COMBINED

RELINQUISHMENT REPORT

EL’s 5888 and 5889

BIRRINDUDU - SUPPLEJACK PROJECT

From 22 August 2002 to 21 August 2007

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November 2007

Distribution:
o  Department of Business, Industry & Resources Development (1)
o  Native Title Unit - Central Land Council (1)
o  Tanami Gold NL - Perth (1)

File: cr59dpifmRR2007_Birrindudu - Supplejack
**DIGITAL APPENDICES** (supplied on CD)

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<td>Drillhole collar locations</td>
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<td>Geology descriptions</td>
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1.0 SUMMARY

EL 5888 and EL 5889 are part of the Birrindudu - Supplejack Project, which is situated approximately 230km east-southeast of Halls Creek, in the north-western portion of the Tanami Desert (Figure 1). The tenements are granted to Tanami Exploration NL (TENL), a wholly owned subsidiary of Tanami Gold NL (TGNL), a publicly listed company. From December 2000 to December 2005 it formed part of the Tanami (NT) JV, a Joint Venture agreement between Tanami Gold NL (TGNL) and Barrick Gold of Australia Limited (Barrick). A partial surrender was completed for both tenements in August 2007 (Figure 2).

Exploration on the relinquished tenement area was completed by Barrick and TENL. It included geochemical sampling, vacuum drilling and a geological re-interpretation. A summary of exploration is listed in Table 1.

Table 1: Summary of Exploration Activities

<table>
<thead>
<tr>
<th>Tenement</th>
<th>Rock Chips</th>
<th>Lag Sampling</th>
<th>Drill Hole BLEG Sampling</th>
<th>Vacuum Drilling</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL 5888</td>
<td>-</td>
<td>9 samples</td>
<td>6 samples</td>
<td>6 holes, 53m</td>
</tr>
<tr>
<td>EL 5889</td>
<td>4 samples</td>
<td>55 samples</td>
<td>48 samples</td>
<td>48 holes, 426m</td>
</tr>
<tr>
<td>Totals</td>
<td>4 samples</td>
<td>64 samples</td>
<td>54 samples</td>
<td>54 holes, 479m</td>
</tr>
</tbody>
</table>

No significantly elevated results for gold were returned from the geochemical sampling and drilling.

2.0 INTRODUCTION

The Birrindudu - Supplejack Project is located approximately 230km east-southeast of Halls Creek, in the northwestern region of the Tanami Desert. The tenement group lies on the Birrindudu (SE52-11) and Tanami (SE52-15) 1:250,000 geological map sheets. Access from Halls Creek is southeast via the unsealed Tanami Highway past the Tanami Mine and then on the Lajamanu road and station tracks. Access from Alice Springs is northwest via the Tanami Highway for approximately 700km up to the Lajamanu turnoff (Figure 1).

The area is affected annually by high temperatures and seasonal rainfall associated with the northern monsoon, which generally extends from November to April. During this time access via road may be restricted due to wet conditions.

The project covers an area of gently undulating hills and aeolian sand plains, dominated by spinifex, acacia thickets and sparse stands of eucalypts. Scarp of flat lying Proterozoic sandstones (20-50m) surround the plains to the east, south and west of the project, and support little but spinifex and sparse acacia scrub. Occasional springs and ephemeral waterholes occur close to these scarps (Purcell, 2004).

3.0 TENURE

EL 5888 and EL 5889 are part of the Birrindudu - Supplejack Project. Tanami Exploration NL, a wholly owned subsidiary of Tanami Gold NL (TGNL), is the registered title holder of both tenements. Barrick
Gold of Australia Limited (Barrick) managed exploration through the Tanami (NT) JV agreement with TGNL, from December 2000 to December 2005.

A partial surrender was completed for both tenements in August 2007 (Figure 2). Tenement details are listed below in Table 2.

Table 2: Tenement Details

<table>
<thead>
<tr>
<th>Tenement</th>
<th>Tenement No</th>
<th>Blocks Granted</th>
<th>Blocks Relinq. 2005</th>
<th>Blocks Relinq. 2007</th>
<th>Blocks Retained</th>
<th>Grant Date</th>
<th>Expiry Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplejack EL</td>
<td>5888</td>
<td>77</td>
<td>78</td>
<td>22</td>
<td>55</td>
<td>22 Aug 02</td>
<td>21 Aug 08</td>
</tr>
<tr>
<td>Birrindudu EL</td>
<td>5889</td>
<td>99</td>
<td>98</td>
<td>26</td>
<td>73</td>
<td>22 Aug 02</td>
<td>21 Aug 08</td>
</tr>
</tbody>
</table>

4.0 GEOLOGY

4.1 Regional Geology

The Tanami Region comprises a package of Neo-Archaean to Meso-Proterozoic rocks, dominated by multiply deformed Palaeoproterozoic metasediments and felsic and mafic intrusives. It forms part of the North Australian Craton, separating the Palaeoproterozoic Halls Creek and Arunta Orogens. Collectively the region has a gold endowment in excess of 12 million ounces, and to date is recognised as one of the world’s most fertile Palaeoproterozoic gold provinces (TENL, 2005).

The Tanami Region has been divided into a number of stratigraphic packages.

ARCHAEOAN Basement

The presence of Archaean basement has been noted in drill core and in a single area of outcrop south east of the Granites mine. Rocks in this area, known as the Billabong Complex, contain banded granite and gneisses. SHRIMP zircon U-Pb dating of these rocks gives an age of 2514±3 Ma. Recent review of this outcrop suggests this age constraint may have sampled Archaean xenoliths within a Proterozoic gneiss.

PROTEROZOIC Tanami Group

The Tanami Group unconformably overlies Archaean basement. Currently the Tanami Group is subdivided into two separate formations – the Dead Bullock Formation and the conformably overlying Killi Killi Formation (Wygralak et. al., 2004). Work undertaken by Bagas (pers. comm. 2007) suggests an additional subdivision to the Tanami Group, namely the Stubbins Formation.

The Stubbins Formation is currently interpreted to be the oldest unit within the Tanami Group recently constrained by a ca. 1864 Ma SHRIMP zircon U-Pb date from an intrusive unit (Bagas et. al., 2007). The Stubbins Formation occurs as a ~200 m thick succession of iron-rich siltstone, graphitic and carbonaceous shale, banded and nodular chert, siltstone, basalt, dolerite sills and rare turbiditic sandstone (wacke), and a 2 to 3 km-thick lower succession of interlayered sandstone, pelite, and dolerite sills (Bagas et. al., 2007b).

The Dead Bullock Formation is interpreted to be stratigraphically above the Stubbins Formation, constrained by a SHRIMP U-Pb zircon age of ca 1838 Ma from a tuffaceous unit within the Callie Member (Bagas et. al., 2007a and references therein). The Dead Bullock Formation is further subdivided into two separate members – the lower Ferdies member and the overlying Callie member. The Ferdies member comprises a fining upward package of thinly bedded carbonaceous sandstone
and siltstone. The Callies member comprises chemical sediments, silicate facies banded iron formation, calc silicate and cherts in a siltstone dominated package. Bands of chert nodules are common. The upper contact of the Dead Bullock Formation is considered gradational into the Killi Killi Formation (Lambeck, 2004).

The Killi Killi Formation is composed of poorly sorted sandstones with substantial detrital mica component. The formation is interpreted to be a 4000 m thick turbidite package (Wygralak et al., 2004). Currently the age of the Killi Killi Formation is constrained by the ca. 1838 Ma age of the Dead Bullock Formation and the ca. 1820 Ma age of volcanic rocks overlying the Killi Killi Formation (Bagas et al., 2007a).

Doleritic sills cross cut both Dead Bullock and Killi Killi Formations. Peperitic textures are locally developed indicating emplacement synchronous with deposition.

Tanami Group rocks were subjected to the 1835-1825 Ma Tanami Orogeny. This involved disharmonic and angular folding combined with regional metamorphism to greenschist and locally, amphibolite facies (Bagas et al., 2007a).

**Ware Group**
Rocks of the Ware Group are currently interpreted to unconformably overlie the Tanami Group. The Ware Group comprises four distinct packages.

Quartz sandstone and granular conglomerate comprise the Mt Winnecke Formation (ca. 1825 Ma). Volcanogenic sandstone interbedded with felsic volcanic rocks comprise a younger package known as the Nanny Goat Volcanic Complex (ca. 1820 Ma). Conglomeratic sandstone, siltstone and fine grained sandstones comprise the Century Formation (ca. 1815-1800 Ma) (Bagas et al., 2007a and references therein).

Intrusives of the Birthday Suite are thought to correlate with Ware Group volcanics as interpreted intrusive ages are between 1825 and 1850 Ma. Birthday suite intrusives are generally restricted to the North East part of the Tanami.

**Mount Charles Formation**
The Mount Charles Formation contains poorly exposed intercalated basalts and fine to coarse turbidite, currently interpreted to have been deposited in a narrow continental rift setting (Wygralak et al. 2004). The Mount Charles Formation is limited to the western margin of the Frankenia Dome. It is believed to unconformably overlie the Ware Group, and to be unconformably overlain by the Birrindudu Group (Wygralak et al., 2004).

A further five events of complex deformation are interpreted to have occurred to the aforementioned packages between 1820 and 1790 Ma (Bagas et al., 2007a and references therein) although current interpretation suggest the Mount Charles Formation may only have experienced the last event. This series of deformation events was accompanied by broadly synchronous emplacement of Frederick and Grimwade Suite intrusives.

**Pargee Sandstone**
The Pargee Sandstone consists of a thick bedded quartz arenite, lithic arenite and conglomerate, with a maximum thickness of 1300m (Wyralak et al., 2004). The unit unconformably overlies the Killi Killi Formation, and is overlain by Gardiner Sandstone of the Birrindudu Group.

**Birrindudu Group**
The Birrindudu Group occurs as a widespread unconformable blanket across much of the Tanami. It is broken down into four separate units – The Gardiner Sandstone, Supplejack Downs Sandstone, Talbot
Well Formation and Coomarie Sandstone. These units include lithic arenites, quartz arenites and conglomerates. Subtle variations make these units distinguishable.

**PHANEROZOIC**

Antrim Plateau Volcanics comprise the oldest reported Phanerzoic rocks within the Tanami Region. These normally consist of intensely weathered basalt >20 metres thick, capped by pisolithic laterite. The exposures are flat-lying and unconformably overlie the Proterozoic lithologies. (TENL, 2005)

The southern part of the Tanami Region is covered by Permian sandstone and conglomerate of the Canning Basin.

**GOLD MINERALISATION**

Bagas et. al. (2007a) suggests that gold was emplaced into Tanami Group lithologies as two separate events. This includes an early ca. 1835-1825 Ma gold event effecting the Stubbins Formation and a second 1790 Ma event in the Dead Bullock and Killi Killi Formations, the Ware Group, and Mt Charles Formation.

4.2 Local Geology

The interpreted geology for the relinquished portions of EL 5888 and EL 5889 is shown on Figure 3. TMI aeromagnetics is shown on Figure 4.

The Birrindudu - Supplejack area comprises isolated rafts of Tanami Group basement, surrounded and covered by thick sequences of flat lying Birrindudu Group sediments. These sediments form elevated plateaus rising 20-50 m above surrounding topography (Purcell, 2004). Outcrops of Tanami Group lithologies are relatively rare over the majority of the project area, occurring as highly weathered isolated outcrop and subcrop on shallow topographic rises. Basement is more commonly covered by a transported horizon of alluvial and aeolian material.

Transported nodular and pisolithic gravels occur over and around the flanks of the majority of shallow rises. This material comprises both locally derived and transported material. In some cases, gravels are multiple metres thick, and locally iron cemented (ferricretes). Thickness of material decreases with increasing proximity away from rises.

Aeolian sands cover much of the low lying areas varying in thickness from less than 10 cm to multiple metres. Alluvial material commonly occurs immediately beneath aeolian sands. This material comprises poorly sorted sands, clays and often basal gravels with thicknesses of single metres to in excess of 30 metres over areas of localised palaeochannel development.

Aeromagnetic assessment suggests that basement lithologies are complexly deformed. Tight north-south oriented folding is observed in magnetically responsive sedimentary marker units in the north and west of EL 5889. Local faulting and shearing is also evident, manifested as offsets of marker units, and demagnetised zones (Purcell, 2004).
Regional Geology

- Pale greywacke with intercalated mafics (High mag response; Ptkm)
- Interbedded coarse sandstone and greywacke (Mod mag response; Ptk-SS)
- Fine to medium grained clastic sediments interbedded BIF (Very High mag response Ptd)
- Interbedded greywacke and siltstone - greywacke dominant (Low mag response; Ptkn)
- Browns Dome metamorphic complex (Myloritic zone P-YM)
- Gneiss - undifferentiated ortho+/-paragneiss (P-MG)
- Granite - low magnetic response (Pgn)
- Platform cover sandstone-dominated sequence (Ps)
- Felsic volcanic, volcaniclastic (P-FU)
- Amphibolite (P-AM)
- Dolerite (P-OD)
- Mafic volcanics (P-BV)
- Amphibolite (P-AM)
- Unconformity
- Faults (inferred)
- Trendlines

Interbedded greywacke and siltstone - abundant intercalated mafics (high mag response; Ptkn)
Interbedded coarse sandstone and greywacke (mod mag response; Ptk-SS)
Fine to medium grained clastic sediments interbedded BIF (very high mag response; Ptd)
Mafic volcanics (P-BV)
Amphibolite (P-AM)
Granite - undifferentiated ortho+/-paragneiss (P-MG)
Browns Dome metamorphic complex (myloritic zone P-YM)
Unconformity
Faults (inferred)
Trendlines

Interpreted Geology

- Interbedded greywacke and siltstone - abundant intercalated mafics (High mag response; Ptkn)
- Interbedded coarse sandstone and greywacke (Mod mag response; Ptk-SS)
- Fine to medium grained clastic sediments interbedded BIF (Very High mag response Ptd)
- Mafic volcanics (P-BV)
- Amphibolite (P-AM)
- Granite - low magnetic response (Pgn)
- Platform cover sandstone-dominated sequence (Ps)
- Felsic volcanic, volcaniclastic (P-FU)
- Unconformity
- Faults (inferred)
- Trendlines

Flood basalt (Ela)
Dolerite (P-OD)
Gabbro (P-OG)
Mafic volcanics (P-BV)
Amphibolite (P-AM)
Granite - undifferentiated ortho+/-paragneiss (P-MG)
Browns Dome metamorphic complex (myloritic zone P-YM)
Unconformity
Faults (inferred)
Trendlines
TANAMI GOLD NL

EL5888 & EL5889 PARTIAL RELINQUISHMENTS

TMI AEROMAGNETICS

ORIGINATOR: C. Rohde
DATE: Nov 2007
DRAWN: M.H.Bailey

PLAN No: ETP_4_1_004

FIGURE 4
5.0 EXPLORATION COMPLETED

All field exploration on the relinquished tenement areas of EL 5888 and EL 5889 was carried out by Barrick in the first three years of tenure. A summary of exploration is shown in Table 1. All sample data and assay results are included in the digital appendix. All surface sample locations are shown on Plate 1 and all drill hole locations on Plate 2.

TENL completed an assessment and compilation on the geology, gold mineralisation and extent of previous activities over the Eastern Tanami Project area including EL 5888 and EL 5889. A geological re-interpretation of the Birrindudu - Supplejack area was undertaken incorporating 1:250,000 fact mapping, historic bottom of hole (BOH) drilling, close spaced aeromagnetics and the Barrick geological interpretation (Figure 3).

5.1 EL 5888

Barrick conducted exploration on EL 5889 during 2003 with all activities detailed in Purcell, 2004. Exploration included minor lag sampling (9 samples) and vacuum drilling (5 holes). No significant results were returned.

5.2 EL 5889

Barrick conducted exploration on EL 5889 during 2003 and 2004 with all activities detailed in Purcell, 2004 and Purcell, 2005.

Work conducted in 2003 included rock chip sampling and lag sampling. No significant gold anomalism was identified from a total of 4 rock chip samples and 56 lag samples taken from the relinquished portion of EL 5889. The highest rock chip value was 3ppb Au (Plate1).

Exploration in 2004 included reconnaissance vacuum drilling of 48 holes for 426m on the relinquished portion of EL 5889. Only disappointing assay results were received, with a maximum result of 620ppb in BDVA0309 (Plate 2).

6.0 BIBLIOGRAPHY


