NORTHERN TERRITORY
DEPARTMENT OF MINES & ENERGY

Operations and Processing Report

Airborne Geophysical Survey
EROMANGA
Northern Territory

3rd September 2001 – 2nd November 2001

FLOWN AND PROCESSED BY KEVRON GEOPHYSICS FOR AND ON BEHALF OF THE NORTHERN TERRITORY DEPARTMENT OF MINES & ENERGY

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INTRODUCTION

The Eromanga airborne geophysical survey lies on 1:250,000 maps Finke (SG53-6), Rodinga (SG53-2), Hale River (SG53-3), Illogwa Creek (SF53-15), Hay River (SF53-16), Tobermorey (SF53-12) and Sandover River (SF53-8). A total of 134,164 line kilometres over two areas, of magnetic, radiometric and digital elevation data were acquired and processed. It is intended that the acquired geophysical data will constitute a major addition to the fundamental geological database of the Northern Territory and will stimulate mineral exploration activity with a view to possible discovery and development of economic mineral deposits.

The project was managed by the Northern Territory Department of Mines & Energy under the supervision of the Chief Geophysicist Mr. Richard Brecianini. The data acquisition, quality control, data processing and mapping were carried out by Kevron Geophysics Pty Ltd of 10 Compass Road, Jandakot Airport, Western Australia.

Alice Springs, Numery, Marqua, Urandangi and Kulgera were used as the base of operations for the duration of the Eromanga survey. Mobilisation of crew commenced on Monday 2nd July 2001 and all crew members were on site on Tuesday 3rd July 2001. Production commenced on Tuesday 3rd July and was completed on 2nd November 2001. A total of 189 sorties were flown.

Acquisition was undertaken using three, twin engine Aero Commander 'Shrike' 500s aircraft, registration VH EXS, VH KAV and VH KAC. Periodic maintenance was performed by Kevron Aviation staff in Kununurra and Alice Springs.

The fixed wing traverse lines were flown at an interline spacing of 400 m, and a tie line spacing of 4000m. Traverse lines and tie lines were oriented 360° and 090° respectively. An average ground clearance of 80m was specified for both magnetic and radiometric sensors.

In field data verification and quality control was undertaken on a post flight basis on-site using a combination of Kevron proprietary software and ChrisDBF. QC products produced in the field included magnetometer 4^{th} difference noise plots, flight path deviation plots of cross-track and elevation and radiometric summed spectra plots. Diurnal plots of the Cs vapor base station magnetometer were plotted and assessed to ensure contract compliance. Some reflights were necessary due to excessive magnetic variation. Back-ups of all field data were written to compact disk and an additional copy sent to Kevron's data processing center in Perth where further QC products were produced and data processing undertaken.

1. SURVEY AREAS AND PARAMETERS

1.1 SURVEY AREA

Total line kilometres for the Eromanga Area was calculated to be 134,164 inclusive of tie lines and boundary overlap. A breakdown of the survey follows:

	Direction	Spacing	Shortest	Longest	Lines	Total
Eromanga Main Traverse Lines	0 – 180°	400 m	1.7 km	168.9 km	1479	107,212
Eromanga Main Tie Lines	90 -270°	4000m	50.8 km	256.1 km	100	11,556
Eromanga NE Traverse Lines	0 – 180°	400 m	9.25 km	167.9 km	148	14,001
Eromanga NE Tie Lines	90 -270°	4000m	52.5 km	52.8 km	26	1,394
Total Line Kilometres						**134,164**

The Eromanga survey is located approximately 50kms South East of Alice Springs between Longitude 133º 30'E and 138º E and Latitude 21º S and 26º S. The area is characterised by sand dunes, low scrub and spinifex with very little topographical relief. Mean daily maximum temperatures for Alice Springs (located near the central latitude of the survey area) from July to October is 32.5º. Mean daily minimum temperatures for the same period is 14.5º.

The following geographic coordinates based on the GDA94 datum and spheroid define the survey boundary.

	Latitude	Longitude	Easting	Northing
1	21° 00' 00" S	138° 00' 00" E	811893	7674924
2	24° 00' 00" S	138° 00' 00" E	805227	7342521
3	24° 00' 00" S	136° 00' 00" E	601714	7345412
4	24° 15' 00" S	136° 00' 00" E	601517	7317730
5	24° 15' 00" S	135° 30' 00" E	550757	7318003
6	25° 00' 00" S	135° 30' 00" E	550455	7234959
7	25° 00' 00" S	135° 00' 00" E	500000	7235052
8	25° 30' 00" S	135° 00' 00" E	500000	7179686
9	25° 30' 00" S	134° 30' 00" E	449750	7179591
10	25° 45' 00" S	134° 30' 00" E	449960	7124220
11	25° 45' 00" S	134° 00' 00" E	399919	7123933
12	25° 30' 00" S	134° 00' 00" E	399499	7179308
13	25° 30' 00" S	133° 30' 00" E	349242	7178836
14	25° 00' 00" S	133° 30' 00" E	348624	7234214
15	25° 00' 00" S	135° 00' 00" E	500000	7235052

16	24° 15' 00" S	135° 00' 00" E	500000	7318094
17	24° 15' 00" S	134° 00' 00" E	398482	7317730
18	24° 00' 00" S	134° 00' 00" E	398285	7345412
19	24° 00' 00" S	135° 30' 00" E	550855	7345683
20	23° 30' 00" S	135° 30' 00" E	551050	7401039
21	23° 30' 00" S	137° 30' 00" E	755306	7398906
22	21° 00' 00" S	137° 30' 00" E	759883	7675819
23	21° 00' 00" S	138° 00' 30" E	811893	7674924

The survey areas cover portions of the following 1:250,000 map sheets.

1:250,000 Sheet Reference:

Sandover River	SF53-8
Tobermory	SF53-12
Hay River	SF53-16
Illogwa Creek	SF53-15
Hale River	SG53-3
Rodinga	SG53-2
Finke	SG53-6

Refer to ***Appendix 1*** for survey area location diagram.

1.2 SURVEY PARAMETERS

Flight line direction	0° - 180°
Flight line spacing	400 metres
Tie line direction	90° - 270°
Tie line spacing	4000 metres
Mean Terrain Clearance	80 metres

Time Base and approximate sampling interval (in still air):

- Magnetics — 0.1 second (7 metres approx.)
- Radar altimeter — 0.1 second (7 metres approx)
- Radiometrics — 1.0 second (70 metres approx.)
- GPS system — 1.0 second (70 metres approx.)

2. LOGISTICS

2.1 OPERATIONS BASE AND SURVEY DATES

Base Airfield	Latitude	Longitude	Elevation
Urandangi	21º 35.4' S	138º 21.5' E	584 ft
Alice Springs	23º 48.4' S	133º 54.1' E	1789 ft
Kulgera	25º 50' S	133º 16.5' E	1700 ft
Numery	23º 50' S	135º 24' E	1500 ft
Marqua	22º 51' S	137º 20' E	800 ft

Alice Springs was selected as the preferred operating base as it provided all the facilities required for the safe operation of an airborne geophysical survey.

The township of Alice Springs offers comfortable accommodation and eating establishments, important for crew morale on large projects. A regular service by Commercial airlines allowed for the rapid dispatch of data to the DPC in Perth and the ability to rotate crews smoothly with little or no loss of production. Down time due to instrument failure was also minimised as replacement components could be despatched and delivered the following day.

Alice Springs airport is located 12km SE of Alice Springs and has three runways (1) (12/30) bitumen 2438 m in length by 45 m, (2) (06/24) gravel 1029 m by 18 m, and (3) (17/35) sealed 1133 m by 18 m. The airport is services by AIRBP and NT Fuels Pty Ltd (Shell Distributor). Urandangi airport is a sealed strip of 1100 m by 23 m. Numery, Marqua and Kulgera are all private strips.

Crew Accommodation:

Alice Springs	Desert Rose Inn Railway Terrace Alice Springs NT
Urandangi	Dangi Pub PMB 36 via Mt Isa 4825 Urandangi QLD
Numery	Numery Station PMB 256 via Alice Springs 0872
Kulgera	Kulgera Roadhouse Kulgera, NT
Marqua	Marqua Station Marqua, NT

Survey Dates and Production Summary

Refer to ***APPENDIX 4*** for detailed production summary.

Mobilisation	2nd July 2001
Production flying commenced	3rd July 2001
Production flying completed	2nd November 2001
Demobilisation	3rd November 2001
Total days on job	123
Total number of flights	172
Total production days	102
Total days lost due to weather	20
Total days lost due to aircraft maintenance	29
Total days lost due to Mag storms	2
Total days lost due to other causes	10
Total kilometres flown	134,164 km
Average acquisition rate - km per flight	780 km
km per production day	1,315 km

2.2 SURVEY AIRCRAFT AND FIELD CREW

Aircraft

Three twin engine Rockwell Aero Commander 500S 'Shrike': Registration VH EXS,KAV,KAC.

Field Crew

Pilots	Operators
Ivan Hussein	Ross Rackham
Max Eichorn	David Little
Rod Jamieson	Erron Gardner
John Sparkman	Rob Deopel
Mark Rooney	Kevin Cahill
Dave Chappell	Matt Gray
Melanie Cote	Leith Gardiner
	Mark Devenish

Crew Leader & Field QC — Ross Rackham

3. SURVEY EQUIPMENT, OPERATION AND QUALITY CONTROL

3.1 MAJOR EQUIPMENT SUMMARY

Aircraft Magnetometer	Geometrics G-822A Caesium vapour
Magnetic Compensator	RMS Instruments Automatic Aeromagnetic Digital Compensator (AADC)
Base station magnetometer	Geometrics G856 proton precession
Gamma-ray spectrometer	Exploranium GR820D, 256 channels
Gamma-ray detector	NaI(T1) crystals; 33.6L down;
Altimeter	Sperry AA-210 radio altimeter
Barometer	Rosemount 1241m
Thermometer	Rosemount Model 22000 temperature sensor
Navigation system	Fugro Omnistar in VBS (Virtual Base Station) mode, Ashtech G12 GPS receiver
Flight Track Recording	VHS video tracking camera with wide-angle lens
Data acquisition system	RMS Instruments DAS-8 digital acquisition system

3.2 MAGNETOMETER AND COMPENSATOR

A Geometrics G-822A optically pumped caesium vapour magnetometer was used for the survey with the sensor mounted in a tail stinger of each aircraft. The magnetometer sensor was coupled to a RMS Instruments Automatic Aeromagnetic Digital Compensator (AADC) to produce real time compensation for the effects of the aircraft's motion, changes in attitude and heading. The AADC interference coefficients were calculated from compensation flights carried out before the survey commenced and after aircraft maintenance. The AADC output data, with a resolution and sensitivity of 0.001 nT at a sampling rate of ten (10) times per second, were recorded digitally. The noise envelope for compensated magnetometer readings was less than 0.1 nT

3.3 BASE STATION MAGNETOMETER

GR823B caesium vapour base station magnetometers were used to measure the daily variations of the Earth's magnetic field. The base stations were established in areas of low gradient, away from cultural influences. These data were displayed and recorded on a Libretto laptop computer. The base stations were run continuously throughout the survey flying period with a sampling interval of 1 seconds and a sensitivity of 0.01 nT.

In addition to the caesium vapour base stations, a Geometrics G856 proton precession magnetometer base station recording at 5 second intervals was established at each of the base locations primarily as a storm monitor.

The base station data were closely examined after each days production flying to determine if any data had been acquired during periods of out-of-specification diurnal variation.

3.4 SPECTROMETER

An Exploranium GR-820, 256-channel gamma ray spectrometer with automatic crystal gain was used to record 256 channels of data in addition to the data from pre-set spectral windows. Total downward crystal array volume was 33.6 litres. System sample time and live time were also recorded. The digital were recorded once per second.

The pre-set spectral window limits were:

	Spectrometer channel number		**Equivalent energy levels (keV)**	
Window	**Lower**	**Upper**	**Lower**	**Upper**
Total Count	34	237	410	2.810
K-40	116	132	1 370	1 570
Bi-141	141	157	1 660	1 860
Tl-208	204	237	2 410	2 810
Cosmic	255	255	4 000	$\propto$ $\geq$4 meV

3.5 ALTIMETERS

A Sperry AA-210 Radio Altimeter system was used to measure ground clearance. The radio altimeter indicator provides an absolute altitude display from 0 - 750 metres (0 - 2,500 feet) with a sensitivity of 4 mV/ft.

A Rosemount 1241m barometer, with an output sensitivity of 0.666 mV/ft, was used to measure barometric altitude of the aircraft.

The radar altimeter system was checked prior to commencement of production flying. This involved flying the aircraft at 30 metre height intervals, up to a height of 300 metres over the base of operations airstrip using the aircraft's barometric altimeter as the height reference. Radar altimeter and GPS height data were recorded for each flight interval flown. A comparison of these data with the aircraft's barometric altimeter verified that the system was operating satisfactorily.

Altimeter data (radar and barometric) were digitally recorded every 0.1 seconds.

3.6 NAVIGATION AND FLIGHT PATH RECOVERY

Aircraft navigation was controlled by real-time differential GPS using an Ashtech G12 receiver in the aircraft with pseudo range corrections obtained through the commercial FUGRO VBS system transmitting via the OPTUS B satellite.

The position of the aircraft was fixed and recorded once per second and the on-board pilot guidance steering signal updated once every half second.

The flight path data were inspected after each flight for any deviations of flight path from specifications and for any gaps caused by momentary loss of satellites. Flight path quality was confirmed at Kevron's processing centre by plotting flight path maps at an appropriate scale, highlighting any portions of lines which exceeded the specified horizontal and altitude tolerances.

3.7 FLIGHT TRACK RECORDING SYSTEM

The flight path of the aircraft was recorded with a National CCD colour video camera and a VHS video recorder. Line and fiducial numbers were recorded on the video image.

3.8 DATA ACQUISITION

A RMS Instruments DAS-8 Data Acquisition System was used to record all data in digital format onto a 10 gigabyte hard disk drive.

3.9 GENERAL QUALITY CONTROL

Rigorous in-field quality control was undertaken on-site and various QC products were produced in the field using a combination of Kevron proprietary software, ChrisDBF software and AGSO software. QC plots were produced for each flight and included:

- Flight path maps displaying cross track and height deviations.
- Magnetic 4th difference noise plots
- Radiometric Summed spectra plots
- Diurnal plots

Lines selected at random from each flight were subjected to further QC checks. Profiles were generated for all variables recorded and inspected for data quality. Any lines found to be outside the specified tolerances were identified and reflown.

A running log of each flight was maintained recording details of all lines flown. A complete flight line listing is included in ***APPENDIX 3***. Equipment tests and calibrations are described in Section 4 and tabulations of the calibration and test flight data are in ***APPENDIX 5.***

Field data were sent to Kevron's processing centre in Perth where they were further

inspected for data quality and conformance to specifications before commencing processing.

3.10 SAFETY MANAGEMENT

Kevron Geophysics Pty Ltd are an accredited active member of IAGSA and thus has a commitment, as far as practicable, to eliminate or control all risks and hazards to its staff that may arise in the work environment.

A revision of Kevron's Occupational Health, Safety and Environment was undertaken in January 2001 and a comprehensive Safety Management System was implemented in February 2001. The Safety Management System includes Risk Evaluation Processes and Procedures and Occupational Health Safety & Environment Policies for the entire Kevron Group of Companies.

Copies of Kevron's Occupational Health, Safety and Environment Polices are provided in ***APPENDIX 7***

All aircraft operations, including pilot flying hours and aircraft maintenance, complied with the requirements of the Federal Civil Aviation Safety Authority (CASA) and the CASA-approved procedures set out in Kevron's Aircraft Operations Manual.

An integral part of the Safety Management System provides for the installation of a Flight Following System that transmits a position via satellite at pre determined intervals. The Fugro EagleStar Flight Following System is fitted to all Kevron aircraft and for the Eromanga survey, position information was transmitted every 4 minutes to FUGRO's premises in Perth. This information can be monitored by accessing the FUGRO web page where the updated flight path is displayed. In the event that positional information from the aircraft is lost for a period exceeding 12 minutes or three consecutive transmissions, an alarm is raised and a SMS text message sent to nominated contacts and the Emergency Response plan impilmented.

4. CALIBRATIONS

4.1 MAGNETICS

Compensation coefficients for the AADC were established by flying a "compensation box" test (a series of pitch, roll and yaw manoeuvres in each of the four cardinal headings) before survey production commenced, and again after aircraft servicing where components were changed that may effect the magnetic field of the aircraft.

Compensation flights were flown in an area of low gradient near the survey area at an altitude of 8000 to 10000 feet above mean sea level.

The AADC calculates basic statistics, which reflect the degree of merit of the compensation. These include the standard deviation of the recorded data without corrections applied, the standard deviation with the correction applied, the improvement ratio (the ratio of the standard deviation of the data without and with corrections applied) and the vector norm (the degree of difficulty in calculating the corrections. The table below shows statistics recorded from compensation flights with the aircraft in survey configuration, ie Air conditioner on, Transponder off, DME off, HF on, ADF on, #1 COM on, #2 NAV/Com on .

Compbox Test Date	Aircraft
19th July, 2001	VH-KAV
4th October, 2001	VH-KAV
4th November, 2001	VH-KAV
2nd July, 2001	VH-KAC
27th August, 2001	VH-EXS

4.2 RADIOMETRICS

4.2.1. Background Correction Plots and Equations

The following procedure was used to determine the aircraft background radiation was determined following the procedures outlined in AGSO Record 1995/60. There were no changes to the system between the date of this test and the survey.

The measured 256 channel spectra are each the sum of the aircraft component (constant) and the cosmic component. The measured spectra are used to calculate the aircraft gamma energy spectrum and the normalised cosmic gamma energy spectrum.

Aircraft and Cosmic background spectra are estimated as follows:

$$N_i = a_i + b_i N_{cos}$$

Where:

N_i = aircraft + cosmic background count rate in the (i)th channel

N_{cos} = cosmic window count rate

a_i = aircraft background in the (i)th channel

b_i = cosmic background in the (i)th channel normalized top unit counts in the cosmic window.

A linear regression of the cosmic window count rate on any channel gives the cosmic sensitivity (slope of regression line) and aircraft background (zero intercept)

for that channel.

The aircraft and cosmic background spectra are subtracted from the dead-time corrected and energy calibrated observed spectra, The conventional radiometric windows are extracted from the 256 channel data.

4.2.2 Pre and Post Flight Checks

Hand sample checks, using thorium, uranium and caesium-137 samples, were carried out before and after flights.

4.2.3 Test Line

A test line approximately 8 kilometres long was chosen NE of Tennant Creek along a cleared line. The start and end co-ordinates are as follows;

	Latitude (°S)	**Longitude (°E)**
South End	15º 34.9043’	128° 49.9366’
North End	15º 40.3951’	128º 45.2548’

4.2.4 Compton Stripping Coefficients

The following Compton stripping coefficients, derived from calibrations over test pads in Perth were used in subsequent processing:

alpha (Tl-208 into Bi-214)	0.270648
beta (Tl-208 into K-40)	0.455881
gamma (Bi-214 into K-40)	0.855276

4.2.5 Spectrometer Countrate Sensitivities

Broad source sensitivities for each of the radio-element windows were obtained from a flight line flown at a height of 80 m over the Carnamah Test Range and a corresponding line on the ground surveyed with a calibrated hand-held spectrometer supplied by Tesla Geoscience. The Carnamah Test Range is located approximately 10 kilometres east of Carnamah, 200 kilometres north of Perth, on the Carnamah-Belvoir Road. The Test Range follows the power line south for eight kilometres crossing undulating wheat crops and rocky scrub covered hills.

The aircraft acquisition system was not changed between the date of the calibration flight and the survey dates. The following values were obtained:

VH KAV 26th April, 2001

VH KAC 26th May, 2001

VH EXS 23rd June, 2001

Element	Corrected mean countrate (cps)	Average ground concentration	Countrate sensitivity
Potassium	357.1473589	2.71 %K	131.847 cps/%K
Uranium	36.86961332	3.93 ppm eU	9.375 cps/ppm eU
Thorium	204.0701113	32.39 ppm eTh	6.301 cps/ppm eTh
Total Count	4422.491351	143.95 nG/h (nGh^{-1})	30.72 cps/nGh

4.3 PARALLAX

The parallax error was established immediately after completion of the survey by flying over a suitable anomaly in opposite directions. The parallax for each aircraft system was resolved to following:

Magnetics 7 fiducials (all flights)
Radiometrics No parallax correction was applied to the radiometrics

5. DATA PROCESSING

5.1 DATA VERIFICATION AND EDITING

The field data were sent regularly to Kevron's processing centre in Perth for verification and editing with in-house software installed on Sun Sparc 20 workstations.

The data were loaded into a database and a statistical report generated for each variable on a line by line basis. The data were then edited for scrubbed or duplicate lines and checked for spikes, steps or high noise levels. Lines with any out-of-specification data were flagged for reflight.

5.2 FLIGHT PATH RECOVERY

The differentially corrected GPS data were converted to Universal Transverse Mercator coordinates using the Australian National Spheroid GDA94

The survey area is in grid UTM Zone 53 with a central meridian of 135° East.

Flight path maps were generated to verify the off-line tolerances and to ensure all necessary data had been loaded into the geophysical data base.

5.3 MAGNETIC PROCESSING

After correcting the magnetic data for diurnal variations, the International Geomagnetic Reference Field (IGRF) was subtracted and the data were tie line levelled.

These processes are described more fully below.

5.3.1 Diurnal Correction

The diurnal data were edited to keep only those readings taken during flight time. The data were visually checked on the computer screen for spikes, noise and any apparent cultural magnetic events.

After editing, the data were low pass filtered using a twenty-term, spatial domain filter, which removed periods of less than thirty seconds. The data were again checked visually for integrity after the filtering process.

The filtered data were synchronised with the airborne data, interpolated and subtracted from the airborne data, one sample at a time. After subtraction, the mean diurnal value was added back to the airborne data for each line to produce diurnally corrected data.

5.3.2 Subtraction of the IGRF

The International Geomagnetic Reference Field (IGRF) was removed from the diurnally-corrected data by fitting a second order polynomial surface to thirteen coefficients computed from the IGRF model and then subtracting the IGRF values

on a sample by sample basis.

The IGRF 2000 model updated to the survey date was used with the following values:

IGRF updated to	2001.8
Magnetic Declination	6.5°
Magnetic Inclination	-58.0
Total Field Strength	52753

5.3.3 Tie Line Levelling

The diurnally corrected and IGRF-removed data were processed by a Kevron proprietary levelling program.

The program compares the magnetic differences at intersections of the flight lines and tie lines and calculates individual magnetic field biases for each flight line based on the tie line intersection. The miss-ties are minimised in a least-squares sense for all intersections. The biases are manually evaluated and selectively applied. Further reduction of the miss-ties can be removed by fitting a polynomial to produce levelled magnetic data.

The levelled data were then gridded on a 100 x 100 metre mesh using a minimum curvature algorithm based on Briggs (1974). The gridded data were displayed on an image processor to check data integrity and data levelling.

5.3.4 Micro Levelling

The data were microlevelled using Kevron in-house proprietary software. Kevron's micro-levelling process is line based rather than grid based. Pseudo lines are extracted perpendicular to the traverse line direction. These are low pass filtered and mis-tied to the traverse lines using the tie line levelling software.

The mis-tie values are bounded spatially by a series of polygons edited through ER Mapper.

5.4 RADIOMETRIC PROCESSING

5.4.1 System Deadtime and Energy Calibrations

Following correction for system deadtime, the 256 channel spectrometer data were energy calibrated using the following procedure:

For each line, the individual 256 channel data from each sample point were stacked to produce a single spectrum. The peak positions of the standard potassium and thorium windows were found by performing a gaussian fit to the spectral data for the energy range of each window after first removing the Compton continuum slope. If the measured peak positions were shifted by more than one channels for

the thorium peak or 0.5 channels for the potassium peak, an energy recalibration was performed to obtain the correct spectral channel positions for the lower and upper bounds of each of the required windows. Using these corrected channel limits, new window counts were then extracted from the 256 channel data for each 1 second data sample on the line.

5.4.2 Noise Adjusted Singular Value Decomposition (NASVD)

The raw gamma-ray spectra was smoothed using the Noise Adjusted Singular Value Decomposition (NASVD – Hovgaard and Grasty, 1997) spectral smoothing technique. This technique is a spectral component analysis procedure for the removal of noise from gamma-ray spectra. The observed spectra were transformed into orthogonal spectral components in which lower order components represent the signal and higher order components represent noise. Noise was removed from the observed spectra by rejecting the noise components and reconstructing the spectra using the first five principal components.

5.4.3 Aircraft and Cosmic Background Removal

Aircraft and cosmic background were removed from the data using the normalised 256 channel cosmic spectrum for the aircraft, and the aircraft 256 channel background spectrum.

Aircraft Background Coefficients	
Total Count	52.26
Potassium	7.4
Uranium	1.2
Thorium	0

Aircraft CosmicCoefficients	
Total Count	0.718991
Potassium	0.039252
Uranium	0.033910
Thorium	0.035575

5.4.4 Airborne radon removal

Data were corrected for airborne radon using Minty (1996 – Alt Method B) two component spectral ratio method .Calibration constants for Method B derived directly from observed radon and ground spectra at a height of 80m STP. $C_{1,}$ *and* $C_{2,}$ are the ratios between the 0.609 MeV peak count rate and the conventional U window count rate for a radon spectrum and a composite K, U and Th ground spectrum respectively.

Calibration Constants for Method B	
C1	1.944
C2	0.859

5.4.5 Effective Altitude Calculations and Compton Scattering Corrections

At this point, the conventional radiometric windows are extracted from the 256 channel data and all further gamma-ray corrections are performed using three-window radiometric data processing.

Following reduction of the altitude data to effective altitude at standard temperature and pressure as described in Grasty and Minty (1995), Compton scattering stripping was carried out on the background corrected count rates in the potassium, uranium and thorium channel data using the appropriate coefficients listed in Section 4.2.4.

5.4.6 Height attenuation corrections

A height attenuation factor was applied to reduce the data for each channel to a nominal datum of 80 m above ground level. The program used limits corrections to data at terrain clearances between 30m and 250m. Data recorded at terrain clearances outside these limits are corrected assuming they are at these limits.

The attenuation factors used are listed below and were determined from tests carried out over the Carnamah Test Range. ***(APPENDIX 5)***

Total Count	Potassium	Uranium	Thorium
-0.0074	-0.0094	-0.0084	-0.0074

5.4.7 Conversion to Ground Element Concentrations

Data were converted to equivalent ground concentrations using the method described in Grasty and Minty (1995) using, for each window, the equation:

$$\mathbf{C_i = N_i / S_i}$$

where C_i = ground concentration of radio-element "i" (%K, ppm eU or ppm eTh);
N_i = corrected count rate for window "i"; and
S_i = broad source sensitivity for window "i" as tabled in Section 4.2.5.

5.4.8 Levelling

The corrected and reduced radiometric data were tie-line levelled and micro-levelled using the procedure described above for the magnetic data.

5.5 DIGITAL ELEVATION MODEL

A digital elevation model (DEM) was computed by subtracting the terrain clearance measured by the radar altimeter from the GPS measured aircraft altitude to obtain a nominal ground elevation. The nominal ground elevation data were tie-line levelled and micro-levelled using the same technique described for the levelling of the magnetic data.

Allowance was made for the constant 3.9 m elevation difference between the radar altimeter and the GPS antenna.

A set of geoid-ellipsoid separation values were obtained from AUSLIG, gridded and values interpolated for each point along the survey lines. The interpolated separation values were subtracted from the nominal ground elevation to produce the final located DEM.

The DEM data were tie line levelled and micro-levelled using the procedure described above for the magnetic and radiometric data.

5.6 DELIVERABLE ITEMS

The following survey data items were produced and delivered:

1. Survey location diagram . ***(APPENDIX 1)***
2. Magnetometer Base station location diagram. ***(APPENDIX 2)***
3. Flight logs and Flight line summary **(*APPENDIX 3*)**
4. Production summaries week by week for each aircraft. **(*APPENDIX 4*)**
5. Tabulations of calibration and test flight data **(*APPENDIX 5*)**
6. Located digital records in the specified format **(*APPENDIX 6*)**
7. OHS and Environment Policies **(*APPENDIX 7*)**

5.7 FINAL PRODUCTS

The following files containing digital ASCII located data and grids were delivered on CD.

List of final products for NTGS survey

Eromanga Main

CD#1

README - Text file describing content of CD
DATA:
Eromanga_Main_Mag.zip (uncompressed 2GB)- Magnetics 0.1 second ASCII Located data
Eromanga_Main_Mag.DES - Description File
Eromanga_Main_Mag.DFN - Definition File
Eromanga_Main_Spec.zip (uncompressed 0.3GB)- 1 second Radiometrics ASCII Located Data
Eromanga_Main_Spec.DES - Description File
Eromanga_Main_Spec.DFN - Definition File

CD#2

README - Text file describing content of CD

DATA:
Eromanga_Main_256.zip (uncompressed 2.3GB) - 256 Channel Radiometrics 1 sec ASCII Located data
Eromanga_Main_256.DES - Description File
Eromanga_Main_256.DFN - Definition File

CD#3

README - Text file describing content of CD

GRIDS:

Eromanga_1VD_GDA94_MGA53	
Eromanga_1VD_GDA94_MGA53.ers	- First Vertical Derivative Erampper Grid
Eromanga_1VD_RTP_GDA94_MGA53	
Eromanga_1VD_RTP_GDA94_MGA53.ers	- First Vertical Derivative of RTP Ermapper Grid
Eromanga_AGC_1VD_GDA94_MGA53	
Eromanga_AGC_1VD_GDA94_MGA53.ers	- AGC of First Vertical Derivative Ermapper Grid
Eromanga_DTM_GDA94_MGA53	
Eromanga_DTM_GDA94_MGA53.ers	- DTM Ermapper Grid
Eromanga_RTP_GDA94_MGA53	
Eromanga_RTP_GDA94_MGA53.ers	- Reduced to Pole Ermapper Grid
Eromanga_TMI_GDA94_MGA53	
Eromanga_TMI_GDA94_MGA53.ers	- TMI Ermapper Grid
Eromanga_K_GDA94_MGA53	
Eromanga_K_GDA94_MGA53.ers	- Potassium % Ermapper Grid
Eromanga_TC_GDA94_MGA53	
Eromanga_TC_GDA94_MGA53.ers	- Total Count nGy/hr Ermapper Grid
Eromanga_Th_GDA94_MGA53	
Eromanga_Th_GDA94_MGA53.ers	- Thorium ppm Ermapper Grid
Eromanga_U_GDA94_MGA53	
Eromanga_U_GDA94_MGA53.ers	- Uranium ppm Ermapper Grid
Eromanga_KThU_RGB_GDA94_MGA53	
Eromanga_KThU_RGB_GDA94_MGA53.ers	- Potassium Thorium Uranium (RGB) composite Ermapper Grid

Note : For each original CD delivered, 2 copies were also delivered.
Total of 9 CDs were delivered for **Eromanga Main** (3 originals + 6 copies)

Eromanga NE

CD#1

README - Text file describing content of CD
DATA:

Eromanga_NE_256.zip (uncompressed 0.3GB)	- 1 second 256 Channel Radiometrics ASCII Located Data
Eromanga_NE_256.DES	- Description File
Eromanga_NE_256.DFN	- Definition File
Eromanga_NE_Mag.zip (uncompressed 0.27GB)	- Magnetics 0.1 second ASCII Located data
Eromanga_NE_Mag.DES	- Description File
Eromanga_NE_Mag.DFN	- Definition File
Eromanga_NE_Spec.zip (uncompress 41,387kB)	- 1 second Radiometrics ASCII Located Data
Eromanga_NE_Spec.DES	- Description File
Eromanga_NE_Spec.DFN	- Definition File

Note : For each original CD delivered, 2 copies were also delivered.
Total of 3 CDs were delivered for **Eromanga NE** (1 originals + 2 copies)

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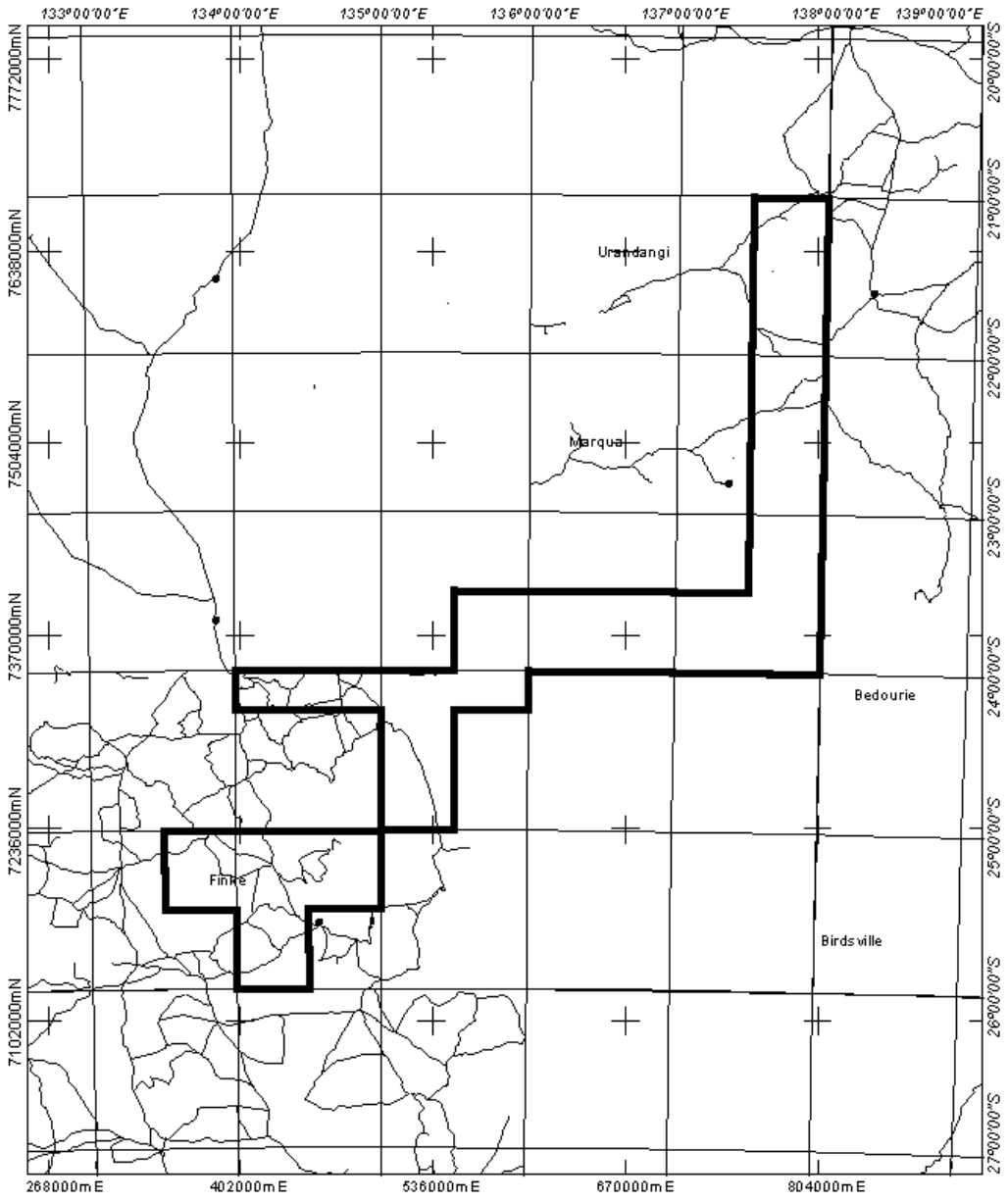
APPENDIX 1

Survey Area

Eromanga Survey Area Location Diagram



Eromanga Magnetic and Radiometric Survey

0 40 80 120 160 Kilometers

1:4000000

Projection ; Transverse Mercator
Spheroid ; WGS 84
False Easing ; 500000
False Northing ; 10000000
CentralMeridian ; 135

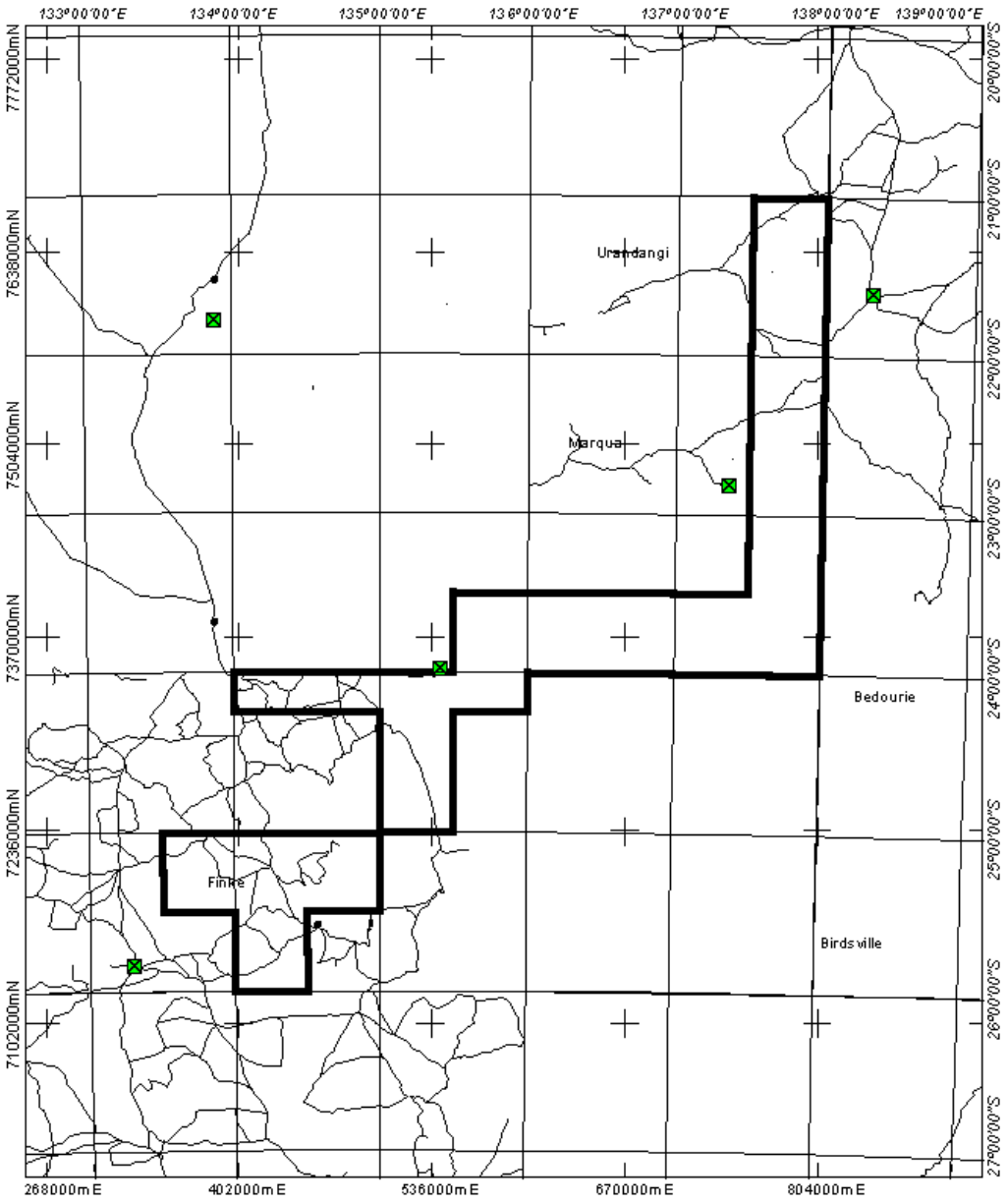
Flight Line Heading ; 0
Flight Line Spacing ; 10000
Cross Line Heading ; 90
Cross Line Spacing ; 10000
Total Line Km ; 9796

N
W E
S

APPENDIX 2

Magnetometer Base Position

Base Magnetometer Location Diagram



Eromanga Magnetic and Radiometric Survey
Basestation locations

0 40 80 120 160 Kilometers

1:4000000

Projection ; Transverse Mercator
Spheroid ; WGS 84
False Easing ; 500000
False Northing ; 10000000
Central Meridian ; 135

Flight Line Heading ; 0
Flight Line Spacing ; 10000
Cross Line Heading ; 90
Cross Line Spacing ; 10000
Total Line Km ; 9796

N
W E
S

APPENDIX 3

Flight Summary
Line Listing

Flight Line Listing Summary

EROMANGA MAIN

Line	Flight	Date	Start Fid	End Fid	Line	Flight	Date	Start Fid	End Fid
10011	2	20010703	9420	13640	**17620**	66	20010928	34440	42090
10020	2	20010703	17890	22160	**17630**	67	20010930	20380	27710
10030	2	20010703	26710	30560	**17640**	67	20010930	36600	43900
10040	5	20010706	5660	9550	**17650**	67	20010930	11840	20050
10050	2	20010703	13880	17670	**17660**	67	20010930	28060	36270
10060	2	20010703	22410	26240	**17671**	68	20010930	200	7600
10070	5	20010706	9870	13670	**17680**	68	20010930	17480	24850
10080	5	20010706	1480	5280	**17690**	67	20010930	44240	52570
10090	5	20010706	18340	22180	**17700**	68	20010930	8070	17060
10100	5	20010706	26890	30700	**17710**	68	20010930	34480	41960
10110	5	20010706	35350	39160	**17720**	68	20010930	25330	34050
10120	5	20010706	43760	47560	**17730**	68	20010930	51530	59000
10130	5	20010706	52150	55980	**17740**	68	20010930	68400	75790
10140	5	20010706	14050	17970	**17750**	68	20010930	42390	51100
10150	5	20010706	22570	26490	**17760**	68	20010930	59400	67980
10160	5	20010706	31090	34970	**17770**	68	20010930	76190	84780
10170	5	20010706	39530	43350	**17780**	68	20010930	93200	101620
10180	5	20010706	47930	51760	**17790**	68	20010930	109920	118200
10190	5	20010706	56350	60120	**17800**	68	20010930	85280	92800
10200	5	20010706	64710	68480	**17810**	68	20010930	102020	109470
10210	5	20010706	73050	76860	**17820**	69	20011001	1950	10140
10220	5	20010706	81570	85380	**17830**	69	20011001	18400	26600
10230	5	20010706	60510	64330	**17840**	69	20011001	35010	43260
10240	5	20010706	68800	72650	**17841**	77	20011005	77440	84920
10250	5	20010706	77230	81180	**17850**	69	20011001	51490	59660
10260	5	20010706	85770	89610	**17860**	69	20011001	10550	17960
10270	5	20010706	94200	98080	**17870**	69	20011001	27010	34590
10280	5	20010706	102710	106540	**17880**	69	20011001	43690	51060
10290	5	20010706	89990	93770	**17881**	77	20011005	69800	77110
10300	5	20010706	98470	102280	**17890**	69	20011001	60050	67540
10310	5	20010706	106910	110700	**17900**	69	20011001	78840	86180
10320	5	20010706	115380	119200	**17910**	69	20011001	95170	102560
10330	5	20010706	123810	127600	**17921**	69	20011001	70160	78440
10340	5	20010706	111120	114990	**17922**	77	20011005	61970	69480
10350	5	20010706	119590	123450	**17930**	69	20011001	86550	94800
10360	5	20010706	127990	131820	**17940**	69	20011001	102930	111180
10370	5	20010706	136520	140400	**17950**	70	20011001	200	8100
10380	5	20010706	145070	148970	**17960**	69	20011001	111590	119070
10390	5	20010706	132220	136030	**17970**	70	20011001	16010	24030
10400	5	20010706	140820	144650	**17980**	70	20011001	31860	39800
10410	5	20010706	149330	153190	**17990**	70	20011001	8410	15650
10420	5	20010706	157800	161620	**18000**	70	20011001	24310	31510
10430	6	20010707	1450	5300	**18010**	70	20011001	47680	55570
10440	6	20010707	9920	13870	**18020**	70	20011001	63400	71330
10450	5	20010707	153540	157400	**18030**	70	20011001	40080	47350
10460	6	20010707	5630	9510	**18040**	70	20011001	55840	63080
10470	6	20010707	14280	18080	**18050**	70	20011001	79550	87360
10480	6	20010707	22760	26580	**18060**	70	20011001	95180	103040
10490	6	20010707	31160	34930	**18070**	70	20011001	71640	79060
10500	6	20010707	39690	43490	**18080**	70	20011001	87670	94890
10510	6	20010707	18480	22420	**18090**	70	20011001	103280	110460
10520	6	20010707	26970	30850	**18100**	70	20011001	119050	126270

10530	6	20010707	35340	39290	**18110**	71	20011002	1840	9580
10540	6	20010707	43880	47810	**18120**	70	20011001	110790	118730
10550	6	20010707	52420	56290	**18130**	71	20011002	17520	25280
10560	6	20010707	60910	64860	**18140**	71	20011002	33190	40730
10570	6	20010707	69370	73310	**18150**	71	20011002	9900	17190
10580	6	20010707	48220	51990	**18160**	71	20011002	25540	32880
10590	6	20010707	56690	60470	**18170**	71	20011002	48600	56110
10600	6	20010707	65180	68960	**18180**	71	20011002	64000	71580
10610	6	20010707	73710	77530	**18181**	77	20011005	54330	61640
10620	6	20010707	82230	86040	**18190**	71	20011002	41000	48260
10630	6	20010707	90800	94600	**18200**	71	20011002	56410	63680
10640	6	20010707	99410	103270	**18210**	71	20011002	79530	87170
10650	6	20010707	77960	81850	**18220**	71	20011002	94990	102710
10660	6	20010707	86510	90390	**18230**	71	20011002	71920	79210
10671	6	20010707	95100	98980	**18240**	71	20011002	87460	94680
10680	6	20010707	103690	107550	**18250**	71	20011002	110580	118310
10690	6	20010707	112200	116100	**18260**	72	20011002	230	8320
10700	6	20010707	120700	124560	**18270**	71	20011002	103030	110260
10710	7	20010708	1680	5580	**18280**	71	20011002	118630	125880
10720	6	20010707	107930	111780	**18290**	72	20011002	8720	16140
10730	6	20010707	116480	120360	**18300**	72	20011002	24990	32470
10740	6	20010707	124960	128780	**18310**	72	20011002	41540	48970
10750	7	20010708	5990	9940	**18320**	72	20011002	16560	24640
10760	7	20010708	14720	18580	**18330**	72	20011002	32890	41170
10770	7	20010708	23340	27210	**18340**	72	20011002	49380	57630
10780	7	20010708	32020	35910	**18350**	72	20011002	65790	74040
10790	7	20010708	10350	14300	**18360**	72	20011002	82210	90320
10800	7	20010708	18980	22900	**18370**	72	20011002	98650	106600
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10860	7	20010708	40560	44360	**18430**	73	20011003	1880	9940
10870	7	20010708	49070	52850	**18440**	72	20011002	114840	122760
10880	7	20010708	57600	61420	**18450**	73	20011003	10360	17950
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10950	7	20010708	87450	91330	**18511**	74	20011003	56590	64020
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10970	7	20010708	104460	108390	**18530**	74	20011003	41860	49120
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11090	7	20010708	147880	151830	**18650**	75	20011004	48350	56430
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11300	9	20010711	5980	10020	**18860**	76	20011005	73040	80870
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11330	9	20010711	32710	36750	**18890**	77	20011005	160	7490
11340	9	20010711	10390	14370	**18900**	77	20011005	15540	22920
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11380	9	20010711	46220	50120	**18940**	77	20011005	38760	46100
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11400	9	20010711	63920	67890	**18951**	81	20011008	99530	109010
11410	9	20010711	41600	45750	**18961**	87	20011015	4960	17110
11420	9	20010711	50570	54660	**18970**	84	20011010	90600	106380
11430	9	20010711	59400	63470	**18980**	81	20011008	64170	83710
11440	9	20010711	68300	72360	**18990**	81	20011008	109430	131210
11450	9	20010711	77250	81300	**19001**	83	20011009	10	21800
11460	9	20010711	86220	90180	**19010**	81	20011008	84030	95960
11470	9	20010711	95090	99100	**19011**	82	20011009	1670	13690
11480	9	20010711	72830	76780	**19020**	83	20011009	22140	44580
11490	9	20010711	81770	85770	**19030**	83	20011009	66520	88770
11500	9	20010711	90640	94630	**19040**	83	20011009	110920	132940
11510	9	20010711	99570	103620	**19050**	83	20011009	44590	66180
11520	9	20010711	108500	112600	**19060**	83	20011009	88780	110600
11530	9	20010711	117450	121630	**19070**	85	20011010	10	23310
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11550	9	20010711	104090	108050	**19090**	85	20011010	94420	115350
11560	9	20010711	112970	117050	**19091**	86	20011011	25650	30480
11570	9	20010711	122110	126150	**19100**	85	20011010	23760	47410
11580	9	20010711	131060	135010	**19110**	85	20011010	71110	94400
11590	9	20010711	139810	143700	**19120**	86	20011011	30860	53700
11600	9	20010711	148460	152380	**19130**	86	20011011	1670	25420
11610	10	20010712	1540	5480	**19140**	86	20011011	77920	100100
11620	9	20010711	135450	139400	**19150**	86	20011011	190	15380
11630	9	20010711	144040	148030	**19151**	89	20011016	1560	10630
11640	10	20010712	5900	9950	**19152**	107	20011102	7770	28950
11650	10	20010712	14760	18870	**19160**	86	20011011	53720	77490
11660	10	20010712	23590	27700	**19171**	88	20011015	10	22550
11670	10	20010712	32430	36490	**19180**	87	20011015	17420	39560

11680	10	20010712	10370	14330	**19190**	87	20011015	62010	84770
11690	10	20010712	19270	23190	**19200**	87	20011015	107100	129960
11700	10	20010712	28160	32010	**19210**	87	20011015	39570	61670
11710	10	20010712	36890	40690	**19220**	87	20011015	84790	106800
11720	10	20010712	45830	49700	**19230**	87	20011015	129980	138790
11730	10	20010712	54460	58280	**19231**	90	20011016	10	14330
11740	10	20010712	63010	66840	**19240**	88	20011015	23010	46220
11750	10	20010712	41080	45030	**19250**	88	20011015	69460	92180
11760	10	20010712	50130	54030	**19260**	88	20011015	115380	131070
11770	10	20010712	58680	62590	**19261**	92	20011019	10	8270
11780	10	20010712	67270	71070	**19270**	88	20011015	46240	69010
11790	10	20010712	75640	79420	**19280**	89	20011016	10650	32770
11800	10	20010712	83910	87620	**19290**	88	20011015	92200	114960
11810	10	20010712	92160	96010	**19300**	89	20011016	33230	58250
11820	10	20010712	71470	75240	**19310**	89	20011016	80700	105120
11830	10	20010712	79800	83530	**19320**	89	20011016	127890	151280
11840	10	20010712	88050	91770	**19330**	89	20011016	58260	80240
11850	10	20010712	96400	100230	**19340**	89	20011016	105130	127430
11860	10	20010712	104850	108630	**19350**	90	20011016	14650	38220
11870	10	20010712	113340	117110	**19360**	90	20011016	60770	84760
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16360	54	20010831	9710	17590	**23710**	9	20010711	112490	119740
16370	54	20010831	26040	34060	**23720**	9	20010711	97400	104630
16380	54	20010831	42350	50390	**23730**	9	20010711	73500	80810
16390	54	20010831	58670	66800	**23740**	9	20010711	58280	65560
16400	54	20010831	75140	83240	**23750**	9	20010711	81110	88340
16410	54	20010831	91610	99690	**23760**	9	20010711	65880	73170
16420	54	20010831	108140	116070	**23770**	9	20010711	42980	50360
16430	54	20010831	67250	74680	**23780**	9	20010711	27740	35020
16440	54	20010831	83680	91180	**23790**	9	20010711	50670	58100
16450	54	20010831	100100	107680	**23800**	9	20010711	35380	42790
16460	54	20010831	116520	124020	**23810**	9	20010711	27340	27550
16470	54	20010831	132830	140300	**90010**	14	20010714	1730	22040
16471	60	20010923	17730	24980	**90020**	17	20010721	190	20370
16480	54	20010831	149090	156600	**90030**	17	20010721	99080	119280
16481	60	20010923	25330	33400	**90040**	18	20010722	1970	22580
16490	54	20010831	157040	164890	**90050**	18	20010722	131160	151160
16491	60	20010923	33800	41050	**90060**	19	20010722	190	20020
16500	54	20010831	124500	132410	**90070**	14	20010714	83190	102740
16510	54	20010831	140700	148660	**90080**	14	20010714	103070	122730
16511	60	20010923	41360	49690	**90090**	14	20010714	123060	142500
16520	55	20010831	42590	49940	**90100**	13	20010713	67660	88130
16530	55	20010831	58510	65820	**90110**	13	20010713	140	19570
16540	55	20010831	74270	81550	**90120**	10	20010712	141760	161180

16550	55	20010831	50440	58160	**90130**	10	20010712	1790	21110
16560	55	20010831	66160	73950	**90140**	9	20010711	127560	147970
16570	55	20010831	81880	89790	**90150**	9	20010711	270	19830
16571	60	20010923	50000	57220	**90161**	19	20010722	88900	95470
16580	56	20010910	1410	9550	**90170**	20	20010723	1750	8480
16590	56	20010910	18150	26230	**90180**	20	20010723	180	6780
16600	56	20010910	34780	42710	**90190**	21	20010723	190	6980
16610	56	20010910	51270	59200	**90200**	22	20010724	1890	8610
16620	56	20010910	9960	17680	**90210**	23	20010724	190	6770
16630	56	20010910	26680	34320	**90220**	24	20010725	1830	8510
16640	56	20010910	43150	50820	**90230**	22	20010724	134220	141080
16650	56	20010910	59610	67270	**90240**	2	20010704	52100	58830
16660	56	20010910	76160	83820	**90250**	2	20010704	45170	51770
16670	56	20010910	92710	100250	**90260**	2	20010704	37760	44490
16680	58	20010922	1870	9650	**90270**	2	20010704	30890	37450
16690	56	20010910	67780	75710	**90280**	2	20010704	23240	29850
16700	56	20010910	84280	92250	**90290**	2	20010704	16290	22920
16710	58	20010922	10080	17630	**90430**	84	20011010	17530	24640
16720	58	20010922	26230	33690	**90440**	84	20011010	10270	17170
16730	58	20010922	42310	49860	**90450**	82	20011009	13910	21550
16740	58	20010922	58490	65970	**90460**	81	20011008	53310	60350
16750	58	20010922	18060	25800	**90470**	81	20011008	45700	52910
16760	58	20010922	34130	41890	**90480**	81	20011008	38200	45310
16770	58	20010922	50300	58050	**90490**	81	20011008	30550	37770
16780	58	20010922	66400	74060	**90500**	81	20011008	23020	30140
16790	58	20010922	82560	90230	**90510**	81	20011008	15390	22590
16800	58	20010922	106970	114730	**90520**	81	20011008	7880	14990
16810	58	20010922	90630	98280	**90530**	81	20011008	180	7480
16820	58	20010922	74510	82120	**90540**	79	20011007	94630	101550
16830	58	20010922	98710	106520	**90550**	79	20011007	86980	94320
16840	59	20010922	90	7410	**90560**	79	20011007	79980	86670
16850	59	20010922	15780	23130	**90570**	79	20011007	72220	79700
16860	59	20010922	31410	38800	**90580**	79	20011007	65170	71880
16870	59	20010922	7730	15450	**90590**	79	20011007	57590	64920
16880	59	20010922	23450	31100	**90600**	79	20011007	50590	57320
16890	59	20010922	47100	54500	**90610**	79	20011007	43150	50310
16900	59	20010922	63030	70310	**90620**	79	20011007	36120	42800
16910	59	20010922	39130	46760	**90630**	79	20011007	28770	35780
16920	59	20010922	54870	62680	**90640**	80	20011007	112990	119650
16930	59	20010922	78720	85950	**90650**	80	20011007	105600	112650
16940	59	20010922	94210	101470	**90660**	80	20011007	98630	105260
16950	59	20010922	70650	78380	**90670**	80	20011007	91330	98330
16960	59	20010922	86290	93860	**90680**	80	20011007	84350	91000
16970	59	20010922	109780	117040	**90690**	80	20011007	76980	84040
16980	60	20010923	57580	65740	**90700**	41	20010806	1390	29640
16990	59	20010922	101800	109420	**90701**	62	20010924	1550	13420
17000	59	20010922	117380	124920	**90710**	80	20011007	69970	76660
17010	60	20010923	66050	73260	**90720**	41	20010806	29810	63640
17020	57	20010921	28000	35760	**90721**	62	20010924	13600	31670
17030	57	20010921	11530	19390	**90730**	41	20010806	63980	98340
17040	57	20010921	44380	52140	**90731**	62	20010924	31690	50170
17050	57	20010921	36200	43940	**90732**	80	20011007	52010	69680
17060	57	20010921	19840	27570	**90740**	41	20010806	98650	133190
17070	57	20010921	3420	11070	**90741**	62	20010924	50620	68860
17081	52	20010830	166970	174900	**90742**	80	20011007	35010	51990
17090	52	20010830	159220	166440	**90750**	51	20010829	78720	96310
17100	51	20010829	71040	78460	**90751**	62	20010924	68870	87140
17110	60	20010923	82140	89450	**90752**	80	20011007	17180	34710

17120	60	20010923	98290	105560	**90760**	52	20010830	175060	193290
17130	60	20010923	73620	81790	**90761**	62	20010924	87580	105940
17140	60	20010923	89760	97970	**90762**	80	20011007	180	17150
17150	60	20010923	105930	114030	**90770**	52	20010830	140410	159050
17160	61	20010923	210	7830	**90772**	63	20010924	200	17740
17170	61	20010923	16680	24360	**90780**	52	20010830	122040	140020
17180	61	20010923	33070	40850	**90781**	63	20010924	17750	34810
17190	61	20010923	49500	57290	**90790**	52	20010830	103620	122020
17200	61	20010923	8310	16240	**90791**	63	20010924	35160	52760
17210	61	20010923	24760	32630	**90800**	52	20010830	85570	103260
17212	77	20011005	85240	92510	**90801**	63	20010924	52780	69860
17220	61	20010923	41270	49100	**90810**	52	20010830	67230	85560
17230	61	20010923	57730	65620	**90811**	63	20010924	70210	87440
17240	61	20010923	74230	81940	**90820**	52	20010830	49070	66880
17250	61	20010923	90540	98220	**90821**	63	20010924	87450	90900
17260	61	20010923	106830	114680	**90822**	78	20011008	200	17910
17270	61	20010923	66050	73790	**90830**	52	20010830	30960	49050
17280	61	20010923	82370	90110	**90832**	78	20011008	17930	36640
17290	61	20010923	98640	106400	**90840**	52	20010830	12970	30630
17300	61	20010923	115200	122820	**90841**	78	20011008	13920	31440
17310	64	20010925	1950	9670	**90850**	4	20010705	1590	29940
17320	61	20010923	123250	130930	**90860**	52	20010830	1290	12960
17330	64	20010925	17570	25410	**90861**	78	20011008	1800	13510
17340	64	20010925	33320	41240	**90862**	79	20011007	1730	19410
17350	64	20010925	10000	17200	**90870**	3	20010705	140980	168340
17360	64	20010925	25710	32970	**90880**	3	20010705	112850	140550
17370	64	20010925	49050	57100	**90890**	3	20010705	84940	112420
17380	65	20010927	1700	9300	**90900**	3	20010705	56850	84530
17390	64	20010925	41530	48680	**90910**	3	20010705	29340	56480
17400	64	20010925	57370	64560	**90920**	3	20010705	1300	28930
17410	65	20010927	17290	24860	**90930**	4	20010705	190	6990
17420	65	20010927	33050	40440	**90940**	4	20010705	7470	14740
17430	65	20010927	9580	16970	**90950**	4	20010705	15170	22100
17440	65	20010927	25190	32510	**90960**	4	20010705	22630	29580
17450	65	20010927	48420	55670	**90970**	4	20010705	30030	36800
17460	65	20010927	63610	70820	**90980**	4	20010705	37260	44110
17470	65	20010927	40760	48080	**90990**	4	20010705	44590	51400
17480	65	20010927	56000	63270	**91000**	4	20010705	51850	58750
17490	65	20010927	78690	85890	**91010**	4	20010705	59160	66040
17500	65	20010927	93670	100980	**91020**	4	20010705	66500	73410
17510	65	20010927	71140	78370	**91030**	4	20010705	73790	80640
17520	65	20010927	86150	93380	**91040**	4	20010705	81080	87980
17530	65	20010927	108860	116120	**91050**	4	20010705	88450	95270
17540	66	20010928	1920	9600	**91060**	14	20010714	47120	54080
17550	65	20010927	101310	108550	**91070**	14	20010714	54430	61150
17560	65	20010927	116420	123680	**91080**	14	20010714	61470	68390
17570	66	20010928	10030	17850	**91090**	14	20010714	68740	75480
17580	66	20010928	26320	33990	**91100**	14	20010714	75790	82680
17590	66	20010928	42530	50080	**91110**	14	20010714	83000	89720
17600	67	20010930	4190	11490	**91120**	14	20010714	90050	96970
17610	66	20010928	18270	25880	**91130**	14	20010714	97300	103980

EROMANGA NE

Line	Flight	Date	Start Fid	End Fid	Line	Flight	Date	Start Fid	End Fid
10010	2	20010827	105790	107600	**10820**	18	20010908	210	14790
10020	2	20010827	96510	101490	**10830**	18	20010908	28440	42980

10030	2	20010827	87770	96470	**10840**	18	20010908	56590	70390
10040	2	20010827	71820	83440	**10850**	18	20010908	14830	28050
10050	2	20010827	55890	71790	**10861**	18	20010908	43020	56140
10060	2	20010827	33220	51180	**10870**	14	20010906	120760	134130
10070	2	20010827	10310	33190	**10880**	14	20010906	94010	107430
10080	2	20010827	107640	123950	**10890**	14	20010906	67310	80660
10081	3	20010827	7400	14910	**10900**	14	20010906	107800	120730
10085	17	20010908	59890	68000	**10910**	14	20010906	81060	93980
10090	3	20010827	15310	39180	**10920**	14	20010906	40300	53720
10100	3	20010827	39220	61310	**10930**	14	20010906	13290	26790
10110	3	20010827	61690	85380	**10940**	14	20010906	54070	67270
10120	3	20010827	85420	101770	**10950**	14	20010906	27180	40270
10121	7	20010902	1240	8650	**10962**	14	20010906	200	13260
10130	7	20010902	9030	22460	**10970**	10	20010903	130450	143460
10140	7	20010902	22490	35880	**10980**	10	20010903	116910	130410
10150	7	20010902	36260	49760	**10990**	10	20010903	103590	116540
10160	7	20010902	49800	62970	**11000**	10	20010903	90070	103560
10170	7	20010902	63360	77290	**11010**	10	20010903	76630	89700
10181	17	20010908	14910	30290	**11020**	10	20010903	62930	76600
10190	7	20010902	90680	104490	**11030**	10	20010903	49400	62550
10200	7	20010902	104520	117550	**11040**	10	20010903	35850	49360
10210	7	20010902	117960	131690	**11050**	10	20010903	22240	35440
10220	7	20010902	131730	144850	**11060**	10	20010903	8600	22200
10230	7	20010902	145240	158970	**11070**	8	20010902	124990	138470
10240	18	20010908	5220	19150	**11080**	8	20010902	111340	124460
10251	18	20010908	19180	33050	**11090**	8	20010902	97560	111300
10262	17	20010908	30320	43470	**11100**	8	20010902	83740	97110
10270	9	20010903	47140	60620	**11110**	8	20010902	69970	83710
10280	9	20010903	61120	74570	**11120**	8	20010902	55640	69480
10290	9	20010903	74610	87980	**11130**	8	20010902	41920	55610
10300	9	20010903	88480	101980	**11140**	8	20010902	27840	41320
10310	9	20010903	102020	115640	**11150**	8	20010902	13950	27810
10320	9	20010903	116070	129850	**11160**	8	20010902	10	13480
10330	9	20010903	129880	143450	**11170**	6	20010901	109360	122880
10340	9	20010903	143850	157470	**11180**	6	20010901	95990	108980
10350	11	20010904	4160	11120	**11190**	6	20010901	82470	95950
10351	17	20010908	84260	92590	**11200**	6	20010901	68830	82070
10360	11	20010904	11470	24570	**11210**	6	20010901	54620	68800
10370	11	20010904	24610	38280	**11220**	6	20010901	41100	54230
10380	11	20010904	38690	51640	**11230**	6	20010901	27450	41070
10390	11	20010904	51680	65160	**11240**	6	20010901	13910	27050
10400	11	20010904	65540	78780	**11250**	6	20010901	210	13870
10410	11	20010904	78810	92040	**11261**	6	20010901	122920	129350
10420	11	20010904	92440	105660	**11262**	10	20010904	10	8200
10430	11	20010904	105690	118890	**11270**	5	20010901	151980	165410
10440	11	20010904	119270	132800	**11280**	5	20010901	138700	151950
10450	11	20010904	132830	140520	**11290**	5	20010901	124760	138290
10451	12	20010904	10	7460	**11300**	5	20010901	110990	124730
10460	12	20010904	7980	22450	**11310**	5	20010901	96830	110500
10470	12	20010904	22490	35920	**11321**	6	20010901	20	12710
10480	12	20010904	36430	50670	**11330**	5	20010901	68710	82300
10490	12	20010904	50710	64380	**11340**	5	20010901	54360	68670
10500	12	20010904	64880	79090	**11350**	5	20010901	42100	53820
10510	12	20010904	79120	92540	**11360**	5	20010901	26310	36110
10520	12	20010904	93010	107310	**11370**	5	20010901	5530	12020
10530	12	20010904	107350	121090	**11380**	5	20010901	12530	16720
10540	12	20010904	121590	135790	**11390**	5	20010901	24620	25840
10551	17	20010908	43950	59850	**11400**	1	20010827	1300	3710

10561	17	20010908	68350	84220	**90010**	1	20010827	3960	11000
10570	13	20010906	28750	42670	**90020**	1	20010827	220	7660
10581	15	20010907	1380	14400	**90030**	1	20010827	8080	15210
10590	15	20010907	29360	42550	**90040**	1	20010827	15560	22950
10600	15	20010907	57070	70170	**90050**	1	20010827	23380	30550
10610	15	20010907	14440	29020	**90060**	1	20010827	30920	38360
10620	15	20010907	42580	56720	**90070**	1	20010827	38770	45930
10630	15	20010907	84970	98040	**90080**	1	20010827	46290	53670
10640	15	20010907	112720	125780	**90090**	2	20010828	1530	8600
10650	15	20010907	70200	84660	**90100**	2	20010828	124170	131530
10660	15	20010907	98080	112350	**90110**	3	20010828	230	7250
10670	15	20010907	125810	140130	**90120**	3	20010828	102000	109090
10680	16	20010907	220	13460	**90130**	4	20010830	1420	8340
10690	16	20010907	13500	27830	**90140**	4	20010830	8690	15960
10700	16	20010907	28340	42090	**90150**	4	20010830	16330	23210
10710	16	20010907	42130	56380	**90160**	4	20010830	23580	30830
10720	16	20010907	56830	71040	**90170**	4	20010830	31270	38200
10730	16	20010907	71080	85240	**90180**	4	20010830	38540	45650
10740	16	20010907	85730	99180	**90190**	4	20010830	46080	53030
10750	16	20010907	99220	113360	**90200**	4	20010830	53520	60720
10760	16	20010907	113860	127210	**90210**	4	20010830	61170	68110
10770	16	20010907	127250	141440	**90220**	4	20010830	68460	75570
10780	16	20010907	141940	155210	**90230**	4	20010830	75940	82900
10790	17	20010908	1490	14390	**90240**	4	20010830	83260	90340
10800	17	20010908	103090	116120	**90250**	7	20010902	159190	166200
10810	17	20010908	116620	131790	**90260**	9	20010903	157730	164820

APPENDIX 4

Weekly Production Reports

WEEK COMMENCING MONDAY 16/ 07/ 2001

CREW: PILOTS: Melanie Cote

AIRCRAFT: **VH-KAV**

OPERATORS: Kevin Cahill, Matt Gray

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.	-	1593	-	-	-	-	-	-	-	-	-	-	No flights due Weather
16/07	-	1593	-	-	-	-	-	-	-	-	-	-	No flights due Weather
TUE.	-	1593	-	-	-	-	-	-	-	-	-	-	No flights due Weather
17/07	-	1593	-	-	-	-	-	-	-	-	-	-	No flights due Weather
WED.	-	1593	-	-	-	-	-	-	-	-	-	-	No flights due Weather
18/07	-	1593	-	-	-	-	-	-	-	-	-	-	No flights due Weather
THU.	-	1593	13.00	-	1.5	410	1	1	-	-	MC	KC	Comp Box / Test Box
19/07	-	1593	15.00	-	1.5	345	1	-	-	-	MC	MG	Comp Box / Test Box, Parallax Check
FRI.	-	1593	10.54	1.4	2.0	403	-	-	147	-	MC	MG	Parallax / Heading Check & Travs
20/07	-	1593	-	-	-	-	-	-	-	-	-	-	
SAT.	-	1593	11.13	4.3	1.4	702	1	1	1225.8	-	MC	KC	Flight OK
21/07	-	1593	-	-	-	-	-	-	-	-	-	-	No flights
SUN.	-	1593	9.16	4.0	1.2	596	-	-	882.6	-	MC	MG	Flight OK
22/07	-	-	-	-	-	-	-	-	-	-	-	-	No flights
		TOTALS		9.7	7.6	2456			2255.4	-	-	-	

SUMMARY

FUEL USAGE	141.9	Ltrs/Hr
OIL USAGE L:	0.17	Ltrs/Hr
R:	0.12	Ltrs/Hr
PRODUCTION RATE	130.4	Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	TOTALS HOURS	TOTALS LINE KM
Melanie Cote	9.7	7.6	17.3	2,255.4
		GRAND TOTALS	17.3	2,255.4

HOURS TO 120 HOURLY:

TOTAL A/C HOURS:

WEEK COMMENCING MONDAY 23/ 07/ 2001

CREW: PILOTS: Melanie Cote

AIRCRAFT: **VH-KAV**

OPERATORS: Kevin Cahill

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.	5	1593	10.00	5.3	0.5	623	1	1	1058.4	-	MC		Flight OK
23/07	-	1593	-	-	-	-	-	-	-	-	-	-	No flight due Pilot Hours
TUE.	6	1593	11.04	4.3	0.7	537	1	-	875.9	-	MC		Return Early due strong Winds
24/07	-	1593	-	-	-	-	-	-	-	-	-	-	No flight Pilot Hours – 100 Hourly
WED.	-	1593	-	-	-	-	-	-	-	-	-	-	100 Hourly – No flight
25/07	-	1593	-	-	-	-	-	-	-	-	-	-	100 Hourly – No flight
THU.	-	1593	-	-	-	-	-	-	-	-	-	-	100 Hourly – No flight
26/07	-	1593	-	-	-	-	-	-	-	-	-	-	100 Hourly – No flight
FRI.	7	1593	09.45	5.3	0.5	644	-	-	1054.8		MC		Turbulent Conditions
27/07	-	1593	-	-	-	-	-	-	-	-	-	-	No flight due Turb
SAT.	8	1593	10.42	3.1	0.6	411	1	1	556.7	29.3	MC		Late Takeoff due Comp Problem
28/07	-	1593	-	-	-	-	-	-	-	-	-	-	Turbulent Conditions early Return
SUN.	9	1593	09.14	5.1	0.7	642	1	1	986.2		MC		Turbulent Conditions
29/07	-	-	-	-	-	-	-	-	-	-	-	-	Strong Winds
		TOTALS		23.1	3.0	2857	4	3	4532.0	29.3			

SUMMARY

FUEL USAGE	109.5	Ltrs/Hr
OIL USAGE L:	0.15	Ltrs/Hr
R:	0.11	Ltrs/Hr
PRODUCTION RATE	173.6	Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	TOTALS HOURS	TOTALS LINE KM
Melanie Cote	23.1	3.0	26.1	4,532.0
		GRAND TOTALS	26.1	4,532.0

HOURS TO 120 HOURLY: **104.7**

TOTAL A/C HOURS: **10,366.9**

WEEK COMMENCING MONDAY 30/ 07/ 2001

CREW: PILOTS: Melanie Cote, Mark Rooney

AIRCRAFT: **VH-KAV**

OPERATORS: Kevin Cahill, Rob Deopel

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.	10	1593	9.50	5.1	0.7	637	1	1	994.9	-	MC	KC	OK
30/07	-	1593				-	-	-	-	-	-	-	NO FLIGHT DUE ONLY 1 PILOT
TUE.	11	1593	9.04	5.0	1.0	633	1	1	994.9	-	MC	KC	OK
31/07	-	1593	-			-	-	-		-	-	-	NO FLIGHT DUE ONLY 1 PILOT
WED.	12	1593	9.19	4.3	1.0	568	2	1	700.8	146.0	MC	KC	TURBULANT
1/08	-	1593	-			-	-	-		-	-	-	NO FLIGHT DUE ONLY 1 PILOT
THU.	13	1593	9.14	5.0	1.0	698	1	-	1120.5	-	MR	RD	OK
2/08	-	1593				-	-	-		-	-	-	NO FLIGHT DUE ONLY 1 PILOT
FRI.	14	1593	6.59	4.2	1.3	609		1	979	-	MR	RD	TRAVS & TIES OK
3/08	15	1593	13.10	2.8	1.0	416	1	1	675.6	-	MC	KC	OK
SAT.	16	1593	7.36	3.8	1.1	335	-	-	900.8	-	MC	KC	OK
4/08	17	1593	13.12	2.7	1.1	661	2	2	675.6	-	MR	RD	OK
SUN.	18	1593	7.03	1.8	1.1	169	-	-	450	-	MR	RD	ABORT DUE WIND/TURB
5/08	19	1593	13.56	2.8	1.2	584	2	1	675.6	-	MC	KC	TURBULANT
		TOTALS		37.5	10.5	5310	10	8	8167.7	146.0	-	-	

SUMMARY

FUEL USAGE	110.6	Ltrs/Hr
OIL USAGE L:	0.2	Ltrs/Hr
R:	0.17	Ltrs/Hr
PRODUCTION RATE	173.2	Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	**TOTALS** HOURS	**TOTALS** LINE KM
Melanie Cote	23.8	6.0	29.8	5088.6
Mark Rooney	13.7	4.5	18.2	3225.1
		GRAND TOTALS	48.0	8,313.7

HOURS TO 120 HOURLY: **56.9**

TOTAL A/C HOURS: **10,414.7**

WEEK COMMENCING MONDAY 06/ 08/ 2001

CREW: PILOTS: Melanie Cote, Mark Rooney

AIRCRAFT: **VH-KAV**

OPERATORS: Kevin Cahill, Rob Deopel

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.	20	1593	7.30	3.9	1.1	590	-	-	500.8	-	MC	KC	OK
06/08	21	1593	10.07	3.7	1.1	560	1	1	900.8	-	MR	RD	OK
TUE.	22	1593	9.01	2.3	1.7	228	1	-	500.4	50	MR	RD	AUDIO U/S AND FIXED
07/08	23	1593	13.42	3.2	1.1	667	1	1	675.6	-	MC	KC	TURBULENT
WED.	24	1593	11.38	2.7	-	360	-	-	-	-	MR	PH	CHECK FLIGHT
08/08	25	1593	14.40	1.0	1.3	628	-	-	225.2	-	DC	PH	CHECK FLIGHT + 2 LINES
THU.	-	1593	16.45	-	1.0	-	1	1	-	-	MR	MC	FERRY ALICE – NUMERY
09/08	-	1593	-	0.5	-	-	-	-	-	-	MR	RD	TEST LINE
FRI.	26	1593	10.13	2.2	0.5	300	1	-	509.8	-	MR	RD	OK
10/08	27	1593	14.12	2.9	0.6	500	-	1	593.6	-	MC	CK	OK
SAT.	28	1593	7.31	3.6	0.9	480	-	-	848.0	-	MC	CK	OK
11/08	29	1593	12.56	3.9	0.5	550	1	1	1017.6	-	MR	RD	OK
SUN.	30	1593	6.59	4.8	0.9	650	1	1	1270.9	-	MR	RD	OK
12/08	31	1593	13.11	3.8	0.7	530	2	2	847.0	-	MC	KC	OK
		TOTALS		38.5	11.4	4813	9	8	7889.7	50	-	-	

SUMMARY

FUEL USAGE	96.5	Ltrs/Hr
OIL USAGE L:	0.18	Ltrs/Hr
R:	0.16	Ltrs/Hr
PRODUCTION RATE	159.1	Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	TOTALS HOURS	TOTALS LINE KM
Mark Rooney	20.1	5.7	25.8	4249.5
David Chappell	1.0	1.3	2.3	225.2
Melanie Cote	17.4	4.4	21.8	3465
GRAND TOTALS			49.9	7939.7

HOURS TO 120 HOURLY: 7.5 **TOTAL A/C HOURS:** 10,464.1

WEEK COMMENCING MONDAY 13/ 08/ 2001

CREW: PILOTS: Melanie Cote, Mark Rooney

AIRCRAFT: **VH-KAV**

OPERATORS: Kevin Cahill, Rob Deopel

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.	32	1593	7.11	3.4	0.7	480	-	-	-	-	MR	KC	FLIGHT OK
13/08	-	1593	-	-	1.4	-	-	-	-	-	MC	MR	NUMERY – ALICE FOR 100 HRLY
TUE.	-	1593	-	-	-	-	-	-	-	-	-	-	100 HOURLY
14/08	-	1593	-	-	-	-	-	-	-	-	-	-	100 HOURLY
WED.	-	1593	-	-	-	-	-	-	-	-	-	-	100 HOURLY
15/08	-	1593	-	-	-	-	-	-	-	-	-	-	100 HOURLY
THU.	-	1593	-	-	-	-	-	-	-	-	-	-	100 HOURLY
16/08	-	1593	-	-		-	-	-	-	-	-	-	100 HOURLY
FRI.	-	1593	17.00	-	0.8	398	-	-	-	-	MR	LG	TEST FLIGHT
17/08	-	1593	-	-	-	-	-	-	-	-	-	-	100 HOURLY
SAT.	-	1593	9.30	-	0.9	300	1	2	-	-	MR	-	FERRY ALICE - NUMERY
18/08	33	1593	14.59	2.2	0.3	400	-	-	509.4	-	MC	KC	LATE START DUE DIURNAL
SUN.	34	1593	7.26	5.0	0.3	600	1	1	1188.6	-	MC	KC	TURBULENT
19/08	35	1593	13.42	3.6	0.4	550	2	2	933.9	-	MR	RD	FLIGHT OK
		TOTALS		14.2	4.8	2728	4	5	2631.9	-	-	-	

SUMMARY

FUEL USAGE	143.6	Ltrs/Hr
OIL USAGE L:	0.21	Ltrs/Hr
R:	0.26	Ltrs/Hr
PRODUCTION RATE	138.5	Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	TOTALS HOURS	TOTALS LINE KM
Mark Rooney	7.0	2.8	9.8	933.9
Melanie Cote	7.2	2.0	9.2	1698.0
		GRAND TOTALS	19.0	2631.9

HOURS TO 120 HOURLY: **101**

TOTAL A/C HOURS: **10,603.3**

WEEK COMMENCING MONDAY 20/ 08/ 2001

CREW: PILOTS: Melanie Cote, Mark Rooney

AIRCRAFT: **VH-KAV**

OPERATORS: Kevin Cahill, Rob Deopel

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.	35	1593	6.54	5.0	0.5	600	-	-	1273.5	-	MC	RD	FLIGHT OK
20/08	36	1593	13.14	3.7	0.6	600	-	-	847.5	-	MC	KC	TURBULENT
TUE.	37	1593	7.03	4.6	1.1	600	1	1	758.0	339.6	MC	KC	TURBULENT
21/08	38	1593	13.31	1.6	0.6	300	1	1	305.5	28.7	MR	RD	RAIN/STORMS
WED.	-	1593	7.45	-	2.5	200	-	-		-	MR	RD	NUMERY – TOBOMORIE -NUM
22/08	39	1593	13.30	3.7	0.3	550	2	2	901.6	-	MC	KC	TURBULENT
THU.	-	1593	-	-	1.4	-	-	-		-	MC	KC	SPAR INSPECT IN ALICE
23/08	40	1593	15.00	1.8	0.3	420	1	-	450.8	-	MC	KC	FLIGHT OK
FRI.	41	1593	6.27	5.9	0.5	700	-	-	1424.3	-	MR	RD	TRAVS & TIES OK
24/08	-	1593	-	-	-	-	-	-		-			NO 2ND PM FLIGHT
SAT.	42	1593	7.25	4.8	0.3	500	-	-	1127.0	-	MC	KC	TURBULENT
25/08	43	1593	13.10	3.2	1.5	600	2	2	788.8	-	MR	RD	LAND MARQUA DUE FUEL PROB
SUN.	44	1593	6.25	4.9	1.2	650	-	-	1124.2	-	MR	RD	FLIGHT OK
26/08	45	1593	13.15	4.1	0.7	600	2	2	910.4	-	MC	KC	FLIGHT OK
		TOTALS		43.3	11.5	6320	9	8	9911.6	368.3	-	-	

SUMMARY

FUEL USAGE	115	Ltrs/Hr
OIL USAGE L:	0.16	Ltrs/Hr
R:	0.14	Ltrs/Hr
PRODUCTION RATE	228.9	Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	TOTALS HOURS	TOTALS LINE KM
Mark Rooney	15.6	6.3	21.9	3,671.5
Melanie Cote	27.7	5.2	32.9	6,608.4
		GRAND TOTALS	54.8	10,279.9

HOURS TO 120 HOURLY: **51.5**

TOTAL A/C HOURS: **10,524.4**

WEEK COMMENCING MONDAY 27/ 08/ 2001

CREW: PILOTS: Melanie Cote, Mark Rooney

AIRCRAFT: **VH-KAV**

OPERATORS: Kevin Cahill, Rob Deopel

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.	46	1593	07.02	4.8	0.4	200	-	-	1024.2	-	MC	KC	OK
	-	1593	12.50	2.2	0.9		-	-	392.0	-	MR	RD	Ferry Numery – Alice
27/08	47	1593	14.26	-	1.0	400	1	1	1254.0	-	MR	RD	Ferry Alice – Numery
TUE.	48	1593	06.30	5.1	0.7	600	-	-	798	-	MR	RD	Survey
28/08	49	1593	13.02	3.5	0.8	500	2	2	1026	-	MC	KC	OK
WED.	50	1593	07.03	4.6	0.9	600	-	-	705.5	135.0	MC	KC	OK
29/08	51	1593	13.22	3.1	1.1	550	1	1	1414.4	788.8	MR	RD	OK
THU.	52	1593	06.20	6.0	0.5	600	1	-	799.4	-	MR	RD	OK
30/08	53	1593	13.33	3.5	0.9	550	2	2	1142.0	-	MC	KC	OK
FRI.	54	1593	06.42	5.1	1.0	550	-	-	-	-	MC	KC	OK
31/08	55	1593	13.29	-	-	200	1	1	-	-	MR	RD	OK
SAT.	-	1593	-	-	-	-	-	-	-	-	-		No flights
1/09	-	1593	-	-	-	-	-	-	-	-	-	-	No flights
SUN.	-	1593	-	-	1.0	-	-	-	-	-			Numery – Alice (100 Hourly)
2/09	-	1593	-	-	-	-	-	-	-	-	-	-	100 Hourly in Alice
TOTALS				37.9	9.2	4750	8	7	8555	923.8	-	-	

SUMMARY

FUEL USAGE	100.8	Ltrs/Hr
OIL USAGE L:	0.17	Ltrs/Hr
R:	0.15	Ltrs/Hr
PRODUCTION RATE	201.3	Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	TOTALS HOURS	TOTALS LINE KM
Mark Rooney	16.4	4.2	20.6	4689.7
Melanie Cote	21.5	5.0	26.5	4789.6
		GRAND TOTALS	47.1	9479.3

HOURS TO 120 HOURLY: **51.5**

TOTAL A/C HOURS: **10,524.4**

WEEK COMMENCING MONDAY 3/09/2001

CREW: PILOTS: Melanie Cote, Mark Rooney

AIRCRAFT: **VH-KAV**

OPERATORS: Kevin Cahill, Rob Deopel

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.		1593											100 Hourly in Alice
3/09		1593											
TUE.		1593											
4/09		1593											
WED.		1593											
5/09		1593											
THU.		1593											
6/09		1593											Waiting in Alice due Bad Weather
FRI.		1593											Waiting in Alice due Bad Weather
7/09		1593											Waiting in Alice due Bad Weather
SAT.		1593			7.4						MC		Alice – Ayers – Kalgoorlie-Jandakot
8/09		1593											Parked in Jandakot
SUN.		1593											Parked in Jandakot
9/09		1593											Parked in Jandakot
		TOTALS									-	-	

SUMMARY

FUEL USAGE		Ltrs/Hr
OIL USAGE L:		Ltrs/Hr
R:		Ltrs/Hr
PRODUCTION RATE		Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	**TOTALS** HOURS	**TOTALS** LINE KM
Mark Rooney	-	7.4	7.4	-
Melanie Cote	-	-	-	-
		GRAND TOTALS	7.4	-

HOURS TO 120 HOURLY: **TOTAL A/C HOURS:**

WEEK COMMENCING MONDAY 1/10/2001

CREW: PILOTS: Ivan Hussein, Rod Jamieson, Mark Rooney

AIRCRAFT: **VH-KAV**

OPERATORS: Kevin Cahill, Rob Deopel

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.	-	-	-	-	-	-	-	-	-	-	-	-	-
1/10	-	-	-	-	-	-	-	-	-	-	-	-	-
TUE.	-	-	-	-	-	-	-	-	-	-	-	-	-
2/10	-	-	-	-	-	-	-	-	-	-	-	-	-
WED.	-	-	-	-	-	-	-	-	-	-	-	-	-
3/10	-	-	-	-	-	-	-	-	-	-	-	-	-
THU.	-	1593	-	-	-	-	-	-	-	-	-	-	-
4/10	-	1593	14.45	-	0.7	241	-	-	-	-	IH	DA	Comp Box
FRI.	-	1593	7.50	-	7.1	562	-	-	-	-	IH	-	Ferry Jandakot – Alice Springs
5/10	-	1593	-	-	-	-	-	-	-	-	-	-	-
SAT.	-	1593	-	-	-	-	-	-	-	-	-	-	-
6/10	-	1593	15.00	-	1.4	361	-	-	-	-	MR	RD	Ferry Alice – Marqua
SUN.	79	1593	7.15	2.8	1.2	470	-	-	470.0	-	RJ	KC	Tie Lines & Equip Problems
710	80	1593	11.59	3.7	0.7	480	2	2	887.5	-	MR	RD	Tie Lines
		TOTALS		6.5	11.1	1753	2	2	1357.5	-	-	-	

SUMMARY

FUEL USAGE	99.6	Ltrs/Hr
OIL USAGE L:	0.11	Ltrs/Hr
R:	0.11	Ltrs/Hr
PRODUCTION RATE	77	Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	TOTALS HOURS	TOTALS LINE KM
Mark Rooney	3.7	2.1	5.8	887.5
Ivan Hussein	-	7.8	7.8	-
Rod Jamieson	2.8	1.2	4.0	470.0
GRAND TOTALS			17.6	1357.5

HOURS TO 120 HOURLY: **94.8**

TOTAL A/C HOURS: **10,614.3**

WEEK COMMENCING MONDAY 8/10/2001

CREW: PILOTS: Rod Jamieson, Mark Rooney

AIRCRAFT: **VH-KAV**

OPERATORS: Kevin Cahill, Rob Deopel

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.	78	1593	6.55	3.3	1.0	480	-	-	724.3	80	MR	RD	TIE/TRAVS
8/10	81	1593	11.55	4.0	0.5	500	-	2	937.5	-	RJ	KC	OK
TUE.	82	1593	7.00	4.1	0.7	500	-	-	915.8	-	RJ	KC	OK
9/10	83	1593	12.26	3.8	0.6	500	2	2	997.7	-	MR	RD	OK
WED.	84	1593	6.56	3.7	0.7	500	-	-	806.8	-	MR	RD	OK
10/10	85	1593	12.00	3.2	0.8	400	-	-	808.5	-	RJ	KC	LEFT ENGINE PROB
THU.	-	1593	10.05	-	0.7	250	-	1	-	-	RJ	MR	TEST FLIGHT
11/10	86	1593	12.35	3.9	0.7	450	-	-	970.8	-	RJ	KC	THUNDERSTORM
FRI.	-	1593	10.00	-	1.8	419	-	-	-	-	MR	RD	FERRY MARQUA – ALICE
12/10	-	1593	15.30	-	2.1	257	1	2	-	-	MR	RD	FERRY ALICE – ABORTED
SAT.	-	1593	13.30	-	1.6	-	-	-	-	-	MR	RD	FERRY ALICE – MARQUA
13/10	-	1593	-	-	-	-	-	-	-	-	-	-	NO SURVEY DUE STORMS
SUN.	-	1593	13.05	0.5	0.5	150	-	-	-	-	MR	RD	ABORT DUE AREA WET
14/10	-	1593	-	-	-	-	-	-	-	-	-	-	NO FLIGHT DUE AREA WET
		TOTALS		26.5	11.7	4416	3	7	6161.4	80	-	-	

SUMMARY

FUEL USAGE	115.6	Ltrs/Hr
OIL USAGE L:	0.08	Ltrs/Hr
R:	0.18	Ltrs/Hr
PRODUCTION RATE	163.4	Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	TOTALS HOURS	TOTALS LINE KM
Mark Rooney	11.3	8.3	19.6	2608.8
Rod Jamieson	15.2	3.4	18.6	3632.6
		GRAND TOTALS	38.2	6241.4

HOURS TO 120 HOURLY: **56.8**

TOTAL A/C HOURS: **10,652.3**

WEEK COMMENCING MONDAY 15/10/2001

CREW: PILOTS: Rod Jamieson, Mark Rooney

AIRCRAFT: **VH-KAV**

OPERATORS: Kevin Cahill, Rob Deopel

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.	87	1593	7.05	3.9	0.4	500	-	-	993.2	-	MR	RD	OK
15/10	88	1593	12.04	3.7	0.5	500	1	2	948.3	-	RJ	KC	OK
TUE.	89	1593	7.00	4.2	0.5	450	-	-	1048.3	-	RJ	KC	OK, RAIN
16/10	90	1593	12.18	3.9	0.5	480	2	2	983.5	-	MR	RD	OK
WED.	-	1593	-	-	-	-	-	-	-	-	-		NO FLIGHT DUE WEATHER /WET
17/10	-	1593	-	-	-	-	-	-	-	-	-		NO FLIGHT DUE WEATHER /WET
THU.	-	1593	11.52	-	1.2	160	-	-	-	-	MR	RD	TEST AREA FOR DRYNESS
18/10	-	1593	-	-	-	-	-	-	-	-	-		NO FLIGHT DUE GROUND WET
FRI.	91	1593	6.50	3.8	0.6	450	-	-	947.5	-	MR	RD	SAT DROP OUTS
19/10	92	1593	11.55	4.2	0.6	500	2	2	999.0	-	RJ	KC	OK
SAT.	93	1593	6.55	4.2	0.6	450	-	-	1049.0	-	RJ	KC	OK
20/10	94	1593	12.15	3.8	0.6	500	1	1	999.6	-	MR	RD	OK
SUN.	95	1593	6.56	3.5	0.9	500	-	-	844.4	60	MR	RD	OK
21/10	96	1593	11.58	4.0	0.6	500	1	2	999.6	-	RJ	KC	OK
		TOTALS		39.2	7	4990	7	9	9,812.4	60	-	-	

SUMMARY

FUEL USAGE	108.0	Ltrs/Hr
OIL USAGE L:	0.15	Ltrs/Hr
R:	0.19	Ltrs/Hr
PRODUCTION RATE	213.7	Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	TOTALS HOURS	TOTALS LINE KM
Mark Rooney	18.9	4.2	23.1	4,828.2
Rod Jamieson	20.3	2.8	23.1	5,044.2
		GRAND TOTALS	46.2	9,872.4

HOURS TO 120 HOURLY: **9**

TOTAL A/C HOURS: **10,698.5**

WEEK COMMENCING MONDAY 22/10/2001

CREW: PILOTS: Rod Jamieson, Mark Rooney

AIRCRAFT: **VH-KAV**

OPERATORS: Kevin Cahill, Rob Deopel

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.	-	1593	-	-	-	-	-	-	-	-	-	-	No am flight
22/10	-	1593	12.20	-	1.3	-	-	-	-	-	RJ	-	Ferry Marqua-Alice
TUE.	-	1593	-	-	-	-	-	-	-	-	-	-	100 HOURLY
23/10	-	1593	-	-	-	-	-	-	-	-	-	-	100 HOURLY
WED.	-	1593	10.00	-	0.4	-	-	-	-	-	RJ	-	TEST FLIGHT
24/10	-	1593	-	-	-	203	-	-	-	-	-	-	HYDRAULIC PUMP FAILED
THU.	-	1593	-	-	-	-	-	-	-	-	-	-	A/C MAINTENANCE
25/10	-	1593	15.11	-	1.2	230	2	2	-	-	RJ	-	FERRY ALICE – MARQUA
FRI.	-	1593	-	-	-	-			-	-	-	-	NO FLIGHTS DUE WEATHER
26/10	-	1593	-	-	-	-			-	-	-	-	NO FLIGHTS DUE WEATHER
SAT.	-	1593	12.47	-	1.3	167			-	-	MR	-	FERRY MARQUA – ALICE
27/10	-	1593	6.15	-	1.4	200			-	-	MR	-	FERRY ALICE – MARQUA
SUN.	97	1593	5.50	3.5	0.8	500			884	-	MR	RD	OK
28/10	98	1593	13.46	2.0	0.8	350	1	1	499.8	-	RJ	KC	OK
		TOTALS		5.5	7.2	1650	3	3	1383.8	-	-	-	

SUMMARY

FUEL USAGE	129.9	Ltrs/Hr
OIL USAGE L:	0.24	Ltrs/Hr
R:	0.24	Ltrs/Hr
PRODUCTION RATE	108.9	Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	TOTALS HOURS	TOTALS LINE KM
Mark Rooney	3.5	3.5	7.0	884
Rod Jamieson	2.0	3.7	5.7	499.8
		GRAND TOTALS	12.7	1383.8

HOURS TO 120 HOURLY: **110**

TOTAL A/C HOURS: **10,709.8**

WEEK COMMENCING MONDAY 29/10/2001

CREW: PILOTS: Rod Jamieson, Mark Rooney

AIRCRAFT: **VH-KAV**

OPERATORS: Kevin Cahill, Rob Deopel

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.	99	1593	6.45	4.0	0.6	400	-	-	999.6	-	RJ	KC	OK
29/10	100	1593	11.58	3.7	0.7	500	2	2	930.8	30	MR	RD	OK
TUE.	101	1593	6.59	3.4	0.9	450	-	-	867.8	-	MR	RD	OK
30/10	102	1593	11.52	3.6	0.7	500	1	1	910.2	-	RJ	KC	OK
WED.	103	1593	6.52	4.4	0.7	450	-	-	1100.2	-	RJ	KC	OK
31/10	104	1593	11.54	3.5	0.8	480	1	2	900.2	-	MR	RD	OK
THU.	105	1593	7.00	2.4	0.7	230	1	-	498	166.6	RJ	KC	OK
1/11	106	1593	10.56	4.1	1.7	800	1	2	-	436.6	MR	RD	MARQUA – NUMERY REFLIGHTS
FRI.	107	1593	7.07	2.3	1.1	500	-	-	-	308.5	MR	RD	MARQUA – NUMERY REFLIGHTS
2/11	-	1593	13.00	-	1.3	-	-	-	-	-	RJ	MR	FERRY MARQUA – ALICE MAINT
SAT.	-	1593		-	-	397	-	-	-	-	-	-	IN ALICE BAD WEATHER
3/11	-	1593		-	-	-	-	-	-	-	-	-	NO FLIGHTS
SUN.	-	1593	6.48	-	3.9	330	-	2	-	-	RJ	RD	FERRY ALICE - TINDAL
4/11	-	1592A	13.00	0.5	1.7	251	-	-	-	115.2	RJ	RD	REFLIGHTS & COMP BOX
		TOTALS		31.9	14.8	5258	8	9	6,206.8	1056.9	-	-	

SUMMARY

FUEL USAGE	112.6	Ltrs/Hr
OIL USAGE L:	0.17	Ltrs/Hr
R:	0.19	Ltrs/Hr
PRODUCTION RATE	155.5	Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	TOTALS HOURS	TOTALS LINE KM
Mark Rooney	17.0	5.2	22.2	3473.9
Rod Jamieson	14.9	9.6	24.5	3789.8
		GRAND TOTALS	46.7	7263.7

HOURS TO ENGINE CHANGE: 58.8

TOTAL A/C HOURS: 10,756.7

WEEK COMMENCING MONDAY 02/07/ 2001 AIRCRAFT: **VH-KAC** **CREW:** PILOTS: Mark Rooney, John Sparkman

OPERATORS: Rob Deopel, David Little

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.	-	1598	07.20	-	0.9	6	-	-	-	-	MR	RD	Ferry Kulgera - Alice
02/07	-	1598	12.00	-	1.2	-	-	-	-	-	MR	RD	Ferry Alice – Kulgera + Test lines
TUES	1	1598	13.29	3.4	0.8	500	2	1	602.8	-	MR	RD	Ties&Travs – Short lines
03/07	-	1598	-	-	-	-	-	-	-	-	JS	DL	
WEDS	2	1598	07.19	3.0	0.8	500	-	-	548.8	-	MR	RD	Ties & Travs – Short lines
04/07	-	1598	-	-	-	-	1	2	-	-	JS	DL	AT2 Prob
THU.	3	1598	07.39	4.3	0.5	600	1	-	750.4	-	JS	DL	Prod OK, Flight delayed due AT2
05/07	4	1598	13.17	3.6	0.8	550	1	1	629.8	-	MR	RD	Prod OK, Flight delayed due AT2
FRI.	5	1598	07.30	2.5	1.0	200	-	-	455.6	-	MR	RD	
06/07	-	1593	-	-	0.8	210	2	2	-	-	JS	DL	Kulgera – Alice
SAT	-	1593	-	-	2.8	400	-	-	-	-	JS	DL	Alice – Lucy Creek – Kulgera
07/07	6	1593	13.45	2.7	0.9	500	-	-	675	-	MR	RD	
SUN.	-	1593	07.40	-	0.4	60	-	-	-	-	MR	RD	Return Due Electrical Probs.
08/07	7	1593	13.49	2.7	0.9	360	-	-	675	-	JS	DL	
		TOTALS		22.2	11.7	3520	7	6	4337.4	-	-	-	

SUMMARY

FUEL USAGE	104.0	Ltrs/Hr
OIL USAGE L:	0.2	Ltrs/Hr
R:	0.2	Ltrs/Hr
PRODUCTION RATE	195	Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	TOTALS HOURS	TOTALS LINE KM
Mark Rooney	7.0	5.0	12.0	1425
John Sparkman	15.2	6.7	21.9	2912
		GRAND TOTALS	33.9	4337

HOURS TO 120 HOURLY: 21 **TOTAL A/C HOURS:** 25,450

WEEK COMMENCING MONDAY 09/ 07/ 2001 AIRCRAFT: **VH-KAC** **CREW:** PILOTS: Mark Rooney, John Sparkman

OPERATORS: Rob Deopel, David Little

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.	-	1593	-	-	0.8	250	-	-	-	-	JS	DL	Ferry Kulgera – Alice
09/07	-	1593	-	-	-	-	-	-	-	-			120 Hourly
TUES	-	1593	-	-	-	-	-	-	-	-			120 Hourly
10/07	-	1593	-	-	0.9	600	-	-	-	-	JS	DL	Ferry Alice – Kulgera
WEDS	8	1593	07.18	2.7	0.7	300	1	1	675	-	JS	DL	Pilot ill
11/07	9	1593	11.45	4.8	0.5	600	2	2	1105	-	MR	RD	Nav Drop out
THU.	10	1593	07.00	4.9	0.5	400	-	-	1217.9	-	MR	RD	OK
12/07	11	1593	13.54	3.0	0.7	650	2	-	450	-	MR	DL	Nav Drop out
FRI.	12	1593	07.03	3.6	0.8	400	-	-	900	-	MR	DL	Long lines
13/07	13	1593	13.05	3.0	0.5	600	2	2	647	-	MR	RD	Short lines
SAT	14	1593	06.56	4.5	0.7	300	-	-	1066.5	-	MR	RD	OK
14/07	15	1593	12.20	1.6	0.8	400	2	2	397	-	JS	DL	Rain
SUN.	-	1593	-	-	-	-	-	-	-	-	-	-	No flight Due rain
15/07	-	1593	-	-	-	-	-	-	-	-	-	-	No flight Due rain
TOTALS				27.1	6.9	4300	9	7	6458.4	-	-	-	

SUMMARY

FUEL USAGE	112.0	Ltrs/Hr
OIL USAGE L:	.27	Ltrs/Hr
R:	.20	Ltrs/Hr
PRODUCTION RATE	238	Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	TOTALS HOURS	TOTALS LINE KM
Mark Rooney	4.3	3.2	7.5	5386.4
John Sparkman	22.8	3.7	26.5	1072
		GRAND TOTALS	34.0	6458.4

HOURS TO 120 HOURLY: **86.8** **TOTAL A/C HOURS:** **25,484**

WEEK COMMENCING MONDAY 16/ 07/ 2001 AIRCRAFT: **VH-KAC** **CREW:** PILOTS: Mark Rooney, John Sparkman

OPERATORS: Rob Deopel, David Little

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.	-	1593	-	-	-	-	-	-	-	-	-	-	No flights due rain / Bad Weather
16/07	-	1593	-	-	-	-	-	-	-	-	-	-	No flights due rain / Bad Weather
TUES	-	1593	-	-	-	-	-	-	-	-	-	-	No flights due rain / Bad Weather
17/07	-	1593	-	-	-	-	-	-	-	-	-	-	No flights due rain / Bad Weather
WEDS	-	1593	-	-	-	-	-	-	-	-	-	-	No flights due rain / Bad Weather
18/07	-	1593	-	-	-	-	-	-	-	-	-	-	No flights due rain / Bad Weather
THU.	-	1593	-	-	-	-	-	-	-	-	-	-	No flights due rain / Bad Weather
19/07	-	1593	-	-	-	-	-	-	-	-	-	-	No flights due rain / Bad Weather
FRI.	-	1593	-	-	-	-	-	-	-	-	-	-	No flights due rain / Bad Weather
20/07	-	1593	-	-	-	-	-	-	-	-	-	-	No flights due rain / Bad Weather
SAT	16	1593	07.46	2.0	0.7	400	-	-	313.7	122.5	MR	RD	Check flight post Rain
21/07	17	1593	12.00	3.6	1.0	600	1	1	876	-	JS	DL	
SUN.	18	1593	07.07	4.7	0.8	600	-	-	1104	-	JS	DL	
22/07	19	1593	13.15	3.5	0.7	550	2	2	718	-	MR	RD	
		TOTALS		13.8	3.2	2150	3	3	3011.7	122.5			

SUMMARY

FUEL USAGE	126.5	Ltrs/Hr
OIL USAGE L:	0.176	Ltrs/Hr
R:	0.176	Ltrs/Hr
PRODUCTION RATE	177.1	Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	**TOTALS** HOURS	LINE KM
Mark Rooney	5.5	1.4	6.9	1031.7
John Sparkman	8.3	1.8	10.1	1980
		GRAND TOTALS	17.0	3011.7

HOURS TO 120 HOURLY: **69.8** **TOTAL A/C HOURS:** **25,501.4**

WEEK COMMENCING MONDAY 23/ 07/ 2001 AIRCRAFT: **VH-KAC** **CREW:** PILOTS: Mark Rooney, John Sparkman

OPERATORS: Rob Deopel, David Little

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.	20	1593	7.00	4.7	0.7	450	-	-	1015.5	-	MR	RD	Flight OK
23/07	21	1593	12.51	2.1	0.9	400	2	2	393.8	57.1	JS	DL	Flight OK
TUES	22	1593	7.16	4.4	0.7	400	-	-	1014	-	JS	DL	Flight OK
24/07	23	1593	12.55	3.6	0.9	660	1	2	734.2	-	MR	RD	Flight OK
WEDS	24	1593	7.00	4.9	0.7	400	2	-	1121.1	-	MR	RD	Flight OK
25/07	25	1593	13.06	3.6	1.0	600	1	2	900	-	JS	DL	Flight OK
THU.	26	1593	8.54	3.6	1.0	150	-	-	900	-	JS	DL	Late – ICE
26/07	27	1593	15.57	1.2	1.2	866	2	1	112.5	-	MR	RD	Ferry Kulgera – Alice – Kulgera
FRI.	28	1593	8.23	3.6	0.9	400	-	-	900	-	MR	RD	ICE
27/07	29	1593	13.35	3.3	0.9	515	2	2	789	-	JS	DL	Flight OK
SAT	30	1593	7.13	4.4	1.0	485	-	-	1120	-	JS	DL	Flight OK
28/07	31	1593	13.09	3.5	0.8	400	2	2	900	-	MR	RD	Flight OK
SUN.	32	1593	7.11	2.6	0.8	550	-	-	625.5	-	JS	DL	Flight OK
29/07	33	1593	11.26	4.3	0.9	400	2	2	1125.0	-	MR	RD	Flight OK
TOTALS				49.8	12.4	6676	14	13	11650.6	57.1	-	-	

SUMMARY

FUEL USAGE	107.0	Ltrs/Hr
OIL USAGE L:	0.22	Ltrs/Hr
R:	0.20	Ltrs/Hr
PRODUCTION RATE	188.2	Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	TOTALS HOURS	TOTALS LINE KM
Mark Rooney	25.8	6.1	31.9	5908.3
John Sparkman	24.0	6.3	30.3	5799.4
		GRAND TOTALS	62.2	11,707.7

HOURS TO 120 HOURLY: 7.6 **TOTAL A/C HOURS:** 25,683.6

WEEK COMMENCING MONDAY 30/ 07/ 2001 AIRCRAFT: **VH-KAC**

CREW: PILOTS: Mark Rooney, Rod Jamieson

OPERATORS: Rob Deopel, Leith Gardiner

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.	-	1593	07.03	-	0.6	-	-	-	-	-	MR	RD	Abort due A/c U/s
30/07	-	1593	11.25	-	0.8	-	-	-	-	-	MR	RD	Ferry to Alice for 100 Hourly
TUES	-	1593	-	-	-	-	-	-	-	-	-	-	-
31/07	-	1593	-	-	-	-	-	-	-	-	-	-	-
WEDS	-	1593	12.33	-	0.9	417	-	-	-	-	RJ	-	Ferry Alice – Kulgera
01/08	34	1593	14.46	1.8	1.1	400	-	-	450	-	RJ	DL	-
THU.	35	1593	07.36	4.3	0.9	400	-	1	1125.0	-	RJ	DL	OK
02/08	36	1593	14.20	2.6	0.9	540	-	1	675	-	RJ	LG	OK
FRI.	37	1593	07.55	3.5	0.9	530	1	2	900	-	RJ	LG	OK
03/08	-	1593	-	-	-		-	-	-	-	-	-	No flight Office Checking Data
SAT	38	1593	09.15	4.9	0.8	430	-	1	1140	-	RJ	LG	OK
04/08	-	1593	-	-	-		-	-	-	-	-	-	No flight due 1 only pilot
SUN.	39	1593	08.15	3.1	0.8	624	2	2	741.3	-	RJ	LG	OK
05/08	40	1593	14.00	3.0	0.8	400	-	-	742.3	-	RJ	LG	OK
		TOTALS		23.2	8.5	3741	3	7	5772.6	-			

SUMMARY

FUEL USAGE	118.0	Ltrs/Hr
OIL USAGE L:	0.09	Ltrs/Hr
R:	0.22	Ltrs/Hr
PRODUCTION RATE	182.1	Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	TOTALS HOURS	TOTALS LINE KM
Mark Rooney	-	1.4	1.4	-
Rod Jamieson	23.2	7.1	30.3	5772.6
		GRAND TOTALS	31.7	5772.6

HOURS TO 120 HOURLY: 87.7

TOTAL A/C HOURS: 25,715.3

WEEK COMMENCING MONDAY 06/ 08/ 2001 AIRCRAFT: **VH-KAC**

CREW: PILOTS: Rod Jamieson, Dave Chappell

OPERATORS: Mark Devenish, Leith Gardiner

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.	41	1593	08.28	5.2	0.6	650	1	1	1256.2	-	RJ	DL	OK
06/08	-	1593	-	-	-	-	-	-	-	-			
TUES	42	1593	08.15	4.7	1.2	400	1	1	970.7	87.1	RJ	LG	OK, LONG FERRY TO REFLY
07/08	43	1593	14.43	1.8	0.5	450	1	1	456.8	-	RJ	DL	OK
WEDS	44	1593	07.38	3.6	0.8	320	-	2	914.7	-	RJ	DL	OK
08/08	-	1593	15.53	-	0.9	-	-		-	-	RJ		KULGERA – ALICE
THU.	1	1593	13.45	2.7	1.2	414	1	1	675.9	-	DC	MD	-
09/08	-	1593	-	-	-		-		-	-			-
FRI.	2	1593	07.50	3.5	1.3	415	1	3	901.2	-	DC	MD	OK
10/08	3	1593	13.20	3.5	1.2	600	2	2	901.2	-	RJ	LG	FLIGHT OK
SAT	-	1593	10.22	-	3.6	-			-	-	RJ	DC	ALICE - KUNUNURRA
11/08	-		-	-	-	-			-	-			IN KUNUNURRA
SUN.	-		-	-	-	-			-	-			IN KUNUNURRA
12/08	-		-	-	-	-			-	-			IN KUNUNURRA
		TOTALS		25.0	11.3	3249	7	11	6076.7	87.1			

SUMMARY

FUEL USAGE	89.5	Ltrs/Hr
OIL USAGE L:	0.19	Ltrs/Hr
R:	0.30	Ltrs/Hr
PRODUCTION RATE	169.8	Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	**TOTALS** HOURS	**TOTALS** LINE KM
Rod Jamieson	18.8	8.8	27.6	4586.7
David Chappell	6.2	2.5	8.7	1577.1
		GRAND TOTALS	36.3	6163.8

HOURS TO 120 HOURLY: **51.4**

TOTAL A/C HOURS: **26,078.3**

WEEK COMMENCING MONDAY 24 / 09/ 2001 **AIRCRAFT**: VH-KAC **CREW:** PILOTS: Max Eichorn, Mark Rooney, Ivan Hussein, Dave Chappell

OPERATORS: Kevin Cahill, Rob Deopel

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.													
24/09													
TUES													
25/09													
WEDS													
26/09													
THU.													
27/09													
FRI.													
28/09	66	1593	15.10	1.5	0.9	300	1	1	343.8	-	ME	KC	OK
SAT	-	1593	9.00	-	2.5	490	-	-	-	-	MR	ME	Ferry Marqua – Ayers Rock
29/09	-	1593	13.20	-	2.6	150	2	2	-	-	MR	RJ	Ferry Ayers – Marqua
SUN.	67	1593	6.42	1.5	2.2	400	-	-	400.4	-	MR	RD	Fugro expired, Sat Dropouts
30/09	68	1593	11.09	3.4	0.8	500	1	2	802.2	-	RJ	KC	OK
		TOTALS											

SUMMARY

FUEL USAGE		Ltrs/Hr
OIL USAGE L:		Ltrs/Hr
R:		Ltrs/Hr
PRODUCTION RATE		Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	**TOTALS** HOURS	LINE KM
		GRAND TOTALS		

HOURS TO 120 HOURLY: **TOTAL A/C HOURS:**

WEEK COMMENCING MONDAY 1/ 10/ 2001 AIRCRAFT: **VH-KAC**

CREW: PILOTS: Rod Jamieson, Mark Rooney, Ivan Hussein

OPERATORS: Kevin Cahill, Rob Deopel

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.	69	1593	6.56	3.5	0.7	500	-	-	802.2	-	RJ	KC	OK, Sat Coverage Problem
1/10	70	1593	11.45	3.7	0.7	500	1	1	916.8	-	MR	RD	OK
TUES	71	1593	6.39	3.8	0.6	500	1	-	916.8	-	MR	RD	OK
2/10	72	1593	11.54	3.8	0.6	500	1	1	918.4	-	RJ	KC	OK
WEDS	73	1593	-	0.6	0.6	130	-	-	114.8	-	RJ	KC	Rain in Area
3/10	-	1593	-	-	-	-	-	-	-	-			-
THU.	74	1593	7.05	3.5	0.8	480	-	-	746.2	-	MR		GPS PROBS
4/10	75	1593	12.01	3.7	0.7	480	3	2	918.4	-	RJ	KC	OK
FRI.	76	1593	-	3.6	0.7	480	-	-	800.6	-	RJ	KC	3 Sats for 30 Mins
5/10	77	1593	12.12	3.1	0.6	230	2	-	687.6	343.8	MR	RD	OK
SAT	-	1593	-	-	1.4	-	-	-	-	-	MR	RD	Ferry Marqua – Alice
6/10	-	1593	16.30	-	6.5	928	-	1	-	-	IH	ZZ	Ferry Alice - Jandakot
SUN.	-	1593	-	-	-	-	-	-	-	-	-	-	-
7/10	-	1593	-	-	-	-	-	-	-	-	-	-	-
		TOTALS		29.3	13.9	4728	8	5	6821.8	343.8	-	-	

SUMMARY

FUEL USAGE	108.7	Ltrs/Hr
OIL USAGE L:	0.18	Ltrs/Hr
R:	0.11	Ltrs/Hr
PRODUCTION RATE	164.7	Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	**TOTALS** HOURS	**TOTALS** LINE KM
Ivan Hussein	-	6.5	6.5	-
Mark Rooney	14.1	4.1	18.2	3611.2
Rod Jamieson	15.2	3.3	18.5	3554.4
GRAND TOTALS			43.5	7165.6

HOURS TO 120 HOURLY: 4 **TOTAL A/C HOURS:** 25,824.4

WEEK COMMENCING MONDAY 20/ 08/ 2001 AIRCRAFT: **VH-EXS**

CREW: PILOTS: Rod Jamieson, Ivan Hussein

OPERATORS: Ross Rackham, Erron Gardner

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.	-	-	-	-	-	-	-	-	-	-	-	-	-
20/08	-	-	-	-	-	-	-	-	-	-	-	-	-
TUE.	-	-	-	-	-	-	-	-	-	-	-	-	-
21/08	-	-	-	-	-	-	-	-	-	-	-	-	-
WED.	-	-	-	-	-	-	-	-	-	-	-	-	-
22/08	-	-	-	-	-	-	-	-	-	-	-	-	-
THU.	-	-	-	-	-	-	-	-	-	-	-	-	-
23/08	-	-	-	-	-	-	-	-	-	-	-	-	-
FRI.	-	-	-	-	-	-	-	-	-	-	-	-	-
24/08	-	-	-	-	-	-	-	-	-	-	-	-	-
SAT.	-	-	-	-	-	-	-	-	-	-	-	-	-
25/08	-	-	-	-	-	-	-	-	-	-	-	-	-
SUN.	-	1593	7.30	-	3.9	496	-	-	-	-	RJ	-	Ferry Kununurra to Urandangi
26/08	-	1593	14.30	-	1.8	342	1	1	-	-	RJ	-	Urandangie – Alice - Urandangi
		TOTALS											

SUMMARY

FUEL USAGE		Ltrs/Hr
OIL USAGE L:		Ltrs/Hr
R:		Ltrs/Hr
PRODUCTION RATE		Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	**TOTALS** HOURS	LINE KM
		GRAND TOTALS		

HOURS TO 120 HOURLY [ ] **OTAL A/C HOURS:** [ ]

WEEK COMMENCING MONDAY 27/ 08/ 2001 AIRCRAFT: **VH-EXS**

CREW: PILOTS: Rod Jamieson, John Sparkman

OPERATORS: Max Eichorn, Dave little

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.	0	1593	-	-	1.4	-	-	-	-	-	JS	DL	COMP BOX & TEST LINE
27/08	1	1593	15.24	2.1	0.6	260	2	2	447	-	JS	DL	OK
TUE.	2	1593	8.10	4.4	0.5	540	-	-	929	-	JS	DL	OK
28/08	3	1593	13.51	3.3	0.4	520	-	-	783.6	-	RJ	DL	OK
WED.	-	1593	-	-	-	-	-	-	-	-	-	-	NO FLIGHTS
29/08	-	1593	-	-	-	-	-	-	-	-	-	-	NO FLIGHTS
THU.	4	1593	09.28	2.8	1.6	200	-	-	643.8	-	RJ	DL	GPS LOW SAT
30/08	-	1593	15.30	-	1.7	245	-	1	-	-	RJ	-	FERRY DANGI – ALICE
FRI.	-	1593		-	1.6	380	1	1	-	-	RJ	-	FERRY ALICE – DANGI
31/08	-	1593	12.20	-	-	-	-	-	-	-	-	-	NO FLIGHT VERY WINDY
SAT.	5	1593	7.45	5.0	0.7	550	-	-	1172	-	ME	JS	WINDY
1/09	6	1593	13.58	4.1	0.4	500	1	2	1000	-	RJ	DL	OK
SUN.	7	1593	7.36	4.8	0.6	500	-	-	1198.6	-	RJ	DL	OK
2/09	8	1593	13.30	4.0	0.6	535	2	3	1000	-	JS	ME	OK
		TOTALS		30.5	9.1	4230	6	9	7174	-	-	-	

SUMMARY

FUEL USAGE	105	Ltrs/Hr
OIL USAGE L:	0.15	Ltrs/Hr
R:	0.2	Ltrs/Hr
PRODUCTION RATE	181	Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	TOTALS HOURS	TOTALS LINE KM
JOHN SPARKMAN	10.5	1.7	12.5	2376
ROD JAMIESON	15.0	5.3	20.3	3626
MAX EICHORN	5.0	0.7	5.7	1172
		GRAND TOTALS	38.5	7174

HOURS TO 120 HOURLY 73.0 **TOTAL A/C HOURS:** 26,925

WEEK COMMENCING MONDAY 3/ 09/ 2001 AIRCRAFT: **VH-EXS** **CREW:** PILOTS: Rod Jamieson, John Sparkman, Max Eichorn, Mark Rooney

OPERATORS: JS, RJ, ME & David Little

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.	9	1593	7.09	5.0	0.7	-	-	-	1153.5	-	ME	JS	
3/09	10	1593	13.27	4.5	0.3	520	1	1	1068.3	51.0	RJ	DL	OK
TUE.	11	1593	7.36	4.2	0.6	500	-	1	1000	20.0	RJ	DL	20 kms Patch
4/09	12	1593	13.05	4.0	0.6	300	2	2	900	52.0	JS	ME	
WED.	-	1593	9.52	-	-		-	-	-	-	-	-	Ferry Urandangi – Alice
5/09	-	1593	-	-	4.2	241	1	1	-	-	RJ	-	Fuel at Alice Springs (BP)
THU.	13	1593	7.26	1.2	0.9	500	-	-	300	-	RJ	MG	OK
6/09	14	1593	13.04	4.0	1.0	500	2	3	1000	-	MR	RD	OK
FRI.	15	1593	7.15	4.1	0.9	500	-	-	1000	-	MR	RD	Das 8 Crash
7/09	16	1593	13.07	4.5	0.8	600	1	2	1100	-	ME	RJ	OK
SAT.	18	1593	13.11	2.2	0.6	300	-	2	500	-	MR	RD	OK Very Windy
8/09	17	1593	7.20	4.7	0.6	400	1	1	-	-	ME	RJ	OK Very Windy
SUN.	-	-	-	-	6.5	698	1	2	-	-	MR	RD	Ferry Urandangi – Alice – Numery
9/09	-	-	-	-	-	-	-	-	-	-	-	-	-
		TOTALS		38.4	17.7	5276	9	15	8021.8	123	-	-	

SUMMARY

FUEL USAGE	94.05	Ltrs/Hr
OIL USAGE L:	0.16	Ltrs/Hr
R:	0.27	Ltrs/Hr
PRODUCTION RATE	145.2	Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	TOTALS HOURS	TOTALS LINE KM
MARK ROONEY	10.3	9.0	19.3	2500.0
ROD JAMIESON	9.9	6.0	15.9	2439.3
JOHN SPARKMAN	4.0	0.6	4.6	952.0
MAX EICHORN	14.2	2.1	16.3	2253.5
GRAND TOTALS			56.1	8144.8

HOURS TO 120 HOURLY 16.8 **TOTAL A/C HOURS:** 27,101

WEEK COMMENCING MONDAY 10/ 09/ 2001 AIRCRAFT: **VH-EXS**

CREW: PILOTS: Max Eichorn, Mark Rooney

OPERATORS: Rob Deopel, Kevin Cahill

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.	56	1593	07.25	3.1	0.9	200	-	-	685.2	-	ME	KC	Return Due Rain
10/09	-	1593	13.41	-	0.2	40	-	-	-	-	MR	RD	Abort due Low vis/Rain
TUE.	-	1593	-	-	0.9	-	-	-	-	-	MR	ME	Numery – Alice for 100 Hourly
11/09	-	1593	-	-	-	-	-	-	-	-	-	-	100 Hourly
WED.	-	1593	-	-	-	-	-	-	-	-	-	-	100 Hourly
12/09	-	1593	-	-	-	-	-	-	-	-	-	-	100 Hourly
THU.	-	1593	-	-	-	-	-	-	-	-	-	-	100 Hourly
13/09	-	1593	-	-	-	-	-	-	-	-	-	-	100 Hourly
FRI.	-	1593	-	-	-	-	-	-	-	-	-	-	100 Hourly
14/09	-	1593	-	-	-	-	-	-	-	-	-	-	100 Hourly
SAT.	-	1593	-	-	-	-	-	-	-	-	-	-	100 Hourly
15/09	-	1593	-	-	-	-	-	-	-	-	-	-	100 Hourly
SUN.	-	-	-	-	-	-	-	-	-	-	-	-	100 Hourly
16/09	-	-	-	-	-	-	-	-	-	-	-	-	100 Hourly
TOTALS				3.1	2.0	240	-	-	685.2	-	-	-	

SUMMARY

FUEL USAGE	47.06	Ltrs/Hr
OIL USAGE L:	0.16	Ltrs/Hr
R:	0.27	Ltrs/Hr
PRODUCTION RATE	134.4	Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	TOTALS HOURS	TOTALS LINE KM
MARK ROONEY	-	1.1	1.1	-
MAX EICHORN	3.1	0.9	4	685.2
		GRAND TOTALS	5.1	685.2

HOURS TO 120 HOURLY 120

TOTAL A/C HOURS: 27,106.1

WEEK COMMENCING MONDAY 17/ 09/ 2001 AIRCRAFT: **VH-EXS**

CREW: PILOTS: Max Eichorn, Mark Rooney

OPERATORS: Rob Deopel, Kevin Cahill

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.	-	1593	-	-	-	-	-	-	-	-	-	-	
17/09	-	1593	-	-	-	-	-	-	-	-	-	-	
TUE.	-	1593	13.30	-	1.4	200	-	-	-	-	MR	ME	FERRY ALICE – MARQUA
18/09	-	1593	-	-	-	-	-	-	-	-			
WED.	-	1593	14.00	-	1.4	305	1	1	-	-	ME	MR	MARQUA – ALICE
19/09	-	1593	-	-	-	-	-	-	-	-	-	-	
THU.	-	1593	-	-	-	-	-	-	-	-	-	-	
20/09	-	1593	-	-	-	-	-	-	-	-	-	-	
FRI.	-	1593	11.05	-	1.6	200	-	-	-	-	MR	ME	FERRY ALICE – MARQUA
21/09	57	1593	15.05	1.5	1.3	200	-	1	-	-	ME	KC	OK
SAT.	58	1593	07.02	3.5	0.9	480	-	2	799.4	-	ME	KC	OK
22/09	59	1593	13.07	3.7	0.8	500	1	2	915.2	-	MR	RD	DAS 8 CRASH
SUN.	60	1593	06.56	3.5	1.0	500	-	1	800.0	400.4	MR	RD	OJ
23/09	61	1593	12.02	4.0	0.7	-	1	1	915.2	-	ME	KC	TURBULENT
		TOTALS											

SUMMARY

FUEL USAGE	110	Ltrs/Hr
OIL USAGE L:	0.12	Ltrs/Hr
R:	0.3	Ltrs/Hr
PRODUCTION RATE		Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	TOTALS HOURS	TOTALS LINE KM
MARK ROONEY				
MAX EICHORN				
		GRAND TOTALS		

HOURS TO 120 HOURLY 95

TOTAL A/C HOURS: 22,132.4

WEEK COMMENCING MONDAY 24/ 09/ 2001 AIRCRAFT: **VH-EXS**

CREW: PILOTS: Max Eichorn, Mark Rooney, Ivan Hussein

OPERATORS: Rob Deopel, Kevin Cahill

DAY/ DATE	FLIGHT No.	JOB No.	TAKE OFF TIME	"ON LINE" FLIGHT HOURS	ALL OTHER FLIGHT HOURS	FUEL	OIL L	OIL R	KM FLOWN	KM REFLOWN	CREW PLT	CREW OR	COMMENTS (Routes Flown, Wx, Equipment & A/C Servicability etc)
MON.	62	1593	6.56	3.3	1.0	480	-	1	730	-	ME	KC	TIES / STRONG WINDS
24/09	63	1593	11.56	2.6	1.6	500	2	2	650	-	MR	RD	TIES DAS 8 LOCKUP
TUE.	64	1593	6.55	1.9	0.7	200	-	-	457.6	-	MR	RD	OK
25/09	-	1593	10.30	-	1.4/1.6	238	-	-	-	-	ME	KC	FERRY TO ALICE
WED.	-	1593	-	-	-	-	-	-	-	-	-	-	NO FLIGHTS DUE MAG STORM
26/09	-	1593	-	-	-	-	-	-	-	-	-	-	NO FLIGHTS DUE MAG STORM
THU.	65	1593	6.52	3.6	0.9	400	-	2	915.2	-	MR	RD	OK
27/09	-	1593	3.15	-	1.7	-	-	-	-	-	ME	MR	FERRY MARQUA – ALICE
FRI.	-	1593	-	-	-	-	-	-	-	-	-	-	FERRY ALICE – KALGOORLIE
28/09	-	1593	-	-	-	-	-	-	-	-	-	-	WAITING FOR FINE WEATHER
SAT.	-	1593	11.45	-	2.5	-	-	-	-	-	IH	DC	FERRY KALGOORLIE TO JANDA
29/09	-	-	-	-	-	-	-	-	-	-	-	-	PARKED AT JANDAKOT
SUN.	-	-	-	-	-	-	-	-	-	-	-	-	PARKED AT JANDAKOT
30/09	-	-	-	-	-	-	-	-	-	-	-	-	PARKED AT JANDAKOT
		TOTALS		11.4	11.4	1818	2	3	2752.8	-	-	-	

SUMMARY

FUEL USAGE	79.74	Ltrs/Hr
OIL USAGE L:	0.09	Ltrs/Hr
R:	0.13	Ltrs/Hr
PRODUCTION RATE	120.7	Km/Hr

PILOT SUMMARY:

NAME	'ON LINE'	OTHER HRS	TOTALS HOURS	TOTALS LINE KM
MARK ROONEY	8.1	3.2	11.3	2022.8
MAX EICHORN	3.3	5.7	9.0	730
IVAN HUSSEIN	-	2.5	2.5	-
		GRAND TOTALS	22.8	2752.8

HOURS TO 120 HOURLY 72.2 **TOTAL A/C HOURS:** 22,132.4

URS TO ENGINE CHANGE? 18 **TOTAL A/C HOURS: 10.797.5**

APPENDIX 5

Radiometric Calibrations

and Test Results

APPENDIX 6

Digital Data Formats

EROMANGA MAIN MAGNETICS DATA DESCRIPTION FILE

Survey Name:	Eromanga main
Survey Date:	July to November 2001
Airborne Contractor:	Kevron Geophysics
Contractor Job Number:	1593
Processing Contractor:	Kevron Geophysics
Client:	Department of Mines and Energy Northern Territory

1:250 000 sheets flown in Located Data File:

FINKE	SG53-6
RODINGA	SG53-2
HALE RIVER	SG53-3
ILLOGWA CREEK	SF53-15
HAY RIVER	SF53-16
TOBERMOREY	SF53-12

1:100 000 sheets flown in Located Data File:

Beddome	5746	Idracowra	5647
Engoordina	5747	Musgrave	5847
Day	5948	Santa Teresa	5749
Pellinore	5849	Todd	5949
Hale	6049	Illogwa	6050
Jarvis	6150	Drury	6250
Lake Caroline	6350	Field River	6450
Adam	6451	Toko	6452

Flight Line Number Range of Located Data File:	10011 - 30291
Tie Line Number Range of Located Data File:	90010 - 91130

SURVEY SPECIFICATIONS:

Flight Line Direction:	North-South
Flight Line Separation (m):	400 metres
Tie Line Direction:	East-West
Tie Line Separation (m):	4000 metres
Nominal Terrain Clearance (m AGL):	80 metres
Average Terrain Clearance (m ASL):	80 metres
Total Line km:	118,769

Projection: MGA
Datum: GDA94
Zone: 53

SURVEY EQUIPMENT:

Aircraft:	Rockwell Aerocommander 500S VH-KAC, VH-KAV and VH-EXS
Magnetometer:	Geometrics G-822A Cesium Vapour
Magnetometer Resolution (nT):	0.001
Magnetometer Compensation:	RMS AADCII operating in real time
Magnetometer Sample Rate (s):	0.1
Magnetometer Sample Interval (m):	approx 7.0 metres
Base Station Magnetometer:	Geometrics G856
Base Station Magnetometer Resolution (nT):	.1
Base Station Magnetometer Sample Rate (s):	5

Base Station Magnetometer Location(s):	Urandangi Aprox: -21 36.7 138 18.8 Alice Springs Aprox: -21 47.7 133 53.3 Kulgera Aprox: -25 50.5 133 18.1 Numery Aprox: -23 59.2 135 24.8 Marque Aprox: -22 49.2 137 21.7
Data Acquisition System:	RMS DAS8
Flight Path Navigation System:	GPS
Navigation Equipment:	Fugro Omnistar and Ashtech G12 GPS
GPS Base Station Location(s):	Differential corrections via Fugro Omnistar VBS (Virtual Base Station)
Radar Altimeter:	Sperry AA200

DATA PROCESSING:
MAGNETIC DATA:
Data are corrected for diurnal variation, and International Geometric Reference Field IGRF 2000 updated to 2001.68 secular variation removed. Tie line and micro levelling has been performed.

The Reduced To Pole (RTP) grid was calculated using a magnetic inclination of -58.0 deg and magnetic declination of 6.5 deg. These values correspond to the following location: latitude -24.266691 deg S, longitude 135.76599 deg E, elevation 500 metres.

ELEVATION DATA:
Elevation was calculted by subration of the radar altimetre from the gps height.
Tie line and micro levelling has been performed.
AUSGEOID 98 nval geoid elipsoid separation values subtracted to achieve AHD.

LOCATED DATA FORMAT:

Variable	Units	Col number	Width	Format	Null
LineName		[1]	12	%12.12s	'-'
LineDate		[2]	8	%8.8s	'-'
Flight number		[3]	4	%3.0f	' -99'
Time (CST)	hours	[4]	9	%8.5f	' -9999999'
Fiducial		[5]	10	%9.0f	' -9999999'
Easting	metres	[6]	11	%10.2f	' -9999999.0'
Northing	metres	[7]	11	%10.2f	' -9999999.0'
Raw Magnetics	nT	[8]	10	%9.2f	' -9999999.'
Diurnal	nT	[9]	10	%9.2f	' -9999999.'
Final Magnetics	nT	[10]	10	%9.2f	' -9999999.'
1VD	nT	[11]	11	%10.6f	' -9999999.0'
Radio Alt	meters	[12]	7	%6.1f	' -99999'
Baro Alt	metres	[13]	7	%6.1f	' -99999'
Gps Height	metres	[14]	7	%6.1f	' -99999'
Elevation	metres	[15]	7	%6.1f	' -99999'

EROMANGA MAIN RADIOMETRICS DATA DESCRIPTION FILE

Survey Name:	Eromanga main
Survey Date:	July - November 2001
Airborne Contractor:	Kevron Geophysics
Contractor Job Number:	1593
Processing Contractor:	Kevron Geophysics
Client:	Department of Mines and Energy Northern Territory

1:250 000 sheets flown in Located Data File:

FINKE	SG53-6
RODINGA	SG53-2
HALE RIVER	SG53-3
ILLOGWA CREEK	SF53-15
HAY RIVER	SF53-16
TOBERMOREY	SF53-12

1:100 000 sheets flown in Located Data File:

Beddome	5746	Idracowra	5647
Engoordina	5747	Musgrave	5847
Day	5948	Santa Teresa	5749
Pellinore	5849	Todd	5949
Hale	6049	Illogwa	6050
Jarvis	6150	Drury	6250
Lake Caroline	6350	Field River	6450
Adam	6451	Toko	6452

Flight Line Number Range of Located Data File:	10011 - 30291
Tie Line Number Range of Located Data File:	90010 - 91130

SURVEY SPECIFICATIONS:

Flight Line Direction:	North-South
Flight Line Separation (m):	400 metres
Tie Line Direction:	East-West
Tie Line Separation (m):	4000 metres
Nominal Terrain Clearance (m AGL):	80 metres
Average Terrain Clearance (m ASL):	80 metres
Total Line km:	118,769

Projection: MGA
Datum: GDA94
Zone: 53

SURVEY EQUIPMENT:

Aircraft:	Rockwell Aerocommander 500S VH-KAC, VH-KAV and VH-EXS
Magnetometer:	Geometrics G-822A Cesium Vapour
Magnetometer Resolution (nT):	0.001
Magnetometer Compensation:	RMS AADCII operating in real time
Magnetometer Sample Rate (s):	0.1
Magnetometer Sample Interval (m):	approx 7.0 metres
Base Station Magnetometer:	Geometrics G856
Base Station Magnetometer Resolution (nT):	.1
Base Station Magnetometer Sample Rate (s):	5
Base Station Magnetometer Location(s):	Urandangi Aprox: -21 36.7 138 18.8 Alice Springs Aprox: -21 47.7 133 53.3 Kulgera Aprox: -25 50.5 133 18.1

Numery Aprox: -23 59.2 135 24.8
Marque Aprox: -22 49.2 137 21.7

Spectrometer:	Exploranium GR820
Crystal Size:	33lt downward array
Spectrometer Sample Rate (s):	.5
Spectrometer Sample Interval (m):	70
Spectral Windows:	Potassium 1370 - 1570 keV
	Uranium 1660 - 1860 keV
	Thorium 2410 - 2810 keV
	Cosmic 4000 keV
Date aircraft last calibrated:	March 2001
Calibration range:	Carnamah
Data Acquisition System:	RMS DAS8
Flight Path Navigation System:	GPS
Navigation Equipment:	Fugro Omnistar and Ashtech G12 GPS
GPS Base Station Location(s):	Differential corrections via Fugro Omnistar VBS (Virtual Base Station)
Radar Altimeter:	Sperry AA200

RADIOMETRICS DATA PROCESSING:

Data has been corrected for aircraft and cosmic backgrounds.
Height corrected to a constant datum of 80 metres,
minimum height of 30 and a maximum of 300 metres.
Data has also been corrected for radon using
Minty (1996 - Alt Method B) and corrected for channel interaction.

Noise Adjusted Singular Value Deconvolution (NASVD) has been applied.
Five components used to reconstruct spectra.

ELEVATION DATA:

Elevation was calculted by subration of the radar altimetre from the gps height.
Tie line and micro levelling has been performed.
AUSGEOID 98 nval geoid elipsoid separation values subtracted to achieve AHD.

LOCATED DATA FORMAT:

Variable	Units	Col number	Width	Format	Null
LineName		[1]	12	%12.12s	'-'
LineDate		[2]	8	%8.8s	'-'
Flight number		[3]	4	%3.0f	' -99'
Time (CST)	hours	[4]	9	%8.5f	' -9999999'
Fiducial		[5]	10	%9.0f	' -9999999'
Easting	metres	[6]	11	%10.2f	' -9999999.0'
Northing	metres	[7]	11	%10.2f	' -9999999.0'
Raw Potassium	cps	[8]	9	%8.2f	' -9999999'
Raw Uranium	cps	[9]	9	%8.2f	' -9999999'
Raw Thorium	cps	[10]	9	%8.2f	' -9999999'
Raw Total Count	cps	[11]	9	%8.2f	' -9999999'
Corrected Potassium	cps	[12]	9	%8.2f	' -9999999'
Corrected Uranium	cps	[13]	9	%8.2f	' -9999999'
Corrected Thorium	cps	[14]	9	%8.2f	' -9999999'
Corrected Total Count	cps	[15]	9	%8.2f	' -9999999'
Corrected Potassiun	%	[16]	9	%8.3f	' -9999999'

Corrected Uranium	ppm	[17]	9	%8.3f	' -9999999'
Corrected Thorium	ppm	[18]	9	%8.3f	' -9999999'
Corrected Total Count	nGy/hr	[19]	9	%8.3f	' -9999999'
Radio Alt	meters	[20]	7	%6.1f	' -99999'
Baro Alt	metres	[21]	7	%6.1f	' -99999'
Gps Height	metres	[22]	7	%6.1f	' -99999'
Elevation	metres	[23]	7	%6.1f	' -99999'

```
####################################################
#         Stripping Coefficients
####################################################
StrippingCoeffStart
        ALPHA           0.265020
        BETA            0.433140
        GAMMA           0.805216
        A               0.081903
StrippingCoeffEnd
####################################################
#         Height Attenuation Coefficients
####################################################
HeightAttenuationStart
        TOTAL_COUNT         -0.0074
        POTASSIUM           -0.0094
        URANIUM             -0.0084
        THORIUM             -0.0074
HeightAttenuationEnd
####################################################
#       Cosmic & Aircraft background
####################################################
Cosmic
        TOTAL_COUNT          0.718991
        POTASSIUM           0.039252
        URANIUM              0.033910
        THORIUM              0.035575
Background
        TOTAL_COUNT         52.26
        POTASSIUM            7.4
        URANIUM              1.2
        THORIUM              0.0


####################################################
#         Sensitivity Coefficients
####################################################
Potassium               98.60
 Uranium                 7.9
 Thorium                 6.1
 Total Count            27.5
```

EROMANGA MAIN 256 CHANNEL RADIOMETRIC DATA DESCRIPTION FILE

Survey Name:	Eromanga main
Survey Date:	July - November 2001
Airborne Contractor:	Kevron Geophysics
Contractor Job Number:	1593
Processing Contractor:	Kevron Geophysics
Client:	Department of Mines and Energy Northern Territory

1:250 000 sheets flown in Located Data File:

FINKE	SG53-6
RODINGA	SG53-2
HALE RIVER	SG53-3
ILLOGWA CREEK	SF53-15
HAY RIVER	SF53-16
TOBERMOREY	SF53-12

1:100 000 sheets flown in Located Data File:

Beddome	5746	Idracowra	5647
Engoordina	5747	Musgrave	5847
Day	5948	Santa Teresa	5749
Pellinore	5849	Todd	5949
Hale	6049	Illogwa	6050
Jarvis	6150	Drury	6250
Lake Caroline	6350	Field River	6450
Adam	6451	Toko	6452

Flight Line Number Range of Located Data File:	10011 - 30291
Tie Line Number Range of Located Data File:	90010 - 91130

SURVEY SPECIFICATIONS:

Flight Line Direction:	North-South
Flight Line Separation (m):	400 metres
Tie Line Direction:	East-West
Tie Line Separation (m):	4000 metres
Nominal Terrain Clearance (m AGL):	80 metres
Average Terrain Clearance (m ASL):	80 metres
Total Line km:	118,769

Projection: MGA
Datum: GDA94
Zone: 53

SURVEY EQUIPMENT:

Aircraft:	Rockwell Aerocommander 500S VH-KAC, VH-KAV and VH-EXS
Magnetometer:	Geometrics G-822A Cesium Vapour
Magnetometer Resolution (nT):	0.001
Magnetometer Compensation:	RMS AADCII operating in real time
Magnetometer Sample Rate (s):	0.1
Magnetometer Sample Interval (m):	approx 7.0 metres
Base Station Magnetometer:	Geometrics G856
Base Station Magnetometer Resolution (nT):	.1
Base Station Magnetometer Sample Rate (s):	5
Base Station Magnetometer Location(s):	Urandangi Aprox: -21 36.7 138 18.8 Alice Springs Aprox: -21 47.7 133 53.3 Kulgera Aprox: -25 50.5 133 18.1

Numery Aprox: -23 59.2 135 24.8
Marque Aprox: -22 49.2 137 21.7

Spectrometer:	Exploranium GR820
Crystal Size:	33lt downward array
Spectrometer Sample Rate (s):	.5
Spectrometer Sample Interval (m):	70
Spectral Windows:	Potassium 1370 - 1570 keV
	Uranium 1660 - 1860 keV
	Thorium 2410 - 2810 keV
	Cosmic 4000 keV
Date aircraft last calibrated:	March 2001
Calibration range:	Carnamah
Data Acquisition System:	RMS DAS8
Flight Path Navigation System:	GPS
Navigation Equipment:	Fugro Omnistar and Ashtech G12 GPS
GPS Base Station Location(s):	Differential corrections via Fugro Omnistar VBS (Virtual Base Station)
Radar Altimeter:	Sperry AA200
Data Acquisition System:	RMS DAS8
Flight Path Navigation System:	GPS
Navigation Equipment:	Fugro Omnistar and Ashtech G12 GPS
GPS Base Station Location(s):	Differential corrections via Fugro Omnistar VBS (Virtual Base Station)
Radar Altimeter:	Sperry AA200

RADIOMETRICS DATA PROCESSING:

Data has been corrected for aircraft and cosmic backgrounds.
Height corrected to a constant datum of 80 metres,
minimum height of 30 and a maximum of 300 metres.
Data has also been corrected for radon using
Minty (1996 - Alt Method B) and corrected for channel interaction.

Noise Adjusted Singular Value Deconvolution (NASVD) has been applied.
Five components used to reconstruct spectra.

LOCATED DATA FORMAT:

Variable	Units	Col number	Width	Format	Null
LineName		[1]	12	%12.12s	'-'
LineDate		[2]	8	%8.8s	'-'
Flight number		[3]	4	%3.0f	' -99'
Time (CST)	hours	[4]	9	%8.5f	' -9999999'
Fiducial		[5]	10	%9.0f	' -9999999'
Easting	metres	[6]	11	%10.2f	' -9999999.0'
Northing	metres	[7]	11	%10.2f	' -9999999.0'
Raw Potassium	cps	[8]	9	%8.2f	' -9999999'
Raw Uranium	cps	[9]	9	%8.2f	' -9999999'
Raw Thorium	cps	[10]	9	%8.2f	' -9999999'
Raw Total Count	cps	[11]	9	%8.2f	' -9999999'
Corrected Potassium	cps	[12]	9	%8.2f	' -9999999'

Corrected Uranium	cps	[13]	9	%8.2f	' -9999999'
Corrected Thorium	cps	[14]	9	%8.2f	' -9999999'
Corrected Total Count	cps	[15]	9	%8.2f	' -9999999'
Corrected Potassiun	%	[16]	9	%8.3f	' -9999999'
Corrected Uranium	ppm	[17]	9	%8.3f	' -9999999'
Corrected Thorium	ppm	[18]	9	%8.3f	' -9999999'
Corrected Total Count	nGy/hr	[19]	9	%8.3f	' -9999999'
Temperature	deg	[20]	9	%8.3f	' -9999999'
Humidity	%	[21]	9	%8.3f	' -9999999'
Air Pressure	hPa	[22]	9	%8.3f	' -9999999'
Radio Alt	meters	[23]	7	%6.1f	' -99999'
Gps Height	metres	[24]	7	%6.1f	' -99999'
Live Time	msec	[25]	5	%5d	'-'
256 channel counts	cps	[26-279]	5	%5d	'-'
Cosmic	cps	[280]	5	%5d	'-'

```
####################################################
#       Stripping Coefficients
####################################################
StrippingCoeffStart
        ALPHA           0.265020
        BETA            0.433140
        GAMMA           0.805216
        A               0.081903
StrippingCoeffEnd
####################################################
#       Height Attenuation Coefficients
####################################################
HeightAttenuationStart
        TOTAL_COUNT         -0.0074
        POTASSIUM           -0.0094
        URANIUM             -0.0084
        THORIUM             -0.0074
HeightAttenuationEnd
####################################################
#     Cosmic & Aircraft background
####################################################
Cosmic
        TOTAL_COUNT          0.718991
        POTASSIUM           0.039252
        URANIUM              0.033910
        THORIUM              0.035575
Background
        TOTAL_COUNT          52.26
        POTASSIUM            7.4
        URANIUM              1.2
        THORIUM              0.0

####################################################
#       Sensitivity Coefficients
####################################################
 Potassium              98.60
 Uranium                 7.89
 Thorium                 6.06
 Total Count            27.46
```

EROMANGA NE MAGNETICS DATA DESCRIPTION FILE

Survey Name:	Eromanga NE
Survey Date:	August to September 2001
Airborne Contractor:	Kevron Geophysics
Contractor Job Number:	1593C
Processing Contractor:	Kevron Geophysics
Client:	Department of Mines and Energy Northern Territory

1:250 000 sheets flown in Located Data File:
SANDOVER RIVER SF53-8

1:100 000 sheets flown in Located Data File:

Georgina	6455
Barry Plain	6454

Flight Line Number Range of Located Data File:	10010 - 11400
Tie Line Number Range of Located Data File:	90010 - 90260

SURVEY SPECIFICATIONS:

Flight Line Direction:	North-South
Flight Line Separation (m):	400 metres
Tie Line Direction:	East-West
Tie Line Separation (m):	4000 metres
Nominal Terrain Clearance (m AGL):	80 metres
Average Terrain Clearance (m ASL):	80 metres
Total Line km:	15,395

Projection: MGA
Datum: GDA94
Zone: 53

SURVEY EQUIPMENT:

Aircraft:	Rockwell Aerocommander 500S VH-EXS
Magnetometer:	Geometrics G-822A Cesium Vapour
Magnetometer Resolution (nT):	0.001
Magnetometer Compensation:	RMS AADCII operating in real time
Magnetometer Sample Rate (s):	0.1
Magnetometer Sample Interval (m):	approx 7.0 metres
Base Station Magnetometer:	Geometrics G856
Base Station Magnetometer Resolution (nT):	.1
Base Station Magnetometer Sample Rate (s):	5
Base Station Magnetometer Location(s):	Urandangi Aprox: -21 36.7 138 18.8 Alice Springs Aprox: -21 47.7 133 53.3 Kulgera Aprox: -25 50.5 133 18.1 Numery Aprox: -23 59.2 135 24.8 Marque Aprox: -22 49.2 137 21.7
Data Acquisition System:	RMS DAS8
Flight Path Navigation System:	GPS
Navigation Equipment:	Fugro Omnistar and Ashtech G12 GPS
GPS Base Station Location(s):	Differential corrections via Fugro Omnistar VBS (Virtual Base Station)
Radar Altimeter:	Sperry AA200

DATA PROCESSING:
MAGNETIC DATA:
Data are corrected for diurnal variation, and International Geometric Reference Field IGRF 2000 updated to 2001.66 secular variation removed. Tie line and micro levelling has been performed.

The Reduced To Pole (RTP) grid was calculated using a magnetic inclination of -58.0 deg and magnetic declination of 6.5 deg. These values correspond to the following location: latitude -24.266691 deg S, longitude 135.76599 deg E, elevation 500 metres.

ELEVATION DATA:
Elevation was calculted by subration of the radar altimetre from the gps height.
Tie line and micro levelling has been performed.
AUSGEOID 98 nval geoid elipsoid separation values subtracted to achieve AHD.

LOCATED DATA FORMAT:

Variable	Units	Col number	Width	Format	Null
LineName		[1]	12	%12.12s	'-'
LineDate		[2]	8	%8.8s	'-'
Flight number		[3]	4	%3.0f	' -99'
Time (CST)	hours	[4]	9	%8.5f	' -9999999'
Fiducial		[5]	10	%9.0f	' -9999999'
Easting	metres	[6]	11	%10.2f	' -9999999.0'
Northing	metres	[7]	11	%10.2f	' -9999999.0'
Raw Magnetics	nT	[8]	10	%9.2f	' -9999999.'
Diurnal	nT	[9]	10	%9.2f	' -9999999.'
Final Magnetics	nT	[10]	10	%9.2f	' -9999999.'
1VD	nT	[11]	11	%10.6f	' -9999999.0'
Radio Alt	meters	[12]	7	%6.1f	' -99999'
Baro Alt	metres	[13]	7	%6.1f	' -99999'
Gps Height	metres	[14]	7	%6.1f	' -99999'
Elevation	metres	[15]	7	%6.1f	' -99999'

EROMANGA NE RADIOMETRICS DATA DESCRIPTION FILE

Survey Name:	Eromanga NE
Survey Date:	August - September 2001
Airborne Contractor:	Kevron Geophysics
Contractor Job Number:	1593C
Processing Contractor:	Kevron Geophysics
Client:	Department of Mines and Energy Northern Territory

1:250 000 sheets flown in Located Data File:
SANDOVER RIVER SF53-8

1:100 000 sheets flown in Located Data File:

Georgina	6455
Barry Plain	6454

Flight Line Number Range of Located Data File:	10010 - 11400
Tie Line Number Range of Located Data File:	90010 - 90260

SURVEY SPECIFICATIONS:

Flight Line Direction:	North-South
Flight Line Separation (m):	400 metres
Tie Line Direction:	East-West
Tie Line Separation (m):	4000 metres
Nominal Terrain Clearance (m AGL):	80 metres
Average Terrain Clearance (m ASL):	80 metres
Total Line km:	15,395

Projection: MGA
Datum: GDA94
Zone: 53

SURVEY EQUIPMENT:

Aircraft:	Rockwell Aerocommander 500S VH-EXS
Magnetometer:	Geometrics G-822A Cesium Vapour
Magnetometer Resolution (nT):	0.001
Magnetometer Compensation:	RMS AADCII operating in real time
Magnetometer Sample Rate (s):	0.1
Magnetometer Sample Interval (m):	approx 7.0 metres
Base Station Magnetometer:	Geometrics G856
Base Station Magnetometer Resolution (nT):	.1
Base Station Magnetometer Sample Rate (s):	5
Base Station Magnetometer Location(s):	Urandangi Aprox: -21 36.7 138 18.8 Alice Springs Aprox: -21 47.7 133 53.3 Kulgera Aprox: -25 50.5 133 18.1 Numery Aprox: -23 59.2 135 24.8 Marque Aprox: -22 49.2 137 21.7
Spectrometer:	Exploranium GR820
Crystal Size:	33lt downward array
Spectrometer Sample Rate (s):	.5
Spectrometer Sample Interval (m):	70
Spectral Windows:	Potassium 1370 - 1570 keV Uranium 1660 - 1860 keV Thorium 2410 - 2810 keV Cosmic 4000 keV

Date aircraft last calibrated:	March 2001
Calibration range:	Carnamah
Data Acquisition System:	RMS DAS8
Flight Path Navigation System:	GPS
Navigation Equipment:	Fugro Omnistar and Ashtech G12 GPS
GPS Base Station Location(s):	Differential corrections via Fugro Omnistar VBS (Virtual Base Station)
Radar Altimeter:	Sperry AA200

RADIOMETRICS DATA PROCESSING:

Data has been corrected for aircraft and cosmic backgrounds.
Height corrected to a constant datum of 80 metres,
minimum height of 30 and a maximum of 300 metres.
Data has also been corrected for radon using
Minty (1996 - Alt Method B) and corrected for channel interaction.

Noise Adjusted Singular Value Deconvolution (NASVD) has been applied.
Five components used to reconstruct spectra.

ELEVATION DATA:

Elevation was calculted by subration of the radar altimetre from the gps height.
Tie line and micro levelling has been performed.
AUSGEOID 98 nval geoid elipsoid separation values subtracted to achieve AHD.

LOCATED DATA FORMAT:

Variable	Units	Col number	Width	Format	Null
LineName		[1]	12	%12.12s	'-'
LineDate		[2]	8	%8.8s	'-'
Flight number		[3]	4	%3.0f	' -99'
Time (CST)	hours	[4]	9	%8.5f	' -9999999'
Fiducial		[5]	10	%9.0f	' -9999999'
Easting	metres	[6]	11	%10.2f	' -9999999.0'
Northing	metres	[7]	11	%10.2f	' -9999999.0'
Raw Potassium	cps	[8]	9	%8.2f	' -9999999'
Raw Uranium	cps	[9]	9	%8.2f	' -9999999'
Raw Thorium	cps	[10]	9	%8.2f	' -9999999'
Raw Total Count	cps	[11]	9	%8.2f	' -9999999'
Corrected Potassium	cps	[12]	9	%8.2f	' -9999999'
Corrected Uranium	cps	[13]	9	%8.2f	' -9999999'
Corrected Thorium	cps	[14]	9	%8.2f	' -9999999'
Corrected Total Count	cps	[15]	9	%8.2f	' -9999999'
Corrected Potassiun	%	[16]	9	%8.3f	' -9999999'
Corrected Uranium	ppm	[17]	9	%8.3f	' -9999999'
Corrected Thorium	ppm	[18]	9	%8.3f	' -9999999'
Corrected Total Count	nGy/hr	[19]	9	%8.3f	' -9999999'
Radio Alt	meters	[20]	7	%6.1f	' -99999'
Baro Alt	metres	[21]	7	%6.1f	' -99999'
Gps Height	metres	[22]	7	%6.1f	' -99999'
Elevation	metres	[23]	7	%6.1f	' -99999'

```
#####################################################
#         Stripping Coefficients
#####################################################
StrippingCoeffStart
        ALPHA           0.265020
        BETA            0.433140
        GAMMA           0.805216
        A               0.081903
StrippingCoeffEnd
#####################################################
#         Height Attenuation Coefficients
#####################################################
HeightAttenuationStart
        TOTAL_COUNT         -0.0074
        POTASSIUM           -0.0094
        URANIUM             -0.0084
        THORIUM             -0.0074
HeightAttenuationEnd
#####################################################
#      Cosmic & Aircraft background
#####################################################
Cosmic
        TOTAL_COUNT          0.718991
        POTASSIUM           0.039252
        URANIUM              0.033910
        THORIUM              0.035575
Background
        TOTAL_COUNT          52.26
        POTASSIUM            7.4
        URANIUM              1.2
        THORIUM              0.0


#####################################################
#         Sensitivity Coefficients
#####################################################
Potassium               98.60
 Uranium                 7.9
 Thorium                 6.1
 Total Count            27.5
```

EROMANGA NE 256 CHANNEL RADIOMETRIC DATA DESCRIPTION FILE

Survey Name:	Eromanga NE
Survey Date:	August - September 2001
Airborne Contractor:	Kevron Geophysics
Contractor Job Number:	1593C
Processing Contractor:	Kevron Geophysics
Client:	Department of Mines and Energy Northern Territory

1:250 000 sheets flown in Located Data File:
SANDOVER RIVER SF53-8

1:100 000 sheets flown in Located Data File:
Georgina 6455
Barry Plain 6454

Flight Line Number Range of Located Data File: 10010 - 11400
Tie Line Number Range of Located Data File: 90010 - 90260

SURVEY SPECIFICATIONS:

Flight Line Direction:	North-South
Flight Line Separation (m):	400 metres
Tie Line Direction:	East-West
Tie Line Separation (m):	4000 metres
Nominal Terrain Clearance (m AGL):	80 metres
Average Terrain Clearance (m ASL):	80 metres
Total Line km:	15,395

Projection: MGA
Datum: GDA94
Zone: 53

SURVEY EQUIPMENT:

Aircraft:	Rockwell Aerocommander 500S VH-EXS
Magnetometer:	Geometrics G-822A Cesium Vapour
Magnetometer Resolution (nT):	0.001
Magnetometer Compensation:	RMS AADCII operating in real time
Magnetometer Sample Rate (s):	0.1
Magnetometer Sample Interval (m):	approx 7.0 metres
Base Station Magnetometer:	Geometrics G856
Base Station Magnetometer Resolution (nT):	.1
Base Station Magnetometer Sample Rate (s):	5
Base Station Magnetometer Location(s):	Urandangi Aprox: -21 36.7 138 18.8 Alice Springs Aprox: -21 47.7 133 53.3 Kulgera Aprox: -25 50.5 133 18.1 Numery Aprox: -23 59.2 135 24.8 Marque Aprox: -22 49.2 137 21.7
Spectrometer:	Exploranium GR820
Crystal Size:	33lt downward array
Spectrometer Sample Rate (s):	.5
Spectrometer Sample Interval (m):	70
Spectral Windows:	Potassium 1370 - 1570 keV Uranium 1660 - 1860 keV Thorium 2410 - 2810 keV Cosmic 4000 keV

Date aircraft last calibrated:	March 2001
Calibration range:	Carnamah
Data Acquisition System:	RMS DAS8
Flight Path Navigation System:	GPS
Navigation Equipment:	Fugro Omnistar and Ashtech G12 GPS
GPS Base Station Location(s):	Differential corrections via Fugro Omnistar VBS (Virtual Base Station)
Radar Altimeter:	Sperry AA200
Data Acquisition System:	RMS DAS8
Flight Path Navigation System:	GPS
Navigation Equipment:	Fugro Omnistar and Ashtech G12 GPS
GPS Base Station Location(s):	Differential corrections via Fugro Omnistar VBS (Virtual Base Station)
Radar Altimeter:	Sperry AA200

RADIOMETRICS DATA PROCESSING:

Data has been corrected for aircraft and cosmic backgrounds.
Height corrected to a constant datum of 80 metres,
minimum height of 30 and a maximum of 300 metres.
Data has also been corrected for radon using
Minty (1996 - Alt Method B) and corrected for channel interaction.

Noise Adjusted Singular Value Deconvolution (NASVD) has been applied.
Five components used to reconstruct spectra.

LOCATED DATA FORMAT:

Variable	Units	Col number	Width	Format	Null
LineName		[1]	12	%12.12s	'-'
LineDate		[2]	8	%8.8s	'-'
Flight number		[3]	4	%3.0f	' -99'
Time (CST)	hours	[4]	9	%8.5f	' -9999999'
Fiducial		[5]	10	%9.0f	' -9999999'
Easting	metres	[6]	11	%10.2f	' -9999999.0'
Northing	metres	[7]	11	%10.2f	' -9999999.0'
Raw Potassium	cps	[8]	9	%8.2f	' -9999999'
Raw Uranium	cps	[9]	9	%8.2f	' -9999999'
Raw Thorium	cps	[10]	9	%8.2f	' -9999999'
Raw Total Count	cps	[11]	9	%8.2f	' -9999999'
Corrected Potassium	cps	[12]	9	%8.2f	' -9999999'
Corrected Uranium	cps	[13]	9	%8.2f	' -9999999'
Corrected Thorium	cps	[14]	9	%8.2f	' -9999999'
Corrected Total Count	cps	[15]	9	%8.2f	' -9999999'
Corrected Potassiun	%	[16]	9	%8.3f	' -9999999'
Corrected Uranium	ppm	[17]	9	%8.3f	' -9999999'
Corrected Thorium	ppm	[18]	9	%8.3f	' -9999999'
Corrected Total Count	nGy/hr	[19]	9	%8.3f	' -9999999'
Temperature	deg	[20]	9	%8.3f	' -9999999'
idity	%	[21]	9	%8.3f	' -9999999'
Air Pressure	hPa	[22]	9	%8.3f	' -9999999'

Radio Alt	meters	[23]	7	%6.1f ' -99999'
Gps Height	metres	[24]	7	%6.1f ' -99999'
Live Time	msec	[25]	5	%5d '-'
256 channel counts	cps	[26-279]	5	%5d '-'
Cosmic	cps	[280]	5	%5d '-'

```
##################################################
#       Stripping Coefficients
##################################################
StrippingCoeffStart
        ALPHA           0.265020
        BETA            0.433140
        GAMMA           0.805216
        A               0.081903
StrippingCoeffEnd
##################################################
#       Height Attenuation Coefficients
##################################################
HeightAttenuationStart
        TOTAL_COUNT         -0.0074
        POTASSIUM           -0.0094
        URANIUM             -0.0084
        THORIUM             -0.0074
HeightAttenuationEnd
##################################################
#     Cosmic & Aircraft background
##################################################
Cosmic
        TOTAL_COUNT          0.718991
        POTASSIUM           0.039252
        URANIUM              0.033910
        THORIUM              0.035575
Background
        TOTAL_COUNT          52.26
        POTASSIUM            7.4
        URANIUM              1.2
        THORIUM              0.0

##################################################
#       Sensitivity Coefficients
##################################################
 Potassium              98.60
 Uranium                 7.89
 Thorium                 6.06
 Total Count            27.46
```

APPENDIX 7

Occupational Health and Safety and Environment Policies