EL 29024

FIRST ANNUAL REPORT

FOR THE PERIOD


By Company

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Summary

Exploration title EL29024 has been granted to Darwin Mining & Exploration PTY LTD on 6 June 2012. During this first year, a detailed review of the previous exploration work has been conducted. This has revealed that the title area has less potential for base metal mineralisation in the area with an exception of low temperature stratabound base metal minerals, such as stratabound lean-zinc mineralisation. Two copper mineral occurrences (01995 and 05374) located in the northeast and southeast of the EL29024 have been mentioned in previous reports. Unfortunately, we were unable to locate the occurrences during our two reconnaissance trips. No other low temperature copper, such as malachite and azurite, has been identified during the period of field work in these areas. Previous geochemical data also had been used to locate interesting spots, but no minerals or alteration signal had been identified from the field investigation. Aero-geophysical images have been reviewed and nothing is interesting from these images. Anomalies of geochemical sampling carried out by previous exploration project are located in the boundary between two types of sedimentary rocks.
Introduction

Exploration Licence EL29024 was granted to DARWIN MINING & EXPLORATION PTY LTD by NT State DEPARTMENT OF RESOURCES on 6 June 2012 for a period of six years. This report summarises work carried out on EL29024 during the period 6 June 2012 to 5 June 2013.

Tenure details

EL29024, total of 35 units (Table 1), is located about 234km southwest of Katherine, accessing by Buchanan Highway and local 4WD tracks (Fig. 1).

Table 1  EL29024 unite

<table>
<thead>
<tr>
<th>BLOCK NO</th>
<th>UNITS</th>
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<tr>
<td>SD52 203</td>
<td>A,B,C,D,E,F,G,H,J,K,L,M,N,O,P</td>
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Geological Setting

Geologically the area of EL29024 is located in the Mesoproterozoic-Palaeoproterozoic Birrindudu sedimentary basin which unconformably overlies the Pine Creek Orogen in the north and Tanami Region in the south and unconformably overlain by the Victoria Basin, Daly Basin and Kalkarindji Province. Also this sedimentary basin is relatively undeformed corelated with
the McArthur Basin. Major rock types of the sedimentary basin include sublithic arenite, quartz arenite, siltstone, shale, conglomerate, stromatolitic chert, limestone, glauconitic sandstone. Limited exploration has been carried out in the area, even the sedimentary basin.

**Mineralisation**

Generally it is uncertainly for mineralisation in the whole basin as insufficient exploration. A few diamond deposits are near Timber Creek, which are associated Jurassic-age (179 Ma) diamond-bearing kimberlite pipes and dykes intruding into the basin sediments. Minor base metal, such as Pb-Ag, occurrences scatter in the basin. Two copper mineral occurrences (01995 and 05374) located in the northeast and southeast of the EL29024 respectively have been mentioned in the previous reports and NT Strike (Fig. 2).

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**Fig. 2** Mineral occurrences in the area of EL29024.
Field Reconnaissance Works

Outcrop of the rocks occurs in the area of EL29024 are dominately limestone (could be dolomite from point of the view of its texture) and conglomerate. Unfortunately, we did not find the occurrences during our two reconnaissance’s trips in late 2012. Even, no any secondary copper mineralisation, such as malachite and azurite, had been identified during the period of field work in the tenement area.

Geophysical Images

Initial review of the geophysical images of the tenement area releases very simple subsurface structures (Figs. 3 and 4). A major fault in NW-SE strike is present in the northeast of tenement and it also splits outcrops of rock types, dominated limestone (or dolomite) in the southwest and clastic sedimentary rocks in the northeast. In the image of magnetic depth, the sub-surface structures in north-south direction may represent the distributions of different clastic sedimentary rocks in the tenement area. Images of gravity and gravity Hipass show almost flate patterns without any interesting signal for mineralisation or sub-surface structures in the tenement area.
**Fig. 3** Images of Magnetic TMI and Magnetic Depth of the tenement area.

**Fig. 4** Images of gravity and gravity Hipass of the tenement area.
Geochemical data

Australasian Minerals, Inc. took a number of stream sedimentary samples in the tenement area in 1973 and the locations of the samples show in Fig. 5. Most of the samples have been only analysed for copper and lead. The results are shown in Fig. 6 and Fig. 7.
Comparing with the magnetic image (Fig. 8), it is obviously that the copper and lead anomalies are located in the northeast boundary of the magnetic anomaly. It is also the boundary of the limestone (or dolomite) and clastic sedimentary rocks. Therefore, these geochemical anomalies may not be a signal of mineralisation. More detail geophysical, geochemical and geological surveys are needed to be carried out in the area.
Fig. 7 Lead contours of the stream sedimentary samples in EL29024 area.

Fig. 8 Comparing geophysical and geochemical results in EL29024 area.
Expenditure

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<td>Aero-geophysical and image analyses</td>
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<td>Geochemical data analyses</td>
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<tr>
<td>Reconnaissance</td>
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Work Planned

1. Geological survey and mapping will be undertaken to identify interesting spots for mineralisation in the EL29024;
2. Then geochemical and geophysical methods will be used to target hydrothermal fluid activities associated with mineralisation;
3. Testing the anomalies targeted by geological, geophysical and geochemical surveys by drilling.