

TANAMI

EXPLORATION NL

ACN 063 213 598

COMBINED

PARTIAL

RELINQUISHMENT REPORT

EL 9474 'Farrands Hill' and EL 9475 'Mt Charles East'

NE TANAMI PROJECT

From 23 March 2001 to 22 March 2006

Author

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Distribution:

- ☐ Department of Business, Industry, & Resource Development (1)
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DIGITAL APPENDICES (supplied on CD)

FILE DESC

NET_WADG3_DHSAMP_2006P **Downhole Samples**

NET WADL3 ALT 2006P Alteration

NET_WADL3_ASSAYNORM_2006P Drilling Assays (Normalised)

Drilling Geology NET_WADL3_GEOL_2006P

NET_WADL3_VEIN_2006P Veining

NET_WADS3_DHSURV_2006P Downhole Survey NET_WASG3_ASSAY_2006P Drilling Assays (Flat) NET_WASG3_SURF_2006P NET_WASL3_COLL_2006P Surface Sampling

Collars

NET_WASG3_GEOLOGY_CODES **Description of Geology Codes**

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1.0 SUMMARY

EL's 9474 and 9475 are situated about 600 kilometres northwest of Alice Springs and were explored as part of the North Eastern Tanami project (**Figure 1**). Both tenements were granted to AngloGold Australia Limited (Anglogold) on 23 March 2001 and were purchased by Tanami Exploration NL (TENL), a wholly owned subsidiary of Tanami Gold NL (TGNL), a publicly listed company in June 2005.

After five years of tenure the southern half of EL 9474 and the western half of EL 9475 were surrendered. This report details the exploration completed within the surrendered tenement area from 23 March 2001 to 22 March 2006.

All field exploration on EL 9474 and EL 9475 was carried out by Anglogold in the first three years of tenure. A summary of exploration is shown below in **Table 1**. No significant results for gold mineralisation were returned. TENL recommended the southern half of EL 9474 and the western half of EL 9475 for relinquishment after a data review.

Exploration Summary
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Tenement	EL 9474	EL 9475
Lag sampling	94 samples	-
Soil sampling	-	366 soil samples
Aircore Drilling	-	2 holes, 132 metres
PH Aircore Drilling	23 holes, 851 metres	-
PH RAB Drilling	1 hole, 27 metres	70 holes, 1082 metres

2.0 INTRODUCTION

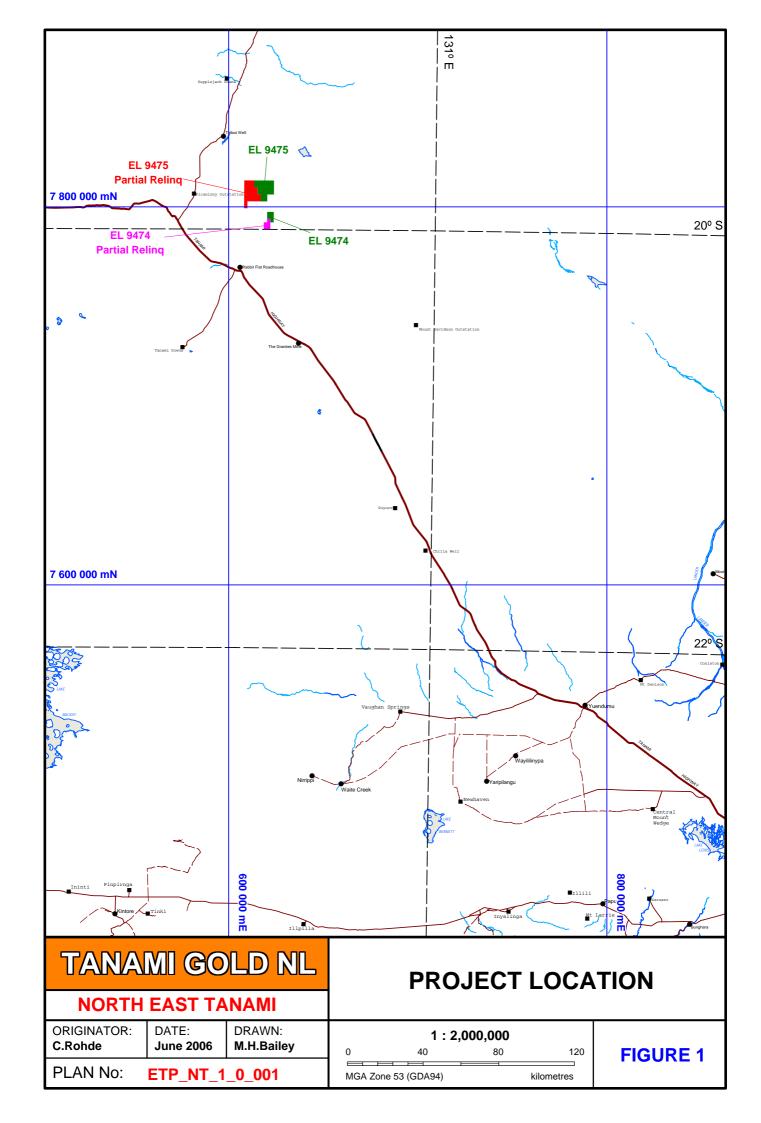
EL's 9474 and 9475 form part of the North Eastern Tanami project area. The tenements are situated about 600 kilometres northwest of Alice Springs and 45 kilometres east of the Tanami Gold Mine within the Tanami Desert. Access to the tenements from Alice Springs is via the unsealed Tanami Track.

The tenements were initially acquired to test a highly prospective, north-south trending package of rocks interpreted to be part Nanny Goat Creek Volcanic Complex, located immediately adjacent to the Supplejack Shear Zone.

The NE Tanami project area is affected by access restrictions, including extremely high temperatures (in excess of 50°C) and high seasonal rainfall; associated with the northern monsoon season that typically extends from late November to the middle of April. Access to the area by the Tanami road (gravel) is periodically restricted due to flooding and is closed for up to four months every year by the Hall's Creek and Alice Springs Shire Councils (Sewell et al, 2004).

The vegetation over the project area varies from wide-open, spinifex studded plains to low desert scrubland. The area has a characteristically subdued topography with limited low breakaway hills and sub-cropping areas. The majority of the area lies beneath a veneer of aeolian or colluvial sediments. Deep palaeo-drainage systems, comprising fluvial, lacustrine and aeolian sediments, are known to transect some of the tenements (Sewell et al, 2004).

After five years of tenure the southern half of EL 9474 and the western half of EL 9475 were surrendered. This report details the exploration completed within the surrendered tenement area from 23 March 2001 to 22 March 2006.



3.0 TENURE

Exploration Licences 9474 and 9475 were granted to AngloGold Australia Limited on 23 March 2001 for a period of six years. They were included in a Sale and Purchase Agreement dated 23 June 2005, between Anglogold Ashanti Australia Limited (Anglogold) and Tanami Exploration NL (TENL). Anlgogold is the current registered holder; the transfer is pending execution of a Deed of Covenant with the Central Land Council.

At the end of the fifth year of term, both tenements were reduced in size pursuant to the requirements of section 26 of the *NT Mining Act* (**Figure 2**). Tenement details are listed below in **Table 2**.

Table 2:	Lenement	Details
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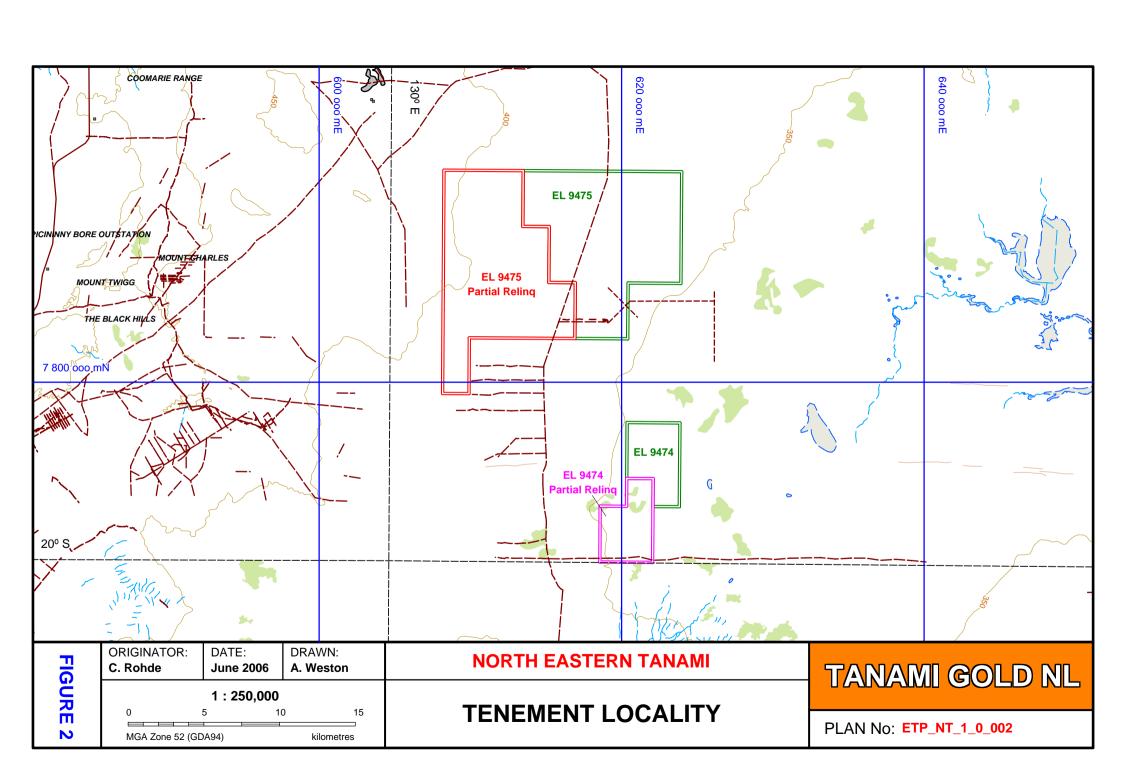
Tenement	Tenement No	Blocks Granted	Blocks Relinq 2006	Blocks Retained	Grant Date	Expiry Date
Farrands Hill	EL 9474	10	5	5	23 Mar 01	22 Mar 07
Mt Charles East	EL 9475	52	26	26	23 Mar 01	22 Mar 07

4.0 REGIONAL GEOLOGY (modified from Sewell et al, 2004)

The North Eastern Tanami Project Area is located within the Granites - Tanami Block that forms the basement to the surrounding Birrindudu Basin (Blake et al. 1979). To the west are the Halls Creek Mobile Zone and the Canning Basin; whilst to the east and south are the Wiso Basin and the Arunta Block (which is possibly of similar age and a stratigraphic equivalent to the Granites - Tanami Block). The Granites - Tanami Block contains rocks of the Tanami Complex, which hosts the mineralisation at the Tanami and Granites gold mines and the recently developed Coyote Gold Mine.

The Tanami Complex is of Early Proterozoic age and comprises meta-sediments and meta-volcanics, which are steeply dipping with a bedding parallel cleavage. Poor exposure and structural complexity have precluded a full understanding of the stratigraphy over much of the Tanami. The NTGS has remapped the eastern portion of the inlier and developed a stratigraphy, which is broadly correlatable with the Pine Creek and Hall's Creek inliers. Economic gold mineralisation is found in a variety of host rocks and within various stratigraphic units. At the Dead Bullock Soak Callie deposit, gold is hosted in a weakly carbonaceous siltstone sequence known as the Dead Bullock Formation. At Tanami Gold's Coyote deposit, gold mineralisation is hosted by a sequence of weakly carbonaceous shales, siltstones, micaceous greywackes and sandstones currently interpreted to represent the Killi Killi Formation. The Killi Killi Formation is currently believed to be comformably above the Dead Bullock formation. At the Tanami Mine gold is hosted by pillow basalts and greywackes of the Mount Charles Formation, which is currently interpreted to represent a younger basin phase.

Late Proterozoic and early Carpentarian granites intrude the Tanami Complex. Most of the known gold mineralisation is spatially related to these granites, although a genetic relationship has not yet been proven.



Cainozoic surficial overburden comprises laterite, calcrete and vein quartz rubble. In addition there is a thin veneer of Quaternary aeolian and alluvial sand. Palaeodrainage channels are well developed in the western Tanami, filled by lacustrine clays and sheetwash sedimentation. Silcrete is locally developed. Where tested by drilling they have a maximum depth of around 40m, but may be deeper elsewhere. These commonly follow the prospective structural grain and inhibit exploration.

Structurally the Block is very complex with multiple phases of deformation and faulting. Two main types of folding have been identified in the Killi Killi Beds. Broad northerly-plunging anticlines and synclines are recognised and east-southeast-trending zones of smaller chevron folds with steep limbs. The chevron folds cut across the broad folds indicating at least two phases of deformation. Both phases have been disrupted by the intrusion of granite. D1 and D2 involve progressive deformation about NW-SE to E-W trending axes. Dextral strike slip reactivation of the Trans Tanami fault during D3 or late D2 resulted in rotation and re-folding of previously folded units to a N-S orientation.

NW-WNW trending strike slip/dip-slip faults (D3) are very prominent and are commonly associated with intense shearing and quartz veining. The structures are possibly related to deep-seated structures in the metamorphic-granitoid Archaean basement, which to the NW define the margin of the Canning Basin on the Lennard Shelf. NE to ENE and N-trending faults are also common and can be related to phases of basin extension and compression during regional tectonism.

The NTGS has identified seven stages of deformation, with the gold mineralisation relatively late and related to a D6 event. Recent dating by AGSO/NTGS of mineralisation also indicates late stage mineralisation. AngloGold erected a simpler, but broadly similar structural model, with three major deformation events, with mineralisation related to late D2 deformation. Much of the dextral faulting on NW-WNW Trans-Tanami Faults is thought to post-date mineralisation.

5.0 PROJECT GEOLOGY (Sewell et al, 2004)

The tenements EL 9474 and EL 9475 straddle a major N-S structure interpreted as a strain partitioning domain boundary. Younger granites ascribed to the Late Tanami Suite (1810 – 1790Ma) form a cluster of at least four discrete plutons intruded along this structure.

Aeromagnetic and drill chip interpretation describe an asymmetrically folded, felsic volcanic complex and subordinate southwest dipping faults, located both within the hanging wall and footwall of the domain bounding structure. These structures are in turn overprinted by a series of E-SE-trending faults/fractures with small-scale offsets. No outcrop is found throughout the tenements and most of the area is covered by 0-20m of aeolian sand and recently transported clays, and 20-50m of Antrim Plateau Basalt overlying Tanami Complex rocks, currently interpreted to be part of the Winnecke Creek Formation.

6.0 EXPLORATION COMPLETED

All field exploration on the relinquished tenement areas of EL 9474 and EL 9475 was carried out by Anglogold in the first three years of tenure. A summary of exploration is shown in **Table 1**.

TENL recommended the southern half of EL 9474 and the western half of EL 9475 for relinquishment after a data review. The interpretive geology for the NE Tanami project area is shown on Plate 1, which is based on a regional interpretation compiled for TENL by Dr Ding Puquan in April-May 2001 (Ding, 2001). TENL reprocessed Anglogold magnetics in early 2006, which is displayed on Plate 2.

6.1 Geochemical Sampling

Lag sampling was completed in May 2001 covering the southwestern tenement area of EL 9474 (Plate 3). Samples averaged 2kg in size and were taken from the +2mm-10mm sieved size fraction. Samples were collected at 50m intervals along 200m spaced traverses, the other samples were collected during vehicle traverses of the tenement when suitable media was encountered. The samples were submitted to ALS (Alice Springs) for low level gold analysis and As, Bi, Cu, Mo, Pb, Sb and Zn. Best results were 18 ppb and 13 ppb Au.

A program of spot soil sampling was completed over the NW corner of EL 9475 in June 2002. A total of 366 samples were collected (**Plate 3**). Samples averaged 0.3kg in size and were taken from the -80# (<200um) sieved size fraction collected by hand auger from approximately 50-60cm below surface. Sample intervals were 50 metre along 200 metre spaced traverses on an E – W oriented grid. The samples were analysed by ALS (Alice Springs) for ultra-low level gold analysis and As, Bi, Cu, Mo, Pb, Sb and Zn. No anomalous results were returned.

All sample and assay details for both geochemical programs are included in the digital appendix.

6.2 Posthole RAB and Aircore Drilling

A program of posthole RAB drilling was completed across portions of the EL 9475 in October 2001. The drilling tested the NW corner of EL 9475 on 400m x 400m x 200m SW/NE grid (**Plate 4**). Holes were drilled to an average depth of 36 metres, ensuring penetration into the residual profile.

A further program of posthole Aircore drilling was completed in August 2002. A total of 23 holes for 851 metres were drilled on the southern portion of EL 9474 as a first pass program to ascertain the regolith profile including depth of cover and residual geology lithotypes (Plate 4). Two 800 metre spaced traverses of Aircore drilling at 100 – 200m spaced holes were completed. Holes were drilled to an average depth of 36 metres, unfortunately not all holes were able to penetrate into Proterozoic age lithologies, most holes ending in Antrim Plateau Volcanics. Also Cambrian basalt and Gardiner Sandstone was encountered.

From both programs a minimum of three 2-3 kg 3m composite sample were collected from each hole and were submitted to ALS (Alice Springs) for analysis. All drill data and assay results are included in the digital appendix. No elevated results for gold were retruned.

6.3 Aircore Drilling

A program of angled Aircore (AC) drill holes were completed in 2003 across portions of EL 8845 and EL 9475. Of this, 2 holes were drilled on the relinquished portion of EL 9475 for a total of 132 metres and 14 three metre composite samples. Drill hole locations are shown on **Plate 4**. All drill data and assay results are shown in the digital Appendix.

A minimum of three, 2 to 3 kilogram, 3m composite samples were collected from each hole and were submitted to ALS (Alice Springs) for analysis. Samples were analysed by ALS for gold using PM219 (1ppb DL). The samples were also submitted for As (1ppm detection limit), Bi (5ppm detection limit), Cu

(2ppm detection limit), Mo (5ppm detection limit), Pb (5ppm detection limit), Sb (5ppm detection limit) and Zn (5ppm detection limit) analysis using ICP-MS (ALS IC581) (Sewell et al, 2004).

No significant results were returned from these two holes.

7.0 REHABILITATION (

All regional and grid based exploration has been conducted in a fashion that keeps environmental disturbance to a minimum. The use of a Global Positioning System (GPS) enables accurate navigation during regional sampling and hence reduces the amount of vehicle traverse tracks and vegetation disturbance (Sewell et al, 2004).

Where RAB/Aircore drilling was used for geochemical sampling, holes were plugged with concrete plugs approximately one metre below beneath ground level and backfilled on completion (Large et al, 2002).

Where AC drilling was used for geochemical sampling, holes were plugged with concrete plugs approximately 1m below beneath ground level and backfilled on completion. All sample bags and bulk samples were collected in wool bales and removed to a central sample farm, remaining spoil piles and drill sites were then re-contoured using backhoe and top soil respread across the site. Areas were then left to naturally revegetate (Sewell et al, 2004).

Vehicle traverses have been left to rehabilitate naturally. Any rubbish, bags etc. associated with any of the work programs have been taken off site (Sewell et al, 2004).

7.0 BIBLIOGRAPHY

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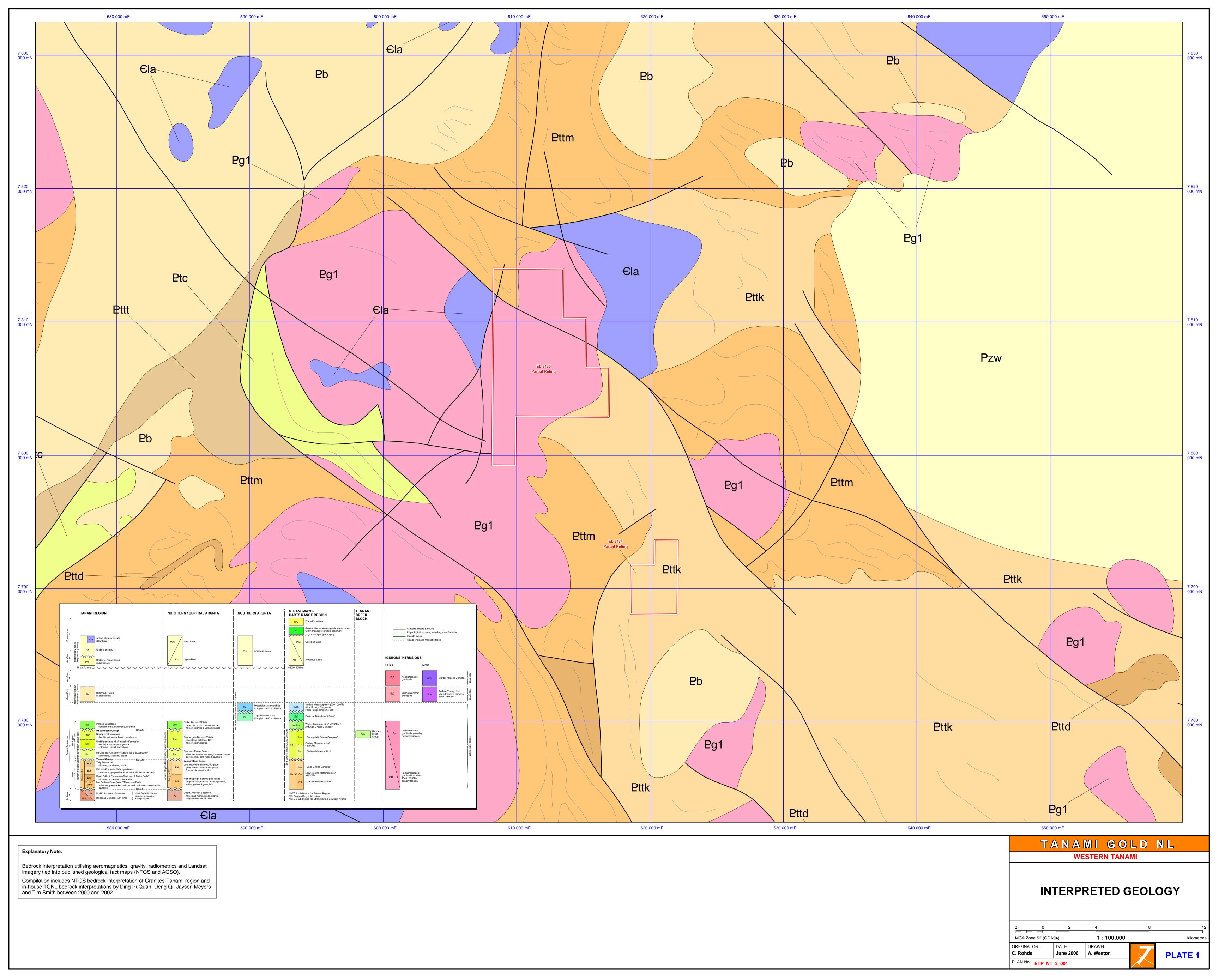
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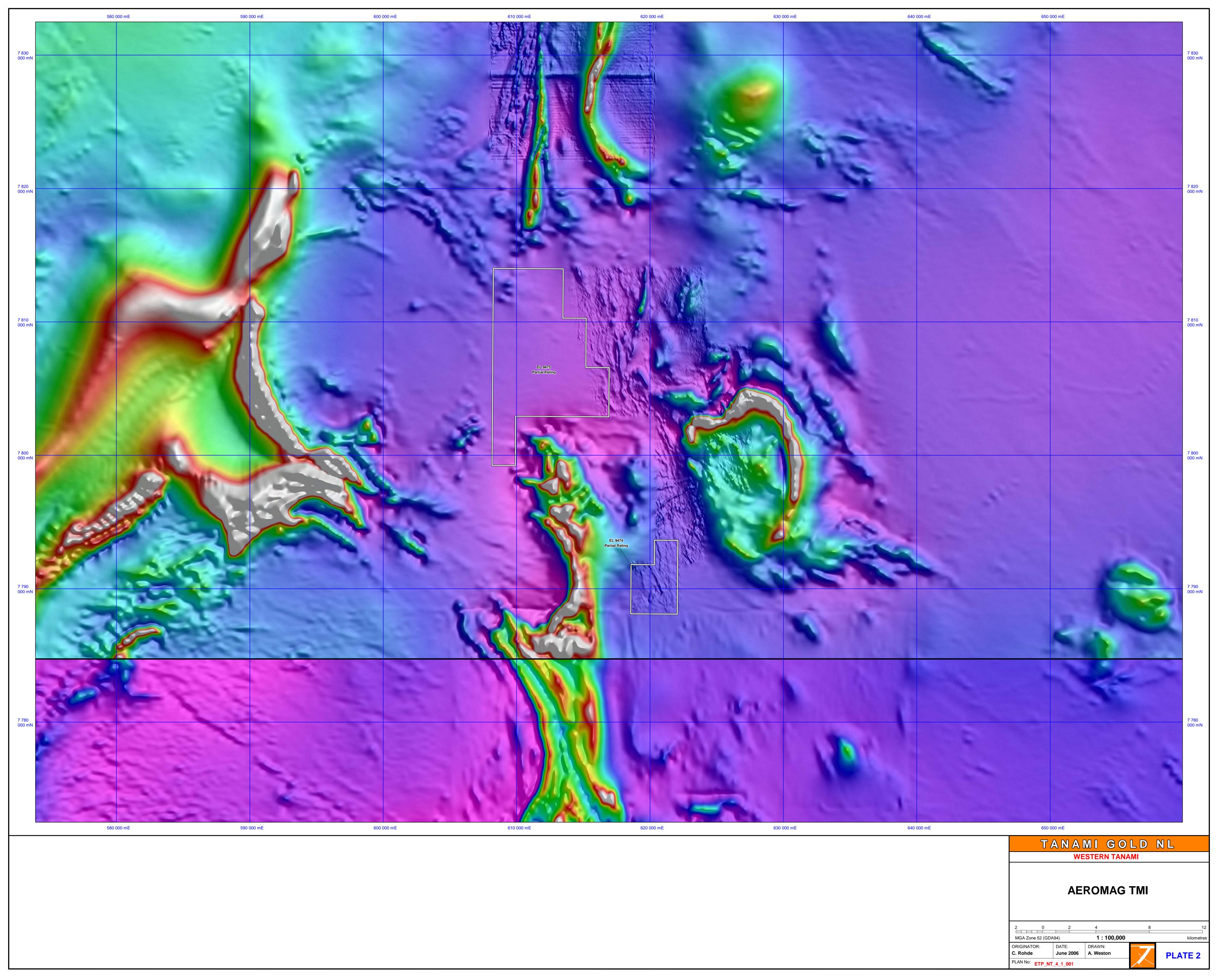
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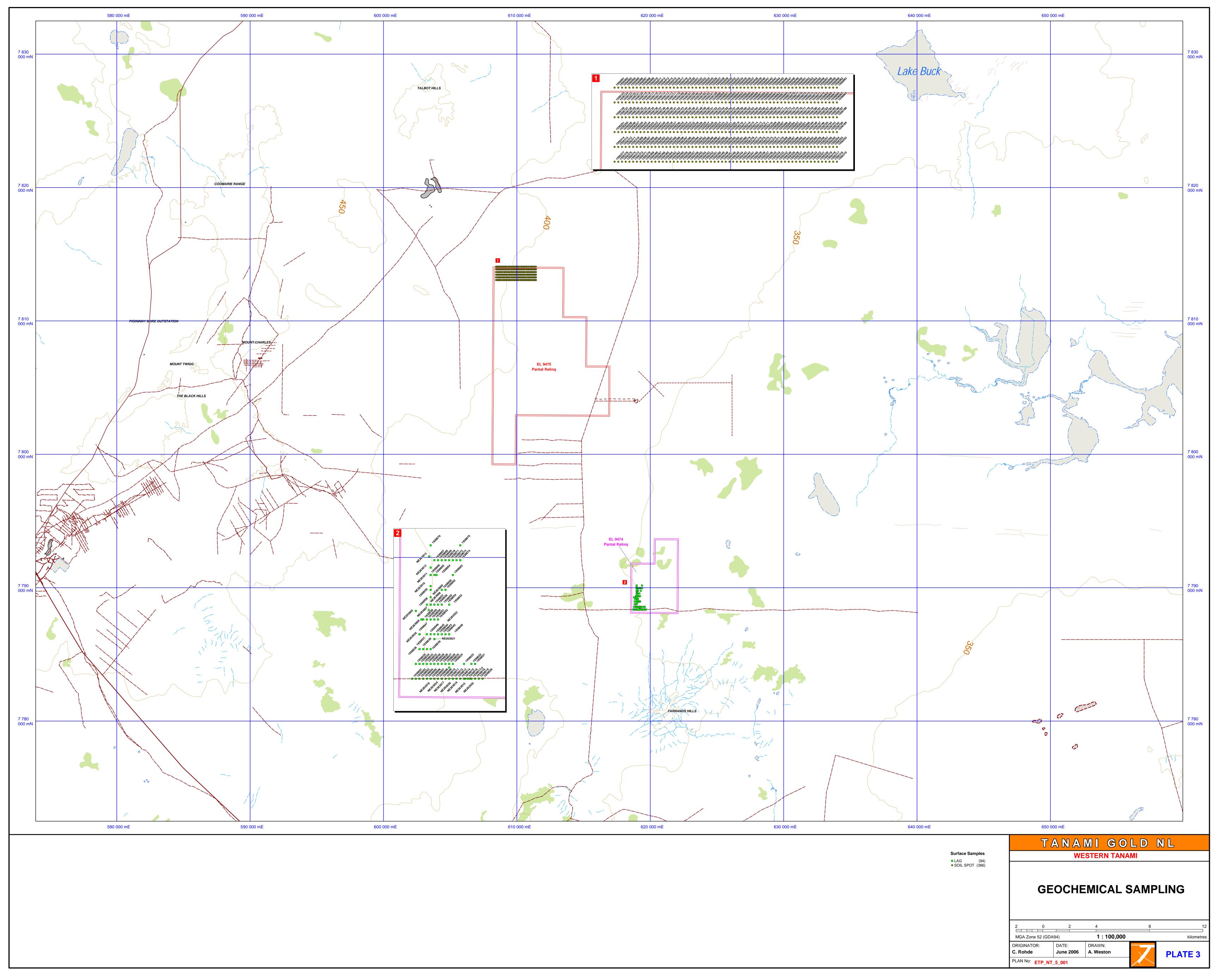
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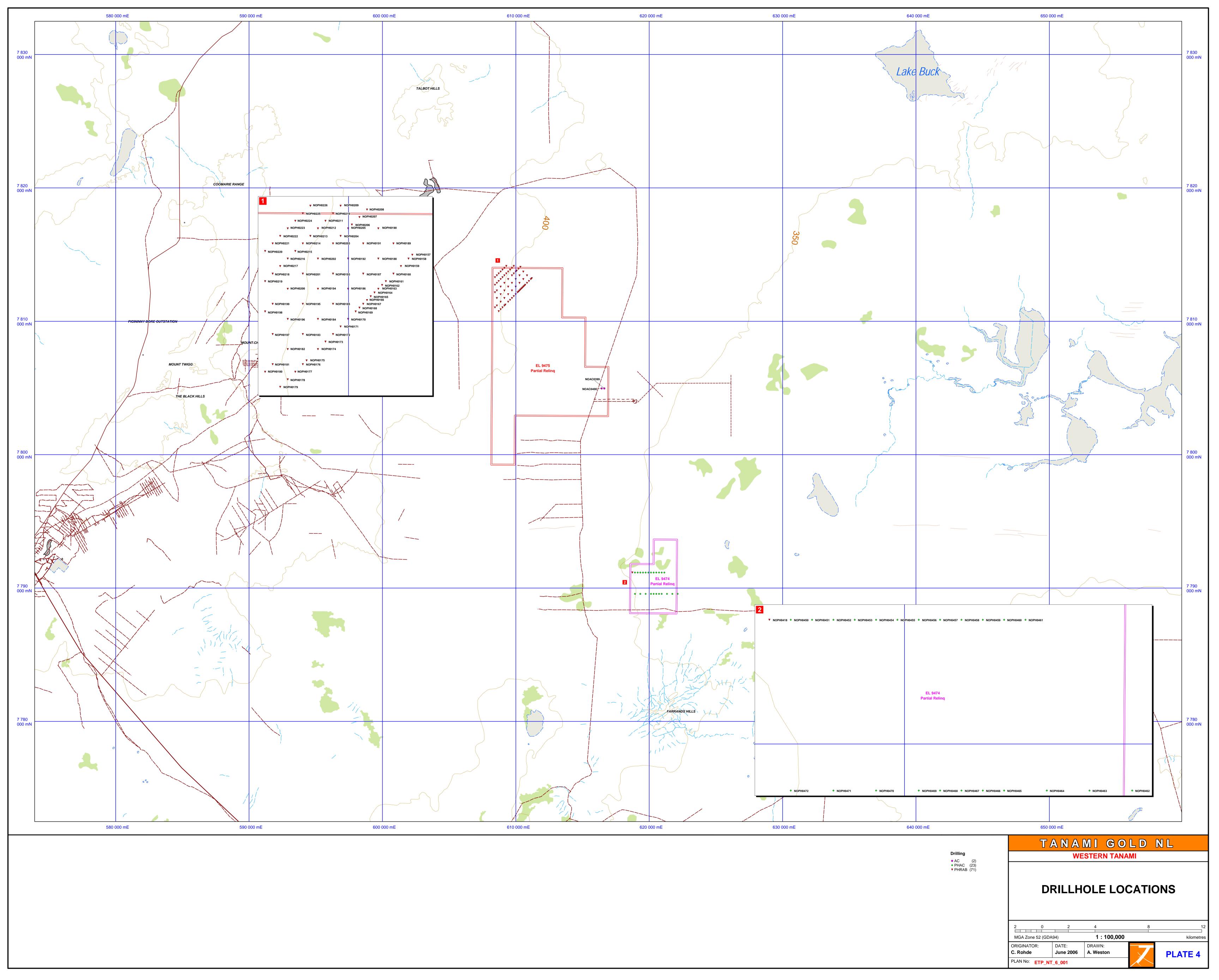
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Grainsize		Sed	Ig/Meta
Clay	су	<1/256 mm	NA
Silt	st	1/256 - 1/32 mm	NA
Very Fine	vf	1/32 - 1/8 mm	<0.1 mm
Fine	fg	1/8 - 1/4 mm	0.1 - 1mm
Medium	mg	1/4 - 1/2 mm	1 - 3 mm
Coarse	cg	1/2 - 1mm	3 - 10 mm
Very coarse	vg	1 - 2 mm	>10mm
Granule	gn	2 - 4mm	NA
Pebble	pb	4 - 64 mm	NA
Cobble	cb	64 - 256 mm	NA
Boulder	bu	>256	NA
Pegmatitic	ра	NA	>30mm

Facing	
Up	
Down	
Both	

Contact	
Sharp	S
Undulose	U
Gradational	G
Vein	V
Faulted/sheared	F

Stratigraphy/Beds					
Formal		Informal		Regolith	
Gardiner Sandstone	GS	Phat Sandstone	PS	Regolith Layer A	LA
Antrim Plateau Basalt	AP	Marker Siltstone	MS	Regolith Layer B	LB
Killi Killi Fm	KK	Marker Siltstone, inferred	iMS	Regolith Layer C	LC
Bald Hill Sequence	BH	Irvine Conglomerate	IG	Regolith Layer D	LD
		Black Shale Bed	BS	Upper Mobile Zone	UM
		Coyote No.1 Fault	CF	Lower Mobile Zone	LM
		Coyote fold hinge	FA		

Deformation Type		
Boudinaged	BD	
Brecciated	BX	
Crenulated	CR	
Folded	FD	
Fractured weakly	CW	more than 10cm fracture spacing
Fractured moderately	CM	2-10cm fracture spacing
Fractured strongly	CS	less than 2cm fracture spacing
Foliation weak	FW	most grains undeformed, deformation restricted to disrete planes
Foliation moderate	FM	more than half grains broken, flattened or elongated
Foliation strong	FS	primary textures completely destroyed
Lineated	LN	

Fracture Controlled FC	;
Foot wall (VMS) FW	/
Hanging wall (VMS) HW	/
Patchy PT	•
Pervasive PV	′
Selective Replacement SR	Į.
Vein Selvedge SV	′

Structure / Lithology Events	
Bedding	BED
Cleavage	CLV
Contact	CNT
Crenulation	CRN
Fault	FLT
Fold axis (plane)	FLD
Fold hinge (lineation)	HNG
Foliation	FOL
Fracture	FRK
Joint	JNT
Lineation	LIN
Layering	LYR
Schistocity (s-fabric)	SCH
Shear zone/plane (c-fabric)	SHZ
Slickenside	SLK
Vein	VEIN

Alteration Intensity

Weak:partial replacement of primary minerals	WA
Moderate: alteration approx. equal proportion to primary minerals	MA
Strong: alteration dominant, some primary minerals remain	SA
Intense: total replacement of primary minerals	IA

Vein Style	
Anastomosing	AN
Boudinage	ВО
En echelon	EE
Folded	FD
Planar	PL
Ptygmatic	PT
Sigmoidal	SG
Stockwork	SW

BB
DS
NW
MA
MW
SE
VH

Vein texture	
Buck	BK
Breccia	BX
Comb-cockade	CB
Colloform	CF
Chalcedonic	CH
Fibrous	FB
Infill	IN
Laminated	LM
Recrystallised	RX
Replacement	RP
Saccaroidal	SC
Vuggy	VG
Tension gashes	VT

Rock Group		Rock Type		Rock Group		Rock Type	
Ultramafic Extrusive	U	Komatiite Undifferentiated Ultramafic Basaltic Komatiite	K U B	Sediment	S	Undifferentiated Mudstone Siltstone	U M T
Ultramafic Intrusive	U	Undifferentiated Pyroxenite Peridotite	U X P			Sandstone Interbedded - mud & silt Interbedded - sand & silt	S F N
		Dunite Hornblendeite	D H			Conglomerate Breccia Limestone	C B L
Mafic Extrusive	В	Undifferentiated Tholeiitic Basalt	V T			Dolomite Coal	D K
		High-mag Basalt Picritic Basalt	M P	Chemical Sediments	С	Undifferentiated	U
Mafic Intrusive	0	Spilitic Basalt Undifferentiated Gabbro	S U G			BIF Chert Evaporites	I H E
		Troctolite Norite	T N			Massive Ironstone Phosphorites	F Z
		Anorthosite Dolerite Gabbronorite	A D B	Metamorphic	М	Slate Schist	L
		Magnetitite	М	Unknown protolith		Gneiss Granulite	S G N
Intermediate Extrusive	I	Undifferentiated Andesite Trachyte	U V T			Marble Amphibolite Hornfels	B A H
Intermediate Intrusive	ı	Trachy-andesite Undifferentiated	Ϋ́	Metamorphic Sedimentary protolith	Р	Quartzite Psammite	Q M
		Diorite Monzonite Syenite	D M S			Semipelite Pelite Slate	E P I
		Porphyry	P			Metacarbonate/marble Calcsilicate	B X
Acid Extrusive	F	Undifferentiated Rhyolite Dacite	U R C			Schist Gneiss Granulite	S G N
Acid Intrusive	G	Rhyodacite Undifferentiated	0 U	Motomorphia		Amphibolite Hornfels Metafelsic	A H
		Granite Monzogranite Syenogranite Alkali feldspar granite	G M S A	Metamorphic Igneous protolith	R	Metaresic Metamafic Meta-ultramafic Schist	F M U S
		Granodiorite Tonalite	D T			Gneiss Granulite	G N
		Porphyry Pegmatite Aplite	P Z L	Metamorphic Intensely deformed	Y	Amphibolite Mylonite Cataclasite	M C
Lamprophyre/ Kimberlites	L	Undifferentiated Phyric lamprophyre	U P	Hydrothermal	Н	Undifferentiated Mylonite	U Y
		Lamproite Kimberlite	L K	Mining Codes	\A/	Skarn	S
Vein material	VN	Carbonatite	С	Mining Codes	W	Mullock/Waste Tailings cavity	W T C
Massive sulphide Contamination	AM XX					Stope Backfill Stockpile	S B P
						Lost Core	- ;

Lost Core

Albite ab Actinolite ac Andalusite ad Anhydrite ai Ankerite ak Amphibole am Asbestos ao Apatite ba Biotite bi Calcite ca Carbonate cb Chloritoid cd Chlorite cl Cordierite co Carbonaceous cs Clay cy Clinopyroxene cx Dolomite(ic) bi Obiopside dp Epidote ep Feldspar fd Ferruginous fe Fluorite fi Fuchsite fu Garnet ga Graphite gf Gypsum gm Goethite gu Halite ha Hornblende hb Haematite li Leucite kn K-feldspar ks Kyanite ky Limonite ii Leucoxene k Magnesite me Manganese mn Montmorillonite mr Muscovite ms	Albite Actinolite Andalusite Anhydrite Ankerite Amphibole Asbestos Apatite	ab ac ad ai ak am ao ap ba bi ca cb
Actinolite Andalusite Andalusite Ankerite Ankerite Ankerite Asbestos Apatite Barite Barite Biotite Calcite Carbonate Chloritoid Chlorite Cordierite Cordierite Cordiopyroxene Carbonaceous Clay Clinopyroxene Dolomite(ic) Diopside Epidote Feldspar Ferruginous Ferruginous Ferruginous Ferruginous Ferruginous Ferruginous Ferruginous Ferughite Garnet Garnet Garnet Garnet Garnet Gypsum Goethite Gossan Grunerite Halite Halite Haematite Hmm Ilmenite Kaolinite Kr-feldspar Kyanite Leucoxene Manganese-Co-Fe Mica Manganese Montmorillonite Muscovite ms	Actinolite Andalusite Anhydrite Ankerite Amphibole Asbestos Apatite	ac ad ai ak am ao ap ba bi ca cb
Andalusite ai Anhydrite ai Ankerite ak Amphibole am Asbestos ao Apatite ap Barite ba Biotite bi Calcite ca Carbonate cb Chloritoid cd Chlorite cl Cordierite co Carbonaceous cs Clay cy Clinopyroxene cx Dolomite(ic) do Diopside dp Epidote ep Feldspar fd Ferruginous fe Fluorite fi Fuchsite fu Garnet ga Graphite gf Gypsum gm Goethite go Gossan gs Grunerite gu Halite ha Hornblende hb Haematite lim Kaolinite kn K-feldspar ks Kyanite ky Limonite li Leucoxene kx Magnesite me Manganese mn Montmorillonite mr Muscovite ms	Andalusite Anhydrite Ankerite Amphibole Asbestos Apatite	ad ai ak am ao ap ba bi ca cb
Anhydrite ak Ankerite ak Amphibole am Asbestos ao Apatite ap Barite ba Biotite bi Calcite ca Carbonate cb Chloritoid cd Chlorite cl Cordierite co Carbonaceous cs Clay cy Clinopyroxene cx Dolomite(ic) do Diopside dp Epidote ep Feldspar fd Ferruginous fe Fluorite fi Fuchsite fu Garnet ga Graphite gf Gypsum gm Goethite go Gossan gs Grunerite gu Halite ha Hornblende hb Haematite im Kaolinite kn K-feldspar ks Kyanite ky Limonite li Leucoxene kx Magnesite me Manganese-Co-Fe Mica mi Manganese Muscovite ms	Anhydrite Ankerite Amphibole Asbestos Apatite	ai ak am ao ap ba bi ca cb
Ankerite ak Amphibole am Asbestos ao Apatite ap Barite ba Biotite bi Calcite ca Carbonate cb Chloritoid cd Chlorite cl Cordierite co Carbonaceous cs Clay cy Clinopyroxene cx Dolomite(ic) do Diopside dp Epidote ep Feldspar fd Ferruginous fe Fluorite fi Fuchsite fu Garnet ga Graphite gf Gypsum gm Goethite go Gossan gs Grunerite ha Hornblende hb Haematite hm Ilmenite im Kaolinite kn K-feldspar ks Kyanite ky Limonite li Leucite lu Leucoxene lx Magnesite me Manganese mn Montmorillonite mr Muscovite ms	Ankerite Amphibole Asbestos Apatite	ak am ao ap ba bi ca cb
Amphibole am Asbestos ao Apatite ap Barite ba Biotite bi Calcite ca Carbonate cb Chloritoid cd Chlorite cl Cordierite co Carbonaceous cs Clay cy Clinopyroxene cx Dolomite(ic) do Diopside dp Epidote ep Feldspar fd Ferruginous fe Fluorite fi Fuchsite fu Garnet ga Graphite gf Gypsum gm Goethite go Gossan gs Grunerite ha Hornblende hb Haematite hm Ilmenite im Kaolinite kn K-feldspar ks Kyanite ky Limonite li Leucoxene lx Magnesite me Manganese mn Montmorillonite mr Muscovite ms	Amphibole Asbestos Apatite	am ao ap ba bi ca cb
Asbestos ao Apatite ap Barite ba Biotite ca Calcite ca Carbonate cb Chloritoid cd Chlorite cl Cordierite co Carbonaceous cs Clay cy Clinopyroxene cx Dolomite(ic) do Diopside dp Epidote ep Feldspar fd Ferruginous fe Fluorite fi Fuchsite fu Garnet ga Graphite gf Gypsum gm Goethite go Gossan gs Grunerite ha Hornblende hb Haematite hm Ilmenite kn K-feldspar ks Kyanite ky Limonite li Leucoxene kx Magnesite me Manganese mn Montmorillonite mr Muscovite ms	Asbestos Apatite	ao ap ba bi ca cb
Apatite ba Barite bi Calcite ca Carbonate cb Chloritoid cd Chlorite cl Cordierite co Carbonaceous cs Clay cy Clinopyroxene cx Dolomite(ic) do Diopside dp Epidote ep Feldspar fd Ferruginous fe Fluorite fi Fuchsite fu Garnet ga Graphite gf Gypsum gm Goethite go Gossan gs Grunerite ha Hornblende hb Haematite hm Ilmenite kn K-feldspar ks Kyanite ky Limonite li Leucoxene kx Magnesite me Manganese mn Montmorillonite mr Muscovite ms	Apatite	ap ba bi ca cb
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Montmorillonite mr Muscovite ms	Manganese	mn
		mr
Magnetite	Muscovite	ms
Inagricuic IIII	Magnetite	mt
Monazite mz	_	mz
Nontronite no	Nontronite	no
Nepheline np	Nepheline	np
Oxide od	•	•
Olivine ol	Olivine	ol
Onalicad	Opalised	ор

Variants - Minerals	
Oxidised sulphide	os
Orthopyroxene	ОХ
Phlogopite	pg
Phosphate(ic)	ph
Plagioclase	pl
Pyroxene	рх
Quartz	qt
Rutile	ru
Sanidine	se
Sphene	sf
Smectite	sg
Siderite	sj
Sillimanite	sm
Cassiterite	sn
Staurolite	SO
Sphalerite	sp
Serpentine	sr
Sulphur	sv
Sylvite	sy
Talc	tc
Tremolite	tm
Tourmaline	to
Wolframite	wf
White Mica	wm
Zircon	zr
Zeolite	zt
	·

Variants - Sulphides	/ Ore
Minerals	
Arsenopyrite	as
Azurite	az
Bornite	bn
Chalcocite	CC
Chalcopyrite	ср
Chromite	cr
Copper, native	cu
Covellite	CV
Cuprite	ct
Electrum	el
Enargite	en
Galena	gl
Gold, native	au
Malachite	ml
Molybdenite	mo
Nickeliferous	nk
Pentlandite	pn
Pyrite	ру
Pyrrhotite	po
Scheelite	sc
Silver	ag
Stibnite	sb
Sulphide	su
Tellurides	te

Variants - Texture	
Adcumulate	at
Agglomerate	al
Amygdaloidal	ay
Banded	bd
Breccia	bx
Cherty	ch
Chill margin	CZ
Coarse-grained	cg
Crystal Tuff	tx
Cumulus	cm
Downhole fining	df
Fine-grained	fg
Flaser bedding	fz
Flow top breccia	fx
Gradational	gt
Granophyric	gp
Groundmass	gd
Lamination	ga Im
Lapilli Tuff	tl
Lenticular bedding	lc
Lithic	lk
Massive	ma
Matrix	mx
Medium-grained	mg
Mesocumulate	mc
Migmatitic	mm
Muddy	md
Oolitic	00
Orthocumulate	OC
Phyllitic	pi
Pillowed	pw
Poorly sorted	ps
Porphyritic	pp
Porphyroblastic	pb
Porphyroclastic	pc
Sandy	sd
Shaley	sh
Silicification	si
Silty	st
Spinifex	sx
Tuff	tf
Uphole fining	uf
Volcanic breccia	vb
Volcaniclastic	VC
Wallrock	wr
Welded Tuff	tw



Weathering and Other Events Base of transported BOA Base of complete oxidation BOCO Top of palaeochannel Top of saprolite TOP **TOSA** Top of saprock **TOSR** Top of fresh rock **TOFR** Top of basement TOB Water table WT

Colour	
Black	bk
Blue	bl
Blue-green	bg
Brown	br
Cream	CW
Green	gr
Green-grey	gg
Grey	gy
Grey-brown	gb
Olive green	og
Orange	or
Orange-brown	ob
Pink	pk
Purple	pu
Red	rd
Red-brown	rb
Transluscent	tt
White	wh
Yellow	ye
Yellow-brown	yb
Yellow-green	уg
* Light (l) and dark (d) prefix optiona	ıl

GEOLOGY LOGGING CODES May 2006

Regolith Group	
Aeolian	EO
Alluvium	AL
Calcrete	CT
Clay Zone	CY
Colluvium	CV
Ferricrete	FK
Gossan	GS
Lacustrine	LA
Lacustrine Evaporites	LE
Lag	LG
Lateritic Residuum	LT
Mottled Zone	MZ
Saprock	SR
Saprolite	SA
Silcrete	SC
Soil	SL
Transported	TR

Sample Condition	
Dry – no water	D
Moist – can be moulded by hand but not wet to the touch	M
Wet – a slurry that is wet to the touch, but no free water	W
Saturated – sample suspende in free running water, note that water may contain suspended clay particles and	S
therefore be discoloured	

Regolith Variant	
Bleached	bl
Breccia	bx
Calcareous	ca
Carbonaceous	CS
Chert	ch
Clay	су
Duricrust	du
Ferruginuous	fe
Goethite	go
Gravel	gv
Gypsum	gm
Haematite	hm
Halides	ha
Hardpanised/Indurated	hp
Iron Segregation	is
Kaolinite	kn
Lateritic	lt
Lignite/Plant material	lg
Limonitic	li
Lithic Fragments	lk
Loess	lo
Mega-Mottled	mb
Mn-Co-Fe	mf
Mottled	mu
Mud	md
Nodules	nd
Nontronitic	no
Pisoliths	ps
Quartz	qt
Sand	sd
Siliceous	si
Silt	st
Silty clay	ys
Smectite	sg
Oxidised sulphides	os
Talc	tc
White mica	wm

Weathering		
Fresh rock	No visible signs of rock weathering	FR
Slightly weathered	Stained along discontinuity surfaces, original colour and texture recognisable	SW
Moderately weathered	Stained throughout, original texture recognisable throughout	MW
Highly weathered	Original colour and hardness severely altered, some texture visible	HW
Completely weathered	Rock exhibits soil-like properties (ie can be remoulded), some rock fragments may remair	CW

Hardness	
Unconsolidated	UC
Very weak - may be broken by hand	VW
Weak - Crumbles under firm blow with sharp end of geological hammer	W
Moderately weak - Cannot be cut by hand into triaxial specimen	MW
Moderately strong - 5mm indentation with sharp end of geological hammer	MS
Strong - Hand held specimen can be broken with single blow of geological hammer	S
Very strong - More than one blow of geological hammer required to break specimen	VS
Extremely strong - More than one blow of geological hammer required to break specimen	ES