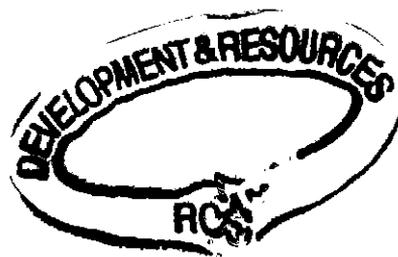


EL 17/93	
22 APR 1996	
See folio 51	
RES TO	DATE



PASMINCO EXPLORATION

LUINA EL 17/93
JOINT VENTURE

ANNUAL REPORT FOR THE PERIOD

ENDING MARCH 1996
MICROFILMED
FICHE No. 013924-26

AUTHOR: NK McGunnigle

DATE: April 1996

REPORT No.: TA-20

SUBMITTED TO: Regional Exploration Manager - Tasmania

DISTRIBUTION: Tasmania Development & Resources Industry Safety & Mines Division - Hobart

Pasminco Exploration - Burnie
- Melbourne
- Rosebery

MPI Gold Pty Ltd - Melbourne

SUBMITTED BY: *NK McGunnigle*

ACCEPTED BY: *[Signature]*

BURNIE
April
1996

CONTENTS**SUMMARY****RECOMMENDATIONS**

1	INTRODUCTION	1
2	TENURE	2
3	PREVIOUS EXPLORATION AND MINING	3
4	GEOLOGY	5
	4.1 Regional Geology	5
	4.2 Oonah Formation	5
	4.3 Crimson Creek Formation	6
	4.4 Ordovician to Devonian sediments	6
	4.5 Meredith Granite	7
	4.6 Tertiary Basalt	7
	4.7 Known Mineralization	7
5	WORK COMPLETED	9
	5.1 Data Review	9
	5.2 Regional Data Compilation	10
	5.3 Stream Sediment Surveys Review	10
	5.4 Regional Aeromagnetic Interpretation	10
	5.5 Field Mapping	12
	5.6 Diamond Drill Holes AD1 and AD2	12
	5.6.1 AD1	12
	5.6.2 AD2	13
	5.7 Arthur Dam Grid Soil Sampling Survey	14
6	ENVIRONMENTAL DISTURBANCE AND REHABILITATION	15
7	EXPENDITURE	16
8	KEYWORDS AND LOCALITY	17
9	REFERENCES	18

LIST OF FIGURES

1.	Location Map	1:500 000
2.	Land Tenure	1:50 000
3.	Simplified Geology	1:100 000
4.	Cu-Pb-Zn Stream Geochemistry (MPI Gold Pty)	1:50 000
5.	Cu-Pb-Zn Stream Geochemistry (Placer Exploration)	1:50 000
6.	Regional Aeromagnetics - Preliminary Interpretation	1:100 000
7.	Arthur Dam Grid Location	1:10 000
8.	Arthur Dam Grid Cu-Pb-Zn Soil Geochemistry	1:5 000

LIST OF APPENDICES

1.	Open File Literature Review - K.C. Morrison, August 1995
2.	Rock Chip Locations, Descriptions and Assay Results
3.	Drill Hole Log - AD1
4.	Drill Hole Metal Assay results - AD1, AD2
5.	Thin Section descriptions
6.	Drill Hole XRD Results
7.	Drill Hole Log - AD2
8.	Arthur Dam Grid 'C' Horizon Soil Geochemistry Results

LIST OF TABLES

Table 1. Previous Exploration in the Waratah area.

SUMMARY

Work undertaken to date within Luina EL 17/93 has included both regional and prospect scale exploration. Evaluation of previous geochemical work and mineralization in the area suggests three target styles:

- 1) Sn dominant replacement of carbonate lithologies
- 2) Pb-Zn ± Au-Ag veins
- 3) geophysical anomalies below Tertiary basalt cover.

Preliminary evaluation of previous stream sediment sampling surveys indicate anomalous Zn + Pb + Cu along a NNW trending strike from south of Arthur Dam to Magnet Mine. Interpretation of regional aeromagnetic data has identified several broad magnetic features with dominant NW trending magnetic fabric and minor NE linear features also apparent. However, the images are of too poor quality to carry out detailed interpretations.

Arthur Dam drill holes AD1 and AD2 were relogged and resampled. The most significant mineralisation was intersected in AD2 and includes:

- 12m @ 5% Zn, 1% Pb, 0.6g/t Au
- 3m @ 9.21% Zn, 8.34% Pb, 0.5 g/t Au
- 3m @ 1.52% Zn, 0.75% Pb, 0.65 g/t Au

Resampling of soil geochemistry sites over the Arthur Dam grid revealed an anomalous NNW striking Zn-Pb-Cu trend which is comparable to results obtained from an earlier soil sampling survey. This confirms the existence of an anomalous signature and the reliability of previous results for use in future exploration work.

RECOMMENDATIONS

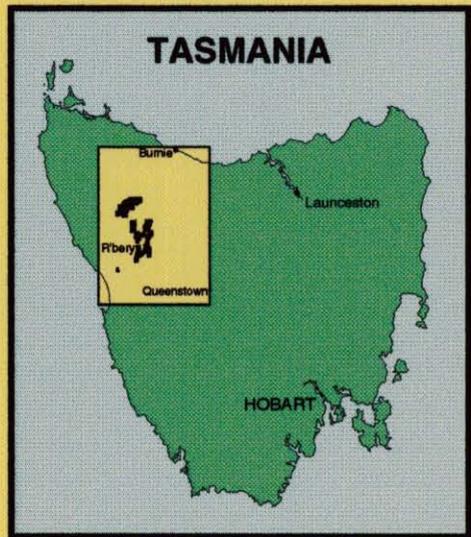
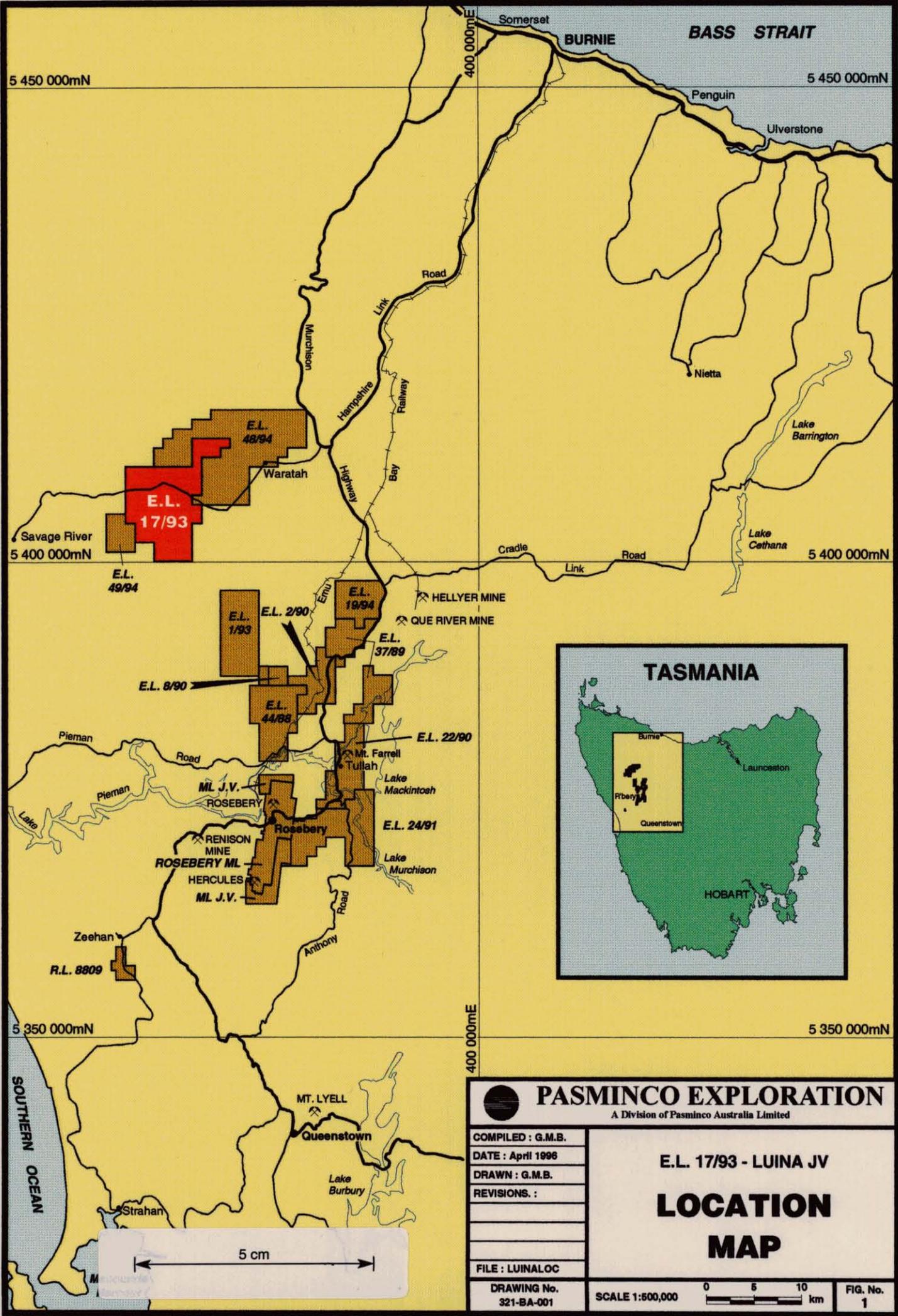
A proposed work program for the coming year includes the following:

Regional:

- A regional scale aeromagnetic survey to aid geological and structural interpretation and generate targets.
- Investigation of MPI and Placer stream sediment anomalies, and repeat sampling to confirm obvious anomalies.
- Statistical analyses of all previous stream sediment surveys to define trends and subtle anomalies.
- Geological and structural mapping in the Magnet Mine area.
- Regional mapping and rock sampling.

Arthur Dam:

- Extensions to the north and south of the Arthur Dam grid soil anomalies and further soil sampling.
- IP and EM surveys over the Arthur Dam grid.
- Locate collar of AD2 and conduct DHEM survey if conditions allow.
- Drilling of at least 2 300m DDH in Arthur Dam area to target:
 - a) *the northern soil geochemistry anomaly*
 - b) AD2 follow up
- DHEM and MALM of proposed DDH's



PASMINCO EXPLORATION
 A Division of Pasminco Australia Limited

COMPILED : G.M.B.	E.L. 17/93 - LUINA JV LOCATION MAP
DATE : April 1996	
DRAWN : G.M.B.	
REVISIONS :	
FILE : LUINALOC	
DRAWING No. 321-BA-001	SCALE 1:500,000
	FIG. No. 1

1 INTRODUCTION

The Luina EL 17/93 is located 10km SW of Waratah on the Waratah Road (Figure 1). It covers 70km² from the Magnet Mine area immediately west of Waratah township to Wilson River in the south. A joint venture agreement between MPI Gold Pty Ltd (MPI), the registered holder of EL 17/93, and Pasminco Australia Ltd (Pasminco) was signed in February 1996. This Annual Report for EL 17/93 covers the period from April 1995 to March 1996. Work completed in this period was carried out by Pasminco, the tenement managers, and has comprised regional and prospect exploration programmes, including the compilation of an open file literature review and collection of existing regional geological, geophysical and geochemical data. Much of this work has been carried out concurrently with EL 48/94 (Pasminco), immediately east of EL 48/94. Work in the Arthur Dam area has included relogging and sampling of previous drill holes, field mapping and a review of previous soil sampling which initiated a resampling programme to check previous anomalies.

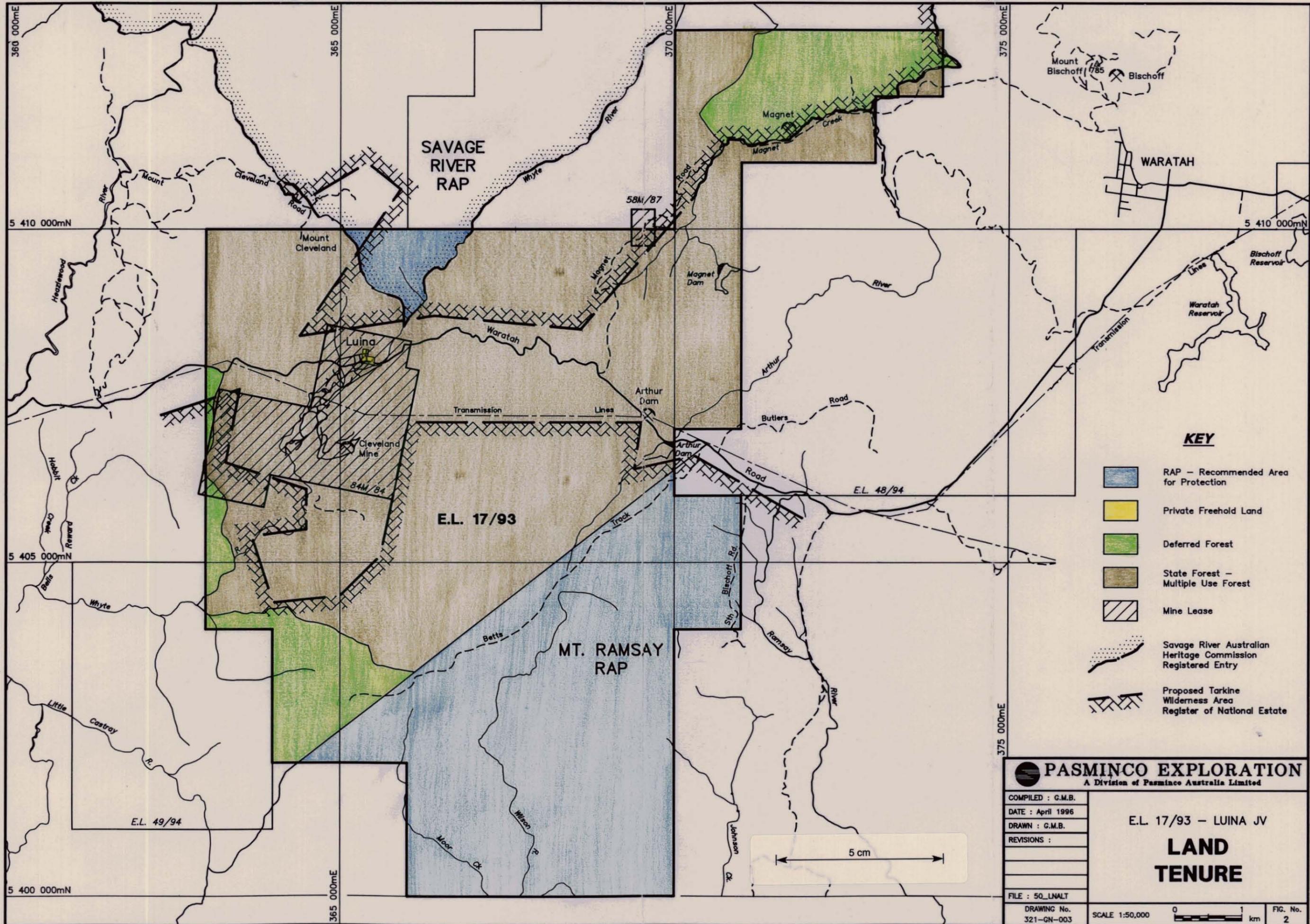
The Magnet Pb-Ag-Zn and Cleveland Sn Mines lie within the Licence, along with numerous other small Sn and base metal shows. Base metal mineralisation appears to be hosted by Precambrian and Cambrian volcano-sedimentary sequences, with all reported occurrences being vein-style.

Much of the EL area is Crown Land, covered by patches of rainforest and forestry, ti-tree scrub and button grass plains. Access is provided by Waratah Road, numerous logging and HEC access tracks, and walking tracks. Much of the area is accessible only by foot.

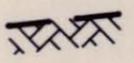
2 TENURE

Luina EL 17/94 was issued to Pasminco Australia Limited in February 1996, in a joint venture agreement between the registered licence holders MPI Gold Ltd Pty and Pasminco Australia Ltd. The licence area covers 70km², which excludes the Cleveland Mine Lease land area of 4.1km² (84M/8M) and a 0.6km² Sand and Gravel Mining Lease (58M/87) located on the Magnet Road.

The land tenure of the area comprises predominantly Crown Land, as non-allocated, Deferred Forest Land, and Mt Ramsay Recommended Area for Protection. The area also contains State Forest land and minor Private Property.



KEY

-  RAP - Recommended Area for Protection
-  Private Freehold Land
-  Deferred Forest
-  State Forest - Multiple Use Forest
-  Mine Lease
-  Savage River Australian Heritage Commission Registered Entry
-  Proposed Tarkine Wilderness Area Register of National Estate

PASMINCO EXPLORATION
 A Division of Pasminco Australia Limited

COMPILED : G.M.B.
 DATE : April 1996
 DRAWN : G.M.B.
 REVISIONS :
 FILE : 50_LNALT
 DRAWING No. 321-GN-003

E.L. 17/93 - LUINA JV

LAND TENURE

SCALE 1:50,000  km FIG. No. 2

3 PREVIOUS EXPLORATION AND MINING

A comprehensive bibliography of reports on previous exploration in the Waratah-Luina area is included in Morrison (1995b; Appendix 1) which includes a listing of regional data available. Previous exploration conducted in the area is summarised in Table 1.

Earliest work in the Waratah district began with the discovery of Sn ore in Tinstone Creek by James Smith in December 1871. Small lodes of antimonial galena, and zinc blende - galena were discovered before locating the source of the Sn to Mt Bischoff. Following the rich discoveries at Broken Hill (New South Wales) in 1882, a silver "boom" commenced and the district was energetically prospected for Ag-Pb (Nye, 1923). During the following decade discoveries of Ag-Pb were made at Magnet and Heazlewood, Au at Corinna, Sn at Heemskirk and Cu and Fe at the Rocky and Savage Rivers. The majority of the discoveries were made during the years 1890 and 1891. The lodes were opened up and tested during the nineties, and although the majority produced small quantities of argentiferous galena the results were otherwise disappointing.

The Magnet Mine is thought to have been first discovered in 1877 by W.R. Bell, but was not investigated until 1890 when Bell was able to relocate his find. The Magnet Silver Mining Co. was formed in 1895 and worked the mine with various success until 1933. From 1933 to 1940 the mine was controlled by four separate organisations, none of whom found it a successful venture. Production from the mine totalled approximately 630,000t @ 6% Pb, 7% Zn and 394 g/t Ag up to 1940 when operation ceased (Cottle, 1951).

Modern exploration in the area commenced in the early 1970's and has been undertaken within several exploration licences since then (Table 1). The work has included extensive stream sediment sampling and geological mapping, a range of geophysical surveys and several drill holes. Numerous Sn and base metal anomalies have been discovered in the area, although much of the anomalism is thought to be related to contamination from the Magnet and Mt Bischoff Mines.

In the Magnet Mine area modern exploration began during 1970 with stream sediment sampling undertaken by Comstaff. All results however were discarded due to cultural contamination. A Sn stream sediment anomaly thought not to be related to the mine was located in 1972, and meaningful exploration began in 1975 with the establishment of a grid from Magnet to Mt Bischoff. Mapping, soil sampling, ground magnetics and EM surveys resulted in one diamond drill hole (BAB1) targeted at an EM anomaly, and two holes (MAG1, MAG2) drilled to test the southern extension of the Magnet Mine Pb-Ag-Zn vein. BAB1 failed to intersect any evidence of mineralization, whilst MAG1 and MAG2 intersected moderate patchy mineralization plus extensive zones of stoping. No further activity was undertaken by Comstaff, and much of the area was surrendered from EL 5/63 during 1985.

During the 1980's the Tasmanian Mines Department carried out exploration on the Luina and Wombat Flat exempt areas (Collins, 1983; Brown 1986). This work included magnetic and DIGHEM surveys and soil geochemistry. The programme culminated in the drilling of two holes at Arthur Dam which targeted coincident magnetic and soil geochemical anomalies. The holes intersected sheet-like pyrrhotite-chalcopyrite bearing veins (AD1) and sphalerite-galena quartz stockwork veining (AD2) in EoCambrian andesites and volcaniclastics.

RGC held ground in the area from 1990-1993 primarily focussing on potential Renison-style Sn mineralisation, specifically carbonate replacement Sn deposits such as those mined at Mt Bischoff and Cleveland. A newly discovered skarn on the Whyte River Grid with anomalous Sn geochemistry remains untested.

TABLE 1. PREVIOUS EXPLORATION IN THE WARATAH AREA

- 1870's- 1940 *Early prospecting.*
Discovery of tin ore in Tinstone Creek and Mt Bischoff tin deposit. 1877: Magnet Mine discovered, producing approx. 630,000t @ 6% Pb, 7% Zn and 394 g/t Ag (1895 - 1940). 1890's: small discoveries of Ag-Pb, Au, Sn, Cu and Fe lodes opened up.
- 1963-1989 *EL 5/63, 7AP/AM, Comstaff Pty Ltd (plus BHP Co Ltd).*
1969+: Stream sediment sampling, reconnaissance mapping, gridding and soil sampling around the eastern margin of Meredith Granite.
Early 1970's: Extensive stream sediment sampling and geological mapping (Shaw and Everett, 1985a, b; BHP, 1988), regional TURAM EM survey, CRONE EM and magnetic surveys over 3 grids. Drilled BAB1, MAG1 and MAG2.
1981: Investigation of Deep Gully Creek anomaly; gridding, soil geochemistry, geological mapping, ground magnetics and aeromagnetics identified anomalous tin.
1983: Regional DIGHEM survey identified anomalies in the Deep Gully Creek area (not further investigated). BHP joint-ventured into EL 5/63 in 1985 and drilled BR1.
1984: 5 holes drilled through Tertiary cover.
- 1963-1989 *EL 1/63, Cominco Exploration Pty Ltd.*
1974 helimag survey, 52m line spacing; 1980 - 1981 DIGHEM EM and stream sediment geochemistry.
- 1983-1985 *Department of Mines, Luina and Wombat Flat Exempt areas.*
Regional mapping (Brown, 1986), magnetic and DIGHEM surveys and soil geochemistry. Two holes drilled at Arthur Dam, AD1 and AD2.
- 1988-1990 *EL 46/88, Billiton Australia.*
Gridding of 1983 Comstaff DIGHEM anomaly; geological mapping, ground magnetics and UTEM. Drilling intersected background levels of tin and basemetals.
- 1989-1990 *EL 47/88 Placer Exploration Ltd.*
Regional stream sediment sampling, rock chip geochemistry (Magnet Mine) and resampling of MAG1, MAG2 and BAB1.
- 1990-1993 *EL 12/90, EL 15/90, RGC Exploration Ltd.*
Regional data review, magnetic and gravity interpretation of existing data, mapping and rock chip sampling and regional gravity survey led to initiation of Deep Gully Creek Grid and multi-element soil geochemistry. Geochemical anomaly identified close to the Waratah River (remains untested).
- 1991-1992 *EL 21/90, Geopeko.*
1: 25 000 compilation maps of Comstaff stream sediment data. Limited water and rock float sampling.
- 1994- *EL 17/93, EL 49/94, MPI Gold Pty Ltd.*
Regional stream sediment sampling, rock chip sampling (Magnet Mine) and resampling of AD1 and AD2.

4 GEOLOGY

4.1 Regional Geology

The regional geology of the Waratah-Luina area consists of Precambrian to Ordovician rocks of the Dundas Trough. Lithologies which are well described in Brown (1986) include carbonates, intermediate to mafic volcanics and ultramafics. The Devonian Meredith Granite outcrops in the southern and eastern extent of EL 17/93 (Figure 3). The outcropping lithologies are summarised below:

4.2 Oonah Formation

A block of Oonah Formation of approximately 17km² in size surrounds the Mt Bischoff Mine and extends below Tertiary basalt to the east. The Proterozoic Oonah Formation is composed of pale grey quartz rich sandstones, pale grey siltstones, dark grey shales, dolomites and minor mafic lavas and volcanoclastics. A high degree of deformation often allows distinction from younger rocks.

The Oonah Formation has been divided into upper and lower successions on the basis of lithology. The lower sequence is dominated by micaceous quartz sandstones and siltstone with minor interbedded phyllitic mudstone. The upper Oonah has a greater abundance of mudstone and shale with dolomite and occasional intercalated mafic volcanics.

The Oonah Formation in the Mt Bischoff area is comprised of a shale and siltstone succession with thick units of dolomite that correlates to the upper sequence. It is inferred that the Oonah/Crimson Creek Formation contacts northeast and east of Magnet Mine are faulted, possibly involving significant over thrusting of Precambrian over the EoCambrian sequences.

Correlates of the Success Creek Group underlie the Crimson Creek Formation north of the Meredith Granite to the west of EL 17/93, and mapping from Brown (1986) indicates a conglomerate and sandstone dominated sequence.

4.3 Crimson Creek Formation

The Crimson Creek Formation occurs to the north and east of the Meredith Granite, and is in part overlain by Tertiary basalt. The formation is comprised largely of basalt lavas, basaltic volcanoclastics, and finely bedded siltstone and mudstone. Brown (1986) notes that the Crimson Creek Formation becomes more basaltic to the north of the Meredith Granite. Thin carbonate horizons occur in the Formation but rarely outcrop.

Contact metamorphism of the Crimson Creek Formation by the Meredith Granite has resulted in a highly magnetic aureole about the granite. It is likely that this magnetic signature would swamp any magnetic anomaly sourced from mineralization, thus limiting the use of magnetics to an indirect mapping tool.

4.4 Ordovician to Devonian sediments

A sequence of Ordovician to Devonian sediments overlie the Crimson Creek Formation and associated ultramafic rocks within a small syncline to the north of the Meredith Granite in the Mt Stewart-Heazlewood area. These sediments belong to the conformable Gordon Limestone-Eldon Group sequence, and the Gordon Limestone at the base of the sequence may have a stratigraphic thickness of up to 500m. It is overlain by the Crotty Sandstone, a white, friable, quartz rich unit up to 400m in thickness, which forms a prominent ridge around the edge of the syncline. Much of the sequence is poorly exposed and covered by alluvium.

4.5 Meredith Granite

The Meredith Granite has been radiometrically dated at 356 Ma, using both K-Ar and Rb-Sr methods (Brown, 1986). Around the north-eastern tip and eastern margin, the granite is porphyritic close to the contact, containing feldspar (up to 25mm) and quartz phenocrysts (up to 8mm). The granite becomes increasingly equigranular towards the core, and contains biotite throughout. Zones of greisenization and concentrations of tourmaline veining are common and conspicuous close to the granite margins. Quartz feldspar porphyry dykes related to the Meredith Granite occur at Mt Bischoff and at Deep Gully Creek.

4.6 Tertiary Basalt

Tertiary Basalt overlies Crimson Creek Formation in the north of Luina EL 17/93. In the area, the basalt cover may be up to 300m in thickness, and consists of flows ranging from less than 1m to greater than 10m thick. Fluvial and lacustrine sediments occur between basalt flows, ranging from mud to gravel grain size.

Magnetic character and variation in thickness of the basalt severely hinders interpretation of basement magnetic features.

4.7 Known Mineralization

The Waratah-Luina area is well known for large replacement-style Sn deposits (Cleveland, Mt Bischoff), but less known for Pb-Zn mineralization.

The largest base metal orebody discovered and mined to date is Magnet, from which approximately 630,000t @ 6% Pb, 7% Zn and 394 g/t Ag were extracted. Magnet lies in the northern part of EL 17/93. The orebody has a strike length of 90m, a true width averaging 5.5m, and was worked to 365m vertical depth. The orebody is described as occupying a steep west-northwest dipping fracture system within an early Cambrian

mafic/ultramafic body known as the Magnet dyke, close to its discordant footwall contact with early Cambrian sedimentary rocks.

The ore at Magnet consists of sphalerite and argentiferous galena with lesser amounts of arsenopyrite, pyrite, boulangerite, pyrargyrite, tetrahedrite and chalcopyrite in a gangue of manganosiderite.

Other base metal prospect sites are discussed in Nye (1923), however all are small vein style galena dominated accumulations that were worked to a shallow depth only.

The Cleveland Sn-Cu deposit located just within the western boundary of EL 17/93 comprises several stratabound lenses of pyrrhotite-cassiterite-stannite-chalcopyrite mineralization formed by metasomatic replacement of limestone beds. The limestone belongs to the Crimson Creek Formation and forms part of a transitional sequence between mafic volcanics and overlying turbidites. The tabular sulfide lenses range up to 30m in thickness, and are disrupted by a series of sub-parallel reverse faults that are thought to have been conduits for the mineralisation.

At Mt Bischoff, massive pyrrhotite has partially replaced a 40-60m thick dolomite bed within a sequence of turbiditic sandstone, siltstone and shale of the Oonah Formation. Quartz-feldspar porphyry dykes intrude this sequence. Other mineralization styles include topazised porphyry dykes and late stage quartz-carbonate-fluorite veins.

5 WORK COMPLETED

The compilation and evaluation of previous prospecting and exploration data in the Luina area has prepared a geological framework which will form the basis of more detailed studies. Prospect scale exploration has focussed around the Arthur Dam area, examining previous Department of Mines drill holes and soil sampling surveys.

Regional Activity

5.1 Data Review

Pasminco acquired available open file and Mines Department records, which were compiled and reviewed by contract geologist Ken Morrison (Appendix 1). This review has indicated that anomalous geochemistry and geophysical signatures in the Waratah-Luina area may be explained by:

- 1 *Replacement Sn deposits* Sn dominant anomalies have been identified in stream and soil geochemical sampling and are also believed to be associated with granite-sourced geophysical anomalies. eg. Deep Gully Creek, Whyte River, Wombat Flat, Foleys East, Luina. These are possibly associated with sheet-like replacement of carbonate lithologies eg. Mt Bischoff style, and /or metasomatic replacement of limestone beds in the Oonah and Crimson Creek Formations eg. Cleveland style.
- 2 *Pb-Zn ± Au-Ag veins* Veins which have been drilled or sampled in the area are located at Butlers Road, Washington Hay, Persic-Silver Cliffs, Arthur Dam and Magnet. The vein style mineralisation could be related to larger vein systems, stockwork development and/or structure controlled replacement mineralisation. Most of the discoveries remain under explored.

- 3 *Sub-basalt geophysical anomalies* These signatures remain unexplained by drilling beneath the Tertiary basalt cover, and may be related to the Tertiary basalt, eg. Stonedam Creek and 1981 CRA MBD anomaly, Cominco DIGHEM anomaly.

5.2 Regional Data Compilation

A regional database for the Luina-Waratah area has been added to Pasmaenco's Geological Information System (GIS). Data compiled so far includes simplified regional geology, road and track access, waterways and drainage basins, tenement locations, known mineralization and contamination, land use, tenure and the results of previous work including stream sediment and soil sampling surveys.

5.3 Stream Sediment Surveys Review

Comstaff (1977), Placer (1988) and MPI Gold (1994) have all conducted regional stream sediment surveys over areas covered by the current Luina EL 17/93. A preliminary review of Placer and MPI Gold's regional stream sediment surveys indicates anomalous Zn + Pb + Cu values along a NNW trending strike from south of Arthur Dam to Magnet Mine (Figures 4 and 5). Anomalous Zn was detected with values up to 1389ppm (disregarding highly anomalous samples collected downstream (north and east) of Magnet Mine which are related to contamination from mine workings). Follow up investigation of anomalous values and statistical analyses of the data sets are yet to be completed.

5.4 Regional Aeromagnetic Interpretation

Regional aeromagnetic data over the Waratah-Luina area was reinterpreted during the licence year. This included EL 17/93 and adjacent tenements to the immediate east (Waratah EL 48/94) and west (Whyte River EL 49/94). Data from previous regional surveys in the area, primarily the TDR 1981 West Coast survey and BMR 1984 Burnie sheet survey, were grid stitched to provide a regional image. Due to the gridding cell size

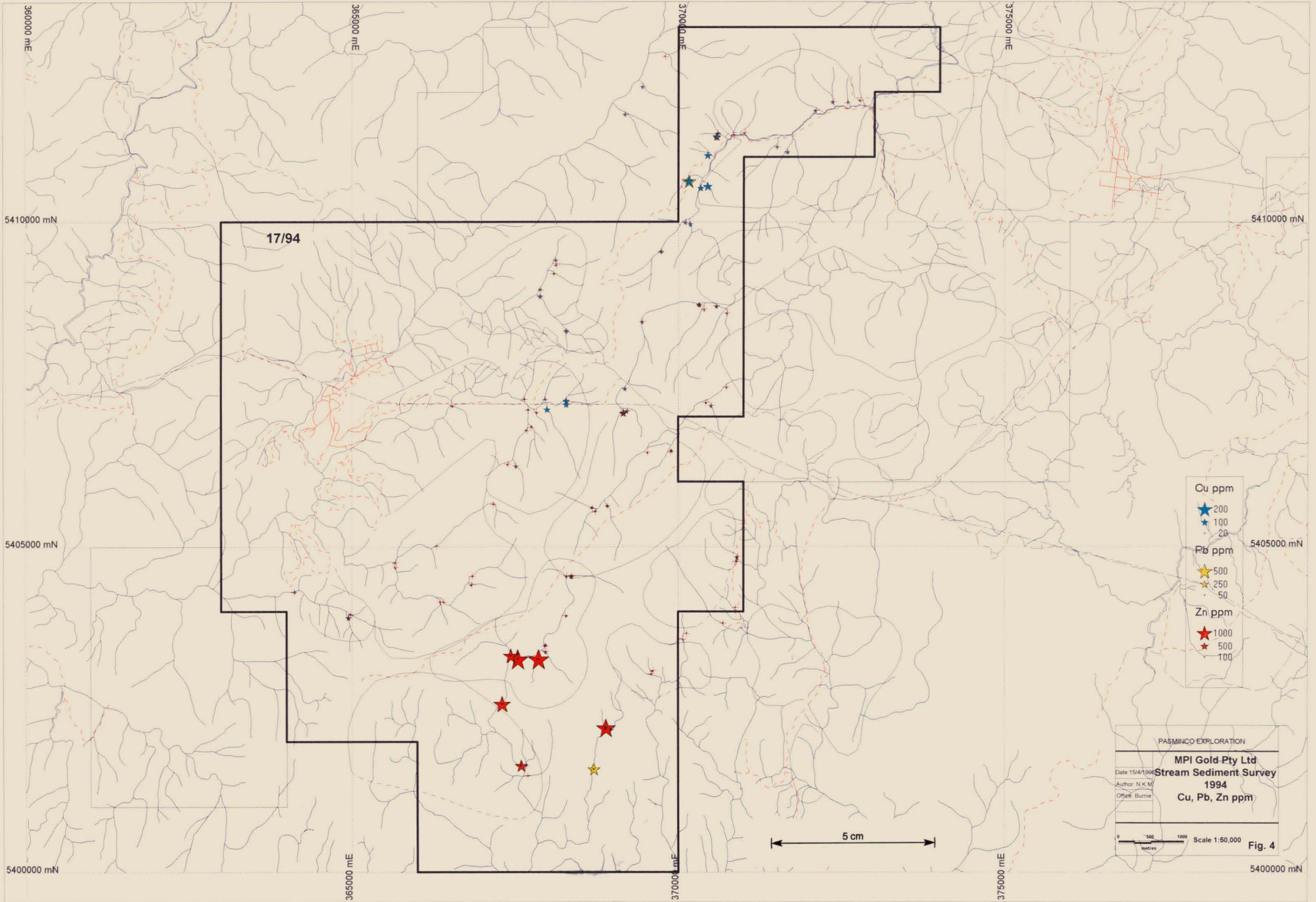
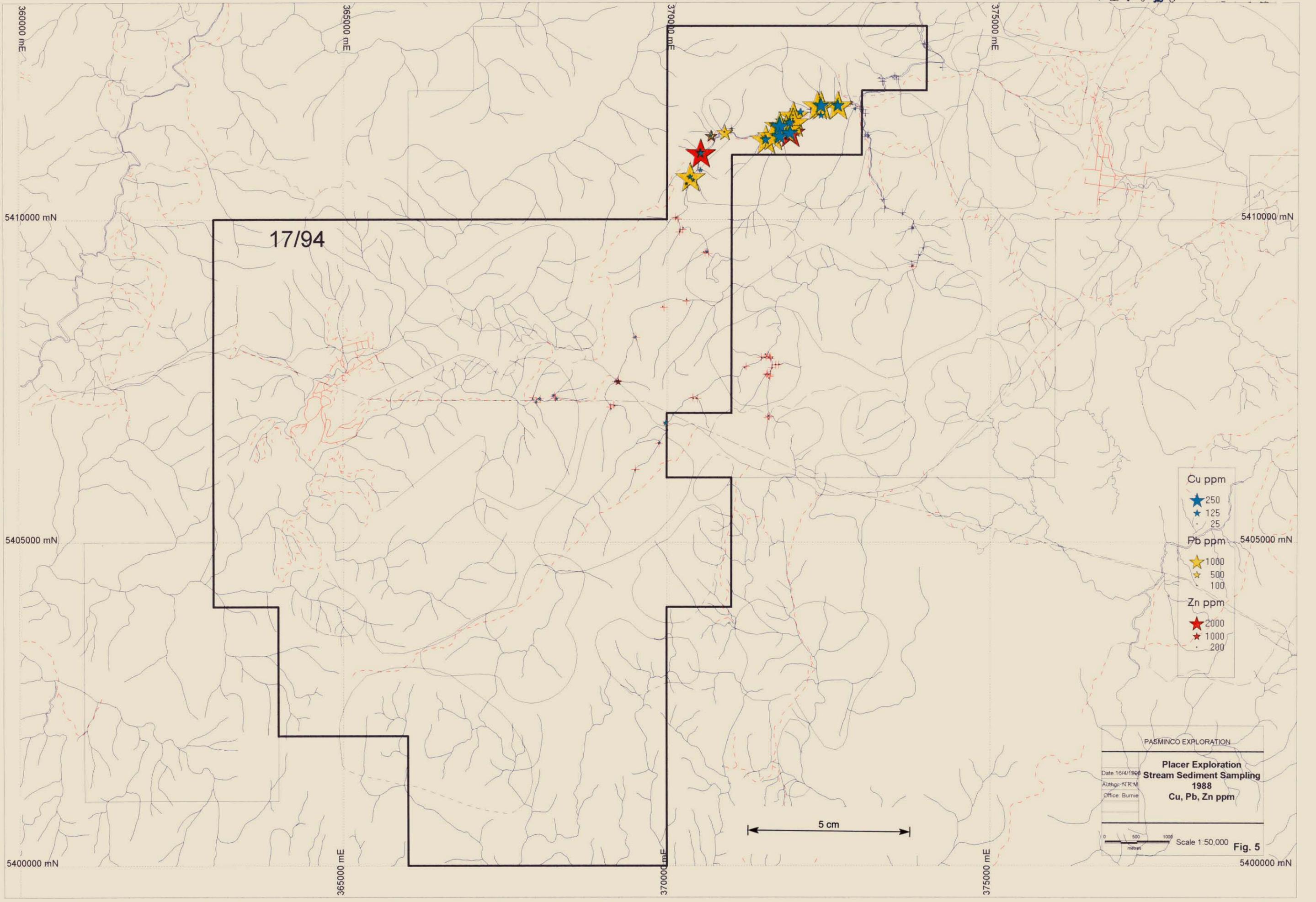


Fig. 4



17/94

5 cm

Scale 1:50,000

Fig. 5

compared to the flight line spacing of the surveys, the resulting images are of poor quality for interpretation. Preliminary regional interpretation is provided in Figure 6.

Key observations and conclusions:

- 1) The Arthur Lineament is identified by a series of strongly magnetic linear features trending NNW along the western edge of the image. A large magnetic mass exists in the centre of the lineament, which may be in part coincident with the Savage River Mine.
- 2) A large magnetic mass east of the Arthur lineament (360000E) is indicated from geological maps to be the Heazlewood mafic/ultramafic complex.
- 3) A large quiet zone at the bottom of the image is due to the Meredith Granite.
- 4) A small magnetic high on the northeast corner of the map, surrounded to the east and south by a mottled magnetic signature, correlates with outcropping Crimson Creek Volcanics and Tertiary Basalt respectively.
- 5) A horse shoe shaped magnetic structure slightly south and east of the centre of the map reveals an eastern limb which extends to the southern limit of the image. This is possibly related to Crimson Creek Basalts and/or contact metamorphism of sediments from the intruded granite. The western limb is related to a mapped and drill intersected serpentinite. West of the western limb a small magnetic high may also be related to Crimson Creek Basalts.
- 6) A large magnetic high is apparent over the Mt Bischoff Mine. There are however no clear magnetic features in the image which can be interpreted to be associated with the Cleveland Sn mineralisation or the Magnet Pb-Zn-Ag mineralisation.

- 7) The regional image displays a northwest dominant magnetic fabric in the area with some minor northeast trending linear features also apparent. The data is too poor to be able to infer any north-south linear features.

5.5 Field Mapping

Detailed field mapping on EL 17/93 has been initiated in the Arthur Dam and Magnet Mine areas. Results of rock chip samples taken from gossan exposed in Magnet Road are provided in Appendix 2.

Arthur Dam area

5.6 Diamond Drill Holes AD1 and AD2

The Tasmanian Department of Mines conducted exploration on the Luina exempt area in the 1980's (Collins, 1983; Baker, 1986). Work included DIGHEM and magnetic surveys and a soil sampling programme which resulted in the drilling of two diamond drill holes at Arthur Dam, targeting coincident magnetic and soil geochemical anomalies. Both AD1 and AD2 were relogged and resampled by Pasmaenco.

5.6.1 AD1

AD1 was drilled to 395m. A graphic log for the drill hole is presented in Appendix 3 and analytical results of resampling are included in Appendix 4. Mineralisation was intersected in fine grained mafic volcanoclastic sediments below 155m, and is dominated by pyrite-arsenopyrite-chalcopyrite and pyrrhotite-arsenopyrite-pyrite-chalcopyrite veins which run parallel to the core axis (from 177.5 - 202.3m and 215.5 - 224.5m respectively).

Mineralisation paragenesis identified from thin section examination (Appendix 5) suggests early galena and sphalerite, replaced by later pyrrhotite-chalcopyrite-arsenopyrite-pyrite. Mineralisation has infilled vugs in quartz-feldspar veins and also cross-cuts carbonate-hematite alteration.

Several XRD analyses representing alteration types observed in AD1 correspond with petrographic observations of early quartz-feldspar veining and cross-cutting carbonate-hematite with later carbonate and chlorite alteration (Appendix 6).

Resampling of AD1 did not provide any new significant results (Appendix 4).

5.6.2 AD2

AD2 intersected quartz stockwork veining and mineralisation from 100m to 123.1m, in highly altered and tectonized interstratified mafic volcanics (Appendix 7). Hangingwall and footwall rocks comprise variably textured volcanoclastics, lava, lava breccia and hyaloclastite composed of pyroxene andesite and pillowed aphyric basalt. An amphibole alteration halo extends from 1-2m in the hangingwall to the mineralisation (100m) to 25m into the footwall. The core is also highly cleaved in the upper mineralised zone.

Mineralisation and alteration overprints the original lithologies. Phases of alteration and mineralisation identified to date include:

Quartz - feldspar, infilling vugs

Galena

Sphalerite - pyrrhotite - chalcopyrite

Pyrite - arsenopyrite

Carbonate- haematite - quartz

Amphibole

Chlorite is commonly associated with the occurrence of minor galena-sphalerite, and clusters of apatite crystals are present in chloritic patches and as crystallites on altered feldspar phenocrysts. The sphalerite - pyrrhotite - chalcopyrite mineralisation clearly postdates the galena phase and is followed by later pyrite and arsenopyrite. Late arsenopyrite forms euhedral crystals in quartz, which is cut by both minor carbonate-hematite veinlets, and later amphibole alteration which is both pervasive (in spray-like masses) and also cross cuts mineralisation in veins.

The most significant results from resampling of AD2 (Appendix 4) include:

12m @ 5% Zn, 1% Pb, 0.6g/t Au

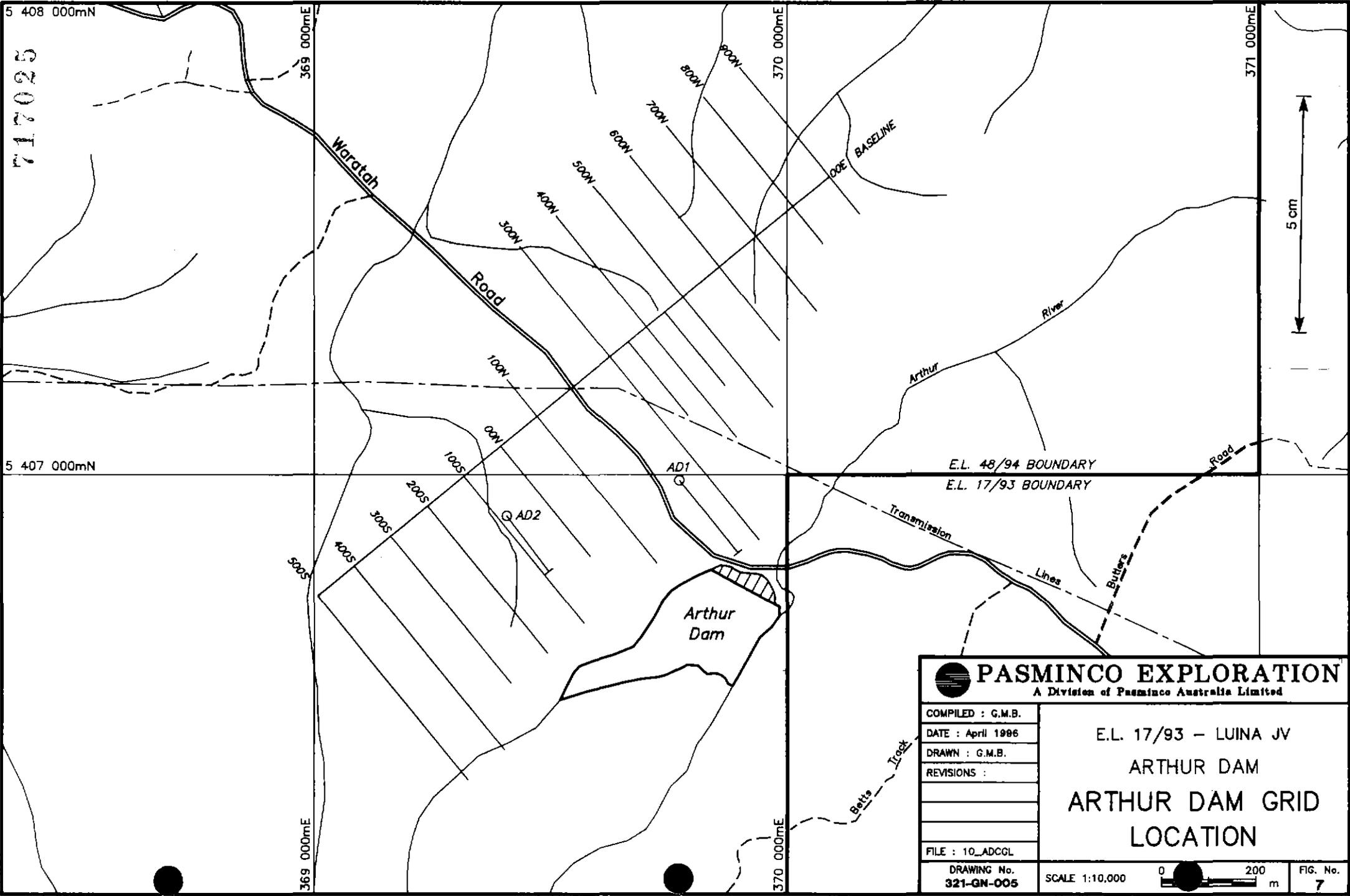
3m @ 9.21% Zn, 8.34% Pb, 0.5 g/t Au

3m @ 1.52% Zn, 0.75% Pb, 0.65 g/t Au

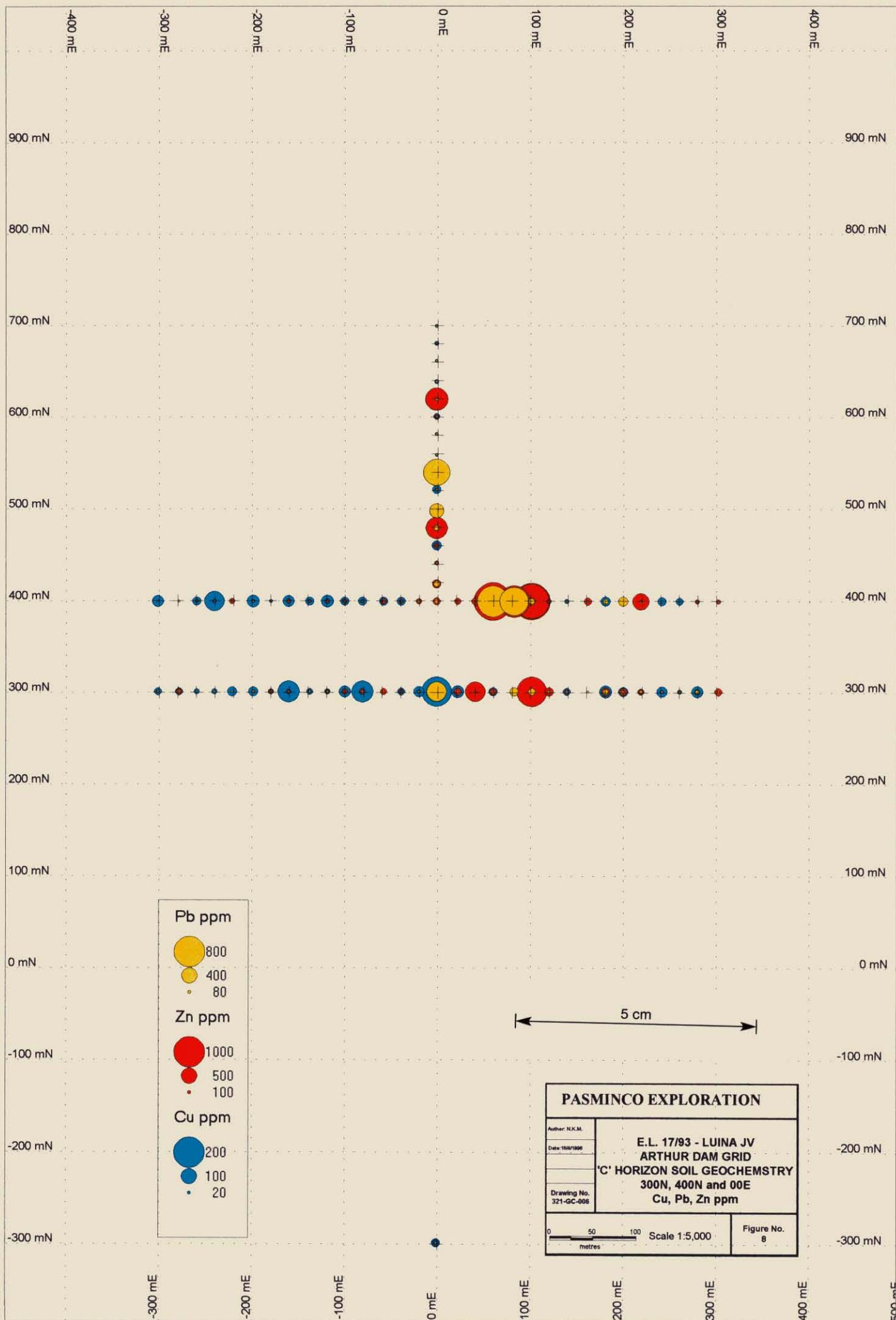
5.7 Arthur Dam Grid Soil Sampling Survey

The purpose of soil sampling over two lines of the refurbished Arthur Dam grid (figure 7) was to replicate previous soil sample results which showed anomalous geochemistry. 'C' horizon soil sampling by Collins (1983) and 'A' horizon sampling by Baker (1986) produced coincident Cu, Pb and Zn anomalies which showed a NNW striking trend.

'A' and 'C' horizon soil samples were taken at 20m spaced intervals along local grid lines 300N and 400N (both from 300W to 300E). Samples were also taken along the baseline from 400N to 700N. 'C' horizon results are presented on Figure 8 and in Appendix 8. The results show similar anomalous trends to the previous sampling, which confirms the existence of the anomalous zone and also shows the reliability of previous results for future work.



 PASMINCO EXPLORATION A Division of Pasminco Australia Limited	
COMPILED : G.M.B. DATE : April 1996 DRAWN : G.M.B. REVISIONS : FILE : 10_ADCGL	E.L. 17/93 - LUINA JV ARTHUR DAM ARTHUR DAM GRID LOCATION
DRAWING No. 321-GN-005	SCALE 1:10,000 
	FIG. No. 7



6 ENVIRONMENTAL DISTURBANCE AND REHABILITATION

Refurbishment of the Arthur Dam grid commenced with cutting the baseline (00E) and sections of cross lines 300N and 400N (600m and 800m respectively). Recutting and extensions of the grid are continuing for further work. No rehabilitation has been done yet.

7 EXPENDITURE

Expenditure incurred by Pasminco Exploration since inception of Joint Venture with MPI Gold Pty Ltd and Fodina Minerals Pty Ltd. Period ending March 1996.

	\$
Personnel & Oncosts	16 995
Travel & Accommodation	1 790
Geological Consultants	3 872
Geochemical Consultants & Assays	3 858
Other Consultants	1 746
Drilling (including access & core processing/storage)	142
Stores & Supplies	391
Vehicles & Equipment	258
Land	12
Computing	950
Office Running Costs	3 243
Management Fee	3 326
TOTAL EXPENDITURE	36 582

8 KEYWORDS AND LOCALITY

BASIC VOLCANICS, BRECCIA, GRANITE, CARBONATE, BASE METALS, TIN, GOLD, REPLACEMENT, STOCKWORKS, VEINS, PRECAMBRIAN, CAMBRIAN, DEVONIAN, ORDOVICIAN, TERTIARY, DATA REVIEW, GEOLOGY, GEOCHEMISTRY, GEOPHYSICS

BURNIE SK5503, LUINA, RUSSELL, DUNDAS

9 REFERENCES

- Baker, W.E., 1986 An application of soil humic substances to geochemical exploration. Applied Geochemistry, Vol. 1, p 307 - 310.
- BHP, 1988 EL 5/63 Final Report in the Relinquished Area: Results of exploration for 1987-1988 and a summary of activities for the period 1963-1988. BHP Ltd.
- Brown, A.V., 1986 Geology of the Dundas-Mt Lindsay-Mt Youngbuck Region. Tasmanian Department of Mines Geological Survey Bulletin 62.
- Collins, P. L. F., 1983 Luina and Wombat Flat Exempt Areas: A review of previous exploration and a reconnaissance survey of an aeromagnetic anomaly, Tasmanian Department of Mines, Unpub. Rpt. 1983/35, 28p.
- Comstaff, 1977 Stream sediment sampling - National coordinates and Assay Results. Unpub. Rpt. Comstaff Pty. Ltd
- Cottle, V., 1951 The Magnet Silver Lead Mine, Tasmania. EZ Company of Australasia, Report No. 44.
- Morrison, K.C., 1995a Prospectivity Review Progress Report. Unpub. Rpt to Pasminco Exploration, Burnie.
- Morrison, K.C., 1995b Waratah Project - Open File Literature Review. Unpub. Rpt. to Pasminco Exploration, Burnie.
- Nye, P.B., 1923 The Silver-Lead Deposits of the Waratah District, Tasmanian Department of Mines Geological Survey Bulletin 33.
- Saxon, M.S., 1994 ETA 366 - Mt Bischoff Area. Pasminco Exploration Memorandum.
- Shaw, R.W.L. & Everett, M.P., 1985a Final Report on areas surrendered to the Department of Mines Tasmania, June 1985. EL 5/63 Area 1 Arthur River. Unpub. Rpt. Comstaff Pty. Ltd.
- Shaw, R.W.L. & Everett, M.P., 1985b Final Report on areas surrendered to the Department of Mines Tasmania, June 1985. EL 5/63 Area 5. Unpub. Rpt. Comstaff Pty. Ltd.

APPENDIX 1

Open File Literature Review - K.C. Morrison, August 1995

Pasminco Exploration
Waratah Project
Open File Literature Review

K.C. Morrison
2 August 1995

1. INTRODUCTION

The project area is currently covered by three Exploration Licences; E.L.s 17/93 and 49/94 (MPI Pty Ltd) and E.L. 48/94 (Pasminco Exploration).

A comprehensive set of company reports on previous exploration covering parts of the project area is held in the Tasmania Development and Resources Open File library, Rosny Park.

Previous literature reviews on the most important references have been conducted by Pasminco for the ETA 366 (E.L. 48/94) application bid (Saxon, 1994) and for background to the MPI joint venture negotiations (Morrison, 1995 a and b). This report supplements those earlier reports and is intended to complete the pre-exploration review of existing data availability.

2. PREVIOUS EXPLORATION

A comprehensive bibliography of company reports on previous exploration within the Waratah-Mt Cleveland area is enclosed as Appendix 1, which includes four reference lists.

- BHP (Comstock JV) - Open File Report 88-2815
- Tasmanian Department of Mines Unpublished Report 1983/35 reference list.
- Pasminco - ETA 366 evaluation, internal memorandum.
- Pasminco Library - listing of reports copied.

These reports, together with exploration and research conducted by the Tasmanian Department of Mines (Collins, 1983; Brown, 1986) show that exploration useful to Pasminco at Waratah has been conducted by the following groups:

1963-1989

Cominco Exploration Pty Ltd (plus Aberfoyle Resources Ltd and Billiton Australia); E.L. 1/63 and E.L. 34/82.

1963-1989

Comstaff Pty Ltd (plus BHP Co Ltd); E.L. 5/63, E.L. 1/68, 7 AP/AM

1983-1985

Tasmanian Department of Mines; Luina and Wombat Flat Exempt Areas.

1988-1990

Billiton Australia; E.L. 46/88

1989-1990

Placer Exploration Ltd; E.L. 47/88

1990-1993

RGC Exploration Pty Ltd; E.L. 12/90, E.L. 15/90

1991-1992

Geopeko; E.L. 45/85, E.L. 21/90

Prior tenure and the main prospects are shown on Figure 1.

Saxon (1994) summarised the main prospects and exploration anomalies investigated by the previous explorers and, when combined with the information on the abandoned small lead-zinc workings along the "Magnet trend" (Ward, 1911; Nye, 1923; Ellis, 1980 a and b), they fall into 4 categories of probable explanation.

1. Tin dominant anomalies and associated granite-sourced geophysical anomalies; Deep Gully Creek, Whyte River, Wombat Flat, Foleys East, Luina. Most of the Cominco, Billiton and RGC work was directed towards tin.
2. Sub basalt geophysical anomalies unexplained by drilling and probably related to Tertiary basalt; Stone Dam Creek (and 1981 CRA MBD anomaly), Cominco Dighem anomaly (possibly sub basalt gravels)
3. Small lead-zinc veins, drilled or reasonably sampled; Washington Hay, Butlers Road, Persic-Silver Cliffs.
4. Significant zinc +/- gold mineralisation with exploration signature demonstrated and currently underexplored; Arthur Dam, Magnet.

Arthur Dam ranks higher than Magnet because on the former a strong geochemical/magnetic anomaly with easy access has been partly drilled, with an encouraging zinc/gold intersection, and requires evaluation with more drilling. In particular, the larger of the two soil anomalies remains totally untested (Figure 2).

3. FUTURE EXPLORATION

A proposal and work program to explore Arthur Dam is outlined in Morrison (1995c). At Magnet the old Comstaff grid along the alteration zone has only three exploration drill holes within it (Figure 2) and the current Pasminco strategy for Year 1 exploration is to conduct an ore and host rock petrology and geochemistry comparative study between Arthur Dam (drill core) and Magnet (outcrop and dump samples).

On the regional scale the aim is to compile a set of maps interpreting the available geology, geophysics and geochemistry, focussed on the NE-SW trending low magnetic belts of mafic and ultramafic volcanics, including the high magnesium andesites and low titanium basalts thought to be associated with Magnet and Arthur Dam mineralisation. The regional work will also target structural and lithological signatures associated with replacement style mineralisation as outlined in Saxon (1994).

Inventory of Best Regional Data Available for Year 1 Compilation

1. Geology

Tasmanian Geological Survey, 1995, Central Arthur Project - Map 2, 1:50,000 Sheet [MRT publication]

Tasmanian Geological Survey, 1986, Bulletin 62, Geology of the Dundas-Mt Lindsay-Mt Youngbuck Region. [MRT publication]

2. Stream Sediment Geochemistry

Comstaff E.L. 5/63 - data base, print out of all samples 1963-1977 - MRT Open File Library [77-1226]

Cominco E.L. 1/63 - 1:25,000 maps [74-1-36, 75-1072, 76-1181]

Placer E.L. 47/88 - data tables in report, Magnet area [90-3070]

Geopeko E.L. 21/90 - 1:25,000 compilation maps of previous data [92-3371]

MPI E.L. 17/93 - 1:25,000 maps with new data [Roger Poltocks Report]

3. Aeromagnetics

Cominco 1974 helimag survey, .52 m line spacing [75-1072, 75-1115]

CRAE 1979 Geoex survey - original data not located but reprocessed by Billiton [89-3053]

Department of Mines 1981 West Coast Survey [Unpublished Report 1982/39]

Comstaff 1982 Area 1 Survey [88-2815]

RGC - 1991 Magnetic and gravity interpretations of existing data, including review of 1981 Department of Mines Survey by Wyatt and Associates [91-3284]

Pasminco in-house magnetics, based on 1981 Department of Mines data.
This may be the best achievable from existing data.

4. *Airborne EM*

Comstaff 1975 Input EM [88-2815]

Cominco 1980 Dighem EM [80-1452, 80-1485]

Cominco 1981 Dighem EM [81-1577, 82-1710]

Comstaff 1983 Dighem EM, helisurvey 200 m line space. This is probably the most useful survey [84-2135 = W5 (Pasminco library), 84-2129, 88-2815]

REFERENCES

Brown, A.V., 1986, Geology of the Dundas-Mt Lindsay-Mt Youngbuck region, Tasmanian Department of Mines Geological Survey Bulletin 62.

Collins, P.F., and Williams, E., 1986, Metallogeny and Tectonic Development of the Tasman Fold Belt System in Tasmania, *Ore Geology REview* 1, 1986, 153-201.

Ellis, P., 1990, Placer Exploration Ltd., Relinquishment Report, E.L. 47/88, Magnet Tasmania.

Nye P.B., 1923, The Silver-Lead Deposits of the Waratah District, Tasmania Department of Mines Geological Survey Bulletin No. 33.

Saxon, M., 1994, ETA 366 - Mt Bischoff Area, Pasminco memorandum.

Morrison, K.C., 1995a, Prospectivity Review Progress Report, Pasminco Report.

Morrison, K.C., 1995b, Background to Arthur Dam drilling, Pasminco Report.

Morrison, K.C., 1995c, Year 1 Work Program, Pasminco Letter.

Ellis, P.D., 1980a, Progress Report, Exploration Licence 1/63, for six months ending February 11 1980. Unpubl. Rep. Cleveland Tin Ltd.

Ellis, P.D., 1980b, Progress Report, Exploration Licence 1/63, for six months ending August 11 1980. Unpubl. Rep. Cleveland Tin Ltd.

APPENDIX 1
BIBLIOGRAPHY

From BHP 88-2815

REFERENCES

- 74-1050 Shosh, S.K.; Morgan, W.A.; 1963. The Recovery of Tin From Mt. Bischoff Ore. Unpub. Rep. Geo-Met Reactors Pty. Ltd.
- 64-367 Glasson, K.R.; 1964. Report on Authority to Prospect No. 5 AP/AM Mount Bischoff with Recommendation for drilling. Unpub. Rep. Mt. Costigan Mines Ltd.
- 65-412 Comstaff; 1965. I.P. Profiles. Unpub. Rep. Comstaff Pty. Ltd.
- 65-404 Fander, H.W.; 1965. Razorback Tin Mine Cores. Australian Mineral Development.
- 65-390 Rogers, J.K.; 1965. IP Survey Lines, Dundas Area, N.W. Tasmania. Unpub. Rep. Broken Hill South Ltd.
- 85-2416 McPhar Geophysics; 1966. Report on the Helicopter Afmag Survey Northwestern Tasmania. Unpub. Rep. McPhar Geophysics Pty. Ltd.
- 66-428 Sutherland, D.B.; 1966. Report on the Helicopter AFMAG Survey Northwestern Tasmania. Unpub. Rep. McPhar Geophysics Pty. Ltd.
- 68-940 McBride, B.; Cornwall, F.W.D.; 1968. Geological Review Exploration Licences EL 5/63, EL 1/68 and 7 AP/AM North West Tasmania. Unpub. Rep. Comstaff Pty. Ltd.
- 69-602 Comstaff; 1969. Review of Summer Exploration Programme, 69-602 Exploration Licence E.L. 5/63 1968-1969 Comstaff Pty. Ltd.; Australian Anglo American Ltd. Unpub. Rep. (MF)
- 70-706 Comstaff; 1970. Review of 1969-1970 Exploration Programme, 70-706 Exploration Licence 5/63, Tasmania. Unpub. Rep. Comstaff Pty. Ltd. (MF)
- 70-709 Comstaff; 1970. Review of 1969-1970 Summer Exploration Programme Exploration Licence 1/68, Tasmania. Unpub. Rep. Comstaff Pty. Ltd.

85-2392 Everett, M.P.; 1970. An Assessment and Review of the Chester, Silver Falls and Pinnacles Areas ('69-'70). Unpub. Rep. Comstaff Pty. Ltd.

85-2393 Everett, M.P.; 1970. A Rapid Reconnaissance of the Coldstream-Ramsay River Systems (1969-1970). Unpub. Rep. Comstaff Pty. Ltd.

5-2391 Robison, H.R.; 1970. Webb Creek 1969-1970. Unpub. Rep. Comstaff Pty. Ltd.

71-838 Wallis, D.; Everett, M.P.; Chisholm, T.; Henry, D.; Pigott, G.F.; 1970. 1970-1971 Summer Field Season Report, Exploration Licence 5/63. Unpub. Rep. Comstaff Pty. Ltd.

71-806 Chisholm, T.; 1971. 1971 Winter Field Season Report. Unpub. Rep. Comstaff Pty. Ltd. (MF) 71-806

71-718 Chisholm, T.; 1971. E.L. 5/63 Mt. Charter Area, Regional Programme. Unpub. Rep. Comstaff Pty. Ltd.

71-762 Claridge, G.; Omnes, G.; 1971. Geophysical Surveys at Chester Pinnacles, Que River, Arthur River, March 1971. Unpub. Rep. Compagnie Generale De Geophysique. - *Trans. ... at A2*

71-844 Comstaff; 1971. Drill Hole Logs, Mt. Bischoff. Unpub. Rep. Comstaff Pty. Ltd.

85-2394 Everett, M.P.; 1971. Chester-Pinnacles Regional Interim Report September 1971. Comstaff Pty. Ltd. 85-2394 (MF)

71-717 Pigott, G.F.; 1971. EL 5/63, The Renison Bell East Area. Unpub. Rep. Comstaff Pty. Ltd.

71-717A Pigott, G.F.; 1971. E.L. 5/63 - Ring River Project. Addendum to 1970 Winter Report on the Renison Bell East Area. Unpub. Rep. Comstaff Pty. Ltd.

71-720 Robison, H.R.; 1971. E.L. 5/63 & 7 AP/AM, The Bischoff South Project. A Reconnaissance of the Arthur River and its Tributaries. Unpub. Rep. Comstaff Pty. Ltd.

72-848 Everett, M.P.; 1972. Coldstream-Hatfield-Que Regional
Reconnaissance Project, 1971-1972 Summer Field Season
Report. Unpub. Rep. Comstaff Pty. Ltd.

72-914 Everett, M.P.; 1972. Exploration Licence 5/63, Will O'Wisp
Follow-up Project, March to December 1972. Unpub. Rep.
Comstaff Pty. Ltd.

72-903 Everett, M.P.; 1972. Huskisson diamond drill hole No. 1,
Exploration Licence 5/63 Unpub. Rep. Comstaff Pty. Ltd.

72-849 Pigott, G.F.; 1972. Exploration Licence 5/63, 1971/1972
Summer Field Season Report, Huskisson Grids. Unpub. Rep.
Comstaff Pty. Ltd.

72-850 Pigott, G.F.; 1972. Exploration Licence 5/63, 1971/1972
Summer Field Season Report, Pieman Area. Unpub. Rep.
Comstaff Pty. Ltd.

72-857 Pigott, M.; 1972. Exploration Licence 5/63, Huskisson
Asbestos Project, 1971/1972 Summer Field Season Report.
Unpub. Rep. Comstaff Pty. Ltd.

72-852 Rugless, C.S.; 1972. Exploration Licence 5/63, Ramsay Area
Project, 1971/1972 Summer Field Season Report. Unpub. Rep.
Comstaff Pty. Ltd.

73-958 Everett, M.P.; Pigott, M.; 1973. Exploration Licence 5/63
Will O'Wisp Project, Coldstream, Report on Drilling
Programme Parts I and II, 1972/1973 Summer Field Season.
Unpub. Rep. Comstaff Pty. Ltd.

73-960 Herrmann, W.; 1973. Exploration Licence 1/68, Exploration
Licence 5/63 and Authority to Prospect/Authority to Mine
No. 7. Regional Exploration Heazlewood and Arthur River,
1972/1973 Summer Field Season Report. Unpub. Rep. Comstaff
Pty. Ltd.

74-1017 Cammell, C.; 1974. E.L. 5/63 Arthur River Area Regional and
Detailed Exploration 1973/1974 Summer Field Season. Unpub.
Rep. Comstaff Pty. Ltd.

74-1021 Cammell, C.; 1974. E.L. 5/63 Renison East Block, Interim Report. 1973/1974 Summer Field Season. Unpub. Rep. Comstaff Pty. Ltd.

74-1030B Morgan, W.A.; King, D.E.; Ghosh, S.K.; 1974. Summary Report on the Present Status and Future Development of the Geo-Met Milling and Chloridising Process for the Treatment of Mt. Bischoff Ore. Unpub. Rep. Geo-Met Reactors Ltd.

74-1023 Orr, D.B.; 1974. Pieman South Summer Field Season Report. Unpub. Rep. Comstaff Pty. Ltd.

74-1022 Smith, R.N.; 1974. Chester Area 1973/74 Summer Field Season. Unpub. Rep. Comstaff Pty. Ltd. 85-2395 (MC)
74-1022

85-2397 Butt, G.R.; Hansen, J.; Finney, W.; 1975. Interpretation Report Airborne Electromagnetic (Input) Survey of the Comstaff South Leases Tasmania, Australia. Unpub. Rep. Geoterrex Pty. Ltd.

75-1124 Orr, D.B.; Smith, R.N.; 1975. Interim Report to the Department of Mines, Tasmania, September, 1975. Unpub. Rep. Comstaff Pty. Ltd. 75-1124 (MC)

74-1050 Piranjo, F.; 1975. The Geology and Mineralisation of Mt. Bischoff, Comstaff Pty. Ltd.

75-1084 Smith, R.N.; 1975. Drill Log CP 3, 4, 5, 6, 11, 16, 17, 18, 19, 20, 21, 22. Unpub. Rep. Comstaff Pty. Ltd. 75-1084 (MC)

75-1095 Smith, R.N.; 1975. Drill Log CP 7, 9, 10, 12, 13, 14, 15. Unpub. Rep. Comstaff Pty. Ltd. 75-1095 (MC)

85-2424 Keane, E.; Orr, D.B.; 1976. Drill Logs and Assay Results, Diamond Drill Holes SK-1 to SK-14 (1974-1976, Sock Creek Prospect). Unpub. Rep. Comstaff Pty. Ltd.

70-1152 Rugless, C.S.; 1976. Interim Report on the Manget Mine area, Exploration Licence 5/63, Part 1. Unpub. Rep. Comstaff Pty. Ltd.

Comstaff; 1977. Stream Sediment Sampling - National

77-1226 Co-Ordinates and Assay Results. Unpub. Rep. Comstaff Pty.
Ltd.

85-2415 Hopwood, T.P.; 1977. A Brief Assessment of the Sock Creek
and Chester-Pinnacles Prospects, Tasmania. Unpub. Rep.
Comstaff Pty. Ltd. 85-2415 (MF)

35-2421 Krummei, G.; 1977. Progress Report on the Pinnacles Area.
Unpub. Rep. Preussag Aust. Pty. Ltd. (MF) 85-2421

85-2396 Perkin, D.J.; 1977. Interim Report on the Chester Area.
Unpub. Rep. Preussag Aust. Pty. Ltd. (MF) 85-2396

77-1202 Pigott, G.F.; 1977. Final Report on Follow Up Work on
Input Anomaly FAH. Unpub. Rep. Comstaff Pty. Ltd. 77-1202

77-1203 Pigott, G.F.; 1977. Interim Reports on Ground Follow-up of
Work on Input Anomaly GAG. Unpub. Rep. Comstaff Pty. Ltd.

78-1316D Hall, D.B.; 1978. Report on Exploration in Exploration
Licence 5/63, Part 4, in Tasmania, Australia. Unpub. Rep.
Comstaff Pty. Ltd. 85-2439 (MF)

78-1316 Orr, D.B.; 1978. Six Monthly Report to the Department of
Mines, Tasmania for the Period Ended 31st December 1978.
Unpub. Rep. Comstaff Pty. Ltd. Metals for venture into Backstaff. Duller on BAS grid

78-1316C Orr, D.B.; 1978. Geological Assessment of the Comstaff
Licence Areas. Unpub. Rep. Comstaff Pty. Ltd.

78-1316A Pigott, G.F.; 1978. Renison East - Grid Gap. Unpub. Rep.
Comstaff Pty. Ltd.

78-1316B Hussey, M.C.; 1979. Photogeological Investigation of the
Comstaff Tenements and Adjacent Areas in Tasmania. Unpub.
Rep. Comstaff Pty. Ltd.

79-1359 Hall, D.B.; 1979. Report on Work Completed on EAA Grid
Extensions (E.L. 5/63 Part 4). Unpub. Rep. Comstaff Pty.
Ltd. 85-2439. 1/4N (MF)
79-1359

79-1303 Hall, D.B.; 1979. Pieman Area (Input Anomaly GAO), 1979
Report on Work Completed. Unpub. Rep. Comstaff Pty. Ltd.

79-1304 Hall, D.B.; 1979. Bulgobac-Que Region, Review of
Geochemistry. Unpub. Rep. Comstaff Pty. Ltd.

79-1305 Hall, D.B.; 1979. Regional Geology of the Mt Read Volcanics
North of the Pieman River. Unpub. Rep. Comstaff Pty. Ltd.

78-1319 Jannink, A.; 1979. Mt. Bischoff Tin Prospect (Exploration
Area Being Part of EL 5/63) Tasmania. Report on Stage I
Programme. Unpub. Rep. Metals Exploration Ltd.

79-1347A Jannink, A.; 1979. Mt. Bischoff Tin Prospect (Exploration
Area Being Part of EL 5/63) Tasmania. Stage 2A Programme
and Budget (Amended). Unpub. Rep. Metals Exploration Ltd.

79-1347B Jannink, A.; 1979. Mt. Bischoff Tin Prospect, Exploration
Licence 13/79, Tasmania. Stage 2B Programme and Budget.
Unpub. Rep. Metals Exploration Ltd.

80-1413 Hall, D.B.; Pigott, G.F.; 1980. East Chester - EAB Grid,
Exploration Report for 1980, Exploration Licence 5/63,
Section 4. Unpub. Rep. Comstaff Pty. Ltd. 80-1413 (MC)

80-1421 Pigott, G.F.; 1980. Report on Diamond Drilling in the
Renison East Area (E.L. 5/63 Part 6). Unpub. Rep. Comstaff
Pty. Ltd.

80-1426 Pigott, G.F.; 1980. Interim Report on the Ramsay Area E.L.
5/63 Part 2. Unpub. Rep. Comstaff Pty. Ltd.

80-1508 Pigott, G.F.; 1980. Monthly Report to the Department of Mines,
Tasmania for October, 1980. Unpub. Rep. Comstaff Pty. Ltd.
80-1508 (MC)

80-1509B Ramsay, W.R.H.; 1980. Interim Report on Renison East (Grid
"GAP" West). Unpub. Rep. Comstaff Pty. Ltd.

80-1415 Washausen, G.F.A.; Wilding, I.G.P.; 1980. Report on the
Arthur River Alluvials, Exploration Licence 5/63, Section
1. Unpub. Rep. Comstaff Pty. Ltd.

Green, N.P.; 1981. Six Monthly Report to Tasmania

82-1690B Department of Mines for the Period Ended 30 December 1981:
Preliminary Report on the South Bischoff Mine Area (CSB) in
E.L. 5/63 Part 2. Unpub. Rep. Comstaff Pty. Ltd.

81-1604A Henley, K.J.; Doherty, R.; 1981. Preliminary Mineralogical
and Metallurgical Evaluation of Two Samples of Lead-Zinc
Ore. Unpub. Rep. Australian Mineral Development
Laboratories.

81-1604 Pigott, G.F.; 1981. Report Accompanying Licence Renewal 81-1604
Application for Exploration Licence 5/63 Tasmania. Unpub.
Rep. Comstaff Pty. Ltd. Mn. AR ment. - map. DGC work only

81-1644 Pigott, G.F.; 1981. E.L. Renewal Application for E.L. 5/63
Western Tasmania. Unpub. Rep. Comstaff Pty. Ltd.

82-1690I Trussell, D.B.; 1981. Interpretation of Ground Magnetic
Data - GAR Grid; Renison Grid GAR, 1980 Mis-a-la-Masse
Program. Unpub. Rep. Comstaff Pty. Ltd.

83-1903 Anderson, B.E.; 1982. Progress Report on Chester-Pinnacles.
EL 5/63, Part 4. Unpub. Rep. Comstaff Pty. Ltd.

83-1986B Comstaff; 1982. Comstaff-Preussag J.V., EL 5/63, Section 6,
East Renison. Unpub. Rep. Comstaff Pty. Ltd.

83-1986A Dickson, G.O.; 1982. Interpretation of ground magnetic data on
the GAR and GAP Grids of EL 5/63, Tasmania.

82-1690E Green, N.P.; 1982. Six Monthly Report to Tasmania
Department of Mines for the Period Ended 30 December 1981:
Report on Grids CAI and CAG, E.L. 5/63 Part 2. Unpub. Rep.
Comstaff Pty. Ltd.

83-1907 Green, N.P.; 1982. Interim Report on Ramsay Grid CAF
Exploration Licence 5/63 Part 2. Unpub. Rep. Comstaff Pty.
Ltd.

83-1908 Green, N.P.; 1982. Stage Report on the Ramsay Grids CAI &
CAG in E.L. 5/63 Part 2. Unpub. Rep. Comstaff Pty. Ltd.

83-1904 Green, N.P.; 1982. Interim Report on the Diamond Drilling
at Ramsay Grid CAL, Exploration Licence 5/63 Part 2.
Unpub. Rep. Comstaff Pty. Ltd.

82-16905 Hussey, M.C.; 1982. Photogeological Investigation of the
Renison East Area, Comstaff Tenements, Tasmania. Unpub.
Rep. Australian Anglo American Ltd.

83-1902 Jones, C.N.; 1982. Interim Report on EL 5/63, Area One Arthur
River, Tasmania, Unpub Rep. Comstaff Pty. Ltd. (MF) 83-1902

82-1690A Jones, C.M.; 1982. Six Monthly Report to Tasmania
Department of Mines for Period Ended 30 December 1981. EL
5/63 Section 1 (Arthur River). Comstaff Pty. Ltd.

82-1690 Pigott, G.F. et al. 1982. Six Monthly Report to Tasmania 82-1690
Department of Mines for the Period Ended 30 December 1981;
Summary of Work Completed, in Progress and Proposed for EL
5/83. Comstaff Pty. Ltd. *Min. A.R. mention - DGC work only.*

82-1690C Pigott, G.F.; 1982. Six Monthly Report to Tasmania
Department of Mines for the Period Ended 30 December 1981:
Interim Report on Grid CAL, E.L. 5/63 Part 2. Unpub. Rep.
Comstaff Pty. Ltd.

82-1690D Pigott, G.F.; 1982. Six Monthly Report to Tasmania
Department of Mines for the Period Ended 30 December 1981:
Report on Grid CAF, E.L. 5/63 Part 2. Unpub. Rep. Comstaff
Pty. Ltd.

82-16906 Pigott, G.F.; 1982. Six Monthly Report to Tasmania
Department of Mines for the Period Ended 30 December 1981,
Report on Chester-Pinnacles Area E.L. 5/63 Part 4. Unpub.
Rep. Comstaff Pty. Ltd.

82-1731 Pigott, G.F.; Anderson, B.E.; Green, N.P.; Yardley, S.R.;
Crimeen, J.D.; 1982. Quarterly Report to the Department of
Mines, Tasmania, for the Period 1st January to 31st March,
1982, Exploration Licence 5/63. Unpub. Rep. Comstaff Pty.
Ltd.

Pigott, G.F.; 1982. Progress Report on the Huskisson Area
E.L. 5/63 Part 5. Unpub. Rep. Comstaff Pty. Ltd.

83-1904

Trussell, D.B.; 1982. Ramsay, 1982 Aeromagnetic Survey
Interpretation. Unpub Rep. Australian Anglo American Ltd.

83-1910

Trussell, D.B.; 1982. Arthur River, 1982 Aeromagnetic
Survey Interpretation of an Area North East of Waratah.
Unpub. Rep. Australian Anglo American Ltd.

83-1911

Trussell, D.B.; 1982. Arthur River, 1982 Aeromagnetic
Survey Interpretation of an Area West of Waratah. Unpub.
Rep. Australian Anglo American Ltd.

83-1912

Yardley, S.R.; 1982. Stage Report - GAR Fentons E.L. 5/63
Part 6. Unpub. Rep. Comstaff Pty. Ltd.

82-1690H

Dighem; 1983. Dighem III Survey of the East Chester, North
Pieman and Arthur River Areas, Tasmania (Relinquished Areas
Only). Unpub. Rep. Dighem Ltd. (MF)

85-2444

Dvorak, Z; 1983. Dighem III Survey of East Chester, North
Pieman and Arthur River areas, Tasmania. (MF) *Comstaff*

84-2129

Green, N.P.; 1983. Interim report on Ramsay Grid CAM
Exploration Licence 5/63 Part 2. Unpub. Rep. Comstaff Pty.
Ltd.

83-1984

Green, N.P.; 1983. Stage Report on the South Bischoff Mine
Area (CSB) EL 5/63 Part 2. Unpub. Rep. Comstaff Pty. Ltd.

83-1991

Levings, J.A.; 1983. Final Report on the South Bischoff
Prospect (CSB), EL 5/63 Part 2. Unpub. Rep. Comstaff Pty.
Ltd.

84-2136

Levings, J.A.; 1983. Final Report on the South Bischoff
Prospect (CSB) E.L. 5/63 Area 2. Unpub. Rep. Comstaff Pty.
Ltd.

Pigott, G.F.; 1983. Interim Report on the Mount Ramsay
Tin-Tungsten Project, Exploration Licence 5/63 Part 2.
Unpub. Rep. Comstaff Pty. Ltd.

83-1985

83-1983 Shaw, R.W.L.; 1983. Report to the Mines Department, Tasmania for the period 1 January to 30 June, 1983. Unpub. Rep. Comstaff Pty. Ltd.

83-1984A Trussell, D.B.; 1983. A Test of the Genie EM Method. Unpub. Rep. Comstaff Pty. Ltd.

83-1984B Trussell, D.B.; 1983. Geophysical Follow Up Ramsay Aeromagnetic Survey. Unpub. Rep. Comstaff Pty. Ltd.

84-259A Trussell, D.B.; 1983. Geophysical Follow Up of Ramsay Aeromagnetic Survey. Unpub. Rep. Comstaff Pty. Ltd.

84-2135 Trussell, D.B.; 1983. Interpretation of Arthur River Area - Dighem Survey. Comstaff Pty. Ltd.

Yardley, S.R.; 1983. Stage Report on the East Renison area, EL 5/63, Part 6. Unpub. Rep. Comstaff Pty. Ltd.

83-1986 Yardley, S.R.; Crimeen, J.D.; 1983. Stage Report on the East Renison Area. Unpub. Rep. Comstaff Pty. Ltd.

85-2438A Buckett, G.A.; 1984. Update evaluation of East Renison Resources. Unpub. Rep. Comstaff Pty. Ltd.

85-2386 Everett, M.P.; 1984. Will O'Wisp/CAB Interim Report. Unpub. Rep. Comstaff Pty. Ltd.

85-2401 Everett, M.P.; 1984. Proposals for further work in the Will O'Wisp (CAB) area. Unpub. Rep. Comstaff Pty. Ltd.

85-2411 Levings, J.A.; 1984a. Deep Gully Creek Interim Report EL5/63 Area 1. Unpub. Rep. Comstaff Pty. Ltd.

84-2159 Levings, J.A.; 1984b. Interim Report on the West Ramsay Grids CAI, CAM, L30, L80, L211, L250 and CKC. E.L. 5/63 Area 2: May, 1984. Unpub. Rep. Comstaff Pty. Ltd.

85-2428C McDonald, N.W.; 1984. Metallurgical assessment, Tin and Base Metal Resource. East Renison EL 5/63 Part 6. Unpub. Rep. Comstaff Pty. Ltd.

Roberts, R.H.; 1984. Gold Sampling Report - Pinnacles,
Tasmania. Unpub. Rep. Comstaff Pty. Ltd.

85-2389

Scintrex; 1984. Interpretation of 180H Geophysics. Unpub.
Rep. Scintrex Pty. Ltd.

85-2419A

Shaw, R.W.L.; 1984. Annual Report to the Department of Mines,
Tasmania. Unpub. Rep. Comstaff Pty. Ltd.

84-2133

Shaw, R.W.L.; Munro, R.A.A.; 1984. Interpretation of Butter's
Road Grid Results and Interim Report. Unpub. Rep. Comstaff
Pty. Ltd.

85-2400

Sturgess, J.K.; 1984. Conceptual studies of mineralization in
the Salmon's and Pieman veins. EL 5/63 Part 6. Unpub.
Rep. Aust. Anglo American Ltd.

85-2438B

Thynne, D.S.; 1984. A review of the Tin and Base Metal
Resources, East Renison. EL 5/63 Part 6. Unpub. Rep.
Comstaff Pty. Ltd.

85-2403

Trussell, D.B.; 1984. 1983 Genie Survey of CAB Grid. Unpub.
Rep. Comstaff Pty. Ltd.

84-2130

Trussell, D.B.; 1984. Interpretation of Chester area Dighem
Survey. Unpub. Rep. Comstaff Pty. Ltd.

84-2131

Trussell, D.B.; 1984. Applied potential survey of RBE 50 (EL
25/63, Part 6). Unpub. Rep. Comstaff Pty. Ltd.

84-2132

Trussell, D.B.; 1984. Interpretation of Renison East area
Dighem survey. Unpub. Rep. Comstaff Pty. Ltd.

84-2134

Trussell, D.B.; 1984. 1984 Genie EM Survey of Butler's Road
Grid. Unpub. Rep. Comstaff Pty. Ltd.

85-2394

Carr, G.R.; 1985. Report to Comstaff Pty. Ltd. on the
significance of Pb isotope data from EL 5/63, Tasmania.
Unpub. Rep. CSIRO

85-2381A

Everett, M.P.; 1985a. Hatfield, 'Zinc' Anomaly, Interim
Report. Unpub. Rep. Comstaff Pty. Ltd.

85-2384

Everett, M.P.; 1985b. East Renison (E.L. 5/63), Part 6

85-2419 Interim Report. Unpub. Rep. Comstaff Pty. Ltd.

Mroczek, C.R.; 1985. Interim Report on the EAF 15-18 Drilling Programme, Chester-Pinnacles EL 5/63 Part 4. Unpub. Rep. Comstaff Pty. Ltd.

85-2382

Roberts, R.H.; 1985. Chester-Pinnacles Interim Report EL 5/63 Part 4. Brown's Workings. Unpub. Rep. Comstaff Pty. Ltd.

85-2386

Shaw, R.W.L.; Everett, M.P.; 1985. Final Report on Areas Surrendered to the Department of Mines Tasmania (June 1985) Exploration Licence 5/63 Area 1 Arthur River. Unpub. Rep. Comstaff Pty. Ltd.

85-2383

Shaw, R.W.L., Everett, M.P.; 1985. Final Report on Areas Surrendered to the Department of Mines, Tasmania (June 1985) E.L. 5/63 Area 5. Unpub. Rep. Comstaff Pty. Ltd.

85-2387

Shaw, R.W.L., Everett, M.P.; 1985. Final Report on Areas Surrendered to the Department of Mines Tasmania (June, 1985) Exploration Licence 5/63 Area 2 Ramsay. Unpub. Rep. Comstaff Pty. Ltd.

85-2388

Shaw, R.W.L.; Everett, M.P.; 1985. Final Report to the Department of Mines, Tasmania on the Surrendered Portion of EL 5/63 Area 3 Mt. Block. Unpub. Rep. Comstaff Pty. Ltd.

85-2412

Shaw, R.W.L.; Everett, M.P.; 1985. Final Report on Areas Surrendered to the Department of Mines, Tasmania Exploration Licence 5/63 Area 6 East Renison. Unpub. Rep. Comstaff Pty. Ltd.

85-2418

Shaw, R.W.L.; 1985. Pinnacles EL 5/63 Area 4. Comstaff Pty. Ltd.

25/2542
85/2542
(2452)

BHP; 1986. EL 5/63 Comstaff J.V. N.W. Tasmania. Report for the Year Ended 30 June 1986. Broken Hill Pty. Co. Ltd.

85-2571

BHP; 1987. EL 5/63 Comstaff J.V. N.W. Tasmania. Report for the Year Ended 30 June 1987. Broken Hill Pty. Co. Ltd.

87-2690

(0 00 2815 174P)

REFERENCES (COLLINS, 1983)

- COLLINS, P.L.F. 1981. The geology and genesis of the Cleveland tin deposit, western Tasmania : fluid inclusion and stable isotope studies. *Econ.Geol.* 76:365-392.
- CORBETT, K.D.; RICHARDSON, R.G.; COLLINS, P.L.F.; GREEN, G.R.; BROWN, A.V. 1982. The 1981 West Coast aeromagnetic survey : a summary of information and results. *Unpubl.Rep.Dep.Mines Tasm.* 1982/39.
- COX, R. 1968. *The economic geology of the Cleveland and Magnet mines, Tasmania.* Ph.D. thesis, University of Sydney.
- COX, R. 1975. Magnet silver-lead-zinc orebody. *Monogr.Ser.australas. Inst.Min.Metall.* 5:628-631.
- ELLIS, P.D. 1980a. Progress report, Exploration Licence 1/63, for six months ending February 11 1980. *Unpubl.Rep.Cleveland Tin Ltd.* [TCR 80-1452].
- ELLIS, P.D. 1980b. Progress report, Exploration Licence 1/63, for six months ending August 11 1980. *Unpubl.Rep.Cleveland Tin Ltd.* [TCR 80-1485].
- GROVES, D.I. 1968. *The cassiterite-sulphide deposits of western Tasmania.* Ph.D. thesis, University of Tasmania : Hobart.
- GROVES, D.I.; MARTIN, E.L.; MURCHIE, H.; WELLINGTON, H.K. 1972. A century of tin mining at Mt Bischoff, 1871-1971. *Bull.geol.Surv.Tasm.* 54.
- MCARTHUR, G.J. 1981. Progress report, Exploration Licence 1/63, for the period January 14 1981 - August 11 1981. *Unpubl.Rep.Cleveland Tin Ltd.* [TCR 81-1577].
- MCARTHUR, G.J. 1982. Progress report, Exploration Licence 1/63, for the period August 12 1981 - February 11 1982. *Unpubl.Rep.Cleveland Tin Ltd.* [TCR 82-1710].
- PALMER, K.G. 1975a. Progress report - Exploration Licence 1/63, Cleveland Tin N.L. Six months to February 11 1975. *Unpubl.Rep.Cominco Exploration Pty Ltd.* [TCR 75-1072].
- PALMER, K.G. 1975b. Progress report, Exploration Licence 1/63, for six months ending August 11 1975. *Unpubl.Rep.Cominco Exploration Pty Ltd.* [TCR 75-1115].
- RANSOM, D.M. 1976a. Progress report, Exploration Licence 1/63, for six months ending February 11 1976. *Unpubl.Rep.Cominco Exploration Pty Ltd.* [TCR 76-1153].
- RANSOM, D.M. 1976b. Progress report on Exploration Licence 1/63 for six months ending August 11 1976. *Unpubl.Rep.Cominco Exploration Pty Ltd.* [TCR 76-1181].
- REID, A.M. 1923. The Mount Bischoff tinfield. *Bull.geol.Surv.Tasm.* 34.
- STUART-SMITH, P.G. 1974. Report to the Tasmanian Mines Department, Exploration Licence 1/63 for six months to August 11 1974. *Unpubl.Rep. Cominco Exploration Pty Ltd.* [TCR 74-1036].

References

(SAXON, 1994)

The following company reports have been reviewed:

Shaw, R.W.L. and Munro, R.A. 1984. Interpretation of Butlers Road Grid Results and Interim Report. Comstaff Pty. Ltd. (TCR85-2383)

Shaw, R.L.W. and Everett, M.P. 1985. Geological Summary Report for Comstaff Pty. Ltd. EL 5/63. Zetetic Cons.

Shaw, R.W.L. and Everett, M.P. 1985. Final Report on Areas Surrendered to the Department of Mines Tasmania (June 1985) EL 5/63 Area 1 Arthur River. Comstaff Pty. Ltd. (TCR85-2400)

BHP, 1988. EL 5/63 - Final Report in the Relinquished area: Results of exploration for 1987-88 and a summary of activities for the period 1963-1988. BHP Ltd. (TCR88-2815).

Randell, J.P. and Hungerford, N. 1989. EL 46/88 - Waratah. Progress report on exploration to 23rd December 1989. Billiton. (TCR89-3053)

Halley, S.W. 1991. EL 12/90 and 15/90, Waratah Annual Report 1990/91. RGC Exploration Pty. Ltd. (TCR 91-3284)

Halley, S.W. 1992 EL 12/90 and EL 15/90, Waratah Annual Report for the period July 1991 to June 1992. RGC Exploration Pty. Ltd. (TCR 92-3363)

Halley, S.W. 1993 Annual Report 1993. RGC Exploration Pty. Ltd. (TCR93-3446)

Halley, S.W. 1994. Relinquishment Report for EL 12/90 and 15/90 - Waratah Area. RGC Exploration Pty. Ltd. (TCR94-3576)

Reports from Pasminco Library, Burnie

- W1 TCR 74-1017 Comstaff E.L. 5/63 Report on 1973-74 field season (Cammell)
- W2 TCR 76-1152 Comstaff E.L. 5/63 Interim report on Magnet Mine ares, 1976 (Rugless)
- W3 TCR 84-2135 Comstaff E.L. 5/63 Interpretation of Arthur River Area Dighem survey, 1983 (Trussell)
- W4 TCR 85-2385 Comstaff E.L. 5/63 Interpretation of Butlers Road grid results and Interim Report, 1984 (Shaw and Munro)
- W5 TCR 83-2135 Comstaff E.L. 5/63 Genie EM survey of Butlers Road grid, 1984 (Trussell)
- W6 TCR 85-2400 Comstaff E.L. 5/63 Final report on area relinquished, 1985 (Shaw and Everett)
- W7 TCR 91-3284 RGC E.L. 12/90, 15/90, Waratah annual report, 1990-91 (Halley)
- W8 TCR 93-3446 RGC E.L. 12/90, 15/90, Waratah annual report, 1992-93 (Halley)

The Magnet Silver Lead Mine EZ Co 1951 report (Cottle)

Assorted Microfiche copies of 1981-1984 Comstaff/BHP E.L. 5/63 reports.

APPENDIX 2

Rock Chip Locations, Descriptions and Assay Results

Appendix 2

ROCK CHIP SAMPLES

Sample No.	Sample Location		Rock Description
	North	East	
36501	5407710	369000	Silicified float rock with Q-C veins
75514	5411800	370610	Gossan (Magnet Road)
75515	5411800	370610	" "
75516	5411800	370610	" "
75517	5411800	370610	" "
75518	5411800	370610	" "

Gossan (samples 75514-75518) is black Mn-rich and orange-brown Fe stained, and replaces highly altered and cleaved mafic volcanics. It shows banded carbonate and sulphides: spotty sphalerite and pyrite; disseminated and massive galena occurs in patches and in quartz-carbonate veins; and carbonate and quartz infills vugs in the carbonate banding. Some quartz veins show traces of visible galena cross-cutting the shear texture.



Phone (004) 316837

14 Thirkell St. COOEE TAS 7320

Fax (004) 318890

ANALYTICAL REPORT No.

111310.60.11506

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

INVOICE TO:
Pasminco Exploration
P.O. Box 886
BURNIE TAS 7320

ORDER No. PROJECT
2279

DATE RECEIVED RESULTS REQUIRED
22/12/95 ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES
2	12/01/96	1

TOTAL No. OF SAMPLES
0

SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
36501,75514-518	RO Fred : 6F029 P4	Cu,Pb,Zn,Ag,Fe,Mn/6A140 Pb,Zn,Ag,Fe,Mn/6A104 Ag,Au(S)/66309

RESULTS TO
Dr. M Tomkinson
Pasminco Exploration
P.O. Box 886
BURNIE TAS 7320

RESULTS TO
Ms H McGunnigle
Pasminco Exploration
P.O. Box 886
BURNIE TAS 7320

RESULTS TO

REMARKS
Pb,Zn,Mn/6A104 >5% and Ag/6A104 >500ppm are over the recommended analytical range. Results were obtained by dilution.

PP *M.A. Good*
AUTHORISED OFFICER



ANALYTICAL DATA

SAMPLE PREFIX REPORT No. REPORT DATE CLIENT ORDER No. PAGE

		111310.60.11506				12/01/96		2279		1 OF 2	
	SAMPLE No.	Cu	Pb	Pb	Zn	Zn	Ag	Ag	Fe	Fe	
METHOD		GA140	GA140	GA104	GA140	GA104	GA140	GA104	GA140	GA104	
1	36501	11	129	-	131	-	1	-	0.99	-	
2	75514	475	>5000	16.30	>5000	1.63	>50	2200	>5.00	34.40	
3	75515	97	>5000	2.40	>5000	1.43	>50	172	>5.00	23.20	
4	75516	168	>5000	3.39	>5000	2.20	>50	417	>5.00	38.40	
5	75517	101	>5000	3.44	>5000	2.78	>50	461	>5.00	38.90	
6	75518	227	>5000	4.01	>5000	9.30	>50	444	>5.00	29.10	
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24	DETECTION	2	3	0.01	2	0.01	1	10	0.01	0.01	
25	UNITS	ppm	ppm	%	ppm	%	ppm	ppm	%	%	

Results in ppm unless otherwise specified
-- = element not determined

IS = insufficient sample
SNR = sample not received

AUTHORISED OFFICER *pp M.A. Good*

ANALYTICAL DATA

SAMPLE PREFIX

REPORT No.

REPORT DATE

CLIENT ORDER No.

PAGE

SAMPLE PREFIX		111310.60.11506				12/01/96		2279		2 OF 2	
	SAMPLE No.	Mn	Mn	Au	Au (S)						
METHOD		GA140	GA104	GB309	GB309						
1	36501	571	-	<0.008	<0.008						
2	75514	>5000	6.80	0.098	-						
3	75515	>5000	3.93	0.011	-						
4	75516	>5000	11.10	<0.008	-						
5	75517	>5000	8.70	<0.008	-						
6	75518	>5000	8.30	0.098	-						
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24	DETECTION	3	0.01	0.008	0.008						
25	UNITS	ppm	%	ppm	ppm						

Results in ppm unless otherwise specified
 -- = element not determined

IS = insufficient sample
 SNR = sample not received

AUTHORISED OFFICER

pp M.A. [Signature]

APPENDIX 3

Drill Hole Log - AD1

PASMINCO EXPLORATION
 DIAMOND DRILL CORE LOG
 Vertical Scale 1 : 200

HOLE No. AD1

PROJECT: LUINA EL 17/93

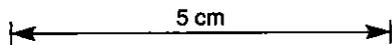
Page 1 of 15

DESCRIPTION				GRAPHIC			STRUCTURES
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	Structures
0.00	32.50	MAFIC VOLCANICLASTICS Intercalated mid-dark grey laminae of sandstone-siltstone sized volcaniclastics. Sediments are intermixed and deformed, particularly in finer beds, with kinks, compaction joints and soft sediment deformation. Lesser worked pyroxene crystals (2-3mm) are observed in coarser grain sized laminae	Oxidised, Orange-brown on broken surfaces		0 10 20		<p>BROKEN CORE,</p> <p>BROKEN CORE, Soft sediment deformation, kinked and slumped</p> <p>BEDDING, A So. Facing uphole,</p>

5 cm

215062

DESCRIPTION				GRAPHIC			STRUCTURES
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	
32.50	36.00	MAFIC VOLCANICLASTICS Mid-grey, uniform unit of volcaniclastics composed of eu-subhedral feldspar, dark pyroxene and fawny green (pale) olivine crystals up to 5mm in size. The upper contact contains clasts (up to 30mm) of laminated siltstone. From 34.3-36.0m, the core has pale silicic blotches on core surface					
36.00	71.70	MAFIC VOLCANICLASTICS Intercalated coarse-fine grained volcaniclastic sandstone-siltstone. The green-grey siltstone is composed of darker pyroxene crystals and clasts in a pale-mid grey ?felsic matrix. From 52.5m, increasing abundance of dark grey sericitic fine siltstone-mudstone laminae with lesser coarse sandstone and mixed siltstone-sandstone clasts					
			Slightly Sericitised, Carbonate-quartz veins and veinlets: carbonate on margins and quartz in centre of veins. Some silica replacement of clasts/crystals in coarser grained sediments.				BEDDING, A 60.



217003

PASMINCO EXPLORATION
DIAMOND DRILL CORE LOG
Vertical Scale 1 : 200

HOLE No. AD1

PROJECT: LUINA EL 17/93

Page 3 of 15

DESCRIPTION				GRAPHIC			
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	Structures
					60		BROKEN CORE.
71.70	73.50	LAVA-HYALOCLASTITE Dark green porphyritic mafic lava or intrusion, with a fragmented hyaloclastitic upper contact. Fragmented material is up to 80mm, with compaction of finer grained volcaniclastics uphole suggesting intrusion into soft sediments. From 72.5-73.5m, intermixed vesicular mafic lava and finegrained black mudstone. 50mm band of mudstone at lower contact	Moderately Sericitised, In finer and glassy sediments.		70		BEDDING, A 30. Facing uphole. Laminated shales are deformed and kinked
73.50	91.80	LAVA-VOLCANICLASTICS Intermixed lava and volcaniclastics sequence composed of bedded and laminated black sandstone-siltstone mafic volcaniclastics. Clasts include cherty (laminated) siltstone and fragmented clasts of green mafic porphyritic and vesicular volcanics. Zones of dark green, medium grained, finely vesicular mafic volcanics within the sediments have fragmented hyaloclastite margins and are lesser brecciated in the centre of sequence	Carbonate-quartz veins and veinlets; carbonate in very fine cracks and veinlets. Some silica replacement of clasts/crystals in coarser grained sediments.		80		FAULT, A 40. 20mm shear; 10mm carbonate vein FIRST CLEAVAGE, A 40.

5 cm

717004

PASMINCO EXPLORATION
DIAMOND DRILL CORE LOG
Vertical Scale 1 : 200

HOLE No. AD1

PROJECT: LUINA EL 17/93

Page 4 of 15

DESCRIPTION				GRAPHIC			STRUCTURES	
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith		Structures
91.80	95.00	Crystal-rich bedded mafic volcaniclastics						FIRST CLEAVAGE, R 50. Increasingly sheared downhole, especially siltstone beds
95.00	155.00	SERPENTINIZED MAFIC VOLCANICS Mixed contact zone from 95.0-95.5m. Serpeninite is a complex of dark to light grey and green-black swirly, fragmented, fractured and sheared mafic volcanics with a bronze sheen in places. A clastic texture is created by the presence of fragments within a grey, finegrained, vein-like netted (?remobilised) matrix. Also present are green mafic clasts and fawny green cherty clasts	Serpentinized zone hosting a complex of fine quartz net veinlets and very fine carbonate veinlets, cross-cutting quartz veinlets. Green-brown sericite in cracks and cleavage planes. Minor green ?fucsite veins.					FIRST CLEAVAGE, R 55. FIRST CLEAVAGE, R 60.

5 cm

2150003

DESCRIPTION				GRAPHIC				
From	To	LITHOLOGY	ALTERTION	MINERALISATION	Depth	Lith	Structures	STRUCTURES
123.80	130.50	Pale, rounded blotchy alteration texture. Some anhedral olivine phenocrysts are present		minor pyrrhotite very fine in darker matrix and along very fine dark alteration veins.	120			
					130			
131.50	151.50	Striated clasts/fragments of serpentised laminated sediments(?), with reddish brown alteration in striations			140			
								FAULT, A S2. Sheared, infilled with quartz + 20mm mylonite
								BROKEN CORE.

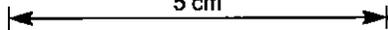
5 cm

2150CC

DESCRIPTION					GRAPHIC			
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	Structures	STRUCTURES
					140			FALT, A 36, Sheared, siliceous along shear planes
151.50	155.00	SHEARED/DEFORMED ZONE At 155.0m, contact of serpentized zone is characterised by a change from yellow-brown alteration in coarse grained volcanoclastics to fine grained comparatively unaltered sediments	Pale yellow to red-brown alteration in sprays and veinlets.	minor pyrite fine grained; 1% ?magnetite.	150			FIRST CLEAVAGE, A 42.
155.00	172.50	VOLCANICLASTIC SILTSTONE-MUDSTONE Stratified volcanoclastic sediments composed of dark grey mudstone and mid-grey fine-medium grained siltstone laminae, some which are intercalated. Some fragmentation and brecciation by compaction and jointing	Moderately Sericitised, In veins and veinlets and in patches. Pale pink hematite veinlets and staining on margins of quartz veins.	minor pyrite in veinlets and quartz veinlets, trace of very fine arsenopyrite.	160			FIRST CLEAVAGE, A 55. Sheared zone, some broken core
			Intense quartz-?dolomite vein, iron stained, brecciated and intensely mineralised with v.f.g disseminated sulphides (pyrite) filling vugs.	VEIN, pyrite massive, 5-10mm.				
			Quartz veins and veinlets, up to 30mm.	pyrite + very fine sulphides in brecciated vein.				
				VEIN, pyrite arsenopyrite chalcopyrite				FIRST CLEAVAGE, A 40.

2170067

5 cm



PASMINCO EXPLORATION
DIAMOND DRILL CORE LOG

HOLE No. AD1

PROJECT: LUINA EL 17/93

Vertical Scale 1 : 200

Page 7 of 15

DESCRIPTION			GRAPHIC			STRUCTURES		
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth		Lith	Structures
						170		
172.50	173.00	Exposed veins contain tectonoclasts of sediments in mineralised zones						
173.00	241.80	Siltstone intercalated and interfingered with mudstone laminae, often brecciated by jointing and cracks						
			Quartz vein, contains tectonoclasts of sediments in mineralisation.	VEIN, pyrite arsenopyrite chalcopyrite in quartz vein running parallel to core axis.		180		
						190		
			Quartz vein with tectonoclasts.					

5 cm

212068

PRSMINGO EXPLORATION
DIAMOND DRILL CORE LOG

HOLE No. AD1

PROJECT: LUINA EL 17/93

Vertical Scale 1 : 200

Page 8 of 15

DESCRIPTION				GRAPHIC			STRUCTURES	
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith		Structures
			quartz vein with tectonoclasts.			200		
				minor pyrrhotite as stringers, in laminated beds.				FIRST CLEAVAGE, A 51.
				abundant pyrite as stringers, along laminae.				
				very minor arsenopyrite in acicular sprays.				
			Bleached zone			210		
			Slightly Carbonatised, in veinlets					
				pyrrhotite increasing in abundance, infilling fine fractures.				
			Mineralised vein running parallel to core axis. Bleaching alteration around vein.	VEIN, pyrrhotite arsenopyrite pyrite chalcopyrite .Change to pyrrhotite dominant vein mineralisation.		220		FIRST CLEAVAGE, A50-70
				VEIN, pyrrhotite chalcopyrite pyrite arsenopyrite				

5 cm

717069

PRSMINGO EXPLORATION
DIAMOND DRILL CORE LOG

HOLE No. AD1

PROJECT: LUINA EL 17/93

Vertical Scale 1 : 200

Page 9 of 15

DESCRIPTION			GRAPHIC					
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	Structures	STRUCTURES
				5% pyrrhotite in veinlets and fractures, commonly parallel to bedding planes, and associated with carbonate network veining. Minor fine grained pyrite and lesser chalcocopyrite.				FIRST CLEAVAGE, A 46.
			Carbonate vein (<30mm) with clasts of brecciated sediment (up to 30mm)		230			
			Very fine carbonate network veins					
			Pale green alteration replacing carbonate veinlets		240			FIRST CLEAVAGE, A 64. FAULT, A 62, Sericite on slickensides and fault shear
242:00	245:00	Strong green alteration with diffuse upper and lower (?heated) contacts Intercalated finegrained siltstone-mudstone.						
			Minor carbonate veinlets (<10mm) and network veinlets, commonly replaced by pyrrhotite.	VEIN, pyrrhotite pyrite in carbonate alteration. pyrrhotite pyrite 3-5% Some acicular-sprayed pyrite exposed in cracked vein at 261.0m.	250			

5 cm

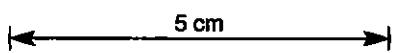
212070

DESCRIPTION			GRAPHIC			STRUCTURES		
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth		Lith	Structures
			veinlets, commonly replaced by pyrrhotite, and associated with bleaching alteration. Very minor green alteration in patches.			260		FIRST CLEAVAGE, A60-64
				very fine grained pyrrhotite in siltstone laminae and veinlets.				
				VEIN, pyrrhotite pyrite arsenopyrite 10mm, parallel to core.				FIRST CLEAVAGE, A60-64
				VEIN, pyrrhotite pyrite carbonate vein.		270		
			Bleached.					BROKEN CORE.
			Increasing abundance of green alteration and pale/bleached alteration halo			280		FIRST CLEAVAGE, A 50.

5 cm

217071

DESCRIPTION				GRAPHIC			STRUCTURES
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	Structures
			halo		280		FIRST CLEAVAGE, R 50.
			Quartz-carbonate veining; slightly sericitic veinlets		290		FIRST CLEAVAGE, R 53.
				VED, pyrrhotite pyrite arsenopyrite fine grained pyrrhotite-carbonate veinlets, some parallel to bedding.	300		
				VED, pyrrhotite pyrite arsenopyrite in carbonate-quartz vein.			



712072

PASMINCO EXPLORATION
DIAMOND DRILL CORE LOG

HOLE No. AD1

PROJECT: LUINA EL 17/93

Vertical Scale 1 : 200

Page 12 of 15

DESCRIPTION			GRAPHIC			STRUCTURES		
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth		Lith	Structures
				VEIN, pyrrhotite pyrite arsenopyrite in carbonate-quartz vein.	310			BEDDING, A35-60
			Network carbonate veinlets with pyrrhotite-pyrite	VEIN, pyrrhotite pyrite arsenopyrite				
				VEIN, pyrrhotite pyrite arsenopyrite in quartz-carbonate vein.				
			?amphibole (yellow) sprayed alteration	network of pyrrhotite veinlets which cut pyrrhotite-carbonate veins.	320			
					330			
			Green mineralisation/alteration					FAULT, A 60, Sheared, carbonate-pyrrhotite-pyrite alteration-mineralisation
			Very minor yellow ?amphibole alteration					

5 cm

217073

PASMINCO EXPLORATION
 DIAMOND DRILL CORE LOG
 Vertical Scale 1 : 200

HOLE No. AD1

PROJECT: LUINA EL 17/93

Page 13 of 15

DESCRIPTION				GRAPHIC			STRUCTURES
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	
				VEIN, pyrrhotite arsenopyrite pyrite	340		
			Green alteration	very fine acicular arsenopyrite in carbonate veins.	350		
			Green alteration Bladed and needle-like crystals of shiny, pale yellow amphibole alteration	pyrrhotite pyrite 2%.			
			Moderately Chloritised, Slightly Chloritised.	pyrrhotite pyrite 2-3% in chlorite veins and nodules in sediments. Some po-py replacement of original clasts.	360		
			Moderately Chloritised.				

FIRST CLEAVAGE, R 30,
Twisted shear

BEDDING, R 58.

717074

5 cm

PASMINCO EXPLORATION
DIAMOND DRILL CORE LOG

HOLE No. AD1

PROJECT: LUINA EL 17/93

Vertical Scale 1 : 200

Page 14 of 15

DESCRIPTION				GRAPHIC				
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	Structures	STRUCTURES
			<p>Moderately Chloritised. Green-black</p> <p>Network of carbonate alteration has been replaced by pale-dark green alteration and chlorite, with and without bleaching on margins. Pyrrhotite has replaced some veins.</p>		370			
					380			
					390			

5 cm

217075

PASMINCO EXPLORATION
 DIAMOND DRILL CORE LOG
 Vertical Scale 1 : 200

HOLE No. AD1

PROJECT: LUINA EL 17/93

Page 15 of 15

DESCRIPTION						GRAPHIC		
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	Structures	STRUCTURES
					400			
					410			
					420			

5 cm

412056

APPENDIX 4

Drill Hole Metal Assay Results - AD1, AD2

METAL ASSAY RESULTS AD1

<i>LGC_SAMP</i>	<i>LGC_FROM</i>	<i>LGC_TO</i>	<i>Au</i>	<i>Sn</i>	<i>W</i>
36466	150.2	151.2	<0.008	<3	<10
36467	151.2	152.2	0.01	5	<10
36468	152.2	153.5	0.12	5	<10
36469	153.5	155	0.01	12	<10
36470	155.1	157	<0.008	32	<10
36471	157	158	<0.008	42	<10
36472	158	159	0.01	56	25
36473	159	160	0.01	43	<10
36474	160	161	0.03	<3	15
36475	161	162	0.02	<3	<10
36476	162	163	0.05	<3	30
36477	163	164	0.02	31	10
36478	206.2	207.2	<0.008	39	<10
36479	209.6	210.6	0.01	37	10
36480	290	291	0.03	17	10
36481	291	292	0.01	19	<10
36482	299.5	300.5	<0.008	18	10
36483	318.2	319.2	<0.008	20	<10
36484	319.2	320.2	<0.008	14	10
36485	349.7	350.7	<0.008	<3	15
36486	350.7	351.7	<0.008	7	<10
36487	351.7	352.7	<0.008	15	<10

METAL ASSAY RESULTS AD2

LGC_SAMP	LGC_FROM	LGC_TO	Cu	Pb	Zn	Au	Sn	W
36426	93	95	54	20	108	<0.008	<3	<10
36427	95	97	11	26	156	<0.008	8	<10
36428	97	99	45	52	182	<0.008	13	<10
36429	99	101	279	16200	22800	0.03	33	-
36430	101	103	3	407	230	<0.008	10	<10
36431	103	106	279	14500	23100	0.48	90	-
36432	106	109	340	5200	38700	0.49	127	-
36433	109	112	376	23100	21700	1.4	56	-
36434	112	115	351	2858	117000	0.06	87	-
36435	115	118	104	1098	1618	0.9	31	<10
36436	118	121	53	1177	1509	0.03	55	<10
36437	121	124	987	83400	92100	0.41	173	-
36438	124	127	27	409	244	0.01	5	<10
36439	127	130	27	72	130	<0.008	4	<10
36440	130	132	21	73	399	0.23	15	<10
36441	132	134	21	650	2673	0.09	50	<10
36442	134	136	20	18	90	<0.008	<3	<10
36443	136	138	19	23	91	<0.008	<3	<10
36444	138	140	94	3980	1441	0.16	12	<10
36445	140	142	344	7500	15200	0.65	19	-
36446	142	144	37	35	66	<0.008	<3	<10
36447	144	146	26	33	96	<0.008	6	10
36448	146	148	60	22	53	<0.008	<3	<10
36449	148	150	25	15	60	<0.008	<3	<10
36450	150	152	4	19	55	<0.008	<3	<10
36451	152	154	24	21	60	<0.008	<3	<10
36452	154	156	51	19	94	<0.008	<3	<10
36453	156	158	15	24	62	0.02	4	<10
36454	158	160	58	17	53	0.01	<3	<10

APPENDIX 5

Thin Section Descriptions

APPENDIX 5
THIN SECTION DESCRIPTIONS

DDH	Sample No.	SampleDepth
AD1	36455	34.8m
	36456	46.2m
	35457	72.4m
	36461	178.2m
	36462	189.4m
	36464	287.1m
AD2	36415	42.0m
	36416	49.8m
	36417	95.0m
	36418	107.0m
	36419	124.5m
	36420	110.7m
	36421	136.6m
	36422	192.4m

AD1

36455 34.8m Crystal-rich volcanoclastic sandstone

This volcanoclastic sandstone is comprised of angular, not very reworked crystals of pyroxene, feldspar and iddingsite altered olivine (\pm wispy scoria/pumice clasts?). Alteration includes silicification and sericitisation in the matrix, and minor quartz \pm carbonate veinlets. Secondary quartz-chlorite-feldspar has formed spherulitic masses in the matrix. Minor chlorite occurs around some crystals.

36456 46.2m Hyalotuff

This sample is highly altered and original fabric has been replaced by quartz-feldspar and sericite within a sericitic-carbonitised matrix. An even distribution of apparent pyroxene-feldspar crystals (outlines preserved) are present in what appears to be an originally fine grained matrix, such as a tuff. Amphibole alteration is also present in the matrix.

36457 72.4m Recrystallised hyaloclastite

Remnant textures within a matrix altered and recrystallised to quartz-feldspar-amphibole suggest that the original lithology was quenched brecciated lava. Altered, angular crystals of pyroxene and feldspar are commonly replaced with quartz-feldspar alteration. Some vesicles (?) are now filled with quartz-feldspar and carbonate.

36461 178.2m Mineralisation paragenesis

Quartz-feldspar veins \pm chlorite (on margins)

Carbonate

Pyrrhotite-chalcopryrite

Arsenopyrite

Pyrite

Carbonate

36462 189.4m Mineralisation and alteration paragenesis

Carbonate-hematite veins

Mineralisation has infilled vugs in quartz-feldspar:

Sphalerite

Pyrrhotite

Chalcopryrite

Arsenopyrite

Pyrite

Late carbonate-chlorite veins, follow and cross cut mineralisation veins.

36464 287.1 Mineralisation and alteration paragenesis

Carbonate

Galena - sphalerite (traces, replaced by later mineralisation)

Pyrrhotite - pyrite

Quartz - feldspar

Chlorite

AD2**36415 42.0m Spherulitic mafic lava**

Spherulitic basaltic lava containing phenocrysts of pyroxene, amphibole and feldspar in a devitrified and spherulitic finegrained groundmass. Coarser phenocrysts of pyroxene commonly show chilled margins with finegrained pyroxene and feldspar. Ragged laths and sprays of pyroxene, feldspar and amphibole are present in the groundmass. Large (up to 8mm) spheroids composed of basaltic lava appear to be silicified within chilled and devitrified margins. Granular quartz infills fractures and vesicles. Glassy groundmass is extensively chloritised.

36416 49.8m Hyaloclastite

Quench brecciated lava composed of vesicular, angular to curvilinear shaped clasts. Vesicles commonly show margins radially lined with carbonate and infilled with quartz-carbonate. Patches of glassy groundmass show devitrification to bowtie and plumose shaped spherulites and alteration to chlorite is prevalent. Original pyroxene and feldspar phenocrysts in more coherent lava fragments are quenched and resorbed, with reaction rims on margins and fractures dominated by devitrified glass and chlorite. Secondary granular quartz has infilled fractures between glassy and porphyritic lava. (Appears to be similar in composition and texture to 30417, but finer grained due to rapid cooling).

36417 95.0m Devitrified lava

Devitrified lava of intermediate composition consists of a glassy and spherulitic feldspathic groundmass of bowtie and plumose shaped spherulites. Chlorite +/- sericite has infilled vugs and replaces phenocrysts which were originally composed of pyroxene, amphibole and feldspar. Some relict phenocrysts of pyroxene and amphibole show resorption on the margins and in fractures. Quartz and amphibole has infilled occasional vugs, and amphibole alteration is proximal to patchy chlorite.

36418 107.0m Altered mafic volcanics

These highly altered mafic volcanics contain iddingsite altered olivine (with some apparent olivine texture) in a groundmass dominated by amphibole alteration in fan and axiolitic shaped overgrowths and spherulites. Some of the amphibole is observed

cross-cutting the chloritic fabric. Accessory biotite alteration is also observed in pervasive spray-like masses. Quartz-feldspar alteration infills vugs and is slightly pervasive in places. Chlorite commonly occurs with minor galena-sphalerite. Clusters of apatite crystals are present in chloritic patches and as crystallites on altered feldspar phenocrysts.

36419 124.5m Quenched brecciated lava

Altered quench brecciated lava of intermediate to mafic composition (similar in composition to 36318) contains phenocrysts of chloritised pyroxene +/- amphibole in a glassy, vesicular and devitrified groundmass. Some vesicles show radially lined margins composed of carbonate. Vugs and veinlets are infilled with spherulitic and spray textured amphibole, granular quartz and amphibole-dolomite.

36420 110.7m Mineralisation paragenesis

Alteration and mineralisation overprints the original lithologies, which has recrystallised in the groundmass to quartz-carbonate +/- perthitic feldspar. Alteration and mineralisation consists of:

Quartz - feldspar, infilling vugs

Galena

Sphalerite - pyrrhotite - chalcopyrite

Pyrite - arsenopyrite (including late euhedral arsenopyrite + quartz)

Carbonate-hematite-quartz

Amphibole

The sphalerite-pyrrhotite-chalcopyrite mineralisation clearly postdates the galena phase and is followed by later pyrite and arsenopyrite. Late arsenopyrite forms euhedral crystals in quartz. This is cut by both minor carbonate-hematite veinlets and by later amphibole alteration, which occurs in pervasive spray-like masses and also cross-cuts mineralisation in veins.

36421 136.6m Altered lava

The original lithology is thought to have been a lava or quench brecciated lava/hyaloclastite of intermediate to mafic composition, which is now highly quartz-chlorite altered. Relict pyroxene +/- amphibole phenocrysts apparent in a hyalocrystalline matrix, are resorbed and replaced along margins and fractures with extensive chloritisation. This is seen particularly in the pyroxene phenocrysts. Granular quartz is pervasive in fractures, some of which are possibly quench fractures. Minor secondary dolomite-amphibole alteration appears to have nucleated around original amphibole phenocrysts.

36422 192.4m Volcaniclastic

An altered and cleaved volcaniclastic breccia containing clasts of irregular shaped vesicular lava. Clasts are composed of feldspathic-chlorite altered fan shaped spherulitic lava with fine grained rimmed vesicles which are infilled with silica-

chlorite. Phenocrysts include abraded and chlorite altered pyroxene. Extensive chlorite \pm amphibole alteration is present in both the clasts and matrix. Secondary granular quartz and carbonate has infilled vugs and fractures.

APPENDIX 6

Drill Hole XRD Results

Appendix 6

XRD SAMPLE LOCATIONS AND DESCRIPTIONS

DDH	Sample No.	Sample Depth	Description
AD2	36418	107.0m	Mineralisation in quartz + amphibole
	36419	124.5m	Host rocks - Mafic volcanics
	36421	136.6m	Mafic volcanics + amphibole alt. halo
AD1	36460	155.0m	Serpentinite - sediment contact
	36462	189.4m	Alteration in mineralisation zone
	36463	242.0m	Carbonate-mineralisation vein
	36465	350.1m	Chlorite alteration

MINERALOGY OF 7 SAMPLES

1. INTRODUCTION

Seven samples were received from Nicola McGunnigle of Pasminco Exploration with a request for mineral identification.

2. PROCEDURE

A portion of each sample was pulverised and analysed by X-ray diffraction.

3. RESULTS

The minerals detected are as follows:

Mineral	36418	36419	36421	36460	36462	36463	36465
Quartz	A-SD	A-SD	A-SD	D	D	CD	Tr-A
Plagioclase	-	-	-	-	-	CD	A
Amphibole (monoclinic)	D	Tr	-	SD	-	A	D
Muscovite	-	-	-	-	SD	-	?Tr
Biotite	A	-	-	-	-	A	?Tr
Chlorite	Tr	D	D	A	A	Tr	A
Talc	-	A	A	Tr	-	-	-
Antigorite	-	-	-	?Tr	-	-	-
Dolomite	-	Tr-A	Tr-A	-	-	-	-
Calcite	-	-	-	-	-	-	Tr-A
Siderite	-	-	-	-	-	Tr-A	-
Magnesite	?Tr	-	-	-	-	-	-
Pyrite	-	?Tr	-	-	Tr	-	-
Magnetite	Tr	-	-	-	Tr	Tr	-

Semi-quantitative Abbreviations

- D = Dominant. Used for the component apparently most abundant, regardless of its probable percentage level.
- CD = Co-dominant. Used for two (or more) predominating components, both or all of which are judged to be present in roughly equal amounts.
- SD = Sub-dominant. The next most abundant component(s) providing its percentage level is judged above about 20.
- A = Accessory. Components judged to be present between the levels of roughly 5 and 20%.
- Tr = Trace. Components judged to be below about 5%.

APPENDIX 7

Drill Hole Log - AD2

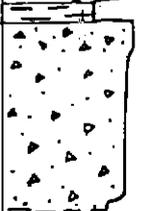
PRSMINCO EXPLORATION
DIAMOND DRILL CORE LOG

HOLE No. AD2

PROJECT: LUINA EL 17/93

Vertical Scale 1 : 200

Page 1 of 11

DESCRIPTION				GRAPHIC			STRUCTURES
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	
0.00	19.50	INTERSTRATIFIED VOLCANICS Variably textured volcaniclastics, lava and lava breccia composed of pyroxene andesite. 0-7.0m is oxidised and weathered brown, coarse grained, with phenocrysts of pyroxene up to 5mm. Volcaniclastics include fine grained tuffaceous beds, coarse crystal-rich sandstone and clastic gravel beds, interstratified with brecciated, fragmented and hyaloclastite lava textures, suggesting deposition in a subaqueous environment	Brown: weathered and oxidised		0		
			Moderately Carbonatised. In veins and veinlets, and replacing occasional phenocrysts		10		BROKEN CORE, FRACTURE. A 60.
19.50	20.30	Fine-medium grained, laminated tuffaceous volcaniclastics, with some silica-chlorite pseudobrecciation	Slightly Chloritised. Slightly Carbonatised. Replacing clasts and crystals, very minor veinlets		20		
		Grey-green mass flow breccia containing clasts of pyroxene-andesite and mafic vesicular (?pillow lava) in a blue-green fine grained matrix					
25.50	26.00	Bedded fine grained tuffaceous and sand sized clastics, including abraded crystals of pyroxene					BEDDING. A 60.
26.00	34.30	Brecciated and fragmented dark grey-green pyroxene-rich andesite lava with minor intermixed fine grained tuffaceous sediments	100mm quartz vein				

5 cm

717001

DESCRIPTION				GRAPHIC			STRUCTURES	
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith		Structures
		andesite lava with minor intermixed fine grained tuffaceous sediments				30		Tuffs compacted downhole, with syn-depositional compaction-faulting
34.30	41.80	Coarser brecciated andesite, with 2-30mm clasts (averaging 5mm) composed of pyroxene andesite, vesicular mafic volcanics and tuffaceous siltstone.				40		
41.80	42.60	MAFIC LAVA Dark, vesicular and spherulitic ?pillowed lava, with fine grained, glassy (?chilled) upper margin. Lava contains pyroxene phenocrysts (approx. 8%) in a coarser, dark chloritic groundmass	Carbonatised, Minor, in bands parallel to beds	minor pyrite in clasts and vesicles.				FLOWBANDING A50
46.85	49.00	Cherty, fine grained tuff	Moderately Carbonatised, In veins and veinlets					
49.00	51.80	LAVA BRECCIA Dark grey fragmented andesitic lava, containing clasts of glassy, vesicular andesite. Upper contact is composed of intermixed and fragmented (?hyaloclastic) volcaniclastics and tuff				50		Fragmented and deformed zone
51.80	53.70	Dark green-grey andesite with 1-10mm sized pale green chloritic amygdales, which increase in size in centre of unit						
53.70	56.00	Brecciated andesite, increasingly fragmented downhole to a finegrained lower contact comprised of 100mm of tuff						
56.00	61.70	Dark grey-black volcaniclastic breccia composed of	Slightly Sericitised.					FRUIT, A 50, Pug.

5 cm

717092

PASMINCO EXPLORATION
DIAMOND DRILL CORE LOG

HOLE No. AD2

PROJECT: LUINA EL 17/93

Vertical Scale 1 : 200

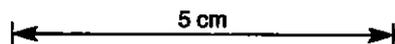
Page 3 of 11

DESCRIPTION				GRAPHIC			STRUCTURES
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	Structures
56.00	61.70	Dark grey-black volcanoclastic breccia composed of angular to sub-rounded clasts of grey and black mafic volcanics and pyroxene andesite, up to 150mm in size	Slightly Sericitised, Carbonate veinlets		60		Fault, A 60. Pug.
61.70	65.00	Fine grained tuffs, commonly deformed by kinking, slumping and compaction of beds	Carbonate vein in fault				Brecciated, deformed and puggy zone A62
65.00	67.30	Lava breccia					
67.30	82.20	VOLCANICLASTICS Dark grey volcanoclastics composed of angular-subangular clasts of green pyroxene andesite, up to 80mm, interbedded with fine grained volcanoclastics and tuffaceous sediment	Carbonate vein		70		Fault, A 70. Brittle, with carbonate vein
				abundant pyrrhotite in clasts and veinlets, minor pyrite.	80		Puggy zone
82.20	91.20	Lava breccia, composed of fragmented dark grey-black clasts of pyroxene andesite					BROKEN CORE,

5 cm

713003

DESCRIPTION				GRAPHIC			STRUCTURES	
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith		Structures
			Carbonate veinlets, minor chlorite replacement of crystals			90		
91.20	100.00	LAVA Grey pyroxene andesite lava with hyaloclastic upper contact. Lava is fine grained, massive and uniform, containing 10% pyroxene +/- feldspar +/- amphibole phenocrysts, and is possibly flowbanded. Lower contact unclear due to broken core, but is possibly brecciated or hyaloclastic	Carbonate and minor quartz veining	abundant pyrite-galena in quartz-carbonate veins.				BROKEN CORE.
100.00	115.80	Brecciated, dark mafic lava is mostly overprinted by extensive alteration, shearing and mineralisation. Lava contains some green ?olivine phenocrysts and glomerocrysts	Intense alteration: cream-yellow sprayed and pervasive amphibole; lesser biotite alteration: silica in veins (cutting shear planes); minor chlorite and sericite in shear planes Fucsite	massive and cubic galena, 3% fine grey disseminated galena in silica-albite veins, minor sphalerite, trace pyrite. sphalerite-galena-arsenopyrite-chalcopyrite-pyrrotite-pyrite in veins and replacement style.	100			BROKEN CORE, SHEARED ZONE FIRST CLEAVAGE, R 55, FIRST CLEAVAGE, R 60, FIRST CLEAVAGE, R 10, FIRST CLEAVAGE, R 45.
			Highly Silicified. In veins and stockwork veins. amphibole in patches and veinlets, very minor fucsite in patches	later sphalerite-galena-pyrite-arsenopyrite veins and spotty galena-pyrite in silica veins, ascicular arsenopyrite in patches.	110			



PASMINCO EXPLORATION
DIAMOND DRILL CORE LOG

HOLE No. AD2

PROJECT: LUINA EL 17/93

Vertical Scale 1 : 200

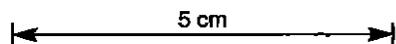
Page 5 of 11

DESCRIPTION				GRAPHIC			STRUCTURES	
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith		Structures
			fucsite in patches					
116.80	123.10	Strongly tectonised lava breccia. Pale fawn-brown, fine grained matrix composed of pulverised, remobilised and altered breccia, containing clasts of altered and bleached andesite and tectonoclasts in veins	Moderately Silicified. In veins cross-cutting amphibole alteration, minor fucsite, devitrification and sericitisation of matrix	galena-pyrrhotite-pyrite, minor sphalerite.				Shearing overprinted by alteration and mineralisation
			Moderately Silicified. In stockwork veins and pervasive, slight to moderate amphibole alteration	galena in quartz veins, sphalerite-galena-arsenopyrite.	120			BROKEN CORE, Along veins and cleavage, tectonised
123.10	133.40	LAVA BRECCIA Mid-grey porphyritic mafic volcanics containing medium-coarse grained phenocrysts of pyroxene and amygdales infilled with silica and chlorite. Fragmented lower contact	Slightly Silicified, Slightly Silicified. In patches, commonly greater in clasts than matrix, minor quartz veins, moderate amphibole and minor dolomite alteration occurs in veinlets and sprays, decreasing in abundance downhole	massive sphalerite-galena.				
133.40	133.80	Bedded volcanoclastic sandstone-siltstone						
133.80	139.80	LAVA Silica-chlorite altered dark green pyroxene andesite lava with interstitial and devitrified spherulitic glass	Moderately Chloritised. Silica in fractures and vesicles, moderate chlorite, minor amphibole and carbonate alteration, slightly sericitic					
139.80	151.90	BRECCIA Composed of angular to sub-rounded clasts of	Moderately Chloritised,	remobilised gn-po-apy and massive	140			

5 cm

215093

DESCRIPTION				GRAPHIC			
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	Structures
139.80	151.90	BRECCIA Composed of angular to sub-rounded clasts of vesicular andesite, pyroxenite and argillite up to 120mm, averaging 8-10mm, in a mid-grey coarse grained matrix which contains subhedral crystals of pyroxene. Amygdales and vesicles are infilled with chlorite in places. From 148.8m, fine-coarse grained volcanoclastics coarsen downhole to volcanoclastic breccia	Moderately Chloritised, Moderately Sericitised, Slightly Silicified, Slight amphibole alteration	remobilised gn-po-apy and massive gn-po-py-sp.	140		
			Moderately Chloritised, Moderately Sericitised, Slightly Silicified,		150		FIRST CLEAVAGE, A 50.
151.90	155.00	LAVA Medium-coarse, slightly flowbanded, porphyritic lava flows containing phenocrysts of pyroxene, and interstratified with breccia	Carbonate veinlets				FLOWBANDING A43
155.00	163.50	Breccia	Some pseudobrecciation with increased carbonate veining Slight carbonate veining		160		
163.50	168.60	Fine grained, black, sericitised sediments	Moderately Sericitised, Moderately Chloritised, Slight carbonate veining				FIRST CLEAVAGE, A 46. Sheared and deformed zone FAULT, A 60, Pug. FAULT, Pug. FAULT, A 70, Pug. And



960117

PASMINCO EXPLORATION
DIAMOND DRILL CORE LOG

HOLE No. AD2

PROJECT: LUINA EL 17/93

Vertical Scale 1 : 200

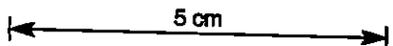
Page 7 of 11

DESCRIPTION			GRAPHIC			STRUCTURES		
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	Structures	STRUCTURES
168.60	219.80	VOLCANICLASTICS Mid-dark grey, bedded, fine-coarse volcaniclastic sandstone and breccia containing clasts of vesicular andesite and interstratified tuffaceous sediment. Sheared and deformed zones prevalent						
			Carbonatised, In sheared and deformed zone					Fault, A 70, Pug, And minor fragments
			Patchy, marble-textured silica, overprinting much of original texture					Sheared and deformed zone
								?axis of anti/synform structure
								Deformed zone, cleavage A30
			Carbonate-quartz veins and fucsite	1% pyrite minor galena				Sheared volcaniclastics
			Quartz-carbonate veins in shear and stockwork					Intensely sheared zone
			Carbonate-quartz veins and fucsite	nodular pyrite-sphalerite in quartz carbonate veins, galena in quartz veins.				FIRST CLEAVAGE, A 60.
			Slightly Sericitised, In cleavage planes, minor					FIRST CLEAVAGE, A 40, Highly deformed
								Fault, A 60, Pug, And minor fragments

5 cm

110007

DESCRIPTION			GRAPHIC					
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	Structures	STRUCTURES
			Original chloritised, in cleavage planes, minor pervasive chlorite and replacing crystals, minor carbonate veinlets			200		FAULT, Rubbly, slickensides on exposed face
						210		FIRST CLEAVAGE, R 60. Cleaved
219.60	247.00	LAVA Grey, porphyritic, uniformly textured unit with coarse black phenocrysts or chloritised phenocrysts and altered an-euhedral pyroxene phenocrysts in a fine grained, pale grey matrix. Phenocrysts increase in abundance downhole, from 7-10% in patches, to 25% near lower contact. From 243.0m, the unit is mid grey-green coloured with greenish siliceous fine grained patches, and pyroxene phenocrysts up to 8mm.	<p>Minor carbonate and silica in veinlets</p> <p>Quartz veining, fucsite in cleavage around fault and filling wugs in quartz vein</p>	<p>trace galena in quartz vein.</p> <p>trace pyrite in sheared zone.</p>	220		FAULT, Rubbly	



80011

PASMINCO EXPLORATION
DIAMOND DRILL CORE LOG

HOLE No. AD2

PROJECT: LUINA EL 17/93

Vertical Scale 1 : 200

Page 9 of 11

DESCRIPTION				GRAPHIC			STRUCTURES	
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith		Structures
		coloured with greenish siliceous fine grained patches, and pyroxene phenocrysts up to 8mm.	filling vugs in quartz vein Chloritised. Slight to moderate in patches	trace pyrite in sheared zone.		=		FAULT, Rubbly
					230	"	"	
					240	"	"	
			Moderately Silicified, In patches			"	"	
247.00	249.70	Brecciated finer grained porphyritic unit as above, with siliceous-chloritic amygdales				"	"	
249.70	286.10	VOLCANICLASTICS Dark green, medium-coarse grained mafic volcaniclastics, composed of interstratified bedded siltstone-sandstone. Coarser volcaniclastics are crystal-rich, containing pale and dark pyroxene(?) and chlorite-silica altered amygdales. Some cherty bands of	Moderately Sericitised. Some silicification of vesicular clasts. chloritisation of vesicles in clasts.		250	∇	∇	

5 cm

410099

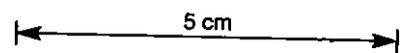
DESCRIPTION				GRAPHIC			STRUCTURES	
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith		Structures
		Siltstone-sandstone, coarse to medium grained, crystal-rich, containing pale and dark pyroxene(?) and chlorite-silica altered amygdales. Some cherty bands of siltstone have been post-depositionally faulted (compacted) and are also present as clasts in coarser unit. Numerous thin, fawn cherty bands are present from 273.0m	Vascular chert, chloritisation of vesicles in clasts Carbonate vein Minor carbonate veinlets		260	✓		
				Quartz-carbonate vein with minor fucsite Moderately Silicified, In veins, with grey dusting	minor chalcopyrite trace arsenopyrite trace of galena in silica.	270	✓	
				Quartz veins and veinlets, parallel and cross-cutting cleavage	minor pyrite-chalcopyrite-galena in quartz veinlets.		✓	
						280	✓	

FIRST CLEAVAGE, R 60.

FIRST CLEAVAGE, R 60.

FAULT, Pug.

FIRST CLEAVAGE, R 60.



711100

DESCRIPTION					GRAPHIC		
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	Structures
					280	✓ ✓ ✓ ✓	
286.10	289.80	LAVA/DYKE Dark grey, uniformly textured, equigranular medium grained igneous rock containing dark subhedral phenocrysts (undistinguishable)	Slightly Silica-albite.	trace chalcopyrite in silica-albite vein.		↙ ↘ ↗ ↖	
289.80	294.00	CLASTICS Cleaved and deformed medium-fine grained sediments containing dark, spotty corroded crystals (8-10%) and subangular clasts of laminated chert, up to 40mm	Slightly Silicified, Slightly Carbonatised, Slightly Sericitised, In cleavage planes		290	↗ ↖ ↙ ↘	Slightly cleaved
			Carbonate-quartz veins abundant, with minor fucsite and secondary carbonate veinlets				Highly cleaved R50
					300		Core not recovered

5 cm

112101

APPENDIX 8

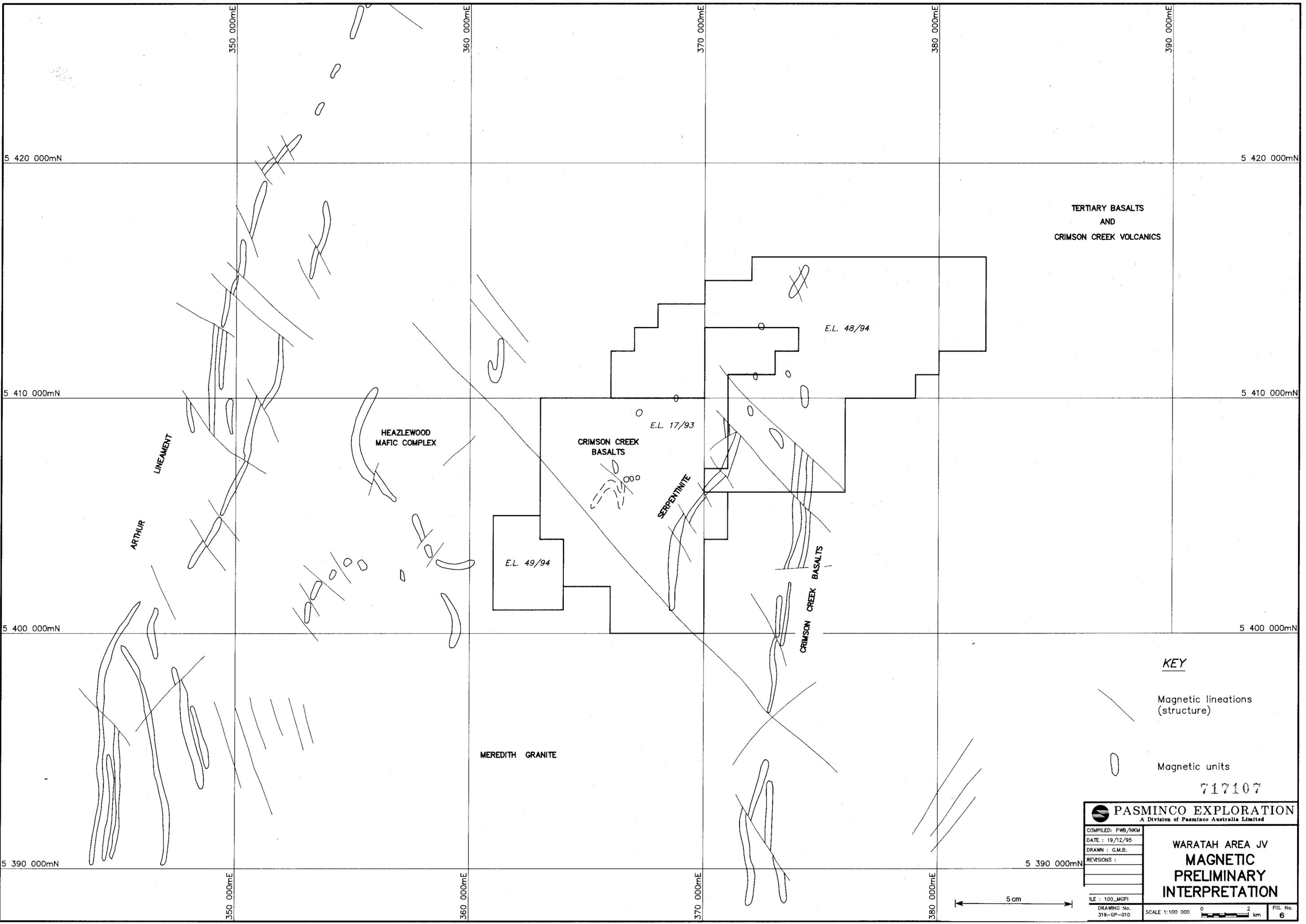
Arthur Dam Grid 'C' Horizon Soil Geochemistry Results

<i>lgc_samp</i>	<i>local_n</i>	<i>local_e</i>	<i>Cu</i>	<i>Pb</i>	<i>Zn</i>	<i>Ag</i>	<i>Mn</i>	<i>As</i>	<i>Au</i>	<i>Sn</i>	<i>W</i>
36515	400	-300	76	<3	72	<1	652	1	<0.008	7	<10
36517	400	-280	13	<3	80	<1	780	9.2	<0.008	<3	<10
36519	400	-260	50	<3	85	<1	882	3.3	0.008	5	<10
36521	400	-240	124	<3	115	<1	563	5.4	0.008	<3	<10
36523	400	-220	13	<3	176	<1	728	2	<0.008	5	<10
36525	400	-200	80	<3	114	<1	424	3.1	<0.008	4	<10
36527	400	-180	23	<3	71	<1	605	2.3	<0.008	<3	<10
36529	400	-160	70	24	120	<1	617	11	<0.008	<3	<10
36531	400	-140	55	12	101	<1	549	6.2	<0.008	4	<10
36533	400	-120	79	30	146	<1	378	18	<0.008	5	<10
36535	400	-100	55	<3	121	<1	1296	6.3	0.008	6	<10
36537	400	-80	53	11	84	<1	779	6.8	<0.008	<3	<10
36539	400	-60	56	47	158	<1	443	11	<0.008	7	<10
36541	400	-40	54	47	121	<1	634	16	<0.008	6	<10
36543	400	-20	27	77	176	<1	456	21	0.01	4	<10
36545	400	0	28	106	241	<1	346	26	<0.008	9	<10
36547	400	20	42	50	184	<1	340	8.5	0.01	6	<10
36549	400	40	35	57	233	<1	386	46	<0.008	<3	<10
36551	400	60	33	833	1234	<1	480	259	<0.008	4	<10
36553	400	80	60	748	1041	<1	694	191	<0.008	14	<10
36555	400	100	25	190	1200	<1	954	190	<0.008	8	<10
36557	400	120	12	44	144	<1	302	19	<0.008	<3	<10
36559	400	140	28	10	66	<1	222	17	<0.008	8	<10
36561	400	160	39	28	234	<1	380	18	<0.008	5	<10
36563	400	180	62	120	170	<1	294	50	<0.008	8	<10
36565	400	200	32	251	163	<1	309	47	0.009	8	<10
36567	400	220	43	39	542	<1	977	69	<0.008	22	<10
36569	400	240	52	9	83	<1	374	7.7	<0.008	4	<10
36571	400	260	45	33	82	<1	360	12	<0.008	<3	<10
36573	400	280	4	6	138	<1	298	20	<0.008	10	<10
36575	400	300	5	31	125	<1	86	25	0.008	9	<10
36577	300	-300	44	18	99	<1	633	6.9	<0.008	<3	<10
36579	300	-280	26	3	68	<1	632	6	<0.008	<3	<10
36581	300	-260	35	10	67	<1	250	4.8	<0.008	<3	<10
36583	300	-240	36	<3	64	<1	746	0.7	<0.008	<3	<10
36585	300	-220	59	<3	74	<1	747	1.4	<0.008	5	<10

21103

lgc_samp	local_n	local_e	Cu	Pb	Zn	Ag	Mn	As	Au	Sn	W
36587	300	-200	62	11	85	<1	795	3.5	0.011	5	<10
36589	300	-180	36	<3	130	<1	900	1.9	0.01	<3	<10
36591	300	-160	141	<3	119	<1	728	1.5	<0.008	4	<10
36593	300	-140	37	<3	110	<1	796	1.3	<0.008	<3	<10
36595	300	-120	26	<3	88	<1	697	1.5	<0.008	<3	<10
36597	300	-100	72	12	181	<1	484	1.9	<0.008	6	<10
36599	300	-80	140	8	166	<1	464	7.2	<0.008	<3	<10
75801	-300	0	53	<3	49	<1	649	2.2	<0.008	7	<10
75803	300	-60	42	8	197	<1	1017	6.3	<0.008	5	<10
75805	300	-40	46	31	135	<1	866	14	<0.008	<3	<10
75807	300	-20	69	27	94	<1	788	14	0.022	6	<10
75809	300	0	196	503	318	<1	741	75	<0.008	5	<10
75811	300	20	78	48	233	<1	633	33	<0.008	4	<10
75813	300	40	92	9	621	<1	925	11	<0.008	8	<10
75815	300	60	51	36	214	<1	347	6.7	<0.008	<3	<10
75817	300	80	53	214	255	<1	715	50	<0.008	8	<10
75819	300	100	142	175	962	<1	772	50	0.015	5	<10
75821	300	120	50	82	282	<1	389	15	0.016	12	<10
75823	300	140	45	58	143	<1	278	18	<0.008	14	<10
75825	300	160	14	44	27	<1	78	6	<0.008	15	20
75827	300	180	82	144	252	<1	1088	28	<0.008	12	<10
75829	300	200	62	87	233	<1	411	25	<0.008	13	<10
75831	300	220	42	79	166	<1	264	23	<0.008	13	<10
75833	300	240	67	39	97	<1	671	26	<0.008	10	<10
75835	300	260	25	39	95	<1	213	19	<0.008	12	<10
75837	300	280	72	108	158	<1	317	42	0.012	12	<10
75839	300	300	40	48	229	<1	401	52	<0.008	9	<10
75841	420	0	38	149	251	<1	378	48	<0.008	6	25
75843	440	0	14	33	147	<1	334	8.6	<0.008	5	<10
75845	460	0	58	14	168	<1	456	<0.5	<0.008	<3	<10
75847	480	0	56	138	711	<1	934	50	<0.008	8	<10
75849	500	0	62	367	269	<1	136	192	<0.008	12	<10
75851	520	0	56	31	106	<1	296	18	<0.008	12	<10
75853	540	0	45	689	70	<1	150	50	<0.008	28	<10
75855	560	0	17	9	60	<1	206	1.1	<0.008	<3	<10
75857	580	0	17	25	90	<1	141	21	<0.008	6	<10

<i>lgc_samp</i>	<i>local_n</i>	<i>local_e</i>	<i>Cu</i>	<i>Pb</i>	<i>Zn</i>	<i>Ag</i>	<i>Mn</i>	<i>As</i>	<i>Au</i>	<i>Sn</i>	<i>W</i>
75859	600	0	40	43	121	<1	414	5.5	<0.008	4	<10
75861	620	0	14	93	748	<1	700	42	<0.008	11	<10
75863	640	0	25	21	68	<1	157	<0.5	<0.008	<3	<10
75865	660	0	21	14	72	<1	404	<0.5	<0.008	6	<10
75867	680	0	26	4	52	<1	343	<0.5	<0.008	5	<10
75869	700	0	18	7	41	<1	244	<0.5	0.011	<3	<10
75871	-300	0	29	<3	53	<1	531	<0.5	<0.008	4	<10
75873	300	-120	31	3	81	<1	671	<0.5	<0.008	<3	<10
75875	300	-280	45	54	167	<1	426	50	<0.008	11	<10
75877	-300	0	38	3	52	<1	640	<0.5	<0.008	<3	<10
75879	400	100	25	166	1147	<1	871	124	<0.008	5	<10



TERTIARY BASALTS
AND
CRIMSTON CREEK VOLCANICS

HAZLEWOOD
MAFIC COMPLEX

CRIMSTON CREEK
BASALTS

MEREDITH GRANITE

CRIMSTON CREEK
BASALTS

SERPENTINITE

ARTHUR
LINEAMENT

KEY

Magnetic lineations
(structure)

Magnetic units

717107

PASMINCO EXPLORATION
A Division of Pasminco Australia Limited

COMPILED: PWB/NKM
DATE: 19/12/95
DRAWN: G.M.B.
REVISIONS:

**WARATAH AREA JV
MAGNETIC
PRELIMINARY
INTERPRETATION**

FILE: 100_MGPI
DRAWING No.
319-GP-010

SCALE 1:100 000 0 2 km FIG. No. 6

