EL 27265

ANNUAL & FINAL REPORT

for period ending

March 18, 2017

1:250,000 map sheets:  SF53-15 Illogwa Creek

Licensee:  Red Metal Limited

G. McKay
Red Metal Limited
18 April 2017
TENEMENT REPORT INDEX

HOLDER / OPERATOR: Red Metal Limited

TENEMENT: EL 27265

PROJECT: East Illogwa Creek #1

REPORTING PERIOD: March 19, 2016 to March 18, 2017

AUTHOR: G. McKay

LATITUDE: 135º 40’ to 135º 56’

LONGITUDE: -23º 30’ to -23º 49’

1:250,000 SHEET: SF53-15 Illogwa Creek

1:100,000 SHEET: Illogwa 6050

MINERAL PROVINCE: Eastern Arunta Province (Irindina Province)

COMMODITIES: Base metals

KEYWORDS: Regional review

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EL27265_2017_01 Annual Report.pdf  (This report)
SUMMARY

EL 27265 was acquired by Red Metal Limited to investigate airborne magnetic anomalies within the Neo-Proterozoic Eastern Arunta Province (Irindina Province), considered to have potential for copper-nickel mineralisation in a continuation of the new style of pyrrhotite copper-cobalt mineralisation discovered in the region by Mithril Resources.

The work carried out on EL 27265 during the second year of tenure included a review of existing data and results from the previous soil sampling geochemical survey and ground based electromagnetic survey conducted in 2015.

Based on disappointing results from a RAB drilling program on an adjacent EL, it was decided to surrender EL 27265.
1.0 INTRODUCTION

This report summarises exploration activities undertaken on Exploration Licence 27265 for the second year of tenure.

2.0 LOCATION AND LAND USE

EL 27265 is located 200 km east of Alice Springs, east of the Harts Ranges, 85km south of the Plenty Highway (Figure 1). Access is via unsealed roads and tracks. The tenement area has low relief and sand dunes with sparse vegetation. The land is Aboriginal Freehold, owned by the Atnetye Aboriginal Land Trust.

![Figure 1: Tenement location on topographic sheet SF53-15](image)

3.0 TENEMENT STATUS

EL 27265 was granted to Red Metal Limited over 240 blocks on March 19, 2015 for a period of six years. The tenement area was reduced to 98 blocks in March 2016.

Details of EL 27265 are shown in Table 1.
Table 1 - Tenement Details

<table>
<thead>
<tr>
<th>TENEMENT</th>
<th>HOLDER</th>
<th>GRANTED</th>
<th>SURRENDERED</th>
<th>Blocks</th>
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<td>Red Metal Limited</td>
<td>Mar 19, 2015</td>
<td>Mar 18, 2017</td>
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</table>

4.0 GEOLOGY

The tenement is located within the Neo-Proterozoic to Cambrian rift sequence referred to as the Irindina Province and the Paleo-Proterozoic Aileron Province which underlies. Shallow Quaternary sediments cover most of the area (see Figure 4).

The area was considered by Red Metal to have potential to host intrusive-style copper-nickel mineralisation.

The Aileron Province is a 1740-1860Ma high-metamorphic grade meta-sedimentary dominant terrain. Garnet pelites, psammites and quartzites, interbedded mafic granulites and calc-silicate-rich rocks, quartz-magnetite horizons, rare marbles and deformed igneous rocks including mafic amphibolite, meta-gabbro and granitoids occur throughout the province. A less common felsic volcanoclastic horizon was dated at 1771Ma. The Aileron Province is considered prospective for stratabound and strataform massive base metal deposits comparable with the Jervois, Home of Bullion, Utnalanama, Oonagalabi types as well as gold-tungsten skarns.

The Irindina Province is a highly metamorphosed deep water clastic metasedimentary terrain dominated by garnet- and biotite-rich ± sillimanite psammo-pelitic schists with localised marbles, calc-silicate rocks and quartzite. Large volumes of mafic amphibolite are intercalated with the metasediments. The Irindina Province is in fault contact with the underlying Aileron province. Along Geoscience Australia seismic traverse 09GA-GA1, across the eastern Arunta terrain, the Irindina Province is shown to be approximately 10km thick and underlain by large detachment faults that extend to the mantle. The detachments express themselves at surface as the Basil Shear Zone (BaF) and Bruna Detachment (BrD). A geological section along the seismic line is shown in Figure 3.

![Geological section showing the Basil Fault (BaF) and Bruna Detachment (BrD)](image)

Figure 2: Seismic section interpreted by Geoscience Australia for the Eastern Arunta deep seismic transect. Interpretation highlights the Basil Fault (BaF), which hosts the Basil copper-cobalt-silver mineralisation, is located within a deep mantle tapping structure.
Later magmatic intrusions include a 525-515Ma suite which comprises felsic and mafic rocks and the 460-400Ma Lloyd Gabbro which consists of olivine bearing-gabbro and gabbronorite. The Lloyd Gabbro bodies have a distinctive remnant magnetic signature and host Cu-Ni sulphides at the Baldrick and Blackadder prospects.

Recent age dating has produced a significant revision of the tectonothermal history of the region. U-Pb and Sm-Nd geochronological studies suggest that sediments and igneous rocks of the Irindina Province represent a rift sequence that was ‘deposited’ during the late Neoproterozoic to Cambrian and was metamorphosed to granulite facies in an extensional setting during the early Ordovician Larapinta Event (480–460 Ma). The Larapinta Event is divided into an early peak metamorphic event at 475 Ma, and a subsequent retrograde event at 460 Ma that was associated with the formation of a near-pervasive flat-lying fabric. Pressure - temperature conditions for peak metamorphism during the Larapinta Event have been estimated at around 800°C and 8 to 12 kbar from several locations. These peak metamorphic pressures suggest burial depths of 30 to 35 kilometres.

The Irindina Province was subsequently exhumed during the Alice Spring Orogeny between 450 and 300Ma.

Prospective, crystalline basement rocks of the Irindina Province are overlain by Late Jurassic to Cretaceous sedimentary rocks particularly towards the southeast. Remnants of Cainozoic sedimentary strata can overlay the basement or Cretaceous sequences but are poorly preserved. Unconsolidated Quaternary fluvial sediments and aeolian dune sands of the Simpson Desert cover a large portion of the terrain.

Figure 3: regional geology
5.0 HISTORICAL EXPLORATION

Previous companies which conducted exploration in the vicinity of EL 27265 include:

<table>
<thead>
<tr>
<th>Licence</th>
<th>Years</th>
<th>Company</th>
<th>Target</th>
<th>Summary</th>
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<tr>
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<td>Dec90-Jan02</td>
<td>BHP Minerals</td>
<td>Base metals</td>
<td>Soil &amp; stream sed sampling, SIROTEM on mag anomalies, RC drilling mag anomalies.</td>
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<tr>
<td>8861</td>
<td>Nov94-Dec95</td>
<td>Poseidon Gold</td>
<td>Ultramafic PGM &amp; gold</td>
<td>RAB drilling on previous BHP anomalies</td>
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<td>23902</td>
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<tr>
<td>23996,</td>
<td>2006-2007</td>
<td>BHP Billiton</td>
<td>IOCG copper-gold</td>
<td>Airborne gravity survey, ground gravity follow-up, diamond drilling of six targets. No significant results.</td>
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<tr>
<td>24000</td>
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</tbody>
</table>
6.0 EXPLORATION PROGRAM

Red Metal conducted a review of data from the 2015 initial soil sampling geochemical survey and ground based electromagnetic survey.

The geochemical response in the soil/sand was considered to be only slightly anomalous and the trial moving-loop electromagnetic survey lines across two of the soil geochemical targets detected no significant responses.

7.0 CONCLUSIONS

EL 27265 was acquired to investigate the potential for intrusive-related copper-nickel mineralisation in a continuation of the new style of pyrrhotite copper-cobalt mineralisation discovered in the region by Mithril Resources.

Based on disappointing results from a RAB drilling program on an adjacent EL, it was decided to surrender EL 27265.
8.0 References/Bibliography


Madeline L. Wallace, Simon M. Jowitt, Ahmad Saleem - Geochemistry and petrogenesis of mafic–ultramafic suites of the Irindina Province, Northern Territory, Australia: Implications for the Neoproterozoic to Devonian evolution of central Australia. School of Earth, Atmosphere and Environment, Monash University, Melbourne, VIC 3800, Australia.


Ian R Scrimgeour and Dorothy F Close. Overview of the geology and tectonics along the Georgina-Arunta Seismic Traverse AGES Conference Record NTGS Rec2011-003.

