Annual Technical Report
EL 29514 (“Mt Emma”)  
Year 2 (2013-2014)

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Date: 3rd February 2014
Tenement Holders: DBL Blues Pty Ltd 100%
Tenement: EL29514 “Mt Emma”
Reporting Period: 20 December 2013 – 31 December 2014 (Year 1)
Distribution: Core Exploration Ltd (1)
Geoscience.Info (Department of Mines and Energy,1)
Map Sheet: Illogwa Creek 1:250,000 sheet (SF5315)
Quartz 1:100,000 sheet (S951).
Target Commodity: Copper, gold, uranium, silver
Keywords: Field visit, literature review, Iron oxide copper-gold, Uranium, REE
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1.0 SUMMARY

EL29514 "Mt Emma" is located about 140 km north-east of Alice Springs. Access into the area is reasonable, via the Ross Highway, through the Arltunga Historical Reserve to Ambalindum Station, past Clarville Homestead and then by station tracks. During the reporting period Core Exploration undertook a comprehensive review of historical exploration data and reconnaissance field trip of the area. Core believes that further mapping and rock chip sampling is warranted to properly evaluate the prospects.

Figure 1.1: Exploration Index Map for EL29514, for the 2014 reporting year

2.0 INTRODUCTION

This report covers the second year of exploration conducted at EL29514 "Mt Emma". The tenement transferred ownership into DBL Blues Pty Ltd (Core Exploration) during the reporting period as part of a buyout by Core Exploration of Gempart for a package of tenements within the Arunta Region of the NT. The tenement is located 140 kilometres north-east of Alice Springs midway between the Harts Range and Illogawa Creek. Travel time is just under 2.5 hours from the Alice Springs (Figure 2.1) via the Ross, through the Arltunga Historical Reserve to Ambalindum Station, past Clarville Homestead and then by station tracks.

Access within the tenement is limited; the general area is hilly with only a few vehicle tracks available. The rivers are prone to flooding during heavy rainfalls over the summer. Accommodation can be found at Ambalindum Station (45 minute drive). The climate is typical of central Australia, hot summers and mild winters.
3.0 TENURE

EL29514 was granted on the 20 December 2012. The tenement lies on pastoral leases PPL1124 (Ambalindum Station). Tenure details are shown below. In October 2012 a joint venture was entered into with Core Exploration Ltd. During the reporting period Core became 100% owner of the tenement through a purchase agreement with Gempart.

<table>
<thead>
<tr>
<th>Tenement</th>
<th>Owner</th>
<th>Date Granted</th>
<th>Tenure</th>
<th>Size</th>
<th>Rent Yr 1</th>
<th>Expenditure Commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL 29514</td>
<td>DBL Blues Pty Ltd (wholly owned subsidiary of Core Exploration Pty Ltd) 100%</td>
<td>20/12/2012</td>
<td>6 Years</td>
<td>12 sq. blocks</td>
<td>$384</td>
<td>$12,000</td>
</tr>
</tbody>
</table>

Table 4.1 Tenure Details for Year 1

4.0 GEOLOGY AND MINERALISATION

EL 29514 is located at the contact between the Proterozoic Aileron Province and the Irindina Province of the Central Arunta Region. The rocks mostly comprise variably metamorphosed sediments, volcanics, calcisilicates, amphibolites and granite. The dominant late structures appear to trend NW within the Aileron Province.
The Irindina Provinces is dominated by the Irindina Gneiss (schistose garnet-biotite gneiss; sillimanite gneiss; amphibolite; biotite gneiss) and Riddock Amphibolite a layered to massive amphibolite; minor garnetiferous quartzofeldspathic gneiss, garnet-biotite gneiss; rare sillimanite gneiss, hornblende or clinopyroxene-bearing plagioclase-rich gneiss. The bulk of the tenements geology is comprised of the Bruna Gneiss (porphyroblastic-feldspar granitic gneiss, granitic gneiss) and the Entia Gneiss (quartzofeldspathic gneiss with conspicuously interlayered amphibolite) of the Aileron Province. Later ultramafic intrusives are major features of the tenements geology with significant ultramafic intrusives mapped at the western and eastern end of the tenement, intruding into the Aileron Province geology (Figure 4.1).

Figure 4.1 Extract from Illogwa Creek 1:250,000 Geology

5.0 PREVIOUS EXPLORATION

Exploration Review

Core Exploration undertook a thorough review of historical exploration work in the vicinity of the Mt Emma tenement.

Numerous old prospects (mica) occur within the area but little production of any worth has been recorded. BMR geologists prospected the area for uranium in the late 1940’s and discovered minor high grade zones within pegmatites.
The earliest modern exploration in the area was conducted on AP 1991 by Placer Prospecting between 1968 and 1970. The work included scintillometer prospecting, stream sediment sampling for base metals and rock chip sampling. The target minerals were tantalite and rare earth elements. No economic mineralization was discovered.

The area was explored for rubies and industrial minerals by Hillrise Properties/Mistral Mines between 1978 and 1983 under ELs 1801 and 1956. CRA Exploration conducted a stream sediment survey over these ELs in 1980 under a joint venture agreement with the tenement holder. Some significant anomalies were reported but there is no record of any follow-up being done.

Western Mining Corporation undertook exploration for diamonds in ELs 2657 and 3115 between 1981 and 1984. The catchment of Entire Creek was sampled and the results were disappointing. Prospectors held ELs 4673, 6133 and 7914 over the area between 1984 and 1996. Most of the work undertaken was prospecting for gemstones and industrial minerals with little success.

Between 1993 and 1996 PNC Exploration (Australia) Pty Ltd undertook an extensive exploration program in the area for uranium. The Harts Range project covered nine exploration licences and field activities included airborne radiometric/magnetic surveys, ground spectrometer surveys, geological mapping, rock chip sampling and trenching. Seventeen prospects were subject to detailed work. The Yambla prospect on EL 7967 was tested with 22 trenches and 13 diamond drillholes. Results showed that although high grade uranium mineralization occurred it was extremely poddy in nature and was not economic.

The ground was further explored for uranium by Paladin Resources Ltd and Deep Yellow Ltd under EL 9890 between 2002 and 2007. Little ground work was done in the first four years of tenure. Deep Yellow completed a thirteen hole RC percussion drilling programme in 2006 in the Yambla area. No uranium mineralization was intersected.

Between 2008 and 2011 Cullen Resources in joint venture with UXA Resources explored EL 26142 over the Yambla area. Stream sediments and rock chips were collected and a drill program was proposed but never completed. Both companies also held tenements in their own rights but only desk top studies and minor reconnaissance work were completed (ELs 25716, 27850 and 27852). No significant new discoveries were reported.

Hale Energy Ltd held four ELs (24735, 24736, 24765 and 24766) in the Entia Dome region from 2007 to 2012. Detailed rock chip sampling, soil sampling and mapping were carried out over three prospects during the second year of tenure. Very high values were found in samples of pegmatite from the Daicos Prospect – Hale reported one sample with 19.4%U, 26.5%Nb, 6.2%Ta and 2.7%Y. However further systematic sampling of the prospect in year 5 failed to replicate these high values. An airborne EM survey was conducted over portions of the Hale tenements in 2009. Some bedrock conductors were identified but no ground follow up has been completed.

Newera Uranium Ltd held EL 25674 and 26047 in the area from 2008 to 2009. A few rock chips were taken with poor results and the ground was dropped.

The recent announcements by Mithril Resources on their Huckitta project to the south east of the Entia Dome led to some increased interest in the area for base metals. Independence Group held EL 27646 from 2010 to 2012 however no work was completed except for a brief field visit. The mafic to ultramafic target lithologies were not sampled.

6.0 YEAR 2 WORK SUMMARY & DISCUSSION

During the reporting period Core Exploration completed a review of the past exploration covering EL29514 with an assessment of the current mineralisation models applicable for the tenement’s...
geological setting. EL29514 covers the contact between the Neoproterozoic Irindina Province and the southwestern corner of the Entia Dome in the Aileron Province (Figure 3.1). Recent exploration successes within the Irindina Province have focused on the Cu-Ni-Co potential within the Riddock Amphibolite as well as in post Cambrian undeformed ultramafic intrusives (Lloyd Gabbro) which intrude into the Irindina Province. Core believes the Irindina Province Cu-Ni-Co mineralisation models to be encouraging and decided to explore for this style within EL29514.

During the reporting period Core Exploration completed a transfer of tenement owner from the former joint venture partners Gempart NT Pty Ltd to DBL Blues a fully owned subsidiary of Core Exploration Pty Ltd. This transfer was part of a larger suit of tenements transferred from Gempart to Core Exploration.

No active exploration was completed on EL29514 during the bridging period.

7.0 REHABILITATION
There were no earth disturbing activities on the tenement. No rehabilitation was required.

8.0 CONCLUSIONS AND RECOMMENDATIONS
The company is exploring for Iron-oxide Copper-Gold mineralisation within the eastern Arunta region. Research studies as well as recent successes by other explorers in the region have increased the prospectivity of both the Aileron Province and the Irindina Provinces. The Aileron Province has been suggested as a highly metamorphosed IOCG enriched protolith, whilst company successes in Cu-Ni and Cu-Co mineralisation styles within the Riddock Amphibolite and later intrusive ultramafics within the Irindina Province have opened up the province for explorers.

Core will continue to focus on base metal mineralisation within EL29514 whilst also investigating the potential for uranium mineralisation within the felsic (pegmatites) portions of the Aileron Province. The felsic units of the Entia Dome host uranium prospects (i.e. Daicos and Yambla) which form exploration models worthy of follow up within EL29514.

During the 3rd year of activities on EL29514 the company plans to;

- Assess the uranium potential of the tenement, through investigating the available radiometric data, mineralisation potentials and existing surface geochemistry to identify potential uranium targets worthy of ground truthing.
- Reconnaissance fieldwork to ground truth any identified uranium targets
- Regional helimagnetic and radiometric surveys in areas where the open file coverage is inadequate to us in targeting
- Soil and/or rock chip sampling of any identified prospects or prospective units
- Prospect scale magnetics/radiometrics and gravity surveys

9.0 REFERENCES
Scrimgeour IR, 2011. Chapter 12 Aileron Province, In. Geology and mineral resources of the Northern Territory, compilers M Ahmad & TJ Munson