JACARANDA MINERALS PTY LTD
&
MINERALS AUSTRALIA PTY LTD

EL 25917 WALHALLOW,
NORTHERN TERRITORY

ANNUAL REPORT

FOR THE 12 MONTH PERIOD

29th October 2008 TO 28th October 2009

November 2009

Prepared for Jacaranda Minerals Pty Ltd & Minerals Australia Pty Ltd

by

Michael Stephenson

Exploration Project Manager - Jacaranda Alliance
EXECUTIVE SUMMARY

Exploration Licence 25917 was granted to Conarco Minerals Pty Ltd on 29th October 2007 for a term of 6 years. The EL comprises an area of 500 sub-blocks (approximately 1,639 sq. km.) and is located on Walhallow and Mallapunyah pastoral leases, approximately 130km SSW of Cape Crawford in the Northern Territory of Australia.

In December, 2007, Conarco Minerals Pty Ltd entered into the Jacaranda Alliance Joint Venture with Hancock Prospecting Pty Ltd of Perth, WA in order to carry out exploration on all Conarco tenements, including EL 25917. The Jacaranda Alliance JV comprises Jacaranda Minerals Pty Ltd (50%) and Minerals Australia Pty Ltd (50%). Jacaranda Minerals Ltd is wholly owned by Conarco Minerals Pty Ltd and Minerals Australia Pty Ltd is wholly owned by Hancock Prospecting Pty Ltd.

In June, 2008 title to EL 25917 was transferred from Conarco Minerals Pty Ltd to Jacaranda Minerals Ltd and Minerals Australia Pty Ltd in equal shares.

In 2002, Conarco conducted a reconnaissance geochemical survey for petroleum exploration along the Tablelands Highway. Geochemically anomalous molybdenum was reported from a sample site located near Bostock Bore on the Walhallow 1:250,000 map sheet area. Subsequent evaluation of the Cretaceous Toolebuc Formation in the Carpentaria and Eromanga Basin of NW Queensland resulted in the realization that Walhallow’s molybdenum anomalism could be originating from the Cretaceous. It was considered possible that the Cretaceous sediments at Walhallow could be a close stratigraphic/facies equivalent of the Toolebuc Formation.

Assay results from work completed in the 2007-2008 reporting period, show no anomalous Uranium, with two small areas of anomalous Molybdenum and Vanadium within the laterite and on the contact with the underlying Cretaceous sediments.

Work completed by the JV during 2008/2009 involved a 28 day ground reconnaissance of the entire tenement. Geochemical samples were taken on a 9 kilometre square grid over the entire tenement, for a total of 149 samples. Rough inaccessible terrain prevented a total of 37 samples from being collected.

A total of 149 samples were analysed for a suite of 21 elements incorporating areas displaying elevated radiometric total counts from previously sampled locations.

No anomalous uranium, molybdenum or vanadium were reported. The remaining elements assayed showed only background levels.
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1. LOCATION AND ACCESS

EL 25917 is located on the Tablelands Highway on Walhallow and Mallapunyah pastoral leases, approximately 130km SSW of Cape Crawford in the Northern Territory of Australia (Figure 1). Access is north on the Tablelands Highway from the Barkly Highway at the Barkly Homestead Roadhouse, which is situated 188 kilometres east of the Three Ways Roadhouse on the Stuart Highway. Walhallow Homestead is 237 kilometres from the Barkly Homestead Roadhouse. The Tablelands Highway is fully sealed and transects the project area.

Figure 1. Location map
Other access within the project is along sparse local tracks that mostly follow fencelines, creeks and rivers as shown in Figure 2 below:

**WALHALLOW EL 25917**

![Local topographic map](image)

*Figure 2. Local topographic map*
2. TENURE

Exploration Licence 25917 was granted to Conarco Minerals Pty Ltd on 29th October 2007 for 6 years. The EL comprises an area of 500 sub-blocks (approximately 1639 sq km) and is located on Walhallow and Mallapunyah pastoral leases, approximately 130km SSW of Cape Crawford in the Northern Territory of Australia.

In December, 2007, Conarco Minerals Pty Ltd entered into the Jacaranda Alliance Joint Venture with Hancock Prospecting Pty Ltd of Perth, WA in order to carry out exploration on all Conarco tenements, including EL 25917. The Jacaranda Alliance JV comprises Jacaranda Minerals Pty Ltd (50%) and Minerals Australia Pty Ltd (50%). Jacaranda Minerals Ltd is wholly owned by Conarco Minerals Pty Ltd and Minerals Australia Pty Ltd is wholly owned by Hancock Prospecting Pty Ltd.

The area of the EL is subject to registered Native Title claims DC02/1 (Mallapunyah/Creswell) and DC01/3 (Mallapunyah North), both claimant groups being represented by the Northern Land Council.

Full details of the Exploration Licence 25917 are:

**STATE - NORTHERN TERRITORY**

**EXPLORATION LICENCE APPLICATION AREA - Walhallow**

1:1,000,000 BLOCK IDENTIFICATION MAP - Newcastle Waters

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<th>SUB-BLOCKS</th>
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</tr>
<tr>
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<tr>
<td>981</td>
<td>v w x y z</td>
</tr>
<tr>
<td>982</td>
<td>v</td>
</tr>
<tr>
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<td>n o p s t u x y z</td>
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<tr>
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<td>g h j l m n o q r s t u v w x y z</td>
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Point 1             X: 135.450         Y: -17.2000
Point 2             X: 135.517         Y: -17.2000
Point 3             X: 135.517         Y: -17.1833
Point 4             X: 135.567         Y: -17.1833
Point 5             X: 135.567         Y: -17.2167
Point 6             X: 135.650         Y: -17.2167
Point 7             X: 135.650         Y: -17.1833
Point 8             X: 135.633         Y: -17.1833
Point 9             X: 135.633         Y: -17.1667
Point 10            X: 135.650         Y: -17.1667
Point 11            X: 135.650         Y: -17.1500
Point 12            X: 135.767         Y: -17.1500
Point 14            X: 135.700         Y: -17.2000
Point 15            X: 135.700         Y: -17.3500
Point 16            X: 135.833         Y: -17.3500
Point 17            X: 135.833         Y: -17.6000
Point 18            X: 135.450         Y: -17.6000

Total Number of Sub-Blocks: 500 (1,639 sq.km.)

The tenement schedule for “Walhallow” is as follows:

<table>
<thead>
<tr>
<th>TENEMENT NUMBER</th>
<th>EL 25917</th>
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<tbody>
<tr>
<td>REGISTERED HOLDER</td>
<td>Jacaranda Minerals Ltd (50%) &amp; Minerals Australia Pty Ltd (50%)</td>
</tr>
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<td>EXPIRY DATE</td>
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<td>EXPENDITURE COMMITMENT 2009-10</td>
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3. GEOLOGICAL SETTING

EL 25917 is mostly blanketed by Cenozoic and predominantly lateritised Cretaceous sediments. Basement to the north comprises inliers of Proterozoic Tawalla Group and McArthur River Group meta-sediments within Cambrian limestones and sandstones as shown in Figure 3 below:

Figure 3. Geology (excerpt from Sheet SE 53-7)
4. DESCRIPTION OF THE REGOLITH

The Barkley Tablelands are situated within the dry tropics and were once subject to the Tertiary laterisation that covered many parts of Australia. Despite the protection provided by the duricrusts, coupled with decreased vegetation and channeling of surface drainage have led to slope instability and erosion of the original laterite profiles. Materials eroded from the erosional regimes have been deposited on lower slopes and in valleys with the burial of incomplete and complete profiles and in many cases preserve an inversion of the weathering stratigraphy. In some localities sediments are of mixed origin.

The dominant topographical features of the tenement are the breakaways and the gently undulating to open flat plains. The breakaways comprise three major facets, an upper, nearly vertical free face, protected by the hard capping to the breakaway; below this is the linear debris slope maintained by the hard capping above. The debris slope merges to a very gently inclined and more extensive, pediment.

The ferruginous saprolite are extensively exposed in the breakaway face and form the principal regolith material of the steep debris slopes which have extensive subcrop and some outcrop of saprolite, and is often covered by a shallow stony colluvium.

Debris washed down onto the pediment is a mixture of alluvial, colluvial and eolian deposits.

In places silica induration of various types is common in the regolith and is considered to be post lateritic. Silcretes are widespread across the tenement but not abundant.

The black soil plains covering a substantial proportion of the southern portion of the tenement, are composed of calcareous earths and pedogenic carbonates with calcrete fragments derived from the in situ weathering of the Lower Cretaceous undifferentiated beds (KI) of massive grey calcareous siltstone, white leached siltstone and massive white quartz sandstone.

Abundant across the black soils plains is the distinct red-brown mottling in the sediment, resulting from successive small scale migration and accumulation of Fe with seasonal wetting and drying of the upper regolith.

Nodular and pisolitic calcrites as well as nodular calcium carbonate with nodular baryte have been noted in a few localities. Accumulation of the calcite and baryte nodules is most pronounced where gullying of the black soil has exposed the underlying grey calcareous siltstone. The baryte nodules are seen forming with the calcite nodules with sizes noted to 1 metre. The baryte has a radiating crystalline structure set amid crystalline calcite.

The variety of exposed regolith materials have experienced varying degrees of weathering and sedimentary processes and consequently show varying degrees of enrichment and depletion of ore-related elements.
5. PREVIOUS EXPLORATION

In 2002, Conarco Minerals conducted a reconnaissance geochemical survey for petroleum exploration along the Tablelands Highway. Geochemically anomalous molybdenum was reported from a sample site located near Bostock Bore on the Walhallow 1:250,000 map sheet area.

Given the extensive surficial cover within the limits of EL 25917, there has been little recorded exploration in the past and certainly none for uranium. The nearest documented base metal occurrence is the small Kilgour copper workings located some 2 km east of the NE corner of the EL.

There were a number of low-order uranium anomalies within the project area interpreted from radiometric data. Some seem to coincide with laterite caps on the Cretaceous while others are over the Cretaceous itself. These anomalies were investigated in the 2007-2008 reporting period and found to warrant further investigation. The 2007-2008 geochemical survey was conducted by helicopter and specifically targeted the strongest radiometric anomalies. A large portion of the tenement needed further investigation, specifically by four wheel drive vehicle.

6. EXPLORATION CONDUCTED DURING 2008-2009

Walhallow EL 25917 comprising 500 blocks was divided on a 3 kilometre by 3 kilometre grid across the tenement for 175 sample point locations. Access was mainly by bore tracks and fenceline tracks that accessed the majority of the tenement. Inaccessible areas were not sampled and have no point location on figure 4.

The survey took 28 days, using a four wheel drive vehicle, across the majority of the tenement for a total of 149 samples.

Samples were labeled with the WAL prefix with each weighing approximately 500 grams, sieved to -1mm and placed in a labeled plastic cliplock bag. Sample locations were determined by a handheld Magellan MAP 330M handheld GPS.

Sample locations were relocated from transported soils areas to residual soil areas. Nodules and pisoliths were noted in the soils and removed by sieving.

A short description of the sampled soil and its geological environment also noting the nature, distribution and genesis of regolith types and the relationships between the various regolith units and the association with the underlying bedrock.

At every site a reading was taken of the soil to be sampled by a scintillometer. An average was taken of readings every 10 seconds for as long as it took to take the sample.
Scintillometer readings were also taken at selected outcrops, such as the calcareous grey siltstone, mottled saprolitic fossiliferous siltstone, ferruginous and massive white sandstones and various laterites in different stages of weathering.

Numerous rock samples were collected and noted for their fossil content, iron enrichment and secondary ore enrichment.

Both soil and rock samples were sent to ALS Laboratories in Perth for multi-element analyses.

Sample Preparation:
The samples were sorted and dried, and the whole sample has been pulverized in a vibrating disc pulveriser.

Au, Pt, Pd
The samples have been analysed by firing a 40 gram portion of the sample and have been determined by Inductively Coupled Plasma (ICP) Optical Emission Spectrometry.

The determination of the remaining elements was by fusing the sample with sodium peroxide and subsequently the melt has been dissolved in dilute hydrochloric acid for analysis. This procedure is efficient for determination of major element composition in the samples.

Ag, Ce, La, Mo, Pb, Th, U, W
Have been determined by Inductively Coupled Plasma (ICP) Mass Spectrometry.

Ca, Co, Cu, Fe, Ni, P, Sc, Ti, V, Zn
Have been determined by Inductively Coupled Plasma (ICP) Optical Emission Spectrometry.
Figure 4. Sample locations from the 2009 geochemical survey
7. CONCLUSIONS and RECOMMENDATIONS

The 1972 geochemical survey reported slightly anomalous molybdenum as did the 2007-2008 geochemical survey. The Tablelands Highway dissecting the tenement north-south through the centre of the tenement was constructed from lateritic material sourced beside the road.

The results from the 2007-2008 geochemical survey defined a cluster of anomalous molybdenum-arsenic results centered on samples collected on laterite hardcap from three isolated but grouped mesas. The laterite is the duricrust on the Lower Cretaceous calcareous siltstones and sandstones and covers up to 30% of the tenement. All previous samples were taken on the edge of the laterite and did not cover the range of lithologies and regolith landforms of the tenement.

The 2009 geochemical survey covered all lithologies and the majority of regolith landforms but could not replicate the anomalous results from previous investigations.

Results suggest some elevated concentrations of path finder elements that require followup investigation. There are no strongly anomalous uranium, vanadium or molybdenum in the sample results.

A targeted approach concentrating on areas of elevated radiometric signatures as well as rock chip and stream sediment sampling with a follow up from the 2009 assay results are recommended.

8. PROPOSED EXPLORATION PROGRAM for 2010

The planned exploration program for 2010 consists of the following:

Stream sediment sampling – 100 sites, targeting 4 main drainages.
Targeted sediment sampling – 100 sites from previous sampling locations and from previously inaccessible areas.
Targeted radiometric anomalies – 25 sites, especially in previously inaccessible areas and locations with anomalous readings from previous sampling.
Rockchip sampling – 25 sites, covering a greater range of regolith landforms.

Expenditure for this work is estimated to be at least $80,000.00.
9. EXPLORATION EXPENDITURE for 2008-2009

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