ANNUAL TECHNICAL REPORT
EXPLORATION LICENCE 28546
“Star Creek”

For the reporting period:
14th September 2013 – 13th September 2014 (Year 3)

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Date: 5th November 2014
Tenement Holders: Gempart (NT) Pty Ltd 50%
Bralich Holdings Pty Ltd 50%
Tenement: EL28546 “Star Creek”
Reporting Period: 14 September 2013 – 13 September 2014 (Year 3)
Distribution: Gempart NT Pty Ltd (1)
Bralich Holdings Pty Ltd (1)
Core Exploration Ltd (1)
Geoscience.Info (Dept Resources - Minerals & Energy, 1)
Map Sheet: Alice Springs 1:250,000 sheet (SF5314)
Riddoch 1:100,000 sheet (5851),
Target Commodity: Copper, Lead, Silver, REE
Keywords: Literature review, Iron oxide copper-gold, Uranium, REE
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1.0 Summary

Exploration Licence 28546 “Star Creek” lies approximately 110 km east-northeast of Alice Springs between the Amarata Range and Hale River. Light vehicle travel time to the tenure is just under two hours from the township of Alice Springs. Access from Alice Springs is by way of Ross Highway for 70 km, then northeast towards Arltunga, and heading southeast to east along the Ruby Gorge track.

During the reporting period Core Exploration collected 181 gridded soil samples (200m grid) in the northwest corner of EL 28546, as part of the broader Greater Paradise Well Project targeting IOCG mineralisation within the Aileron Province (Figure 1). Results of the soil sampling identified a number of copper in soil anomalies grading over 100ppm Cu (Appendix 1). These anomalous copper results were followed up with two reconnaissance field trips. Outcropping malachite mineralisation was identified sporadically along a north-south striking contact between a magnetic amphibolite and a granitic unit which trends to the north into Core’s adjacent tenement EL27369. Core identified the Jay Prospect (E 485400 N 7417200, Z53 GDA 94) where the strike of the mineralised contact folds around to the west in a broad open fold within EL 28546. Five rock chip samples were collected from within the Jay Prospect mineralised contact and assayed for a full suite of elements (Appendix 2).

A number of copper in soil targets within EL28546 remain untested within the northwest corner of EL28546. Core’s identification of the Jay Prospect following up on identified soil anomalism illustrated that soil geochemical surveys are an effective first pass tool for identifying outcropping copper mineralisation within the broader Greater Paradise Well Project within the Aileron Province. No evidence of mineralisation or associated alteration was identified away from the immediate amphibolite-granite folded contact reducing the potential for significant mineralisation being found at the prospect.
Figure 1.1: Exploration Index Map
2.0 Introduction

This report details exploration activities completed within EL28546 “Star Creek” during the third year of tenure, 14th September 2013 to 13th September 2014. The tenement is owned by Gempart (NT) Pty Ltd (50%) and Bralich Holdings Pty Ltd (50%), and Core Exploration Ltd (DBL Blues Pty Ltd) is currently managing and exploring the tenement under a Joint Venture (JV) agreement.

The tenement is located approximately 110 km east-northeast of Alice Springs. Vehicle access to the project area is reasonable, via the Ross Highway, northeast to Arltunga, then southeast along the Ruby Gorge track (Figure 2.1). Light vehicle travel time to the project is approximately two hours from the township of Alice Springs.

Vehicle 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 the old Ambalindum Station Homestead (approximate an half hour drive from the tenure). The climate is typical of central Australia, hot summers and mild winters.

Figure 2.1: Location Map of EL28546

3.0 Geology and Mineralisation

EL28546 is located in the Proterozoic Aileron Province of the Central Arunta Region. The rocks here mostly comprise variably metamorphosed sediments, volcanic rocks, calcisilicates, amphibolites and granite (Figure 3.1). The dominant structures appear to trend NE. Most of the interest in the immediate area has focused on the rare earth mineralisation (REE) at Blueys Folly about 5-10 km southwest of EL28546. Here allanite is often associated with a rare earth bearing thorium. It can in a number of settings, local examples being pegmatite dykes (plug-like to lenticular subvertical bodies
and sheet-like apophysis that intrude the surrounding amphibolite facies metamorphic rocks and within amphibolite and marble (calcsilicate?) units adjacent to these pegmatites (Murrell, 1988). Murrell estimated that Blueys Folly contained several million tonnes of pegmatite grading about of 0.4% allanite. This is a sub-economic grade. The north-east strike extent of the Blueys Folly REE geology continues up into EL28546, and two anomalous Th areas were identified. Further to the south west is Blueys Cu-Ag prospect. Mineralisation at Blueys comprises secondary lead, copper and silver in association with pyrite, barite, quartz veining and replacement minerals. Rocks hosting mineralisation are dolomite and dolomitic siltstones belonging to the Bitter Springs Formation. This sedimentary unit is not observed on EL28546.

To the west of EL28546, some work has gone on exploring for quartz vein hosted gold similar to the Arltunga workings. Some of this has been drilled (e.g. Duffer workings), but in most cases the veins are thin (<1m) with poor continuity.

*Figure 3.1: Extract from 1 Extract from Illogwa Creek 1:250,000 Geology*
4.0 Tenure

EL28546 was granted on the 14th September 2011 for a period of six (6) years. The tenement overlies pastoral lease PPL1124 (Ambalindum Station) and PPL995 (Atnarpa Station/CLC). In October 2012 a joint venture (JV) agreement was entered into between Gempart (NT) Pty Ltd, Bralich Holdings Pty Ltd and Core Exploration Ltd covering a number of leases within the Artunga area, including EL 28546. As part of the JV agreement Core Exploration manages all exploration activities completed within the tenure. Tenement details are summarised in Table 4.1 below.

Table 4.1: Tenement Summary

<table>
<thead>
<tr>
<th>Tenement</th>
<th>Owner(s)</th>
<th>Date Granted</th>
<th>Tenure</th>
<th>Size</th>
<th>Rent (Year 2)</th>
<th>Expenditure Commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL 28546</td>
<td>Gempart (NT) Pty Ltd 50% Bralich Holdings Pty Ltd 50%</td>
<td>14/09/2011</td>
<td>6 Years</td>
<td>32 sq. blocks</td>
<td>$1,557</td>
<td>$28,000</td>
</tr>
</tbody>
</table>

5.0 Previous Exploration

During the first year of tenure, a diligent literature review consisting of obtaining all relevant NTGS open file reports, purchasing a copy of a PhD thesis (on the Blueys Folly REE mineralisation) from James Cook University, and the monitoring surround tenement holders exploration activities was completed. Very little academic or scientific reporting was available.

Previous workers had highlighted a number of prospects and potential exploration tools that could be used in the area. One of these was the purported association of magnetite and thorium with allanite (CaAl-Fe Si3O12[OH]) or monzonite (CePO4). Historic geophysical data was obtained and reprocessed by a geophysical consultant, with an emphasis on highlighting the magnetite-thorium association. Two large anomalies called White Flower and Harts View were highlighted. Previous explorer (Bluey, 1988) had mentioned these two areas in an old report however, did not appear to follow it up. A ground scintillometer survey was conducted, with several traverses across the peak anomaly. The highest Th value was just 247 ppm Th, the rocks were granitic gneiss. The anomaly also appeared to have a circular shape, similar to the topography. It was concluded that the anomaly may be a result of the topography, but nonetheless, the thorium was indeed a higher order than the background values (<100 ppm Th) observed.

Support for REE or monzonite dominant mineralisation in the area was observed in a number of higher level phosphate (>1000ppm) stream anomalies. The higher phosphate in the streams indicated that the headwaters originated near the Harts View and White Flower anomalies. However given the difficult access in following these streams up, and the often unreliability of stream data, it was decided to not walk the creeks. Given the level of outcrop, it was thought that any significant REE deposit should have some surface expression, be it thorium, uranium or total count. It was found in these two particular areas, and also in between, was that topography did appear to influence to some degree the final results.

The 2012 Aster image released by the NTGS was examined. No anomalous or interesting features were recognised in the data over EL 28546.

A fixed wing magnetic geophysical survey was completed over the northwestern portion of EL 28546 in My 2012. No direct survey was completed over the Harts View/White Flower area. The survey was
flown along 100m line spacings by Baigent Geosciences. The orientation was 1350/3150. The magnetic survey was successful in delineating anomalies and structures to the north, and within adjacent tenement EL 27369. Interpreted structures can be traced onto EL 28546 and provide targets for follow up exploration.

Two other areas explored within EL 28546 were “Star Creek” and “Mt Russell”. Star Creek returned several anomalous quartz veins including As 132 ppm, Ag 3.3ppm, Cu 1710 ppm, Au 0.21 ppm, Mo 25 ppm. The elevated Mo suggests a granitic component. This is considered encouraging as in the Arltunga area, there has been little evidence for Mo-Au-Cu-Ag mineralisation. The quartz vein itself was about 1m wide and appeared to extend for several hundred meters. Some ferruginous or gossan textures were visible.

The Mt Russell area was explored as there were earlier reports mentioning several monzonite bearing pegmatites, up to 100m wide, in the area (called Mt Russell). Historical assays from rock chip samples have been encouraging with values up to 30% REE. No details of exact locations or references on a map were found. A study of NTGS maps, magnetic, false colour imagery, google earth, radiometrics failed to discriminate any obvious pegmatites (higher potassium, lighter colour) within the prospective area. Mt Russell is an imposing location, the hills and gullies being quite steep and high. One rock chip sample and six soils samples were collected along a traverse completed in 2012. The multi-element results were all disappointing.

Core Exploration completed a thorough review of historical exploration work on the Star Creek tenement compiled by the Joint Venture partners, and reported on in the first year annual technical report (2012).

During the second year of tenure, Core Exploration completed a field trip to the tenement to assess the terrain, topography and infrastructure to assist with logistics planning for undertaking geological mapping, sampling and geophysical surveying across the tenement. During the filed trip Core Exploration geologists visited the Star Creek Prospect as defined by the Joint Venture partners. The prospect consists of a series of 0.5m wide quartz with minor hematite gossanorth-southtaining veins/pegmatites, one patch of malachite was found on some roadside float. Four samples were collected during the field trip however, were not submitted for geochemistry based on the lack of visible mineralisation.

<table>
<thead>
<tr>
<th>Sample No</th>
<th>Easting</th>
<th>Northing</th>
<th>Datum</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC001</td>
<td>488841</td>
<td>7413830</td>
<td>GDA94 Z53</td>
<td>Amphibolitic pods, m.g qrtz + feld+ magnetite-biotite + amphibolite, broad outcrop contacts ~020, minor epidote in qrtz leucosomes within amphibolite +/- magnetite</td>
</tr>
<tr>
<td>SC002</td>
<td>488851</td>
<td>7413820</td>
<td>GDA94 Z53</td>
<td>Weathered deformed foliated qrtz + muscovite felsic gneiss, interlayered with amphibolite</td>
</tr>
<tr>
<td>SC003</td>
<td>490724</td>
<td>7411050</td>
<td>GDA94 Z53</td>
<td>0.5m wide weakly gossaneous quartzite vein/pegmatite strike 025, Iron rich gossan +/- manganese, intrudes into micaeous felsic geniss</td>
</tr>
<tr>
<td>SC004</td>
<td>490719</td>
<td>7411031</td>
<td>GDA94 Z53</td>
<td>Along strike of 0.5m wide qrtz vein/pegmatite with gossaneous hematite, yellow to brown hematite staining/gossan in clean white qrtz</td>
</tr>
</tbody>
</table>
6.0 Year 3 Work Summary & Discussion

During the third year of tenure, 14th September 2013 to 13th September 2014, Core Exploration as managers of EL 28546 completed a reconnaissance field trip and gridded soil sampling program within the Star Creek tenement, geochemical analysis of collected surface samples (soil and rock), and completed desktop works including planning and logistics, data analysis, report preparation and exploration targeting.

Field Reconnaissance and gridded soil sampling program

During the reporting period Core Exploration collected 181 gridded soil sampling (200m grid) in the northwest corner of EL28546 as part of the broader Greater Paradise Well Project targeting IOCG mineralisation within the Aileron Province. Results of the soil sampling identified two copper in soil single point anomalies grading over 100ppm Cu. One of the sites was visited, identifying the Jay Prospect (Appendix 1). The other greater than 100ppm Cu in soil anomaly is yet to be reconnaissance tested (GPW0746). Other elements assayed for in the soil program were Pb, Zn, Ag and Au. No significant Ag, Pb or Zn anomalies were identified within EL28546 compared to the broader Greater Paradise Well survey. The highest Au in soil value recorded was 2.5ppb Au in sample GPW0690 which has not been ground truthed and is not deemed significant.

Outcropping malachite mineralisation was identified sporadically along a north-south striking contact between a magnetic amphibolite and a granitic unit which trends to the north into Cores adjacent tenement EL27369. This north-south contact coincided with a magnetic high and a moderate copper in soil feature. Core identified the Jay Prospect (E 485400 N 7417200, Z53 GDA 94) where the strike of the mineralized contact folds around to the west in a broad open fold at the site of the >100ppm copper in soil sample. Five rock chip samples were collected from within the Jay Prospect mineralised contact and assayed for a full suite of elements (Table 6.1: Appendix 2). The highest copper in rock chips recorded was 0.83% Cu in a malachite stained and replaced quartz + garnet + iron oxides with muscovite veining granitic unit. One sample was collected of the magnetic amphibolite which contained a 41.5% Fe, but no anomalous economic elements. Figure 6.2 illustrates the sample site for sample 1283 in situ at the contact between a magnetic amphibolite and a garnet bearing quartz rich felsic unit (granitic unit).

Table 6.1: Table of rock chip samples collected in the 2014 reporting period

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Easting</th>
<th>Northing</th>
<th>Observations</th>
<th>Au g/t</th>
<th>Ag g/t</th>
<th>Cu %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1281</td>
<td>485554</td>
<td>7417449</td>
<td>malachite staining mainly along fracture plains in wthered pale qrtz + feld matrix with 2-10mm garnet</td>
<td>0.07</td>
<td>1.2</td>
<td>0.59</td>
</tr>
<tr>
<td>1282</td>
<td>485455</td>
<td>7417234</td>
<td>dense very magnteic f.g banded magnetite banded metased, thin &lt;5mm bands of magnetite + magnetite in matrix of rock, amongst banded qrtz rich metaseds + clean granite</td>
<td>X</td>
<td>X</td>
<td>0.03</td>
</tr>
<tr>
<td>1283</td>
<td>485408</td>
<td>7417278</td>
<td>contact between granite + amphibolite, malachite staining of fe oxide altered granite</td>
<td>X</td>
<td>0.5</td>
<td>0.38</td>
</tr>
<tr>
<td>1284</td>
<td>485438</td>
<td>7417247</td>
<td>malachite staining + replacing interstitial minerals in qrtz dominant</td>
<td>0.01</td>
<td>1.2</td>
<td>0.83</td>
</tr>
<tr>
<td>Sample</td>
<td>Result</td>
<td>Location</td>
<td>Description</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>--------</td>
<td>----------</td>
<td>-------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1292</td>
<td>485143</td>
<td>7417179</td>
<td>+ garnet &lt;4mm + fe oxides + veins of muscovite</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>malachite bearing c.g bio + phlogapite + qrtz + feld + garnet bearing granite, at contact with amphibolite in J fold, banded pelitic gneiss to south, contact bearing 295 degrees</td>
<td>0.01</td>
<td>2.2</td>
<td>0.78</td>
</tr>
</tbody>
</table>

**Figure 6.1**: Copper in soil and rock chip results EL 28546
Figure 6.2: Photo at Jay Prospect illustrating malachite mineralisation at folded contact between amphibolite and granitic unit
**Desktop Analysis and Exploration Targeting**

During the reporting period Core Exploration compiled and analysed newly collected geological data for EL 28546 for exploration targeting within the tenure, as part of its Greater Paradise Well Project in the Aileron Province. EL28546 forms the southeastern corner of the Greater Paradise Well Project. Results from EL28546 confirm assertions that gridded soil sampling over the outcropping and covered Aileron Province geology can identify outcropping copper prospect areas and prospective geological contacts or structures. Core has recognised that the varied regolith profiles (i.e. outcropping verses alluvium covered) can control the grade that is classified as anomalous in the soil sampling results. As an example the 100ppm Cu in soil sample at the Jay Prospect was located amongst sub-cropping malachite bearing rocks whilst the sporadically mineralised north-south amphibolite-granite contact to the north of the Jay Prospect consistently graded between 15-30ppm Cu over ~1.5km (including into the adjacent EL27369). Copper anomalism located in overlying alluvial or colluvial sediments should be considered anomalous at lower grades compared to samples collected amongst outcropping lithologies.

Core believes that the work program undertaken at EL2856 and the broader Greater Paradise Well Project has been successful in identifying previously unknown copper occurrences within the Aileron Province. The surface soil sampling program has been successful in identifying previously unknown copper occurrences.

Core plans to ground truth with reconnaissance field trips the identified copper in soil anomalism within EL28546 as well as assess the worthiness of either infill soils or a further 200m spaced regional soil sampling program over the other parts of EL28546.

### 7.0 Rehabilitation

No earth disturbing activities were completed within the tenement during the reporting period. No rehabilitation was required.

### 8.0 Year 4 Proposed Exploration Activities

The company is actively exploring for Iron-Oxide Copper-Gold (IOCG) mineralisation within the eastern Arunta region, in conjunction with the potential for economic base metal, and uranium and REE mineralisation within EL28546. As part of a Joint Venture agreement between DBL Blues Pty Ltd, Gempart (NT) Pty Ltd and Bralich Holdings Pty Ltd, Core Exploration plans to undertake the following exploration activities within EL28546 during the fourth year of tenure:

- Field reconnaissance, geological mapping and field investigation of soil anomalism
- Geochemical analysis of any collect surface samples
- Ground-based geophysical surveying at the Jay Prospect (magnetics or IP)
- Continued evalution of prospective mineralisation styles within the tenure
- Target generation work and report preparation, including the development of drilling proposals
9.0 References
