EL 26738  
Roper River  

FINAL REPORT  
for period ended  
December 9, 2011  

1:250,000 map sheets:  
SD53-10 Urapunga  
SD53-11 Roper River  

Licensee: Red Metal Limited  

G McKay  
Red Metal Limited  
1 February 2012
TENEMENT REPORT INDEX

HOLDER / OPERATOR: Red Metal Limited
TENEMENT: EL 26738
REPORTING PERIOD: December 10, 2008 to December 9, 2011
AUTHOR: G. McKay
LATITUDE: –14º41’ to –14º53’
LONGITUDE: 134º50’ to 135º19’
1:250,000 SHEET: Urapunga SD53-10 / Roper River SD53-11
1:100,000 SHEET: Urapunga 5868 / Roper 5968
MINERAL PROVINCE: Northern McArthur Basin
COMMODITIES: Pb Zn Cu
KEYWORDS: Data review, reconnaissance
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SUMMARY

EL 26738 was acquired in 2008 to investigate the prospective Vizard Group within the northern McArthur Basin for lead-zinc deposits similar to the McArthur River deposit.

A review of available regional exploration data and a field reconnaissance visit were conducted. Previous airborne EM lines from a 2003 survey provided a target area for follow-up. However it was concluded that the conductivity target was related to salt water flats adjacent to the Roper River.

The licence was surrendered without conducting an exploration program.
1.0 INTRODUCTION

EL 26738 is located on the Roper River in north-east Arnhem Land.

The work carried out on EL 26738 within the relinquished area included a review of available regional exploration and geophysical data and brief reconnaissance.

2.0 LOCATION AND LAND USE

EL 26738 (Roper River) is located in northeast Arnhem Land, some 500 km south-east of Darwin and 300 km east of Katherine and east of the Roper River Aboriginal community of Ngukurr (Figure 1). A sealed road extends as far as Roper Bar, 40 km west of the EL and unsealed roads and tracks traverse the area. The EL is located on crown land held by Northern Territory Land Corporation (NT Por 819) and private land held by Carpentaria Aquafarm Pty Ltd (NT Por 4249). The tenement area has generally low relief, with the dominant historical and current land use being cattle grazing and prawn farming.

3.0 TENEMENT STATUS

EL 26738 was granted to Red Metal Limited on December 10, 2008 for a period of six years over 138 blocks. The area has been reduced to 69 blocks. Details of EL 26738 are shown in Table 1. Location of the tenement is shown in Figures 1, 2 and 3.

<table>
<thead>
<tr>
<th>TENEMENT</th>
<th>HOLDER</th>
<th>GRANTED</th>
<th>EXPIRY</th>
<th>BLOCKS</th>
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<td>Red Metal Limited</td>
<td>Dec 10, 2008</td>
<td>Dec 9, 2011</td>
<td>69</td>
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</tbody>
</table>

Figure 1: EL 26738 location
4.0 TENEMENT GEOLOGY

The tenement covers Palaeoproterozoic to Mesoproterozoic sediment-dominated sequences, located on a regional scale ESE-trending horst which separates the Batten Trough (containing the McArthur River Pb-Zn-Ag deposit) to the south, from the Walker Trough to the north. Within the area, the oldest outcropping rocks are the Palaeoproterozoic Katherine River Group siliciclastics, carbonates, volcanics and high level intrusives, which are restricted to a small portion to the northwest. Overlying these rocks are much more extensive tracts of Palaeoproterozoic to Early Mesoproterozoic sediments. Of these, the oldest rocks are mixed carbonates and siliciclastics of the Vizard Group, which is interpreted to be stratigraphically equivalent to the McArthur Group, which hosts the McArthur lead-zinc-silver deposit. Succeeding the Vizard Group are carbonates and minor, localised volcanics of the Nathan Group, followed by the Early Mesoproterozoic Roper Group, which consists predominantly of mudstone and sandstone, with minor intervals of calcareous siltstone, limestone, conglomerate and ironstone.

Red Metal’s area of interest is a belt of outcropping and shallow-covered Vizard Group rocks, which occupy an antiformal zone bounded by regional scale N-S and ESE-trending faults in the western portion of EL 26738 (see Figure 4).
5.0 HISTORICAL EXPLORATION

This belt of Vizard Group sediments, which contains minor occurrences of copper, lead and zinc mineralization, has been explored in a limited fashion in the past by regional stream sediment and rock chip sampling, local grid-based soil sampling, and two percussion holes by MIM Exploration Ltd in 1992.

Elsewhere in the district there are a number of small, subeconimic occurrences of disseminated and vein-style Cu-Pb-Zn mineralization, which have been periodically investigated by several groups from the late 1950s to the 1990s. These occurrences are of two styles, as follows:

- Sandstone-hosted disseminated lead-zinc within the Roper Group in the northern part of the region. These include the Galena Cliffs prospect, discovered by Stockdale Prospecting in 1992, and the Wongalara prospect, which was discovered by Anglo American in 1983. Subsequent drilling of both prospects by Poseidon Exploration intersected weak disseminations of galena and sphalerite with traces of chalcopyrite. The best interval was 9.1m @ 0.56% Pb, 0.51% Zn from surface in the Wongalara prospect.

- Carbonate-hosted veinlet and disseminated Pb-Zn-Cu mineralization, within and adjacent to fault zones in the Nathan Group, overlying the Vizard Group in the southeast portion of the area, eg the Mt Vizard, Mount Birch, Mountain Creek and Walmudga prospects. Previous work on this style by BHP (1958), MIM (1962 and 1995) and Rio Tinto (1997-1998) involved rock chip/soil/drainage sampling programmes, followed by RAB, RC and diamond drill holes. The best intersections were 15m @ 0.4% Zn at the Mountain Creek prospect and 15m @ 0.18% Cu at Mount Birch.

Lead isotope studies by MIM Exploration Limited on samples from Mount Vizard and Mount Birch indicated the lead is more radiogenic than the McArthur River deposit and the compositions are inhomogeneous indicative of an epigenetic origin.

6.0 EXPLORATION PROGRAM

A review of available regional exploration data and a field reconnaissance visit were conducted. Previous airborne EM survey lines provide a target area for follow-up (see Figure 3).

The western portion of EL 26738 was flown with wide-spaced test airborne TEM lines as part of a program on adjacent EL 23092 in 2003. The survey was conducted to map conductive Vizard Group rocks considered prospective hosts for McArthur River style Pb-Zn-Ag mineralisation. The heliborne hoist TEM survey was flown by GPX Pty Ltd.

It was concluded that the conductivity target was related to salt water flats adjacent to the Roper River.

7.0 CONCLUSIONS

EL 23092 was acquired to investigate the prospective Vizard Group units within the northern McArthur Basin for lead-zinc deposits similar to the McArthur River deposit. The licence was surrendered following reconnaissance without conducting an exploration program.
8.0 References/Bibliography


Figure 3: EM survey lines (2003) and target area (pink polygon)
Figure 4: EL 26738 relinquished blocks hatched (as at 10/12/2010)
Figure 5: EL 26738 Regional Geology