988001

ANNUAL REPORT
1/10/92 TO 25/9/93

EL 3/92 - THIRKELL HILL, TASMANIA

Joint Venture Partners: Anglo Australian Resources N.L. - Manager
Mac Mining N.L.

Compiled by: P.A. McNeil - Exploration and Management Consultants Pty Ltd,
Lot 15 La Grange Road
Stoneville, WA, 6081

Date: July, 1993

SUMMARY

EL 3/92 - Thirkell Hill is located in (central) western Tasmania south of Birch Inlet. The tenement is a joint venture between Anglo Australian Resources NL and Mac Mining NL. Exploration targets are volcanic hosted massive sulphide (VHMS) and structural gold deposits.

Mac Mining completed a data review of past exploration associated with the tenement, and this work was continued and enhanced by Anglo Australian Resources. An exploration program consisting of C-Horizon auger sampling (229 collected) was undertaken in April/early May 1993, to help further define soil and C-horizon anomalies that were documented by Geopeko and Union Oil. This program was successful and most of the areas tested returned anomalous lead and base metal results. Several zones were enhanced by the geochemical sampling and the eastern and southern parts of the Condor River Zone (Viking 22 - 900N) were advanced to the scout drilling stage.

An evaluation of the gold potential in the EL was undertaken because of the near absolute paucity of existing information regarding this commodity. Pan Concentrate sampling was completed at 35 different sites, with catchements ranging in size from ≈ 0.4 to 6km² and averaging ≈ 1km².

Free gold was noted in pan concentrate in 5 samples, 13 returned anomalous results (≥ ≈ 4μg total contained Au or ≈ 8 times background) and 11 were > 10μg gold. Results are reported as total contained gold in each sample (expressed in micrograms [μg] because this is a far more objective measure than results expressed in g/t Au which is dependent on the panned sample weight).

The EL 3/92 area has been shown to be significantly gold anomalous (in drainages) and blanket concentrate sampling of the entire EL at a high sample density (≈ 1/0.5km²) is proposed. Further work is strongly warranted on the Viking 22 - 900N anomaly and scout drilling is suggested. A concerted exploration effort is advocated to test and document known areas of basemetal anomalism and advance them to drill status. The Thirkell Hill tenement is the most under explored section of Mount Read Volcanics in Tasmania: no drilling has been completed and the potential for locating high value/tonne VHMS and/or gold deposits is excellent.

TABLE OF CONTENTS

APPENDICIES

A(i) Plans

1. Geology of The D'Aguilar Range Area (South Sheet) 1:10,000. (*After Geological Survey of Tasmania).
2. Geology of The D'Aguilar Range Area (North Sheet) 1:10,000. (*After Geological Survey of Tasmania).
3. Reconnaiassance Geophysics of The D'Aguilar Range Area (South Sheet) - 1:10,000.
4. Reconnaiassance Geophysics of The D'Aguilar Range Area (North Sheet) - 1:10,000.
5. Compiled Geochemistry of the D'Aguilar Range Area - Lead Profiles (South Sheet) - 1:10,000.
6. Compiled Geochemistry of the D'Aguilar Range Area - Lead Profiles (North Sheet) - 1:10,000.
7. Compiled Geochemistry of the D'Aguilar Range Area - Zinc Profiles (South Sheet) - 1:10,000.
8. Compiled Geochemistry of the D'Aguilar Range Area - Zinc Profiles (North Sheet) - 1:10,000.

A(ii)

9. Compiled Geochemistry of the D'Aguilar Range Area - Copper Profiles (South Sheet) - 1:10,000.
10. Compiled Geochemistry of the D'Aguilar Range Area - Copper Profiles (North Sheet) - 1:10,000.
11. 1993 Pan Concentrate (Au) Sampling, Sample Locations and Drainage Divides (South Sheet) - 1:10,000.
12. 1993 Pan Concentrate (Au) Sampling, Sample Locations and Drainage Divides (North Sheet) - 1:10,000.
13. Proposed Pan Concentrate (Au) Sampling, Sample Locations and Drainage Divides (South Sheet) - 1:10,000.
14. Proposed Pan Concentrate (Au) Sampling, Sample Locations and Drainage Divides (North Sheet) - 1:10,000.

B. Sample Information

1. C-Horizon Auger
2. Rock-Chip and Float

C. Assay Results

1. C-Horizon Auger Samples
2. Pan Concentrate (Gold) Samples
3. Rock-Chip and Float Samples

FIGURES

TABLES

1.0 INTRODUCTION

Exploration Licence 3/92 - Thirkell Hill (67 square kilometres) is located in southwest Tasmania, between Queenstown and Elliot Bay, approximately twenty kilometres from the coast (Figure 1). The exploration licence covers of some of the most prospective host rocks for volcanogenic massive sulphides in Australia. The license covers an 18 kilometre strike length. (~42 km²) of Mt.Read Volcanics.

E.L. 3/92 is a joint venture between Anglo Australian Resources N.L. (Manager - earning 80% equity) and Mac Mining N.L. (20% free carried interest to a bankable feasibility).

The area has received incomplete surface exploration (no drilling or comprehensive gold exploration / geochemical sampling had been undertaken) by previous explorers, however, numerous Pb/Zn/Cu geochemical anomalies within rhyolitic extrusives, intrusives and pyroclastics and quartz - feldspar porphyry intrusives have been outlined. In particular a zone some 9 kilometres in length and between 1 and 2 kilometres in width has been shown by soil and auger geochemistry to contain at least three separate horizons that contain high iron, probably pyrite, with associated lead, zinc, and copper. Some of these zones have given airborne E.M. and I.P. responses.

The northern one third of the area remains largely untested by detailed soil or auger sampling/geochemistry, although stream geochemistry and geologic mapping suggests that this part is equally as prospective as the southern area.

Exploration in the EL 3/92 area has historically been 'neglected', even though it is underlain by some of the most prospective host rocks for V.H.M.S. deposits in Australia. The reasons for this are as follows:

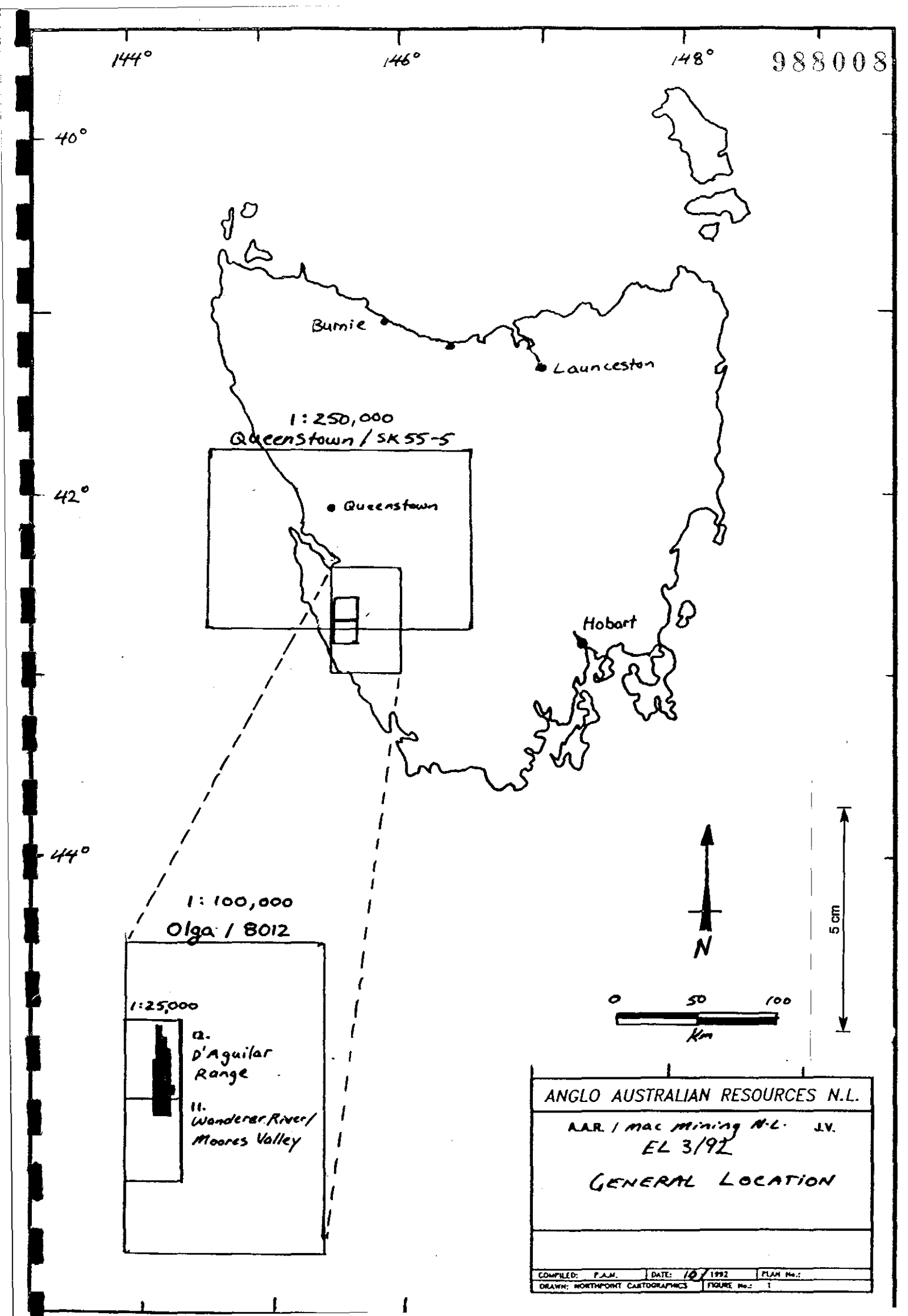
1. The location is relatively remote and exploration was serviced/supported by tracked vehicle from Birch Inlet (on Macquarie Harbour) or by helicopter from Hobart and/or Strathgordon.

2. The subdued topography significantly reduces the probability of outcropping mineralisation and thus being detected by prospectors.

3. Early exploration by Union Oil was initially followed up by Geopeko, however it was not strongly pursued after 1977 because of Geopeko's early technical successes and heavy involvement in the adjacent Elliott Bay area.

4. The area is within the S.W.Conservation area (as is Aberfoyle's Elliott Bay), and adjacent to the Franklin-Gordon River National Park. The "Greens" had a strong influence in Tasmania up until 1992 and companies were cautious about their involvement in Western Tasmania. The present government is highly supportive of exploration in this area.

988008



ANGLO AUSTRALIAN RESOURCES N.L.

A.A.R. / Mac Mining N.L. J.V.

EL 3/92

GENERAL LOCATION

COMPILED: P.A.M.	DATE: 10 / 1992	PLAN No.:	
DRAWN: NORTHPOINT CARTOGRAPHICS		FIGURE No.:	1

1.1 Licence Details

E.L. 3/92 was granted to Mac Mining N.L. on 1/10/92 and the term expires 25/9/93. The area was joint ventured to Anglo Australian Resources N.L. on the 25th of September, 1992. The required expenditure commitment for the first year is $13,400.

The license is centred at approximately 145°37'E/42°39'S and 386000mE/5278000mN (AMG) and the boundaries of the tenement are described as follows:

Commencing at the southwest corner at grid co-ordinates 384 000 metres E. 5 267 000 metres N. thence grid north to 5 278 000 metres N. grid east to 385 000 metres E. again grid north to 5 287 000 metres N. again grid east to 386 000 metres E. grid south to 5 286 000 metres N. again grid east to the Franklin-Lower Gordon Wild Rivers National Park boundary and by that boundary in a general south easterly direction to approximate grid co-ordinates 387 000 metres E. 5 284 400 metres N. again grid south to 5 282 000 metres N. again grid east to 388 000 metres E. again grid south to 5 274 000 metres N. again grid east to 389 000 metres E. again grid south to 5 272 000 metres N. grid west to 388 000 metres E. aforesaid again grid south to 5 267 000 metres N. aforesaid thence again grid west to the point of commencement (Figure 2).

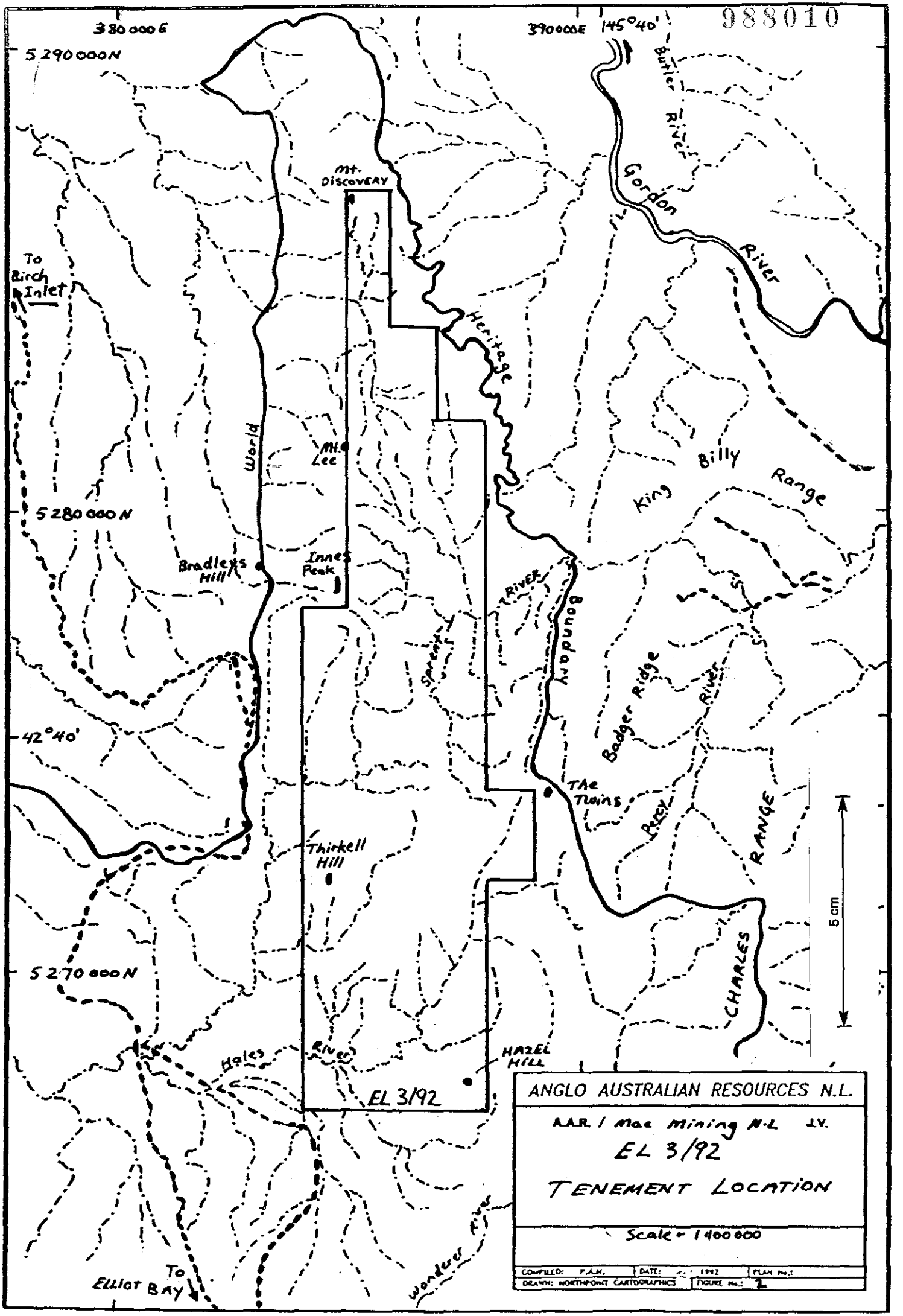
1.2 Topography

The Thirkell Hill area occupies a depression or flat bottomed valley, possibly of glacial origin, between mountains of Owen Conglomerate to the west and Precambrian rocks to the east. Most of the E.L. is covered by heath or scrub and access is relatively easy compared to other parts of the Mt.Read Volcanics north of the Gordon River. The topography within the valley is subdued and this reduces the probability of rock cropping out. Drainages are overgrown, sluggish and are likely to contain of humic material. Humic acid inhibits the formation of gossans and geochemical anomalies both in soils and stream sediments.

1.3 Access

Access for heavy equipment/supplies can be by tracked or four wheel drive vehicle from the head of Birch Inlet on Macquarie Harbour or by helicopter from Hobart and/or Strathgordon (40 kms east). An airstrip exists at Moores Valley and it is believed to be in a servicable condition. Bombardiers and 4 wheel (Quad) bikes have been used extensively in the past for transport within the E.L. boundaries.

988010



ANGLO AUSTRALIAN RESOURCES N.L.

A.A.R. / Mac Mining N.L J.V.

EL 3/92

TENEMENT LOCATION

Scale = 1:400 000

COMPILED: P.A.M.	DATE: .. 1992	PLAN No.:
DRAWN: NORTHPOINT CARTOGRAPHICS	FIGURE No.: 2	

1.4 Target Types

The Mt.Read Volcanics (Figure 3) are host to five major massive sulphide deposits (Mt.Lyell, Rosebery, Hercules, Que River and Hellyer), one major gold deposit (Henty) and many smaller deposits.
The target models for the Thirkell Hill area are well defined:

1. Polymetallic massive sulphides such as Rosebery/Hellyer with plus 20 Mt at 21% combined Pb+Zn, 160 g/t Ag and 3 g/t Au (Large et al, 1987).

2. Copper/gold deposits such as Lyell with plus 100 Mt (in several deposits) at 1.3% Cu and 0.4 g/t Au (Large et al, 1987).

3. Structurally controlled, high-grade gold deposits such as Henty with 500,000 plus tonnes at 30 to 50 g/t Au.

Significant base metal and gold mineralisation has been located to the south of Thirkell Hill in the Elliott Bay area. This area is presently being explored by Aberfoyle.

1.5 Summary of Previous Exploration

Australasian Minerals completed a Turair survey and reconnaissance sampling in 1973, however, most of the previous exploration was carried out by Union Oil Development Corporation (Union), and Geopeko Limited (Geopeko), between 1975 and 1981 [E.L. 9/74].

Union completed grid based soil and I.P.surveys (800m spaced lines) over the southern two thirds of the tenement, an airborne E.M.survey over the southern third of the tenement and reconnaissance sampling elsewhere during 1975. This work identified several anomalous Pb, Zn, Cu horizons within the volcanic sequence which appeared to be more or less continuous over strike lengths of 1 to 5 kms. Numerous other isolated I.P., EM., and geochemical anomalies were defined.

Union withdrew from Australia in 1975. The project was joint ventured with Geopeko and they completed one field seasons work in 1977 and a few weeks work in 1981. Geopeko (1977) confirmed the existence of the geochemically anomalous horizons utilizing auger holes (C-horizon samples) and briefly reviewed several of the prospects. At the conclusion of their program, Geopeko recommended numerous prospects for follow-up evaluation. In 1981, they flew a Dighem E.M. survey and completed semi-detailed ground exploration over two prospects. Extensive auger drilling on one prospect within the volcanics suggested the presence of two pyritic horizons with anomalous base metals.

Geopeko withdrew from Tasmania, as part of an exploration restructuring, without drill testing any of the targets. C.S.R. sampled 13 stream sites for gold in 1985. Thirteen BLEG [active stream sediments] and four pan concentrate samples were collected. All pan concentrate samples were gold anomalous (to 10 g/t). The bulk leach results from the 13 sites were all low. No other gold exploration had been undertaken.

Table 1: Summary of Exploration Completed.

COMPANY	AIRBORNE EM	STREAM SED. SAMPLES ANALYSED	SOIL SAMPLES ANALYSED	AUGER SAMPLES ANALYSED	ROCK SAMPLES ANALYSED	I.P. (kms)
AUSTRALASIAN MINERALS	TURAIR NORTHERN THIRD EL	-	~ 300	-	~ 50	-
UNION	GEOEX SOUTHERN THIRD EL	129	1260	-	42	21
GEOPEKO	DIGHEM ENTIRE EL	959	-	482	82	-
CSR	-	13	-	-	-	-

In addition, Union completed 31 kilometres of gridding and constructed an access track from Birch Inlet on Macquarie Harbour. Geopeko also completed extensive geological traversing, collected 736 rocks for "closer study", submitted 40 rocks for petrographic examination and completed ~16,000 metres of gridding with an unspecified amount of magnetic, VLF-EM and IP traversing.

2.0 REGIONAL GEOLOGY

2.1 General

Subsections 2.1.1 through 2.1.5 have been quoted under the same headings from Green, 1990. All his figure references have been deleted.

2.1.1 Mt Read Volcanics

The Mt Read Volcanics (named after Mount Read, 2 km east of the Hercules mine), are dominantly calc-alkaline volcanic and intrusive rocks ranging in composition from subordinate basalt and andesite to predominant dacite and rhyolite. They form an arcuate belt wrapping around the western and northern margins of the Tyennan region from Elliott Bay to near Deloraine (Figures 3 and 4). The age of the volcanics is poorly constrained, but they may be restricted to the Middle and Late Cambrian. The oldest fossils in the volcanics are of late Middle Cambrian age at Que River (Undillan) and at Mount Lyell (Boomerangian) where they occur in units underlain by the bulk of the local volcanic sequences (Gee, Jago and Quilty, 1970; Jago et al., 1972, Corbett, in Corbett and Solomon, 1989; Jago and Brown, in Brown, 1989). Minor felsic and mafic volcanics and intrusives occur within Late Cambrian to Early Ordovician siliciclastic sequences of the Denison Group (Owen Conglomerate and correlatives) which blanket, commonly unconformably, much of the eastern and northern flanks of the Mt Read Volcanics (Corbett, in Corbett and Solomon, 1989). On the western margin the volcanics either interfinger with, or are faulted against, fossiliferous sedimentary rocks of the Dundas Group and correlatives. No felsic volcanic detritus has been reported from the Crimson Creek Formation or from the oldest units of the Dundas Group, so it appears that the Mt Read Volcanics may be synchronous with the Dundas Group.

In central western Tasmania, the Mt Read Volcanics are bisected by a major NNE trending fault zone, the Henty Fault, which separates the belt into two different metallogenic and lithological segments. Although movement on the fault was considerable in the Devonian (Berry, 1989), a concentration of tholeiitic dykes in the vicinity of the fault SE of Mount Read strongly suggest it was an active structure in the Cambrian (Corbett and Lees, 1987).

988014

144°

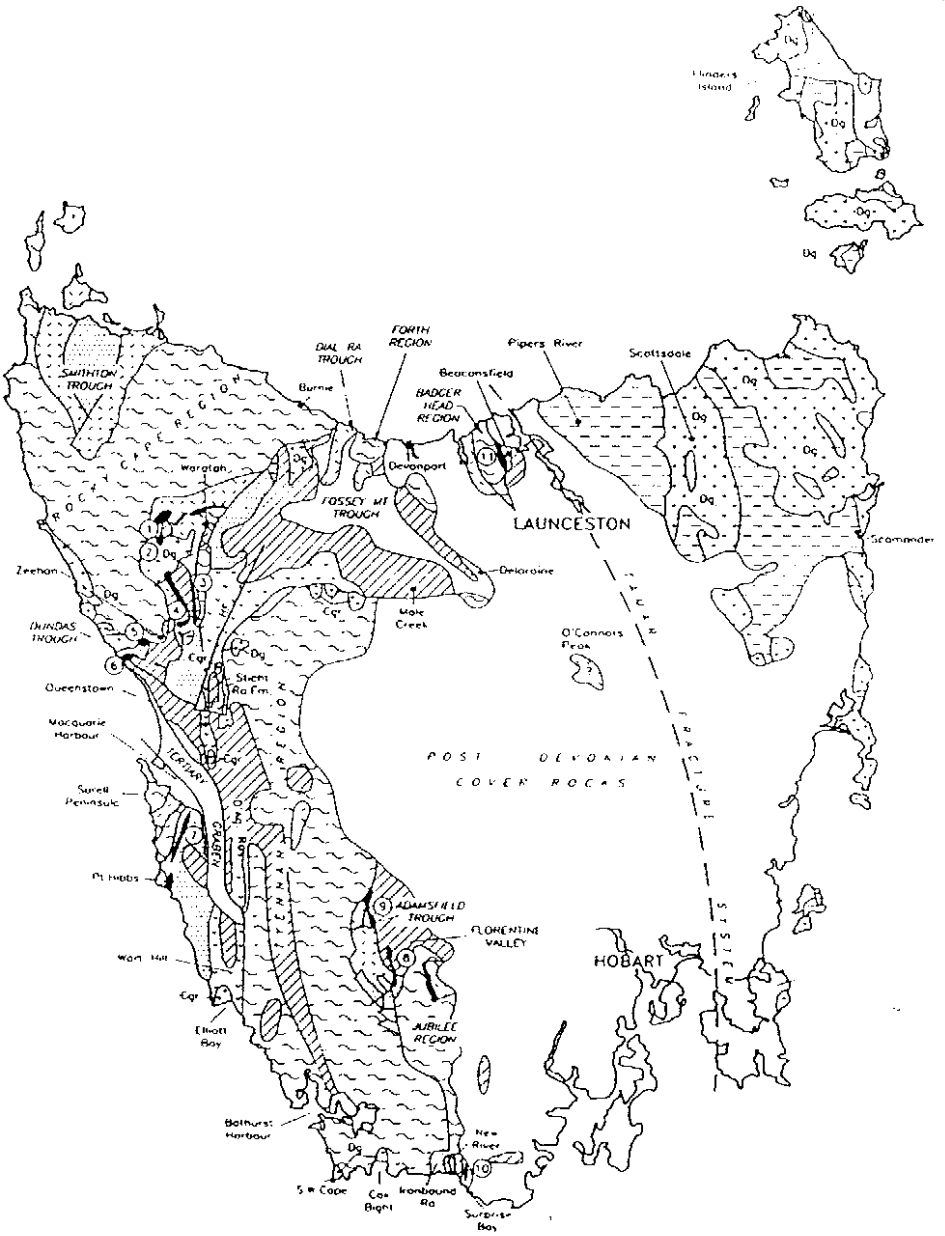
146°

148°

40°

42°

44°



N

0 50 100

5 cm

LEGEND

- Dg — Devonian granitoids
- Late Cambrian to Early Devonian Wurawina Supergroup
- Mathinna beds
- Middle to Late Cambrian volcano-sedimentary & sedimentary sequences and correlates
- €gr — Cambrian granite
- Ultramafic-mafic complexes
- Mt Read Volcanics
- Crimson Creek Fm, Success Creek Group, sequences of Waratah Cleveland area and correlates
- Precambrian
- Faults

ANGLO AUSTRALIAN RESOURCES N.L.

AAR / Mac Mining N.L J.V.

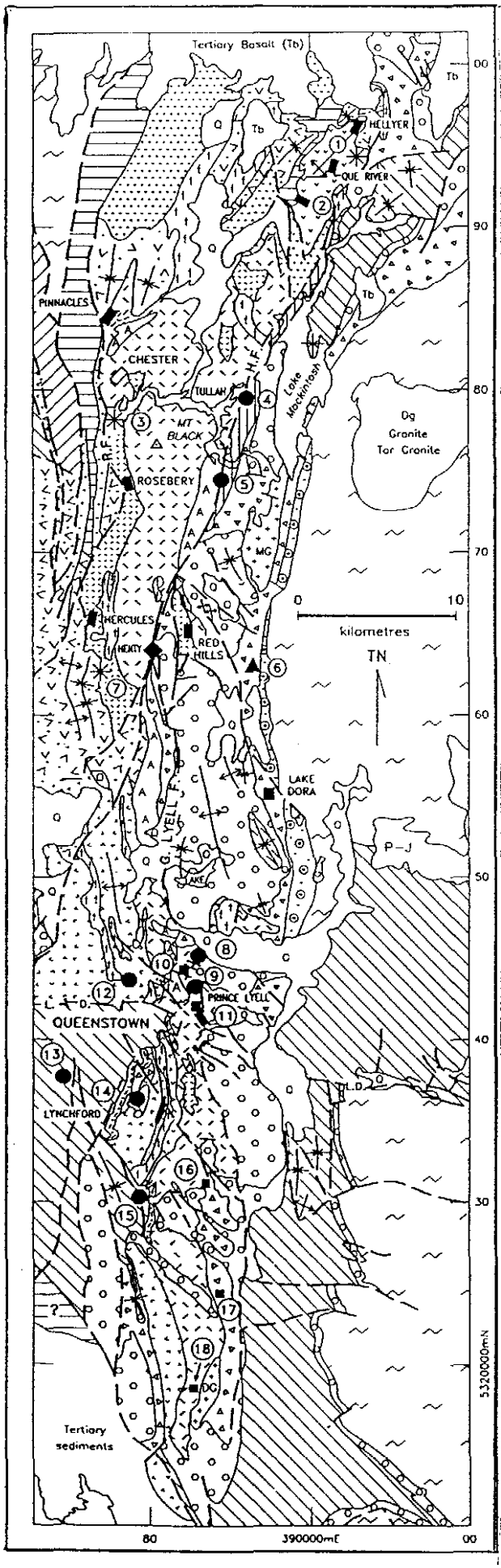
Tasmania -

GENERALISED GEOLOGY

(from Green, 1990)

COMPILED: P.A.M.	DATE: -.- 1992	PLAN No.:
DRAWN: NORTHPOINT CARTOGRAPHICS		FIGURE No.: 3

988015



LEGEND

Post Early Devonian
Q=Quaternary; Tb=Tertiary Basalt;
P–J=Permian–Jurassic; Dg=Devonian granite

LATE-CAMBRIAN - DEVONIAN

- Upper Wurawina Supergroup (Ord.–Early Dev.)
- Owen Conglomerate (Denison Group); / Upper Owen Conglomerate at Queenstown & Lynchford

MIDDLE-LATE CAMBRIAN

TYNDALL GROUP

- Felsic quartz porphyry; mostly intrusive
- Murchison Granite (MG)
- Farrell Slate
- Quartz-phyric volcanics; volcaniclastic sedimentary rocks
- Slicht Range Formation

DUNDAS GROUP

- Felsic quartz porphyry; mostly intrusive
- Quartz-rich turbidite sequences
- Mostly siltstone, lithicwacke, conglomerate
- Que-Hellyer Volcanics: andesite, basalt, dacite
- Epiclastic and tuffaceous sedimentary rocks, mudstone

CENTRAL VOLCANIC COMPLEX

- Felsic quartz porphyry; mostly intrusive
- Darwin Granite (DG)
- Andesite, intrusive and extrusive
- Mainly pyroclastic and epiclastic rocks
- Mainly feldspar-phyric volcanics

WESTERN VOLCANIC ASSOCIATION

- Felsic quartz porphyry; mostly intrusive
- Extrusive andesite
- Interbedded crystal and vitric tuff, shale, lithicwacke and quartz-phyric lavas and intrusives
- Quartz-rich turbidite-mudstone unit
- Miners Ridge tholeiitic basalt

MIDDLE CAMBRIAN

- Mafic–ultramafic complexes

?LATE PRECAMBRIAN - EARLY CAMBRIAN

- Crimson Creek Formation

LATE PRECAMBRIAN

- Mainly sandstone–mudstone and metamorphosed equivalents

MINERALISATION

- Mineral deposit: probably Devonian
- Disseminated and veinlet gold mineralisation
- Clastic sulphide deposit
- Disseminated pyritic deposit (low base metals)
- Disseminated copper–silver–gold pyritic deposit
- Essentially barren massive pyrite; strike given by orientation of symbol
- Massive Zn–Pb–Ag–Au–Cu massive sulphide, or massive barite (sulphide) deposit, strike given by orientation of symbol
- (7) Deposit number (see caption)

5 cm

ANGLO AUSTRALIAN RESOURCES N.L.

A.A.R. / Mac Mining N.L J.V.

Simplified Geology of Central-western Tasmania showing Mount Read Volcanics + Deposits (from Green, 1990)

COMPILED: P.A.M.	DATE: 10-/ 1992	PLAN No.:
DRAWN: NORTHPORT CARTOGRAPHICS	FIGURE No.: 4	

2.1.2 Mt Read Volcanics Southeast of the Henty Fault

Southeast of the Henty Fault the Mt Read Volcanics have been subdivided into three broad lithological units (Corbett, in Corbett and Solomon, 1989):

1. a western volcanic association of sediments, vitric-and crystal-rich volcaniclastics with andesite to dacitic intrusives,

2. a central volcanic complex (CVC) composed mainly of rhyolitic to dacitic lavas with a minor proportion of the fine grained sediments, and

3. a younger sequence of characteristic quartzphyric pyroclastics, lavas, intrusive porphyries and epiclastic sediments passing upward into volcaniclastic conglomerate and sandstone (the Tyndall Group).

The western volcanic association is a subaqueously deposited suite of quartz-feldspar crystal tuff, vitric tuff, mud-stone, shale and epiclastic breccia intruded by a number of sill-like bodies of quartz-feldspar-biotite porphyry, feldspar-pyroxene-quartz prophyry and hornblende-feldspar porphyry. In the Lynchford area, south of Queenstown, the lowest exposed unit is a distinctive low potash ophitic tholeiitic basalt, the Miners Ridge basalt (Corbett, in Corbett and Solomon, 1989), which differs from all other known rocks in the Mt Read Volcanics in that it is depleted in light rare earth elements (A.J. Crawford, personal communication, in Corbett and Solomon, 1989). It is similar geochemically to the low titanium basalts associated with the mafic-ultramafic complexes (Crawford and Berry, 1988). At the top of the sequence, at its western margin, a calc-alkaline basalt is overlain disconformably by the Tyndall Group. Northwest of Queenstown, the western association is faulted against Dundas Group correlatives along the eastern branch of the Henty Fault. On its eastern margin, the association is overlain by the CVC in the Lynchford area, but north of Queenstown (Corbett, in Corbett and Solomon, 1989).

No diagnostic fossils have been found in the western volcanic association, although on lithological grounds it is most similar to the Dundas Group. Mineralisation is minor: small auriferous quartz veins (e.g. King River, Harris Reward) and barite lodes (e.g. Madam Howard) have been worked in the past. These are probably of Devonian age. Similar gold vein deposits, such as Woody Hill, occur in clastic rocks as young as Early Devonian.

The CVC between Mount Darwin (about 20 km south of Queenstown) and Red Hills consists mainly of feldspar-phyric dacite and rhyodacite lavas, tuffs and agglomerates, with a significant proportion of andesitic tuffs, flows and intrusives in the Queenstown-Tyndall Range area. Clastic sedimentary rocks are comparatively rare and consist of shale, volcaniclastic breccia and sandstone. Distinctive phyric potash rich spherulitic rhyodacite lava occurs in the Mount Darwin area and at Red Hills. In the former area the volcanics are intruded by the Darwin Granite, a coarse grained biotite granite, clasts of which are incorporated into the unconformably overlying Tyndall Group (White, 1975; Corbett, 1981).

Apart from small zinc-lead-copper-silver-gold pyritic massive sulphide deposits at Red Hills and in the Lyell Comstock area, mineralisation in the CVC SE of the Henty Fault is copper dominated. At Mount Lyell (Hills, this publication) the dominant ore type is disseminated chalcopyrite-pyrite in chloritised rhyolite (e.g. Prince Lyell), although massive pyrite-chalcopyrite deposits (e.g. The Blow) have also been important producers. These styles of mineralisation are believed to be of Cambrian age (Markham, 1968; Reid, 1975; Walshe and Solomon, 1981), but bornite rich ores near the faulted contact with the Owen Conglomerate (e.g. North Lyell, Lyell Comstock) and bornite-chalcocite ores in the Gordon Limestone (e.g. Lyell Blocks) may be Devonian in age and may be products of leaching and reprecipitation of pre-existing Cambrian mineralisation (Solomon, Rafter and Jensen, 1969; Arnold and Fitzgerald, 1986; Solomon, Vokes and Walshe, 1987; Hills, this publication).

Numerous disseminated chalcopyrite deposits occur in chloritised felsic volcanics in the Jukes-Darwin area. At East Darwin, disseminated pyrite-chalcopyrite mineralisation occurs in quartz-sericite altered volcanics, and at Prince Darwin pyrite and chalcopyrite occur in stockwork magnetite-hematite veins. The majority of deposit are hosted by chloritised volcanics; at Jukes Proprietary mineralisation extends up into the Tyndall Group (White, 1975; Corbett and Solomon, 1989).

2.1.3 Tyndall Group and Underlying Siliciclastic Rocks

The Tyndall Group is most extensively developed between the CVC and the Tyennan region, but it also overlies the western volcanic association near Lynchford. Significant erosion preceded deposition of the Tyndall Group at Mount Darwin. In the Mount Lyell area, the bulk of hydrothermal alteration occurred before deposition of Boomeranngian (late Middle Cambrian) limestone at the base of the group (Green. 1971; Jago et al., 1972; Corbett et al., 1974).

To the west of the Tyennan region the Tyndall Group is underlain by the Sticht Range beds consisting of 1200 m of Precambrian- and felsic volcanic-derived conglomerate, sandstone and mudstone (Baillie, 1989). Correlatives of the Sticht Range beds extend NE of Queenstown discontinuously over 50 km to the north. Probable correlatives also exist to the south.

The Tyndall Group is laterally variable, but a common factor is the quartzphyric nature of the volcanics. Lavas, prophyritic intrusives, pyroclastics and volcaniclastic conglomerate and sandstone are the main rock types. Minor shale and vitric tuff are locally present (Corbett, in Corbett and Solomon, 1989). The groups intruded by biotite-hornblende grandiorite and adamellite dated at 524± 15 Myr by K-Ar (McDougall and Leggo, 1965; Adams et al., 1985) and by quartz-feldspar-biotite porphyry (McNeill, 1987; Corbett, in Corbett and Solomon, 1989). The volcanics are overlain conformably by the Farrell Slate which generally consists of highly sheared slate, greywacke, quartz-feldspar bearing tuff, vitric ash and minor lava (McNeill, 1986), although Berry (1989) regards the contact as faulted.

Mineralisation in the Tyndall Group is varied, but deposits are generally small. Copper and lead-silver vein deposits in the area east of the Farrell Slate are probably Devonian, but disseminated pyritic minor base metal mineralisation associated with altered granite and sericitised and chloritised volcanics in the Lake Serlin area (Gulson and Porritt, 1987) and NNW trending, structurally controlled dissemenated pyrrite-chalcopyrite deposits hosted by chloritised volcanics in the Lake Dora area are probably Cambrian in age.

The most significant deposit in the Tyndall Group is the Henty prospect, where gold mineralisation occurs over a strike length of 600m in pyritic schistose volcanics in the footwall of the Henty Fault. The mineralisation is mainly in narrow veins and massive pyrite (Little River Goldfields N.L., 1988). On the basis of lead isotope ratios, a Cambrian origin for some of the mineralisation is indicated, but a contribution from radiogenic lead from the country rock during Devonian plutonism or post-Cambrian metamorphism cannot be ruled out (Gulson and Porritt, 1987). Modelling of gravity data suggests that the top of the Devonian granite is some 6 km below the surface in the area (Leaman and Richardson, 1989), so significant input from granite derived fluids appears to be unlikely.

2.1.4 Areas South of Macquarie Harbour

In the D'Aguilar Range conglomerate, largely of Precambrian derivation with a minor volcaniclastic component, overlies Tyenannan basement. Succeeding quartzphyric rhyolite, tuff and intrusive porphyry are unconformably overlain by polymict conglomerate, sandstone, tuff and shale beneath the Owen Conglomerate (I.D. Martin, unpublished data, 1974). Further south in the Elliott Bay area, the Lewis River Volcanics comprise quartz-feldspar prophyry lavas, pyroclastic breccias and tuffs with horizons of siltstone, volcaniclastic sandstone. Precambrian-derived conglomerate and black shale, which face west and are succeeded, apparently conformably, by Pleasant Creek Formation mudstone, felsic epiclastic breccia and sandstone, and sedimentary breccia. In the same area the Lewis River volcanics are unconformably overlain by volcaniclastic conglomerate, sandstone and pyritic black shale which are succeeded by the Owen Conglomerate (Large, Herrmann and Corbett, 1987). Pre-kinematic biotite granite plutons intrusive into the Lewis River Volcanics are probable of Cambrian age (Mcdougall and Leggo, 1965). Mineralisation has been discovered at a number of localities, the most significant of which is at Wart Hill where small pods of zinc-lead-silver-gold rich massive sulphides occur (Large, Herrmann and Corbett, 1987).

Correlation of the rocks of the Elliott Bay and D'Aguilar Range areas is problematical; they are most probably equivalent to the Tyndall Group (Corbett, in Corbett and Solomon, 1989).

A belt of calc-alkaline quartz-feldsparphyric felsic volcanics and andesitic lava and breccia, locally intruded by diorite, the Noddy Creek Volcanics, occurs south of Macquarie Harbour (White, 1975; McClenaghan and Corbett, in Corbett and Solomon, 1989).

2.1.5 Volcanics West of the Henty Fault

To the NW of the Henty Fault an east facing sequence of pumice rich pyroclastic and epiclastic rocks, the Primrose Pyroclastics, is the oldest unit of the CVC. In the Rosebery area, the Primrose Pyroclastics consist of a lower felsophyric pumice rich pyroclastic unit, several hundred metres thick, overlain by siltstone which hosts the Rosebery orebody, black slate with horizons of epiclastic sandstone and rarer beds of Precambrian-derived graded sandstone, and an upper unit which is dominated by quartz-feldsparphyric, mass flow, epiclastic breccia with clasts and rafts of slate (Green, Solomon and Walshe, 1981). In the Bastvan Dam area 4 km north of Rosebery, the breccia contains outsize rafts of massive sulphide. The lowest unit, the footwall pyroclastics, is extensively altered in the Rosebery and Hercules mine areas to quartz-sericite-chlorite-pyrite assemblages which represent the feeder pipes to the overlying massive sulphide orebodies (Lees et al., this publication). Significant gold mineralisation has been defined 1 km south of Hercules (North Broken Hill Limited, 1987).

The Primrose Pyroclastics are overlain to the east by the lava dominated dacitic and andesitic Mount Black Volcanics which are truncated to the east by the Henty Fault. The Rosebery Fault thrusts the Primrose Pyroclastics over Dundas Group correlatives to the west, the lowest unit of which is the White Spur Formation. To the south of the Hercules mine, the White Spur Formation overlies the Primrose Pyroclastics with a transgressive, and in places erosional, contact and locally contains clasts of massive sulphides and altered volcanics at its base (Corbett and Lees, 1987).

North of the Bastyan Dam, there is an abrupt change in the style of volcanism which probably marks the northern margin of the Rosebery-Hercules volcanic centre. To the north, felsophyric lavas and tuffs host a lens of bedded pyritic chert and massive pyrite at the Chester mine which has been exploited as a source of sulphur. Further north again, an andesite body is overlain by a complex sequence of lavas, some of which are quartzphyric, shales, chert and tuff. Small lenses of zinc-lead-silver-gold rich massive sulphide and disseminated mineralisation, strongly disrupted by faults subsidiary to the adjacent Rosebery Fault, occur within the shales and cherts at The Pinnacles (Gregory, 1986; Corbett, in Corbett and solomon, 1989). To the north of Mount Block, felsophyric acid lavas and pyroclastics are folded into a broad anticline and are overlain by Dundas Group greywacke, vitric tuff and mudstone along a probable faulted unconformity, although elsewhere the contact is apparently unfaulted (Komyshan, 1986).

The sedimentary sequence underlies the Que-Hellyer Volcanics which consist of basaltic, andesitic and subordinate dacitic lavas and less frequent volcaniclastic rocks. The unit shows remarkable thickness variations, from 600 to 1000 m in the Que River area (Corbett, in Corbett and Solomon, 1989) to a few metres at 2.5 km NW of Hellyer (Vicary and Pemberton, 1988), a feature indicative of volcanism in an active tectonic environment, possibly a caldera setting. The Que River and Hellyer orebodies (McArthur and Dronseika, this publication) are located at the contact between lower altered andesite and overlying polymict volcaniclastics. Evidence for local fault control of mineralisation is present at both deposits (Mc Arthur, 1986; Large et al., 1988). Between Que River and Hellyer the volcaniclastic unit locally contains large clasts of massive sulphide. In the Hellyer area the volcaniclastic unit is ovelain by pillowed, hyaloclastic and sheet basalt flows (McArthur, 1986), which form the upper-most unit of the Que Hellyer Volcanics. The basalt passes conformably upward into the Que River shale with local development of peperite at the contact. The overlying quartzphyric epiclastic breccia, greywacke turbidite, shale and siltstone sequence is intruded by sill-like to slightly transgressive quartz-feldspar porphyry bodies (Komyshan, 1986). To the north this sequence includes major proportions of vitric tuff and pumiceous epiclastic tuff and breccia and is followed conformably by correlatives of the Tyndall Group (Vicary and Pemberton, 1988). To the west of the Que River area the upper units of the Dundas Group are predominantly siliciclastic and carbonate bearing (Collins, Gulline and Williams, 1981; Green, 1983).

2.2 Mt.Read Volcanics - South to North Correlation

The correlation of Mt.Read Volcanics in the Elliott Bay - Thirkell Hill area to subdivisions within the northern Mt.Read Volcanics is uncertain and controversial. Whether such correlations are meaningful in terms of prospectivity for mineral deposits is also controversial.

Large in Large et at (1987) noted

> correlation of the relatively simple sequence at Elliott Bay with the complex sequence in the Mt Darwin-Que River area is problematic and difficult to resolve with certainty. There seems little doubt that the Lewis River Volcanics represent a continuation of the Mt.Read Volcanic belt, since the rocks are petrologically similar and occupy the same geographic-stratigraphic position at the margin of the Tyennan Precambrian block and underlying the Owen Conglomerate.

In terms of correlation with the three main subdivisions of the northern part of the belt, Large and Wilson (1982) equated the Lewis River Volcanics with the central volcanic sequence, and the Waterloo Creek Group with the Tyndall Group. This was based on the fact that the centrally located Lewis River Volcanics are dominated by rhyolitic pyroclastics, lavas, subvolcanic intrusions, and granitoids broadly similar to those in the central volcanic sequence, whereas the Waterloo Creek Group consists of epiclastics and quartz porphyritic tuff unconformably overlying the central volcanic sequence in a manner similar to the Tyndall Group. However, the typical albite porphyritic rhyolites and dacites which dominate the central volcanic sequence in the Lyell-Murchison area do not appear to be present at Elliott Bay. Whether this is due to non development, burial by younger volcanics, or a facies change to quartz-feldspar porphyritic rocks is uncertain.

Corbett in Large et al (1987) favoured an alternative correlation and

equates the Lewis River Volcanics with the Tyndall Group exposed along the eastern margin of the belt in the vicinity of Mt.Murchison. Here, a basal conglomerate-sandstone-shale unit (Sticht Range Beds) sits unconformably on the Precambrian rocks (as is also the case near D'Aguiler Range) and passes up into sequence of quartz-feldspar porphyritic volcanics, intrusions, and volcaniclastic conglomerates. The sequence is intruded by the subvolcanic Murchison Granite of Cambrian age, which may be equivalent to the Low Rocky Point granite. Near its faulted western margin, the Murchison volcanic sequence passes gradationally into a unit of slate and volcanogenic sandstone (the Farrell slates), a sequence resembling the Pleasant Creek Formation. The sub-Owen Conglomerate sequences in both areas are also similar, beginning with a basal volcaniclastic unit (generally thicker and more sandstone rich at Elliott Bay), followed by a siltstone-sandstone unit (only locally present in the Murchison-Lyell area), and capped by the typical siliceous conglomerate.

Large in Large et al 1987 comments further

If this correlation of the Lewis River Volcanics with the Tyndall Group is correct, it provides further evidence that massive sulfide mineralisation has occurred in the younger part of the Mount Read Volcanic belt, originally thought to be relatively unmineralised.

Corbett (1992) revised his opinion and equated the Elliott Bay volcanics to the Eastern Sequence in the Mt.Murchison area. In this area the Eastern Sequence comprises a belt of mainly quartz feldspar porphyritic volcanic, intrusive and volcaniclastic beds overlying the Sticht Range Beds to the east and north of Mt.Murchison. He also equated the Waterloo Creek Group with the Tyndall Group.

McPhee and Allen (1992) recently concluded that the Tyndall Group rocks may be prospective for massive sulphides. This conclusion impacts on the Thirkell area as there are numerous airborne EM and geochemical anomalies within Tyndall Group correlates. McPhee and Allen (1992) state:

> sea floor hydrothermal systems responsible for the massive sulfide mineralisation in the Mount Read Volcanics operated in a variety of volcanic hosts and settings. In particular, the volcaniclastic facies associations that dominate the western volcano-sedimentary sequences and the Tyndall Group may be as prospective as the formations dominated by lavas (Central Volcanic Complex, Que-Hellyer Volcanics). In fact, such a volcaniclastic association hosts the Hercules and Rosebery massive sulfide deposits. These volcaniclastic associations also offer a means of eventually establishing correlations within the Mt.Read Volcanics that will constrain the relative ages of the known ore deposits. For example, correlation of the lower part of the Southwell Subgroup, the White Spur Formation, and the upper part of the Hercules-Rosebery volcaniclastic sequence would imply that the mineralisation at Hellyer is lower in the stratigraphic pile than that at Hercules-Rosebery. Existing understanding suggests the reverse.

Whether the above correlations have any significance in terms of the prospectivity of EL 3/92 is entirely conjectural, however, we do know that massive sulphides of similar composition to Rosebery and significant gold both occur south of Thirkell Hill in the Elliott Bay area.

The southern sections of the Mt.Read Volcanics may be as prospective as the northern belt and are likely to yield significant deposits with sustained exploration.

2.3 Comparison of Mt Read Volcanics to other Eastern Australian Areas

Large et al (1987) and Large (1987) compared VMS deposits from the Mt Read Volcanics in Tasmania with others throughout Eastern Australia, and the metal value of Tasmanian deposits with other deposits throughout Australia. Some of his figures are now a little out of date (Hellyer is larger and the Henty high grade gold deposit should be added) but his conclusions are still valid.

Large et al (1987) concluded

> Of the 42 known deposits (in Eastern Australia), 19 are in the Cambrian Mt.Read Volcanics of Tasmania: these make up 62% of the total tonnage. The major types of deposits in the Mt.Read Volcanics are: (1) lead-zinc-rich polymetallic (Pb,Zn,Cu,Ag & Au) ore deposits such as Rosebery, Hercules, Que River, and Hellyer and (2) copper rich massive and disseminated ore deposits such as Prince Lyell and North Lyell. The polymetallic ores average 21% combined Pb+Zn plus 160 g/t Ag and 3 g/t Au and the mean size is about 10 million tonnes; therefore they represent an extremely attractive exploration target.

Rosebery and Hellyer are (were) both about 20M tonnes.

Large (1987) also stated

> the Tasmanian deposits are generally the largest and certainly the richest of all Australian deposits. This is clearly shown in .... where the value/tonne of Tasmanian deposits is compared to other major mining districts in Australia. The reason that the Tasmanian ores have a higher in ground dollar/tonne value than ores from all other major districts is due to the fact that they are rich in five separate metals: lead, zinc, silver, gold and copper. On a global basis the Western Tasmanian Volcanic province ranks with the other top class volcanogenic massive provinces including the Abitibi (E.Canada), Bathurst (New Brunswick) and Scandinavian mineral provinces.

3.0 EL 3/92 GEOLOGY

The geology is described in some detail by McGregor Dawson (1975) and Strickland (1978) and is shown in Figures 5, 6 and 7. The Department of Mines published (1992) the geology of the area at 1:25 000 as the A'Aguilar Range and Moores Valley - Wanderer River map sheets.

The Lower-Middle Cambrian rocks within EL 3/92 are known as the Lucas Volcanics and are equivalent of the Mt.Read Volcanics to the north and the Lewis River Volcanics to the south. Essentially the Lucas Volcanics consists of a sequence of fine to coarse-grained porphyritic quartz-feldspar rhyolitic lavas, pyroclastics, volcaniclastic sediments, and a high-level intrusive coarse-grained rhyolitic porphyry.

The Proterozoic rocks to the east are undifferentiated quartzites, quartz-mica and tourmaline-quartz schist, silicified dolomites, graphitic schists and chlorite schists. The faulted contact between the Precambrian and the Cambrian volcanics is suggested to be a steep reverse fault with negligible horizontal movement.

On the western fringe of the Cambrian volcanics is the Owen Conglomerate and to the south the volcanic sequence is obscured by Tertiary graben fill sediments.

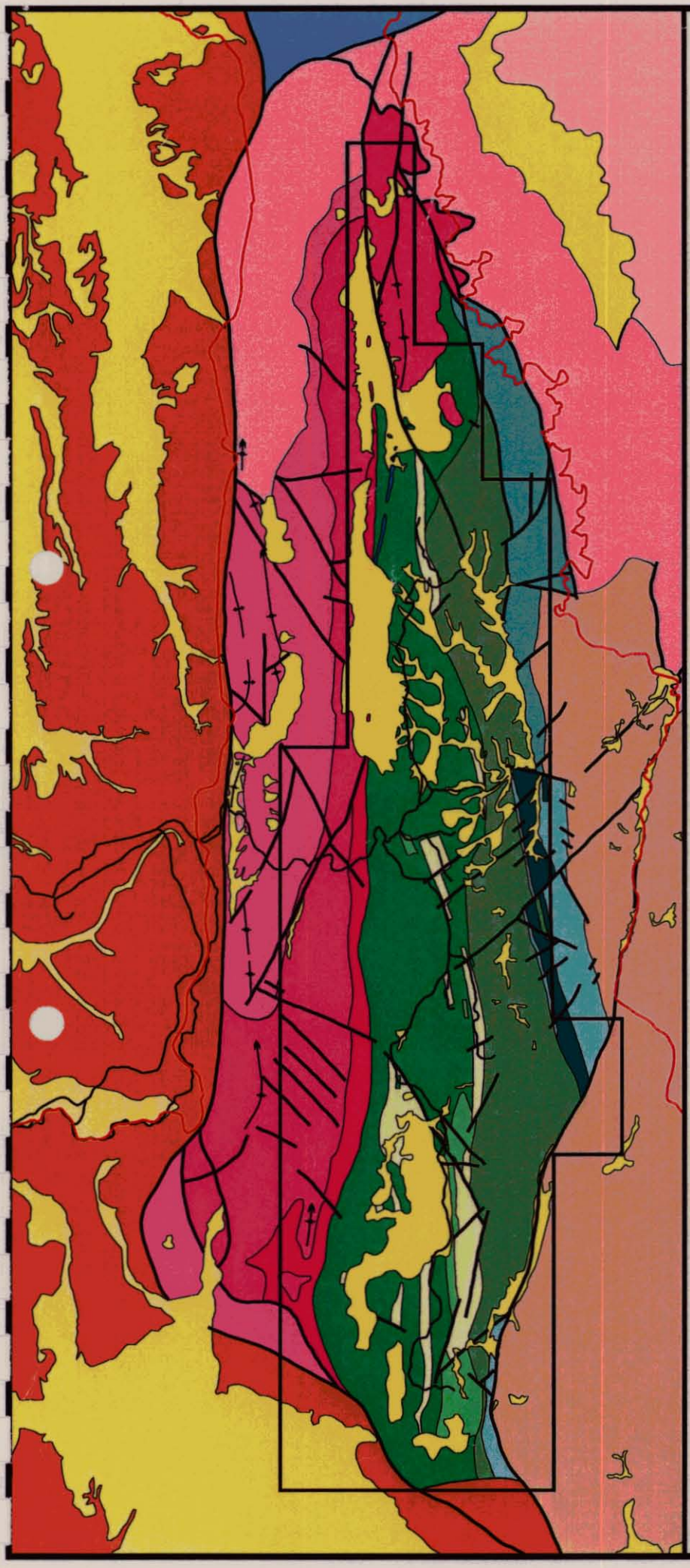
The Tasmanian Department of Mines, on the D'Aguilar Range map sheet, describes the main mass of volcanics which extend along the entire western side of the EL as dominantly cream to pink felsic lava (quartz feldspar $\pm$ biotite-phyric) with minor intercalated epiclastic rocks and lava breccias. To the east of these volcanics is an apparently intrusive unit described as coarse grained quartz-feldspar-biotite porphyry. This porphyry also extends the entire length of the EL but is much thicker at the northern end. It appears, in part, to have a distinctive magnetic character.

Underlying the above lava/intrusive is a sequence of siltstones, sandstone and shale that is partly siliclastic and partly volcaniclastic. Underlying that unit are poorly bedded to massive sandstones and granule-pebble conglomerate. Both these sedimentary units are considered to be correlates of the Sticht Range Beds.

Unconformably overlying the main volcanic sequence is the Waterloo Creek Group. This group consists of two members - a lower unit of mainly volcaniclastic conglomerate, siltstone and sandstone with some intercalated lavas and an upper unit of mainly pyritic black shale and siltstone that may grade upwards into micaceous siltstone and sandstone.

Little is known of the internal structure of the volcanics, although there appears to be a definite northerly structural trend. Intense shearing and cleavage has obliterated most bedding and facings.

988026



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

? EARLY ORDOVICIAN - ? LATE CAMBRIAN

- ? 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 volcaniclastic conglomerate and sandstone.

MT READ FELSIC TO INTERMEDIATE VOLCANICS

CAMBRIAN

- Cream to pink felsic lava with minor intercalated epiclastic rocks and lava breccias.
- Felsic volcaniclastic and epiclastic rocks.
- Siliciclastic breccia-conglomerate unit, with quartzite clasts.
- Quartz-feldspar-biotite-phyric lava and / or intrusive.
- Siliciclastic to volcaniclastic bedded siltstone, sandstone and shale.
- Siliciclastic sandstone and granule-pebble conglomerate.

CAMBRIAN INTRUSIVE ROCKS

- 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

0 1 2 3 4 5
kilometres

5 cm

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

E.L. 3/92 GEOLOGY

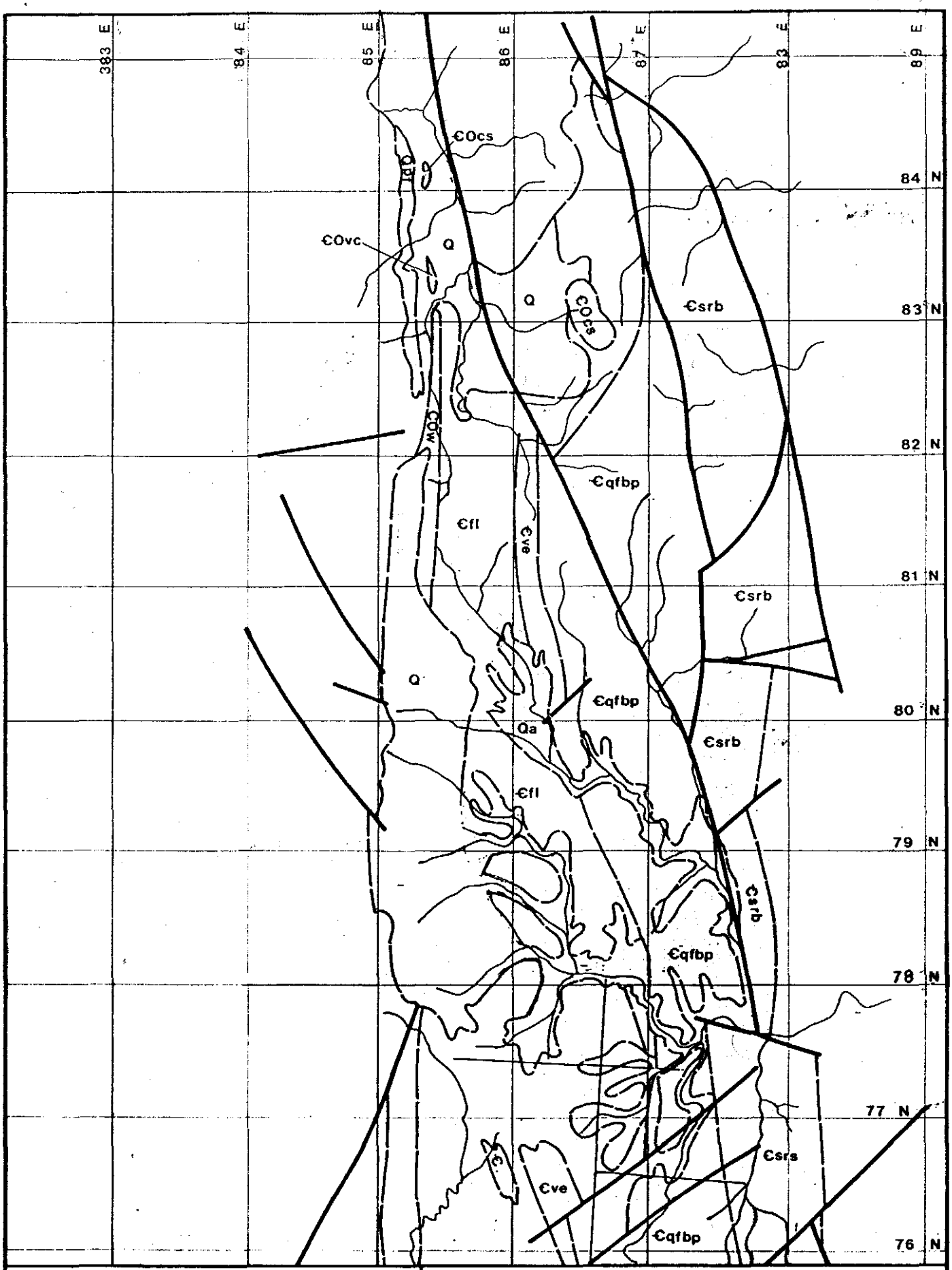
Date: OCTOBER 1992

Drawn: NORTHPOINT

After Bradbury et al and Vicary et al (1992)

Figure 5

988027



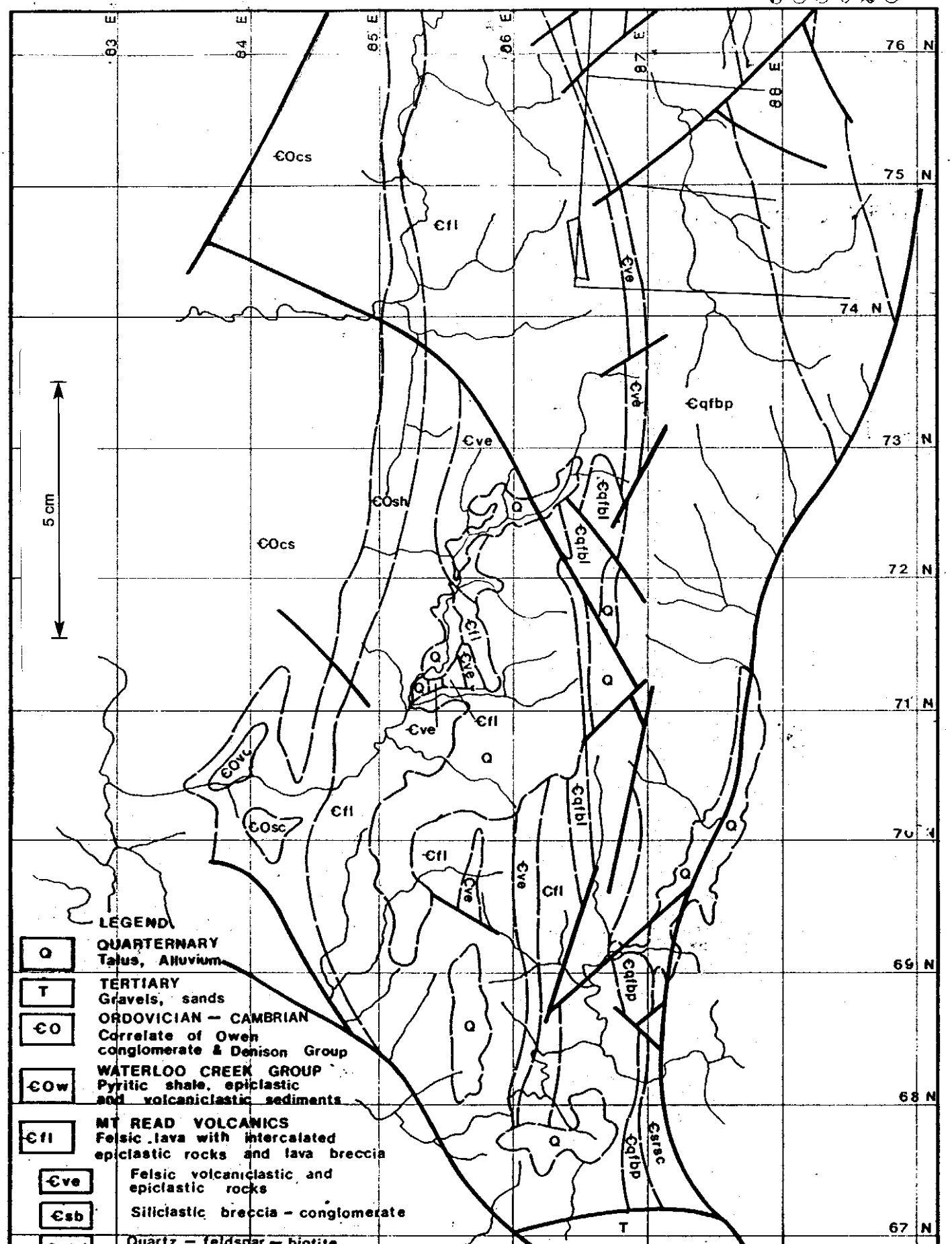
MACMINING N.L.

E.L. 3/92 THIRKELL HILL
PROSPECT ZONES
GEOLOGY - NORTH SHEET

Scale 1:40 000	Date Sept 92	Author R Mc N	MB

Figure 6

988028



MACMINING N.L.

E.L. 3/92 THIRKELL HILL
PROSPECT ZONES
GEOLOGY - SOUTH SHEET

Scale 1: 40 000	Date Sept 92	Author R Mc N	MB

* After Bradbury et al (1992) and Vicary et al. (1992).

Figure 7

4.0 PREVIOUS EXPLORATION

4.1 Australasian Minerals Inc. (Alcoa of U.S.A.) - 1973

* Widely spaced soil sample traverses, mapping and rock chip sampling.
* Scintrex Turair E.M. survey over the northern third of the volcanics.
* Details of the field program are not available (to the writer) but it appears doubtful that more than a few weeks were spent in the field.

4.2 Union Oil Development Corp. - Jan thru April 1975

* Construction of access track from Birch Inlet and cutting of numerous internal tracks.
* Approximately 31 line km of gridding on east-west lines spaced 800m apart over the central and southern parts of the volcanic belt.
* Geological traverse mapping of all grid lines, plus some mapping in other areas.
* Stream sediment sampling (129 samples collected), giving only partial coverage of the volcanic sequence.
* A 500m line was cut over a ridge containing anomalous rock chip samples in the northern part of the grid.
* A_1 (?) horizon sampling (at 10cm depths) on 25m intervals (1260 samples) on the main grid and 15m intervals (34 samples) on the short northern grid line (total 1294 samples).
* Rock chip sampling (42 samples collected).
* Gradient Array Induced Polarisation - total of 21 line km on grid lines between 12800N and 19200N (main southern grid).
* McPhar H-400 Airborne Electromagnetic/Magnetic survey over the southern third of the exposed Lucas Volcanics.

4.3 Geopeko - January thru March 1977

* Geological mapping at 1:10,000 scale.
* Petrographic description of 40 rock specimens.
* Analysis of 82 rock samples with significant chlorite/sericite alteration or sulphide mineralisation (for Cu, Pb, Zn, Ag, Mn, Cd, Fe, As and Sn).
* Analysis of 308 soil samples from 68 hand auger holes and 188 Jacro machine auger holes including:
  - auger holes at 50m centres on UODC grid lines 11200N, 14400M and 16000N for comparison with UODC A_1 horizon sampling.
  - auger holes at 25m centres on reconnaissance grids over Viking 1, 5 and 10 prospects.

* 14,750 metres of grid line cutting over selected prospects and airborne EM anomalies.
* Geophysical ground follow-up of (12) electromagetic anomalies defined by previous airborne surveys (SCINTREX-TURAIR [1973] and GEOEX-McPHAR H-400 [1975]) utilising the VLF-EM technique with some additional magnetic traversing and minor (V1, V10) Gradient Array IP survey.

4.4 Geopeko / Aquitaine - 3 Weeks in 1981

* Helicopter borne DIGHEM II electromagnetic/magnetic survey of the exposed Cambrian acid volcanic belt.
* Six day field visit (Lewis and Glasson) with brief ground inspection of eleven weak DIGHEM II anomalies.
* Detailed follow-up of Viking 22-10 Area including:
  - Hand auger "C-Horizon" sampling at 25m centres on lines 200m apart (analysed for Cu, Pb, Zn, Ag, Fe and Mn).
  - Ground magnetics.
  - Geological mapping at 1:2500 scale.
* Detailed follow-up of Viking 17 areas:
  - Hand auger "C-Horizon" geochemical sampling of 174 samples at 25m centres on lines 200m apart (analysed for Cu, Pb, Zn, Ag, Fe, Mn, W, Sn).
  - Ground magnetics.
  - 50m dipole-dipole IP on one line.
  - Geological mapping at 1:2500 scale.
* The planned use of Moving Source Turam as electromagnetic follow-up was ruled out because of equipment malfunction.

4.5 C.S.R. - 1985

Whilst encouraging results were emerging from exploration of Geopeko's EL27/76 (Elliott Bay), EL 9/74 was more or less shelved (by Geopeko) in anticipation that geological enlightenment and exploration clues would be derived from the work being undertaken in the analogous environment to the south.

In 1984, Geopeko underwent an exploration rationalisation and withdrew from active work in Tasmania. C.S.R. (Minerals Division) then examined the documented data and made a one day field visit to EL 9/74 and collected 13 drainage sediment samples that were analysed for gold and other metals.

4.6 Mac Mining N.L.

Mac Mining N.L acquired the tenement in September, 1992 and conducted a systematic data review and compilation. R.D. McNeil's Summary Report (1992) was recompiled and used as the basis of this report.

4.7 Summary of Previous Exploration

4.7.1 Geophysics

Significant surveys were carried out as follows:

February, 1973	-	Scintrex Turair survey for Australasian Minerals over the northern third of the area.
March, 1975	-	Union Oil IP Survey - 21 line km over the southern half of the area
April, 1975	-	Geoex M-400 EM survey for Union over the southern third of the area
February, 1977	-	Geopeko VLF-EM, some ground magnetics and IP over various prospects
December, 1980	-	Dighem II survey for Geopeko over the entire EL

The results of these surveys are described in Appendix 3 by Salisbury (Union Oil) and Strickland (Geopeko). In general, they defined numerous low order anomalies but few "high quality" conductors or anomalies. Where the surveys coincide, in some cases they support each other (co-incident anomalies), but in many instances anomalies recorded by one survey were not noted by the other. The VLF-EM was plagued by equipment failures and produced little in the way of useable data.

Union's gradient array IP defined 22 chargeability highs, but many may be lithologically derived. A zone of higher conductivity (lower resistivity) was defined by the IP survey within the Conder River West Zone from Union line 136N to 168N, in approximately the same position as the soil/auger geochemical anomalies. Good magnetic coverage resulted from the Dighem and 1975 EM surveys, but to date little use has been made of this data.

Two magnetic features dominate the EL. The main anomalous zone trends northerly from 5273000N (to the north end of the EL). It is mainly confined to the zone of intrusive coarse grained quartz-feldspar-biotite porphyry, except at the northern end of the EL where it's intensity increases and it transgresses the main volcanics to trend under the Owen Conglomerate. The magnetic feature terminates towards the south at 5273000N, even though the quartz-feldspar-porphyry intrusive appears to be continuous to the southern boundary of the EL (it terminates where the more or less flat valley passes into the deeply eroded Hale River catchment).

The D'Aguilar North Zone, Vikings 3 and 4, and part of the D'Aguilar South Zone are within this magnetic feature. An explanation for this magnetic zone and its' southern termination at 5273000N is not obvious from the mapped geology. Indeed it would suggest that the mapping is incorrect at the southern end of the EL.

The second main magnetic feature extends along or near the western side of the EL from 5268000N to 5271000N. There is no immediate explanation for this magnetic feature from the known geology, however, it extends south-wards beyond the southern boundary of volcanics beneath Tertiary gravels. It is not known if this indicates that the mapping is suspect or if the gravels are perhaps quite thin.

Other less continuous and less intense magnetic features occur mainly in the southern half of the EL. Further evaluation of these features may assist exploration.

The lack of strong EM and IP anomalies is disappointing but according to Large et al (1987) VMS deposits in Tasmania tend to have weak IP responses and no EM response and thus does not preclude the presence of a massive sulphide deposit.

4.7.2 Geochemistry

Significant geochemical surveys were carried out as follows:

- 1973 - Reconnaissance soil and rock chip sampling by Australasian Minerals.
- 1975 - 129 stream sediment, 1294 soil samples (A_1 horizon), and 42 rock samples by Union Oil.
- 1977 - 82 rock chip samples, 959 stream sediments, 308 auger samples (hand and Jacro auger holes) by Geopeko.
- 1981 - 174 auger samples (hand auger) by Geopeko.
- 1985 - 13 stream sediment samples by C.S.R. (for gold).

Geochemical responses in Western Tasmania tend to be muted or of low absolute values, at least in part due to the widespread presence of humic acids.

According to Baker (undated) humic substances

> are likely to ensure that visible attributes of massive sulphides such as gossans will be removed in the Western Tasmanian environment. Where the chemical activity exceeds the physical removal of weathered products, the soil profile may be strongly leached and secondary dispersion patterns will be weakened or entirely obliterated by removal of trace elements as mobile humates.

This is especially true at Thirkell Hill where much of the EL is a relatively flat valley with numerous swamps or swampy areas. Physical removal is at a minimum over much of the EL.

Table 2: Anomalous threshhold values for stream-sediments and soil samples according to McGregor Dawson (1975).

Element	Stream Sediments		Soil Samples	
	Weakly Anomalous	Anomalous	Weakly Anomalous	Anomalous
Cu	5	7	10	14
Pb	9	18	20	29
Zn	10	35	80	99

Strickland (1978) states that for stream sediment samples regional background is 2 ppm Cu, 20 ppm Pb and 25 ppm Zn. Anomalous results are greater than 9 ppm Cu, 69 ppm Pb and 159 ppm Zn.

The anomalous threshold for Union and Geopeko drainage samples is markedly different but as both surveys tended to give anomalies in the same general areas the differences may have been caused by analytical factors.

Widespread low-level, but very distinct Cu, Pb & Zn anomalism has been recorded in all types of samples, however, to date no massive sulphides or definite gossans after massive sulphides have been located. This to be expected given the probable high level of humic acid, soil cover, lack of outcrop along stream channels, thick low scrub and rain forest.

The geochemistry indicates that zones rich in Fe, Pb, Zn & Cu exist within the volcanics, within the overlying volcaniclastic sediments and near the volcanics - volcaniclastics boundary. Several zones exist and each appear to extend over a strike length of several kilometres.

Union and Geopeko drainage geochemistry correlate fairly well, except Union's values and backgrounds (in general) are lower than Geopeko's. Geopeko and Union define similar anomalous areas, but Union's results tend to define larger areas.

Geopeko's auger results are more definitive than Union's soils; in general they confirmed the soils although in a few cases no auger anomalies were located below soil anomalies and in at least one case an auger anomaly resulted where surface soils were not anomalous.

4.7.3 Gold

The gold potential of the E.L. 3/92 area was unknown, however, gold had been documented in outcrop and drill hole to the south of the license in the Elliott Bay region.

The only gold geochemistry appears to have been completed by CSR just prior to Geopeko's relinquishment of E.L. 9/74. Thirteen sites were visited in a single, brief reconnaissance trip. BLEG (bulk cyanide leach) and stream sediment (silt) samples were collected at each site, but pan concentrates were only collected at 4 sites. The results are ambiguous. Each of the pan concentrates were reported to contain visible gold and all returned anomalous assay results (maximum of 10.5 g/t Au from 8 noted flakes in the pan). All stream sediments (-80 mesh) were below level of detection and generally bulk leach results were low. At the 10.5 g/t Au pan concentrate sample site, the bulk leach result was 0.073 ppb.

Most of the samples were taken at or near the boundary of Owen Conglomerate with the volcanics (located on the western side of the E.L) and CSR noted (erroniously) that samples were dominated by fine quartz derived from Owen sandstones and conglomerates. CSR's conclusion that all the gold in pan concentrates is derived from Owen Conglomerate is not supported by any evidence. In fact the pan concentrates on the Sprent and Condor Rivers are anomalous and suggest that gold is shedding from the volcanics.

5.0 EXPLORATION CHARACTERISTICS OF MT READ DEPOSITS

The exploration characteristics and approach defined by Large et al (1987) appear to be appropriate for EL 3/92. He states

> The massive sulphide deposits occur locally within a narrow horizon of shales or volcaniclastics which forms part of a sequence of submarine volcanics and minor sediments.
>
> The volcanics underlying the deposits are strongly altered with chlorite, sericite, pyrite, and crypto-crystalline quartz dominant, whereas volcanics overlying the deposits show little alteration.
>
> Outcropping deposits exhibit stream-sediment lead, zinc, and gold anomalies. Discrete lead anomalies in soils are developed over sub-cropping ore zones and provide suitable drilling targets. Copper and zinc anomalies in soils tend to be dispersed and provide less reliable drilling targets.
>
> Near-surface copper-bearing massive sulphides give rise to electro-magnetic and induced polarisation anomalies, whereas lead-zinc-rich massive sulphides (with minor copper) give a weak induced polarisation response and no electromagnetic response. However, recent work by Eadie et al. (1984) on the Que River and Hellyer deposits suggests that the lead-zinc ore is sufficiently conductive to give an electro-magnetic response using large loop transient electromagnetic systems.

6.0 WORK COMPLETED

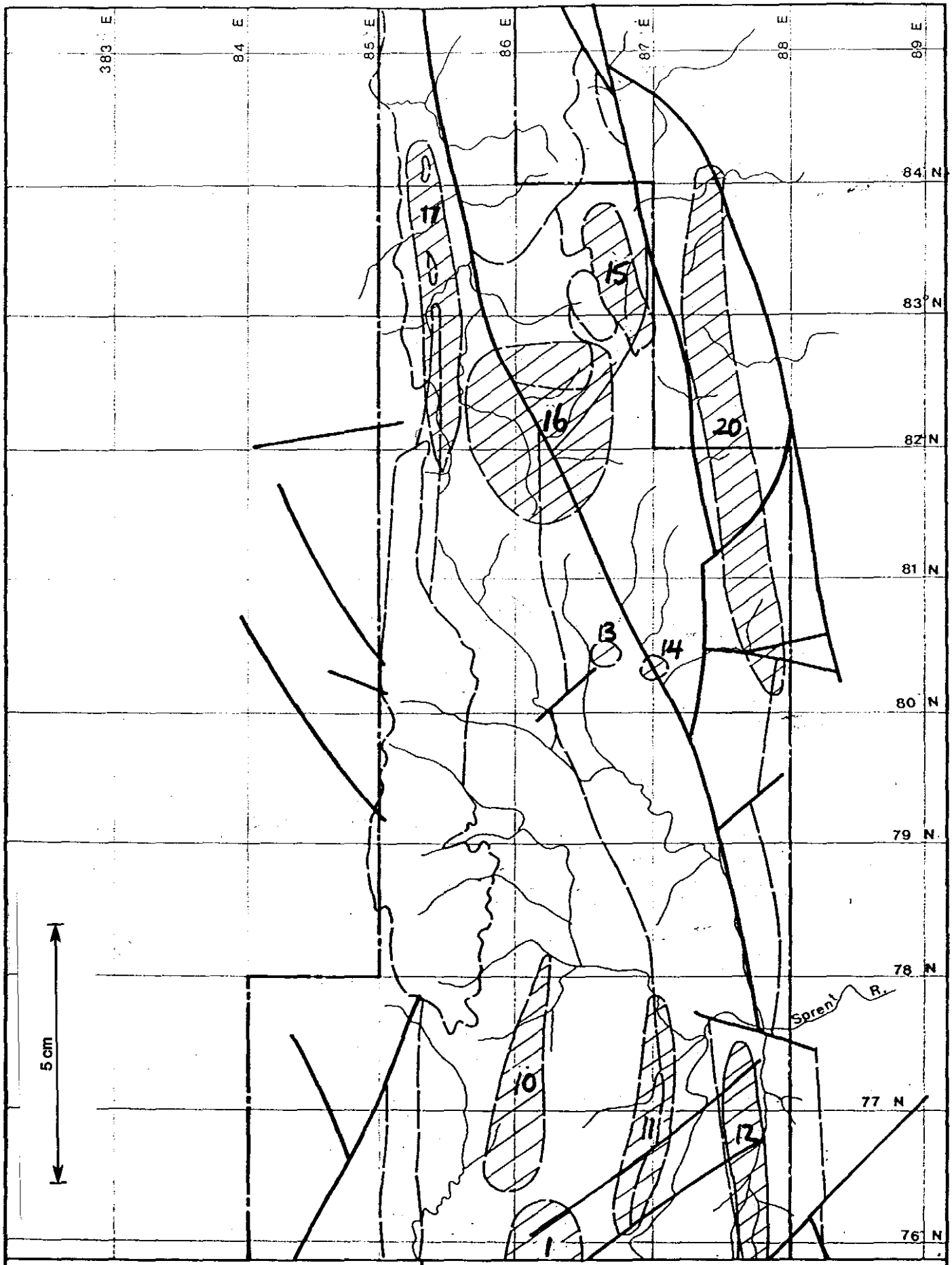
6.1 Data Compilation / Review

The prospects, anomalous areas and prospective zones defined by the combined work of Union and Geopeko will be described below.

The term prospective zone has been used in most cases throughout this report, in preference to 'prospect'. To date, twenty one zones have been defined that require follow-up exploration and these areas are indicated on Figures 8 and 9 and are briefly described in Table 3.

The Union and Geopeko nomenclature and numbering is different and there has been a tendency to give names (e.g. Geopeko lists prospects by names - Viking, etc or by number - Dighem 21 B) to clusters of geochemical or geophysical anomalies (particularly by Geopeko) without much regard for their strike extent. A new set of prospect/prospective zone names is introduced here.

988037



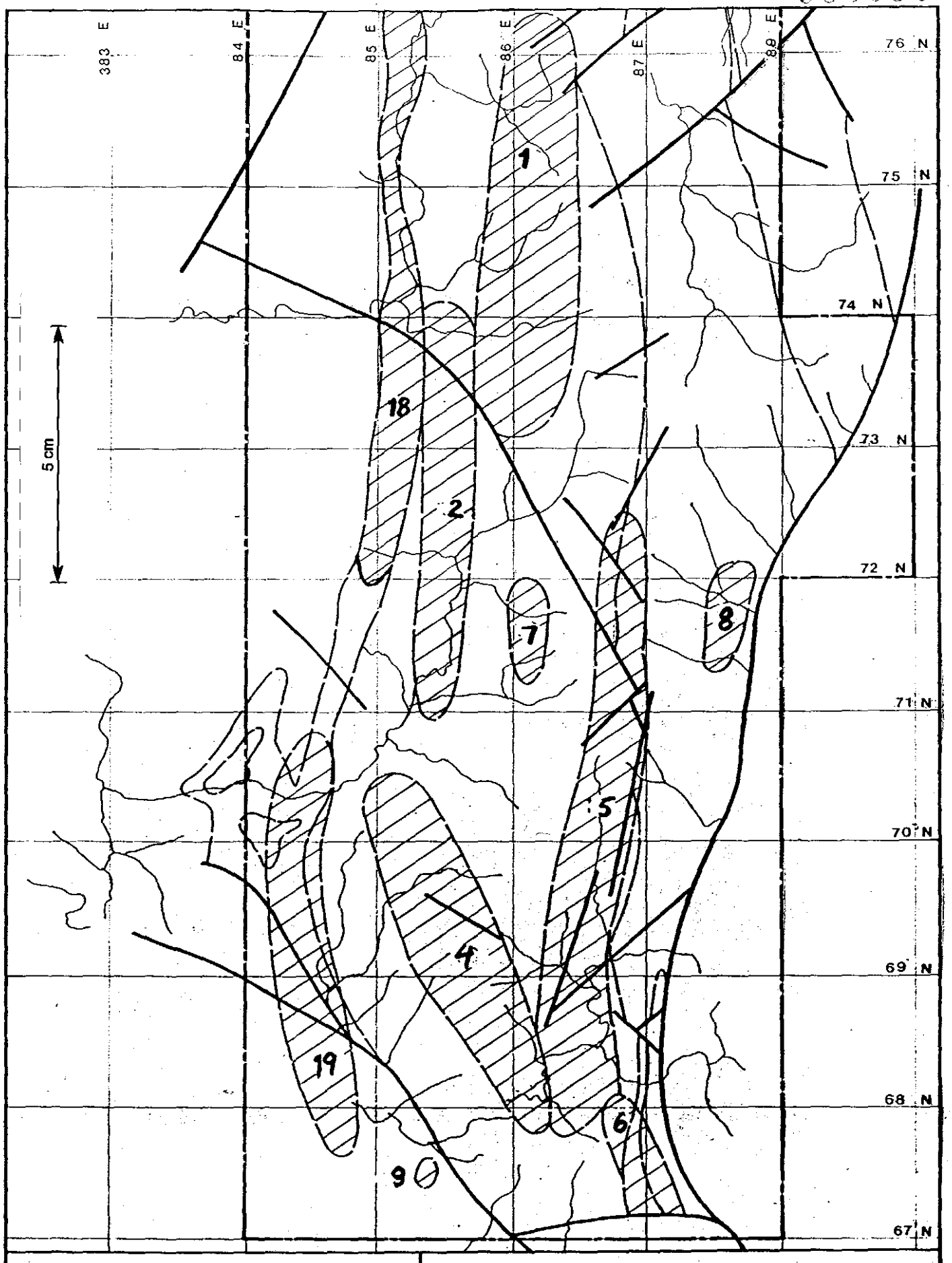
MACMINING N.L.

E.L. 3/92 THIRKELL HILL
PROSPECT ZONES
MODIFIED GEOLOGY - NORTH SHEET

Scale 1: 40000 | Date Sept 92 | Author R McN | MB

Figure 8

988038



E.L. Boundary

Soil Auger Geochemical Anomaly

N

MACMINING N.L.

E.L. 3/92 THIRKELL HILL
PROSPECT ZONES
MODIFIED GEOLOGY - SOUTH SHEET

Scale 1: 40000	Date Sept '92	Author R Mc N	M B

Figure 9

Table 3 : THIRKELL HILL ANOMALOUS ZONES

Prospect	Comments
Condor River	3km x 1km cohesive, coincident stream-sediments, soils, C horizon samples (to 560ppm Pb and 800 ppm Zn), I.P and airborne EM anomalies.
Condor River West	3.5km x 0.3km zone with anomalous soils, C horizon samples (to 1190 ppm Pb, 870 ppm Zn), three airborne EM and 3-I.P. anomalies.
Condor River East	1 km long zone with anomalous soils (to 260 ppm Pb), an airborne EM anomaly and roughly a coincident Dighem EM anomaly.
Hales River West	2 km long zone with anomalous stream - sediments (to 240 ppm Pb), soils, C horizon samples (Pb to 860 ppm, Zn to 888 ppm) and 2 airborne EM anomalies.
	3.5 km long zone with anomalous stream-sediments and soils.
Hales River East	Two E.M. anomalies and coincident? Dighem E.M anomalies.
Viking 14	Small zone defined by Pb and Zn anomalous soils.
Hales River North	Small zone defined by Pb anomalous soils.
Hales River NW	E.M. anomaly in pyritic lithic-crystal tuff.
Viking 15	1 km long zone of anomalous soils, erratic stream-sediments and one Dighem EM anomaly.
Sprent River West	1.5 km long weak soil anomaly.
Sprent River East	2 km long weak soil anomaly.
Sprent River South	Turair E.M. anomaly.
Viking 3	

Table 3 : THIRKELL HILL ANOMALOUS ZONES (cont.)	
Prospect	**Comments**
Viking 4	Turair E.M. anomaly.
D'Aguilar North	Anomalous stream-sediments, Zn rock-chip, Turair E.M. anomaly and 2 possible EM conductors
D'Aguilar South	1.5 km² area of extensive drainage anomalism.
Mt Lee	Zone with 2 airborne EM anomalies,plus faulting and haematite mineralisation similar to 'The Blow - Mt. Lyell'.
Thirkell North	Narrow 1 km long zone of anomalous soils with airborne E.M. VLF-EM and Dighem anomalies, pan-concentrate gold anomaly, I.P anomalies and weak stream geochemistry.
Thirkell Hill South	2 km long strong airborne EM anomaly, Dighem anomaly and weak stream geochemistry.
D'Aguilar East	Several airborne EM anomalies.
Line 184N IP	Two weak IP responses flanking a magnetic feature.

A few of these anomalies have been subjected to some follow up such as mapping, auger drilling, VLF EM etc. but in general such follow up is limited.

Geopeko, after the 1977 field season, recommended detailed study of the following five areas:

* Viking 1 - 2 - now Mt.Lee Zone
* Viking 19 - 5 - now D'Aguilar North Zone
* Viking 3 - 4
* Viking 10 - now Condor River West & Condor River Zones
* Viking 23 - now Hale River East & West Zones

Some work was carried out on Viking 10 (Condor River Zone), but it appears that no other follow up was ever completed. The work on Viking 10 (includes Viking 22) upgraded the area to drilling status, but no holes were drilled.

6.1.1 Condor River Zone

The Condor River Zone is centred at 5274000N/5386000E and is approximately 3 kms by 1 km in area (Figure 10). It is wholly within the western part of the main volcanics. It includes Geopeko's Vikings 8, 11 and 12 prospects and is associated with the following:

- Anomalous stream sediment geochemistry (Geopeko/Union) with peak values of 40 ppm Cu, 100 ppm Pb and 90 ppm Zn.
- Anomalous Union Oil soil samples on lines 152N (40 ppm Pb), 160N (182,90 and 85 ppm Pb, 100 ppm Zn), 168N (30 and 42 ppm Pb) and 176N (70 ppm Pb and 100 ppm Zn).
- Geoex "possible AEM anomaly" (Viking 11).
- Union IP anomaly at 160N/00E.
- Anomalous C - horizon geochemical results (Geopeko) from Union line 160N with peak values of 560 ppm Pb and 330 ppm Zn.
- Pan concentrate gold anomaly occurs downstream in the Condor River.
- Numerous anomalous results (Geopeko) from a semi detailed C-horizon grid survey between lines 152N and 160N. This survey outlined several northerly trending zones of Pb/Zn anomalism. Maximum values of 800 ppm Zn, 410 ppm Pb [9,800N/ 10,200E to 9,600N/10,300E] and 500 ppm Zn / 445 ppm Pb [9,000N/10,100E] appear to represent a northerly trending zone with high Fe, Pb and Zn. Geopeko contoured the results from this survey with a NW trend to the anomalous zones. A northerly trend appears to more adequately represent the source zones of the geochemical anomalies.

Geopeko's geological mapping revealed a sequence of north-south striking, steeply dipping rhyolitic quartz-feldspar-biotite porphyries, porphyritic-lavas and quartz-feldspar-crystal-lithic tuffs. Sericite, chlorite and silica alteration was noted at various places over the grid, however, distinguishable alteration zones were not noted.

The Condor River Zone appears to contain two (or more) northerly trending, perhaps discontinuous or on echelon, horizons that exhibit significant Pb/Zn/Fe anomalism within a silicic volcanic sequence at surface over a strike length in excess of 2.5 kms. No gossans have been located, but the airborne EM and ground IP surveys both recorded low order anomalies within the area.

This zone warrants additional exploration that should include the extension of the soil auger grid north to line 176N and south including and beyond Viking 11. Other exploration should include a UTEM (ground EM) survey and drill testing of the geochemically anomalous zones.

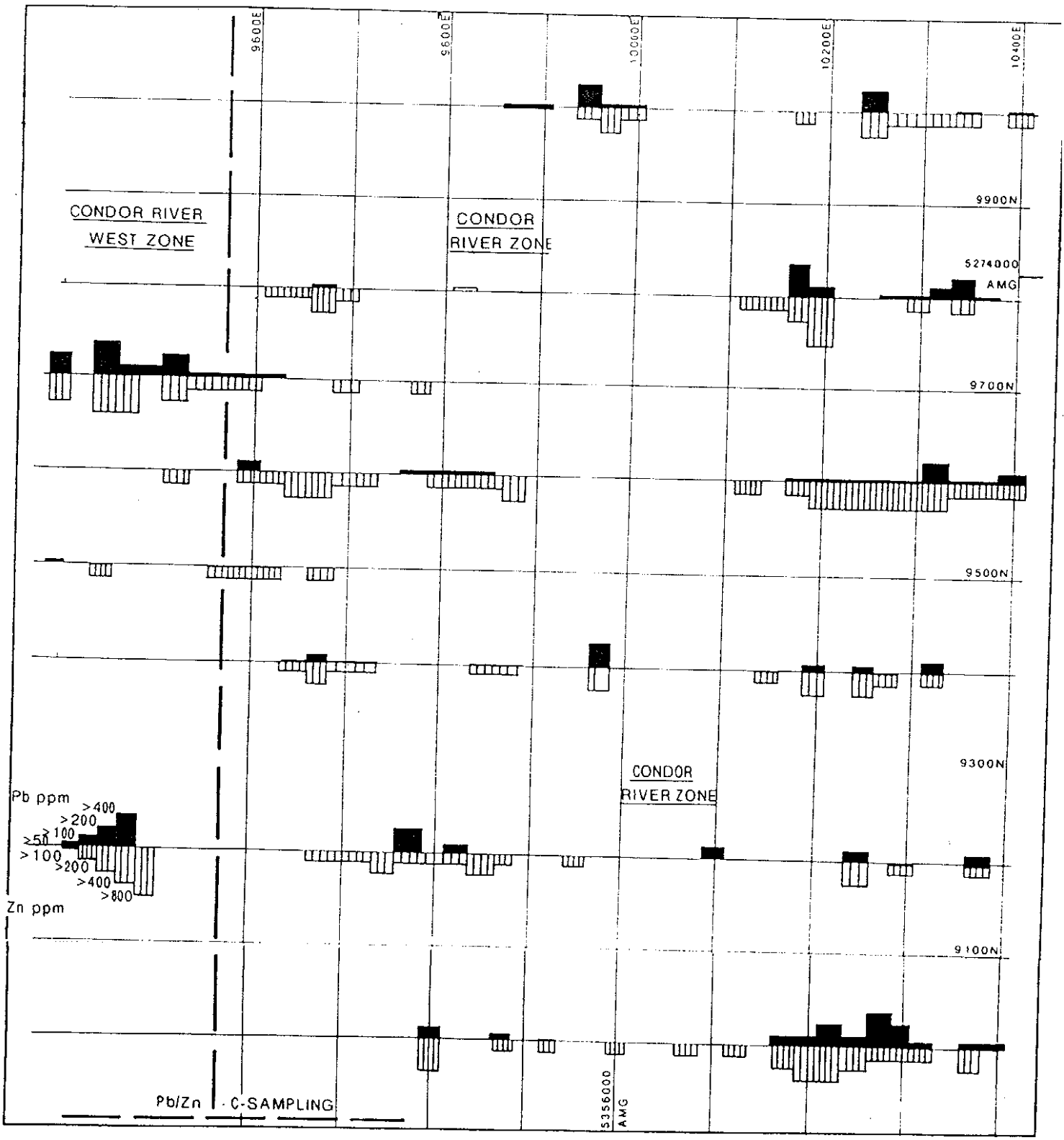

9600E
9800E
10000E
10200E
10400E
CONDOR RIVER WEST ZONE
CONDOR RIVER ZONE
9900N
5274000 AMG
9700N
9500N
CONDOR RIVER ZONE
9300N
Pb ppm
>400
>200
>50
>100
>100
>200
>400
>800
Zn ppm
9100N
Pb/Zn - C-SAMPLING
5356000 AMG

Figure 10

6.1.2 **Conder River West Zone**

The Conder River West Zone is situated near the western margin of the main volcanics and it forms a zone approximately 300 metres wide that extends north from 5271000N to 5274500N; it includes Viking 10 and is associated with the following:

- Three Geoex airborne EM anomalies [the central anomaly was considered by Deakin (1977) to be the most significant of the survey].
- IP anomalies on Union lines 144N, 136N and 128N.
- Anomalous soil samples on Union lines 136N (50 ppm Pb) and 160N (110 ppm Zn).
- Anomalous C horizon auger soil sampling (Geopeko) on Union line 144N (Pb -600 ppm / Zn -350 ppm, Pb -400 ppm / Zn -400 ppm and Zn -400 ppm). Union's soil sampling did not detect any significant anomalies to correspond with this C horizon sampling.
- Anomalous C-horizon sampling on Viking 10 grid as follows:

	Cu ppm	Pb ppm	Zn ppm
125N/00E	10	190	870
125S/00E	2	360	140
325S/00E	10	430	80
600S/00E	10	840	340
625S/00E	10	1190	260

- Anomalous C-horizon sampling in the NW of Figure 10 and adjacent to the Conder River Zone with highs of 450 ppm Pb and 520 ppm Zn.
- A zone of low resistivity or high conductivity was defined by Union from line 136N to 168N in approximately the same position as the soil/auger geochemical anomaly.
- An east west trending VLF (EM) anomaly from Geopeko's 1977 work.
- A pan concentrate gold anomaly occurs downstream in the Conder River.

According to Strickland (1978), the VLF anomaly is situated within a broad zone of quartz-feldspar porphyry (gross rhyolitic composition) with evidence of significant sericite alteration and veining north of 300N (Viking 10 grid). Immediately to the west is a major linear unit of tuffaceous sandstones and slates (Waterloo Creek Group).

The extension of the zone south of Union line 144N is speculative and the geochemical response on line 136N and the IP responses on lines 136N and 144N could be related to a separate zone of anomalism / mineralisation.

The combination of combined EM and geochemical anomalies make this an attractive area for further exploration. An E-W oriented grid should be surveyed over the entire zone, C-horizon geochemistry and a UTEM survey completed between 5272000N and 5274000N, followed by drill testing.

6.1.3 Condor River East Zone

This is a small zone to the east of the Condor River Zone between 5273000N and 5274000N. It appears to occur near the boundary between the quartz-feldspar-biotite porphyry and the main body of volcanics (cream to pink felsic lavas and interrelated epiclastic rocks). The zone is associated with the following:

- Soil anomalies on Union's lines 152N (85 ppm Pb) and 160N (260 ppm Pb, 160 ppm Zn and 200 ppm Zn).

- Geoex airborne EM anomaly and more or less co-incident Dighem EM anomaly.

Although line 160N had high soil Pb and Zn values, Geopeko's-C-horizon sampling failed to detect anomalous results at the same location. The prospect still warrants several lines of C horizon sampling, preferably in the vicinity of the airborne EM features.

6.1.4 Hales River West Zone

The Hales River West Zone is situated in the southern part of the main volcanic belt within a broad zone of stream sediment anomalism (that also includes the Hales River East Zone).

Geopeko's Viking 23 appears to have included both Hales River East and West. The Hales River West Zone is associated with the following:

- Anomalous drainage geochemistry with maximum values of 20 ppm Cu, 240 ppm Pb and 90 ppm Zn.

- Anomalous soil geochemistry on Union line 104N (50 ppm Pb and 400 ppm Zn), line 112N (25 ppm Pb, 90 ppm Zn and 20 ppm Cu) and line 120N (90 ppm Pb, 120 ppm Zn and 150 ppm Zn).

- Anomalous C horizon auger sampling on line 120N (not carried out on other lines) as follows

	Cu ppm	Pb ppm	Zn ppm
112N/500W	15	130	420
112N/550W	30	860	880
112N/650W	25	320	420

This zone corresponds to soil values of less than 25 ppm Pb and 90 ppm Zn.

- Two Geoex airborne EM anomalies.

The lithologies present include a massive, fine grained rhyolitic quartz-feldspar porphyritic-lava, containing locally extensive sericitisation, minor sulphides, magnetite and lithic-crystal tuffs. This zone should be gridded in conjunction with Hales River East to confirm or disprove the proposed NW trend of the anomaly. C-horizon geochemistry and possibly a UTEM survey is required, followed by drill testing.

6.1.5 **Hales River East Zone**

This northerly trending, linear zone lies just to the east of Hales River West and shares some of its encouraging features such as anomalous stream sediment geochemistry and favourable geology. It is associated with the following:

- Anomalous Cu, Pb, and Zn stream geochemistry.

- Anomalous soil geochemistry on Union lines 104N (30 ppm Pb), 112N (40 ppm Pb and 120 ppm Zn), 120N (45 ppm Pb and 150 ppm Zn), 128N (45 ppm Pb) and 136N (40 ppm Pb).

- Anomalous C-horizon copper values of up to 50 ppm on line 112N. The C-horizon samples are not anomalous for Pb/Zn and this conflicts with the soil sample results.

This zone occurs near the eastern margin of the cream to pink felsic lavas (as mapped by the Department of Mines) and is adjacent to or perhaps partly within the quartz-feldspar-biotite phyric lava and/or intrusive and quartz-feldspar-biotite porphyry.

Although there is conflict between soil and auger results the zone should be further explored using additional C-horizon sampling on lines 200 metres apart. Any continuous or cohesive anomalies should be checked with UTEM and then drilled if warranted.

6.1.6 Viking 14

This zone was defined by Geoex and consists of two EM anomalies; it is situated south of the Hales River East Zone near 5387000E and 5267699N. It appears to also correspond with two Dighem EM anomalies [108C & 110D].

The zone may be within one or all of the following units: quartz-feldspar-biotite-phyric lava, intrusive quartz-feldspar-biotite porphyry and the adjacent siliclastic sandstones that overlie the Precambrian.

Geopeko carried out geological mapping in the area and concluded that the anomaly was probably within a zone of sheared, flow-banded, crystal-lithic tuff adjacent to the faulted contact with the Precambrian. They also completed some VLF-EM and magnetics with inconclusive results.

Geopeko concluded (1978) that the area did not warrant further work, however, the Dighem survey (1980) re-confirmed the EM anomalies and additional exploration is warranted to at least define the origin of these anomalies.

6.1.7 Hales River North Zone

The Hales River North Zone is a small area centred on Union Line 136N just south of 5272000N. It is defined by soil geochemistry, on line 136N, that includes Zn values of 220 and 160 ppm and two Pb values of about 30 ppm.

The zone is within a unit described by the Mines Department as a quartz vein derived superficial deposit.

This area should be followed up with C horizon geochemistry.

6.1.8 Hales River Northwest Zone

This zone is a small area within the quartz-feldspar-biotite porphyry. It is a geochemical soil anomaly on Union line 136N. There is no sampling to the north or south and the extent of anomaly is unknown. The peak lead value was 40 ppm, but Zn was low.

This zone should be checked with C-Horizon geochemistry.

6.1.9 **Viking 15** (5385400E/5267000N)

According to Geopeko this Geoex EM anomaly is located within a unit of lithic-crystal tuff that contains disseminated pyrite. VLF EM recorded a very large and sharp in phase and quadrature anomaly, but no further follow up was attempted.

Strickland (1978) and Pemberton (1981) both recommended EM and geochemical follow-up for this zone.

According to Geopeko's plotting, this anomaly occurs south of the southern boundary of the Mt.Read Volcanics as mapped by the Mines Department (within Tertiary gravels). This conflict needs to be resolved before further work is attempted, but from Geopeko's description of the geology, the area certainly occurs within Mt.Read Volcanics.

6.1.10 **Sprent River West Zone**

The Sprent River West Zone is within the central west part of EL 3/92's Mt.Read Volcanics, it is north of the Condor River Zone and may be an extension to it.

The zone is based on erratic stream geochemistry in the northern part, anomalous soil values on Union lines 184N and 192N and a single Dighem EM anomaly (49B). The zone is also upstream of a pan concentrate gold anomaly in the Sprent River. The soil geochemical anomalies are relatively subdued with a peak value of 35 ppm Pb.

This is a relatively low priority area, but it does warrant C-horizon sampling to further define the geochemical anomalies and to determine if the Dighem anomaly is significant.

6.1.11 **Sprent River East Zone**

This zone occurs at or near the boundary between the quartz-feldspar-biotite-porhyry intrusive and the cream to pink felsic lavas and minor epiclastic rocks. It is based on a 20 ppm Pb soil anomaly on two of Union's lines (184 and 192N). It is also upstream of a pan concentrate gold anomaly in the Sprent River.

This zone is a low priority zone but should be checked using C horizon sampling.

6.1.12 **Sprent River South Zone**

This zone occurs within the Sticht Range Beds that consists of volcaniclastic and clastic sediments overlying the Precambrian. The zone is based on copper soil anomalies on lines 168N, 176N and 184N with peak values of 22 ppm Cu and 60 ppm Zn.

This zone has been ignored because it occurs mainly within the Sticht Range Beds, but should be further evaluated by geological reconnaissance and C-horizon sampling.

6.1.13 **Viking 3**

Viking 3 is a Turair EM anomaly at 5386800E/5280500N. Geopeko carried out some VLF EM on the area but failed to locate the airborne anomaly. Deakin (1977) classed the anomaly as significant.

The geological mapping indicated that the rocks are massive rhyolitic quartz-feldspar-biotite porphyry and lithic-crystal tuffs. Minor traces of sulphides were noted in both lithologies.

Geopeko, in 1978, recommended that the zone warranted extensive additional work including gridding, power auger sampling for geochemical samples and reconnaissance ground EM.

6.1.14 **Viking 4**

This Turair EM anomaly is situated at 5387100E/5280100N, within a broad zone of massive rhyolitic quartz-feldspar-biotite porphyry. Geopeko completed some inconclusive VLF EM and have recommended further follow up in conjunction with Viking 3.

6.1.15 **D'Aguilar North Zone**

This zone is located in the extreme northern part of the main volcanic zone and it includes Geopeko's Viking 5 and 19 prospects.

Strickland (1978) described the area as follows:

> This area is considered favourable for massive sulphide mineralisation as it is associated with the following:
>
> - favourable geological environment.

- reported Australasian Minerals and Union Oil rock geochemical anomaly (Zn).
- anomalous stream sediment results.
- presence of a magnetic anomaly, Turair survey (1973).
- inconclusive VFL EM anomalies.

Geological mapping using surface outcrop has indicated a unique variety of favourable potential host rocks in the environs of Viking 19 and Viking 5.

To the east is situated a coarse grained lapilli lithic crystal tuff containing extensive sericitic alteration of the volcanic rock fragments and minor associated haematite. Overlying ? this unit is a rhyolitic quartz feldspar porphyritic lava containing accessory fine grained haematite, intercalated with a chloritic, haematite veined sedimentary breccia horizon. To the west a fine to coarse grained sandstone horizon, interpreted as Cambrian, occurs also containing significant haematite.

Investigation of the Zn rock chip anomaly at Viking 5 by handauger methods resulted in discouraging values. Weakly anomalous Pb and Zn results, peak spot values of 160 ppm Pb and 130 ppm Zn, were recorded. The shallow depth of penetration of the handauger may be responsible for the low geochemical response encountered.

Stream sediment sampling resulted in two anomalous Pb values (maximum 70 ppm) to the east of Viking 19, and a pair of anomalous Zn samples draining the Viking 5 ridge to the southwest. The peak value for Zn was 140 ppm.

The aeromagnetic data from the 1973 Turair survey shows a magnetic anomaly in close association with the Viking 19 - Viking 5 area, however ground magnetics over both prospect grids recorded flat profiles. Doubts as to the accuracy and thus usefulness of the existing airborne survey data are again raised.

VLF EM data recorded over the Viking 19 grid traverse suggests two large conductors. Topographical effects on VLF EM recordings are proportional to strata conductivity, thus the relief in this area causes the existing VLF EM data to be somewhat inconclusive.

Since this description was completed, the Dighem survey defined a low order EM response just north of Viking 19 and showed that the zone is within a major magnetic fracture that extends from south of Viking 3 to north of Viking 19. The significance or cause of this magnetic feature is not known.

Strickland (1978) also recommended an extensive follow-up program, which was not carried out. This included gridding the zone at 200 metre centres, power augering to obtain bedrock samples, ground magnetometer and EM surveys. These recommendations should be implemented and completed.

6.1.16 D'Aguilar South Zone

This 1.5 square kilometre area in the northern part of the EL is defined by widespread drainage anomalism from both Union and Geopeko surveys. In addition this area is upstream of a significant pan concentrate gold anomaly.

The geology (Mines Department mapping) consists dominantly of cream to pink felsic lava (quartz-feldspar±biotite phyric) with minor intercalated epiclastic rocks and lava breccias. This zone was geologically mapped by Geopeko, but as there were no co-incident EM anomalies, no other follow-up work was initiated.

In view of the extensive drainage anomalism, this area warrants additional study that should include reconnaissance C-horizon soil sampling and gold drainage geochemistry.

6.1.17 Mt.Lee Zone

The Mt.Lee Zone is situated near the NW corner of the EL and includes Geopeko prospects Viking 1 and 2 and Geoex Dighem EM anomalies. According to Strickland (1978), it is considered favourable for significant sulphide mineralisation because of the following:

- favourable geological environment
- faulting associated with haematite mineralisation
- proximity to a major time break (the Upper Cambrian unconformity)
- the presence of two airborne EM anomalies

The zone, according to the Mines Department mapping, falls mainly within the Waterloo Creek Group, which is a sequence of volcaniclastic conglomerates, sandstones and pyritic black shales. The Waterloo Creek Group shows evidence of discontinuous mineralisation throughout its length both within the group and near or at its contact with the underlying volcanics. In addition to the Mt.Lee Zone, the Group is host to the Thirkell North and Thirkell South Zones.

Geopeko completed a reconnaissance survey of the area including mapping, some sampling and VLF EM.

Strickland (1978) describes the geology of the Viking 1 area from east to west as:

- Massive porphyritic lava of rhyolitic composition
- Lithic tuffs and lithic-crystal tuffs containing haematite veins
- Ordovician sandstones and Owen Conglomerate

There is massive haematite veining associated with Upper Cambrian sandstones at Viking 2 . These sandstones are intercalated with Cambrian volcanics that consist of rhyolitic porphyritic lava and volcaniclastic sandstones.

Geopeko carried out C-horizon sampling on one line only and recorded peak values of 20 ppm Cu, 90 ppm Pb and 130 ppm Zn. The drainage geochemical expression was negligible. VLF-EM suggested a large magnitude quadrature anomaly west of the area covered at Viking 1.

Strickland (1978) concluded that "the presence of abundant haematite at this location may be of significance when compared to the similar haematite occurrence at 'The Blow', Mt.Lyell, which is also localised at the Owen Conglomerate contact". He also concluded "the VLF and IP data suggest a zone of poor conductivity and high chargeability to the west of Viking 1.

An extensive follow up exploration program including gridding, mapping, hand or power auger C-horizon sampling and an EM survey was recommended by Strickland (1978). This program is still warranted.

6.1.18 Thirkell North Zone

This is a long narrow zone that extends from 5217000N to 5278000N and covers the Waterloo Creek Group (possible correlate of the Tyndall Group) and the boundary between the Waterloo Creek Group and the main zone of volcanics. It includes some of the Thirkell anomalies of McGregor Dawson (1975) and Vikings 6, 7 and 21 of Geopeko. It is associated with the following:

- Anomalous soil geochemistry on Union lines 144N (100 ppm Zn), 160N (105 and 80 ppm Zn, 12 and 14 ppm Cu and 22 ppm Pb), 168N (20 ppm Cu and 32 ppm Pb), 176N (22 ppm Pb, and 20 ppm Cu,) 184N (12 ppm Cu, 30, 30 and 25 ppm Pb) and 192N (20 ppm Pb).
- Geoex airborne EM anomalies at Viking 21.
- Dighem airborne EM anomalies 89B, 76C and 64D.
- Panconcentrate gold anomaly in the Condor River just downstream from the central part of the zone.
- IP anomalies on lines 144N, 160N, 176N, and 184N.
- Geopeko stream sediment anomaly of 90 ppm Zn near Viking 7.
- Possible VLF EM anomaly west of Viking 21
- Pyritic, black shale horizons with trace copper, lead and zinc.

McPhee and Allen (1992) recently concluded that Tyndall Group rocks may be prospective for massive sulphides. They state

> sea floor hydrothermal systems responsible for massive sulphide mineralisation in the Mt.Read Volcanics operated in a variety of hosts and settings. In particular the volcaniclastic facies associations that dominate the western volcano-sedimentary sequences and the Tyndall Group may be as prospective as the formations dominated by lavas (Central Volcanic complex). In fact such a volcaniclastic sequence hosts the Hercules and Rosebery massive sulphide deposits.

The geophysical character of this zone is significant with more or less co-incident airborne EM anomalies from two separate surveys, IP anomalies and a possible VLF EM anomaly. Follow up has so far been restricted to a few reconnaissance traverses in the vicinity of Vikings 6, 7 and 21.

Strickland (1978) recommended gridding the central part of this zone and mapping, C-horizon sampling and EM traversing.

6.1.19 Thirkell Hill South Zone

This Zone is within the Waterloo Creek Group and is similar to Thirkell North. It may in fact be continuous with Thirkell North. It includes Vikings 12 and 13 and is associated with the following:

- Geoex airborne EM anomalies that extend from 5268000N to 5270000 (4 separate lines)
- Dighem airborne EM anomaly 99A
- Stream sediment anomalous copper on the order of 10 ppm Cu

The most significant features of the Zone are the relatively strong EM responses. These EM responses indicate a northerly trending zone some two kilometres in length. According to Mines Department mapping, the southerly responses occur in Tertiary sediments, however, the magnetics also show that the Cambrian units extend further south than mapped and perhaps the Tertiary sediments are only a very thin veneer.

Geopeko briefly checked these areas and noted that "Viking 12 is situated within a narrow tuffaceous shale unit whereas Viking 13 appears to be close to the contact of this tuffaceous unit with a lithic-crystal tuff horizon containing minor pyrite."

Strickland (1978) recommended that the zone warranted further work but the anomalies should be localised prior to extensive gridding.

6.1.20 D'Aguilar East Zone

The D'Aguilar East Zone is wholly within the correlates of the Sticht Range Beds. These Beds were referred to as the D'Aguilar Group by Union. According to the Mines Department mapping, these beds are partly volcaniclastic sediments.

A series of airborne EM anomalies were recorded along the length of this unit by both Scintrex and Geoex. In particular, AEM anomalies D, E and K (Viking 20) warrant further follow up to attempt to confirm their source(s).

6.1.21 Line 184N IP

There are two weak IP responses on line 184N flanking both sides of a magnetic feature that occurs along the boundary of the quartz-feldspar-biotite porphyry. This zone also flanks the Cu geochemical anomalies of the Sprent River South Zone.

6.2 1993 Field Program

6.2.1 Introduction

The field component of the Thirkell Hill exploration program commenced 18/4/93 and was concluded 1/5/93. Mobility was inhibited by the (expected) inclement poor weather and difficult terrain. The program concentrated on the 'Condor' group of anomalies in the central sector of the exploration license.

The programs objectives were:

1. To upgrade Anglo's knowledge of the EL and collect specific additional data that would help facilitate a joint venture.
2. Attempt to locate gossan or massive sulphide by drilling deep auger holes over geochemical anomalies previously defined by Geopeko.
3. Upgrade the D'Aguilar South Prospect, which has similar stream sediment geochemistry to the Hellyer Mine by attempting to source the anomalies [this was not undertaken because the area was too far from the base camp under the general conditions].
4. Undertake gold geochemical surveys as determined in the field.

6.2.2 C-Horizon Auger Assisted Soil Sampling

A total of 229 C-horizon soil samples were collected, using a 'two' man power auger, at various locations within the central sector of the E.L. Encouraging iron staining was noted in the holes and the samples were analysed for Pb, Zn, Cu, Fe, Ba, Au and As.

Several significant base-metal anomalous zones were defined. The Viking 22 - 9000N area was documented as a highly encouraging anomaly with coincident Pb, Zn, Cu and Fe (Figures 12 - 16). Ninety two percent of the samples collected from this zone returned assays >100 ppm Pb. The zone (Figure 13), as defined by the 300 ppm Pb contour, is approximately 80m wide with an apparent northerly strike. The samples were collected on three lines with 25m spacings and samples collected every 12.5 [to 25m] downline, giving a documented (but open ended to the north and south) length of + 75m.

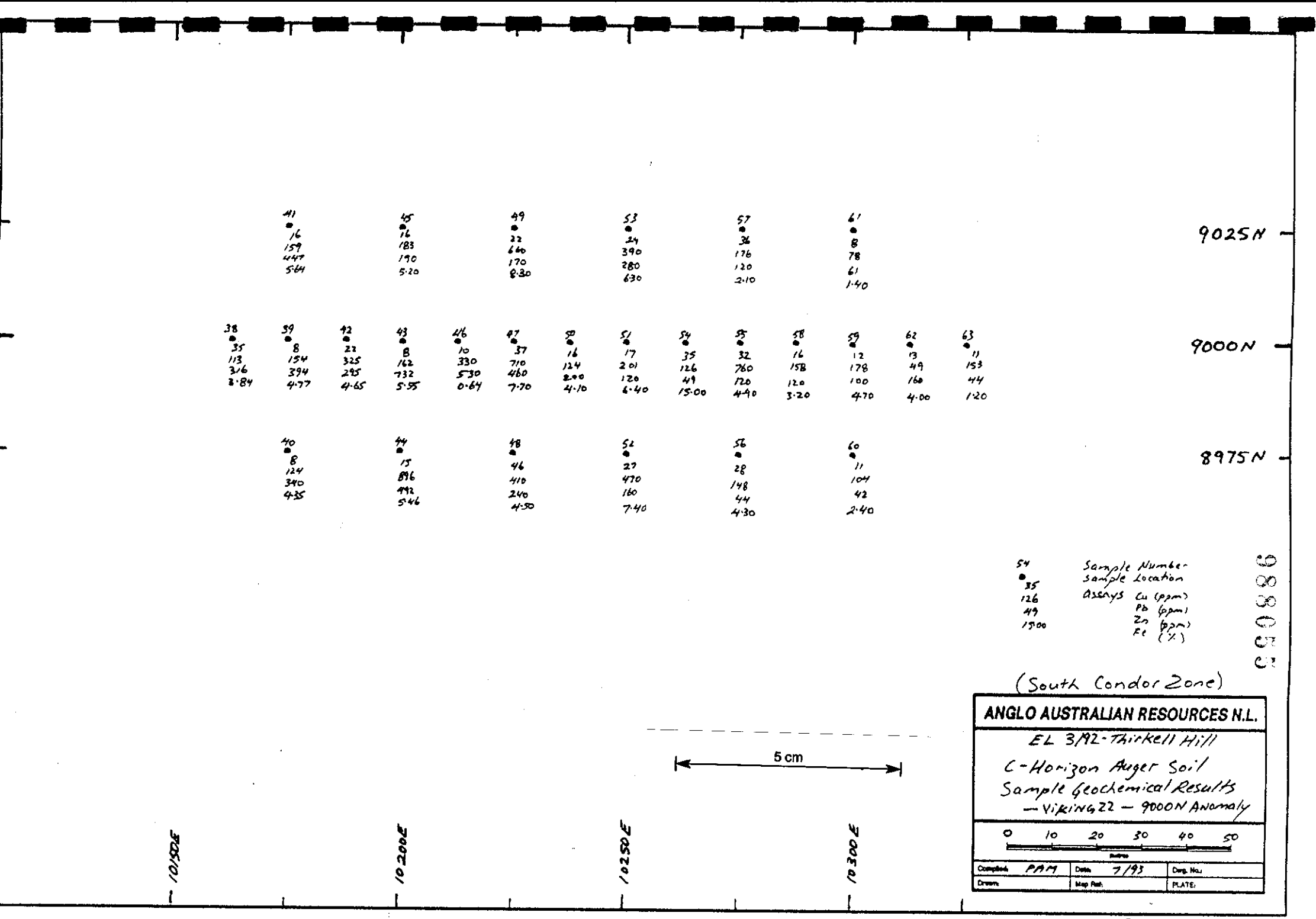
Several other anomalous zones were defined by the C-horizon geochemical sampling and one included the peak value of 946 ppm Pb, with anomalous values of 919 and 257 ppm Pb immediately along strike to the north and south.

The samples were analysed for Pb, Zn, Cu, Fe, Ba, Au and As by Australian Assay Laboratories using ICP technique with detection limits of 3, 1, 1, 100, 10, 0.02 and 1 ppm, respectively. See Appendix C1. for the laboratory assay sheets and Appendix B1. for tables listing information relevent to the C-horizon sampling. Time constraints have precluded plotting all the C-horizon sample results.

6.2.3 Pan Concentrate Gold Sampling

A pan concentrate survey for gold was conducted over the largest area that could be traversed by foot from the camp site. This included a large part of the central section of the tenement (See plans 11 and 12 - Appendix A(ii)).

The pan con sampling was successful as several anomalous areas were defined by visible gold. Analysis of the samples confirmed these observations and also enlarged the area to include streams where visible gold was not noted. A total of 35 separate sites were sampled, constituting a drainage area of approximately 31 km^2. A total of 11 samples returned assays greater than 10 micrograms total contained gold (generally > 1.0 g/t Au with samples averaging approximately 20 grams). The gold anomalous area is approximately 12 km^2, however, the sample density varies considerably. One visible gold anomaly that was noted is very localised, with the anomalous drainage covering less than 0.4km^2.



(South Condor Zone)

ANGLO AUSTRALIAN RESOURCES N.L.

EL 3/92 - Thirkell Hill

C-Horizon Auger Soil Sample Geochemical Results — Viking 22 — 9000N Anomaly

Compiled: PAM	Date: 7/93	Dwg. No.:	
Drawn:	Map Ref.:	PLATE:	

Figure 11.

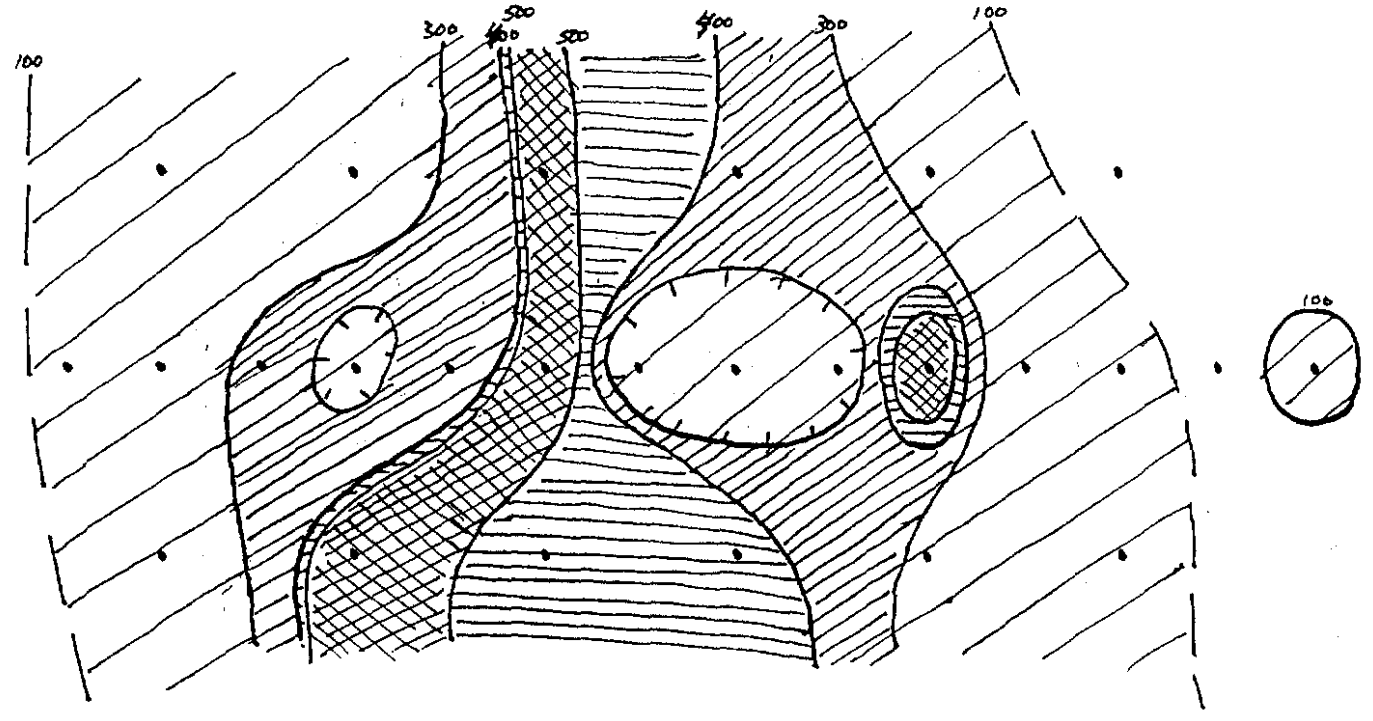
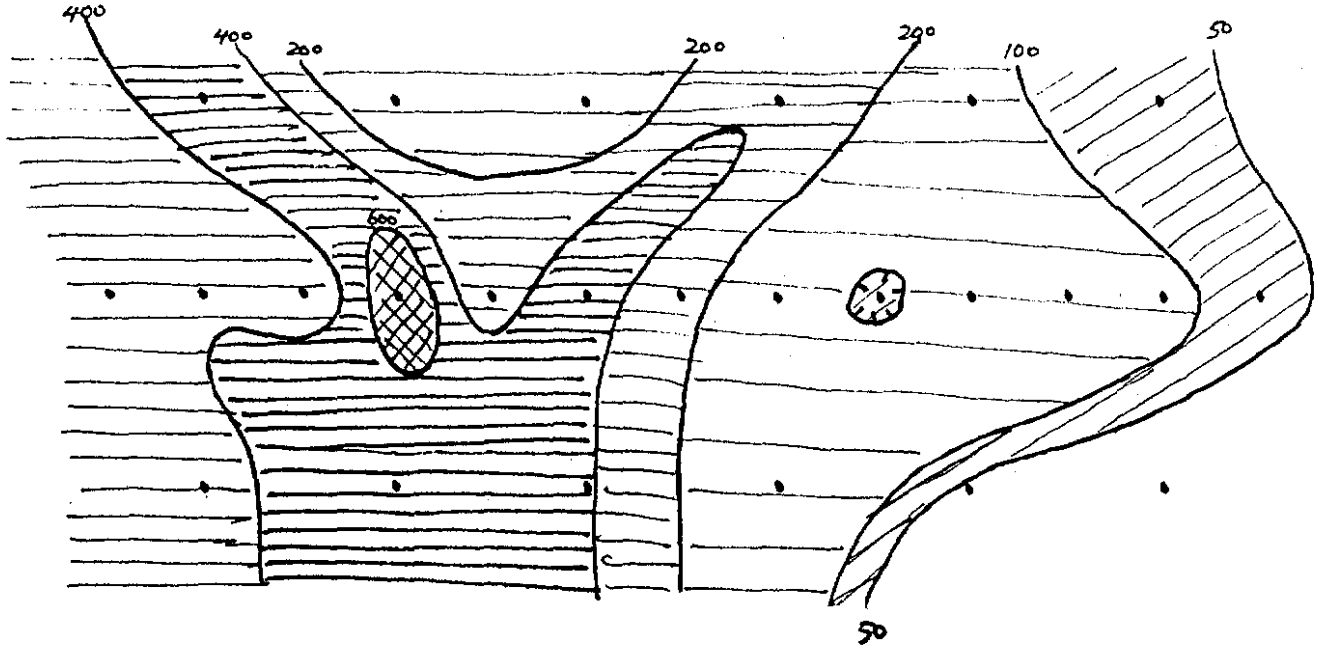

100
300
500
400
500
400
300
100
100
9025N
9000N
8975N
5 cm
9950886
High: 896 ppm Pb
(South Condor Zone)
ANGLO AUSTRALIAN RESOURCES N.L.
EL 3192 - Rirkell Hill
South Condor Zone
(VIKING 22 - 9000N Anomaly)
C Horizon Sampling
Lead Contours
0
50
metres
Compiled
Date
Dwg. No.
Drawn
Map Ref.
PLATE
10150E
10200E
10250E
10300E

Figure 12



9025N

9000N

8975N

10150E

10200E

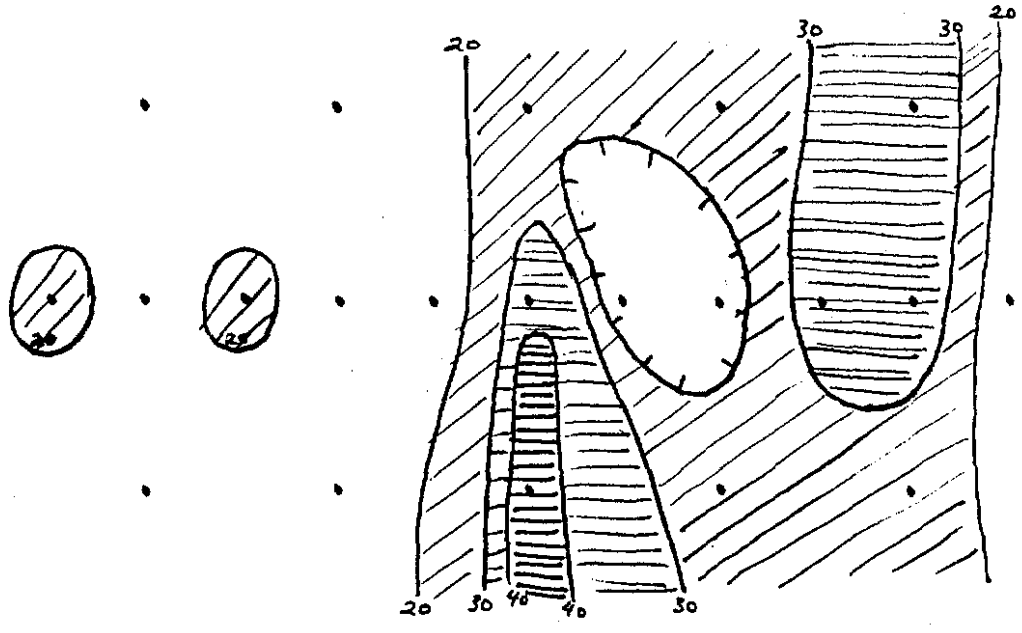
10250E

10300E

High = 732 ppm Zn

ANGLO AUSTRALIAN RESOURCES N.L.		
EL 3/92 - Thirkell Hill South Condor Zone (Viking 22 - 9000N Anomaly) Zinc Contours		
0 50 Metres		
Compiled:	Date:	Dwg. No.:
Drawn:	Map Ref.:	PLATE:

Figure 13



9025N

9000N

8975N

10150E

10200E

10250E

10300E

5 cm

High = 46 ppm Cu

ANGLO AUSTRALIAN RESOURCES N.L.

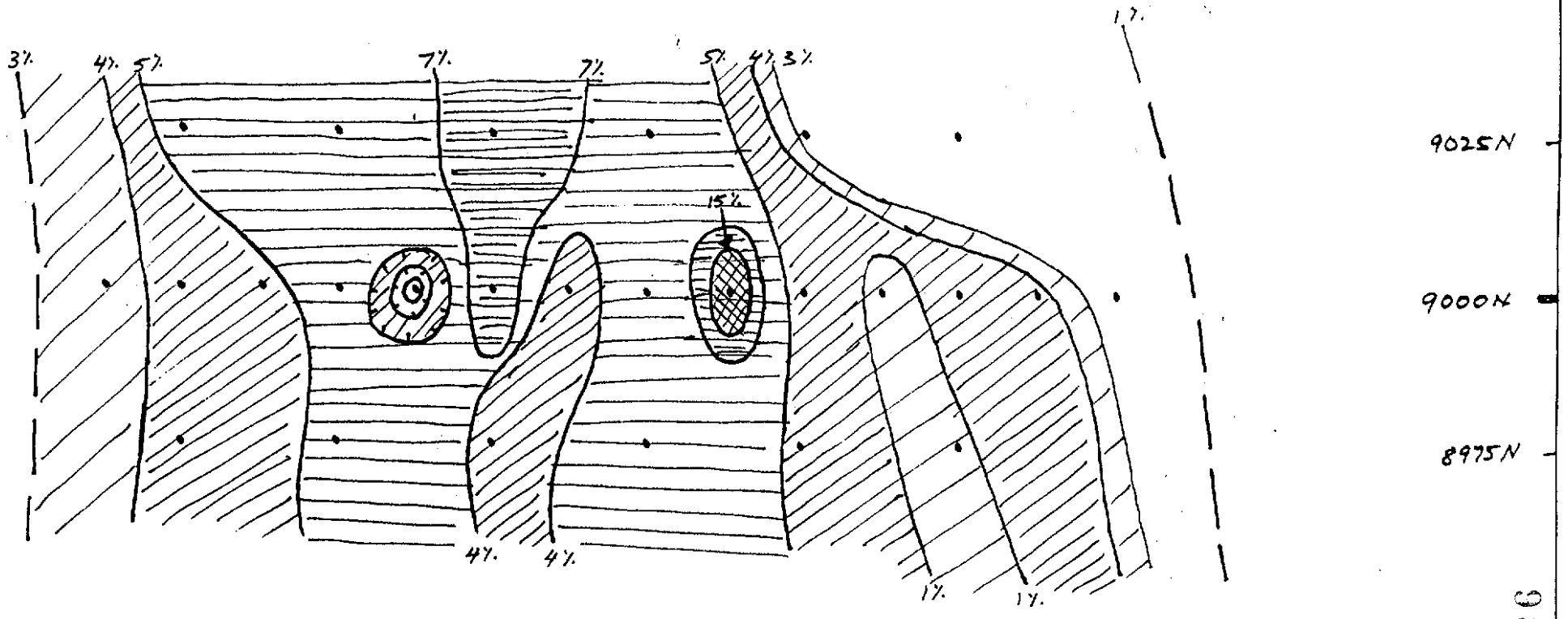
EL 3192 - Rirkell Hill
(Viking 22 - 9000N Anomaly)
South Condor Zone
Copper Contours

0 50

Scale

Compiled	Date	Dwg. No.
Drawn	Map Pack	PLATE

Figure 14



650886

ANGLO AUSTRALIAN RESOURCES N.L.

EL 3/92 - Birkell Hill South (Condor Zone)
(Viking 22 Grid - 9000N)
C Horizon Samples
Fe Contours

Compiled	Date	Dwg. No.
Drawn	Map Ref.	PLATE

10150E
10200E
10250E
10300E

Figure 15

988060

SAMPLE No.	Au (g/t)	Au (ug)
2	5.22	48.18
3	0.63	12.02
6	5.18	14.50
12	2.92	53.76
17	1.74	18.03
18	1.31	23.06
19	1.66	28.92
22	5.43	51.59
23	1.41	12.35
29	2.81	12.00
32	1.32	11.17
34	0.68	5.61

WORLD HERITAGE BOUNDARY

TENEMENT BOUNDARY

MAJOR DRAINAGE BASIN

ANOMALOUS BASIN

DRAINAGE BASIN SAMPLED

● 21 VG — SAMPLE LOCATION VISIBLE GOLD

ANGLO AUSTRALIAN RESOURCES N.L.

A.A.R. / MAC MINING N.L. J.V.
EL 3/92

PAN CON (GOLD)
Sample Location &
Anomalous Drainages

SCALE 1 : 50 000

Compiled: P. Mc Nell	Date: MAY 1993	Dwg. No.:
Drawn: NORTHPOINT	Map Ref:	PLATE:

Figure 16

The samples were analysed by Australian Assay Laboratories by firing the entire sample to extinction, spraying, digesting and recalculating based on the initial sample weight. The assay sheets list the initial sample weight, grams/tonne Au and total contained gold in the sample in micrograms. See Appendix C2. for the laboratory assay sheets.

6.2.4 Rock Chip and Float Sampling

No gossans were located, however, six rock chip / float samples of ferruginous pyroclastics, graphitic / carbonaceous shale, Fe stained and altered quartz vein and quartz vein with an unidentified ?metallic sulphide or perhaps oxide mineral were analysed for Pb, Zn, Cu, Fe, Ba, Au and As by Australian Assay Laboratories using ICP technique with detection limits of 3, 1, 1, 100, 10, 0.02 and 1 ppm, respectively. No significant assay results were returned (See Table App.B2).

7.0 DISCUSSION / RECOMMENDATIONS

The work completed to date on EL 3/92 has been superficial because surface geochemistry and airborne geophysics have yielded many anomalies but no drill holes have been completed. Exploration to date has confirmed:

- The Cambrian series consists predominantly of felsic intrusive and extrusive volcanics.
- The volcanics contain intercalated sediment horizons, several of which are rich in Fe (probably pyrite) and anomalous in Pb, Zn and Cu. These horizons are semi-continuous over strike lengths of several kilometres. These zones are known only from soil/auger sampling.
- Areas with extensive haematite veining and brecciation have been noted.
- Unconformably overlying the volcanics is a volcaniclastic /volcanic sequence with black shales. This sequence has consistent EM, IP and geochemical anomalies over a strike length of more than 10 kms.
- Unexplained geochemical and geophysical anomalies occur in the volcaniclastic sequence that underlies the volcanics and overlies the Precambrian.
- No comprehensive gold exploration had been undertaken, prior to Anglo's 1993 program, even though visible gold was recorded in samples (pan concentrates) draining the area. Structural situations similar to Henty occur within the E.L.
- Numerous 2nd & 3rd order airborne EM anomalies have been recorded in the three surveys completed. Much of this data has been suggested to be unreliable by previous workers but few of the anomalies have been evaluated in detail.
- Little use has been made of the aeromagnetic data.
- Geopeko recommended follow up on five areas. Limited follow up was completed on one area only and this work upgraded the prospect to drill or near drill status.

The Anglo field program returned gold results from pan concentrate sampling that are highly encouraging and suggest that gold mineralisation occurs within the EL and/or is derived from VHMS mineralisation. The C-horizon sampling returned several significant anomalies including the south Condor (Viking 22 / 9000N) area that require further definition. The south Condor area is a viable drill target and should be investigated further. In addition, a detailed pan concentrate sampling program is warranted and suggested for the entire E.L.(see Appendix 1, Plans 13 and 14).

The Thirkell Hill licence covers on the few remaining relatively unexplored areas in Tasmania and the potential for locating economically viable VHMS deposits is excellent. The area warrants an extensive and sustained exploration effort.

8.0 REFERENCES / SELECT BIBLIOGRAPHY

Bradbury et.al., 1992. Geology of the D'Aguilar Range Area (!:25,000). Geological Survey of Tasmania

Corbett, K.D., 1992. Stratigraphic - Volcanic Setting of Massive Sulphide Deposits in the Cambrian Mt. Read Volcanics, Tasmania. Economic Geology, Vol. 87, No.3

Deakin, R., 1977. Geophysical Progress Report on Birch Inlet EL 9/74 Tasmania. (L.A.Richardson & Assoc. for Geopeko) 77-1205.

Frazer,D.C.& Dvorak.Z.,1981. Dighem II Survey of Birch Inlet Area, Tasmania (Dighem Ltd for Geopeko). 85-2492.

Green, G.R.,1990. Palaeozoic Geology and Mineral Deposits of Tasmania, in Geology of the Mineral Deposits of Australia and Papua New Guinea (Ed. F.E. Hughes) pp. 1207-1223 (The Australasian Institute of Mining and Metallurgy: Melbourne).

Large, R.R., 1987. The Mineral Wealth of Western Tasmania and the Potential of the S.W. Conservation Area. Tasmanian Chamber of Mines.

Large, R.R. et al., 1987. Base Metal Exploration in the Mt. Read Volcanics, Western Tasmania: Part 1: Geology and Exploration, Elliott Bay. Economic Geology, Vol. 82, No. 2.

Linford, J.G., 1973. Report on Turair Airborne Electromagnetic-Magnetic Survey, D'Aguilar Range, Queenstown, Tasmania. (Scintrex Pty Ltd for Australasian Minerals Inc.) T 1035.

McNeil, R.D., 1992. Thirkell Hill, Tasmania (E.L 3/92) Unpublished Mac Mining N.L. Report

Martin, I.D., 1974. Final Report on Exploration Licence 2/72, Tasmania. (Australasian Minerals Inc).

McGregor-Dawson, J.L., 1975. Birch Inlet EL 9/74, Annual Report 1974-75 Season (Union Oil Development Corp.) 75-1112.

Pemberton, J., 1981. Progress Report on EL 9/74, Birch Inlet Tasmania, 1980-81 (Geopeko) 81-1580.

Pemberton, J., 1984. Relinquishment Report on Part of EL 9/74 Birch Inlet, Tasmania. (Geopeko) 84-2124.

Strickland, C.D., 1978. Progress Report, EL 9/74 Report No K1/78/2 (in 2 parts). (Geopeko) 78-1275.

Vicary et. al., 1992. Geology of the Wanderer River - Moores Valley Area (1:25,000) Geological Survey of Tasmania

Williams, R.E., 1985. Letter on Field visit to Birch Inlet EL 9/74. (CSR) 85-2492.

988064

THIRKELL HILL ANNUAL REPORT (TO 9/93)

Appendix A(i)

Plans

1. Geology of The D'Aguilar Range Area (South Sheet) 1:10,000. (*After Geological Survey of Tasmania).

2. Geology of The D'Aguilar Range Area (North Sheet) 1:10,000. (*After Geological Survey of Tasmania).

3. Reconnaiassance Geophysics of The D'Aguilar Range Area (South Sheet) - 1:10,000.

4. Reconnaiassance Geophysics of The D'Aguilar Range Area (North Sheet) - 1:10,000.

5. Compiled Geochemistry of the D'Aguilar Range Area - Lead Profiles (South Sheet) - 1:10,000.

6. Compiled Geochemistry of the D'Aguilar Range Area - Lead Profiles (North Sheet) - 1:10,000.

7. Compiled Geochemistry of the D'Aguilar Range Area - Zinc Profiles (South Sheet) - 1:10,000.

8. Compiled Geochemistry of the D'Aguilar Range Area - Zinc Profiles (North Sheet) - 1:10,000.

382 000mE | 383 000mE | 384 000mE | 385 000mE | 386 000mE | 387 000mE | 388 000mE | 389 000mE

5 277 000mN | 5 276 000mN | 5 275 000mN | 5 274 000mN | 5 273 000mN | 5 272 000mN | 5 271 000mN | 5 270 000mN | 5 269 000mN | 5 268 000mN | 5 267 000mN

QUATERNARY

Qa — Talus, scree, younger and older alluvium + fan deposits.

TERTIARY

Ts — Semi-consolidated interbedded sands, pebble-cobble gravels, silts and clays.

Unconformity

SILURO-DEVONIAN

S-D — Undifferentiated sandstone, siltstone and shale. Fossiliferous siltstone and sandstone at GN841882 is correlate of Florence Sandstone.

ORDOVICIAN

Og — Limestone with some associated siltstone and sandstone.

SILICICLASTIC SEQUENCE - CORRELATE OF OWEN CONGLOMERATE & DENISON GROUP

? EARLY ORDOVICIAN - ? LATE CAMBRIAN

EOum — Ouu — Grey to pink well-bedded sandstone and chert-bearing gritty sandstone. Commonly bioturbated, with fossiliferous horizons.

EOum — EOmc — Pink thickly bedded to massive pebble-cobble conglomerate with minor sandstone.

EOcs — EOxsp — Mainly pink trough cross-bedded sandstone with intercalations of pebble conglomerate.

EOcs — EOxsg — Grey trough cross-bedded micaceous sandstone with some granule-pebble conglomerate and minor siltstone.

EOcs — EOsl — Thinly bedded micaceous siltstone and sandstone (EOsl). Minor bioturbation.

EOcs — Grey to pink granule-pebble to pebble-cobble conglomerate with interbedded sandstone and minor siltstone (EOcs).

EOw — EOsh — Mainly black pyritic shale and siltstone (EOsh), with upper unit of micaceous siltstone and sandstone in some areas.

EOw — EOvc — Mainly volcaniclastic conglomerate and sandstone with minor siltstone.

Unconformity

FELSIC TO INTERMEDIATE VOLCANICS AND RELATED SEQUENCES - CORRELATES OF MT READ VOLCANICS

CAMBRIAN

Eve — Dominantly cream to pink felsic lava (quartz-feldspar+biotite-phyric) with minor intercalated epiclastic rocks and lava breccias (Efl).

Efl — Felsic volcaniclastic and epiclastic rocks, well bedded to poorly bedded, fine to coarse grained (Eve).

Esb — Siliciclastic breccia-conglomerate unit, with quartzite clasts to 20cm. Strongly fractured and recrystallised.

Eqfbl — Quartz-feldspar-biotite-phyric lava and/or intrusive.

Esb — Esfsh — Laminated to thinly bedded siltstone, sandstone and shale, partly siliciclastic, partly volcaniclastic.

Esb — Esrsc — Poorly bedded to massive grey siliciclastic sandstone and granule-pebble conglomerate.

CAMBRIAN INTRUSIVE ROCKS

Eqfbp — Quartz-feldspar-biotite porphyry, coarse grained.

Eqfbl — Fine to medium grained quartz-feldspar-biotite-phyric lava and/or intrusive.

Unconformity

PRECAMBRIAN

Pu — Undifferentiated quartzite, phyllite, schist.

q — Quartz vein.

Geological boundary

Fault - accurate or approximate.

Fault - inferred or concealed.

Axial surface trace of major anticline, syncline; plunge indicated.

Tenement boundary - E.L. 3/92

Major access track - suitable for tracked vehicles only.

Minor access track.

Exploration grid line.

World heritage area boundary.

5 cm

988065

93-3485.

ANGLO AUSTRALIAN RESOURCES N.L.

TASMANIA - E.L. 3/92

GEOLOGY OF THE D'AGUILAR RANGE AREA SOUTH SHEET

SCALE 1 : 10 000

0 200 400 600 800 1000 metres

Compiled: P. A. M.	Date: JANUARY 1993	Dwg. No.:
Drawn: NORTHPOINT	Map Ref: 11	PLATE:

Plan 1

382 000mE 383 000mE 384 000mE 385 000mE 386 000mE 387 000mE 388 000mE 389 000mE

5 288 000mN 5 287 000mN 5 286 000mN 5 285 000mN 5 284 000mN 5 283 000mN 5 282 000mN 5 281 000mN 5 280 000mN 5 279 000mN 5 278 000mN

LEGEND

QUATERNARY	Qa	Talus, scree, younger and older alluvium + fan deposits.
TERTIARY	Ts	Semi-consolidated interbedded sands, pebble-cobble gravels, silts and clays.
		Unconformity
SILURO-DEVONIAN	S-D	Undifferentiated sandstone, siltstone and shale. Fossiliferous siltstone and sandstone at CN841882 is correlate of Florence Sandstone.
ORDOVICIAN	Og	Limestone with some associated siltstone and sandstone.

SILICICLASTIC SEQUENCE - CORRELATE OF OWEN CONGLOMERATE & DENISON GROUP

? EARLY ORDOVICIAN - ? LATE CAMBRIAN	EOum / Ouu	Grey to pink well-bedded sandstone and chert-bearing gritty sandstone. Commonly bioturbated, with fossiliferous horizons.
	EOmc	Pink thickly bedded to massive pebble-cobble conglomerate with minor sandstone.
	EOxsp	Mainly pink trough cross-bedded sandstone with intercalations of pebble conglomerate.
	EOxs / EOxsg	Grey trough cross-bedded micaceous sandstone with some granule-pebble conglomerate and minor siltstone.
	EOsl	Thinly bedded micaceous siltstone and sandstone (EOsl). Minor bioturbation.
	EOcs	Grey to pink granule-pebble to pebble-cobble conglomerate with interbedded sandstone and minor siltstone (EOcs).
	EOw / EOsh	Mainly black pyritic shale and siltstone (EOsh), with upper unit of micaceous siltstone and sandstone in some areas.
	EOvc	Mainly volcaniclastic conglomerate and sandstone with minor siltstone.
		Unconformity

FELSIC TO INTERMEDIATE VOLCANICS AND RELATED SEQUENCES - CORRELATES OF MT READ VOLCANICS

CAMBRIAN	Eve	Dominantly cream to pink felsic lava (quartz-feldspar+biotite-phyric) with minor intercalated epiclastic rocks and lava breccias (Efl). Felsic volcaniclastic and epiclastic rocks, well bedded to poorly bedded, fine to coarse grained (Eve).
	Efl	
	Esb	Siliciclastic breccia-conglomerate unit, with quartzite clasts to 20cm. Strongly fractured and recrystallised.
	Eqfb	Quartz-feldspar-biotite-phyric lava and/or intrusive.
	Esrb / Esrsh	Laminated to thinly bedded siltstone, sandstone and shale, partly siliciclastic, partly volcaniclastic.
	Esrsc	Poorly bedded to massive grey siliciclastic sandstone and granule-pebble conglomerate.

CAMBRIAN INTRUSIVE ROCKS

	Eqfbp	Quartz-feldspar-biotite porphyry, coarse grained.
	Eqfbl	Fine to medium grained quartz-feldspar-biotite-phyric lava and/or intrusive.
		Unconformity
PRECAMBRIAN	Pu	Undifferentiated quartzite, phyllite, schist.

- Quartz vein.
- Geological boundary
- Fault - accurate or approximate.
- Fault - inferred or concealed.
- Axial surface trace of major anticline, syncline; plunge indicated.
- Tenement boundary - E.L. 3/92
- Major access track - suitable for tracked vehicles only.
- Minor access track.
- Exploration grid line.
- World heritage area boundary.

5 cm

988066

93-3485.

ANGLO AUSTRALIAN RESOURCES N.L.

TASMANIA - E.L. 3/92

GEOLOGY OF THE D'AGUILAR RANGE AREA NORTH SHEET

SCALE 1 : 10 000

0 200 400 600 800 1000 metres

Compiled: P. A. M.	Date: JANUARY 1993	Dwg. No.:
Drawn: NORTHPOINT	Map Ref: 12	PLATE:

Plan 2

382 000mE 383 000mE 384 000mE 385 000mE 386 000mE 387 000mE 388 000mE 389 000mE

5 277 000mN
5 276 000mN
5 275 000mN
5 274 000mN
5 273 000mN
5 272 000mN
5 271 000mN
5 270 000mN
5 269 000mN
5 268 000mN
5 267 000mN

1 500W 19 200N 1 500E
1 600W 18 400N 1 500E
1 700W 17 600N 1 400E
1 700W 16 800N 1 600E
1 500W 16 000N (VIKING 6) (VIKING 7) (VIKING 8) 16 800N (VIKING 9) 2 200E
THIRKELL NORTH
(VIKING 21)
(VIKING 10)
CONDOR WEST
1 300W 15 200N 400E
GEOPEKO V22 GRID
CONDOR
(VIKING 22)
150W 15 200N 1 700E
(VIKING 11)
SPRENT RIVER SOUTH
1 500W 14 400N 700E
1 400W 13 600N (IIP 22) 1 700E
HALE RIVER NORTH EAST
1 500W 12 800N 750E
1 475W 12 000N 625E
THIRKELL SOUTH
(VIKING 12)
1 150W 11 200N 575E
(VIKING 13)
(VIKING 23)
600W 10 400N 475E
HALE RIVER EAST
(VIKING 15)
(VIKING 16)
(VIKING 17)
(VIKING 18)
(VIKING 14)
GEOPEKO V17 GRID

LEGEND

Apparent Resistivity
Chargeability
Quadrature
VLF (NWC)
In Phase
Magnetic intensity
U.O.D.C. I.P. Anomalies Stronger
Weaker
SCINTREX E.M. Anomalies Stronger: >10 ot MHOS, signal/noise >2
Weaker: ot <10 MHOS, signal/noise <2
Spurious Anomaly
GEOEX E.M. Anomalies Stronger
Weaker
Anomaly number
Conductor axis Definite
Possible
Conductive zone
Magnetic body trace
E.M. survey boundary

988067

93-3485.

ANGLO AUSTRALIAN RESOURCES N.L.

TASMANIA - E.L. 3/92

RECONNAISSANCE GEOPHYSICS OF THE D'AGUILAR RANGE AREA SOUTH SHEET

SCALE 1 : 10 000

0 200 400 600 800 1000 metres

Compiled: P. A. M.	Date: JANUARY 1993	Dwg. No.:
Drawn: NORTHPOINT	Map Ref: 11	PLATE:

Plan 3

382 000mE | 383 000mE | 384 000mE | 385 000mE | 386 000mE | 387 000mE | 388 000mE | 389 000mE

5 288 000mN | 5 287 000mN | 5 286 000mN | 5 285 000mN | 5 284 000mN | 5 283 000mN | 5 282 000mN | 5 281 000mN | 5 280 000mN | 5 279 000mN | 5 278 000mN

(A.E.M. J) (A.E.M. B) (A.E.M. I) (A.E.M. H) (A.E.M. D) (A.E.M. E)

(VIKING 2) MT LEE (VIKING 19) D' AGUILAR NORTH (VIKING 1) (VIKING 5) (VIKING 3) (VIKING 4)

INNES PEAK
TRG. No. 833 2179'

LEGEND

Apparent Resistivity

Chargeability

Quadrature
VLF (NWC)
In Phase

Magnetic intensity

U.O.D.C. I.P. Anomalies
Stronger
Weaker

SCINTREX E.M. Anomalies
Stronger: >10 ot MHOS, signal/noise >2
Weaker: ot <10 MHOS, signal/noise <2
Spurious Anomaly

GEOEX E.M. Anomalies
Stronger
Weaker

Anomaly number

Conductor axis
Definite
Possible

Conductive zone

Magnetic body trace

E.M. survey boundary

988068

93-3485.

5 cm

ANGLO AUSTRALIAN RESOURCES N.L.

TASMANIA - E.L. 3/92

RECONNAISSANCE GEOPHYSICS OF THE D'AGUILAR RANGE AREA NORTH SHEET

SCALE 1 : 10 000

0 200 400 600 800 1000
metres

Compiled: P. A. M.	Date: JANUARY 1993	Dwg. No.:
Drawn: NORTHPOINT	Map Ref: 12	PLATE:

Plan 4

382 000mE
383 000mE
384 000mE
385 000mE
386 000mE
387 000mE
388 000mE
389 000mE
5 277 000mN
5 276 000mN
5 275 000mN
5 274 000mN
5 273 000mN
5 272 000mN
5 271 000mN
5 270 000mN
5 269 000mN
5 268 000mN
5 267 000mN
1 500W
19 200N
1 500E
1 600W
18 400N
1 700W
17 600N
1 400E
16 800N
1 650E
16 000N
2 200E
15 200N
1 700E
14 400N
700E
13 600N
12 800N
750E
12 000N
625E
11 200N
575E
10 400N
475E
THIRKELL NORTH
THIRKELL SOUTH
CONDOR WEST
CONDOR
SPRENT RIVER SOUTH
HALE RIVER NORTH EAST
HALE RIVER EAST
(VIKING 6)
(VIKING 7)
(VIKING 8)
(VIKING 9)
(VIKING 10)
(VIKING 11)
(VIKING 12)
(VIKING 13)
(VIKING 14)
(VIKING 15)
(VIKING 16)
(VIKING 17)
(VIKING 18)
(VIKING 21)
(VIKING 22)
(VIKING 23)
(IP 22)
GEOPEKO V22 GRID
GEOPEKO V17 GRID

LEGEND

- Stream Sample Location no anomalous results
- Stream Sample Location with anomalous results
- Anomaly Centre (approximate)
- (VIKING 23) Anomaly Name (Geopeko 1978)
- **CONDOR** Prospect Name
- 5 / 60 / 55 Copper Assay Result (ppm) / Lead Assay Result (ppm) / Zinc Assay Result (ppm)

Stream Sample Colour Code

Cu	≥5-<10	≥10-<15	≥15
Pb	≥30-<40	≥40-<50	≥50
Zn		≥40-<75	≥75

Soil Sample profiles
Union Oil (1975)
Vertical scale 38mm = 20ppm Cu, Pb
38mm = 80ppm Zn

Soil Sample Profile
"C" Horizon, Geopeko (1978)
Vertical scale 38mm = 20ppm Cu
38mm = 200ppm Pb, Zn

5 cm

988069
93-3485

ANGLO AUSTRALIAN RESOURCES N.L.

TASMANIA - E.L. 3/92

COMPILED GEOCHEMISTRY OF THE D'AGUILAR RANGE AREA LEAD PROFILES SOUTH SHEET

SCALE 1 : 10 000

0 200 400 600 800 1000 metres

Compiled: P. A. M.	Date: JANUARY 1993	Dwg. No.:
Drawn: NORTHPOINT	Map Ref: 11	PLATE:

Plan 5

382 000mE 383 000mE 384 000mE 385 000mE 386 000mE 387 000mE 388 000mE 389 000mE

5 288 000mN
5 287 000mN
5 286 000mN
5 285 000mN
5 284 000mN
5 283 000mN
5 282 000mN
5 281 000mN
5 280 000mN
5 279 000mN
5 278 000mN

(A.E.M. J)
(A.E.M. B)
(A.E.M. I)
(A.E.M. H)
(A.E.M. D)
(A.E.M. E)

20
40
40
30 40 60 40
30
60
40
40 30

40 70
40 60
30
30 60
(VIKING 19) 70
40 50
30
30
50N
(VIKING 5) 50S
150W 150E

360W 00 70 100E 40 30 30
150S 200E
700W
(VIKING 2)
MT LEE
D' AGUILAR NORTH
200W 100N 300E
00 40 80
(VIKING 1)
200W 100S 200E
1 500W 19 200N

(VIKING 3)
(VIKING 4)

<20

LEGEND

- Stream Sample Location no anomalous results
- Stream Sample Location with anomalous results
- Anomaly Centre (approximate)
- (VIKING 23) Anomaly Name (Geopeko 1978)
- **CONDOR** Prospect Name
- 5 Copper Assay Result (ppm)
- 60 Lead Assay Result (ppm)
- 55 Zinc Assay Result (ppm)

Stream Sample Colour Code

Cu	≥5-<10	≥10-<15	≥15
Pb	≥30-<40	≥40-<50	≥50
Zn		≥40-<75	≥75

Soil Sample profiles
Union Oil (1975)
Vertical scale 38mm = 20ppm Cu, Pb
38mm = 80ppm Zn

Soil Sample Profile
"C" Horizon, Geopeko (1978)
Vertical scale 38mm = 20ppm Cu
38mm = 200ppm Pb, Zn

5 cm

93-3485.

ANGLO AUSTRALIAN RESOURCES N.L.

TASMANIA - E.L. 3/92

COMPILED GEOCHEMISTRY OF THE D'AGUILAR RANGE AREA LEAD PROFILES NORTH SHEET

988070

SCALE 1 : 10 000

0 200 400 600 800 1000
metres

Compiled: P. A. M.	Date: JANUARY 1993	Dwg. No.:
Drawn: NORTHPOINT	Map Ref: 12	PLATE:

Plan 6

382 000mE 383 000mE 384 000mE 385 000mE 386 000mE 387 000mE 388 000mE 389 000mE

5 277 000mN
5 276 000mN
5 275 000mN
5 274 000mN
5 273 000mN
5 272 000mN
5 271 000mN
5 270 000mN
5 269 000mN
5 268 000mN
5 267 000mN

1 500W 19 200N 1 500E
1 600W 18 400N 1 500E
1 700W 17 600N 1 400E
1 700W 16 800N 1 650E
1 500W 16 000N 2 200E
1 500W 14 400N 700E
1 400W 13 600N 1 700E
1 500W 12 800N 750E
1 475W 12 000N 625E
1 150W 11 200N 575E
600W 10 400N 475E
1 300W 15 200N 400W
150W 15 200N 1 700E

THIRKELL NORTH
CONDOR WEST
CONDOR
SPRENT RIVER SOUTH
HALE RIVER NORTH EAST
THIRKELL SOUTH
HALE RIVER EAST

(VIKING 6) (VIKING 7) (VIKING 8) (VIKING 9)
(VIKING 10) (VIKING 11) (VIKING 12) (VIKING 13)
(VIKING 14) (VIKING 15) (VIKING 16) (VIKING 17) (VIKING 18)
(VIKING 21) (VIKING 22) (VIKING 23) (IP 22)

GEOPEKO V22 GRID
GEOPEKO V17 GRID

LEGEND

- Stream Sample Location no anomalous results
- Stream Sample Location with anomalous results
- Anomaly Centre (approximate)
- [VIKING 23] Anomaly Name (Geopeko 1978)
- **CONDOR** Prospect Name
- 5 / 60 / 55 Copper Assay Result (ppm) / Lead Assay Result (ppm) / Zinc Assay Result (ppm)

Stream Sample Colour Code

Cu	≥5-<10	≥10-<15	≥15
Pb	≥30-<40	≥40-<50	≥50
Zn		≥40-<75	≥75

Soil Sample profiles
Union Oil (1975)
Vertical scale 38mm = 20ppm Cu, Pb
38mm = 80ppm Zn

Soil Sample Profile
'C' Horizon, Geopeko (1978)
Vertical scale 38mm = 20ppm Cu
38mm = 200ppm Pb, Zn

5 cm

93-3485.
988071

ANGLO AUSTRALIAN RESOURCES N.L.

TASMANIA - E.L. 3/92

COMPILED GEOCHEMISTRY OF THE D'AGUILAR RANGE AREA ZINC PROFILES SOUTH SHEET

SCALE 1 : 10 000

0 200 400 600 800 1000 metres

Compiled: P. A. M.	Date: JANUARY 1993	Dwg. No.:
Drawn: NORTHPOINT	Map Ref: 11	PLATE:

Plan 11

382 000mE 383 000mE 384 000mE 385 000mE 386 000mE 387 000mE 388 000mE 389 000mE

5 288 000mN
5 287 000mN
5 286 000mN
5 285 000mN
5 284 000mN
5 283 000mN
5 282 000mN
5 281 000mN
5 280 000mN
5 279 000mN
5 278 000mN

(A.E.M. J)
(A.E.M. B)
(A.E.M. I)
(A.E.M. H)
(A.E.M. D)
(A.E.M. E)

MT LEE
D' AGUILAR NORTH

(VIKING 1)
(VIKING 2)
(VIKING 3)
(VIKING 4)
(VIKING 5)
(VIKING 19)

350W 00 100E 150S 200E 700W
200W 100N 300E 00 200W 100S 200E
150W 50S 50N 150E
1 500W 19 200N

LEGEND

- Stream Sample Location no anomalous results
- Stream Sample Location with anomalous results
- Anomaly Centre (approximate)
- (VIKING 23) Anomaly Name (Geopeko 1978)
- **CONDOR** Prospect Name
- 5 / 60 / 55 Copper Assay Result (ppm) / Lead Assay Result (ppm) / Zinc Assay Result (ppm)

Stream Sample Colour Code

Cu	≥5-<10	≥10-<15	≥15
Pb	≥30-<40	≥40-<50	≥50
Zn		≥40-<75	≥75

Soil Sample profiles
Union Oil (1975)
Vertical scale 38mm = 20ppm Cu, Pb
38mm = 80ppm Zn

Soil Sample Profile
"C" Horizon, Geopeko (1978)
Vertical scale 38mm = 20ppm Cu
38mm = 200ppm Pb, Zn

5 cm

93-3485.

ANGLO AUSTRALIAN RESOURCES N.L.

TASMANIA - E.L. 3/92

COMPILED GEOCHEMISTRY OF THE D'AGUILAR RANGE AREA ZINC PROFILES

988072 **NORTH SHEET**

SCALE 1 : 10 000

0 200 400 600 800 1000 metres

Compiled: P. A. M.	Date: JANUARY 1993	Dwg. No.:
Drawn: NORTHPOINT	Map Ref: 12	PLATE:

Plan 8

THIRKELL HILL ANNUAL REPORT (TO 9/93)

Appendix A(ii)

Plans

9. Compiled Geochemistry of the D'Aguilar Range Area - Copper Profiles (South Sheet) - 1:10,000.

10. Compiled Geochemistry of the D'Aguilar Range Area - Copper Profiles (North Sheet) - 1:10,000.

11. 1993 Pan Concentrate (Au) Sampling, Sample Locations and Drainage Divides (South Sheet) - 1:10,000.

12. 1993 Pan Concentrate (Au) Sampling, Sample Locations and Drainage Divides (North Sheet) - 1:10,000.

13. Proposed Pan Concentrate (Au) Sampling, Sample Locations and Drainage Divides (South Sheet) - 1:10,000.

14. Proposed Pan Concentrate (Au) Sampling, Sample Locations and Drainage Divides (North Sheet) - 1:10,000.

382 000mE
383 000mE
384 000mE
385 000mE
386 000mE
387 000mE
388 000mE
389 000mE
5 277 000mN
5 276 000mN
5 275 000mN
5 274 000mN
5 273 000mN
5 272 000mN
5 271 000mN
5 270 000mN
5 269 000mN
5 268 000mN
5 267 000mN

1 500W
19 200N
1 500E
1 600W
18 400N
1 500E
1 700W
17 600N
1 400E
1 700W
16 800N
1 650E
1 500W
16 000N
2 200E
1 300W
15 200N
400W
150W
15 200N
1 700E
1 500W
14 400N
700E
1 400W
13 600N
1 700E
1 500W
12 800N
750E
1 475W
12 000N
625E
1 150W
11 200N
575E
600W
10 400N
475E

THIRKELL NORTH
CONDOR WEST
CONDOR
SPRENT RIVER SOUTH
HALE RIVER NORTH EAST
THIRKELL SOUTH
HALE RIVER EAST

(VIKING 6)
(VIKING 7)
(VIKING 8)
(VIKING 9)
(VIKING 10)
(VIKING 11)
(VIKING 12)
(VIKING 13)
(VIKING 14)
(VIKING 15)
(VIKING 16)
(VIKING 17)
(VIKING 18)
(VIKING 21)
(VIKING 22)
(VIKING 23)
(IP 22)

GEOPEKO V22 GRID
GEOPEKO V17 GRID

LEGEND

- Stream Sample Location no anomalous results
- Stream Sample Location with anomalous results
- Anomaly Centre (approximate)
- (VIKING 23) Anomaly Name (Geopeko 1978)
- **CONDOR** Prospect Name
- 5 Copper Assay Result (ppm)
- 60 Lead Assay Result (ppm)
- 55 Zinc Assay Result (ppm)

Stream Sample Colour Code

Cu	≥5-<10	≥10-<15	≥15
Pb	≥30-<40	≥40-<50	≥50
Zn		≥40-<75	≥75

- Soil Sample profiles Union Oil (1975) Vertical scale 38mm = 20ppm Cu, Pb; 38mm = 80ppm Zn
- Soil Sample Profile "C" Horizon, Geopeko (1978) Vertical scale 38mm = 20ppm Cu; 38mm = 200ppm Pb, Zn

5 cm

988074
93-3485.1

ANGLO AUSTRALIAN RESOURCES N.L.

TASMANIA - E.L. 3/92

COMPILED GEOCHEMISTRY OF THE D'AGUILAR RANGE AREA COPPER PROFILES SOUTH SHEET

SCALE 1 : 10 000

0 200 400 600 800 1000 metres

Compiled: P. A. M.	Date: JANUARY 1993	Dwg. No.:
Drawn: NORTHPOINT	Map Ref: 11	PLATE:

Plan 9

382 000mE 383 000mE 384 000mE 385 000mE 386 000mE 387 000mE 388 000mE 389 000mE

5 288 000mN
5 287 000mN
5 286 000mN
5 285 000mN
5 284 000mN
5 283 000mN
5 282 000mN
5 281 000mN
5 280 000mN
5 279 000mN
5 278 000mN

(A.E.M. J)
(A.E.M. B)
(A.E.M. I)
(A.E.M. H)
(A.E.M. D)
(A.E.M. E)
(VIKING 19)
(VIKING 2)
(VIKING 1)
(VIKING 5)
(VIKING 3)
(VIKING 4)

MT LEE
D' AGUILAR NORTH

00 360W 100E
150S 700W 200E
200W 100N 300E
00 200W 100S 200E
50N 150W 50S 150E
1 500W 19 200N

<2 2 5 10

LEGEND

- Stream Sample Location no anomalous results
- Stream Sample Location with anomalous results
- Anomaly Centre (approximate)
- (VIKING 23) Anomaly Name (Geopeko 1978)
- **CONDOR** Prospect Name
- 5 Copper Assay Result (ppm)
- 60 Lead Assay Result (ppm)
- 55 Zinc Assay Result (ppm)

Stream Sample Colour Code

Cu	≥5-<10	≥10-<15	≥15
Pb	≥30-<40	≥40-<50	≥50
Zn		≥40-<75	≥75

- Soil Sample profiles Union Oil (1975) Vertical scale 38mm = 20ppm Cu, Pb; 38mm = 80ppm Zn
- Soil Sample Profile "C" Horizon, Geopeko (1978) Vertical scale 38mm = 20ppm Cu; 38mm = 200ppm Pb, Zn

5 cm

93-3485.

ANGLO AUSTRALIAN RESOURCES N.L.

TASMANIA - E.L. 3/92

COMPILED GEOCHEMISTRY OF THE D'AGUILAR RANGE AREA COPPER PROFILES NORTH SHEET

988075

SCALE 1 : 10 000

0 200 400 600 800 1000 metres

Compiled: P. A. M.	Date: JANUARY 1993	Dwg. No.:
Drawn: NORTHPOINT	Map Ref: 12	PLATE:

Plan 10

382 000mE
383 000mE
384 000mE
385 000mE
386 000mE
387 000mE
388 000mE
389 000mE
5 277 000mN
5 276 000mN
5 275 000mN
5 274 000mN
5 273 000mN
5 272 000mN
5 271 000mN
5 270 000mN
5 269 000mN
5 268 000mN
5 267 000mN

0.43 11
0.67 10
14 0.42
0.57 15
0.40 16
18.03 17
14.50 6
7 0.93
1.86 5
0.32 8
0.44 9
12.02 3
0.55 4
0.82 35
0.83 1
2 48.18
5.61 34
27 0.84
3.95 26
0.29 33
18 23.06
32 11.17
0.46 28
12.00 29 VG
0.47 30
31 0.54
25 0.34
0.11 21
28.92 19
12.35 23 VG
22 VG 51.39
20 0.14
1.28 24

LEGEND

- WORLD HERITAGE BOUNDARY
- TENEMENT BOUNDARY
- MAJOR DRAINAGE BASIN
- MINOR DRAINAGE BASIN
- DRAINAGE BASIN SAMPLED
- 12 VG — SAMPLE LOCATION + ASSAY IN UG AU VISIBLE GOLD

988076
93-3485.

5 cm

ANGLO AUSTRALIAN RESOURCES N.L.

TASMANIA - E.L. 3/92

1993 PAN CONCENTRATE (Au) SAMPLING

Sample Locations & Drainage Divides

SCALE 1 : 10 000

0 200 400 600 800 1000 metres

Compiled: P. A. M.	Date: JULY 1993	Dwg. No.:
Drawn: NORTHPOINT	Map Ref: 11	PLATE:

Plan 11

382 000mE 383 000mE 384 000mE 385 000mE 386 000mE 387 000mE 388 000mE 389 000mE

5 288 000mN
5 287 000mN
5 286 000mN
5 285 000mN
5 284 000mN
5 283 000mN
5 282 000mN
5 281 000mN
5 280 000mN
5 279 000mN
5 278 000mN

LEGEND

- WORLD HERITAGE BOUNDARY
- TENEMENT BOUNDARY
- MAJOR DRAINAGE BASIN
- MINOR DRAINAGE BASIN
- DRAINAGE BASIN SAMPLED
- 12 VG ○ SAMPLE LOCATION + ASSAY IN UG AU VISIBLE GOLD

988077
93-3485.

5 cm

ANGLO AUSTRALIAN RESOURCES N.L.

TASMANIA - E.L. 3/92

1993 PAN CONCENTRATE (Au) SAMPLING

Sample Locations & Drainage Divides

SCALE 1 : 10 000

0 200 400 600 800 1000 metres

Compiled: P. A. M.	Date: JULY 1993	Dwg. No.:
Drawn: NORTHPOINT	Map Ref: 12	PLATE:

Plan 12

382 000mE 383 000mE 384 000mE 385 000mE 386 000mE 387 000mE 388 000mE 389 000mE

5 277 000mN
5 276 000mN
5 275 000mN
5 274 000mN
5 273 000mN
5 272 000mN
5 271 000mN
5 270 000mN
5 269 000mN
5 268 000mN
5 267 000mN

0.43 11
0.67 10
14 0.42
0.57 15
0.40 16
18.03 17
14.50 6
7 0.93
1.86 5
0.32 8
0.44 9
12.02 3
0.55 4
0.82 35
0.83 1
2 48.18
5.61 34
27 0.84
3.95 26
0.29 33
18 23.06
32 11.17
0.46 28
12.00 29 VG
0.47 30
31 0.54
0.11 21
28.92 19
12.35 23 VG
22 VG 51.59
20 0.14
1.28 24

LEGEND

- WORLD HERITAGE BOUNDARY
- TENEMENT BOUNDARY
- MAJOR DRAINAGE BASIN
- MINOR DRAINAGE BASIN
- DRAINAGE BASIN SAMPLED
- 12 VG SAMPLE LOCATION + ASSAY IN UG AU VISIBLE GOLD
- SITE TO BE SAMPLED

988078

5 cm

93-3485.

ANGLO AUSTRALIAN RESOURCES N.L.

TASMANIA - E.L. 3/92

PROPOSED PAN CONCENTRATE (Au) Sample Locations & Drainage Divides

SCALE 1 : 10 000

0 200 400 600 800 1000 metres

Compiled: P. A. M.	Date: JULY 1993	Dwg. No.:
Drawn: NORTHPOINT	Map Ref: 11	PLATE:

Plan 13

382 000mE 383 000mE 384 000mE 385 000mE 386 000mE 387 000mE 388 000mE 389 000mE

5 288 000mN
5 287 000mN
5 286 000mN
5 285 000mN
5 284 000mN
5 283 000mN
5 282 000mN
5 281 000mN
5 280 000mN
5 279 000mN
5 278 000mN

LEGEND

- WORLD HERITAGE BOUNDARY
- TENEMENT BOUNDARY
- MAJOR DRAINAGE BASIN
- MINOR DRAINAGE BASIN
- DRAINAGE BASIN SAMPLED
- 12 VG ○ SAMPLE LOCATION + ASSAY IN UG AU VISIBLE GOLD
- • SITE TO BE SAMPLED

988079

5 cm

93-3485.

ANGLO AUSTRALIAN RESOURCES N.L.

TASMANIA - E.L. 3/92

PROPOSED PAN CONCENTRATE (Au) Sample Locations & Drainage Divides

SCALE 1 : 10 000

0 200 400 600 800 1000 metres

Compiled: P. A. M.	Date: JULY 1993	Dwg. No.:
Drawn: NORTHPOINT	Map Ref: 12	PLATE:

Plan 14

988080

THIRKELL HILL ANNUAL REPORT TO 9/93

Appendix B.

Sample Information

1. C-Horizon Auger Sample Information

2. Rock-Chip and Float Sample Information

SOUTH CONDOR ZONE (9000N ANOMALY - VIKING 22 GRID)

Sample No.	Co-ordinates	Depth	Comment	Cu (ppm)	Pb (ppm)	Zn (ppm)	Fe (%)
41	9025N : 10175 E	1.0m	tan friable rock	16	159	447	5.64
45	9025N : 10200 E	1.1m	tan clay - quartz fragments	16	183	190	4.20
49	9025N : 10225 E	0.8m	quartz in hole at 300- 450m	22	660	170	8.30
53	9025N : 10250 E	0.8m		24	390	280	6.30
57	9025N : 10275 E	0.4m	hit hard rock bottom - qtz frag	36	176	120	2.10
38	9000N : 10162.5E	0.7m		35	113	316	3.84
39	9000N : 10175 E	0.8m	tan friable rock	8	154	394	4.77
42	9000N : 10187.5E	1.1m	reddish friable weathered rock	22	325	295	4.65
43	9000N : 10200 E	1.2m		8	162	732	5.55
46	9000N : 10212.5E	1.2m	orange - tan weathered rock	10	330	530	0.64
47	9000N : 10225 E	1.2m		37	710	460	7.70
50	9000N : 10237.5E	1.2m	quartz fragments on bottom of hole	16	124	200	4.10
51	9000N : 10250 E	1.0m		17	201	120	6.40
54	9000N : 10262.5E	0.9m		35	126	49	15.00
55	9000N : 10275 E	1.0m		32	760	120	4.90
40	8975N : 10175 E	0.9m	tan friable rock	8	124	340	4.35
44	8975N : 10200 E	1.2m	orange colour	15	896	492	5.46
48	8975N : 10225 E	1.1m		46	410	240	4.50
52	8975N : 10250 E	0.8m	low wet area	27	470	160	7.40
56	8975N : 10275 E	0.4m	hit hard rock (qtz?)	28	148	44	4.30
All of the above samples are within forest/vegetation anomaly defined by large trees and fern undergrowth. Line 9000N is along a ridge.							
61	9025N : 10300 E	0.8m	button grass, melaleuca/paper bark	8	78	61	1.40
58	9000N : 10247.5E	1.1m	yellow	16	158	120	3.20
59	9000N : 10300 E	1.1m	yellow	12	178	100	4.70
62	9000N : 10312.5E	1.0m	brown	13	49	160	4.00
63	9000N : 10325 E	0.8m	brown	11	153	44	1.20
64	9500N : 10275 E Extension	1.3m		37	530	160	4.90
60	8975N : 10300 E	1.1m	yellow	11	104	42	2.40

SOUTH CONDOR ZONE (VIKING 22 GRID - LINE 10000N - WEST END)							
Sample No.	**Co-ordinates**	**Depth**	**Comment**	**Cu (ppm)**	**Pb (ppm)**	**Zn (ppm)**	**Fe (%)**
181	10000N : 10050 E	0.3m	all grey	17	42	21	0.33
182	10000N : 10036.5	0.25m	"	8	15	14	0.24
183	10000N : 10025 E	0.4m	"	8	24	31	0.68
184	10000N : 1012.5E	0.4m	"	8	16	32	0.36
185	10000N : 10000 E	0.35m	"	8	8	19	0.20
186	10000N : 9987.5E	0.4m	"	8	54	101	0.43
187	10000N : 9975 E	0.3m	"	8	64	84	0.64
188	10000N : 9962.5E	0.4m	"	8	193	31	0.25
189	10000N : 9950 E	0.5m	"	9	85	38	0.49
190	10000N : 9936.5E	0.4m	"	8	51	67	0.43
191	10000N : 9925 E	0.4m	"	8	40	63	0.23
192	10000N : 9912.5E	0.3m	"	8	33	18	0.31
193	10000N : 9950 E	0.4m	"	8	17	12	0.29
194	10000N : 9886.5E	0.4m	"	8	33	16	0.55
195	9900E : 10025 N	0.35m	"	8	177	13	0.90
196	9900E : 9975 N	0.4m	"	8	23	16	0.32
197	9924E : 10025 N	0.3m	"	9	53	27	0.26
198	9950E : 10025 N	0.35m	"	8	68	40	2.03
199	9975E : 10025 N	0.4m	reddish brown	8	25	60	0.69
200	10000N : 9975 N	0.25m		8	8	15	0.23

SOUTH CONDOR ZONE (VIKING 22/UNION 160N CENTRAL ANOMALY)

Sample No.	Co-ordinates	Depth	Comment	Cu (ppm)	Pb (ppm)	Zn (ppm)	Fe (%)
239	10000N : 10225 E	0.4m		8	16	51	1.11
238	10000N : 10237.5E	0.5m		8	24	59	1.27
237	10000N : 10250 E	0.3m		9	105	64	3.69
236	10000N : 10262.5E	0.3m	grey	17	59	129	7.45
233	10000N : 10275 E	0.45m	grey	9	9	21	1.35
232	10000N : 10287.5E	0.3m	light grey	8	59	242	4.96
234	10025N : 10275 E	0.5m		8	8	8	0.29
235	9975 N : 10275 E	1.0m	qtz all the way - sand at bottom	8	25	55	12.7

SOUTH CONDOR ZONE [UNION 160N, 50W ANOMALY (10000N ON GEOPEKO GRID)]

Sample No.	Co-ordinates	Depth	Comment	Cu (ppm)	Pb (ppm)	Zn (ppm)	Fe (%)
218	10000N : 10512.5E	0.8m	reddish brown	8	8	11	0.30
219	10000N : 10500 E	1.0m	yellow	8	24	21	3.62
220	9975N : 10500 E	0.8m	reddish brown	9	27	17	1.11
221	10025N : 10500 E	0.8m	reddish brown	8	33	20	5.06
222	10000N : 10487.5E	0.9m	mustard yellow	17	52	52	6.79
223	10000N : 10475 E	0.9m	yellow	16	117	124	5.01
224	9975 N : 10475 E	0.4m	brown/yellow	8	58	51	2.80
225	10025N : 10475 E	1.0m	yellow	16	70	51	5.84
226	10000N : 10462.5E	1.0m	mustard	8	75	105	9.21
227	10000N : 10450 E	0.5m	dark brown	8	24	24	0.41
228	10000N : 10437.5E	0.6m	grey	8	25	42	0.52
229	10000N : 10425 E	0.7m	grey/yellow	9	113	80	2.51
230	10000N : 10412.5E	0.7m	brown	8	31	9	0.73
231	10000N : 10400 E	0.35m	light brown	8	8	5	0.12

SOUTH CONDOR ZONE ('UNION 176N' ANOMALY)

Sample No.	Co-ordinates	Depth	Comment	Cu (ppm)	Pb (ppm)	Zn (ppm)	Fe (%)
145	00 : 00	0.2m	creek	7	<3	7	0.32
146	00 : 25 W	0.8m		7	7	6	0.31
147	00 : 50 W	0.8m		9	9	6	0.25
148	00 : 75 W	0.8m		8	8	10	0.31
149	00 : 25 E	0.2m		9	<3	5	0.15
150	00 : 50 E	0.5m		8	8	8	0.16
151	00 : 75 E	0.7m	creek	9	18	8	0.23
152	118N : 00	0.15m		<1	7	6	0.13
153	118N : 25 W	0.3m		<1	<3	7	0.18
154	118N : 50 W	0.5m		9	9	8	0.18
155	118N : 75 W	0.8m	creek	9	35	12	0.20
156	118N : 25 E	0.3m		9	<3	6	0.20
157	118N : 50 E	1.0m	creek	9	26	56	0.18
158	100S : 00	0.3m	on Bombardier track	<1	9	8	0.33

Samples 145 to 158 are centred on Bombardier track immediately south of Union line 176N. Datum 00,00 is at creek crossing Bombardier track. Lines are 81 degrees magnetic.

SOUTH CONDOR ZONE ('UNION 176N' ANOMALY cont.)

Samples 159 - 180 are on Bombardier track south of Union line 176N. Initially sampling was at 100m intervals, reducing to 50m intervals when line diverges from Base line south of Union line 184N. Datum is creek as for previous sampling (creek is approximately 100m south of 170N - Line 170N is not now visible).

Sample No.	Co-ordinates	Depth	Comment	Cu (ppm)	Pb (ppm)	Zn (ppm)	Fe (%)
159	200 S	0.3m		8	<3	4	0.18
160	300 S	0.9m		7	7	6	0.20
161	400 S	0.35m		8	60	18	0.16
162	500 S	0.4m		9	9	7	0.27
163	600 S	0.3m		8	25	5	0.16
164	700 S	0.3m	Union line 184N is at 710S.	8	8	6	0.51
165	800 S	0.2m		7	<3	5	0.20
166	900 S	0.3m		8	<3	6	0.36
167	1000 S	0.2m		8	8	20	0.88
168	1050 S	*	* Raining - all samples in bedrock	9	9	19	1.67
169	1100 S		from 168 to 180. Mainly 200 to	8	15	63	0.86
170	1150 S		900mm deep.	7	7	34	0.59
171	1200 S			9	9	24	0.40
172	1250 S			9	9	85	0.66
173	1300 S			16	16	309	1.41
174	1350 S			9	9	35	0.37
175	1400 S			8	16	72	2.99
176	1450 S			9	77	73	2.14
177	1500 S			8	8	22	0.72
178	1550 S			8	16	18	1.09
179	1600 S			9	9	6	0.59
180	1650 S		10000N, 10050E is at 1660S.	8	39	9	0.16

THIRKELL NORTH (9700N ANOMALY - VIKING 22 GRID)

Sample No.	Co-ordinates	Depth	Comment	Cu (ppm)	Pb (ppm)	Zn (ppm)	Fe (%)
1	9700N : 9475 E	0.8m	flood plain	8	8	21	0.25
2	9700N : 9462.5E	0.8m	flood plain	7	<3	4	0.07
3	9700N : 9450 E	0.2m	hill	8	<3	5	0.19
4	9700N : 9437.5E	0.4m		8	<3	4	0.17
5	9700N : 9400 E	0.15m	rocky hill - volcanics	8	<3	4	0.08
6	9700N : 9387.5E	0.15m	rocky hill	IS	IS	IS	IS
7	9700N : 9375 E	0.25m	rocky hill	<1	<3	4	0.14
8	9700N : 9362.5E	0.2m	rocky hill	<1	<3	6	0.09
9	9700N : 9350 E	0.2m	crest of hill	8	<3	4	0.31
30	9700N : 9325 E	0.9m	west side of hill	8	8	7	0.11
31	9700N : 9300 E	1.1m	east side of creek	9	26	12	0.17
32	9700N : 9275 E	1.0m	5m beyond creek, may be in gravels	7	15	17	0.73
33	9700N : 9250 E	1.1m	former flood plain	8	8	5	0.08
34	9700N : 9225 E	1.1m	former flood plain	7	15	8	0.15
35	9700N : 9200 E	1.0m	former flood plain	<1	<3	3	0.12
36	9700N : 9175 E	1.0m	from Ti Tree swamp	8	76	16	0.19
37	9700N : 9150 E	0.9m	Slope of hill - horizontal formation	<1	<3	IS	IS
19	9800N : 9525 E	0.8m		9	<3	5	0.20
18	9800N : 9500 E	0.9m	flat area	8	<3	7	0.15
17	9800N : 9475 E	0.15m	flat area	8	<3	9	0.16
16	9800N : 9450 E	0.9m	small hill - altered volcanics	8	<3	5	0.19
15	9800N : 9425 E	1.1m	drainage to south	<1	<3	3	0.04
14	9800N : 9400 E	0.8m	drainage to south	<1	<3	5	0.10
13	9800N : 9375 E	0.35m	drainage to south	<1	<3	3	0.09
12	9800N : 9350 E	0.25m	hill of volcanics	9	17	6	0.23
11	9800N : 9325 E	0.8m	hill of volcanics	8	17	9	0.11
10	9800N : 9300 E	1.0m		8	39	26	0.25

THIRKELL NORTH (9700N ANOMALY - VIKING 22 GRID cont.)

Sample No.	Co-ordinates	Depth	Comment	Cu (ppm)	Pb (ppm)	Zn (ppm)	Fe (%)
20	9900N : 9500 E	0.55m		7	<3	9	0.16
21	9900N : 9475 E	0.6m	valley - flat	8	<3	7	0.25
22	9900N : 9450 E	0.15m	valley - flat	8	<3	8	0.17
23	9900N : 9425 E	0.2m	hard rock - then soil	7	<3	6	0.38
24	9900N : 9400 E	0.15m		7	<3	6	0.07
25	9900N : 9375 E	1.1m		<1	<3	3	0.16
26	9900N : 9350 E	0.35m		81	30	9	0.14
27	9900N : 9325 E	-	no sample - creek	N/S	N/S	N/S	N/S
28	9900N : 9300 E	1.2m	flood plain - not bedrock?	8	8	6	0.21
29	9900N : 9275 E	1.2m	high water inflow	8	8	5	0.09
128	9700N : 9550 E	0.15m	rock	8	8	9	0.23
129	9675N : 9550 E	0.05m	rock at surface	<1	<3	6	0.16
130	9650N : 9550 E	0.2m	rock	7	7	7	0.42
131	9625N : 9550 E	1.1m	near creek, probably only silt	9	9	15	0.48
132	9700N : 9525 E	1.0m	Fe stained clay	<1	7	7	0.06
133	9675N : 9525 E	0.2m		8	<3	8	0.14
134A	9650N : 9525 E	0.15m	rock near surface	9	<3	8	0.16
134	9700N : 9500 E	0.8m	hard bottom, uncertain sample - high water	8	15	81	0.55
135	9675N : 9500 E	1.2m	doubtful sample	8	<3	7	0.16
136	9725N : 9500 E	1.1m	good bottom rock sample	8	8	19	0.37
137	9700N : 9512.5E	1.3m		8	8	12	0.29
138	9700N : 9487.5E	0.9m		8	17	122	0.49
139	9687.5N : 9475 E	1.1m		7	22	116	0.65
140	9725N : 9475 E	1.0m		7	7	6	0.13
141	9725N : 9450 E	0.4m		8	3	5	0.19
142	9675N : 9450 E	0.3m		9	<3	7	0.19
143	9675N : 9400 E	0.3m		8	<3	4	0.18
144	9725N : 9400 E	0.3m		8	<3	10	0.12

THIRKELL NORTH (VIKING 10 GRID ANOMALIES)

Sample No.	Co-ordinates	Depth	Comment	Cu (ppm)	Pb (ppm)	Zn (ppm)	Fe (%)
65	562.5S : 50 E	0.2m	hard rock	4	4	4	0.19
66	562.5S : 25 E	0.8m		2	3	5	0.47
67	562.5S : 00	0.6m		4	4	6	0.19
68	562.5S : 25 W	0.8m		9	249	220	1.40
69	563.6S : 50 W	0.6m		15	80	120	1.60
70	587.5S : 50 W	0.6m	brown - high limonite	8	37	170	0.89
71	587.5S : 25 W	0.2m	dark brown	8	110	370	1.80
72	587.5S : 00 W	0.3m	v. light brown	2	3	5	0.09
73	587.5S : 25 E	0.3m		4	<3	6	0.13
74	587.5S : 50 E	0.3m		4	<3	5	0.16
75	600.S : 00	0.4m		8	<3	43	1.60
76	612.5S : 50 E	0.25m		5	<3	3	0.21
77	612.5S : 25 E	0.4m	edge of quartz float knoll	5	6	8	0.11
78	612.5S : 00	0.3m	within quartz float knoll	4	3	35	2.30
79	612.5S : 25 W	0.3m		5	16	22	0.63
80	612.5S : 50 W	0.3m		4	<3	8	0.19
86	625.S : 00	0.3m	within quartz float knoll	6	<3	34	1.09
87	637.5S : 75 W	0.3m	probably soil	5	4	6	0.20
81	637.5S : 50 W	0.4m	probably mainly soil	6	9	48	0.69
82	637.5S : 25 W	0.25m	rock in base of hole	5	3	19	0.52
83	637.5S : 00 W	0.3m	quartz float knoll/rock bottom	5	3	34	0.97
84	637.5S : 25 E	0.3m	" " " " "	5	<3	4	0.39
85	637.5S : 50 E	0.3m		5	3	25	0.23

THIRKELL NORTH (VIKING 10 GRID ANOMALIES cont.)

Sample No.	Grid	Depth	Comment	Cu (ppm)	Pb (ppm)	Zn (ppm)	Fe (%)
88	662.5S : 50 E	0.4m		8	<3	5	0.10
89	662.5S : 25 E	0.9m	good sample of C-horizon	7	15	5	0.07
90	662.5S : 00 E	0.4m	sth end of quartz float knoll	8	8	63	1.32
91	662.5S : 25 W	0.4m		9	17	38	0.65
92	662.5S : 50 W	0.4m	Fe stained - brown, just into rock	8	<3	6	0.21
93	587.5S : 62.5E	0.6m		8	8	29	0.27
94	587.5S : 75 E	0.6m		IS	IS	IS	IS
95	?		MISSED	-	-	-	-
96	587.5S : 50 E	0.6m	redrill of hole	17	69	9	0.05
97	562.5S : 62.5W	0.6m	brown - Fe stained	IS	IS	IS	IS
98	327.5S : 25 W	0.5m	yellow - brown	8	78	32	1.37
99	327.5S : 00	0.6m		9	919	14	0.26
100	327.5S : 25 E	0.5m		<1	7	5	0.08
101	312.5S : 25 E	0.5m	grey	<1	8	9	0.37
102	312.5S : 00	0.5m	green - grey	8	946	10	0.09
103	312.5S : 25 W	0.6m	yellow - brown	<1	8	6	0.46
104	325. S : 00	0.6m		9	257	14	0.20

NOTE : North-south line is on hill or ridge.

THIRKELL NORTH (VIKING 10 GRID ANOMALIES cont.)

Sample No.	Co-ordinates	Depth	Comment	Cu (ppm)	Pb (ppm)	Zn (ppm)	Fe (%)
105	137.5S : 25 W	0.2m	tan - grey	9	9	7	0.17
106	137.5S : 00	0.4m	brown - Fe stained	8	8	4	0.32
107	137.5S : 25 E	0.8m	brown - Fe stained	<1	<3	2	0.08
108	125.S : 00			<1	8	3	0.07
109	112.5S : 25 W	1.0m	quartz fragments in sample	8	8	5	0.25
110	112.5S : 23 W	0.2m	basement	7	7	4	0.22
111	112.5S : 00	0.25m		<1	9	2	0.13
112	112.5S : 25 E	0.25m		<1	<3	4	0.22
113	100.S : 20 E	0.7m					
114	50.N : 25 W	0.9m	clayey weathered qtz red volcanic	<1	8	5	0.08
115	50.N : 00	0.9m		<1	9	5	0.13
116	50.N : 25 E	0.7m	light brown	7	7	7	0.24
117	75.N : 00	0.8m	white/grey	8	<3	6	0.16
118	112.5N : 00	0.8m	white/grey	8	131	10	0.08
119	112.5N : 25 W	0.8m	white/grey	8	8	4	0.09
120	112.5N : 25 E	0.8m	yellow-brown, Fe stained	8	8	3	0.07
121	112.5N : 50 E	0.6m	yellow-brown, Fe stained	<1	7	3	0.22
122	137.5N : 50 E	0.7m	yellow-brown, Fe stained	9	9	5	0.22
123	137.5N : 25 E	0.9m	grey	<1	<3	4	0.20
124	137.5N : 00	0.6m		8	15	9	0.12
125	137.5N : 25 W	0.7m		8	8	7	0.14
126	125.N : 00	0.6m		8	17	25	0.21
127	300.N : 00	0.3m		7	<3	8	0.22

THIRKELL NORTH (VIKING 22 GRID, 9750N ANOMALY)
SINGLE SITE MULTIPLE HOLE SAMPLE/ASSAY COMPARISONS

Sample No.	Co-ordinates	Cu (ppm)	Pb (ppm)	Zn (ppm)	Fe (%)
201	9700N : 9450E N	8	8	6	0.61
202	9700N : 9450E S	9	9	5	0.19
203	9700N : 9450E E	9	9	6	0.18
204	9700N : 9450E W	8	8	8	0.20
*3	9700N : 9450E	8	<3	5	0.19
205	9525E : 9700N N	8	8	6	0.16
206	9525E : 9700N S	8	8	7	0.11
207	9525E : 9700N E	8	8	8	0.19
208	9525E : 9700N W	8	<3	6	0.23

* The Geopeko anomaly could not be reproduced and as such this sampling was useless in documenting variations in elemental abundances over short distances.

Geopeko C-Horizon Geochemical Results			
Viking 22 Grid 9000N Anomaly			
Co-ordinates	**Cu (ppm)**	**Pb (ppm)**	**Zn (ppm)**
9000N : 10150E	5	45	95
9000N : 10175E	bdl	120	305
9000N : 10200E	5	155	650
9000N : 10225E	20	445	410
9000N : 10250E	5	85	235
9000N : 10275E	25	500	155
9000N : 10300E	10	260	45
9000N : 10325E	10	55	35

Rock Chip Information

Sample No.	Co-ordinates (AMG)	Assays (ppm)					Description
		Cu	Pb	Zn	Ao	Fe(%)	
1	5273160N:385280E	13	<5	18	13	0.48	Milky buck qtz with Minor lt.pink clasts of qtz + mod (?5%) vnlt soft blk mineral perhaps ? chlorite. Minor sml vugs.
2	5273220N:385315E	6	<5	17	6	0.62	As above, but ? 10 -30 % blk mineral both vnlt. + diss. with qtz frags.
3	5270890N:385180E	6	<5	137	6	1.92	Mod sil. rhy-cryst. ash tuff ? chl. alt. mafic min.
4	5271070N:386280E	7	8	6	7	1.10	Wk-mod ferug. buck qtz.
5	5271080N:385300E	10	56	21	10	22.12	Sml sloc frags of stg ferrug. f.g. rock
6	5277720N:387780E	5	5	6	5	0.21	Lt-med. gy. mod. sil. fg. schist
7	5275650N:386400E	26	33	51	26	17.95	Wk-stg. ferrug., wk. sil. rhy. cry. ash. tuff
8	5275650N:386400E	12	<5	8	12	0.47	Buck qtz. vn., locally wk. frac. Feo, with sil. clasts of f.g. rock, minor vugs.

NOTE : Sample No. 6 is a stream float sample.

THIRKELL HILL ANNUAL REPORT TO 9/93

Appendix C.

Assay Results

1. C-Horizon Auger Samples
2. Pan Concentrate (Gold) Samples
3. Rock-Chip and Float Samples

988094

Amberley Pty. Ltd. A.C.N. 009 443 887
as Trustee for the AALG Unit Trust t/a

Australian Assay Laboratories Group

PERTH: 3 Halley Road, BALCATTA 6021
PO Box 207, GREENWOOD 6024
Ph (09) 345 1799 Fax (09) 345 1707

REPORT : BA046644 20 Page(s) Date : 24/06/93

ANGLO AUSTRALIAN RESOURCES N.L.
PO BOX 657
SOUTH PERTH

WA 6151

Client Reference : 3091

Copies to :

Samples :
Received : 10/06/93

Comments :

Approved Signatory: Alastair Inglis

ANALYSIS REPORT

988095

Amberley Pty. Ltd. A.C.N. 009 443 887
as Trustee for the AALG Unit Trust t/a
Australian Assay Laboratories Group

REPORT : BA046644 Reference : 3091

Scheme	BAR25	BAR25	BAR25	BAR25	BAR25	BAR25	BAR25
Det.Lim.	0.02	0.02	1	3	1	1	100
Sample	Au	Au(R)	Cu	Pb	Zn	As	Fe
01	<0.02	--	8	8	21	6	2549
02	<0.02	--	7	<3	4	4	738
03	<0.02	--	8	<3	5	8	1913
04	<0.02	--	8	<3	4	7	1745
05	<0.02	<0.02	8	<3	4	3	822
06	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
07	<0.02	--	<1	<3	4	5	1371
08	<0.02	--	<1	<3	6	3	949
09	<0.02	--	8	<3	4	4	3075
10	<0.02	--	8	39	26	5	2461
11	<0.02	--	8	17	9	3	1115
12	<0.02	--	9	17	6	5	2292
13	<0.02	--	<1	<3	3	3	931
14	<0.02	--	<1	<3	5	4	975
15	<0.02	--	<1	<3	3	2	417
16	<0.02	--	8	<3	5	5	1877
17	<0.02	--	8	<3	9	5	1570
18	<0.02	--	8	<3	7	6	1461
19	<0.02	--	9	<3	5	6	1974
20	<0.02	--	7	<3	9	5	1645
21	<0.02	--	8	<3	7	5	2472
22	<0.02	--	8	<3	8	6	1737
23	<0.02	--	7	<3	6	5	3853
24	<0.02	--	7	<3	6	7	738
25	<0.02	--	<1	<3	3	4	1638
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm

ANALYSIS REPORT

988096

Amberley Pty. Ltd. A.C.N. 009 443 887
as Trustee for the AALG Unit Trust t/a
Australian Assay Laboratories Group

REPORT : BA046644 Reference : 3091

Scheme	BAR25	BAR25	BAR25	BAR25	BAR25	BAR25	BAR25
Det.Lim.	0.02	0.02	1	3	1	1	100
Sample	Au	Au(R)	Cu	Pb	Zn	As	Fe
26	<0.02	--	8	30	9	3	1379
28	<0.02	--	8	8	6	6	2067
29	<0.02	--	8	8	5	6	943
30	<0.02	--	8	8	7	3	1147
31	<0.02	<0.02	9	26	12	7	1711
32	<0.02	--	7	15	17	8	7316
33	<0.02	--	8	8	5	3	786
34	<0.02	<0.02	7	15	8	7	1473
35	<0.02	--	<1	<3	3	3	1189
36	<0.02	--	8	76	16	6	1922
37	<0.02	--	<1	<3	--	I.S.	--
38	<0.02	--	35	113	316	13	3.84%
39	<0.02	--	8	154	394	11	4.77%
40	<0.02	<0.02	8	124	340	11	4.35%
41	<0.02	--	16	159	447	13	5.64%
42	<0.02	--	22	325	295	10	4.65%
43	<0.02	--	8	162	732	13	5.55%
44	<0.02	--	15	896	492	10	5.46%
45	0.02	--	16	183	190	8	5.20%
46	<0.02	--	10	330	530	9	6400
47	<0.02	--	37	710	460	8	7.70%
48	<0.02	--	46	410	240	8	4.50%
49	<0.02	<0.02	22	660	170	8	8.30%
50	<0.02	--	16	124	200	7	4.10%
51	<0.02	--	17	201	120	8	6.40%
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm

ANALYSIS REPORT 988097

REPORT : BA046644 Reference : 3091

Amberley Pty. Ltd. A.C.N. 009 443 887
as Trustee for the AALG Unit Trust t/a
Australian Assay Laboratories Group

Scheme	BAR25	BAR25	BAR25	BAR25	BAR25	BAR25	BAR25
Det.Lim.	0.02	0.02	1	3	1	1	100
Sample	Au	Au(R)	Cu	Pb	Zn	As	Fe
52	<0.02	--	27	470	160	9	7.40%
53	<0.02	--	24	390	280	8	6.30%
54	<0.02	<0.02	35	126	49	8	15.0%
55	<0.02	--	32	760	120	7	4.90%
56	<0.02	--	28	148	44	11	4.30%
57	<0.02	<0.02	36	176	120	8	2.10%
58	<0.02	--	16	158	120	7	3.20%
59	<0.02	--	12	178	100	6	4.70%
60	<0.02	--	11	104	42	6	2.40%
61	<0.02	--	8	78	61	6	1.40%
62	<0.02	--	13	49	160	6	4.00%
63	<0.02	--	11	153	44	6	1.20%
64	<0.02	--	37	530	160	8	4.90%
65	<0.02	--	4	4	4	4	1900
66	<0.02	--	2	3	5	6	4700
67	<0.02	--	4	4	6	3	1900
68	<0.02	--	9	249	220	10	1.40%
69	<0.02	--	15	80	120	7	1.60%
70	<0.02	--	8	37	170	5	8900
71	<0.02	--	8	110	370	9	1.80%
72	<0.02	0.02	2	3	5	2	900
73	<0.02	--	4	<3	6	3	1300
74	<0.02	--	4	<3	5	3	1600
75	<0.02	--	8	<3	43	8	1.60%
76	<0.02	--	5	<3	3	3	2100
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm

Amberley Pty. Ltd. A.C.N. 009 443 887
as Trustee for the AALG Unit Trust t/a
Australian Assay Laboratories Group

REPORT : BA046644 Reference : 3091

Scheme	BAR25	BAR25	BAR25	BAR25	BAR25	BAR25	BAR25
Det.Lim.	0.02	0.02	1	3	1	1	100
Sample	Au	Au(R)	Cu	Pb	Zn	As	Fe
77	<0.02	--	5	6	8	2	1100
78	<0.02	--	4	3	35	7	2.30%
79	<0.02	--	5	16	22	5	6300
80	<0.02	--	4	<3	8	3	1900
81	<0.02	--	6	9	48	5	6900
82	<0.02	--	5	3	19	4	5200
83	<0.02	--	5	3	34	6	9700
84	<0.02	--	5	<3	4	4	3900
85	<0.02	--	5	3	25	4	2300
86	<0.02	--	6	<3	34	7	1.09%
87	<0.02	--	5	4	6	3	2000
88	<0.02	--	8	<3	5	<1	1042
89	<0.02	--	7	15	5	2	782
90	<0.02	--	8	8	63	8	1.32%
91	<0.02	<0.02	9	17	38	8	6531
92	<0.02	--	8	<3	6	5	2118
93	<0.02	<0.02	8	8	29	5	2739
94	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
096	<0.02	--	17	69	9	2	466
097	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
098	<0.02	--	8	78	32	11	1.37%
099	<0.02	--	9	919	14	6	2569
100	<0.02	--	<1	7	5	2	794
101	<0.02	<0.02	<1	8	9	6	3688
102	<0.02	--	8	946	10	4	938
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm

ANALYSIS REPORT 988099

REPORT : BA046644 Reference : 3091

Amberley Pty. Ltd. A.C.N. 009 443 887
as Trustee for the AALG Unit Trust t/a
Australian Assay Laboratories Group

Scheme	BAR25	BAR25	BAR25	BAR25	BAR25	BAR25	BAR25
Det.Lim.	0.02	0.02	1	3	1	1	100
Sample	Au	Au(R)	Cu	Pb	Zn	As	Fe
103	<0.02	--	<1	8	6	7	4574
104	<0.02	--	9	257	14	3	1959
105	<0.02	--	9	9	7	3	1673
106	<0.02	--	8	8	4	4	3202
107	<0.02	--	<1	<3	2	3	818
108	<0.02	--	<1	8	3	2	709
109	<0.02	--	8	8	5	5	2488
110	<0.02	--	7	7	4	4	2171
111	<0.02	--	<1	9	2	4	1331
112	<0.02	--	<1	<3	4	5	2178
113	<0.02	--	9	9	10	6	3151
114	<0.02	--	<1	8	5	3	791
115	<0.02	--	<1	9	5	4	1284
116	<0.02	--	7	7	7	5	2385
117	<0.02	--	8	<3	6	4	1587
118	<0.02	--	8	131	10	1	791
119	<0.02	--	8	8	4	2	928
120	<0.02	--	8	8	3	3	678
121	<0.02	--	<1	7	3	5	2164
122	<0.02	--	9	9	5	5	2196
123	<0.02	--	<1	<3	4	4	1962
124	<0.02	--	8	15	9	4	1220
125	<0.02	--	8	8	7	4	1352
126	<0.02	--	8	17	25	5	2132
127	<0.02	--	7	<3	8	4	2246
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm

ANALYSIS REPORT 988100

Amberley Pty. Ltd. A.C.N. 009 443 887
as Trustee for the AALG Unit Trust t/a

Australian Assay Laboratories Group

REPORT : BA046644 Reference : 3091

Scheme Det.Lim. Sample	BAR25 0.02 Au	BAR25 0.02 Au(R)	BAR25 1 Cu	BAR25 3 Pb	BAR25 1 Zn	BAR25 1 As	BAR25 100 Fe
128	<0.02	--	8	8	9	4	2328
129	<0.02	<0.02	<1	<3	6	4	1609
130	<0.02	--	7	7	7	7	4189
131	<0.02	--	9	9	15	5	4769
132	<0.02	--	<1	7	7	2	649
133	<0.02	--	8	<3	8	3	1407
134	<0.02	<0.02	8	15	81	6	5498
134A	<0.02	<0.02	9	<3	8	1	1590
135	<0.02	--	8	<3	7	2	1610
136	<0.02	<0.02	8	8	19	5	3663
137	<0.02	<0.02	8	8	12	4	2866
138	<0.02	--	8	17	122	5	4877
139	<0.02	--	7	22	116	6	6490
140	<0.02	--	7	7	6	2	1310
141	<0.02	--	8	<3	5	4	1964
142	<0.02	--	9	<3	7	6	1938
143	<0.02	--	8	<3	4	5	1788
144	<0.02	--	8	<3	10	4	1224
145	<0.02	--	7	<3	7	6	3152
146	<0.02	--	7	7	6	5	3093
147	<0.02	--	9	9	6	5	2553
148	<0.02	--	8	8	10	5	3146
149	<0.02	--	9	<3	5	3	1493
150	<0.02	--	8	8	8	5	1574
151	0.18	0.19	9	18	8	7	2274
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm

ANALYSIS REPORT 988101

Amberley Pty. Ltd. A.C.N. 009 443 887
as Trustee for the AALG Unit Trust t/a
Australian Assay Laboratories Group

REPORT : BA046644 Reference : 3091

Scheme Det.Lim. Sample	BAR25 0.02 Au	BAR25 0.02 Au(R)	BAR25 1 Cu	BAR25 3 Pb	BAR25 1 Zn	BAR25 1 As	BAR25 100 Fe
152	<0.02	--	<1	7	6	3	1331
153	<0.02	--	<1	<3	7	3	1783
154	<0.02	--	9	9	8	3	1752
155	<0.02	--	9	35	12	4	2054
156	<0.02	--	9	<3	6	3	2023
157	<0.02	--	9	26	56	5	1762
158	<0.02	--	<1	9	8	5	3305
159	<0.02	--	8	<3	4	3	1819
160	<0.02	--	7	7	6	4	1952
161	<0.02	--	8	60	18	9	1652
162	<0.02	--	9	9	7	4	2714
163	<0.02	--	8	25	5	3	1653
164	<0.02	--	8	8	6	7	5122
165	<0.02	--	7	<3	5	3	2020
166	<0.02	--	8	<3	6	5	3574
167	<0.02	--	8	8	20	9	8792
168	<0.02	--	9	9	19	12	1.67%
169	<0.02	--	8	15	63	6	8562
170	<0.02	--	7	7	34	7	5914
171	<0.02	--	9	9	24	5	4013
172	<0.02	--	9	9	85	7	6632
173	<0.02	--	16	16	309	7	1.41%
174	<0.02	--	9	9	35	5	3732
175	<0.02	--	8	16	72	10	2.99%
176	<0.02	--	9	77	73	9	2.14%
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm

REPORT : BA046644 Reference : 3091

Scheme Det.Lim. Sample	BAR25 0.02 Au	BAR25 0.02 Au(R)	BAR25 1 Cu	BAR25 3 Pb	BAR25 1 Zn	BAR25 1 As	BAR25 100 Fe
177	<0.02	--	8	8	22	8	7158
178	<0.02	--	8	16	18	9	1.09%
179	<0.02	--	9	9	6	6	5878
180	<0.02	--	8	39	9	4	1642
181	<0.02	--	17	42	21	6	3265
182	<0.02	--	8	15	14	5	2411
183	<0.02	--	8	24	31	9	6769
184	<0.02	--	8	16	32	6	3638
185	<0.02	--	8	8	19	5	2007
186	<0.02	--	8	54	101	8	4332
187	<0.02	--	8	68	84	11	6360
188	<0.02	--	8	193	31	5	2461
189	<0.02	--	9	85	38	7	4939
190	<0.02	--	8	51	67	6	4283
191	<0.02	--	8	40	63	5	2340
192	<0.02	--	8	33	18	5	3142
193	<0.02	<0.02	8	17	12	3	2902
194	<0.02	--	8	33	16	9	5546
195	<0.02	--	18	177	13	11	9021
196	<0.02	<0.02	8	23	16	5	3236
197	<0.02	--	9	53	27	4	2600
198	<0.02	<0.02	8	68	40	13	2.03%
199	<0.02	--	8	25	60	7	6945
200	<0.02	--	8	8	15	4	2325
201	<0.02	--	8	8	6	11	6115
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm

ANALYSIS REPORT 988103

REPORT : BA046644 Reference : 3091

Amberley Pty. Ltd. A.C.N. 009 443 887
as Trustee for the AALG Unit Trust t/a
Australian Assay Laboratories Group

Scheme Det.Lim. Sample	BAR25 0.02 Au	BAR25 0.02 Au(R)	BAR25 1 Cu	BAR25 3 Pb	BAR25 1 Zn	BAR25 1 As	BAR25 100 Fe
202	<0.02	--	9	9	5	8	1925
203	<0.02	--	9	9	6	6	1845
204	<0.02	--	8	8	8	6	1988
205	<0.02	--	8	8	6	2	1652
206	<0.02	--	8	8	7	2	1114
207	<0.02	--	8	8	8	3	1913
208	<0.02	--	8	<3	6	4	2261
218	<0.02	--	8	8	11	4	3013
219	<0.02	--	8	24	21	11	3.62%
220	<0.02	--	9	27	17	10	1.11%
221	<0.02	--	8	33	20	13	5.06%
222	<0.02	--	17	52	52	15	6.79%
223	<0.02	--	16	117	124	9	5.01%
224	<0.02	<0.02	8	58	51	11	2.80%
225	<0.02	--	16	70	51	10	5.84%
226	<0.02	--	8	75	105	14	9.21%
227	<0.02	<0.02	8	24	24	6	4079
228	<0.02	--	8	25	42	7	5174
229	<0.02	--	9	113	80	13	2.51%
230	<0.02	--	8	31	9	9	7284
231	<0.02	--	8	8	5	4	1213
232	<0.02	--	8	59	242	11	4.96%
233	<0.02	<0.02	9	9	21	12	1.34%
234	<0.02	--	8	8	8	5	2934
235	<0.02	--	8	25	55	16	12.7%
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm

ANALYSIS REPORT

988104

Amberley Pty. Ltd. A.C.N. 009 443 887
as Trustee for the AALG Unit Trust t/a
Australian Assay Laboratories Group

REPORT : BA046644 Reference : 3091

Scheme	BAR25	BAR25	BAR25	BAR25	BAR25	BAR25	BAR25
Det.Lim.	0.02	0.02	1	3	1	1	100
Sample	Au	Au(R)	Cu	Pb	Zn	As	Fe
236	<0.02	--	17	59	129	14	7.45%
237	<0.02	--	9	105	64	11	3.69%
238	<0.02	--	8	24	59	8	1.27%
239	<0.02	--	8	16	51	9	1.11%
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm

ANALYSIS REPORT

988105

Amberley Pty. Ltd. A.C.N. 009 443 887
as Trustee for the AALG Unit Trust t/a

Australian Assay Laboratories Group

REPORT : BA046644 Reference : 3091

Scheme	X410
Det.Lim.	10
Sample	Ba
01	614
02	538
03	433
04	533
05	464
06	I.S.
07	821
08	938
09	820
10	374
11	463
12	849
13	757
14	325
15	498
16	355
17	365
18	581
19	254
20	301
21	558
22	284
23	371
24	103
25	468
Units	ppm

ANALYSIS REPORT

988106

Amberley Pty. Ltd. A.C.N. 009 443 887
as Trustee for the AALG Unit Trust t/a

Australian Assay Laboratories Group

REPORT : BA046644 Reference : 3091

Scheme	X410
Det.Lim.	10
Sample	Ba
26	354
28	367
29	238
30	307
31	538
32	442
33	395
34	532
35	1340
36	385
37	I.S.
38	285
39	231
40	484
41	183
42	329
43	462
44	318
45	163
46	485
47	312
48	I.S.
49	275
50	221
51	417
Units	ppm

ANALYSIS REPORT

988107

Amberley Pty. Ltd. A.C.N. 009 443 887
as Trustee for the AALG Unit Trust t/a
Australian Assay Laboratories Group

REPORT : BA046644 Reference : 3091

Scheme	X410
Det.Lim.	10
Sample	Ba
52	277
53	436
54	175
55	168
56	92
57	348
58	294
59	292
60	316
61	263
62	474
63	629
64	252
65	485
66	234
67	550
68	981
69	532
70	I.S.
71	816
72	578
73	419
74	248
75	521
76	174
Units	ppm

Amberley Pty. Ltd. A.C.N. 009 443 867
as Trustee for the AALG Unit Trust t/a
Australian Assay Laboratories Group

REPORT : BA046644 Reference : 3091

Scheme	X410
Det.Lim.	10
Sample	Ba
77	385
78	762
79	798
80	145
81	409
82	I.S.
83	489
84	221
85	159
86	636
87	242
88	192
89	609
90	832
91	752
92	290
93	324
94	I.S.
096	611
097	I.S.
098	556
099	580
100	404
101	186
102	324
Units	ppm

ANALYSIS REPORT

988109

Amberley Pty. Ltd. A.C.N. 009 443 887
as Trustee for the AALG Unit Trust t/a
Australian Assay Laboratories Group

REPORT : BA046644 Reference : 3091

Scheme	X410
Det.Lim.	10
Sample	Ba
103	399
104	372
105	557
106	284
107	255
108	510
109	466
110	531
111	516
112	327
113	529
114	837
115	607
116	589
117	364
118	590
119	572
120	607
121	499
122	1054
123	216
124	535
125	741
126	364
127	620
Units	ppm

ANALYSIS REPORT

988110

Amberley Pty. Ltd. A.C.N. 009 443 887
as Trustee for the AALG Unit Trust t/a
Australian Assay Laboratories Group

REPORT : BA046644 Reference : 3091

Scheme	X410
Det.Lim.	10
Sample	Ba
128	455
129	876
130	796
131	356
132	519
133	500
134	640
134A	928
135	789
136	519
137	757
138	717
139	637
140	791
141	336
142	491
143	514
144	280
145	516
146	456
147	786
148	542
149	495
150	610
151	986
Units	ppm

Amberley Pty. Ltd. A.C.N. 009 443 887
as Trustee for the AALG Unit Trust t/a
Australian Assay Laboratories Group

REPORT : BA046644 Reference : 3091

Scheme	X410
Det.Lim.	10
Sample	Ba
152	652
153	555
154	568
155	571
156	802
157	693
158	433
159	95
160	429
161	635
162	738
163	1135
164	396
165	347
166	573
167	390
168	433
169	526
170	226
171	468
172	668
173	959
174	494
175	727
176	657
Units	ppm

ANALYSIS REPORT

988112

Amberley Pty. Ltd. A.C.N. 009 443 887
as Trustee for the AALG Unit Trust t/a

Australian Assay Laboratories Group

REPORT : BA046644 Reference : 3091

Scheme	X410
Det.Lim.	10
Sample	Ba
177	288
178	535
179	502
180	530
181	539
182	574
183	737
184	491
185	458
186	475
187	663
188	388
189	711
190	1152
191	563
192	374
193	526
194	308
195	518
196	319
197	1360
198	344
199	695
200	329
201	483
Units	ppm

ANALYSIS REPORT

988113

Amberley Pty. Ltd. A.C.N. 009 443 887
as Trustee for the AALG Unit Trust t/a

Australian Assay Laboratories Group

EPORT : BA046644 Reference : 3091

Scheme	X410
Det.Lim.	10
Sample	Ba
202	423
203	391
204	471
205	434
206	616
207	515
208	526
218	306
219	336
220	346
221	204
222	93
223	153
224	330
225	147
226	137
227	157
228	262
229	109
230	108
231	593
232	417
233	967
234	43
235	477
Units	ppm

988114

ANALYSIS REPORT

Amberley Pty. Ltd. A.C.N. 009 443 887
as Trustee for the AALG Unit Trust t/a

Australian Assay Laboratories Group

REPORT : BA046644 Reference : 3091

Scheme	X410
Det.Lim.	10
Sample	Ba
236	505
237	363
238	612
239	611
Units	ppm

988115

Amberley Pty. Ltd. A.C.N. 009 443 887
as Trustee for the AALG Unit Trust t/a

Australian Assay Laboratories Group

PERTH: 3 Halley Road, BALCATTA 6021
PO Box 207, GREENWOOD 6024
Ph (09) 345 1799 Fax (09) 345 1707

REPORT : BA045965 2 Page(s) Date : 07/05/93

ANGLO AUSTRALIAN RESOURCES N.L.
PO BOX 657
SOUTH PERTH

WA 6151

Client Reference : 3088

Copies to : Peter McNeil

Samples :
Received : 04/05/93

Comments :

Approved Signatory: Alastair Inglis

ANALYSIS REPORT

988116

Amberley Pty. Ltd. A.C.N. 009 443 887
as Trustee for the AALG Unit Trust t/a

Australian Assay Laboratories Group

REPORT : BA045965 Reference : 3088

Scheme	EXTIN	EXTIN	EXTIN
Det.Lim.	0.01	0.01	0.01
Sample	Weight	Au	AuCALC
PC 01	11.82	0.07	0.83
PC 02	9.23	5.22	48.18
PC 03	19.08	0.63	12.02
PC 04	13.68	0.04	0.55
PC 05	23.30	0.08	1.86
PC 06	2.80	5.18	14.50
PC 07	5.79	0.16	0.93
PC 08	6.49	0.05	0.32
PC 09	10.95	0.04	0.44
PC 10	16.70	0.04	0.67
PC 11	21.57	0.02	0.43
PC 12	18.41	2.92	53.76
PC 13	26.96	0.01	0.27
PC 14	20.79	0.02	0.42
PC 15	11.37	0.05	0.57
PC 16	13.30	0.03	0.40
PC 17	10.36	1.74	18.03
PC 18	17.60	1.31	23.06
PC 19	17.42	1.66	28.92
PC 20	14.49	0.01	0.14
PC 21	5.66	0.02	0.11
PC 22	9.50	5.43	51.59
PC 23	8.76	1.41	12.35
PC 24	9.85	0.13	1.28
PC 25	8.60	0.04	0.34
Units	grams	ug/g	ug

ANALYSIS REPORT

988117

Amberley Pty. Ltd. A.C.N. 009 443 887
as Trustee for the AALG Unit Trust t/a

Australian Assay Laboratories Group

REPORT : BA045965 Reference : 3088

Scheme	EXTIN	EXTIN	EXTIN
Det.Lim.	0.01	0.01	0.01
Sample	Weight	Au	AuCALC
PC 26	13.17	0.30	3.95
PC 27	8.40	0.10	0.84
PC 28	9.27	0.05	0.46
PC 29	4.27	2.81	12.00
PC 30	5.93	0.08	0.47
PC 31	8.99	0.06	0.54
PC 32	8.46	1.32	11.17
PC 33	5.89	0.05	0.29
PC 34	8.25	0.68	5.61
PC 35	10.27	0.08	0.82
Units	grams	ug/g	ug

Amberley Pty. Ltd. A.C.N. 009 443 887
as Trustee for the AALG Unit Trust t/a

Australian Assay Laboratories Group

PERTH: 3 Halley Road, BALCATTA 6021
PO Box 207, GREENWOOD 6024
Ph (09) 345 1799 Fax (09) 345 1707

REPORT : BA047126 1 Page(s) Date : 13/07/93

PETER McNEIL

ANGLO AUSTRALIAN RESOURCES N.L.
PO BOX 657
SOUTH PERTH

WA 6151

Client Reference : 3220

Copies to :

Samples :
Received : 09/07/93

Comments :

Approved Signatory: Alastair Inglis

ANALYSIS REPORT

Amberley Pty. Ltd. A.C.N. 009 443 887
as Trustee for the AALG Unit Trust t/a

988119

Australian Assay Laboratories Group

REPORT : BA047126 Reference : 3220

Scheme	AR40	AR40	I100	I100	I100	I100	I100
Det.Lim.	0.01	0.01	5	2	2	0.01	2
Sample	Au	Au(R)	Pb	Zn	Cu	Fe	As
RC 1	<0.01	--	<5	18	13	0.48	3
RC 2	<0.01	--	<5	17	6	0.62	3
RC 3	<0.01	<0.01	<5	137	6	1.92	4
RC 4	<0.01	--	8	6	7	1.10	3
RC 5	<0.01	--	56	21	10	22.12	22
RC 6	I.S.	--	5	6	5	0.21	2
RC 7	0.02	--	33	51	26	17.95	479
RC 8	<0.01	--	<5	8	12	0.47	7
Units	ppm	ppm	ppm	ppm	ppm	%	ppm