GR303/13 Combined First Annual and Final Report
EL29338, EL29340 and EL29341 – Tennant Creek Project

For Period Ending 30th September 2013

Target commodity: Gold
NT 1:250,000 map series – Tennant Creek SE5314
NT 1:100,000 map series – Flynn 5759
NT 1:100,000 map series – Short Range 5659

Distribution:-

1. DOR Darwin NT
2. Primary Gold Ltd

Ben Cairns
September 2013
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>EXECUTIVE SUMMARY</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>COPYRIGHT</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>INTRODUCTION</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>LOCATION AND ACCESS</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>TENEMENT DETAILS</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>GEOLOGICAL SETTING</td>
<td>7</td>
</tr>
<tr>
<td>6.1</td>
<td>Regional Geology</td>
<td>7</td>
</tr>
<tr>
<td>6.2</td>
<td>Local Geology</td>
<td>9</td>
</tr>
<tr>
<td>7</td>
<td>EXPLORATION ACTIVITY YEAR ENDING 30th June 2013</td>
<td>13</td>
</tr>
<tr>
<td>8</td>
<td>RECOMMENDATIONS AND CONCLUSIONS</td>
<td>13</td>
</tr>
<tr>
<td>9</td>
<td>REFERENCES</td>
<td>13</td>
</tr>
</tbody>
</table>
1 EXECUTIVE SUMMARY

Tenements of GR303/13 lie approximately 50km north of the township of Tennant Creek or 940km south of Darwin along the Stuart Highway. Primary access is via the sealed Stuart Highway and from thence via station tracks into the tenements.

The tenements are interpreted to overlie the Tomkinson Province, a large Palaeo-mesoproterozoic basin with interpreted affinities to other large basins in northern Australia, the MacArthur, Birrindudu, South Nicholson and Fitzmaurice Basins. Surface expression of the rocks of the Tomkinson Province is poor in the NE where tenement EL29338 is dominated by Cainozoic alluvium but improves to the SW into tenements EL29340 and EL29341 and is dominated by lithic and sublithic arenites and minor siltstones and andesitic volcanics of the Hayward Formation.

Gold mineralisation in the Tennant Creek district is dominantly ironstone hosted with only minor occurrences of quartz vein hosted mineralisation. The ironstone mineralisation is closely related to magnetite – hematite bodies within terrigenous metasediments of The Warramunga Formation of the Warramunga Province. They are replacement pipe like bodies, flattened and elongated primarily discordant to bedding and tend to occupy S1 and S2 cleavage planes that are dominantly sub-vertical with and easterly trend. Local, late D2 deformation has resulted in the folding and faulting of the ore bodies. In the oxide zone the ore body is characterized by hematite-goethite-quartz-sericite-clay with only minor remnant magnetite; hypogene ore assemblage is dominated by magnetite (50-80%) - quartz (0-60%) – chlorite (5-40%) +/- minor pyrite, talc, dolomite, muscovite and calcite. Mineralised ironstones are found exclusively within or near iron oxide enriched metasediments of the Warramunga Formation and are probably the source of some of the iron. The ironstones are commonly found within the more argillaceous units of the Warramunga Formation, the mudstones and shales being more readily cleaved than the more arenaceous units and thus more susceptible to magnetite-chlorite alteration. There is also a strong, but not exclusive, stratigraphic association between mineralised ironstones and hematitic shales and quartz feldspar porphyries. Within the ironstones gold is primarily found toward the base and in the footwall ironstone – metasediment contact.

A review of exploration completed by previous explorers has failed to identify any new targets and this in conjunction with the fact the Warramunga Formation is largely absent within the project area the potential for significant gold mineralisation is considered to be low and as such the tenements are recommended for surrender.

During the 2012-2013 exploration year work was limited to desktop reviews of the available state geological data base and publically available company reports from previous explorers. No field work was undertaken.
2 COPYRIGHT

This document and its content are the copyright of Primary Gold Ltd (PGO). The document has been written by Ben Cairns for submission to the Northern Territory Department of Resources as part of the tenement reporting requirements as per Regulation 87 of the Minerals Titles Act.

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.

Primary Gold Ltd authorise the department to copy and distribute the report and associated data.

This report may be released to open file as per Regulation 125(3)(a).
Figure 1- Tenement location map
3 INTRODUCTION

Group reporting status was granted to the Tennant Creek Project, GR303/13, on the 24th May 2013. The reporting period for the title group is 31st July to 30th July, the grant dates of the titles within the reporting group are:

- EL29338 – 23rd October 2012
- EL29340 – 23rd October 2012
- EL29341 – 23rd October 2012

This report documents the exploration activities conducted from the date of grant of the tenements until surrender on 30th September 2013.

The tenements lie partially within and adjacent to the Warramunga Province which plays host to significant mineralisation within the Tennant Creek Region.

4 LOCATION AND ACCESS

The tenements of GR303/13 lie approximately 940km south of Darwin along the Stuart Highway (Figure 1) and 50km north of the township of Tennant Creek. Primary access is via the sealed Stuart Highway and from thence via station tracks into the tenements. These tracks provide good access for 4WD vehicles during the dry season, however these tracks may become impassable after heavy rain, and therefore access will be restricted during the wet season from November to March.

The tenements surround areas of extensive gold mineralisation associated with the Warramunga Formation in Tennant Creek Region.

Figure 1 shows the location of GR303/13 tenements.

5 TENEMENT DETAILS

<table>
<thead>
<tr>
<th>Lease</th>
<th>Area (blocks)</th>
<th>Sq. Km</th>
<th>Applied Date</th>
<th>Grant Date</th>
<th>Expiry Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL29338</td>
<td>44</td>
<td>147.3</td>
<td>17-Jan-12</td>
<td>23-Oct-12</td>
<td>22-Oct-18</td>
</tr>
<tr>
<td>EL29340</td>
<td>39</td>
<td>130.6</td>
<td>17-Jan-12</td>
<td>23-Oct-12</td>
<td>22-Oct-18</td>
</tr>
<tr>
<td>EL29341</td>
<td>42</td>
<td>140.6</td>
<td>17-Jan-12</td>
<td>23-Oct-12</td>
<td>22-Oct-18</td>
</tr>
</tbody>
</table>

In late February 2013 Hydrotech International purchased 100% of the shares in Primary Minerals NL and changed its name to Primary Gold Ltd (PGO). All tenements were granted in the name of Primary Minerals NL which is now a wholly owned subsidiary of Primary Gold Ltd.

The tenements are all located on pastoral leases; EL29338 on Perpetual Pastoral Lease (PPL) 945 and PPL 946; EL29340 on PPL 946, and EL29341 on PPL946. and they fall within the Tennant Creek 1:250,000 map sheet and predominantly on the Flynn 1:100,000 map sheet.
6 GEOLOGICAL SETTING

6.1 REGIONAL GEOLOGY

Tenements of GR303/13 are located within the Palaeoproterozoic rocks of the Tennant Creek Inlier, one of the major mineral provinces of Australia. The Tennant Creek Inlier comprises the Ashburton Province to the north and the Davenport Province to the south separated by the Tennant Creek Province. The Tennant Creek Province comprises a turbiditic flysch sequence, the Warramunga Formation, and is contemporaneous with numerous granite intrusions collectively formed during the Barramundi Orogeny at 1870 – 1800Ma. Extrusive felsic volcanics and volcanoclastics of the Flynn Subgroup are broadly spatially and temporally coincident with the Warramunga Formation in the Tennant Creek Province but do not show signs of Barramundi Deformation and thus determined to be unconformable on the Warramunga Formation. There is a transitional, conformable relationship between the Flynn and Tomkinson Creek Subgroups of which the Hayward Formation is part of. The entire inlier then underwent a second deformation event prior to the intrusion of ‘late’ granites and contemporaneous with the Strangways Orogeny of the Arunta Province (1845 – 1700Ma). A late deformation is evident in the N-S cleavage in the Warramunga which may relate to the Isan Orogeny at ca 1600Ma.

Gold mineralisation in the Tennant Creek district is dominantly ironstone hosted with only minor occurrences of quartz vein hosted mineralisation. The ironstone mineralisation is closely related to magnetite – hematite bodies within terrigenous metasediments of The Warramunga Formation of the Warramunga Province. They are replacement pipe like bodies, flattened and elongated primarily discordant to bedding and tend to occupy S1 and S2 cleavage planes that are dominantly sub-vertical with and easterly trend. Local, late D2 deformation has resulted in the folding and faulting of the ore bodies. In the oxide zone the ore body is characterized by hematite-goethite-quartz-sericite-clay with only minor remnant magnetite; hypogene ore assemblage is dominated by magnetite (50-80%)-quartz (0-60%) – chlorite (5-40%) +/- minor pyrite, talc, dolomite, muscovite and calcite. Mineralised ironstones are found exclusively within or near iron oxide enriched metasediments of the Warramunga Formation and are probably the source of some of the iron. The ironstones are commonly found within the more argillaceous units of the Warramunga Formation, the mudstones and shales being more readily cleaved than the more arenaceous units and thus more susceptible to magnetite-chlorite alteration. There is also a strong, but not exclusive, stratigraphic association between mineralised ironstones and hematitic shales and quartz feldspar porphyries. Within the ironstones gold is primarily found toward the base and in the footwall ironstone – metasediment contact.

The Tennant Creek gold field has produced in excess of 150t gold, 318,000t copper and 14,000t bismuth, 220t selenium and 53t silver from over 130 mines.

Previous workers have defined a set of exploration criteria for working in the Tennant Creek Region;
• E-W orientation dominates with subordinate 070° and 130° orientations.
• Argillaceous metasediments of the Warramunga Formation.
• Proximity to QFP and hematitic shale is favourable.
• Development of S1 / S2 cleavage.
• May be blind at surface (leached barren zone which extends 2-3m below surface)
Figure 2 – Geological provinces of the project area.
6.2 **LOCAL GEOLOGY**

**EL29338**
This tenement is dominated by extensive areas of Cainozoic cover. Steeply dipping and tightly folded Tomkinson Group sediments outcrop immediately adjacent to the south of the tenement extending partially into EL29338. These sediments strike to the NW with a steep NE dip and appear to be folded into a tight antiformal structure with a NW plunge into the tenement. Regional TMI images suggest continuity of a weakly magnetic unit into EL29338 which has been mapped by the NTGS as shale / siltstone of the Tomkinson Group.

An ovate weakly magnetic body that appears to disrupt stratigraphy immediately north of the weakly magnetic sediments may be a late stage intrusion. The occurrence of weakly magnetic argillaceous sediments in close proximity to a possible intrusive and the presence of regional folds is interesting but when associated with Tomkinson Group sediments the prospectivity is decreased. Regional RAB sampling over this unit by previous explorers failed to locate any anomalism.

**EL29340**
The Hayward Formation of the Tomkinson Creek Sub Group outcrops over the tenement area in a gentle basinal feature elongated approximately NW-SE. Locally the Hayward Formation is represented by the Upper, Middle and Lower Sandstone members with lesser thin shale and siltstone beds.
The tenement area has been well explored over the last 30 years, most recently by a J.V between Territory Uranium / TUC Resources over the period 2007-2012. The initial focus of this J.V. was on Tennant Creek Style IOCG gold mineralisation although focus quickly switched to Uranium and REE. Reconnaissance geochemical sampling and a first pass 41 hole RAB program was completed. The RAB program focused on phosphates although the MEX abstract for that reporting year mentions some anomalous Cu results to 250ppm and W to 550ppm but these were deemed of low importance and were not followed up. The tenement expired at the end of the 6 year term.

Prior to the Territory Uranium J.V. the tenement area was explored by Poseidon Gold in the mid 1990’s, undertaking low level aeromagnetic surveys but relinquishing the tenement after only two years. In the period 2005-2008 the tenement area was subject to exploration by a J.V. between Rio Tinto and Diamond Mines Australia looking for kimberlites, work completed including ground reconnaissance, Falcon Airborne Gravity Surveys and aeromagnetic surveys. Indicator minerals, including some diamonds were identified but no kimberlites were located and the tenement was relinquished.

Given the geologic setting and the previous exploration results the tenement is thought to have low prospectivity for the discovery of significant gold mineralisation.

**EL29341**

EL29341 lies mostly within the Tomkinson Province with good exposure of the Hayward Creek Formation of the Tomkinson Creek Sub-group which is dominated by lithic arenites with minor conglomerates and intermediate to felsic volcanics of the Upper, Middle and Lower Sandstone Members. The south eastern most portion of the tenement only just overlies the inferred provincial boundary between the Tomkinson Province and the Warramunga Province, the latter of which plays host to the majority of the gold mineralisation in Tennant Creek.

The area has been the subject of various phases of modern exploration most recently in the period 2009-2011 by the Uranium West / Run Jungle Resources J.V. targeting Tennant Creek IOCG style Au+/- U mineralisation. Work during this phase included 100m line spaced geophysical surveys of which two targets were diamond drilled with no significant results and several phases of rock chip sampling with no significant results reported. Prior to the Uranium West / Rum Jungle J.V. the tenement was held by Giants Reef Mining also targeting Tennant Creek IOCG style gold mineralisation with focus on the more subtle magnetic anomalies as seen at the nearby Chariot and Malbec discoveries. Geophysical techniques were used to focus on these areas but no significant anomalies were identified and the area was slowly relinquished. Earlier workers (Golden Plateau EL4895) identified and drill tested a number of geophysical targets, the best result being 4m @2.37% Cu in a chloritised magnetite quartzite at The Chook prospect but the target was deemed too small and the area was relinquished. The location of The Chook is not known from the MODAT data base but given the description of Warramunga Formation in the drill results it appears unlikely that it is located within EL29341.

EL29341 does not include any mapped occurrences of the Warramunga Formation and the arenites of the Hayward Creek Formation appear unlikely hosts for significant mineralisation, geophysical work undertaken by previous explorers in the broader area
identified several targets which were followed by drill testing but failed to yield any significant results from within the project and as such the tenement is considered to have limited prospectivity for significant gold mineralisation and is recommended for surrender.
Figure 4 General geology of EL29340 and EL29341, from Pine Creek 5270, 1:100,000 map (GDA94 Z52)
7 EXPLORATION ACTIVITY YEAR ENDING 30\textsuperscript{TH} JUNE 2013

There has been no on ground exploration activity competed on any of the tenements in GR303/13 in the current reporting period. Work has been limited to desktop reviews and data compilation using available NTGS data sets. These data sets have proved invaluable in the first pass evaluation of the tenements and when cross referenced with abstracts of the from Annual Technical Reports written by previous operators in the MEX system has allowed rapid evaluation of the project with limited expenditure.

8 RECOMMENDATIONS AND CONCLUSIONS

On the basis of the desktop reviews completed during the reporting period the tenements comprising the Tennant Creek Project are considered to have limited prospectivity to host significant gold mineralisation and as such have been recommended for surrender. This report being both the first Annual and Final Surrender report for the project and the tenements were surrendered on the 25\textsuperscript{th} of September 2013.

9 REFERENCES

