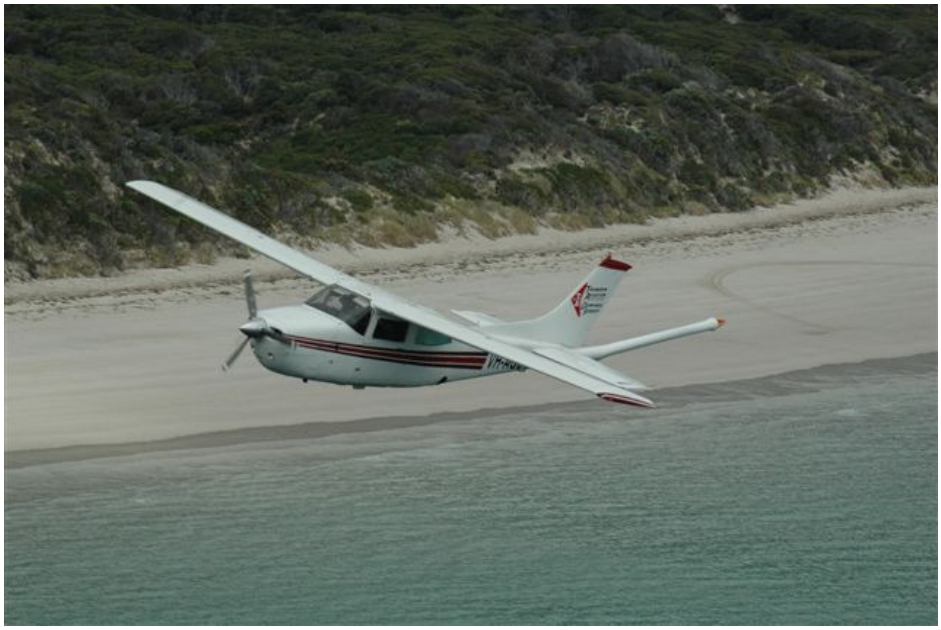
Logistics Report



Flown for

KUTh Energy Ltd

Attention:

Dr Fiona Holgate

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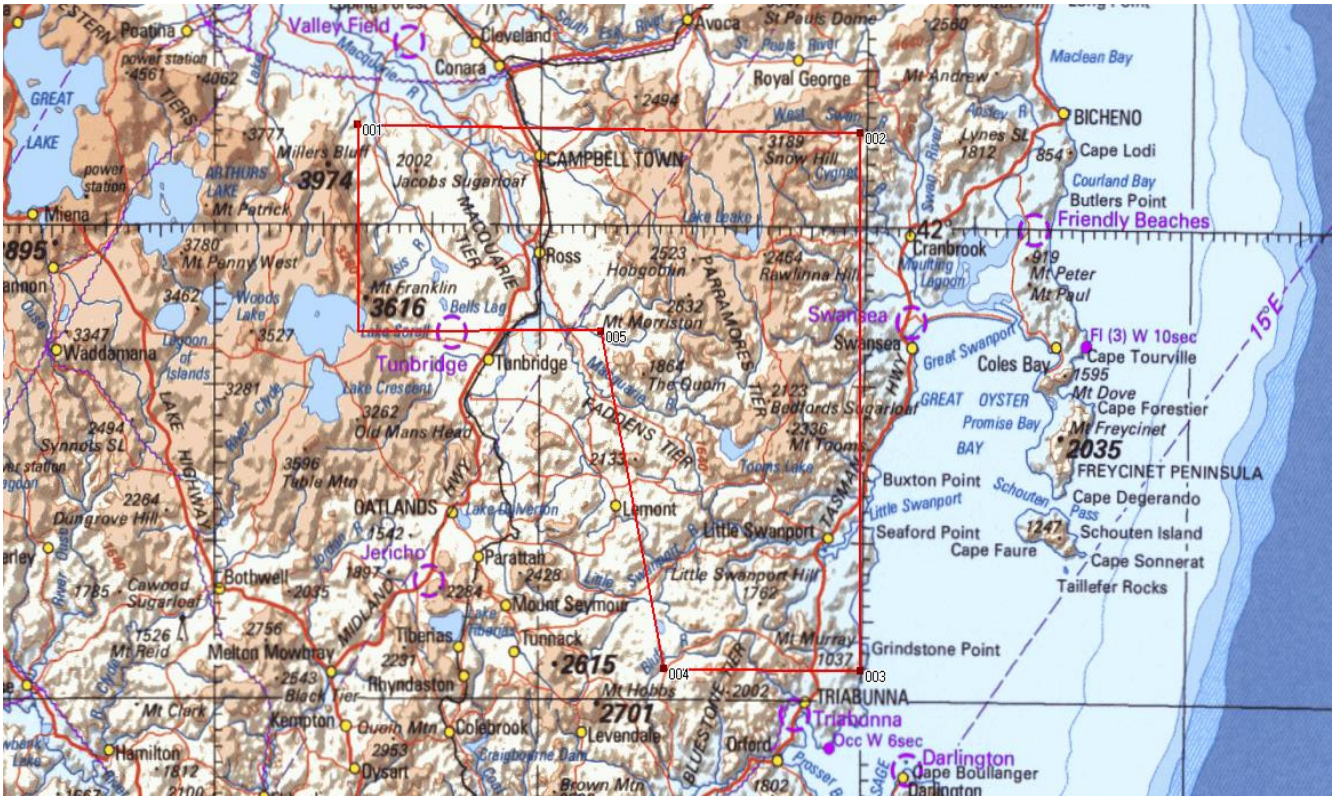
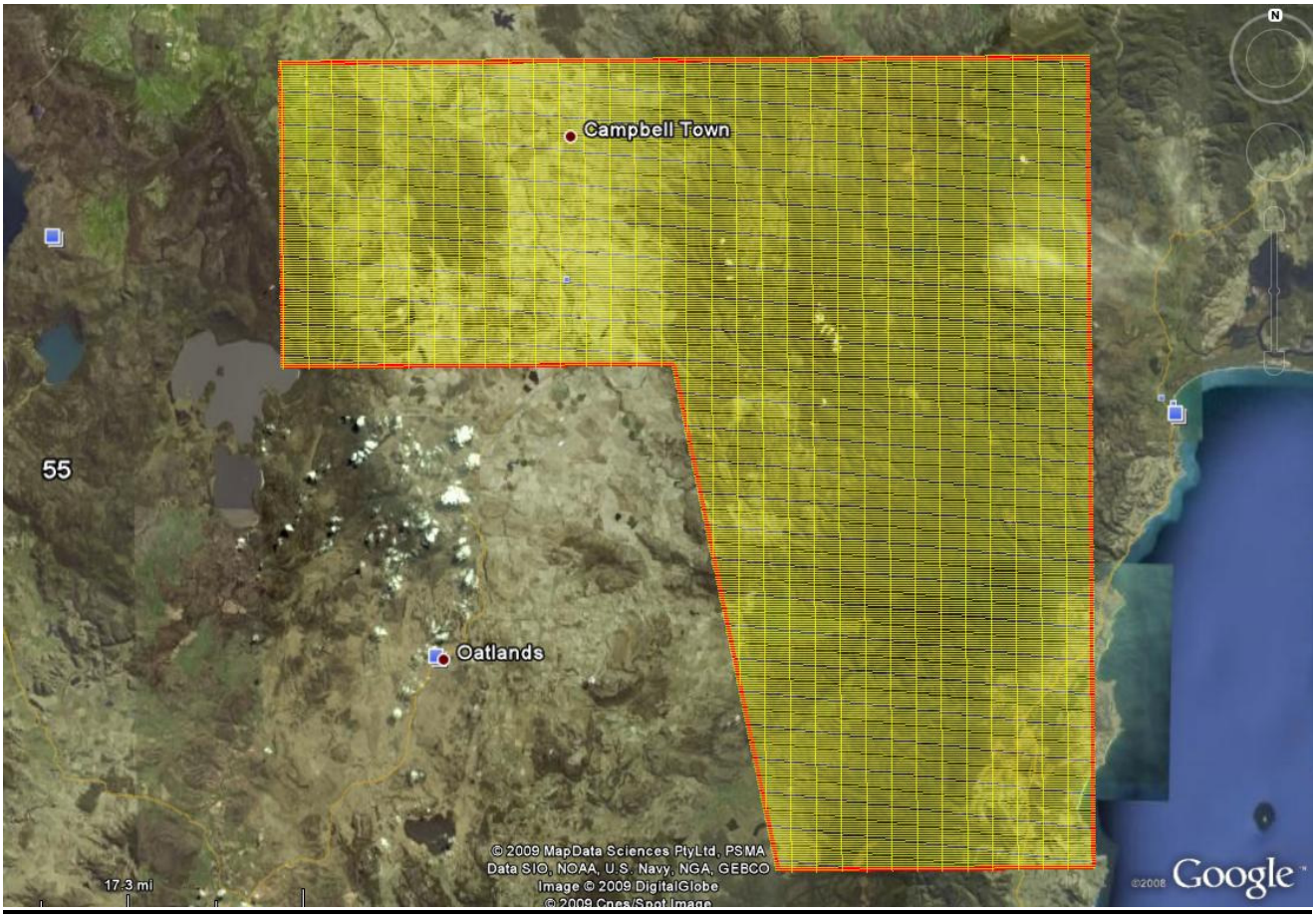
SPECIFICATIONS FOR AIRBORNE GEOPHYSICAL SURVEY

1. SURVEY AREA

Thomson Aviation carried out a Fixed Wing Geophysical Survey of 15,082 line kms in Eastern Tasmania. For the survey our Cessna 210 aircraft was based at Launceston Airport, TAS. The survey was planned and delivered in MGA94 Zone 55, a list of the specifications and location maps can be found below.





FLYING SPECIFICATIONS

Flight line direction	East – West
Flight line spacing	200 m
Tie line direction	North – South
Tie line spacing	2000 m
Sensor mean terrain clearance	90 metres
Time base - for magnetics	0.05 sec. (< 4m)
Total Line Kilometers	4,084.4 Km

Boundary Lines Used	
GDA94 Zone 55	
518000	5364000
582000	5364000
582000	5300000
557000	5300000
549000	5340000
518000	5340000

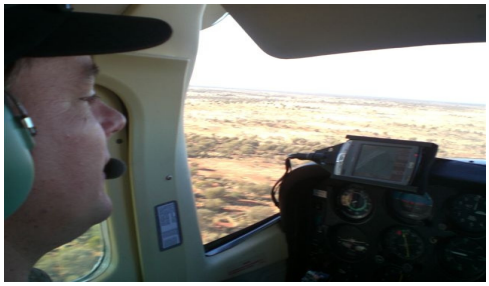
2. CALIBRATION

The radiometric system was calibrated using Geoscience Australia's calibration range in Carnamah, WA, within 12 months of the commencement of this survey. The following calibrations were carried out before and after each days flying:

a) Verification of the gamma ray spectrometer system response using hand sample checks. System was exposed to a Thorium sample for a minimum period required to accumulate 10,000 counts in the Thorium window. All background corrected counts fell within a 10% envelope (+/- 5% from the mean over the survey period).

b) A Test Line was flown at the same height as the survey specified height to verify magnetometer, spectrometer and barometric altimeter baselines. The test line was flown over a repeatable line of five kilometers and was flown in either direction. The test line Thorium window counts fell within a 10% envelope (+/- 5% of the mean over the survey period).

Prior to the commencement of the survey, a parallax check was flown to verify the correct parallax values for all of the recorded parameters.



HEADING CHECKS.

A series of lines were flown to check the magnetic heading of the aircraft at the end of the survey

Two lines were flown North- South and two lines flown East- West

To review this data, intersections were calculated at of each of the cross over points, the lines did not cross over the same point, which is nearly impossible, and Diurnal was not collected on the day and was not removed. As the lines were only several minutes long and not separated by a large time difference then we can assume that the diurnal was near constant during the time period. The IGRF was removed with the appropriate filed and using the gps height as the height control

Lines 10010 was flown East, line 2020 flown North, line 20030 flown South and line 10040 flown West

From the analysis we computed the following results:

Line	Valid number crossings	Heading correction
10010	2	1.28
10040	2	-0.69
20020	2	1.75
20030	2	-0.73

RADAR ALTIMETER/BAROMETRIC ALTIMETER CHECK

VH- JHF

Radar Altimeter (metres)	Barometric Height (hPa)	GPS Height (metres)	H_{gps} - H_{radalt} (metres)
96.25	1375	95.35	-0.9
139.5	1364	140.25	0.75
188.36	1357	189.96	1.6
231.62	1352	234.2	2.58
276.45	1346	274.35	-2.1
326.79	1344	328.69	1.9
373.36	1337	369.89	-3.47
442.58	1333	440.36	-2.22
489.25	1326	487.36	-1.89
520.56	1322	518.65	-1.91

3. IN-FIELD VERIFICATION AND PROCESSING

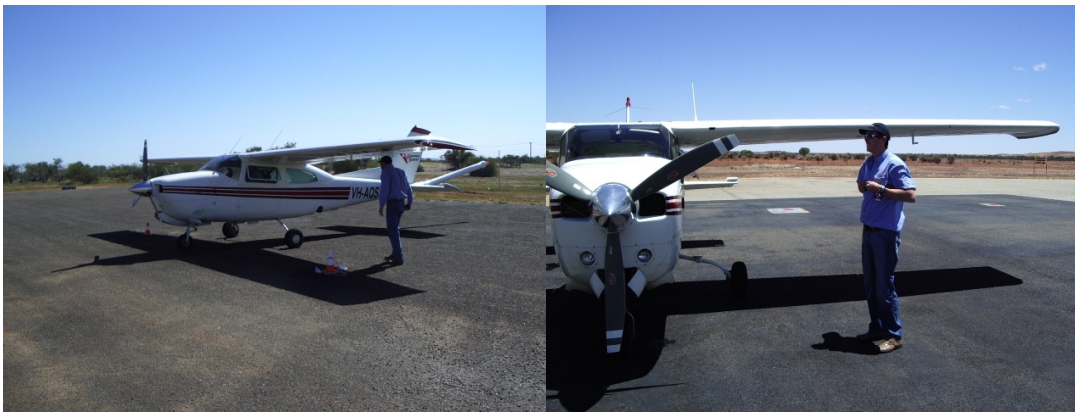
Stringent real time data validity checks were employed. Thomson Aviation conducted a daily post-flight verification of all acquired data. The following products were generated on site by a mixture of ChrisDBF and Thomson Aviation proprietary software:

1) Flight path plots, to demonstrate quality of navigation
2) Magnetic stacked profiles, to demonstrate character of magnetic data
3) Statistical summary of line data
4) Magnetometer base station plots
5) Progressive image presentation of magnetic and topographic data
6) Plots of daily parking site of the aircraft to verify GPS position.

4. NAVIGATION AND POSITIONING

Navigation was by electronic means using a mobile Novatel OEMV-1 VBS receiver to provide flight guidance to the pilot as well as recording the flight path for subsequent processing. Differential GPS data was obtained in real time using static GPS data obtained from the “Omnistar” wide area GPS service. Position relative to the survey line was displayed to the pilot by a system proprietary to Thomson Aviation which has proven highly effective.

Under normal circumstances differential GPS is expected to yield positional accuracies in the order of 5 metres RMS or better.



5. DIURNAL MONITOR

The base station magnetometer was positioned at Esperance, WA for the block. It recorded to a sensitivity of 0.1 nT every 5 seconds. Noise levels on the base station magnetometer did not exceed +/- 1.0 nT and the non-linear variations of the diurnal field did not exceed 10 nT in 5 minutes.

6. DAILY REPORTS OF AIRCRAFT VH-THS

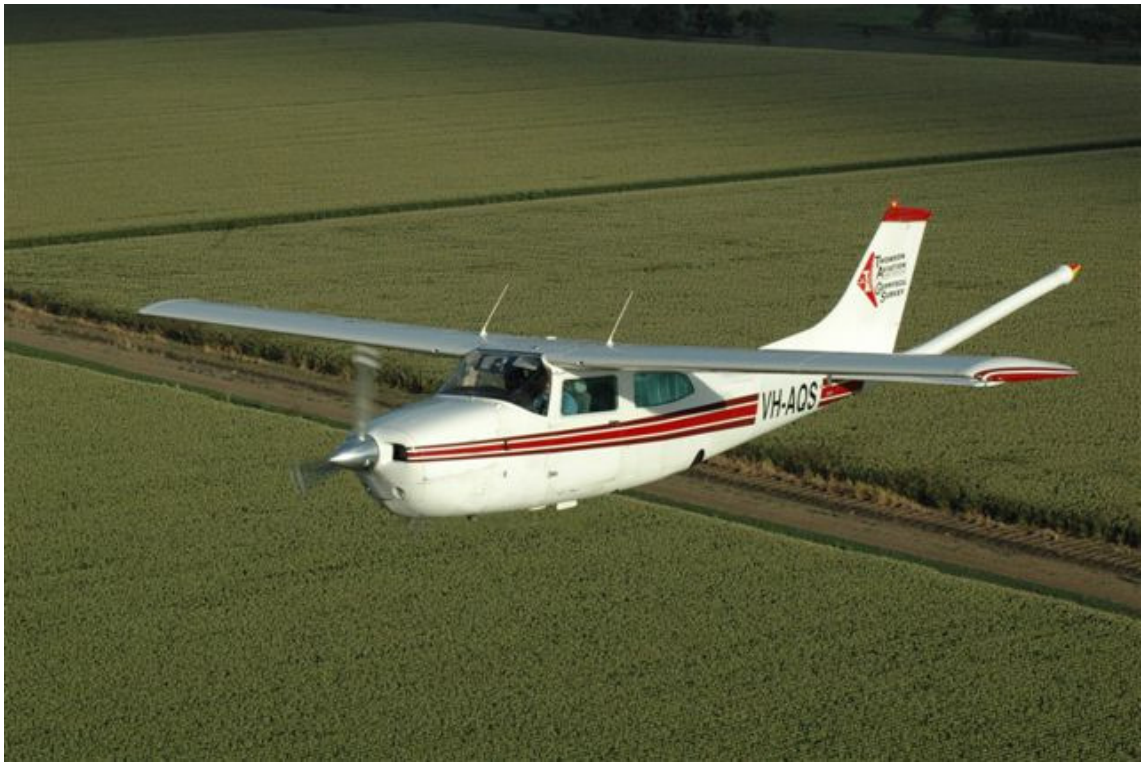
Line Kms flown: 15,082 line kms

Date	Block	Aircraft	Flight	Operator	Comments
4/03/09	KUTh	JHF	0	Chris D	1/2 Day Standby
5/03/09	KUTh	JHF	0	Chris D	Full Day Standby
6/03/09	KUTh	JHF	0	Chris D	Full Day Maint.
7/03/09	KUTh	JHF	1	Chris D	1/2 Day Standby
8/03/09	KUTh	JHF	0	Chris D	Full Day Standby
9/03/09	KUTh	JHF	2	Chris D	Good Weather
9/03/09	KUTh	JHF	3	Chris D	Good Weather

9/03/09	KUTh	AQS	51	Chris D	Good Weather
9/03/09	KUTh	AQS	52	Chris D	Good Weather
10/03/09	KUTh	JHF	4	Chris D	Good Weather
10/03/09	KUTh	AQS	53	Chris D	Good Weather
10/03/09	KUTh	JHF	5	Chris D	Good Weather
10/03/09	KUTh	AQS	54	Chris D	Good Weather
11/03/09	KUTh	JHF	6	Chris D	Good Weather
11/03/09	KUTh	AQS	55	Chris D	Good Weather
11/03/09	KUTh	AQS	56	Chris D	Good Weather
12/03/09	KUTh	JHF	7	Chris D	Good Weather
12/03/09	KUTh	AQS	57	Chris D	Good Weather
13/03/09	KUTh	JHF	8	Chris D	Good Weather
13/03/09	KUTh	AQS	58	Chris D	Good Weather
14/03/09	KUTh			Chris D	Full Day Standby
15/03/09	KUTh			Chris D	Full Day Standby
16/03/09	KUTh			Chris D	Full Day Standby
17/03/09	KUTh	AQS	59	Chris D	1/2 Day Standby
18/03/09	KUTh	JHF	9	Chris D	Good Weather
18/03/09	KUTh	AQS	60	Chris D	Good Weather
18/03/09	KUTh	AQS	61	Chris D	Good Weather
19/03/09	KUTh	AQS	62	Chris D	1/2 Day Standby
20/03/09	KUTh	JHF	10	Chris D	Good Weather
20/03/09	KUTh	AQS	63	Chris D	Good Weather
21/03/09	KUTh	AQS	64	Chris D	1/2 Day Standby
22/03/09	KUTh	JHF	11	Chris D	Good Weather
22/03/09	KUTh	a	65	Chris D	Good Weather

AIRCRAFT AND SURVEY INSTRUMENTATION

1. AIRCRAFT



A Cessna Series 210L, VH-JHF were used as the survey platforms. These aircraft combine good maneuverability with the benefits of a magnetically clean base for minimal interference with the magnetic performance of the sensor.

Details:

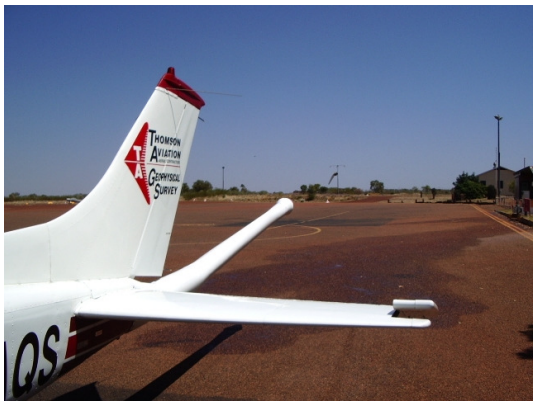
Engine	Continental IO520
Fuel Type	Avgas
Fuel Burn	60lt per hour
Cruise Speed	155 Knots
Survey Speed	145 Knots
Stall Speed	60 Knots
Total Time Airframe	4,679 Hours

2. SURVEY INSTRUMENTATION

MAGNETOMETER AND COMPENSATOR

The Geometrics G822A Magnetometer is a highly sensitive unit incorporating an optically pumped sensor. The constant harmonic frequency from the sensor is proportional to the surrounding scalar magnetic field. This frequency is resolved by the Counter / Processor which provided the magnetic field to a nominal accuracy of 0.01nT at 20 times per second both in analog and digital forms.

The sensor and pre-amp are stinger mounted, attached to the rear of the aircraft.



A Pico Envirotec MMS-4 processor was used to correct, in real time, for the magnetic interference caused by the aircraft itself and the effects of it maneuvering in the earth's magnetic field. The signal from the magnetometer is preserved without aliasing or phase distortion. The raw uncompensated data was also recorded.

2.1. RADAR ALTIMETER

A King KR 495B Radar Altimeter was used, this unit is a high resolution, short pulse ratio altitude system designed for automatic continuous operation over a wide variation of terrain, target reflectivity, weather and aircraft altitude. The radar altimeter indicator provided a terrain clearance display from 0 – 650 metres (0 – 2,000 feet) above ground.

2.2. BAROMETRIC ALTIMETER

Barometric pressure was recorded using a Vaisela pressure transducer with a range of 600 to 1600 Hpa and a resolution of 0.04 Hpa (equivalent to 0.4 metres). The sensor was calibrated to the height given by the GPS.

2.3. DATA ACQUISITION SYSTEM

The GeOZ_DAS digital data acquisition system recorded all system parameters to removable Flash Cards and provided both pilot guidance and error reporting diagnostics for the pilot or operator. Data was transferred to a field computer for both verification and archiving prior to being shipped to the processing centre.

2.4. NAVIGATION EQUIPMENT

The GPS receiver was a Novatel OEMV-1VBS 12 channel parallel tracking receiver capable of providing sub-metre resolution at five times per second. The GPS receiver was integrated within the GeOZ-DAS acquisition unit.

2.5. BASE STATION MAGNETOMETER

Two Geometrics G-856 magnetometers with analog and digital recording were used as diurnal monitors and run continuously during the survey periods.

Contact Information

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Geophysical Survey

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