

Project Report Appendices

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

Appendix A

Flight Logs

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Oct 26, 2016-A (N206TB, SN8227)

Date: 10/26/2016	Aircraft: 208NR	Sensor: 8227
Project: Utah 2016 LiDAR		Project #: R029083
Flight Mgmt File: FAGL_Forge_2PiA_8227_8ppsm_1550m_1 Unplanned-20161026140711_1		
Pilot: Eric Petersen		Sensor Operator: Jon Frech

	Flight 1	Flight 2	Flight 3	Flight 4
Wheels Up	8:10:00 AM			
Wheels Down	1:46:00 PM			
Begin Hobbs	4364			
End Hobbs	4369.5			
On-line Hobbs: 3.5		Mob Hobbs: 2		

Notes

Started on SE lines in the hills. Calculated start altitudes as always from GE. Got false ranges and bad returns. Reflew. Tried higher. Started to try lower and turbulence kicked up....20 degree rolls. Headed to the flat land on the west side of the AOI. Calculated start height for a 1550M plan should have put us right around 10100 feet. At 9700 feet TRACGUI was showing us at 1600M. Flew here for an hour and jumped back over to the terrain lines on the N end. Started close to 1000 feet lower than what we should have been according to GE. This worked and we were within the range gate and getting 100 percent returns. Not sure why there is such a discrepancy between GE and what we were seeing in Flight Pro but flying 500-1000 feet lower was the ticket. SE lines we flew...45-49 are probably trash and should be reflown. 49 for sure.

Flt Mgmt File: FAGL_Forge_2PiA_8227_8ppsm_1550m_1

Name	AltStart	TimeStart	SunAngStrt	AltEnd	TimeEnd	SunAngEnd
FRG1045	3871.213 m	14:35:40	7.39941361	3854.074 m	14:36:11	7.48982815
FRG1046	4034.965 m	14:39:56	8.1526832	3867.559 m	14:40:44	8.29805228
FRG1046	3975.064 m	14:43:52	8.85030275	3787.219 m	14:44:45	9.01022315
FRG1047	3814.869 m	14:46:53	9.38415377	4002.396 m	14:48:08	9.59940549
FRG1047	3883.129 m	14:52:27	10.36435086	3774.031 m	14:53:35	10.55708122
FRG1048	3862.463 m	14:56:18	11.02737776	3879.258 m	14:57:55	11.3175908
FRG1048	3804.568 m	15:01:29	11.92899817	3855.114 m	15:03:06	12.21815168
FRG1049	4074.317 m	15:06:07	12.73622806	3950.632 m	15:07:37	12.98407873
FRG1049	4091.973 m	15:12:10	13.77422543	4123.601 m	15:13:51	14.04774213
FRG1049	4259.745 m	15:22:14	15.47860424	3609.746 m	15:23:57	15.75127184
FRG1049	3825.786 m	15:31:09	16.96276118	3828.337 m	15:32:03	17.1021126
FRG1001	3051.133 m	15:39:53	18.2544374	2996.326 m	15:47:02	19.25658584
FRG1002	2999.448 m	15:49:20	19.62459463	3000.031 m	15:56:41	20.93133698
FRG1003	2970.461 m	15:58:59	21.29161559	2975.782 m	16:06:09	22.2287964
FRG1004	2978.745 m	16:07:59	22.50851216	2992.559 m	16:15:21	23.77203769
FRG1005	3023.160 m	16:17:21	24.06913756	2996.812 m	16:24:23	24.91356897
FRG1006	2981.724 m	16:26:13	25.17730282	2996.980 m	16:33:41	26.40148626
FRG1007	2993.199 m	16:35:30	26.65443707	2993.665 m	16:42:37	27.43028758
FRG1008	2992.670 m	16:44:35	27.69329631	2994.342 m	16:51:57	28.84012361
FRG1009	2988.868 m	16:57:45	29.57352097	2997.171 m	17:04:59	30.25260782
FRG1073	3394.317 m	17:11:16	31.06274838	3434.843 m	17:11:47	31.13020081
FRG1073	3561.354 m	17:14:52	31.46890274	3523.968 m	17:15:12	31.51316343
FRG1073	3314.439 m	17:18:54	31.91339969	3236.084 m	17:21:25	32.2341034
FRG1072	3214.203 m	17:23:32	32.46843087	3147.890 m	17:26:00	32.66804354
FRG1071	3186.395 m	17:28:16	32.90279643	3206.736 m	17:31:39	33.30974941
FRG1070	3212.843 m	17:34:09	33.56528698	3273.130 m	17:37:29	33.80855056
FRG1069	3315.219 m	17:40:30	34.09177282	3229.325 m	17:44:30	34.54072802
FRG1068	3255.811 m	17:46:29	34.72538785	3280.418 m	17:50:18	34.9550173
FRG1067	3230.857 m	17:52:20	35.12701129	3304.892 m	17:56:48	35.59157227
FRG1066	3268.091 m	17:59:02	35.77457277	3284.116 m	18:03:02	35.96312057
FRG1065	3264.910 m	18:07:04	36.25856931	3299.405 m	18:11:33	36.67148475
FRG1064	3264.804 m	18:13:58	36.83620062	3342.912 m	18:17:56	36.96080809

Flt Mgmt File: Unplanned-20161026140711_1

Name	AltStart	TimeStart	SunAngStrt	AltEnd	TimeEnd	SunAngEnd
UL001	2963.570 m	18:22:46	37.23269721	2956.908 m	18:24:15	37.29888741

Oct 27, 2016-A (N206TB, SN8227)

Date: 10/26/2016	Aircraft: 208NR	Sensor: 8227
Project: Utah 2016 LiDAR		Project #: R029083
Flight Mgmt File: FAGL_Forge_2PiA_8227_8ppsm_1550m_2 Unplanned-20161027203238_2		
Pilot: Travis Peden		Sensor Operator: Aaron Mallon

	Flight 1	Flight 2	Flight 3	Flight 4
Wheels Up				
Wheels Down				
Begin Hobbs	4370.5			
End Hobbs	4374.4			
On-line Hobbs: 3		Mob Hobbs: 0.9		

Notes

Today we had to wait for clearance to fly the Nellis project which was located near the Air Force base. We had wheels up at 1220 and completed the Nellis project. We then flew North of Cedar City and continued work on the Forge project. We completed lines 10-16. While flying the Forge project we utilized the UTMI COR.

Flt Mgmt File: FAGL_Forge_2PiA_8227_8ppsm_1550m_2

Name	AltStart	TimeStart	SunAngStrt	AltEnd	TimeEnd	SunAngEnd
FRG1010	2943.885 m	21:31:14	29.35619503	2885.984 m	21:39:19	28.54069518
FRG1011	2885.850 m	21:40:50	28.34414939	2825.645 m	21:48:26	27.16894826
FRG1012	2883.954 m	21:51:43	26.73008225	2875.466 m	21:59:57	25.7819643
FRG1013	2915.240 m	22:02:00	25.49260906	2815.433 m	22:09:38	24.23912249
FRG1014	2899.838 m	22:12:14	23.8621836	2944.128 m	22:20:15	22.84609942
FRG1015	2960.284 m	22:22:20	22.53109998	2844.928 m	22:30:00	21.21342207
FRG1016	2895.579 m	22:32:48	20.78140107	2945.676 m	22:41:14	19.61251161

Flt Mgmt File: Unplanned-20161027203238_2

Name	AltStart	TimeStart	SunAngStrt	AltEnd	TimeEnd	SunAngEnd
ULO01	3051.707 m	22:45:16	18.88340904	2893.457 m	22:47:52	18.53455266

Oct 28, 2016-A (N206TB, SN8227)

Date: 10/26/2016	Aircraft: 208NR	Sensor: 8227
Project: Utah 2016 LiDAR		Project #: R029083
Flight Mgmt File: FAGL_Forge_2PiA_8227_8ppsm_1550m_3 Unplanned-20161028141918_3		
Pilot: Travis Peden		Sensor Operator: Aaron Mallon

	Flight 1	Flight 2	Flight 3	Flight 4
Wheels Up	8:25:00 AM			
Wheels Down	2:25:00 PM			
Begin Hobbs	4374.4			
End Hobbs	4380.4			
On-line Hobbs: 5.8		Mob Hobbs: 0.2		

Notes

Today we had wheels up at 0825 and targeted the Forge project. We completed lines 17-36, 42-44, and 59-63. We encountered severe turbulence over the mountains on the Eastern side of the block so we were unable fly those lines.

Flt Mgmt File: FAGL_Forge_2PiA_8227_8ppsm_1550m_3

Name	AltStart	TimeStart	SunAngStrt	AltEnd	TimeEnd	SunAngEnd
FRG1017	2935.311 m	14:54:08	10.12929221	2888.788 m	15:01:43	11.32603285
FRG1018	2911.919 m	15:04:28	11.80190794	2915.486 m	15:12:25	13.28232157
FRG1019	2955.837 m	15:14:43	13.67561469	2906.589 m	15:22:10	14.79507554
FRG1020	2882.833 m	15:25:28	15.34640691	2951.828 m	15:35:37	17.15014608
FRG1021	2918.654 m	15:38:11	17.5696487	2859.935 m	15:45:40	18.62033967
FRG1022	2890.981 m	15:48:02	18.99768491	2942.902 m	15:56:31	20.47606933
FRG1023	2974.954 m	15:58:39	20.80786892	2871.202 m	16:06:02	21.768447
FRG1024	2937.993 m	16:10:08	22.38287703	2955.364 m	16:18:20	23.75387889
FRG1025	2968.686 m	16:20:34	24.0789407	2908.415 m	16:28:00	24.95534817
FRG1026	2967.556 m	16:30:27	25.29867386	2973.998 m	16:39:34	26.72127194
FRG1027	2881.204 m	16:42:32	27.11834686	2900.344 m	16:49:51	27.87526072
FRG1028	2868.236 m	16:52:56	28.26759154	3095.245 m	17:02:02	29.58189474
FRG1029	2993.067 m	17:04:12	29.84272268	2933.564 m	17:11:39	30.49993478
FRG1030	2911.247 m	17:18:00	31.20556486	3111.453 m	17:25:47	32.24396887
FRG1063	3462.862 m	17:33:54	32.91254253	3311.464 m	17:38:28	33.44259992
FRG1062	3285.994 m	17:40:36	33.64879569	3363.873 m	17:44:47	33.92133183
FRG1061	3368.098 m	17:48:49	34.27829557	3320.781 m	17:53:44	34.78738267
FRG1060	3500.554 m	17:56:24	35.00844023	3336.805 m	17:56:44	35.02523939
FRG1060	3312.877 m	18:01:37	35.40341409	3473.475 m	18:05:52	35.59526944
FRG1059	3484.413 m	18:08:14	35.76718794	3377.760 m	18:12:58	36.18798313
FRG1058	3323.643 m	18:15:36	36.36055772	3299.711 m	18:16:18	36.38215444
FRG1031	3139.293 m	18:22:03	36.7424515	2984.536 m	18:29:39	36.88233442
FRG1032	3012.834 m	18:31:28	36.96713466	3158.334 m	18:39:15	37.53422595
FRG1033	3104.580 m	18:42:02	37.63434829	3015.668 m	18:49:34	37.61489716
FRG1034	2993.261 m	18:51:35	37.66743122	3258.731 m	18:59:27	38.07900955
FRG1035	3311.430 m	19:01:46	38.11409453	2991.208 m	19:09:26	37.93798293
FRG1036	3048.132 m	19:11:41	37.94991059	3389.996 m	19:19:59	38.19279248
FRG1044	3183.174 m	19:28:08	37.86077728	3158.801 m	19:28:59	37.87681951
FRG1043	3165.956 m	19:31:04	37.85501076	3071.614 m	19:32:17	37.79402833
FRG1042	3145.249 m	19:34:50	37.74504996	3216.367 m	19:36:30	37.75862048

Flt Mgmt File: Unplanned-20161028141918_3

Name	AltStart	TimeStart	SunAngStrt	AltEnd	TimeEnd	SunAngEnd
UL001	3160.450 m	19:41:16	37.59612915	2807.825 m	19:47:38	37.44891146

Nov 1, 2016-A (N206TB, SN8227)

Date: 10/26/2016	Aircraft: 208NR	Sensor: 8227
Project: Utah 2016 LiDAR		Project #: R029083
Flight Mgmt File: FAGL_Forge_2PiA_8227_8ppsm_1550m_5 FAGL_Forge_Heavy_Terrain_8227_1850m_1 Unplanned-20161101165607_1		
Pilot: Travis Peden		Sensor Operator: Aaron Mallon

	Flight 1	Flight 2	Flight 3	Flight 4
Wheels Up	9:30:00 AM			
Wheels Down	12:20:00 AM			
Begin Hobbs	4381.5			
End Hobbs	4384.5			
On-line Hobbs: 2		Mob Hobbs: 1		

Notes

Today we had wheels up at 0930. We completed as much as we could of the Utah Forge block before getting clouded out. We then MOBbed to Provo (KPVO) and tried to target the Utah Lake block but there were low clouds in our AOI. We utilized the UTMI COR while flying the Forge block.

Flt Mgmt File: FAGL_Forge_2PiA_8227_8ppsm_1550m_5

Name	AltStart	TimeStart	SunAngStrt	AltEnd	TimeEnd	SunAngEnd
FRG1037	3168.089 m	15:58:25	19.83671723	2836.750 m	16:06:05	20.82131537
FRG1038	2826.119 m	16:07:24	21.01878732	3311.274 m	16:15:08	22.31665908
FRG1039	3386.992 m	16:16:38	22.5351722	2878.999 m	16:24:29	23.46793088
FRG1040	2846.129 m	16:25:50	23.65792927	3465.185 m	16:33:34	24.89709309
FRG1041	3080.649 m	16:38:49	25.46135698	3078.481 m	16:40:52	25.67893977
FRG1045	3754.852 m	16:49:32	26.99096252	3662.717 m	16:50:06	27.07158678
FRG1046	3697.885 m	16:51:15	27.21299269	3839.928 m	16:52:08	27.30691658
FRG1047	3887.023 m	16:53:45	27.49805851	3743.989 m	16:55:01	27.67592644

Flt Mgmt File: FAGL_Forge_Heavy_Terrain_8227_1850m_1

Name	AltStart	TimeStart	SunAngStrt	AltEnd	TimeEnd	SunAngEnd
FHT1001	3740.396 m	16:58:39	28.11935451	3775.798 m	16:59:07	28.16610464
FHT1018	3374.016 m	17:04:53	28.80436983	3562.330 m	17:09:11	29.21280211
FHT1019	3596.251 m	17:10:49	29.38868966	3403.412 m	17:15:19	29.96939855
FHT1020	3394.535 m	17:17:00	30.14378731	3477.521 m	17:21:19	30.51170503
FHT1017	3538.707 m	17:24:40	30.8786159	3341.409 m	17:28:59	31.40274634

Flt Mgmt File: Unplanned-20161101165607_1

Name	AltStart	TimeStart	SunAngStrt	AltEnd	TimeEnd	SunAngEnd
UL001	3327.017 m	17:32:44	31.69905878	3640.532 m	17:35:08	31.97877952

Nov 3, 2016-A (N206TB, SN8227)

Date: 10/26/2016	Aircraft: 208NR	Sensor: 8227
Project: Utah 2016 LiDAR		Project #: R029083
Flight Mgmt File: FAGL_Forge_Heavy_Terrain_8227_1850m_2 FAGL_Forge_2PiA_8227_8ppsm_1550m_6 Unplanned-20161103180629_6		
Pilot: Travis Peden		Sensor Operator: Aaron Mallon

	Flight 1	Flight 2	Flight 3	Flight 4
Wheels Up	9:10:00 AM			
Wheels Down	3:35:00 PM			
Begin Hobbs	4387.7			
End Hobbs	4394.1			
On-line Hobbs: 3.9		Mob Hobbs: 2.5		

Notes

Today we were out at the airport ready to take off at 0630 but the deicing trucks broke down so we were not able to take off until 0910. We then flew to the Forge area and completed the remaining lines as well as some reflies. After that we flew back to the Utah Lake area and completed the remaining lines in that block. We eventually had wheels down in Ogden UT and are currently based there.

Flt Mgmt File: FAGL_Forge_Heavy_Terrain_8227_1850m_2

Name	AltStart	TimeStart	SunAngStrt	AltEnd	TimeEnd	SunAngEnd
FHT1016	3460.328 m	16:14:35	21.72915982	3445.609 m	16:18:57	22.29020272
FHT1015	3554.159 m	16:21:06	22.59869745	3483.537 m	16:25:31	23.27633697
FHT1014	3637.917 m	16:26:54	23.47186422	3501.944 m	16:31:15	23.99915505
FHT1013	3625.827 m	16:32:29	24.17177581	3487.332 m	16:36:43	24.7980419
FHT1012	3587.539 m	16:38:03	24.97612755	3668.645 m	16:41:50	25.40781185
FHT1011	3702.976 m	16:43:45	25.66072889	3588.038 m	16:47:25	26.18395233
FHT1010	3660.742 m	16:54:06	27.01414778	3726.351 m	16:57:22	27.3520379
FHT1009	3827.228 m	16:58:39	27.51212237	3600.468 m	17:01:42	27.92429393
FHT1008	3731.201 m	17:03:33	28.14100063	3741.443 m	17:06:17	28.40658079
FHT1007	3726.965 m	17:08:17	28.64042902	3795.993 m	17:10:48	28.96511044
FHT1006	3935.950 m	17:12:06	29.1103306	3901.787 m	17:12:25	29.1385829
FHT1006	3833.796 m	17:15:49	29.51467141	3593.358 m	17:17:53	29.69531025
FHT1006	3821.307 m	17:20:02	29.92106807	3777.652 m	17:22:08	30.17899822
FHT1005	4125.686 m	17:26:38	30.63553881	3670.979 m	17:28:18	30.76509392
FHT1005	3747.620 m	17:30:09	30.9455665	3900.836 m	17:32:07	31.17073952
FHT1004	4013.208 m	17:34:02	31.35346573	3706.002 m	17:35:25	31.4515496
FHT1003	3932.734 m	17:37:16	31.62996316	3742.217 m	17:38:26	31.7603511
FHT1002	3676.191 m	17:40:38	31.95849202	3717.353 m	17:41:26	32.01078311
FHT1001	3801.262 m	17:43:20	32.18470611	3697.428 m	17:43:50	32.23938709
FHT1017	3449.274 m	17:46:49	32.45347041	3460.602 m	17:51:36	32.74129801

Flt Mgmt File: FAGL_Forge_2PiA_8227_8ppsm_1550m_6

Name	AltStart	TimeStart	SunAngStrt	AltEnd	TimeEnd	SunAngEnd
FRG1048	3572.524 m	18:13:20	34.36225322	3834.759 m	18:15:25	34.52736631
FRG1049	4016.370 m	18:16:55	34.61305662	3527.408 m	18:18:47	34.66633436
FRG1047	3733.159 m	18:21:51	34.85234265	3673.408 m	18:23:13	34.95711878
FRG1064	3257.665 m	18:46:41	35.72581473	3281.831 m	18:48:23	35.72246738
FRG1065	3323.622 m	18:49:54	35.75126834	3295.636 m	18:51:53	35.85141085
FRG1063	3336.415 m	18:53:37	35.90535426	3422.723 m	18:55:16	35.89148937
FRG1070	3340.850 m	19:00:06	35.92800012	3253.811 m	19:01:23	35.98432686
FRG1071	3263.036 m	19:03:08	36.00514727	3428.892 m	19:04:22	35.98136062
FRG1069	3278.747 m	19:06:01	35.9973917	3390.703 m	19:07:29	36.05214048

Flt Mgmt File: Unplanned-20161103180629_6

Name	AltStart	TimeStart	SunAngStrt	AltEnd	TimeEnd	SunAngEnd
FRG1048	3572.524 m	18:13:20	34.36225322	3834.759 m	18:15:25	34.52736631
FRG1049	4016.370 m	18:16:55	34.61305662	3527.408 m	18:18:47	34.66633436
FRG1047	3733.159 m	18:21:51	34.85234265	3673.408 m	18:23:13	34.95711878
FRG1064	3257.665 m	18:46:41	35.72581473	3281.831 m	18:48:23	35.72246738
FRG1065	3323.622 m	18:49:54	35.75126834	3295.636 m	18:51:53	35.85141085
FRG1063	3336.415 m	18:53:37	35.90535426	3422.723 m	18:55:16	35.89148937
FRG1070	3340.850 m	19:00:06	35.92800012	3253.811 m	19:01:23	35.98432686
FRG1071	3263.036 m	19:03:08	36.00514727	3428.892 m	19:04:22	35.98136062
FRG1069	3278.747 m	19:06:01	35.9973917	3390.703 m	19:07:29	36.05214048