SEL26483 – 2011 Annual Report

Year Ending: 17 July 2011

Title: SEL26483

Suplejack Project

Ord River Resources Limited

Job No. 2389-02a 11 August 2011

Prepared for:

Peter Shou
Ord River Resources Limited
Managing Director

Prepared by:

Katherine Smith
Geologist
BBABSc, MAusIMM

Reviewed by:

Jeff Randell
BSc Hons, MAIG
Technical Manager
Executive Summary

Suplejack Pty Ltd holds the Substitute Exploration Licence (SEL) 26483, which covers 330km$^2$ in the Tanami region of the Northern Territory. The tenement is located approximately 650km northwest of Alice Springs along the Tanami and Lajumanu Roads and is wholly contained within the Suplejack Downs Pastoral Station.

Previous explorers on the tenement area have been MJ Kidd and various partnerships and JV’s between Kidd and P Messenger, Dominion Gold, Acacia Resources and AngloGold. In excess of $5 million had been spent by previous explorers, which resulted in identification of a small resource at Tregony, delineation of a major zone of gold occurrences and identification of a series of untested targets with potential for structurally controlled gold deposits similar to the Groundrush deposit approximately 40km to the south of SEL26483.

The geology is partly equivalent in age with host sequences for the gold deposits at Tanami. Major D5 age structures are thought to control the majority of gold deposits in the Tanami region and major structures of the same age control gold mineralisation within and adjacent to the tenement.

Airborne geophysical surveys and field reconnaissance programmes have been conducted by Ord River Resources in the reporting period. Magnetics and Radiometrics were run over the tenement indicating that further targets exist and a more detailed investigation is required in these areas. During a field reconnaissance trip 35 rock chip samples were taken between the Five Mile, PhD and PhD north prospects however the results were disappointing.

A drill programme has been proposed for the Tregony area to be conducted in the upcoming reporting year to better define the existing resource in this area.

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Table 1 - Tenement Information
DIGITAL DATA VERIFICATION LIST

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Table 2 - Digital Data verification list

MAP SHEETS

1:250 000  Tanami SE 52-15
1:100 000  Breaden 4859, Wilson Creek 4959

KEY WORDS

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Table 3 - Keys words associated with the Tenement
Disclaimer

While every effort has been made, within the time constraints of this assignment, to ensure the accuracy of this report, Geos Mining accepts no liability for any error or omission. Geos Mining can take no responsibility if the conclusions of this report are based on incomplete or misleading data.

Geos Mining and the authors are independent of Ord River Resources Limited, and have no financial interests in Ord River Resources Limited or any associated companies. Geos Mining is being remunerated for this report on a standard fee for time basis, with no success incentives.
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Introduction

LOCATION, ACCESS AND CLIMATE

SEL 26483 is located in the Tanami Desert area of the Northern Territory, approximately 440 km west of the township of Tennant Creek and 625 km northwest of the township of Alice Springs (Figure 1). Access to the tenement is via the Stuart Highway and the Tanami Road from Alice Springs (N.T.), the Lajamanu Road to Suplejack Downs Pastoral Station and then via intermittently maintained pastoral tracks. SEL 26483 is wholly contained within the Suplejack Downs Pastoral Station.

Figure 1 - Location of tenement SEL26483
Access is limited to those months outside the northern Australian ‘wet season’ (typified as November to March). Intermittent rainfall subsequent to this period further reduces the period in which access to the tenement is possible. Mean annual rainfall is stated by the Bureau of Meteorology for Rabbit Flat as 426 mm with a mean number of rainfall days being 35. Approximately 75% (or 330 mm rainfall) occurs during the period November to March. Mean maximum temperatures for Rabbit Flat are stated as ranging from 25.9°C in July to 39.2°C in December. Mean minimum temperatures range from 6.6°C in July to 23.6°C in January.

**Topography**

The region has generally low relief with a regional fall to the inland drainage areas of Lake Buck and associated salt pans. Local relief in the tenement is approximately 50 metres and consists of broad drainage areas with local channels. The vegetation is dominated by desert woodlands and scrublands with abundant Spinifex grasses.

**Tenement Details**

SEL 26483 of 204 blocks (629 km²) was granted to Suplejack Pty Ltd on 18/07/2008 for a term of four years. The substitution tenement replaced EL23454, 23492, 24167 and 25208 and was reduced by 50% on the first anniversary date. Applications for deferment of further reductions were lodged in 2009 and 2010.

**Geology**

**Regional & Local Geology**

The area is underlain by sequences belonging to the Tanami Group, which was deposited on extended Archaean basement. The Tanami Group is thought to be stratigraphically equivalent to the Pine Creek Geosyncline sequences and to the Eastern Halls Creek Belt.

The oldest lithological unit present in the tenement area is the MacFarlane Peak Group, which is included in the Dead Bullock Formation. The Dead Bullock Formation is the basal unit in the Tanami Group, dated at about 1840Ma. The MacFarlane Peak Group consists of mafic volcanics, turbiditic sandstone, siltstone and minor calc-silicate. The Killi Killi Formation, which also belongs to the Tanami Group, is also mapped in the eastern part of the tenements area, is dated at approximately 1835Ma, and consists of fine grained turbiditic sediments, mostly siltstones, some of which are carbonaceous and also rare cherts and calcareous units. Dolerite sills were intruded into the Killi Killi Formation during deposition.

The Tanami Group was deformed and variably regionally metamorphosed to greenschist and amphibolite facies at about 1830Ma by the Tanami Orogenic Event (TOE), and is unconformably overlain by the Ware Group.

The Ware Group consists of basal Mount Winneke Formation, which is not present in the Suplejack area, the Nannygoat Volcanics, and Wilson and Century Formations. The Century Formation consists of conglomeratic sandstone, siltstone and fine-grained sandstone and is overlain by the Wilson Formation, which consists of greywacke, quartz wacke and siltstone. The Ware Group was laid down between about 1825 and 1815Ma in a post TOE environment associated with D4 extensional rifting. This is a similar environment to, and is partly coeval with, that proposed for the Mt. Charles Formation, which is the host to the gold deposits at Tanami.
The Nannygoat Volcanics within SEL 26483 area have been identified as feldspathic quartz sandstones, some of which are lithic and pebbly to cobbly, olivine basalts and fine grained felsic igneous rocks including dacites, some of which may be ignimbrites. The discrepancy between bedrock geology as mapped by Acacia Gold, and that by the Northern Territory Geological Survey, suggests that there may be considerably more basalt intercalated in the Nannygoat Volcanics than appears on the Geological Survey (2001) 1:250,000 scale Tanami Sheet geological map (Figure 2).

Figure 2 - Regional Geology
Post orogenic granites have intruded the sequences in the Tanami region and portions of two different granite suites, one strongly magnetic in the south-east of SEL 24683, and one weakly magnetic in the southwest of, and just to the south of SEL 26483, are present in and adjacent to the tenements.

Peneplanation of the Tanami and Ware groups took place after emplacement of the late and post orogenic granite suites, and postdates 1800Ma. Deposition of the Suplejack Sandstone, which consists of fine grained quartzose sandstone units with thick interbedded siltstone units, took place after this time and by correlation with similar sequences in the NT, probably was deposited in the 1790-1760Ma time span, but may be significantly younger.

Supplejack Downs Sandstone is currently correlated with the Birrindudu Group, which has similar lithologies. Earlier stratigraphic interpretations suggest that the Supplejack Downs Sandstone underlies the Birrindudu Group and structural interpretation shows that the Supplejack Downs Sandstone was folded with the regional scale Tanami Synform and is cut by the structures that control gold mineralisation at Tanami.

The Supplejack Downs Sandstone contains significant siltstone units that are micaceous, red coloured and are recessive in the landscape. The structural history, molasse type lithologies, and probable unconformable relationship to the overlying Birrindudu Group suggests it may be an equivalent of the Pargee Sandstone, though not necessarily of the same age and correlatable.

Probable thrust faults that appear to be mineralised are present in the Supplejack Sandstone immediately west of the Boco prospect area.

Overlying this platformal cover is Cambrian age Antrim Plateau Basalt. Alluvium, partly related to palaeochannels, is present overlying other lithologies. Aeolian sand is widespread and may be up to several metres thick (Temby, 2007).

**MINERALISATION**

Gold mineralization within the Suplejack Gold Project area is interpreted to occur within sheared and faulted host assemblages, and resultant dilatant zones. These may be interpreted to be different from the historically mined auriferous quartz fissure reefs at Tanami, and perhaps similar to the wide zones containing fine quartz veinlets at The Granites. The gold resource is hosted within Nannygoat Volcanics and fine grained sediments assigned by the NTGS to the Killi Killi Formation. These lithologies are dissected by the Suplejack Shear Zone, and associated parallel shears and splay faults. Blake et al., (1979) considered the close proximity to a felsic intrusive an important and significant feature. Quartz veinlets here are reported to be concordant to semi-parallel to host bedding, and steeply dipping.

Suplejack Pty. Ltd. will target delineation of gold mineralization within a structural geological model, containing fundamental regional cross cutting structures, complicated at the local scale by development of dilatants and shatter/breccias zones concordant to semi-concordant with bedding, and bedding parallel shearing and faulting. Inclusive in this model will be sheared axial planes and fold closures.
Exploration

Previous Exploration

The current area encompassed by SEL 26483 has previously been explored by Kidd and Messenger, Dominion Gold Ltd., Acacia Resources Ltd., and AngloGold Australasia Ltd. Exploration activities have included RAB, RC percussion, and diamond drilling, culminating in the outlining of a 55,000 ounce gold resource at the Tregony Prospect. This gold resource is situated within a magnetically quiet zone in the eastern part of SEL 26483, and within a linear, 19km long, zone of gold, arsenic and base metal anomalies.

Surface orientation soil geochemical sampling programs have been completed by Dominion Gold Ltd. and Acacia Resources Ltd., and have demonstrated the effectiveness of this method of sampling with generally good correlation with previous bedrock sampling.

Acacia Resources Ltd. completed a 2,900 line km magnetic and radiometric airborne survey. Data was used to assist with drill hole targeting, and for a collaborative Joint venture diamond exploration program with Stockdale Prospecting.

Regional scale geomorphology and regolith studies were completed by Dominion Gold Ltd. in 1994 that defined areas of different regolith types and alluvium as well as modern drainages. That study incorporates SEL 26483.

An aerial photography interpretation was completed by Acacia Resources Ltd. over the south-eastern portion of SEL 26483, underlain by Tanami and Ware Group sequences.

AngloGold Australasia Ltd. carried out a review of the previous work on the tenements prior to withdrawing from the Joint Venture with Kidd and Messenger. Work completed identified several, previously untested, structural targets, with similar geological and structural settings to that of the Groundrush Prospect, along with several other geochemically under-tested areas (Meade, 2010).

Work previously conducted by Suplejack Pty Ltd is summarised in Table 4 below.
### Table 4 - Previous exploration work completed by Suplejack Pty Ltd.

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<td>486 Soil samples on various prospects</td>
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<td>23 drainage samples</td>
<td>8 rock chip samples</td>
<td>2.6km ground mag traversing</td>
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<td></td>
<td>1100kg of bulk sample</td>
<td>Recovery of 25 drill hole collars</td>
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</tr>
<tr>
<td>2005</td>
<td>Aerial photography</td>
<td>Aerial photography</td>
<td>Aerial photography</td>
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<td>Drainage sampling on supplejack sandstone</td>
<td>Revised structural control model</td>
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<td>158 soil samples on 6 prospects</td>
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<td>2025 soil samples on 10 prospects</td>
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<td>531 soil samples over 7 prospects</td>
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**Work Conducted During 2010-2011**

**Geophysical Airborne Survey – Nov 2010**

In November 2010 a filtered Airborne Magnetic and Radiometrics Survey was conducted by UTS Geophysics Pty Ltd on behalf of Ord River Resources over the tenement, SEL26483. The survey produced successful geophysical images on a local scale that are far more detailed than the regional geophysics previously conducted by AGSO.

From the magnetic geophysical images further prospective targets have been identified both near surface and buried beneath cover. The majority of the newly defined targets are along the southern extent of the PhD structure and sub-parallel to the Tregony line (Figure 3).

The radiometric images have been used to identify rock types and geological trends, with a new structural corridor defined sub-parallel to the PhD structure that warrants further investigation (Figure 4).
Figure 3 - Airborne Magnetic survey (1VD); left is the ORD airborne magnetic image showing new prospective targets in yellow & right the AGSO regional image

Figure 4 - Airborne Radiometric Survey; left is the ORD airborne radiometrics showing newly defined structural corridor in red & right the AGSO regional image
ROCK CHIP SAMPLING AND FIELD RECONNAISSANCE – MAY 2011

Field reconnaissance took place in May 2011 to determine if and where a small drilling programme could be undertaken. During the time 35 rock chip samples were taken from between Five Mile, PhD and PhD north; the location of each of the samples is shown in Figure 5. The results of the samples were disappointing and are listed in Appendix 1.

Other work completed included mapping of outcrop along the PhD structure, walking the length of the Tregony resource area and meeting with other geologists/mine managers within the region.

Figure 5 - Location of Rock Chip samples
FIELD RECONNAISSANCE – JULY 2011

Following on from previous field work a drill programme was proposed for the Tregony area. To ensure that this programme was suitable a second field reconnaissance trip was undertaken. During this time the drill holes for the programme were marked out and the tracks flagged.

The logistics of the drill programme were also addressed and investigations were undertaken into the state of the camp at Tregony; it was deemed suitable with only some aspects to be repaired.

PROPOSED WORK PROGRAMME FOR 2011-2012

RC/DIAMOND DRILLING PROGRAMME

The proposed drilling program consists of ten drill holes totalling 2,400m (Table 5 & Figure 6). Of this total metreage, 1,200m is proposed to be RC drilling and 1,200m is proposed to be HQ / NQ diamond core drilling. It is estimated that the entire program, including camp rehabilitation, access tracks and drill site preparation, will take two months.

Eight drill holes are designed to test for extensions to mineralisation previously intersected in the Tregony deposit. The other two holes are designed to test RAB anomalies to the northwest of Tregony. The proposed budget for this programme is $750,000.

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Table 5 - Proposed drill holes
Figure 6 - Location of proposed drill holes
FURTHER RECOMMENDATIONS

Depending on the results of the upcoming drilling programme at Tregony further infill drilling may be required to improve the resource definition.

Detailed analysis of the geophysical anomalies will be undertaken to determine if there is merit in further exploration.

Professional petrological examination of key mineral assemblages and host sequences may be undertaken to better define the relationship between gold mineralization, host rock alteration, and structural deformation.

Detailed geological mapping over the 7 kilometre long PhD Prospect to PhD North Prospect prospective zone is to be undertaken to determine if there is any significant structural trend. A program of closely spaced ground magnetic surveying may be undertaken.

Conclusions

Further targets within the Suplejack area have been identified through geophysical surveys and field reconnaissance trips in the reporting period. The geophysical survey conducted by Ord River Resources has defined areas that require assessment to determine if further exploration either due to a magnetic anomaly or further geological evidence is warranted. Rock chip sampling along previously defined targets has not proven successful however these targets remain of interest at depth.

The Tregony area is of further interest with deeper drilling planned for the coming year to better define the existing 55,000 oz Au resource.

References


## Appendix 1

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<td>5</td>
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<td>4</td>
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</table>

Table 6 - Assay Results for Rock Chips
Appendix 2

Thomson Aviation Pty. Ltd.

GEOPHYSICAL SURVEY DATA REPORT

Date : 9 Nov 2010

This readme file describes the equipment and specifications of a geophysical airborne survey conducted by Thomson Aviation Pty. Ltd.

The readme also summarises the data processing parameters and procedures used.

CLIENT DETAILS

Company Flown for: Ord Resources Ltd
Company Flown by: Thomson Aviation Pty. Ltd.
Company Processed: Thomson Aviation Pty. Ltd.
Company Job: Thomson 10017

AIRBORNE SURVEY EQUIPMENT:

Aircraft: Cessna 210 VH-THS
Magnetometer: Kroum
Magnetometer Resolution: 0.001 nT
Magnetometer Compensation: Post Flight
Magnetometer Sample Interval: 20 Hz, Approx 3.75 meters
Data Acquisition: GeOZ Model 2007
Spectrometer: Radiation Solutions RS 500
Crystal Size: 33 lt downward array
Spectrometer Sample Interval: 0.5 Seconds (approx 37 meters)
GPS Navigation System: Novatel 951R GPS Receiver

Flight path calculated from real time differentially corrected GPS Data.

AIRBORNE SURVEY SPECIFICATIONS

Area 1 : Tanami Desert, NT
Flight Line Direction: 090 - 270 degrees
Flight Line Separation: 100 metres
Tie Line Direction: 000 - 180 degrees
Tie Line Separation: 1000 metres
Terrain Clearance: 35 metres (MTC)
Survey flown: February 2010

DATUM and PROJECTION
Datum: Geodetic Datum of Australia 94. GDA94
Projection: Map Grid of Australia. MGA
Zone: Zone 52

RADIOMETRIC PROCESSING PARAMETERS:

<table>
<thead>
<tr>
<th></th>
<th>Potassium</th>
<th>Uranium</th>
<th>Thorium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arcft Bkg</td>
<td>155.53</td>
<td>23.58</td>
<td>6.047</td>
</tr>
<tr>
<td>Cosmic Bkg</td>
<td>0.986</td>
<td>0.0514</td>
<td>0.041</td>
</tr>
<tr>
<td>Height Attn</td>
<td>0.007434</td>
<td>0.009432</td>
<td>0.008428</td>
</tr>
<tr>
<td>CPS to equivalents</td>
<td>53.21</td>
<td>214.96</td>
<td>18.80</td>
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</table>

RADIOMETRIC STRIPPING RATIOS:

\[\text{Alpha} = 0.276 \quad a = 0.048\]
\[\text{Beta} = 0.418 \quad b = 0.003\]
\[\text{Gamma} = 0.759 \quad g = 0.001\]

DATA PROCESSING: MAGNETIC DATA

MAGNETIC PROCESSING FLOW

The final magnetic data processing was performed using the following processing flow:

- Aircraft magnetic data QC
- Diurnal magnetic data QC
- System parallax removal
- Diurnal variation removal and addition of the mean diurnal base value
- IGRF removal and addition of mean IGRF value.
- Levelling using polynomial Tie line levelling,
- Micro levelling if required
- Reduction to the pole.
- Gridding using Minimum Curvature algorithm

MAGNETIC QUALITY CONTROL

The processing of the magnetic data firstly involved the routine quality control in the field of both the aeromagnetic and diurnal data during the acquisition phase. Any data found not meeting the required specifications were reflown.
MAGNETIC PARALLAX CORRECTION

The total magnetic intensity aircraft data was firstly corrected for the effects of system parallax. The parallax parameters were determined and checked from the results of opposing test line flights.

MAGNETIC DIURNAL CORRECTION

The base station magnetometer data was edited and merged into the main database. The aeromagnetic data was corrected for diurnal variations by subtracting the observed magnetic base station deviations. There were no magnetic storms recorded by the diurnal monitoring station during the survey. The mean value was then added back to the data.

MAGNETIC IGRF CORRECTION

The data was corrected for the regional gradient of the International Geomagnetic Reference Field (IGRF). The IGRF was calculated for every point along the lines with respect to GPS height using the IGRF Model for 2005 with secular variation applied. The mean IGRF value was then added back to the data.

MAGNETIC PROFILE LEVELLING

The magnetic traverse line data was then statistically levelled from the tie line data using Intrepid polynomial levelling. The steps involved in the tie line levelling were as follows:

- A primary tie line was chosen as a reference tie.
- All other ties were levelled to this tie line using 1st degree polynomial adjustment.
- lines were adjusted individually to minimize crossover differences, using 2nd degree polynomial adjustments.

Any residual flight line effects were removed using Intrepid micro levelling techniques and the resultant line data saved as a separate field.

MAGNETIC GRIDDING

The data was gridded to a cell size of 25% of line spacing using a Minimum Curvature algorithm.

DATA PROCESSING : RADIOMETRIC DATA

RADIOMETRIC PROCESSING FLOW

Radiometric data processing consists of the following processing flow:

Full spectrum 256 channel Overview:

- Noise Adjusted Singular Value Deconvolution (NASVD) noise reduction
- Dead Time correction
- Energy calibration
- Cosmic and Aircraft background Removal.
- Radon background Removal
- Extraction of IAEA Window data
Windowed data processing Overview:

- Compton Stripping correction.
- Height Attenuation correction using IAEA coefficients.
- Gridding

The specific processing steps are described below:

**256 CHANNEL PROCESSING**

**NASVD Noise Reduction:**

Noise-Adjusted Singular Value Decomposition (NASVD) Smoothing. Correction of the radiometric data involved the reduction of the 256 channels of raw gamma spectrometer data using Noise-Adjusted Singular Value Decomposition (NASVD) noise reduction method. The signal to noise ratio of the multi channel spectra can be substantially enhanced using Noise-Adjusted Singular Value Decomposition (NASVD) as described by Hovgaard and Grasty (1997), Schneider (1998) and Minty (1998). This method involves a general linear transformation of groups of spectra (a whole line or flight), using NASVD to compute the different spectral shapes that make up the measured multi-channel spectra. New multi-channel spectra are created by recombining the statistically significant spectral components. Each spectral component contributes an unequal amount to the features observed in the measured multi-channel spectrum, until a point is reached where the spectral components represent only noise.

The 1st spectral component is the spectral shape that represents most of the features in the measured multi-channel spectra. The 2nd spectral component represents those features not described by the 1st spectral component, etc. By excluding from the recombination those spectral components that do not represent significant features in the measured multi-channel spectra, the resulting reconstructed multi-channel spectra have a much larger signal to noise ratio than the measured multi-channel spectra.

**Dead Time Corrections:**

The raw 256 channel spectra were corrected for spectrometer dead time using the recorded live time and the standard formula.

\[ N = n / (1 - t) \]

N = corrected counts in each second;

n = all counts processed in each second by the ADC; and

t = the recorded dead time

Where the live time (L) is recorded, the dead time t is replaced by (1 - L).

**Energy Calibration:**

Energy calibration was undertaken line by line using a maximum of 3 calibration peaks; and a minimum of 2 calibration peaks dependent upon their clear identification in the spectra. The 3 calibration peaks used were Bi 214 at 0.609 Mev, K-40 at 1.46 Mev and TI-208 at 2.615 Mev
Cosmic and Aircraft Background Correction:

Cosmic and aircraft background removal utilised the data recorded from a series of calibration flights over water. These flights produce a normalised cosmic spectra for the system installation, together with a 256ch spectra for the aircraft background.

The combined correction is calculated using:

\[ N = a + bC, \]

where:

- \( N \) = the combined cosmic and aircraft background in each spectral window;
- \( a \) = the aircraft background in the window
- \( C \) = the cosmic channel count; and
- \( b \) = the cosmic stripping factor for the window.

The values of \( a \) and \( b \) for each window are determined from the calibration flights over the sea.

Cosmic coefficients and aircraft background coefficients were derived using INTREPID CAL256 program.

Atmospheric Radon:

The influence of atmospheric radon has been minimised using the spectral ratio method described by Minty (1992). However the effect of radon in the Uranium channel can be considerable; and some effects of the radon are visible in the character of the final processed data.

Extraction of Four Standard Windows:

The fully processed 256 channel spectra were reduced to the four IAEA (1991) standard windows or Regions of Interest (ROI): As given by the following Energy windows and channel numbers:

- Total Count 0.41 to 2.81 Mev (channels 33 to 238)
- Potassium 1.37 to 1.57 Mev (channels 116 to 133)
- Uranium 1.66 to 1.86 Mev (channels 140 to 158)
- Thorium 2.41 to 2.81 Mev (channels 205 to 238)

WINDOW PROCESSING

Spectral Stripping of Standard Window Data:

Corrections for Compton stripping and height attenuation were applied to the windowed data using constants supplied by Radiation Solutions Inc.

Due to scattering of gamma rays in the air, the three principle stripping ratios (Alpha, Beta and Gamma) increase with altitude above the ground:
Stripping Ratio Increase at STP per metre

\[
\begin{align*}
\text{Alpha} & \quad 0.00049 \\
\text{Beta} & \quad 0.00065 \\
\text{Gamma} & \quad 0.00069
\end{align*}
\]

Following adjustment of the stripping ratios for altitude, the technique for producing the corrected (stripped) count rates in the potassium, uranium and thorium channels (NKC, NUC and NThC) are given by Grasty and Minty (1995)

The Compton coefficients for the system are given above:

*Height Corrections*

The stripped count rates vary exponentially with aircraft altitude. Adjustments for variation in altitude were made using the formula:

\[
N_c = N_0 e^{-u(H-h)}
\]

Where

\[
\begin{align*}
N_c & \quad = \text{count rate normalised to height } H, \\
N_0 & \quad = \text{uncorrected counts}, \\
h & \quad = \text{measured height above the ground}, \\
H & \quad = \text{nominal flight height}, \\
u & \quad = \text{attenuation coefficient for the channel being corrected.}
\end{align*}
\]

*Calculation of Effective Height*

The Effective Height, which is the aircraft terrain clearance corrected to Standard Temperature and Pressure was determined as follows:

- Filtering of the temperature field was applied to remove spikes and smooth out the instrument noise.
- Filtering of the barometric pressure field was applied to remove spikes and to smooth out the instrument noise.
- Filtering of the radar altimeter was applied to remove spikes, spurious reflections from groups of tree and very narrow gullies and to smooth out the instrument noise.
- The formula option in the spread sheet editor was used to combine the terrain clearance, pressure and temperature.

\[
E_{\text{height}} = \frac{\_h \times P \times 273}{1013 \times (T + 273)}
\]

Where:

\[
\begin{align*}
E_{\text{height}} & \quad = \text{the effective height;} \\
h & \quad = \text{the observed radar altitude in metres;}
\end{align*}
\]
\[ T = \text{the measured air temperature in degrees C}; \]
\[ P = \text{the barometric pressure in millibars}. \]

*Reduction to Ground Concentrations:*

The fully corrected window data is then converted to effective ground concentrations by dividing by the conversion coefficient to produce the following equivalent concentrations for each element.

- **Total Count**: Dose Rate
- **Potassium**: Percent
- **Uranium**: PPM
- **Thorium**: PPM

*Radiometric gridding*

The data was gridded to a cell size of 25% of line spacing using a Minimum Curvature algorithm.

For further information on the data processing please contact Thomson Aviation Pty. Ltd. directly.