

BARRICK GOLD OF AUSTRALIA LIMITED

(ABN 19 008 143 137)

**PROJECT 8440
TANAMI (NT) JV**

SW PARGEE

EL 10139

ANNUAL REPORT

Period 1 January 2003 – 31 December 2003

TECHNICAL REPORT No. 1114

MAP SHEET: SE52-15 (Tanami), SF52-03 (The Granites)

DISTRIBUTION:

1. BGAL – Perth 8440.325
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February 2004

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1.0 SUMMARY

Exploration license (EL) 10139 – SW Pargee, forms part of the Tanami (NT) JV, a Joint Venture agreement between Tanami Gold NL (TGNL) and Barrick Gold of Australia Limited (BGAL). The tenement was granted on 17 October 2002 for a period of six years.

Work conducted since includes detailed data compilation and interpretation, geological field mapping, rock-chip sampling and limited vacuum drilling. These activities are summarised in Table 1 and illustrated in Figure 1.

Tenement	Rock Chips	Lags	Drill BLEG	Vacuum Drilling	
				Holes	Metres
EL 10139	54	287	102	102	921

2.0 LOCATION AND ACCESS

The SW Pargee Project is located approximately 270km south east of Halls Creek, adjacent to the WA/NT border within the western portion of the Tanami Desert. The tenement lies on the Tanami (SE52-15) and The Granites (SF52-03) 1:250,000 geological map sheets. Access from Halls Creek is southeast via the unsealed Tanami Highway for approximately 270km. Access from Alice Springs is northwest via the Tanami Highway for approximately 800km. The highway bisects the tenement area, with the exploration base camp 30km inside the WA border, approximately 7km south of the road. The tenement is traversed by historic exploration tracks that come off the highway to the north and south (Figure 2). The Balgo community is the nearest established town and is approximately 100km, by road to the west of the project. The Groundrush mine is located approximately 80km to the east along the Tanami Highway.

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.

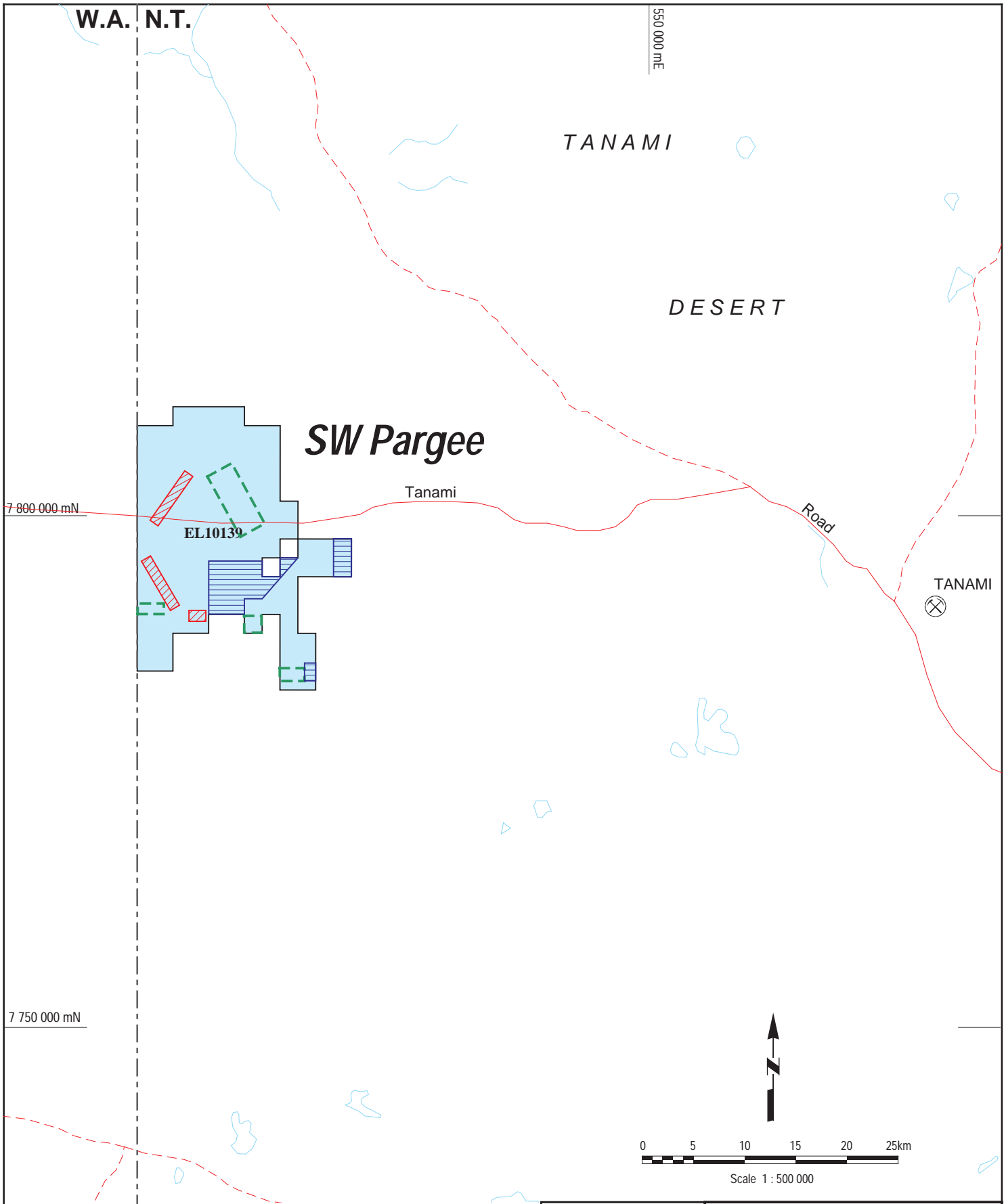
The project covers an area of gently undulating hills and aeolian sand plains, dominated by spinifex, acacia thickets and sparse stands of eucalypts. To the north of the project area, the plains are surrounded by high scarps (20->100m) of flat lying Proterozoic sandstones that support little but spinifex and sparse acacia scrub. Occasional springs and ephemeral waterholes occur close to these scarps.

3.0 TENURE





SW Pargee comprises one Exploration Licence, and forms part of the Tanami (NT) JV project. Details are listed in Table 2 and illustrated in Figure 3.

Tanami Exploration NL, a wholly owned subsidiary of Tanami Gold NL (TGNL), is the registered title-holder of this tenement. Barrick Gold of Australia Limited (BGAL) are managers of exploration through the Tanami (NT) JV agreement with TGNL, commencing 13 December 2000.


Tenement	Area	Commences	Expires	Req. Exp.	Comments
EL 10139	110 blocks	17/10/2002	16/10/2008	\$40,000	

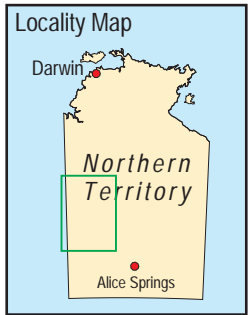
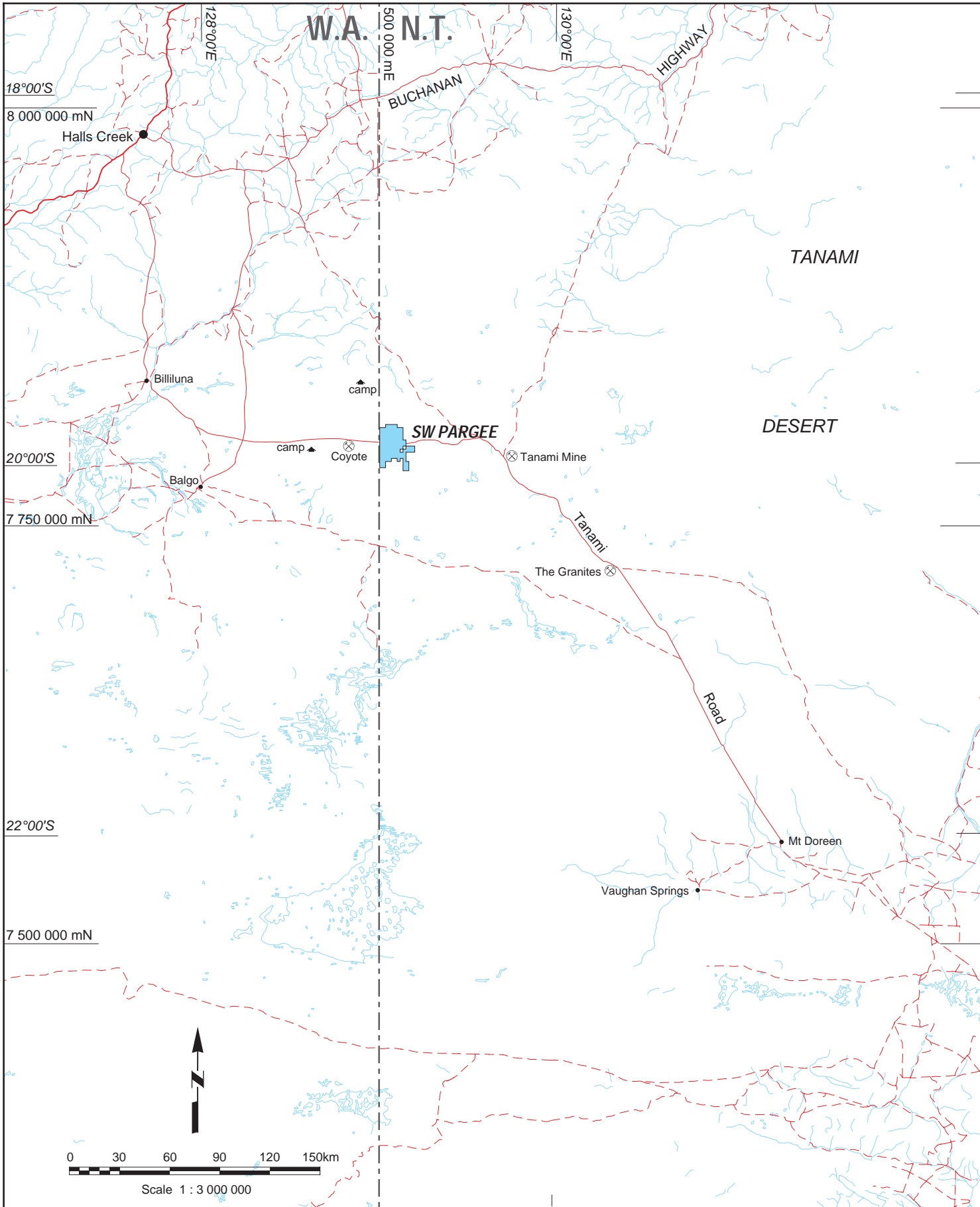


Legend

-  Barrick Tenements
-  Area of LAG sampling
-  Area of Rock Chip sampling
-  Area of Vacuum Drilling

Projection Based on AGD84 (Zone 52)

		SW PARGEES EXPLORATION INDEX MAP	
		Project: 8440 - TANAMI (NT) JV	
Originator: G.P.	Date Drawn: Feb 2004	Scale: 1 : 500 000	Technical Report No. 1114
Drawn By: D.F.B.	Revised:		
Ref : FILE: k:\Drafting\Tanami\Taten023.dgn DATE: 11-Feb-04 13:03			Figure No.: 1

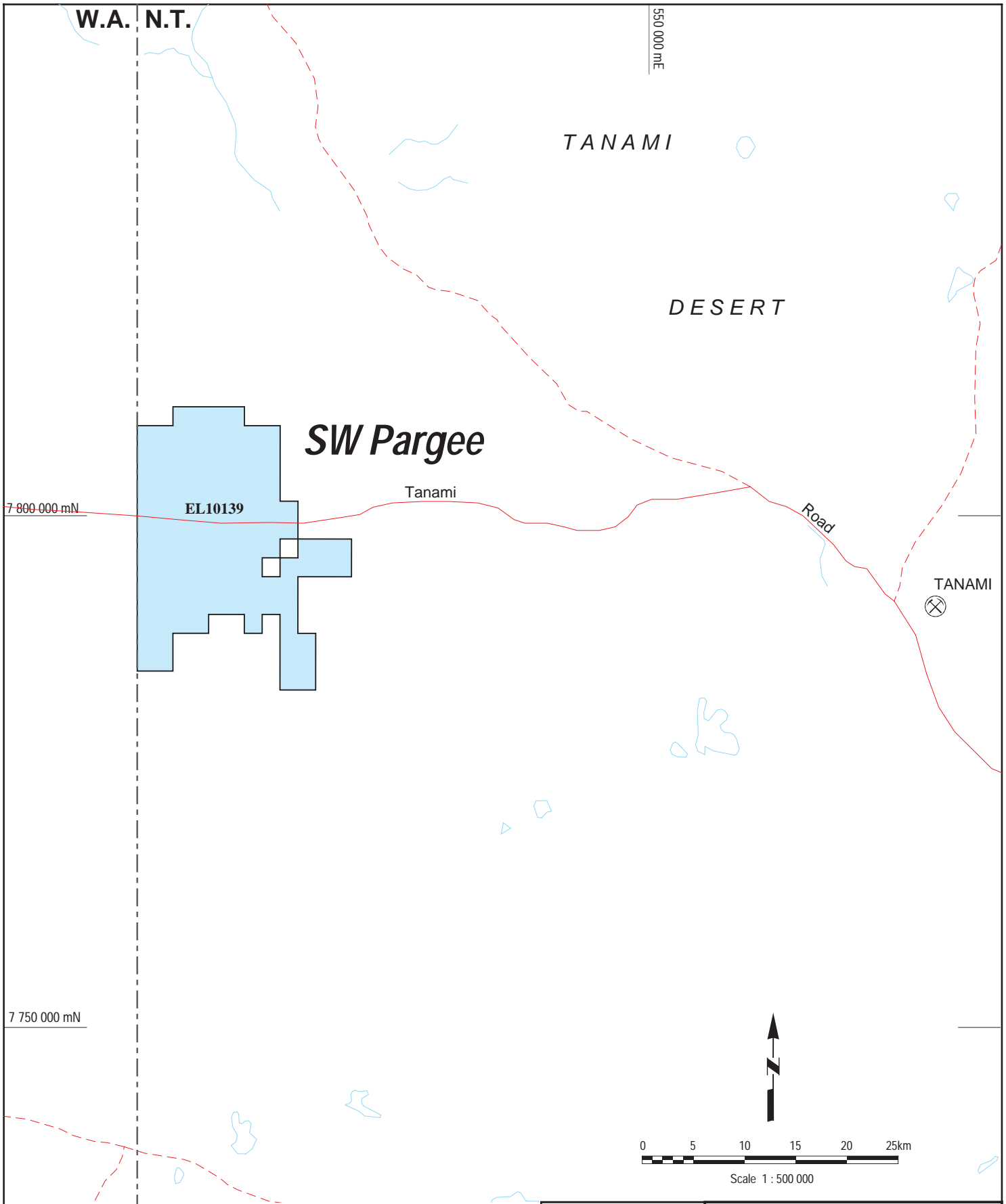


Legend

Barrick Tenements

Projection Based on AGD84 (Zone 52)


		SW PARGEE LOCATION	
Project: 8440 - TANAMI (NT) JV			
Originator: G.P.	Date Drawn: Dec 2000	Scale: 1 : 3 000 000	Technical Report No. 1114
Drawn By: D.F.B.	Revised: Jan 2004		
Ref : FILE: k:\Drafting\tanami\ntloc001.dgn DATE: 10-Feb-04 08:44			Figure No.: 2



Legend

Barrick Tenements

Projection Based on AGD84 (Zone 52)

		SW PARGEES TENEMENTS	
Project:		8440 - TANAMI (NT) JV	
Originator: G.P.	Date Drawn: Feb 2004	Scale	Technical Report No.
Drawn By: D.F.B.	Revised:	1 : 500 000	1114
Ref : FILE: k:\Drafting\Tanami\Taten023.dgn DATE: 11-Feb-04 13:03			Figure No.: 3

4.0 GEOLOGY

4.1 Regional Geology

The project area lies within the Granites - Tanami Block, a 250km x 100km NW trending, Palaeoproterozoic window comprising various packages of multiply deformed sediments and volcanics. It is bound to the south by the Arunta Province, to the northeast by the Tennant Creek Inlier and Wiso Basin, to the northwest by the Hall's Creek Mobile Zone and to the southwest by the Canning Basin.

Basement is rarely exposed and is composed of Archaean granites and gneisses. Basement rocks have SHRIMP U-Pb zircon dates of $2504 \pm 4\text{Ma}$ and $2514 \pm 3\text{Ma}$. The basement was subjected to the Barramundi Orogeny ($1882 \pm 14\text{Ma}$), prior to the deposition of the overlying sediments.

Post-Barramundi rifting led to deposition of mafic volcanics, volcanoclastics and subordinate clastics and calc-silicates of the McFarlane Peak Group. This was succeeded by the deposition of the Tanami Group in a passive margin environment. These rocks include carbonaceous siltstone, minor banded ironstone and calc-silicates of the Dead Bullock Formation, which is conformably overlain by several thousand metres of turbiditic sandstones of the Killi-Killi Formation.

The sedimentary pile was later intruded by doleritic sills, prior to and during the subsequent deformation of the Tanami Orogenic Event. The Tanami Orogenic Event occurred between 1830-1845Ma and was a period of regional deformation and metamorphism across the Tanami Inlier. The Pargee Sandstone, a thick molasse of interbedded conglomerate, sands and minor silts, was deposited unconformably on the Tanami Group in a sub-basin created during the Tanami Orogenic Event.

Local intracontinental rifting (1825 to 1815Ma), led to subaqueous and subaerial sedimentation and felsic to mafic volcanism forming the Mount Charles Formation, Mount Winnecke Group and the Nanny Goat Volcanics.

Three overlapping periods of I-type granitic plutonism occurred at this time producing the Winnecke Suite (1830-1820Ma), the Inningarra-Coomarie Suites (1820-1810Ma) and the Granites-Frederick Suites (1810-1790Ma). The Palaeoproterozoic basement was then exhumed, eroded and covered by the Neoproterozoic Birrindudu Group sediments comprising the Gardiner Sandstone, Talbot Well Formation and Coomarie Sandstone.

The region has been cut by large west-northwest trending faults. These structures manifest themselves as large prominent quartz ridges or as drainages. Recent field mapping indicates that these structures were long lived with various episodes and orientations of movement.

Gold mineralisation in the Tanami is extensive. The endowment of the region exceeds 13Moz of gold with the Callie system being the largest single deposit, which contains more than 6Moz of gold. Mineralisation in the Tanami region is diverse, ranging from epithermal styles at the Tanami group of mines, to the deeper lode gold deposit at Groundrush. Locally some deposits favour certain lithologies, however it is clear that gold mineralisation is lithologically indiscriminate and occurs in almost all rock types across the Tanami region.

4.2 Local Geology

The bulk of the tenement comprises deformed and metamorphosed sediments of the Killi-Killi Formation. Lithologies include shales, siltstones, greywackes, carbonaceous sediments and doleritic sills. Massive granitic stocks intrude the sediments. The southeast portion of the tenement is interpreted to comprise undifferentiated Palaeoproterozoic sediments and segments of Archaean basement, in part overlain by Killi-Killi Formation. Adjacent to the north of the tenement are thick sequences of flat lying Gardiner Sandstone of the Birrindudu

Group. The sandstone forms elevated plateaus, which unconformably overlies Tanami Complex rocks, and rise from 20 - 100m above the surrounding topography.

Aeromagnetic interpretation suggests numerous structures traverse the tenement, dominated by WNW trending Trans-Tanami Style Fault Zones and later smaller-scale brittle faults. The package has been multiply deformed giving rise to a well-developed fold interference pattern. Evidence suggests that thrusting has occurred within the package, giving rise to stratigraphic thickening and repetition.

Outcrop is extremely limited to the southwest portion of the tenement. Subcrop is more common though limited to slight topographic rises. Deflationary lag is well developed around these areas. Elsewhere, stratigraphy is commonly overlain by a transported horizon of variable thickness with localised palaeochannel development. A veneer of aeolian sand from 1-3m thick covers the majority of the tenement.

5.0 PREVIOUS EXPLORATION

Early explorers Davidson and Talbot passed through the area 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 has been extensive. Work conducted since the early 1970's by exploration companies, including PNC, WMC, CRA, Otter Gold, Acacia Resources, Normandy NFM and Pechiny, have also been extensive. This historical work includes exploration for a variety of minerals and deposit styles, including Au, Cu-Au, base metals and U. Work conducted includes numerous surface geochemical sampling programmes, VAC/RAB/AC drill programmes and geophysical interpretation. All historical exploration for the project are detailed in Open File reports at NT BIRD, including; Longmire, et al., 1998; Large, C., Sinclair, J., 1999; Wedekind, M. R., 1997; Wedekind, M. R., 1996; Valsardieu, et al., 1974; Norris, M. S., 1991; Palmer, D. C., 1990 and Kendall, B., 1998.

6.0 EXPLORATION ACTIVITIES AND RESULTS

All exploration activities were carried out on the Australian Map Grid (AMG84) in Zone 52.

6.1 Aboriginal Heritage Survey

EL10139 was granted 10 October 2002 and lies within the Mt. Frederick and Mt Frederick (No. 2) Aboriginal Lands Trust. Clearance from the Central Land Council to proceed with exploration activities was given in November 2002. An exclusion zone in the southeast of the tenement was excised from any exploration activity.

6.2 Surface Geochemistry

A total of 54 rock chip samples (TA37807-TA37811, TA37830-TA37836, TA37838-TA37844, TA37847-TA37850, TA37852-TA37856, TA37861, TA37960-TA37984), and 287 Lag samples (TA43749-TA43944, TA43951-TA44041), were collected. Some samples were taken during November 2002 and have been included in this report. The surface geochemistry data files are listed in [Appendix 1](#) and the sample locations are attached as [Plates 1](#) and [2](#).

6.2.1 Lag Sampling

The lag samples were taken as part of regional reconnaissance in previously unsampled areas of good lag development.

Samples were taken from an area of approximately five metres in diameter. Sample material was scraped/broomed from the surface and sieved (-6mm+2mm) to remove aeolian sand and organic contamination. A nominal weight of 500g of lag was collected and stored in snap-lock plastic bags within numbered calico bags. The samples were dispatched to Ultra Trace Laboratories Perth for preparation and

analysis. The samples were digested by aqua regia and analysed for Au by AR002 (ICP-MS) to a 0.1ppb lower detection limit. The analytical method AR102 (ICP-MS) was used for the following elements; Ag (0.05ppm), As (0.2ppm), Bi (0.02ppm), Cu (0.5ppm), Mo (0.1ppm), Pb (1ppm), Sb (0.02ppm), Zn (1ppm). The analytical method AR101 (ICP-OES) was used for the following elements; Fe (0.01%), and Mn (1ppm).

No significant values were returned.

6.2.2 Rock Chip Sampling

Rockchip samples were taken as part of reconnaissance mapping, in conjunction with lag sampling programmes, and as part of a geological field-mapping programme to validate geophysical interpretation.

A nominal 2kg sample was obtained by rock chipping over an area of approximately 2m in diameter. The samples were dispatched to Ultra Trace Laboratories Perth for preparation and analysis. The samples were fire assayed and analysed for Au by method FA002 (ICP-OES) to a 1ppb lower detection limit, along with elements Pd (5ppb) and Pt (5ppb). The samples were also digested by aqua regia and the following multi elements analysed. The analytical method AR102 (ICP-MS) was used for the following elements; Ag (0.05ppm), As (0.2ppm), Ba (0.5ppm), Be (0.1ppm), Bi (0.02ppm), Cd (0.1ppm), Ce (0.1ppm), Co (0.2ppm), Cu (0.5ppm), Ga (0.2ppm), Hf (0.01ppm), Hg (0.01ppm), La (0.01ppm), Mo (0.1ppm), Nb (0.1ppm), Pb (1ppm), Pt (5ppb), Sb (0.02ppm), Sr (0.1ppm), Te (0.1ppm), Th (0.1ppm), Tl (10ppb), U (10ppb), W (0.1ppm), Zn (1ppm), Zr (0.5ppm). The analytical method AR101 (ICP-OES) was used for the following elements; Al (10ppm), B (5ppm), Ca (10ppm), Cr (5ppm), Cu (0.5ppm), Fe (0.01%), K (20ppm), Mg (10ppm), Mn (1ppm), Na (50ppm), Ni (1ppm), P (10ppm), S (10ppm), Sc (0.5ppm), Ti (50ppm), V (2ppm), Zn (1ppm), and Zr (0.5ppm).

No significant values were returned.

6.3 Vacuum (VAC) Drilling

A total of 102 VAC holes for 921m (PGVA0001-0102) were completed on the SW Pargee prospect. The drilling was designed to follow up previously identified low-level anomalism, test interpreted structural targets and sparsely tested areas. All drill hole collar locations are included as [Plate 3](#).

Drilling was completed by Tracey Drilling P/L (Tennant Creek) to a minimum depth of the cover bedrock interface (unless water was encountered). Drilling was oriented vertically and spaced on a nominal 500m x 500m pattern.

Samples were collected in 1m increments and placed on the ground in 1m piles. The sampling strategy targeted the pisolitic or lag rich horizon that was located below the aeolian sand cover, other geologically interesting horizons (e.g. quartz veining) and bottom of hole.

The pisolitic/lag rich intervals were sieved (-6mm+2mm) to remove aeolian sand and organic contamination. A nominal weight of 500g of lag was collected and stored in snap-lock plastic bags within numbered calico bags. The samples were dispatched to Ultra Trace Laboratories Perth for analysis. The samples were subjected to bulk cyanide leach (BLEG) with an ICP-MS finish to a detection limit of 0.05ppb Au.

Geologically interesting horizons and bottom of hole samples were obtained by spear sampling from one to two adjacent one-metre intervals to a nominal 2kg, placed in numbered calico bags and dispatched to Ultra Trace Laboratories Ltd Perth for preparation and analysis. The samples were analysed for Au by the AR002 technique (lower detection limit of 0.1ppb), As by the AR102 technique (lower detection limit 0.2ppm), along with Ag (0.05ppm), Bi

(0.02ppm), Pb (1ppm), Sb (0.02ppm), and W (0.1ppm). Cu (0.5ppm) and Zn (1ppm) were analysed by both AR101 and AR102 techniques.

Drilling was designed to screen areas previously untested or sparsely tested by historical exploration. Previous exploration and field validation noted that in general the regolith was suitable for shallow vacuum drilling, consisting of a thin veneer of aeolian dune sands with variable thicknesses of underlying pisolitic lag and transported clays. Drilling established that the pisolitic lag was widespread and was of a moderate quality for effective sampling. Highly weathered greywacke and shale of the Killi-Killi Formation and granitic intrusives dominated the bedrock with lesser discrete dolerite dykes. The bedrock geology identified during drilling correlated well with the geology interpreted from aeromagnetism.

Results were disappointing with only sporadic low-level gold-arsenic anomalism noted from BOH samples, peaking at 19ppb and 24ppm respectively. BLEG results also returned low-level anomalism to 0.45ppb Au in discrete samples.

7.0 CONCLUSIONS AND RECOMMENDATIONS

A series of surface geochemical and vacuum drilling programmes were conducted during the reporting period. These programmes were designed to test areas of sparse historical exploration, previously identified low-level Au-As anomalism and interpreted litho-structural targets. No significant mineralisation or anomalism was identified and no follow-up work is warranted in these areas.

Further post-hole RAB drilling is warranted to complete screening of sparsely tested litho-structural targets, where transported cover was too thick for vacuum drilling to be effective.

8.0 REFERENCES

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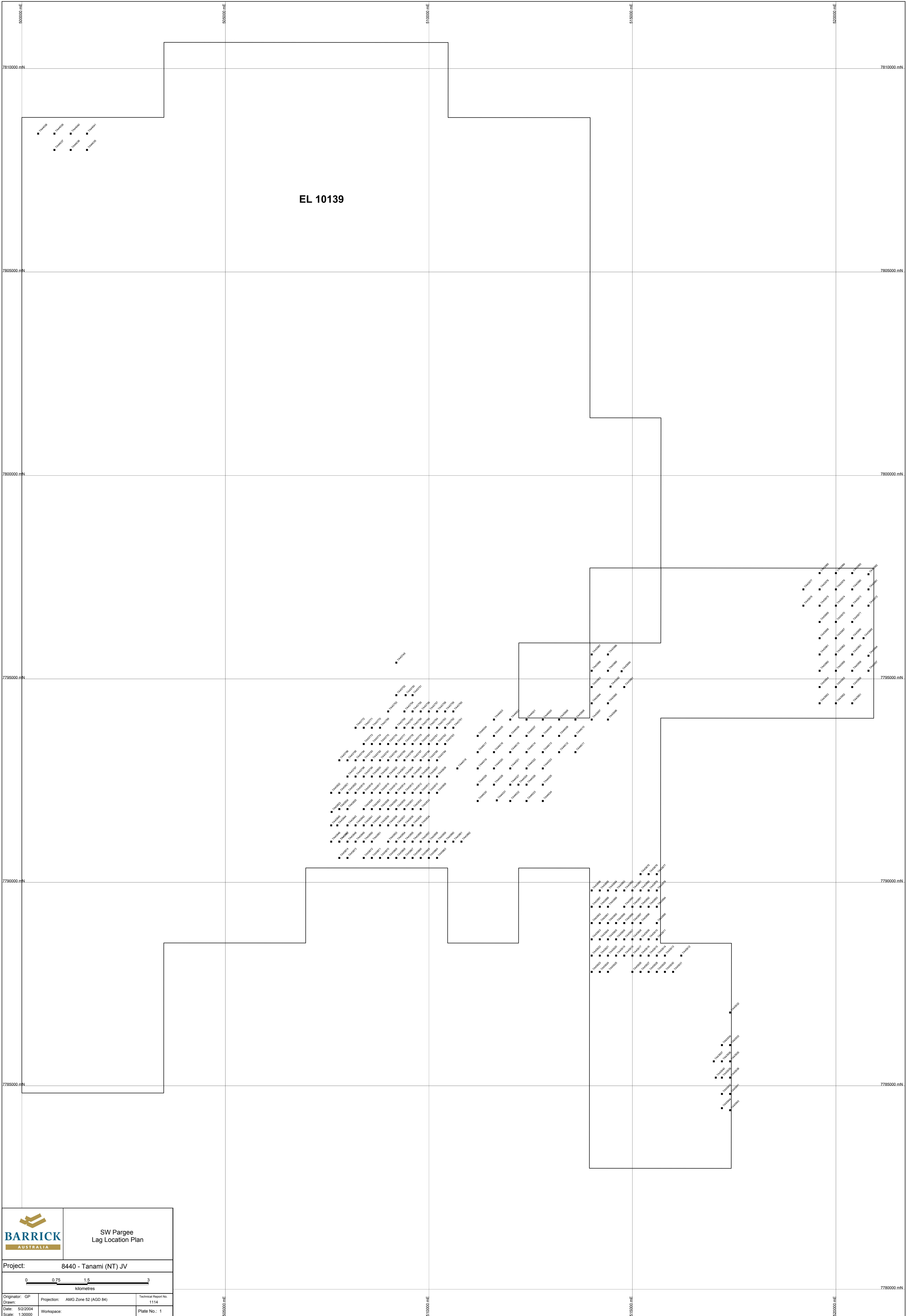
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APPENDIX 1



VERIFICATION LISTING REPORT

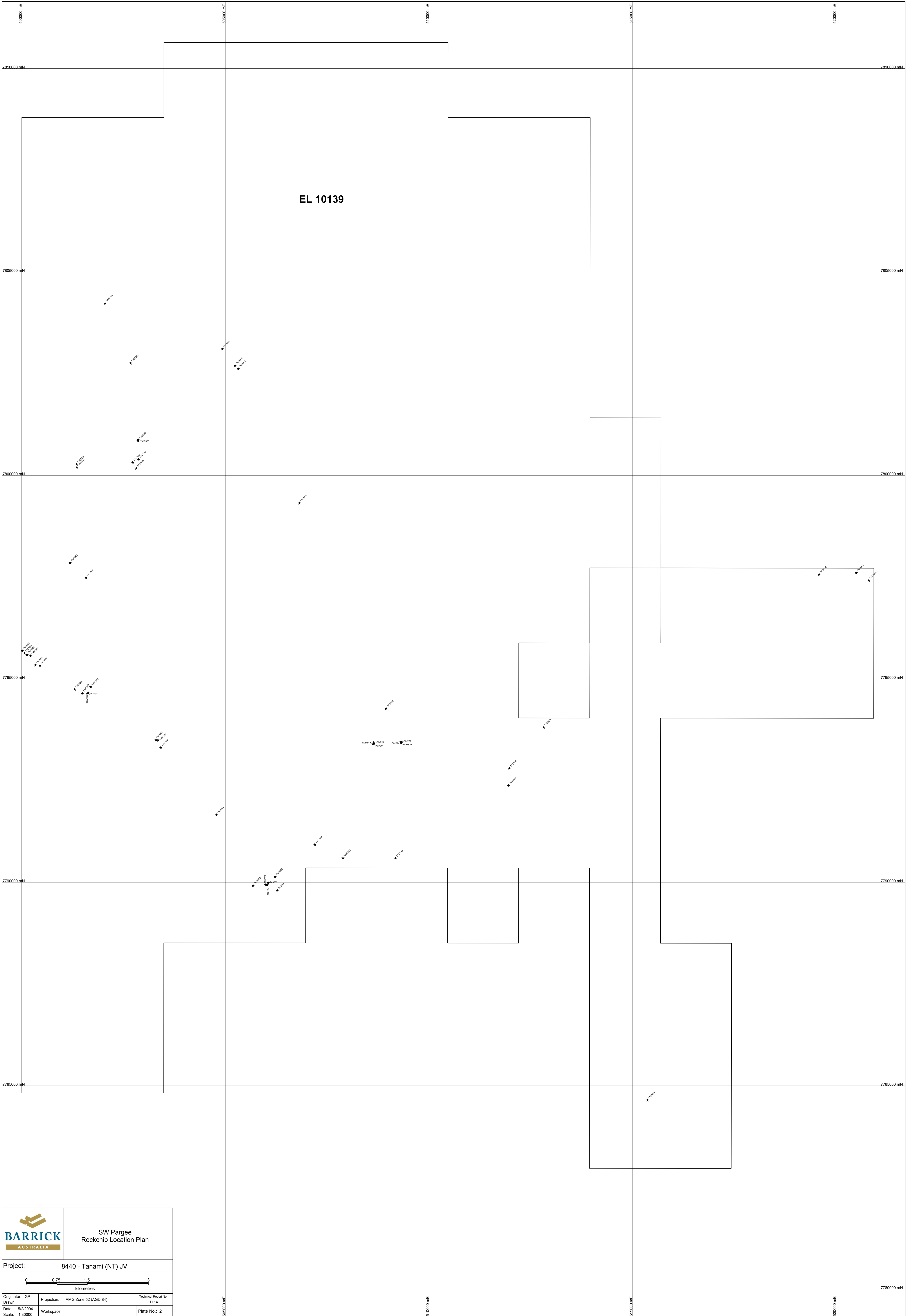
TEMPLATE 7 - VERIFICATION LISTING FORM

Exploration Work Type	File Name	Format
Office Studies		
Literature search		
Database compilation		
Computer modelling		
Reprocessing of data		
Report	tr1114_A_2004	pdf
Airborne Exploration Surveys		
Aeromagnetics		
Radiometrics		
Electromagnetics		
Gravity		
Digital terrain modelling		
Other (specify)		
Remote Sensing		
Aerial photography		
LANDSAT		
SPOT		
MSS		
Radar		
Ground Exploration Surveys		
Geological Mapping		
Regional		
Reconnaissance		
Prospect		
Underground		
Costean		
Ground geophysics		
Radiometrics		
Magnetics		
Gravity		
Digital terrain modelling		
Electromagnetics		
SP/AP/EP		
IP		
AMT		
Resistivity		
Complex resistivity		
Seismic reflection		
Seismic refraction		
Well logging		
Geophysical interpretation		
Other (specify)		
Geochemical Surveying		
Surface Geochemistry	Tr1114geochem.txt	WA SG2
Stream sediment		
Soil		
Rock chip		
Laterite		
Water		
Biogeochemistry		
Isotope		
Whole rock		
Mineral analysis		
Other (specify)		
Drilling		
Data Dictionary	Drillkingdict.txt	
Collar	Tr1114coll.txt	WA SL2
Assay	Tr1114ass.txt	WA DG2
Survey	Tr1114surv.txt	WA DS2
Lithology	Tr1114litho.txt	WA DL1
Events	Tr1114event.txt	WA DL1
Recovery		
Magnetic Susceptibility		
Quartz		
Water		
Translation	Translat.txt	
Alteration		
Vein		
Structure		
Drill	Tr1114drill.txt	WA DL1





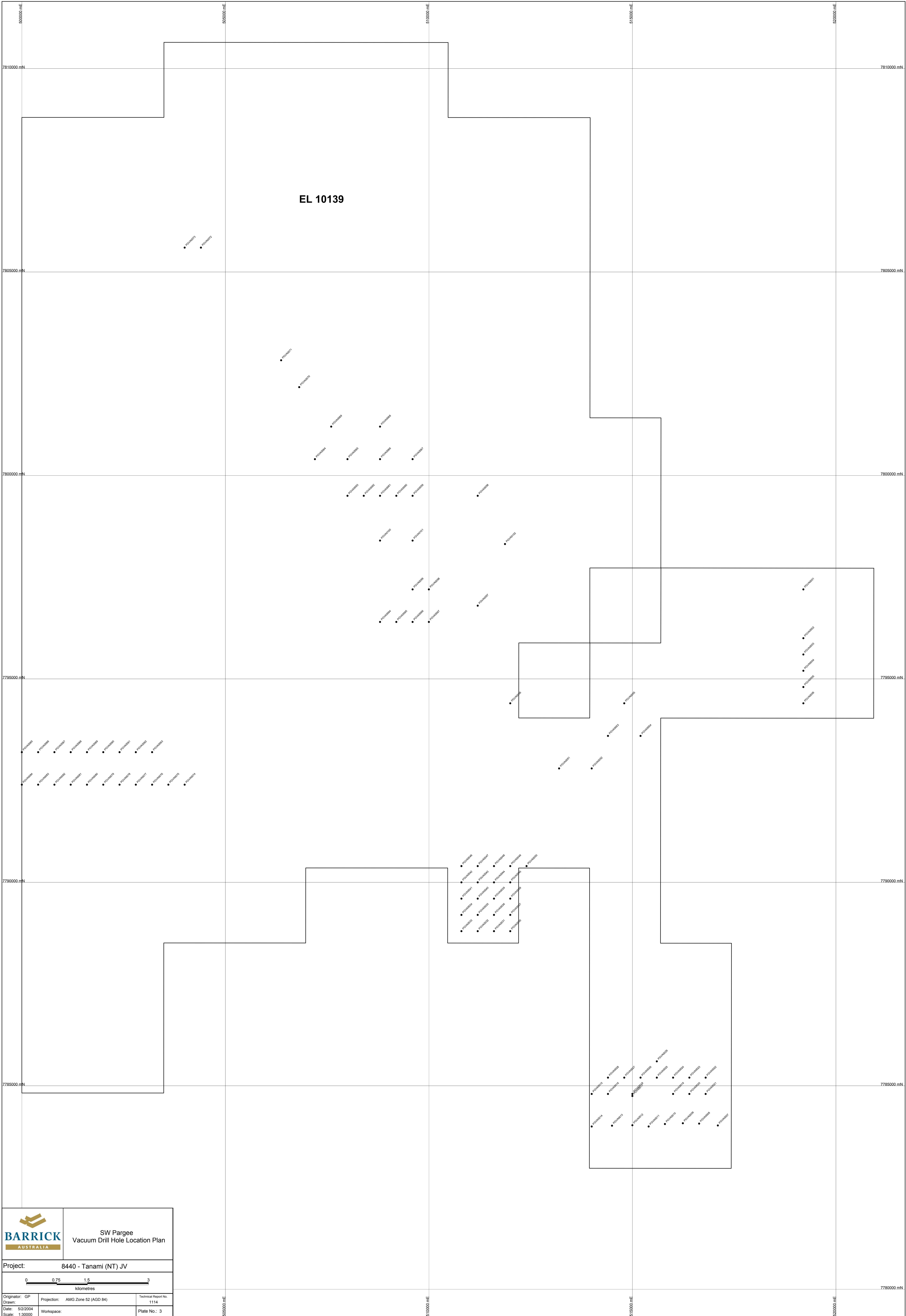
EL 10139

		<p>SW Pargee Lag Location Plan</p>	
<p>Project: 8440 - Tanami (NT) JV</p>			
			
<p>Originator: GP Drawn: [blank] Date: 5/2/2004 Scale: 1:30000</p>	<p>Projection: AMG Zone 52 (AGD 84)</p>	<p>Technical Report No: 1114</p>	<p>Plate No.: 1</p>





EL 10139

		<p>SW Pargee Rockchip Location Plan</p>	
<p>Project: 8440 - Tanami (NT) JV</p>			
			
Originator: GP	Projection: AMG Zone 52 (AGD 84)	Technical Report No: 1114	
Date: 5/2/2004	Workspace:	Plate No.: 2	
Scale: 1:30000			



EL 10139

		<p>SW Pargee Vacuum Drill Hole Location Plan</p>	
<p>Project: 8440 - Tanami (NT) JV</p>			
			
Originator: GP	Project: AMG Zone 52 (AGD 84)	Technical Report No: 1114	
Date: 5/2/2004	Workspace:	Plate No.: 3	
Scale: 1:30000			