AGSO

AUSTRALIAN GEOLOGICAL SURVEY ORGANISATION

# Final Report

# on

# The Igneous Rocks of theMount Webb Region

# for Aurora Gold Ltd

Lesley Wyborn, Murray Hazell and Rod Page



Regional Geology and Minerals Division

Professional Opinion 1996/5

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A Research Bureau of the Department of Primary Industries & Energy

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## PART 2: THE MINERAL POTENTIAL OF THE MOUNT WEBB REGION

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## Executive Summary

This report summarises new petrological, geochemical and geochronological data on the Mount Webb Granite and the felsic volcanics of the Pollock Hills Formation of the western Arunta Block. The new data confirms that this magmatic system has many similarities to other granites in other Australian Proterozoic regions where hydrothermal Au-Cu deposits have been linked to a magmatic source (Pine Creek, Eastern Mount Isa Inlier, Tanami, *etc.*). The key significant data are the primary chemistry of the units, the alteration present in descriptions and evidence of hydrothermal interaction with the local country rocks.

The report confirms that the igneous rocks of the Mount Webb region are part of an oxidised, metaluminous, fractionating system, that late derivative fluids carried some metals of economic interest (Cu, Pb and Mo) and that there was evidence of late hydrothermal alteration within the granite and felsic volcanic system. The alteration is predominantly of two types - sodic-calcic alteration, and a sericite ± chlorite ± tourmaline alteration. The sericite type of alteration is usually associated with quartz veining, brecciation, and open space voids suggesting that it formed at fairly shallow levels. The sodic-calcic alteration is not associated with any of these suggesting that it formed at a deeper level. These alteration types can be distinguished in the regional airborne geophysics in that the sodic-calcic alteration is both a magnetic low and also a low on the K-channel of the radiometrics. The sericite alteration on the other hand has a variable magnetic signature (usually a low) but is quite a strong K-high.

In the adjacent contact aureoles there were suitable host rocks in the form of iron-rich metabasalts, ironstones and possibly some carbonaceous shales. The country rock was also veined by quartz ± tourmaline assemblages and locally brecciated suggesting that in the Mount Webb region the system is much shallower, with the granites intruding their own ejecta and brecciation occurring within the granite. This would infer that epithermal or even porphyry styles of mineralisation remain a possibility, as well as the more traditional style of Proterozoic granite-related mineralisation whereby Au and Cu are hosted by iron-rich or carbonaceous facies some distance from the pluton boundaries.

Targeting potential mineralisation is not easy. However, given the dominance of granites with >68 wt.% $SiO_2$ and by analogy with other Proterozoic mineralised granite systems, any potential mineralisation is more likely to be hosted in sites distal to the granite, in association with shear zones.

## Introduction

In May 1996, AGSO visited the Mount Webb region with Aurora Gold to collect both geochemical and geochronological samples to try to determine the potential of the Mount Webb Granite system for Cu and Au mineralisation. A preliminary report (Wyborn and Hazell, 1996) was submitted to the company summarising this field trip. In Part 1, this final report summarises 100 thin sections, 66 geochemical results and 5 new U-Pb SHRIMP results (3 shows the distribution of all samples collected). Part 2 of this report combines the results of both reports into an overall synthesis of the potential of the region. Appendix 1 contains a list of all samples collected, Appendix 2 contains the geochemical data and Appendix 3 contains the site descriptions.

# Part 1 - New petrological, geochemical and geochronological results

## Country Rock

### *1) The Archaean?*

The Archaean? rock types described by Blake and Towner (1974) consisted mainly of interbedded quartzite and mica schist with some amphibolite. In the field, several areas were visited, but samples were collected only from one major outcrop of Archaean? in the Pokali area, 20 kms east of Mount Webb. This area was specifically visited and sampled as it was anomalously high both on the airborne magnetics and also on the K-channel of the radiometrics.

The new samples were mainly from the southern part of this major outcrop, adjacent to the granite. The most southerly samples showed a very strong metasomatic overprint with all of the original mineralogy being replaced by quartz, biotite and magnetite (AGSO Sites 96496003 and 96496004: Aurora site MW5). One sample from the central part of the outcrop was less altered, and contained predominantly amphibole and plagioclase. As noted in the preliminary report, one thin section from the AGSO 1973 collection from the northern part of this outcrop contained chlorite, actinolite and minor greenish biotite, and appeared to be less metamorphosed than the sites to the south. It appears that the granite has both contact metamorphosed the outcrop and locally metasomatically altered it as well. As noted in the preliminary report, ironstones and quartz veining also appeared more prominent on the southern part of this outcrop, and it is possible that the both the iron and the biotite were introduced during contact metamorphism and metasomatism from the nearby granite to the south.

> New thin sections suggest that the Archaean? outcrops in the southern Pokali Hills area in the NE of the Eastern Tenement have been metasomatically altered, with the addition of both Fe and K. As this area was both a magnetic high and a K high on the airborne data, a combination of both techniques could possibly be used to define areas of similar metasomatic alteration elsewhere.

*2) The Heavitree Quartzite.*

One of the puzzling aspects of the radiometric images, was the linear radiometric highs evident particularly in particular the Th channel, some of which were close to outcrops of the Heavitree Quartzite. One possibility was that the Heavitree Quartzite contained high contents of radioactive detrital minerals such as monazite. A very limited test was carried out on one sample collected from west of Mount Webb. The sample analysed had 2 ppm Th and below detection limits for U. This would suggest that the Th anomaly is unlikely to come from the Quartzite, but is more likely to be related to the occurrence of iron-rich pelletic lag as was suggested in the preliminary report. In thin section the quartzite contained abundant rounded crystals of blue-grey tourmaline, very similar in colour to tourmalines occurring in nodules in the Mount Webb Granite, and also in the Archaean? to the east of Mount Webb.

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| Radiometric anomalies that are coincident with the Heavitree Quartzite are unlikely to be related to the quartzite itself. |

## Post 'Archaean?' primary magmatic types

Three types of post 'Archaean?' magmatic rocks were collected: granites, felsic volcanics and dolerites. Within the granite system, some samples were taken of quartz veins and aplites, as these were believed to be the part of the late derivative magmatic fluids from the granite system.

## Mount Webb Granite

*1) Introduction*

As noted in the preliminary report, the granite is much more extensive than just the narrow linear belt displayed on the map. As the new geochronology results confirm that all granites within the Aurora tenements, including those granites outcropping to the north and south of the Mount Webb Shear are of the same age, the granite samples will be treated as part of the one entity and divided into unaltered granites, sodic-calcic altered granites and sericite altered granites. Most of the altered samples collected came from close to the Mount Webb Shear Zone (Plates 2, 3).

*2) Essentially unaltered granites*

The primary granite compositions were relatively heterogeneous and ranged from more mafic diorites/tonalites through granodiorites, granites and aplites, with the more felsic monzogranite compositions dominating. Some of the late felsic fractionated phases contained fluorite and nodules of tourmaline ± quartz.

Petrologically the mostly unaltered granites were composed of hornblende, biotite, magnetite, plagioclase, K-feldspar and quartz. Within the Aurora tenement areas hornblende ($\alpha$ = straw yellow, $\beta$ = mid green, $\gamma$ = blue green) is only present in the most mafic phases of the granite. In contrast, hornblende is quite common in more felsic compositions in the areas between the western and eastern tenements (AGSO 1973 collection). Magnetite, commonly with exsolution lamellae of ilmenite, is a common feature of all of the samples. It is more abundant in the more mafic samples, and is commonly rimmed by titanite, particularly in the altered samples. Sulphides

were extremely rare in the fresh samples. Biotite is present in all samples examined. All samples examined had some evidence of recrystallisation, and most had a distinct foliation. The degree of recrystallisation and the lack of chlorite would suggest that the granite suite had been affected by a post intrusion metamorphic event which was at least of upper greenschist facies grade.

The presence of hornblende indicates that the granite is metaluminous, as is typical of nearly every granite suite which is associated with Cu-Au mineralisation. The abundance of magnetite and the rarity of sulphides argues that the granite has crystallised under oxidising conditions. This would mean that any S, Cu and Au present in the melt would not partition into the crystallising phases and that these elements would remain within the melt until the latest magmatic stages. This is supported by the rarity of visible sulphides within the unaltered granites.

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| The hornblende + magnetite mineralogy of the unaltered Mount Webb Granite samples is similar to other granites commonly associated with Au-Cu mineralisation. |

### *3) Sodic-calcic alteration*

Sodic-calcic alteration characterised by diopside + epidote ± tremolite was present in the granite in a linear shear zone trending 310° to the northwest and southeast of Mount Webb. Another prominent locality also occurred within in the main granite outcrops about 10 kms to the east of Kiwirrkurra. As noted in the preliminary report, there were few quartz veins present within this alteration type and open space fillings were not observed. Diopside was present in all samples and epidote was common. Tremolite was only present in the more deformed samples. In hand specimen the diopside-rich samples were white to grey in colour, whilst the tremolite-rich rocks were pale green. K-feldspar is also very rare and most samples had albite/oligoclase as the only feldspar present. Some primary plagioclase crystals were preserved. Most samples carried titanite and opaque phases were extremely rare. The measured susceptibilities on all samples of this alteration types was very low, mostly <40 SI-units x $10^{-5}$, indicating that this alteration event was magnetite destructive. No sulphides were noted and no anomalous concentrations of elements were observed in this alteration type suggesting that it may not be significant for mineralisation.

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| The sodic-calcic alteration was common in a northwest trending shear zone (310°) running to the west of Mount Webb. The lack of quartz veining and open space fillings would suggest that this alteration formed at deeper levels. |

### *4) Sericite alteration*

Sericite alteration is usually associated with brecciated and fractured granites which are cut by quartz veins with open space filling. Sulphides are present in quartz veins near some of these localities, and tourmaline quartz nodules are very common. At several localities visible fluorite was present in the individual granite specimens. In thin section sericite consists mainly of fine grains concentrated in veins which run parallel to the foliation. As with the sodic-calcic alteration, most opaque phases were destroyed. Some samples still contained magnetite and coarse chalcopyrite was observed in one sample. Small pyrite grains were also present in several samples. However, it was noted that most of the sericite localities are highly weathered, probably because these sites were also often brecciated and fractured, which has probably facilitated weathering processes. At one these sites (AGSO site 96496020: Aurora site MW20) the granite contained visible malachite with values of 348 and 278 ppm Cu. In this section these samples contained

mainly goethite which was probably formed as a weathering product of primary sulphides. Thus if fresher samples had been obtainable, the amount of observed chalcopyrite may have been higher.

This sericite style of alteration was noted in 3 broad localities. One on the far western part of the western tenements near a major fault as expressed in the magnetics. The other was to the east of the Pokali Hills and the third was near the southern border of the eastern tenements where the traditional owners were reluctant to allow access. The presence of sulphides in the areas where there was sericitic alteration indicates that the alteration fluids were probably acid. As will be shown in the geochemistry section, the sericitic alteration is not noticeably enriched in $K_2O$, although $Na_2O$ is noticeably depleted in some samples.

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| The areas of sericite alteration contained tourmaline, fluorite and some sulphides. These areas look the most promising as it seemed as if these areas were affected by late fluids emanating from the granite system. Some areas of sericitic alteration also had anomalous Cu. |

### *5) Quartz Veins*

Quartz veins carrying sulphides were more prominent in the areas of sericitic alteration. In these areas the granites also tended to be more brecciated and carry tourmaline and fluorite. Sulphides present in these quartz veins were mainly pyrite, though galena was observed in one sample with 1800 ppm Pb (96496016: MW19), whilst another sample had 145 ppm Mo (96496014: MW17).

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| Quartz veins were more common in the areas of sericite alteration. Some of these veins had high values of Mo and Pb. |

## Pollock Hills Formation

### *1) Introduction*

The felsic volcanics of the Pollock Hills Formation consist predominantly of black porphyritic dacites, rhyodacites and lavas, which are overlain by tuffaceous and non-tuffaceous sediments (Blake and Towner, 1974). Two alteration types are present within the volcanics: hematite and epidote. Alteration did not appear as pervasive in the volcanics as it is in the Mount Webb Granite, but it is to be noted that only two sites of the volcanics sampled were located close to the Mount Webb Shear (AGSO sites 96496033, 96496043: Aurora sites MW50, MW39).

### *2) Unaltered Volcanics*

Petrographically the lavas are predominantly porphyritic with phenocrysts of plagioclase, magnetite and quartz in decreasing order of abundance. Phenocrysts of ferromagnesian silicate minerals were very rare: those that were present were altered to epidote and/or biotite. The groundmass in most samples is recrystallised. The lavas could be divided into two broad types: those with abundant lithic fragments and crystals and those which had a lower crystal and lithic content, and contained flattened pumice clasts and evidence of a glassy matrix in the form of abundant spherulites. Lapilli tuffs were observed at locality (AGSO 96496041: Aurora MW46).

Fine grained magnetite was scattered throughout the groundmass explaining the high susceptibility with values between 2000-5000 SI-units x $10^{-5}$. These measured susceptibility values were much higher than in the granite, in part because the granites were more felsic, but also because in the granites the 'groundmass' magnetite had reacted out to form other minerals, generally sphene. In those volcanic which had spherulites preserved, small grains of pyrite/chalcopyrite were common confirming that the original magma has a reasonably high S content. However, in most granites and volcanics, magnetite was dominant and primary sulphides were extremely rare, reflecting the high oxidation state of the magma. This would result in any S being preferentially partitioned into to late volatile phases. It is possible that in these spherulitic volcanics, because of rapid cooling, the primary sulphides were trapped within the glassy groundmass.

There also appears to be a metamorphic progression in the volcanics towards the granite contact, with brown biotite being present in those samples closest to the granite contact, passing through green biotite to chlorite/green biotite in those samples that were furthermost from the granite. Overall, even the least altered volcanic samples had a pronounced recrystallised texture in thin section suggesting that they may have also been affected by a younger metamorphic event.

### *3) Hematite alteration*

The hematite alteration is possibly of two causes. As noted by Blake and Towner (1974) hematite alteration is more prominent at the top of the volcanics near the contact with the sediments of the Pollock Hills Formation. Red hematite-rich layers are also present within the sediments of the upper Pollock Hills Formation, suggesting that atmospheric conditions were oxidising at the time of deposition of the sediments and extrusion of the volcanics, and thus the hematite present may be related to meteoric fluids rather than to hydrothermal/magmatic processes. Some of this early hematitic alteration is also cut by epidote alteration.

At locality MW50, hematite alteration was present in highly sheared volcanics that were sampled near the Mount Webb Shear Zone away from the sediment/volcanic interface. At this locality, a hematite rich, K-feldspar altered volcanic associated with an ironstone cut a chlorite/sericite altered volcanic and was hence later in the paragenesis. Another outcrop of this type of hematite alteration was also observed in an isolated volcanic outcrop to the northwest of Mount Webb (MW39). This sample had anomalously high potassium and also contained K-feldspar and sericite. Both sites were sheared suggesting that this haematitic alteration is another event, distinct from that observed forming early in the paragenetic history at the sediment/water interface.

It is possible that the hematite developed at some of the sites that are close to the sediment interface, may be also be related to this younger shearing event as coincidentally some of this hematite alteration was close to a magnetic shear zone trending about 200°.

> A K-rich hematite alteration was observed in the volcanics only. It could be of two causes: one formed soon after the eruption of the volcanics, the second formed during a younger shearing event.

### *4) Epidote alteration*

Epidote alteration was common in the volcanics and appeared to correlate with linear lows in the magnetics which trended 310°. In thin section, this alteration is pervasive and texturally destructive. It progressively destroys any original igneous textures and produces an assemblage of

epidote + quartz. Mineralogically and chemically it closely resembles the sodic-calcic alteration of the Mount Webb Granite, and both are focussed on shear zones running at approximately 310°.

## Mafic Dykes

Mafic dykes are prolific in the area, particularly in the granite outcrops to the east of the Pollock Hills. In thin section, most of the dykes are pristine, consisting of plagioclase, clinopyroxene and orthopyroxene and are much younger than the granites. One surprising feature of these dykes was the noticeable amount of sulphides in thin section (mostly pyrite, but some chalcopyrite).

Some dykes have a pronounced alteration (e.g. Site AGSO 96496039A). It is therefore likely that there are more than one generation of dolerite dykes in the area. Some may be coeval with the Mount Webb Granite, but there is a strong probability that most are related to the intrusion of the Stuart Pass Dolerite, a major late Proterozoic dolerite dyke swarm in the Arunta Province. However, an alternative interpretation is that there may have been a younger late Proterozoic alteration event but without further age determination work this would be impossible to confirm.

## Geochemistry results.

### *1) Introduction*

Sixty one samples were collected for analysis consisting of 28 samples of granites (both fresh and altered), 9 aplites and quartz veins, 18 samples of the Pollock Hills Formation (both fresh and altered), 5 samples of dolerite dykes and one sample of the Heavitree Quartzite. All samples were analysed in the AGSO geochemical laboratory at Canberra using a combination of XRF and ICPMS techniques. All data are listed in Appendix 2 and the data are plotted on Figures 1-5. AGSO data from ROCKCHEM are also included in these plots.

### *2) Alteration plots*

**$Na_2O$ vs $K_2O$ (Figure 1A):** The loss of $K_2O$ in the samples of the sodic-calcic group is very distinct, whilst the more strongly sericite altered samples have simply lost all $Na_2O$, but have not been enriched in $K_2O$. This reflects the fact that sericitic alteration is usually an indicator of reaction with a low pH fluid, i.e., acid fluid, and as such does not necessarily involve the addition of $K_2O$. That the sericitic alteration is associated with the zone within the granite where sulphides are more prevalent is not surprising. The hematite altered samples in contrast show a strong enrichment in $K_2O$: similar enrichment is found in the Cloncurry area.

**Th/U (Figure 1B):** Most samples have ratios between 2 and 6 which is within the normal range for granitic rocks. Some samples of the sodic-calcic group and the hematitic group have high Th/U ratios suggesting that U has been lost from these samples.

**Fe2O3/(FeO+Fe2O3) (Figure 1C):** These ratios are quite variable suggesting that some samples have been oxidised (particularly the hematite altered ones) whilst some have been reduced.

### *2) Fractionation plots*

**Rb, U, Th, F and K/Rb(Figures 2A, 2B, 2E, 2I and 2K):** These plots show exponentially increasing values with increasing $SiO_2$ which is typical of fractionating metaluminous granites.

**$P_2O_5$ and K/Rb (Figures 2D and 2F):** These plots show decreasing concentrations with increasing $SiO_2$ which is typical of fractionating metaluminous granites.

**Rb-Ba-Sr Plot (Figure 2G):** The fractionated granites plot in the strongly differentiated field.

*3) Metal Plots*

**Cu (Figure 3A):** These values are generally low, and this can be a good indicator for mineral potential as usually in those granites that are associated with mineralisation, low Cu concentrations can indicate that Cu has preferentially partitioned into the late fluid phase, rather than partitioning into the crystallising mineral phases. The two highest Cu concentrations are from the sericite altered area at AGSO site 96496020 (Aurora MW22). This site is associated with the more fractionated parts of the granite system.

**Pb, Zn and Sn (Figures 3B, 3C, 3D):** These values are typical for Proterozoic metaluminous granites.

*4) High Field Strength Elements*

**Zr, Nb and Ce (Figures 4A, 4B, and 4C):** The values of these elements are not particularly high and are more typical of Proterozoic I-type granites than of A-types. This is particularly important as there is very little Au or Cu mineralisation associated with genuine A-type granites.

*5) Classification Plots*

**$CaO$-$Na_2O$-$K_2O$ (Figure 5A):** Most samples plot in the granodiorite to granite range. It is worth noting that the sodic-calcic altered samples plot in the tonalite field. In the Cloncurry district, the sodic altered samples plot in the Trondhjemite field as they are not as rich in CaO.

**Zr/Y vs Sr/Sr* (Figure 5B):** Most samples plot with values < 1.0 for Sr/Sr*. This is typical for Australian Proterozoic granites and contrasts with granites from subduction zones in either an island arc or a continental margin which usually have values of Sr/Sr* of >>1.0.

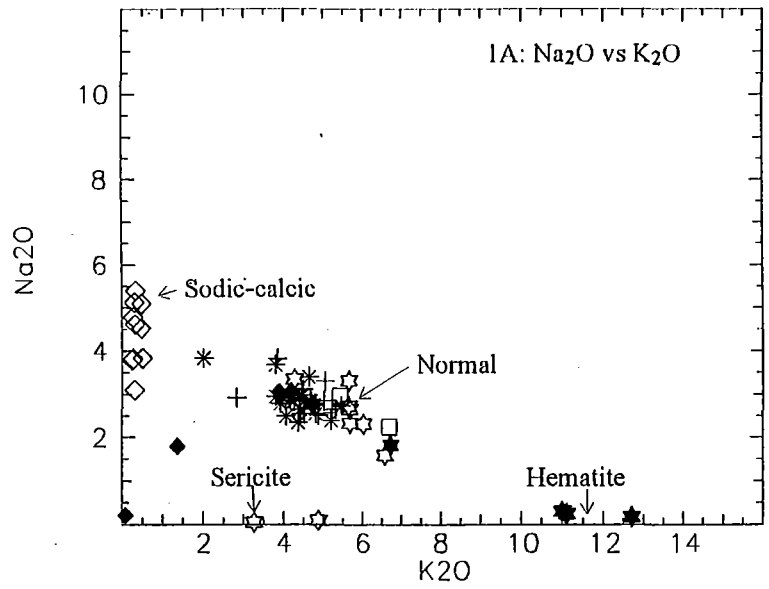
**$Fe_2O_3$/FeO vs Total Fe as FeO (Figure 5D):** Most samples plot in the oxidised field. The hematite altered samples are in the strongly oxidised field and some of the sodic-calcic samples and the aplites are in the reduced field. Granites associated with Cu and Au usually plot in the oxidised field.

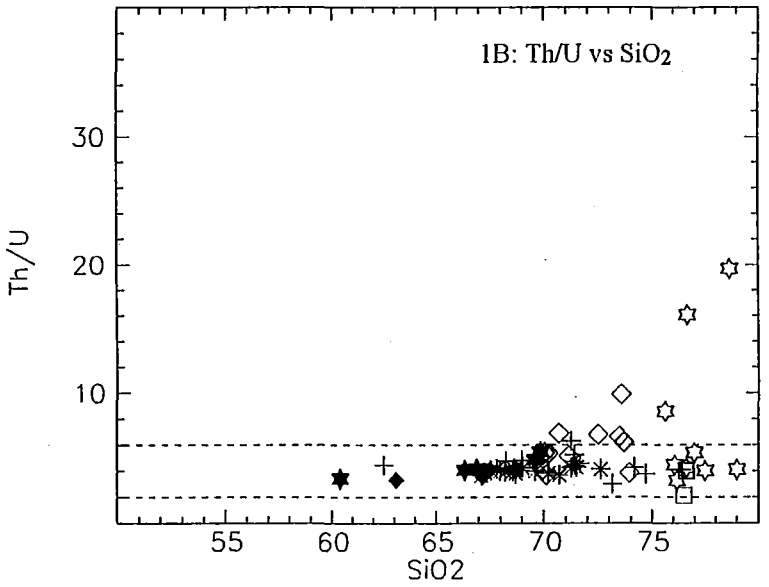
**ASI vs $SiO_2$ (Figure 5E):** The ASI value (molecular $Al_2O_3/(K_2O+CaO+Na_2O)$) is an indicator of how peraluminous a magma is. The samples from the Mount Webb region have values <1.1, indicating that they are metaluminous to weakly peraluminous and plot in the area where other granites associated with Cu and Au usually plot.

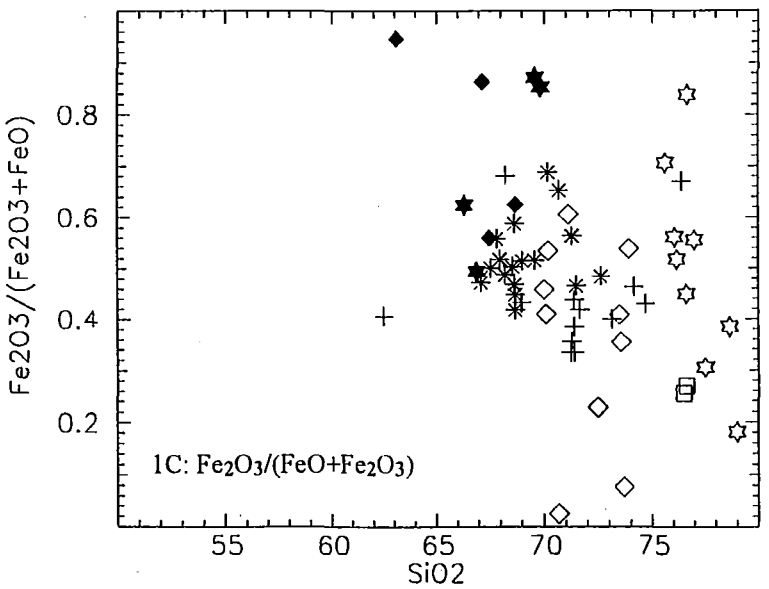
**Ga/Al vs HFSE (High Field Strength Elements - Figure 5F):** This plot gives an indication of the relative abundance of these elements. Again the values are fairly typical of Australian I-type Proterozoic granites.

Geochemically the granites of the Mount Webb Region resemble those of many other areas associated with Cu-Au mineralisation. Most samples have > 65 wt. % $SiO_2$ and where mineralisation is associated with these more felsic granites it is inevitably located distal to the granites in the adjacent country rock.

Figure 1: Alteration Plots



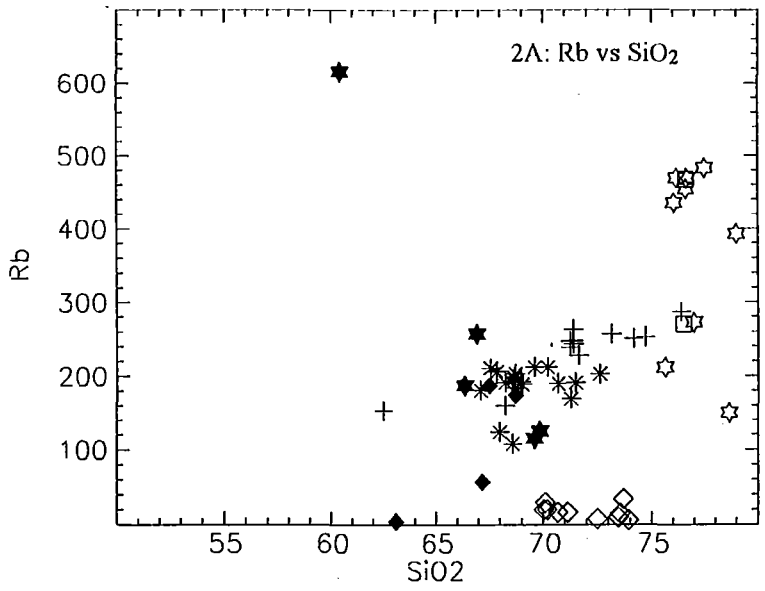



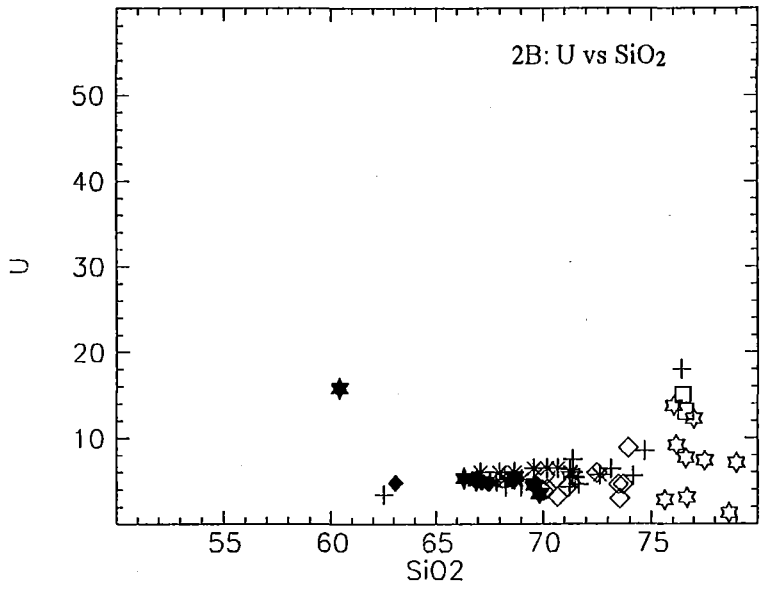



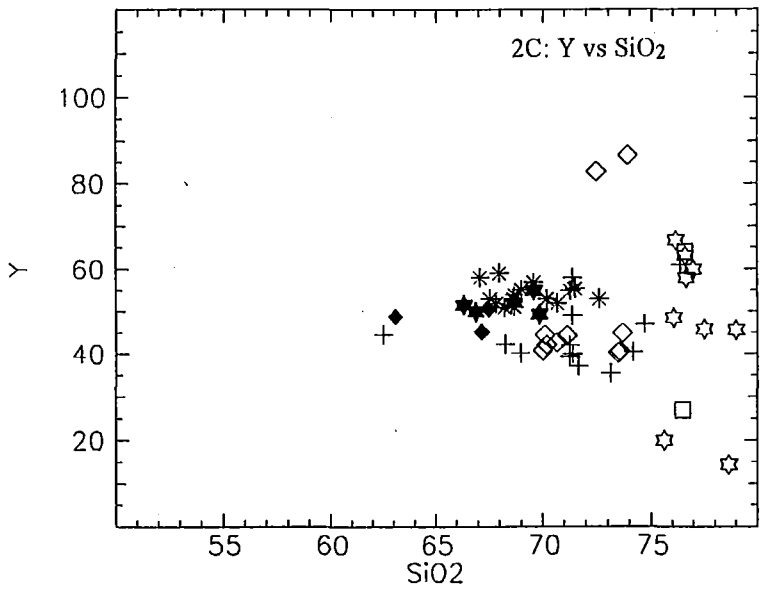

Legend

- Granite – 'Fresh'
- Granite – Sericite
- Granite – Sodic–Calc
- aplite
- Volcanics – 'Fresh'
- Volcanics – epidote
- Volcanics – Hematite

Figure 2: Fractionation plots

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✳ Volcanics – 'Fresh'
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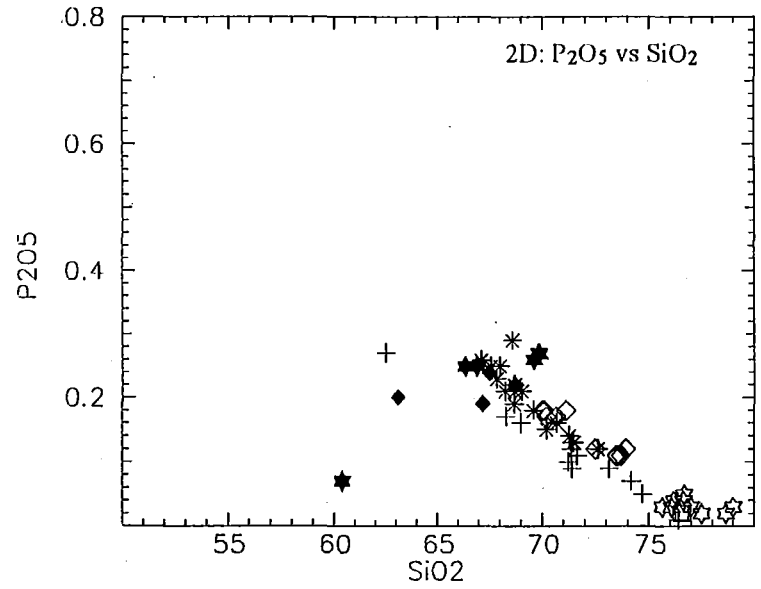
Figure 2 continued:

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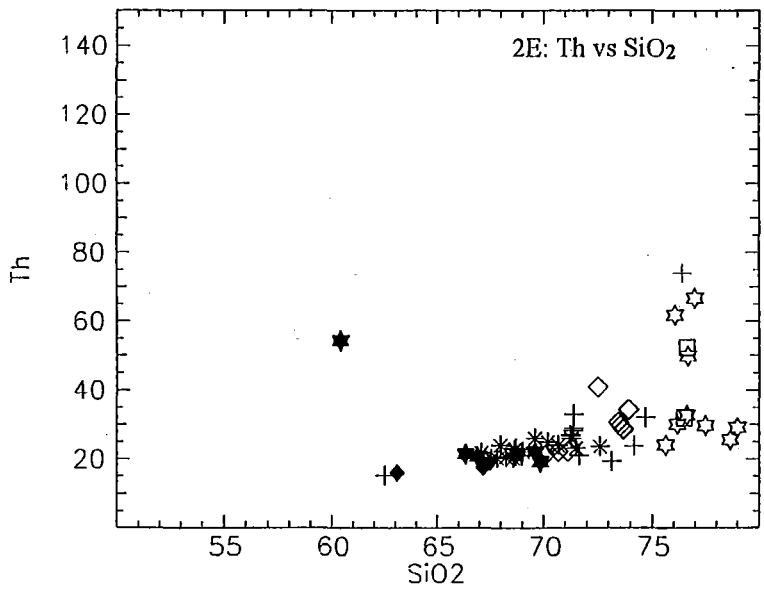


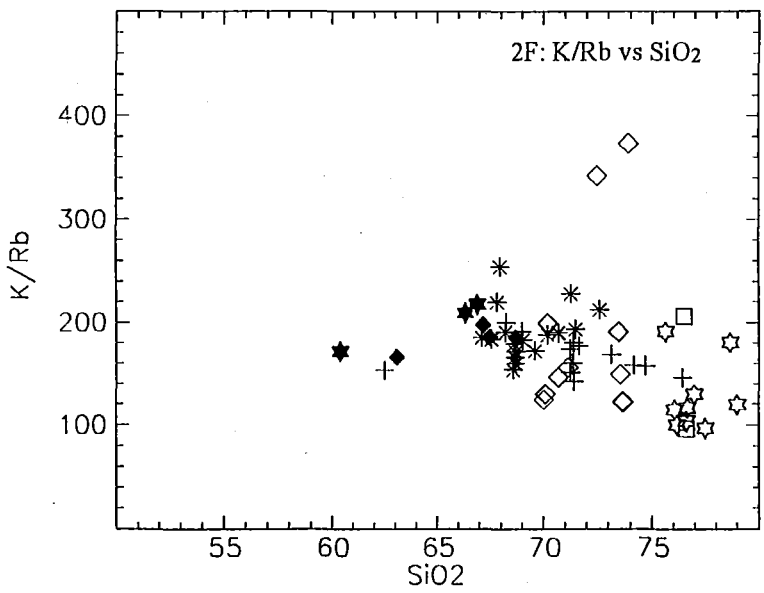

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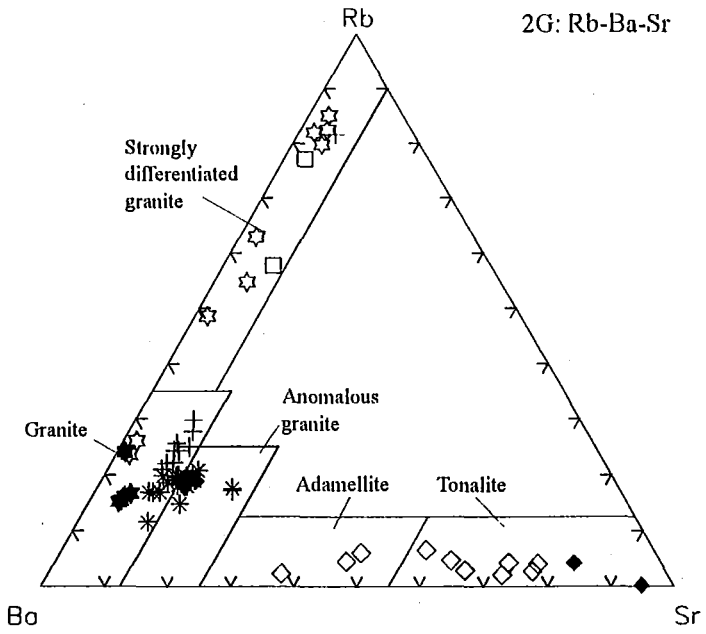


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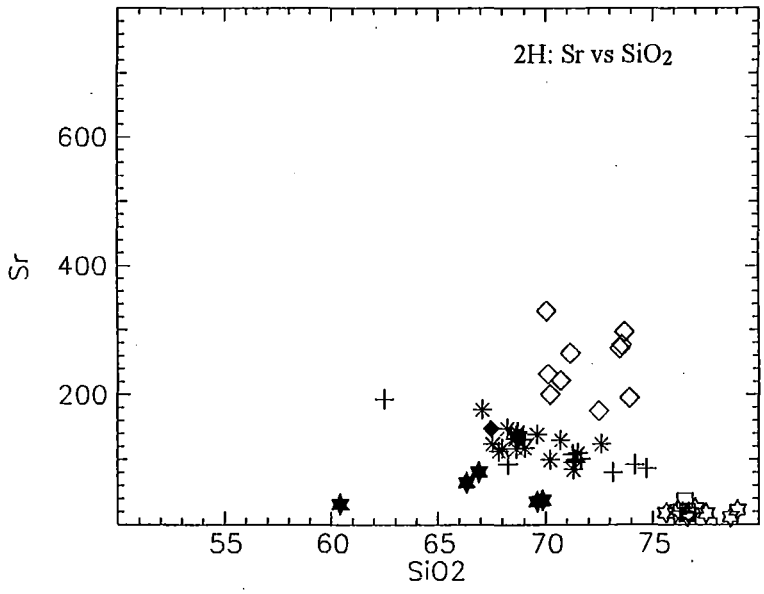


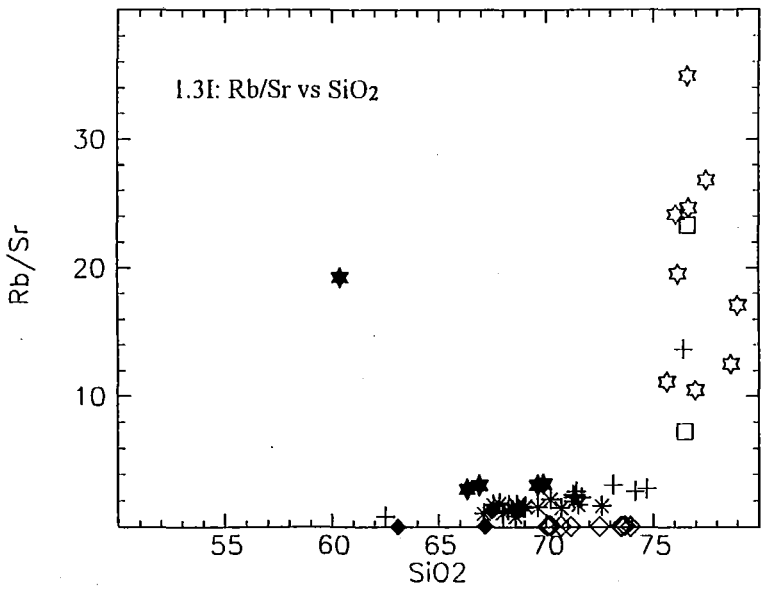

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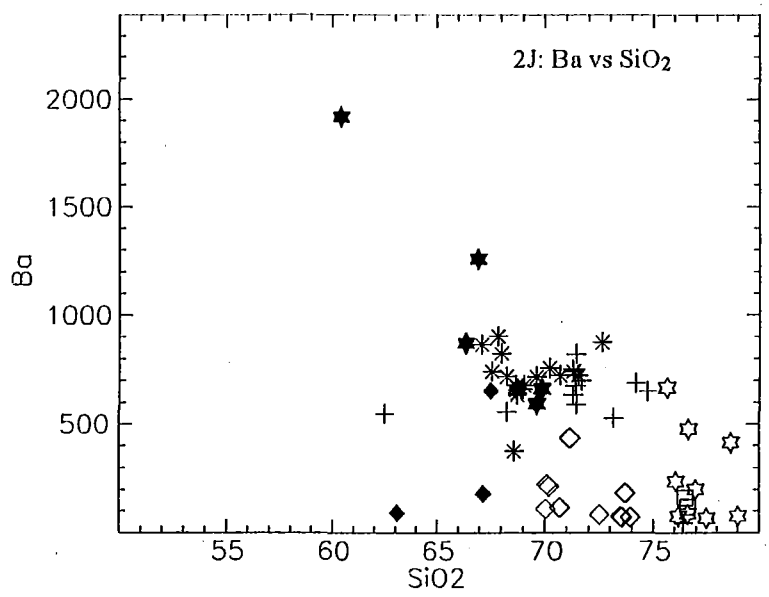


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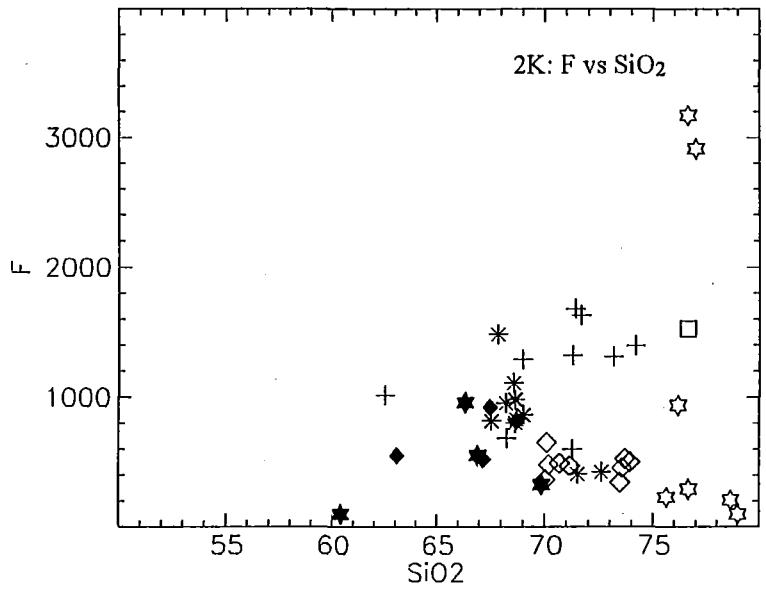
- Volcanics – epidote
- Volcanics – Hematite



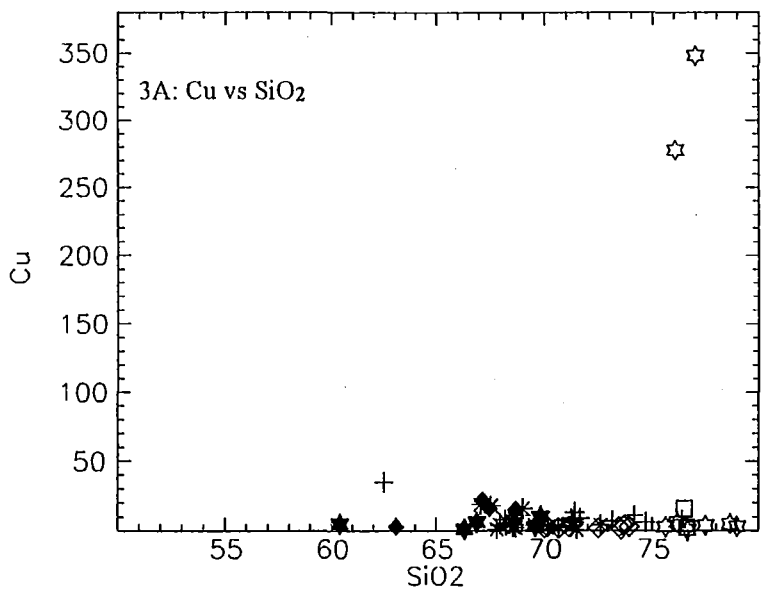
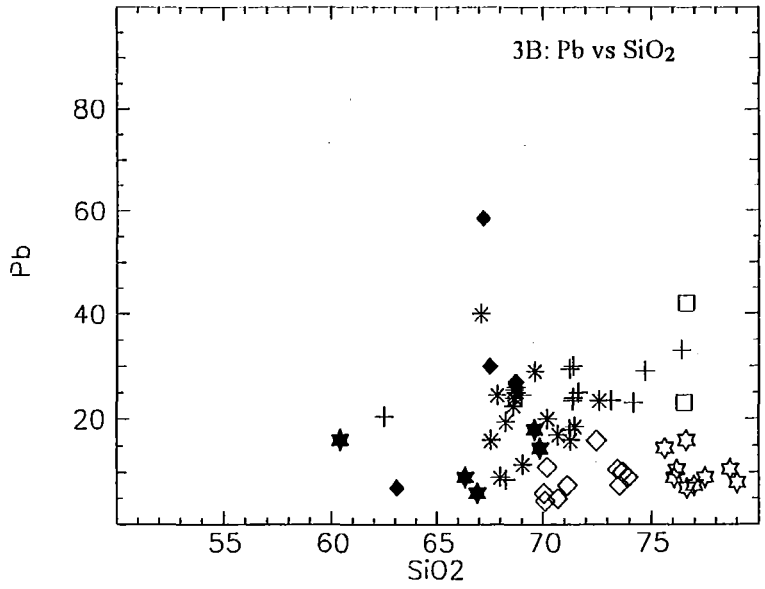
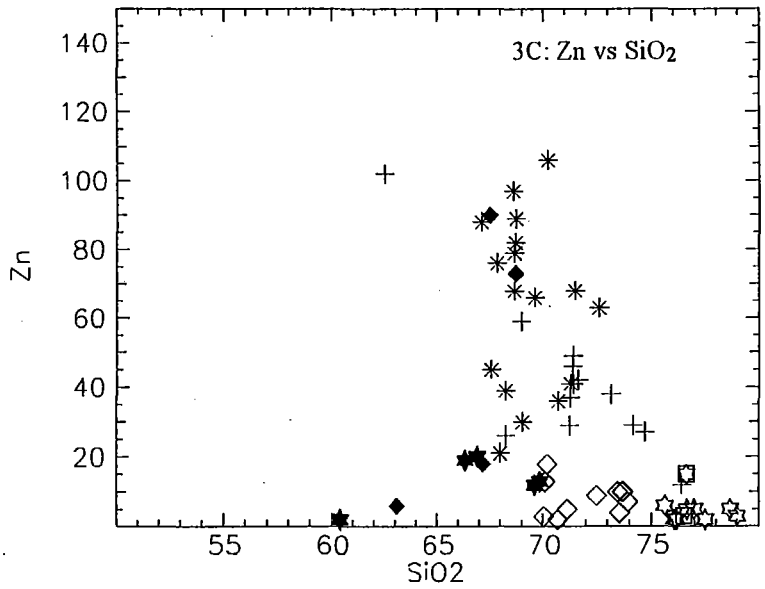
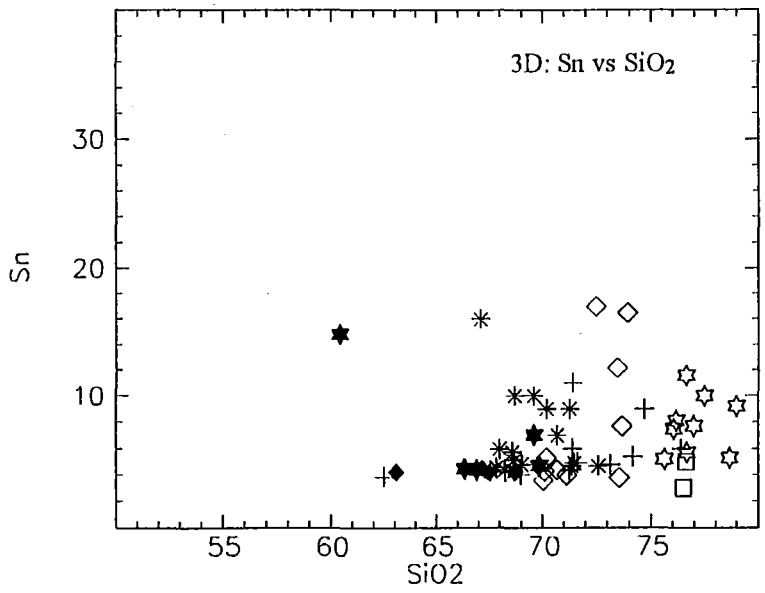




Figure 3: Metal plots

Figure 3 continued:



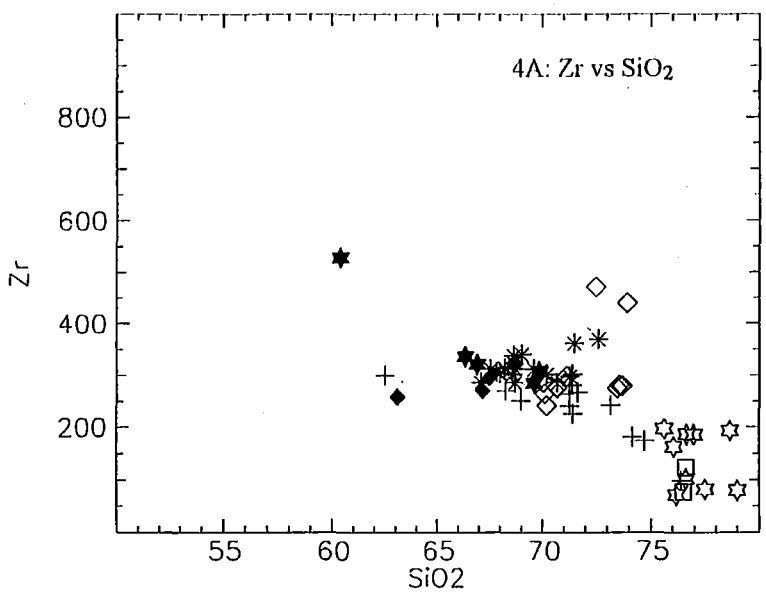



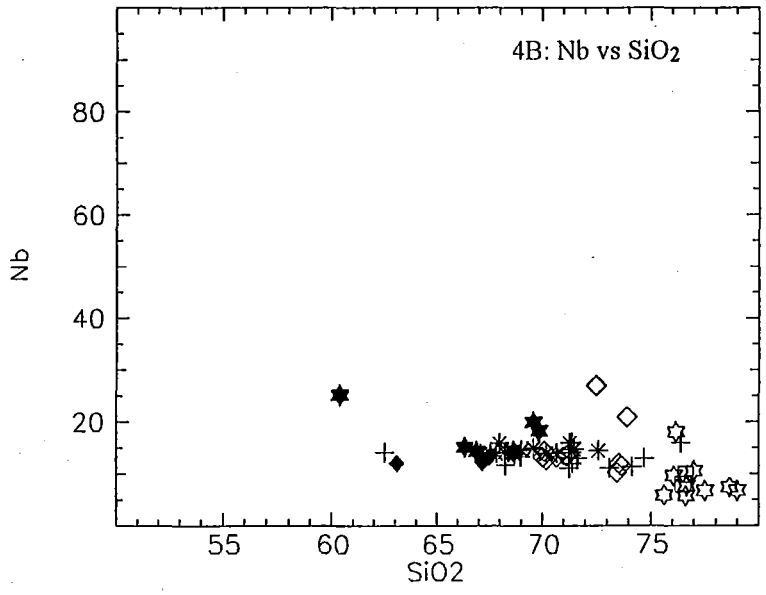



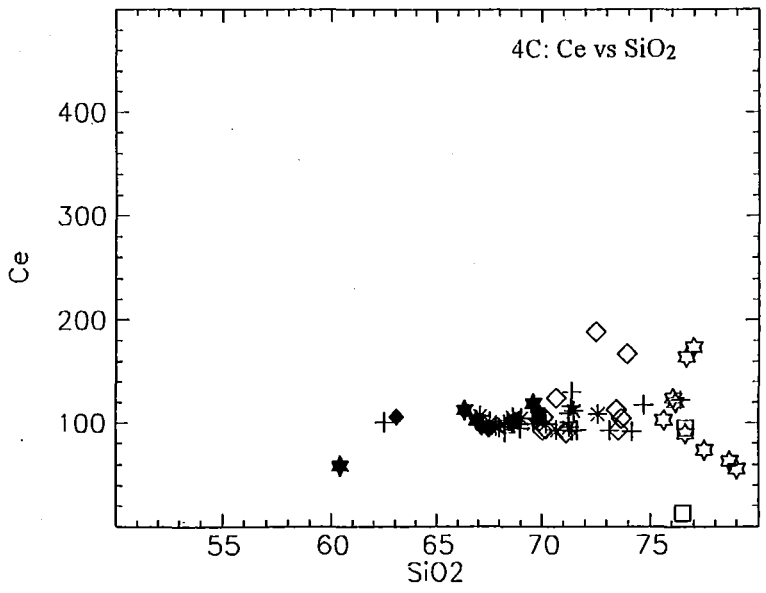

**Legend**

- Granite – 'Fresh'
- Granite – Sericite
- Granite – Sodic–Calc
- aplite
- Volcanics – 'Fresh'
- Volcanics – epidote
- Volcanics – Hematite

**Figure 4: High Field Strength Elements**



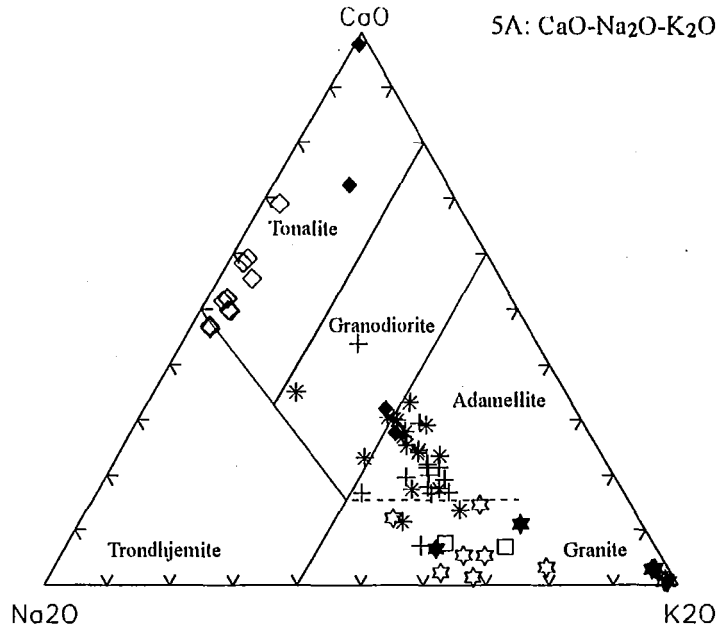




**Legend**

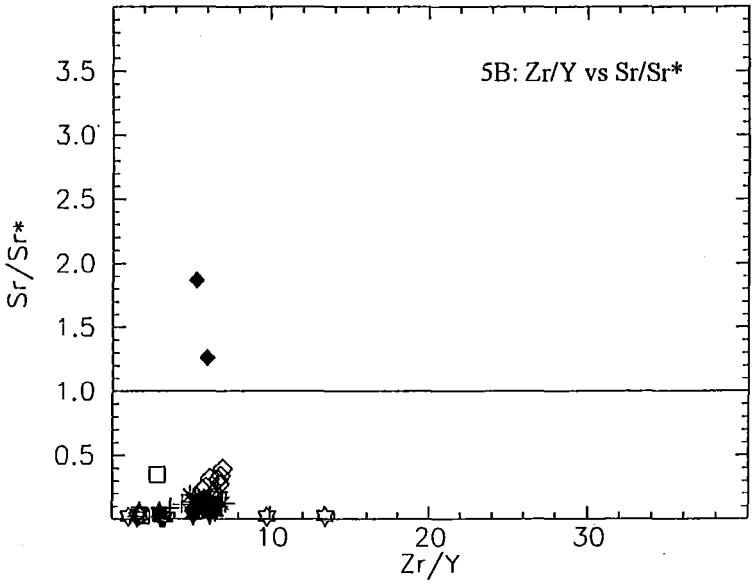
- Granite – 'Fresh'
- Granite – Sericite
- Granite – Sodic–Calc
- aplite
- Volcanics – 'Fresh'
- Volcanics – epidote
- Volcanics – Hematite

Figure 5: Classification plots




**Legend**

- Granite – 'Fresh'
- Granite – Sericite
- Granite – Sodic–Calc
- aplite
- Volcanics – 'Fresh'
- Volcanics – epidote
- Volcanics – Hematite



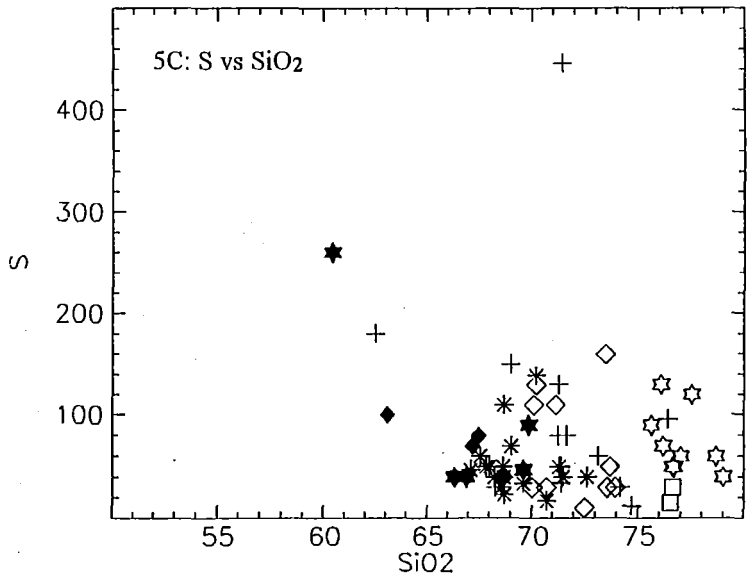
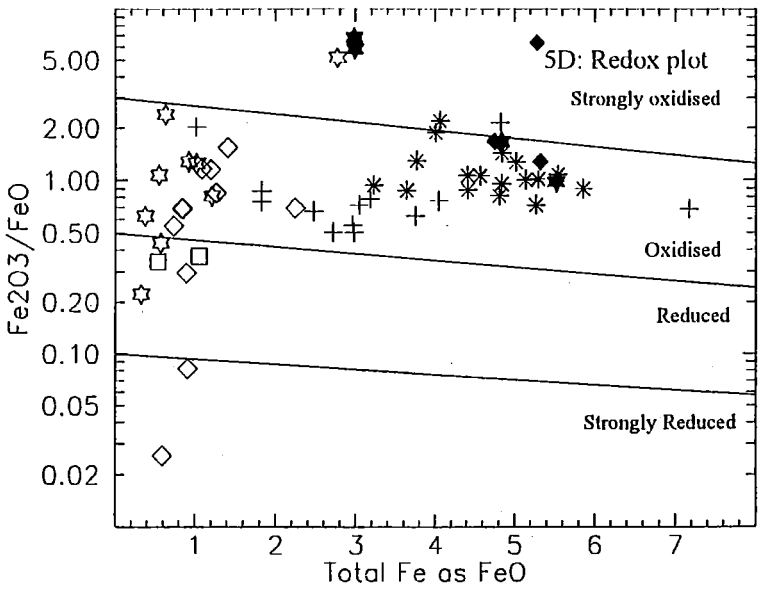
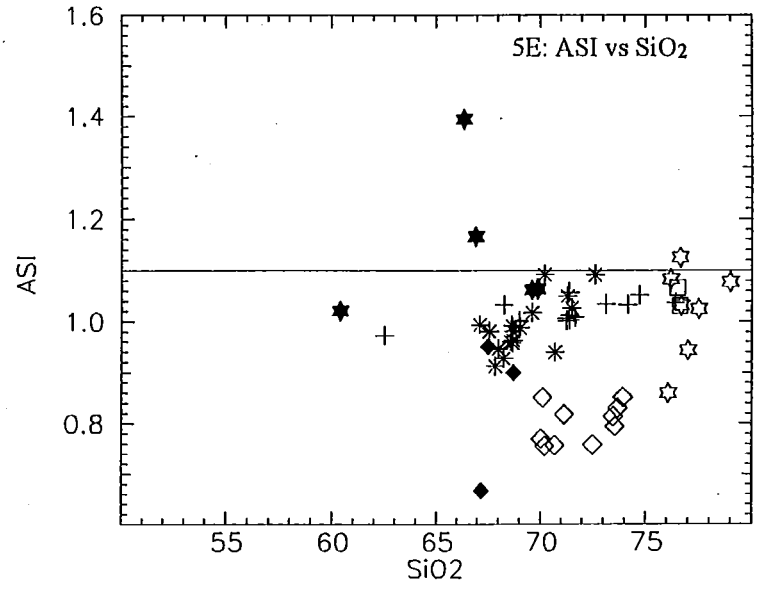



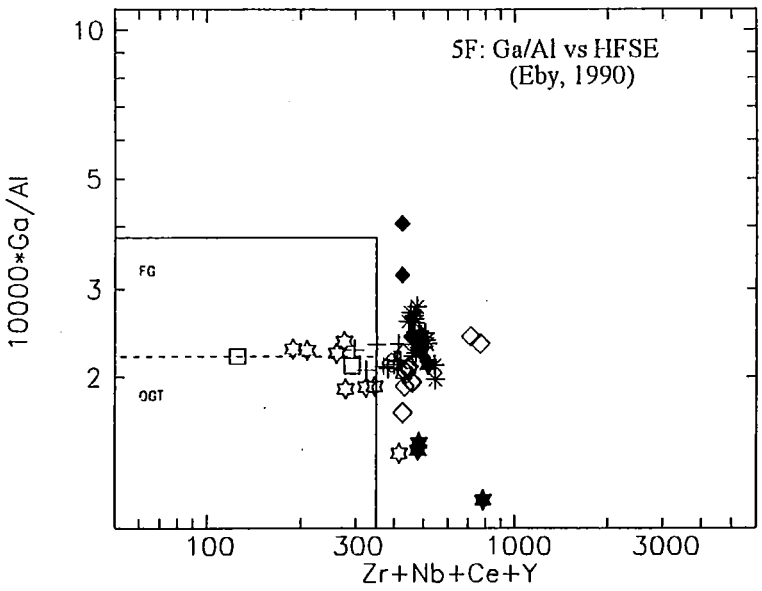
Figure 5 continued:




**Legend**

- \+ Granite – 'Fresh'
- ✡ Granite – Sericite
- ◇ Granite – Sodic–Calc
- □ aplite
- ✳ Volcanics – 'Fresh'
- ◆ Volcanics – epidote
- ✸ Volcanics – Hematite



## Geochronology Results.

*Introduction*

The aim of the dating component of this report was to determine the age of the major magmatic events (granites, volcanics and dolerites) in the Mount Webb region. Three granites were selected for age determination work, one from the western leases and two from the eastern leases. In the eastern leases, the samples dated occurred on opposite sides of the Mount Webb Shear. One samples was selected from the Pollock Hills Formation and one sample was selected from one of the numerous dolerite dyke swarms in the Mount Webb region.

*9649.6035 Monzogranite - Mount Webb Granite*

**Sample data**

This sample was collected 8 kms west of Kiwirrkurra. It is an essentially unfoliated sample and the site was xenolith free. The sample was collected for dating to confirm the age of the granites of the western leases to see if they were the same as those from the eastern leases.

**Petrography**

In thin section the rock is unmetamorphosed and has greenish biotite, allanite and sphene. Chemically the sample has 74 wt % $SiO_2$.

**Geochronology (Figure 6)**

There are igneous zircons present which have a crystallisation age of 1643 ± 43 Ma. Some inherited zircons are present in the sample. Four xenocrysts gave an age of 1680-1690 Ma, two grains were present at ~1775 Ma and whilst two other grains were dated at 1860-1870 Ma.

*9649.6028A Granodiorite - Mount Webb Granite*

**Sample data**

This sample was collected from the eastern leases just south of the road near Mount Webb. It was collected to see if the granites from the eastern and western leases are equivalent in age.

**Petrography:**

The sample intruded a comagmatic tonalite/diorite at the sample site. In thin section the rock has a weak foliation through it and has developed decussate biotite during a younger metamorphic magmatic event. Chemically the sample has 68 wt % $SiO_2$.

**Geochronology (Figure 6)**

Graphically this sample is slightly younger than the monzogranite, with an igneous crystallisation age of 1639 ± 5 Ma. Minor inheritance at ~1700 Ma is indicated by one grain.

### *9649.6011 Sericite granite - Mount Webb Granite*

#### Sample data

This sample was collected from the eastern part of the eastern leases, north of the Mount Webb shear. The aim was to see if the fractionated granites were the same age as the unaltered granites which occur mainly south of the Mount Webb Shear.

#### Petrography

It was a highly fractionated granite with veins of sericite and fluorite. A similar granite also outcrops to the west of the shear zone. Chemically the sample has 77.5 wt % $SiO_2$.

#### Geochronology (Figure 7)

The age of this sample is 1639 ± 5 Ma, but the inheritance pattern is fairly complex with inheritance populations at ~1760 Ma, 1830 Ma, 1860 Ma.

### *9649.6024 Ignimbrite - Pollock Hills Formation*

#### Sample data

This sample was collected from the Kiwirrkurra rock quarry just west of the town. The aim was to see if the Pollock Hills Formation and the Mount Webb Granite are coeval.

#### Petrography

This rock has been contact metamorphosed to upper greenschist grade and has biotite and epidote. It consists of abundant feldspar phenocrysts in a siliceous matrix. It also contains lithic metamorphic rock fragments which show undulose extinction. Rocks near by contain pumice fragments suggesting that the Pollock Hills Formation is an ignimbrite and that it was the product of pyroclastic volcanism. Chemically the sample has 68 wt % $SiO_2$.

#### Geochronology (Figure 7)

No satisfactory igneous age can be determined from the data available, despite the fact that more analyses were made on this rock than any of the above granites. The population of zircons in this rock is exceedingly complex, and it is dominated by zircon ~1860 Ma old. These are not cores, but discrete grains. There are also older inheritance at ~1970 Ma and 2590 Ma present.

An interpretation is that as the youngest reliable data from this rock would indicate an igneous crystallisation age of ~1680-1690 Ma - distinctly older than the granites. One grain analysed from the volcanic is close to the granites' ages (ie ~1640 Ma) but a single analysis cannot be used with any reliability at all.

However, petrographically the rock contains lithic fragments and is highly likely to have xenocrystic zircon populations from these. As it only has 68 wt % $SiO_2$ the amount of magmatic zircon would be low, and any that crystallised may have been winnowed out in the ash cloud during eruption. Jagodzinski (1992: AGSO record 1992/9) has reported a similar case in the

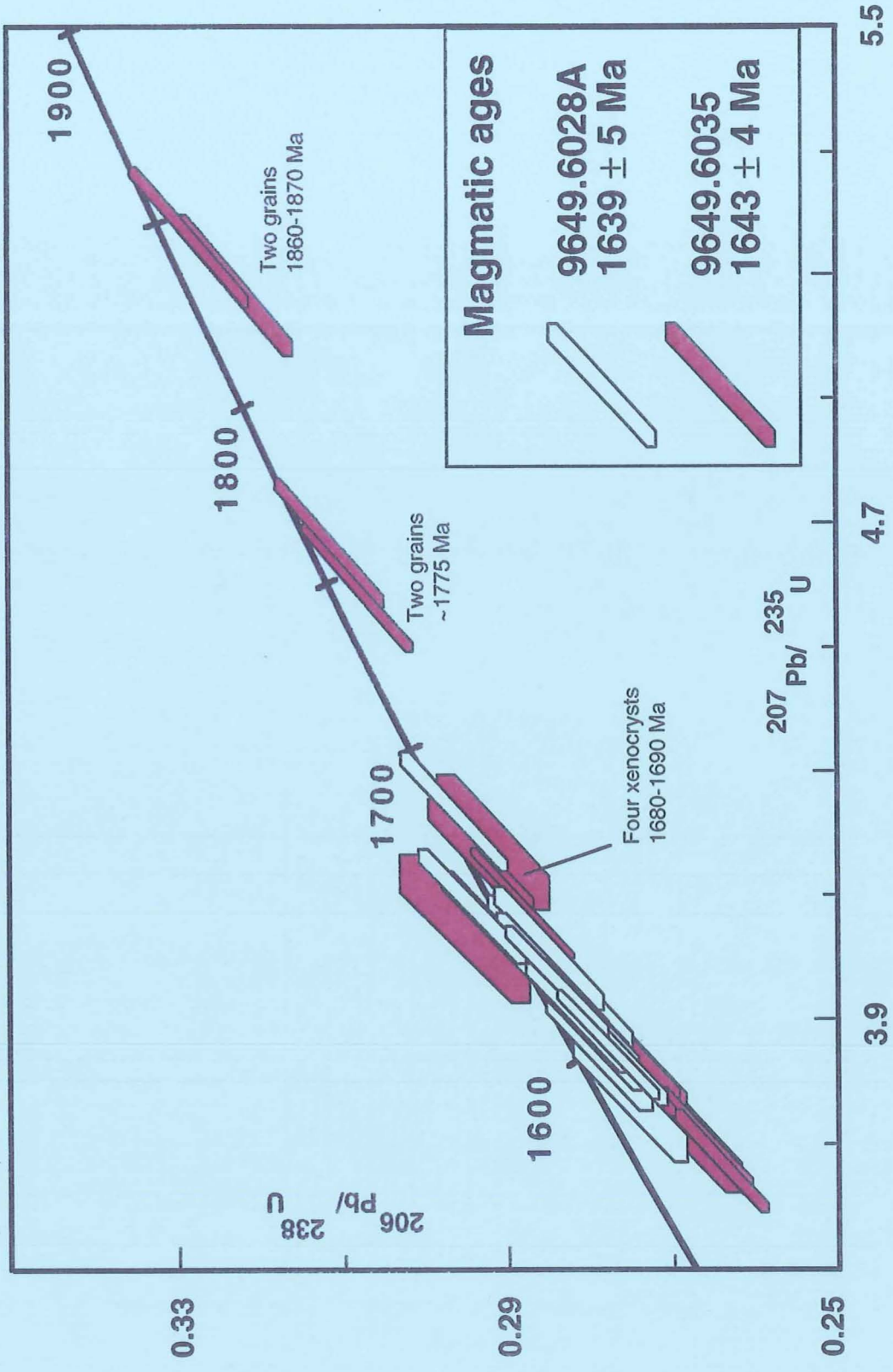



Figure 6. Geochronology data for samples 96496028A and 96496035

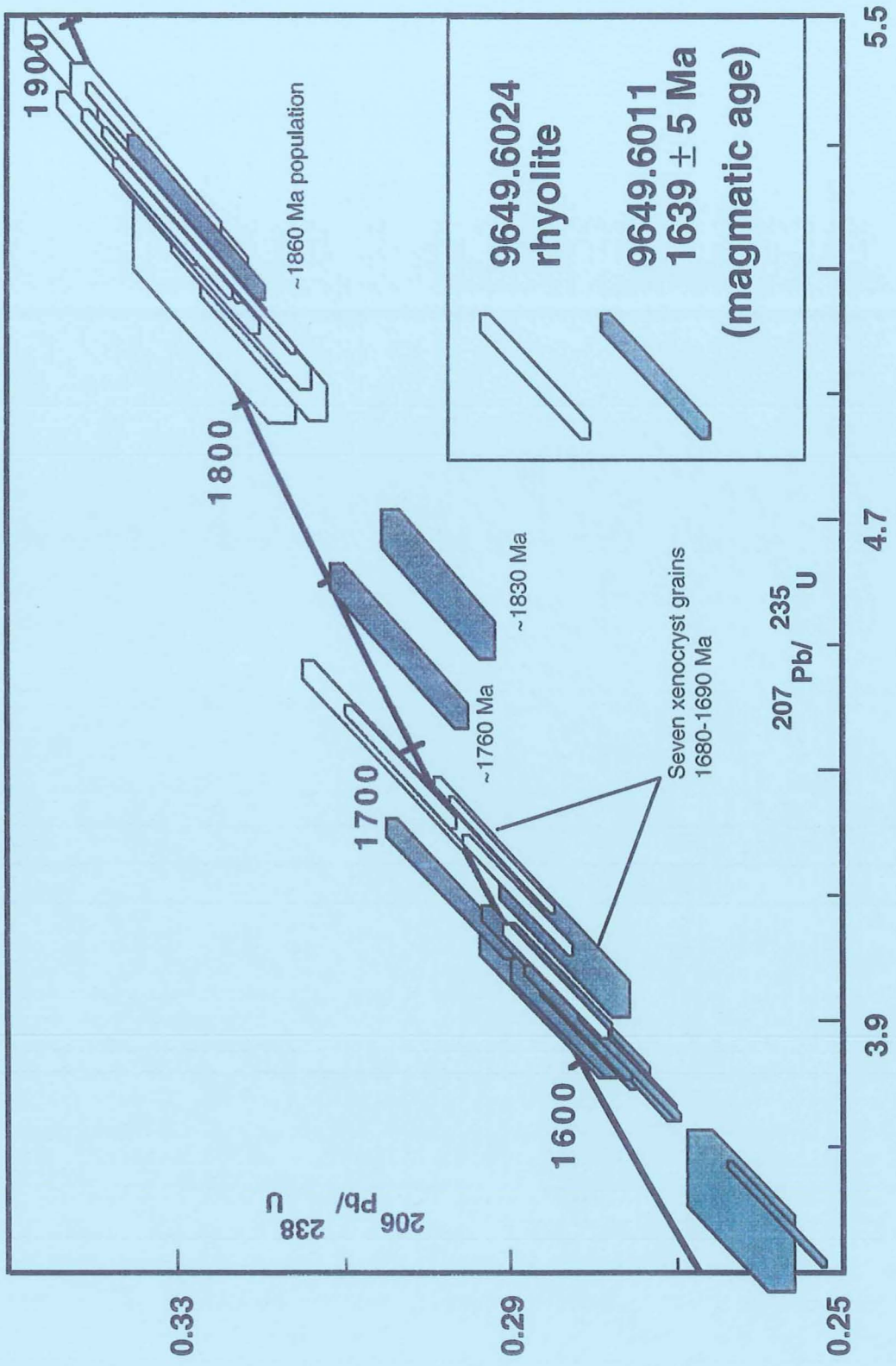



Figure 7. Geochronology data for samples 96496024 and 96496011

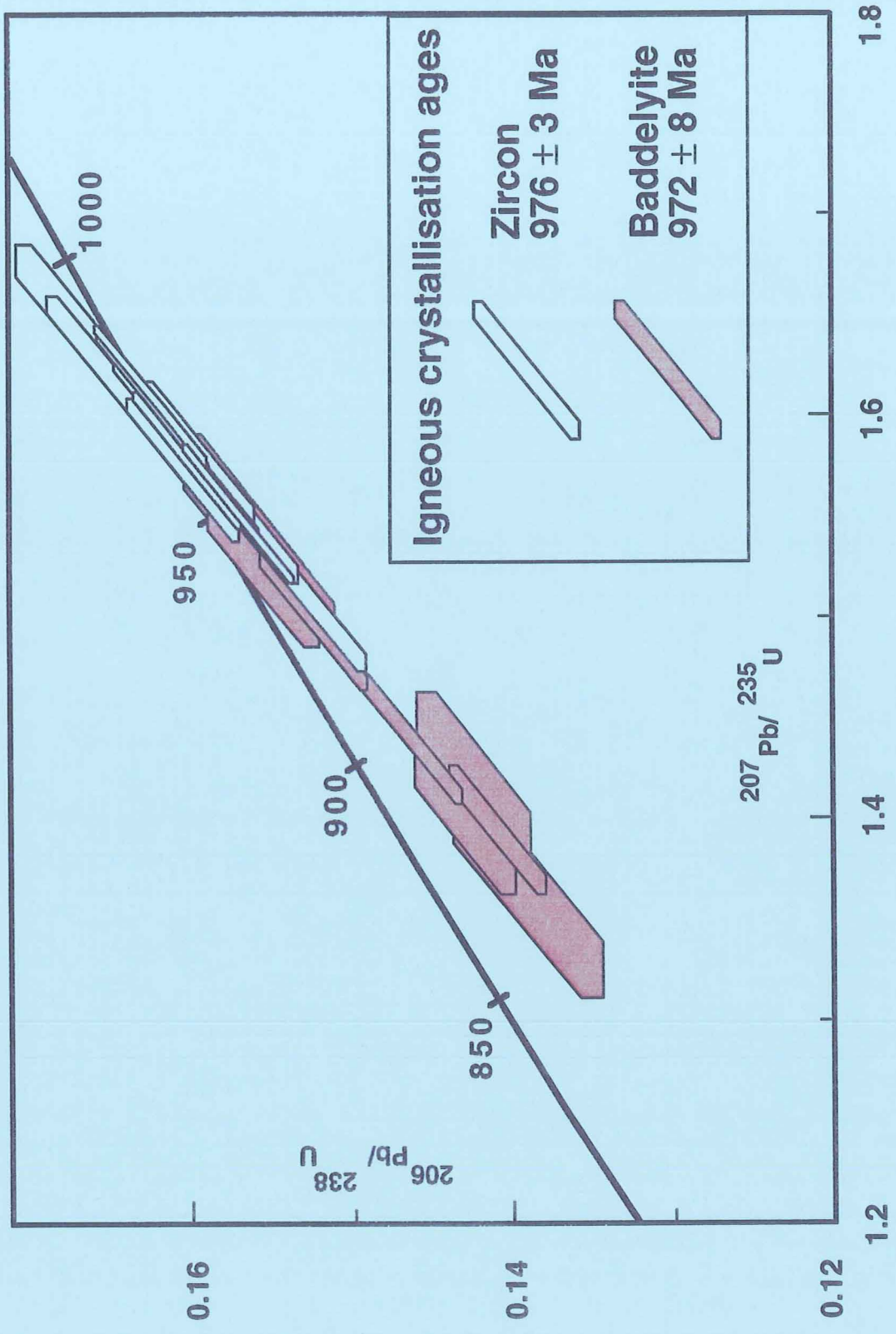



Figure 8. Geochronology data for sample 96496009

Coronation Hill region, Northern Territory where an explosive ignimbrite only recorded dominantly xenocrystic zircon populations and only a few magmatic grains.

### *9649.6009 Dolerite Dyke*

#### Sample data

This sample was collected east of the eastern edge of the western leases. As dykes are abundant in the area, the aim of dating the sample was to see if these mafic dykes were comagmatic with the major granite event.

#### Petrography

The dyke is fresh and completely unmetamorphosed. Chemically the sample has 47.84 wt % $SiO_2$.

#### Geochronology (Figure 8)

The magmatic zircon and baddelyite contained in this rock define the dyke's crystallisation and emplacement age as Neoproterozoic. The zircons gave an age of 976 ± 3 Ma, whilst the baddelyite gave an age of 972 ± 8 Ma and hence these dykes are probably equivalent to the Stuart Dyke Swarm which is abundant throughout the Arunta Inlier. This young age also removes any possibility of a direct connection between the unmetamorphosed dolerite dykes and the Mount Webb Granite system.

*Summary*

The zircon dating program showed that the main magmatic event occurred at around 1640 Ma. The data on the volcanic sample are equivocal, but given the chemical similarity it is highly likely that the volcanics are the same age. A second sample should be selected for dating, preferably one of the samples with a spherulitic groundmass as these would be more likely to have a magmatic population present that was within the original glassy component.

Major granite suites at 1640 Ma are not all that common in the Australian Proterozoic. However, it is an interesting correlation that most major granite events occur on major bends in the Australian Polar Wander Path (APWP) (Loutit *et al.*, 1994). The inflection in the path at 1640 Ma is a major hairpin bend, which is known to be coeval with the development of the major HYC ore body at McArthur River (Figure 9). Fine grained tuffs that occur in this ore body to date have not been related to any major granite event. It is speculative to suggest that perhaps the igneous events in the Mount Webb region may have provided the fine grained ash that was deposited in the coeval Barney Creek Formation which hosts the HYC ore body.

It is also interesting that the Rb-Sr data on both the Pollock Hills Formation and the Mount Webb Granite (Page *et al.*, 1976) gave a combined isochron age for both units of 1493 ± 25, with an initial $Sr^{87}/Sr^{86}$ of 0.7114 ± 0.004 (recalculated using a value of 1.42 x $10^{-11}$ $yr^{-1}$ constant for $Rb^{87}$) If this age is valid it may be dating the age of the younger 'metamorphic' event that was noted petrographically in both the granites and the volcanics.

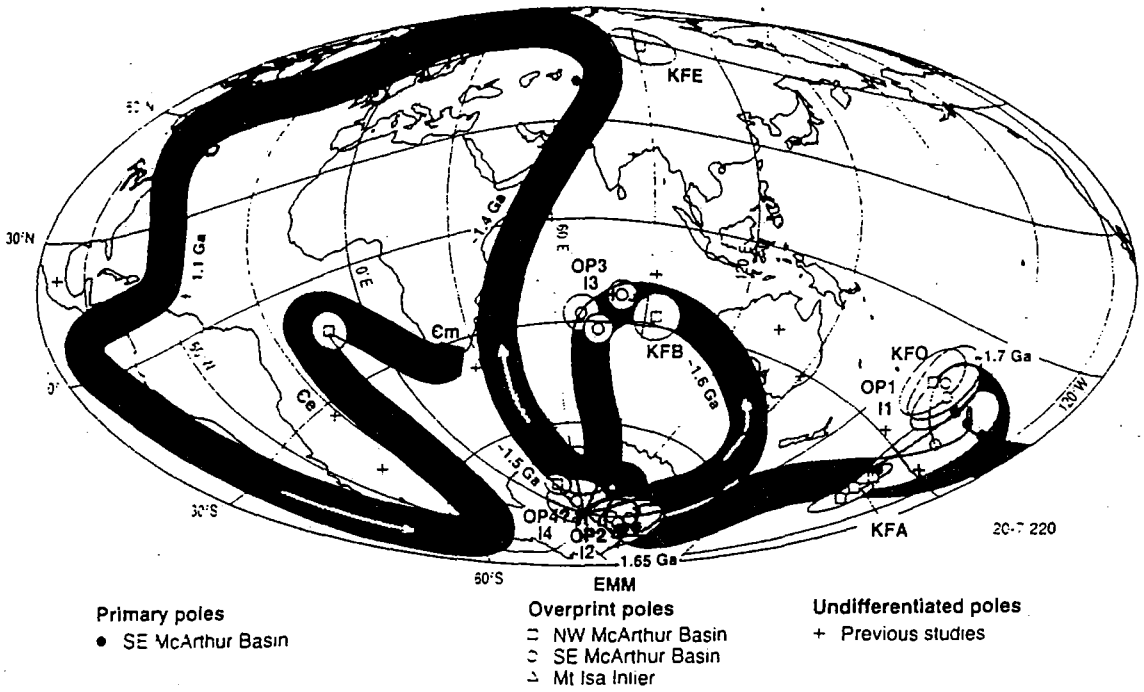



Figure 9a. The Proterozoic APWP for Australia showing the locations of the primary poles (black dots) from the southern McArthur Basin, and overprint poles (white circles with 95 per cen confidence ellipses) from accross the McArthur Basin and the Mount Isa Inlier.

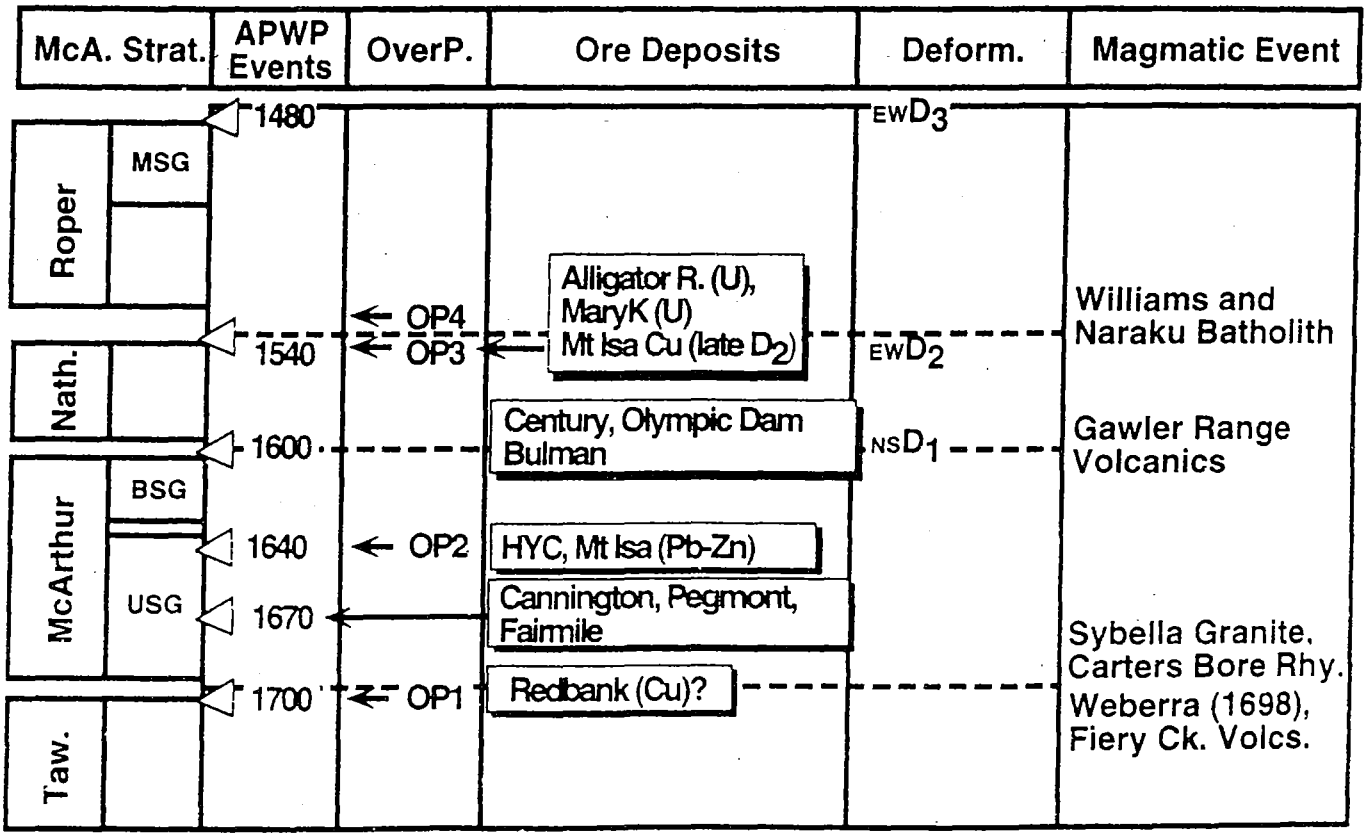



Figure 9b. Generalised stratigraphy of the McArthur Basin APWP and overprint events. Mt Isa tectonic events. major Australian felsic events and periods of mineralisation. Within the constratints of the present time calibration of the APWP a good correlation exists between predicted interplate events and periods of fluid movement that resulted in significnat mienralisation in northern Australia. Note that the new ages of igneous activity in the Mount Webb area correlate directly with the major OP2 event.

The three granites dated gave ages ~ 1640 Ma. The sample of Pollock Hills Formation dated gives an equivocal age. A dolerite dyke gave a Neoproterozoic age and is a correlative of the Stuart Pass Dolerite of the Arunta Inlier.

## Geophysical Interpretation

### *Magnetic Data*

The petrological examination of the thin sections provides new insights into the interpretation of the regional magnetics. At each site, magnetic susceptibility was measured using a Geoinstruments Susceptibility meter model No. JH-8. All measurements are in SI-units x $10^{-5}$ and the results are plotted on Plate 2.

The most mafic samples of the Mount Webb Granite to the south west of Mount Webb itself, had susceptibilities of 2000-5000 SI-units x $10^{-5}$. However, the predominant granite type in the Mount Webb Region is generally more felsic and has susceptibilities ranging from 200-600 SI-units x $10^{-5}$. In thin section these changes in magnetic susceptibility reflected the decreasing modal abundance of magnetite with increasing $SiO_2$. There is a subtle variation of magnetic susceptibility within the main granite outcrops exposed between Kiwirrkurra and Mount Webb itself. East of Kiwirrkurra there is a major block of granite which has low magnetic susceptibility of between 200-400 SI-units x $10^{-5}$, whilst to the north and east the susceptibilities measured within the granites are 400-600 SI-units x $10^{-5}$. The lower susceptibilities are associated with a larger proportion of aplite dykes and granite compositions with higher $SiO_2$ concentrations. The higher magnetic susceptibilities are associated with a marked increased in modal abundance of hornblende and epidote and slight increase in magnetite (particularly within the area between the western and eastern tenements). As noted in the previous report the area of higher susceptibilities within the granite also corresponds to areas of calcrete. These changes suggest that in this area the granite was more mafic (lower $SiO_2$ concentration) and had a higher CaO content.

The volcanic units of the Pollock Hills Formation on average had high susceptibilities, generally from 3000 to 5000 SI-units x $10^{-5}$. The volcanics had phenocrysts of magnetite and the groundmass of the volcanics also contained abundant fine grained magnetite. In thin section, the volcanics lower $SiO_2$ concentrations than most of the granites, and corresponded in composition to the tonalitic and dioritic compositions of the Mount Webb Granite. Thus care should be taken in interpreting the areas of high susceptibility (>2000 SI-units x $10^{-5}$) as being volcanic as some of the more mafic areas of the granite have susceptibilities comparable to those of the volcanics.

Within the granites, there were areas with distinctly lower susceptibilities. Some of these areas had a greater concentration of aplites which were generally of very low susceptibilities. However, mostly the lower susceptibility areas were the alteration zones in both the granite and the volcanics where the magnetic susceptibilities were significantly lower and generally < 100 SI-units x $10^{-5}$. In the sodic-calcic altered areas all primary magnetite had been destroyed. This was generally the case with the sericite altered areas, although some high areas were observed.

The petrological data support the idea that the high areas in the granite and volcanics are likely to be the **unaltered** assemblages and the linear magnetic lows are the **alteration** assemblages. Circular lows are either alteration or late aplites.

Susceptibilities in amphibolites from the outcrops described as 'Archaean?' in the Pokali Hills area (in the eastern tenements), are variable but range from 200 to 5000 SI-units x $10^{-5}$. Those rocks with a particularly high susceptibility had metasomatic magnetite and biotite in thin section.

The fresh mafic dykes had high susceptibility > 4000 SI-units x $10^{-5}$, those that were altered had very low susceptibilities. The dyke that was dated had high magnetic susceptibility, and it is not known whether the dykes that were altered and had low magnetic susceptibilities were of a different generation and perhaps equivalent in age to the Mount Webb Granite.

### *Radiometric data*

The geochemical data show that some of the units can be distinguished within the airborne radiometric data. Figure 10 is a box whisker plot which shows the abundance of K2O, Th and U relative to a Proterozoic median for all samples of granites and volcanics from the Mount Webb region. The following offers a few pointers for more detailed radiometric interpretation:

1) The high Th anomalies near the Heavitree Quartzite outcrops are unlikely to be related to heavy minerals within the quartzite as the sample analysed had very low values for K, Th and U. The high Th values seem to correlate more convincingly where abundant iron-rich pisolites are found on the surface, almost predominantly overlying the faults and the ironstone bodies, as interpreted from the magnetic data. These iron-rich pisolites are also enriched in Th, and stand out strongly in the Th radiometric channel.

2. Areas of metasomatic biotite alteration in the Archaean? appear as highs both in the K channel and also on the regional magnetics.

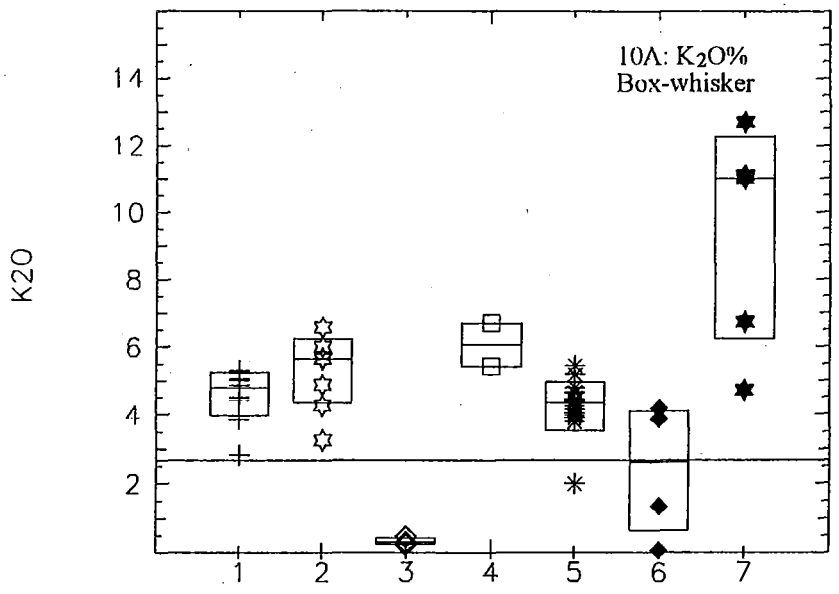
3. The areas of sodic alteration are markedly depleted in $K_2O$ relative to the other units in the area (Figure 10A). The sodic alteration would thus appear as a K low and a magnetic low.

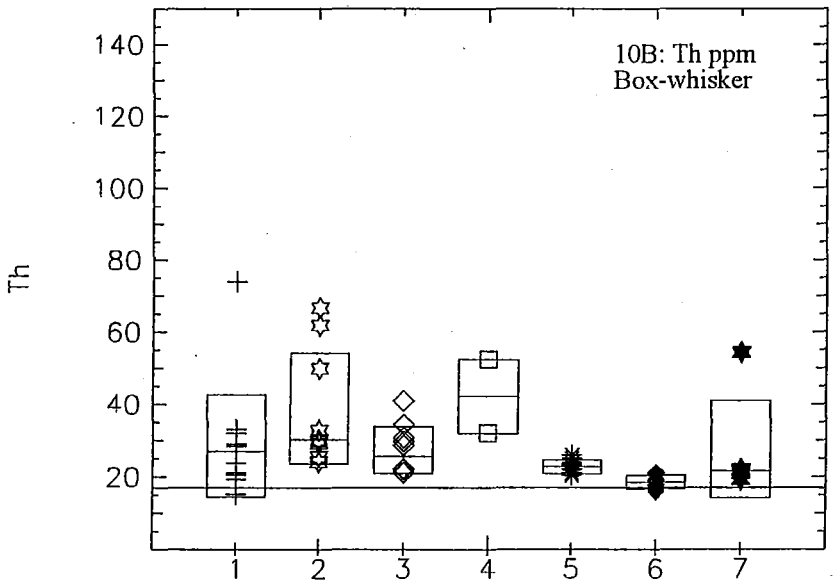
4. The areas of sericitic alteration appear as a high in K, Th and U and have a variable magnetic signature: generally a low.

5. Areas of hematitic alteration appear as a strong K high and a magnetic low.

6. Areas of aplite appear as a relative high in K, Th and U, and be a distinct magnetic low. These could be difficult to distinguish from an area of sericitic alteration.

The Th channel of the airborne radiometric data can possibly provide a mechanism for readily delineating the ironstones and major faults at the surface, whilst the K channel may map areas of sericite or biotite alteration (as highs) and sodic-calcic alteration (as lows).



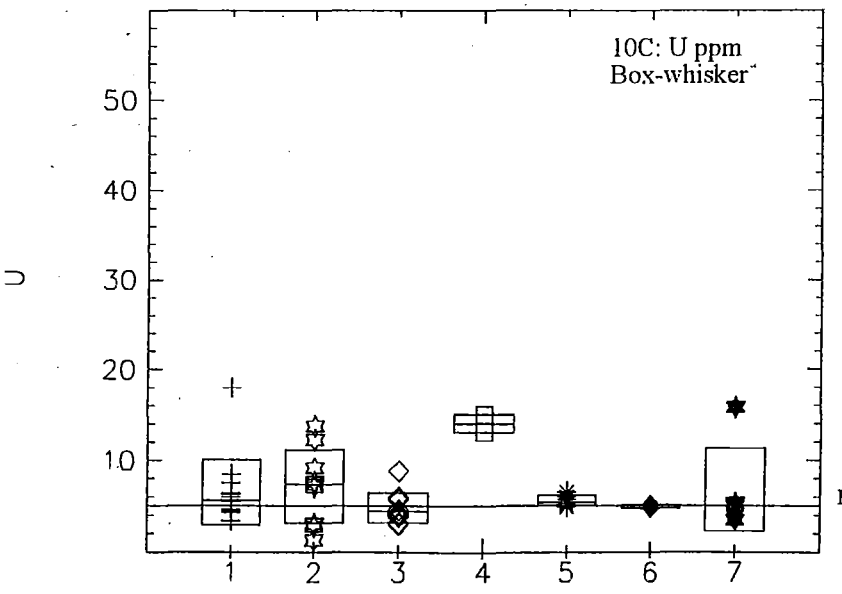




Figure 10: Box-whisker plots for K2O, Th and U values relative to a Proterozoic median

**Legend**

- Granite – 'Fresh'
- Granite – Sericite
- Granite – Sodic–Calc
- aplite
- Volcanics – 'Fresh'
- Volcanics – epidote
- Volcanics – Hematite

# PART 2: The Mineral Potential of the Mount Webb Region

## Overview

For mineralisation to be related to any granite intrusion several key factors are required.

1) the granite must be one that was emplaced predominantly as a liquid, which subsequently fractionated

2) the granite must have evolved a fluid phase which contained the metals or else had properties that enabled the magmatic fluid to leach the appropriate elements from the adjacent country rocks

3) hosts rocks of either suitable 'reactive' composition and/or a favourable trap structure must be present.

4) in most areas where granites are related to mineralisation, the granite system is spatially very large.

The Mount Webb region has every indication of all of these key factors being present.

The Mount Webb Granite is clearly a system which has fractionated from a predominantly liquid magma. This statement is supported by the paucity of cognate xenoliths within the granite, the heterogeneity of some parts of the granite (e.g., several of the bodies are distinct leucogranites, whilst some zoning is apparent in the magnetics). Further, in the geochemical data some of the plots show exponentially increasing trends for Rb, U, K/Rb, etc. in contrast to the unfractionated, unmineralised 'restite'-rich granites which show linear trends. All of these are characteristics that are common with other mineralised Palaeozoic and Proterozoic fractionating granite systems. The Mount Webb Granite is also an oxidised, metaluminous system which is characteristic of granites related to both Cu and Au mineralisation.

There is evidence of the evolution of magmatic fluids in the form of late stage aplites and quartz veins, and the extensive magmatic alteration in some areas, particularly within the more felsic varieties of the granite. Alteration is of two dominant types: sodic-calcic and sericitic. The sodic-calcic alteration is also very common in the Cloncurry area, although one important difference is that in the Mount Webb region, the sodic alteration has much more CaO than in the Cloncurry area. This may or may not be significant. The sericitic alteration is more common in the more felsic fractionated granites. Within these sericite altered granites fluorite, boron and sulphides are common accessories and some of these samples had anomalous F, Cu and S. All of the quartz veins that contained sulphides were located within the sericite-altered areas. These veins also had elevated Mo and Pb values.

The magnetic signature of the country rock indicates that there are potential high susceptibility magnetite-rich hosts adjacent to the granites. These high susceptibility rocks are either primary basalt within the sequence or else the metasomatically altered host rocks (e.g., the biotite + magnetite ± sericite assemblages in the eastern leases). Data on the structure of the region are limited, but within the magnetic data suitable structural traps appear evident. As noted in the preliminary report, it is feasible that some of the fine grained rocks observed by Blake and Towner (1974) in the area may be carbonaceous at depth: if so then this would enhance the prospectivity as such rocks could act as direct hosts, or could contribute to producing a methane-rich fluid which would mix with the oxidised fluid from the granites to cause precipitation (e.g.

Matthai *et al.*, 1996). One outstanding feature of the country rock is the abundance of late-stage quartz and quartz-tourmaline veins. Blake and Towner (1974) describe cross cutting quartz and quartz tourmaline veins as abundant and also noted the presence of brecciation within the Archaean? outcrops. If these veins are from fluids related to the fractionating processes in the granite then it could indicate release of significant volumes of magmatic fluid into the adjacent country rocks. Th country rocks assume considerable importance in the Mount Webb region, as in common with most other Proterozoic areas where mineralisation is related granites, the Mount Webb magma suite is predominantly I-granodiorite type with most of the samples having >65 wt.% $SiO_2$. In all of these areas, with the exception of Olympic Dam the mineralisation is hosted in the country rock, often up to 3 to 5 kms away from the granite contact. At Olympic Dam itself, the mineralisation is not in a pristine granite either, but rather is located in one that has been considerably metasomatically altered.

The Mount Webb Granite system is of large extent, extending west from the Aurora leases onto the Wilson 1:250 000 sheet area and eastwards onto the Mount Rennie 1:250 000 sheet area. Not only is the size of the granite system large by Australian Proterozoic granite systems, the extent of the alteration within the system is also very large.

> The granites of the Mount Webb region show all of the important characteristics of granites associated with Au-Cu mineralisation elsewhere in the Australian Proterozoic. These include 1) a fractionating granite system, 2) evidence of late magmatic fluids, 3) potential hosts of the correct composition and 4) a large volume of granite.

As noted in the previous report, some of the Mount Webb intrusives are at a much shallower level than in the other Proterozoic mineralised areas, as is evidenced by the brecciation within the granite and the quartz veins with open space fillings and also by the intrusion of the Mount Webb Granite into its own comagmatic volcanic ejecta. Brecciation is common in Hiltaba Suite Granites of the Olympic Dam region, but unusual within the other granite systems of the Proterozoic. There is thus a possibility in the Mount Webb region, because of the abundance of alteration and brecciation within the granite, that mineralisation could also be hosted within the granite, and not as far out in the country rock as in the normal case.

> There are indicators that the Mount Webb Granite may have intruded at a shallower level and as such, there is a possibility that there may be some mineralisation within the granite, as happens at Olympic Dam rather than being distal to the granite as occurs in most other Australian Proterozoic granite-related Au-Cu districts.

## Recommendations

In is difficult to make recommendations as to where the next exploration phase should go. On the one hand, the Mount Webb granite system has all of the important indicators for having the potential to release Cu-Au bearing fluids and there are appropriate host rocks in the vicinity. However, without any past exploration being carried out in the area what-so-ever it is harder to know where to effectively target any future exploration. With this in mind, the following recommendations are made:

1) The areas of sericite alteration within the Mount Webb Granite system also carry sulphides. These areas of granite should be more closely looked at, in particular the area to the south of sites visited in E80/2041 of the eastern tenements. Whilst at these sites, it was clear from the outcrops visible to the south that this alteration style continued into these areas, although we could not get permission from the traditional owners to proceed there for sampling. In the western tenements, the highly brecciated and altered areas on E80/2039 are also worthy of more detailed follow up. However, exploration should look also closely in the country rock surrounding these areas of granite. Although exposure is poor, in one of the better exposed areas surrounding this sericite type of alteration, metasomatic alteration of the country rock was clearly visible with the development of metasomatic biotite ± magnetite.

2) In any area of granite-related mineralisation, most of the mineralisation is located near major structures. Exploration should also focus on the areas closest to the shear zones. This is reinforced by the observation that most of the outcrops away from the shear zones within both the granites and the volcanics do not appear to have any significant alteration, and hence are unlikely to have much mineral potential. There is a remote possibility that some of the alteration may not be related to the granite, and that it may reflect some younger event. However, most of the alteration sampled is 'magmatic' in character and most of it, particularly the sericite alteration is restricted to the more fractionated parts of the granite system.

3) In the country rock, those areas that have been metasomatically altered to assemblages of magnetite ± biotite would form potential hosts to mineralisation as would any areas that are naturally enhanced in magnetite (e.g., mafic volcanics). There is also a possibility that some areas of country rock may contain reduced phases such as carbon and sulphides. However, their presence could only be confirmed by drilling and their subsurface distribution detected by EM surveys. One of the difficulties in targeting host rocks around fractionating granites is knowing the composition of the ore bearing fluids which emanate from the granite. If the fluids coming from the granite were oxidised, then the magnetite-rich hosts, as well as any sulphides or carbonaceous matter present would act as suitable reductants for these ore fluids leading to the precipitation of Cu and Au. If however, the late fluids were reduced, then iron-rich hosts (e.g., magnetite, iron-bearing silicates such as chlorite and clinopyroxene) could deposit Au by desulphidation of the fluids. As reduced fluids are often sulphur-bearing they also have a tendency to have a low pH and hence will react with carbonate hosts to also cause precipitation. Although most of the Mount Webb Granite system is oxidised (Figure 5D), some of the samples from the sericite and sodic-calcic alteration, as well as the aplites sampled plot in the reduced field (Figure 5D). This scenario of the possibility of some of the late fluids being reduced should be kept in mind when exploring around this system. Where reduced fluids are involved, with the exception of magnetite-rich rocks, most potential hosts do not have a strong magnetic signature.

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## Appendix 1. Sample location data.

Mount Webb Sample Data

| SITEID | FIELDID | EASTING | NORTHIN | STRATNAME | DESCRIPTION | GROUPING | Geochem | Age Det |
|---|---|---|---|---|---|---|---|---|
| 96496000 | | 346431 | 7473464 | Mount Webb Granite | Quartz feldspar porphyry | Normal | X | |
| 96496001 | MW2 | 432077 | 7459251 | Mount Webb Granite | foliated tourmaline sericite granite | Sericite | X | |
| 96496002 | | 432748 | 7460609 | | Sheared basalt | Host | | |
| 96496003A | | 432726 | 7462367 | | Biotite, sericite. magnetite altered rock | Host | | |
| 96496003B | | 432726 | 7462367 | | Biotite, sericite. magnetite altered rock | Host | | |
| 96496004 | MW5 | 432885 | 7461930 | | Biotite, sericite. magnetite altered rock | Host | | |
| 96496005 | MW7 | 414352 | 7461632 | Mount Webb Granite | Foliated albitite | Sodic-calcic | X | |
| 96496006 | MW8 | 414219 | 7461834 | Mount Webb Granite | Foliated albitite | Sodic-calcic | X | |
| 96496006A | MW8 | 414219 | 7461834 | Mount Webb Granite | Pink alteration vein | Vein | X | |
| 96496007 | MW9 | 413601 | 7461670 | Mount Webb Granite | Albitite | Sodic-calcic | X | |
| 96496007A | MW9 | 413601 | 7461670 | Mount Webb Granite | Epidote inclusion | Sodic-calcic | | |
| 96496007B | MW9 | 413601 | 7461670 | Mount Webb Granite | Epidote vein | Sodic-calcic | | |
| 96496008 | MW11 | 381573 | 7474469 | Mount Webb Granite | Fresh granite | Normal | X | |
| 96496008A | MW11 | 381573 | 7474469 | Mount Webb Granite | Mafic xenolith | Normal | | |
| 96496009 | MW13 | 386461 | 7473940 | Stuart Pass Dolerite | Dolerite | Dolerite | X | X |
| 96496009A | MW13 | 386461 | 7473940 | Stuart Pass Dolerite | Vein in dolerite | Dolerite | | |
| 96496010 | MW14 | 436887 | 7455930 | Mount Webb Granite | Foliated granite | Normal | | |
| 96496011 | MW1 | 431071 | 7459449 | Mount Webb Granite | Micaceous altered granite | Sericite | X | X |
| 96496011A | MW1 | 431071 | 7459449 | Mount Webb Granite | Aplite vein with fluorite | Sericite | X | |
| 96496011B | MW1 | 431071 | 7459449 | Mount Webb Granite | Quartz tourmaline inclusion | Sericite | | |
| 96496012 | MW16 | 435421 | 7456370 | Mount Webb Granite | Foliated biotite granite | Normal | | |
| 96496014 | MW17 | 433160 | 7458362 | Mount Webb Granite | Micaceous altered granite | Sericite | X | |
| 96496014A | MW17 | 433160 | 7458362 | Mount Webb Granite | Sulphide-bearing quartz vein | Vein | X | |
| 96496016 | MW19 | 432211 | 7458780 | Mount Webb Granite | Sulphide-bearing quartz vein | Vein | X | |
| 96496017 | MW20 | 434703 | 7458523 | Mount Webb Granite | Sulphide-bearing black quartz vein | Vein | X | |
| 96496017A | MW20 | 434703 | 7458523 | Mount Webb Granite | Sulphide-bearing feldspar vein | Vein | X | |
| 96496017B | MW20 | 434703 | 7458523 | Mount Webb Granite | Sulphide-bearing white quartz vein | Vein | X | |
| 96496018 | | 435195 | 7459122 | Mount Webb Granite | Foliated vein | Vein | | |
| 96496019 | MW21 | 438260 | 7455200 | Mount Webb Granite | Coarse foliated granite | Normal | | |
| 96496020 | MW22 | 429437 | 7456178 | Mount Webb Granite | Altered granite with sulphides | Sericite | X | |
| 96496020 | MW22 | 429437 | 7456178 | Mount Webb Granite | Altered granite with sulphides | Sericite | X | |
| 96496020A | MW22 | 429437 | 7456178 | Mount Webb Granite | granitic breccia | Sericite | X | |
| 96496020B | MW22 | 429437 | 7456178 | Mount Webb Granite | Altered granite | Sericite | X | |
| 96496021 | MW24 | 413929 | 7462446 | Mount Webb Granite | Altered and foliated granite | Sodic-calcic | X | |
| 96496022 | MW25 | 371813 | 7471854 | Mount Webb Granite | Pink porphyritic granite | Normal | X | |

Mount Webb Sample Data

| SITEID | FIELDID | EASTING | NORTHIN | STRATNAME | DESCRIPTION | GROUPING | Geochem | Age Det |
|---|---|---|---|---|---|---|---|---|
| 96496022A | MW25 | 371813 | 7471854 | Stuart Pass Dolerite | Dolerite | Dolerite | X | |
| 96496022B | MW25 | 371813 | 7471854 | Mount Webb Granite | Altered porphyry | Normal | X | |
| 96496022BX | MW25 | 371813 | 7471854 | Mount Webb Granite | Inclusion in porphyry | Normal | | |
| 96496023 | MW26 | 370494 | 7473028 | Pollock Hills Formation | Rhyodacite | Normal | X | |
| 96496023A | MW26 | 370494 | 7473028 | Pollock Hills Formation | Intensely epidote altered rhyolite | Epidote | X | |
| 96496023B | MW26 | 370494 | 7473028 | Pollock Hills Formation | Intensely epidote altered rhyolite | Epidote | X | |
| 96496023C | MW26 | 370494 | 7473028 | Pollock Hills Formation | Epidote altered volcanic | Epidote | | |
| 96496024 | MW27 | 370304 | 7474550 | Pollock Hills Formation | Rhyodacite | Normal | X | X |
| 96496024A | MW27 | 370304 | 7474550 | Stuart Pass Dolerite | Dolerite | Dolerite | X | |
| 96496025 | MW29 | 429835 | 7456054 | Mount Webb Granite | Quartz vein | Vein | X | |
| 96496025A | MW29 | 429835 | 7456054 | Mount Webb Granite | Dark hematite-rich dolerite | Dolerite | X | |
| 96496026 | MW30 | 429510 | 7458870 | Mount Webb Granite | Sericitised granite | Sericite | | |
| 96496026A | MW30 | 429510 | 7458870 | Mount Webb Granite | Tourmaline nodule | Sericite | | |
| 96496027 | MW33 | 411882 | 7462432 | Mount Webb Granite | Saw tooth quartz vein | Vein | | |
| 96496028 | MW34 | 412150 | 7461897 | Mount Webb Granite | Diorite | Normal | X | |
| 96496028A | MW34 | 412150 | 7461897 | Mount Webb Granite | Tonalite | Normal | X | X |
| 96496028B | MW34 | 412150 | 7461897 | Mount Webb Granite | Xenolith within tonalite | Normal | | |
| 96496029 | MW35 | 412067 | 7463213 | Mount Webb Granite | White albitite | Sodic-calcic | X | |
| 96496029A | MW35 | 412067 | 7463213 | Mount Webb Granite | More mafic albitite | Sodic-calcic | | |
| 96496030 | MW36 | 411650 | 7463632 | Mount Webb Granite | Albitite | Sodic-calcic | X | |
| 96496030A | MW36 | 411650 | 7463632 | Mount Webb Granite | Grey albitite | Sodic-calcic | X | |
| 96496031 | MW37 | 411437 | 7463448 | Mount Webb Granite | Albitite with epidote | Sodic-calcic | X | |
| 96496032 | MW38 | 411399 | 7463629 | Mount Webb Granite | Albitite with sericite (?) | Sodic-calcic | X | |
| 96496033 | MW39 | 408935 | 7465109 | Pollock Hills Formation | Flow banded porphyritic rhyolite | Hematite-potassic | X | |
| 96496034 | MW40 | 408435 | 7465052 | Heavitree Quartzite | Sandstone | | X | |
| 96496035 | MW41 | 366445 | 7475918 | Mount Webb Granite | Granodiorite | Normal | X | X |
| 96496035A | MW41 | 366445 | 7475918 | Mount Webb Granite | Hornblende-rich vein | Normal | | |
| 96496036 | MW42 | 364641 | 7474907 | Pollock Hills Formation | Lava | Normal | X | |
| 96496037 | | 364475 | 7474592 | Pollock Hills Formation | Lava | Normal | X | |
| 96496038 | MW43 | 364151 | 7473790 | Pollock Hills Formation | Chert | Normal | X | |
| 96496038A | MW43 | 364151 | 7473790 | Pollock Hills Formation | Finely crystalline tuff | Normal | X | |
| 96496038B | MW43 | 364151 | 7473790 | Pollock Hills Formation | Porphyritic lava | Normal | X | |
| 96496039 | MW45 | 361940 | 7473805 | Pollock Hills Formation | Altered Lava | Normal | X | |
| 96496039A | MW45 | 361940 | 7473805 | | Low susceptibility dolerite | Dolerite | X | |
| 96496039V | MW45 | 361940 | 7473805 | Pollock Hills Formation | Epidote vein cross cutting pink alteration | Epidote | | |

Mount Webb Sample Data

| SITEID | FIELDID | EASTING | NORTHIN | STRATNAME | DESCRIPTION | GROUPING | Geochem | Age Det |
|---|---|---|---|---|---|---|---|---|
| 96496040 | MW45 | 362051 | 7474737 | Pollock Hills Formation | Hematite altered lava at sediment contac | Hematite-potassic | X | |
| 96496040A | MW46 | 362051 | 7474737 | Pollock Hills Formation | Hematite altered lava 2m below contact | Hematite-potassic | X | |
| 96496041 | MW46 | 362151 | 7474494 | Pollock Hills Formation | Lapili tuff | Normal | X | |
| 96496042 | | 362404 | 7474876 | Pollock Hills Formation | Epidote altered lava | Epidote | X | |
| 96496043 | MW50 | 369404 | 7478605 | Pollock Hills Formation | Hematite altered volcanic | Hematite-potassic | X | |
| 96496043A | MW50 | 369404 | 7478605 | Pollock Hills Formation | Micaceous altered volcanic | Sericite | X | |
| 96496043B | MW50 | 369404 | 7478605 | Mount Webb Granite | Micaceous altered granite | Sericite | | |
| 96496044 | MW51 | 369935 | 7474503 | Pollock Hills Formation | Epidote altered volcanic | Epidote | | |
| 96496045 | MW52 | 369573 | 7474436 | Pollock Hills Formation | Lava | Normal | X | |
| 96496045A | MW52 | 369573 | 7474436 | Pollock Hills Formation | Epidote altered lava | Epidote | X | |
| 96496046 | MW53 | 370135 | 7469944 | Mount Webb Granite | Granite | Normal | X | |
| 96496046A | MW53 | 370135 | 7469944 | Mount Webb Granite | Rapakivi textured granite | Normal | | |
| 96496047 | MW54 | 374660 | 7471683 | Mount Webb Granite | Granite | Normal | | |
| 96496048 | MW55 | 346293 | 7473952 | Mount Webb Granite | Weathered granite | Sericite | | |
| 96496049 | MW56 | 347493 | 7474378 | Mount Webb Granite | Weathered granite | Sericite | X | |
| 96496049A | MW56 | 347493 | 7474378 | Mount Webb Granite | Weathered granite | Sericite | X | |
| 96496050 | MW63 | 377529 | 7471222 | Mount Webb Granite | Recrystallised porphyry | Normal | | |
| 96496051 | MW64 | 379972 | 7472511 | Mount Webb Granite | Aplite | Aplite | X | |
| 96496052 | MW65 | 379992 | 7472581 | Mount Webb Granite | Granite | Normal | X | |
| 96496053 | MW66 | 381646 | 7473041 | Mount Webb Granite | Aplite | Aplite | | |
| 96496054 | MW67 | 382833 | 7473360 | Mount Webb Granite | Granite | Normal | | |
| 96496055 | MW68 | 382888 | 7473355 | Mount Webb Granite | Granite | Normal | | |
| 96496056 | MW69 | 383959 | 7472789 | Mount Webb Granite | Granite | Normal | | |
| 96496057 | MW70 | 386094 | 7473706 | Mount Webb Granite | Albitite | Sodic-calcic | X | |
| 96496058 | MW71 | 387742 | 7473164 | Mount Webb Granite | Granite | Normal | | |
| 96496059 | MW72 | 388534 | 7472891 | Mount Webb Granite | Granite | Normal | | |
| 96496060 | MW73 | 390728 | 7471129 | Mount Webb Granite | Granite | Normal | | |
| 96496061 | MW74 | 389119 | 7470434 | Mount Webb Granite | Granite | Normal | | |
| 96496062 | MW75 | 387986 | 7470566 | Mount Webb Granite | Granite | Normal | | |

## Appendix 2. Whole-rock geochemical data.

## Mount Webb Granite

| | | | | |
|---|---|---|---|---|
| Originator | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. |
| Siteid | 96496020 | 96496020A | 96496020B | 96496025 |
| Sample | 96496020 | 96496020A | 96496020B | 96496025 |
| Geolprov. | Arunta Block | Arunta Block | Arunta Block | Arunta Block |
| Subprov. | | | | |
| Domain | | | | |
| 100K Map | ARANGA | ARANGA | ARANGA | ARANGA |
| 250K Map | MACDONALD | MACDONALD | MACDONALD | MACDONALD |
| Easting | 429437 | 429437 | 429437 | 429835 |
| Northing | 7456178 | 7456178 | 7456178 | 7456054 |
| Latitude | 23.001154 | 23.001154 | 23.001154 | 23.002291 |
| Longitude | 128.311465 | 128.311465 | 128.311465 | 128.315342 |
| Informal | | | | |
| Qualifier | altered | granitic | altered | quartz |
| Lithname | granite | breccia | granite | vein |
| Rocktype | felsic intrusive | felsic intrusive | felsic intrusive | metasomatite |
| Lith Desc. | Altered granite with sulphides | granitic breccia | Altered granite | Quartz vein |
| SiO2 | 76.06 | 76.66 | 76.99 | 88.65 |
| TiO2 | .20 | .28 | .23 | .20 |
| Al2O3 | 11.03 | 10.43 | 11.32 | 5.25 |
| Fe2O3 tot. | 1.03 | 3.08 | 1.13 | 1.35 |
| Fe2O3 | .55 | 2.54 | .60 | 1.01 |
| FeO | .43 | .49 | .48 | .31 |
| MnO | .01 | .01 | 0.00 | 0.00 |
| MgO | .19 | .26 | .24 | .18 |
| CaO | 1.43 | .27 | 1.06 | .06 |
| Na2O | 2.30 | 1.59 | 3.35 | .07 |
| K2O | 6.01 | 6.58 | 4.27 | 3.47 |
| P2O5 | .03 | .05 | .03 | .02 |
| CO2 | .49 | .04 | .30 | .06 |
| H2O+ | .30 | .39 | .44 | .70 |
| H2O- | 0.00 | 0.00 | 0.00 | 0.00 |
| LOI | .47 | .19 | .32 | .02 |
| rest | -.04 | .18 | .07 | .13 |
| total | 99.46 | 99.96 | 99.70 | 100.13 |
| Ba | 238 | 478 | 200 | 471 |
| Li | 3 | 3 | 4 | 8 |
| Rb | 435 | 469 | 273 | 235 |
| Sr | 18 | 19 | 26 | 10 |
| Pb | 9 | 7 | 8 | 4 |
| Th | 62 | 50 | 67 | 21 |
| U | 14 | 3 | 12 | 3 |
| Zr | 163 | 186 | 185 | 107 |
| Nb | 10 | 8 | 11 | 2 |
| Y | 49 | 58 | 60 | 26 |
| La | 61 | 73 | 84 | 38 |
| Ce | 124 | 164 | 174 | 23 |
| Nd | 42 | 51 | 58 | 27 |
| Sc | 3 | 5 | 4 | 3 |
| V | 7 | 12 | 8 | 16 |
| Cr | 2 | 5 | 3 | 4 |
| Mn | 0 | 0 | 0 | 0 |
| Co | 0 | 0 | 0 | 0 |
| Ni | 1 | 3 | 1 | 2 |
| Cu | 278 | -1 | 348 | 2 |
| Zn | 2 | 5 | 5 | 4 |
| Sn | 8 | 6 | 8 | 3 |
| W | 0 | 0 | 0 | 0 |
| Mo | 0 | - | 0 | 0 |
| Ga | 11 | 8 | 12 | 5 |
| As | - | - | - | - |
| S | 130 | 50 | 60 | 70 |
| F | 5263 | 293 | 2913 | -200 |
| Ag | -1 | -1 | -1 | -1 |
| Au | | | | |
| Bi | 0 | 0 | - | - |
| Ge | 1 | 1 | 1 | 1 |

## Mount Webb Granite

| | | | | |
|---|---|---|---|---|
| Originator | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. |
| Siteid | 96496025A | 96496000 | 96496001 | 96496011 |
| Sample | 96496025A | 96496000 | 96496001 | 96496011 |
| Geolprov. | Arunta Block | Arunta Block | Arunta Block | Arunta Block |
| Subprov. | | | | |
| Domain | | | | |
| 100K Map | ARANGA | POLLOCK | WEBB | WEBB |
| 250K Map | MACDONALD | WEBB | WEBB | WEBB |
| Easting | 429835 | 346431 | 432077 | 431071 |
| Northing | 7456054 | 7473464 | 7459251 | 7459449 |
| Latitude | 23.002291 | 22.839464 | 22.973506 | 22.971676 |
| Longitude | 128.315342 | 127.503385 | 128.337359 | 128.327554 |
| Informal | | | | |
| Qualifier | hematite | feldspar | tourmaline | altered |
| Lithname | dolerite | porphyry | granite | granite |
| Rocktype | metasomatite | felsic intrusive | felsic intrusive | felsic intrusive |
| Lith Desc. | Dark hematite-rich dolerite | Quartz feldspar porphyry | foliated tourmaline sericite granite | Micaceous altered granite |
| SiO2 | 50.50 | 68.26 | 79.00 | 77.50 |
| TiO2 | 2.92 | .75 | .07 | .08 |
| Al2O3 | 13.96 | 13.28 | 11.45 | 11.69 |
| Fe2O3 tot. | 17.47 | 5.36 | .36 | .64 |
| Fe2O3 | 16.66 | 3.53 | .06 | .18 |
| FeO | .73 | 1.65 | .27 | .41 |
| MnO | .07 | .04 | 0.00 | 0.00 |
| MgO | .50 | 1.09 | .11 | .11 |
| CaO | 3.44 | 1.55 | .12 | .48 |
| Na2O | 3.58 | 3.82 | 2.64 | 2.72 |
| K2O | 5.34 | 3.85 | 5.67 | 5.64 |
| P2O5 | .43 | .17 | .03 | .02 |
| CO2 | .44 | .05 | .03 | .06 |
| H2O+ | 1.48 | 1.28 | .49 | .50 |
| H2O- | 0.00 | 0.00 | 0.00 | 0.00 |
| LOI | -.09 | -.11 | .02 | .12 |
| rest | .29 | .15 | .10 | -.08 |
| total | 100.25 | 99.36 | 100.06 | 99.43 |
| Ba | 875 | 557 | 77 | 67 |
| Li | 4 | 7 | 3 | 2 |
| Rb | 285 | 160 | 393 | 483 |
| Sr | 138 | 93 | 23 | 18 |
| Pb | 19 | 9 | 8 | 9 |
| Th | 2 | 21 | 29 | 30 |
| U | 1 | 4 | 7 | 7 |
| Zr | 260 | 270 | 80 | 82 |
| Nb | 10 | 12 | 7 | 7 |
| Y | 57 | 42 | 46 | 46 |
| La | 27 | 43 | 12 | 18 |
| Ce | 54 | 91 | 56 | 74 |
| Nd | 31 | 38 | 11 | 18 |
| Sc | 41 | 13 | 5 | 5 |
| V | 371 | 56 | -1 | -1 |
| Cr | 97 | 9 | -1 | -1 |
| Mn | 0 | 0 | 0 | 0 |
| Co | 0 | 0 | 0 | 0 |
| Ni | 32 | 7 | -1 | -1 |
| Cu | 108 | 3 | 3 | 4 |
| Zn | 20 | 26 | 3 | 2 |
| Sn | 2 | 4 | 9 | 10 |
| W | 0 | 0 | 0 | 0 |
| Mo | 1 | 0 | 0 | 0 |
| Ga | 12 | 16 | 14 | 14 |
| As | 1 | 1 | - | 0 |
| S | 490 | 30 | 40 | 120 |
| F | 410 | 686 | -200 | 4309 |
| Ag | -1 | -1 | -1 | -1 |
| Au | | | | |
| Bi | - | 0 | 0 | 0 |
| Ge | 2 | 2 | 2 | 2 |

## Mount Webb Granite

| | | | | |
|---|---|---|---|---|
| Originator | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. |
| Siteid | 96496014 | 96496011A | 96496022B | 96496022 |
| Sample | 96496014 | 96496011A | 96496022B | 96496022 |
| Geolprov. | Arunta Block | Arunta Block | Arunta Block | Arunta Block |
| Subprov. | | | | |
| Domain | | | | |
| 100K Map | WEBB | WEBB | POLLOCK | POLLOCK |
| 250K Map | WEBB | WEBB | WEBB | WEBB |
| Easting | 433160 | 431071 | 371813 | 371813 |
| Northing | 7458362 | 7459449 | 7471854 | 7471854 |
| Latitude | 22.98158 | 22.971676 | 22.856137 | 22.856137 |
| Longitude | 128.347886 | 128.327554 | 127.750564 | 127.750564 |
| Informal | | | | |
| Qualifier | altered | | altered | porphyritic |
| Lithname | granite | vein | porphyry | granite |
| Rocktype | felsic intrusive | felsic intrusive | felsic intrusive | felsic intrusive |
| Lith Desc. | Micaceous altered granite | Aplite vein with fluorite | Altered porphyry | Pink porphyritic granite |
| SiO2 | 76.62 | 76.17 | 71.26 | 71.65 |
| TiO2 | .12 | .05 | .53 | .56 |
| Al2O3 | 12.02 | 12.81 | 13.14 | 12.92 |
| Fe2O3 tot. | 1.35 | .61 | 3.29 | 3.39 |
| Fe2O3 | .57 | .30 | 1.09 | 1.33 |
| FeO | .70 | .28 | 1.98 | 1.85 |
| MnO | .02 | 0.00 | .04 | .04 |
| MgO | .22 | .07 | .80 | .78 |
| CaO | .45 | .21 | 1.86 | 2.02 |
| Na2O | 2.32 | 3.30 | 3.11 | 2.51 |
| K2O | 5.67 | 5.65 | 4.49 | 4.87 |
| P2O5 | .04 | .04 | .10 | .11 |
| CO2 | .05 | .04 | .06 | .04 |
| H2O+ | .88 | .75 | .91 | .94 |
| H2O- | 0.00 | 0.00 | 0.00 | 0.00 |
| LOI | .01 | -.08 | .15 | .19 |
| rest | -.01 | .08 | .17 | .14 |
| total | 99.68 | 99.67 | 99.69 | 99.95 |
| Ba | 87 | 76 | 635 | 700 |
| Li | 6 | 1 | 6 | 16 |
| Rb | 454 | 469 | 247 | 228 |
| Sr | 13 | 24 | 108 | 101 |
| Pb | 16 | 11 | 18 | 25 |
| Th | 33 | 30 | 27 | 21 |
| U | 8 | 9 | 6 | 5 |
| Zr | 102 | 71 | 264 | 267 |
| Nb | 6 | 18 | 13 | 13 |
| Y | 63 | 67 | 42 | 37 |
| La | 43 | 46 | 49 | 45 |
| Ce | 90 | 120 | 101 | 93 |
| Nd | 37 | 52 | 38 | 36 |
| Sc | 5 | 4 | 9 | 10 |
| V | 3 | -1 | 37 | 36 |
| Cr | 2 | -1 | 9 | 11 |
| Mn | 0 | 0 | 0 | 0 |
| Co | 0 | 0 | 0 | 0 |
| Ni | 1 | -1 | 6 | 5 |
| Cu | 3 | 6 | 9 | 9 |
| Zn | 15 | 2 | 29 | 42 |
| Sn | 12 | 8 | 4 | 5 |
| W | 0 | 0 | 0 | 0 |
| Mo | 0 | 0 | 1 | 0 |
| Ga | 14 | 16 | 15 | 15 |
| As | 1 | 0 | 0 | - |
| S | 50 | 70 | 130 | 80 |
| F | 3172 | 936 | 601 | 1633 |
| Ag | -1 | -1 | -1 | -1 |
| Au | | | | |
| Bi | 1 | 0 | 0 | 0 |
| Ge | 2 | 2 | 1 | 1 |

## Mount Webb Granite

| | | | | |
|---|---|---|---|---|
| Originator | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. |
| Siteid | 96496021 | 96496017B | 96496017A | 96496017 |
| Sample | 96496021 | 96496017B | 96496017A | 96496017 |
| Geolprov. | Arunta Block | Arunta Block | Arunta Block | Arunta Block |
| Subprov. | | | | |
| Domain | | | | |
| 100K Map | WEBB | WEBB | WEBB | WEBB |
| 250K Map | WEBB | WEBB | WEBB | WEBB |
| Easting | 413929 | 434703 | 434703 | 434703 |
| Northing | 7462446 | 7458523 | 7458523 | 7458523 |
| Latitude | 22.943809 | 22.980187 | 22.980187 | 22.980187 |
| Longitude | 128.160503 | 128.362946 | 128.362946 | 128.362946 |
| Informal | | | | |
| Qualifier | foliated | quartz | quartz | quartz |
| Lithname | granite | vein | vein | vein |
| Rocktype | felsic intrusive | metasomatite | metasomatite | metasomatite |
| Lith Desc. | Altered and foliated granite | Sulphide-bearing white quartz vein | Sulphide-bearing feldspar vein | Sulphide-bearing black quartz vein |
| SiO2 | 73.68 | 98.87 | 98.03 | 96.54 |
| TiO2 | .52 | 0.00 | 0.00 | .01 |
| Al2O3 | 13.64 | 0.00 | .69 | .48 |
| Fe2O3 tot. | 1.01 | .07 | .34 | 1.37 |
| Fe2O3 | .07 | .07 | .34 | .93 |
| FeO | .85 | 0.00 | 0.00 | .40 |
| MnO | .01 | 0.00 | 0.00 | 0.00 |
| MgO | .78 | .01 | .04 | .03 |
| CaO | 5.40 | .01 | 0.00 | .01 |
| Na2O | 3.84 | 0.00 | .05 | .01 |
| K2O | .50 | .02 | .20 | .16 |
| P2O5 | .11 | 0.00 | 0.00 | .01 |
| CO2 | .06 | .06 | .08 | .05 |
| H2O+ | .38 | .04 | .13 | .06 |
| H2O- | 0.00 | 0.00 | 0.00 | 0.00 |
| LOI | .25 | .01 | .03 | -.21 |
| rest | .13 | .01 | .02 | -.19 |
| total | 100.22 | 99.10 | 99.61 | 98.29 |
| Ba | 185 | 22 | 19 | 48 |
| Li | 6 | -1 | 1 | -1 |
| Rb | 34 | 1 | 13 | 10 |
| Sr | 298 | -1 | 1 | 5 |
| Pb | 10 | 1 | 57 | 22 |
| Th | 29 | - | 1 | 0 |
| U | 5 | - | 0 | 1 |
| Zr | 280 | -1 | 5 | 3 |
| Nb | 12 | - | - | - |
| Y | 45 | 0 | 1 | 0 |
| La | 52 | 0 | 1 | 1 |
| Ce | 105 | 1 | 2 | 2 |
| Nd | 41 | 0 | 1 | 1 |
| Sc | 9 | -1 | -1 | -1 |
| V | 32 | 1 | 7 | 9 |
| Cr | 9 | 2 | 3 | 23 |
| Mn | 0 | 0 | 0 | 0 |
| Co | 0 | 0 | 0 | 0 |
| Ni | 6 | 1 | 1 | 6 |
| Cu | 4 | 1 | 5 | 11 |
| Zn | 10 | -1 | -1 | -1 |
| Sn | 8 | - | 0 | 0 |
| W | 0 | 0 | 0 | 0 |
| Mo | 0 | 0 | 1 | 11 |
| Ga | 15 | 0 | 2 | 1 |
| As | 0 | - | 1 | 4 |
| S | 50 | 30 | 40 | 8860 |
| F | 530 | -200 | -200 | -200 |
| Ag | -1 | -1 | -1 | 1 |
| Au | | | | |
| Bi | 0 | - | 1 | 6 |
| Ge | 2 | 0 | 0 | 0 |

## Mount Webb Granite

| | | | | |
|---|---|---|---|---|
| Originator | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. |
| Siteid | 96496016 | 96496014A | 96496035 | 96496032 |
| Sample | 96496016 | 96496014A | 96496035 | 96496032 |
| Geolprov. | Arunta Block | Arunta Block | Arunta Block | Arunta Block |
| Subprov. | | | | |
| Domain | | | | |
| 100K Map | WEBB | WEBB | POLLOCK | WEBB |
| 250K Map | WEBB | WEBB | WEBB | WEBB |
| Easting | 432211 | 433160 | 366445 | 411399 |
| Northing | 7458780 | 7458362 | 7475918 | 7463629 |
| Latitude | 22.977766 | 22.98158 | 22.819015 | 22.932991 |
| Longitude | 128.338646 | 128.347886 | 127.698602 | 128.135896 |
| Informal | | | | |
| Qualifier | quartz | quartz | | |
| Lithname | vein | vein | granodiorite | albitite |
| Rocktype | metasomatite | metasomatite | felsic intrusive | metasomatite |
| Lith Desc. | Sulphide-bearing quartz vein | Sulphide-bearing quartz vein | Granodiorite | Albitite with sericite (?) |
| SiO2 | 93.31 | 86.20 | 74.16 | 71.14 |
| TiO2 | .02 | .85 | .32 | .76 |
| Al2O3 | 2.78 | 2.99 | 13.00 | 14.10 |
| Fe2O3 tot. | .55 | 4.25 | 2.03 | 1.57 |
| Fe2O3 | .22 | 3.78 | .89 | .91 |
| FeO | .30 | .42 | 1.03 | .59 |
| MnO | 0.00 | 0.00 | .03 | 0.00 |
| MgO | .04 | .21 | .46 | .86 |
| CaO | .02 | .05 | 1.65 | 5.34 |
| Na2O | .39 | .18 | 2.78 | 4.62 |
| K2O | 1.75 | 1.27 | 4.78 | .32 |
| P2O5 | .01 | .15 | .07 | .18 |
| CO2 | .04 | .09 | 0.00 | 0.00 |
| H2O+ | .21 | 1.52 | 0.00 | 0.00 |
| H2O- | 0.00 | 0.00 | 0.00 | 0.00 |
| LOI | -.20 | .90 | .71 | .91 |
| rest | .15 | -.05 | .13 | .16 |
| total | 99.04 | 98.56 | 100.01 | 99.89 |
| Ba | 118 | 592 | 689 | 437 |
| Li | 1 | 6 | 12 | 5 |
| Rb | 119 | 124 | 251 | 17 |
| Sr | 8 | 85 | 92 | 265 |
| Pb | 1801 | 18 | 23 | 8 |
| Th | 7 | 2 | 24 | 22 |
| U | 3 | 2 | 6 | 4 |
| Zr | 24 | 109 | 181 | 299 |
| Nb | 1 | 2 | 11 | 14 |
| Y | 8 | 17 | 41 | 44 |
| La | 7 | 23 | 45 | 50 |
| Ce | 17 | 32 | 92 | 91 |
| Nd | 6 | 9 | 35 | 42 |
| Sc | 1 | 14 | 6 | 14 |
| V | 3 | 52 | 17 | 56 |
| Cr | -1 | 101 | 3 | 16 |
| Mn | 0 | 0 | 0 | 0 |
| Co | 0 | 0 | 0 | 0 |
| Ni | 1 | 2 | 3 | 10 |
| Cu | 90 | 3 | 11 | 3 |
| Zn | 36 | 5 | 29 | 5 |
| Sn | 3 | 7 | 5 | 4 |
| W | 0 | 0 | 0 | 0 |
| Mo | 8 | 145 | 1 | 0 |
| Ga | 3 | 12 | 14 | 16 |
| As | 19 | 3 | - | - |
| S | 4560 | 7230 | 30 | 110 |
| F | -200 | 977 | 1395 | 476 |
| Ag | 4 | -1 | -1 | -1 |
| Au | | | | |
| Bi | 22 | 10 | 0 | - |
| Ge | 0 | 1 | 2 | 1 |

## Mount Webb Granite

| | | | | |
|---|---|---|---|---|
| Originator | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. |
| Siteid | 96496031 | 96496030A | 96496030 | 96496029 |
| Sample | 96496031 | 96496030A | 96496030 | 96496029 |
| Geolprov. | Arunta Block | Arunta Block | Arunta Block | Arunta Block |
| Subprov. | | | | |
| Domain | | | | |
| 100K Map | WEBB | WEBB | WEBB | WEBB |
| 250K Map | WEBB | WEBB | WEBB | WEBB |
| Easting | 411437 | 411650 | 411650 | 412067 |
| Northing | 7463448 | 7463632 | 7463632 | 7463213 |
| Latitude | 22.934628 | 22.932977 | 22.932977 | 22.936784 |
| Longitude | 128.136256 | 128.138344 | 128.138344 | 128.142387 |
| Informal | | | | |
| Qualifier | | | | |
| Lithname | albitite | albitite | albitite | albitite |
| Rocktype | metasomatite | metasomatite | metasomatite | metasomatite |
| Lith Desc. | Albitite with epidote | Grey albitite | Albitite | White albitite |
| SiO2 | 70.03 | 70.11 | 70.69 | 70.82 |
| TiO2 | .71 | .77 | .72 | .67 |
| Al2O3 | 14.46 | 14.06 | 14.28 | 14.29 |
| Fe2O3 tot. | 1.41 | 2.49 | .61 | .92 |
| Fe2O3 | .61 | .96 | -.03 | .10 |
| FeO | .72 | 1.38 | .58 | .74 |
| MnO | 0.00 | .03 | 0.00 | 0.00 |
| MgO | 1.31 | 1.31 | 1.57 | 1.36 |
| CaO | 7.56 | 4.94 | 5.77 | 6.37 |
| Na2O | 3.11 | 4.53 | 5.13 | 4.14 |
| K2O | .30 | .47 | .30 | .48 |
| P2O5 | .18 | .18 | .17 | .16 |
| CO2 | 0.00 | 0.00 | .06 | .11 |
| H2O+ | 0.00 | 0.00 | .06 | .03 |
| H2O- | 0.00 | 0.00 | 0.00 | 0.00 |
| LOI | .94 | .93 | .49 | .67 |
| rest | .13 | .12 | .12 | .13 |
| total | 100.06 | 99.79 | 99.91 | 100.07 |
| Ba | 110 | 227 | 117 | 177 |
| Li | 10 | 4 | 6 | 6 |
| Rb | 20 | 30 | 17 | 31 |
| Sr | 330 | 233 | 223 | 294 |
| Pb | 6 | 5 | 5 | 12 |
| Th | 21 | 21 | 22 | 21 |
| U | 4 | 6 | 3 | 4 |
| Zr | 287 | 265 | 277 | 275 |
| Nb | 13 | 15 | 13 | 13 |
| Y | 41 | 45 | 43 | 41 |
| La | 45 | 49 | 61 | 50 |
| Ce | 93 | 106 | 125 | 102 |
| Nd | 38 | 42 | 45 | 38 |
| Sc | 13 | 13 | 13 | 13 |
| V | 62 | 70 | 43 | 57 |
| Cr | 15 | 17 | 14 | 13 |
| Mn | 0 | 0 | 0 | 0 |
| Co | 0 | 0 | 0 | 0 |
| Ni | 10 | 13 | 7 | 9 |
| Cu | 2 | 4 | 2 | 6 |
| Zn | 3 | 13 | 2 | 7 |
| Sn | 4 | 4 | 4 | 5 |
| W | 0 | 0 | 0 | 0 |
| Mo | 0 | 0 | 0 | 0 |
| Ga | 15 | 17 | 15 | 15 |
| As | - | - | - | 1 |
| S | 30 | 110 | 30 | 50 |
| F | 368 | 654 | 494 | 541 |
| Ag | -1 | -1 | -1 | -1 |
| Au | | | | |
| Bi | - | 0 | - | 0 |
| Ge | 1 | 2 | 1 | 1 |

## Mount Webb Granite

| | | | | |
|---|---|---|---|---|
| Originator | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. |
| Siteid | 96496028A | 96496028 | 96496005 | 96496006 |
| Sample | 96496028A | 96496028 | 96496005 | 96496006 |
| Geolprov. | Arunta Block | Arunta Block | Arunta Block | Arunta Block |
| Subprov. | | | | |
| Domain | | | | |
| 100K Map | WEBB | WEBB | WEBB | WEBB |
| 250K Map | WEBB | WEBB | WEBB | WEBB |
| Easting | 412150 | 412150 | 414352 | 414219 |
| Northing | 7461897 | 7461897 | 7461632 | 7461834 |
| Latitude | 22.948675 | 22.948675 | 22.951183 | 22.949351 |
| Longitude | 128.143121 | 128.143121 | 128.164583 | 128.163297 |
| Informal | | | | |
| Qualifier | | | foliated | foliated |
| Lithname | tonalite | diorite | albitite | albitite |
| Rocktype | felsic intrusive | intermediate intrusi | metasomatite | metasomatite |
| Lith Desc. | Tonalite | Diorite | Foliated albitite | Foliated albitite |
| | | | | |
| SiO2 | 68.99 | 62.50 | 73.55 | 73.47 |
| TiO2 | .66 | 1.09 | .54 | .52 |
| Al2O3 | 13.89 | 14.93 | 13.55 | 13.41 |
| Fe2O3 tot. | 4.50 | 7.98 | .81 | .94 |
| Fe2O3 | 1.83 | 3.03 | .27 | .36 |
| FeO | 2.40 | 4.45 | .49 | .52 |
| MnO | .07 | .12 | 0.00 | 0.00 |
| MgO | 1.16 | 2.20 | .93 | .76 |
| CaO | 2.91 | 4.48 | 5.90 | 5.62 |
| Na2O | 2.54 | 2.92 | 3.82 | 3.80 |
| K2O | 4.42 | 2.82 | .27 | .23 |
| P2O5 | .16 | .27 | .11 | .11 |
| CO2 | .09 | .06 | .06 | .08 |
| H2O+ | .03 | 1.38 | .51 | .51 |
| H2O- | 0.00 | 0.00 | 0.00 | 0.00 |
| LOI | .74 | -.20 | .03 | .01 |
| rest | .15 | .19 | .11 | .12 |
| total | 100.04 | 100.24 | 100.14 | 99.52 |
| | | | | |
| Ba | 661 | 548 | 71 | 75 |
| Li | 19 | 20 | 4 | 4 |
| Rb | 192 | 153 | 15 | 10 |
| Sr | 131 | 193 | 278 | 272 |
| Pb | 25 | 21 | 8 | 11 |
| Th | 21 | 15 | 30 | 31 |
| U | 4 | 3 | 3 | 5 |
| Zr | 251 | 299 | 281 | 276 |
| Nb | 13 | 14 | 12 | 10 |
| Y | 40 | 45 | 41 | 40 |
| La | 45 | 47 | 44 | 55 |
| Ce | 95 | 101 | 93 | 113 |
| Nd | 38 | 42 | 36 | 43 |
| Sc | 12 | 19 | 9 | 9 |
| V | 59 | 115 | 33 | 34 |
| Cr | 14 | 30 | 8 | 9 |
| Mn | 0 | 0 | 0 | 0 |
| Co | 0 | 0 | 0 | 0 |
| Ni | 9 | 18 | 6 | 5 |
| Cu | 11 | 35 | 1 | 3 |
| Zn | 59 | 102 | 4 | 10 |
| Sn | 4 | 4 | 4 | 12 |
| W | 0 | 0 | 0 | 0 |
| Mo | 0 | 1 | 0 | 0 |
| Ga | 16 | 18 | 12 | 15 |
| As | 1 | 1 | - | - |
| S | 150 | 180 | 30 | 160 |
| F | 1290 | 1014 | 457 | 346 |
| Ag | -1 | -1 | -1 | -1 |
| Au | | | | |
| Bi | - | 0 | 0 | 0 |
| Ge | 2 | 2 | 1 | 1 |

## Mount Webb Granite

| | | | | |
|---|---|---|---|---|
| Originator | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. |
| Siteid | 96496006A | 96496007 | 96496008 | 96496057 |
| Sample | 96496006A | 96496007 | 96496008 | 96496057 |
| Geolprov. | Arunta Block | Arunta Block | Arunta Block | Arunta Block |
| Subprov. | | | | |
| Domain | | | | |
| 100K Map | WEBB | WEBB | POLLOCK | POLLOCK |
| 250K Map | WEBB | WEBB | WEBB | WEBB |
| Easting | 414219 | 413601 | 381573 | 386094 |
| Northing | 7461834 | 7461670 | 7474469 | 7473706 |
| Latitude | 22.949351 | 22.950801 | 22.833237 | 22.840442 |
| Longitude | 128.163297 | 128.15726 | 127.845878 | 127.889875 |
| Informal | | | | |
| Qualifier | altered | | | |
| Lithname | vein | albitite | granite | granite |
| Rocktype | metasomatite | metasomatite | felsic intrusive | felsic intrusive |
| Lith Desc. | Pink alteration vein | Albitite | Fresh granite | Albitite |
| | | | | |
| SiO2 | 72.37 | 70.20 | 71.25 | 73.93 |
| TiO2 | .50 | .69 | .48 | .55 |
| Al2O3 | 13.73 | 14.05 | 13.55 | 13.65 |
| Fe2O3 tot. | .90 | 1.34 | 3.02 | 1.21 |
| Fe2O3 | .21 | .68 | .94 | .62 |
| FeO | .62 | .59 | 1.87 | .53 |
| MnO | .02 | .01 | .04 | .02 |
| MgO | .74 | 1.26 | .69 | .58 |
| CaO | 5.08 | 5.54 | 1.98 | 4.48 |
| Na2O | 4.23 | 5.10 | 2.85 | 4.78 |
| K2O | .61 | .48 | 5.01 | .27 |
| P2O5 | .10 | .17 | .10 | .12 |
| CO2 | .20 | .10 | .05 | 0.00 |
| H2O+ | .90 | .67 | .62 | 0.00 |
| H2O- | 0.00 | 0.00 | 0.00 | 0.00 |
| LOI | -.02 | 0.00 | .01 | .49 |
| rest | .13 | .11 | .16 | .15 |
| total | 99.42 | 99.65 | 99.60 | 100.17 |
| | | | | |
| Ba | 135 | 216 | 751 | 71 |
| Li | 5 | 3 | 20 | 1 |
| Rb | 44 | 20 | 239 | 6 |
| Sr | 266 | 201 | 96 | 196 |
| Pb | 28 | 11 | 30 | 9 |
| Th | 29 | 22 | 27 | 35 |
| U | 4 | 4 | 4 | 9 |
| Zr | 272 | 242 | 241 | 440 |
| Nb | 11 | 13 | 11 | 21 |
| Y | 37 | 42 | 39 | 87 |
| La | 47 | 37 | 59 | 94 |
| Ce | 97 | 95 | 109 | 167 |
| Nd | 37 | 42 | 44 | 75 |
| Sc | 9 | 13 | 9 | 9 |
| V | 32 | 52 | 30 | 25 |
| Cr | 8 | 14 | 8 | 4 |
| Mn | 0 | 0 | 0 | 0 |
| Co | 0 | 0 | 0 | 0 |
| Ni | 4 | 9 | 5 | 3 |
| Cu | 4 | 3 | 7 | 3 |
| Zn | 50 | 18 | 37 | 7 |
| Sn | 12 | 5 | 4 | 17 |
| W | 0 | 0 | 0 | 0 |
| Mo | 0 | 0 | 0 | 0 |
| Ga | 15 | 16 | 15 | 18 |
| As | 0 | - | 1 | - |
| S | 150 | 130 | 80 | 30 |
| F | 387 | 482 | 1321 | 504 |
| Ag | -1 | -1 | -1 | -1 |
| Au | | | | |
| Bi | 0 | 0 | 0 | - |
| Ge | 1 | 2 | 2 | 2 |

## Mount Webb Granite

| | | | | |
|---|---|---|---|---|
| Originator | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. |
| Siteid | 96496052 | 96496051 | 96496049A | 96496049 |
| Sample | 96496052 | 96496051 | 96496049A | 96496049 |
| Geolprov. | Arunta Block | Arunta Block | Arunta Block | Arunta Block |
| Subprov. | | | | |
| Domain | | | | |
| 100K Map | POLLOCK | POLLOCK | POLLOCK | POLLOCK |
| 250K Map | WEBB | WEBB | WEBB | WEBB |
| Easting | 379992 | 379972 | 347493 | 347493 |
| Northing | 7472581 | 7472511 | 7474378 | 7474378 |
| Latitude | 22.850177 | 22.850808 | 22.831307 | 22.831307 |
| Longitude | 127.830328 | 127.830127 | 127.513822 | 127.513822 |
| Informal | | | | |
| Qualifier | | | weathered | weathered |
| Lithname | granite | aplite | granite | granite |
| Rocktype | felsic intrusive | felsic intrusive | felsic intrusive | felsic intrusive |
| Lith Desc. | Granite | Aplite | Weathered granite | Weathered granite |
| | | | | |
| SiO2 | 73.13 | 76.62 | 75.62 | 78.66 |
| TiO2 | .42 | .13 | .28 | .28 |
| Al2O3 | 12.98 | 12.29 | 14.15 | 12.77 |
| Fe2O3 tot. | 2.75 | 1.17 | .70 | .42 |
| Fe2O3 | 1.03 | .29 | .48 | .15 |
| FeO | 1.55 | .79 | .20 | .24 |
| MnO | .04 | .03 | 0.00 | 0.00 |
| MgO | .58 | .16 | .08 | .15 |
| CaO | 1.59 | .69 | .03 | .03 |
| Na2O | 2.57 | 2.95 | .09 | .05 |
| K2O | 5.22 | 5.42 | 4.88 | 3.26 |
| P2O5 | .09 | .02 | .03 | .02 |
| CO2 | 0.00 | 0.00 | 0.00 | 0.00 |
| H2O+ | 0.00 | 0.00 | 0.00 | 0.00 |
| H2O- | 0.00 | 0.00 | 0.00 | 0.00 |
| LOI | .66 | .57 | 4.18 | 4.35 |
| rest | .13 | .08 | .16 | .11 |
| total | 99.99 | 100.04 | 100.18 | 100.07 |
| | | | | |
| Ba | 528 | 119 | 668 | 415 |
| Li | 23 | 24 | 1 | 1 |
| Rb | 257 | 467 | 212 | 150 |
| Sr | 80 | 20 | 19 | 12 |
| Pb | 24 | 42 | 15 | 11 |
| Th | 19 | 52 | 24 | 26 |
| U | 6 | 13 | 3 | 1 |
| Zr | 242 | 123 | 196 | 193 |
| Nb | 11 | 10 | 6 | 8 |
| Y | 36 | 64 | 20 | 14 |
| La | 41 | 45 | 55 | 32 |
| Ce | 93 | 95 | 103 | 63 |
| Nd | 33 | 39 | 38 | 22 |
| Sc | 8 | 4 | 4 | 6 |
| V | 26 | 3 | 13 | 10 |
| Cr | 7 | -1 | 4 | 4 |
| Mn | 0 | 0 | 0 | 0 |
| Co | 0 | 0 | 0 | 0 |
| Ni | 17 | 1 | 1 | -1 |
| Cu | 7 | 2 | 3 | 5 |
| Zn | 38 | 15 | 6 | 5 |
| Sn | 5 | 5 | 5 | 5 |
| W | 0 | 0 | 0 | 0 |
| Mo | 1 | 0 | 0 | - |
| Ga | 14 | 14 | 14 | 13 |
| As | - | 1 | - | - |
| S | 60 | 30 | 90 | 60 |
| F | 1311 | 1526 | 231 | 209 |
| Ag | -1 | -1 | -1 | -1 |
| Au | | | | |
| Bi | 0 | 0 | 0 | 1 |
| Ge | 1 | 2 | 1 | 1 |

# Mount Webb Granite

| | |
|---|---|
| Group | |
| Originator | Wyborn, L.A.I. |
| Siteid | 96496046 |
| Sample | 96496046 |
| Geolprov. | Arunta Block |
| Subprov. | |
| Domain | |
| 100K Map | POLLOCK |
| 250K Map | WEBB |
| Easting | 370135 |
| Northing | 7469944 |
| Latitude | 22.873258 |
| Longitude | 127.734052 |
| Informal | |
| Qualifier | |
| Lithname | granite |
| Rocktype | felsic intrusive |
| Lith Desc. | Granite |

| | |
|---|---|
| SiO2 | 71.38 |
| TiO2 | .56 |
| Al2O3 | 13.19 |
| Fe2O3 tot. | 3.54 |
| Fe2O3 | 1.46 |
| FeO | 1.87 |
| MnO | .05 |
| MgO | .80 |
| CaO | 2.06 |
| Na2O | 2.74 |
| K2O | 4.79 |
| P2O5 | .12 |
| CO2 | 0.00 |
| H2O+ | 0.00 |
| H2O- | 0.00 |
| LOI | .76 |
| rest | .15 |
| total | 99.93 |
| --- | --- |
| Ba | 677 |
| Li | 16 |
| Rb | 248 |
| Sr | 99 |
| Pb | 24 |
| Th | 28 |
| U | 6 |
| Zr | 281 |
| Nb | 14 |
| Y | 49 |
| La | 57 |
| Ce | 116 |
| Nd | 46 |
| Sc | 10 |
| V | 39 |
| Cr | 10 |
| Mn | 0 |
| Co | 0 |
| Ni | 6 |
| Cu | 8 |
| Zn | 46 |
| Sn | 5 |
| W | 0 |
| Mo | 1 |
| Ga | 15 |
| As | 1 |
| S | 50 |
| F | 1680 |
| Ag | -1 |
| Au | |
| Bi | 0 |
| Ge | 2 |

## Pollock Hills Formation

| | | | | |
|---|---|---|---|---|
| Originator | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. |
| Siteid | 96496023 | 96496023A | 96496023B | 96496024 |
| Sample | 96496023 | 96496023A | 96496023B | 96496024 |
| Geolprov. | Arunta Block | Arunta Block | Arunta Block | Arunta Block |
| Subprov. | | | | |
| Domain | | | | |
| 100K Map | POLLOCK | POLLOCK | POLLOCK | POLLOCK |
| 250K Map | WEBB | WEBB | WEBB | WEBB |
| Easting | 370494 | 370494 | 370494 | 370304 |
| Northing | 7473028 | 7473028 | 7473028 | 7474550 |
| Latitude | 22.845433 | 22.845433 | 22.845433 | 22.831672 |
| Longitude | 127.737808 | 127.737808 | 127.737808 | 127.736084 |
| Informal | | | | |
| Qualifier | | altered | altered | |
| Lithname | rhyodacite | rhyodacite | rhyodacite | rhyodacite |
| Rocktype | felsic extrusive | felsic extrusive | felsic extrusive | felsic extrusive |
| Lith Desc. | Rhyodacite | Intensely epidote al tered rhyolite | Intensely epidote al tered rhyolite | Rhyodacite |
| SiO2 | 68.23 | 67.17 | 63.08 | 68.70 |
| TiO2 | .85 | .81 | .82 | .86 |
| Al2O3 | 13.15 | 12.61 | 12.95 | 13.25 |
| Fe2O3 tot. | 5.38 | 5.87 | 7.74 | 5.35 |
| Fe2O3 | 2.48 | 4.99 | 7.28 | 2.26 |
| FeO | 2.61 | .79 | .41 | 2.78 |
| MnO | .07 | .08 | .08 | .09 |
| MgO | .95 | .43 | .20 | 1.00 |
| CaO | 2.82 | 8.21 | 13.05 | 2.86 |
| Na2O | 2.92 | 1.79 | .21 | 2.78 |
| K2O | 4.38 | 1.36 | .08 | 3.91 |
| P2O5 | .21 | .19 | .20 | .21 |
| CO2 | .06 | .14 | .10 | .04 |
| H2O+ | .95 | 1.05 | 1.33 | .51 |
| H2O- | 0.00 | 0.00 | 0.00 | 0.00 |
| LOI | .24 | .27 | .06 | .40 |
| rest | .18 | .23 | .28 | .18 |
| total | 100.10 | 100.12 | 100.13 | 99.83 |
| Ba | 720 | 182 | 92 | 634 |
| Li | 5 | 3 | 3 | 9 |
| Rb | 191 | 57 | 4 | 203 |
| Sr | 148 | 1085 | 1737 | 141 |
| Pb | 20 | 59 | 7 | 25 |
| Th | 21 | 18 | 16 | 21 |
| U | 5 | 5 | 5 | 5 |
| Zr | 315 | 271 | 258 | 313 |
| Nb | 14 | 12 | 12 | 14 |
| Y | 51 | 45 | 49 | 51 |
| La | 47 | 44 | 50 | 47 |
| Ce | 99 | 97 | 106 | 100 |
| Nd | 43 | 39 | 41 | 42 |
| Sc | 13 | 12 | 13 | 13 |
| V | 36 | 53 | 53 | 39 |
| Cr | 4 | 5 | 6 | 4 |
| Mn | 0 | 0 | 0 | 0 |
| Co | 0 | 0 | 0 | 0 |
| Ni | 4 | 3 | -1 | 3 |
| Cu | 8 | 22 | 3 | 11 |
| Zn | 39 | 18 | 6 | 82 |
| Sn | 4 | 5 | 4 | 4 |
| W | 0 | 0 | 0 | 0 |
| Mo | 1 | 0 | 0 | 1 |
| Ga | 16 | 21 | 28 | 17 |
| As | 0 | 1 | - | 1 |
| S | 40 | 70 | 100 | 110 |
| F | 956 | 524 | 554 | 831 |
| Ag | -1 | -1 | -1 | -1 |
| Au | | | | |
| Bi | 1 | 0 | 0 | 0 |
| Ge | 2 | 3 | 4 | 1 |

## Pollock Hills Formation

| | | | | |
|---|---|---|---|---|
| Originator | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. |
| Siteid | 96496036 | 96496038 | 96496038B | 96496040 |
| Sample | 96496036 | 96496038 | 96496038B | 96496040 |
| Geolprov. | Arunta Block | Arunta Block | Arunta Block | Arunta Block |
| Subprov. | | | | |
| Domain | | | | |
| 100K Map | POLLOCK | POLLOCK | POLLOCK | POLLOCK |
| 250K Map | WEBB | WEBB | WEBB | WEBB |
| Easting | 364641 | 364151 | 364151 | 362051 |
| Northing | 7474907 | 7473790 | 7473790 | 7474737 |
| Latitude | 22.828001 | 22.838049 | 22.838049 | 22.829325 |
| Longitude | 127.680939 | 127.676067 | 127.676067 | 127.65569 |
| Informal | | | | |
| Qualifier | | volcanic | porphyritic | altered |
| Lithname | lava | chert | lava | lava |
| Rocktype | felsic extrusive | felsic extrusive | felsic extrusive | felsic extrusive |
| Lith Desc. | Lava | Chert | Porphyritic lava | Hematite altered lav a at sediment contact |
| SiO2 | 67.84 | 72.61 | 68.65 | 66.33 |
| TiO2 | .89 | .60 | .77 | .95 |
| Al2O3 | 13.18 | 12.49 | 13.11 | 13.97 |
| Fe2O3 tot. | 5.58 | 3.58 | 4.90 | 5.38 |
| Fe2O3 | 2.97 | 1.64 | 2.17 | 3.22 |
| FeO | 2.35 | 1.75 | 2.46 | 1.94 |
| MnO | .05 | .06 | .07 | .02 |
| MgO | .98 | .59 | .83 | 2.62 |
| CaO | 2.53 | 1.20 | 2.42 | .53 |
| Na2O | 2.73 | 2.39 | 2.84 | 2.77 |
| K2O | 5.45 | 5.19 | 4.25 | 4.71 |
| P2O5 | .23 | .12 | .19 | .25 |
| CO2 | 0.00 | 0.00 | 0.00 | 0.00 |
| H2O+ | 0.00 | 0.00 | 0.00 | 0.00 |
| H2O- | 0.00 | 0.00 | 0.00 | 0.00 |
| LOI | .87 | 1.20 | 1.40 | 2.48 |
| rest | .18 | .22 | .19 | .19 |
| total | 100.25 | 100.06 | 99.35 | 99.98 |
| Ba | 903 | 875 | 679 | 872 |
| Li | 8 | 5 | 9 | 28 |
| Rb | 206 | 203 | 197 | 187 |
| Sr | 113 | 124 | 117 | 65 |
| Pb | 25 | 24 | 24 | 9 |
| Th | 20 | 24 | 23 | 22 |
| U | 5 | 6 | 5 | 5 |
| Zr | 307 | 370 | 338 | 337 |
| Nb | 14 | 15 | 15 | 15 |
| Y | 52 | 53 | 53 | 52 |
| La | 47 | 52 | 51 | 55 |
| Ce | 97 | 109 | 106 | 113 |
| Nd | 41 | 46 | 45 | 48 |
| Sc | 15 | 10 | 13 | 15 |
| V | 39 | 11 | 27 | 41 |
| Cr | 3 | 2 | 4 | 5 |
| Mn | 0 | 0 | 0 | 0 |
| Co | 0 | 0 | 0 | 0 |
| Ni | 2 | 2 | 2 | 4 |
| Cu | 1 | 4 | 4 | 1 |
| Zn | 76 | 63 | 68 | 19 |
| Sn | 5 | 5 | 5 | 5 |
| W | 0 | 0 | 0 | 0 |
| Mo | 0 | 0 | 1 | 0 |
| Ga | 16 | 13 | 17 | 16 |
| As | 1 | 1 | 1 | 0 |
| S | 50 | 40 | 50 | 40 |
| F | 1484 | 427 | 804 | 959 |
| Ag | -1 | -1 | -1 | 1 |
| Au | | | | |
| Bi | 0 | 1 | 0 | 3 |
| Ge | 2 | 1 | 2 | 1 |

## Pollock Hills Formation

| | | | | |
|---|---|---|---|---|
| Originator | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. |
| Siteid | 96496039 | 96496045A | 96496045 | 96496043A |
| Sample | 96496039 | 96496045A | 96496045 | 96496043A |
| Geolprov. | Arunta Block | Arunta Block | Arunta Block | Arunta Block |
| Subprov. | | | | |
| Domain | | | | |
| 100K Map | POLLOCK | POLLOCK | POLLOCK | POLLOCK |
| 250K Map | WEBB | WEBB | WEBB | WEBB |
| Easting | 361940 | 369573 | 369573 | 369404 |
| Northing | 7473805 | 7474436 | 7474436 | 7478605 |
| Latitude | 22.837733 | 22.832645 | 22.832645 | 22.79498 |
| Longitude | 127.654525 | 127.728952 | 127.728952 | 127.727655 |
| Informal | | | | |
| Qualifier | altered | altered | | volcanic |
| Lithname | lava | lava | lava | rock |
| Rocktype | felsic extrusive | felsic extrusive | felsic extrusive | felsic extrusive |
| Lith Desc. | Altered Lava | Epidote altered lava | Lava | Micaceous altered volcanic |
| SiO2 | 69.03 | 68.71 | 68.66 | 70.26 |
| TiO2 | .82 | .87 | .89 | .93 |
| Al2O3 | 13.26 | 13.19 | 13.42 | 13.46 |
| Fe2O3 tot. | 5.08 | 5.28 | 5.39 | 4.63 |
| Fe2O3 | 2.48 | 3.17 | 3.03 | 4.13 |
| FeO | 2.34 | 1.90 | 2.12 | .45 |
| MnO | .08 | .09 | .08 | .06 |
| MgO | .79 | .77 | .95 | .77 |
| CaO | 2.59 | 3.27 | 2.98 | .89 |
| Na2O | 2.86 | 3.06 | 2.92 | 2.66 |
| K2O | 4.16 | 3.88 | 3.98 | 4.34 |
| P2O5 | .21 | .22 | .22 | .15 |
| CO2 | 0.00 | 0.00 | 0.00 | 0.00 |
| H2O+ | 0.00 | 0.00 | 0.00 | 0.00 |
| H2O- | 0.00 | 0.00 | 0.00 | 0.00 |
| LOI | 1.32 | .69 | .79 | 1.93 |
| rest | .18 | .18 | .18 | .20 |
| total | 100.12 | 100.00 | 100.22 | 100.23 |
| Ba | 679 | 670 | 657 | 857 |
| Li | 7 | 8 | 12 | 5 |
| Rb | 189 | 174 | 199 | 167 |
| Sr | 118 | 135 | 138 | 103 |
| Pb | 12 | 27 | 26 | 18 |
| Th | 22 | 21 | 21 | 22 |
| U | 5 | 5 | 5 | 6 |
| Zr | 340 | 323 | 324 | 331 |
| Nb | 15 | 14 | 14 | 15 |
| Y | 55 | 53 | 53 | 88 |
| La | 51 | 48 | 49 | 41 |
| Ce | 105 | 102 | 103 | 88 |
| Nd | 45 | 44 | 44 | 41 |
| Sc | 13 | 14 | 14 | 15 |
| V | 27 | 35 | 36 | 29 |
| Cr | 4 | 2 | 3 | 3 |
| Mn | 0 | 0 | 0 | 0 |
| Co | 0 | 0 | 0 | 0 |
| Ni | 2 | 2 | 2 | 11 |
| Cu | 16 | 15 | 9 | 9 |
| Zn | 30 | 73 | 79 | 69 |
| Sn | 5 | 4 | 4 | 5 |
| W | 0 | 0 | 0 | 0 |
| Mo | 1 | 1 | 2 | 1 |
| Ga | 16 | 17 | 17 | 17 |
| As | 2 | 1 | 1 | - |
| S | 70 | 40 | 40 | 60 |
| F | 864 | 818 | 983 | 743 |
| Ag | -1 | -1 | -1 | -1 |
| Au | | | | |
| Bi | 0 | 0 | 0 | 0 |
| Ge | 2 | 2 | 2 | 1 |

## Pollock Hills Formation

| | | | | |
|---|---|---|---|---|
| Originator | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. |
| Siteid | 96496043 | 96496042 | 96496041 | 96496040A |
| Sample | 96496043 | 96496042 | 96496041 | 96496040A |
| Geolprov. | Arunta Block | Arunta Block | Arunta Block | Arunta Block |
| Subprov. | | | | |
| Domain | | | | |
| 100K Map | POLLOCK | POLLOCK | POLLOCK | POLLOCK |
| 250K Map | WEBB | WEBB | WEBB | WEBB |
| Easting | 369404 | 362404 | 362151 | 362051 |
| Northing | 7478605 | 7474876 | 7474494 | 7474737 |
| Latitude | 22.79498 | 22.828099 | 22.831528 | 22.829325 |
| Longitude | 127.727655 | 127.659141 | 127.656642 | 127.65569 |
| Informal | | | | |
| Qualifier | volcanic | altered | lapilli | altered |
| Lithname | rock | lava | tuff | lava |
| Rocktype | felsic extrusive | felsic extrusive | felsic extrusive | felsic extrusive |
| Lith Desc. | Hematite altered vol canic | Epidote altered lava | Lapili tuff | Hematite altered lav a 2m below contact |
| SiO2 | 69.85 | 67.49 | 67.56 | 66.90 |
| TiO2 | .99 | .92 | .91 | .94 |
| Al2O3 | 13.14 | 13.38 | 13.22 | 13.54 |
| Fe2O3 tot. | 3.32 | 5.92 | 5.71 | 6.14 |
| Fe2O3 | 2.79 | 3.16 | 2.71 | 2.87 |
| FeO | .48 | 2.48 | 2.70 | 2.94 |
| MnO | .01 | .09 | .07 | .04 |
| MgO | .19 | 1.03 | .96 | 1.22 |
| CaO | .33 | 2.78 | 2.39 | 1.06 |
| Na2O | .30 | 3.07 | 2.84 | 1.82 |
| K2O | 11.00 | 4.19 | 4.67 | 6.73 |
| P2O5 | .27 | .24 | .25 | .25 |
| CO2 | 0.00 | 0.00 | 0.00 | 0.00 |
| H2O+ | 0.00 | 0.00 | 0.00 | 0.00 |
| H2O- | 0.00 | 0.00 | 0.00 | 0.00 |
| LOI | .71 | 1.08 | 1.52 | 1.61 |
| rest | .17 | .18 | .19 | .25 |
| total | 100.23 | 100.09 | 99.99 | 100.17 |
| Ba | 663 | 654 | 744 | 1258 |
| Li | 4 | 6 | 6 | 6 |
| Rb | 125 | 187 | 211 | 257 |
| Sr | 38 | 149 | 125 | 81 |
| Pb | 15 | 30 | 16 | 6 |
| Th | 19 | 19 | 20 | 21 |
| U | 4 | 5 | 5 | 5 |
| Zr | 307 | 296 | 313 | 322 |
| Nb | 18 | 13 | 14 | 14 |
| Y | 49 | 51 | 53 | 50 |
| La | 52 | 45 | 48 | 49 |
| Ce | 107 | 95 | 101 | 103 |
| Nd | 45 | 42 | 43 | 45 |
| Sc | 11 | 15 | 15 | 15 |
| V | 44 | 51 | 39 | 38 |
| Cr | 5 | 4 | 3 | 4 |
| Mn | 0 | 0 | 0 | 0 |
| Co | 0 | 0 | 0 | 0 |
| Ni | 4 | 4 | 3 | 4 |
| Cu | 10 | 16 | 18 | 6 |
| Zn | 13 | 90 | 45 | 20 |
| Sn | 5 | 4 | 4 | 4 |
| W | 0 | 0 | 0 | 0 |
| Mo | 0 | 1 | 1 | 0 |
| Ga | 10 | 17 | 16 | 16 |
| As | 1 | 1 | 1 | 0 |
| S | 90 | 80 | 60 | 40 |
| F | 329 | 923 | 819 | 554 |
| Ag | -1 | -1 | -1 | -1 |
| Au | | | | |
| Bi | 0 | 0 | 0 | 0 |
| Ge | 1 | 2 | 2 | 2 |

## Pollock Hills Formationion

| | | | |
|---|---|---|---|
| Originator | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. |
| Siteid | 96496038A | 96496037 | 96496033 |
| Sample | 96496038A | 96496037 | 96496033 |
| Geolprov. | Arunta Block | Arunta Block | Arunta Block |
| Subprov. | | | |
| Domain | | | |
| 100K Map | POLLOCK | POLLOCK | WEBB |
| 250K Map | WEBB | WEBB | WEBB |
| Easting | 364151 | 364475 | 408935 |
| Northing | 7473790 | 7474592 | 7465109 |
| Latitude | 22.838049 | 22.830832 | 22.91949 |
| Longitude | 127.676067 | 127.679294 | 128.111955 |
| Informal | | | |
| Qualifier | fine | | |
| Lithname | tuff | lava | rhyolite |
| Rocktype | felsic extrusive | felsic extrusive | felsic extrusive |
| Lith Desc. | Finely crystalline t uff | Lava | Flow banded porphyri tic rhyolite |
| SiO2 | 71.49 | 68.58 | 60.39 |
| TiO2 | .71 | 1.03 | 1.07 |
| Al2O3 | 12.59 | 12.99 | 14.28 |
| Fe2O3 tot. | 4.05 | 5.89 | 10.00 |
| Fe2O3 | 1.78 | 2.81 | 10.00 |
| FeO | 2.04 | 2.77 | 0.00 |
| MnO | .05 | .10 | .01 |
| MgO | .68 | .92 | .05 |
| CaO | 1.57 | 3.15 | .07 |
| Na2O | 2.98 | 3.84 | .17 |
| K2O | 4.45 | 2.00 | 12.70 |
| P2O5 | .13 | .29 | .07 |
| CO2 | 0.00 | 0.00 | 0.00 |
| H2O+ | 0.00 | 0.00 | 0.00 |
| H2O- | 0.00 | 0.00 | 0.00 |
| LOI | 1.46 | 1.24 | 1.14 |
| rest | .21 | .13 | .43 |
| total | 100.14 | 99.85 | 100.38 |
| Ba | 726 | 376 | 1917 |
| Li | 6 | 11 | 1 |
| Rb | 191 | 108 | 616 |
| Sr | 110 | 132 | 32 |
| Pb | 19 | 23 | 16 |
| Th | 23 | 20 | 54 |
| U | 5 | 5 | 16 |
| Zr | 362 | 302 | 528 |
| Nb | 15 | 14 | 25 |
| Y | 55 | 52 | 174 |
| La | 53 | 47 | 29 |
| Ce | 112 | 99 | 58 |
| Nd | 47 | 43 | 33 |
| Sc | 11 | 15 | 17 |
| V | 16 | 28 | 54 |
| Cr | 2 | 2 | 10 |
| Mn | 0 | 0 | 0 |
| Co | 0 | 0 | 0 |
| Ni | 2 | 1 | -1 |
| Cu | -1 | 2 | 5 |
| Zn | 68 | 97 | 2 |
| Sn | 5 | 6 | 15 |
| W | 0 | 0 | 0 |
| Mo | 0 | 1 | 0 |
| Ga | 14 | 18 | 9 |
| As | - | 1 | 0 |
| S | 40 | 30 | 260 |
| F | 411 | 1111 | -200 |
| Ag | -1 | -1 | -1 |
| Au | | | |
| Bi | 1 | 0 | 0 |
| Ge | 1 | 2 | 1 |

## Dolerite Dyke - age unknown

| | |
|---|---|
| Originator | Wyborn, L.A.I. |
| Siteid | 96496039A |
| Sample | 96496039A |
| Geolprov. | Arunta Block |
| Subprov. | |
| Domain | |
| 100K Map | POLLOCK |
| 250K Map | WEBB |
| Easting | 361940 |
| Northing | 7473805 |
| Latitude | 22.837733 |
| Longitude | 127.654525 |
| Informal | Mafic dyke |
| Qualifier | |
| Lithname | dolerite |
| Rocktype | mafic intrusive |
| Lith Desc. | Low susceptibility d olerite |

| | |
|---|---|
| SiO2 | 48.94 |
| TiO2 | .55 |
| Al2O3 | 12.79 |
| Fe2O3 tot. | 9.14 |
| Fe2O3 | 3.15 |
| FeO | 5.39 |
| MnO | .14 |
| MgO | 9.20 |
| CaO | 10.91 |
| Na2O | 1.68 |
| K2O | 1.27 |
| P2O5 | .15 |
| CO2 | 0.00 |
| H2O+ | 0.00 |
| H2O- | 0.00 |
| LOI | 5.56 |
| rest | .24 |
| total | 99.97 |

| | |
|---|---|
| Ba | 581 |
| Li | 15 |
| Rb | 81 |
| Sr | 277 |
| Pb | 13 |
| Th | 2 |
| U | 0 |
| Zr | 40 |
| Nb | 2 |
| Y | 15 |
| La | 9 |
| Ce | 17 |
| Nd | 10 |
| Sc | 49 |
| V | 238 |
| Cr | 581 |
| Mn | 0 |
| Co | 0 |
| Ni | 102 |
| Cu | 64 |
| Zn | 73 |
| Sn | 1 |
| W | 0 |
| Mo | - |
| Ga | 12 |
| As | 1 |
| S | 140 |
| F | 1138 |
| Ag | -1 |
| Au | |
| Bi | 0 |
| Ge | 2 |

## Stuart Pass Dolerite

| | | | |
|---|---|---|---|
| Originator | Wyborn, L.A.I. | Wyborn, L.A.I. | Wyborn, L.A.I. |
| Siteid | 96496009 | 96496022A | 96496024A |
| Sample | 96496009 | 96496022A | 96496024A |
| Geolprov. | Arunta Block | Arunta Block | Arunta Block |
| Subprov. | | | |
| Domain | | | |
| 100K Map | POLLOCK | POLLOCK | POLLOCK |
| 250K Map | WEBB | WEBB | WEBB |
| Easting | 386461 | 371813 | 370304 |
| Northing | 7473940 | 7471854 | 7474550 |
| Latitude | 22.838353 | 22.856137 | 22.831672 |
| Longitude | 127.893468 | 127.750564 | 127.736084 |
| Informal | Mafic dyke | Mafic dyke | Mafic Dyke |
| Qualifier | | | |
| Lithname | dolerite | dolerite | dolerite |
| Rocktype | mafic intrusive | mafic intrusive | mafic intrusive |
| Lith Desc. | Dolerite | Dolerite | Dolerite |
| | | | |
| SiO2 | 47.84 | 47.69 | 48.03 |
| TiO2 | .70 | .71 | .89 |
| Al2O3 | 16.54 | 16.84 | 17.11 |
| Fe2O3 tot. | 9.62 | 9.36 | 10.21 |
| Fe2O3 | 1.46 | 1.73 | 2.38 |
| FeO | 7.34 | 6.87 | 7.05 |
| MnO | .13 | .13 | .14 |
| MgO | 10.45 | 10.00 | 8.47 |
| CaO | 11.86 | 12.39 | 10.99 |
| Na2O | 1.80 | 1.52 | 2.06 |
| K2O | .22 | .31 | .48 |
| P2O5 | .06 | .06 | .08 |
| CO2 | .04 | .10 | .05 |
| H2O+ | 1.35 | 1.37 | 1.39 |
| H2O- | 0.00 | 0.00 | 0.00 |
| LOI | -.14 | .15 | .77 |
| rest | .12 | .10 | .11 |
| total | 99.77 | 99.97 | 100.00 |
| | | | |
| Ba | 33 | 16 | 50 |
| Li | 4 | 9 | 9 |
| Rb | 10 | 12 | 25 |
| Sr | 123 | 115 | 179 |
| Pb | 1 | 1 | 1 |
| Th | 1 | 0 | 1 |
| U | 0 | - | 0 |
| Zr | 43 | 35 | 60 |
| Nb | 1 | 1 | 2 |
| Y | 17 | 16 | 20 |
| La | 3 | 2 | 3 |
| Ce | 7 | 5 | 9 |
| Nd | 5 | 4 | 7 |
| Sc | 35 | 34 | 33 |
| V | 210 | 208 | 221 |
| Cr | 338 | 290 | 202 |
| Mn | 0 | 0 | 0 |
| Co | 0 | 0 | 0 |
| Ni | 238 | 229 | 167 |
| Cu | 120 | 95 | 108 |
| Zn | 60 | 59 | 64 |
| Sn | 1 | 0 | 1 |
| W | 0 | 0 | 0 |
| Mo | 0 | 0 | 0 |
| Ga | 13 | 13 | 15 |
| As | - | - | - |
| S | 800 | 810 | 850 |
| F | 902 | 974 | 795 |
| Ag | -1 | -1 | -1 |
| Au | | | |
| Bi | - | - | - |
| Ge | 1 | 1 | 1 |

## Heavitree Quartzite

| | |
|---|---|
| Originator | Wyborn, L.A.I. |
| Siteid | 96496034 |
| Sample | 96496034 |
| Geolprov. | Arunta Block |
| Subprov. | |
| Domain | |
| 100K Map | WEBB |
| 250K Map | WEBB |
| Easting | 408435 |
| Northing | 7465052 |
| Latitude | 22.919978 |
| Longitude | 128.107076 |
| Informal | |
| Qualifier | |
| Lithname | sandstone |
| Rocktype | clastic sediment |
| Lith Desc. | Sandstone |

| | |
|---|---|
| SiO2 | 98.69 |
| TiO2 | .02 |
| Al2O3 | .58 |
| Fe2O3 tot. | .08 |
| Fe2O3 | .08 |
| FeO | 0.00 |
| MnO | 0.00 |
| MgO | .02 |
| CaO | .02 |
| Na2O | 0.00 |
| K2O | .10 |
| P2O5 | .01 |
| CO2 | 0.00 |
| H2O+ | 0.00 |
| H2O- | 0.00 |
| LOI | .28 |
| rest | .04 |
| total | 99.84 |

| | |
|---|---|
| Ba | 189 |
| Li | 2 |
| Rb | 6 |
| Sr | 19 |
| Pb | 5 |
| Th | 2 |
| U | 0 |
| Zr | 46 |
| Nb | - |
| Y | 3 |
| La | 9 |
| Ce | 20 |
| Nd | 7 |
| Sc | -1 |
| V | 3 |
| Cr | 5 |
| Mn | 0 |
| Co | 0 |
| Ni | 1 |
| Cu | 2 |
| Zn | -1 |
| Sn | 0 |
| W | 0 |
| Mo | - |
| Ga | 1 |
| As | - |
| S | 160 |
| F | -200 |
| Ag | -1 |
| Au | |
| Bi | - |
| Ge | 1 |

**Appendix 3. Site descriptions.**

```
SITE ID: 96496000       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452        AMGEAST: 346431     AMGNORTH: 7473464
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496000      ROCK TYPE: felsic intrusive
LITHNAME:  quartz feldspar porphyry
DESC: Quartz feldspar porphyry
GROUPING: Normal
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Alteration       chloritic
Colour           maroon            purple
Grain Size       medium
Igneous Texture  porphyritic
Magnetic sus. (S mean              2000 x 10-5 Si units
Sampled for      whole-rock chemi
Sample type      outcrop sample
Weathering       fresh
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496001       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552        AMGEAST: 432077     AMGNORTH: 7459251
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496001      ROCK TYPE: felsic intrusive
LITHNAME:   tourmaline granite
DESC: foliated tourmaline sericite granite
GROUPING: Sericite
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Colour           white
Grain Size       medium
Igneous Texture  equigranular
Magnetic sus. (S maximum           2 x 10-5 SI units
Mineral          sericite          minor veins
Mineral          tourmaline        needle-like aggregates
Sampled for      whole-rock chemi
Sample type      outcrop sample
Tectonic Feature foliated
Weathering       moderately weath
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
TYPE       STYPE      AZ    INCL    DEFNO   DEFS
Foliation  Foliation  315


SITE ID: 96496002       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552        AMGEAST: 432748     AMGNORTH: 7460609
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT:
SMPLID: 96496002      ROCK TYPE: mafic extrusive
LITHNAME:   sheared basalt
DESC: Sheared basalt
GROUPING: Host
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Colour           black
Grain Size       fine
Magnetic sus. (S maximum           200 x 10 -5 SI units
Metamorphic Text recrystallised
Sampled for      thin section
Sample type      outcrop sample
Weathering       moderately weath
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
TYPE       STYPE      AZ    INCL    DEFNO   DEFS
Foliation  Foliation  305
```

```
SITE ID: 96496003A      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552        AMGEAST: 432726     AMGNORTH: 7462367
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT:
SMPLID: 96496003A     ROCK TYPE: clastic sediment
LITHNAME:  biotite muscovite schist
DESC: Sheared mafic and altered volcanic
GROUPING: Host
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Alteration       chloritic
Colour           green
Grain Size       fine
Magnetic sus. (S maximum           800 x 10-5 SI units
Magnetic sus. (S minimum           200 x 10-5 SI units
Sampled for      thin section
Tectonic Feature sheared
Weathering       moderately weath
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
TYPE       STYPE      AZ    INCL    DEFNO   DEFS
Foliation  Foliation  263


SITE ID: 96496003B      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552        AMGEAST: 432726     AMGNORTH: 7462367
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT:
SMPLID: 96496003B     ROCK TYPE: mafic extrusive
LITHNAME:   lithic agglomerate
DESC: Lithic agglomerate
GROUPING: Host
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Colour           green
Magnetic sus. (S maximum           800 x 10-5 SI units
Sampled for      thin section
Sorting          poorly sorted
Tectonic Feature sheared
Weathering       moderately weath
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496004       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552        AMGEAST: 432885     AMGNORTH: 7461930
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT:
SMPLID: 96496004      ROCK TYPE: mafic extrusive
LITHNAME:   amygdaloidal basalt
DESC: Amygdaloidal basalt
GROUPING: Host
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Colour           black
Grain Size       fine
Igneous Texture  amygdaloidal      quartz filled vesicles
Magnetic sus. (S maximum           5000 x 10-5 SI units
Sampled for      thin section
Weathering       slightly weather
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
TYPE       STYPE      AZ    INCL    DEFNO   DEFS
Foliation  Foliation  246
```

```
SITE ID: 96496005       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552        AMGEAST: 414352     AMGNORTH: 7461632
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496005      ROCK TYPE: metasomatite
LITHNAME:   foliated albitite
DESC: Foliated albitite
GROUPING: Sodic-calcic
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Alteration        albitic
Alteration        epidotised
Colour            white
Grain Size        coarse
Magnetic sus. (S maximum            15 x 10-5 SI units
Sampled for       whole-rock chemi
Tectonic Feature foliated
Weathering        slightly weather
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
TYPE        STYPE      AZ    INCL    DEFNO   DEFS
Foliation   Foliation  120
Vein        Vein quart 120


SITE ID: 96496006       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552        AMGEAST: 414219     AMGNORTH: 7461834
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496006      ROCK TYPE: metasomatite
LITHNAME:   foliated albitite
DESC: Foliated albitite
GROUPING: Sodic-calcic
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Alteration        albitic
Alteration        epidotised
Colour            white
Grain Size        medium
Magnetic sus. (S maximum            15 x 10-5 SI
Sampled for       whole-rock chemi
Tectonic Feature foliated
Tectonic Feature vein
Weathering        slightly weather
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
TYPE        STYPE      AZ    INCL    DEFNO   DEFS
Foliation   Foliation  120


SITE ID: 96496006A      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552        AMGEAST: 414219     AMGNORTH: 7461834
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496006A     ROCK TYPE: metasomatite
LITHNAME:  feldspar altered vein
DESC: Pink alteration vein
GROUPING: Vein
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Alteration        potassic          weak alteration overprinte
Colour            pink
Colour            pink
Grain Size        medium
Igneous Texture   equigranular
Magnetic sus. (S maximum            15 x 10-5 SI units
Sampled for       whole-rock chemi
Weathering        slightly weather
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

SITE ID: 96496007 ORIGNO: 50 DATE: STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552 AMGEAST: 413601 AMGNORTH: 7461670
LOC METHOD: GPS observation (AGD66 ABS ACC: 100

STRAT UNIT: 13203 Mount Webb Granite
SMPLID: 96496007 ROCK TYPE: metasomatite
LITHNAME: albitite
DESC: Albitite
GROUPING: Sodic-calcic

| DATA TYPE | SUB TYPE | DESCRIPTION |
|---|---|---|
| Alteration | albitic | |
| Colour | grey | |
| Igneous Texture | equigranular | |
| Magnetic sus. (S | maximum | 20 x 10-5 Si units |
| Remarks | general | contains clasts and veins of epidote rich material |
| Sampled for | whole-rock chemi | |
| Tectonic Feature | foliated | weak foliation developed |
| Weathering | moderately weath | |

| TYPE | STYPE | AZ | INCL | DEFNO | DEFS |
|---|---|---|---|---|---|
| Foliation | Foliation | 130 | | | |

SITE ID: 96496007A ORIGNO: 50 DATE: STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552 AMGEAST: 413601 AMGNORTH: 7461670
LOC METHOD: GPS observation (AGD66 ABS ACC: 100

STRAT UNIT: 13203 Mount Webb Granite
SMPLID: 96496007A ROCK TYPE: felsic intrusive
LITHNAME:
DESC: Epidote inclusion
GROUPING: Sodic-calcic

| DATA TYPE | SUB TYPE | DESCRIPTION |
|---|---|---|
| Alteration | epidotised | |
| Colour | green | |
| Grain Size | fine | |
| Igneous occurren | xenolith | |
| Sampled for | thin section | |
| Weathering | moderately weath | |

SITE ID: 96496007B ORIGNO: 50 DATE: STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552 AMGEAST: 413601 AMGNORTH: 7461670
LOC METHOD: GPS observation (AGD66 ABS ACC: 100

STRAT UNIT: 13203 Mount Webb Granite
SMPLID: 96496007B ROCK TYPE: metasomatite
LITHNAME:
DESC: Epidote vein
GROUPING: Sodic-calcic

| DATA TYPE | SUB TYPE | DESCRIPTION |
|---|---|---|
| Colour | black | |
| Grain Size | fine | |
| Igneous occurren | vein | narrow, 3 cm wide |
| Sampled for | thin section | |
| Weathering | moderately weath | |

```
SITE ID: 96496008       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 381573     AMGNORTH: 7474469
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496008      ROCK TYPE: felsic intrusive
LITHNAME:    granite
DESC: Fresh granite
GROUPING: Normal
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            grey
Grain Size        coarse
Igneous Texture   equigranular
Magnetic sus. (S  maximum           600 x 10-5 SI units
Magnetic sus. (S  minimum           400 x 10-5 SI units
Mineral           allanite
Sampled for       whole-rock chemi
Weathering        fresh
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
TYPE       STYPE      AZ    INCL    DEFNO   DEFS
Foliation  Foliation  120


SITE ID: 96496008A      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 381573     AMGNORTH: 7474469
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496008A     ROCK TYPE: unknown
LITHNAME:  mafic intrusive rock
DESC: Mafic xenolith
GROUPING: Normal
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            black
Grain Size        fine
Igneous occurren  xenolith
Sampled for       thin section
Weathering        fresh
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496009       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 386461     AMGNORTH: 7473940
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 22910     Stuart Pass Dolerite
SMPLID: 96496009      ROCK TYPE: mafic intrusive
LITHNAME:    dolerite
DESC: Dolerite
GROUPING: Dolerite
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            black
Grain Size        coarse
Magnetic sus. (S  maximum           2000 x 10-5 SI units
Sampled for       whole-rock chemi
Weathering        fresh
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496009A      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 386461     AMGNORTH: 7473940
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT:
SMPLID: 96496009A     ROCK TYPE: unknown
LITHNAME:    vein
DESC: Vein in dolerite
GROUPING: Dolerite
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Sampled for       thin section
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
SITE ID: 96496010       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4551          AMGEAST: 436887     AMGNORTH: 7455930
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496010      ROCK TYPE: felsic intrusive
LITHNAME:   foliated granite
DESC: Foliated granite
GROUPING: Normal
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            white
Grain Size        coarse
Igneous Texture   equigranular
Magnetic sus. (S  maximum           200 x 10-5 SI units
Magnetic sus. (S  minimum           100 x 10-5 SI units
Sampled for       thin section
Tectonic Feature  foliated
Weathering        moderately weath
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
TYPE        STYPE       AZ    INCL    DEFNO   DEFS
Foliation   Foliation   276


SITE ID: 96496011       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552          AMGEAST: 431071     AMGNORTH: 7459449
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496011      ROCK TYPE: felsic intrusive
LITHNAME:  micaceous altered granite
DESC: Micaceous altered granite
GROUPING: Sericite
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Alteration        sericitic
Colour            pink
Magnetic sus. (S  maximum           40 x 10-5 SI units
Magnetic sus. (S  minimum           20 x 10-5 Si units
Mineral           fluorite
Mineral           selenium
Sampled for       whole-rock chemi
Vein              aplite
Weathering        moderately weath
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
TYPE        STYPE       AZ    INCL    DEFNO   DEFS
Foliation   Foliation   65


SITE ID: 96496011A      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552          AMGEAST: 431071     AMGNORTH: 7459449
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496011A     ROCK TYPE: felsic intrusive
LITHNAME:    vein
DESC: Aplite vein with fluorite
GROUPING: Sericite
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            pink
Igneous Texture   equigranular
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496011B      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552          AMGEAST: 431071     AMGNORTH: 7459449
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496011B     ROCK TYPE: felsic intrusive
LITHNAME:
DESC: Quartz tourmaline inclusion
GROUPING: Sericite
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
SITE ID: 96496012       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552          AMGEAST: 435421     AMGNORTH: 7456370
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203      Mount Webb Granite
SMPLID: 96496012       ROCK TYPE: felsic intrusive
LITHNAME:  foliated biotite granite
DESC: Foliated biotite granite
GROUPING: Normal
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            white
Grain Size        coarse
Igneous Texture   equigranular
Magnetic sus. (S  maximum           400 x 10-5 SI units
Magnetic sus. (S  minimum           200 x 10-5 SI units
Sampled for       thin section
Tectonic Feature  foliated
Weathering        highly weathered
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496014       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552          AMGEAST: 433160     AMGNORTH: 7458362
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203      Mount Webb Granite
SMPLID: 96496014       ROCK TYPE: felsic intrusive
LITHNAME:  micaceous altered granite
DESC: Micaceous altered granite
GROUPING: Sericite
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            pink
Grain Size        coarse
Magnetic sus. (S  maximum           30 x 10-5 SI units
Magnetic sus. (S  minimum           10 x 10-5 Si units
Sampled for       whole-rock chemi
Tectonic Feature  foliated
Weathering        moderately weath
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496014A      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552          AMGEAST: 433160     AMGNORTH: 7458362
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203      Mount Webb Granite
SMPLID: 96496014A      ROCK TYPE: metasomatite
LITHNAME:   quartz vein
DESC: Sulphide-bearing quartz vein
GROUPING: Vein
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            varicoloured
Grain Size        fine
Weathering        moderately weath
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496016       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552          AMGEAST: 432211     AMGNORTH: 7458780
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203      Mount Webb Granite
SMPLID: 96496016       ROCK TYPE: metasomatite
LITHNAME:   quartz vein
DESC: Sulphide-bearing quartz vein
GROUPING: Vein
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            grey
Grain Size        fine
Mineral           pyrite
Sampled for       whole-rock chemi
Weathering        moderately weath
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
TYPE        STYPE       AZ    INCL    DEFNO   DEFS
Foliation   Foliation   130
```

SITE ID: 96496017 ORIGNO: 50 DATE: STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552 AMGEAST: 434703 AMGNORTH: 7458523
LOC METHOD: GPS observation (AGD66 ABS ACC: 100

STRAT UNIT: 13203 Mount Webb Granite
SMPLID: 96496017 ROCK TYPE: metasomatite
LITHNAME: quartz vein
DESC: Sulphide-bearing black quartz vein
GROUPING: Vein

| DATA TYPE | SUB TYPE | DESCRIPTION |
|---|---|---|
| Colour | black | |
| Colour | black | |
| Grain Size | fine | |
| Magnetic sus. (S | maximum | 30 x 10-5 SI units |
| Magnetic sus. (S | minimum | 10 x 10-5 SI units |
| Sampled for | whole-rock chemi | |
| Weathering | slightly weather | |

SITE ID: 96496017A ORIGNO: 50 DATE: STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552 AMGEAST: 434703 AMGNORTH: 7458523
LOC METHOD: GPS observation (AGD66 ABS ACC: 100

STRAT UNIT: 13203 Mount Webb Granite
SMPLID: 96496017A ROCK TYPE: metasomatite
LITHNAME: quartz vein
DESC: Sulphide-bearing feldspar vein
GROUPING: Vein

| DATA TYPE | SUB TYPE | DESCRIPTION |
|---|---|---|

SITE ID: 96496017B ORIGNO: 50 DATE: STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552 AMGEAST: 434703 AMGNORTH: 7458523
LOC METHOD: GPS observation (AGD66 ABS ACC: 100

STRAT UNIT: 13203 Mount Webb Granite
SMPLID: 96496017B ROCK TYPE: metasomatite
LITHNAME: quartz vein
DESC: Sulphide-bearing white quartz vein
GROUPING: Vein

| DATA TYPE | SUB TYPE | DESCRIPTION |
|---|---|---|
| Colour | white | |
| Magnetic sus. (S | maximum | 250 x10-5 SI units |
| Sampled for | thin section | |

SITE ID: 96496018 ORIGNO: 50 DATE: STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552 AMGEAST: 435195 AMGNORTH: 7459122
LOC METHOD: GPS observation (AGD66 ABS ACC: 100

STRAT UNIT: 13203 Mount Webb Granite
SMPLID: 96496018 ROCK TYPE: metasomatite
LITHNAME: foliated vein
DESC: Foliated vein
GROUPING: Vein

| DATA TYPE | SUB TYPE | DESCRIPTION |
|---|---|---|
| Colour | black | |
| Grain Size | medium | |
| Magnetic sus. (S | maximum | 250 |
| Sampled for | thin section | |
| Tectonic Feature | foliated | |
| Weathering | moderately weath | |

```
SITE ID: 96496019       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4551          AMGEAST: 438260     AMGNORTH: 7455200
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496019      ROCK TYPE: felsic intrusive
LITHNAME:  coarse foliated granite
DESC: Coarse foliated granite
GROUPING: Normal
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            grey
Magnetic sus. (S  maximum           200 x 10-5 SI units
Sampled for       thin section
Tectonic Feature  foliated          weak
Weathering        moderately weath
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496020       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4551          AMGEAST: 429437     AMGNORTH: 7456178
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496020      ROCK TYPE: felsic intrusive
LITHNAME:   altered granite
DESC: Altered granite with sulphides
GROUPING: Sericite
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            red
Grain Size        coarse
Igneous Texture   equigranular
Magnetic sus. (S  maximum           400 x 10-5 SI units
Magnetic sus. (S  minimum           35 x 10-5 SI units
Mineral           pyrite
Remarks           general           site is a magnetic high
Sampled for       whole-rock chemi
Tectonic Feature  foliated
Weathering        slightly weather
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
TYPE       STYPE      AZ    INCL    DEFNO   DEFS
Foliation  Foliation  100
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496020C     ROCK TYPE: felsic intrusive

LITHNAME:   altered granite
DESC: Altered granite with sulphides
GROUPING: Sericite
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Alteration        sericitic
Colour            red
Grain Size        coarse
Magnetic sus. (S  maximum           10 x 10-5 SI units
Magnetic sus. (S  minimum           5 x 10-5 SI units
Mineral           sericite
Sampled for       whole-rock chemi
Weathering        moderately weath
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
TYPE       STYPE      AZ    INCL    DEFNO   DEFS


SITE ID: 96496020A      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4551          AMGEAST: 429437     AMGNORTH: 7456178
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496020A     ROCK TYPE: felsic intrusive
LITHNAME:   granitic breccia
DESC: granitic breccia
GROUPING: Sericite
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            black
Grain Size        fine
Magnetic sus. (S  maximum           20 x 10-5 SI units
Magnetic sus. (S  minimum           10 x 10-5 SI units
Sampled for       whole-rock chemi
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
SITE ID: 96496020B      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4551        AMGEAST: 429437     AMGNORTH: 7456178
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496020B     ROCK TYPE: felsic intrusive
LITHNAME:   altered granite
DESC: Altered granite
GROUPING: Sericite
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Alteration       sericitic
Grain Size       coarse
Magnetic sus. (S maximum           10 x 10-5 SI units
Magnetic sus. (S minimum           5 x 10-5 SI units
Mineral          malachite
Sampled for      whole-rock chemi
Weathering       moderately weath
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496020C      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4551        AMGEAST: 429437     AMGNORTH: 7456178
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496021       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552        AMGEAST: 413929     AMGNORTH: 7462446
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496021      ROCK TYPE: felsic intrusive
LITHNAME:  altered foliated granite
DESC: Altered and foliated granite
GROUPING: Sodic-calcic
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Colour           grey
Igneous Texture  equigranular
Magnetic sus. (S maximum           20 x 10-5 SI units
Magnetic sus. (S minimum           10 x 10-5 SI units
Sampled for      whole-rock chemi
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
TYPE       STYPE      AZ    INCL    DEFNO   DEFS
Foliation  Foliation  135


SITE ID: 96496022       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452        AMGEAST: 371813     AMGNORTH: 7471854
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496022      ROCK TYPE: felsic intrusive
LITHNAME:   porphyritic granite
DESC: Pink porphyritic granite
GROUPING: Normal
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Colour           pink
Colour           pink
Grain Size       coarse
Igneous Texture  porphyritic
Magnetic sus. (S maximum           500 x 10-5 SI units
Magnetic sus. (S minimum           200 x 10-5 SI units
Sampled for      whole-rock chemi
Weathering       fresh
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
TYPE       STYPE      AZ    INCL    DEFNO   DEFS
Foliation  Foliation  110
```

```
SITE ID: 96496022A      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 371813     AMGNORTH: 7471854
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 22910       Stuart Pass Dolerite
SMPLID: 96496022A       ROCK TYPE: mafic intrusive
LITHNAME:    dolerite
DESC: Dolerite
GROUPING: Dolerite
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            black
Grain Size        medium
Igneous Texture   equigranular
Magnetic sus. (S  maximum           2000 x 10-5 SI units
Magnetic sus. (S  minimum           1000 x 10-5 SI units
Sampled for       whole-rock chemi
Weathering        fresh
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496022B      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 371813     AMGNORTH: 7471854
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203       Mount Webb Granite
SMPLID: 96496022B       ROCK TYPE: felsic intrusive
LITHNAME:    altered porphyry
DESC: Altered porphyry
GROUPING: Normal
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            buff
Grain Size        coarse
Igneous Texture   porphyritic
Magnetic sus. (S  maximum           500 x 10-5 SI units
Magnetic sus. (S  minimum           10 x 105 SI units
Remarks           general           susceptibility is highly
                                    variable
Sampled for       whole-rock chemi
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496022BX     ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 371813     AMGNORTH: 7471854
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203       Mount Webb Granite
SMPLID: 96496022BX      ROCK TYPE: felsic intrusive
LITHNAME:
DESC: Inclusion in porphyry
GROUPING: Normal
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            green
Grain Size        fine
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496023       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 370494     AMGNORTH: 7473028
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 15411       Pollock Hills Formation
SMPLID: 96496023        ROCK TYPE: felsic extrusive
LITHNAME:    rhyodacite
DESC: Rhyodacite
GROUPING: Normal
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Alteration        epidotised
Alteration        hematitic
Colour            black             mi
Grain Size        fine
Magnetic sus. (S  maximum           4000 x 10-5 SI units
Magnetic sus. (S  minimum           2000 x 10-5 SI units
Mineral           epidote
Sampled for       whole-rock chemi
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
TYPE        STYPE       AZ    INCL    DEFNO   DEFS
Foliation   Foliation   90
```

```
SITE ID: 96496023A      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452        AMGEAST: 370494     AMGNORTH: 7473028
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 15411     Pollock Hills Formation
SMPLID: 96496023A     ROCK TYPE: felsic extrusive
LITHNAME: weathered epidote altered rhyodacite
DESC: Intensely epidote altered rhyolite
GROUPING: Epidote
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            green
Grain Size        fine
Magnetic sus. (S  maximum           60 x 10-5 SI units
Magnetic sus. (S  minimum           20 x 10-5 SI units
Remarks           general           Sample comes from a distinct
                                    airborne magnetic low
Sampled for       whole-rock chemi
Weathering        highly weathered
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496023B      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452        AMGEAST: 370494     AMGNORTH: 7473028
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 15411     Pollock Hills Formation
SMPLID: 96496023B     ROCK TYPE: felsic extrusive
LITHNAME:  epidote altered rhyodacite
DESC: Intensely epidote altered rhyolite
GROUPING: Epidote
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            green
Grain Size        fine
Magnetic sus. (S  maximum           60 x 10-5 SI units
Magnetic sus. (S  minimum           20 x 10-5 Si units
Sampled for       whole-rock chemi
Weathering        moderately weath
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496023C      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452        AMGEAST: 370494     AMGNORTH: 7473028
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 15411     Pollock Hills Formation
SMPLID: 96496023C     ROCK TYPE: felsic extrusive
LITHNAME: epidote altered volcanic rock
DESC: Epidote altered volcanic
GROUPING: Epidote
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Grain Size        fine
Magnetic sus. (S  maximum           60 x 10-5 SI units
Magnetic sus. (S  minimum           20 x 10-5 SI units
Sampled for       whole-rock chemi
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496024       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452        AMGEAST: 370304     AMGNORTH: 7474550
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 15411     Pollock Hills Formation
SMPLID: 96496024      ROCK TYPE: felsic extrusive
LITHNAME:    rhyodacite
DESC: Rhyodacite
GROUPING: Normal
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            black
Grain Size        fine
Igneous Texture   porphyritic       white phenocrysts
Magnetic sus. (S  maximum           5000 x 10-5 SI units
Magnetic sus. (S  minimum           3000 x 10-5 SI units
Sampled for       whole-rock chemi
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
TYPE       STYPE      AZ    INCL    DEFNO    DEFS
Foliation  Foliation  90
```

```
SITE ID: 96496024A      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 370304     AMGNORTH: 7474550
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 22910     Stuart Pass Dolerite
SMPLID: 96496024A     ROCK TYPE: mafic intrusive
LITHNAME:    dolerite
DESC: Dolerite
GROUPING: Dolerite
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            black
Grain Size        medium
Igneous Texture   equigranular
Magnetic sus. (S  maximum           3000 x 10-5 SI units
Magnetic sus. (S  minimum           2000 x 10-5 SI units
Sampled for       whole-rock chemi
Weathering        fresh
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496025       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4551          AMGEAST: 429835     AMGNORTH: 7456054
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496025      ROCK TYPE: metasomatite
LITHNAME:  weathered quartz vein
DESC: Quartz vein
GROUPING: Vein
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            black
Grain Size        fine
Magnetic sus. (S  maximum           10 x 10-5 SI units
Magnetic sus. (S  minimum           5 x 10-5 SI units
Sampled for       whole-rock chemi
Weathering        moderately weath
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496025A      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4551          AMGEAST: 429835     AMGNORTH: 7456054
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496025A     ROCK TYPE: metasomatite
LITHNAME: weathered dark hematite dolerite
DESC: Dark hematite-rich dolerite
GROUPING: Dolerite
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            black
Grain Size        fine
Magnetic sus. (S  maximum           2000 x 10-5 SI units
Magnetic sus. (S  minimum           100 x 10-5 SI units
Sampled for       whole-rock chemi
Sample type       sidewall sample
Weathering        moderately weath
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
SITE ID: 96496026       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552          AMGEAST: 429510     AMGNORTH: 7458870
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496026      ROCK TYPE: metasomatite
LITHNAME:   sericitic granite
DESC: Sericitised granite
GROUPING: Sericite
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Alteration        sericitic
Grain Size        coarse
Magnetic sus. (S maximum            200 x 10-5 SI units
Magnetic sus. (S minimum            20 x 10-5 SI units
Mineral           tourmaline
Remarks           general           comtains large sericite
                                    inclusions and tourmaline
Sampled for       thin section
Weathering        moderately weath
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
TYPE       STYPE      AZ    INCL    DEFNO   DEFS
Foliation  Foliation  104


SITE ID: 96496026A      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552          AMGEAST: 429510     AMGNORTH: 7458870
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496026A     ROCK TYPE: metasomatite
LITHNAME:
DESC: Tourmaline nodule
GROUPING: Sericite
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496027       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552          AMGEAST: 411882     AMGNORTH: 7462432
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496027      ROCK TYPE: metasomatite
LITHNAME:   quartz vein
DESC: Saw tooth quartz vein
GROUPING: Vein
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            white
Grain Size        fine
Magnetic sus. (S maximum            10 x 10-5 SI units
Magnetic sus. (S minimum            5 x 10-5 SI units
Sampled for       thin section
Weathering        moderately weath
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496028       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552          AMGEAST: 412150     AMGNORTH: 7461897
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496028      ROCK TYPE: intermediate intrusive
LITHNAME:    diorite
DESC: Diorite
GROUPING: Normal
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            black
Grain Size        medium
Igneous Texture   equigranular
Magnetic sus. (S maximum            5000 x 10-5 SI units
Magnetic sus. (S minimum            4000 x 10-5 SI units
Sampled for       whole-rock chemi
Weathering        slightly weather
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
TYPE       STYPE      AZ    INCL    DEFNO   DEFS
Foliation  Foliation  120
```

```
SITE ID: 96496028A      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552        AMGEAST: 412150     AMGNORTH: 7461897
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496028A     ROCK TYPE: felsic intrusive
LITHNAME:    tonalite
DESC: Tonalite
GROUPING: Normal
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Colour           grey
Grain Size       medium
Magnetic sus. (S maximum           2000 x 10-5 SI units
Magnetic sus. (S minimum           1500 x 10-5 SI units
Sampled for      whole-rock chemi
Weathering       fresh
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496028B      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552        AMGEAST: 412150     AMGNORTH: 7461897
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496028B     ROCK TYPE: felsic intrusive
LITHNAME:
DESC: Xenolith within tonalite
GROUPING: Normal
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Colour           black
Grain Size       fine
Sampled for      thin section
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496029       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552        AMGEAST: 412067     AMGNORTH: 7463213
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496029      ROCK TYPE: metasomatite
LITHNAME:    albitite
DESC: White albitite
GROUPING:
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Colour           white             bluish white
Colour           white
Grain Size       medium
Igneous Texture  equigranular
Magnetic sus. (S maximum           20 x 10-5 SI units
Magnetic sus. (S minimum           10 x 10-5 SI units
Sampled for      whole-rock chemi
Weathering       slightly weather  some
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
TYPE       STYPE      AZ    INCL    DEFNO   DEFS
Foliation  Foliation  135


SITE ID: 96496029A      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552        AMGEAST: 412067     AMGNORTH: 7463213
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496029A     ROCK TYPE: metasomatite
LITHNAME:    albitite
DESC: More mafic albitite
GROUPING: Sodic-calcic
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Alteration       albitic
Colour           green
Grain Size       medium
Magnetic sus. (S maximum           20 x 10-5 SI units
Magnetic sus. (S minimum           10 x 10-5 SI units
Sampled for      thin section
Weathering       highly weathered
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
SITE ID: 96496030       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552          AMGEAST: 411650     AMGNORTH: 7463632
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496030      ROCK TYPE: metasomatite
LITHNAME:    albitite
DESC: Albitite
GROUPING: Sodic-calcic
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Alteration        albitic
Colour            white
Grain Size        medium
Magnetic sus. (S maximum            20 x 10-5 SI units
Magnetic sus. (S minimum            10 x 10-5 SI units
Sampled for       whole-rock chemi
Weathering        fresh
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496030A      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552          AMGEAST: 411650     AMGNORTH: 7463632
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496030A     ROCK TYPE: metasomatite
LITHNAME:    albitite
DESC: Grey albitite
GROUPING: Sodic-calcic
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            grey
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496031       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552          AMGEAST: 411437     AMGNORTH: 7463448
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496031      ROCK TYPE: metasomatite
LITHNAME:    albitite
DESC: Albitite with epidote
GROUPING: Sodic-calcic
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Alteration        albitic
Colour            grey
Grain Size        medium
Igneous Texture   equigranular
Magnetic sus. (S maximum            20 x 10-5 SI units
Magnetic sus. (S minimum            10 x 10-5 SI units
Mineral           epidote
Sampled for       whole-rock chemi
Weathering        fresh
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
TYPE       STYPE      AZ    INCL    DEFNO   DEFS
Foliation  Foliation  150   45


SITE ID: 96496032       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552          AMGEAST: 411399     AMGNORTH: 7463629
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496032      ROCK TYPE: metasomatite
LITHNAME:    albitite
DESC: Albitite with sericite (?)
GROUPING: Sodic-calcic
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            grey
Igneous Texture   equigranular
Magnetic sus. (S maximum            20 x 10-5 SI units
Magnetic sus. (S minimum            10 x 10-5 SI units
Mineral           sericite
Sampled for       whole-rock chemi
Tectonic Feature  foliated
Weathering        moderately weath
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
SITE ID: 96496033       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552          AMGEAST: 408935     AMGNORTH: 7465109
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 15411       Pollock Hills Formation
SMPLID: 96496033        ROCK TYPE: felsic extrusive
LITHNAME:    rhyolite
DESC: Flow banded porphyritic rhyolite
GROUPING: Hematite-potassic
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            purple
Grain Size        coarse
Igneous Texture   flow banded
Igneous Texture   porphyritic
Magnetic sus. (S  maximum           60
Magnetic sus. (S  minimum           20
Remarks           general           Flow banded
Remarks           general           Red feldspar phenocrysts
Sampled for       whole-rock chemi
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
TYPE       STYPE      AZ    INCL    DEFNO   DEFS
Foliation  Foliation  124
```

```
SITE ID: 96496034       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4552          AMGEAST: 408435     AMGNORTH: 7465052
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 8225        Heavitree Quartzite
SMPLID: 96496034        ROCK TYPE: clastic sediment
LITHNAME:    sandstone
DESC: Sandstone
GROUPING:
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Bedding Thicknes  medium (100-300
Coherence         indurated
Colour            white
Colour            white
Grain Size        fine
Grain Size        sand (0.062-2 mm
Magnetic sus. (S  maximum           20 x 10-5 SI units
Magnetic sus. (S  minimum           10 x 10-5 SI units
Sampled for       whole-rock chemi
Weathering        slightly weather
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
SITE ID: 96496035       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 366445     AMGNORTH: 7475918
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203       Mount Webb Granite
SMPLID: 96496035        ROCK TYPE: felsic intrusive
LITHNAME:    granodiorite
DESC: Granodiorite
GROUPING: Normal
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            grey
Grain Size        medium
Igneous Texture   equigranular
Magnetic sus. (S  maximum           400 x 10-5 SI units
Magnetic sus. (S  minimum           200 x 10-5 SI units
Remarks           general           No xenoliths, no foliation
Sampled for       whole-rock chemi
Weathering        fresh
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

SITE ID: 96496035A ORIGNO: 50 DATE: STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452 AMGEAST: 366445 AMGNORTH: 7475918
LOC METHOD: GPS observation (AGD66 ABS ACC: 100

STRAT UNIT: 13203 Mount Webb Granite
SMPLID: 96496035A ROCK TYPE: felsic intrusive
LITHNAME: hornblende rich vein
DESC: Hornblende-rich vein
GROUPING: Normal

| DATA TYPE | SUB TYPE | DESCRIPTION |
|---|---|---|
| Mineral | hornblende | |
| Sampled for | thin section | |

SITE ID: 96496036 ORIGNO: 50 DATE: STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452 AMGEAST: 364641 AMGNORTH: 7474907
LOC METHOD: GPS observation (AGD66 ABS ACC: 100

STRAT UNIT: 15411 Pollock Hills Formation
SMPLID: 96496036 ROCK TYPE: felsic extrusive
LITHNAME: lava
DESC: Lava
GROUPING: Normal

| DATA TYPE | SUB TYPE | DESCRIPTION |
|---|---|---|
| Colour | black | |
| Grain Size | fine | |
| Magnetic sus. (S | maximum | 4000 x 10-5 SI units |
| Magnetic sus. (S | minimum | 2000 x 10-5 SI units |
| Sampled for | whole-rock chemi | |
| Weathering | fresh | |

SITE ID: 96496037 ORIGNO: 50 DATE: STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452 AMGEAST: 364475 AMGNORTH: 7474592
LOC METHOD: GPS observation (AGD66 ABS ACC: 100

STRAT UNIT: 15411 Pollock Hills Formation
SMPLID: 96496037 ROCK TYPE: felsic extrusive
LITHNAME: lava
DESC: Lava
GROUPING: Normal

| DATA TYPE | SUB TYPE | DESCRIPTION |
|---|---|---|
| Colour | black | |
| Magnetic sus. (S | maximum | 2000 x 10-5 SI units |
| Sampled for | whole-rock chemi | |
| Weathering | fresh | |

SITE ID: 96496038 ORIGNO: 50 DATE: STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452 AMGEAST: 364151 AMGNORTH: 7473790
LOC METHOD: GPS observation (AGD66 ABS ACC: 100

STRAT UNIT: 15411 Pollock Hills Formation
SMPLID: 96496038 ROCK TYPE: felsic extrusive
LITHNAME: volcanic chert
DESC: Chert
GROUPING: Normal

| DATA TYPE | SUB TYPE | DESCRIPTION |
|---|---|---|
| Colour | black | |
| Grain Size | fine | Very fine grained aphyric |
| Magnetic sus. (S | maximum | 80 x 10-5 SI units |
| Magnetic sus. (S | minimum | 60 x 10-5 SI units |
| Sampled for | whole-rock chemi | |
| Weathering | moderately weath | Weathering along joint surfaces |

```
SITE ID: 96496038A      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452        AMGEAST: 364151     AMGNORTH: 7473790
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 15411     Pollock Hills Formation
SMPLID: 96496038A     ROCK TYPE: felsic extrusive
LITHNAME:   fine tuff
DESC: Finely crystalline tuff
GROUPING: Normal
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Colour           black
Grain Size       fine
Magnetic sus. (S maximum           200 x 10-5 SI units
Magnetic sus. (S minimum           100 x 10-5 SI units
Sampled for      whole-rock chemi
Weathering       slightly weather
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496038B      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452        AMGEAST: 364151     AMGNORTH: 7473790
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 15411     Pollock Hills Formation
SMPLID: 96496038B     ROCK TYPE: felsic extrusive
LITHNAME:   porphyritic lava
DESC: Porphyritic lava
GROUPING: Normal
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Colour           black
Grain Size       fine
Igneous Texture  porphyritic
Magnetic sus. (S maximum           800 x 10-5 SI units
Magnetic sus. (S minimum           600 x 10-5 SI units
Sampled for      whole-rock chemi
Weathering       fresh
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496039       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452        AMGEAST: 361940     AMGNORTH: 7473805
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 15411     Pollock Hills Formation
SMPLID: 96496039      ROCK TYPE: felsic extrusive
LITHNAME:   altered lava
DESC: Altered Lava
GROUPING: Normal
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Colour           purple
Magnetic sus. (S maximum           2000 x 10-5 SI units
Magnetic sus. (S minimum           1500 x 10-5 SI units
Sampled for      whole-rock chemi
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496039A      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452        AMGEAST: 361940     AMGNORTH: 7473805
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT:
SMPLID: 96496039A     ROCK TYPE: mafic intrusive
LITHNAME:    dolerite
DESC: Low susceptibility dolerite
GROUPING: Dolerite
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Colour           green
Igneous Texture  equigranular
Magnetic sus. (S maximum           50 x 10-5 SI units
Sampled for      whole-rock chemi
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
SITE ID: 96496039V      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 361940     AMGNORTH: 7473805
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 15411     Pollock Hills Formation
SMPLID: 96496039V     ROCK TYPE: metasomatite
LITHNAME:   epidote vein
DESC: Epidote vein cross cutting pink alteration
GROUPING: Epidote
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496040       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 362051     AMGNORTH: 7474737
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 15411     Pollock Hills Formation
SMPLID: 96496040      ROCK TYPE: felsic extrusive
LITHNAME:  hematite altered lava
DESC: Hematite altered lava at sediment contact
GROUPING: Hematite-potassic
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Alteration       hematitic
Colour           black             Phenocryst red
Igneous Texture  porphyritic
Magnetic sus. (S maximum           20 x 10-5 SI units
Magnetic sus. (S minimum           10 x 10-5 SI units
Sampled for      whole-rock chemi
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496040A      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 362051     AMGNORTH: 7474737
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 15411     Pollock Hills Formation
SMPLID: 96496040A     ROCK TYPE: felsic extrusive
LITHNAME:  hematite altered lava
DESC: Hematite altered lava 2m below contact
GROUPING: Hematite-potassic
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Alteration       hematitic
Grain Size       fine
Igneous Texture  porphyritic
Magnetic sus. (S maximum           2000 x 10-5 SI units
Magnetic sus. (S minimum           1000 x 10-5 SI units
Remarks          general           Feldspar phenos laminated
Sampled for      whole-rock chemi
Weathering       moderately weath
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496041       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 362151     AMGNORTH: 7474494
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 15411     Pollock Hills Formation
SMPLID: 96496041      ROCK TYPE: felsic extrusive
LITHNAME:   lapilli tuff
DESC: Lapili tuff
GROUPING: Normal
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Colour           black
Igneous Texture  porphyritic
Magnetic sus. (S maximum           2000 x 10-5 SI units
Remarks          general           white plag phenocrysts
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
SITE ID: 96496042       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452        AMGEAST: 362404     AMGNORTH: 7474876
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 15411     Pollock Hills Formation
SMPLID: 96496042      ROCK TYPE: felsic extrusive
LITHNAME:  epidote altered lava
DESC: Epidote altered lava
GROUPING: Epidote
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Alteration       epidotised        Some epidote clots
Alteration       epidotised
Grain Size       fine
Igneous Texture  porphyritic
Magnetic sus. (S maximum           2000 x 10-5 SI units
Remarks          general           White feld phenocryst
Sampled for      whole-rock chemi
Weathering       fresh
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496043       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452        AMGEAST: 369404     AMGNORTH: 7478605
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 15411     Pollock Hills Formation
SMPLID: 96496043      ROCK TYPE: felsic extrusive
LITHNAME: hematite altered volcanic rock
DESC: Hematite altered volcanic
GROUPING: Hematite-potassic
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Colour           red
Grain Size       fine
Magnetic sus. (S maximum           20 x 10-5 SI units
Sampled for      whole-rock chemi
Weathering       highly weathered
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496043A      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452        AMGEAST: 369404     AMGNORTH: 7478605
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 15411     Pollock Hills Formation
SMPLID: 96496043A     ROCK TYPE: felsic extrusive
LITHNAME: micaceous altered volcanic rock
DESC: Micaceous altered volcanic
GROUPING: Sericite
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Colour           grey
Grain Size       fine
Magnetic sus. (S maximum           20 x 10-5 SI units
Magnetic sus. (S minimum           10 x 10-5 SI units
Sampled for      whole-rock chemi
Tectonic Feature foliated          Highly sheared trend 190
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496043B      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452        AMGEAST: 369404     AMGNORTH: 7478605
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496043B     ROCK TYPE: felsic extrusive
LITHNAME:  micaceous altered granite
DESC: Micaceous altered granite
GROUPING: Sericite
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Alteration       sericitic
Grain Size       medium
Magnetic sus. (S maximum           10 x 10-5 SI units
Magnetic sus. (S minimum           5 x 10-5 SI units
Sampled for      thin section
Tectonic Feature foliated
Weathering       moderately weath
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
SITE ID: 96496044       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 369935     AMGNORTH: 7474503
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 15411     Pollock Hills Formation
SMPLID: 96496044      ROCK TYPE: felsic extrusive
LITHNAME: epidote altered volcanic rock
DESC: Epidote altered volcanic
GROUPING: Epidote
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Alteration        epidotised        Very strong
Alteration        epidotised
Colour            grey
Magnetic sus. (S  maximum           200 x 10-5 SI units
Magnetic sus. (S  minimum           40 x 10-5 SI units
Sampled for       whole-rock chemi
Tectonic Feature  foliated
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
TYPE        STYPE       AZ    INCL    DEFNO   DEFS
Foliation   Foliation   100
```

```
SITE ID: 96496045       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 369573     AMGNORTH: 7474436
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 15411     Pollock Hills Formation
SMPLID: 96496045      ROCK TYPE: felsic extrusive
LITHNAME:    lava
DESC: Lava
GROUPING: Normal
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Grain Size        fine
Igneous Texture   porphyritic
Magnetic sus. (S  maximum           3000 x 10-5 SI units
Remarks           general           White phenocryst
Sampled for       whole-rock chemi
Weathering        slightly weather
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
SITE ID: 96496045A      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 369573     AMGNORTH: 7474436
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 15411     Pollock Hills Formation
SMPLID: 96496045A     ROCK TYPE: felsic extrusive
LITHNAME:  epidote altered lava
DESC: Epidote altered lava
GROUPING: Epidote
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Magnetic sus. (S  maximum           65 x 10-5 SI units
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
SITE ID: 96496046       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 370135     AMGNORTH: 7469944
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496046      ROCK TYPE: felsic intrusive
LITHNAME:    granite
DESC: Granite
GROUPING: Normal
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Grain Size        coarse
Igneous Texture   equigranular
Magnetic sus. (S  maximum           600 x 10-5 SI units
Magnetic sus. (S  minimum           400 x 10-5 SI units
Mineral           feldspar          Brown
Mineral           quartz            Blue
Sampled for       whole-rock chemi
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
SITE ID: 96496046A      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452        AMGEAST: 370135     AMGNORTH: 7469944
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496046A     ROCK TYPE: felsic intrusive
LITHNAME:    granite
DESC: Rapakivi textured granite
GROUPING: Normal
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Sampled for      thin section
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496047       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452        AMGEAST: 374660     AMGNORTH: 7471683
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496047      ROCK TYPE: felsic intrusive
LITHNAME:    granite
DESC: Granite
GROUPING: Normal
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Grain Size       coarse
Igneous Texture  equigranular
Magnetic sus. (S maximum           600 x 10-5 SI units
Magnetic sus. (S minimum           400 x 10-5 SI units
Sampled for      thin section
Weathering       moderately weath
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
TYPE       STYPE      AZ    INCL    DEFNO   DEFS
Foliation  Foliation  120


SITE ID: 96496048       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452        AMGEAST: 346293     AMGNORTH: 7473952
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496048      ROCK TYPE: felsic intrusive
LITHNAME:   weathered granite
DESC: Weathered granite
GROUPING: Sericite
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Colour           white
Magnetic sus. (S maximum           20 x 10-5 SI units
Magnetic sus. (S minimum           10 x 10-5 SI units
Remarks          general           Strongly altered
Sampled for      thin section
Weathering       highly weathered
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496049       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452        AMGEAST: 347493     AMGNORTH: 7474378
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496049      ROCK TYPE: felsic intrusive
LITHNAME:   weathered granite
DESC: Weathered granite
GROUPING: Sericite
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Colour           white
Magnetic sus. (S maximum           0 x 10-5 SI units
Magnetic sus. (S minimum           0 x 10-5 SI units
Sampled for      whole-rock chemi
Weathering       highly weathered
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
SITE ID: 96496049A      ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 347493     AMGNORTH: 7474378
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203       Mount Webb Granite
SMPLID: 96496049A       ROCK TYPE: felsic intrusive
LITHNAME:   weathered granite
DESC: Weathered granite
GROUPING: Sericite
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            pink
Magnetic sus. (S  maximum           10 x 10-5 SI units
Magnetic sus. (S  minimum           5 x 10-5 SI units
Sampled for       whole-rock chemi
Weathering        highly weathered
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496050       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 377529     AMGNORTH: 7471222
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203       Mount Webb Granite
SMPLID: 96496050        ROCK TYPE: felsic intrusive
LITHNAME:    porphyry
DESC: Recrystallised porphyry
GROUPING: Normal
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Magnetic sus. (S  maximum           15 x 10-5 SI units
Remarks           general           Recrystallized
Sampled for       thin section
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
TYPE       STYPE      AZ    INCL    DEFNO  DEFS
Foliation  Foliation  105


SITE ID: 96496051       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 379972     AMGNORTH: 7472511
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203       Mount Webb Granite
SMPLID: 96496051        ROCK TYPE: felsic intrusive
LITHNAME:    aplite
DESC: Aplite
GROUPING: Aplite
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Grain Size        fine
Magnetic sus. (S  maximum           5 x 10-5 SI units
Magnetic sus. (S  minimum           0 x 10-5 SI units
Sampled for       whole-rock chemi
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
TYPE       STYPE      AZ    INCL    DEFNO  DEFS
Foliation  Foliation  105   80


SITE ID: 96496052       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 379992     AMGNORTH: 7472581
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203       Mount Webb Granite
SMPLID: 96496052        ROCK TYPE: felsic intrusive
LITHNAME:    granite
DESC: Granite
GROUPING: Normal
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Grain Size        coarse
Igneous Texture   equigranular
Magnetic sus. (S  maximum           300 x 10-5 SI units
Magnetic sus. (S  minimum           200 x 10-5 SI units
Sampled for       whole-rock chemi
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
SITE ID: 96496053       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 381646     AMGNORTH: 7473041
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496053      ROCK TYPE: felsic intrusive
LITHNAME:    aplite
DESC: Aplite
GROUPING: Aplite
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Colour            grey
Grain Size        fine
Igneous Texture   equigranular
Magnetic sus. (S maximum            10 x 10-5 SI units
Sampled for       thin section
Weathering        moderately weath
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496054       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 382833     AMGNORTH: 7473360
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496054      ROCK TYPE: felsic intrusive
LITHNAME:    granite
DESC: Granite
GROUPING: Normal
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Magnetic sus. (S maximum            300 x 10-5 SI units
Magnetic sus. (S minimum            200 x 10-5 SI units
Sampled for       thin section
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496055       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 382888     AMGNORTH: 7473355
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496055      ROCK TYPE: felsic intrusive
LITHNAME:    granite
DESC: Granite
GROUPING: Normal
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Grain Size        coarse
Igneous Texture   equigranular
Magnetic sus. (S maximum            300 x 10-5 SI units
Mineral           feldspar          White
Sampled for       thin section
Tectonic Feature foliated
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496056       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 383959     AMGNORTH: 7472789
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496056      ROCK TYPE: felsic intrusive
LITHNAME:    granite
DESC: Granite
GROUPING: Normal
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Grain Size        medium
Magnetic sus. (S maximum            10 x 10-5 SI units
Sampled for       thin section
Tectonic Feature foliated
Weathering        moderately weath
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
TYPE       STYPE      AZ    INCL    DEFNO   DEFS
Foliation  Foliation  100
```

```
SITE ID: 96496057       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 386094     AMGNORTH: 7473706
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496057      ROCK TYPE: felsic intrusive
LITHNAME:    granite
DESC: Albitite
GROUPING: Sodic-calcic
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Alteration        albitic
Colour            grey
Magnetic sus. (S  maximum           10 x 10-5 SI units
Magnetic sus. (S  minimum           5 x 10-5 SI units
Sampled for       whole-rock chemi
Tectonic Feature  foliated
Weathering        moderately weath
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496058       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 387742     AMGNORTH: 7473164
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496058      ROCK TYPE: felsic intrusive
LITHNAME:    granite
DESC: Granite
GROUPING: Normal
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Grain Size        medium
Magnetic sus. (S  maximum           400 x 10-5 SI units
Remarks           general           Rounded boulders
Tectonic Feature  foliated
Tectonic Feature  foliated
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496059       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 388534     AMGNORTH: 7472891
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496059      ROCK TYPE: felsic intrusive
LITHNAME:    granite
DESC: Granite
GROUPING: Normal
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Grain Size        medium
Igneous Texture   equigranular
Magnetic sus. (S  maximum           400 x 10-5 SI units
Magnetic sus. (S  minimum           300 x 10-5 SI units
Remarks           general           Weak fol 095/80SW
Sampled for       thin section
Tectonic Feature  foliated
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496060       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452          AMGEAST: 390728     AMGNORTH: 7471129
LOC METHOD: GPS observation (AGD66          ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496060      ROCK TYPE: felsic intrusive
LITHNAME:    granite
DESC: Granite
GROUPING: Normal
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE         SUB TYPE          DESCRIPTION
Grain Size        coarse
Igneous Texture   equigranular
Magnetic sus. (S  maximum           400 x 10 SI units
Sampled for       thin section
Tectonic Feature  foliated          95/SW
Weathering        moderately weath
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
SITE ID: 96496061       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452        AMGEAST: 389119     AMGNORTH: 7470434
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496061      ROCK TYPE: felsic intrusive
LITHNAME:    granite
DESC: Granite
GROUPING: Normal
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Grain Size       coarse
Magnetic sus. (S maximum           300 x 10-5 SI units
Sampled for      thin section
Tectonic Feature foliated
Weathering       moderately weath
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SITE ID: 96496062       ORIGNO: 50  DATE:            STATE: WA
LOC DESC:
REGION: Arunta Block
100K MAP: 4452        AMGEAST: 387986     AMGNORTH: 7470566
LOC METHOD: GPS observation (AGD66         ABS ACC: 100
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
STRAT UNIT: 13203     Mount Webb Granite
SMPLID: 96496062      ROCK TYPE: felsic intrusive
LITHNAME:    granite
DESC: Granite
GROUPING: Normal
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA TYPE        SUB TYPE          DESCRIPTION
Grain Size       coarse
Igneous Texture  equigranular
Magnetic sus. (S maximum           200 x 10-5 SI units
Tectonic Feature foliated
Weathering       moderately weath
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

360000mE

380000mE

400000mE

7490000mN

7450000mN

E80/2039

E80/2040

E80/2041

E80/2042

Grid

Aurora Gold Lease

Alter.shp

- Epidote
- Hematite-potassic
- Normal
- Sericite
- Sodic-calcic

Geology

- Aeolian and evaporitic sediment
- Aeolian and evaporitic sediment
- Alluvial
- Alluvial and aeolian sediment
- Alluvial and lacustrine sediment
- Angas Hills beds
- Bitter Springs Formation
- Buck Formation
- Calcrete
- Evaporitic sediment
- Ferricrete
- Heavitree Quartzite
- Mount Webb Granite
- Permian sandstone, siltstone
- Pollock Hills Formation
- Qz-fspar porphyry, Imetasediment
- Silcrete
- Undivided Proterozoic sediments
- Undivided Arunta Complex
- Undivided Mesozoic
- Vein quartz rubble

# Mount Webb Region Regional Geology and Alteration Distribution

Prepared for Aurora Gold Ltd
By Lesley Wyborn and Murray Hazell
December 1996

N

AGSO

AUSTRALIAN GEOLOGICAL SURVEY ORGANISATION

10 0 Kilometers

Plate 1

360000mE

380000mE

400000mE

7490000mN

7450000mN

E80/2039

E80/2040

E80/2041

E80/2042

Grid

Aurora Gold Lease

Msus.txt

0
2
5
10
15
20
30
40
50
60
65
80
200
250
300
400
500
600
800
2000
3000
4000
5000

Geology

Aeolian and evaporitic sediment
Aeolian and evaporitic sediment
Alluvial
Alluvial and aeolian sediment
Alluvial and lacustrine sediment
Angas Hills beds
Bitter Springs Formation
Buck Formation
Calcrete
Evaporitic sediment
Ferricrete
Heavitree Quartzite
Mount Webb Granite
Permian sandstone, siltstone
Pollock Hills Formation
Qz-fspar porphyry, Imetasediments
Silcrete
Undivided Proterozoic sediments
Undivided Arunta Complex
Undivided Mesozoic
Vein quartz rubble

# Mount Webb Region Regional Geology and Magnetic Susceptibility Measurements

Prepared for Aurora Gold Ltd
By Lesley Wyborn and Murray Hazell
December 1996

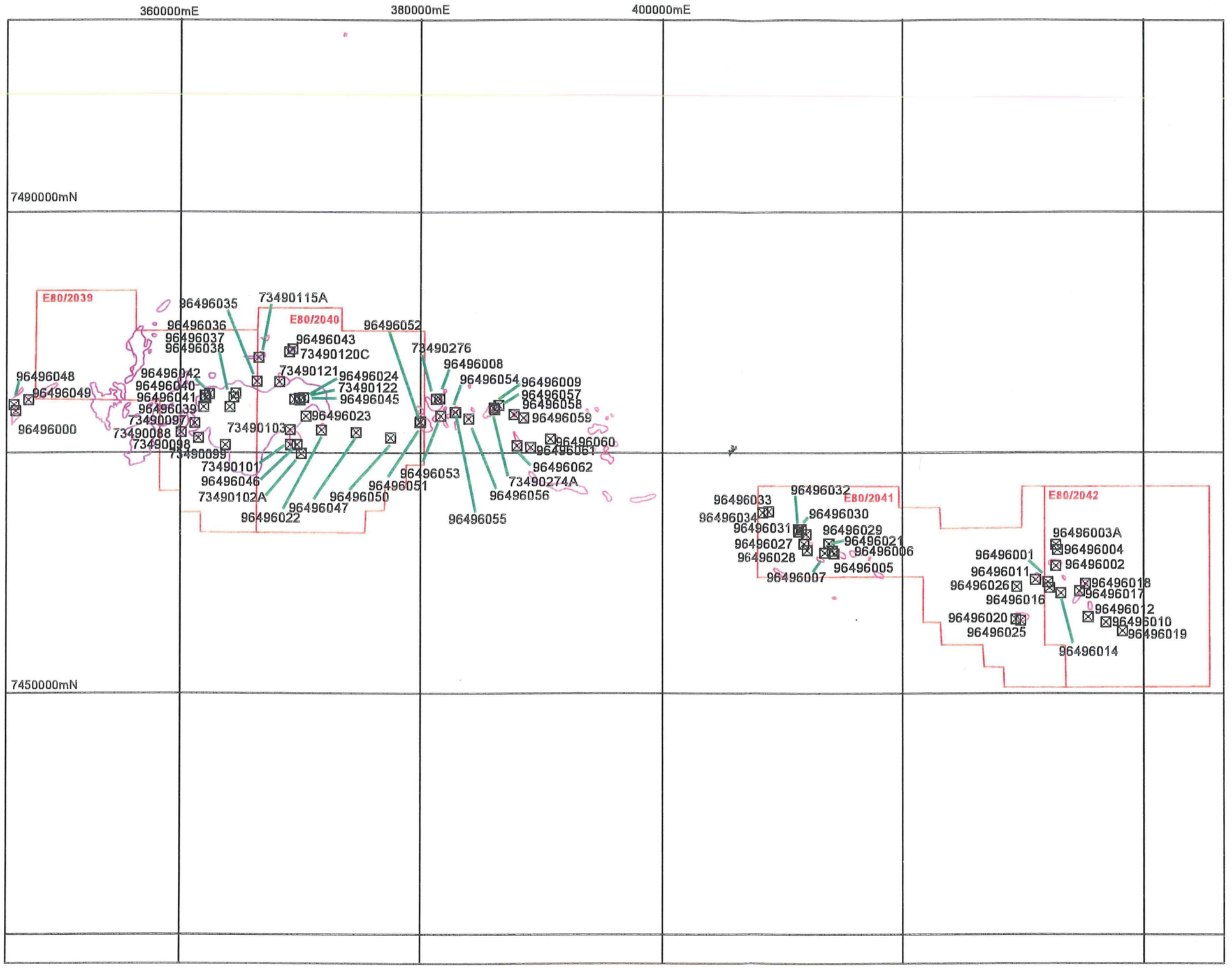
N

AGSO

AUSTRALIAN GEOLOGICAL SURVEY ORGANISATION

10 0 Kilometers

Plate 2




AGSO Field Sites

Igneous Rocks

- Mount Webb Granite
- Pollock Hills Formation
- Grid
- Aurora Gold Lease

# Mount Webb Region
# AGSO Field Site Locations

Prepared for Aurora Gold Ltd
By Lesley Wyborn and Murray Hazell
December 1996

N

AGSO
AUSTRALIAN GEOLOGICAL SURVEY ORGANISATION

10 0 Kilometers

Plate 3