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1.0 SUMMARY

E.L. 3/92 "Thirkell Hill" covers an inlier of highly prospective Mt Read Volcanics in Tasmania's south-west.

Work by Anglo Australian Resources N.L. last season resulted in the definition of two areas with consistently anomalous gold in streams, as determined by panned concentrate sampling, with the subsequent gridding of these two areas defining a number of coherent gold in A-horizon soil anomalies.

Work this season focussed on the two anomalies on the Southern Porphyry Contact grid.

On the southern anomaly that work consisted of geological mapping, the taking of 33 C-horizon 'wacker' samples and the drilling of six diamond drill holes for 292.50 metres using a man portable diamond drill rig. On the northern anomaly geological mapping and the collection of an additional 24 A-horizon soil samples was the work conducted.

The fence of diamond drill holes intersected a zone of fine pyritic veinlets and disseminations hosted within felsic tuffaceous sediments or tuffs and a chloritic quartz-feldspar-biotite porphyry on either side of their contact. The pyrite veinlets and disseminations are possibly related to a fault within the porphyry. Gold values are moderately elevated in the more chloritic zones with disseminated pyrite, though the best assay results, 0.2m @ 82 ppb Au, is from a narrow (5 mm) pyrite-chalcopyrite-chlorite veinlet. *Barely anomalous!*

The extra soil sampling on the northern anomaly has both extended and better defined it. Mapping, though largely inconclusive due to the paucity of outcrop, indicates the same or similar host rocks to the southern anomaly though no evidence of mineralisation style was obtained.

Petrology on samples from the Viking 11 and D'Aguilar South prospects indicates hydrothermal alteration at both prospects with samples from the latter prospect's 'chert' body showing intense silica-sericite alteration.

The work over the past two years has been a technical success in that it successfully used an innovative soil sampling / assaying method, the HUMINEX technique developed by Dr Bill Baker of the Tasmanian 'Mines Department' to follow-up anomalous gold in streams revealed in panned concentrate sampling. The drilling of one of the coherent gold in soil anomalies defined by the gridded A-horizon soil sampling appears to have explained the original source of the gold in the streams.

Further such gold in A-horizon soils anomalies remain untested with the northern anomaly on the Southern Porphyry Contact grid and the anomaly coincident with the silica-sericite alteration zone at D'Aguilar South the priorities.

Apart from this the "Thirkell Hill" licence still has considerable potential for a gold and / or base metal deposit which could be found using more conventional methods.

In particular work should focus on the following:

- enhance and re-interpret available DIGHEM II helicopter borne EM / magnetics (1980 survey) or re-fly if necessary
- complete regional panned concentrate gold stream sampling program
- integrate and infill the soil (and stream) geochemical coverage in the Viking 10-22 area and carry out a dipole - dipole IP survey over the prospective rocks (including Waterloo Creek Group rocks)
- carry out soil sampling over Waterloo Creek Group rocks to the north and south of the Viking 10 - 22 area with IP surveying if warranted
- carry out reconnaissance type work at D'Aguilar North (Viking 19 - 5 area), Viking 15, Viking 23 and Mt Lee (Viking 1 - 2) using stream sampling, soil sampling, geological mapping and geophysical surveys where warranted.

2.0 INTRODUCTION

2.1 Location

Exploration Licence 3/92 "Thirkell Hill" is located in Tasmania's south-west, lying to the south of the Gordon River and to the south-east of Birch's Inlet (see Figure 1).

2.2 Tenure

The Exploration Licence was granted to Mac Mining NL (now Macmin N.L.) on 1/10/92 and joint ventured to Anglo Australian Resources NL on 25th September, 1992. Anglo Australian Resources NL is operator/manager of the licence and is currently earning 80%.

2.3 Land Status

The area covered by EL 3/92 is part of the South West Conservation Area. This status implies a need for greater sensitivity with regards to the environment when planning and carrying out exploration activities. The inlier of prospective Mt Read Volcanics covered by EL 3/92 was deliberately excluded from the surrounding World Heritage Area in which minerals exploration is prohibited.

2.4 Topography / Vegetation

In general the volcanics occupy a broad topographic low bounded to the west by a range underlain by Ordovician siliclastics, and to the east by hills underlain by Precambrian metasediments. The D'Aguilar South prospect lies north of a saddle between the two bounding ranges.

Most of the volcanics are covered by button grass heath or teatree / bauera. The former is open and easy to navigate across, the latter is very dense and makes navigation very difficult.

Most of the bedrock is covered by a veneer of peat and quartz lag.

5 cm



AMG 362100E
5329350N

416300E
5268180N

AMG REFERENCE POINTS ADDED

ANGLO AUSTRALIAN RESOURCES N.L.
TASMANIA - EL. 3/92

E. L. LOCATION

SCALE 1:250 000

0 200 400 600 800 1000
metres

Compiled: G. M.	Date: AUGUST 1994	Dwg. No.:
Drawn:	Map Ref:	PLATE:

767009

2.5 Access

The only vehicular access to EL 3/92 is by the bombardier track which branches off the Low Rocky Point track. An attempt was made last summer to use this track, however, 4WD and 6WD motorbikes were unable to pull trailers containing the equipment over the last two kilometres. The last two kilometres are quite steep and washed out but could be negotiated by unladen bikes with some care.

The alternative access used in this years program, was via helicopter from Strathgordon or the Darwin damsite.

Access within EL 3/92 is limited to a single bombardier track which runs down the centre of the licence from the base of the saddle in the north to the Hales River in the south.

Parts of this track cross wet ground which becomes very boggy with repeated use. In a number of instances cording was insufficient to allow passage and detours were required.

3.0 GEOLOGY

Very limited regional geological mapping has been undertaken by Anglo Australian Resources N.L. The "Mines Department" mapping was considered sufficient and has been used as the basis for the geology shown in figure 2. Prospect scale mapping was conducted over the two gold soil anomalous areas on the Southern Porphyry Contact Grid and is shown in figure 1.

The Mt Read Volcanics which outcrop over much of the licence area lie on the eastern limb of a north striking, shallowly north plunging, syncline with Ordovician siliciclastics lying in the core of the fold. The western limb of the fold has been downfaulted in the formation of a Tertiary graben. Further south at "Elliott Bay" part of this western limb remains unfaulted and in position and contains the high grade massive sulphide lenses / rafts at Wart Hill. The eastern limb to what is named the Mt Osmond Syncline at "Elliott Bay" contains an almost identical stratigraphy to that at "Thirkell Hill".

The exact stratigraphic position of the massive sulphide lenses / rafts at Wart Hill has been the subject of much conjecture, however, the latest interpretation, based on extensive drilling and trenching, indicates that this horizon or source horizon lies close to the contact with the overlying Waterloo Creek Group. The felsic volcanoclastics and pyritic shales and siltstones of the Waterloo Creek Group also outcrop along the western side of the Mt Read Volcanics at "Thirkell Hill".

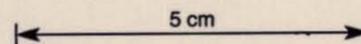
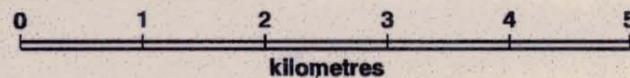
It is this direct correlation with massive sulphide hosting / sourcing volcanics 20 kilometres south at Wart Hill which underpins the prospectivity of the volcanic sequence at "Thirkell Hill" for base metal V.H.M.S's. Correlations with sequences within the Mt Read Volcanics to the north from Queenstown to Hellyer are somewhat tenuous, however, it is probable that the volcanic rocks (other than the Waterloo Creek Group rocks) at both "Thirkell Hill" and "Elliott Bay" are correlates of the Eastern Quartz Pyritic sequence which occupy the eastern side of the belt from Mt Darwin to Lake Selina.

The geology at "Thirkell Hill" is shown in Figure 2. The sequence dips around 60° - 70° and faces west. No evidence for the isoclinal folding of Martin (in Australasian Minerals Inc. Annual Report, 1974) was seen and so the sequence is considered to essentially straightforward.



LEGEND

- QUATERNARY Talus, scree, younger and older alluvium + fan deposits.
 - TERTIARY Semi-consolidated interbedded sands, pebble-cobble gravels, silts and clays.
 - SILURO-DEVONIAN Undifferentiated sandstone, siltstone and shale.
 - ORDOVICIAN Limestone with some associated siltstone and sandstone.
 - OWEN CONGLOMERATE AND DENISON GROUP**
 - Well-bedded sandstone and chert-bearing gritty sandstone, plus thickly bedded to massive pebble-cobble conglomerate.
 - Trough cross-bedded sandstone with intercalations of pebble conglomerate.
 - Granule-pebble to pebble-cobble conglomerate with interbedded sandstone and minor siltstone.
 - Pyritic shale and siltstone, plus volcanoclastic conglomerate and sandstone.
 - ? EARLY ORDOVICIAN - ? LATE CAMBRIAN
 - Cream to pink felsic lava with minor intercalated epiclastic rocks and lava breccias.
 - Felsic volcanoclastic and epiclastic rocks.
 - Siliciclastic breccia-conglomerate unit, with quartzite clasts.
 - Quartz-feldspar-biotite-phyric lava and / or intrusive.
 - Siliciclastic to volcanoclastic bedded siltstone, sandstone and shale.
 - Siliciclastic sandstone and granule-pebble conglomerate.
 - CAMBRIAN
 - Coarse grained quartz-feldspar-biotite porphyry.
 - Fine to medium grained quartz-feldspar-biotite-phyric lava and / or intrusive.
 - PRECAMBRIAN Undifferentiated quartzite, phyllite, schist.
-
- Geological boundary
 - Fault
 - Axial surface trace of major anticline.
 - Axial surface trace of major syncline.
 - Track
 - World Heritage area boundary.
 - Boundary of E.L. 3/92
 - Gridded area



A.A.R. / MAC MINING N.L.

**E.L. 3/92
GEOLOGY**

Date: OCTOBER 1992

Compiled: P.A.M./G.M. Drawn: NORTHPOINT

figure 2.

767012

Unconformably overlying the Precambrian meta-sediments, and in faulted contact with Ordovician siliclastics in the north, is a sequence of coarse to fine grained sediments of mixed Precambrian and volcanic provenance. To the east this unit is almost completely of Precambrian provenance and is coarse grained. Towards the west the grain size decreases and there is an increasing volcanic derived component. This sequence is a correlate of the Sticht Range Beds further north in the Mt Read Volcanic belt.

To the west of these sediments is a large elongate body of coarsely quartz-feldspar-biotite phyric rock which is almost certainly a Cambrian intrusive. It too has correlates to the north and south.

West again is a package of mixed felsic (quartz-feldspar±biotite phyric) lavas or intrusives and felsic volcanoclastics. It is these rocks which are considered to have potential for V.H.M.S. deposits whilst prior work at "Elliott Bay" suggests that their contact with the large porphyritic intrusive body may be prospective for gold.

Apparently conformably overlying this package is a unit of felsic volcanoclastics overlain in turn by a unit of fine shales / siltstones which together constitute the Waterloo Creek Group. Where seen in the field these rocks are invariably sericitic and schistose.

Conformably overlying the Waterloo Creek Group are the Ordovician siliciclastics, correlates of the Owen Conglomerate / Pioneer Beds in the Mt Reads to the north.

Of particular note is a unit of fine grained recrystallised silica which lies toward the top of the package of mixed felsic volcanoclastics and lavas, near to its contact with the Waterloo Creek Group. This unit is shown in Figure 2 as cross-cutting the regional strike.

This may not necessarily be the case as its structural / stratigraphic setting is unclear. Nor is the unit a "siliclastic breccia-conglomerate with quartzite clasts" as mapped by the 'Mines Department'. The rock shows considerable similarity to the Comstock chert, a body of massive silica which is an alteration product, cogenetic with the formation of the base metal massive sulphide lenses which overlie, but which are probably coeval with, the copper deposits at Mt. Lyell. It is not suggested that there is any stratigraphic correlation with the Comstock chert, rather that their genesis may be similar.

The volcanics immediately underlying the silica body are strongly silica-sericite \pm haematite altered.

Structurally the rocks at "Thirkell Hill" are dominated by a north-south striking subvertical cleavage associated with the syncline. This structure is Devonian in age. In addition, a number of north-west and north-east trending wrench faults have been interpreted from aerial photographs.

Other than the southern anomaly on the Southern Porphyry Contact grid (discussed later) sulphides have been noted in chloritic volcanoclastics from the D'Aguilar South grid whilst panned concentrate samples from creeks draining the Waterloo Creek Group rocks and adjacent volcanics occasionally contain galena.

The conceptual models for gold deposits are based partially on the example, at "Elliott Bay". Panned concentrate sampling at "Elliott Bay" has revealed a close spatial relationship between anomalous gold and the porphyry / volcanics contact.

The picture is not straightforward, however, as anomalous gold is also found in creeks sourced solely from the porphyry. Further, drilling at Voyager 12 (North Lewis) though ultimately disappointing, indicates that gold mineralisation is hosted within a north-east trending shear adjacent to the porphyry.

4.0 PREVIOUS EXPLORATION

Previous exploration is quite extensively summarised in last years annual report, however, a number of points should be stressed.

1. Exploration has been sporadic in nature with only a handful of periods of activity over the last twenty years. ie

-	Summer 1974	Australasian Minerals Inc.
-	Summer 1975	Union Oil Development Corp.
-	Summer 1977	Geopeko / U.O.D.C. JV
-	Summer 1980/81	Aquitaine Australia Minerals Pty Ltd / Geopeko JV
-	Summer 1993	Anglo Australian Resources NL
-	Summer 1994	Anglo Australian Resources NL

2. Exploration prior to Anglo Australian Resources involvement has almost entirely focussed on the base metal potential of the volcanics. The only prior gold exploration being a one day stream sediment sampling program (13 samples) conducted by C.S.R. in the early 1980's.

3. Exploration has been of a regional reconnaissance nature with the regional tools consisting of airborne E.M. / Magnetics, broadly spaced gradient array I.P. and soil (base metal assaying only) traverses, stream sediment sampling (base metals only) and geological mapping. Anomalies defined by this work have been followed-up by hand held EM (Max-min) and ground magnetics, closer spaced soil sampling and occasionally more detailed mapping. No prospects have seen fixed loop E.M. surveys, dipole-dipole I.P. surveys or drilling of any kind (before Anglo Australian Resources N.L. drilling this year).

Anglo Australian Resources first year program was designed to better define previously defined base metal soil-geochemical anomalies in the Viking 10 - 22 area. In addition, pan concentrate samples were taken in the central third of the area.

Last years program was initially intended to more tightly define the base metal soil geochemical anomalies at the Viking 11 prospect (also called the Condor South Zone) as well as extending the panned concentrate gold stream sediment coverage.

The definition of two areas of anomalous gold in streams led to a change in emphasis. Both of these areas (D'Aguilar South and Southern Porphyry Contact) were soil sampled on an uncut grid. A-horizon peat samples were taken and assayed using the Huminex method developed by Dr Bill Baker at the Tasmanian "Mines Department".

This technique was decided upon since it was felt that this A-horizon technique would overcome the problem of the lack of dispersion by gold in the C-horizon and would also allow for a greater part of the prospective areas to be sampled. It also did not require the use of power augers which were having mechanical problems.

The Huminex technique involves measurement of the amount of gold in organic humic acid compounds within the soils A-horizon. Gold forms humic compounds by two processes.

- i) Gold is taken up by plants along with other nutrients from weathered bedrock. When the plants die the humus (dead plant material) helps form the soils A-horizon.
- ii) Free gold and gold compounds preferentially react with the dominant humic acids.

Levels of gold, and other base metals, are given in nanograms per gram of organic carbon.

The D'Aguilar South grid was designed to cover

- all creeks containing anomalous gold in panned concentrates
- the contact, as mapped, between the porphyry and volcanics.
- the silica-sericite alteration zone.

The gridded area covered approximately 1.8 kms x 1.2 kms. 458 samples were collected on the 200m x 25m grid, however, it was decided to only assay every second sample (200m x 50m) over the most prospective lines. A total of 158 samples were assayed.

The Southern Porphyry Contact grid was designed to cover the previously mapped contact between the quartz-felspar-biotite porphyry and the volcanics. Sampling was initially undertaken on 400m spaced lines with infill 200m spaced lines completed progressively in the most prospective parts of the grid.

A total of 424 samples were collected, however, again every second sample was assayed from the most prospective lines. A total of 130 samples were assayed.

Orientation lines were completed over two of the Southern Porphyry Contact lines with samples assayed for gold by acid digest/AAS (34 samples were collected). These same samples were later re-assayed using the Huminex technique.

A number of reconnaissance traverses were also completed in the Hales River East area. Two of the lines were designed to follow-up the anomalous 240 ppm Pb stream sediment results from Geopeko's earlier survey whilst the westernmost line covered the Viking 13 airborne E.M. anomaly. A total of 54 samples were collected on 25m spaces.

In addition, rock samples were collected from the D'Aguilar South, Southern Porphyry Contact, Hales River East, Viking 11 and Viking 6 - 21 areas. The results of the petrological analysis of eight of these rocks is presented later.

5.0 WORK CONDUCTED IN 1993 / 1994

Following the somewhat late receipt of soil assays from the "Mines Department" it was decided to drill test the best of the defined gold soil anomalies.

The southern anomaly on the Southern Porphyry Contact grid was selected as the soil anomaly is quite coherent and discrete. At the time the northern anomaly on this grid was still open to the east whilst the D'Aguilar South anomalies, although associated with higher levels of gold in streams to the Southern Porphyry Contact anomalies, were broader and less coherent.

Due to the cost of ferrying in a large diamond rig by helicopter it was decided to wait and use Nick Poltocks man portable rig even though he was not available until April / May 1995.

A two day field visit was made in late January by myself, Nick and his off-sider in order for Nick to plan for the diamond drilling program. At the time a line of 'wacker' samples were taken across the two (adjacent) samples with the highest gold results from the Huminex assaying. These two samples lie at the southern end of the anomaly. A total of 33 samples were taken on an initial 5 metre spacing which was closed up to 2.5 metres in the immediate vicinity of the two anomalous soils.

Following the somewhat disappointing, though unsurprising (given the point source nature of wacker sampling) a four day field visit was made by myself, geologist Tim Farrell and field assistant Paulina Illanes, over the Easter period in order to map the area of the southern anomaly, attempt to locate the source of the anomalous gold and decide upon the optimal sites for the diamond drilling.

Based on the results of that work it was decided to drill test the anomalous area by a fence of holes starting from the apex of the Y shaped soil geochemical anomaly and heading roughly eastwards (actually 080° true) and up onto the low ridge forming the eastern boundary of the anomaly.

The drilling was conducted over two periods with a rest break in between. The first period was from the 25th April to 6th May with the second period from 10th May to 19th May. Six holes for a total of 292.50 metres were completed.



1. **SPCS 4 in progress (tripod near ridge crest just right of centre). Strewn gear, boxes etc defines drill fence. Boxes in left foreground are at SPCS 2 position (looking north-east).**



2. **Drillers (Nick Poltock and Robert Smith) and rig drilling SPCS 4. Camp is in left of picture, Thirkell Hill in the right (looking west).**



3. Typical bush (bauera and tea tree) at "Thirkell Hill".



4. Camp and helipad used in this years program. Thirkell Hill in background (looking west).

Each hole was drilled towards 080° (TN) at a nominal inclination of -50° and nominal depth of 50 metres. Hole 6 was terminated early as the target zone had been crossed.

The holes were drilled as a fence in order to give a complete cross-section across the anomaly.

In addition to the drilling Tim Farrell carried out further geological mapping of both the southern and northern anomalies on the Southern Porphyry Contact grid and collected an additional 24 A-horizon soil samples from the northern anomaly in order to close off that anomaly to the east, north and south.

Due to the relatively low levels of sulphides and quartz in the drill-core it was decided to assay representative samples to see whether comprehensive sampling of core was warranted. Disappointing results from the representative samples did not justify this further expense.

Eight rocks collected in the 1993 / 94 season were thin sectioned and described petrologically. Two of these rocks (PG6 and PG7) are typical of the rocks which underlie the Viking 11 prospect whilst the other 6 are from the 'chert' body and adjacent altered and unaltered rocks at D'Aguilar South.



5. **D'Aguilar South prospect looking north towards Mt Discovery. The 'chert' (not visible) cuts obliquely across the mid foreground.**

6.0 RESULTS

6.1 Wacker Samples

The location of the fence of 'wacker' samples (true C-horizon samples) is shown in figure 3 with individual sample locations, descriptions and results described in Appendix A.

All samples were taken at depths of between 1 and 2 metres.

All samples were of fine to medium grained felsic volcanoclastics (tuffs or reworked tuffs) with very little quartz veining. All samples assayed at or below the detection limit of 8 ppb Au.

In addition two samples of outcropping volcanoclastics from either end of the line also assayed <8 ppb Au.

The results from this work were disappointing though not unexpected for a 'wacker' sample is effectively a sub-surface rock chip sample and unless a hard-rock gold source is actually sampled a discrete gold deposit (e.g. high grade reef) would be missed unless there was dispersion within the country rock ie in the form of an alteration halo.

6.2 Mapping

Mapping (figure 4) was initially conducted in the southern anomaly area. The anomalous rock sample from the previous years work was located. Mapping south from this point discovered a zone of outcropping fine to medium grained felsic volcanoclastics (reworked tuffs?) with fine (1 mm to 2 mm thick) pyritic \pm quartz \pm chlorite veinlets corresponding roughly to both the gold soil anomaly and the contact with the porphyry to the east. Two cleavages were recognised with the earlier S_1 cleavage dipping steeply to the west and the later S_2 cleavage less steeply to the south-south-west. Most pyrite veinlets appear to pick out the two cleavages though occasional veinlets were noted with different orientations.

The quartz-feldspar-biotite porphyry outcrops poorly and was mapped using hand augured fragments from beneath the peat. Unsurprisingly no evidence of veining was seen in this mapping.

A number of outcrops further to the west are mapped as quartz-feldspar-biotite lavas as phenocrysts are finer grained than in the porphyry proper. Conversely these rocks may be a finer grained apophyses of the porphyry.

The younger cleavage is interpreted to represent the north-north-west trending structure shown on Mines Department mapping and presumably interpreted from aerial photographs.

Four samples of pyritic volcanoclastic were assayed with all returning less than 8 ppb Au.

Subsequent mapping by Tim Farrell over the southern anomaly extended the area of both the pyritic rocks and the quartz-feldspar-biotite lava.

Mapping by Tim on the northern anomaly was less conclusive with negligible outcrop. Augured weathered rock samples broadly support the Mines Departments regional mapping and air-photo interpretation though no evidence of the north-north-east trending structure shown in the regional mapping was seen other than that inferred from the location of the various units.

6.3 Drilling

No significant problems were encountered in the technical side to the drilling and core recovery was almost invariably very good.

The location of the fence of drill-holes is shown in figure 4 with a drill-section in figure 5.

Hole SPCS 1 and the upper part of Hole SPCS 2 intersected a weak to moderately schistose / foliated rock with fine to medium grained quartz, sericitised feldspar and lesser chloritic biotite. No bedding was noted and so it is unclear whether the rock is a primary tuff (sub-aerial or sub-marine) or volcanic derived sediment without more detailed work.

The rock shows no evidence of pervasive hydrothermal alteration except for what appears to be carbonate spotting in parts of SPCS1 and weak chlorite alteration near the porphyry contact in SPCS 2, however, it is cut by a number of fine (0.5 mm to 2 mm thick) quartz-pyrite veinlets and contains a number of zones with disseminated pyrite (up to 1% over 0.5m or so).

Most veinlets pick out the foliation (S_1) whilst others clearly cross-cut the foliation. These veinlets are described in more detail below. In addition to these a vuggy limonitic quartz vein with pyritohedral pyrite to 5 mm is intersected by SPCS 1 from 24.85m to 25.80m. A total of thirty one samples representative of the different styles of veining, dissemination, alteration and structure were assayed for gold in order to determine the source of the gold in soils. Sample locations, descriptions and results are summarised in Table 1.

Five of these samples were taken from such features in the tuff / sediments. All three samples of pyrite veining / dissemination and a sample of 'carbonate (?) spotted rock' were at or below the detection limit of 8 ppb Au whilst the limonitic vein returned 12 ppb Au.

At 28.85m in Hole SPCS 2 the contact with the quartz-feldspar-biotite porphyry was intersected, somewhat earlier than expected based on surface mapping.

The contact is sharp and unsheared with the tuff / sediment immediately adjacent (10cm) to the contact showing some quenching but no silicification or chloritisation.

The rest of Hole SPCS 2 and the subsequent holes intersected this porphyry.

The porphyry contains distinct quartz (to 8mm), feldspar (to 15mm) and biotite (to 8mm) in most parts. The rock ranges in colour from grey green, due to the ubiquitous chloritisation of biotite, to darkish green in zones where the groundmass and feldspars are also chloritised. In a number of zones the rock can be described as strongly chloritic.

Schistosity / foliation varies from weak to strong with stronger schistosity often in more chloritic zones. Three significant fault / shear zones and a number of smaller puggy faults were intersected.

Sulphides as pyrite and one instance of chalcopyrite are present in thin veinlets and dissemination as in the tuff / sediment, however, in the porphyry the veinlets are chlorite-pyrite \pm quartz and the zones of disseminated pyrite correspond to stronger chlorite alteration. The chlorite-pyrite \pm quartz veinlets have a similar morphology and orientation to the quartz-pyrite veinlets in the tuff / sediment.

TABLE 1.

DRILL CORE SAMPLE DESCRIPTIONS, LOCATIONS, RESULTS.

767026

HOLE #	INTERVAL	WIDTH (m)	COMMENTS	RESULT (ppm)
1/1	20.48 to 20.65	0.17	carbonate spotted siltstone	0.008
1/2	24.85 to 25.80	0.95	vuggy limonitic quartz vein with pyrite	0.012
1/3	27.80 to 28.60	0.80	chloritic zone with minor disseminated pyrite	<0.008
1/4	28.60 to 29.55	0.95	chloritic zone with significant veinlet + disseminated py	<0.008
1/5	33.25 to 33.90	0.65	numerous pyrite veinlets	<0.008
2/1	30.85 to 31.20	0.35	fibrous quartz-chlorite vein	<0.008
2/2	37.70 to 38.55	0.85	fibrous quartz-chlorite-tourmaline vein	<0.008
2/3	39.90 to 40.10	0.20	pyrite-chalcopyrite-chlorite vein	0.082
2/4	35.16 to 35.23	0.07	fibrous quartz-chlorite vein	<0.008
2/5	35.40 to 35.75	0.25	silicified zone, no sulphides	<0.008
3/1	7.10 to 7.40	0.30	pure chlorite	<0.008
3/2	18.60 to 18.85	0.25	quartz-chlorite-pyrite vein	<0.008
3/3	25.55 to 25.62	0.07	quartz-chlorite-pyrite vein	0.009
3/4	42.25 to 42.80	0.55	chloritic zone with pyritic veinlets	<0.008
3/5	46.70 to 47.60	0.90	strongly chloritic zone	<0.008
3/6	49.50 to 50.25	0.75	Strongly chloritic zone	<0.008
4/1	4.30 to 4.80	0.50	limonitic zone	<0.008
4/2	13.20 to 14.25	1.05	fault zone	<0.008
4/3	14.25 to 14.80	0.55	schistose, chloritic zone with significant pyrite	0.013
4/4	28.75 to 29.30	0.55	strongly chloritic zone with significant pyrite	0.009
4/5	36.55 to 37.10	0.55	strongly chloritic zone with significant pyrite	0.010
4/6	38.70 to 39.25	0.55	strongly chloritic zone with significant pyrite	0.013
4/7	45.15 to 45.35	0.20	strongly chloritic zone with significant pyrite	0.011
5/1	1.70 to 2.35	0.65	chloritic zone with limonitic fracture	<0.008
5/2	17.00 to 17.20	0.20	chloritic zone with significant pyrite	0.026
5/3	19.95 to 20.05	0.10	chloritic zone with significant pyrite	<0.008
5/4	22.90 to 23.85	0.95	fault	<0.008
5/5	37.15 to 37.25	0.10	strongly chloritic zone with significant pyrite	<0.008
5/6	37.40 to 37.50	0.10	strongly chloritic zone with significant pyrite	0.013
6/1	19.55 to 19.80	0.25	strongly chloritic zone with significant pyrite	<0.008
6/2	28.80 to 29.35	0.55	selvedge to puggy fault	<0.008

In addition fibrous tension-veins (?) of quartz-chlorite cut the porphyry. No paragenesis of the vein styles is possible as no cross-cutting relationships were seen. These veins themselves are not sulphidic however in a few instances elevated pyrite levels are noted in the chloritic selvage (?) to these veins. In the drill logs these veins are occasionally referred to as later stage, however, this interpretation may be incorrect and it may well be that the two vein styles are broadly of a similar age. Two of these veins contain a black mineral which appears to be tourmaline.

Neither the quartz-chlorite or quartz-chlorite-tourmaline veins contain gold.

The pyritic veinlets also rarely contain elevated gold values with only one sample above detection limit, (9 ppb Au). The highest single value (82 ppb Au over 20 cm) came from the pyrite-chalcopyrite-chlorite vein in SPCS 2 whilst all other elevated values came from zones of disseminated pyrite in strong chlorite alteration.

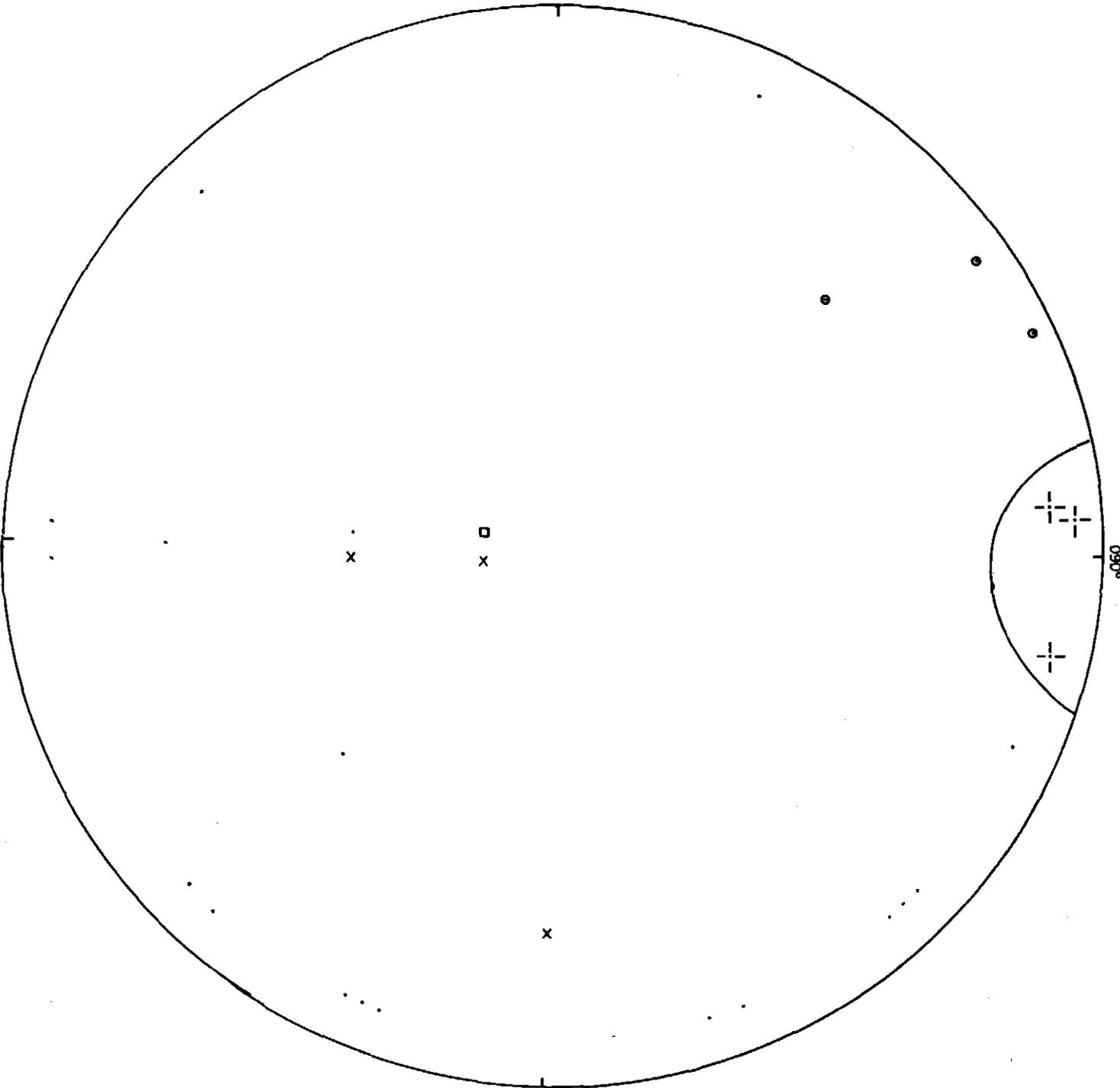
As in the tuff / sediment, most veinlets pick out the dominant foliation, being undeformed themselves whilst others clearly cross-cutting the foliation have a range of orientations. The orientation of some of these veinlets was measured roughly by aligning the foliation in the core in a vertically dipping north-south striking orientation or mapped on the surface for S_1 . These are shown in figure 6.

Pyritic veinlets exhibit a range of orientations with steep to the north-west, north-north-west, north-north-east, north-east and east accounting for most (aside from the veinlets parallel to the foliation, ie steep to the west). Most fibrous quartz-chlorite \pm tourmaline veins dip shallowly to the east. If these veins are true tension veins they formed under an east-west stress regime.

Pyritic veinlets and disseminations are intersected in all holes, however, they are relatively rare in Hole SPCS 6. The intensity of pyritic veining and disseminations appears to increase to the east, with the most pyritic holes being SPCS 4 and 5, before a rather abrupt decrease in SPCS 6.

Significantly, this marked decrease in sulphide levels from SPCS 5 to SPCS 6 coincides with the eastern edge of the soil geochemical anomaly.

000° (TN)



- ⊕ S₁ cleavage
 - ⊙ S₂ cleavage
 - pyritic veinlets / dissemination zone
 - x quartz-chlorite veins
 - quartz-chlorite-tourmaline vein
- Approximate orientations only - see text for explanation of method.

ANGLO AUSTRALIAN RESOURCES N.L.		
SOUTHERN PORPHYRY CONTACT GRID		
SOUTHERN ANOMALY		
ORIENTED STRUCTURES		
Drawn by G. Mac Donald	Scale	Fig. no.

There is no sulphide associated with the fault intersected in SPCS 6 and no relationship between sulphides and the fault in SPCS 3, however, the zone immediately up-hole from the fault in SPCS 5 is relatively sulphidic and chloritic and although this is not repeated on the down-hole side, the pyritic veinlet / dissemination zone may be related to this structure.

6.4 Soil Sampling

Further soil sampling at the northern anomaly on the Southern Porphyry Contact gird has both extended and better defined the previous anomaly whilst remaining open itself (figure 3 and 4). In particular three results of greater than 2 000 ng Au/gC (ie greater than 2 ppm Au in Carbon) have defined a central high which remains open to the north. The anomaly on the eastern end of Line 5½ is open-ended to the south-east.

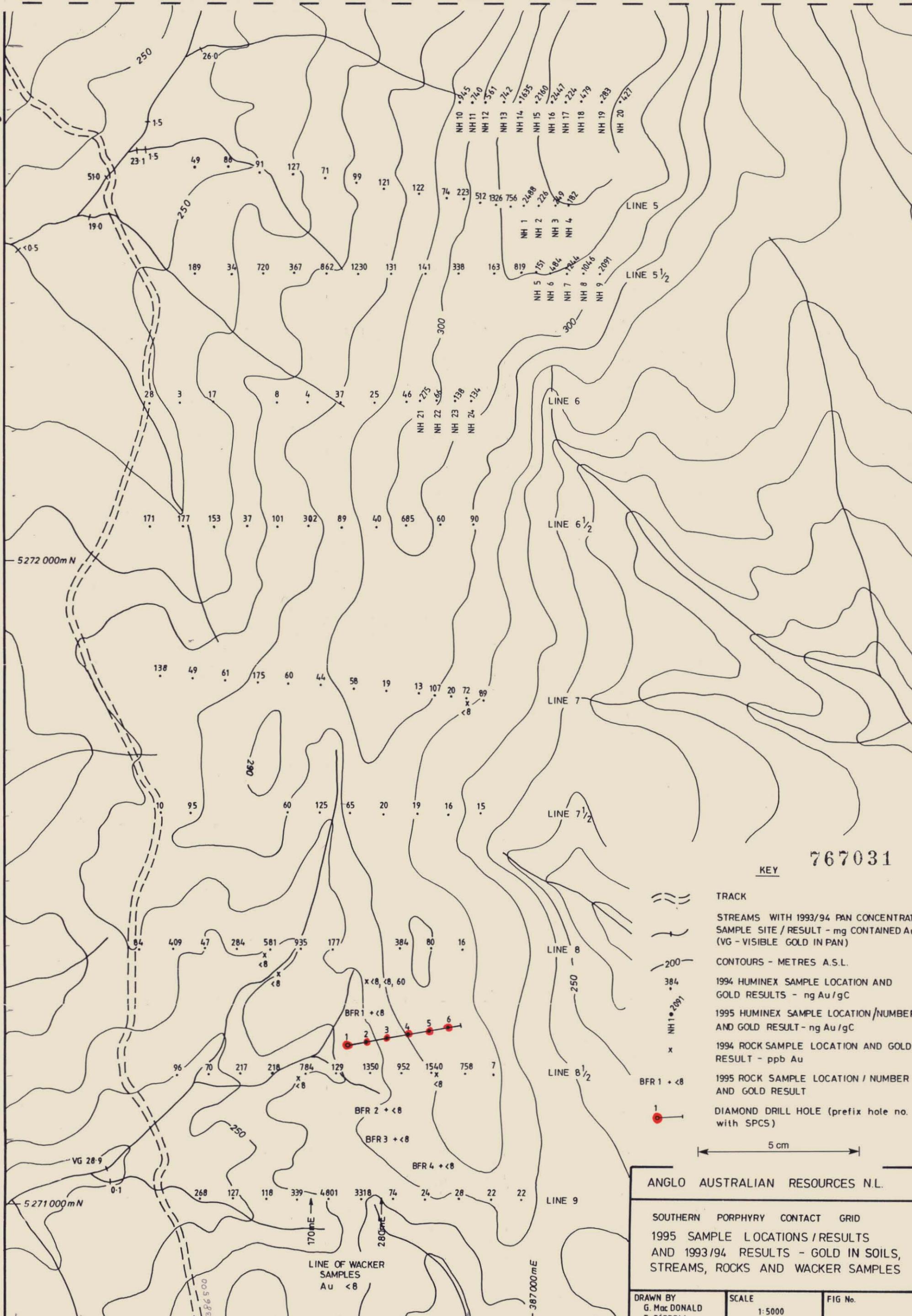
6.5 Petrology

The petrological descriptions of the rocks analysed by Dr Tony Crawford (who has had considerable experience in petrological / lithochemical analysis of Mt Read Volcanics) are summarised in Table 2 below. Full descriptions are included as Appendix F.

TABLE 2.
SUMMARY OF PETROLOGICAL DESCRIPTIONS

PROSPECT	SAMPLE NUMBER FIELD/ ASSAY	DESCRIPTION	ASSAYS (ppm)					
			Cu	Pb	Zn	As	Au	Ba
Viking 11	PG6/39952	felsic crystal vitric tuffs, moderately hydrothermally sericite-chlorite-silica altered	7	33	159	2.5	<0.008	-
Viking 11	PG7/	as per PG6/39952	-	-	-	-	-	-
D'Aguilar South	ML1/-	autoclastic lava breccia with strong chlorite, lesser sericite alteration and tiny oxidised pyrite trails						
D'Aguilar South	ML32/39983	felsic crystal vitric tuff with moderate silica-sericite alteration	2	4	18	1.0	<0.008	-
D'Aguilar South	ML18/39987	felsic tuff or volcanoclastic sandstone with intense silica-sericite alteration	<2	6	25	3.0	<0.008	356
D'Aguilar South	ML22/39980	as per ML18/39987	3	6	21	3.0	<0.008	-
D'Aguilar South	ML27/39990	intensely silica altered, strongly foliated quartz-sericite schists	4	5	18	0.5	<0.008	-
D'Aguilar South	ML29/-	as per ML27/39990	-	-	-	-	-	-

Sample locations for D'Aguilar South samples are shown in figure 7. Viking 11 samples are typical of rocks in this prospect. PG 6 was taken at 9050N, 10175E (local grid) whilst PG 7 was collected near 8950N, 10200E.



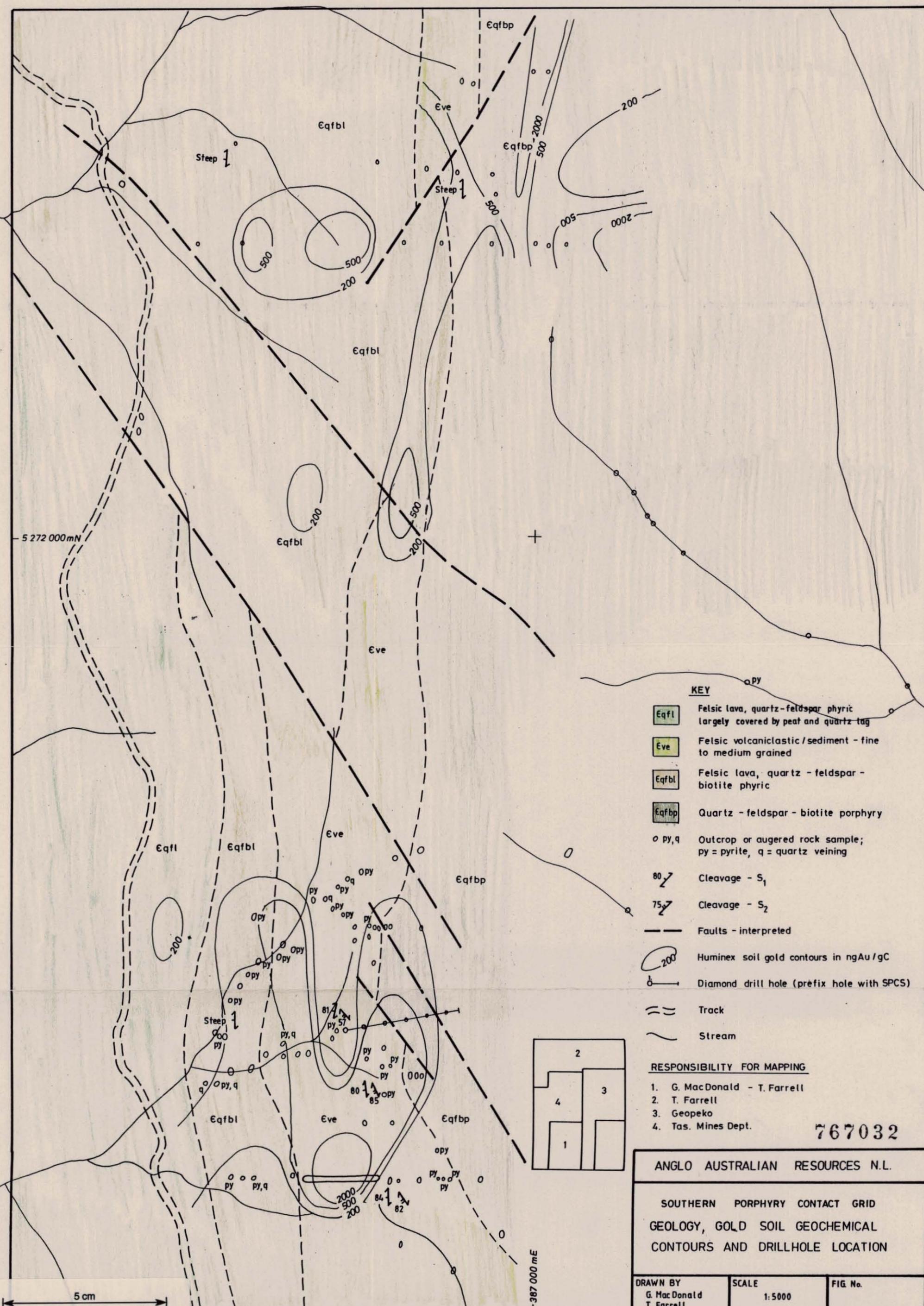
767031

KEY

-  TRACK
-  STREAMS WITH 1993/94 PAN CONCENTRATE SAMPLE SITE / RESULT - mg CONTAINED Au (VG - VISIBLE GOLD IN PAN)
-  CONTOURS - METRES A.S.L.
-  384 1994 HUMINEX SAMPLE LOCATION AND GOLD RESULTS - ng Au/gC
-  NH 1 • 2091 1995 HUMINEX SAMPLE LOCATION / NUMBER AND GOLD RESULT - ng Au/gC
-  x 1994 ROCK SAMPLE LOCATION AND GOLD RESULT - ppb Au
-  BFR 1 • <8 1995 ROCK SAMPLE LOCATION / NUMBER AND GOLD RESULT
-  1 DIAMOND DRILL HOLE (prefix hole no. with SPCS)

5 cm

ANGLO AUSTRALIAN RESOURCES N.L.		
SOUTHERN PORPHYRY CONTACT GRID		
1995 SAMPLE LOCATIONS / RESULTS AND 1993/94 RESULTS - GOLD IN SOILS, STREAMS, ROCKS AND WACKER SAMPLES		
DRAWN BY G. Mac DONALD T. FARRELL	SCALE 1:5000	FIG No.



KEY

- Eqfl Felsic lava, quartz-feldspar phyrlic largely covered by peat and quartz tag
- Eve Felsic volcaniclastic/sediment - fine to medium grained
- Eqfbl Felsic lava, quartz-feldspar-biotite phyrlic
- Eqfbp Quartz-feldspar-biotite porphyry
- py,q Outcrop or augered rock sample; py = pyrite, q = quartz veining
- 80° Cleavage - S_1
- 75° Cleavage - S_2
- Faults - interpreted
- 200 Huminex soil gold contours in ngAu/gC
- | Diamond drill hole (prefix hole with SPCS)
- == Track
- ~ Stream

RESPONSIBILITY FOR MAPPING

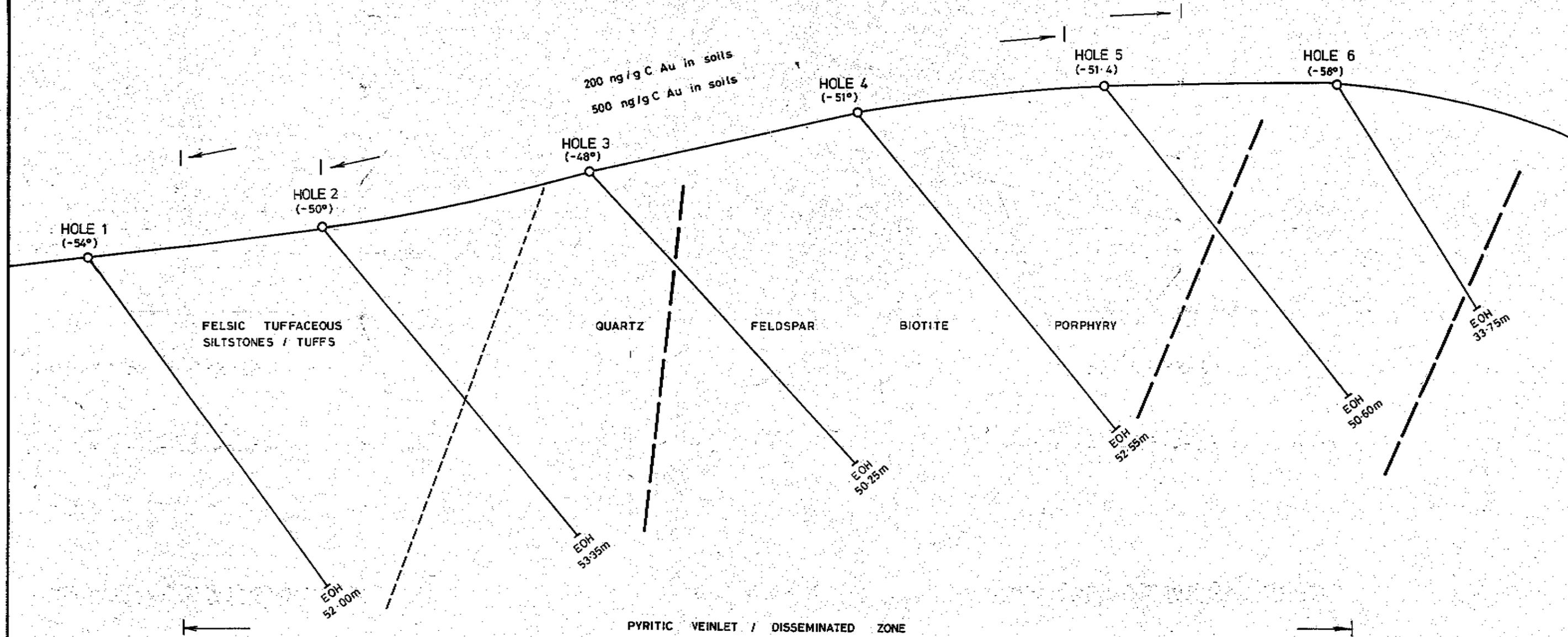
1. G. MacDonald - T. Farrell
2. T. Farrell
3. Geopeko
4. Tas. Mines Dept.

767032

ANGLO AUSTRALIAN RESOURCES N.L.

SOUTHERN PORPHYRY CONTACT GRID
GEOLOGY, GOLD SOIL GEOCHEMICAL
CONTOURS AND DRILLHOLE LOCATION

DRAWN BY G. MacDonald T. Farrell	SCALE 1:5000	FIG. No.
---	------------------------	-----------------

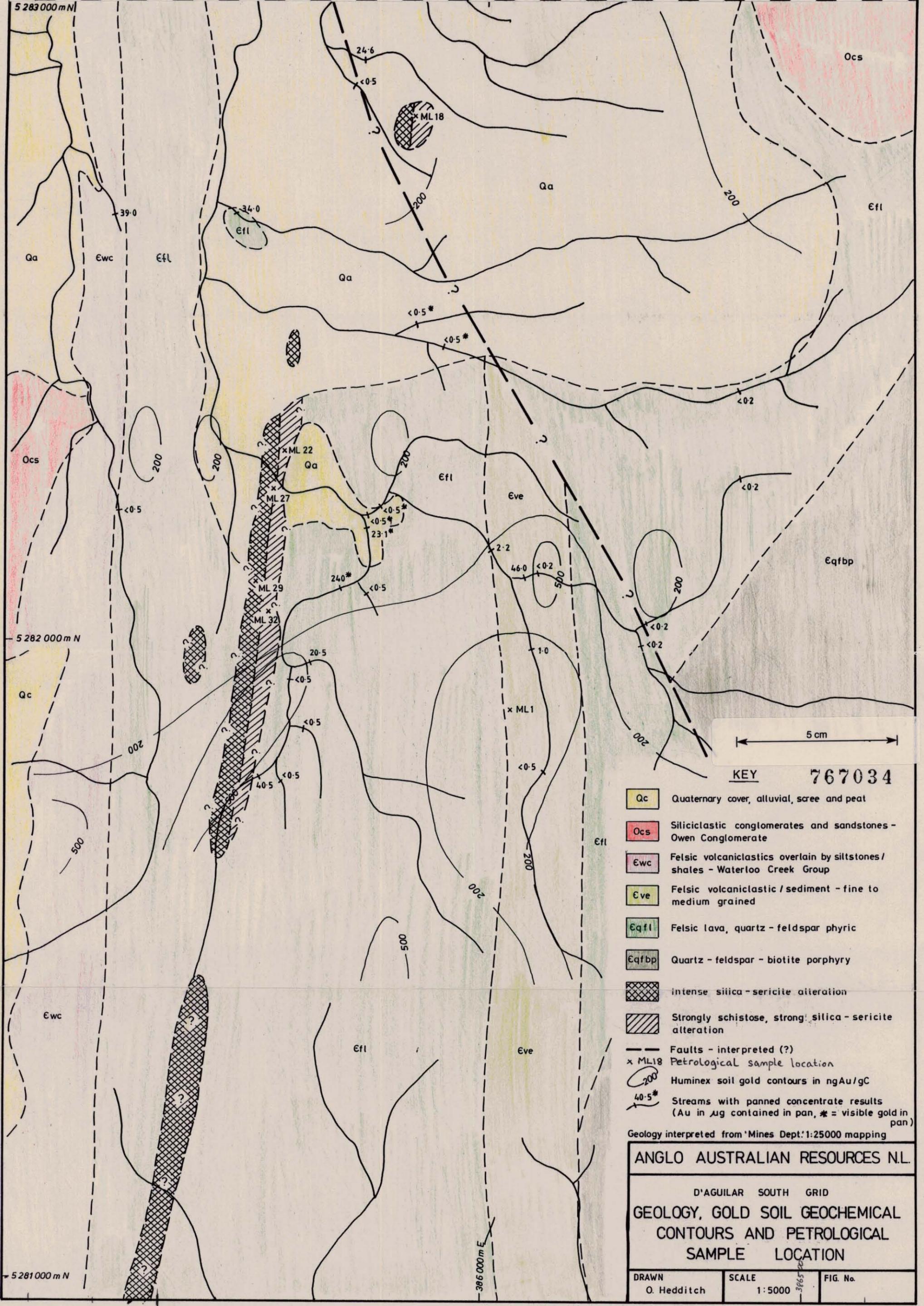


5 cm

- KEY**
- QUARTZ FELDSPAR BIOTITE PORPHYRY
 - FELSIC TUFFACEOUS SILTSTONES / TUFFS
 - PYRITE VEINLET ZONE
 - GEOLOGICAL CONTACT
 - MAJOR FAULT

767033

ANGLO AUSTRALIAN RESOURCES N.L.		
SOUTHERN PORPHYRY CONTACT GRID SOUTHERN ANOMALY DIAMOND DRILL SECTION (LOOKING TOWARDS 350°TN)		
DRAWN BY:	SCALE 1:500	FIG. No.



KEY 767034

- Qc Quaternary cover, alluvial, scree and peat
- Qcs Siliclastic conglomerates and sandstones - Owen Conglomerate
- Ewc Felsic volcanics overlain by siltstones / shales - Waterloo Creek Group
- Eve Felsic volcanoclastic / sediment - fine to medium grained
- Eqfl Felsic lava, quartz - feldspar phryic
- Eqfbb Quartz - feldspar - biotite porphyry
- intense silica-sericite alteration
- Strongly schistose, strong silica-sericite alteration
- Faults - interpreted (?)
- x ML18 Petrological sample location
- Huminex soil gold contours in ngAu/gC
- 40.5* Streams with panned concentrate results (Au in μg contained in pan, * = visible gold in pan)

Geology interpreted from 'Mines Dept.' 1:25000 mapping

ANGLO AUSTRALIAN RESOURCES N.L.		
D'AGUILAR SOUTH GRID		
GEOLOGY, GOLD SOIL GEOCHEMICAL CONTOURS AND PETROLOGICAL SAMPLE LOCATION		
DRAWN O. Hedditch	SCALE 1:5000	FIG. No.

The Viking 11 prospect contains anomalous C-horizon base metal geochemistry with soil assays up to 650 ppm Zn and 500 ppm Pb and rocks up to 926 ppm Zn and 541 ppm Pb. Petrology has indicated that this anomalous geochemistry is associated with hydrothermal alteration, with an assemblage typical of V.H.M.S. mineralising systems.

The D'Aguilar South samples were selected in order to give an indication of the variation of style and intensity of alteration. Samples ML 27 and ML 29 are from within the 'chert' body, ML 18, ML 22 and ML 32 are from the schists flanking the 'chert' whilst ML 1 is from a discrete sample taken 400 metres east of the 'chert'.

Dr Crawford states that "the rocks have almost certainly undergone a crack-seal history of silicification in a fault zone." It is not clear whether all alteration must therefore be fault related.

It is interesting to note that base-metal assays for the samples from D'Aguilar South are depleted with regards to what would normally be background levels in these rocks. If, as is probably the case, the hydrothermal fluid has removed base metals it must also have deposited them somewhere.

7.0 CONCLUSIONS

It is considered that this years work has adequately tested the anomalous gold in soils of the Southern Porphyry Contact grid southern anomaly. It would appear that the anomaly is reflecting the relatively elevated though still quite low gold levels contained in the zones of chlorite alteration with disseminated pyrite intersected in the drill holes.

This zone is not related to the contact between the porphyry and the volcanoclastics as sulphides clearly post-date the S_1 cleavage in these rocks. It is possible that the pyrite veinlets / disseminations are related to the fault zone intersected in SPCS 5.

The drilling results also appear to vindicate the use of HUMINEX as a soil sampling technique for locating gold in the reducing conditions typical of Tasmania's south-west.

Further gold in soil anomalies remain to be tested with the extra sampling and mapping on the northern anomaly of the Southern Porphyry Contact grid both extending and better defining this anomaly ready for drilling.

Petrology on the D'Aguilar South samples confirms the field interpretation of the rocks being strongly altered. The gold soil anomaly coincident with this alteration zone in the south-west of the grid is particularly interesting.

Petrology also indicates the presence of hydrothermal alteration associated with the anomalous base metals in C-horizon soils at Viking 11.

8.0 RECOMMENDATIONS

The northern gold in A-horizon soil anomaly on the Southern Porphyry Contact grid is ready for drilling. The A-horizon gold in soil anomaly on the D'Aguiar South prospect coincident with the intense silica-sericite alteration is also ready for drilling whilst the other anomalies on this grid are broader and require better definition prior to drilling.

Apart from these strong gold in soil anomalies defined by A-horizon HUMINEX sampling / analysis the "Thirkell Hill" exploration licence has considerable, largely untested, potential for volcanic hosted base metal \pm gold deposits.

Regionally priority should be given to:

- Enhancing and re-interpreting the DIGHEM II helicopter borne EM / magnetics survey of the exploration licence conducted in 1980. If this data is not of sufficient quality the area should be reflown.
- The panned concentrate gold stream sampling survey should be increased to cover the whole exploration licence. In particular sampling should be conducted in the Hales River Valley in the south-east and the south of the exploration licence, in the area north of the Sprent River in the north-east of the licence and in the Viking 19-5 area in the far north-east.

More specific work should be conducted in the following areas:

Viking 10 - 22 Area

This area in the central west of the licence has considerable potential for a V.H.M.S. deposit. The area is the location of numerous geophysical and / or geochemical anomalies associated with variably hydrothermally altered felsic lavas / volcanoclastics.

In particular Waterloo Creek Group rocks which lie on the western side and therefore at the top of the volcanic sequence in this area are strongly sericitic. Previous soil surveys have shown that the Waterloo Creek Group rocks in this area are consistently anomalous in base metals with panned concentrate samples from creeks draining these rocks often containing galena.

It is recommended that:

- all available soil and stream geochemical data be compiled, followed by check sampling and extensive infill sampling, in order to integrate soil surveys conducted on localised grids
- a dipole - dipole IP and possibly also fixed loop EM survey should be conducted over the anomalous area.

Waterloo Creek Group Rocks

In addition to the work to be carried out on these rocks in the Viking 10 - 22 area these rocks should also be explored in more detail to the north and south using:

- soil geochemical surveys on closer spaced grid lines than have been sampled previously
- dipole - dipole IP over anomalous lines.

D'Aguilar North (Viking 19 - 5 Area)

This area is the location of anomalous rocks and streams and two large conductors recorded in VLF - EM traverses.

The rocks are reported as including a distinctive breccia unit with siliceous clasts in a chloritic, haematitic matrix with pyrite, as well as sericitic volcanoclastics.

Initial work would be reconnaissance in nature in order to:

- check previous reporting, particularly with respect to geology.

This work would be carried out in conjunction with:

- more detailed stream geochemistry, particularly panned concentrate gold sampling.

Depending upon results and field impressions further work would probably involve gridded C-horizon soil geochemical sampling and a fixed loop EM survey.

Viking 15

This is an airborne EM anomaly which recorded a strong anomaly in a single VLF EM traverse conducted across it. Rocks are sericitic and contain disseminated pyrite.

This prospect requires initial reconnaissance work in order to:

- check previous reporting.

Viking 23

This prospect is defined by anomalous base metals in streams. Field work last season located disseminated and blebby pyrite in felsic volcanics / volcanoclastics (assaying up to 0.167 g/t Au) in the anomalous stream.

This area should be:

- C-horizon soil sampled on a grid followed by geophysical (I.P.) surveying if warranted.

Mt Lee (Viking 1 - 2 area)

This area is the location of DIGHEM II airborne EM anomalies in or near the prospective Waterloo Creek Group rocks. VLF - EM suggested that a large anomaly may exist to the west of Viking 1. This area should be:

- soil sampled and mapped followed by a fixed loop EM survey if warranted.

These recommendations are considered to be the most obvious given the data available.

It is considered that a more detailed appraisal of previous data in conjunction with the suggested regional work may well reveal higher priority prospects.

APPENDIX A

'WACKER' SAMPLE DESCRIPTION / LOCATIONS

Grant MacDonald

SAMPLE LOCATION (m East)	DESCRIPTION	ASSAY (ppb Au)
170	grey, green, schistose, fine medium grained volcanics with fine black partings	<8
175	pale grey green, schistose, medium grained quartz volcanics	<8
180	pale grey green, schistose, medium grained quartz volcanics with vesicle like pores and a 15mm siliceous pod	<8
185	pale grey green, schistose, medium grained quartz volcanics	<8
190	pale grey green, medium grained, quartz volcanics with vesicle like pores	<8
195	pale grey green, fine grained quartz volcanics with some siltstone like clasts	<8
197.5	pale grey green very fine grained volcanoclastic siltstone with fine bedding 2mm thick and a limonitic fracture	<8
200	pale grey green, fine-medium grained quartz volcanic with vesicle like pores	<8
202.5	pale grey brown/green, medium grained quartz volcanics	<8
205	pale grey green, medium grained volcanics with vesicle like pores	<8
207.5	pale grey green, medium grained quartz volcanics	<8
210	pale grey green, fine - medium grained quartz volcanics with fine limonitic fractures	<8
212.5	pale grey green, fine - medium grained quartz volcanics with fine limonitic fractures	<8
215	pale grey green, fine - medium grained quartz volcanics with limonitic fractures	<8
217.5	pale grey green, fine - medium grained quartz volcanics	<8
220	pale grey green, fine - medium grained quartz volcanics with limonitic fractures	<8
225	pale grey green, fine - medium grained volcanics with limonitic fractures and vesicles	<8
230	pale grey green, medium grained gritty quartz volcanics with irregular quartz fragments or vug filling	<8
235	pale grey green, fine - medium grained quartz volcanics with vesicles	<8
240	pale grey green, fine - medium grained quartz with quartz fragments or vug filling	<8
245	pale grey green, fine - medium grained quartz with quartz fragments or vug filling	<8
247.5	pale grey green, fine - medium grained quartz with quartz fragments associated with limonitic patches	<8
250	pale grey green, fine - medium grained quartz with some silicification(?)	<8
252.5	pale grey green, fine - medium grained quartz volcanics	<8
255	pale grey green, fine - medium grained quartz volcanics	<8
257.5	pale grey green, fine - medium grained quartz volcanics with some quartz fragments	<8
260	pale grey green, fine - medium grained quartz volcanics with vesicles	<8
262.5	pale grey green, fine - medium grained volcanics with quartz fragments	<8
265	pale grey green, fine - medium grained quartz volcanics	<8
267.5	pale grey green, medium grained quartz volcanics	<8
270	pale grey green, fine - medium grained quartz, milky quartz veining and possibly tourmaline	<8
275	pale grey green, fine - medium grained quartz volcanics with quartz fragments	<8
280	pale grey green, fine - medium grained quartz	<8

APPENDIX B

'WACKER' SAMPLE RESULTS

- ANALABS



Phone (004) 316837

14 Thirkell St. COBEE TAS 7320

Fax (004) 318990

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101210.60.10680

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SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
LINE 9 VARIOUS	SR Prep : 6P032,6P033	Au,Au(R),Au(S)/6B309

RESULTS TO

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1 OF 2

METHOD	SAMPLE No.	Au	Au (R)	Au (S)					
		GG309	GG309	GG309					
1	LINE 9 170 mE	<0.008	-	-					
2	LINE 9 175 mE	<0.008	-	-					
3	LINE 9 180 mE	<0.008	-	-					
4	LINE 9 185 mE	<0.008	-	-					
5	LINE 9 190 mE	0.008	-	-					
6	LINE 9 195 mE	<0.008	-	-					
7	LINE 9 197.5 mE	<0.008	-	-					
8	LINE 9 200 mE	<0.008	-	-					
9	LINE 9 202.5 mE	<0.008	-	<0.008					
10	LINE 9 205 mE	<0.008	-	-					
11	LINE 9 207.5 mE	<0.008	-	-					
12	LINE 9 210 mE	<0.008	<0.008	-					
13	LINE 9 212.5 mE	<0.008	-	-					
14	LINE 9 215 mE	<0.008	-	-					
15	LINE 9 217.5 mE	<0.008	-	-					
16	LINE 9 220 mE	<0.008	-	-					
17	LINE 9 225 mE	<0.008	-	-					
18	LINE 9 230 mE	<0.008	-	-					
19	LINE 9 235 mE	<0.008	-	-					
20	LINE 9 240 mE	<0.008	-	-					
21	LINE 9 245 mE	<0.008	-	-					
22	LINE 9 247.5 mE	<0.008	<0.008	-					
23	LINE 9 250 mE	<0.008	-	-					
24	LINE 9 252.5 mE	<0.008	-	-					
25	LINE 9 255 mE	<0.008	-	-					



ANALYTICAL DATA

SAMPLE PREFIX

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PAGE

101210.60.10680

10/02/95

G MACDONALD

2 OF 2

	SAMPLE No.		Au	Au (R)	Au (S)				
METHOD			GG309	GG309	GG309				
1	LINE 9 257.5 mE		<0.008	-	-				
2	LINE 9 260 mE		<0.008	-	-				
3	LINE 9 262.5 mE		<0.008	-	-				
4	LINE 9 265 mE		<0.008	-	<0.008				
5	LINE 9 267.5 mE		<0.008	-	-				
6	LINE 9 270 mE		<0.008	-	-				
7	LINE 9 275 mE		<0.008	-	-				
8	LINE 9 280 mE		<0.008	-	-				
9	LINE 9 170 O-C mE		<0.008	-	-				
10	LINE 9 290 O-C mE		<0.008	-	-				
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
	DETECTION		0.008	0.008	0.008				
	UNITS		ppm	ppm	ppm				

APPENDIX C
ROCK CHIP SAMPLE RESULTS
- ANALABS



Analabs Pty. Ltd.

A.C.N. 004 591 664

Phone (004) 316837

14 Thirkell St. COOEE TAS 7320

Fax (004) 318890

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SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
BF61-4	RG Prep : 69033	Au, Au(R)/66309

RESULTS
TO

Grant Macdonald
Mangana Road
FINGAL TAS 7214

RESULTS
TO

RESULTS
TO

REMARKS



ANALYTICAL DATA

SAMPLE PREFIX REPORT No REPORT DATE CLIENT ORDER No PAGE

103300.60.10885 03/05/95 G MACDONALD 1 OF 1

METHOD	SAMPLE No	Au	Au (R)						
1	BFR1	<0.008	-						
2	BFR2	<0.008	<0.008						
3	BFR3	<0.008	-						
4	BFR4	<0.008	-						
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24	DETECTION	0.008	0.008						
25	UNITS	ppm	ppm						

APPENDIX D

DRILL LOGS SPCS 1 TO 6

Grant MacDonald

CO-ORDINATES: 5271250mN : 386706mE

CORE SIZE:
NQ 1.00m to 16.50m
BQ 16.50m to 52.00m

FINAL DEPTH: 52.00m

HOLE NUMBER:

AZIMUTH: 080° (TN)

INCLINATION: -54°

PRE-COLLAR: 1.00m

SPCS-1

FROM :	TO	INCLUDING	DETAILS
0.00	: 1.00		Pre-collar
1.00	: 52.00		TUFFACEOUS SEDIMENTS / FELSIC CRYSTAL TUFF. Beige green, fine to medium grained felsic tuffaceous siltstone / sandstone or tuff. The rock consists of quartz, feldspar and lesser biotite crystals. There is no evidence of bedding or layering. The rock is weakly to moderately schistose / foliated at 40° ca.
		11.60 : 11.70	Very fine chloritic zone with associated very minor pyrite in a veinlet at 15° ca.
		19.00	Below 19.00m the core contains a fine grained orange-brown clayey mineral as disseminations, may be some form of carbonate spotting.
		20.40 : 20.60	Weakly silicified zone with carbonate (?) spotting prominent.
		21.00 : 21.05	Milky whole quartz vein at 70° ca.
		22.00 : 24.95	Below 22.00m the core is starting to contain very minor disseminated pyrite.
		24.95 : 25.80	Vuggy limonitic quartz vein with occasional coarse grained clots (to 5mm) of euhedral pyrite (pyritohedrons) in vugs.
		25.80 : 35.00	Below 25.80m the pyrite content increases very slightly.
		25.95	2mm quartz pyrite vein at 60° ca.
		28.00	0.5mm quartz pyrite veinlet at 45° ca.
		28.95	1mm quartz pyrite veinlet at 45° ca
		28.97	1mm quartz pyrite veinlet at 45° ca
		29.05	1mm quartz pyrite veinlet at 45° ca
		29.00 : 29.30	3% to 5% disseminated pyrite associated with a 1mm quartz pyrite veinlet at 15° ca.
		29.40	1mm quartz pyrite veinlet at 45° ca
		30.15	1mm quartz pyrite veinlet at 50° ca
		31.60 : 31.70	1% pyrite associated with fined quartz veining
		32.35 : 32.60	3 blebby discontinuous veinlets 2mm to 5mm thick at 60° ca.
		33.25 : 33.90	0.5% pyrite throughout as 7 fine veinlets (0.5mm thick) at 50° ca includes a distinctive siliceous band from 33.75m to 33.78 m with an olive green mineral.
		35.00 : 52.00	Below 35m the disseminated pyrite content decreases.
		35.80 : 36.00	1mm quartz pyrite veinlet parallel to core axis
		36.10 : 36.20	1mm quartz pyrite veinlet (as above)
		36.80 : 37.00	Four 0.5mm quartz pyrite veinlets, cross-cutting each other, at 50° to 70° ca, veinlets are parallel to foliation with one veinlet dipping steeply to the north-west
		37.20 : 37.30	1m quartz pyrite veinlet at 25° ca
		41.90 : 41.93	Very minor schistose zone at 60° ca with 2% pyrite in 2 veinlets
		42.20 : 42.30	1% pyrite in discontinuous 0.5mm veinlets at 50° ca
		46.25	0.5mm quartz pyrite discontinuous veinlet at 65° ca
		46.30 : 46.60	Minor pyrite associated with diffuse quartz veining to 2mm
		47.25	1mm quartz pyrite veinlet at 50° ca
		47.35	2mm quartz pyrite vein at 50° ca
		49.05	0.5mm quartz pyrite veinlet at 65° ca

CO-ORDINATES		CORE SIZE: NQ 1.00m to 16.50m BQ 16.50m to 52.00m	FINAL DEPTH: 52.00m	HOLE NUMBER: SPCS-1
AZIMUTH: 080° (TN)	INCLINATION: -54°		PRE-COLLAR: 1.00m	

FROM :	TO	INCLUDING	DETAILS
52.00		50.50 : 52.00 50.65 : 51.10 51.55 : 51.60	Below 50.50 the rock becomes slightly coarser grained (1mm quartz) 0.5% disseminated pyrite associated with two 1mm to 2mm pyrite veins at 35° (dipping at around 60° to the east) ca at 50.85m and 51.05m and a 0.55mm pyrite veinlet at 50° ca from 50.65 to 50.70 Minor disseminated pyrite centred on a weak 0.5mm pyrite veinlet at 45° ca E.O.H.

CO-ORDINATES: 5271260mN : 386735mE	CORE SIZE: NQ 0.70m to 11.10m BQ 11.10m to 53.35m	FINAL DEPTH: 53.35m	HOLE NUMBER:
AZIMUTH: 080° (TN)	INCLINATION: -50°	PRE-COLLAR: 0.70m	SPCS-2

FROM : TO	INCLUDING	DETAILS
0.00 : 0.70		Pre-collar
0.70 : 28.85		TUFFACEOUS SEDIMENTS / TUFF. Generally beige green, moderately foliated / schistose generally medium grained (1mm to 3mm) quartz, lesser biotite, sericitised feldspar volcanoclastic which is either a primary felsic tuff or submarine re-worked felsic tuff. The rock is relatively unaffected by the Qfhp with no induration at the contact.
	2.55	Limonitic fracture
	6.80 : 7.10	1% pyrite in 2mm veinlets at 60° to 70° ca.
	9.30 : 9.31	10mm siliceous band at 65° ca with 1% pyrite in fine anastomosing veinlets.
	9.40	1mm pyrite quartz veinlet
	9.50 : 9.60	2% pyrite as discontinuous blebby veins associated with quartz at 60° to 50° ca.
	10.30	Two 0.5mm veinlets at 70° ca.
	10.90 : 11.00	Broken core - minor fault.
	11.00	Below 11.00m the rock contains very minor disseminated pyrite with better zones as noted.
	12.58 : 12.62	0.5% disseminated pyrite associated with two 2mm clayey veins at 60° ca.
	14.25 : 14.30	Minor pyrite as disseminations and in clayey veinlets.
	15.00 : 15.40	0.5% pyrite as disseminated clots.
	15.40 : 15.75	1% pyrite as disseminated clots
	15.75 : 16.10	0.5% pyrite as disseminated clots.
	16.10 : 16.15	Fault, as crumbly broken core.
	16.15 : 16.25	Broken core associated with above fault.
	16.40 : 16.55	0.5% disseminated pyrite associated with 2mm quartz pyrite veins at 40° ca at 16.40m, 16.50m and 16.55m. The veins dip steeply to the south-east, cutting the foliation.
	17.00 : 17.75	Faults at 17.40m and 17.70m (crumbly pug) with associated broken core from 17.00m to 17.75m.
	18.30 : 18.95	0.5% disseminated pyrite associated with two 1mm quartz pyrite veinlets at 55° ca at 18.55m, a 4mm pyrite quartz vein at 50° ca at 18.67m and 2mm pyrite quartz veins at 55° at 18.72m and 18.95m.
	19.00 : 28.75	Below 19.00m to 28.75m the rock becomes more gritty (quartz 2mm to 3mm) with the cleavage more anastomosing around the quartz eyes. The core also becomes very weakly chloritic in zones.
	21.90 : 22.00	0.5% pyrite in 2 1mm veinlets at 60° ca.
	24.50 : 24.60	0.5% disseminated pyrite.
	25.60 : 26.20	Fault (dry pug) at 25.95m with associated broken core.
	27.10	2mm quartz pyrite vein at 20° ca cutting the cleavage, dipping steeply to south-south-west.
	28.70 : 28.85	The rock adjacent to the contact is relatively unaffected. The porphyry has apparently included a sliver of sediment adjacent to the contact. The contact is sharp and unsheared at 70° ca.
28.85 : 53.35		QUARTZ FELDSPAR BIOTITE PORPHYRY, Grey green, moderately chloritic, weakly schistose Qfhp.
	30.60 : 30.62	20mm later stage quartz chlorite vein at 20° ca, dipping at around 60° to the north.
	30.85 : 31.20	Diffuse later stage quartz chlorite vein / zone with very minor disseminated pyrite.

CO-ORDINATES		CORE SIZE: NQ 0.70m to 11.10m BQ 11.10m to 53.35m	FINAL DEPTH: 53.35m	HOLE NUMBER: SPCS-2
AZIMUTH: 080° (TN)	INCLINATION: -50°		PRE-COLLAR: 0.70m	

FROM :	TO	INCLUDING	DETAILS
53.35		31.50 : 31.90 32.60 : 32.70 32.70 : 32.90 33.20 : 33.30 35.10 : 35.15 35.20 : 35.23 35.50 : 35.85 37.65 : 38.55 39.90 : 40.10 41.10 : 41.12 51.75	Diffuse later-stage quartz chlorite vein. 2mm pyrite carbonate vein at 25° ca dipping steeply to the east. 20mm fibrous quartz chlorite vein at 15° ca dipping at around 30° to the east. 20mm fibrous quartz chlorite vein at 20° ca dipping shallowly to the east-north-east. Quartz chlorite vein. 25mm quartz tourmaline (?) vein at 40° ca. Silicified zone with no associated sulphides Fibrous quartz chlorite veins at 25° ca (with tourmaline ?) with a 10mm zone of minor disseminated pyrite at 38.55m. 3mm pyrite chlorite veins at 60° ca with associated blebs of chalcopyrite. 20mm chlorite vein at 40° ca cipping shallowly to the east. 2mm pyrite vein at 55° ca associated with strongly chloritic zones. E.O.H.

CO-ORDINATES: 5271265mN : 386770mE	CORE SIZE: NQ 1.15m to 9.50m BQ 9.50m to 50.25m	FINAL DEPTH: 50.25m	HOLE NUMBER: SPCS-3
AZIMUTH: 080° (TN)	INCLINATION: -48°	PRE-COLLAR: 1.15m	

FROM : TO	INCLUDING	DETAILS
0.00 : 1.15		Pre-collar
1.15 : 50.25		QUARTZ FELDSPAR BIOTITE PORPHYRY. Pale grey green. Generally weakly to moderately chloritic Qfpb which is generally weakly schistose but with occasional more schistose zones predominantly from 1.15m to 7.10m. Two minor faults cut the core. A number of fine pyrite veinlets are noted.
	3.00 : 3.25	Strongly puggy minor fault
	4.90 : 5.10	Puggy minor fault
	5.45	2mm thick pyrite chlorite vein at 70° ca.
	6.70 : 7.10	Strongly chloritic zone with a 2mm thick chloritic pyrite vein at 70° ca at 6.70m and minor disseminated pyrite at 7.05m.
	7.10 : 7.40	Almost pure chlorite as part of a fibrous chlorite quartz vein.
	12.35 : 12.45	Fibrous quartz-chlorite vein
	13.60 : 13.70	Fibrous quartz-chlorite vein
	15.60 : 17.20	Fault. Core is very broken with core loss (1m lost over 1.5m).
	18.65 : 18.80	20mm thick quartz chlorite pyrite vein at 20° ca with 15% pyrite in the vein.
	21.50 : 21.60	Zone with secondary foliation shallower to the core axis.
	22.50 : 22.60	Zone with secondary foliation shallower to the core axis.
	23.60	1mm pyrite veinlet at 20° ca dipping steeply to the north-west.
	23.80 : 23.95	Fibrous quartz-chlorite vein.
	25.55	15mm quartz-chlorite-pyrite vein with 15% pyrite at 45° ca.
	28.20	3mm quartz-chlorite-pyrite vein at 25° ca dipping steeply to the north-west.
	29.85 : 30.05	A 1mm quartz-chlorite pyrite vein at 10° ca is apparently cross-cut by a 2mm to 5mm chlorite-pyrite vein at 70° ca.
	31.95	3mm quartz-pyrite (coarse grained and cubic) at 20° ca with weakly silicified selvages.
	35.55	10mm chlorite-pyrite zone, with 5% pyrite at 45° ca dipping steeply to the north-east.
	36.65	0.5mm chlorite-pyrite-quartz vein at 55° ca.
	37.95	0.55mm chlorite-pyrite-quartz at 70° ca.
	42.35 : 42.38	30mm chloritic zone with two 2mm thick discontinuous pyrite veinlets at 50° ca.
	42.80	0.5mm pyrite veinlet at 40° ca.
	46.60	2mm chlorite-pyrite veinlet at 40° ca.
	46.60 : 46.90	Strongly chloritic zone with 0.5% pyrite as disseminations and discontinuous veinlets.
	47.40 : 47.60	2mm pyrite veinlet at 15° ca dipping around 30° to the east.
	50.05	2mm pyrite veinlet at 50° ca.
50.25		E.O.H.

CO-ORDINATES: 5271270mN : 386803mE		CORE SIZE: NQ 0.65m to 16.70m BQ 16.70m to 52.56m	FINAL DEPTH: 52.56m	HOLE NUMBER: SPCS-4
AZIMUTH: 080° (TN)	INCLINATION: -51°		PRE-COLLAR: 0.65m	

FROM :	TO	INCLUDING	DETAILS
0.00	: 0.65		QUARTZ FELDSPAR BIOTITE PORPHYRY. Pale grey green, weak to moderately chloritic, weakly foliated / schistose (at 50° to 60° ca) Qfbp. Rock contains cross-cutting fibrous quartz - chlorite veins and chlorite zones but no sulphides were noted.
0.65	: 7.70		
		1.00 : 1.02	Chloritic zone at 30° ca.
		1.95 : 1.97	Chloritic zone at 60° ca.
		2.30 : 2.40	Fibrous quartz-chlorite vein at 30° ca
		2.50 : 2.60	Fibrous quartz-chlorite vein at 40° ca.
		2.90 : 3.00	Chloritic zone at 65° ca.
		3.80 : 3.90	Limonitic fracture at 0° to 30° ca.
7.70	: 9.25		QUARTZ FELDSPAR BIOTITE PORPHYRY Moderately chloritic and foliated / schistose (at 65° ca) Qfbp.
		8.30 : 8.80	Fine chlorite-quartz veinlet at 65° ca.
9.25	: 12.90		QUARTZ FELDSPAR BIOTITE PORPHYRY. Less chloritic and schistose / foliated Qfbp.
		9.40 : 9.43	Quartz vein at 70° with very fine limonitic selvages
		10.00 : 10.40	Secondary foliation at 0° to 10°ca.
12.90	: 15.15		QUARTZ FELDSPAR BIOTITE PORPHYRY / FAULT. Strongly schistose (60°) and chloritic Qfbp as seldge to the fault from 14.00 to 14.25m. Core contains a number of chloritic pyritic zones as noted
		14.00 : 14.25	Puggy fault.
		14.50 : 14.55	1% pyrite in veinlets
		14.75 : 14.80	1% pyrite in 1mm veinlets at 60° ca.
		14.90 : 15.10	1% pyrite in four discontinuous veinlets at 55° to 65° ca.
15.15	: 18.95		QUARTZ FELDSPAR BIOTITE PORPHYRY. Moderately chloritic, moderately schistose / foliated (55° ca) with only very minor disseminated pyrite.
		17.20 : 18.95	Secondary foliation at 0° ca, dipping 50° to the east.
18.95	: 24.60		QUARTZ FELDSPAR BIOTITE PORPHYRY. Weak to moderately schistose / foliated and chloritic Qfbp.
		20.75 : 20.85	Secondary foliation.
		24.00	1mm pyrite veinlet at 70° ca.
24.60	: 40.65		QUARTZ FELDSPAR BIOTITE PORPHYRY. Qfbp with a number of more chloritic and moderately schistose zones. A number of pyritic zones are noted.

CO-ORDINATES		CORE SIZE: NQ 0.65m to 16.70m BQ 16.70m to 52.56m	FINAL DEPTH: 52.56m	HOLE NUMBER: SPCS-4
AZIMUTH: 080° (TN)	INCLINATION: -51°		PRE-COLLAR: 0.65m	

FROM :	TO	INCLUDING	DETAILS
	24.60	24.90	Strongly chloritic zone.
	26.20	26.30	2mm pyrite chlorite vein at 30° ca. plus two 1mm pyrite veinlets at 50° ca
	27.65	27.67	Strongly chloritic zone in broken core with 10% pyrite in disseminations.
	27.00		Mottled quartz chlorite zone
	28.08	28.15	Mottled quartz chlorite zone with three 1mm pyrite veinlets at 65° ca.
	28.75	28.90	15% pyrite in a strongly chloritic zone with pyrite in clots to 5mm diameter.
	28.90	29.30	Chloritic zone with 2% pyrite in fine veinlets at 70° ca, and in disseminations from 28.90m to 29.05m and in a 4mm zone at 15° ca from 29.05m to 29.15m.
	29.30	29.90	Strongly schistose zone.
	30.00		2mm pyrite veinlet at 70° ca.
	30.45	31.65	Carbonate (siderite?) breccia infilling / alteration and minor fuchsite, minor disseminated pyrite occurs in a strongly foliated (60° ca) zone from 30.45m to 30.60m.
	31.65	31.75	Puggy minor fault
	32.25		5mm chlorite pyrite vein at 50° ca.
	36.15		1mm pyrite veinlet at 70° ca with some associated sericite alteration.
	36.55	37.10	Strongly chlorite altered zone with 5% pyrite as disseminated clots to 5mm, from 36.70m to 36.75m and 2% pyrite in four veinlets at 55° to 70° from 36.75 to 37.00m.
	38.70	39.25	Moderately to strongly chloritic zone with 1% to 2% throughout with 5% pyrite as disseminated clots from 38.73m to 38.75 and in four 2mm veinlets from 38.75m to 39.25m.
	39.60	39.80	Secondary foliation dipping 50° to the east.
	40.20	40.65	0.5% pyrite throughout in a irregular veinlet, sub-parallel to the core axis.
40.65	52.56		QUARTZ FELDSPAR BIOTITE PORPHYRY. Qfhp but now consistently moderately to strongly schistose and chloritic. A number of pyritic zones are noted.
	42.00		2mm pyrite vein at 65° ca
	42.15		2mm pyrite vein at 55° ca
	42.75		1mm pyrite chlorite veinlet at 20° ca, dipping steeply to the north-east, with 10mm siliceous selvages.
	44.35		1mm pyrite veinlet at 65° ca
	45.15	45.35	Strongly chloritic zone with 1% pyrite in two veinlets at 50° ca and a single veinlet at 10° ca
	46.35	46.55	Moderately to strongly chloritic zone with 0.5 pyrite as fine disseminations in irregular veinlets at 60° ca.
52.56			EOH

CO-ORDINATES: 5271275mN : 386833mE		CORE SIZE: NQ 0.80m to 18.70m BQ 18.70m to 50.60m	FINAL DEPTH: 50.60m	HOLE NUMBER: SPCS-5
AZIMUTH: 080° (TN)	INCLINATION: -51.4°		PRE-COLLAR: 0.80m	

FROM :	TO	INCLUDING	DETAILS
0.00	: 0.80		Pre-collar
0.80	: 5.70		QUARTZ FELDSPAR BIOTITE PORPHYRY. Generally pale orange/brown weakly to moderately weathered and limonitic Qfbp. The rock is only weakly foliated / schistose and contains limonitic fractures which may or may not be after pyritic veinlets.
		1.90 : 2.50	Chloritic zone with a limonitic fracture running parallel to the core axis.
		2.60	Limonitic fracture at 60° ca with chloritic selvage.
		3.15	Limonitic fracture at 80° ca.
		3.80	Limonitic fracture at 80° ca.
		4.55	Limonitic fracture at 50° ca.
		4.80	Limonitic fracture (after 1mm pyrite veinlet?) at 55° ca.
		5.05	Limonitic fracture at 55° ca.
		5.20	Limonitic fracture at 55° ca.
		5.25 : 5.40	Strongly chloritic zone with three fresh pyritic veinlets (1-2mm thick) at 60° ca.
		5.45	Limonitic veinlet at 50° ca.
5.70	: 7.70		QUARTZ FELDSPAR BIOTITE PORPHYRY. A weak to moderately chloritic, weakly foliated / schistose Qfbp. Two chloritic pyritic zones are noted.
		6.00 : 6.02	20mm thick strongly chloritic zone with 1% pyrite. Zone is at 45° ca.
		6.10 : 6.35	Strongly chloritic zone with 0.5% pyrite in irregular veinlets sub parallel to the core axis.
		7.30 : 7.32	Strongly chloritic zone at 60° ca with no associated pyrite.
		7.50 : 7.52	Strongly chloritic zone around a limonitic veinlet at 50° ca.
7.70	: 9.05		QUARTZ FELDSPAR BIOTITE PORPHYRY. Moderately limonitic zone associated with three quartz veins. No fresh sulphides but some limonite noted.
		7.80 : 7.90	Irregular / vuggy / quartz vein cutting foliation.
		8.00 : 8.03	25mm quartz vein at 60° ca.
		8.40 : 8.43	25m quartz vein at 30° ca with minor limonitic clots in the vein probably after pyrite.
9.05	: 13.75		QUARTZ FELDSPAR BIOTITE PORPHYRY. Moderately foliated / schistose. Qfbp with occasional disseminated / veinlet pyrite as noted.
		9.20 : 9.30	Strongly chloritic zone.
		10.15 : 11.30	Strongly chloritic zone with two 0.5mm pyrite veinlets, cross-cutting, one at 65° ca and the other at 15° ca.
		11.40 : 12.10	
		11.80 : 11.85	Two 1mm pyrite veinlet at 0° ca., one steep to the north-north-east, the other shallow to the east.
		12.00	Two 1mm pyrite veinlet at 20° ca. (Steep to east and steep to north-north-west) and 1mm pyrite veinlet at 50 ca.

CO-ORDINATES		CORE SIZE: NQ 0.80m to 18.70m BQ 18.70m to 50.60m	FINAL DEPTH: 50.60m	HOLE NUMBER: SPCS-5
AZIMUTH: 080° (TN)	INCLINATION: -51.4°		PRE-COLLAR: 0.80m	

FROM : TO	INCLUDING	DETAILS
13.75 : 22.90		QUARTZ FELDSPAR BIOTITE PORPHYRY. Moderately, occasionally more strongly foliated / schistose, increasingly so downhole towards the faults from 22.90m to 23.85m. Contains strongly chlorite altered zones and a number of fine pyritic veinlets as noted.
	13.75 : 14.20	Limonitic zone as selvedge to a minor puggy fault at 14.05m.
	14.40	1mm pyrite veinlet at 60° ca.
	16.60 : 16.70	Secondary foliation defined by fine sericitic layers at 30° ca.
	17.00 : 17.10	10mm thick chlorite zone/vein with 25% pyrite, at 10° - 15° ca.
	17.20	1mm chlorite pyrite veinlet at 20° ca.
	18.10	2mm chlorite-pyrite veinlet at 60° ca.
	18.50	1mm chlorite-pyrite vein at 35° ca, steep to north-north-east.
	18.75	1mm chlorite-quartz-pyrite vein at 25° ca.
	19.20 : 19.60	Strongly chloritic zone with 0.5% pyrite as disseminations and in veinlets at 45° and 25° ca.
	19.95 : 20.05	2mm pyrite veinlet at 20° ca.
	20.45 : 20.55	1mm pyrite veinlet at 15° ca dipping steeply to north-north-east.
	20.65 : 20.80	Strongly chloritic zone with 2% pyrite in three 2mm veins at 55° ca. Zone is a selvedge to the quartz vein.
	20.80 : 20.90	Quartz vein at 25° ca.
	21.00 : 21.90	2mm pyrite vein runs down centre of core dipping steeply to the north-north-west.
	22.50 : 22.60	Quartz chlorite vein at 50° ca.
22.90 : 23.85		FAULT. Two puggy faults separated by a zone of broken Qfbp in the middle. No sulphides or quartz veining within this fault zone.
23.85 : 28.10		QUARTZ FELDSPAR BIOTITE PORPHYRY. Weak to moderately chloritic, weakly schistose. Qfbp with one pyrite vein noted.
	26.35	Irregular 2mm pyrite vein at approximately 30° ca, dipping steeply to the west-north-west.
28.10 : 31.30		QUARTZ FELDSPAR BIOTITE PORPHYRY. Generally moderately foliated / schistose throughout with occasional more strongly schistose zones. The foliation / cleavage is at 50° ca.
	28.40	3mm pyrite vein at 60° ca.
	29.75 : 30.35	Schistose zone with mm pyrite vein at 45° ca at 29.75m, a 1mm vein at 50° ca at 30.00m and two veinlets at 40° ca at 30.05m and 30.20m.
	30.85	1mm pyrite veinlet at 45° ca
	30.95	1mm pyrite veinlet at 45° ca
	31.20	3mm chlorite pyrite vein at 55° ca
31.30 : 50.60		QUARTZ FELDSPAR BIOTITE PORPHYRY. Generally only weakly schistose / foliated Qfbp. Moderately chloritic to 37.50m, weakly chloritic between 37.50m and 46.85m, moderately chloritic below 46.85m.
	36.85	2mm pyrite vein at 60° ca
	37.05	2mm pyrite vein at 60° ca

CO-ORDINATES		CORE SIZE: NQ 0.80m to 18.70m BQ 18.70m to 50.60m	FINAL DEPTH: 50.60m	HOLE NUMBER: SPCS-5
AZIMUTH: 080° (TN)	INCLINATION: -51.4°		PRE-COLLAR: 0.80m	

FROM :	TO	INCLUDING	DETAILS
		37.15 : 37.25	Strongly chloritic zone with 2% pyrite in irregular veins to 50° and 0° to the core axis.
		37.40 : 37.50	Strongly chloritic zone with 5% pyrite in veins at 55° ca.
		37.65 : 37.75	5mm chlorite pyrite vein at 45° ca.
		37.80	Chloritic pug zone at 45° ca.
		38.20 : 38.80	Minor carbonate breccia infilling.
		39.20 : 39.70	30mm fibrous quartz chlorite vein & parallel to core axis.
		40.05 : 40.15	Strongly schistose zone.
		45.40	15mm thick pyrite vein at 55° ca, the vein dips steeply to the south-west.
		46.35	5mm puggy zone at 45° ca.
		47.25 : 47.65	Puggy zones in broken core at 65° ca.
		48.45 : 48.50	Strongly chloritic zone with 3mm pyrite vein at 40° ca.
		49.20	1mm pyrite veinlet at 55° ca.
50.60			E.O.H.

CO-ORDINATES: 5271280mN : 386863mE		CORE SIZE: NQ 1.10m to 14.50m BQ 14.50m to 33.75m	FINAL DEPTH: 33.75m	HOLE NUMBER: SPCS-6
AZIMUTH: 080° (TN)	INCLINATION: -58°		PRE-COLLAR: 1.10m	

FROM :	TO	INCLUDING	DETAILS
0.00	: 1.10		Pre-collar
1.10	: 6.50		QUARTZ FELDSPAR BIOTITE PORPHYRY. Core consists of weakly to weathered Qfbp with some more strongly weathered zones associated with limonitic fractures (after pyrite?). The Qfbp is only weakly foliated / schistose and variably weakly to moderately chloritic. There are no fresh sulphides.
		1.10 : 1.50	Occasional fibrous late stage quartz-chlorite veins.
		1.85	Moderately chloritic zone with a 1mm quartz-chlorite veinlet at 50° ca.
		2.20 : 3.20	Strongly limonitic zone with limonitic fractures at 2.25m, 2.35m, 2.65m and 2.80m at angles of 50° to 60° ca. Fractures are not obviously after pyrite.
		3.60	Limonitic fracture at 40° ca.
		3.85	Limonitic fracture at 40° ca.
		4.60	Minor pug zone, 2mm thick.
		4.60 : 4.90	Moderately foliated / schistose zone, at 55° ca, with limonitic fractures at 4.65m and 4.90m at 25° to 30° ca.
		5.30	Leached veinlet at 35° ca.
6.50	: 13.50		QUARTZ FELDSPAR BIOTITE PORPHYRY. Fresh pale grey green Qfbp. The rock is only weakly chloritic and is weakly foliated / schistose becoming more moderately schistose down-hole. No sulphidic veinlets were noted.
13.50	: 29.65		QUARTZ FELDSPAR BIOTITE PORPHYRY. Generally darker green Qfbp due to moderately strong, occasionally strong chlorite alteration. The rock is quite strongly schistose in parts, particularly down hole towards the underlying fault. Schistosity is at 45° to 50° ca. Occasional pyritic veinlets are noted below.
		13.50 : 13.60	Minor puggy fault.
		13.90 : 16.10	A number of fibrous quartz-chlorite veins up to 50mm thick cross-cut the core as late stage veins. No sulphides are associated with these.
		19.50 : 19.80	5mm thick chlorite-pyrite vein/zone at 10° ca, dipping moderately to the north-east.
		20.30 : 20.40	2% pyrite in a quartz-chlorite-sericite vein/zone
		21.05 : 21.08	Minor puggy fault at 45° ca.
		27.70 : 27.71	Minor puggy fault
		28.05 : 28.06	Minor puggy fault
		28.65 : 28.66	Minor puggy fault
		29.65 : 29.75	Puggy fault
		29.75 : 30.85	Strongly schistose Qfbp.
30.85	: 32.05		MAJOR PUGGY FAULT. Very clayey zone.
32.05	: 33.75		QUARTZ FELDSPAR BIOTITE PORPHYRY. Strongly schistose and chloritic Qfbp with no sulphides.
33.75			EOH

APPENDIX E
DRILL CORE ASSAYS
- ANALABS

767063



Analabs

Analabs Pty. Ltd.

A.C.N. 004 591 664

Phone (004) 316837

14 Thirkell St. CBD EE TAS 7320

Fax (004) 318890

ANALYTICAL REPORT No.

101210.60.10962

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

INVOICE TO:

Mr G Macdonald
Anglo Australian Resources N.L.
Mangana Road
FINGAL TAS 7214

ORDER No.

PROJECT

G MACDONALD

DATE RECEIVED

RESULTS REQUIRED

26/05/95

ASAP

No. OF PAGES
OF RESULTS

DATE
REPORTED

No.
OF COPIES

TOTAL No.
OF SAMPLES

2

14/06/95

1

31

SAMPLE NUMBERS

SAMPLE DESCRIPTION

ELEMENT/METHOD

Various

RO Prep : BP033

Au, Au(R), Au(S) / 66309

RESULTS
TO

Mr G Macdonald
Anglo Australian Resources N.L.
Mangana Road
FINGAL TAS 7214

RESULTS
TO

RESULTS
TO

REMARKS

AUTHORISED OFFICER



ANALYTICAL DATA

SAMPLE PREFIX

REPORT No.

REPORT DATE

CLIENT ORDER No.

PAGE

101210.60.10962

14/06/95

G MACDONALD

1 OF 2

	SAMPLE No.	Au	Au (R)	Au (S)					
METHOD		GG309	GG309	GG309					
1	1 - 1	0.008	-	-					
2	1 - 2	0.012	-	<0.008					
3	1 - 3	<0.008	-	-					
4	1 - 4	<0.008	-	-					
5	1 - 5	<0.008	-	-					
6	2 - 1	<0.008	-	-					
7	2 - 2	<0.008	-	-					
8	2 - 3	0.082	-	-					
9	2 - 4	<0.008	-	-					
10	2 - 5	<0.008	-	-					
11	3 - 1	<0.008	-	-					
12	3 - 2	<0.008	<0.008	-					
13	3 - 3	0.009	-	-					
14	3 - 4	<0.008	-	-					
15	3 - 5	<0.008	-	-					
16	3 - 6	<0.008	-	-					
17	4 - 1	<0.008	-	-					
18	4 - 2	<0.008	-	-					
19	4 - 3	0.013	-	-					
20	4 - 4	0.009	-	-					
21	4 - 5	0.010	-	-					
22	4 - 6	0.013	<0.008	-					
23	4 - 7	0.011	-	-					
24	5 - 1	<0.008	-	-					
25	5 - 2	0.026	-	-					



ANALYTICAL DATA

SAMPLE PREFIX

REPORT No.

REPORT DATE

CLIENT ORDER No.

PAGE

101210.60.10962

14/06/95

G MACDONALD

2 OF 2

	SAMPLE No.	Au	Au (R)	Au (S)					
METHOD		GG309	GG309	GG309					
1	5 - 3	<0.008	-	-					
2	5 - 4	<0.008	-	-					
3	5 - 5	<0.008	-	-					
4	5 - 6	0.013	-	-					
5	6 - 1	<0.008	-	<0.008					
6	6 - 2	<0.008	-	-					
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24	DETECTION	0.008	0.008	0.008					
25	UNITS	ppm	ppm	ppm					

APPENDIX F
THIN SECTION DESCRIPTIONS

Dr Tony Crawford

SUMMARY DESCRIPTION:

These two samples are essentially identical petrographically, the only significant difference being that PG6 is more strongly bleached and weathered than PG7. Both are quite strongly altered crystal vitric tuffs. Phenocryst detritus includes quartz, albitized plagioclase and altered biotite and hornblende. Quartz phenocrysts (4-5 modal%) occur mainly as crystal fragments that are mostly angular, and usually <1mm across, although some are as large as 3mm. They contain occasional devitrified melt inclusions. Plagioclase phenocrysts are rather more abundant than quartz, and are partially sericitized albite crystals usually less than 2mm long that vary from entire, euhedral crystals to quite angular crystal fragments. Former biotite crystals (<<1 modal%) show typical forms and are replaced by pleochroic chlorite and not uncommon tiny Fe- or FeTi oxides. A few similarly altered more stout crystals may have been primary hornblende phenocrysts. The groundmass of these samples was probably vitric ash, although recrystallization and alteration has obliterated the primary textural details. It now consists of a patchy and heterogeneous intergrowth of fine-grained quartz and sericitized plagioclase, with abundant streaks of sericite and dispersed fine-grained chlorite. The broken nature of the quartz and plagioclase phenocrysts and their distribution in both thin sections suggest that these rocks were crystal vitric tuffs. The alteration assemblage is sericite-chlorite-silica, and the alteration, although of only moderate intensity, is of local hydrothermal origin rather than regional burial metamorphism.

SAMPLE NUMBER: ML 1
SUMMARY DESCRIPTION:

This sample is a strongly altered chloritic apparently fragmental lava breccia in hand specimen, with some angular fragments reaching almost 1cm across. However, in thin section, the apparent fragments are quite clearly all petrographically the same, suggesting that the rock is a autoclastic lava breccia. Phenocrysts include dominant albitized plagioclase (~10 modal%), which are up to 2mm across, usually riddled with chlorite replacing melt inclusion networks through crystals, and usually euhedral. Multi-crystal clots of small albite crystals are common. Less common are untwinned small feldspar pheno-crysts that may be Kspar. Quartz phenocrysts (<<1 modal%) are small (<<1mm across on average) and mostly resorbed. Occasional small mafic phenocryst were mainly biotite, and have been replaced by chlorite; several more stout chloritized crystals may have been hornblende. The groundmass of this rock is clearly arranged into angular domains, often separated by small veinlets and microshears, and each neighbouring domain shows different textural and alteration details. The rock was undoubtedly largely glassy, and autoclastic eruption exploded the flow/plug margin, producing a meshwork of interconnected fractures along which small fragments partially disaggregated and rotated. Main textural differences between fragments are due to the varying grainsize of the quartzose intergrowth replacing glass, plus the varying intensity of the chlorite alteration that is a significant feature of this rock. Sericite is a subordinate alteration mineral, and tiny oxidized pyrite trails are not uncommon.

SAMPLE NUMBER: ML18
SUMMARY DESCRIPTION:

This sample is a strongly silica-sericite-altered felsic tuff or volcaniclastic sandstone. Mainly angular quartz phenocryst fragments (~10 modal%) to 4mm across are strongly strained and often internally subgrain recrystallized. Originally rather less abundant than quartz, former feldspar phenocrysts have been totally replaced by sericite, and often slightly stretched and flattened. Intense sericite alteration has obliterated any former mafic phenocrysts if there were, in fact, any mafic phenocrysts originally in this rock. The groundmass is altered to a mainly fine-grained variably textured quartzose material pervaded by fine-grained sericite and tiny discontinuous quartz veinlets. I suggest that this was another crystal vitric tuff derived from rhyolitic volcanism; the intense silica-sericite alteration is of hydrothermal origin, but the sample lacks any disseminated sulphides.

SAMPLE NUMBER: ML22**SUMMARY DESCRIPTION:**

This sample is a foliated, intensely silica-sericite-altered felsic metavolcanic rock, probably a fragmental. In many respects, the protolith of this rock may have been very close to the preceding sample. This rock now consists of about 20-30 modal% of angular and broken quartz phenocryst crystal debris set in a remarkably variable texturally groundmass. Former feldspar phenocrysts have been thoroughly sericitized, and most are barely evident due to the intense sericite alteration of the groundmass. The groundmass texture varies from coarsely sugary quartzose intergrowths, to more mosaic-textured intergrowths with interstitial sericite. Bands and streaks of sericite define a moderate foliation in this sample, and the groundmass textures indicate that it was almost certainly originally glassy. The sample has suffered intense sericite-silica alteration in a moderate strain zone (fault zone), and volume loss accompanying foliation development may have contributed to the apparently more abundant quartz in this sample than the otherwise similar sample ML18; these samples could well be from the same lithostratigraphic unit.

SAMPLE NUMBER: ML27 and ML29**SUMMARY DESCRIPTION:**

These almost identical samples are strongly silica-altered and strongly foliated quartz-sericite schists with little trace of the protolith remaining. Both consist of foliated, quite coarse-grained quartz intergrowths with minor interstitial sericite. In places, the quartz coarsens even more to stretched strained masses, some with almost ribbon textures, that are probably recrystallized deformed quartz phenocrysts. The intense silica alteration of both samples has destroyed any original feldspar crystal sites, and all trace of groundmass. These rocks are disrupted by small faults, so that textural domains of contrasting grain size and schistosity are juxtaposed, and diffuse probably recrystallized quartz veins transect the sample. The rocks have almost certainly undergone a crack-seal history of silicification in a fault zone, and my best bet is that they were derived from a hydrothermally-altered (silica-sericite) quartz (+plagioclase?)-phyric felsic volcanics or fragmental rocks similar to the preceding samples.

SAMPLE NUMBER: ML32**SUMMARY DESCRIPTION:**

This sample is very similar to PG 6 and PG 7 in many respects, and was probably originally a crystal vitric tuff of rhyolitic composition. Broken and angular, mainly small (<1mm across) quartz phenocryst fragments are common (10-15 modal%), and bigger grains are strained and show some subgrain recrystallization. Probably slightly less abundant, former feldspar phenocrysts mainly <1mm long are totally replaced by fine-grained sericite. A few former biotite crystal sites are also obvious, with the biotite now replaced by fine-grained opaques. The groundmass of this rock was probably dominated by vitric ash. It is now a mainly fine-grained quartzose integrowth, coarsening in places, and variably veined by a meshwork of sericite. Unlike the other samples, this rock contains minor but significant amounts of very fine-grained hematite dispersed in diffuse patches throughout the sample. Again, this rock is hydrothermally altered, with a moderate silica-sericite overprint. It lacks the dynamic silica-dominated recrystallization that characterizes the two preceding samples, so presumably recrystallized and altered away from the fault zone responsible for those strongly foliated rocks.

APPENDIX G

HUMINEX SOIL SAMPLE RESULTS

Dr Bill Baker

Mineral Resources Tasmania



TASMANIA
DEVELOPMENT
AND RESOURCES

INDUSTRY SAFETY AND MINES — LABORATORY SERVICES
ANALYTICAL RESULTS SHEET

Anglo Australian - Huminex Analysis - 25g Samples

MRT Reg. No.	Client No.	Humic Recovery (ml)	Lab.DOC mg/L	Total DOC gm	AAS/GF Au (ng)	Humic A (ng)	Sample Au (ppb)	Au : C (ng/g)
950768	NH 1	42	15.082	0.1885	0.492	469	18.7	2488
950769	NH 2	44	15.910	0.1989	0.050	45	1.8	226
950770	NH 3	46	13.186	0.1648	0.047	41	1.6	249
950771	NH 4	44	12.771	0.1596	0.032	29	1.2	182
950772	NH 5	35	20.171	0.2521	0.033	38	1.5	151
950773	NH 6	43	14.378	0.1797	0.094	87	3.5	484
950774	NH 7	39	17.807	0.2226	0.270	277	11.1	1244
950775	NH 8	45	14.994	0.1874	0.220	196	7.8	1046
950776	NH 9	46	12.170	0.1521	0.366	318	12.7	2091
950777	NH 10	45	6.431	0.0804	0.086	76	3.1	945
950778	NH 11	46	11.783	0.1473	0.125	109	4.3	740
950779	NH 12	44	10.412	0.1302	0.080	73	2.9	561
950780	NH 13	46	10.776	0.1347	0.115	100	4.0	742
950781	NH 14	45	14.097	0.1762	0.324	288	11.5	1635
950782	NH 15	43	17.548	0.2194	0.510	474	19.0	2160
950783	NH 16	41	21.574	0.2697	0.676	660	26.4	2447
950784	NH 17	41	21.073	0.2634	0.060	59	2.3	224
950785	NH 18	44	17.547	0.2193	0.116	105	4.2	479
950786	NH 19	47	13.277	0.1660	0.055	47	1.9	283
950787	NH 20	44	12.178	0.1522	0.071	65	2.6	427
950788	NH 21	40	25.296	0.3162	0.087	87	3.5	275
950789	NH 22	39	21.728	0.2716	0.018	18	0.7	66
950790	NH 23	44	21.419	0.2677	0.041	37	1.5	138
950791	NH 24	46	13.754	0.1719	0.026	23	0.9	134

W. E. Baker

W. E. Baker
Manager Laboratory Services