RELINQUISHMENT REPORT

EL 23655 ‘LANDER’

REYNOLDS RANGE PROJECT

From 12 June 2003 to 11 June 2007

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1.0 SUMMARY

Tanami Gold NL identified the potential for quartz-vein-hosted gold mineralisation in the Proterozoic basement rocks of the Reynolds Range area. EL 23655 was granted to Select Resources Pty Ltd (Select) on 12 June 2003 and, subject to a Joint Venture Agreement, is being explored by Tanami Exploration NL (TENL), a wholly owned subsidiary of Tanami Gold NL (TGNL), a publicly listed company as part of their Reynolds Range Project.

The tenements of the Reynolds Range Project lie in Central Australia centred approximately 225 kilometres north-northwest of Alice Springs (Figure 1). EL 23655 is situated in the central part of the Aileron Province of the Arunta Region and is covered by the Mount Peake, Napperby, and Mount Theo 1:250,000 Geological Sheets.

After four years of tenure more than half of the tenement area was surrendered (Figure 2). Exploration on relinquished tenement portions of EL 23655 by Select and TENL is listed in Table 1.

Table 1: Exploration Summary

<table>
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<th>Method</th>
<th>Relinquished area of EL 23655</th>
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<tr>
<td>Rock Chip Sampling</td>
<td>15 samples</td>
</tr>
<tr>
<td>Vegetation Sampling</td>
<td>10 samples</td>
</tr>
<tr>
<td>Lag Sampling</td>
<td>197 samples</td>
</tr>
<tr>
<td>RAB Drilling</td>
<td>124 holes, 4,783 metres</td>
</tr>
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As part of a regional study of the Reynolds Range area TENL completed an interpretation of the regional geology, reprocessed aeromagnetic data and carried out regolith mapping.

Geochemical sampling in the area of the Red Hackle prospect returned a best rock chip result of 108 ppb Au, 1,625 ppm As, 259 ppm Bi and 1,234 ppm Cu from a known anomalous area at Red Hackle East. Lag sampling outlined the Red Hackle Dam anomaly with a best result of 194 ppb Au, which could not be improved with infill sampling. Results of vegetation sampling highlighted detectable concentrations of various metals, including Au.

No significant results were received from RAB drilling testing Lander beds to the west of Red Hackle.

2.0 INTRODUCTION

EL 23655 is explored as part of TENL’s Reynolds Range Project, which is located approximately 225 kilometres north-northwest of Alice Springs (Figure 1). The licence area lies within the Mt Peake, Napperby and Mt Theo 1:250,000 map sheets and is situated about 200 km southeast of the Granites mine.

Access to the Reynolds Range project area is via the Stuart Highway, and then a major gravel road between Aileron and Yuendumu. Various station tracks provide further access throughout the licence area. The Lander River truncates the SE portion of the tenement. Good outcrop and subcrop is found over much of the eastern part of the Lander tenement providing good geological exposure. This area is dominated by the Yindjirbi, Yundurbulu, and Giles Ranges, whilst the western area of the Lander the tenement is mostly covered by aeolian sands over flat plains (Messenger, 2004).

This report covers all exploration carried out on the relinquished tenement portions for the period 12 June 2003 to 11 June 2007.
3.0 TENURE

EL 23655 was applied for and granted to Select Resources Pty Ltd (Select), a private exploration and investment company, on 12 June 2003 for a period of six years. TENL entered into an option agreement with Select on 17 December 2004 and is currently managing exploration within the licence area. After four years of tenure a partial relinquishment was completed (Figure 2). Tenement details are shown below in Table 2.

Table 2: Tenement Details

<table>
<thead>
<tr>
<th>Tenement</th>
<th>Tenement No</th>
<th>Blocks Granted</th>
<th>Blocks Relinqu</th>
<th>Blocks Retained</th>
<th>Grant Date</th>
<th>Expiry</th>
</tr>
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<tbody>
<tr>
<td>Lander</td>
<td>EL 23655</td>
<td>480</td>
<td>282</td>
<td>198</td>
<td>12 Jun 03</td>
<td>11 Jun 09</td>
</tr>
</tbody>
</table>

4.0 GEOLOGY

The tenements of the Reynolds Range Project cover Palaeoproterozoic metasediments and intrusives in the central Aileron Province of the Arunta Region. The surface geology has been mapped and described by the Northern Territory Geological Survey (NTGS) in the 1:250 000 scale Mount Peake (SF53-05), Napperby (SF53-09) and Mount Theo (SF52-08) sheets. About 30% of the tenement area comprises outcrop of Palaeoproterozoic Arunta basement rocks, with the remaining areas covered by recent transported sediments.

The following description of regional and local geology has been taken from Messenger, 2004. Ahmad (2001) presented the 2nd generation 1 : 2.5M scale geological map of the NT with revised terminology and geological concepts. Under this new scheme the north Arunta forms part of the Central Australian Mobile Belt (CAMB) and the Lander Rock beds are classified as P4, ie correlatives of the Killi Killi Formation in the adjoining North Australian Craton (NAC). The correlation between the Lander Rock beds and Killi Killi Formation follows from Hendrickx et al. (2000). In effect, the major WNW-trending suture zone that separates the NAC and CAMB forms a deformation gradient of increasing metamorphic grade to the south from the greenschist facies NAC to the upper amphibolite-granulite facies central and southern CAMB. This suture zone with its prevalent WNW to NW-trending crustal-scale structures may prove to have substantial, as yet unrealised economic potential.

At the district or project scale, EL 23655 straddles the contact zone between a granite-gneiss terrain (P6 - 1800 to 1700 Ma) to the north and a meta-turbidite terrain (P4 Lander Rock beds - 1880 to 1850 Ma) to the south. These terrains are separated by 1850 - 1800 Ma P5 granite. Most mineralisation outlined to date is hosted by upper greenschist to lower amphibolite facies phyllite, dolerite, greywacke and hornfels of the Lander Rock beds. Important structures trend 320°, 030° and 065° forming thrusts and conjugate compressional fault sets.

The interpreted geology and prospect locations for EL 23655 are shown on Plate 1.

5.0 EXPLORATION COMPLETED

5.1 Year 1

Select completed a literature review, data compilation of previous exploration of the licence area and preliminary negotiations with the Central Land Council and Aboriginal Owners in the first year of tenure.
A detailed discussion of exploration prior to EL 23655 is found in Messenger, 2004. Several prospects were defined, which are shown on Plate 1.

5.2 Year 2

In the second year of tenure TENL completed a regional desktop study of the Reynolds Range project comprising regional bedrock geological interpretation of geophysical data. The study identified that a major Trans-Tanami structural corridor runs through the region and is prospective for hosting Palaeoproterozoic gold mineralisation in Lander Group metasediments.

5.3 Year 3

5.3.1 Geological and Regolith Mapping / Interpretation

In the 2005/2006 reporting period geological field and regolith mapping and interpretation was conducted at Reynolds Range in September 2005. A geological interpretation including EL 23655 is shown on Plate 1. It was undertaken to develop a geological history and mineralisation model of the area. In brief, the model suggests that vein-related gold mineralisation was emplaced late in the Stafford tectono-thermal event (ca.1800 Ma) and so mineralisation was deformed (folded, sheared, boudinaged) during the Yambah event (ca. 1760 Ma), which folds the Reynolds Range Group.

Steve Hill from CRC-LEME, Adelaide University and TGNL geologists undertook a regional regolith mapping program in September 2005. Regolith units and descriptions in the Reynolds Range area are shown on Plate 2. This outlined the areas of cover and bedrock with the aim to assess the successfulness of the surface geochemistry and shallow drilling. Also the geophysical data at Reynolds Range was reprocessed by Resource Potentials, demonstrating a definite improvement from the previous data (Plate 3).

5.3.2 Rock Chip Sampling

A total of 20 rock chip samples were collected on EL 23655 and submitted to Genalysis for multi-element analyses including one calcrete sample from Troutbeck, which was analysed for whole-rock analysis. Sample locations are shown on Plate 4, while all sample and assay data are listed in the digital Appendix.

Elevated results were received from RRK088, which was collected from a known anomalous area at Red Hackle East with 108 ppb Au, 1,625 ppm As, 259 ppm Bi and 1,234 ppm Cu.

5.3.3 Vegetation Sampling

During the regolith mapping one of the main problems identified was that large parts of the Lander River valley, where the best prospects are known, are covered by talus lobes or reworked material from these lobes. Such coarse material is problematic for mineral exploration, particularly the suspicion that basement geochemical signatures are masked and surface sampling is ineffective. Therefore, in conjunction with the regolith overview provided by Steve Hill, it was decided to collect some vegetation samples from various prospects to determine whether common plants in the Reynolds Range area may incorporate metals indicative of buried mineralisation. The study was opportunistic and so provides only limited information about the potential of vegetation sampling. Of broader interest is whether a
suite of plants could be used to identify gold in the Palaeoproterozoic basement irrespective of the regolith.

The specific aims of this study were to:

- identify whether there is a suitable suite of plants covering most of the area,
- see whether sampling and sample preparation is efficient,
- determine whether commercial laboratories can analyse for the desired elements at suitable detection limits at a reasonable price, and
- see whether the samples collected have elevated concentrations of metals indicative of gold mineralisation,

Metal concentrations variations between various tissues (e.g., leaves versus bark) and seasonality of sample collection (wet versus dry climatic conditions) were not addressed.

Common plant species were targeted as they are most likely to be regionally useful. Mulga (*Acacia aneura*) is common in the Reynolds Range area with mulga woodlands common on sheetwash plains. Spinifex (*Troidia sp.*) is also very common, particularly in areas with well drained soils (aeolian sand, hills). Mulga and spinifex sometimes occur together, so it is possible to calibrate these species with each other. River red gum (*Eucalyptus calmandensis*) is common along river courses and could provide a useful reconnaissance species, especially where drainage cuts structural corridors. These three species are found in many regolith landforms over larger areas of the greater Reynolds Range area. Moreover, they are readily identified and are among the species most likely to be used for regional exploration.

A total of 10 samples were collected on the relinquished tenement portions of EL 23655 ([Plate 4](#)). Sample and assay data are included in the digital Appendix. Fifty gram samples were placed into paper bags and dried in the sun. Disposable latex gloves were used to preclude human contamination. Samples were ground successfully using a household electrical coffee grinder. Leaves were collected from mulga, river red gum and one mistletoe from a river red gum. Seed spears without seeds were collected from spinifex.

Results highlighted detectable concentrations of various metals, including Au. Initial observations include:

- Profound differences between mulga leaves and spinifex seed spears collected at same site for both MS/OES and INAA methods. As, B, Ba, Br, Ca, Ce, Co, Cu, Dy, Er, Eu, K, La, Li, Mg, Mn, Nd, P, Pr, Rb, S, Sm, Sr, Tb, Y, Yb, Zn greater in mulga relative to spinifex, whereas Cr and Au are greater in spinifex relative to mulga.
- Western Creek river red gum samples elevated in Be, K, Tl and U, with further elevation of these elements in attached mistletoe.

### 5.3.4 Lag Sampling

Lag sampling was completed at the **Red Hackle Dam** Anomaly on a 100m x 100m grid. A total of 183 samples were collected ([Plate 4](#)). All assay data are included in the digital Appendix. Best result was 194ppb Au with a total of 11 samples returning ≥5ppb Au.
5.3.5 Drilling

RAB/Aircore drilling commenced at the Red Hackle prospect area in May 2006 with RAB and Aircore drilling comprising three lines of drilling at 2000m x 200m along strike to the east and west of surface gold anomalism on the Red Hackle trend.

A total of 124 RAB holes for 4,783m were completed within the relinquished tenement area, testing the western strike extension of the Red Hackle trend, which also targeted an interpreted flexure in the magnetic fabric. Drill hole locations are shown on Plate 4 with drill and assay data located in the digital Appendix.

Drilling along the Red Hackle trend defined a wide zone of typically shallow-weathered sheared and quartz veined greenschist facies sandstones and siltstones typical of Lander Formation turbidites. Where this zone crops out at Red Hackle Ridge West the ‘shear’ zone is named the ‘Smoking Gun Shear’. The northern margin of this sheared zone is locally intruded by dolerites. Weak gold and arsenic anomalism was returned in assay results from both the Smoking Gun Shear zone and the deeper weathered rocks to the north.

5.4 Year 4

Infill lag sampling was carried around a 194ppb Au and 162ppm As lag sample (RRL0046) collected as part of a 200m x 200m grid around the Red Hackle Dam anomaly. The anomalous lag sample consisted of 95% rock chips of coarse-grained sandstone and weathered phyllitic metasiltstone and 5% translucent, coarsely crystalline vein quartz. The sample is situated on the northern margin of a belt of quartz veining that comprises the Red Hackle trend. There are no outcropping rocks in the vicinity so follow-up rock chip sampling was not possible. Infill lag sampling of the 2-6mm fraction (as for the original program) was completed on a 50m spacing around the 194ppb Au anomaly for a total of fourteen samples (RLL0191-206 including a standard and a blank).

No elevated gold results were returned.

6.0 BIBLIOGRAPHY


