Reduction Report

EL29670

Pine Creek SD5208 1:250,000
Pine Creek 5270 1:100,000

11 July 2013 to 10 July 2015

Distribution:-

1. DME Darwin, NT
2. Newmarket Inc, Darwin
3. Newmarket Inc Australian Operations, Brocks Creek Office

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EXECUTIVE SUMMARY

Exploration licences (EL) EL29670 is located roughly 180 km south east of Darwin and approximately 20km north of the Pine Creek township. Both tenements were granted on the 11th of July, 2013 to Newmarket Gold for a period of 6 years. In accordance with section 29 (2) of the Northern Territory Mineral Titles Act, EL29670 must be reduced in size at the end of every second operational year. This report documents the exploration activities completed on the relinquished area.

EL29760 is located in the central portion of the Pine Creek Geosycline, and consists of greywacke, siltstones and mudstone from the Burrell Creek Formation. Towards the north-west, minor rocks of the Mount Bonnie Formation (South Alligator Group) are also exposed. These lithologies have been intruded and thermally metamorphosed by the Tabletop, Allamber Springs and McKinlay Granites. The central part of the tenement is transected north-northwest to south-southeast by the Pine Creek Shear Zone (PCSZ), a grossly antiformal zone averaging 300m wide, characterised by phyllitic schist and tightly compressed folds. The axial zones on the principal anticlines have frequently failed within the PCSZ and predominant bedding and fabric attitudes are steeply dipping to the north east. Some parasitic folds have steep westerly dips. The PCSZ is the most mineralised structure with respect to gold in the region and host many gold deposits such as Union Reefs, Enterprise, International, Gandys, Czarina, Spring Hill and may more prospects.

Exploration activities for the reporting period included desktop reviews and data validation of historic exploration data.

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Any information included in the report that originates from historical reports or other sources is listed in the “References” section at the end of the document.

This report may be released to open file as per Regulation 125(3) (b).
3 INTRODUCTION

EL29670 was granted to Newmarket Gold on the 11th of July, 2013. The tenement is apart of the Mountain Creek Project area, which covers prospective ground around the Union Reefs Goldfields.

In accordance with section 29 of the NT Mineral Titles Act (2010), Newmarket Gold must reduce the area of both tenements at the end of the second operational year. The sub-blocks which have been chosen to be dropped from EL29670 are:

- SD521437F
- SD521437G
- SD521436U
- SD521437T
- SD521509C
- SD521509D
- SD521509J
- SD521509K
- SD521509P

This can be viewed in Figure 2.

4 LOCATION AND ACCESS

EL29670 is located approximately 20km northwest of Pine Creek and roughly 10km northwest of the Union Reefs Gold Mine. Access to the central portion of the tenement group may be obtained via Mt Wells road from Union Reefs mine complex north-westwards, or alternatively by turning NE off the Stuart Highway on the Spring Hill Road, some 20km north of Pine Creek. The Darwin-Adelaide railway crosses the eastern boundary and north eastern sectors of the tenement and in addition, the Darwin-Palm Springs gas pipeline easement crosses the same sectors. For reasons of public safety there are statutory restrictions relating to exploring in the vicinity of these easements.

The tenement group covers part of the McKinlay River and its tributaries. These have excised the area and created a terrain that is undulating and marked by north-west trending ridges. It is also within the Mary River West Pastoral Lease

Figure 1 shows the location of EL29760 with its relinquished blocks.
Figure 1: Tenement Locations
5 TENEMENT DETAILS

EL29670 was granted to Newmarket Gold in November of 2013, as part of the Mountain Creek Project area, and is set to expire in July of 2019. The Table 1 below, lists the tenement details.

Underlying cadastre is the Northern Territory Portions 00649 and 01631, which include Perpetual Pastoral Lease 1134 Mary River Wildlife Ranch Pty Ldy.

<table>
<thead>
<tr>
<th>Tenement</th>
<th>Area (Km2)</th>
<th>Grant Date</th>
<th>Expiry Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL29670</td>
<td>53.27</td>
<td>11-Jul-13</td>
<td>10-Jul-19</td>
</tr>
</tbody>
</table>

Table 1: Tenement Details

Due to section 29 of the NT Minerals Title Act (2010) that a total of 9 blocks shall be relinquished from EL29670. (Figure 2).
Figure 2: EL29670 with relinquished blocks.
6 GEOLOGICAL SETTING

6.1 REGIONAL GEOLOGY

The Mountain Creek project is situated within the Pine Creek Orogen, a tightly folded sequence of Lower Proterozoic rocks, 10km to 14km in thickness, laid down on a rifted granitic Archaean basement during the interval ~2.2-1.87Ga. The sequence is dominated by pelitic and psammitic (continental shelf shallow marine) sediments with locally significant inter-layered cherty tuff units. Pre-orogenic mafic sills of the Zamu Dolerite event (~1.87Ga) intruded the lower formations of the South Alligator Group (Ahmad et al 1993).

During the Top End Orogeny (Nimbuwah Event ~1.87-1.85Ga) the sequence was tightly folded, faulted and pervasively altered with metamorphic grade averaging greenschist facies with phyllite in sheared zones.

The Cullen intrusive event introduced a suite of fractionated calc-alkaline granitic batholith into the sequence in the period ~1.84-1.1.78Ga. These high temperature I-type intrusives induced strong contact metamorphic aureoles ranging up to (garnet) amphibolite facies, and created regionally extensive biotite and andalusite hornfels facies. Less deformed Middle and Late Proterozoic clastic rocks and volcanics have an unconformable relationship to the older sequences. Flat lying Palaeozoic and Mesozoic strata along with Cainozoic sediments and proto-laterite cementation overlie parts of the Pine Creek Orogen lithologies. Recent scree deposits sometimes with proto-laterite cement occupy the lower hill slopes while fluvialite sands, gravels and black soil deposits mask the river/creek flats areas.

There is a tendency for gold mineralisation to be focused in anticlinal settings within strata of the South Alligator Group and lower parts of the Finniss River Group. This sequence evolved from initial low energy shallow basinal sedimentation to higher energy deeper water flysch facies.

Gold mineralisation appears to be related to the I-type members of the Cullen Batholith, formed as a result of fractionation and differentiation processes during magma emplacement. That ultimately led to the evolution of hydrothermal fluids responsible for gold mineralisation in the adjacent meta-sediments (Bajwah, 1994).
Figure 3: Regional Geology of EL29670 and Relinquished Blocks

6.2 LOCAL GEOLOGY

The tenement area covers the Burrell Creek Formation with dominant lithologies of greywacke, siltstone and mudstone. Towards the north-west and north-east, rocks of the
Mount Bonnie Formation (South Alligator Group), Gerowie Tuff and Zamu Dolerite are also exposed. These lithologies have been intruded and thermally metamorphosed by the Tabletop, Allamber Springs and McKinlay Granites.

The central part of the tenement area is transected north-northwest to south-southeast by the Pine Creek Shear Zone, a grossly antiformal zone averaging 300m wide, characterised by phyllitic schist and tightly compressed folds. The axial zones on the principal anticlines have frequently failed within the PCSZ and predominant bedding and fabric attitudes are steeply dipping to the north east. Some parasitic folds have steep westerly dips. The PCSZ is the most mineralised structure with respect to gold in the region and host many gold deposits such as Union Reefs, Elizabeth, Enterprise, International, Gandy’s, Czarina, Spring Hill and may more prospects.

7 PREVIOUS HISTORY

EL29670 has been explored by various companies, including Billiton, Zapopan, Enterprise and Northern Gold NL, who focused their efforts exploring the PCSZ. The area was previously held by R. Biddlecombe as EL8172 (Ennis) who later optioned the area to Acacia Resources Ltd in 1993.

In 1994, Acacia conducted a soil sampling campaign over the area which saw 226 being taken from the tenement on a 500m by 2500m grid. Spot samples were taken from the northern part of the tenement which were sieved to -5mm and 2-3kg collected for Au, Cu, Pb, Zn and As.

From 1995 to the end of 1999, Acaid conducted a number of soil sampling, rock chip sampling, mapping and costean campaigns over the tenement.

It was within 2000 that AngloGold (Ashanti) Australia Ltd, took over Acacia which, with the uncertainties raised by the Delta Gold attempted takeover, caused the halt of further work carried out on EL8172.

Upon acquisition of the tenement during the 2004 to 2005 reporting year, the Burnside Joint Venture carried out a remote sensing study based upon satellite SPOT imagery and AGSO geological mapping.

Exploration activities from September 2005 to September 2006, conducted by GBS Gold Australia included a desktop review and reconnaissance field mapping.

During the 2006 to 2007 reporting year, exploration activities included a desktop review, data validation and reconnaissance field mapping. The desktop review highlighted some anomalous zones and a series of drill holes were planned.

During the 2007 to 2008 reporting year, anomalies identified in the previous desktop top review were tested with a campaign of RC drilling. GBS Gold drilled a total of 6 RC holes for 591 metres. A total of 614 samples were retrieved and analysed for Au, As, Cu, Pb and Zn. Logging of the RC chips showed that rocks generally belong to the Burrell Creek Formation with some evidence of hydrothermal alteration. Assaying of chip samples provided disappointing results with most samples showing very low concentrations of gold, generally below the detection limit. Au values range from 0.1 to 0.20 ppm with an average of 0.02
ppm which were much below the expectation. These values were mirrored in As values. Cu values were moderately higher ranging from 1 to 292 ppm with an average of 32.43 ppm. Pb and Zn concentrations are anomalously higher. This could be due to the presence of galena-zinc mineralisation in the tenement (e.g., Flora Bella). Pb values varied from 5 to 7269 ppm with an average of 132 ppm whereas Zn has the highest concentration of 8040 ppm. Other activities included a review of the results, data compilation and reconnaissance visits.

In September 2008, GBS Gold Australia went into voluntary administration and hence exploration activities for the 2008 to 2009 year were confined to a desktop review and reconnaissance visits.

Newmarket Gold obtained EL29670 in November 2009. Exploration activities carried out for the 2009 to 2010 period included a review of the tenement and reconnaissance mapping. From September 2010 to the expiry date of 29 September 2011, Newmarket Gold conducted a review of satellite imagery, purchased new satellite images and conducted field reconnaissance mapping.

8 EXPLORATION ACTIVITIES 11 JULY 2013 TO 10 JULY 2015

Exploration activities for the reporting period included desktop reviews and data validation of historic exploration data.

9 REFERENCES


