

MRV 1985

LOGISTICS REPORT

AIRBORNE GEOPHYSICAL SURVEY

NORTHERN AREA, SOUTH-WEST AREA AND MACQUARIE HARBOUR
TASMANIA

Geometrics Job No: 9312

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LOGISTICS REPORT

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1. LOGISTICS

1.1 OPERATING BASE AND DATES OF FLYING

1.1.1 Operating Base

The crew and aircraft were based at Devonport for the Northern Area (Area A) and Queenstown for the South-West (Area B) and Macquarie Harbour (Area C) areas.

1.1.2 Dates of Flying

The following are the relevant dates in regard to the survey with the full daily summary tabulated in Appendix 1:

Mobilised to Devenport	21 October 1985
Start of the survey production	26 October 1985
Mobilised to Queenstown	14 November 1985
Completion of survey	10 January 1986
Demobilised from Queenstown	11 January 1986

1.2 AIRCRAFT DETAILS AND NAMES OF FIELD CREW

1.2.1 Aircraft

Piper PA-31 Chieftain, registration VH-WJK.

1.2.2 Field Crew

Pilot / Navigator	Mr Joe Johnson
Operator / Technician	Mr Zoltan Beldi and Mr David Lyus
Geophysical Data Technician	Mr Rodney Gardner

1.3 SURVEY AREAS

The areas are defined by the following coordinates in A.M.G. grid zone 55:

1.3.1 Area A - Northern Area

395,000 metres east, to the west
470,000 metres east, to the east
5,393,000 metres north, to the south
and, the coast, to the north.

1.3.2 Area B - South-West Area

395,000 metres east, to the east
5,300,000 metres north, to the north
and, the coast, to the south and west.

1.3.3 Area C - Macquarie Harbour

5,314,000 metres north, to the south
5,324,000 metres north, to the north
and, extending one kilometre onto the eastern and
western shores of Macquarie Harbour.

2. SURVEY DETAILS

2.1 DESCRIPTION OF AREA FLOWN

An attached map (Appendix No: 2) at the rear of the report shows the actual area boundaries used in the flying of this survey.

2.1.1 Flying Specifications

Flight line direction	
South-west & Macquarie Harb.	- 090 - 270 degrees
Northern area	- 000 - 180 degrees
Flight line spacing	- 500 metres
Tie line direction	- perpendicular to flight lines
Tie line spacing	- 10,000 metres
Sensors mean terrain clearance	- 150 metres
Sampling interval	- 35 metres

2.2 AERIAL PHOTOGRAPHY AND TOPOGRAPHIC MAPS

Aerial photography was supplied through the Tasmanian Department of Mines in Hobart with two sets of each photograph being supplied at 1:25,000 (one set with the control marked on) and one set of contact prints.

For Area A, Geometrics flew and recovered onto the 1:100,000 scale topographic maps, which were blown-up to 1:50,000.

For Area B, Geometrics flew and recovered onto the 1:25,000 air photography, supplied by the Department of Mines. The recovery was then transferred to the 1:50,000 topographic blow-ups of the area.

For Area C, the flying was undertaken using the doppler navigation system and recovery of the ends of the lines was undertaken onto the 1:50,000 blow-ups.

2.3 FLIGHT PATH RECOVERY

On this project a colour video camera and recovery equipment were used with a wide angle lens. This system uses the VHS-PAL digital video tapes to record the flight path of the aircraft. The recovery interval used for this survey was in the order of 8 kilometres.

It should also be noted at this stage that a digital Doppler navigation system was used on this survey and the flight path information, for each sample, was recorded onto digital a magnetic tape for interpolation between recovered fiducials.

2.4 MAGNETOMETER

The survey was flown using an Airborne Horizontal Gradiometer System incorporating three Geometrics G-813 High Sensitivity Proton Precession Magnetometers. One sensor was mounted outboard of each wing tip and the third in a conventional tail stinger.

SURVEY SPECIFICATIONS

Sensitivity	0.2 nT.
Signal / Noise Ratio	> 100
Still Air RMS Noise	0.05 nT.
Digital Recording Resolution	0.01 nT.
Sample Distance (Doppler Control)	35 metres
Analog Chart Full Scale	20 / 200 nT.

MAGNETOMETER ANALOG RECORD

The following were recorded on the RMS Recorder:

Channel	Description
0	Stinger Magnetometer
1	Left Magnetometer
2	Right Magnetometer
3	Radar Altimeter
4	Stinger Magnetometer (course scale)
5	Spectrometer - Total Count
6	Spectrometer - Potasium
7	Spectrometer - Uranium
8	Spectrometer - Thorium
9	Vertical Gyro Roll

2.5 SPECTROMETER

A Geometrics GR-800D double buffered, gamma ray spectrometer was used with a crystal volume of 16.78 litres (1024 cubic inches).

A Geometrics GR-900 controlled the gains and temperature of the crystal pack.

The analogs were recorded on the RMS-33 Recorder, normalized into counts per second by the spectrometer (only for analog presentation) and corrected for compton scatter due to U and Th.

The following are the survey specifications:

Sample Distance (doppler control) (over two magnetometer samples)	70 metres
Digital Recording (serial data)	6 channels

The following are the radiometrics digital data specifications:

1.	Sample Period (50 mSec. Resolution)	
2.	Total Count	0.40 - 3.01 MeV
3.	K-40	1.37 - 1.57 MeV
4.	Bi-214	1.67 - 1.87 MeV
5.	Tl-208	2.42 - 2.82 MeV
6.	Cosmic	3.01 - 6.00 MeV

The following are the radiometrics full scale settings:

	AIR	GROUND
Total Counts	1,000	5,000
Tl-208	100	500
Bi-214	100	500
K-40	100	500

Refer to Appendix 4.

2.6 ALTIMETER

Sperry AA-210 Radar Altimeter system was used, this being a high resolution, short pulse radio altitude system designed for automatic continuous operation over a wide variation of terrain, target reflectivity, weather and aircraft altitude. The radar altimeter indicator provides an absolute altitude display from 0 - 750 metres (0 - 2,500 feet).

2.7 BASE STATION MAGNETOMETER

Geometrics Recording Base Station Model G-866 with analog and digital recording was used as the primary base station magnetometer for recording the diurnal monitor and run continuously throughout the survey flying period. A back-up base station was run concurrently, this being a G-856 digital recording base station.

Data were recorded by an Epson PX-8 computer, onto cassettes which were returned to the Sydney office for transcribing onto 9 track magnetic tape.

The Base Station was established at the Devenport and Queenstown airports, in an area of low gradient and away from man made

influences.

2.8 DATA ACQUISITION SYSTEM

A Geometrics Model G-714 geophysical data formatting / recording unit was used for this survey, recording data onto a 9 track magnetic tape for subsequent computer processing. The unit includes dual memories, two micro-processors and a tape controller. Both raw and formatted digital and analog data are recorded in an IBM compatible format, on magnetic tape at 800 bpi NRZI specifications.

The following is the format of the data recorded on the field tapes:

Characters		Description	No. of Characters
Start	End		
1	16	Julian Clock	16
17	32	Header	16
33	37	Fiducial Number	5
38	42	Line Number	5
43	46	Compass Heading	4
47	53	Magnetometer 1 (Stinger)	7
54	60	Magnetometer 2 (Left Wing)	7
61	67	Magnetometer 3 (Right Wing)	7
68	68	Doppler Normal / Memory	1
69	84	Doppler Coordinates	16
85	87	Not used (10 ms Timer)	3
88	93	Radar Altimeter	6
94	99	Barometric Altimeter	6
100	105	Vertical Gyro Roll	6
106	111	Vertical Gyro Pitch	6
112	117	Elevator Motion	6
118	123	Aileron Motion	6
124	129	Rudder Motion	6
130	135	Spare	6
136	141	Pitch Rate	6
142	147	Roll Rate	6
148	153	Yaw Rate	6
154	159	Amps L/H Alternator	6
160	165	Amps R/H Alternator	6
166	171	Spare	6
172	190	GPIO Radiometrics Data	19

Please Note:

Characters 1 - 171 are ASCII
 Characters 172 - 190 are binary

3. CALIBRATIONS

3.1 MAGNETICS

3.1.1 MAGNETIC NOISE ENVELOPE

The small amplitude of the magnetic anomalies in the survey area dictated an analog full scales of 20 & 200 nT. The analog 8th. difference was frequently monitored and no abnormal excursions were indicated.

3.1.2 HEADING ERROR CHECKS

Heading error checks were carried out prior to the start and after completion of the survey. All magnetometers had less than 1.5 nT. heading errors. A nominal terrain clearance correction of 0.1 nT. per 10 feet has been used.

3.1.3 PARALLAX TEST

It is not possible to resolve system lag to an accuracy better than one sample period by the technique of flying in both directions over a suitable magnetic anomaly.

When using a horizontal gradiometer, the system lag must be known accurately because the tail stinger is physically lagging the wing sensors. The system lag has been measured electronically because this enables it to be measured to one tenth of a sample period.

The gradiometer system lag is defined as the distance by which the picked point lags the centre of the magnetometer reading period (the opposite of some systems, where the reading lags the picked points).

At a sensitivity of 0.2 nT. and a sample distance of 35 metres the picked point lags the stinger reading by 0.5 sample periods or 17.5 metres. The picked point lags the wing sensors by 0.7 sample periods or 24.5 metres.

3.2 RADIOMETRICS

PREFACE

The following information was collected using a Piper Navajo (registration N 9219Y) with the same system as is in the Piper Chieftain VH-WJK. Both aircraft as similar in design and construction with the Chieftain being a stretched Navajo with larger horsepower engines. It can therefore be assumed that these results would be the same for the aircraft configuration used in this survey.

3.2.1 BACKGROUND CORRECTION PLOTS AND EQUATIONS

The following is the processing scheme for computing Aircraft background and cosmic radiation:

A. Fly a stack of seven (7) lines over water, 60 kilometres east of the Sydney coast with the altitudes being:

16,000 feet (above sea level)
14,000 feet (" " ")
12,000 feet (" " ")
10,000 feet (" " ")
8,000 feet (" " ")
6,500 feet (" " ")
5,000 feet (" " ")

B. The radiometrics ie. Potassium, Uranium, Thorium, Total Count and Cosmic were corrected for dead time (8×10^{-6} seconds) and scaled to counts per second for all lines.

C. The mean value of each line, for each element, was used for computing the background and cosmic.

D. Each radiometric element (K, U, Th) and Total Count were independently processed through a curve fitting program, using cosmic versus each radiometric variable. Thus producing a best linear ($Y = mx + b$) fit for Potassium, Uranium, Thorium and Total Count.

E. The curve-fitting program displays the parameters to produce the linear fit, where b is aircraft background and mx is the cosmic radiation correction.

F. The following correction coefficients were calculated:

TYPE	COSMIC CORRECTION	AIRCRAFT BACKGROUND
Total Count	2.34 cps/cosmic cps	89.3 cps
Thorium	0.13 " " "	2.5 cps
Uranium	0.108 " " "	3.3 cps

Potassium 0.118 " " " 9.5 cps

Verification of these values may be qualitatively inspected in Appendix 6.

3.2.2 ALTITUDE PLOTS AND LINEAR ATTENUATION COEFFICIENTS

The following is the processing schedule for computing the linear attenuation coefficients:

A. Geometrics flew a stack of ten (10) lines in July 1984 over a test line (in north Queensland) with altitudes ranging from 100 to 1,000 feet above the ground, and a flight at 2,000 to test for an inversion layer.

B. All radiometrics - ie Total Count, Potassium, Uranium, Thorium and Cosmic were corrected for dead time (8×10^{-6} sec.) and scaled to counts per second.

C. The mean value of each line, for each element, was used for the rest of the calculations.

D. First the Compton scatter due to cosmic radiation (x) was subtracted from all radiometric elements, using the calculated ratio (m) from $Y = mx + b$ equation.

E. Then the aircraft background was subtracted from the Total Count, Potassium, Uranium and Thorium using the corresponding calculated value (b) from $Y = mx + b$ equation.

F. Using the stripping coefficients for a standard airborne 1,024 cubic inch crystal system, Uranium and Potassium were corrected for Compton scatter. The Potassium window had a $0.18 \times$ Thorium (count per second) and $0.86 \times$ Uranium (count per second) subtracted from the aircraft background and cosmic radiation corrected Potassium mean, on a line by line basis. Where both the Uranium and Thorium values used, had only been corrected for aircraft background and cosmic radiation. The Uranium window had $0.29 \times$ Thorium (count per second) subtracted from the aircraft background and cosmic radiation corrected Uranium value. Again, the Thorium window had only been corrected for cosmic and aircraft background.

G. Each radiometric element (K, U, Th) and Total Count were independently processed through a curve-fitting program using altitude versus each radiometric variable, to produce a best fit exponential ($Y = A \times e^{BX}$) curve for Potassium, Uranium, Thorium and Total Count.

H. The curve fitting program displays the parameters to produce the exponential curve and thus the actual linear Attenuation Coefficient (B).

I. As you can see from the log plot (Appendix 7), Uranium does

appear to be radon affected since the curve is not intermediate between Potassium and Thorium. The final interpolated linear attenuation coefficient was determined by using the information about the Uranium coefficient in a previously defined 1,024 cubic inch airborne system.

J. These are the calculated linear attenuation coefficients:

Total Count	=	0.000369	per metre
Potassium	=	0.000825	" "
Uranium	=	0.000672	" "
Thorium	=	0.0005	" "

3.2.3 PRE AND POST FLIGHT CHECKS

A statistical summary of the pre and post flight hand sample checks is enclosed at the rear of this report (see Appendix No: 8).

It should be understood that the total count statistics were generated using a cesium 137 source to trigger the total count window in the spectrometer. This also avoided any appreciable number of counts to be detected in the other windows.

3.2.4 HAND SAMPLE SPECTROGRAMS

The following sources were used:

Thorium sample
Uranium sample
Cobalt 60 sample

Please Note:

Potassium 40 samples to produce a reasonable window peak response at one second count periods, must necessarily be very large, because the radioactive isotope K-40 constitutes only 0.0119 % of all natural potassium. Refined samples are not generally available.

A Cobalt 60 source is used for this reason, to activate a potassium window response. Co-60 has two gamma peaks at 1.12 and 1.33 MeV. If the crystal pack had an infinite resolution, we would be unable to see any counts in the potassium window which has a higher energy level of 1.36 MeV. However since the crystals have a finite resolution, we are able to see some of the counts in the potassium window.

The spectral plots show the lower potassium window marker just after the 1.33 MeV Co-60 peak, and because of this, extremely small shifts in the spectrum position due to normal spectrum drift, are visible as increased or reduced count rates in the potassium hand sample checks.

Visual inspection of these spectral plots show extremely high stability and repeatability of the spectrum during all flights of the survey.

Crystal pack resolution was checked before and after the survey using a Cesium 137 source. The pre-survey figure was 8.0 percent and the after survey figure was 9.7 percent. The change was due to the initial aging of one very high resolution crystal which was new at the start of the survey.

3.2.5 TEST LINE AND HIGH ALTITUDE BACKGROUND

The Test Line locations are marked on the maps marked Appendix 3 for the northern area and south-west area.

Some variation was noticeable in the total count and uranium levels due to daily radon variations. These variations showed some correlation with wind conditions, windy days being lower than calm days.

The day to day response from the test line is considered a satisfactory indication that the system was performing well.

3.2.6 ANALOG STRIPPING COEFFICIENTS

These coefficients were obtained using point source Thorium and Uranium samples placed to give a uniform irradiation of the crystal pack, while the GR-800 subtraction switches were adjusted to give minimum observable contribution into the other channels.

The following stripping coefficients were used for the analog data:

alpha	0.29	(Tl-208 from Bi-204)
beta	0.18	(Tl-208 from K-40)
gamma	0.86	(Bi-214 from K-40)

3.2.7 DATA REDUCTION

The data reduction of the 256 channel spectrometry data is undertaken to 4 channels (raw data) in the GR-800D Spectrometer.

4. DATA PROCESSING

4.1 PROCESSING TO CREATE MAGNETIC STACKED PROFILES AND FLIGHT PATH MAPS

Three types of data were required for the data processing:

- o reformatted raw field data tapes;
- o flight path recovery information; and
- o digital diurnal data.

This section describes the steps taken to process these data in order to produce the final residual magnetic map and the gradient enhanced magnetic map. The steps are outlined graphically in the accompanying data processing flow chart (Appendix 8). The processing sequence was identical for each area.

Location data was received in Engineering Computer Services Pty. Limited (E.C.S.) in Bowral as a series of topographic maps. The consistency of the digitized points was checked by calculating the average spatial distance between the located points. This procedure aids in detection of both data entry errors and possible flight path recovery errors.

The first step in processing the raw digital field data was to read it onto the computer system and check for steps, spikes, noise, and missing or duplicate fiducials. If errors were detected, the data containing the errors were automatically displayed for evaluation and correction. The barometric and radar altimeter data were calibrated to convert them from millivolts to metres.

The digitally recorded diurnal data from the base station were edited to keep only samples taken during actual flight time and to remove spikes and check data quality. This data was then subtracted from the data of each magnetometer, one sample at a time. After subtraction, the mean diurnal value was added back to the airborne data for each line, producing diurnally corrected data.

The next process was to correct the magnetic data heading errors and calibrate the aircraft Doppler coordinates to UTM x and y coordinates. Heading corrections include corrections due to variations in the heading and motion of the aircraft, and compensation for the effect of electrical currents. The calibration coefficients for these parameters were calculated from a high-altitude test flight flown before the survey. Calibration of the Doppler coordinates involved converting these to x and y values in metres in the AMG coordinate system, by applying a least squares quadratic fit to the data on a

line-by-line basis. The lag between recording the digital data and the flight path data was accounted for by adding 0.875 to the location data to synchronize them with the fiducials on the data file. The data are in AMG grid zone 55, with a central meridian of 147 degrees E, with an x-bias of 500 kilometres and a y-bias of 10,000 kilometres applied. The reference spheroid used was the Australian National Spheroid.

Once the doppler information had been calibrated, the data were merged with the location information to produce properly located data. The next procedure used the located data to calculate the intersection locations for the tie lines and traverse lines. In this tying process, only the stinger magnetometer data was used. The magnetic differences (misties) at each intersection were compared. A constant magnetic field value was calculated for each traverse line and tie line and applied in such a way as to minimize (in a least square sense) the misties throughout each survey area.

The geomagnetic field was removed by fitting a second-order polynomial surface to thirteen values computed from the IGRF model. The coefficients of this surface were used to compute the IGRF value for each sample. This value was then subtracted from the diurnal and heading corrected, tied stinger magnetic data. The 1980 IGRF, updated to 1985.9 and 1986.1, were used.

The corrected stinger magnetometer data, with the IGRF removed, was then interpolated, using a minimum curvature algorithm, to form the final residual magnetic intensity map. The primary grid size was 100.0 metres.

The next procedure was to calculate the x- and y- gradients using the wing tip magnetometer data. The difference between the left-wing and right-wing magnetometer is taken as the 'transverse difference'. The difference between the stinger magnetometer and the average of the two wing magnetometers is the 'longitudinal difference'. The transverse difference and longitudinal difference are converted into the transverse gradient and longitudinal gradient, respectively, by dividing by the distance between the sensors (15.39 metres between wing tips and 8.03 metres between the stinger and the centre point of the two wing tips). These parameters are converted to the gradient in the grid x- direction and the gradient in the grid y- direction by using the aircraft heading direction, and taking into account the declination of magnetic north from true north.

The x- and y- gradients have to be tied to the residual magnetic contour map. This is accomplished by computing the difference between the means of the x- and y- gradients just calculated (the measured gradients), and the means of the x- and y- gradients calculated from the residual map on a line-by-line basis. This difference is corrected by adjusting (line-by-line) the measured gradients, thereby producing tied gradient data.

The stinger magnetometer data is interpolated again, using the gradient data to interpolate between flight lines. This is performed as follows: Each data point has associated with it a value, an x- gradient and a y- gradient, which together define a plane. This plane is used to fix the values of the three grid points closest to the data point. As many grid points as possible are fixed in this manner, using a weighted average where any one grid point is affected by more than one data point. The values of the remaining grid points are determined using a minimum curvature algorithm. This produces the final gradient enhanced magnetic map.

4.2 LOCATED DATA TAPE

See Appendix 9 for details of the Located Data Tape Format.

4.3 DESCRIPTION OF PARAMETERS

Radar altimeter is instantaneously sampled 1/3 of a second after the magnetometer is read.

The magnetometer is accumulated over a 276 millisecond interval and then averaged for the read cycle.

The radiometrics were accumulated over 2 sample intervals (35 metres x 2) and read simultaneously with the magnetometer read. Therefore, the digital radiometric values are read every even fiducial number. Each odd fiducial number will contain the radiometric values from the previous even fiducial numbered sample. Doubling the accumulation time for the radiometrics produces better statistics.

WEEKLY FLIGHT REPORT

APPENDIX 1

JOB No: 9312

REPORT No: 1

SURVEY NAME 3 areas, Tasmania.

PERIOD 21.10.85

THRU 27.10.85

DATE	FLIGHT	FLIGHT TIME	KMS	WEATHER	DIURNAL	REMARKS
21.10.85		4.00				Ferry Sydney Devenport.
22.10.85		-		Bad weather # high winds.		Standby due weather
23.10.85		1.30				Compensation Flight.
24.10.85	1 A.	0.2		Bad weather # high winds		Standby due weather
25.10.85		-		Bad Weather # high winds.		Standby due weather
26.10.85	2 A.	4.25	590	High winds		Flights cut short due wind.
27.10.85	3 A.	3.00	575	High winds.		Flight cut short due wind.

TOTAL KILOMETRES FOR WEEK 1165

AIRCRAFT: VH-WJK (chieftain)

PILOT / NAVIGATOR Joe Johnson

OPERATOR / TECHNICIAN Zoltan Beldi

DATA TECHNICIAN Rodney Gardner

BASE Devenport

WEEKLY FLIGHT REPORT

JOB No: 9312

REPORT No: 2

SURVEY NAME 3 areas - Tasmanid.

PERIOD 28.10.1985

THRU 3.11.1985

DATE	FLIGHT	FLIGHT TIME	KMS	WEATHER	DIURNAL	REMARKS
28.10.85	4 A	4.35	782	low cloud.		Terminated early due weather
29.10.85				Rain & Low cloud.		Standby due weather
30.10.85	5 A	0.40	50	Rain & high winds		
31.10.85	6 A	1.45	245			
1.11.85	7 A	5.15	905			
2.11.85	8 A	5.15	600			
	9 A					
3.11.85		-	-		Diurnal active	Standby due Diurnal.

TOTAL KILOMETRES FOR WEEK 2582

AIRCRAFT: VH-WJK (Chieftain)

PILOT / NAVIGATOR Joe Johnson.

OPERATOR / TECHNICIAN Zoltan Beldi

DATA TECHNICIAN Rodney Gardner.

BASE Devenport.

WEEKLY FLIGHT REPORT

JOB No: 9312

REPORT No: 3

SURVEY NAME 3 Areas - Tasmania

PERIOD 4.11.1985

THRU 10.11.1985

DATE	FLIGHT	FLIGHT TIME	KMS	WEATHER	DIURNAL	REMARKS
4.11.85	10 A	5.35	850			
	11 A					
5.11.85	12 A	3.40	472			
	13 A					
6.11.85		-	-	Rain & high winds		Standby due weather
7.11.85	14 A	0.40	-	Rain & high winds.		Standby due weather
8.11.85	15 A	3.20	406			
9.11.85	16 A	5.50	830			
10.11.85	17 A	3.40	386			
	18 A					

TOTAL KILOMETRES FOR WEEK 2944

AIRCRAFT: VH-WJK (Chieftain)

PILOT / NAVIGATOR Joe Johnson.

OPERATOR / TECHNICIAN Zoltan Beldi

DATA TECHNICIAN Rodney Gardner.

BASE Devenport.

WEEKLY FLIGHT REPORT

JOB No: 9312

REPORT No: 4

SURVEY NAME 3 Areas - Tasmania

PERIOD 11.11.1985

THRU 17.11.1985

DATE	FLIGHT	FLIGHT TIME	KMS	WEATHER	DIURNAL	REMARKS
11.11.85	19 A	1.45	-		Durnal	Standby due
					activity.	Durnal.
12.11.85	20 A	4.35	950			
	21 A					
13.11.85	22 A	6.55	1059			
14.11.85		2.00				Ferry Devenport to Melbourne.
15.11.85						
16.11.85						
17.11.85						

TOTAL KILOMETRES FOR WEEK 2009

AIRCRAFT: VH-WJK (Chieftain)

PILOT / NAVIGATOR Joe Johnson

OPERATOR / TECHNICIAN Zoltan Beldi

DATA TECHNICIAN Rodney Gardner

BASE Devenport

WEEKLY FLIGHT REPORT

JOB No: 9312

REPORT No: 5

SURVEY NAME 3 Areas - Tasmania

PERIOD 2.12.1985

THRU 8.12.1985

DATE	FLIGHT	FLIGHT TIME	KMS	WEATHER	DIURNAL	REMARKS
2.12.85						
3.12.85						
4.12.85		2.05	-			Ferry Albury to Wynyard.
5.12.85		0.30	-			Ferry Wynyard to Queenstown
6.12.85		2.30	-			Compensation
7.12.85	1B	3.15	232			
	2B					
8.12.85	3B	5.25	814			

TOTAL KILOMETRES FOR WEEK 1046

AIRCRAFT: VH-WJK (Chieftain)

PILOT / NAVIGATOR Joe Johnson

OPERATOR / TECHNICIAN David Lyus

DATA TECHNICIAN Rodney Gardner

BASE Queenstown

WEEKLY FLIGHT REPORT

JOB No: 9312

REPORT No: 6

SURVEY NAME 3 Areas - Tasmania

PERIOD 9-12.1985

THRU 15.12.1985

DATE	FLIGHT	FLIGHT TIME	KMS	WEATHER	DIURNAL	REMARKS
9.12.85		0.15	-	Rain & High Winds.		Standby due to Weather
10.12.85	4B	7.00	945			
	5B					
11.12.85						} Flying for another Client out of Queenstown.
12.12.85						
13.12.85						
14.12.85	6B	7.45	1080			
	7B					
15.12.85	23A	7.40	295			Plus Reflights
	24A					

TOTAL KILOMETRES FOR WEEK 2320

AIRCRAFT: VH-WSK (Chieftain)

PILOT / NAVIGATOR Joe Johnson

OPERATOR / TECHNICIAN David Lyus

DATA TECHNICIAN Rodney Gardner

BASE Queenstown

WEEKLY FLIGHT REPORT

JOB No: 9312

REPORT No: 7

SURVEY NAME 3 Areas - Tasmania

PERIOD 16.12.1985

THRU 22.12.1985

DATE	FLIGHT	FLIGHT TIME	KMS	WEATHER	DIURNAL	REMARKS
16.12.85		-	-	Rain & High winds		Standby due weather
17.12.85		-	-			Flying for another Client.
18.12.85		-	-	Rain & High Winds.		Standby due weather
19.12.85	25 A	6.45				Reflights.
	26 A					
20.12.85		0.30		Rain & Low Cloud.		Standby due weather
21.12.85						Crew return to Sydney for Christmas break.
22.12.85						

TOTAL KILOMETRES FOR WEEK 0

AIRCRAFT: VH-WJK (Chieftain)

PILOT / NAVIGATOR Joe Johnson

OPERATOR / TECHNICIAN David Lyus

DATA TECHNICIAN Rodney Gardner

BASE Queenstown

WEEKLY FLIGHT REPORT

JOB No: 9312

REPORT No: 8

SURVEY NAME 3 Areas - Tasmania

PERIOD 30.12.1985

THRU 5.1.1986

DATE	FLIGHT	FLIGHT TIME	KMS	WEATHER	DIURNAL	REMARKS
30.12.85						Crew return to Queenstown.
31.12.85	1 C	5.20	330			Macquarie Harbour.
1.1.86						Refight for other Client.
2.1.86	1 B	8.25	-			Refights
	2 B					
3.1.86	3 B	8.15	220			Plus Reflights
4.1.86	4 B	2.55	115	Rain & low cloud.		1/2 day Standby due weather
5.1.86	5 B	8.50	250			Plus Reflights

TOTAL KILOMETRES FOR WEEK 915

AIRCRAFT: VH-WJK (Chieftain)

PILOT / NAVIGATOR Joe Johnson

OPERATOR / TECHNICIAN David Lyus

DATA TECHNICIAN Rodney Gardner

BASE Queenstown

WEEKLY FLIGHT REPORT

JOB No: 9312

REPORT No: 9

SURVEY NAME 3 Areas - Tasmania

PERIOD 6.1.1986

THRU 12.1.1986

DATE	FLIGHT	FLIGHT TIME	KMS	WEATHER	DIURNAL	REMARKS
6.1.86	6B	7.35	118			Plus Reflights
	7B					
7.1.86	8B	5.30	-			Reflights
8.1.86		-	-	Rain & low cloud.		Standby due weather
9.1.86	9B	2.00	-	Rain & low cloud.		Reflights/½ day Standby due weather
10.1.86	10B	5.15	-			Reflights
11.1.86		2.50	-			Compensation "Hansen Test"
12.1.86						Flying for another Client.

TOTAL KILOMETRES FOR WEEK 118.

AIRCRAFT: VH-WJK (Chieftain)

PILOT / NAVIGATOR Joe Johnson

OPERATOR / TECHNICIAN David Lyus

DATA TECHNICIAN Rodney Gardner

BASE Queenstown

WEEKLY FLIGHT REPORT

JOB No: 9312

REPORT No: 10

SURVEY NAME 3 Areas - Tasmania

PERIOD 13.1.1986

THRU 19.1.1986

DATE	FLIGHT	FLIGHT TIME	KMS	WEATHER	DIURNAL	REMARKS
13.1.86		5.30				Demobilising from Queenstown.
14.1.86						
15.1.86						
16.1.86						
17.1.86						
18.1.86						
19.1.86						

TOTAL KILOMETRES FOR WEEK Nil

AIRCRAFT: VH-WJK (Chieftain)

PILOT / NAVIGATOR Joe Johnson

OPERATOR / TECHNICIAN David Lyus

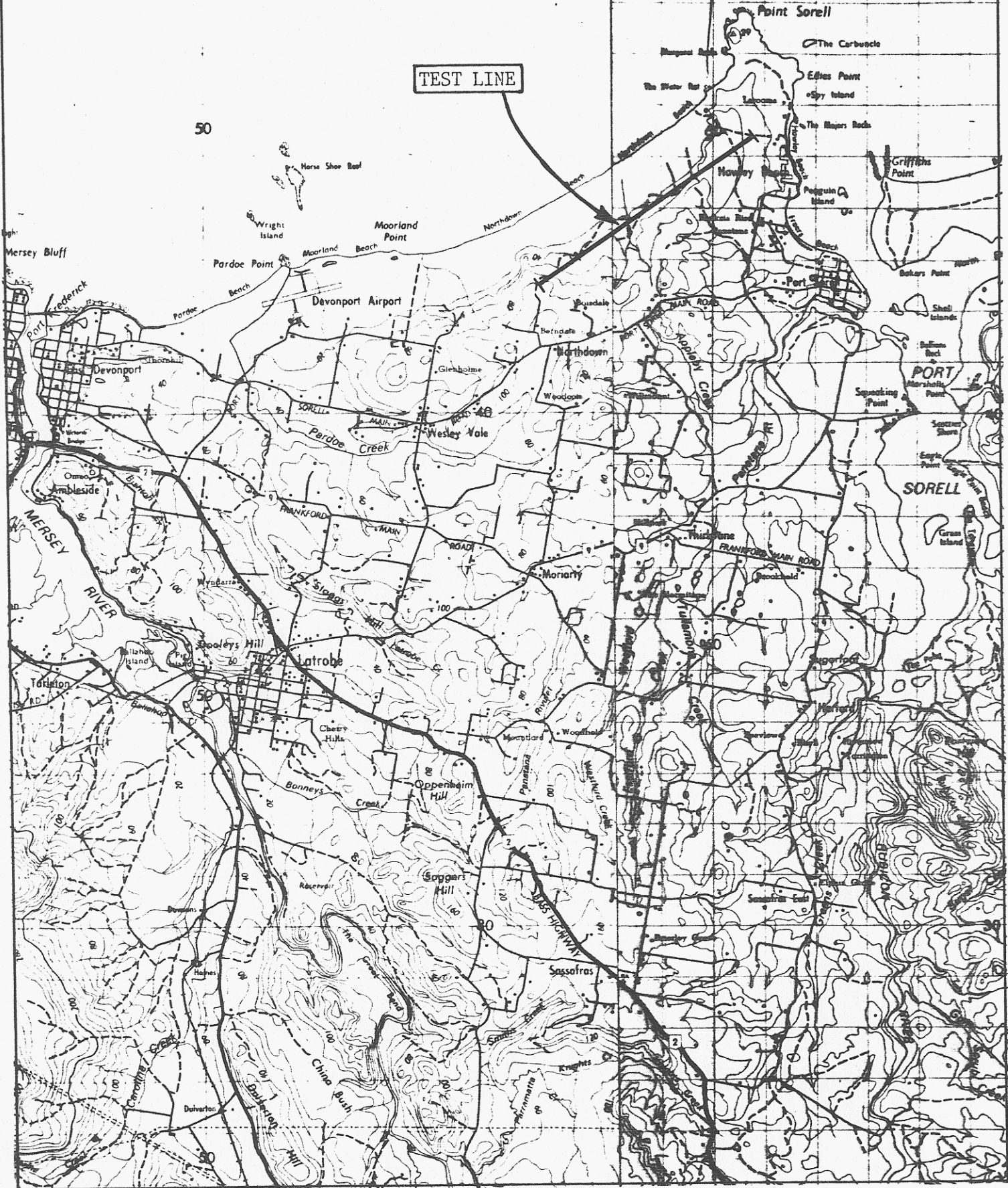
DATA TECHNICIAN Rodney Gardner

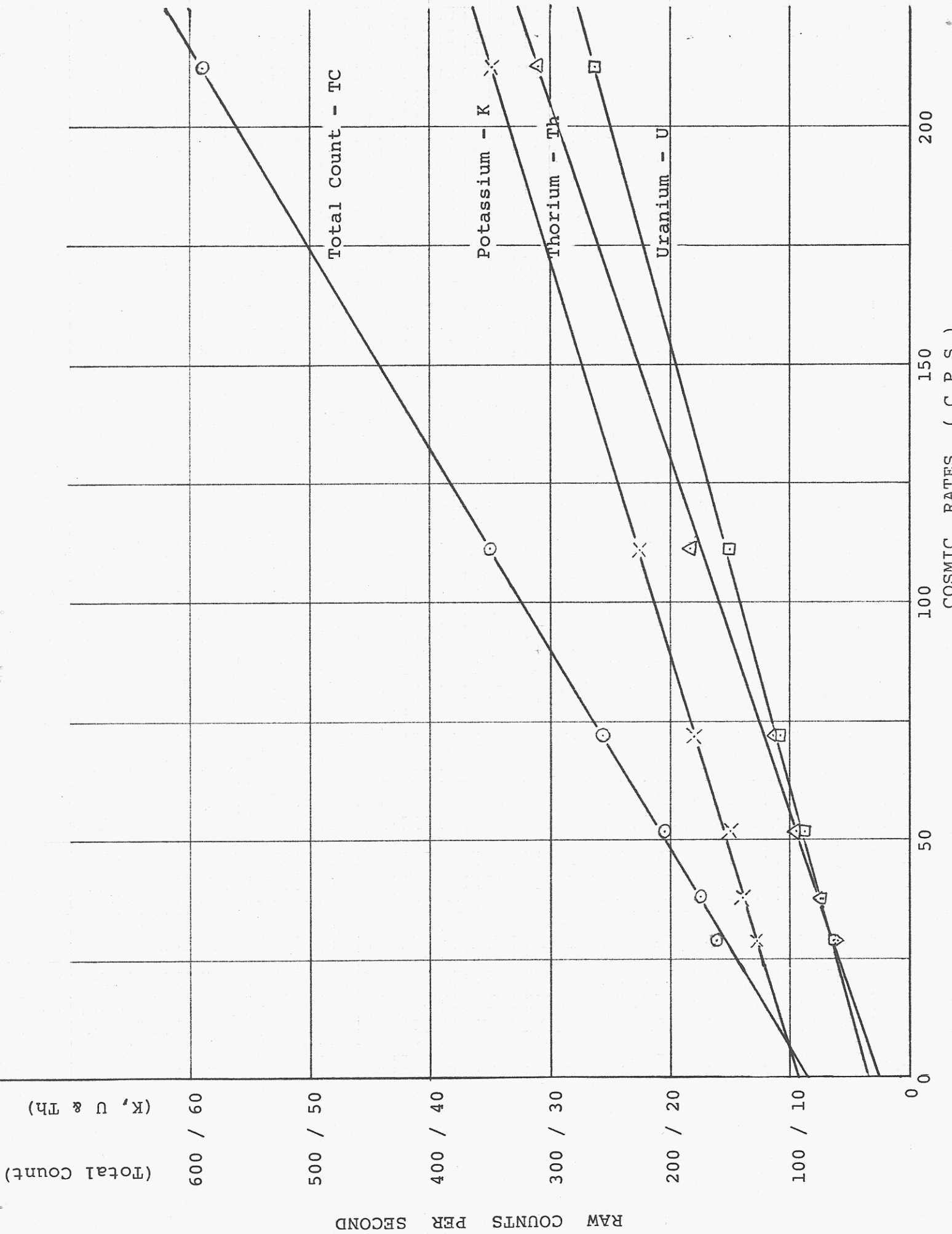
BASE Queenstown

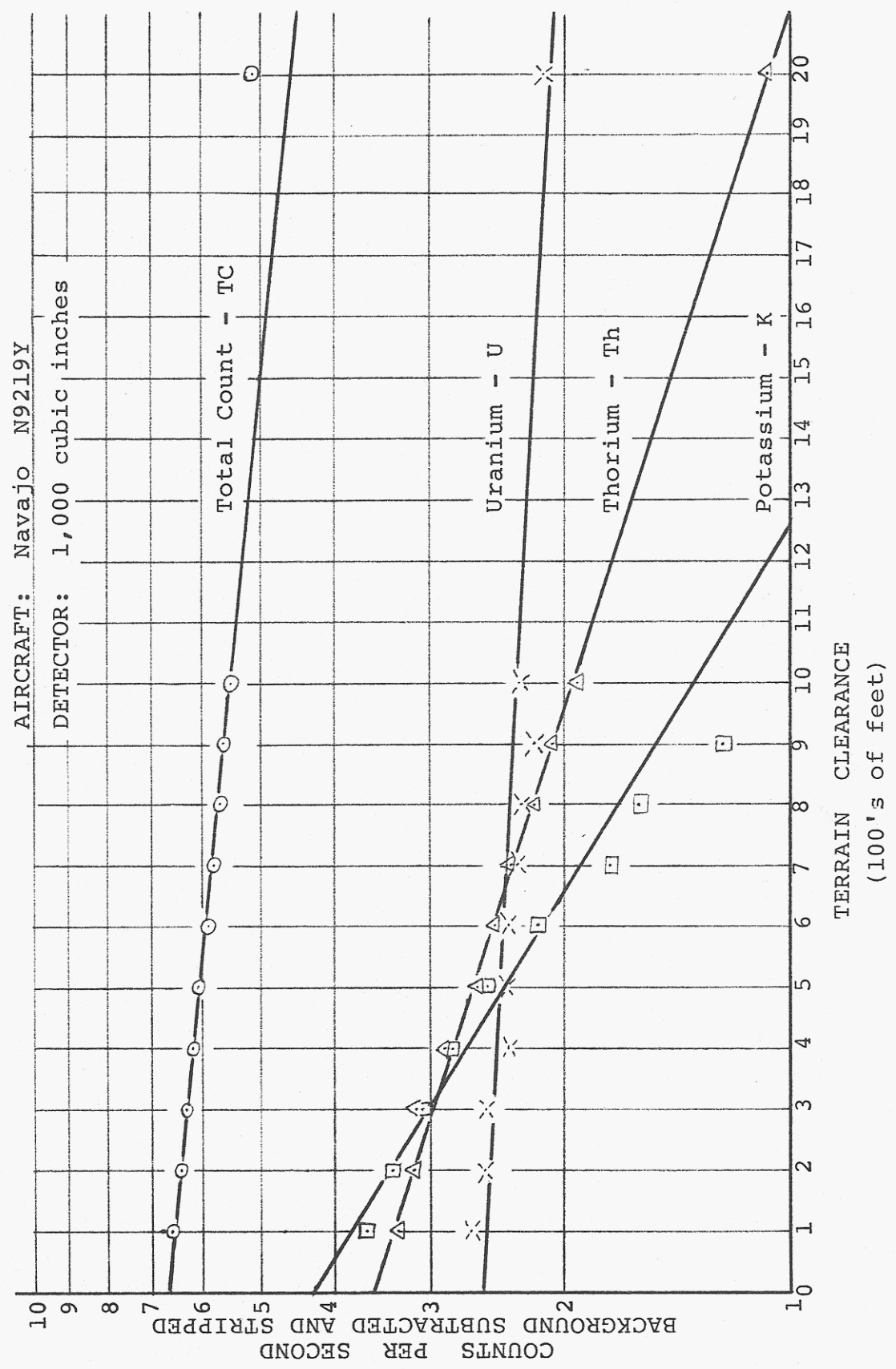


TEST LINE

50







STATISTICS OF RADIOMETRICS

Average of the readings of the Total Count values over the test line for each flight.

Flight No: Area	Pre Flight (c.p.s.)	Post Flight (c.p.s.)
--------------------	------------------------	-------------------------

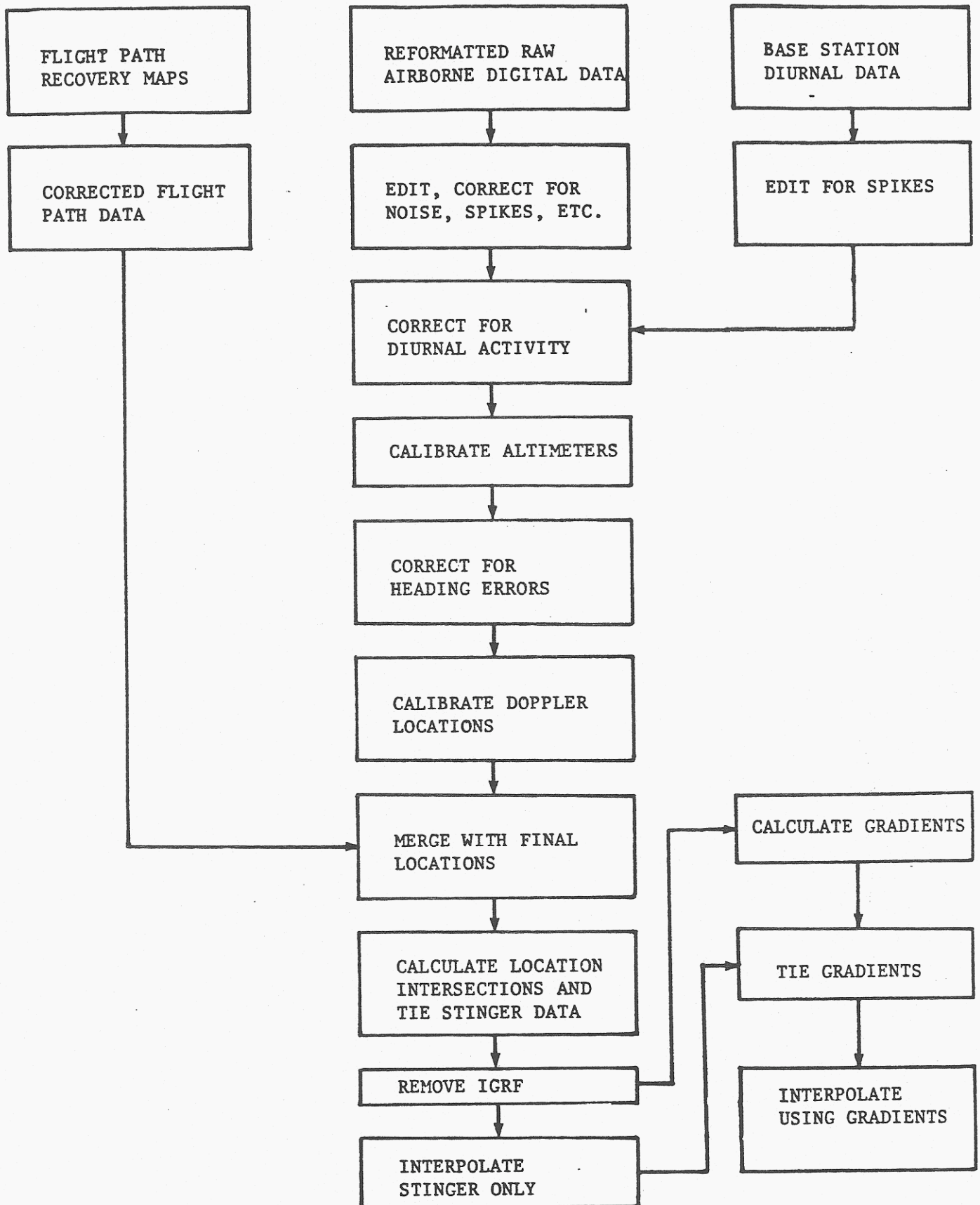
TEST LINE - DEVONPORT

02 A	169.2	143.8
03 A	177.0	-
04 A	167.0	145.4
05 A	150.7	-
06 A	160.6	154.2
07 A	169.6	148.0
08 A	171.6	165.6
09 A	168.5	155.8
10 / 11 A	165.0	163.5
12 A	166.4	-
13 / 14 A	-	-
15 A	153.8	165.3
16 A	174.1	-
17 A	186.7	-
18 / 19 A	SCRUBBED	-
20 / 21 A	153.8	165.9
22 A	-	157.5
23 / 24 A	182.1	-

NEW TEST LINE - QUEENSTOWN

01 / 02 B	124.4	112.8
03 B	125.3	118.8
04 B	126.4	127.8
05 / 06 B	135.3	116.4
07 B	128.0	117.0
08 B	141.9	135.7
09 B	120.0	123.1
10 B	124.7	121.2
01 C	126.9	-

GRADIENT DATA PROCESSING FLOW CHART



```

CONTROL HEADER=VAR,SADME=T
H 'ABCDEFGHIJKLMNPOQRSTUVWXYZ0123456789+=*/()$= ,.<>'
W 3
H 'FILE HEADER'
H 'WESTERN TASMANIA'
H '378'
H '4'
H '8014'
H '7914'
H '7913'
H '8013'
H 'GEOMETRICS'
H 'ENGINEERING COMP SERV BOWRAL NSW'
H 'TASMANIAN MINES DEPARTMENT'
H 'A'
H 'TOPO 50000'
H '500 M'
H '3000 M'
H '120 M'
H '090'
H 'XXX'
H 'XXX'
H '192'
W 3
H '1)NO SPECIAL SYMBOLS USED'
H '2)NO EXPANSION OF FILE HEADER INFORMATION'
H '3)RESIDUAL MAGNETIC DATA TIE LINE LEVELLED AND IGRF 2000 DATUM'
H 'REMOVED.'
H '4)MAGNETIC GRID OBTAINED FROM RAW STINGER MAGNETIC DATA'
H 'AND THE CORRECTED TRANSVERSE GRADIENT USING A BI-CUBIC SPLINE'
H 'METHOD.'
H '5) TEST LINES ARE PRE FLIGHT 7000 SERIES; POST FLIGHT 8000 SERIES'
H 'TRAVERSES ARE 30000 SERIES; TIE LINES ARE 93000 SERIES.'
H '6)CHANNEL DESCRIPTION:DATA IS STORED ON A RECORD SIZE OF 190 CHARS'
H '          COLUMNS          DESCRIPTION'
H '          1 TO 6          DATE IN DDMYY'
H '          7          BLANK'
H '          8 TO 10          FLIGHT NUMBER'
H '          11 TO 16          TIME IN SECONDS AFTER MIDNIGHT
  
```

JOB REF.
PROG,AGP910

JOB NO= GIC-9312TASMANIA AREA2 GRADIOMETER PROCESSING

PAGE 2
24-APR-86 10:22:07

2	H				
3	H	17	BLANK		
4	H				
5	H	18 TO 22	LINE NUMBER		
6	H				
7	H	23	BLANK		
8	H				
9	H	24 TO 29	FIDUCIAL		
10	H				
11	H	30	ASTERISK IF A RECOVERED POINT		
12	H				
13	H	31 TO 37	AMG EASTING COORDINATE IN METRES		
14	H				
15	H	38	BLANK		
16	H				
17	H	39 TO 45	AMG NORTHING COORDINATE IN METRES		
18	H				
19	H	46	BLANK		
20	H				
21	H	47 TO 53	RESIDUAL MAGNETIC VALUE		
22	H				
23	H	54	BLANK		
24	H				
25	H	55 TO 61	RAW STINGER MAGNETIC VALUE		
26	H				
27	H	62	BLANK		
28	H				
29	H	63 TO 69	RAW LEFT WING MAGNETIC VALUE		
30	H				
31	H	70	BLANK		
32	H				
33	H	71 TO 77	RAW RIGHT WING MAGNETIC VALUE		
34	H				
35	H	78	BLANK		
36	H				
37	H	79 TO 85	CORRECTED STINGER MAGNETIC VALUE		
38	H				
39	H	86	BLANK		
40	H				
41	H	87 TO 93	CORRECTED LEFT WING MAGNETIC VALUE		
42	H				
43	H	94	BLANK		
44	H				
45	H	95 TO 101	CORRECTED RIGHT WING MAGNETIC VALUE		
46	H				
47	H	102 TO 109	RAW TRANSVERSE GRADIENT VALUE		
48	H				
49	H	110 TO 117	RAW LONGITUDINAL GRADIENT VALUE		
50	H				
51	H	118 TO 125	CORRECTED TRANSVERSE GRADIENT VALUE		
52	H				
53	H	126 TO 133	CORRECTED LONGITUDINAL GRADIENT VAL		
54	H	UE			
55	H	134 TO 140	RADAR ALTIMETER VALUE		
56	H				
57	H				
58					
59					
60					
61					
62					
63					
64					

H	141 TO 147	BAROMETRIC ALTIMETER VALUE
H		
H	148 TO 154	RAW TOTAL FIELD RADIOMETRIC VALUE
H		
H	155	BLANK
H		
H	156 TO 161	RAW POTASSIUM VALUE COUNTS
H		
H	162	BLANK
H		
H	163 TO 169	RAW URANIUM VALUE COUNTS
H		
H	170 TO 176	RAW THORIUM VALUE COUNTS
H		
H	177 TO 183	CORRECTED TOTAL COUNT CPS
H		
H	184 TO 190	CORRECTED POTASSIUM COUNT CPS
H		
H	191 TO 197	CORRECTED URANIUM COUNT CPS
H		
H	198 TO 204	CORRECTED THORIUM COUNT CPS
H		
H	205 TO 211	RAW COSMIC COUNTS
H		
H	212 TO 218	LIVE TIME MICRO-SECONDS
H		

W 1
 OUTPUT MAG, FIELD=(47,7,1)
 OUTPUT MAGGRAW, FIELD=(55,7,1)
 OUTPUT MAGGLRAW, FIELD=(63,7,1)
 OUTPUT MAGGRRAW, FIELD=(71,7,1)
 OUTPUT MAGG, FIELD=(79,7,1)
 OUTPUT MAGGL, FIELD=(87,7,1)
 OUTPUT MAGGR, FIELD=(95,7,1)
 OUTPUT TRANGRAW, FIELD=(102,8,3)
 OUTPUT LONGGRAW, FIELD=(110,8,3)
 OUTPUT TRANGRAD, FIELD=(118,8,3)
 OUTPUT LONGGRAD, FIELD=(126,8,3)
 OUTPUT ALT, FIELD=(134,7,1)
 OUTPUT BARALT, FIELD=(141,7,1)
 OUTPUT TOTRAW, FIELD=(148,7,1)
 OUTPUT KRAW, FIELD=(156,7,1)
 OUTPUT URRAW, FIELD=(163,7,1)
 OUTPUT TRAW, FIELD=(170,7,1)
 OUTPUT COMP, FIELD=(177,7,1)
 OUTPUT VGROLL, FIELD=(184,7,1)
 OUTPUT VGPITCH, FIELD=(191,7,1)
 OUTPUT ELEVM, FIELD=(198,7,1)
 OUTPUT COSMIC, FIELD=(205,7,1)
 OUTPUT LITIME, FIELD=(212,7,1)
 SEL LI=(7000,99000)
 SEN

geoMetrics <small>INTERNATIONAL CORPORATION</small>		OPERATORS FLIGHT REPORT				FLIGHT No. <u>02</u>		
		Date <u>26/10/1985</u> <u>04299</u>				JOB No. <u>9312</u>		
Area <u>DEVONPORT</u> Aircraft <u>Y4-WJK</u> Pilot <u>J. JOHNSON</u> Operator <u>Z. BELDI</u> Dataman _____ Airport <u>DEVONPORT</u> Take off <u>08:05</u> land <u>12:32</u> Flying time <u>4:25</u> hours		MAGNETOMETER			SPECTROMETER			
		Sample Rate <u>35</u> <u>MHz</u> sec. Sensitivity <u>0.2</u> nT Mag. F.S.D. <u>20</u> / <u>200</u> nT			Sample Rate <u>70</u> <u>MHz</u> sec. Crystal Size <u>16.8L</u> / <u>30.0C</u>			
		ALTIMETER			GND. CALS (FSD) IN FLIGHT			
		Survey Altitude <u>150</u> metres Radar FSD <u>2500</u> metres Baro. Pres. <u>1035</u> Cal. <u>-138</u>			K40 <u>500</u> / <u>100</u> Bi214 <u>500</u> / <u>100</u> TL208 <u>500</u> / <u>100</u> Total Count <u>5000</u> / <u>1000</u>			
LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
	01100	00001	08:08	08:10			TEST L	ACT BLND OVER WATER
	01101	00211	08:10	08:11				ACT BLND OVER WATER
	01200	00321	08:11	08:13			TEST L	
	91020	00571	08:15	08:34				TIE L2 W.
	91010	00275	08:39	08:44				TIE L E.
X	10500	03281	08:49	08:53			50S	SCRUB
X	10511	03611	08:57	09:00			50S	SCRUB
X	10500	03921	09:05	09:11			50S	SCRUB.
	10550	04621	09:39	09:53			55N	
	10503	06331	09:54	10:09			50S	
	10511	08061	10:13	10:26			51N	
	10520	09741	10:28	10:43			52S	
	10530	11511	10:44	10:59			53N	
	10540	13291	11:01	11:15			54S	
	10560	15001	11:17	11:32			56N	
	10570	16741	11:34	11:48			57S	
	10580	18451	12:02	12:16			58S	SCRUB
	03100	02071	12:25	12:27			TEST L	
REMARKS:								

Date 27.1.19.85 24300

Area DEVON HKT
Aircraft M. WJK
Pilot J. JOHNSON
Operator Z. BENDI
Detaman -
Airport DEVON HKT
Take off 10:02 land 13:05
Flying time 2:03 hours

MAGNETOMETER
Sample Rate 25.0 sec.
Sensitivity 0.2 nT
Mag. F.S.D. 20 / 1200 nT

ALTIMETER
Survey Altitude 150 metres
Radar FSD 820.4 metres
Baro. Pres. 1031 Cal. -0.283

SPECTROMETER
Sample Rate 70 M sec.
Crystal Size 16.8L / 99-9t

GND. CALS (FSD) IN FLIGHT

K40	<u>500</u>	<u>100</u>
Bi214	<u>500</u>	<u>100</u>
TL208	<u>500</u>	<u>100</u>
Total Count	<u>5000</u>	<u>1000</u>

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
00100	20901	20960	10:07	10:08			BND	OVER WATER
01000	20961	21200	10:10	10:11			FET LINE	-
10581	21201	22940	10:17	10:32			58S	
10590	22941	24640	09:35	10:49			59N	
X 10600	24641	24930	10:51	10:54			60S	SCRUB.
10601	24931	26620	10:51	11:11			60S	
10610	26621	28340	11:13	11:27			61N	
10620	28341	29910	11:29	11:42			62S	
10630	29911	31510	11:43	11:57			63N	
10640	31511	33110	11:58	12:11			64S	
10650	33111	34700	12:13	12:26			65N	
10660	34701	36230	12:28	12:40			66S	
10670	36231	37830	12:42	12:55			67N	
00100	37831	38010						

REMARKS:

Date 28/10/1985 Day 301

Area Devon Port
Aircraft VH-WJK
Pilot J. JOHNSON
Operator Z. BIRD
Dataman -
Airport Devon Port
Take off 07:37 land 12:13
Flying time 4:35 hours

MAGNETOMETER
Sample Rate 35.4 sec.
Sensitivity 0.2 nT
Mag. F.S.D. 50 / 1.500 nT

ALTIMETER
Survey Altitude 150 metres
Radar FSD 850 metres
Baro. Pres. 10.25 Cal. -0.23

SPECTROMETER
Sample Rate 7.0 sec.
Crystal Size 16.8L / 33.8L

GND. CALS (FSD) IN FLIGHT
K40 500 100
Bi214 500 100
TL208 500 100
Total Count 5000 1000

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
01000	37831	38010	07:43	07:45			TEST L	
91021	38011	139200	07:47	07:57			TIE 2W	Retlight PA4
10680	39201	40480	08:02	08:14	N END	TIE 6	68S	BEAK WEATHER
10690	40481	41800	08:15	08:26	TIE 6	N END	69N	Ti-
11130	41801	43390	08:36	08:50			113S	
11140	43391	44940	08:50	09:04			114N	
11150	44941	46490	09:05	09:19			115S	
11160	46491	48050	09:20	09:33			116N	Header say 111>0
11170	48051	49600	09:35	09:48			117S	Header say
11180	49601	51150	09:50	10:03			118N	
11190	51151	52680	10:04	10:17			119S	
11200	52681	54240	10:18	10:32			120N	
11210	54241	55780	10:33	10:46			121S	
11220	55781	57350	10:48	11:02			122N	
11230	57351	58940	11:05	11:18			123S	
11240	58941	60550	11:19	11:34			124N	
11250	60551	62120	11:35	11:48			125S	
11260	62121	63720	11:50	12:04			126N	
03000	63721	63890	12:05	12:07			TEST L	

REMARKS:

geoMetrics
INTERNATIONAL CORPORATION

OPERATORS FLIGHT REPORT

Date 30.1.19. ds

FLIGHT No. 05

JOB No. 9312

Area LEWONPORT TAMARA
Aircraft VH WJK
Pilot J. Johnson
Operator Z. Beldi
Detaman -
Airport Levon Port
Take off 11.31 land 12.21
Flying time 0:55 hours

MAGNETOMETER
Sample Rate 35 m sec.
Sensitivity 0.2 nT
Mag. F.S.D. 50 1 500 nT
ALTIMETER
Survey Altitude 150 metres
Radar FSD 850 metres
Baro. Pres. 10 Cal. -

SPECTROMETER
Sample Rate 70 M sec.
Crystal Size 16.8L / 33.8L
GND. CALS (FSD) IN FLIGHT
K40 A 500 A 50
Bi214 A 500 A 50
TL208 A 500 A 50
Total Count A 5000 A 500

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		

REMARKS: FLIGHT ABORTED DUE EXTREME TURBULENCE.

Area <u>Devon Port - TAMAR</u>	MAGNETOMETER	SPECTROMETER
Aircraft <u>VH-WJK</u>	Sample Rate <u>35 M</u> sec.	Sample Rate <u>70 M</u> sec.
Pilot <u>J. JOHNSON</u>	Sensitivity <u>0.2</u> nT	Crystal Size <u>16.8L / 33-8T</u>
Operator <u>Z. BELDI</u>	Mag. F.S.D. <u>50 / 500</u> nT	GND. CALS (FSD) IN FLIGHT
Dataman	ALTIMETER	K40 <u>A 500</u> <u>A 50</u>
Airport <u>Devon Port</u>	Survey Altitude <u>150</u> metres	Bi214 <u>A 500</u> <u>A 50</u>
Take off <u>07:16</u> land <u>09:02</u>	Radar FSD <u>850</u> metres	TL208 <u>A 500</u> <u>A 50</u>
Flying time <u>1:45</u> hours	Baro. Pres. <u>1005</u> Cal. <u>-0.04</u>	Total Count <u>A 5000</u> <u>A 5000</u>

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
010000	020000	02210	07:21	07:27			TS1 L	PARTLY OVER WATER
112810	022110	03850	07:29	07:44			128 S	REFUSHT
112900	038510	05510	07:46	07:59			129 N	
113000	055110	06580	08:01	08:11	N BND	TL 5	130 S	CUT SHORT DUE TO TURBULENCE
113100	065810	07660	08:12	08:21	TL 5	N. BND	131 N	
X 113200	076610	08130	08:22	08:27			132 S	SCRUB
113210	081310	09140	08:31	08:40	N. BND	TL 5	132 S	
113300	091410	10180	08:41	08:50	TL 5	N. BND	133 N	
030000	101810	10360	08:53	08:54			TS1 L	

REMARKS: FLIGHT TERMINATED DUE SEVERE TURBULENCE DUE WIND,
TEMP 15°C
WIND 300°/25-30 KNOTS.

Area <u>DEKOPORT TAMAR</u>	MAGNETOMETER	SPECTROMETER
Aircraft <u>VH-NJK</u>	Sample Rate <u>35 M</u> sec.	Sample Rate <u>70 M</u> sec.
Pilot <u>J. Johnson</u>	Sensitivity <u>0.2</u> nT	Crystal Size <u>16.8L / 33.8t</u>
Operator <u>Z. Beldi</u>	Mag. F.S.D. <u>50 / 500</u> nT	GND. CALS (FSD) IN FLIGHT
Dataman <u>-</u>	ALTIMETER	
Airport <u>DEKOPORT</u>	Survey Altitude <u>150</u> metres	K40 <u>A 500</u> <u>A 50</u>
Take off <u>07:37</u> land <u>12:52</u>	Radar FSD <u>850</u> metres	Bi214 <u>A 500</u> <u>A 50</u>
Flying time <u>5:15</u> hours	Baro. Pres. <u>101.8</u> Cal. <u>-0.13</u>	TL208 <u>A 500</u> <u>A 50</u>
		Total Count <u>A 5000</u> <u>A 500</u>

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
01000	10361	10540	07:42	07:43			TST L	
11340	10541	112170	07:47	08:01			134S	
X 11350	12171	12480	08:02	08:05			135N	SCRUB
11351	12481	14040	08:09	08:23			135N	
11360	14041	15620	08:24	08:38			136S	
11370	15621	17200	08:39	08:53			137N	
11390	17201	18730	08:55	09:08			138S	
11390	18731	20320	09:09	09:23			139N	
11400	20321	21930	09:29	09:43			140S	
11410	21931	23540	09:45	09:58			141N	
11420	23541	25150	10:00	10:13			142S	
11430	25151	26750	10:14	10:29			143N	
11440	26751	28410	10:31	10:45			144S	
11450	28411	30100	10:46	11:01			145N	
11460	30101	31790	11:04	11:18			146S	
11470	31791	33550	11:19	11:35			147N	
11480	33551	35310	11:36	11:50			148S	
11311	35311	36050	11:55	12:01	S BND	TL5	130N	INFILL
11321	36051	36780	12:02	12:09	TL5	S BND	131S	"
11331	36781	37510	12:10	12:16	FESS.BND	TL5	132N	"
11341	37511	38230	12:17	12:23	TL5	S BND	133S	"
11490	38231	40040	12:25	12:40			149N	
03000	40041	40240	12:44	12:45			TST L	

REMARKS: T/OFF WIND 210°/10 TEMP 12°C
LANDING WIND 260°/25 TEMP 17°C.

NOTE
INCORRECT
HEADER.

Date 02.11.1985 Jay 306

Area Devon Park - TAMAR
Aircraft VH-NJK
Pilot J. JOHNSON
Operator Z. BELDI
Dataman _____
Airport DEVON PARK
Take off 08:36 land 11:23
Flying time 2:47 hours

MAGNETOMETER
Sample Rate 25 M sec.
Sensitivity 0.2 nT
Mag. F.S.D. 50 / 1500 nT

ALTIMETER
Survey Altitude 150 metres
Radar FSD 850 metres
Baro. Pres. 1023 Cal. -0.21

SPECTROMETER
Sample Rate 70 M sec.
Crystal Size 16.8L / 3000

GND. CALS (FSD) IN FLIGHT
K40 Δ 500 Δ 50
Bi214 Δ 500 Δ 50
TL208 Δ 500 Δ 50
Total Count Δ 500 Δ 500

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
01000	40241	40460	08:40	08:42			TST L	
10950	40461	41900	08:48	09:02	N BND	TL 5	95S	BREAK
X 10951	41901	42340	09:06	09:09	S BND	TL 5	95N	SCRUB TOO FAST
10952	42341	42790	09:19	09:23	S BND	TL 5	95N	
X 10940	42791	43060	09:28	09:30	TL 5	S BND	94S	SCRUB
10941	43061	48360	09:33	09:40	N BND	TL 5	94S	LINES BAKEN
10930	48361	44560	09:42	09:48	S B	TL 5	93N	DVE TOPOGRAPHY
10920	44561	45380	09:49	09:57	TL 5	S B	92S	✓
10910	45381	46080	09:59	10:04	S B	TL 5	91N	✓
10900	46081	46880	10:06	10:12	TL 5	S B	90S	✓
10890	46881	47610	10:15	10:20	S B	TL 5	89N	✓
10880	47611	48410	10:22	10:28	TL 5	S B	88S	✓
10870	48411	49190	10:30	10:36	S B	TL 5	87N	✓
10860	49191	49980	10:38	10:44	TL 5	S B	86S	✓
10850	49981	50760	10:46	10:52	S B	TL 5	85N	✓
10840	50761	51520	10:53	11:00	TL 5	S B	84S	✓
X 10830	51521	51830	11:01	11:04			83N	SCRUB DATA
X 10831	51831	52400	11:07	11:12			83N	SCRUB DATA

REMARKS: TAKEOFF WIND 175°/10 KNOTS TEMP 13°C
LANDING " 340°/10 KNOTS TEMP 18°C

Area DEVON PORT - TAMAR
Aircraft VH-WJK
Pilot J. JOHNSON
Operator Z. BELD
Dataman
Airport DEVON PORT
Take off 14:37 land
Flying time 2:30 hours

MAGNETOMETER
Sample Rate 35 M sec.
Sensitivity 0.2 nT
Mag. F.S.D. 50 / 1500 nT
ALTIMETER
Survey Altitude 150 metres
Radar FSD 850 metres
Baro. Pres. 1025 Cal. -0.31

SPECTROMETER
Sample Rate 70 M sec.
Crystal Size 16.8L / 32.8L
GND. CALS (FSD) IN FLIGHT
K40 1.500 1.50
Bi214 1.500 1.50
TL208 1.500 1.50
Total Count 15000 15000

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
1094	15240	15333	14:41	14:49	NTH BAND	TL 5	94S	INFILL
1093	15333	15428	14:51	14:59	NTH BAND	TL 5	93N	✓
1092	15428	15524	15:00	15:09	NTH BAND	TL 5	92S	✓
1091	15524	15620	15:10	15:19	NTH BAND	TL 5	91N	✓
1090	15620	15714	15:20	15:28	NTH BAND	TL 5	90S	✓
1089	15714	15812	15:29	15:38	NTH BAND	TL 5	89N	✓
1088	15812	15911	15:39	15:47	NTH BAND	TL 5	88S	✓
X 1087	15911	15930	15:49	15:51			87N	✓ SCUB
1087	15930	16025	16:01	16:04	NTH BAND	TL 5	87N	✓ INFILL
1086	16025	16122	16:05	16:13	NTH BAND	TL 5	86S	✓
1085	16122	16219	16:14	16:23	NTH BAND	TL 5	85N	✓
1084	16219	16317	16:24	16:32	NTH BAND	TL 5	84S	✓
1083	16317	16475	16:37	16:51	STH BAND	NTH BAND	83N	REFLIGHT
0000	16475	16494	16:57	16:58			FEET L	POST CAL.

REMARKS: T/off WIND 300°/10 KNOTS TEMP 19°C
LAND " 320°/10 " " 16°C.
CLEAR SKIES.

Area DEVONPORT / TAMAR
 Aircraft NH-WTK
 Pilot J. BARKER
 Operator Z. BELDI
 Dataman _____
 Airport DEVONPORT
 Take off 09:26 land 13:24
 Flying time 3:58 hours

MAGNETOMETER
 Sample Rate 0.235 sec.
 Sensitivity 0.2 nT
 Mag. F.S.D. 20 / 1500 nT

SPECTROMETER
 Sample Rate 7.0 sec.
 Crystal Size 16.8L / 35.8L

ALTIMETER
 Survey Altitude 150 metres
 Radar FSD 850 metres
 Baro. Pres. 101.9 Cal. -0.16

GND. CALS (FSD) IN FLIGHT
 K40 Δ 500 | Δ 50
 Bi214 Δ 500 | Δ 50
 TL208 Δ 500 | Δ 50
 Total Count Δ 5000 | Δ 500

LINE No. (Header)	FIDUCIALS				TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END				
01000	64941	65140	09:31	09:32					TEST L	
11120	65141	66320	09:36	09:47	N END	TL6		112S	Break. HDL WKS 01000	
11121	66321	67030	09:51	09:56	SBND	TL6		112N	INFILL	
11110	67031	68580	09:58	10:11				111N		
11100	68581	70120	10:13	10:27				110S		
11090	70121	71680	10:28	10:41				109N		
11080	71681	73190	10:43	10:54				108S		
11070	73191	74730	10:59	11:12				107N		
X 11060	74731	75560	11:12	11:20				106S	BREAK 9813	
X 11061	75561	76420	11:23	11:31				106S	BREAK 9813	
11062	76421	78020	11:35	11:48				106N	REFLECT.	
11050	78021	79560	11:50	12:04				105S		
11040	79561	81150	12:06	12:19				104N		
11030	81151	82720	12:20	12:34				103S		
11020	82721	84300	12:36	12:49				102N		
11010	84301	85880	12:52	13:06				101S		
11000	85881	87450	13:07	13:20				100N		

REMARKS: WEATHER
 T/OFF WIND 200°/10 KNOTS TEMP 12°C
 LANDING " 330°/10 KNOTS " 20°C
CLEAR SKY.

Area DEVON BAR / TAMPA
Aircraft VH-WJK
Pilot J. JOHNSON
Operator Z. BELDI
Detaman -
Airport DEVON BAR
Take off 15:27 land 17:03
Flying time 1:35 hours

MAGNETOMETER
Sample Rate 0.65 sec. 70M
Sensitivity 0.2 nT
Mag. F.S.D. 50 / 500 nT

SPECTROMETER
Sample Rate 70M sec.
Crystal Size 16.8L / 33.8L

ALTIMETER
Survey Altitude 150 metres
Radar FSD 850 metres
Baro. Pres. 1017 Cal. -0.18

GND. CALS (FSD) IN FLIGHT
K40 Δ 500 | Δ 50
Bi214 Δ 500 | Δ 50
TL208 Δ 500 | Δ 50
Total Count Δ 5000 | Δ 500

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
10990	87451	88940	15:51	15:54	N.BND	TL 6	99S	BREAK
10991	88941	89380	15:50	15:54	S.BND	TL 6	99N	INFILL
10980	89381	90910	16:00	16:13			98N	
10970	90911	91900	16:14	16:22	N BND	TL 4	97S	BREAK GETS
10971	91901	92900	16:27	16:35	TL 4	S BND	97S	
10960	92901	94440	16:37	16:50			96N	
03000	94441	94640	16:54	16:55			TEST L	

REMARKS:

Area Devon Port / TAMAR
Aircraft VH-WTK
Pilot J. JOHNSON
Operator Z. BEARD
Dataman -
Airport Devon Port
Take off 07:39 land 10:24
Flying time 2:45 hours

MAGNETOMETER
Sample Rate 3.5M sec.
Sensitivity 0.2 nT
Mag. F.S.D. 50 / 500 nT

ALTIMETER
Survey Altitude 150 metres
Radar FSD 850 metres
Baro. Pres. 1019 Cal. -0.11

SPECTROMETER
Sample Rate 70M sec.
Crystal Size 16.8L / 33.8L

GND. CALS (FSD) IN FLIGHT

K40	<u>A 500</u>	<u>A 50</u>
Bi214	<u>A 500</u>	<u>A 50</u>
TL208	<u>A 500</u>	<u>A 50</u>
Total Count	<u>A 5000</u>	<u>A 500</u>

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
X 01000	9464	194690	07:42	07:42			CAL	SCRUB
01001	9469	194850	07:45	07:46			TEST	L
10820	9485	195840	07:54	08:04	N. BND	TL 5	82 S	
10810	9584	196910	08:05	08:13	TL 5	N. BND	81 N	
10800	9691	197760	08:15	08:24	N. BND	TL 5	80 S	
10790	9776	198700	08:25	08:33	TL 5	N. B	79 N	
10780	9870	199690	08:35	08:44	N. B	TL 5	78 S	
10770	9969	100690	08:45	08:54	TL 5	N. B	77 N	
10760	0069	101670	08:55	09:04	N. B	TL 5	76 S	
10750	0167	102660	09:06	09:14	TL 5	N. B	75 N	
10740	0266	103670	09:15	09:25	N. B	TL 5	74 S	
10730	0367	104680	09:27	09:36	TL 5	N. B	73 N	
10720	0468	105660	09:37	09:46	N. B	TL 5	72 S	
10710	0566	106640	09:48	09:56	TL 5	N. B	71 N	
10700	0664	107640	09:57	10:06	N. B	TL 5	70 S	
10690	0764	108640	10:08	10:16	TL 5	N. B	69 N	

REMARKS: LANDED FOR FUEL. FLT 13 RESUMES.
T/GH



OPERATORS FLIGHT REPORT

Date 05.11.1985 DAY 309

FLIGHT No. 13

JOB No. 9312

Area <u>Devon Pt / TAMAR</u>	MAGNETOMETER	SPECTROMETER	
Aircraft <u>VH: WJK</u>	Sample Rate <u>35.1</u> sec.	Sample Rate <u>70.1</u> sec.	
Pilot <u>J. JOHNSON</u>	Sensitivity <u>0.2</u> nT	Crystal Size <u>16.8L / 33.8t</u>	
Operator <u>Z. BELDI</u>	Mag. F.S.D. <u>50 / 500</u> nT	GND. CALS (FSD) IN FLIGHT	
Dataman <u>-</u>	ALTIMETER		K40 <u>1.500</u> <u>1.50</u>
Airport <u>DEVON PT</u>	Survey Altitude <u>150</u> metres	Bi214 <u>1.500</u> <u>1.50</u>	
Take off <u>11:26</u> land <u>12:31</u>	Radar FSD <u>850</u> metres	TL208 <u>1.500</u> <u>1.50</u>	
Flying time <u>0.55</u> hours	Baro. Pres. <u>1019</u> Cal. <u>-0.11</u>	Total Count <u>1.500</u> <u>1.500</u>	

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
10480	0864	109930	11:46	11:58			48S	
10470	0993	11110	12:01	12:11	TL5	N.BND	47N	
03000	111	111320	12:21	12:22			T51L	

REMARKS: FLIGHT ABORTED DUE RAIN IN AREA.

Date 07.11.1985 DAY 311

JOB No. 9312

Area DEVON PORT / TAMAR
 Aircraft VH-WJK
 Pilot J. JOHNSON
 Operator Z. BELDI
 Detaman _____
 Airport DEVON PORT
 Take off 07:43 land 08:27
 Flying time 0:44 hours

MAGNETOMETER
 Sample Rate sec.
 Sensitivity nT
 Mag. F.S.D. / nT

ALTIMETER
 Survey Altitude metres
 Radar FSD metres
 Baro. Pres. Cal.

SPECTROMETER
 Sample Rate sec.
 Crystal Size **16.8L / 33.8L**

GND. CALS (FSD) IN FLIGHT
 K40
 Bi214
 TL208
 Total Count

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
<u>1000</u>	<u>11321</u>	<u>11510</u>	<u>07:46</u>	<u>07:48</u>			<u>TST L</u>	
<u>11490</u>	<u>11511</u>	<u>12360</u>	<u>07:58</u>	<u>08:07</u>			<u>1495</u>	<u>SCRUB</u>

REMARKS: FLIGHT ABORTED DUE SEVERE TURBULENCE CAUSED BY 38 KNOT
WIND.

Area DEVONPORT / TAMAR
Aircraft VH-WJK
Pilot J. JOHNSON
Operator Z. BELDI
Dataman -
Airport DEVONPORT
Take off 10:45 land 14:05
Flying time 3:21 hours

MAGNETOMETER
Sample Rate 35M sec.
Sensitivity 0.2 nT
Mag. F.S.D. 50 / 500 nT

ALTIMETER
Survey Altitude 150 metres
Radar FSD 850 metres
Baro. Pres. 1015 Cal. -0.15

SPECTROMETER
Sample Rate 70M sec.
Crystal Size 16.8L / 39.8L

GND. CALS (FSD) IN FLIGHT
K40 Δ 500 Δ 50
Bi214 Δ 500 Δ 50
TL208 Δ 500 Δ 50
Total Count Δ 5000 Δ 5000

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
00000	12361	12480	10:48	10:49			TST L	
10440	12481	13510	10:59	11:09	N. BND.	TL 3	44S	BLKAK
10441	13511	14480	11:14	11:22	TL 3		44S	
10442	14481	15180	11:24	11:30			44N	
10451	15181	15980	11:30	11:39	TS	S. BND	45S	
10430	15981	16980	11:40	11:48	S BND	TL 5	43N	
10420	16981	18030	11:49	11:58	TL 5	S. BND	42S	
10410	18031	19050	12:00	12:07	S. BND	TL 5	41N	
10400	19051	20100	12:09	12:18	TL 5	S. BND	40S	
10390	20101	21080	12:19	12:27	S. BND	TL 5	39N	
10380	21081	22050	12:28	12:36	TL 5	S. B.	38S	
X 10370	22051	22130	12:38	12:39			37N	SCHUB.
10371	22131	23120	12:40	12:47	S. B.	TL 5	37N	
10360	23121	24160	12:49	12:57	TL 5	S. B.	36S	
10350	24161	25200	12:59	13:07	S. B.	TL 5	35N	
10340	25201	26230	13:08	13:17	TL 5	S. B.	34S	
10460	26231	27040	13:29	13:25			46N	
91050	27041	29320	13:31	13:50			TIE SE	
03000	29321	29500	13:58	13:59			TST L	

REMARKS:

Date 09.11.19.85

Area SEVEN PORT / TAMAR
Aircraft VH-MJK
Pilot J. JOHNSON
Operator Z. BELDI
Dataman _____
Airport SEVEN PORT
Take off 07:24 land 12:37
Flying time 5:07 hours

MAGNETOMETER
Sample Rate 35.1 sec.
Sensitivity 0.2 nT
Mag. F.S.D. 20 / 500 nT

ALTIMETER
Survey Altitude 150 metres
Radar FSD 850 metres
Baro. Pres. 101.2 Cal. -0.02

SPECTROMETER
Sample Rate 70 M sec.
Crystal Size 16.8L / 33.8L

GND. CALS (FSD) IN FLIGHT
K40 Δ 500 Δ 50
Bi214 Δ 500 Δ 50
TL208 Δ 500 Δ 50
Total Count Δ 5000 Δ 500

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
010000	2950	129690	07:29	07:31			751L	
100100	2969	131690	07:47	08:05			1S	LINE OUTSIDE AREA
100113	1691	32720	08:09	08:17	SND	TL 5	1N	BREAK. MAG SNAKES
100123	2721	34130	08:22	08:33	TL 5	N.B.	1N	
100203	4131	36180	08:34	08:52			2S	
100303	3618	38230	08:53	09:10			3N	
100403	8231	40250	09:11	09:28			4S	
100504	0251	42270	09:30	09:47			5N	
100604	2271	42970	09:48	09:54	N. BND	TL 2.	6S	BREAK
100614	2971	44510	09:57	10:10	TL 2	S BND	6S	
100704	4451	46480	10:12	10:28			7N	
100804	6481	48420	10:30	10:46			8S	
100904	8421	50340	10:47	11:02			9N	
X10100	5034	150810	11:04	11:08			10S	SCRUB
10101	5081	152740	11:13	11:29			10S	
10110	5274	154660	11:30	11:46			11N	
10120	5466	156600	11:47	12:03			12S	
10130	5660	158530	12:04	12:19			13N	

REMARKS: LANDED FOR FUEL.

OPERATORS FLIGHT REPORT

FLIGHT No. 17
 JOB No. 9312

Date 10/11/1985 DA4314

Area DEVONPORT / TAMAR
 Aircraft VH-WJK
 Pilot J. DUNSON
 Operator Z. BELDI
 Detaman _____
 Airport Devonport
 Take off 07:37 land 09:16
 Flying time 1:39 hours

MAGNETOMETER
 Sample Rate 33.4 sec.
 Sensitivity 0.2 nT
 Mag. F.S.D. 50 1.500 nT

SPECTROMETER
 Sample Rate 7.0 sec.
 Crystal Size 16.8L / 33.8L

ALTIMETER
 Survey Altitude 150 metres
 Radar FSD _____ metres
 Baro. Pres. _____ Cal. _____

GND. CALS (FSD) IN FLIGHT
 K40 1.500 1.50
 Bi214 1.500 1.50
 TL208 1.500 1.50
 Total Count 5000 1.500

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
X01000	5853	158600	07:39	07:41			TEST L	SR sub.
01001	5860	158780	07:43	07:44			TEST L	
91030	5878	161030	07:49	08:08			TL3W	
10140	6103	162920	08:15	08:32			14S	
X10150	6292	163280	08:33	08:36			15N	schub

REMARKS: MAG BASE SIN OUT OF SPECS
DATA INVALIDATED

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geoMetrics		OPERATORS FLIGHT REPORT				FLIGHT No. 19		
INTERNATIONAL CORPORATION		Date 11.11.1985 JHY 315				JOB No. 9312		
Area <u>Deven Port / TAMAR</u>		MAGNETOMETER		SPECTROMETER				
Aircraft <u>14-NJK</u>		Sample Rate <u>0.45</u> sec.		Sample Rate sec.				
Pilot <u>J. JOHNSON</u>		Sensitivity <u>0.2</u> nT		Crystal Size 16.8L / 33.8L				
Operator <u>R. BELDI</u>		Mag. F.S.D. <u>2 10 1 120</u> nT		GND. CALS (FSD) IN FLIGHT				
Dataman		ALTIMETER		K40				
Airport <u>Deven Port</u>		Survey Altitude <u>1300</u> metres		Bi214				
Take off <u>16:23</u> land <u>18:09</u>		Radar FSD metres		TL208				
Flying time <u>01:45</u> hours		Baro. Pres. <u>1022</u> Cal. <u>-0.18</u>		Total Count				
LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
097300	003100	140	16:42				ES	E YAWS.
997300	003110	0390					EN	✓
997400	006810	0800					S	ROLLS
997400	010010	1130					N	✓
997500	013200	1400					S	PITCHES.
997500	016010	1690					N	✓
997300	021400	2230					E	YAWS
997300	024210	2510					W	✓
997400	027310	2830					E	ROLLS.
997400	030210	3110					W	ROLLS
997500	033000	3430					E	PITCHES.
997500	035100	3610					W	PITCHES.
998300	037710	3850					045° NE	YAWS.
998300	042510	4350					225° SW	✓
998400	045310	4620					045° NE	ROLLS.
998400	048210	4960					225° SW	✓
998500	051210	5230					045° NE	PITCHES
998500	054310	5550					225° SW	✓
REMARKS: ① G714 IN TIME BASE CYCLE MODE								
② G714 LEFT TO RUN THROUGHOUT TEST SO FIDS ARE ONLY APPROX AS OBSERVED.								
③ OPERATOR EXTREMELY GREEN IN COLOR.								

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LINE No. (Header)		FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
		START	END	START	END	START	END		
99830	0586105960			17.35		135°		SE	YAWS
99830	0614106230					315°		NW	✓
99840	0639106540					135°		SE	ROLLS
99840	0673106830					315°		NW	✓
99850	0705107170					135°		SE	PITCHES
99850	0738107460					315°		NW	✓
9974	10776107880					000°		N	ROLLS RETURN
REMARKS: USE SECOND NORTH ROLLS AS LOAD BOX NOT SWITCHED ON DURING FIRST SET.									

geoMetrics
INTERNATIONAL CORPORATION

OPERATORS FLIGHT REPORT

Date 11/11/1985

FLIGHT No. 19
JOB No. 9312

Area HIGH ALT MAN. TEST
Aircraft VM-WJK
Pilot
Operator
Dataman
Airport
Take off land
Flying time hours

MAGNETOMETER
Sample Rate sec.
Sensitivity nT
Mag. F.S.D. / nT
ALTIMETER
Survey Altitude metres
Radar FSD metres
Baro. Pres. Cal.

SPECTROMETER
Sample Rate sec.
Crystal Size 16.8L / 33.8L
GND. CALS (FSD) IN FLIGHT
K40
Bi214
TL208
Total Count

Area <u>DEVONPORT / TAMAR</u>	MAGNETOMETER	SPECTROMETER	
Aircraft <u>VH-WJK</u>	Sample Rate <u>35.4</u> sec.	Sample Rate <u>70</u> sec.	
Pilot <u>J. EMANSON</u>	Sensitivity <u>0.2</u> nT	Crystal Size <u>16.8L / 33.8L</u>	
Operator <u>Z. BELDI</u>	Mag. F.S.D. <u>50</u> <u>500</u> nT	GND. CALS (FSD) IN FLIGHT	
Dataman	ALTIMETER	K40 <u>A 500</u> <u>A 50</u>	
Airport <u>Devonport Tas.</u>	Survey Altitude <u>150</u> metres	Bi214 <u>A 500</u> <u>A 50</u>	
Take off <u>08:34</u> land <u>16:42</u>	Radar FSD <u>850</u> metres	TL208 <u>A 500</u> <u>A 50</u>	
Flying time <u>5:50</u> hours	Baro. Pres. <u>1027</u> Cal. <u>-0.26</u>	Total Count <u>A 5000</u> <u>B 500</u>	

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
01000	00000	0100190	08:39	08:40				TSTL
X 10150	00019	101300	08:56	09:06				15S SCRIB G813 STICKS
			LANDED AT WYN VAB TO REPAIR					NAG 1 09:21
			TAKE OFF					11:52
101600	130103	210	12:06	12:22				16S
101700	0321	105130	12:23	12:39				17N
101800	0513	107030	12:40	12:56				18S
101900	0703	107450	12:57	13:01	S BND	TL 6		19N Break
101910	0745	109120	13:03	13:17	TL 6	N. BND		19N
102000	0912	110000	13:18	13:34				20S
102100	1100	112910	13:35	13:51				21N
102200	1291	114810	13:52	14:08				22S
102300	1481	116720	14:09	14:24				23N
102400	1672	118590	14:26	14:41				24S
102500	1859	120490	14:42	14:57				25N
102600	2049	122410	14:59	15:14				26S
102700	2241	124290	15:15	15:31				27N
102800	2429	126150	15:32	15:47				28S
102900	2615	128010	15:48	16:03				29N
103000	2801	129030	16:04	16:13	N. BND	TL 4		30S Break - Clouds
103100	2903	130050	16:14	16:22	TL 4	N. BND		31N
03000	3005	130250	16:34	16:36				TSTL

REMARKS: 110ft WIND 330°/10 KNOTS TEMP 14°C
LAND " 340°/10-15 KNOTS TEMP 17°C.
GENERALLY OVERCAST NEAR COAST AND PEAKS INLAND.

OPERATORS FLIGHT REPORT

FLIGHT No. 21

Date 12.11.1985 DAY 317

JOB No. 9312

Area DEVON. RPT. TAMAR
Aircraft VH-NJK
Pilot JOE JOHNSON
Operator Z. BELDI
Dataman -
Airport DEVON. RPT. / TAS.
Take off 08:21 land 13:02
Flying time 4:41 hours

MAGNETOMETER
Sample Rate 25.1 sec.
Sensitivity 0.2 nT
Mag. F.S.D. 50 1.500 nT

ALTIMETER
Survey Altitude 150 metres
Radar FSD 800 metres
Baro. Pres. _____ Cal. _____

SPECTROMETER
Sample Rate 70 sec.
Crystal Size 16.8L / 33.8L

GND. CALS (FSD) IN FLIGHT
K40 A.500 A.50
Bi214 A.500 A.50
TL208 A.500 A.50
Total Count A.5000 A.500

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
010003025130430			08:24	08:26				TST L
910413043132680			08:35	08:54				TL 4W
X 103203268132930			09:03	09:05				32S SCLUB NAV
103213293133890			09:08	09:17	N.B.	TL 4		32S
103303389134900			09:18	09:27	TL 4	N.B.		33N
103403490135870			09:28	09:37	N.B.	TL 4		34S
X 103503587136160			09:38	09:41				35N SCLUB NAV.
103413616136590			09:46	09:50	TL 3	TL 4		34S INFILL
103503659137580			09:51	09:59	TL 4	N.B.		35N
103603758138540			10:01	10:10	N.B.	TL 4		36S
103703854139530			10:11	10:19	TL 4	N.B.		37N
103803953140480			10:20	10:29	N.B.	TL 4		38S
103904048141400			10:30	10:37	TL 4	N.B.		39N
104004140142350			10:39	10:47	N.B.	TL 4		40S
104104235143310			10:48	10:57	TL 4	N.B.		41N
104204331144270			10:58	11:07	N.B.	TL 4		42S
104304427145200			11:08	11:16	TL 4	N.B.		43N
104704520146930			11:18	11:32				47S
103314693147980			11:35	11:44	TL 4	N.B.		33N
103214798149020			11:46	11:54	N.B.	TL 4		32S
103114902150050			11:55	12:04	TL 4	N.B.		31N
103015005151070			12:06	12:14	N.B.	TL 4		30S
102915107152120			12:15	12:24	TL 4	N.B.		29N
910635212154440			12:31	12:50				TL 6E

REMARKS: T/off WIND 330°/10 KNOTS TEMP 14°C
LANDING " 330°/10 KNOTS 19°C.
O/CAST IN AREA.

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OPERATORS FLIGHT REPORT

FLIGHT No. 22
JOB No. 9312

Date 13 / 14 / 1985

Area <u>DEVONPORT / TAMAR</u>	MAGNETOMETER	SPECTROMETER
Aircraft <u>VH-WJK</u>	Sample Rate <u>35M</u> sec.	Sample Rate <u>70M</u> sec.
Pilot <u>JOE JIMMISON</u>	Sensitivity <u>0.2</u> nT	Crystal Size <u>16.8L / 83.8L</u>
Operator <u>Z BELDI</u>	Mag. F.S.D. <u>50 / 500</u> nT	GND. CALS (FSD) IN FLIGHT
Dataman <u>-</u>	ALTIMETER	
Airport <u>DEVONPORT TAS</u>	Survey Altitude <u>150</u> metres	K40 <u>A 500</u> <u>A 50</u>
Take off <u>13:48</u> land <u>15:43</u>	Radar FSD <u>850</u> metres	Bi214 <u>A 500</u> <u>A 50</u>
Flying time <u>01:55</u> hours	Baro. Pres. <u>10.5</u> Cal. <u>-0.06</u>	TL208 <u>A 500</u> <u>A 50</u>
		Total Count <u>A 500</u> <u>A 500</u>

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT	COMMENTS
	START	END	START	END	START	END		
91071	5444	15668	14:03	14:21			7L7N	
10151	5668	15860	14:25	14:41			15N	
10480	5860	16032	14:46	15:00			48S	
10490	6032	16205	15:01	15:14			49N	
1050	16205	16290	15:16	15:24			50S	
03000	6290	16313	15:35	15:37			751 L	

REMARKS:

341 Date 7/12/1985

Area B SW TASHANIA
Aircraft WJK
Pilot JOHNSON
Operator LYUS
Detaman
Airport QUEENSTOWN
Take off 1315 land 1430
Flying time 1-15 hours

MAGNETOMETER
Sample Rate 3.5M sec.
Sensitivity 0.2 nT
Mag. F.S.D. 50 / 500 nT
ALTIMETER
Survey Altitude 150M metres
Radar FSD 1007 250 FT
Baro. Pres. 1007 Cal. 0.659

SPECTROMETER
Sample Rate 70M sec.
Crystal Size 16.8L / 20L
GND. CALS (FSD) IN FLIGHT
K40 500 | 100
Bi214 500 | 100
TL208 500 | 100
Total Count 10,000 2000

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
10010	5431	6670	1335	1347	WBDY	E BDY	T1E	SEE BELOW CLOCK TAPPE # 1 ANA LOG 50 / 500
10020	6671	7930	1350	1401	E "	W "	T2W	CLOCK RESET.
X10030	7931	8770	1402	1412	W "	E "	T3E	VOID G714 HANG UP - VERY TURB MOVED TO COAST
X10040	8770		1417		N "	S "	T4S (TL4S)	VOID
	FLT ABORTED G714 HANGING UP IN SCAN MODE							
	NO BGND NO TEST LINE POST FLT. NO GND SAMA CHECK							

REMARKS
NOTE T1E - SUBTRACT 13 SECONDS FROM CLOCK.
NOTE ANALOG SCALES SET 50 & 500NT

342 Date 8/12/1985

Area <u>B SWTASMANIA</u>	MAGNETOMETER	SPECTROMETER
Aircraft <u>WJK</u>	Sample Rate <u>35m</u> sec.	Sample Rate <u>70m</u> sec.
Pilot <u>JOHNSON</u>	Sensitivity <u>0.2</u> nT	Crystal Size <u>16.8L / 34</u>
Operator <u>LYUS</u>	Mag. F.S.D. <u>50 / 500</u> nT	GND. CALS (FSD) IN FLIGHT
Dataman <u>GARDNER</u>	ALTIMETER	K40 <u>500</u> <u>100</u>
Airport <u>QUEENSTOWN</u>	Survey Altitude <u>150m</u> metres	Bi214 <u>500</u> <u>100</u>
Take off <u>10.00</u> land <u>15.20</u>	Radar FSD <u>2500 FT</u>	TL208 <u>500</u> <u>100</u>
Flying time <u>5-20</u> hours	Baro. Pres. <u>1068</u>	Total Count <u>0,000</u> <u>2000</u>
	Baro. Pres. <u>40.620</u> Cal. <u>+0.674</u>	

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
72030	8801	91140					BGND	LAST 14.26 R/LT 14.06
71030	9101	9320	1010	1013			T/LINE	
10031	9321	10560	1026	1038	WBDY	EBDY	T3E	
10040	10561	11820	1039	1050	E "	W "	T4W	
10050	11821	13070	1052	1104	W "	E "	T5E	
10060	13071	14360	1105	1116	E "	W "	T6W	
10070	14361	14480	1117	1119	W "	E "	T7E	VOID NAV
10071	14481	115700	1180	1132	W "	E "	T7E	
10080	15701	116950	1133	1144	E "	W "	T8W	
10090	16951	118220	1145	1157	W "	E "	T9E	ALTIMETER DROPS OVER STRAI VALLEYS
10100	18221	119490	1158	1209	E "	W "	T10W	
10110	19491	20780	1210	1222	W "	E "	T11E	
10120	20781	22060	1223	1234	E "	W "	T12W	
10130	22061	23320	1235	1248	W "	E "	T13E	
10140	23321	24570	1249	1259	E "	W "	T14W	
10150	24571	25800	1300	1312	W "	E "	T15E	
10160	25801	27030	1313	1324	E "	W "	T16W	
10170	27031	28270	1327	1338	W "	E "	T17E	TAPE #3 7/16 CLOCK FAST 1500 RECT.
10180	28271	29520	1339	1349	E "	W "	T18W	
10190	29521	30740	1350	1402	W "	E "	T19E	
10200	30741	31950	1403	1414	E "	W "	T20W	
10210	31951	33170	1415	1426	W "	E "	T21E	
10220	33171	34380	1427	1438	E "	W "	T22W	
10230	34381	35570	1439	1450	W "	E "	T23E	
10240	35571	36760	1451	1501	E "	W "	T24W	
81030	36761	36930	1506	1509			T/LINE	
82030	36931	37230					BGND	

REMARKS:

geoMetrics
INTERNATIONAL CORPORATION

OPERATORS FLIGHT REPORT

FLIGHT No. 04
JOB No. 9318B

Area B SW TASMANIA
Aircraft WJK
Pilot JOHNSON
Operator LYUS
Dataman GARDNER
Airport QUEENSTOWN
Take off 0750 land 0800 FOC
Flying time 0735 hours
5-10

MAGNETOMETER
Sample Rate 35m sec. (25+7)
Sensitivity 0.2 nT
Mag. F.S.D. 50 / 500 nT
ALTIMETER
Survey Altitude 150 metres
Radar FSD 2500FT metres
Baro. Pres. 1008 Cal. 1003

SPECTROMETER
Sample Rate 70m sec.
Crystal Size 16.8L / 304L
GND. CALS (FSD) IN FLIGHT
K40 500 | 100
Bi214 500 | 100
TL208 500 | 100
Total Count 10,000 (8000)

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
72040	37231	37560					BGND	TAPE # 4
71040	37561	37780	0752	0758			T/LINE	* 102 HDG DIGIT IS 0 ' NOT RECORDING
/ 10510	37781	38750	0804	0814	W Bdy	E Bdy	T51E	
/ 10500	38751	39770	0817	0827	E "	W "	T50W	
/ 10490	39771	40820	0828	0838	W "	E "	T49E	
/ 10480	40821	41870	0840	0849	E "	W "	T48W	
/ 10470	41871	42910	0850	0900	W "	E "	T47E	
/ 10460	42911	44090	0901	0912	E "	W "	T46W	
/ 10450	44091	45270	0913	0925	W "	E "	T45E	
/ 10440	45271	46440	0926	0936	E "	W "	T44W	
/ 10430	46441	47610	0937	0950	W "	E "	T43E	
/ 10420	47611	48790	0951	1002	E "	W "	T42W	
/ 10410	48791	49940	1003	1014	W "	E "	T41E	
/ 10400	49941	51090	1015	1026	E "	W "	T40W	
/ 10390	51091	52230	1027	1038	W "	E "	T39E	
/ 10380	52231	53370	1039	1049	E "	W "	T38W	
/ 10370	53370	54480	1050	1101	W "	E "	T37E	
/ 10360	54481	55590	1102	1112	E "	W "	T36W	
/ 10350	55591	56680	1113	1124	W "	E "	T35E	
/ 10340	56681	57790	1125	1135	E "	W "	T34W	
/ 10330	57791	58910	1137	1148	W "	E "	T33E	TAPE # 5
x 10320	58911	59030	1149	1151	E "	W "	T32W	VOID
/ 10321	59031	60150	1152	1203	E "	W "	T32W	
/ 10310	60151	61280	1204	1215	W "	E "	T31E	
/ 10300	61281	62430	1216	1227	E "	W "	T30W	
			RETURN REFUEL					

REMARKS:

NOTE T/COUNT ANALOG CHANGED TO 1000 CPS

(334) Date 10/12/1985

Area 'B' SW. TASMANIA Aircraft WJK Pilot JOHNSON Operator LYUS Dataman GARDNER Airport QUEENSTOWN Take off 1845 Land 1505 Flying time 1-50 hours	<p align="center">MAGNETOMETER</p> Sample Rate 35m sec (28+7) Sensitivity 0.2 nT Mag. F.S.D. 50 / 500 nT	<p align="center">SPECTROMETER</p> Sample Rate 70m sec Crystal Size 16.8L / 200C
	<p>ALTIMETER</p> Survey Altitude 150 metres Radar FSD 2500FT Baro. Pres. 1003 Cal. 1003 +0.737 Cal. +0.737	GND. CALS (FSD) IN FLIGHT K40 500 100 Bi214 500 100 TL208 500 100 Total Count 10,000 1,000

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
✓ 10290	62431	63230	1835	1843	W BDY	E BDY	T29E	LINE BROKEN COULDN'T GET OVER HILL!
✓ 10291	63231	63790	1845	1350	TL3	E BDY	T29E	CONTINUED.
✓ 10280	63791	64930	1351	1400	E BDY	W BDY	T28W	
✓ 10270	64931	66110	1401	1413	W "	E "	T27E	
X 10260	66111	66140	1414	1415	E "	-	T26W	VOID
✓ 10260	66141	67330	1416	1427	E "	W "	T26W	
✓ 10250	67331	68530	1428	1439	W "	E "	T25E	
X 10291	68531	68890	1440	1443	E "	TL2	T29E	PARTLINE
82050	68891	69110	1447	1450			T/LINE	
82050	69111	69420					BGND	

REMARKS:

geoMetrics
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OPERATORS FLIGHT REPORT

FLIGHT No. 06
JOB No. 9312B

Date 14/12/1985

Area <u>B SW TASMANIA</u>	MAGNETOMETER	SPECTROMETER
Aircraft <u>WJK</u>	Sample Rate <u>3.5</u> sec. (28+7)	Sample Rate <u>70m</u> sec
Pilot <u>JOHNSON</u>	Sensitivity <u>0.2</u> nT	Crystal Size <u>16.8L/328C</u>
Operator <u>LYUS</u>	Mag. F.S.D. <u>50 / 500</u> nT	GND. CALS (FSD) IN FLIGHT
Dataman <u>GARDNER</u>	ALTIMETER	K40 <u>500</u> <u>100</u>
Airport <u>QUEENSTOWN</u>	Survey Altitude <u>150</u> metres	Bi214 <u>500</u> <u>100</u>
Take off <u>0725</u> land <u>1205</u>	Radar FSD <u>2500 FT</u>	TL208 <u>500</u> <u>100</u>
Flying time <u>4-50</u> hours	Baro. Pres. <u>1016</u> Cal. <u>1017</u>	Total Count <u>10,000</u> <u>10,000</u>

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
72060	6972	169720					BGND	TAPE # 6
71060	6972	169930	0740	0742			T/LINE	
✓ 10520	6993	170850	0752	0802	W Bdy	E Bdy	T52E	
✓ 10530	7085	171820	0803	0811	E Bdy	W "	T53W	
✓ 10540	7182	172760	0812	0822	W "	E "	T54E	
✓ 10550	7276	173690	0823	0830	E "	W "	T55W	
✓ 10560	7369	174610	0831	0840	W "	E "	T56E	
✓ 10570	7461	175560	0841	0849	E "	W "	T57W	
✓ 10680	7556	176490	0850	0900	W "	E "	T58E	
✓ 10590	7649	177460	0901	0909	E "	W "	T59W	
✓ 10600	7746	178370	0910	0919	W "	E "	T60E	
✓ 10610	7837	179360	0920	0928	E "	W "	T61W	
✓ 10620	7930	180210	0929	0937	W "	E "	T62E	
✓ 10630	8021	181110	0938	0946	E "	W "	T63W	
✓ 10640	8111	182040	0947	0956	W "	E "	T64E	
✓ 10650	8204	182960	0957	1005	E "	W "	T65W	
✓ 10660	8296	183860	1006	1014	W "	E "	T66E	
✓ 10670	8386	184770	1015	1023	E "	W "	T67W	
✓ 10680	8477	185670	1024	1032	W "	E "	T68E	
✓ 10690	8567	186570	1033	1042	E "	W "	T69W	
✓ 10700	8657	187470	1043	1051	W "	E "	T70E	
10710	8747	188380	1052	1100	E "	W "	T71W	NEW VIDEO
10720	8838	188700	1102	1104	W "	E "	T72E	TAPE # 7 VOID
10720	8870	189610	1108	1116	W "	E "	T72E	
10730	8961	190530	1117	1125	E "	W "	T73W	
10740	9053	191440	1126	1134	W "	E "	T74E	
10750	9144	192330	1135	1143	E "	W "	T75W	
90050	9233	193540	1144	1155	S "	B "	T75N	

REMARKS: RETURN QUEENSTOWN TO REFUEL

OPERATORS FLIGHT REPORT

FLIGHT No. 07
JOB No. 9812B

(348) Date 14/12/1985

Area 'B' SW. TASMANIA	MAGNETOMETER	SPECTROMETER
Aircraft NJK	Sample Rate 3.5 m sec. (28+7)	Sample Rate 7.0 m sec.
Pilot JOHNSON	Sensitivity 0.2 nT	Crystal Size 16.8L / 2.0L
Operator LYUS	Mag. F.S.D. 50 / 500 nT	GND. CALS (FSD) IN FLIGHT
Dataman GARDNER	ALTIMETER	
Airport QUEENSTOWN	Survey Altitude 150 metres	K40 500 100
Take off 1240 land 1545	Radar FSD 2500 FT	Bi214 500 100
Flying time 3-05 hours	Baro. Pres. +0.459 Cal. +0.484	TL208 500 100
		Total Count 10,000 1000

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
90060	9354	9483	1250	1257	N BDY	S BDY	T16 S	TAPE #7 CONT.
10760	9433	95200	1302	1309	W BDY	E BDY	T76 E	
10770	9620	96100	1310	1318	E BDY	W BDY	T77 W	
10780	9610	96960	1319	1327	W "	E "	T78 E	
10790	9696	97790	1328	1335	E "	W "	T79 W	
10800	9779	98600	1336	1344	W "	E "	T80 E	
10810	9860	99410	1345	1352	E "	W "	T81 W	
10820	9941	100240	1353	1359	W "	E "	T82 E	
10830	0024	101070	1400	1408	E "	W "	T83 W	
10840	0107	101890	1409	1416	W "	E "	T84 E	
10850	0189	102690	1417	1423	E "	W "	T85 W	
10860	0269	103500	1425	1432	W "	E "	T86 E	
10870	0350	104280	1433	1440	E "	W "	T87 W	
10880	0428	105060	1441	1448	W "	E "	T88 E	
10890	0506	105830	1449	1456	E "	W "	T89 W	
10900	0583	106610	1457	1504	W "	E "	T90 E	NEW VIDEO
10910	0661	106890	1505	1507	E "	W "	T91 W	VOID NAV.
10910	0689	107700	1511	1517	E "	W "	T91 W	
81070	0770	108000					SGND	
81070	0800	108230	1529	1532			PLINE	

REMARKS:

(349) Date 15/12/1985

Area A N. TASMANIA
Aircraft WJK
Pilot JOHNSON
Operator LYUS
Dataman GARDNER
Airport QUEENSTOWN
Take off 0740 land 1150
Flying time 4-10 hours

MAGNETOMETER
Sample Rate 3.5m sec. (28+7)
Sensitivity 0.2 nT
Mag. F.S.D. 100 / 1000 nT

SPECTROMETER
Sample Rate 70m sec.
Crystal Size 16.8L / 20.8L

ALTIMETER
Survey Altitude 150 metres
Radar FSD 2500 Ft
Baro. Pres. 1015 Cal. 1018
+0.308 Cal. +0.568

GND. CALS (FSD) IN FLIGHT
K40 500 100
Bi214 500 100
TL208 500 100
Total Count 10,000 1,000

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
72230	00001	300					BGND	TAPE# 1132 A23 OVER WATER
71230	301	500	0819	0821			TLINE	
11081	501	1120	0825	0834	N.BDY	TL4 SBDY	T1085	INFILL
11451	1121	1930	0839	0846	NBDY	TL4	T1455	"
11131	1931	2280	0850	0856	TL5	SBDY	T1135	T1136 "VOID"
11132	2281	3070	0900	0907	TL5	SBDY	T1135	INFILL
11341	3071	3650	0910	0915	TL6	TL5	T134N	WRONG HDR 1132 VOID NAV
11341	3651	4220	0916	0922	TL5	TL6	T1345	INFILL
11041	4221	4970	0927	0933	SBDY	TL5	T104N	"
10932	4971	5710	0934	0942	TL5	SBDY	T935	"
10842	5711	6500	0948	0954	SBDY	TL5	T84N	"
10591	6501	7310	0958	1007	TL5	SBDY	T595	"
10912	7311	7570	1010	1012	SBDY	-	T91N	" VOID
10913	7571	8310	1016	1023	SBDY	TL5	T91N	"
10402	8311	9090	1033	1039	TL6	T4 N	T40N	"
10343	9091	9540	1040	1044	TL4	TL5	T345	" CLOUD END AT TL5
10441	9541	10800	1049	1103	SBDY	TL3	T44N	"
10681	10801	11290	1111	1115	TL6	SBDY	T685	"
10691	11291	11140	1116	1121	SBDY	TL6	T69N	
10344	11141	12550	1126	1133	SBDY	TL4	T34N	PRT INFILL
112	12551						T	
RETURN TO QUEENSTOWN TO REFUEL								

REMARKS:

(349) Date 15/12/1985

Area A N. TASMANIA
Aircraft WIK
Pilot JOHNSON
Operator LYUS
Dataman GARDNER
Airport QUEENSTOWN
Take off 1300 land 1540
Flying time 1625 1745 hours
3-30

MAGNETOMETER
Sample Rate 3.5 m sec (28+7)
Sensitivity 0.2 nT
Mag. F.S.D. 100 / 1000 nT

ALTIMETER
Survey Altitude 150 metres
Radar FSD 2500 metres
Baro. Pres. 1012 Cal. 1006

SPECTROMETER
Sample Rate 7.0 m sec.
Crystal Size 16.8L / 38.8L

GND. CALS (FSD) IN FLIGHT

K40	500	100
Bi214	500	100
TL208	500	100
Total Count	10,000	1000

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
1082	1255	1331	1324	1331	SBDY	TL5	T82N	TAPE # A23 CONT.
1081	1331	1402	1332	1338	TL5	SBDY	T81S	
1080	1402	1480	1339	1346	SBDY	TL5	T80N	
1079	1480	1554	1348	1355	TL5	SBDY	T79S	
1078	1554	1631	1356	1403	SBDY	TL5	T78N	
1077	1631	1706	1404	1411	TL5	SBDY	T77S	
1076	1706	1779	1412	1418	SBDY	TL5	T76N	
1075	1779	1852	1419	1426	TL5	SBDY	T75S	
1074	1852	1868	1427	1429	SBDY	NBDY	T74N	VOID NAV
10742	1868	1940	1431	1437	SBDY	TL5	T74N	
1073	1940	2014	1438	1445	SBDY	SBDY	T73S	
1072	2014	2090	1446	1453	SBDY	TL5	T72N	
1071	2090	2166	1454	1500	TL5	SBDY	T71S	
1070	2166	2236	1502	1509	SBDY	TL5	T70N	TAPE # A24 + 8
1045	2236	2350	1518	2328	TL5	NBDY	T45N	INFILL
	REFUEL		WYN YARD					
82240	2350	2380					BGND	OVERWATER
81240	2380	2398	1644	1646			T/LINE	AREA 'A'

REMARKS:

Area N. TASMANIA
Aircraft WJK
Pilot JOHNSON
Operator LYUS
Dataman GARDNER
Airport QUEENSTOWN
Take off 0830 land 1310
Flying time 4-40 hours

MAGNETOMETER
Sample Rate 35m sec. (26+7)
Sensitivity 0.2 nT
Mag. F.S.D. 100 / 1000 nT

SPECTROMETER
Sample Rate 70m
Crystal Size 16.8L

ALTIMETER
Survey Altitude 150m metres
Radar FSD 2500 metres
Baro. Pres. 1002 Cal. 0.781

GND. CALS (FSD) IN FLIGHT
K40 500 | 100
Bi214 500 | 100
TL208 500 | 100
Total Count 10,000 | 1000

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
72230	1800	2230					BGND	L ALT 1416 RALT 1416 DME ON STINGER MAG 000000
71230	2101	2430	0934	0936			T/LINE	TAPE #1
10451	0000	0111	0859	0910	N BDY	TL5	T45S	MAY BE RADIO STAKE RUNNING AT LINE START
10441	1111	1800	0914	0920	TL5	TL3	T44N	PART LINE DUE CLOUD INFILL
11081	2431	3050	0949	0955	N BDY	TL4	T108S	INFILL
11451	3051	3780	1002	1009	N "	TL4	T145S	"
11131	3781	4630	1013	1021	TL5	S BDY	T113S	"
11041	4631	4680	-	-	S BDY	TL5	T104N	" WROTE VOID NAV
11041	4680	5400	1027	1034	S "	TL5	T104N	" FORGOT LAST HDR DIGIT 2
11341	5401	5970	1040	1045	TL5	TL6	T134S	"
10932	5971	6680	1052	1059	S BDY	TL5	T93N	"
10842	6681	7450	1101	1109	TL5	S BDY	T84S	"
10912	7451	8180	1112	1118	S BDY	TL5	T91N	"
10591	8181	8980	1122	1129	TL5	S BDY	T59S	"
10442	8981	9760	1133	1140	S BDY	TL5	T44N	"
10402	9761	10520	1143	1150	TL4	TL6	T40S	"
10343	10521	11290	1152	1158	TL6	TL4	T34N	"
10681	11291	11790	1204	1208	TL6	S BDY	T68S	"
10699	11791	12300	1210	1215	S BDY	TL6	T69N	"
10701	12301	13040	1216	1223	TL5	S BDY	T70S	"
10711	13041	13780	1224	1230	S BDY	TL5	T71N	"
10721	13781	14530	1231	1238	TL5	S BDY	T72S	"
10731	14531	15300	1239	1246	S BDY	TL5	T73N	"
10741	15301	16070	1247	1254	TL5	S BDY	T74S	"
RETURN TO REFUEL								

REMARKS:

geoMetrics
INTERNATIONAL CORPORATION

OPERATORS FLIGHT REPORT
(353) Date 19/12/1985

FLIGHT No. 26
JOB No. 9318A

Area A' N TASHANIA
Aircraft WJK
Pilot JOHNSON
Operator LYUS
Dataman GARDNER
Airport QUEENSTOWN
Take off 1345 land 1540
Flying time 1-55 hours

MAGNETOMETER
Sample Rate 35 m sec. (28+7)
Sensitivity 0.2 nT
Mag. F.S.D. 100 / 1000 nT

ALTIMETER
Survey Altitude 150 metres
Radar FSD 2500 FT
Baro. Pres. 0.801 Cal. +0.810

SPECTROMETER
Sample Rate 70 m sec.
Crystal Size 16.8L

GND. CALS (FSD) IN FLIGHT

K40	<u>500</u>	<u>100</u>
Bi214	<u>500</u>	<u>100</u>
TL208	<u>500</u>	<u>100</u>
Total Count	<u>10,000</u>	<u>1000</u>

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
✓10881	11607	116870	1404	1412	SBDY	TL5	T82N	TAPE #2
✓10811	116871	117640	1413	1420	TL5	SBDY	T81S	
✓10801	117641	118420	1421	1429	SBDY	TL5	T80N	RADIO SPIKES R/WING MAG.
✓10791	118421	119250	1430	1438	TL5	SBDY	T79S	
✓10781	119251	120030	1439	1446	SBDY	TL5	T78N	
✓10771	120031	120840	1447	1454	TL5	SBDY	T77S	
✓10761	120841	121600	1455	1502	SBDY	TL5	T76N	
✓10751	121601	122400	1503	1510	TL5	SBDY	T75S	
	UNABLE FLY TEST		LINE DUE		RAIN			
82240	22401	23070					BGND	Vo ID SIGN NO WRONG.
82241	22401	22700					BGND	

REMARKS:

Date 31/12/1985

Area MAQUARIE HBR
Aircraft WJK
Pilot JOHNSON
Operator LYUS
Dataman GARDNER
Airport QUEENSTOWN
Take off 1140 land 1415
Flying time 2-35 hours

MAGNETOMETER
Sample Rate 2.5 m sec.
Sensitivity 0.2 nT
Mag. F.S.D. 50 / 500 nT
ALTIMETER
Survey Altitude 150m metres
Radar FSD 2500' metres
Baro. Pres. 1006 Cal. ±0.698

SPECTROMETER
Sample Rate 2.0 m sec.
Crystal Size 16.8L / 300
GND. CALS (FSD) IN FLIGHT
K40 500 100
Bi214 500 100
TL208 500 100
Total Count 1000 1000

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
72010		300					6GND	} DID THESE FROM HABIT - } NOT REQUIRED
71010	301	410	1151	1153			LINE	
✓ 30230	411	800	1154	1157	W BDY	E BDY	T23E	
✓ 30220	801	1180	1159	1202	E "	W "	T22W	
✓ 30210	1181	1530	1203	1206	W "	E "	T21E	
✓ 30200	1531	1890	1208	1211	E "	W "	T20W	
✓ 30190	1891		1212	1215	W "	E "	T19E	
✓ 30180		2680	1217	1220	E "	W "	T18W	
✓ 30170	2681	3140	1221	1225	W "	E "	T17E	
✓ 30160	3141	3620	1226	1230	E "	W "	T16W	
✓ 30150	3621	4020	1231	1235	W "	E "	T15E	
✓ 30140	4021	4460	1236	1240	E "	W "	T14W	
✓ 30130	4461	4890	1241	1244	W "	E "	T13E	AIR COND ON FID 4480 R/WING STEP
✓ 30120	4891	5380	1245	1250	E "	W "	T12W	
✓ 30110	5381	5810	1251	1255	W "	E "	T11E	
✓ 30100	5811	6290	1256	1301	E "	W "	T10W	WRONG HDR 30110
✓ 30090	6291	6700	1302	1305	W "	E "	T9E	
✓ 30080	6701	7150	1306	1310	E "	W "	T8W	
✓ 30070	7151	7560	1311	1314	W "	E "	T7E	
✓ 30060	7561	8010	1315	1319	E "	W "	T6W	
✓ 30050	8011	8460	1321	1325	W "	E "	T5E	
✓ 30040	8461	8900	1326	1331	E "	W "	T4W	
✓ 30030	8901	9320	1332	1336	W "	E "	T3E	
X 30020	9321	9370	1337	-	E "	W "	T2W	VOID
✓ 30021	9371	9820	1339	1343	E "	W "	T2W	
✓ 30010	9823	10250	1344	1348	W "	E "	T1E	
✓ 40020	10251	10430	1349	1350	N "	S "	TL2S	
✓ 40010	10431	10800	1352	1355	N "	S "	TL1S	

REMARKS: MARK
* USE FID 4480 AS START FID FOR T13E

Date 2/1/1986

Area <u>SW TASMANIA</u>	MAGNETOMETER	SPECTROMETER
Aircraft <u>WJK</u>	Sample Rate <u>35m/sec</u>	Sample Rate <u>70m/sec</u>
Pilot <u>JOHNSON</u>	Sensitivity <u>0.2 nT</u>	Crystal Size <u>16.8L/300</u>
Operator <u>HYUS</u>	Mag. F.S.D. <u>50 / 500 nT</u>	GND. CALS (FSD) IN FLIGHT
Date <u>GARDNER</u>	ALTIMETER	K40 <u>500</u> <u>100</u>
Airport <u>QUEENSTOWN</u>		Bi214 <u>500</u> <u>100</u>
Take off <u>0915 land 1340</u>	Survey Altitude <u>150</u> metres	TL208 <u>500</u> <u>100</u>
Flying time <u>4-25</u> hours	Radar FSD <u>2500 F</u> metres	Total Count <u>1000</u> <u>1000</u>
	Baro. Pres. <u>999</u> Cal. <u>1007</u>	

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
72010		300					BGND	TAPE #1
71010	301	510	0924	0927			1/1	
10160	511	1760	0937	0949	W BDY	E BDY	T16E	
10900	1761	2770	0950	1001	E "	W "	T20W	
10210	2971	4230	1003	1015	W "	E "	T31E	
10170	4231	5480	1016	1026	E "	W "	T17W	F-B 4350 SMALL SAR - USING
10280	5481	6690	1027	1039	W "	E "	T22E	
10180	6691	7930	1040	1052	E "	W "	T18W	DIURNAL REFLY
10190	7931	9180	1053	1105	W "	E "	T19E	
10150	9181	9420	1106	1108	E "	W "	T15E	WLD
10151	9421	10720	1112	1123	F "	W "	T15E	
10238	10721	11950	1125	1136	W "	E "	T23E	
10340	11951	13060	1140	1150	E "	W "	T34W	
10350	13061	14130	1151	1200	W "	E "	T35E	
10360	14131	15290	1201	1211	E "	W "	T36W	
10370	15291	16410	1213	1223	W "	F "	T37E	
10380	16411	17540	1224	1234	E "	W "	T32W	HDR WAS OK RE W/F END
10390	17541	18690	1235	1245	W "	E "	T31E	
10400	18691	19890	1246	1256	E "	W "	T40W	
10410	19891	21060	1257	1308	W "	E "	T41E	
10420	21061	22250	1310	1321	E "	W "	T42W	TAPE #2

REMARKS:

geoMetrics
INTERNATIONAL CORPORATION

OPERATORS FLIGHT REPORT

FLIGHT No. 02
JOB No. 9313 B

Date 2 / 1 / 19 86

Area <u>SW TASMANIA B</u>	MAGNETOMETER	SPECTROMETER
Aircraft <u>WJK</u>	Sample Rate <u>3.5 sec. (25+7)</u>	Sample Rate <u>70 m sec.</u>
Pilot <u>JOHNSON</u>	Sensitivity <u>0.2 nT</u>	Crystal Size <u>16.8L / 38.8L</u>
Operator <u>LYUS</u>	Mag. F.S.D. <u>50 / 500 nT</u>	GND. CALS (FSD) IN FLIGHT
Detaman <u>GARDNER</u>	ALTIMETER	K40 <u>500</u> <u>100</u>
Airport <u>QUEENSTOWN</u>	Survey Altitude <u>150</u> metres	Bi214 <u>500</u> <u>100</u>
Take off <u>1415</u> land <u>1720</u>	Redar FSD <u>2500 FT</u> metres	TL208 <u>500</u> <u>100</u>
Flying time <u>3-05</u> hours	Baro. Pres. <u>1007</u> Cal. <u>1010</u>	Total Count <u>10000</u> <u>1000</u>

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
10540	2225	123250	1435	1443	W 83	F 83	T51E	TAPE #2 CONT.
10560	2235	124300	1414	1454	F "	W "	T5 W	
10520	2435	125350	1455	1514	W "	E "	T50E	
10530	2535	126340	1505	1514	F "	W "	T50W	
10540	2634	127300	1515	1524	W "	F "	T54E	VIDE J. TAPE THIS LINE
10550	2733	128300	1525	1534	F "	W "	T55W	
10560	2830	129240	1535	1544	W "	F "	T56E	
10570	2924	130200	1545	1554	E "	W "	T57W	PAUSE ON AFTER LINE START.
10580	3020	131180	1555	1603	W "	F "	T58E	
10590	3118	132160	1604	1613	E "	W "	T59W	PAUSE
10600	3216	133090	1614	1623	W "	F "	T60E	
10610	3309	134000	1624	1633	E "	W "	T61W	
10620	3405	135010	1634	1643	W "	F "	T62E	
10720	3501	135970	1643	1651	E "	W "	T63W	PAUSE ON AFTER LINE
81020	3557	136110	1704	1706			T64E	
82020	3619	136470					PEND	

REMARKS:

geoMetrics
INTERNATIONAL CORPORATION

OPERATORS FLIGHT REPORT

FLIGHT No. 43
JOB No. 93128

Date 3/1/1986

Area: <u>S.W. TASMANIA '81</u>	MAGNETOMETER	SPECTROMETER
Aircraft: <u>WJIK</u>	Sample Rate: <u>35</u> sec. (35+7)	Sample Rate: <u>7.0</u> sec.
Pilot: <u>JOHNSON</u>	Sensitivity: <u>0.2</u> nT	Crystal Size: <u>16.8L/301</u>
Operator: <u>LYUS</u>	Meg. F.S.D.: <u>5.0 / 500</u> nT	GND. CALS (FSD) IN FLIGHT
Dataman: <u>GARDNER</u>	ALTIMETER	K40: <u>5.00</u> / <u>1.00</u>
Airport: <u>QUEENSTOWN</u>	Survey Altitude: <u>150</u> metres	Bi214: <u>5.00</u> / <u>1.00</u>
Take off: <u>1405</u> land: <u>1725</u>	Radar FSD: <u>1013</u> / <u>2500</u> metres	TL208: <u>5.00</u> / <u>1.00</u>
Flying time: <u>3-05</u> hours	Baro. Pres.: <u>+0.547</u> Cal: <u>+0.591</u>	Total Count: <u>10,000</u> / <u>1,000</u>

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
72030	36491	36790					BEND	TAPE #3
71030	36791	36990	1419	1421			T/LINE	
10880	36991	37760	1434	1442	W. BODY	E. BODY	T88E	VOID NAV } ^{VERY} DIFFUS
10870	37761	38570	1443	1451	E "	W "	T87W	VOID NAV }
10881	38571	38700	1452	-	W "	E "	T88E	SURUB NAV }
10882	38701	39470	1500	1506	W "	E "	T88E	
10871	39471	40260	1507	1514	E "	W "	T87W	
10890	40261	41040	1515	1523	W "	E "	T89E	
10900	41041	41840	1523	1531	E "	W "	T90W	
10910	41841	42600	1532	1539	W "	E "	T91E	
10920	42601	43360	1540	1547	E "	W "	T92W	
10930	43361	44120	1548	1555	W "	E "	T93E	
10940	44121	44890	1556	1603	E "	W "	T94W	
10950	44891	45640	1604	1610	W "	E "	T95E	
10960	45641	46400	1611	1618	E "	W "	T96W	
10970	46401	47160	1619	1626	W "	E "	T97E	
10980	47161	47940	1627	1635	E "	W "	T98W	
10990	47941	48700	1636	1642	W "	E "	T99E	
14000	48701	49490	1643	1651	E "	W "	T100W	
82030	49491	49790					BEND	
80050	49791	49980	1656	1657			T15N	VOID
90051	49921	51130	1658	1709	S BODY	N BODY	T15N	
81030	51121	51350	1711	1713			T/LINE	END TAPE #3

REMARKS:

Area: B SW TASMANIA
Aircraft: WJK
Pilot: JOHNSON
Operator: LYUS
Detaman: GARDNER
Airport: GREENSTOWN
Take off: 0710 land: 0745
Flying time: 0915 1015 hours

MAGNETOMETER
Sample Rate: 35m sec.
Sensitivity: 0.2 nT
Mag. F.S.D.: 50 / 500 nT

ALTIMETER
Survey Altitude: 150 metres
Radar FSD: 2500 FT metres
Baro. Pres: 1003 Cal: 1002

SPECTROMETER
Sample Rate: 2000 sec.
Crystal Size: 16.8L / 33.8L

GND. CALS (FSD) IN FLIGHT

K40	<u>500</u>	<u>100</u>
Bi214	<u>500</u>	<u>100</u>
TL208	<u>500</u>	<u>100</u>
Total Count	<u>10,000</u>	<u>10,000</u>

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS	
	START	END	START	END	START	END			
72040	51351	51650					BGN)	TAPE # 4	
71040	51651	51850	0723	0725			T/LINE		
90040	51851	53500	0729	0744	N BDY	S BDY	TL4S		
11520	53501	53670	0913	0915	W BDY	E BDY	T150E	TIACLOCK LOSS VOID TIME	
11521	53671	53530	0916	0918	E "	W "	T152W		
11510	53831	54000	0919	0920	W "	E "	T151E		
11500	54001	54170	0921	0923	E "	W "	T150W		
11490	54171	54350	0924	0925	W "	E "	T149E		
11480	54351	54530	0926	0928	E "	W "	T148W	SEVERE TURB CLOUD	
82040	53531	53830					BGN)		
114			VERY RAPID WEATHER DETERIORATION						
114			RETURN BASE - NO TEST LINE DUE HEAVY RAIN						
			LOW CLOUD						

REMARKS:

geoMetrics
INTERNATIONAL CORPORATION

OPERATORS FLIGHT REPORT

FLIGHT No. 45
JOB No. 9312 B

Date 5/1/1986

Area: <u>B SW TASMANIA</u>	MAGNETOMETER	SPECTROMETER
Aircraft: <u>WJK</u>	Sample Rate: <u>3.5m. sec.</u>	Sample Rate: <u>70m. sec.</u>
Pilot: <u>JOHNSON</u>	Sensitivity: <u>0.2 nT</u>	Crystal Size: <u>16.8L 1308T</u>
Operator: <u>LYUS</u>	Mag. F.S.D.: <u>50 / 500 nT</u>	GND. CALS (FSD) IN FLIGHT
Dataman: <u>GARDNER</u>	ALTIMETER	K40: <u>5.00</u> <u>1.00</u>
Airport: <u>QUEENSTOWN</u>	Survey Altitude: <u>1.50m. metres</u>	BI214: <u>5.00</u> <u>1.00</u>
Take off: <u>0800</u> land <u>1310</u>	Radar FSD: <u>2500 FT metres</u>	TL208: <u>5.00</u> <u>1.00</u>
Flying time: <u>5-10</u> hours	Baro. Pres: <u>1011</u> Cal: <u>1015</u>	Total Count: <u>10.000</u> <u>1.000</u>

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
72050	53531	54130					BGN	Tape # 4 cont
71050	54131	54320	0841	0843			T/LINE	
90020	54321	56280	0848	0905	N BDY	S BDY	TL2S	
90030	56281	55330	0907	0924	S BDY	N BDY	TL3N	
90010	55221	60450	0936	0949	N "	S "	TL1S	
10470	60451	61670	0953	0955	W "	E "	T147E	
11460	60671	60570	0956	0955	E "	W "	T146W	
11450	60571	61070	0957	1000	W "	E "	T145E	
11440	61071	61260	1001	1003	E "	W "	T144W	
11430	61261	61440	1004	1006	W "	E "	T143E	
11420	61441	61640	1007	1009	E "	W "	T142W	
11410	61641	61830	1010	1012	W "	E "	T141E	
11400	61831	62020	1012	1013	E "	W "	T140W	
11370	62021	62210	1014	1016	W "	E "	T137E	
11380	62211	62400	1017	1019	E "	W "	T138W	
11370	62421	62640	1020	1022	W "	E "	T137E	
11360	62641	62830	1023	1025	E "	W "	T136W	
11350	62831	63150	1026	1028	W "	E "	T135E	
11340	63151	63420	1029	1031	E "	W "	T134W	
11330	63421	63690	1032	1034	W "	E "	T133E	
11320	63691	63980	1035	1038	E "	W "	T132W	
11310	63981	64260	1039	1042	W "	E "	T131E	
11300	64261	64570	1042	1046	E "	W "	T130W	
11290	64571	64870	1047	1049	W "	E "	T129E	
11280	64871	65290	1050	1053	E "	W "	T128W	
11270	65291	65560	1054	1057	W "	E "	T127E	
11260	65561	65900	1058	1101	E "	W "	T126W	
11250	65901	66250	1102	1105	W "	E "	T125E	

REMARKS:

5

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INTERNATIONAL CORPORATION

OPERATORS FLIGHT REPORT

FLIGHT No. 05 CONT

Date 5/1/1986

JOB No. 9312 B

Area B SW TASMANIA
Aircraft WJK
Pilot JOHNSON
Operator LYUS
Detaman GARDNER
Airport QUEENS TOWN
Take off land
Flying time hours

MAGNETOMETER
Sample Rate 35 m sec (25+7)
Sensitivity 0.2 nT
Mag. F.S.D. 50 / 500 nT
ALTIMETER
Survey Altitude 150 metres
Radar FSD 2500 FT metres
Baro. Pres. Cal.

SPECTROMETER
Sample Rate 70 m sec
Crystal Size 16.8L
GND. CALS (FSD) IN FLIGHT
K40 500 100
Bi214 500 100
TL208 500 100
Total Count 16000 1000

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
90026	66250	66810	1109	1116	1158	1125	T2N	
90060	66811	67680	1126	1134	S BDY	N BDY	T6N	
10010	67681	68590	1142	1153	W BDY	E BDY	T1E	
10050	68591	70250	1154	1206	E "	W "	T5W	
10060	70251	71540	1207	1219	W "	F "	T6E	TAPE #5
10070	71541	72550	1230	1233	E "	W "	T7W	
10080	72551	74150	1234	1244	W "	E "	T8E	
10090	74151	75430	1245	1258	E "	W "	T9W	
80050							T10E	RETURN FOR REFUEL

REMARKS:

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INTERNATIONAL CORPORATION

OPERATORS FLIGHT REPORT

FLIGHT No. 06

Date 1/19/86

JOB No. 9312B

Area <u>B SW TASMANIA</u> Aircraft <u>WJK</u> Pilot <u>JOHNSON</u> Operator <u>LYUS</u> Dataman <u>GARDNER</u> Airport <u>QUEENSTOWN</u> Take off <u>1340</u> land <u>1650</u> Flying time <u>3-10</u> hours	MAGNETOMETER Sample Rate <u>35</u> m/sec Sensitivity <u>.03</u> nT Mag. F.S.D. <u>50 / 500</u> nT		SPECTROMETER Sample Rate <u>70</u> m/sec Crystal Size <u>16.8L / 130E</u>	
	ALTIMETER Survey Altitude <u>1500</u> metres Radar FSD <u>2500 Ft</u> metres Baro. Pres. <u>1015</u> Cal. <u>1015</u>		GND. CALS (FSD) IN FLIGHT K40 <u>500</u> <u>100</u> Bi214 <u>500</u> <u>100</u> TL208 <u>500</u> <u>100</u> Total Count <u>10000</u> <u>1000</u>	

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
10100	75430	76720	1357	1408	W BDY	E BDY	T10E	TAPE #5 CONT WPCNGADR 90100 ALTIMETER DRIFT
10110	76721	78030	1409	1421	E BDY	W BDY	T11W	
10120	78031	79350	1422	1433	W "	E "	T12E	
10130	79351	80660	1434	1446	E "	W "	T13W	
10140	80661	81980	1447	1458	W "	E "	T14E	
10180	81981	83290	1459	1511	E "	W "	T18W	DIURNAL REFLT
10250	83291	84470	1512	1523	W "	E "	T24E	
10270	84471	85660	1524	1534	E "	W "	T27W	
10271	85661	85900	1535	1538	W BDY	E BDY	T27E	
10280	85901	87090	1542	1553	W BDY	E BDY	T28E	
10290	87091	88270	1553	1605	E BDY	W BDY	T29W	
10300	88271	89450	1606	1615	W "	E "	T30E	
10310	89451	90610	1616	1627	E "	W "	T31W	
82060	90611	90910					BND	
81060	90911	91120	1639	1641			LINE	

REMARKS:

geoMetrics
INTERNATIONAL CORPORATION

OPERATORS FLIGHT REPORT

FLIGHT No. 07
JOB No. 9312B

Date 6/1/1986

Area B. SW TASMANIA
Aircraft WJK
Pilot JOHNSON
Operator LYUS
Dataman GARDNER
Airport GUFFNSTOWN
Take off 0755 land 0835
Flying time 0755 1720 hours
0.10 5-25 6-05

MAGNETOMETER
Sample Rate 35.1 sec. (25+7)
Sensitivity 0.2 nT
Mag. F.S.D. 50 / 500 nT

SPECTROMETER
Sample Rate 70. sec.
Crystal Size 16.8L / 20.8L
GND. CALS (FSD) IN FLIGHT
K40 500 100
Bi214 500 100
TL208 500 100
Total Count 10,000 1,000

ALTIMETER
Survey Altitude 150 metres
Radar FSD 2500 F metres
Baro. Pres. 1020 366 Cal 1019 4040

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
72070	91121	91420					BGND	TAPE #6
71070	91421	91640	0910	0912			LINE	
	LOW CLOUD-RAIN IN SURVEY AREA - RETURN BASE							
10630	91641	92530	1218	1227	W Bdy	E Bdy	T63E	
10640	92531	93510	1228	1237	E Bdy	W Bdy	T64W	
10650	93511	94440	1238	1246	W "	E "	T65E	
10660	94441	95360	1247	1255	E "	W "	T66W	
10670	95361	96310	1256	1305	W "	E "	T67E	
10680	96311	97250	1306	1314	E "	W "	T68E	
10690	97251	98160	1315	1324	W "	E "	T69E	
10700	98161	99070	1325	1333	E "	W "	T70E	
10710	99071	100000	1334	1343	W "	E "	T71E	
10730	100001	100920	1344	1350	E "	W "	T73E	AURUNG HDR 10710
10740	100921	101835	1353	1401	W "	E "	T74E	
10750	101836	102760	1402	1411	E "	W "	T75E	
10760	102761	103660	1412	1419	W "	E "	T76E	
10770	103661	103510	1420	1423	E "	W "	T77W	VOID
10771	103901	104830	1426	1435	E "	W "	T77W	
10780	104831	105690	1436	1444	W "	E "	T78E	
10790	105691	106530	1445	1452	E "	W "	T79W	
10800	106531	107400	1453	1501	W "	E "	T80E	
10810	107401	108240	1502	1509	E "	W "	T81W	
10820	108241	109070	1510	1518	W "	E "	T82E	
10830	109071	109900	1519	1526	E "	W "	T83W	
10840	109901	110710	1527	1534	W "	E "	T84E	
10850	110711	110530	1535	1542	E "	W "	T85W	
10860	110531	111470	1543	1548	W "	TL3	T86E	LINE IS RECENT - NEW DISC TAPE
10861	111471	112520	1551	1557	TL3	E Bdy	T86E	TAPE #7

REMARKS: * MARK TAPE #6 HAS DATA TO THE ECT. MARKER AND NO FILE GAPS.

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OPERATORS FLIGHT REPORT

Date 6/1/1986

FLIGHT No. 07 CONT

JOB No. 9312 B

Area B SW TASMANIA
 Aircraft WJK
 Pilot JOHNSON
 Operator LYUS
 Detaman GARDNER
 Airport QUEENSTOWN
 Take off land
 Flying time hours

MAGNETOMETER
 Sample Rate 35M sec. (2317)
 Sensitivity 0.2 nT
 Mag. F.S.D. 50 / 500 nT

ALTIMETER
 Survey Altitude 750 metres
 Radar FSD 2500 FT metres
 Baro. Pres. Cal. 409

SPECTROMETER
 Sample Rate 2.0 m. sec.
 Crystal Size 16.8L733BL

BND. CALS (FSD) IN FLIGHT

K40	<u>500</u>	<u>100</u>
BI214	<u>500</u>	<u>100</u>
TL208	<u>500</u>	<u>100</u>
Total Count	<u>10000</u>	<u>10000</u>

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
11010	1252	1326	1558	1605	E BDY	W BDY	T101W	LALT 1313 KAL1343
11020	1326	1399	1606	1613	W BDY	E BDY	T102E	
11030	1399	1470	1614	1620	E BDY	W BDY	T103W	
11040	1470	1545	1621	1628	W "	E "	T104E	
11050	1545	1620	1629	1635	E "	W "	T105W	
11060	1620	1693	1636	1642	W "	E "	T106E	
11070	1693	1760	1643	1649	E "	W "	T107W	
82070	1760	1790					BGND	
81070	1790	1810	1703	1705			1/2 LINE	

REMARKS:

Area <u>SW TASMANIA</u> Aircraft <u>WJK</u> Pilot <u>JOHNSON</u> Operator <u>LYUS</u> Dataman <u>GARDNER</u> Airport <u>QUEENSTOWN</u> Take off <u>0800</u> land <u>1325</u> Flying time <u>5-25</u> hours	MAGNETOMETER Sample Rate <u>35</u> sec. (28+7) Sensitivity <u>0.2</u> nT Mag. F.S.D. <u>50 / 500</u> nT		SPECTROMETER Sample Rate <u>7.0</u> m. sec. Crystal Size <u>16.8L / 92.8L</u>	
	ALTIMETER Survey Altitude <u>150</u> metres Radar FSD <u>2500</u> Ft. <u>1074</u> metres Baro. Pres. <u>40.420</u> Cal. <u>40.508</u>		GND. CALS (FSD) IN FLIGHT K40 <u>500</u> <u>100</u> Bi214 <u>500</u> <u>100</u> TL208 <u>500</u> <u>100</u> Total Count <u>10,000</u> <u>1,000</u>	

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
72080	18110	18420					BGND	TAPE #7 CONT
71080	18421	18620	0814	0816				1/2 LINE
11240	18621	19270	0831	0837	W BDY	E BDY		T124E
11230	19271	19700	0836	0843	E	WLD		T123W DE PPLE + GSPD TO 2500 - NO DATA SAMPLE
11231	19701	20060	0845	0846	W	TLQ		T123E PART LINE
11220	20061	20670	0853	0859	W	E		T122E
11210	20671	21300	0900	0905	E	W		T121W
11200	21301	21930	0906	0912	W	E		T120E
11190	21931	22560	0913	0919	E	W		T119W
11180	22561	23190	0920	0926	W	E		T118E
11170	23191	23820	0927	0933	E	W		T117W
11160	23821	24440	0934	0940	W	E		T116E
11150	24441	25080	0941	0947	E	W		T115W
11140	25081	25730	0948	0954	W	E		T114E
11130	25731	26370	0955	1001	E	W		T113W
11120	26371	27040	1002	1008	W	E		T112E
11110	27041	27730	1009	1016	E	W		T111W
11100	27731	28330	1017	1022	W	E		T110E CLOCK READS +6 SECS FIRST TWO DIGITS BLANK
10090	28331	29050	1023	1030	F	W		T109W CLOCK RESET FOR T109W
11080	29051	29000	1031	1031	W	E		T108E VOID NAV
11081	29101	29330	1034	1037	W	E		T108E VOID NAV
11082	29330	30010	1040	1046	W	E		T108E
10430	30011	31200	1057	1108	E	W		T143W
10440	31201	31510	1109	1113	W	E		T144E VOID LINEING PROB
10441	31511	32720	1115	1125	W	E		T144E
10445	32721	33720	1126	1137	E	W		T145W
10460	33721	35120	1139	1149	W	E		T146E TAPE #3
10470	35121	36140	1150	1159	E	W		T147W

REMARKS:
 MARK BETWEEN T144E + T108E CLOCK GOT BLANKS
 FOR "48" FIRST TWO DIGITS AND JUMPED +6 SECS
 TIME CORRECTED FOR T109E * THIS RT SCRUBBED
 DURING STORM

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OPERATORS FLIGHT REPORT

FLIGHT No. 48
JOB No. 93/23

Date 7/1/1986

Area <u>NB SW TASMANIA</u>	MAGNETOMETER	SPECTROMETER	
Aircraft <u>WJK</u>	Sample Rate <u>35m</u> sec.	Sample Rate <u>7.0m</u> sec.	
Pilot <u>JOHNSON</u>	Sensitivity <u>0.2</u> nT	Crystal Size <u>16.8L/3.20L</u>	
Operator <u>LYUS</u>	Mag. F.S.D. <u>50 / 500</u> nT	GND. CALS (FSD) IN FLIGHT	
Dataman <u>GARDNER</u>	ALTIMETER	K40 <u>500</u> <u>100</u>	
Airport <u>QUEENSTOWN</u>		Bi214 <u>500</u> <u>100</u>	
Take off land		TL208 <u>500</u> <u>100</u>	
Flying time hours		Total Count <u>10,000</u> <u>1000</u>	
	Survey Altitude <u>150</u> metres		
	Radar FSD <u>2500</u> Ft metres		
	Baro. Pres. Cal.		

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
10470	36191	37170	1200	1210	W BDY	E BDY	T49E	
10480	37271	38330	1211	1220	E "	W "	T48W	
10020	38331	39000	1238	1239	W "	E "	T2E	
10030	39601	40890	1240	1252	E "	W "	T3W	
10040	40811	42170	1253	1304	W "	E "	T4E	
81080	42171	42350	1310	1312			T/LINE	
82080	42381	42700					BGND	
		THIS FT SURVEY DUE						
		MAG STORM						

REMARKS:

T.M.
D.C.

Area B SW TASHANLIA
Aircraft WJK
Pilot JOHNSON
Operator LYUS
Dataman GARDNER
Airport QUEENSTOWN
Take off 1730 land 1340
Flying time 005 hours

MAGNETOMETER
Sample Rate 35.0 sec 35+7
Sensitivity 0.2 nT
Mag. # S.D. 5.0 / 5.00 nT
ALTIMETER
Survey Altitude 150 metres
Radar FSD 2500 Ft. metres
Baro. Pres. 1000 Cal. 1001
7577

SPECTROMETER
Sample Rate 70.0 m sec
Crystal Size 16.8L / 13.9L
GND. CALS (FSD) IN FLIGHT
K40 500 | 100
Bi214 500 | 100
TL208 500 | 100
Total Count 10,000 | 1000

LINE No. (Header)	FIDUCIALS				TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END				
72090	4271	1430	1100						BGN	TAPE #9.
71090	4301	1432	1150	1152					TLINE	
10021	4322	1445	1200	1213	W BDY	E BDY			T2E	30 KT WIND VERY TORENTIAL MTS.
10031	4452	1458	1214	1225	E "	W "			T3W	PRD USE BCTH LINE S
10041	4581	1470	1226	1235	W "	E "			T4E	
10051	4707	1482	1243	1253	E "	W "			T4W	
10260	4827	1494	1254	1307	W "	E "			T26E	
10360	4947	1506	1308	1318	E "	W "			T32W	
92070	5063	1507							BGN	
91010	5094	1511	1329	1330					TLINE	
RETURN TO BASE - RAIN FRONT APPROACHING.										

REMARKS:

Date 10/1/1986

Area SW TASMANIA
Aircraft WTK
Pilot JOHNSON
Operator LYUS
Dataman GARDNER
Airport COFFENSTEEN
Take off 1120 land 1555
Flying time 4-35 hours

MAGNETOMETER
Sample Rate 35 sec. (25+7)
Sensitivity 0.2 nT
Mag. F.S.D. 50 / 500 nT

SPECTROMETER
Sample Rate 70 sec.
Crystal Size 16.8L / 396L

ALTIMETER
Survey Altitude 150 metres
Radar FSD 2500 Ft
Baro. Pres. 1002 Cal. 999

GND. CALS (FSD) IN FLIGHT
K40 500 | 100
Bi214 500 | 100
TL208 500 | 100
Total Count 0.000 | 1000

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
	5116	5117						TAPE # 9 CONT
72100	5117	5147						BOND
71100	5147	5168						T16NF
10330	5168	5280	1138	1149	W Bdy	F Bdy		T33E
10431	5280	5400	1151	1202	E "	W "		T43W K40 USED THIS LINE
10441	5400	5520	1203	1214	W "	E "		T44E
10451	5520	5640	1215	1226	E "	W "		T45W
10461	5640	5760	1237	1240	W "	E "		T46E
10471	5760	5867	1241	1251	E "	W "		T47W
10491	5867	5976	1252	1302	W "	E "		T49E
10481	5976	6055	1303	1310	E "	W "		T45W
11081	6055	6154	1325	1332	W "	E "		T108E CORRECT HDR DATE 10/1/86
11091	6154	6222	1333	1339	E "	W "		T109W
11101	6222	6291	1340	1347	W "	E "		T110E
11111	6291	6358	1348	1354	E "	W "		T111W
11224	6358	6419	1356	1403	W "	E "		T124E
11232	6419	6451	1404	1409	E "	W "		T123W
11221	6451	6541	1410	1417	W "	E "		T122E
11211	6541	6599	1418	1423	E "	W "		T121W
11201	6599	6662	1424	1430	W "	E "		T120E
11191	6662	6725	1431	1437	E "	W "		T119W
11181	6725	6789	1438	1444	W "	E "		T118E
11171	6789	6852	1445	1451	E "	W "		T117W
11161	6852	6913	1452	1458	W "	E "		T116E
11151	6913	6976	1459	1504	E "	W "		T115W
11141	6976	7038	1505	1511	W "	E "		T114E
11131	7038	7101	1512	1518	E "	W "		T113W
11121	7101	7169	1519	1525	W "	E "		T112E
REMARKS:								
82100	7169	7190	1539					T110E
82400	7190	7220						BOND

Date 11 / 1 / 1986

Area: S 42-26.9 E 145-18.4
Aircraft: NJK
Pilot: JOHNSON
Operator: LYUS
Dataman: CARPNER
Airport: QUEENSTOWN
Take off: 0705 land: 0900
Flying time: 1-55 hours

MAGNETOMETER
Sample Rate: 0.45 sec.
Sensitivity: 0.2 nT
Mag. F.S.D.: 208 / nT

ALTIMETER
Survey Altitude: 6000 F BARO metres
Radar FSD: 100 metres
Baro. Pres.: 27.47 Cal. 10.754

SPECTROMETER 17
Sample Rate: sec.
Crystal Size: 16.8L / 33.8L
GND. CALS (FSD) IN FLIGHT
K40:
Bi214:
TL208:
Total Count:

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
00001		1					E	YAWS
2				650			W	"
3	651	960					E	PITCHES
4	961	1320					W	"
5	1321	1670					E	ROLLS
6	1671	2050					W	ROLLS
7	2051	2300					S	YAWS
8	2301	2720					N	"
9	2720	3150					S	PITCHES
10	3151	3500					N	"
11	3501	4000					S	ROLLS
12	4001	4200					N	"
13	4201	4590					SE	YAWS
14	4591	5080					NW	"
15	5081	5310					SE	PITCHES
16	5310	5730					NW	"
17	5731	6200					SE	ROLLS
18	6201	6410					NW	" VOID
19	6411	6600					SW	YAWS
20	6601	7000					NE	"
21	7001	7400					SW	PITCHES
22	7401	7730					NE	"
23	7731	8000					SW	ROLLS
24	8001	8280					NE	"

REFLOWN
HANSEN.2

REMARKS:

S 42-26.9 E 145-18.4
DECOMPENSATING LEVEL SHIFTS BEGAN APPEARING ON
RECORD AFTER FID 3501 - VERY LARGE SHIFTS ON R/WING
NOT VISIBLE ON BOTH OTHER IMAGE

Date 11/1/1986

Area <u>S 42-26.9 E 145-18.4</u>	MAGNETOMETER	SPECTROMETER
Aircraft <u>WJK</u>	Sample Rate <u>0.45</u> sec.	Sample Rate <u>-</u> sec.
Pilot <u>JOHNSON</u>	Sensitivity <u>0.8</u> nT	Crystal Size <u>16.8L / 33.8L</u>
Operator <u>LYUS</u>	Mag. F.S.D. <u>20</u> / nT	GND. CALS (FSD) IN FLIGHT
Dataman	ALTIMETER	K40.....
Airport <u>QUEENSTOWN</u>	Survey Altitude <u>6000 BARO</u> metres	BI214.....
Take off <u>1440</u> land <u>1550</u>	Radar FSD <u>1000</u> metres	TL208.....
Flying time <u>1-10</u> hours	Baro. Pres. <u>1076.6</u> Cal. <u>1000</u>	Total Count.....

LINE No. (Header)	FIDUCIALS		TIME		LINE LIMITS		LINE No. DIRECT.	COMMENTS
	START	END	START	END	START	END		
25	8231	8500					N	ROLLS
26	8501	8810					S	"
27	8811	9260					NW	YAWS
28	9261	9580					SE	"
29	9581	9850					NW	PITCHES
30	9851	10290					SE	"
31	10291	10570					NW	ROLLS
32	10571	10950					SE	"
33	10951	11450					SW	YAWS
34	11451	11830					NE	"
35	11831	12200					SW	PITCHES REZERO PROP POSN
36	12201	12500					NE	"
37	12501	13010					SW	ROLLS
38	13011	13400					NE	"
39	13400	13800					SW	" RPT. FLAPS RAISED BEFORE END

REMARKS: THESE MANEUVERS REPEAT VOID DATA ON HANSEN.1