LOVE CREEK PROJECT
EL25164

Annual Report for the Period

Volume 1 of 1

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Date: 19 November 2008

Distribution:
Northern Territory Geological Survey - (1 digital)
Uranex N.L. - Perth Office (1 digital)
Peter F. Robinson & Assoc Pty Ltd - (1 digital)
SUMMARY

The Love Creek Project comprises exploration licence 25164 located in the Mary River region approximately 100 kilometres east of Darwin in the Northern Territory.

Uranex is targeting East Alligator River Uranium Field (EARUF) and/or South Alligator Rivers Uranium Field (SARUF) and/or Rum Jungle Uranium Field (RJUF) style uranium deposits. This is based on the recognition that the Lower Proterozoic stratigraphy of the area has some similarities that may equate with stratigraphy in these uranium fields.

Most of the outcrop areas are mapped as the Mundogie Sandstone (Ppm). The Mundogie Sandstone is thought to be possibly equivalent to the magnetic Upper Cahill Formation of the EARUF further east. Hence the Lower Cahill host equivalent would be stratigraphically below it.

This first annual report describes activities conducted for the period 5th November 2007 to 4th November 2008. Exploration activities during the period have involved a detailed aeromagnetic and radiometric survey comprising 5188 line kilometres and its processing and interpretation. This survey has produced both radiometric and aeromagnetic interpreted litho-structural targets for follow up by ground inspection and then drilling of those that may relate to uranium mineralisation.

Total project expenditure for the reporting period was $135,144.
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1.0 INTRODUCTION

This annual report details all exploration work undertaken on Love Creek Project Exploration Licence 25614 during the reporting period 5th November 2006 to 4th November 2007.

The licence located in the Mary River area, on the western margin of the Kakadu National Park within the Pine Creek Orogen approximately 100 kilometres east south east of Darwin in the Northern Territory (Figure 1).

Access is from Darwin on the Arnhem Highway approximately 130 kms to the south of the tenement, then north on the Point Stuart Road. Accommodation is available at the Mary River Point Stuart Lodge Just off the Point Stuart Road.

The tenement is situated on the Darwin (SD52-04) and Alligator River (SD 53-01) 1:250,000 map sheets.

The terrain in the area is mostly low hills and coastal flood plain. Vegetation cover is mostly tropical woodland and grasses.

2.0 TENURE

The Love Creek Project comprises one granted exploration licence. It covers 156 blocks (approximately 368 square kms) and attracts a Year 1 expenditure covenant of $44000.

<table>
<thead>
<tr>
<th>Name</th>
<th>Licence</th>
<th>Granted</th>
<th>Expiry</th>
<th>No. Blocks</th>
<th>Area Km²</th>
<th>Commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Love Creek</td>
<td>EL25614</td>
<td>5-Nov-07</td>
<td>4-Nov-13</td>
<td>156</td>
<td>368</td>
<td>$44000</td>
</tr>
</tbody>
</table>
3.0 GEOLOGY

The Love Creek Project is situated in the middle of the Pine Creek Orogen. The older Archean basement domes are situated about 80 kilometres to the east (Nanambu Complex) and similarly 80 kilometres to the west (Rum Jungle Complex).

As shown in Figure 2, most of the outcrop areas are mapped as the Mundogie Sandstone (Ppm)
4.0 PREVIOUS EXPLORATION

Very early exploration by Kewanee Aust PL (1970 – 1973) was to the west of the project and consisted of airborne scintillometer traverses and auger drilling to assist in mapping. Interpreted lithologies were Coomalie Dolomite, Golden Dyke Formation and possibly Masson Formation (= Lower Cahill).

CRA was exploring a large area (AP2930) to the east of the above at the same time which encompassed EL 25164. This consisted of an analogue radiometric and magnetic airborne survey, stream sediment sampling (Cu, Pb, Zn, Ni, Co, Ag and U) and auger drilling along tracks (Cu, Pb, Zn, Ni, Co and U). There were no airborne uranium anomalies greater than 1.5 x background. Ground follow up by CRA and later by Union Oil did not recommend any further ground investigations. The analogue contour maps have not been sited. There were no anomalous uranium results in the stream sediments and the auger samples. Some anomalous base metal results were followed up.

BP Mining and Development explored EL 1039 from 1977 to 1979. This covered the south west part of EL 25164. In 1977 BP did a rapid reconnaissance survey and drilled 5 rotary holes to test bedrock beneath the Cainozoic cover. They then reinterpreted the basement geology in the light of current BMR mapping. The point Stuart area was considered to occupy a NNE – SSW syncline between a local dome of Masson Formation (= Lower Cahill) with the Woolner Granite Complex to the west.
They also conducted a selective airborne input EM, radiometric and magnetic survey.

The input survey located many anomalies probably due to graphitic shales in the Wildman Siltstone. It also suggested that the Cretaceous cover could be up to 120 metres thick in the north.

A number of uranium anomalies were detected, especially in the south of the EL. They were not ground checked by BP but most were later checked by Union Oil and Minatome.

BP later drilled 46 holes for stratigraphy and to test some input anomalies. Only 22 were radiometrically logged. Radiometric anomalies were found in Cainozoic cover and one (1000cps) in a quartzite.

Union Oil Development Corporation conducted field work on EL 2433 from 1980 to 1982. The tenement covered a 50% reduction of BP’s EL. Field checking of the CRA and BP radiometric anomalies was completed and there were no recommendations for further follow up. A reinterpretation of BP’s input data outlined 9 priority targets that may be due to graphitic schists. Three were drilled but did not locate graphitic schists. This does not discount the others.

Minatome Australia P/L conducted exploration on EL 2860 between 1980 and 1983. The tenement covered the southern remaining 50% of the original BP tenement. Besides checking the BP anomalies it also conducted trenching, ground radiometric and magnetic surveys. It revealed that the radiometric anomalies checked appear to be surface phenomena.

Outside of the Love Creek tenement Dampier Mining conducted exploration on a large part of what is now Kakadu Stage 2 from 1992 to 1997 within E1s 393 and 394. Primitive airborne radiometric and radiometric surveys were completed but the plans are absent from their reports. It has since been covered by the Kakadu 2 airborne survey at 200 metre line spacing. Crusader 6, 7 and 8 were ground checked with spectrometric surveys with no encouraging results.

5.0 TARGETING

The three main criteria for forming these unconformity related deposits in the Pine Creek Orogen are:

1) Proximity to Archaean–Lower Proterozoic crystalline basement highs (>1800ma). These are the Nanambu Complex at EARUF, the Rum Jungle and Waterhouse Complexes of the RJUF and parts of the Litchfield Complex.

2) Favourable Lower Proterozoic host rock stratigraphy and lithofacies. At the EARUF, this is the Lower Cahill Formation. This starts at the base with massive dolomites and minor gneisses and schists. These underlie the major uranium deposits. The apparent equivalents at RJUF would be the Manton’s Group Celia Dolomite and the Mount Partridge Group’s Crater Formation and Coomalie Dolomite underlying the host Whites Formation.
3) Proximity of the current land surface profile to the base of existing or previously overlying Middle Proterozoic sedimentary cover rocks. This is the Kombolgie Formation at ARUF and the Depot Creek Sandstone at the RJUF and the Litchfield Complex. Critical to the exploration equation for the Love Creek area is how far the current land surface is below the pre- Kombolgie regolith and whether there was a pre-sedimentary felsic volcanic episode equivalent to the Edith River Volcanics. The nearest Kombolgie Formation outcrop is in the Koongarra outlier some 100 kilometres to the east.

Uranex is targeting East Alligator River Uranium Field (EARUF) and/or Rum Jungle Uranium Field (RJUF) style uranium deposits.

This is based on the recognition that the Lower Proterozoic stratigraphy of the area has some similarities that may equate with stratigraphy in the EARUF or the RJUF described above.

The Mundogie Sandstone (Ppm), which underlies the Wildman Siltstone is thought to be possibly equivalent to the magnetic Upper Cahill Formation of the EARUF further east. This, being the most likely case, then the Lower Cahill host equivalent would be stratigraphically below it. The earlier interpretations Kewanee Aust PL (1970 – 1973) and BP Mining and (1977 to 1979) from drilling to bedrock beneath the Cainozoic cover supports this.

The Lower Cahill Formation host lithologies consist of dolomites overlain by interbedded pyritic carbonaceous mica schists, chloritic calc-silicates, and chloritised felspathic quartzites.

**6.0 CURRENT EXPLORATION ACTIVITIES**

During the reporting period, exploration activities have included completion of a detailed airborne geophysical survey, the processing and interpretation of the results and defining targets and helicopter assisted ground follow up.

**6.1 AIRBORNE GEOPHYSICS**

UTS Geophysics were contracted to complete a detailed aeromagnetic and radiometric survey comprising 5188 line kilometres in late November 2006.

The survey was flown using the MGA94 coordinate system (a Universal Transverse Mercator projection) derived from the Geocentric Datum of Australia.

The survey data acquisition specifications for each area flown are specified in the following table:
Table 2: Airborne Survey Data Acquisition Specifications

<table>
<thead>
<tr>
<th>NAME</th>
<th>LINE SPACING</th>
<th>LINE DIRECTION</th>
<th>TIE LINE SPACING</th>
<th>TIE LINE DIRECTION</th>
<th>SENSOR HEIGHT</th>
<th>TOTAL LINE KMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Love Creek</td>
<td>100m</td>
<td>090-270</td>
<td>1000m</td>
<td>000-180</td>
<td>40m</td>
<td>5188</td>
</tr>
</tbody>
</table>

**Total Field Magnetometer**
Total field magnetic data readings for the survey were made using a Scintrex Cesium Vapour CS-2 Magnetometer. This precision sensor has the following specifications:
- Model Scintrex Cesium Vapour CS-2 Magnetometer
- Sample Rate 0.1 seconds (10Hz)
- Resolution 0.001nT
- Operating Range 15,000nT to 100,000nT

**Three Component Vector Magnetometer**
Three component vector magnetic data readings for the survey were made using a Develco Fluxgate Magnetometer. This precision sensor has the following specifications:
- Model Develco Fluxgate Magnetometer
- Sample Rate 0.1 seconds (10Hz)
- Resolution 0.1nT
- Operating Range -100,000nT to 100,000nT

**Radiometric Data Acquisition**
The gamma ray spectrometer used for the survey was capable of recording 256 channels and was self stabilising in order to minimise spectral drift. The detectors used contain thallium activated sodium iodide crystals. Thorium source measurements were made each survey day to monitor system resolution and sensitivity. A calibration line was also flown at the start and end of each survey day to monitor ground moisture levels and system performance. Spectrometer model Exploranium GR820
- Detector volume 32 litres
- Sample rate 1 Hz

**Magnetic Data Processing**
The diurnal base station data was checked for spikes and steps, and suitably filtered prior to the removal of diurnal variations from the aircraft magnetic data. The filtered diurnal measurements were subtracted from the diurnal base field and the residual corrections applied to the survey data by synchronising the diurnal data time and the aircraft survey time. The average diurnal base station value was added to the survey data. This regional magnetic gradient was subtracted from the survey data points. Tie line levelling was applied to the data by least squares minimisation, using a polynomial fit of order 0, of the differences in magnetic values at the crossover points of the survey traverse and tie line data.
Located and gridded data were generated from the final processed magnetic data.

**Radiometric Data Processing**

Statistical noise reduction of the 256 channel data was performed using the Maximum Noise Fraction (MNF) method described by Dickson and Taylor (1998). Channels 30-250 only are noise-cleaned, as these contain the regions of interest and are not dominated by the lower end of the Compton continuum. The energy spectrum between the potassium and thorium peaks was recalibrated from the noise-cleaned 256 channel measurements. The aircraft background spectrum and the scaled unit cosmic spectrum were then subtracted from the 256 channel data. This 256 channel data was then windowed to the 5 primary channels of total count, potassium, uranium, thorium and low-energy uranium. Height attenuation corrections based on the STP radar altimeter were then performed to remove any altitude variation effects from the data. The corrected count rate data was then converted to ground concentrations for potassium, uranium and thorium. Located and gridded data were generated from the final processed radiometric data.

The processed magnetic data was presented as - Total Magnetic Intensity (TMI), Reduced to Pole (RTP) and Reduced to Pole First Vertical Derivative (RTR1VD) images. The processed radiometric data was presented as – Total Count (TC), Potassium (K), Thorium (Th), Uranium (U) and Ternary (K, Th, U) images. A Digital Terrane (DT) image was also produced.

6.2 INTERPRETATION OF AIRBORNE GEOPHYSICS

The geophysics was further processed by Southern Geosciences (SGS) and Dr Geoff Dickson. They produced an array of images that allowed a far better interpretation of the results.

Magnetic images included – Reduced to Pole (RTP) (Figure 7), First Vertical Derivative of the RTP (1VD, RTP) Gradient, TMI 1VD, and Total Magnetic Intensity (TMI) (Figure 6) images all with various shade directions.

Radiometric images included K, U, TH, K:Th, U:Th (Figure 4), Ternary images (Figure 5) all with various shade directions. The U: Th ratio image (Figure 4) is very useful in reducing the effect of uranium and thorium rich laterites and granites and emphasising uranium dominant sources.

The Uranium Indicator by Dr Dickson that uses U x U:Th image (Figure 3) emphasises the uranium component even further.

The Ternary image (Figure 5) combines and displays the uranium window (blue), the thorium window (green) and the potassium window (red)

The selected images are shown in the figures below. They also show the uranium anomaly way points that were ground checked.
Figure 3: Love Creek U x U:Th (Uranium Indicator) with Ground Check Way-points

Figure 4: Love Creek U:Th East Shade with Ground Check Way-points
Figure 5: Love Creek Ternary Radiometrics with Ground Check Way-points

Figure 6: Love Creek Total Magnetic Intensity (TMI) with Ground Check Way-points
Figure 7: Love Creek Reduced to Pole (RTP) with Ground Check Way-points

Figure 8: Love Creek Digital Terrane Model (DTM) with Ground Check Way-points
The spot uranium indicator anomalies on Figure 3 were transferred to the other images.

Figure 2, Geology above shows the proximity of the U indicator anomalies to the marker Mundogie Sandstone. All anomalies north of this could be in Lower Cahill Fm equivalent lithologies.

The magnetic images, Figures 6 and 7, also suggest some stratigraphic control. The Mundogie Sandstone (Upper Cahill Fm ?) has a strong magnetic signature. Anomalies 2, 3 and 5 are below this marker in the potential Lower Cahill Fm.

Figure 5, Ternary Image and Figure 8 Digital Terrane (DTM) show the lowland flood plain. Anomalies 4, 2 and 6 are in the higher ground but still close to the high water level of the flood plain. Anomalies 2, 3 and 5 are on the margins of the flood plain.

Although the proximity of the flood plain boundary to most anomalies suggests that they are hydromorphic in origin, this boundary is controlled by stratigraphy. It marks the most important the Lower Cahill / Upper Cahill sequence contact.

6.3 INITIAL GROUND CHECKS

A reconnaissance trip was made in October 2007 to check access, geology and potentially some uranium radiometric anomalies.

Away from the formed roads access was not possible. Outcrop along the access roads are scarce.

This was followed by a helicopter assisted ground check of uranium radiometric anomalies in July 2008. The survey used Jayro Helicopters and was based out of Point Stuart Lodge.

The location of ground check way-points is shown on the above figures as discussed above. The results are summarised in Table 3.

All anomalies in EL 25164 were located by GPS and checked, where possible by scintillometer foot traverses across the anomalies. Geological observations were made and samples taken on obvious anomalies.
Table 3 Summary of Geology, and CPS Helicopter Ground Survey

<table>
<thead>
<tr>
<th>ANOMALY WAYPOINT NUMBER</th>
<th>SAMPLE NUMBER</th>
<th>ROCK TYPE DESCRIPTION</th>
<th>STRATIGRAPHY</th>
<th>BACKGROUND</th>
<th>MAX COUNTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC1</td>
<td></td>
<td>Flood Plain</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Black soil</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC2</td>
<td></td>
<td>Weak linear anomaly, no pisolites, could be bedrock anomaly</td>
<td></td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>LC3</td>
<td></td>
<td>Flood Plain</td>
<td></td>
<td></td>
<td></td>
</tr>
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<td></td>
<td></td>
<td>Black soil</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC4</td>
<td></td>
<td>Local pisolite gravel in chocolate soils</td>
<td></td>
<td></td>
<td>50</td>
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<tr>
<td>LC5</td>
<td></td>
<td>Flood Plain</td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Black soil</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC6</td>
<td></td>
<td>No defined anomaly, above flood plain line</td>
<td></td>
<td></td>
<td>55</td>
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</tbody>
</table>

Anomalies WC 1, 3 and 5 were under water in the coastal black soil flood plain and are probably daughter product anomalies

Anomalies WC 2, 4 and 6 were on higher ground just above the flood plain.

No strongly anomalous locations were found and hence no samples were taken.

7.0 EXPENDITURE

A breakdown of expenditure is contained in Table 3. Expenditure for the Love Creek Project for the period 5th November 2006 to 4th November 2007 is $135,144
Table 4: Expenditure 2008 (Year 1)

<table>
<thead>
<tr>
<th>Item</th>
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<tr>
<td>Helicopter Hire</td>
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<tr>
<td>Geological Consultants</td>
<td>18,820</td>
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<td>General Contractors</td>
<td></td>
</tr>
<tr>
<td>Geophysical Consultants</td>
<td>4,883</td>
</tr>
<tr>
<td>Geophysical Data Acquisition</td>
<td>66,543</td>
</tr>
<tr>
<td>Gridding</td>
<td></td>
</tr>
<tr>
<td>Drilling RAB / Aircore</td>
<td></td>
</tr>
<tr>
<td>Assaying</td>
<td></td>
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<td>Tenement Administration</td>
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<td>Computer Services</td>
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<tr>
<td>Conferences and Seminars</td>
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<td>Data Entry</td>
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<td>Drafting</td>
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<td>Salaries</td>
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<td>Accomodation</td>
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<td>Travel</td>
<td>823</td>
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<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>117,517</strong></td>
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<tr>
<td><strong>Administrative Overheads (15%)</strong></td>
<td><strong>17,627</strong></td>
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<td><strong>TOTAL</strong></td>
<td><strong>135,144</strong></td>
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<tr>
<td><strong>Tenement Costs</strong></td>
<td><strong>2,120</strong></td>
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</table>

8.0 CONCLUSIONS AND RECOMMENDATIONS

Results from the aeromagnetic and radiometric survey and stratigraphic analysis have provided some targets to follow up of the Love Creek Project area for uranium exploration. Exploration for the next report period will include ground inspection of anomalies and drilling of the generated targets and for stratigraphy.

9.0 PROPOSED EXPLORATION

The results of the forthcoming AEM survey help decide the next exploration step here.

Drill follow up to test conductors and litho-structural targets defined by the AEM will then follow. This would be accompanied by some stratigraphic drilling to confirm the presence of the Lower Cahill potential host lithologies. This would best be done at the peak of the next dry season when access is to the flood plains is available.

A proposed Expenditure for this is attached as Table 4.

If targets remain after the initial reconnaissance and drilling is justified, the expected expenditure would be in the vicinity of $112,000 as detailed below in Table 4.
<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
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<tr>
<td>Geological Consultants / Contractors</td>
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<td>Geophysical Consultants</td>
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<tr>
<td>Geophysical Data Acquisition</td>
<td>$17,500</td>
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<tr>
<td>Gridding</td>
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<tr>
<td>Drilling RAB / Aircore</td>
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<tr>
<td>Assaying</td>
<td>$5,000</td>
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<td>Accommodation</td>
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<td>Travel</td>
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<td>Total</td>
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<td>Administrative Overheads (15%)</td>
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<tr>
<td><strong>TOTAL</strong></td>
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