TANAMI
EXPLORATION NL
ACN 063 213 598

PARTIAL RELINQUISHMENT REPORT

EL 8809

NORTH BREADEN

From 17 October 2002 to 16 October 2007

Author
J Rohde

January 2008

Distribution:
- ❑ Department of Primary Industry, Fisheries and Mines (1)
- ❑ Central Land Council (1)
- ❑ Tanami NL, Perth (1)

File: cr63_dpifmRR2007_North Breaden

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NB_WADL3_GEOL_2007P	Drillhole geology logs
NB_WADL3_WEAT_2007P	Drillhole weathering
NB_WADS3_DHSURV_2007P	Drillhole downhole survey
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1.0 SUMMARY

Exploration Licence 8809 is situated approximately 250km east-southeast of Halls Creek, in the north-western portion of the Tanami Desert (Figure 1). The tenement is 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 compulsory partial surrender was completed in October 2007 (Figure 2).

Exploration on the relinquished tenement portion 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

Tenement	Vacuum Drilling	Rock Chip Samples	DHBLEG Samples	Lag Samples
EL 8809	27 holes, 205m	16	26	31

Both geochemical surface sampling and vacuum drilling did not return any significant results.

2.0 INTRODUCTION

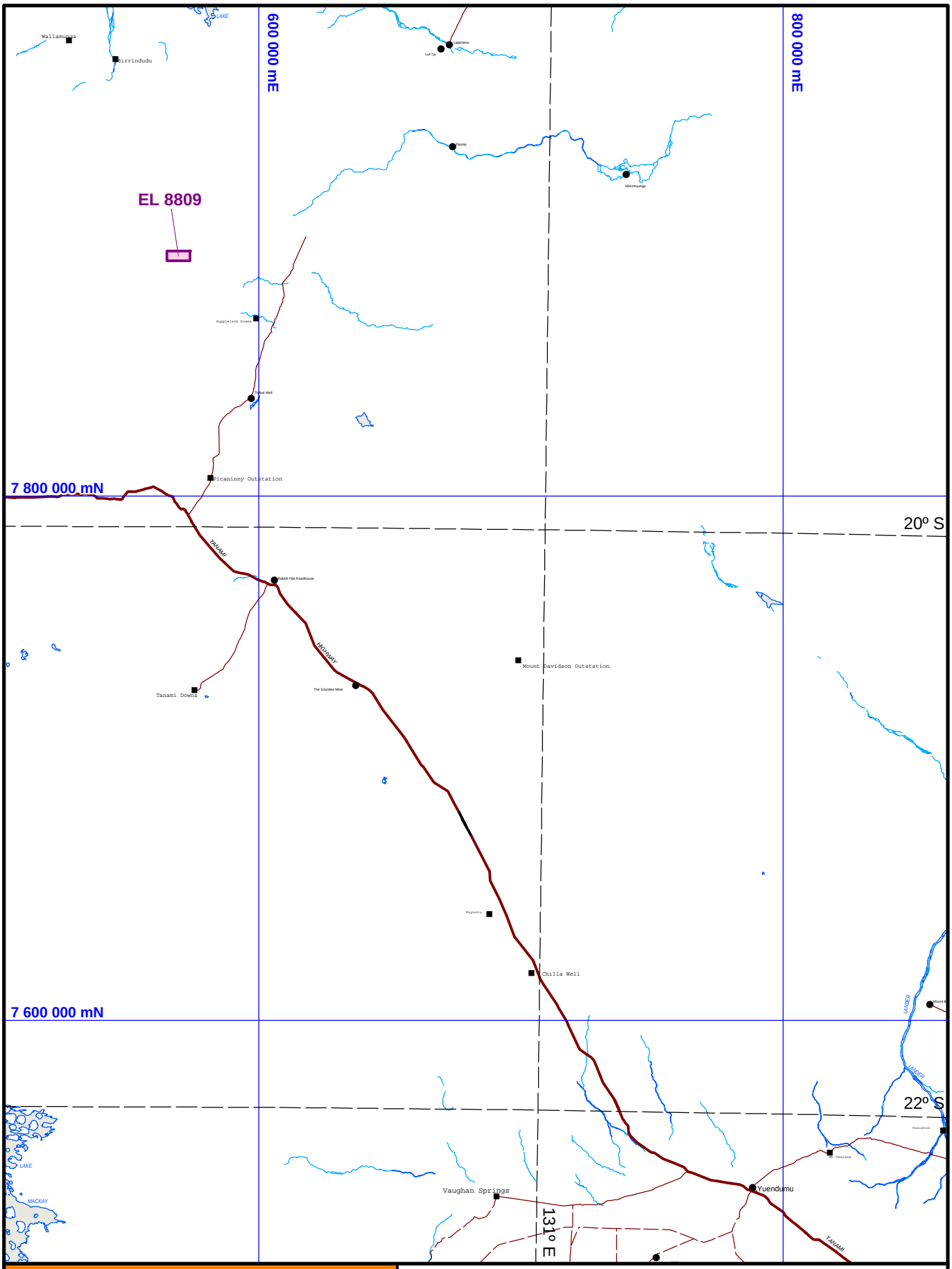
EL 8809 was explored as part of the Supplejack Project, which is located approximately 250km east-southeast of Halls Creek, in the north-western portion of the Tanami Desert. The tenement group lies on the Tanami (SE52-15) and Birrindudu (SE52-11) 1:250,000 geological map sheets. Access from Halls Creek is southeast via the unsealed Tanami Highway for approximately 320km to the Tanami Mine, then 80km north along the Lajamanu (Hooker Creek) Road to the Supplejack Downs homestead, then 40km northwest using station and access tracks. Access from Alice Springs is northwest via the Tanami Highway for approximately 700km until the Lajamanu turnoff.

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

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 (Purcell, 2004).

3.0 TENURE

EL 8809 'North Breaden' forms part of the Supplejack Project (Figure 2). A compulsory partial surrender was completed in October 2007 with tenement details listed below in Table 2.



TANAMI GOLD NL

EASTERN TANAMI

EL 8809 PARTIAL RELINQUISHMENT

TENEMENT LOCATION

ORIGINATOR:	DATE:	DRAWN:
J. Rohde	**Jan 2008**	**M.H.Bailey**

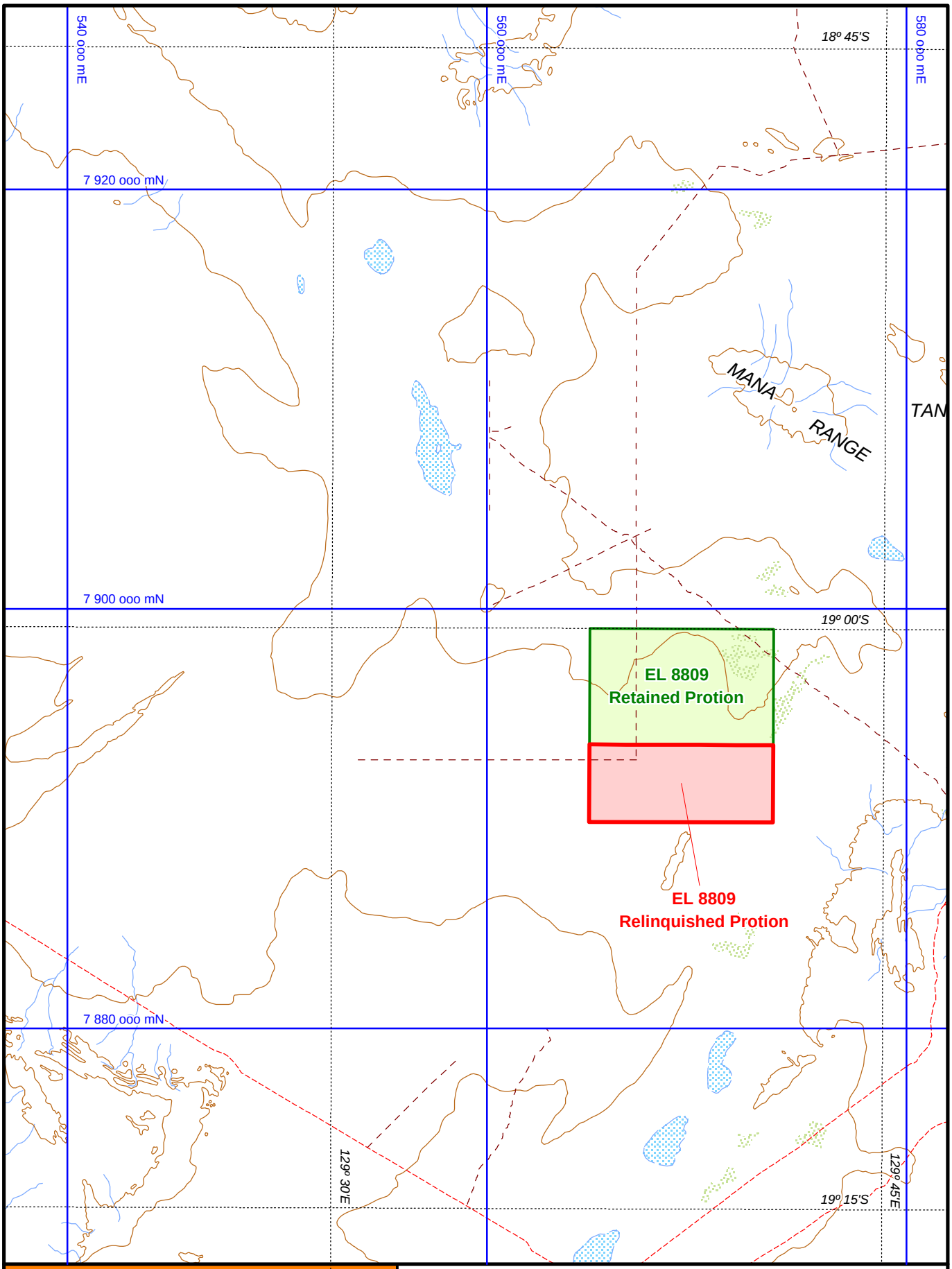
PLAN No: **ETP_SU_1_0_006**

1 : 2,000,000

0 40 80 120

MGA Zone 53 (GDA94) kilometres

FIGURE 1



TANAMI GOLD NL

SUPPLEJACK

EL 8809 PARTIAL RELINQUISHMENT

TENEMENT LOCALITY

ORIGINATOR:	DATE:	DRAWN:
J. Rohde	**Jan 2008**	**M.H.Bailey**

PLAN No: **ETP_SU_1_0_007**

1 : 250,000

0 5 10 15

MGA Zone 52 (GDA94) kilometres

FIGURE 2

Table 2: Tenement Details

Tenement	Tenement No	Blocks Granted	Blocks Relinq.	Blocks Retained	Grant Date	Expiry Date
North Breaden	EL 8809	25	10	15	17/10/2002	16/10/2008

Tanami Exploration NL, a wholly owned subsidiary of Tanami Gold NL (TGNL), is the registered title holder. Barrick Gold of Australia Limited (Barrick) managed exploration through the Tanami (NT) JV agreement with TGNL, from December 2000 to December 2005.

4.0 GEOLOGY

4.1 Regional Geology and Mineralisation

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.

ARCHAEAN

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 inter-layered 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 Callie 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 overly 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 (1825-1815 Ma) and wacke and siltstone comprise the Wilson 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 uncomformably overly the Ware Group, and to be uncomformably 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 uncomformably overlies the Killi Killi Formation, and is overlain by Gardiner Sandstone of the Birrindudu Group.

Birrindudu Group

The Birrindudu Group occurs as a widespread uncomformable 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 Phanerozoic rocks within the Tanami Region. These normally consist of intensely weathered basalt >20 metres thick, capped by pisolitic 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 affecting 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 Supplejack area comprises isolated rafts of Tanami Group basement and large granitoid bodies, 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 lateritic rises. Basement is more commonly covered by a transported horizon of alluvial and aeolian material.

Transported nodular and pisolitic 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. Silcrete is commonly developed within transported material in low lying areas.

Basement Tanami Group rocks comprise deformed and metamorphosed, fine to coarse poorly sorted sandstones, carbonaceous shale, ferruginous shale, chert, ferruginous chert, volcanogenic (pyroclastic?) sediments and dolerite dykes, intruded by stocks of granitic dykes. These are currently interpreted to comprise rocks of the Dead Bullock Formation.

Aeromagnetic assessment of the Supplejack area suggests that basement lithologies are complexly deformed. Tight NNW-SSE folding is apparent through much of the sequence defined by magnetically responsive dolerite marker units and outcrop exposures of deformed

metasediment. Aeromagnetics also suggests the presence of significant faulting and shearing throughout much of the area.

The relinquished tenement area is mainly underlain in the central northwestern part by a granite (Pgn), defined by its low magnetic response, that includes a NW trending dolerite (P-OD). Few occurrences of interbedded greywacke and siltstone units with abundant intercalated mafics (Ptkm) within the granite were noted. The granite is bordering a sandstone dominated sequence (Ps), which underlies the southern portion with the exception of the southwest corner, where an interbedded unit of siltstone with dominant greywacke is present (Plate 1). Aeromag TMI of the relinquished tenement area is shown on Plate 2.

5.0 PREVIOUS EXPLORATION

There is no record of historical exploration within the Supplejack tenement group.

Early explorers Davidson and Talbot passed through the region in 1901 and 1909 respectively, where they recorded the presence of gold at a number of locations, including The Granites, Tanami and Larranganni Bluff (Kookaburra/Sandpiper mineralised system). More recent activities by the NTGS within the Tanami region have been extensive.

6.0 EXPLORATION COMPLETED

Exploration on the relinquished area was completed by Barrick and TENL from 2002 to 2007. A summery of exploration is listed in Table 1.

6.1 Barrick Geochemical Sampling

A total of 16 rock chip samples were collected in conjunction with the regional reconnaissance field mapping. As part of a systematic regional lag sampling program a total of 31 lag samples were collected on the relinquished area.

A total of 26 'DRILL BLEG' samples were taken from the pisolitic / lag rich intervals from the regional vacuum drilling. Samples were sieved to remove aeolian sand and organic contamination before a 500g sample was submitted. All sample locations are shown on Plate 3 and all sample and assay data are included in the digital appendices.

No significant results were returned from any of the geochemical samples.

6.2 Barrick Vacuum Drilling

A total of 27 vacuum drill holes for 205m were completed on the relinquished tenement area. Drilling was completed to a minimum depth of the cover bedrock interface, unless water was encountered. The drilling program was oriented vertically and part of a regional program spaced on a nominal 400m x 800m pattern. Samples were collected in 1m increments.

All drill hole locations are shown on Plate 4 and all sample and assay data are included in the digital appendices.

No significant results were retuned.

6.3 TENL Geological Re-interpretation

In 2006 an assessment and compilation of the geology, gold mineralisation and extent of previous activities was compiled over the Eastern Tanami Project area including the Supplejack tenements. A geological re-interpretation of the Supplejack area incorporated 1:250,000 fact mapping, historic and recent drilling, close spaced aeromagnetics and the Barrick geological interpretation. This compilation is presented on Plate 1.

6.4 TENL Reconnaissance and Rock Chip Sampling

Tanami geologists carried out a reconnaissance program in June / July 2006 to the Birrindudu-Supplejack project areas. During this trip the amount of transported cover, outcrop, rock types and historic drilling completed by Barrick over the planned areas of drilling was assessed. Much of the previous lag sampling was considered ineffective, having sampled transported pisolithic gravel (ferricrete) rather than residual laterite.

Two rock chip samples (SUK 12 and SUK 13) were taken but did not return any significant assay results. The sample locations are shown on Plate 3 and all sample and assay data are included in the digital appendices.

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557 500 mE | 560 000 mE | 562 500 mE | 565 000 mE | 567 500 mE | 570 000 mE | 572 500 mE | 575 000 mE | 577 500 mE

7 900 000 mN | 7 897 500 mN | 7 895 000 mN | 7 892 500 mN | 7 890 000 mN | 7 887 500 mN

Regional Geology

- Flood basalt (Ela)
- Unconformity
- Platform cover sandstone-dominated sequence (Ps)
- Unconformity
- Granite - low magnetic response (Pgn)
- Felsic volcanic, volcaniclastic (P-FU)
- Dolerite (P-OD)
- Gabbro (P-OG)
- Interbedded greywacke and siltstone - greywacke dominant (Low mag response; Ptkn)
- Interbedded greywacke and siltstone - abundant 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)
- Mafic volcanics (P-BV)
- Amphibolite (P-MA)
- Gneiss - undifferentiated ortho+/-paragneiss (P-MG)
- Browns Dome metamorphic complex (Mylonitic zone P-YM)
- Faults (inferred)
- Trendlines

Old Soldier

Pgn

Pgn

EL 8809

Ps

TANAMI GOLD NL

NORTH BREADAN

EL 8809 - PARTIAL RELINQUISHMENT

INTERPRETED GEOLOGY

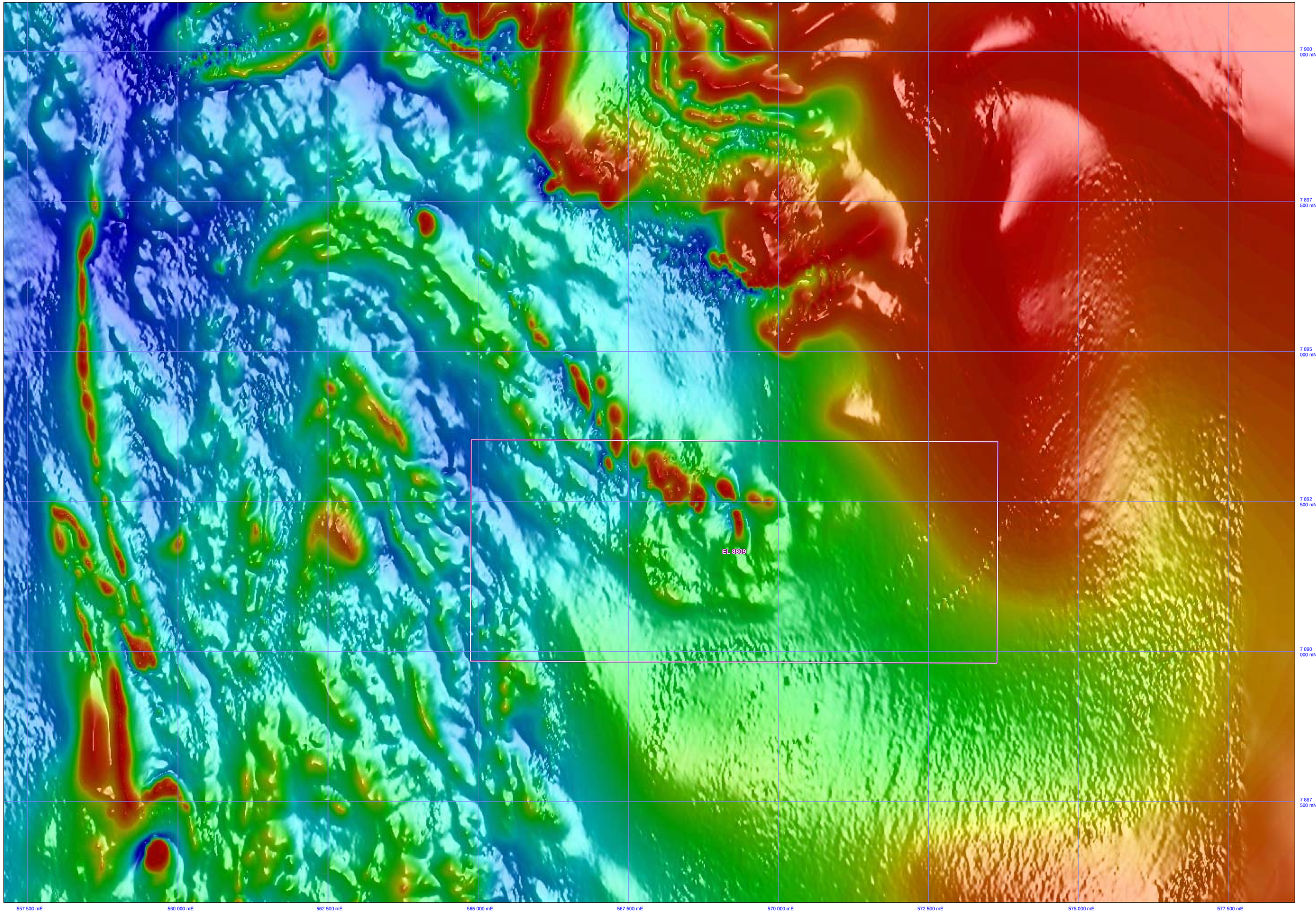
2 0 2 4 8 12

MGA Zone 52 (GDA94) | 1 : 100,000 | kilometres

ORIGINATOR:	DATE:	DRAWN:
J. Rohde	Jan 2008	M.H.Bailey

PLAN No: ETP_SU_2_002

PLATE 1



TANAMI GOLD NL

NORTH BREADAN

EL 8809 - PARTIAL RELINQUISHMENT

AEROMAG TMI

2 0 2 4 8 12

MGA Zone 52 (GDA94) 1 : 100,000 kilometres

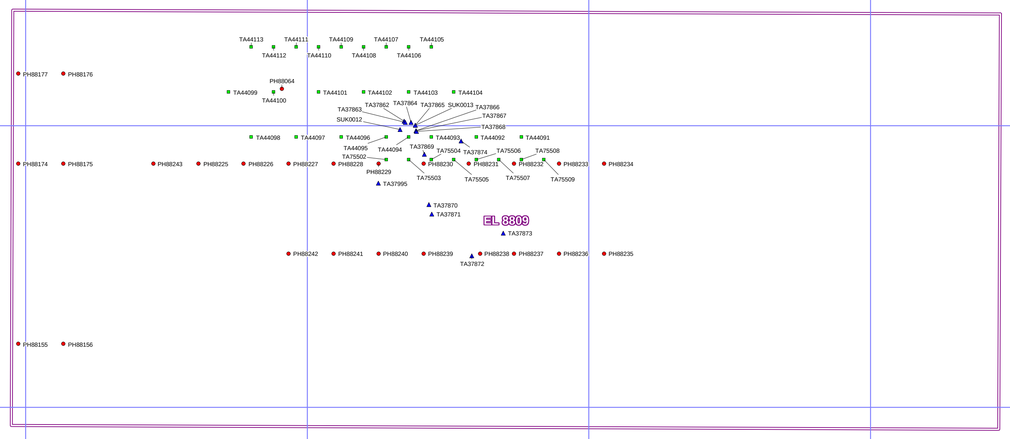
ORIGINATOR:	DATE:	DRAWN:
J. Rohde	Jan 2008	M.H.Bailey

PLAN No: ETP_SU_4_1_001

PLATE 2

557 500 mE | 560 000 mE | 562 500 mE | 565 000 mE | 567 500 mE | 570 000 mE | 572 500 mE | 575 000 mE | 577 500 mE

7 900 000 mN | 7 897 500 mN | 7 895 000 mN | 7 892 500 mN | 7 890 000 mN | 7 887 500 mN



443

425

Surface Sampling
- Drillhole derived BLEC (26)
- Lag sample (31)
- Rock chip sample (16)

TANAMI GOLD NL

NORTH BREADAN

EL 8809 - PARTIAL RELINQUISHMENT

SURFACE SAMPLING

2 0 2 4 8 12 kilometres

MGA Zone 52 (GDA94) **1 : 100,000**

ORIGINATOR:	DATE:	DRAWN:
J. Rohde	**Jan 2008**	**M.H.Bailey**

PLAN No: **ETP_SU_5_001**

PLATE 3

557 500 mE | 560 000 mE | 562 500 mE | 565 000 mE | 567 500 mE | 570 000 mE | 572 500 mE | 575 000 mE | 577 500 mE

7 900 000 mN
7 897 500 mN
7 895 000 mN
7 892 500 mN
7 890 000 mN
7 887 500 mN

443

SUVA0115 SUVA0114 SUVA0162 SUVA0002

SUVA0112 SUVA0113 SUVA0181 SUVA0163 SUVA0164 SUVA0165 SUVA0166 SUVA0167 SUVA0168 SUVA0169 SUVA0170 SUVA0171 SUVA0172

EL 8809

SUVA0180 SUVA0179 SUVA0178 SUVA0177 SUVA0176 SUVA0175 SUVA0174 SUVA0173

SUVA0093 SUVA0094

425

Drilling
- Vacuum drillhole (27)

TANAMI GOLD NL

NORTH BREADAN

EL 8809 - PARTIAL RELINQUISHMENT

DRILLING

2 0 2 4 8 12

MGA Zone 52 (GDA94) **1 : 100,000** kilometres

ORIGINATOR:	DATE:	DRAWN:
J. Rohde	**Jan 2008**	**M.H.Bailey**

PLAN No: **ETP_SU_6_004**

PLATE 4