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SUMMARY

This annual report describes all work carried out by Joint Venturers BHP Billiton and Mithril Resources on EL 9695, Mount Doreen E, Andrew Young Project during the annual period ended 13 May 2003.

Exploration work on the tenement is aimed at discovering Proterozoic ultramafic-related Ni-Cu mineralisation.

Throughout most of the reporting period work was confined to office-based studies as negotiations with the Traditional Owners proceeded. This included continued compilation of existing data, processing and modelling GEOTEM data flown in 1999 and generating targets from this data.

Non-exploration work included: BHP Billiton and Mithril Resources signing a Joint Venture agreement with Mithril to manage exploration on E 9695, the raising of exploration capital via the successful listing of Mithril Resources on the Australian Stock Exchange, the finalisation of an Exploration deed between the Joint Venture partners and the Central Land Council and the undertaking of Heritage Clearance surveys by the CLC.

Subsequent to the signing of the Exploration Deed in March a brief field trip was undertaken to examine outcrops of the Andrew Young complex and to assess the viability of ground electrical geophysics.

Following this and Aboriginal Heritage Clearance of target areas (undertaken in April) a ground geophysical crew was organised to commence moving loop TEM in early June.
1 INTRODUCTION

This annual report describes all work carried out on EL 9695 (Mount Doreen E) by Joint Venturers BHP Billiton and Mithril Resources during the annual period ended 13 May 2003.

Exploration Licence 9695 is located 400km west of Alice Springs in the southwest part of the Northern Territory (Figure 1). The tenement extends from Newhaven Station in the east, over Lake Bennett and the Andrew Young Hills, to Mount Gurner in the west. The area is covered by the southwest quadrant of the Mt Doreen 1:250,000 topographic map sheet. Access to the area is via the Tanami Track and numerous unsealed station tracks.

The tenement is located within the Arunta geological province which hosts large Palaeoproterozoic mafic-ultramafic magmatic systems, with intrusions occurring over a 90,000 square kilometres area. Recently completed incompatible element discrimination work identified the Western Arunta Intrusions as sulphur enriched (300-1200 ppm sulphur) and demonstrated they have potential for orthomagmatic nickel-copper-cobalt sulphide associations.

Mithril Resources, in Joint Venture with BHP Billiton, are exploring for nickel-copper mineralisation associated with Proterozoic mafic-ultramafic intrusions in this highly prospective region.

2 TENURE AND EXPLORATION ACCESS

Exploration Licence Application 9695 was lodged by BHP Billiton Minerals Proprietary Limited on 24 September 1996 and was granted on 14 May 2001 (Table 1).
Background tenure for EL 9695 is NT Portion 2406, Newhaven Pastoral Lease, which is owned by Birds Australia (formerly the Royal Australasian Ornithologists Union).

<table>
<thead>
<tr>
<th>EL</th>
<th>Name</th>
<th>No. Blocks</th>
<th>Application Date</th>
<th>Grant Date</th>
<th>Expiry Date</th>
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<tr>
<td>9695</td>
<td>Mount Doreen E</td>
<td>400</td>
<td>24-Sep-96</td>
<td>14-May-01</td>
<td>13-May-07</td>
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</table>

Table 1: Tenement details

In the E9695 Annual Report for the period ending 13 May 2001 (Christensen, 2002) BHP Billiton stated:

“Birds Australia has written to BHP Billiton to formally express their concern in relation to exploration activities on Newhaven Pastoral Lease. They advised they were undertaking extensive discussions and negotiations with the Traditional Owners through the Central Land Council, to include them in management and planning issues and processes.

BHP Billiton is still in discussions with Birds Australia in order to further their understanding of the proposed exploration programme for EL 9695. In addition, BHP Billiton has been negotiation exploration access with the Central Land Council in order to satisfy Native Title Heritage matters. A draft Exploration Agreement is presently under discussion.

To summarise, BHP Billiton will only enter the area to carry out exploration when the concerns of the two other Parties that have an interest in the land have been addressed.”

BHP Billiton continued access negotiations until August 2002 when it signed the Andrew Young Joint Venture with Mithril Resources. The enactment of the Joint Venture was conditional on Mithril successfully floating on the Australian Stock Exchange, after which it would assume management of the Andrew Young Project.

Mithril listed on the ASX on 18 November 2002 and continued with negotiations towards completing an Exploration Deed commenced by BHPB. This included meeting with representatives of the CLC in early December. The Andrew Young Joint Venture Agreement was registered by the NT Dept of Bird on 24 February 2003.

In March 2003 Mithril, BHPB and the Traditional Owners signed an Exploration Deed covering E9596, E10117, E22909 and E23628. On 9 April Mithril successfully applied to NT Dept. of BIRD for a waiver of the compulsory reduction for licence 9695 based on time spent negotiating access.

On 6 May Mithril received approval from the CLC for its exploration Work Programme (which had been submitted in February) following surveys for aboriginal heritage sites. This cleared the way for exploration work on the ground to commence.
3 GEOLOGY

From recent investigations by the Northern Territory Geological Survey and Geoscience Australia (eg Hoatson and Stewart, 2001), the Mesoproterozoic Andrew Young Complex crops out in five hills in a regional arcuate alignment within an area 4.5 by 6.5 km (Figure 2). This alignment parallels layering trends in the mafic rocks evident on aerial photographs and in aeromagnetic data; the latter indicate that the areal extent of the whole intrusion is some 30 kilometres westerly and 13 kilometres southerly (Figure 3).
The complex consists of an homogeneous mafic sequence of fine- to medium-grained, gabbronorite, gabbro, hornblende tonalite and diorite. The rocks contain well-preserved igneous features and are not foliated or strongly recrystallized. Contacts between rock types tend to be diffuse and distinctive marker layers and compositional layering are absent; the most marked variation relates to the degree of felsic contamination.

The complex intruded greenschist facies pelites and psammites and is itself intruded by late stage hornblende granite, aplite and pegmatite. Regional occurrences of felsic volcanics and granitic rocks indicate that these rocks and the gabbroic intrusions are part of a Large Igneous Province.

Geochemical data show that Andrew Young Complex is strongly contaminated with felsic crustal material and is sulphur enriched (Figure 4, after Hoatsen). Copper and nickel ratios indicate that the magma was depleted in these elements and therefore that sulphides may have segregated prior to the current level of intrusion. The latter is similar to interpretations for the Noril'sk region, where segregated sulphides from early magmas were injected into country rock or carried by later magmas to basal parts of intrusions. This similarity to Noril'sk applies to the overall rare earth element distribution for Andrew Young Complex, which also shows a strong similarity to that for Noril'sk (Figure 5).

Figure 3: S v Zr geochemistry of Arunta Intrusives
4 EXPLORATION WORK COMPLETED

As noted in section 2 exploration access to the area was not fully granted until early May so work has concentrated on generating targets from the GEOTEM survey flown in 1999, and the planning for the follow-up of these targets. Locations of the priority one and two anomalies are shown in figures 2 and 3. Initial modelling of these suggests some component of basement conductivity, although surficial conductors also appear to be present (J Hart, pers comm.). Twelve areas were selected for ground follow-up (pending access approval).

Immediately following the execution of the Exploration Deed in late March, consent was given by the Traditional Owners (via the Central Land Council) for a brief field visit to examine outcrops of the Andrew Young complex and to assess the viability of ground electrical geophysics.

During this brief reconnaissance trip field evidence was found to support the geochemical evidence for crustal contamination (as discussed in section 3). This is illustrated in Figure 5. Sand dunes were found to be generally low, with maximum heights up to 4m (Figure 6) and they are thought unlikely to pose significant problems for ground TEM.
Aboriginal heritage surveys over priority targets were undertaken by the CLC in April 2003. Several exclusions zones were identified by the CLC affecting four target areas. No exploration work is permitted within the exclusion zones and any transit through them is to be only undertaken via existing vehicle tracks, and if no alternate route exists.

Subsequent to the heritage clearance approvals tenders were called for to undertake a ground TEM program over several targets within the Andrew Young Project, including 8 targets on Exploration Licence 9695. The survey specification is as follows:

- **Survey Configuration:** Moving Loop
- **Loop Size:** 200m
- **Loop Move:** 100m
- **Station Spacing:** 50m
- **Frequency:** Composite 31 Channels
- **Number of sites:** 8, total 10.1 line-km

The contract was awarded to Solo Geophysics & Co., and the survey was due to commence in early June.
5 EXPENDITURE

Combined project expenditure for the year ended 13 May 2003 totals $31,092 against an annual commitment of $40,000 (Table 2). As noted in section 2 the shortfall is primarily due to time spent negotiating access with the Traditional Owners, which is now complete. An additional $18,200 of non-claimable expenditure (including salaries, legal costs, administrative costs) was incurred during negotiations for the Exploration Deed and Heritage Surveys. Note that on 28 April the NT Dept of BIRD waived the compulsory 50% reduction of E9695 for twelve months based on time spent negotiating access.

<table>
<thead>
<tr>
<th>Item</th>
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<tr>
<td>Contractors &amp; consultants</td>
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<td>Employee costs</td>
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<td>Maps and Drafting</td>
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<td>Field expenses/equipment hire</td>
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<td>Supplies</td>
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<td>Travel &amp; vehicles</td>
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<td>Administration</td>
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<td><strong>TOTALS</strong></td>
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</table>

*Table 2: E 9695 expenditure details*

6 PROPOSED EXPLORATION PROGRAM YEAR 3

Execution of the Exploration Deed and completion of Heritage Clearance surveys has opened the way for commencement of field investigations. For the next twelve months Mithril and BHPB propose the following program:

- Undertake ground TEM surveys over 8 targets (already commenced)
- Process and model results
- RC drill priority targets
- Compile and analyse all results
- Consider further RC/Diamond drilling

Proposed expenditure will compromise:

<table>
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<th>Item</th>
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<td>Employee costs</td>
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<tr>
<td>Geophysical surveys</td>
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<td>RC Drilling</td>
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<td>Field expenses</td>
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<td>Office expenses</td>
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<tr>
<td><strong>TOTALS</strong></td>
<td><strong>$56,000</strong></td>
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*Table 3: E 9695 planned expenditure*
REFERENCES
