	10:56:00 PM
188	10:58:00 PM	2081.019531	11:00:00 PM
UL001	7:58:00 PM	0	8:00:00 PM
UL002	11:02:00 PM	2058.72876	11:03:00 PM

Mar 9, 2017-A (N704MD, SN8121)

Date: 3/9/2017	Aircraft: N704MD	Sensor: 8121
Project: Utah 2016 LiDAR		Project #: R029083
Flight Mgmt File: FMSL_WACounty_8121_speed_redux, FMSL_Utah_WACounty_SN8121_reflies		
Pilot: Eric Petersen		Sensor Operator: Jon Frech

	Flight 1	Flight 2	Flight 3	Flight 4
Wheels Up	9:55:00 AM	3:30:00 PM		
Wheels Down	11:35:00 AM	6:45:00 PM		
Begin Hobbs	11720.2	11721.6		
End Hobbs	11721.6	11724.7		
On-line Hobbs: 2.5		Mob Hobbs: 2		

Notes

MOB to SGU with ground gear and CPB, disaster finding rental cars, got up for a late flight

Flt Mgmt File: FMSL_WACounty_8121_speed_redux, FMSL_Utah_WACounty_SN8121_reflies

Name	StartTime (UTC)	Start AGL (m)	End Time (UTC)
R001	10:58:29 PM	2053.582031	11:00:42 PM
R002	11:02:36 PM	2117.344482	11:04:44 PM
R003	11:07:23 PM	1988.538696	11:09:30 PM
R004	11:11:50 PM	2139.024902	11:13:39 PM
R029	11:16:36 PM	2077.910645	11:19:00 PM
136	11:23:16 PM	2043.16748	11:24:39 PM
135	11:27:42 PM	2044.414551	11:31:04 PM
134	11:33:36 PM	1874.095337	11:38:26 PM
133	11:40:23 PM	2124.749268	11:46:15 PM
132	11:47:54 PM	1948.367676	11:53:24 PM
131	11:55:17 PM	2109.124268	12:00:59 AM
130	12:02:52 AM	1960.753296	12:08:21 AM
111	12:17:45 AM	1961.992676	12:19:39 AM

Mar 9, 2017-B (N704MD, SN8121)

Date: 3/9/2017	Aircraft: N704MD	Sensor: 8121
Project: Utah 2016 LiDAR		Project #: R029083
Flight Mgmt File: FMSL_WACounty_8121_speed_redux, FMSL_Utah_WACounty_SN8121_reflies		
Pilot: Eric Petersen		Sensor Operator: Jon Frech

	Flight 1	Flight 2	Flight 3	Flight 4
Wheels Up				
Wheels Down				
Begin Hobbs				
End Hobbs				
On-line Hobbs:		Mob Hobbs:		

Notes

Flt Mgmt File: FMSL_WACounty_8121_speed_redux, FMSL_Utah_WACounty_SN8121_reflies

Name	StartTime (UTC)	Start AGL (m)	End Time (UTC)
R001	10:58:29 PM	2053.582	11:00:42 PM
R002	11:02:36 PM	2117.344	11:04:44 PM
R003	11:07:23 PM	1988.539	11:09:30 PM
R004	11:11:50 PM	2139.025	11:13:39 PM
R029	11:16:36 PM	2077.911	11:19:00 PM
136	11:23:16 PM	2043.167	11:24:39 PM
135	11:27:42 PM	2044.415	11:31:04 PM
134	11:33:36 PM	1874.095	11:38:26 PM
133	11:40:23 PM	2124.749	11:46:15 PM
132	11:47:54 PM	1948.368	11:53:24 PM
131	11:55:17 PM	2109.124	12:00:59 AM
130	12:02:52 AM	1960.753	12:08:21 AM
111	12:17:45 AM	1961.993	12:19:39 AM

Mar 10, 2017-A (N704MD, SN8121)

Date: 3/10/2017	Aircraft: N704MD	Sensor: 8121
Project: Utah 2016 LiDAR		Project #: R029083
Flight Mgmt File: FMSL_WACounty_8121_speed_redux, FMSL_Utah_WACounty_SN8121_reflies		
Pilot: Eric Petersen		Sensor Operator: Jon Frech

	Flight 1	Flight 2	Flight 3	Flight 4
Wheels Up	9:35:00 AM			
Wheels Down	2:55:00 PM			
Begin Hobbs	11724.7			
End Hobbs	11729.7			
On-line Hobbs: 4.3		Mob Hobbs: 0.7		

Notes

Finished reflies and all snow free areas of washington county

Flt Mgmt File: FMSL_WACounty_8121_speed_redux, FMSL_Utah_
WACounty_SN8121_reflies

Name	StartTime (UTC)	Start AGL (m)	End Time (UTC)
R033	12:35:00 AM	2079.244873	12:35:53 AM
R032	12:38:38 AM	1879.702026	12:39:27 AM
R014	12:48:05 AM	1627.617065	12:50:11 AM
R015	12:54:04 AM	1857.729004	12:59:04 AM
R016	1:00:46 AM	1988.139038	1:05:48 AM
R017	1:07:38 AM	2007.612915	1:12:42 AM
R018	1:14:32 AM	2089.651367	1:16:46 AM
R019	1:18:56 AM	1993.693604	1:20:33 AM
R030	1:24:47 AM	1642.352417	1:27:31 AM