Annual Technical Report
EL4497

For the period ending 31 May 2011

N Galloway Warland

August 2011

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1. SUMMARY OF ACTIVITIES

EL4497 (Lake Harris) is highly prospective for a range of commodities including gold and silver, nickel, iron ore, tin and sediment hosted uranium. Recent discoveries in the area include Tunkillia gold deposit, 60km south of Tarcoola within the Yarlbrinda Shear Zone (Resource 15.5Mt @ 1.61g/t Au ~803,000oz Au). The historic goldfields – Glenloth, Earea Dam and Tarcoola surround the tenure.

The Archaean Harris Greenstone Belt extends across the tenement and is the only greenstone belt in SA. EL4497 was selected for this prospective suite of rocks and their strong geological affinities to known Archaean and Proterozoic gold, base metal and nickel producing districts in the world, for example Yilgarn Craton, WA and the Abitibi Greenstone Belt, Canada.

Compared to the Western Australian greenstone belts, this South Australian area is significantly under-explored. The thin veneer of alluvium and aeolian sands covering a large portion of the tenure has limited previous exploration. It is also important to note that the historic goldfields surrounding the tenure all outcropped.

During the reporting period Endeavour Discoveries completed a surface geochemistry program over the tenure focusing on areas previously untested or with anomalous calcrete results. 226 calcrete samples, 4 MMI samples and 293 plant biogeochemistry samples were collected.

This surface geochemistry program was part of a collaborative research project established between Endeavour Discoveries Limited and The Adelaide University. The principle aim of the project is to test plant biogeochemistry over varying regolith terrains (aeolian sand dunes, alluvial/colliuval cover and residual saprolite) and compare results to calcrete data. To complement this study, data was also collected over the know mineralization at the historic Glenloth Goldfields (permission granted from ML owners). This research project is still in progress with only preliminary work completed.

2. INTRODUCTION

2.1 Tenure

Exploration License EL 4497 Lake Harris, was granted to Endeavour Discoveries Limited 31 May 2010 for a 1 year period. Tenure was renewed in full for a further 2 years, expiring 31 May 2013.

2.2 Location

The Lake Harris tenement is located in the Archaean-Mesoproterozoic Harris Greenstone Belt of the central Gawler Craton. The tenement consists of three separate land parcels totally an area of 993km2. The 3 areas lie between the townships of Tarcoola and Kingoonya, Figure 1.

The tenement is accessed from the Glendambo to Tarcoola Road which runs parallel to the Trans-Australian railway line. Within the tenement access is via numerous unsealed roads and station tracks.

The terrain consists of flat, scrubby saltbush plains and sand dunes. Some of the tenement is covered by the salt pans associated with Lake Harris in the south eastern corner.

2.3 Native Title

Endeavour Discoveries signed on to the Gawler Rangers Mineral Exploration ILUA on 4 April 2011, figure 1. This was followed up by an Early Exploration Notification sent 18 April 2011 advising of the proposed surface geochemistry program.

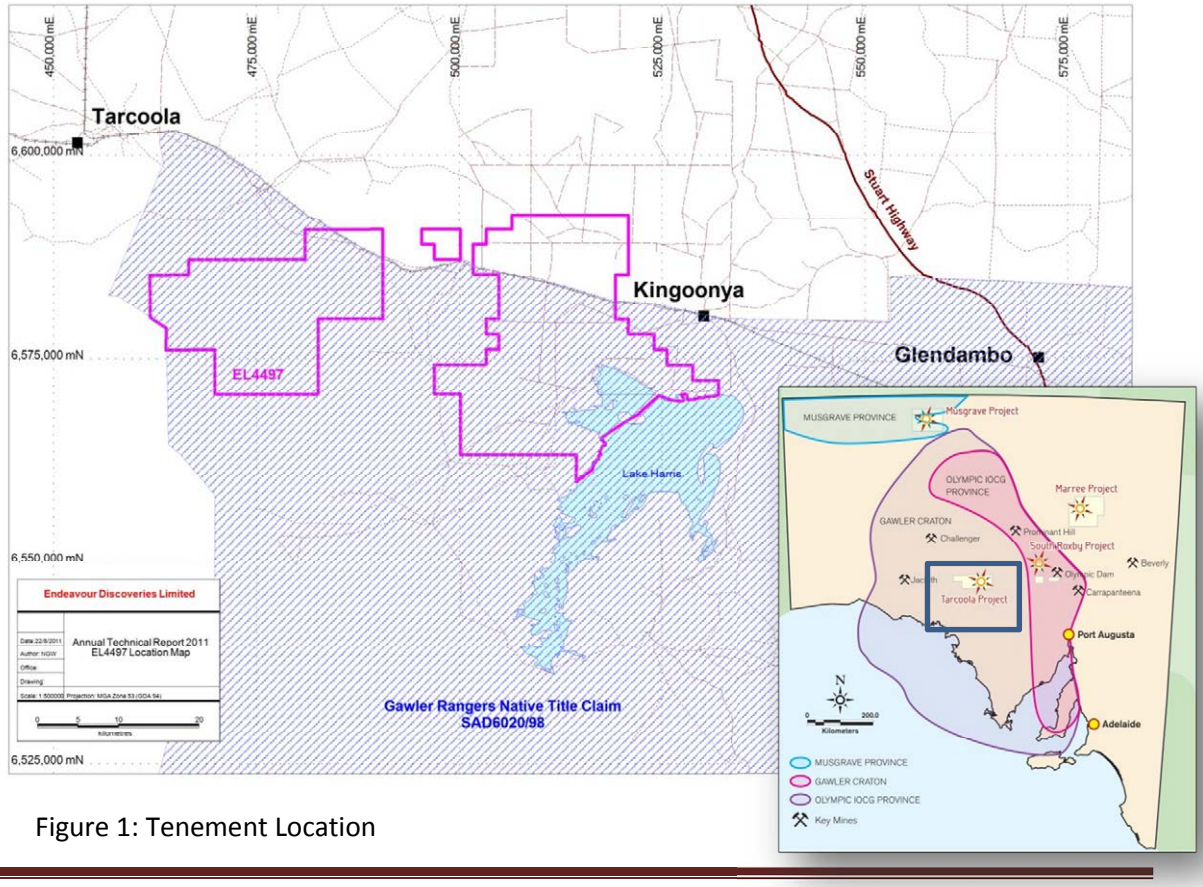


Figure 1: Tenement Location

3. GEOLOGY

EL4497 (Lake Harris) lies within the Harris Greenstone Belt of the central Gawler Craton, where it is sandwiched between the Wilgena Subdomain and the Gawler Range Volcanics Domain, as well as being within the northern part of the Central Gawler Gold Province (Davies M. 2003) Figure 2.

Archaean rocks include the gneisses of the Mulgathing Complex, intruded in the southern part of the project by the Glenloth Granite, and largely extrusive mafic-ultramafic rocks of the Harris Greenstone sequence. Palaeoproterozoic rocks include pre-early syntectonic granitoids and high magnetic intensity metasediments and BIF of the Tarcoola and Lake Labyrinth Formation (Figure 2).

Mesoproterozoic rocks include the Lower Gawler Range Volcanics, which mainly overlie older basement in the east of the project, and intrusive granitoids of the Hiltaba Suite.

Phanerozoic cover sediments include minor outliers of Jurassic Algebuckina Sandstone found in the east of the Project, and interpreted Tertiary channels of the Kingoonya Palaeochannel System, fingers of which extend through the tenement. This palaeochannel is host to the Warrior uranium deposit located approximately 80km west of tenement. Bedrock exposure is relatively sparse, with a thin cover of Tertiary/Quaternary aeolian, fluvial/alluvial or lacustrine sediments or pedogenic carbonate found in most places.

3.1 Historic Goldfields

Gold mineralisation literally surrounds EL4497, including known deposits within close proximity such as Tunkillia, Tarcoola, Earea Dam, Challenger, and Glenloth (Figure 3). This widespread distribution of gold mineralisation in related geological settings indicates that gold is endemic in the system.

The Earea Dam Goldfield lies to the west of tenure, approximately 35 km west of Kingoonya. From the discovery of gold in 1899 until the last production in 1941 the Earea Dam Goldfield intermittently produced about 2,000 ounces (62 kg) of gold from narrow quartz veins in granite (Tonkins, 2011).

Alluvial gold was found at Glenloth Well directly south of tenure, 30 km south-west of Kingoonya in 1893, but the reef gold of the Glenloth Goldfield was not discovered until 1901. Gold is found in narrow discontinuous quartz reefs associated with extensive alteration zones in the Glenloth Granite. Gold batteries and cyanide works operated from 1904 to 1924 and from 1935 to 1955, after which a small production continued. The estimated total gold production from Glenloth Goldfield was 10,000 ounces (300 kg).

At the Tarcoola Goldfield, alluvial gold was found in 1893, followed by the discovery of reef gold in 1900, sparking a gold rush. The Tarcoola Blocks Co. pegged 10 twenty acre blocks surrounding the original find and established the largest gold mine in South Australia, which continued production until 1918. Smaller operators included the Tarcoola Perseverance, Welcome Home and Curdnatta Mines. Gold is found in numerous sub parallel quartz reefs, which cross cut Mesozoic sediments of the Tarcoola Formation and an adjacent granite intrusive. Estimated total production for the Tarcoola Goldfield was 100,000 ounces (3,100 kg) (Daly et al., 1990).

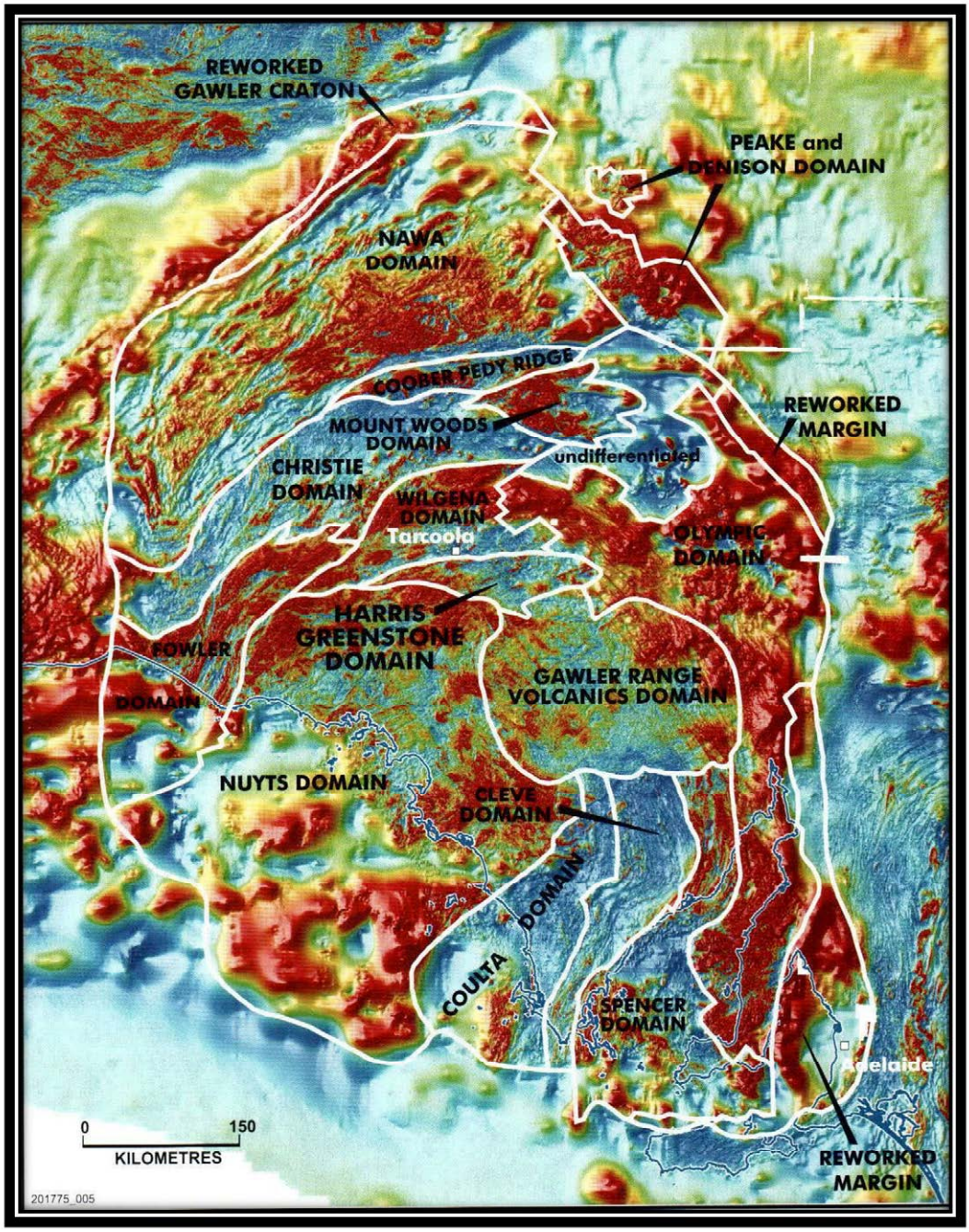


Figure 2: Domains of the Gawler Craton overlying TMI Images (after Davies, M. 2003)

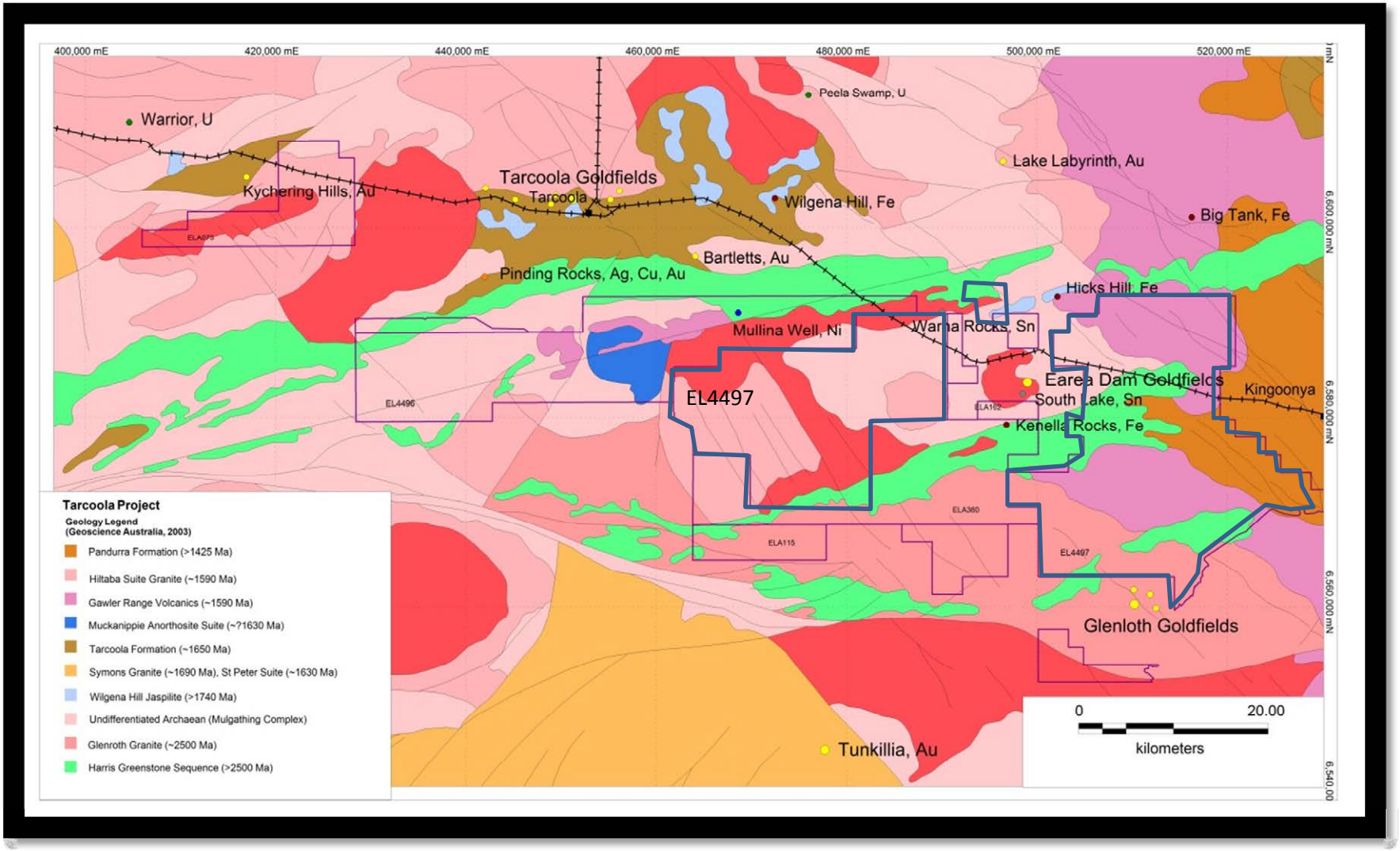


Figure 3: Geology Map of the Harris Greenstone Belt showing Endeavour Discoveries Tenements.

4 PETROLOGY AND MINERALOGY

During the reporting period two field orientation trips were completed over EL4497 and Endeavours surrounding tenure in the Tarcoola region. Outcropping geology was reviewed and compared to published mapping. Endeavour collected several samples to establish a reference library for the Tarcoola area (table 1). To complement this eleven outcropped samples were sent to Pontifex and Associates Pty Ltd for petrological and mineralogical descriptions (eight thin sections and three polished thin sections). Please refer to Appendix 1 for Mineralogy Report.

Table 1: Mineralogy Summary

Sample ID	Easting (GDA 94)	Northing (GDA 94)	Lithology	Rock type
T027	513685	6583753	mafic	altered mafic - basalt or dolerite
T102a	504288	6585796	granitoid	micromonzogranite
T102b	504288	6585796	granitoid	micromonzogranite
DR019	497687	6567992	granitoid	micromonzogranite
DR022	490020	6567620	mafic	altered basalt
DR028	496540	6582000	granitoid	synenogranite gneiss
DR029a	497000	6579000	metasediments	oxidised magnetite
DR029b	497000	6579000	metasediments	quartz-feldspar gneiss
DR029c	497000	6579000	metasediments	oxidised BIF (30% magnetite, 10% haematite)
DR040a	491077	6587321	granoitoid/mafic	Contact tonalite gneiss and metamorphosed mafic
DR040b	491077	6587321	granitoid	syenogranite gneiss

5 SURFACE GEOCHEMISTRY

During the reporting period Endeavour Discoveries completed an initial surface geochemistry program over the tenure focusing on areas previously untested or with anomalous calcrete results. 4 MMI samples, 226 calcrete samples and 293 plant biogeochemistry samples were collected from 3 areas across the tenure plus along the Telstra line in the north of tenure which parallels the railway line (which has not been rehabilitated) Figure 4.

A collaborative research project was established between Endeavour Discoveries and Adelaide University to test plant biogeochemistry over varying regolith terrains (aeolian sand dunes, alluvial/colliuval cover and residual saprolite) and comparing results to calcrete data. This project will form part of Ben van der Hoeks PhD thesis under the supervision of Dr Steve Hill and Dr Robert Dart. This research project is still in progress with only preliminary work completed. Plant biogeochemistry if proven to be effective in this terrain is a fast, low impact (heritage and environmental) alternative sampling technique.

5.1 MMI Samples

Four MMI samples were collected in Area 3 (A3X1 and A3X2) to test best sampling horizon - 10-20cm and 20-30cm soil horizons. This work was in preparation for future MMI sampling in the region (figure 4). See Appendix 3 for analytical results.

5.2 Calcrete Samples

Calcrete samples were collected by hand digging to calcrete horizon varying in depth from 1-1.5m. Samples were sent to Genalysis for analysis, pulverised to 300g followed by AR10/OM10 analytical method - Aqua regia digestion 10g / ICPOES & ICPMS Package. Refer to Appendix 4 for full analytical results.

52/218 calcrete samples (excluding historic Glenloth goldfield samples) returned values greater than/or equal to 5ppb Au with 5 samples above 10ppb Au (table 2, 3 and Figure 5). Background gold in calcrete is 3-4ppb.

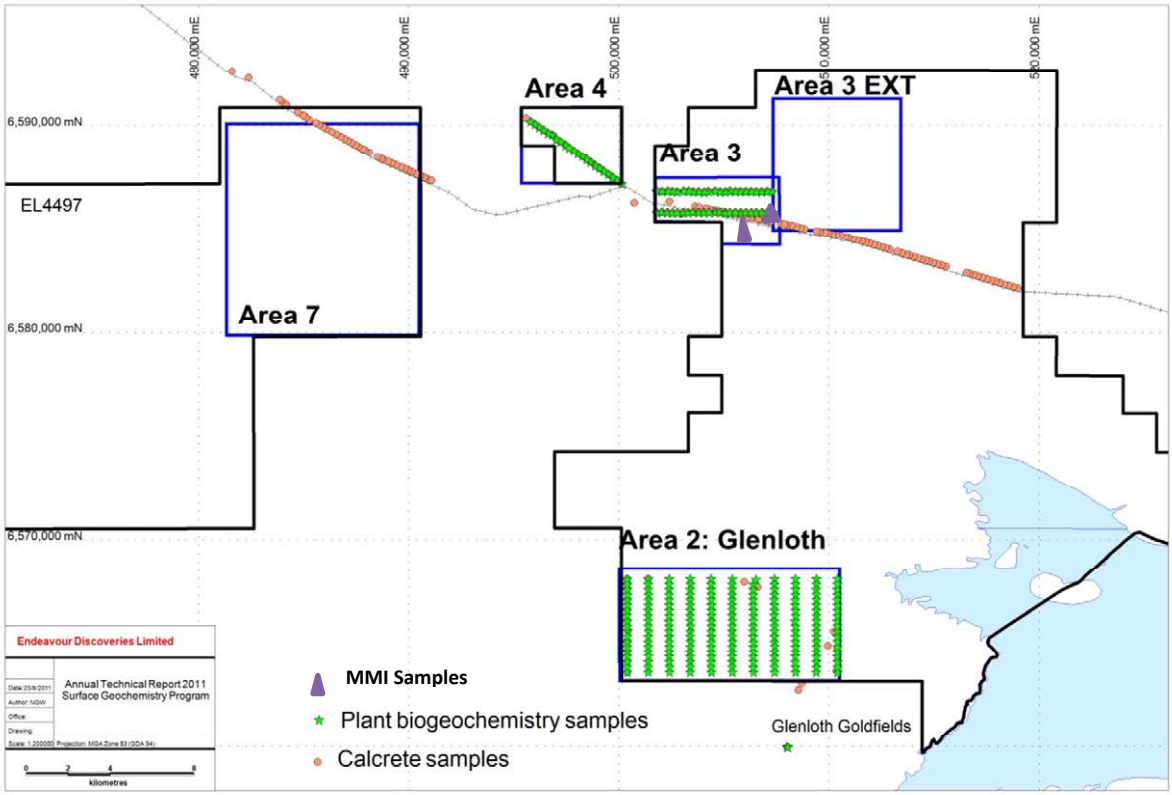


Figure 4: Surface Geochemistry Sampling Location Map

Table 2: Summary of Calcrete results for economic elements

Calcrete	Au	As	Cu	Ni	Zn
Area	Telstra Line	Glenloth	Telstra Line	Area 4	Glenloth
Sample ID	T077	GLX20	T076	A420	GLX5
Max Value	15ppb	26ppm	93ppm	20ppm	59ppm

Mean Value	3ppb	2.8ppm	12ppm	9.4ppm	16.9ppm

Table 3: Calcrete Samples greater than 10ppb Au

TENEMENT	SAMPLE_ID	Area	Au ppb
EL4497	T065	Telstra Line	11
EL4497	T069	Telstra Line	11
EL4497	T077	Telstra Line	15
EL4497	A315	Area 3	11
EL4497	A316	Area 3	12

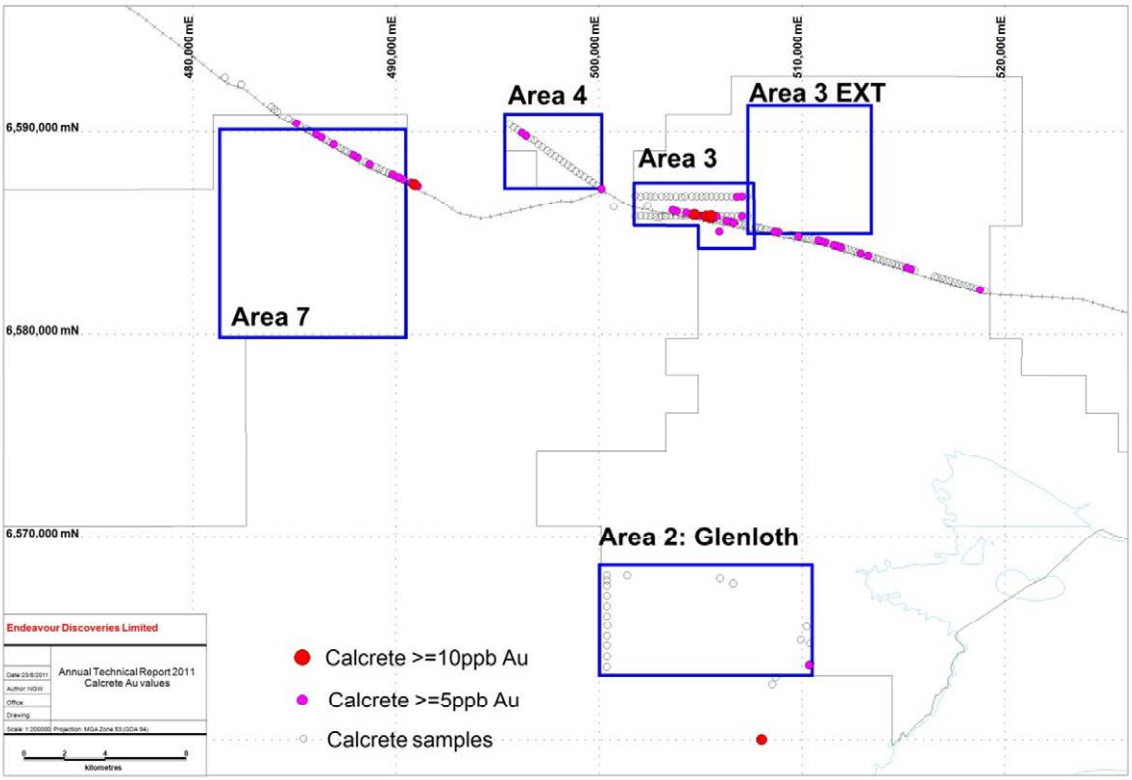


Figure 5: Calcrete Au values

5.3 Plant Biogeochemistry Samples

Plant biogeochemistry involves collection by gloved hand or sterile secateurs, approximately 300gram samples of plant material (in this circumstance leaf material was collected) from a widespread plant species across the program area (collection subject to availability and/or distribution). Pearl Bluebush and Mulga Acacia were the predominant sampled species (Table 4).

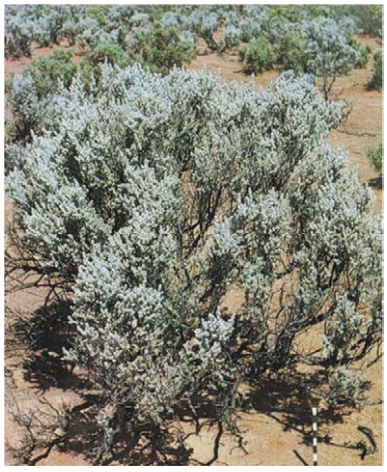
Plant samples were dried and sorted at the Adelaide University and sent to Acme Analytical Laboratories Vancouver for analysis. Plant analysis included plant maceration to 1mm followed by Aqua Regia Digestion - ICP-MS finish (1VE2-1VE6).

Only preliminary work has been carried out on the plant biogeochemistry results, follow up sampling and analysis if planned for mid-2011. Preliminary statistics are outlined in Table 4 for economic elements (Refer to Appendix 5 for full results).

Table 4: Plant Biogeochemistry statistics

Biogeochemistry	***Au***	***Cu***	***Zn***	***Ni***	***Pb***
Count	*293*	*293*	*293*	*293*	*293*
Area	*Area 3*	*Area 4*	*Area 4*	*Glenloth*	*Glenloth*
Sample ID	*several samples*	*A405*	*A413*	*GL058*	*several samples*
Max	*2ppb*	*9*	*22*	*16*	*1*
mean	*0.17ppb*	*4.5*	*7.8*	*0.5*	*0.06*

Table 5: Plant Species selected for sampling in the Lake Harris area.

Common Name	Scientific Name	Image
Bluebush, Low	*Maireana astrotricha*	
Bluebush, Pearl	*Maireana sedifolia*	
Mulga	*Acacia aneura*	
Mulga, Horse*	*Acacia ramulosa*	

6 ENVIRONMENT

All surface geochemical sampling was conducted on foot. Calcrete sample sites were selected and rehabilitated in accordance with PIRSA exploration guidelines M33 -*Statement of Environmental objectives and environmental guidelines for mineral exploration activities in South Australia* and M21 -*Mineral exploration drillholes- general specifications for construction and abandonment.*

Vehicle movement was restricted to roads and station tracks. There was no off –road vehicle work.

All field personnel were accommodated at the Kingoonya Hotel hence no field camp was established.

7 EXPENDITURE

Endeavours expenditure for the 12month reporting period totalled $150,304. PIRSA expenditure commitment was $130,000.

Table 6: EL4497 Expenditure

ITEM	EXPENDITURE
Tenure & Regulatory	$13,248.00
Native Title	$4,043
Wages & on costs	$52,479.00
Geology	$18,800.00
Geophysics	$2,610
Geochemistry	$27,678
Field Costs	$15,342.10
Administration (12%)	$16,104.01
Total	**$150,304.11**

8 CONCLUSION

Plant biogeochemistry if proven to be effective in this terrain or in a particular regolith environment would be a fast and low impact (heritage and environmental) alternative sampling method to traditional calcrete sampling. Preliminary results from the first program have led to a follow up program scheduled for June 2011.

In addition to the surface geochemistry program, work is continuing on open file data reviews in conjunction with the reprocessing and modelling of all available public geophysical data sets.

Exploration to date validates Endeavours geological models for lode gold mineralization, Archaean nickel and iron ore mineralization.

9 REFERENCES

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Pontifex & Associates Pty Ltd

MINERALOGY – PETROLOGY · SECTION PREPARATION

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MINERALOGICAL REPORT No. 9895

by Alan C. Purvis, PhD

April 15, 2011

TO :	Duncan Chessell Endeavour Discoveries Level 1, 228 Rundle St Adelaide SA 5000
YOUR REFERENCE :	Samples Received 4/3/11
MATERIAL :	Rock Samples, Tarcoola Area
IDENTIFICATION :	DR019 to DR040(B) T027 to T102(B)
WORK REQUESTED :	Thin section preparation, description and report.
SAMPLES & SECTIONS :	Returned to you with hardcopy of this report.
DIGITAL COPY :	Emailed 15/4/11 to: <duncan@edvltd.com.au>

PONTIFEX & ASSOCIATES PTY. LTD.

SUMMARY COMMENTS

Eleven outcrop samples, from the Tarcoola area in the Gawler Craton in South Australia, are described in this report from eight thin sections and three polished thin sections. The offcuts were stained with HF and sodium cobaltinitrite to reveal K-feldspar with a deep yellow stain in some samples. The petrography is summarised below by listing the headers from the individual samples within three lithological groups represented.

Metasediments

One sample consists of weathered, previously garnet-bearing, and weakly graphitic metasediment, and there are two weathered oxide-bearing metasediments as follows:

DR029 (B): Weathered (graphitic) quartz-feldspar-gneiss with sparse oxidised garnet passing into quartz-garnet-feldspar gneiss. Ex-garnet is represented by limonite boxworks, largely within kaolinite ± illite.

DR029 (A): Massive to weakly coarse layered iron formation with sub-equal metamorphic quartz (or possible vein quartz), and partly or totally oxidised magnetite. Extensive clays/limonite/goethite occurs around the oxidised magnetite, in fractures and rimming voids.

DR029 (C): Oxidised BIF with up to 30% oxidised magnetite and 10% scattered fine primary hematite, with clay patches, supergene quartz and limonite-filled fractures.

Granitoids and granitoid gneisses

Six samples in this suite contain or consist of granitoids and granitoid gneisses, with gneissic samples possibly older than undeformed samples. On this textual basis, these are listed below from probably oldest to youngest, with the last two samples containing partly bipyramidal quartz suggesting shallow intrusive depths, such as a subvolcanic setting.

DR040 (A): Contact between weakly altered tonalite gneiss and metamorphosed fine-grained mafic with plagioclase, actinolite ex-pyroxene, clinopyroxene, hornblende, accessory opaque oxide and apatite.

DR028: Leucocratic augen gneiss of syenogranite composition with clay-hematite-stained feldspars.

DR040 (B): Weakly altered syenogranite gneiss with sericite-clouded plagioclase, clay-limonite altered. This sample has antiperthitic plagioclase, suggesting high-grade metamorphism.

DR019: Weakly altered medium-grained leucocratic monzogranite with sericite-clay-limonite alteration.

T102 (A): Weakly weathered micromonzogranite with hematite and clay alteration.

T102 (B): Weakly altered biotite-bearing monzogranite similar to T102 (A).

Mafic lithologies (metamorphosed and/or altered)

Three samples contain or consist of metamorphosed or altered mafic lithologies, one of which has intruded the granitoid gneiss DR040 (A) as indicated above. These three mafics are:

DR040 (A): Contact between tonalite gneiss and metamorphosed fine-grained mafic with plagioclase, actinolite ex-pyroxene, clinopyroxene, hornblende, opaque oxide and apatite.

T027: Sericite-clouded plagioclase-clinopyroxene-quartz-K-spar-oxide aggregate, with zones rich in K-spar. Interpreted as altered metamorphosed mafic material (basalt or dolerite?), with potassic alteration.

DR022: Plagioclase-actinolite-clinopyroxene-epidote-altered basalt, with veins rich in epidote-clinozoisite or clinopyroxene.

The texture in sample DR040 (A) is similar to that seen in retrogressed mafic granulites near Broken Hill, and the mafic component may have originally had granulite or high amphibolite facies metamorphism. Sample T027 may also have had amphibolite to granulite facies metamorphism, but DR022 has probably greenschist facies metamorphism and alteration, suggesting that it is younger.

INDIVIDUAL DESCRIPTIONS

DR019	**Weakly altered medium-grained leucocratic monzogranite with sericite-clay-limonite alteration.**

Handspecimen

This sample represents pinkish medium-grained granitoid, with quartz less abundant than plagioclase and K-spar, as seen on the stained offcut.

Thin section

The thin section has a visually estimated mineralogy of 40% sericite-clouded, hematite-stained plagioclase, 35% microcline, 24% quartz and <1% each of altered mafic grains and oxidised opaque oxide. Rare microcrystalline muscovite occurs in the plagioclase. This assemblage indicates leucocratic monzogranite possibly related to alaskite.

Some fine-grained lenses with anhedral grains are less than 1mm long, but most of the thin section is inequigranular with plagioclase to 6mm, microcline to 5mm, and quartz to 4mm in size. A mafic grain 2mm in diameter is altered to clay and limonite but there is no textural preservation to indicate the original mineral species. Accessory opaque oxide grains have been oxidised, and there is a micro-fracture containing clay, limonite and leucoxene. The alteration seems to be mostly due to weathering.

DR022	**Plagioclase-actinolite-clinopyroxene-epidote-altered basalt, with veins rich in epidote-clinozoisite or clinopyroxene.**

Handspecimen

This dark greenish grey rock has anastomosing fractures but may represent altered or metamorphosed mafic material such as basalt.

Thin section

The thin section shows abundant unoriented plagioclase microlites to 0.5mm long with interstitial actinolite and minor microcrystalline opaque oxide. Rare lenses of fine-grained clinopyroxene occur, and there are micro-fractures filled with very fine-grained clinopyroxene accompanied by opaque oxide and rare plagioclase. Lenses of clouded clinozoisite-epidote are disseminated and most of the fractures or veins contain clouded clinozoisite-epidote.

This sample represents metamorphosed basalt with abundant veinlets and fractures.

DR028	**Leucocratic augen gneiss of syenogranite composition with clay-hematite-stained feldspars.**

Handspecimen

This sample is seen in hand specimen as a leucocratic quartz-K-spar-rich gneiss, with minor plagioclase.

Thin section

The thin section has a visually estimated mineralogy of 40% quartz, 45-50% clouded K-spar and 10-15% clouded plagioclase. This indicates leucocratic syenogranite.

There are rare augen of K-spar from 2mm to 8mm in diameter and alternating lenses to 5mm wide of fine-grained K-spar ± plagioclase and of inequigranular quartz. Most of the feldspar is about 0.4mm in grainsize and clouded by clay and earthy hematite. Plagioclase is not obvious in the thin section, but can be seen as white unstained grains on the stained offcut. The quartz includes weakly strained old grains possibly as much as 8mm long, as well as recrystallised new grains to 1.5mm long. Rare limonite-filled fractures are present.

DR029 (A)	**Massive to weakly coarse layered iron formulation of sub-equal metamorphic quartz and partly or totally oxidised magnetite, with extensive clays/limonite/goethite around the oxidised magnetite, in fractures and rimming voids.**

Handspecimen

Macroscopically this rock is seen to consist of coarse irregularly vaguely layered to massive partly porous limonite ± hematite, within scattered oxidised magnetite and more abundant white vein or metamorphic quartz. It is moderately magnetic.

Thin section

The polished section has approximately 60% metamorphic(± possible vein)-quartz, mostly fine-grained, but rarely to 7mm grainsize, and 15% partly to completely oxidised magnetite to 2mm in grainsize.

The magnetite has been partly or completely replaced by micro-porous martite-textured hematite, but some grains are largely fresh. Limonite and goethite make up 25% of the thin section, rimming and enclosing magnetite grains, in irregular fractures and as colloform crystalline material partly rimming small voids. Much of the limonite is brown in low-angle incident light but at either end of the thin section there are fractures containing yellow-orange limonite, possibly with clay. There are also abundant limonite-filled fractures in the quartz-garnet-rich band.

This sample seems to represent an oxidised quartz-magnetite iron formation.

DR029 (B)	**Weathered (graphitic) quartz-feldspar-gneiss with sparse oxidised garnet passing into quartz-garnet-feldspar gneiss. Ex-garnet is represented by limonite boxworks, within kaolinite ± illite.**

Handspecimen

This sample is seen macroscopically as a weathered banded gneiss, with extensively kaolinised feldspar, and brownish or pink bands containing leached and oxidised probable ex-garnets.

Thin section

The pale part of this thin section consists of 25-30% quartz to 0.8mm in grainsize as well as abundant probable kaolin derived from ex-feldspar(s) with 1-2% graphite as scattered poorly oriented flakes to 0.25mm long. Limonite is rare in this pale area, but includes sparse boxworks probably derived from garnet to 1mm in grainsize.

The amount of limonite increases towards a quartz-rich band with voids to 6mm long and boxworks derived from ex-garnets to 4mm in diameter, together with 50-60% quartz, but only minor clay-limonite-altered feldspar(s). In the transition zone the kaolinite seems to be mixed with illite, and there is rare fine muscovite in the formerly quartz-garnet-rich zone.

This sample represents weathered, banded quartz-feldspar(-graphitic) gneiss, passing into quartz-garnet-feldspar gneiss with kaolinite and limonite ± illite and muscovite.

DR029 (C)	**Oxidised BIF with up to 30% oxidised magnetite and 10% scattered primary fine hematite, with clay patches, supergene quartz and limonite-filled fractures.**

Handspecimen

This sample is a laminated sequence of fine oxidised magnetite, possibly supergene enriched in secondary oxides. It is moderately magnetic.

Thin section

About 20% quartz in this thin section consists of a mosaic of angular or subangular grains to 1.5mm in size, poorly defined laminae alternating with laminae rich in reddish goethite ± oxidised residual opaque oxide. Minor primary fine granular hematite is scattered but most original oxide was magnetite (30%), now largely replaced by porous martite. Small voids occur locally, and there are rare patches of very fine-grained possibly supergene or low temperature hydrothermal quartz.

Patches of decussate clay are scattered and there is also a lens of foliated clay of uncertain origin. Most of the secondary oxide/hydroxide aggregates are massive, including microspherulitic goethite or hematite disseminated through limonite, but some of the goethite has an unusual texture with platy masses elongate at a high angle to the layering. There are also abundant limonite-filled fractures in the quartz-rich laminae.

DR040 (A)	**Contact between weakly altered tonalite gneiss and metamorphosed fine-grained mafic with plagioclase, actinolite ex-pyroxene, clinopyroxene, hornblende, accessory opaque oxide and apatite.**

Handspecimen

A contact in this sample occurs between quartz-feldspar gneiss and fine-grained possibly mafic material.

Thin section

The gneiss in this thin section has an estimated 45% recrystallised quartz, and subparallel laminae of inequigranular sericite-clouded plagioclase, making up 50% of the gneiss, with minor K-feldspar (best seen on the stained offcut), as well as actinolite apparently ex-pyroxene and sparse fine-grained opaque oxide. The plagioclase and quartz are inequigranular and locally as much as 4mm size, with actinolite and opaque oxide to 1.5mm. This probably represents altered tonalite or trondhjemite.

There is a sharp contact, oblique to the foliation in the gneiss, with possibly later altered mafic material with 55% plagioclase accompanied by lesser actinolite ex-clinopyroxene, with 5% residual clinopyroxene. There is also minor opaque oxide and brown hornblende and accessory acicular apatite. A zone at one end of the thin section has hornblende more abundant than altered pyroxene.

DR040 (B)	**Weakly altered syenogranite gneiss with sericite-clouded plagioclase, clay-limonite altered. This sample has antiperthitic plagioclase, suggesting high-grade metamorphism.**

Handspecimen

This sample consists of gneissic syenogranite with a visually estimated mineralogy, based on the stained offcut of 35% quartz, 35% K-spar, 15% plagioclase and 5% mafic lenses.

Thin section

The thin section includes sparse augen of orthoclase to 8mm long and weakly to strongly sericite-clouded plagioclase to 4mm grainsize. Much of the feldspar is finer-grained, however, with partly brownish clouded K-feldspar as well as sericite-clouded plagioclase. The larger plagioclase grains are commonly antiperthitic with small blocks of exsolved K-spar. Irregular lenses and laminae of quartz, to 6mm thick, define a foliation and contain quartz to 4mm long as well as abundant fine-grained quartz.

Mafic lenses to 4mm long are poorly oriented and variously contain or consist of biotite (commonly clay-limonite-altered), actinolite (mostly clouded with limonite) and opaque oxide. Apatite and rare fine-grained zircon also occur in these aggregates.

T027	**Sericite-clouded plagioclase-clinopyroxene-quartz-K-spar-oxide aggregate, with zones rich in K-spar. Interpreted as altered metamorphosed mafic material (basalt or dolerite?), with potassic alteration.**

Handspecimen

This sample is grey and composed of mafic material but the stained offcut indicates lamellae towards one end that contain fine-grained K-spar.

Thin section

This sample is granoblastic with 55-60% plagioclase in most of the thin section, accompanied by less abundant granular clinopyroxene, and 2-3% opaque oxide. Towards one end of the thin section there is 5-20% K-spar and less abundant (40-50%) plagioclase, but no quartz. Sparse quartz occurs where there is no K-feldspar, with a single lens 6mm long and 0.4mm to 2mm wide, composed of granular quartz. The plagioclase has been moderately altered to sericite but the K-feldspar is fresh. Accessory apatite is present.

This sample represents metamorphosed mafic material (basalt or dolerite?), with zones of potassic alteration.

T102 (A)	**Weakly weathered micromonzogranite with hematite and clay alteration.**

Handspecimen

This sample represents micromonzogranite, interpreted from the stained offcut with sparse phenocrysts of quartz and K-spar, in a fine-grained groundmass of K-spar (35-40%) > plagioclase (30-35%) > quartz (25-30%) and minor mafic grains.

Thin section

The phenocrysts seen on the stained offcut were not seen in thin section. However, larger quartz grains, to 2mm in size, are partly bipyramidal, and there are larger plagioclase grains to 2mm. The bulk of the plagioclase and K-spar are subhedral or euhedral and less than 1mm. Minor clay-limonite-altered biotite and oxidised opaque oxide are disseminated. The feldspars are commonly clouded with hematite and biotite has been altered to earthy hematite and yellow phyllosilicate (clay or phengitic mica?).

T102 (B)	**Weakly altered biotite-bearing monzogranite similar to T102 (A).**

Handspecimen

This sample is similar to T102 (A) but less weathered

Thin section

There are again roughly bipyramidal quartz grains to 2mm in size, also inclusion-rich K-feldspar crystals to 2mm. Most of the rock has abundant K-feldspar, plagioclase and quartz, less than 1mm grain size, with subhedral or euhedral plagioclase, subhedral K-feldspar and interstitial quartz. Some of the quartz is poikilitic with inclusions of plagioclase and K-feldspar. Sparse biotite flakes, to 2mm long, show clay/phengite and sericite alteration, without significant limonite. This sample is also altered micromonzogranite.