

AGAP-S

C-FSJB

December 2008/January 2009

# OPERATOR FLIGHT LOG

Flight Number	50
Date (ZULU)	Jan. 16, 2009
Pilot/Co-Pilot	Lexi/Rory
Operator(s)	Beth
Line Numbers	Recovery Lakes # 2

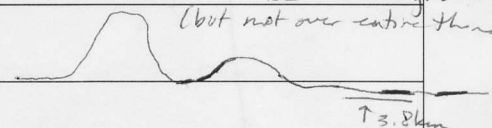
**Start GPS and magnetic base stations at least 30 mins before takeoff. Start recording with aircraft GPS receivers at least 30 mins before takeoff.**

Event	GPS Time	Comments
GPS SJB-1	07:31	Start recording. CF Card: <del>SJB1</del> Job name: C-FSJB1-F50
		Battery charge: A: 100 % B: 100 % External: 73 %
		Available memory: 582330 KB.
		No Sat tracked: 8 L1: 8 L2: 8
GPS SJB-2	07:34	Start recording. CF Card: <del>SJB2</del> Job name: C-FSJB2-F50
		Battery charge: A: 100 % B: 100 % External: 73 %
		Available memory: 582938 KB.
		No Sat tracked: 8 L1: 8 L2: 8

# Operator Flight Log | F 50

AGIS on	8:01:30	Start recording. Project name: B9011608. P01
	8:02	Engines on
	<del>8:02</del> 8:11	Taxi <del>to fueling pos.</del> (from fueling pos.)
	8:14	Takeoff
Laser on	8:02	Start recording. Project name: FSD (start file: FSD004.rdd)
Radar on	8:02:50	Start recording. Filename(s):
Recovery Lakes Flight - NO AGIS SURVEY LINES - WAYPOINTS ONLY		
Event	GPS Time	Comments
	8:06	taxi to fueling pos. (to top off tip tanks)
	8:07	park @ fueling pos
	<del>8:07</del> 08:17	radar Tx on
	8:24	scanner temp: -4.5°C / outside: -25.4°C / radar: 12.5°C
	8:39	rolling foothills ~ 3-3.2 km deep
	9:15	low patchy ground fog
	9:16	incr. alt. to 1500m due to ice
	9:20-9:28	→ -900 nT drop + then levels out → radar shows non-descript rolling hills ~ 3 km deep
	9:25	1100 ft AGL - trying to move below clouds → dropping to 500 ft AGL (~ 9:27)
#sat = 11	9:31	back to 1000 ft AGL
	9:54	scanner temp: -17.3°C / outside: -22.9°C / outside: 18°C
#sat = 9	10:00	1st mtn ~ 2 km deep - mag is generally low freq. (± higher reflectivity) swings (± 200 nT)
	~10:08	1st lake (small) ~ 2.5 km deep

# Operator Flight Log | F 50

Event	GPS Time	Comments
	~10:00 - 10:15	ice sfc has generally been alternating strips of rough + smooth until now - now smoother + heading immediately for rougher sfc
	10:22	several small lakes ~2.5 km deep → slight turbulence
laser F50013 (midway) (to end)	10:23 - ~10:28	going thru some thin clouds
	10:35 - 10:37:30	many lakes on flat sfc + then bed reflectivity drops (mag is steadily decreasing) severely + start to see several peaks + valleys w/ v. small lakes
	10:49	3.5 km deep long lake (w/ abrupt Δ in ice layer orientation) - still low reflectivity (~5 km long?)
radar file ~ .0148	10:50	WP 2 - turn toward lakes (v. low reflectivity since turn)
	10:56	steep drop down to lake (~3.5 km deep) (there is indeed lake-like radar signature)
	10:59:20	intersection of tracks on sfc (but not over entire thing)
	11:03	lake ~3.8 km deep 
	11:06	passed small active camp to rt side of plane
	~11:03	continuous long, flat structure w/ intermittent water signatures (3.5 km deep) - mag generally steadily increasing (photo)
	11:15:30	WP 3 - turn toward AGAPS (still over lake)
	11:16:30	on level track to ABAP-5
	11:19:45	bed incr. to 2.8 km deep + stay high (ice sfc <del>does</del> <sup>does</sup> return) (photo) (lower reflectivity over transition - looks like lake bed ended ~11:18)
	~11:27	topo becomes a bit more rugged (2.5 km deep) + still rising in elev + much higher reflectivity (mag steadily incr.)
	11:47	becoming more rugged + shallow (a little > 2 km), slight turbulence, + flying into patchy clouds (out of clouds)
	11:52	scanner temp: -17.1°C / outside: -22.2°C / racks: 17.2°C
laser file F50019-20	11:56 - 12:02?	hard to see ground
	12:00 - 12:12	large + 300 m mag swings - little Δ in bed character (topo) except for much lower reflectivity @ ~12:02
	12:02 - ~12:20	incredibly low bed reflectivity - see occasional spike on trace ~3.8 km

12:14:40 interference on radar?

294 km/hr  
~5 km/min

Operator Flight Log / F.50

TIME	COMMENTS
12:30	all rel. flat (~3 km dep), not v. rugged
12:53	scanner temp: -15.7°C / outside: -24.2°C / radas: 15°C
13:07	radar Tx off
13:11	landing
13:13	park @ fueling str
13:15	radar, AGIS, laser off

AGAP SURVEY FLIGHT #50

Recovery Lakes Flight #2

1	84° 29.68' S	77° 14.69' E	334.68
2	83° 38.09' S	21° 59.34' E	69.22
3	84° 46.95' S	22° 12.63' E	298.83
4	84° 29.68' S	77° 14.69' E	0.00
Total distance (nm):			702.73

# Recovery Subglacial Lakes

40°E

50°E

60°E

70°E

80°E

84°S

85°S

86°S

87°S

88°S

82°S

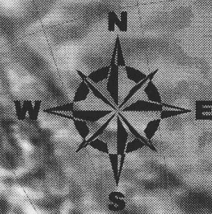
AGO3

*P3° 52  
75° 17*  
*subglacial Δ in  
reflectivity  
along in bed elev.*

83°S

0 25 50 100 150 200

Nautical Miles



0°

10°E

20°E

30°E

40°E

60°E

80°E

