MT. SHOOBRIDGE PROJECT, NT

MLN296

REPORT

FOR THE PERIOD

1st January 2010 to 31st December 2010

Tenement : MLN296
Owner : Altura Exploration Pty Ltd (AEPL)
Operator : Altura Mining Ltd (AJM)
Prepared by : B G Bourke
Date : April 2011
Distribution : Altura Mining Ltd (1)
Department of Resources (DoR) NT (1)
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1. **SUMMARY**

Exploration conducted on MLN296 during the reporting period from 1st January 2101 through to 31st December 2010 included the imaging of VTEM data acquired by Altura in late 2009 and the acquisition of World View 2 satellite imagery covering the Shoobridge project area. No field studies were undertaken within the tenement area.

2. **INTRODUCTION**

This report covers exploration work carried out by Altura Exploration Pty Ltd, a wholly owned subsidiary of Altura Mining Ltd (AJM) during the reporting period 1st January 2010 to 31st December 2010.

The tenement is part of the Shoobridge Project which includes EL22186, EL23105, EL24528, EL25181, ERL88, MCN60, and MLN544 (Figure 1).

3. **LOCATION AND ACCESS**

The Shoobridge Project is located approximately 160km south southeast of Darwin; approximately 19km west northwest of Hayes Creek. Access is via the Old Stuart Highway and Douglas Station tracks, which become impassable in the wet season usually from November through to April.

The Licence lies on the Pine Creek 1:250,000 (SD52), and Tipperary (5170-1) 1:100,000 scale topographical and geology sheets.

4. **TENEMENT STATUS**

MLN296 (0.04km²) was granted to R.M. Biddlecombe on 9th December 1973 for a period of thirty five (35) years. In 2008 the MLN was renewed by AEPL for a further twenty (20) years.

The tenement is included in a group of tenements (EL22186, EL23105, MCN60, and MLN544) that were on offer to Altura Exploration Pty Limited from R.M. Biddlecombe. The option to purchase the tenements was exercised on the 4th May 2006.

<table>
<thead>
<tr>
<th>Tenement</th>
<th>Holder</th>
<th>Grant Date</th>
<th>Expiry</th>
<th>Area Km²</th>
<th>Rent $</th>
<th>Commitment $</th>
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<tbody>
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<td>MLN296</td>
<td>AEPL</td>
<td>09.12.1973</td>
<td>31.12.2029</td>
<td>0.04</td>
<td>$99</td>
<td>N/A</td>
</tr>
</tbody>
</table>

*Table 1. MLN296 – Tenement Details.*
Figure 1. Shoobridge Project - Tenement Location Plan
5. GEOLGY

5.1. Regional Geology and Structure

The project area geology consists primarily of the Lower Proterozoic Burrell Creek Formation comprising feldspathic meta-greywackes, minor lenses of volcano-lithic pebble conglomerate, laminated phyllite, slate and mudstone. The underlying Mt Bonnie Formation of the South Alligator Group comprises interbedded carbonaceous slate, phyllite, mudstone and siltstone, feldspathic meta-greywacke and ferruginous phyllite with chert bands, lenses and nodules.

The Middle Proterozoic Shoobridge Granite lies within EL22186, and intrudes the sediments of the Burrell Creek Formation. Numerous prospects proximal to the Shoobridge Granite display potential for polymetallic Cu, Pb, Zn and Ag vein mineralisation and include the Full Hand and Jackson’s prospects – the latter within MCN60).

The Shoobridge Granite is also considered to be the parent granite to the pegmatites of the Shoobridge pegmatite field (Frater, 2005), which includes the Barrett’s, Plateau Point, Chinese, Halls, Halls Creek and Old Company (Mount Shoobridge) Pegmatites.

Two parallel, north-south trending faults called the Plateau Point and Shoobridge Faults cross cut the Shoobridge Project tenements and have provided the structural control for pegmatite intrusion.

South of Plateau Point, the Plateau Point Fault assemblage consists of a north-northwest-trending bifurcating and en-echelon series of major faults, which displace early Proterozoic meta-sediments and the Fenton Granite.

Within the Fenton Granite, the Koolpin Formation is incorporated as rafts associated with the Plateau Point fault assemblage. A number of prospects, including Gold Ridge open pit, are located within these rafts, and are prospective for polymetallic vein style mineralisation. The Wildman Siltstone is displaced against the Koolpin Formation, the fault zone being characterised by sheared phyllites, abundant quartz blows and numerous contorted pegmatites.

5.2. Mineral Occurrences.

Barrett’s tin workings lie within MLN296. The pegmatite is irregular in outline, and dips to the northeast at an average angle of 30°. The pegmatite body inter-fingers with, and contains blocks of country rock, which account for approximately fifteen percent of the pegmatite. High grade pockets of ore are common on the contacts of these xenoliths. Most shafts, costeans and pits are less than 7 m deep. The only recorded production from Barrett’s is 117 t of Sn concentrate that was won prior to 1910.
The Chinese prospect is located approximately 1 km north of the Barrett’s Mine. Workings consist of a series of collapsed pits and costeans. One 45m long, deep costean has exposed a 7m wide pegmatite, with sharp contacts that are conformable to bedding. Mineralisation appears to have been concentrated on the wall and border zone of the pegmatite, as shafts have been sunk on this zone. Average Ta values from four grab samples taken by Frater (2005), returned 116ppm Ta, and 2,355ppm Sn.

The Halls pegmatite lies on the same line of pegmatites as Chinese and Barrett’s, and is located approximately 200m north of the Chinese workings. Blanchard (1937) reported that Halls was a 2m wide greisen lode, worked for its high grade Sn and Ta, however no details of production are available. Today, the prospect consists of four collapsed pits, 4-5m wide and approximately 4m deep, on a line trending 020° over a strike distance of 30m. Average results of two grab samples taken from the prospect by Frater (2005) returned 124 ppm Ta and 203ppm Sn.

The Old Company Mine is located on the Shoobridge Fault within ERL88. The main lode consists of a steeply dipping quartz-muscovite pegmatite (0.5 to 5m in width), trending NNW, and containing cassiterite shoots over an interval of about 100m. Historic (pre 1900) workings yielded 145t of SnO₂ concentrate (unrecorded grade). A tailings sample has yielded results of 1.48% Sn and 252ppm Ta.

The Mount Shoobridge Gold deposit also lies on the Shoobridge Fault within ERL88. The gold resource from 11,250mN to 11,550mN is stated at 600,000 tonnes at 1.7g/t Au, although gold mineralisation has been intersected from 10,000mN to 12,000mN. All gold mineralisation appears to lie parallel to, and are often co-incident with pegmatites hosting tin and tantalum mineralisation.
Figure 2. Shoobridge Regional Geology and Mineralisation Occurrences
6. PREVIOUS EXPLORATION

Tin was first discovered at Shoobridge by George Barrett in 1882. Since that time mining has primarily been confined to shallow alluvial and small lode underground mining at the Old Company Mine.

Barrett’s has been explored by various parties, and Blanchard (1937) estimated that it contained a total of 237,000 tonnes of mineralised pegmatite to a depth of 30m. Total recorded production from Barrett’s (1968) consisted of 117 tonnes of tin concentrate.

In 2001 Julia Corporation drilled 40 RC holes on 14 traverses at Barrett’s. The best intercept was 11m @ 270g/t Ta₂O₅ from 20m in BARC04. Julia announced a preliminary resource of approximately 280,000 tonnes to a depth of 60m at a grade of 125g/t Ta₂O₅ and 380g/t SnO₂.

United Uranium Pty Ltd carried out an exploration program in search of tin, lead and copper over the property in the 1960’s. In 1983 the ground was taken up by R.M. Biddlecombe, where a number of joint venture partners were involved.

From 1983 to 1986, Talmina Trading carried out stream and soil sampling. Cassiterite, tantalite and tapiolite were identified, including the identification of tantalite in streams south of recognised pegmatite loads.

6.1. Altura Exploration Pty Ltd

Past exploration by AEPL in the area has been focussed on identifying Ta and Sn mineralisation near Barrett’s Mine (EL22186), and at Two Bobs (south of Plateau Point in EL23105).

In 2005, exploration consisted of a small soil sampling program. A total of 92 rock chips and 164 soil samples were assayed in order to identify areas of anomalous pegmatite geochemistry for follow up mapping, sampling and drilling.

The majority of work was completed at the Two Bobs Prospect, immediately south of Plateau Point. A total of 84 rock chips and 162 soil samples were taken, identifying several anomalous areas with a peak value of 107 ppm Ta₂O₅. Results indicated a weak correlation with high Ta, Li, Rb and Cs.

Two rock chips returned Ta values greater than 100 ppm, indicating the possibility of Ta-bearing pegmatites of economic interest. The correlation between Li, Rb, Sn and Ta was high, although the majority of >500 Rb and >75ppm Li had maximum Ta responses of around 75ppm. While the LCT (Lithium, Caesium, and Tantalum) values were generally low, suggesting that these are not LCT type pegmatites.

The Li values suggest there are no enriched margins or individual pegmatites that may be of major economic interest. The work is described in detail in Young, 2005.
7. CURRENT EXPLORATION

Exploration conducted on MLN296 during the reporting period included a small soil sampling program, reprocessing of the Rum Jungle Geophysical Survey by Southern Geoscience Consultants, and a Versatile Time-Domain Electromagnetic (VTEM) airborne survey.

In 2005 a soil sampling program was completed over and along strike of the Barrett’s prospect on 500m x 50m spacing’s. Most samples taken were located in EL23105, with three samples falling within MLN296 (Figure 3). One rock chip was taken from the Barrett’s pegmatite. All sampling was reported in the 2005 Annual Report for EL23105 (Young, 2005). A review of the data shows slightly anomalous results for lithium (up to 500ppm Li in soils), with the three best results within MLN296 (proximal to Barrett’s workings).

The Rum Jungle Radiometric Survey (available from the Department of Resources website) was downloaded and reprocessed by Bill Peters of Southern Geoscience Consultants in Perth.

Geophysical profiles of the raw data were obtained, and these were used to identify the exact location of numerous uranium radiometric targets. In total, 73 point uranium radiometric targets were identified from the reprocessed images. None of these targets were located within MLN296.

A Versatile Time-Domain Electromagnetic (VTEM) airborne survey was completed in September 2009 over some of the most prospective areas of the Shoobridge tenements and included MLN296. The survey was designed to improve the Company’s understanding of the geology and structures controlling uranium mineralisation and to identify discrete conductors, prospective for base and precious metal mineralisation.

The survey was completed by Geotech Airborne Pty Ltd. Approximately 641 line-kms were flown using an AS350B3 helicopter. The survey comprised approximately 300 line-metres over MLN296. East-west lines were spaced 200m apart; additional infill lines were flown over areas of interest.

Geophysical data was imaged and analysed by Southern Geoscience Consultants who highlighted a number of conductors. None of these conductors fell within the boundaries of MLN296.

7.1 Exploration in the current reporting period

Exploration studies over MLN296 during the reporting period were primarily related to the airborne data collected in the latter part of 2009 which comprised a VTEM survey and a airborne magnetic survey. This data was reported on in the previous annual report of April 2010. No ground studies were undertaken in the current reporting period.
8. **CONCLUSIONS & RECOMMENDATIONS**

No ground exploration studies were undertaken during the current reporting period. The processing of airborne data collected in 2009 was undertaken in 2010 and images of the data produced. These images covered MLN296 and the surrounding tenements. Also acquired during the reporting period and covering MLN296 was the satellite imagery World View 2 which was used to assist in interpreting the regional Shoobridge geology.

9. **REFERENCES**

APPENDIX 1

Expenditure Statement