95-3719

Aberfoyle Resources Limited

808001

EXPLORATION DIVISION
ACN 004 664 108

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EXPLORATION LICENCE 106/87
LAKE MACKINTOSH
TASMANIA

MICROFILMED
FICHE No.013590-93

FILE REF. EL 106/87
- 1 APR 1995
DOC. REF.
SEE FOLIO 18,19
DATE

Progress Report for the Period
February 1994 - February 1995

Volume 1 of 1

Prepared by:

S Richardson
SENIOR GEOLOGIST

Issued by:

for **D B Wallace**
MANAGER - EXPLORATION

Internal Report No: Mackintosh 56

95-3719.

n

- Burnie (1/3)
- Melbourne (2/3)
sources Tas (3/3)

808002

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1.0 SUMMARY

Work on EL 106/87 continued to focus on delineation of the Cambrian synvolcanic fault network of the Que-Hellyer Volcanic basin. Areas of prospective stratigraphy, at depth, adjacent to synvolcanic fault intersections are seen as conceptual targets for Volcanic Hosted Massive Sulphides.

Delineation of structures was based on integration of all available geological, geochemical and geophysical (magnetic and gravity) data into a consistent three dimensional model of the Que-Hellyer Volcanic basin.

Twenty seven target areas are identified and have been ranked. Eleven of the highest ranked targets are selected for diamond drilling and will be tested before the end of June, 1995.

2.0 INTRODUCTION

The Lake Mackintosh Exploration Licence (EL 106/87) was granted to Aberfoyle Resources Limited on 5 February, 1988, subject to the Hellyer Mine Agreement Ratification Act 1987. The licence comprised 135 sq km previously covered by EL's 2/70 (Mackintosh) and 15/73 (Hatfield) and encloses the 20.2 km^2 of CML's 68M/84 and 103M/87 (encompassing the Que River and Hellyer mines and facilities).

Under the terms of this Act the licence was issued for ten years with partial relinquishments required on the second and fifth anniversaries. The first partial relinquishment was effected in February, 1990 when the licence was reduced from 135 to 95 sq km. The second partial relinquishment from 95 to 54 sq km was effected on 5 February, 1992. Current tenure is shown on Fig. 1.

This report summarises exploration completed in the Mackintosh district on EL 106/87 for the period 1 February, 1994 to 1 February, 1995.

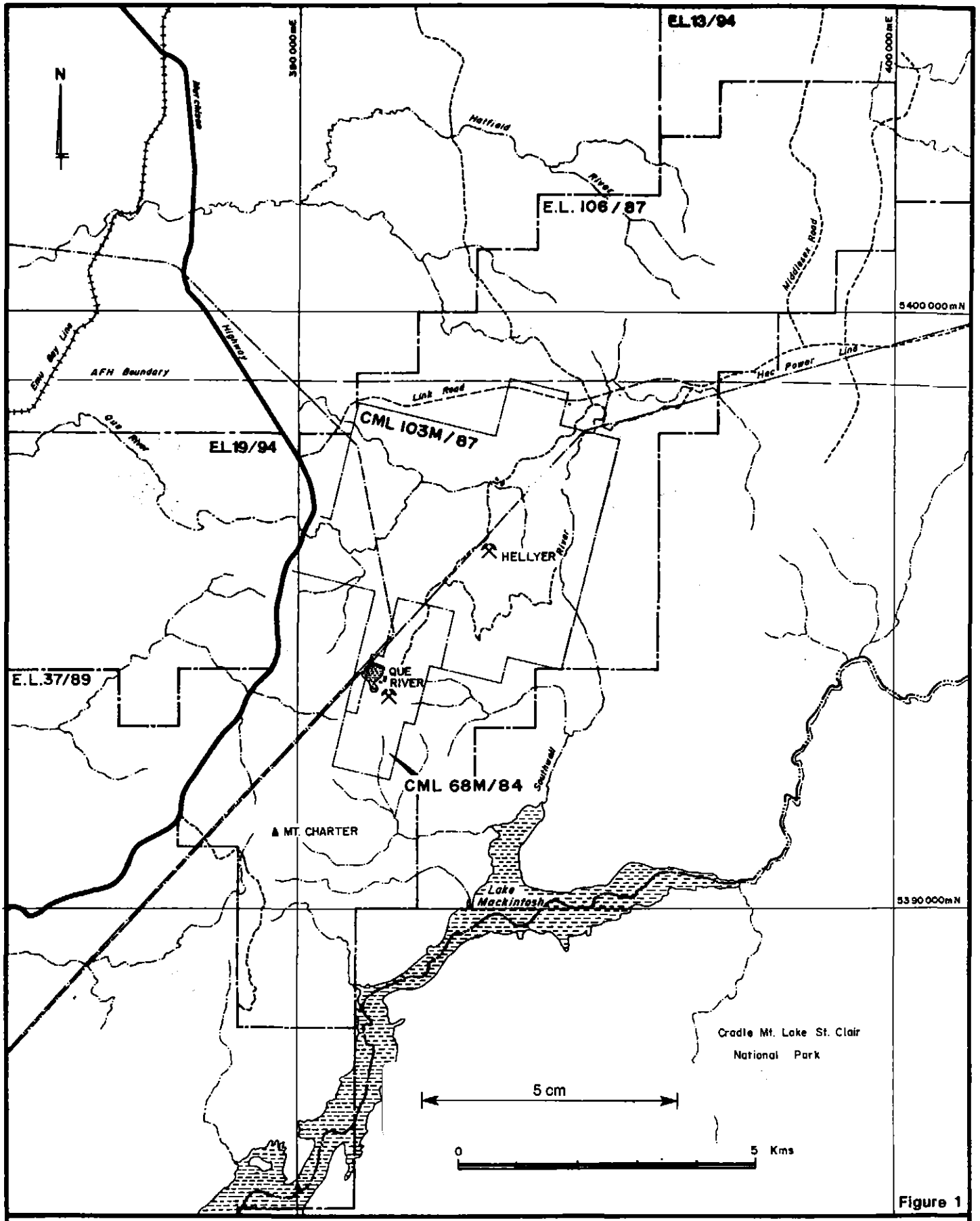

Figure 1

Aberfoyle Resources Limited

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REVISIONS			
Init.	Date	Init.	Date
RJE	May 90		
JMS	Feb 93		
MAR	6/93		
RdeB	1/94		

NORTH WEST TASMANIA

MACKINTOSH DISTRICT

TENURE SUMMARY

Compiled : AMcN

Drawn :

Traced :

Checked :

Location Code : K55/6/44

Scale : As shown

Date : May, 1990

Plate No. : MAC 181

1511

3.0 SURFACE EM SURVEYS

3.1 Introduction

The Southwell Subgroup is defined as the 1000m thick sequence of felsic volcaniclastic, greywacke, siltstone and minor lava overlying the Que River Shale. It is equivalent in its lower part to the Upper Rhyolitic Sequence of Hellyer Mine. North east of Hellyer the Southwell Subgroup is overlain by the Mount Cripps Subgroup; a sequence of volcanogenic conglomerates and sandstones correlated with the Middle to Upper Tyndall Group of the southern Mount Read Volcanics.

Re-evaluation of the Southwell Subgroup has been encouraged by recent volcanological work of McPhie and Allen (1992) who recognise distinctive mass flow deposits of regional extent. Southwell Subgroup rocks are correlated with similar facies associations at Sock Creek, Pinnacles, White Spur and the Rosebery-Hercules mine sequences.

Such an interpretation suggests that Rosebery-Hercules mineralisation may be slightly younger than Que River-Hellyer. This is supported by recent structural analysis of the Rosebery sequence which is now considered to be overthrust by and younger than the northern Central volcanic Complex; Berry 1993.

There is also a broad correlation now recognised between the Southwell Subgroup and Lower Tyndall Volcanics of the southern Mount Read Volcanics; Corbett, 1992.

The timing of Cu, Pb, Zn mineralisation in this area e.g. Mt Lyell-Comstock and Howards Anomaly-Tyndall Creek is around the Upper Central Volcanic Complex boundary through to the Lower Tyndall group and is therefore also broadly contemporaneous with the Southwell Subgroup.

In addition a younger mineralising event is evidenced by the Henty gold mine which is hosted by post Middle Tyndall Group volcaniclastics. In the northern Mount Read Volcanics these rocks would correlate with the Lower Mount Cripps Subgroup.

From the above it can be seen that recent stratigraphic re-interpretation has increased the prospectivity of the relatively under explored Southwell Subgroup and Mount Cripps Subgroups.

Exploration on Mackintosh EL 106/87 to date has focussed on the Que Hellyer Volcanics. Overlying Southwell Subgroup and Mount Cripps Subgroup rocks have only received local attention in areas of geological interest. Areas such as Murrays Road (sulphide clasts), Medway River (? rhyolite dome) and Southwell Gorge (hydrothermal alteration) have been surveyed with surface EM.

However, the bulk of felsic volcanics, which underly about half the area of EL 106/87, often beneath Tertiary basalt up to 150m thick, remain relatively unexplored.

In addition the recent Mackintosh aeromagnetic survey indicated many shallow breaks within Tertiary basalt north of Hellyer. Similar orientations and spacing to known Cambrian structures within the Que Hellyer Volcanics provide reasonable confidence that they reflect reactivation of underlying, possibly synvolcanic, basement structures, Fig. 2.

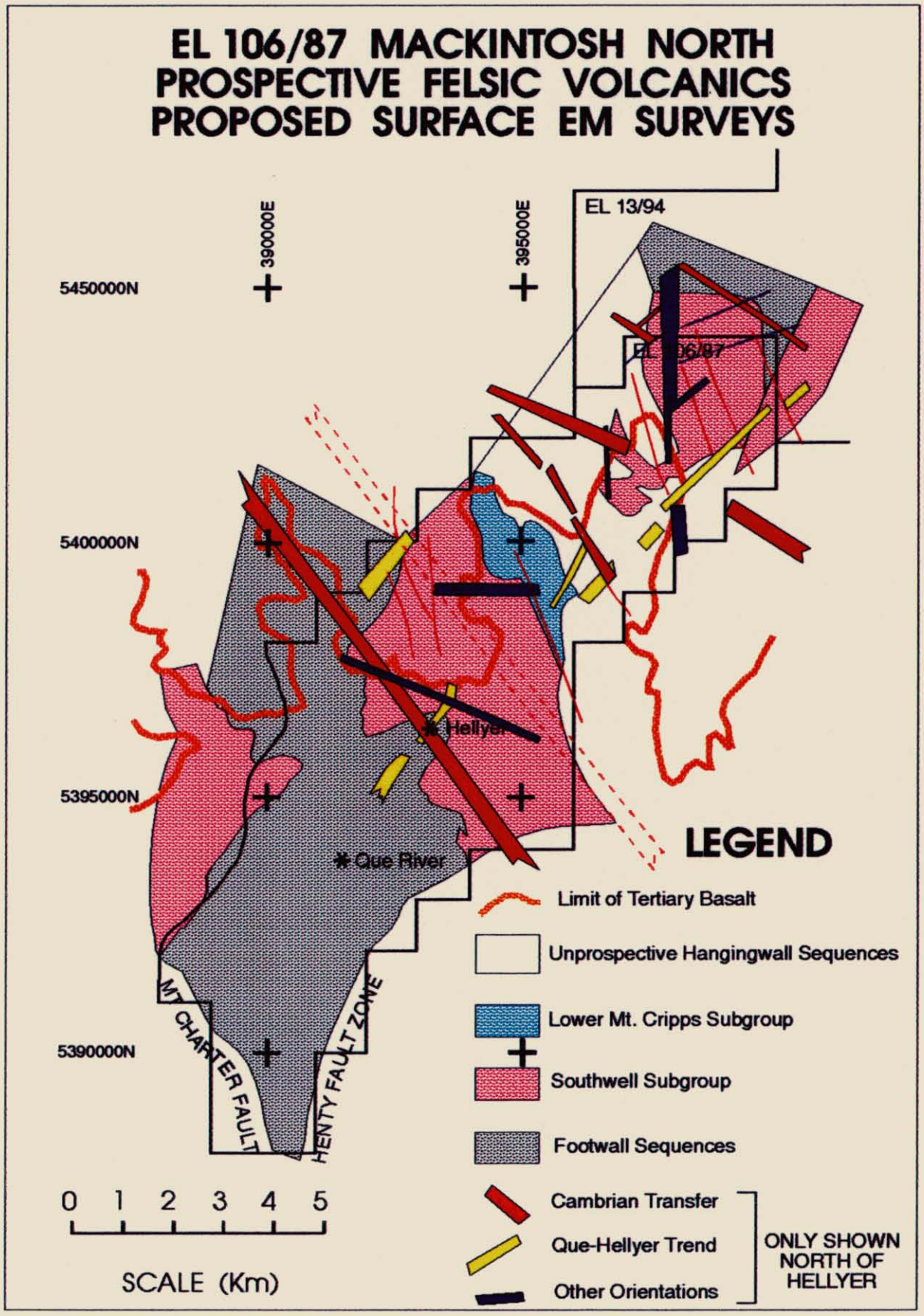
EL 106/87 MACKINTOSH NORTH
PROSPECTIVE FELSIC VOLCANICS
PROPOSED SURFACE EM SURVEYS
390000E
395000E
EL 13/94
5450000N
5400000N
5395000N
5390000N
Hellyer
Que River
MT CHARTER FAULT
HENTY FAULT ZONE
0 1 2 3 4 5
SCALE (Km)
LEGEND
Limit of Tertiary Basalt
Unprospective Hangingwall Sequences
Lower Mt. Cripps Subgroup
Southwell Subgroup
Footwall Sequences
Cambrian Transfer
Que-Hellyer Trend
Other Orientations
ONLY SHOWN NORTH OF HELLYER

Figure 2

5 cm

The most prospective is a NNE trending structure that extends away from Hellyer into the NE corner of the EL. It is inferred to represent a continuation of the Que-Hellyer structure and presents a prime target where it intersects prospective stratigraphy.

3.2 Proposed Programme

Given the exploration status of felsic sequences at Mackintosh, surveying by surface EM and locally with soil geochemistry was considered to be the best method for initial target generation. Only prospective basal Southwell Subgroup (Rosebery horizon) and Lower Mount Cripps Subgroup (Henty horizon) rocks were proposed for coverage.

Four areas are currently being surveyed. These are shown on Fig. 3. They are:

3.2.1 Southwell Gorge Area

Basal Southwell Subgroup rocks dip steeply NE in this area which is just east of the present limit of EM coverage. A small surface EM survey (three loops for 14 line km) is proposed to test Southwell Subgroup rocks overlying the regional NW trending gravity lineament (Cambrian transfer fault) that passes through Hellyer.

The area is adjacent to the NE trending Mount Cripps Fault which is also inferred to be synvolcanic. Other Southwell Subgroup rocks to the north and east are considered to be too high in the sequence to warrant surveying with EM.

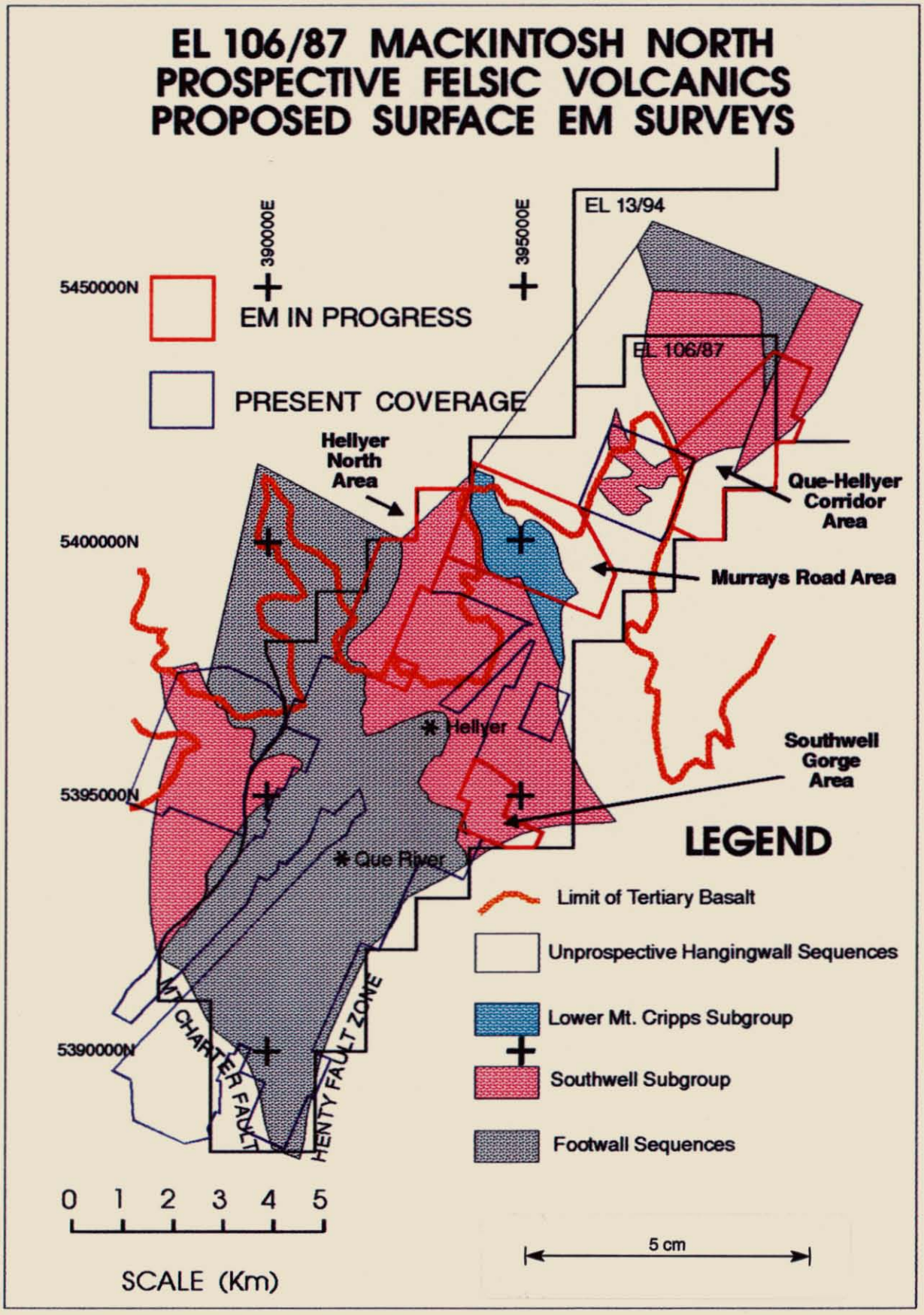
EL 106/87 MACKINTOSH NORTH
PROSPECTIVE FELSIC VOLCANICS
PROPOSED SURFACE EM SURVEYS
390000E
395000E
5450000N
5400000N
5395000N
5390000N
EM IN PROGRESS
PRESENT COVERAGE
EL 13/94
EL 106/87
Hellyer North Area
Que-Hellyer Corridor Area
Murrays Road Area
Southwell Gorge Area
Hellyer
Que River
MT CHARTER FAULT
HENTY FAULT ZONE
LEGEND
Limit of Tertiary Basalt
Unprospective Hangingwall Sequences
Lower Mt. Cripps Subgroup
Southwell Subgroup
Footwall Sequences
0 1 2 3 4 5
SCALE (Km)
5 cm

Figure 3

3.2.2 Murrays Road Area

The target in this area is mineralisation within the Lower Mount Cripps Subgroup i.e. equivalent to the younger Henty mineralising event. Evidence of mineralisation at this stratigraphic level in the Murrays Road area is present as massive pyrite clasts in an epiclastic breccia outcropping on the Cradle Mountain Link road and in costeans excavated by Aberfoyle in 1990.

The NW trending Upper Mayday Fault bounds the NE side of the proposed survey area and shows evidence of synvolcanic activity. Lower Mount Cripps Subgroup volcaniclastics are only developed on the SW side of the fault. To the NE Upper Mount Cripps Subgroup rocks rest directly on Southwell Subgroup. Additionally, ten kilometres SE, along strike and potentially on the same NW transfer structure, another fault bounds the Sticht Range Beds (base of Mount Read Volcanics) and Back Peak Beds (correlate of Eastern Sequence). Anomaly 13 and the Anio Creek gold mineralisation are located adjacent to this fault.

The eastern side of the area proposed for EM surveying also lies along the Que-Hellyer Structure. A five loop 34 line kilometre survey is proposed.

Soil geochemistry (Au, Ag, Cn, Pb, Zn, As, Ba) is also proposed over outcropping volcanics in this area to allow for non-conductive gold rich mineralisation of Henty style.

3.2.3 Que-Hellyer Corridor Area

Interpretation of Mackintosh aeromagnetics indicates the Que-Hellyer Structure, along which the Que River and Hellyer orebodies have developed, may extend for at least a further ten kilometres to the NE.

Previous EM surveys and sterilisation by the 220 Kv powerline cover the structure from Hellyer Mine to the Cradle Mountain Link Road. From here to the Upper Mayday Fault will be surveyed by the Murrays Road EM survey. The area immediately NE of the Upper Mayday Fault is not proposed for further work as it is interpreted to be underlain by unprospective Upper Mount Cripps Subgroup and Upper Southwell Subgroup volcanics.

However, further to the NE, Cambrian rocks are obscured by Tertiary basalt resulting in very poor knowledge of pre-Tertiary rocks in this area. To the west MAC20 and MAC22 have intersected Southwell Subgroup volcaniclastics that are probably relatively high within that sequence. They are inferred to occur within the south plunging Black Marsh Syncline, the eastern limb of which lies close to the Que Hellyer Structure in the NE corner of the EL. Also within this area is the postulated extension of the Henty Fault.

Prospectivity in the survey area is entirely dependent on tightness of the Black Marsh Syncline and location of the Henty Fault. Both govern whether prospective basal Southwell Subgroup stratigraphy can dip up into EM range in the Que-Hellyer Structure area and both are poorly constrained.

Despite poor constraints the potential for prospective stratigraphy to intersect the Que-Hellyer Structure within surface EM range indicates a surface EM survey is warranted. A six loop 33 line kilometre survey is proposed.

3.2.4 Hellyer North Area

The final area proposed for EM coverage is the western limit of Southwell subgroup rocks, northwest of Hellyer, along the western edge of EL 106/87. Again Cambrian rocks are largely overlain by Tertiary basalt.

The only prospective structure inferred to pass through the survey area is the NW trending regional gravity linear that passes through Hellyer.

A six loop 30 line kilometre survey is proposed.

3.3 Progress

EM survey grids are shown on Fig. 4. At the end of the reporting period 70 line kilometres of gridding is complete. EM surveying will commence shortly and the results will be presented in the next annual report.

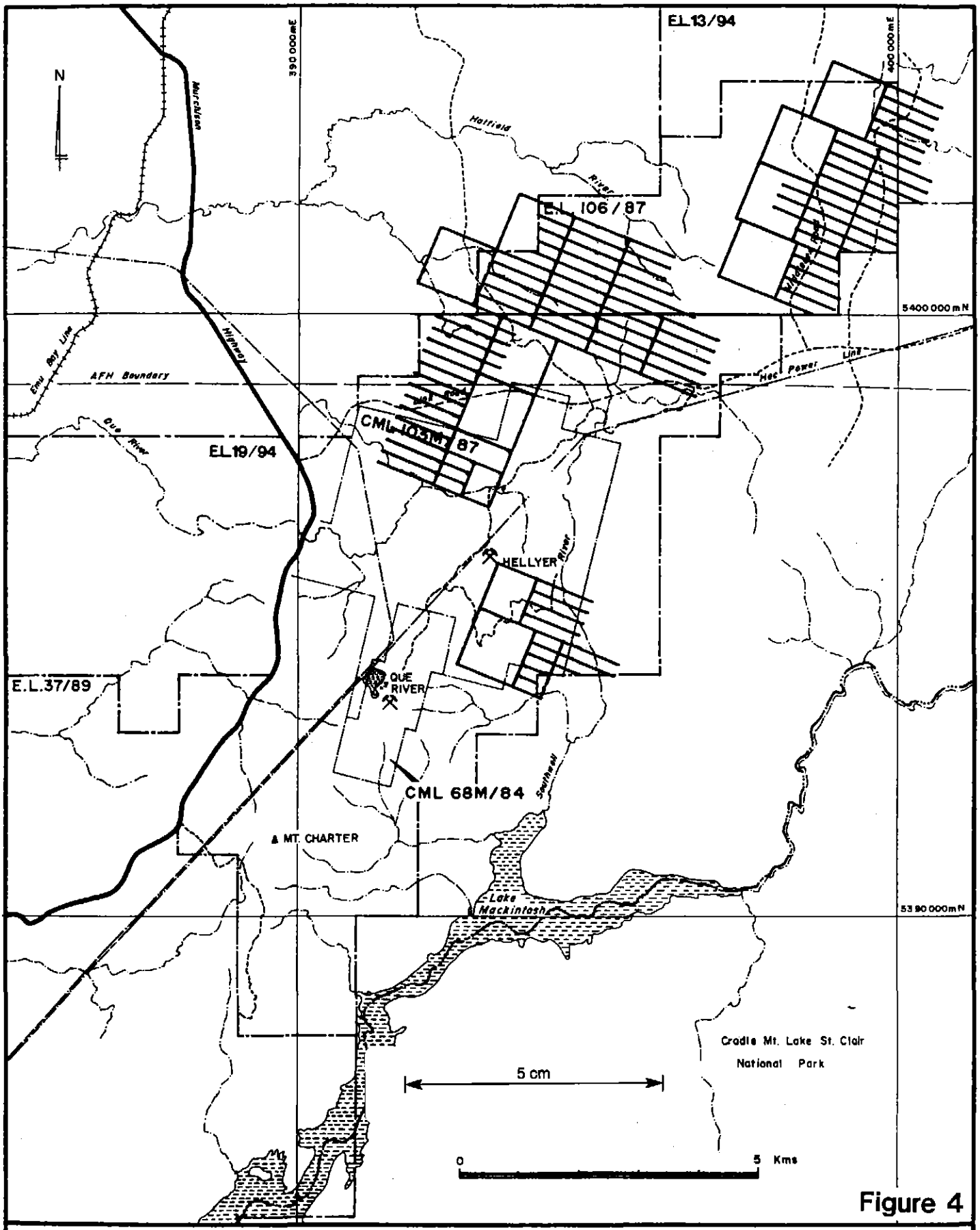

Figure 4

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Init.	Date	Init.	Date
RJE	May 90		
JMS	Feb 93		
MAR	6/93		
RdeB	1/94		

NORTH WEST TASMANIA

MACKINTOSH DISTRICT

1995 EM SURVEY GRID

Compiled : AMcN

Drawn :

Traced :

Checked :

Location Code : K55/6/44

Scale : As shown

Date : May, 1990

Plate No. : MAC 181

4.0 SOUTH MOUNT CHARTER AREA

4.1 Introduction

Interpretation of areomagnetic data in the Mount Charter area indicated the presence of a corridor of low magnetic intensity extending south from the Que River alteration zone and passing east of Mount Charter. An 800m drill hole was proposed to test the base of dacites overlying this structure on section 4500N.

Full details of the target are described in the last annual report, Richardson, 1994. At that time results from this hole, MAC36, were not available. They are therefore presented below.

4.2 DDH MAC 36

4.2.1 Introduction

DDH MAC 36 was collared on 5-6-93 and completed on 16-8-93 at 814.4m. Collar location is at AMG 5391041.2N, 390059.6E.

4.2.2 Geology

A detailed log and petrological descriptions are attached as Appendix I, whilst a cross section is included as Plate MAC 432 .

A summary log is as follows:

0	-	85.6m	Feldspar phyric dacite lava and breccia
85.6	-	95.4m	Andesite lava and breccia
95.4	-	100.5m	Vesicular Basalt lava
100.5	-	108.4m	Andesite lava and breccia
108.4-	-	121.8m	Andesite lava
121.8	-	136.6m	Dacite lava and lapilli volcaniclastic
136.6	-	457.1m	Aphyric to feldspar phyric andesite lava and volcaniclastic
457.1	-	488.3m	Vesicular basalt lava and volcaniclastic
488.3	-	589.9m	Aphyric to feldspar phyric andesite lava and volcaniclastic
589.9	-	600.3m	Dacite lava
600.3	-	730.1m	Aphyric to feldspar phyric andesite lava and volcaniclastic
730.1	-	739.6m	Andesite lava with intervals of strong Si+Se+Py alteration
739.6	-	763.4m	Andesite lapilli to breccia volcaniclastic containing local Si+Se+Py fragments
763.4	-	795.0m	Moderate to strongly Si+Se+Py altered ash to fine (coarse) lapilli volcaniclastic
795.0	-	800.5m	Moderate Se Py Co altered basalt lava
800.5	-	811.1m	Interbedded ash volcaniclastic, micaceous greywacke and black shale
811.1	-	814.4m	Micaceous greywacke

MAC 36 intersected a thick sequence of evolved andesite with minor dacite lava and associated volcaniclastics resting conformably on mica sandstone basement.

This sequence is also intersected by MAC 33 and MAC 37 and dominates the SW corner of the Que-Hellyer Volcanic basin, up until Upper Basalt time.

Dacite dominates in the top of the hole down to about 137m. Below this point feldspar phyric andesite lavas and breccia only contain minor lenses of dacite and vesicular basalt. The entire sequence is epiclastic poor with the best development from 763 to 795 metres in the transition from Que-Hellyer Volcanics to underlying mica sandstone basement. Epiclastics in this area comprise pyritic silica and sericite altered ash to fine lapilli volcaniclastics, indicating quiescence with some hydrothermal alteration, prior to eruption of the volcanics.

Hydrothermal alteration in MAC 36 is only weak to moderately developed. Domainal to pervasive silica + sericite $\pm$ chlorite alteration is common throughout the volcanics. It is strongest in dacites near the top of the hole where it is associated with a locally well developed cleavage. Also present in the lava sequence is patchy to pervasive locally strong epidote $\pm$ silica alteration often associated with disseminated sphalerite.

Epiclastics between the mica sandstone and andesite lava sequences are moderate to strongly sericite + silica + pyrite altered. This may indicate potential for massive sulphide mineralisation, at this stratigraphic level, elsewhere in the Que-Hellyer Volcanic basin.

Trace disseminated pyrite occurs throughout the hole but increases to about five percent in altered epiclastics at the base of the Que-Hellyer Volcanics. Base metal mineralisation is restricted to minor disseminations associated with:

1) patchy epidote alteration or epidote silica veins e.g. 323.1 - 347.2m

or 2) in silica + carbonate veins

4.2.3 Geochemistry

Seventy one core grind samples covering the length of MAC 36 were submitted for assay. Sample intervals up to 22 metres were chosen to coincide with lithological boundaries.

Samples were analysed for whole rock and Zr, Cr, Ba, As, S, Cu, Pb, Zn, Ag and Au. Results are included as Plates MAC 408A and B and Appendix II.

Cu, Pb and Zn values are generally low throughout, usually below 100, 50 and 200 ppm respectively. However, polymict epiclastic and an obscure sheared ash (?) interval, associated with an internal basalt, between 456 and 473 metres, contain up to 1464 ppm Zn and 448 ppm Pb (separate samples). Elevated values of up to 1410 ppm Zn and 158 ppm Pb (separate samples) between 323 and 370 metres reflect disseminated sphalerite associated with epidote alteration. Base metal values from pyritic epiclastics at the base of the Que Hellyer Volcanics are low.

Silver values are all below detection of 2 ppm. Gold assays are also low, only rising above detection in dacites near the top of the hole where a maximum of 0.025 ppm is recorded. There is a broad correlation of detectable gold with elevated As, Ba and S which reach maxima of 57 ppm, 0.62% and 0.8% respectively (separate samples). These values are interpretted to reflect the southern end of the Mt Charter alteration zone.

Both CaO and Na_2O are depleted (CaO strongly) above 149.1m. This results in alteration indices (Na_2O + $CaO/Na_2O + CaO + K_2O + MgO$) of up to 90 implying strong footwall style alteration. K_2O is also elevated above this depth, consistent with sericite development.

However, visually alteration only appears to be weak to moderate but again is interpretted to reflect the southern end of the Mt Charter alteration zone. Alteration indices elsewhere, including pyritic alteration at the bottom of the hole, are low indicating low grade.

Whole rock and trace element data (Ti/Zr, P_2O_5, Cr) confirm the presence of dacite interbedded with some andesite above 136.6m. Below that point a thick andesite sequence is confirmed with only minor basalt and dacite.

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4.2.4 Geophysics

A four loop downhole EM survey was undertaken in MAC 36. Loop locations and survey results are attached as Appendix III.

No conductors attributable to massive sulphide accumulations were detected.

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5.0 BARITE CREEK AREA

5.1 Introduction

DDH MAC 37 was drilled to test a structural/stratigraphic target in the Barite Creek area, east of Mt Charter. The target and results of this hole were described in the last annual report. However, results of the downhole EM survey were not available at that time and are therefore presented below.

5.2 Geophysics

A four loop downhole EM survey (Zonge EM) was undertaken in MAC 37. Loop locations and survey results are attached as Appendix IV.

No conductors attributable to massive sulphide accumulations were detected.

6.0 DRILLING PROGRAM

6.1 Introduction

Recent drill target generation at Mackintosh has focussed on integrating geological, magnetic and gravity data and developing a three dimensional structural picture of the Que-Hellyer Volcanic basin. This approach is predicated on the recognition of the close association of both Hellyer and Que River with district scale structure and the general observation that hydrothermal deposits are always focussed by co-active faults.

The inferred structural framework for the Que-Hellyer Volcanic basin was reported in Richardson, 1994 and is shown on Plate MAC 411. Some of these discontinuities can, with geological data, e.g. facies and thickness variations, be confidently interpretted as faults which were active during Cambrian volcanism.

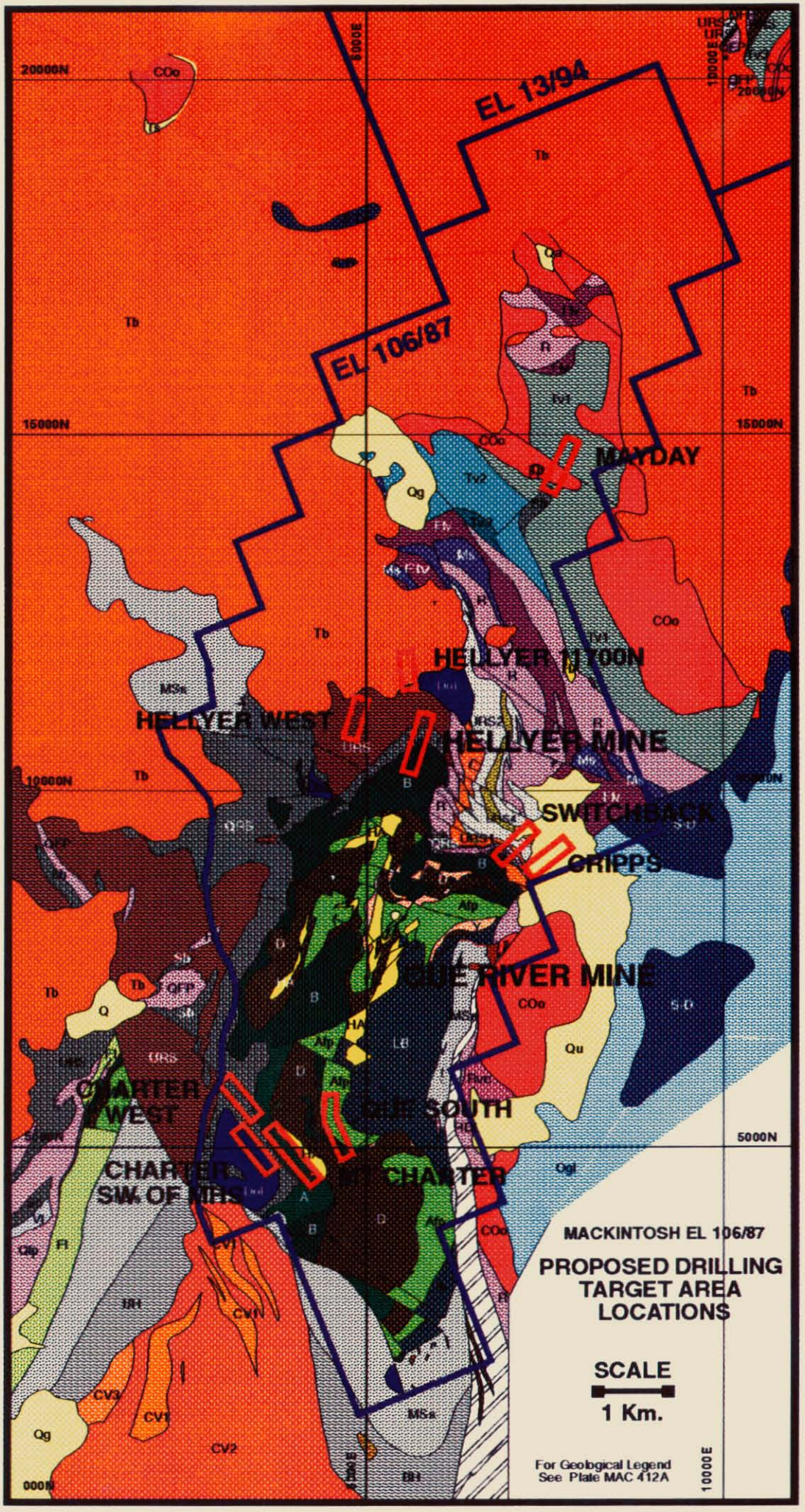
The interpretted fault array comprises major NW structures such as the Hellyer Megastructure and NE trending structures such as the Que Fault. These are interpretted as transfer and extensional basin faults respectively. Another structural set is represented by the Que-Hellyer structure which are interpretted as older basement structures reactivated during basin forming extension. A fourth series of E-W structures are defined by magnetics and gravity. Their origin is obscure but a similar reactivation interpretation is permitted, perhaps involving structures developed during deposition of the earlier Central Volcanic Complex.

Intersections of any combination of these structural elements may represent high permeability zones which may control sites of Volcanic Hosted Massive Sulphide formation. Deep drill targets are indicated where prospective stratigraphy occurs adjacent to these sites.

6.2 Proposed Program

A total of 27 target areas are identified. These have been ranked and it is proposed to drill test the top eleven before the end of June, 1995. The location of these targets is shown on fig. 5.

At the end of the reporting period the first two holes, both on CML 103M/87, are in progress. Results from these holes will be included in the annual CML report.



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5 cm

Figure 5

7.0 GRAVITY SURVEY

7.1 Introduction

Until recently existing gravity data over EL 106/87 was broad spaced, except for detailed surveys over the Que River and Hellyer orebodies. This coverage only reflected regional features. Gravity was seen as a method to model and validate interpretted cross sectional geology through the Que-Hellyer Volcanic basin.

7.2 Results

530 infill stations along available access throughout the EL were read during 1993/94. All stations were then surveyed and levelled. Reduction was undertaken by Leaman Geophysics.

Station locations, numbering and reduced gravity values are shown on Plates MAC 413, A, B, C.

8.0 CONCLUSIONS

A network of syn-volcanic faults within the Que-Hellyer Volcanic basin is inferred from geological, geochemical and geophysical data. Deep drill targets are indicated where prospective stratigraphy occurs adjacent to these structures and in particular their intersection, below surface EM penetration.

Twenty seven drill targets are identified of which eleven have been selected for testing prior to July, 1995. Drilling has commenced, with two rigs, on CML 103M/87.

Parts of felsic volcanic sequences hangingwall to the Que-Hellyer Volcanics are considered prospective for Volcanic Hosted Massive Sulphides and are currently being surveyed with surface EM.

806028

9.0 REFERENCES

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Corbett, K. D., 1992. Stratigraphic-Volcanic Setting of Massive Sulphide Deposits in the Cambrian Mount Read Volcanics, Tasmania. Economic Geology, 87:564-586.

McPhie, J. & Allen, R. L., 1992. Facies Architecture of Mineralised Submarine Volcanic Sequences:Cambrian Mount Read Volcanics, Western Tasmania. Economic Geology, 87:587-596.

Richardson, S., 1994. Exploration Licence 106/87. Progress Report for the Period April 1993 to February 1994. Aberfoyle Resources Ltd. Unpub. Report.

APPENDIX I

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DIAMOND DRILL LOG

HOLE No. MAC 36

GEO. SR

DATE 24-2-94

Depth (from–to)	Core tray no.	Stratigraphy	Rock type	Colour	Fragments: composition	Fragments: max. size (mm)	Fragments: sorting	Fragments: shape	Matrix: composition	Matrix: volume %	Lower contact: gradation	Lower contact: style	Alteration: texture	Alteration: intensity	Alteration: mineralogy	Veining	Foliation: type	Foliation: core axis angle	Weathering	Remarks
0 – 17.9	1, 2, 3, 4		D-L	Br; Gy Gn; Br							G1	C							2P (to 12.0; 12.0 – 15.6; 15.6 – 18.5)	
17.9 – 36.4	4, 5, 6, 7, 8, 9		D-Lv	Gy Gn	Fd. ph. A	50	P	A-SR	a	20	G1	C	M F	3 2	Si Se CC	36.4	CL (20.0)	40		Fabric defined by preferred orientation of inequant frags // to locally well developed cleavage.

log.01931.nar

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DIAMOND DRILL LOG

HOLE No. MAC 36
PAGE 2 OF 21
GEO. SR
DATE 24-2-94

Drilling

Core tray no.	Depth
10	~41
11	~45
12	~49
13	~53.5
14	~57.5
15	~61.5
16	~65.5
17	~70
18	~74
19	~78

Lithology

Depth (base)	Stratigraphy	Rock type	Colour	Fragments: Composition	Fragments: Max. size (mm)	Fragments: Sorting	Fragments: Shape	Matrix: Composition	Matrix: Volume %	Lower contact: Gradation	Lower contact: Style
52.4		D-L/bv	LGy Gn	A/D	100	P	A	SiSe	5	G1	
56.2		D-Lv/bv	LGy Gn	A/D	100					G1	
57.0		Y-Lv	GyGn	A-D	40	P	A	SiSe	20	G1	
69.8		YD-Lv/bv	Gy Gn	FP	50	P	V	SiSe Cl	20	G1	
		D-Lv/bv	Gy Gn	A/D	300	P	A	SiSe	10		

Alteration

Texture	Intensity	Mineralogy
P	1	SeCl

Veining

Depth	Intensity	Max. width (mm)	Mineralogy
to 44.3	2	100	SiCl
	1	10	SiCl
76.0–77.0	2	40	Co

Faults

Position of base	Downhole width (cm)	Core axis angle	Gouge
56.3	10	45	RuPu
58.7	20	?	Ru
60.0	2	25	RuSl
63.4	30	?	Ru
65.0	2	40	Pu

Remarks

@43.7 1cm GnSpPy vein

Feldspar phyric silicic andesite / dacite Lava

Volcaniclastic interval

Prominently feldspar phyric unit looks like FPS. Green chloritic matrix w. feldspar laths. Some pink felsic looking frags.

Appears to be hyaloclastite - domainaly altered Lava.

log.0193Lnwr

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DIAMOND DRILL LOG

HOLE No. MAC 36

PAGE 3 OF 21

GEO. SR

DATE 24-2-94

DRILLING			LITHOLOGY										VESICLES			ALTERATION			VEINING			MINERALISATION		FAULTS				FOLIATION					
DEPTH	DRILLING RUNS / CORE LOSS	CORE TRAY NO.	STRATIGRAPHY	ROCK TYPE	COLOUR	VOLCANICLASTICS: FRAGMENTS: COMPOSITION	FRAGMENTS: MAX. SIZE (MM)	FRAGMENTS: SORTING	FRAGMENTS: SHAPE	MATRIX: COMPOSITION	MATRIX: VOLUME %	LOWER CONTACT: GRADATION	LOWER CONTACT: STYLE	CONCENTRATION	MAX. SIZE (MM)	SHAPE	TEXTURE	INTENSITY	MINERALOGY	INTENSITY	MAX. WIDTH (MM)	MINERALOGY	TEXTURE	MINERALOGY & CONTENTS	POSITION OF BASE	DOWNHOLE WIDTH (CM)	CORE AXIS ANGLE	GOUGE	TYPE	CORE AXIS ANGLE	WEATHERING	STANDARD COLOUR LOG	REMARKS	SAMPLE NO.	DEPTH
82		20																																82
84				85.6								S																						84
86		21		A-L	Cgr									2	10	E				1	2	Co												86
88																																		88
90		22		90.6								S		90.6						90.6														90
92				Y-LV/bl	Cg	AD	100	m	V	a	80	F								92.0				90.9	2	40	PuSL							92
94		23		A/B-LV 95.4	Cg	A/B	50	P	V	a	40	S		95.4						2				93.2	30	?	PuPu							94
96																								95.8	5	20	CoPu							96
98		24		B-L	Cg									3	30	E													CL	40°					98
100				100.5								S	40°	98.5															99						100
102		25		A-C/LV	Cg	A/D	50	P	A	Silt	20	S		2	10	V																			102
104				104.9										100.5			P	2	Si Se	100.5														104
106		26		106.3 Y-LV	Cg	P? D,A	50	P	V	a	20	S																							106
108				A-LV 108.4	Cg	A/D	50	P	A	a	25	S		108.4						108.4				108.3	10	45	PuPu							108
110		27		B-L	Cgr									2	5	V				2	10	Co													110
112				113.0								S		113.0									113.0												112
114		28		113.5 Y-LV	Cg	P?D						S											D6	1gTr											114
116				A-L	Cg Cgr												P	1	Si Cl																116
118		29																																118

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808033

DIAMOND DRILL LOG

HOLE No. MAC36

GEO. SR

DATE 25-2-94

DRILLING — Depth scale 122–158 m; core trays 30, 31, 32, 33, 34, 35, 36, 37, 38.

LITHOLOGY

From (m)	Stratigraphy	Rock type	Colour	Fragments: Composition	Fragments: Max. size (mm)	Fragments: Sorting	Fragments: Shape	Matrix: Composition	Matrix: Volume %	Lower contact: Gradation	Lower contact: Style
121.8										F	
121.8–136.6		D-L/Lv	Cm	D	50	P	V	Si	5	S	
136.6–149.1		A-L	Gy Cm							S	
149.1–		A-L/Lv	Dg Cm	A/D	50	P	V	SiSe	5		

VESICLES

Interval (m)	Concentration	Max. size (mm)	Shape
136.6–139.6	2	20	E

ALTERATION

Interval (m)	Texture	Intensity	Mineralogy
121.8–136.6	P	2	SiSe
136.6–149.1	P	1	SeCl
149.1–	M / F	2 / 2	SiSe / Cl

VEINING

Interval (m)	Intensity	Max. width (mm)	Mineralogy
121.8–130.1	2	20	SiCa
130.1–132.8	4	100	SiClCa
132.8–136.6	2	5	Ca
142.5–144.6	3	10	SiCaCl
149.1–	2	10	Ca

MINERALISATION

Texture	Mineralogy & contents
Ds	PyTr

FAULTS

Position of base	Downhole width (cm)	Core axis angle	Gouge
124.3	250	?	RuPu

FOLIATION — Type | Core axis angle

WEATHERING

STANDARD COLOUR LOG

REMARKS

- Prob. just an alteration boundary.
- Locally dominantly altered lava.
- TS 622243 — 128.4m. Glassy Dacitic lava
- TS 622244 — 139.2m. Glassy andesite lava.
- TS 622245 — 153.0. plag. phyric andesite hyaloclastite

SAMPLE NO.

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DIAMOND DRILL LOG

HOLE No. MAC 36

GEO. SL

DATE 25-2-94

Drilling (Depth 162–198)

Core tray no.	Depth (approx.)
39	162
40	167
41	171
42	175
43	180
44	184
45	188
46	192
47	196

Lithology

From	Rock type	Colour	Lower contact gradation
– 185.3	A-L/Lv	Pk (168), Pk (176)	S
185.3 –	A-L	Gy Gn	

Vesicles

Interval	Concentration	Max. size (mm)	Shape
188.0 – 190.1	2	10	V
190.1 – 192.0	3	15	V
194.5 – 197.6	3	20	V
197.6 –	2	20	V

Alteration

Interval	Texture	Intensity	Mineralogy
167.9 – 168.7	P	2	SeCo
168.7 – 176.2	P	1	SeClSi
176.2 – 177.1	P	2	SeCo
177.1 – 198.6	P	1	SeClSi
198.6 – 199.3	P	3	Se

Veining

Interval	Intensity	Max. width (mm)	Mineralogy
174.7 – 180.6	3	10	Co
180.6 – 198.6	2	10	Co
198.6 – 199.2	4	100	Co

Mineralisation

Texture	Mineralogy & contents
Ds	Py Tr

Foliation

Type	Core axis angle
Cl (163)	40°

Remarks

Possibly locally amygdaloidal (176–178)

Commonly amygdaloidal feldspar phyric lava. (188–190)

TS 622296 — 198.2m — Plag phyric andesite lava

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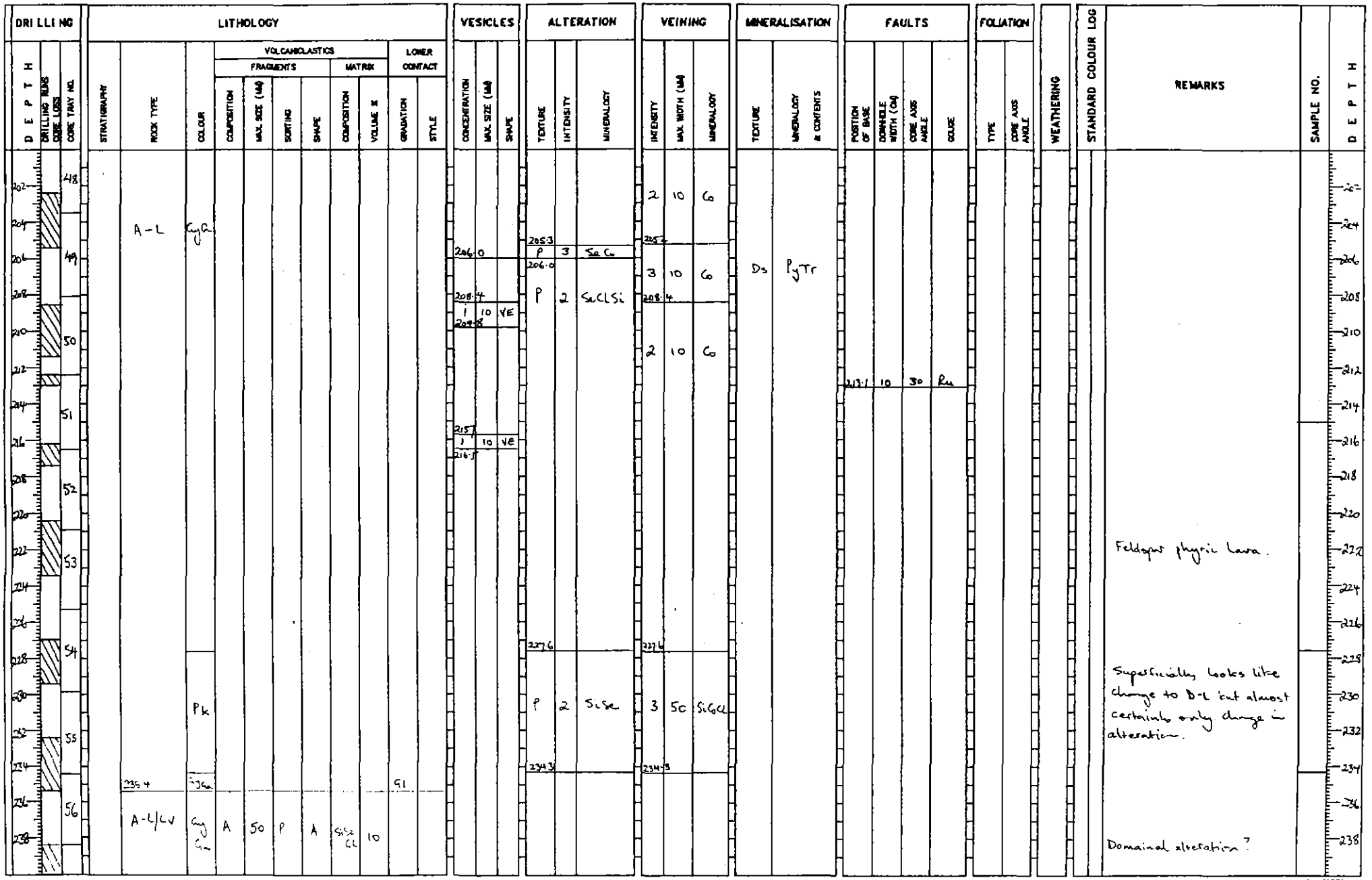
DIAMOND DRILL LOG



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DIAMOND DRILL LOG

HQ / NQ

DRILLING			LITHOLOGY										VESICLES			ALTERATION			VEINING			MINERALISATION		FAULTS				FOLIATION					
DEPTH	DRILLING LOSS / CORE LOSS	CORE TRAY NO.	STRATIGRAPHY	ROCK TYPE	COLOUR	VOLCANICLASTICS: FRAGMENTS: COMPOSITION	VOLCANICLASTICS: FRAGMENTS: MAX. SIZE (MM)	VOLCANICLASTICS: FRAGMENTS: SORTING	VOLCANICLASTICS: FRAGMENTS: SHAPE	VOLCANICLASTICS: MATRIX: COMPOSITION	VOLCANICLASTICS: MATRIX: VOLUME %	LOWER CONTACT: GRADATION	LOWER CONTACT: STYLE	CONCENTRATION	MAX. SIZE (MM)	SHAPE	TEXTURE	INTENSITY	MINERALOGY	INTENSITY	MAX. WIDTH (MM)	MINERALOGY	TEXTURE	MINERALOGY & CONTENTS	POSITION OF BASE	DOWNHOLE WIDTH (CM)	CORE AXIS ANGLE	GOUGE	TYPE	CORE AXIS ANGLE	WEATHERING	STANDARD COLOUR LOG	REMARKS	SAMPLE NO.	DEPTH
241.0														244.0																				
														3	5	V																	
242		57		A-L	Gy Pk									242.0			P	1	Si Se Cl	2	10	G	Ds	Py Tr								Not prominently Fd phyric		242
244				245.2								G1																						244
246		58		A-L V	Gy Pk	A	50	P	V	Si Se Cl	10	S																				Prominently Fd phyric.		246
248				248.0																														248
250		59		A-L	Gy Pk							G1																						250
252				251.9																					252.6	1	10	Sc Pu						252
254		60		A-L V	Gy Pk	A	50	P	V	Si Se Cl	10	G1																				Variably altered feldspar phyric A-D? lava.		254
256				253.9																												Locally feldspars are prominently pink.		256
258		61		A-L	Gy Pk -Pk												P	1	Si Se															258
260																																		260
262		62																														TS 622297 263.5m		262
264																																		264
266				266.5								S					257.8 P	2	Si Se															266
268		63		A-L	Gy Pk												264.5															Very sharp alteration (?) boundary only?		268
270																				268.6														270
272		64															P	1	Si Se Cl	1	5	Si G										Very prominent (pink) feldspar. ≤2mm.		272
274																	274.9																	274
276				276.0								G1																				from fd phyric 276		276
278		65		A-L	Gy Pk																											Weakly fd phyric		278

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HOLE No. MAC 36

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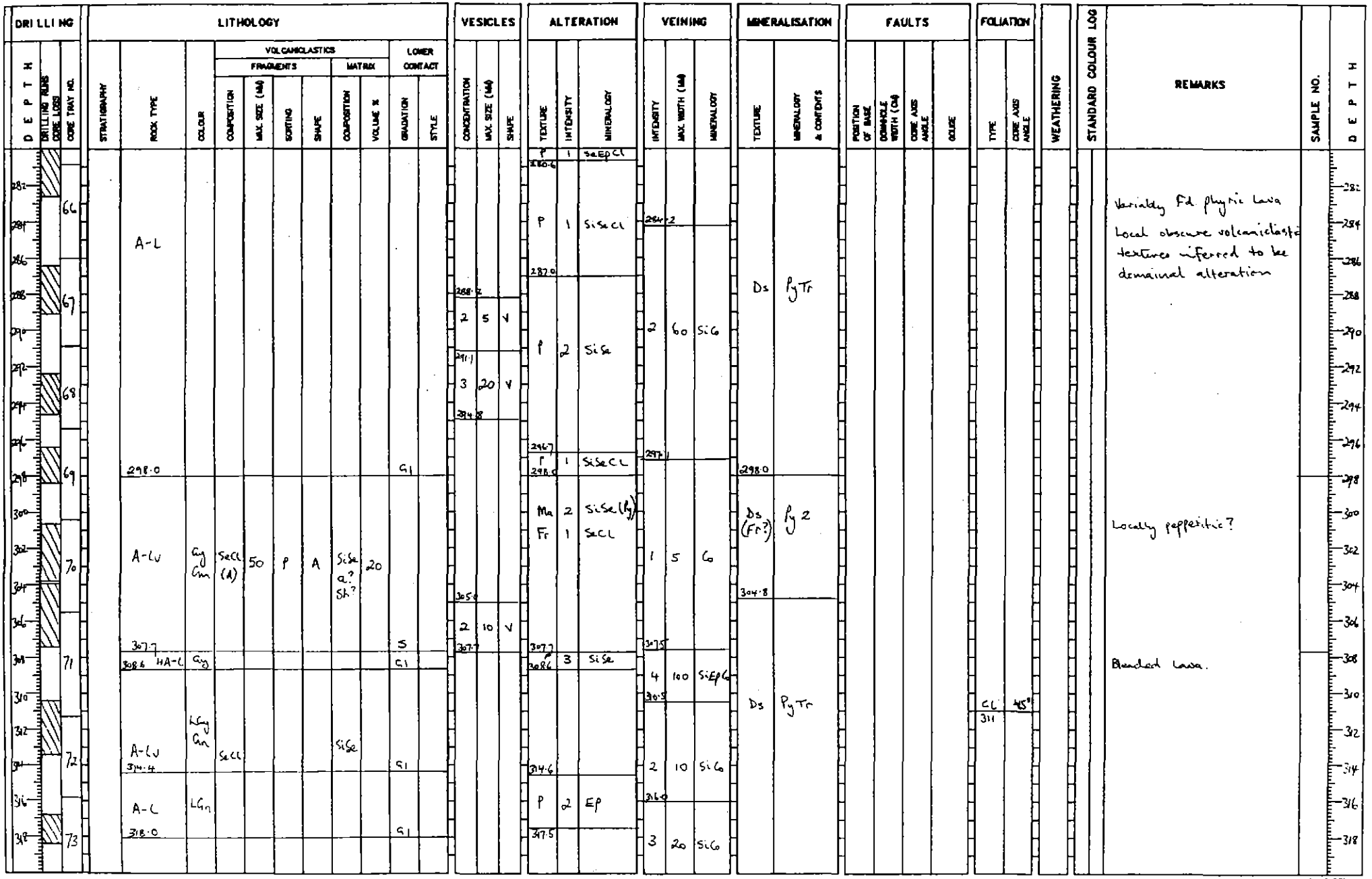
DIAMOND DRILL LOG



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DIAMOND DRILL LOG

HOLE No. MAC36
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Drilling

Depth (m)	Core tray no.
322–324	74
328–330	75
332–334	76
338–340	77
344	78
350	79
356	80

Lithology

To depth	Rock type	Colour	Fragments: Composition	Fragments: Max size (mm)	Fragments: Sorting	Fragments: Shape	Matrix: Composition	Matrix: Volume %	Lower contact: Gradation	Lower contact: Style
323.1	A-L/Lv	LGy Gn							G1	
325.3	A-Lv	Gy Gn	A	40	P	A	SiSe Py	20	G1	
328.3	A-L	Gy Gn							G1	
328.8	A-Lv	Gy	A	30	P	A	SiSeCy	20	G1	
339.3	A-L/Lv	Gy Gn							G1	
341.7	A-Lv	Gy Gn	A	60	P	A	SiSe	20	G1	
	A-L/Lv	Gy Gn								

Vesicles

Depth	Concentration	Max size (mm)	Shape
from 328.8	1	10	V

Alteration

To depth	Texture	Intensity	Mineralogy
325.9	P	1	SiCl
328.3	Pa	3	Ep
328.8	Ma	3	SiSe
331.7	Pa	3	Ep
335.4	P	1	SiSeCl
336.?	P	2	Ep
336.6	[illegible]	[illegible]	Si
338.2	Pa	3	Ep
341.2	P	2	SiSeCl
	Pa	2	Ep
	P	1	SiSeCl

Veining

To depth	Intensity	Max width (mm)	Mineralogy
323.0			
334.6	2	5	SiCo
336.1	4	200	SiCoEp (Tr?)
344.7	1	5	SiEp
347.2	2	10	SiEp
355.2	1	3	SiCo
	2	10	SiCo

Mineralisation

To depth	Texture	Mineralogy & contents
323.1		
325.3	Ds / Ds	Py 2 / Sp Tr
328.4	Ds	Sp Tr
328.8	Ds Va	Sp 3-5
337.9	Ds	Sp Tr
341.1	Ds Va	Sp 2-3
347.2	Ds	Py Sp Tr
	Ds	Py Tr

Remarks

weakly domainaly altered Lava? Fd phyric

Sphalerite dissem assoc w. 1) Patchy epidote 2) Dk gy SiSe matrix to apparent fragmentals 3) SiEp veins

Locally domainaly altered Lava

TS 622298 338.0m

Locally domainaly altered Lava.

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DIAMOND DRILL LOG

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DRILLING			LITHOLOGY									VESICLES			ALTERATION			VEINING			MINERALISATION		FAULTS				FOLIATION					
DEPTH	DRILLING RUNS / CORE LOSS	CORE TRAY NO.	STRATIGRAPHY	ROCK TYPE	COLOUR	VOLCANICLASTICS: FRAGMENTS: COMPOSITION	FRAGMENTS: MAX. SIZE (MM)	FRAGMENTS: SORTING	FRAGMENTS: SHAPE	MATRIX: COMPOSITION	MATRIX: VOLUME %	LOWER CONTACT: GRADATION	LOWER CONTACT: STYLE	CONCENTRATION	MAX. SIZE (MM)	SHAPE	TEXTURE	INTENSITY	MINERALOGY	INTENSITY	MAX. WIDTH (MM)	MINERALOGY	TEXTURE	MINERALOGY & CONTENTS	POSITION OF BASE	DOWNHOLE WIDTH (CM)	CORE AXIS ANGLE	GOUGE	TYPE	CORE AXIS ANGLE	WEATHERING	STANDARD COLOUR LOG	REMARKS	SAMPLE NO.	DEPTH
362		81																		341.1														362
364				A-L/Lv													345.2			3	10	C6												364
366		82																		366.4														366
368																	P	1	SiSeCl	2	5	C6	Ds	PyTr	367.5	320	2°	R-G						368
370				369.7								C2		369.7																				370
372		83		A-Lv	Gy Grn	A	40	P	V	SiSe CC	10																						Mere convincingly volcaniclastic but still bulk may be dominantly altd lava		372
374																																		374
376		84																																376
378																				378.5														378
380		85																		3	10	SiC6												380
382																																		382
384				384.0								C2																						384
386		86												1	20	V																		386
388																				388.9														388
390				A-L	Gy Grn																														390
392		87																		2	10	C6												392
394																				394.0														394
396		88																		3	10	C6												396
398																	397.7																	398
																	Pa	2	ep															

SAMPLE NO.

TS 622299 — 390.5m

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DIAMOND DRILL LOG

DRILLING			LITHOLOGY										VESICLES			ALTERATION			VEINING			MINERALISATION		FAULTS				FOLIATION					
DEPTH	DRILLING LOSS	CORE TRAY NO.	STRATIGRAPHY	ROCK TYPE	COLOUR	VOLCANICLASTICS: FRAGMENTS: COMPOSITION	FRAGMENTS: MAX. SIZE (MM)	FRAGMENTS: SORTING	FRAGMENTS: SHAPE	MATRIX: COMPOSITION	MATRIX: VOLUME %	LOWER CONTACT: GRADATION	LOWER CONTACT: STYLE	CONCENTRATION	MAX. SIZE (MM)	SHAPE	TEXTURE	INTENSITY	MINERALOGY	INTENSITY	MAX. WIDTH (MM)	MINERALOGY	TEXTURE	MINERALOGY & CONTENTS	POSITION OF BASE	DOWNHOLE WIDTH (CM)	CORE AXIS ANGLE	COLOUR	TYPE	CORE AXIS ANGLE	WEATHERING	STANDARD COLOUR LOG	REMARKS	SAMPLE NO.	DEPTH
402		89														403.9																		402
404																P	1	SiSeCl	3	10	G												404
406		90		407.0								92				407.0								407.5	150	57	Ru						406
408																Ma	2	SiSe															408
410																Fr	2	SeCl															410
412		91		A-Cu/l	Gy Gn	A	40	P	V	SiSe Cl	25														415.2	540	?	Ru						412
414																																	414
416		92														417.3							Ds	Cy Tr									416
418																P	3	SiSe														Prob. largely domainal alta + zone of faulting	418
420		93														421.1																	420
422																Ma	2	SiSe															422
424		94														Fr	2	SeCl															424
426																426.0																	426
428		95														P	2	SiSe						428.7	1070	5	Ru/In						428
430																																	430
432		96																						432.2	180	?	Ru						432
434																								433.6	40	?	Ru						434
436		97		436.8								5				436.8			436.0					436.3	10	?	Ru						436
438																			2	10	G												438

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DIAMOND DRILL LOG

HOLE No. MAC36

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DATE 2-3-94

Drilling

Depth	Core tray no.
442	98
444	
446	99
448	
450	100
452	
454	
456	101
458	
460	102
462	
464	
466	103
468	
470	104
472	
474	
476	105
478	

Lithology

Stratigraphy	Rock type	Colour	Fragments: Composition	Max. size (mm)	Sorting	Shape	Matrix: Composition	Volume %	Lower contact: Gradation	Style
	A-L	GyGn								
	456.2								S	
	Y-flv	GyGn	DA	10	m	SR	~	50	S	
	457.1									
	B-L	Gy Gn								
	463.6									
	B-L/Lv	Gy Gn								
	467.2									
	av/Lv?	Gy -Gy Gn	A							
	472.7									
	B-L/Lv	Gy Gn								

Vesicles

Depth	Concentration	Max. size (mm)	Shape
457.1	2	10	S
463.6			
475.0	1	5	V

Alteration

Depth	Texture	Intensity	Mineralogy
to 455.0	P	1	SiSeCL
455.0	P	1	SeCL
	V	1	Ep
468.4	Pa	2	Ep
	L	3	SiSe
	L	1	SiSeCL
472.2	P	1	SiSeCl

Veining

Depth	Intensity	Max. width (mm)	Mineralogy
441.8	3	10	Co
467.4	2	10	Co
477.7	3	10	Co

Mineralisation

Texture	Mineralogy & contents
Ds	PyTr

Faults

Position of base	Downhole width (cm)	Core axis angle	Gouge
440.5	190	30°	Ru
443.5	120	5	Ru
467.8	10	?	Ru
477.6	120	?	Ru

Foliation

Type	Core axis angle
CL	25°
471	
475.8	30°
So	

Weathering

Standard colour log

Remarks

Locally feldspar phyric

Stockwork Co veins ≈ 5mm. Irregular discontinuous veins.

TS 122300
459.7m

An obscure interval - some definite flv but av may be sheared altered A-L

Locally fd phyric

Sample no.

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DIAMOND DRILL LOG

HOLE No. MAC36

GEO. SR

DATE 8-3-94

Drilling

Depth	Core tray no.
482	106
486	107
490	108
494	109
499	110
503	111
509	112
514	113
519	114

Lithology

Depth (base)	Stratigraphy	Rock type	Colour	Fragments composition	Max size (mm)	Sorting	Shape	Matrix composition	Volume %	Lower contact gradation	Lower contact style
488.3		B?-L/Lv								S	c 40°
488.7		?-Lv	LGyPk	DA	20	m	V	a	30	S	C
505.9		A-Lv	DGn Gy	D? A?	40	P	V	SiSe	20	S	20°
510.7		A-L	Gy Gn							Gl	
512.4		D-L	Pk							S	
513.9		A?-L/Lv	Gy Gn							S	
		A-L/Lv	Gy Gn	FP	50	P	V	SiSe CL	20		

Vesicles

Depth	Concentration	Max size (mm)	Shape
481.5			

Alteration

Depth (base)	Texture	Intensity	Mineralogy
488.3	P	1	SiSeCL
493.0	P	1	SiSe
504.4	P	1	SiCLSe
510.7	L / L	1 / 3	SiSeCL / CL
512.4	P	1	SiSe
513.9	P	1	SeCo
	L / P	3 / 1	Ep / SiSeCL

Veining

Depth (base)	Intensity	Max width (mm)	Mineralogy
496.0	3	10	Co
508.4	2	10	Co
511.0	3	40	SiCoCL
512.4	4	40	SiCoCL
519.5	3	30	SiCoCL

Mineralisation

Depth (base)	Texture	Mineralogy & contents
488.3	Ds	PyTr
488.7	Ds	Py 2-3
509.1	Ds	PyTr
509.5	Ds	Py 3
	Ds	PyTr

Faults

Position of base	Downhole width (cm)	Core axis angle	Gouge
493.2	400	5	RuSC
498.9	190	2	RuSC
504.8	40	10	RuRu

Remarks

Mostly volcaniclastic at base. Uncertain composition

Common pink felsic like frags. Also monotonous monomict volcaniclastic Usually feldspar phyric

Possibly just alteration change

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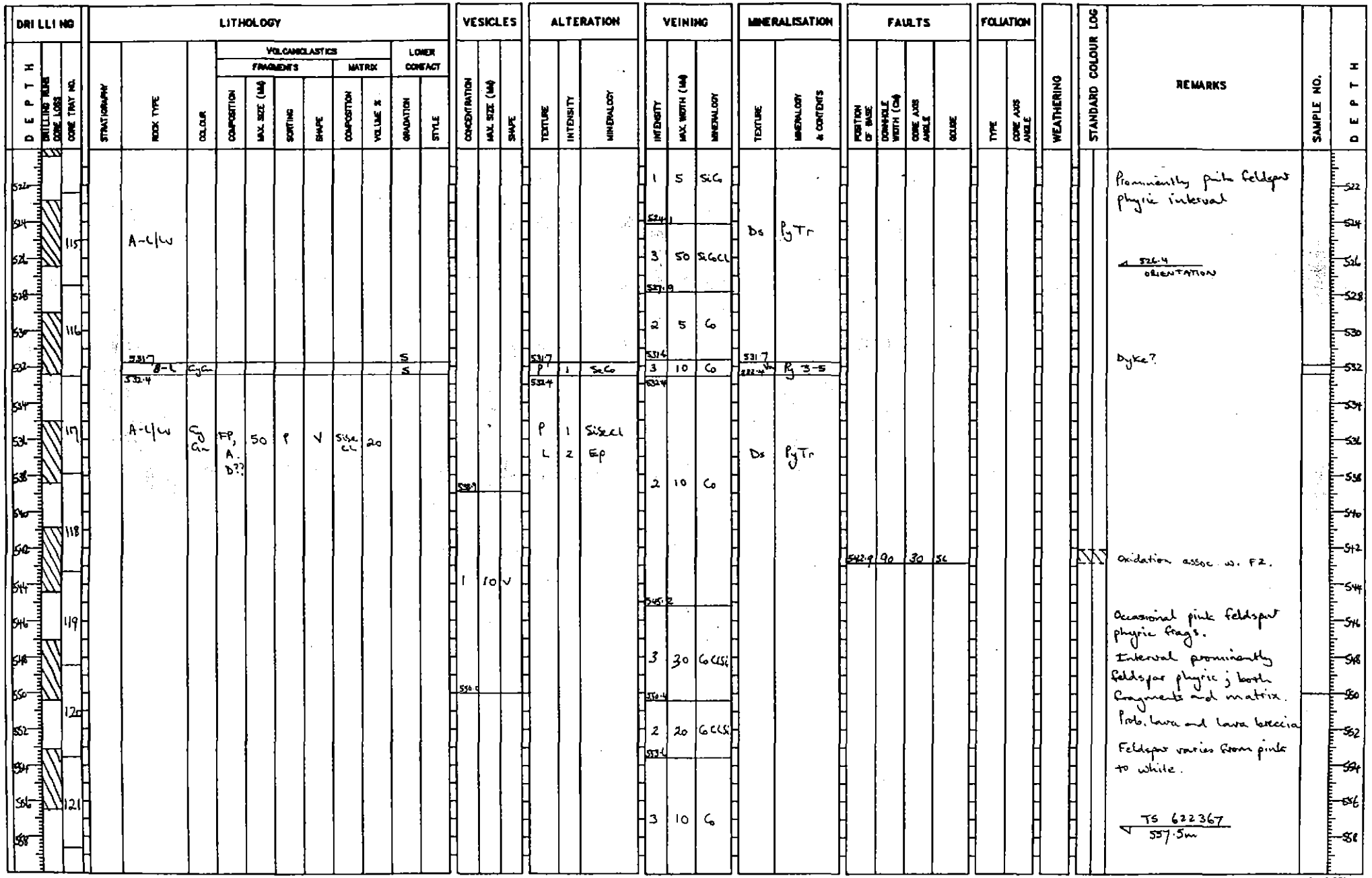
DIAMOND DRILL LOG



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DIAMOND DRILL LOG

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DRILLING

Depth	Core tray no.
562	122
564	
566	123
568	
570	
572	124
574	
576	125
578	
580	
582	126
584	
586	127
588	
590	128
592	
594	
596	129
598	

LITHOLOGY

Lower contact depth	Stratigraphy	Rock type	Colour	Fragments: Composition	Fragments: Max. size (mm)	Fragments: Sorting	Fragments: Shape	Matrix: Composition	Matrix: Volume %	Lower contact: Gradation	Lower contact: Style
566.9										G2	
575.5		A-Lv	DGn	A	40	P	AE	SiSe CL	30	G1	
589.9		A-L/Lv	DGn	/						F	
		D-L	Pk-LGy								

VESICLES

Interval	Concentration	Max. size (mm)	Shape
574.8 – 581.9	3	5	E

ALTERATION

Interval	Texture	Intensity	Mineralogy
566.9 – 589.9	P	2	SeCL
from 589.9	P	2	SiSe

VEINING

Interval	Intensity	Max. width (mm)	Mineralogy
566.6 – 570.3	2	10	SiCo
570.3 – 578.0	1	5	SiCo
578.0 – 593.0	2	10	SiCo
593.0 – 598.0	3	10	Co

MINERALISATION

Texture	Mineralogy & contents
Ds	Py Tr

FAULTS

Position of base	Downhole width (cm)	Core axis angle	Score
572.2	1	30	Pu
577.8	1	10	SL
580.7	110	?	PuRu
586.4	20	35	PuRu
589.9	5	40	CoSL

FOLIATION

Depth	Type	Core axis angle
574.0	CL	40°

WEATHERING

STANDARD COLOUR LOG

REMARKS

565.4 ORIENTATION

Not prominently feldspar phyric.

More coherent version of A-Lv above.

Volcaniclastics may only be domainal alteration

Pale aphyric lava or intrusive

SAMPLE NO.

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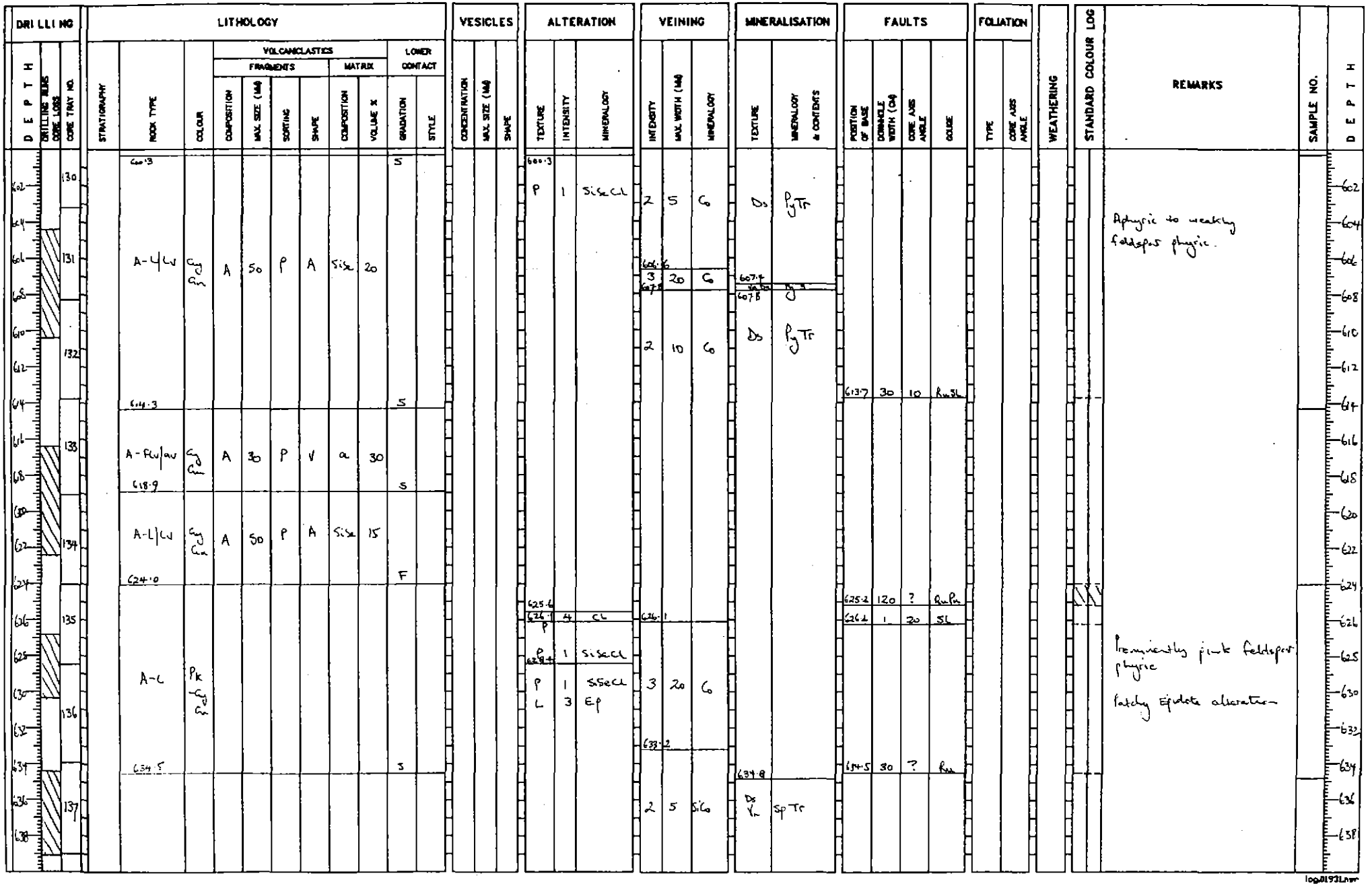
DIAMOND DRILL LOG



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DIAMOND DRILL LOG

HOLE No. MAC 36

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Depth	Core tray no.	Stratigraphy	Rock type	Colour	Fragments: Composition	Fragments: Max. size (mm)	Fragments: Sorting	Fragments: Shape	Matrix: Composition	Matrix: Volume %	Lower contact: Gradation	Lower contact: Style	Vesicles	Alteration: Texture	Alteration: Intensity	Alteration: Mineralogy	Veining: Intensity	Veining: Max. width (mm)	Veining: Mineralogy	Mineralisation: Texture	Mineralisation: Mineralogy & contents	Faults	Foliation	Weathering	Standard colour log	Remarks	Sample no.
641.5	138		641.5								G1			641.5													
641.5–649.3	139		A-Lv/bv	Gy Gn	Fp	100	P	V	SiSe	(20)				Fr L	1 2	SiSe Ep	2	5	Sc	Ds Vn Ds	SpCucpy Tr Py Tr					Peppenite or hydraulic bx. Coarse white Fdspar phenos. 643.9m Ts 622368	
649.3			649.3								G2			649.3													
649.3–670.5	140, 141, 142, 143		A-L	Gy Gn										P L	1 2	SiSe Ep										Common patchy epidote. Coarsely feldspar phyric Lava	
670.5			670.5								S			670.5						670.5							
670.5–674.2	144		A-L	DGy							G1			P D	3 1	Si Ep				Ds	Py Tr					Aphyric Lava	
674.2			674.2											674.2													
675.9–676.2																				Vn	Sp						
674.2–	145		A-L/Lv	GyGn	Fp	50	P	A	SiSe	(20)										Ds	Py Tr					Coarse white Fd. phenos Lava w. common apparent fragmental textures!	

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Aberfoyle Resources Limited

EXPLORATION DIVISION

HOLE No. MAC 56

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GEO. SR

DATE 1-3-94

808047

DIAMOND DRILL LOG

DRILLING			LITHOLOGY										VESICLES			ALTERATION			VEINING			MINERALISATION		FAULTS				FOLIATION						
DEPTH	DRILLING RUNS	CORE LOSS	CORE TRAY NO.	STRATIGRAPHY	ROCK TYPE	COLOUR	VOLCANICLASTICS FRAGMENTS COMPOSITION	FRAGMENTS MAX. SIZE (MM)	FRAGMENTS SORTING	FRAGMENTS SHAPE	MATRIX COMPOSITION	MATRIX VOLUME %	LOWER CONTACT GRADATION	LOWER CONTACT STYLE	CONCENTRATION	MAX. SIZE (MM)	SHAPE	TEXTURE	INTENSITY	MINERALOGY	INTENSITY	MAX. WIDTH (MM)	MINERALOGY	TEXTURE	MINERALOGY & CONTENTS	POSITION OF BASE	DOWNHOLE WIDTH (CM)	CORE AXIS ANGLE	COLOUR	TYPE	CORE AXIS ANGLE	WEATHERING	STANDARD COLOUR LOG	REMARKS	SAMPLE NO.	DEPTH
688			146																																688
690			147		689.1								S	40°				683.8			689.1					683.4	1	5	Pu						690
692					A-L	Gn												P	1	Si Se Cl	3	5	Co	Ds	Py Tr								massive aphyric to weakly feldspar phyric lava		692
694			148															Vn	1	Ep	1	5	Si Ep Co											694
696																					697.5														696
698																					2	5	Co												698
700			149																		699.0														700
702																					1	5	Si Ep Co												702
704					704.4								3	60°				704.4			3	40	Si Co Cl 70° CA												704
706			150																		702.1														706
708																		Mx	2	Si Se	2	5	Co											Prominent white feldspar phyric volcaniclastic.		708
710			151		A-Lv	Gn	FP	50	P	V	Si Se	25						Fr	1	Si Se Cl															710
712																																			712
714			152																		717.2														714
716																					1	2	Co												716
718																																			718

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EXPLORATION DIVISION

HOLE No. MRC 86

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GEO. SR

DATE 10-3-94

803048

DIAMOND DRILL LOG

DRILLING			LITHOLOGY										VESICLES			ALTERATION			VEINING			MINERALISATION		FAULTS				FOLIATION		WEATHERING	STANDARD COLOUR LOG	REMARKS	SAMPLE NO.	DEPTH
DEPTH	DRILLING RUNS / CORE LOSS	CORE TRAY NO.	STRATIGRAPHY	ROCK TYPE	COLOUR	VOLCANICLASTICS: FRAGMENTS COMPOSITION	FRAGMENTS MAX. SIZE (MM)	FRAGMENTS SORTING	FRAGMENTS SHAPE	MATRIX COMPOSITION	MATRIX VOLUME %	LOWER CONTACT GRADATION	LOWER CONTACT STYLE	CONCENTRATION	MAX. SIZE (MM)	SHAPE	TEXTURE	INTENSITY	MINERALOGY	INTENSITY	MAX. WIDTH (MM)	MINERALOGY	TEXTURE	MINERALOGY & CONTENTS	POSITION OF BASE	DOWNHOLE WIDTH (CM)	CORE AXIS ANGLE	GOUGE	TYPE	CORE AXIS ANGLE					
722		153																																722
724				A-Lv													Ma 2	SiSe				Ds	Py Tr											724
726		154															Fr 1	SiSeCl	1	2	Co													726
728												Gl																				TS 622369 725·8		728
730				730·1													730·1			730·4			730·1										730
732		155															L 3	SiSePy				Ds	Py 1-2									Appears to be largely aphyric although ghosted fdspars suggest some composition as above and below.		732
734																	L 2	SiSe						734·6	1	50	Pu Sc					Zones of dk gy SiSePy HA with sharp boundaries		734
736		156		HA/A-L	Gy-Grn														2	5	G			735·0	1	30	Sc							736
738				739·6													739·6			739·6			739·6										738
740				A-Lv	Gy	FP	50	P	V	SiSe	25	S					Ma 1	SiSe				Ds	Py 1-2									As for below 743·1m.		740
				741·9													Fr 1	SiSeCl	1	10	Co	DsVn	Py 1-2											
742		157		743·1 qv	Gy	a		W				Gl					P 1	SeCl				Ds	Py Tr									Massive ash		742
																	743·1						743·1										
744																																ORIENTATION		744
746																	Fr 1	SeCl	1	2	Co											Local HA exotic fragts.		746
748		158															LFr 3	SiSePy				Ds	Py 1-2											748
																	Ma 2	SiSe				LFr												
750				A-L/bv	Gy-Grn	FP	200	P	V	SiSe a?	25								1	10	SiCo														750
752		159																																752
754																																		754
756																																		756
758		160																																758

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808049

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EXPLORATION DIVISION

DIAMOND DRILL LOG

HOLE No. MA-36

GEO. SK

DATE 10-3-..

DRILLING

Depth (m)	Core tray no.
762–798	161, 162, 163, 164, 165, 166, 167

LITHOLOGY

To depth	Stratigraphy	Rock type	Colour	Fragments: composition	Max. size (mm)	Sorting	Shape	Matrix: composition	Volume %	Lower contact: gradation	Style
763.4										G1	
771.1		av/Flv	Gy Gn	A?	3	W	r?	a		G1	
786.8		YA-Flv/clv	Gy Gn -Gy	FP HA	40	m	v	a	40	G1	
787.8		av/Flv	Gy	a, HA	3	w				G1	
790.5		YA-Flv/clv	Gy	HA, A, B?	20	m	v	a SiSe	40	S	
791.4		av	Gy	a	1	w				S	
792.2		Sh/Ch/av	Gy-Bk	a	1	w				S	
795.0		av/Sh	Gy	a	1	w				S	
		B?-C									

VESICLES

From depth	Concentration	Max. size (mm)	Shape
795.0	1	10	S

ALTERATION

Interval	Texture	Intensity	Mineralogy
763.4–771.3	P	1	SiSeCl
	L	2	SiSePy
771.3–782.5	P	1	SiSeCl
	LFr	3	SiSePy
782.5–785.1	P Vn	2	SiSePy
785.1–787.8	P	3	SiSePyCo
787.8–790.5	P	3	SiSeClPyCo
790.5–792.2	P	4	SiSePyCo
792.2–795.0	P	1	SeClCo
795.0–	P	3	SiClCo

VEINING

Interval	Intensity	Max. width (mm)	Mineralogy
763.4–785.0	1	2	SiCo
785.0–	2	5	SiCo

MINERALISATION

Interval	Texture	Mineralogy & contents
–769.5	Ds	Py 1-2
769.5–771.4	Ds	Py 3-5
771.4–782.5	Ds	Py 1-2
782.5–785.1	Ds Vn	Py 3-5 Sp Tr
785.1–787.8	Ds	Py 5
787.8–789.0	Ds	Py 3
789.0–792.2	Ds	Py 5
792.2–795.0	Ds	Py 1-2
795.0–	Ds Vn	Py 1-2

FAULTS

Position of base	Downhole width (cm)	Core axis angle	Gouge
792.4	1	50°	Pu

FOLIATION

Depth	Type	Core axis angle
764.5	Bd	50°
770	Bd	60°
791.6	Bd	10°
792.5	Bd	50°
793.0		40°
794.5	Bd	60°

WEATHERING

STANDARD COLOUR LOG

REMARKS

Alteration gradually increases with depth.

Bk. sphalerite in SiCo veins to 5mm.

TS 622370 784.4m

TS 622371 791.5m

Altered Lower Basalt?

ORIENTATION 79?.?

SAMPLE NO.

lo001931.wmf

Aberfoyle Resources Limited

EXPLORATION DIVISION

808050

DIAMOND DRILL LOG

HOLE No. MAC 36

GEO. SR

DATE 10-3-94

DRILLING

DEPTH	DRILLING RUNS / CORE LOSS	CORE TRAY NO.
800.5–802	(hatched)	168
802–808		169
808–814.4	(hatched)	170

LITHOLOGY

From	Rock Type	Colour	Fragments: Composition	Fragments: Max. Size (mm)	Fragments: Sorting	Fragments: Shape	Matrix: Composition	Matrix: Volume %	Lower Contact: Gradation	Lower Contact: Style
800.5	av/sh	Gy Gn	a		w				G2	
806.4	Sh/Ss	DGy								
808.0	av.	GyGn	a		w				S/W	
809.3	Sh/Ss	Bk								
809.8	av/Ss	GyGn	a		w				S	
811.1	Sh/Ss	Bk								

VESICLES / ALTERATION

Section	From	Entries
Vesicles	800.5	
Alteration	800.5	

VEINING

From	Intensity	Max. Width (mm)	Mineralogy
800.5	3	10	Ca
801.1	2	10	Ca
812.1	3	300	SiCa

MINERALISATION

From	Texture	Mineralogy & Contents
800.5	Ds	Py 3-5
809.8	Ds	Py 1-2
811.1	Ds	Py 5

FAULTS

Position of Base	Downhole Width (cm)	Core Axis Angle	Gouge

FOLIATION

Depth	Type	Core Axis Angle
802	Bd	30°
805	Bd	30°
809.5	Bd	30°

WEATHERING

STANDARD COLOUR LOG

REMARKS

Bedding below 800.5 is strongly contorted on the small scale.

814.0m – Fold hinge

E.O.H. 814.4m

SAMPLE NO.

DEPTH: 802, 804, 806, 808, 810, 812, 814, 816, 818, 820

Aberfoyle Exploration

GEOCHEMICAL SAMPLE LEDGER — PETROLOGICAL SAMPLES

PROJECT: MACKINTOSH

BSS SIEVE SIZE CODE - MESH NUMBER
A 200 D 80 G 30
B 150 E 60 H 20
C 100 F 40 T = TOTAL

SAMPLE TYPE CODE
☐ OXIDIZED PRODUCTS O
☐ FRESH ROCK R
☐ STREAM SEDIMENTS S
☐ WEATHERED BEDROCK W
☐ SURFACE TRANSPORTED T
☐ RESIDUAL SOIL E
☐ MINE DUMP M

CARD PUNCH: YES ☐ NO ☐ PRINT: YES ☐ NO ☐ VERIFY

DATE: 11-3-94

SHEET: 1 of 1

EASTINGS	NORTHINGS	SAMPLE NUMBER	DEPTH in CMS	SIZE FRACTION	Sample Type	METAL VALUES PPM	GEOLOGICAL LOG
MAC 36	128·4	622293					Dacite? Lava
	139·2	622294					Andesite? Lava
	153·0	622295					Andesite? Lava
	198·2	622296					Amygdaloidal A-L?
	263·5	622297					Andesite Lava.
	338·0	622298					Epidote altered A+L/Lv
	390·5	622299					Andesite? Lava.
	459·7	622300					Basalt? Lava
	557·5	622367					Andesite Lava bx
	643·9	622368					Andesite pepperite?
	728·8	622369					silicic andesite/dacite bx
	784·4	622370					altered polymict epiclastic
	791·5	622371					bedded silicified ash.

OPERATOR | COMPUTER | CHECK | PLOTTER | DATE

T-0088

TC 65

806052

PETROGRAPHIC REPORT

Rocks from South, Southwest and East of Mt Charter
MAC 36

Attn: Steve Richardson 17/4/94

by
Anthony J. Crawford
Geology Department
University of Tasmania

808053

SAMPLE: MAC 36 622293 128.4m

SUMMARY: This sample was a sparsely plagioclase-phyric glassy probably dacitic lava that has suffered moderate sericite-silica hydrothermal alteration, leading to total recrystallization of the formerly glassy groundmass.

HAND SPECIMEN:

This is a grey-green intermediate to felsic probably formerly glassy lava with dark olive spots,1mm across that don't appear to be either vesicle-filling or after small phenocrysts. They seem to define a weak flow(?) orientation, which is cut at high angles by hairline dark chloritic (?) fractures. The latter are transected by a set of narrow calcite veinlets that parallel the flow(?) orientation.

THIN SECTION DESCRIPTION:

This sample is a strongly sericite-silica-altered formerly sparsely plagioclase-phyric dacitic glassy lava. Plagioclase phenocrysts usually less than 1mm long made up about 3-5 modal% of this rock, and show a weak flow alignment; they are now represented by clots of colourless to pale yellow-green sericite, and former crystal shapes are often obliterated. There were a few former phenocrysts or microphenocrysts of FeTi oxide, and these are now altered to dark leucoxenitic material.

The once-glassy groundmass has devitrified, then strongly recrystallized to a patchy medium-grained quartzo-feldspathic mosaic with larger anhedral quartz grains growing in strongly sericitized albite, the whole lot being pervaded by discontinuous trails of sericite flecks and veinlets. The latter define a weak foliation evident in thin section but not obvious in the hand specimen. Very fine-grained magnetite or pyrite is quite common disseminated throughout the recrystallized groundmass. Narrow quartz-chlorite veinlets are cut by slightly wider calcite veinlets. Neither are associated with any pyrite or ore minerals.

The significant alteration of this sample is probably due to localized hydrothermal alteration rather than pervasive regional burial metamorphism.

808054

SAMPLE: MAC 36 622294 139.2m

SUMMARY: This sample is a low-grade burial metamorphosed and moderately carbonate-altered formerly glassy plagioclase+ augite +FeTi oxide-phyric andesitic lava with common apatite microphenocrysts.

HAND SPECIMEN:

This is a dark grey-green formerly plagioclase+augite-phyric andesitic lava with streaky and patchy calcite alteration. Former mafic phenocrysts are clearly chlorite-altered, and plagioclase phenocrysts are altered to sericite and/or calcite.

THIN SECTION DESCRIPTION:

This sample is plagioclase-phyric andesite lava that has suffered moderate carbonate alteration. Former plagioclase phenocrysts to about 2mm long maximum make up around 10 modal% of the rock, and are totally replaced by massive calcite and/or very fine-grained sericite aggregates. Much less abundant were former augite phenocrysts, which are now thoroughly replaced by green chlorite. Former FeTi phenocrysts were not uncommon, and are either replaced by messy brown leucoxene, or by clots of small very well-crystallized crystals of sphene. This sample contains a notable number of apatite microphenocrysts.,

The groundmass of this lava was probably originally vitrophyric to glassy textured. It now consists of a strongly altered intergrowth of patchy messy buff-coloured calcite, probably after albite, and larger anhedral quartz grains and aggregates. A pervasive but not strongly developed mesh of sericite cuts the groundmass, and often contains streaks of chlorite intergrown with sericite. Veinlets of quartz-chlorite, or calcite are quite common, and calcite blebs and patches are common in the groundmass.

The alteration of this sample is probably more related to pervasive regional burial metamorphism than to local hydrothermal alteration, although carbonate is strongly developed. The abundance of apatite microphenocrysts may indicate affinities with the more shoshonitic lavas in the Hellyer region, and is a significant difference from the standard Que Footwall andesites.

SAMPLE: MAC 36 622295 153·0m

SUMMARY: This sample is a moderately hydrothermally-altered andesitic hyaloclastite or chill breccia derived from a plagioclase-phyric andesite lava.

HAND SPECIMEN:

This is a dark green-grey andesitic lava breccia with strong alteration of the matrix enhancing the contrast between fragments (mainly < 1cm long) and matrix.

THIN SECTION DESCRIPTION:

This sample is a strongly altered, weakly foliated andesitic hyaloclastite breccia. Fragments are more chloritic than the more silica-rich matrix, and most fragments, despite their alteration, retain a perlitic texture indicating that they were originally glassy. The andesitic lava was moderately plagioclase-phyric, with phenocrysts of albitized plagioclase to about 3mm across (mainly much smaller) being heavily calcite and sericite. A few calcite pseudomorphs after probable augite phenocrysts are present, and former FeTi oxide phenocrysts are leucoxene-altered.

The groundmass of the lava fragments has altered to a chlorite- and very fine-grained silica-dominated intergrowth with calcite and sericite defining perlitic cracks and cross-fractures, and also defining a moderately well-developed foliation. Matrix between fragments is almost unfoliated, and is composed of a heterogeneous sugary-textured quartzose intergrowth with common intergrown calcite and sericite, and minor disseminated pyrite. It is clearly a result of strong fluid interaction with the formerly glassy brecciated lava

This sample was a glassy andesitic hyaloclastite or chill breccia that has suffered moderate hydrothermal alteration. Chlorite-rich altered lava fragments developed a weak foliation during hydrothermal alteration, whereas the more silica-rich matrix resisted foliation development.

808056

SAMPLE: MAC 36 622296 198.2m

SUMMARY: This sample was a glassy moderately plagioclase-phyric andesitic lava; weak hydrothermal alteration (calcite-sericite) overprinted a chlorite-quartz assemblage in the groundmass.

HAND SPECIMEN:

This is a dark green-grey, more massive altered plagioclase-phyric andesitic lava very similar to the protolith (or less altered fragments in) of the previous sample.

THIN SECTION DESCRIPTION:

This sample is a moderately altered plagioclase-phyric andesitic lava originally composed of around 15 modal% plagioclase phenocrysts, and a few augite and FeTi oxide phenocrysts in a formerly glassy groundmass. The albitized plagioclase phenocrysts are to about 3mm long, and most are totally replaced by calcite and sericite. The few identifiable former augite phenocrysts are altered to chlorite, and FeTi oxide phenocrysts are altered to either leucoxene, or clots of small euhedral sphene crystals. A number of apatite microphenocrysts were noted in this sample.

The groundmass of this rock was almost certainly glassy to sparsely vitrophyric. In places, tiny albitized plagioclase microlites occur in altered glass, but throughout most of the slide the groundmass is now composed of an even-textured intergrowth of yellowish green chlorite, sugary anhedral quartz, and leucoxenitized former FeTi oxides. Patchy sericite and chlorite overprints the chlorite-quartz alteration assemblage in places. A few irregular vesicles are filled by chalcedonic silica.

This formerly largely glassy andesitic lava is very similar to the previous sample 622295, which autobrecciated, and subsequently altered more intensely than this more massive coherent lava. Alteration in this sample is weak hydrothermal alteration (calcite-sericite) over an earlier chlorite-quartz-dominated burial metamorphic alteration.

SAMPLE: MAC 36 622297 263·5m

SUMMARY: This sample is a quite strongly plagioclase-phyric burial metamorphosed dacitic to evolved andesitic lava.

HAND SPECIMEN:

This is a dark brown finely plagioclase+augite-phyric andesitic to dacitic lava.

THIN SECTION DESCRIPTION:

This sample is a quite strongly plagioclase-phyric lava of probably dacitic composition, with a formerly vitrophyric texture. Plagioclase phenocrysts make up around 20 modal% of the rock, and occur as single crystals, or commonly crystal clots to about 2mm across; they are totally albitized, but occasionally they contain small granular inclusions of yellowish epidote and green chlorite. Former augite phenocrysts are rather rare, (<2 modal%) and are replaced by green chlorite; common FeTi oxide microphenocrysts are replaced by brown leucoxenitic aggregates. Apatite microphenocrysts are present, but are not nearly as abundant as in sample 622294.

The groundmass of this sample was originally composed of a very fine-grained vitrophyric intergrowth of tiny plagioclase microlites set in glass. The glass has recrystallized to a very patchy but extremely fine-grained quartzo-feldspathic intergrowth from which blebs of anhedral, often multi-crystalline quartz up to about 0.2mm across are growing. Spots of green chlorite and leucoxenitized tiny FeTi oxides are common throughout the altered groundmass. The sample is cut by a few hairline quartz-calcite veinlets.

Alteration in this sample is not related to local hydrothermal system, but rather, is due to pervasive regional burial metamorphism at prehnite-pumpellyite facies. The sample is probably a dacite or evolved andesite composition.

808058

SAMPLE: MAC 36 622298 338.0m

SUMMARY: This sample is a very strongly epidote (± minor sphalerite)-altered plagioclase+augite+olivine-phyric evolved basaltic lava.

HAND SPECIMEN:

This is a very strongly altered andesitic (?) lava that shows intense zones of pale very fine-grained epidote alteration with occasional spots and streaks of deep red-brown sphalerite to several mm across.

THIN SECTION DESCRIPTION:

This sample in its least-altered parts is a texturally well-preserved plagioclase+augite-phyric andesitic to evolved basaltic lava. Small augite phenocrysts are fresh but fractured, and make up around 5 modal% of the rock. Smallish (<1.5mm long) albitized plagioclase phenocrysts are slightly more common, and often contain small inclusions of epidote. FeTi oxide microphenocrysts are leucoxenitized. A few subhedral shapes now composed of very fine-grained sugary silica may have been small olivine phenocrysts.

The groundmass of the best-preserved parts of this rock was clearly originally glassy to vitrophyric, with tiny plagioclase microlites set in glass. The latter has recrystallized to a fine-grained quartzo-feldspathic intergrowth with spotty epidote and chlorite.

The intensely epidotized areas of this sample consist of perfectly preserved phenocrysts of fresh augite, albitized and epidotized phenocrysts of plagioclase, leucoxene-altered FeTi oxide, and tension gashes and fractures filled by quartz and chlorite all set in a matrix of dense, fine-grained yellowish epidote that has replaced in toto the original groundmass. Reddish anhedral small aggregates of sphalerite often occur adjacent to the margins of the intensely epidotized zones.

The coexistence of olivine and plagioclase phenocrysts in this lava suggest that it was probably an evolved basalt composition that has been strongly altered in an oxidizing fluid regime with low carbonate activity. Such alteration is often channelized, and may indicate proximity to a fault.

808059

SAMPLE: MAC 36 622299 390·5m

SUMMARY: This sample was a moderately plagioclase-phyric glassy to vitrophyric-textured andesitic lava that has suffered weak hydrothermal alteration. producing a silica-chlorite-dominated assemblage.

HAND SPECIMEN:

This is a massive grey-green plagioclase-phyric andesitic lava not dissimilar to 622296.

THIN SECTION DESCRIPTION:

This sample is a quite strongly altered, plagioclase-phyric andesitic , sparsely vesicular lava with a formerly vitrophyric groundmass. Plagioclase phenocrysts make up about 10 modal% of this rock, and are all small (<1.5mm long) albitized crystals sometimes with a slight dusting of fine-grained sericite. There were probably a few former augite phenocrysts in this rock, but they are now replaced by quartz-chlorite-calcite intergrowths. Former FeTi oxide phenocrysts are not common, and are leucoxenitized.

Where best preserved, the groundmass of this sample consists of tiny albitized plagioclase microlites in a very fine-grained quartz-chlorite matrix after glass. However, the groundmass is extremely heterogeneous and contains abundant small pockets, discontinuous veins, and vesicle fillings composed of strained quartz. In some parts of the slide, small shear zones are defined by much more intense chlorite development and less sugary quartz than occurs in the remainder of the slide. Quartz-calcite veins transect all earlier alteration.

808060

SAMPLE: MAC 36 622300 459.7 m

SUMMARY: This sample is an augite+olivine±plagioclase-phyric basaltic lava typical of the Hellyer basalt; it shows a low-grade burial metamorphic overprint best demonstrated by sericitization of plagioclase and alteration of glassy mesostasis to silica and chlorite.

HAND SPECIMEN:

This is a mid-grey homogeneous fine-grained and finely-augite-phyric basaltic lava.

THIN SECTION DESCRIPTION:

This sample is an exceptionally well-preserved (texturally) finely porphyritic basaltic lava with pervasive low-grade burial metamorphic alteration at prehnite-pumpellyite facies. The sample is dominated by small (<1mm long) fresh subhedral augite phenocrysts that make up around 10 modal% of the sample and more commonly than not occur as clots of intimately intergrown crystals. Most augite phenocrysts show strong compositional zoning. Former olivine phenocrysts (~3-5 modal%) are now composed of sugary aggregates of chlorite and calcite. The few plagioclase microphenocrysts present are totally pseudomorphed by rather coarsely crystalline sericite.

The groundmass of this sample was composed originally of an intersertal aggregate of rather large plagioclase laths and smaller granular augite and altered equidimensional FeTi oxides, with glassy mesostasis. The latter has altered to chlorite and silica, and small anhedral blebs of quartz are common growing in the groundmass. As for the plagioclase microphenocrysts, the groundmass plagioclase laths are replaced by coarsely crystalline sericite.

This is a fairly typical, if not slightly evolved, Hellyer basaltic lava, with a typical regional burial metamorphic alteration overprint.

SAMPLE: MAC 36 622367 557·5m

SUMMARY: This sample is another plagioclase-phyric formerly glassy andesitic lava with a chloritized groundmass that has been flooded in places by strong silica-dominated alteration..

HAND SPECIMEN:

This is a dark grey-green massive plagioclase-phyric andesitic lava with irregular bleached patches to several cm across with considerably less chlorite development.

THIN SECTION DESCRIPTION:

This sample is a quite strongly plagioclase-phyric andesitic lava very similar originally to 622299. The sample consists of around 20 modal% of mainly small euhedral and subhedral albitized plagioclase phenocrysts that often occur in clots of 10 or more crystals. Many have a feint reddish tinge presumably due to submicroscopic hematite dust. A few small augite phenocrysts have been replaced by chlorite, and FeTi oxide microphenocrysts are all leucoxene-altered.

The less altered parts of the groundmass of this sample consist of a fine-grained chlorite-quartz intergrowth after glass. Small chlorite blebs are surrounded by rims of quartz giving the appearance of small vesicle-fillings. However, in large areas of the section, corresponding to the more bleached parts of the hand specimen, chlorite is considerably reduced in abundance, and the matrix is flooded by a fine-grained intergrowth of ragged quartz and feldspar, with common tiny dots of leucoxene. Common stylolitic seams of insoluble material indicate significant volume loss accompanied alteration of this sample.

SAMPLE: MAC 36 622368 643.9m

SUMMARY: This sample is moderately altered plagioclase-phyric andesitic lava breccia in which the inter-fragment matrix is composed of fine-grained epidote-quartz aggregates.

HAND SPECIMEN:

This is a strongly altered andesitic lava breccia or false breccia in which dark grey fragments of plagioclase-phyric andesite to several cm long are set in a cream-pink intensely altered matrix..

THIN SECTION DESCRIPTION:

This sample is quite distinctive petrographically, being a monomict lava breccia composed of fragments of moderately plagioclase-phyric formerly glassy andesitic lava, set in a matrix dominated by exceptionally fine-grained epidote-quartz intergrowths. The lava fragments are essentially identical to samples 622367 and 622299, being composed of about 15 modal% of small albitized plagioclase phenocrysts, often occurring in clots of more than 4 or 5 crystals, and often containing epidote granules, set in a recrystallized formerly glassy groundmass. Quite common small leucoxenitized FeTi oxide phenocrysts are present, and a few chloritized augite phenocrysts are also present. The latter is a formerly vitrophyric intergrowth of tiny albitized plagioclase microlites in a very even-textured fine-grained quartz-feldspar-chlorite intergrowth after glass.

The matrix between the lava fragments is composed of generally very fine-grained quartz-epidote intergrowths, and the more the epidote, the more opaque and isotropic becomes the matrix. The abundance of epidote in this sample relative to the other petrographically similar plagioclase-phyric andesitic lavas and lava breccias in this hole is interesting, and presumably indicates significantly more oxidizing fluids moving at this level compared with higher in the hole.

SAMPLE: MAC 36 622369 728·8 m

SUMMARY: This sample is an autobrecciated plagioclase-phyric glassy andesitic lava that has suffered hydrothermal alteration that enhanced the brecciated appearance of the sample, depositing fine-grained silica±pyrite in inter-fragmental matrix.

HAND SPECIMEN:

This is a another plagioclase-phyric andesitic lava breccia similar to the previous sample, but in this rock the inter-fragment matrix is not epidotized.

THIN SECTION DESCRIPTION:

This sample is an autoclastic lava breccia in which the original brecciated nature of the sample has probably been amplified and exaggerated by subsequent hydrothermal alteration. The lava fragments are of a plagioclase-phyric andesite, less porphyritic than the previous few samples, but with probably around 5-8 modal% of sericite-calcite-altered small plagioclase phenocrysts. Occasional ovoid vesicles are filled by fine-grained silica, and uncommon FeTi oxide microphenocrysts are replaced by messy brown leucoxenitic material.

The groundmass of the andesitic lava was glassy to very finely vitrophyric , and well-preserved perlitic cracks are present in several places. The glass has devitrified to a very fine-grained, dark quartzo-feldspathic material in which tint to submicroscopic granules of epidote are developed, but never as abundantly as in the previous sample.

The matrix between fragments, which often show well-developed jigsaw-fit textures, is a very fine-grained, rather clear, sugary quartzose intergrowth containing disseminated but uncommon small pyrite crystals.

SAMPLE: MAC 36 622370 784.4m

SUMMARY: This sample is probably a plagioclase-phyric formerly glassy andesitic lava from close to the base of a flow, which has caught up diverse small lithic fragments during flow. It has suffered oxidative hydrothermal recrystallization producing a sericite-silica-hematite±epidote alteration assemblage.

HAND SPECIMEN:

This is a dark grey probably polymictic andesitic lava breccia with fragments up to about 1cm across of dark grey and black lava in a quite altered grey matrix that contains significant disseminated pyrite.

THIN SECTION DESCRIPTION:

This sample is an unusual andesitic lithic tuff or relatively fine-grained lava breccia. The large part of the sample consists of plagioclase-phyric andesitic lava with albitized small plagioclase phenocrysts that are totally replaced by sericite, and a formerly glassy groundmass that now contains common small epidote granules and abundant fine-grained hematite and sericite in a quartzose matrix. This dominant part of the rock shows no obvious lava breccia texture. However, around 5 or 6 obvious lithic fragments mainly around 2-3mm across are present in this rock, and are mainly recrystallized formerly glassy felsic lavas, with perlitic cracks well preserved in at least one of them.

The origin of this rock is difficult to diagnose with certainty. It may be a typical plagioclase-phyric andesite lava taken from close to the base of a flow, which has caught up diverse small lava fragments during eruption and flow. The texture is not typical of a lithic tuff, nor is it really a lava breccia texture. Whatever it original protolith, this sample has suffered moderate oxidative hydrothermal alteration producing a silica-sericite-hematite±epidote-dominated assemblage.

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SAMPLE: MAC 36 622371 791·5m

SUMMARY: This sample is a siltstone with common fine-grained pyrite and hematite, sparse small devitrified lava clasts, and some angular quartz of uncertain derivation. The strongly recrystallized matrix may have had a significant vitric ash component.

HAND SPECIMEN:

This is a dark grey, weakly laminated siltstone or very fine-grained greywacke.

THIN SECTION DESCRIPTION:

This sample is a weakly bedded siltstone with the banding defined by slight changes of average grainsize and variations in the intensity of development of secondary oxides and pyrite. The only discernible lithic clasts are occasional angular grains of quartz of uncertain derivation, and one or two small lithic clasts that are devitrified felsic lava, in one case bearing a single sericitized plagioclase phenocryst. The matrix is a very fine-grained and thoroughly recrystallized quartzose material peppered with tiny opaques in darker layers, and lesser opaques and abundant tiny epidote granules in lighter bands. Secondary calcite is quite abundant overprinting all the bands or layers in this thin section. Some narrow bands have quite a concentration of disseminated perfectly euhedral pyrite that have grown in situ during alteration-recrystallization. Abundant finer-grained opaques are less well-formed and may be magnetite or hematite. It is likely, but difficult to prove, that much of the 'matrix' of this fine-grained sedimentary rock was comminuted vitric ash.

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29 APR 1994

Phone (004) 11[illegible] | 14 Thirkell St. COOEE TAS 7320 | Fax (004) 318890

ANALYTICAL REPORT No. 100560.60.10091

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

INVOICE TO:	ORDER No.	PROJECT
Aberfoyle Resources Limited Exploration Division P.O. Box 952 BURNIE TAS 7320	7073	

DATE RECEIVED	RESULTS REQUIRED
22/03/94	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
3	26/04/94	1	13

SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
622293/300,622367/371	CR Prep : GP033 - Chrome Free Bowls	Cu,Pb,Zn,Ag/GA101 Ba,As,Cr,Zr/GX401 Whole Rock/GX403

RESULTS TO

Mr R de Bomford
Aberfoyle Resources Limited
Exploration Division
P.O. Box 952
BURNIE TAS 7320

RESULTS TO

RESULTS TO

REMARKS

This report replaces the one on 18.4.94
Ti results included

MAC-36

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803067

ANALYTICAL DATA

SAMPLE PREFIX	REPORT No.	REPORT DATE	CLIENT ORDER No.	PAGE
	100560.60.10091	28/04/94	7073	1 OF 3

	SAMPLE No.	Cu	Pb	Zn	Ag	Ba	As	Cr	Zr	Ti
METHOD		GA101	GA101	GA101	GA101	GX401	GX401	GX401	GX401	DX408
1	622293	5	<5	19	<2	908	12	<5	213	1499
2	622294	23	8	77	<2	1588	4	6	163	3123
3	622295	9	7	75	<2	1234	4	10	161	3234
4	622296	62	<5	87	<2	906	<2	41	166	3449
5	622297	6	28	92	<2	1702	<2	13	170	3290
6	622298	9	23	3138	<2	725	11	145	154	3557
7	622299	4	<5	169	<2	3132	<2	127	152	3522
8	622300	71	32	414	<2	2348	<2	130	73	3014
9	622367	38	10	113	<2	322	<2	118	147	3252
10	622368	7	23	161	<2	2557	9	14	149	3428
11	622369	12	10	533	<2	1468	7	13	151	3124
12	622370	45	27	145	<2	2467	11	12	179	5565
13	622371	52	39	120	<2	1000	21	45	133	3786
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24	DETECTION	4	5	4	2	10	2	5	5	60
25	UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm

Results in ppm unless otherwise specified
– = element not determined

IS = insufficient sample
SNR = sample not received

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ANALYTICAL DATA

SAMPLE PREFIX	REPORT No.	REPORT DATE	CLIENT ORDER No.	PAGE
	100560.60.10091	28/04/94	7073	2 OF 3

	SAMPLE No.	Al2O3	SiO2	TiO2	Fe2O3	MnO	CaO	K2O	MgO	P2O5
METHOD		OX408	OX408	OX408	OX408	OX408	OX408	OX408	OX408	OX408
1	622293	13.19	74.2	0.25	2.37	0.03	1.48	4.37	0.70	0.043
2	622294	13.57	61.2	0.52	4.96	0.14	5.93	5.16	1.26	0.144
3	622295	14.05	65.4	0.54	5.86	0.09	3.03	3.68	1.79	0.148
4	622296	14.85	59.3	0.58	7.18	0.16	4.93	3.30	2.41	0.159
5	622297	14.70	65.7	0.55	5.57	0.13	2.79	2.09	1.79	0.154
6	622298	15.64	58.6	0.59	6.93	0.22	9.69	0.54	1.84	0.201
7	622299	14.45	61.5	0.59	8.73	0.21	2.48	1.70	3.31	0.173
8	622300	15.86	51.1	0.50	8.39	0.39	8.68	2.47	6.12	0.205
9	622367	13.96	63.8	0.54	5.96	0.15	4.09	0.22	2.29	0.172
10	622368	14.39	63.7	0.57	6.70	0.19	4.40	3.20	1.81	0.176
11	622369	14.35	65.0	0.52	6.49	0.16	5.47	1.15	1.75	0.155
12	622370	16.73	57.7	0.93	8.13	0.12	3.71	3.53	2.29	0.182
13	622371	12.97	65.5	0.63	6.50	0.05	2.72	1.43	1.43	0.182
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24	DETECTION	0.05	0.1	0.01	0.01	0.01	0.01	0.01	0.01	0.005
25	UNITS	%	%	%	%	%	%	%	%	%

Results in ppm unless otherwise specified
– = element not determined

IS = insufficient sample
SNR = sample not received

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ANALYTICAL DATA

SAMPLE PREFIX	REPORT No.	REPORT DATE	CLIENT ORDER No.	PAGE
	100560.60.10091	28/04/94	7073	3 OF 3

	SAMPLE No.	Na2O	TOTAL	S	LOI					
METHOD		OX408	OX408	OX408	OM615					
1	622293	0.21	99.95	0.224	2.59					
2	622294	0.77	99.64	0.016	5.89					
3	622295	2.13	100.21	<0.005	3.46					
4	622296	1.38	99.77	0.025	5.46					
5	622297	4.77	99.99	<0.005	1.77					
6	622298	3.08	99.85	0.180	2.07					
7	622299	3.64	99.91	0.031	3.06					
8	622300	1.56	99.78	0.025	4.41					
9	622367	5.32	99.89	0.085	3.21					
10	622368	2.64	99.95	0.029	2.08					
11	622369	2.56	100.04	0.172	2.05					
12	622370	2.28	103.62	1.615	3.94					
13	622371	4.22	104.55	1.887	4.25					
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24	DETECTION	0.05	0.01	0.005	0.01					
25	UNITS	%	%	%	%					

Results in ppm unless otherwise specified
– = element not determined

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APPENDIX II

CORE GRIND SAMPLING

808071

HOLE No. MAC 36

DATE 2-3-94

No.	SAMPLE NUMBER	INTERVAL	ELEMENTS REQUIRED	ST	SAMPLE NUMBER	INTERVAL	ELEMENTS REQUIRED
1	626016	0 - 17·9	17.9		626047	369·7 - 384·0	15.3
2	626017	17·9 - 36·4	18.5		48	384·0 - 397·7	13.7
3	626018	36·4 - 52·4	16		49	397·7 - 407·0	9.3
4	19	STANDARD	*		50	407.0 - 421·1	14.1
5	20	52·4 - 69·8	17.4		51	421·1 - 436·8	15.7
6	21	69·8 - 85·6	15.8		52	436·8 - 456·2	19.4
7	22	85·6 - 95·4	9.8		53	456·2 - 457·1	0.9 *
8	23	95·4 - 100·5	5.1		54	457·1 - 467·2	10.1
9	24	100·5 - 108·4	7.9		55	467·2 - 472·7	5.5
10	25	108·4 - 113·0	4.6		56	STANDARD	*
11	26	113·0 - 121·8	8.8		57	472·7 - 488·3	15.5
12	27	121·8 - 136·6	14.8		58	488·3 - 488·7	0.4 *
13	28	136·6 - 149·1	12.5		59	488·7 - 505·9	17.2
14	29	149·1 - 167·9	18.8		60	505·9 - 513·9	8
15	30	167·9 - 185·3	17.4		61	513·9 - 531·7	17.8
16	31	185·3 - 200·0	14.7		62	531·7 - 532·4	.7 *
17	32	200·0 - 215·0	15		63	532·4 - 550·0	17.6
18	33	215·0 - 227·6	12.6		64	550·0 - 566·9	16.9
19	34	227·6 - 234·3	6.7		65	566·9 - 575·5	9.4
20	35	234·3 - 248·0	13.7		66	575·5 - 589·9	14.4
21	36	248·0 - 257·8	9.8		67	589·9 - 600·3	10.4
22	37	257·8 - 266·5	8.7		68	600·3 - 614·3	14
23	38	266·5 - 276·0	9.5		69	614·3 - 624·0	9.7
24	39	276·0 - 298·0	22		70	624·0 - 634·8	10.8
25	40	298·0 - 307·7	9.7		71	634·8 - 649·3	14.5
26	41	307·7 - 323·1	15.4		72	649·3 - 670·5	21.2
27	42	323·1 - 328·8	5.7		73	670·5 - 689·1	18.6
28	43	328·8 - 337·9	9.1		74	689·1 - 704·4	15.3
29	44	337·9 - 341·1	3.2 *		75	704·4 - 720·0	15.6
30	45	341·1 - 347·2	6.1		76	720·0 - 730·1	10.1
31	46	347·2 - 369·7	22.5		77	730·1 - 739·6	9.5

CORE GRIND SAMPLING - MACKINTOSH / HATFIELD 808072 HOLE No. MAC 36

DATE 11-3-94

No.	SAMPLE NUMBER	INTERVAL	ELEMENTS REQUIRED	ST	SAMPLE NUMBER	INTERVAL	ELEMENTS REQUIRED	ST
1	626078	739.6 - 741.9	2.3 *					
2	79	741.9 - 743.1	1.2 *					
3	80	743.1 - 753.0	9.9					
4	81	753.0 - 763.4	10.4					
5	82	763.4 - 771.1	7.7					
6	83	STANDARD	*					
7	84	771.1 - 782.5	11.4					
8	85	782.5 - 791.4	8.9					
9	86	791.4 - 792.2	.8 *					
10	87	792.2 - 795.0	2.8 *					
11	88	795.0 - 800.5	5.5					
12	626089	800.5 - 814.0	13.5					
13		EOH						
14								
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ANALABS
A Division of Intracape Testing Services (Australia) Pty. Ltd.
A.C.N. 004 591 664

808073

Phone (004) 316837 | 14 Thirkell St. COOEE TAS 7320 | Fax (004) 319890

ANALYTICAL REPORT No. 1005&0.&0.10124

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

INVOICE TO: Abertoyle Resources Limited
Exploration Division
P.O. Box 952
BURNIE TAS 7320

ORDER No.	PROJECT
7088	

DATE RECEIVED	RESULTS REQUIRED
05/04/94	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
12	29/04/94	1	74

SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
826016/089	CO Prep : GP033 - CHROME FREE BOWLS	Cu,Pb,Zn,Ag/GA101 Ba,As,Cr,Zr/GX401 WHOLE ROCK ANALYSIS/GX408 Au,Au(R),Au(S)/GA309

RESULTS TO: Mr R de Bomford
Abertoyle Resources Limited
Exploration Division
P.O. Box 952
BURNIE TAS 7320

RESULTS TO:

RESULTS TO:

REMARKS

THIS REPORT REPLACES THE ONE DATED 20.4.94
Ti NOW IN PPM NOT %

MAC-36
GRINDS

AUTHORISED OFFICER

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803074

ANALYTICAL DATA

SAMPLE PREFIX	REPORT No.	REPORT DATE	CLIENT ORDER No.	PAGE
	100560.60.10124	29/04/94	7088	1 OF 12

	SAMPLE No.	Cu	Pb	Zn	Ag	Au	Au(R)	Au(S)	Ba	As
METHOD		GA101	GA101	GA101	GA101	GG309	GG309	GG309	GX401	GX401
1	626016	47	82	200	<2	<0.008	-	0.008	3351	36
2	626017	44	88	272	<2	<0.008	-	-	1822	16
3	626018	29	298	257	<2	<0.008	-	-	1846	8
4	626019	121	195	2238	<2	0.016	-	-	1022	17
5	626020	74	33	208	<2	<0.008	-	-	2112	12
6	626021	83	13	172	<2	0.025	-	-	6268	17
7	626022	71	22	159	<2	0.024	-	-	3221	50
8	626023	72	7	156	<2	<0.008	-	-	2445	44
9	626024	61	26	143	<2	0.010	-	-	2244	57
10	626025	104	12	148	<2	0.015	-	-	1050	37
11	626026	45	16	101	<2	<0.008	-	-	1085	23
12	626027	48	37	106	<2	<0.008	<0.008	-	2534	46
13	626028	117	15	154	<2	0.009	-	-	3408	34
14	626029	56	8	119	<2	<0.008	-	-	920	5
15	626030	53	7	128	<2	<0.008	-	-	922	9
16	626031	52	10	107	<2	<0.008	-	-	1062	13
17	626032	59	5	125	<2	<0.008	-	-	1747	<2
18	626033	51	7	121	<2	<0.008	-	-	1158	5
19	626034	132	<5	156	<2	<0.008	-	-	1147	<2
20	626035	75	8	150	<2	<0.008	-	-	1172	4
21	626036	60	13	158	<2	<0.008	-	-	1799	2
22	626037	167	15	227	<2	<0.008	<0.008	-	1285	2
23	626038	80	33	192	<2	<0.008	-	-	1550	4
24	626039	37	26	162	<2	<0.008	-	-	1789	9
25	626040	25	12	115	<2	<0.008	-	-	1496	11

Results in ppm unless otherwise specified
- = element not determined

IS = insufficient sample
SNR = sample not received

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ANALYTICAL DATA

SAMPLE PREFIX	REPORT No.	REPORT DATE	CLIENT ORDER No.	PAGE
	100560.60.10124	29/04/94	7088	2 OF 12

	SAMPLE No.	Cu	Pb	Zn	Ag	Au	Au(R)	Au(S)	Ba	As
METHOD		GA101	GA101	GA101	GA101	GG309	GG309	GG309	GX401	GX401
1	626041	42	24	140	<2	<0.008	-	-	1672	10
2	626042	93	41	614	<2	<0.008	-	-	1747	13
3	626043	25	34	653	<2	<0.008	-	-	1462	9
4	626044	35	19	1410	<2	<0.008	-	-	466	11
5	626045	80	24	343	<2	<0.008	-	-	1266	17
6	626046	47	158	437	<2	<0.008	-	-	2296	7
7	626047	33	27	173	<2	<0.008	-	-	1844	5
8	626048	22	<5	153	<2	<0.008	-	-	1185	4
9	626049	52	17	169	<2	<0.008	-	<0.008	1712	4
10	626050	14	6	191	<2	<0.008	-	-	548	2
11	626051	8	46	236	<2	<0.008	-	-	1003	2
12	626052	52	44	237	<2	<0.008	<0.008	-	1745	5
13	626053	67	448	642	<2	<0.008	-	-	1289	<2
14	626054	48	30	250	<2	<0.008	-	-	1162	7
15	626055	23	110	1464	<2	<0.008	-	-	2197	4
	626056 X	122	206	2412	<2	<0.008	-	-	999	19
17	626057	25	51	278	<2	<0.008	-	-	1417	5
18	626058	20	25	101	<2	<0.008	-	-	1076	17
19	626059	8	6	174	<2	<0.008	-	-	645	4
20	626060	18	5	198	<2	<0.008	-	-	659	5
21	626061	83	15	225	<2	<0.008	-	-	1059	5
22	626062	161	<5	137	<2	<0.008	<0.008	-	419	25
23	626063	26	20	294	<2	<0.008	-	-	1772	10
24	626064	27	17	151	<2	0.013	-	-	2451	4
25	626065	7	<5	161	<2	<0.008	-	-	906	4

Results in ppm unless otherwise specified
- = element not determined

IS = insufficient sample
SNR = sample not received

AUTHORISED OFFICER

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Analabs Pty. Ltd.
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806076

ANALYTICAL DATA

SAMPLE PREFIX	REPORT No.	REPORT DATE	CLIENT ORDER No.	PAGE
	100560.60.10124	29/04/94	7088	3 OF 12

	SAMPLE No.	Cu	Pb	Zn	Ag	Au	Au(R)	Au(S)	Ba	As
METHOD		GA101	GA101	GA101	GA101	GG309	GG309	GG309	GX401	GX401
1	626066	36	<5	129	<2	<0.008	-	-	611	6
2	626067	13	9	52	<2	<0.008	-	-	2698	4
3	626068	7	8	119	<2	<0.008	-	-	539	5
4	626069	34	10	132	<2	<0.008	-	-	773	10
5	626070	31	35	175	<2	<0.008	-	<0.008	1049	3
6	626071	29	54	511	<2	<0.008	-	-	1036	13
7	626072	27	44	129	<2	<0.008	-	-	1204	3
8	626073	27	17	114	<2	<0.008	-	-	1411	6
9	626074	19	20	82	<2	<0.008	-	-	937	3
10	626075	10	17	81	<2	<0.008	-	-	1373	10
11	626076	15	6	125	<2	<0.008	-	-	1360	9
12	626077	42	11	142	<2	<0.008	-	-	1031	6
13	626078	16	38	155	<2	0.012	-	-	665	2
14	626079	44	21	86	<2	<0.008	-	-	272	14
15	626080	45	13	83	<2	<0.008	-	-	407	9
	626081	47	17	69	<2	<0.008	-	-	516	7
17	626082	45	10	74	<2	<0.008	-	-	402	10
18	626083	118	185	2228	<2	<0.008	-	-	998	18
19	626084	45	41	125	<2	<0.008	-	-	751	8
20	626085	77	23	230	<2	<0.008	-	-	856	10
21	626086	63	31	66	<2	<0.008	-	-	717	16
22	626087	75	14	112	<2	<0.008	-	-	437	4
23	626088	83	<5	81	<2	<0.008	-	-	105	6
24	626089	60	10	75	<2	<0.008	-	-	642	11
25										

Results in ppm unless otherwise specified
– = element not determined

IS = insufficient sample
SNR = sample not received

AUTHORISED OFFICER

Analabs

Analabs Pty. Ltd
A.C.N. 004 591 66

803077

ANALYTICAL DATA

SAMPLE PREFIX	REPORT No.	REPORT DATE	CLIENT ORDER No.	PAGE
	100560.60.10124	29/04/94	7088	4 OF 12

	SAMPLE No.	Cu	Pb	Zn	Ag	Au	Au(R)	Au(S)	Ba	As
METHOD		GA101	GA101	GA101	GA101	GG309	GG309	GG309	GX401	GX401
1										
2										
3										
4										
5										
6										
7										
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17										
18										
19										
20										
21										
22										
23										
24	DETECTION	4	5	4	2	0.008	0.008	0.008	10	2
25	UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm

Results in ppm unless otherwise specified
– = element not determined

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SNR = sample not received

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803078

ANALYTICAL DATA

SAMPLE PREFIX	REPORT No.	REPORT DATE	CLIENT ORDER No.	PAGE
	100560.60.10124	29/04/94	7088	5 OF 12

	SAMPLE No.	Cr	Zr	Ti	S	S	Al2O3	SiO2	TiO2	Fe2O3
METHOD		GX401	GX401	OX408	OX408	OM613	OX408	OX408	OX408	OX408
1	626016	28	202	2944	0.132	-	16.31	66.4	0.49	5.71
2	626017	113	202	3029	0.103	-	15.96	66.5	0.51	5.94
3	626018	27	209	1755	0.222	-	14.91	70.0	0.29	5.23
4	626019 X	861	85	2744	0.040	-	15.45	51.4	0.46	9.81
5	626020	26	215	2617	0.173	-	15.65	68.3	0.44	5.05
6	626021	15	196	2258	0.394	-	14.37	70.5	0.38	3.83
7	626022	33	163	3631	0.797	-	15.51	64.8	0.61	6.26
8	626023	50	112	3174	0.314	-	16.55	58.6	0.53	7.05
9	626024	24	178	3647	0.558	-	15.96	65.4	0.61	5.67
10	626025	65	100	3106	0.466	-	16.65	54.9	0.52	7.86
11	626026	19	171	3276	0.263	-	14.80	62.7	0.55	5.18
12	626027	12	202	1936	0.395	-	13.47	70.8	0.32	3.02
13	626028	15	166	3212	0.421	-	14.35	64.7	0.54	4.38
14	626029	12	181	3264	0.074	-	14.74	63.5	0.54	5.69
15	626030	15	178	3314	0.134	-	14.92	62.3	0.55	5.44
	626031	16	168	3281	0.171	-	14.19	61.4	0.55	4.99
17	626032	17	173	3428	0.055	-	14.76	61.6	0.57	5.49
18	626033	10	178	3374	0.020	-	14.90	62.9	0.56	5.80
19	626034	14	174	3441	0.015	-	14.73	64.2	0.57	4.34
20	626035	12	173	3249	0.040	-	14.54	61.6	0.54	5.68
21	626036	13	169	3261	0.007	-	14.25	64.7	0.54	5.47
22	626037	15	177	3420	0.037	-	15.02	62.4	0.57	6.32
23	626038	37	172	3477	0.024	-	15.05	62.0	0.58	7.34
24	626039	44	171	3410	0.087	-	14.66	62.2	0.57	6.03
25	626040	140	165	3687	0.328	-	14.76	58.7	0.61	6.77

Results in ppm unless otherwise specified
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806079

ANALYTICAL DATA

SAMPLE PREFIX	REPORT No.	REPORT DATE	CLIENT ORDER No.	PAGE
	100560.60.10124	29/04/94	7088	6 OF 12

	SAMPLE No.	Cr	Zr	Ti	S	S	Al2O3	SiO2	TiO2	Fe2O3
METHOD		GX401	GX401	OX408	OX408	OM613	OX408	OX408	OX408	OX408
1	626041	74	162	3337	0.184	-	14.95	58.8	0.56	6.91
2	626042	143	163	3720	0.301	-	14.98	57.9	0.62	8.23
3	626043	135	150	3407	0.063	-	14.06	59.2	0.57	6.53
4	626044	136	159	3477	0.152	-	14.38	62.1	0.58	6.80
5	626045	135	160	3462	0.087	-	14.86	59.3	0.58	8.91
6	626046	130	157	3477	0.137	-	14.42	57.8	0.58	7.56
7	626047	123	156	3536	0.058	-	14.49	58.9	0.59	7.59
8	626048	123	156	3477	0.056	-	14.54	59.6	0.58	7.63
9	626049	138	159	3598	0.075	-	14.82	59.3	0.60	8.08
10	626050	123	154	3448	0.028	-	14.67	57.9	0.58	7.60
11	626051	131	152	3382	0.029	-	14.59	55.9	0.56	7.88
12	626052	118	147	3362	0.032	-	13.99	58.8	0.56	7.86
13	626053	94	158	3194	0.043	-	13.20	63.5	0.53	5.76
14	626054	135	87	2891	0.026	-	14.59	49.9	0.48	7.92
15	626055	132	154	3512	0.140	-	14.41	57.9	0.59	6.71
	626056 ✗	868	87	2683	0.038	-	15.33	51.5	0.45	9.86
17	626057	233	134	3130	0.114	-	13.52	55.9	0.52	7.74
18	626058	99	135	2330	0.396	-	11.67	65.4	0.39	3.79
19	626059	134	160	3534	0.144	-	15.00	58.2	0.59	7.77
20	626060	120	144	3299	0.137	-	14.42	56.2	0.55	7.59
21	626061	130	155	3517	0.123	-	14.70	58.9	0.59	8.04
22	626062	1036	83	2429	1.009	-	11.36	41.5	0.41	9.36
23	626063	137	149	3629	0.090	-	14.80	57.3	0.61	7.22
24	626064	144	148	3398	0.110	-	14.33	58.3	0.57	8.08
25	626065	135	163	3604	0.116	-	15.11	59.2	0.60	8.78

Results in ppm unless otherwise specified
– = element not determined

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805080

ANALYTICAL DATA

SAMPLE PREFIX	REPORT No.	REPORT DATE	CLIENT ORDER No.	PAGE
	100560.60.10124	29/04/94	7088	7 OF 12

	SAMPLE No.	Cr	Zr	Ti	S	S	Al2O3	SiO2	TiO2	Fe2O3
METHOD		GX401	GX401	OX408	OX408	OM613	OX408	OX408	OX408	OX408
1	626066	140	165	3707	0.140	-	15.27	57.2	0.62	9.13
2	626067	23	200	2142	0.180	-	13.47	65.1	0.36	3.63
3	626068	117	148	3550	0.078	-	14.74	55.9	0.59	8.62
4	626069	107	163	3770	0.292	-	15.00	57.9	0.63	8.11
5	626070	130	145	3375	0.045	-	14.49	56.4	0.56	7.22
6	626071	72	159	3470	0.039	-	14.91	62.1	0.58	6.45
7	626072	12	159	3561	0.018	-	15.41	62.0	0.59	6.73
8	626073	23	155	3854	0.034	-	15.14	61.0	0.64	7.38
9	626074	23	156	3917	0.028	-	14.94	60.2	0.65	6.23
10	626075	13	150	3202	0.136	-	15.15	61.0	0.53	6.79
11	626076	11	155	3357	0.116	-	14.95	64.2	0.56	6.52
12	626077	15	146	3149	0.460	-	14.18	64.7	0.53	4.94
13	626078	11	159	3170	0.330	-	15.14	58.5	0.53	6.88
14	626079	68	129	3278	0.589	-	13.37	58.8	0.55	7.13
15	626080	70	138	3897	0.336	-	15.74	56.1	0.65	7.68
	626081	59	141	3897	0.352	-	15.35	58.0	0.65	7.19
17	626082	97	118	3790	0.404	0.420	15.04	58.0	0.63	7.54
18	626083	849	86	2644	0.040	0.050	15.46	51.7	0.44	9.85
19	626084	34	164	6175	0.477	IS	17.10	56.3	1.03	7.80
20	626085	97	148	4455	1.780	1.800	16.15	54.5	0.74	8.96
21	626086	102	145	3672	2.290	2.600	12.67	65.2	0.61	6.85
22	626087	206	134	3721	0.625	0.650	15.92	52.1	0.62	8.46
23	626088	271	74	3109	0.736	0.790	14.10	49.8	0.52	7.85
24	626089	248	158	2874	1.182	1.250	14.37	56.7	0.48	6.35
25										

Results in ppm unless otherwise specified
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805081

ANALYTICAL DATA

SAMPLE PREFIX	REPORT No.	REPORT DATE	CLIENT ORDER No.	PAGE
	100560.60.10124	29/04/94	7088	8 OF 12

	SAMPLE No.	Cr	Zr	Ti	Total S	S	Al_2O_3	SiO_2	TiO_2	Fe_2O_3
METHOD		GX401	GX401	OX408	OX408	OM613	OX408	OX408	OX408	OX408
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
17										
18										
19										
20										
21										
22										
23										
24	DETECTION	5	5	60	0.005	0.005	0.05	0.1	0.01	0.01
25	UNITS	ppm	ppm	ppm	%	%	%	%	%	%

Results in ppm unless otherwise specified
– = element not determined

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803082

ANALYTICAL DATA

SAMPLE PREFIX	REPORT No.	REPORT DATE	CLIENT ORDER No.	PAGE
	100560.60.10124	29/04/94	7088	9 OF 12

	SAMPLE No.	MnO	CaO	K2O	MgO	P2O5	Na2O	LOI	TOTAL	
METHOD		OX408	OX408	OX408	OX408	OX408	OX408	OM615	OX408	
1	626016	0.07	0.06	4.21	0.96	0.047	0.33	4.89	99.82	
2	626017	0.07	0.05	4.05	2.04	0.037	0.70	3.91	100.01	
3	626018	0.06	0.03	3.94	1.18	0.018	0.61	3.00	99.87	
4	626019	0.87	3.87	1.18	7.59	0.192	3.79	5.62	100.37	
5	626020	0.08	0.19	3.79	1.71	0.088	0.99	3.25	100.01	
6	626021	0.08	0.20	3.97	1.61	0.097	1.84	2.67	100.53	
7	626022	0.07	0.51	4.05	2.85	0.192	1.39	3.85	102.01	
8	626023	0.20	2.30	4.10	3.52	0.185	1.15	5.41	100.36	
9	626024	0.05	0.64	4.56	2.24	0.176	1.07	3.65	101.42	
10	626025	0.14	3.51	4.15	4.36	0.190	0.61	6.55	100.63	
11	626026	0.16	3.82	3.99	1.50	0.154	1.39	5.36	100.21	
12	626027	0.06	1.57	4.87	0.96	0.080	0.48	4.84	101.41	
13	626028	0.08	2.65	6.24	1.19	0.150	0.67	4.01	99.99	
14	626029	0.10	2.82	3.21	1.77	0.154	2.63	4.20	99.51	
15	626030	0.11	3.27	3.78	2.24	0.156	2.28	4.81	100.16	
	626031	0.14	5.51	3.38	1.15	0.162	2.45	5.83	100.18	
17	626032	0.13	4.08	3.61	1.90	0.155	1.95	5.20	99.59	
18	626033	0.11	2.63	3.85	2.64	0.155	1.79	4.37	99.77	
19	626034	0.09	3.66	3.44	1.43	0.152	3.29	4.42	100.36	
20	626035	0.11	3.54	3.69	2.66	0.150	2.22	4.89	99.75	
21	626036	0.13	2.95	2.01	2.11	0.143	4.14	3.84	100.33	
22	626037	0.15	3.08	3.14	2.63	0.150	3.17	2.81	99.57	
23	626038	0.17	2.68	2.25	3.07	0.152	3.42	3.05	99.84	
24	626039	0.18	3.99	2.91	2.37	0.155	2.98	3.78	100.06	
25	626040	0.20	4.70	3.56	3.14	0.193	2.02	4.89	100.36	

Results in ppm unless otherwise specified
– = element not determined

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808083

ANALYTICAL DATA

SAMPLE PREFIX	REPORT No.	REPORT DATE	CLIENT ORDER No.	PAGE
	100560.60.10124	29/04/94	7088	10 OF 12

	SAMPLE No.	MnO	CaO	K2O	MgO	P2O5	Na2O	LOI	TOTAL	
METHOD		OX408	OX408	OX408	OX408	OX408	OX408	OM615	OX408	
1	626041	0.19	4.25	3.05	2.69	0.173	3.47	4.90	100.41	
2	626042	0.28	4.18	2.08	3.35	0.190	3.91	3.86	100.31	
3	626043	0.28	6.20	1.92	3.31	0.176	3.72	3.94	100.05	
4	626044	0.28	3.68	0.52	3.14	0.182	4.79	2.91	99.71	
5	626045	0.32	4.05	1.40	3.68	0.184	3.48	3.25	100.22	
6	626046	0.28	5.34	2.25	3.17	0.182	3.34	4.65	99.97	
7	626047	0.21	4.02	1.60	2.95	0.184	4.17	5.55	100.40	
8	626048	0.21	3.85	1.19	2.96	0.177	4.29	4.60	99.80	
9	626049	0.22	3.79	1.62	2.95	0.191	4.05	4.33	100.11	
10	626050	0.24	4.57	1.85	3.37	0.188	2.70	6.24	99.93	
11	626051	0.28	5.69	2.10	3.41	0.188	2.29	7.01	100.00	
12	626052	0.31	4.69	1.70	2.92	0.176	3.14	5.53	99.81	
13	626053	0.26	4.57	1.66	2.62	0.145	3.52	4.13	99.95	
14	626054	0.32	9.63	1.35	4.41	0.186	2.63	8.33	99.80	
15	626055	0.29	5.67	2.21	3.22	0.174	2.46	5.54	99.54	
	626056 X	0.87	3.94	1.09	7.56	0.184	3.50	5.56	99.96	
17	626057	0.30	6.54	1.86	3.90	0.189	1.86	7.32	99.98	
18	626058	0.16	5.87	2.49	1.43	0.122	1.45	6.37	100.15	
19	626059	0.20	4.12	1.30	3.41	0.196	3.69	5.50	100.38	
20	626060	0.21	5.66	1.87	3.69	0.176	2.40	6.73	99.82	
21	626061	0.26	4.59	0.97	2.99	0.181	3.53	4.49	99.56	
22	626062	0.37	14.75	0.53	6.06	0.326	2.38	10.59	100.10	
23	626063	0.27	5.80	2.21	3.05	0.181	2.43	5.50	99.55	
24	626064	0.22	4.85	1.73	3.07	0.183	2.99	5.24	99.82	
25	626065	0.17	1.33	1.98	5.70	0.190	1.74	5.09	100.18	

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

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808034

ANALYTICAL DATA

SAMPLE PREFIX	REPORT No.	REPORT DATE	CLIENT ORDER No.	PAGE
	100560.60.10124	29/04/94	7088	11 OF 12

	SAMPLE No.	MnO	CaO	K2O	MgO	P2O5	Na2O	LOI	TOTAL	
METHOD		OX408	OX408	OX408	OX408	OX408	OX408	OM615	OX408	
1	626066	0.18	2.58	2.31	4.67	0.190	1.37	5.98	99.85	
2	626067	0.14	4.42	2.67	1.48	0.093	2.59	5.35	99.75	
3	626068	0.25	4.79	1.74	3.94	0.203	2.57	6.60	100.13	
4	626069	0.20	3.27	2.13	4.30	0.197	2.22	5.47	100.16	
5	626070	0.25	6.03	1.61	3.71	0.197	3.11	6.28	99.97	
6	626071	0.21	3.73	1.92	2.48	0.184	4.46	3.06	100.20	
7	626072	0.22	5.01	1.61	1.80	0.167	3.11	3.20	99.90	
8	626073	0.20	4.61	2.85	2.20	0.191	2.12	3.54	99.95	
9	626074	0.16	5.60	2.68	1.68	0.200	3.20	4.16	99.78	
10	626075	0.21	4.10	2.06	1.88	0.145	3.39	4.56	100.20	
11	626076	0.19	4.34	1.54	1.56	0.153	2.97	2.56	99.84	
12	626077	0.12	4.07	2.52	1.34	0.156	4.09	3.46	101.27	
13	626078	0.13	4.48	1.41	3.62	0.152	4.30	3.89	99.85	
14	626079	0.13	5.21	0.59	4.52	0.131	3.82	4.67	100.43	
15	626080	0.13	6.40	0.74	4.91	0.140	2.97	3.46	99.79	
	626081	0.13	6.11	0.93	4.23	0.140	3.18	3.16	99.97	
17	626082	0.13	5.37	0.75	5.00	0.123	4.05	2.75	100.36	
18	626083 X	0.86	3.87	1.17	7.52	0.189	3.44	5.55	100.14	
19	626084	0.13	4.13	2.16	5.06	0.174	2.09	3.82	100.94	
20	626085	0.13	3.13	1.41	4.41	0.145	3.81	5.29	103.13	
21	626086	0.06	1.72	1.90	2.64	0.095	2.46	4.37	104.33	
22	626087	0.13	3.93	1.17	6.63	0.206	3.62	6.68	101.02	
23	626088	0.13	6.92	0.15	6.69	0.097	3.95	8.27	100.28	
24	626089	0.10	5.38	3.02	4.07	0.119	0.72	7.06	101.32	
25										

Results in ppm unless otherwise specified
– = element not determined

IS = insufficient sample
SNR = sample not received

AUTHORISED OFFICER

Analabs

Analabs Pty. Ltd.
A.C.N. 004 591 664

805035

ANALYTICAL DATA

SAMPLE PREFIX	REPORT No.	REPORT DATE	CLIENT ORDER No.	PAGE
	100560.60.10124	29/04/94	7088	12 OF 12

	SAMPLE No.	MnO %	CaO %	K2O %	MgO %	P2O5 %	Na2O %	LOI %	TOTAL %	
METHOD		OX408	OX408	OX408	OX408	OX408	OX408	OM615	OX408	
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
17										
18										
19										
20										
21										
22										
23										
24	DETECTION	0.01	0.01	0.01	0.01	0.005	0.05	0.01	0.01	
25	UNITS	%	%	%	%	%	%	%	%	

Results in ppm unless otherwise specified
– = element not determined

IS = Insufficient sample
SNR = sample not received

AUTHORISED OFFICER

APPENDIX III

DOWNHOLE EM - MAC 36 AND MAC 37

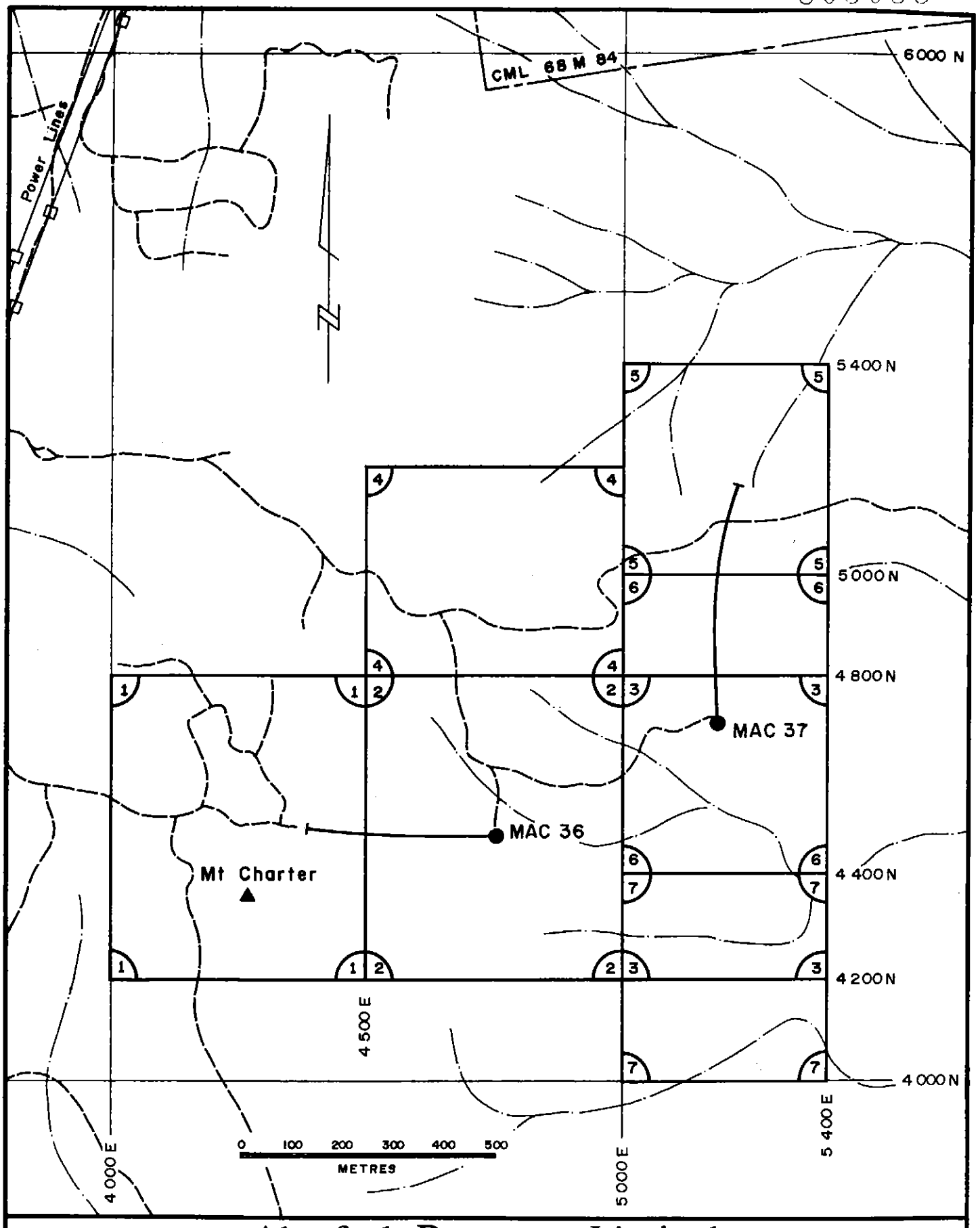
In order to search for conductive mineralisation in the vicinity of MAC 36 and MAC 37 drillholes , eight loops were used to energise the ground (Fig 1), and DHEM data was collected in the drillholes.

DHEM data was collected using Zonge GDP 16 equipment operating at 32 Hz. Table 1 gives the time windows for the Zonge receiver operating in this mode.

Analysis of the data from MAC 36 (Fig 2-2c), however, shows that no "confined" conductive targets are influencing the data set. Only "normal" background responses are evident.

Initially from the data set collected in MAC37 (Fig 3-3G), the peaking of the response in the medium time windows (eg. time windows 13-18, Fig 3) at about 420 meters down the drillholes was interpreted as an effect from an offhole conductive source. However, because it was difficult to reconcile the data set from different loops, as being due to "normal" EM effects, probe malfunction was suspected as causing the stationary peak in the response. Collecting data with other probes (e.g. Hired probe, Fig 3A) confirmed that this suspicion was justified with the medium time peak not being re-produced when the equipment was used in conjunction with other probes (e.g. Fig 3A). On the basis of these results, it was concluded that no conductive targets exist in the immediate vicinity of MAC 37. Subsequent checks performed on the probe with which the initial data set was collected did indeed show that the probe was malfunctioning.

803033



Aberfoyle Resources Limited

EXPLORATION DIVISION

Figure1

REVISIONS			
Init.	Date	Init.	Date
Jms	30-11-93		

Location Code :

NORTH WEST TASMANIA

MACKINTOSH E.L. 106/87

DDH MAC 36,37 - DHEM LOOPS

Scale : 1 : 10 000

Date : October 1993

Compiled :	R deB
Drawn :	JMS
Traced :	
Checked :	R deB
Plate No. :	MAC 407

TABLE 1

6. TEM WINDOW CENTERS FOR ZERO DELAY

WINDOW #'S	32, 16, 8 Hz	4 Hz	2 Hz	1 Hz	.5 Hz	.25 Hz	.125 Hz	.0625 Hz
1	0.0 µs	0.0 µs	0.0 µs	0.0 µs	0.0 µs	0.0 ms	0.0 ms	0.0 ms
2	30.4	60.8	121.6	243.2	486.4	.9728	1.946	3.891
3	60.8	121.6	243.2	486.4	972.8	1.946	3.891	7.782
4	91.2	182.4	364.8	729.6	1.459 ms	2.918	5.837	11.67
5	121.6	243.2	486.4	972.8	1.946	3.891	7.782	15.56
6	152.0	304.0	608.0	1.216 ms	2.432	4.864	9.728	19.46
7	197.0	394.0	788.1	1.576	3.152	6.304	12.61	25.22
8	258.0	515.9	1.032 ms	2.064	4.127	8.254	16.51	33.02
9	318.8	637.7	1.275	2.551	5.101	10.20	20.41	40.81
10	394.0	788.1	1.576	3.152	6.304	12.61	25.22	50.44
11	485.4	970.9	1.942	3.884	7.767	15.53	31.07	62.14
12	605.0	1.210 ms	2.420	4.840	9.679	19.36	38.72	77.43
13	771.5	1.543	3.086	6.172	12.34	24.69	49.37	98.75
14	968.5	1.937	3.874	7.748	15.50	30.99	61.98	124.0
15	1.210 ms	2.420	4.840	9.679	19.36	38.72	77.43	154.9
16	1.512	3.025	6.050	12.10	24.20	48.40	96.79	193.6
17	1.903	3.807	7.613	15.23	30.45	60.91	121.8	243.6
18	2.417	4.833	9.666	19.33	38.66	77.33	154.7	309.3
19	3.052	6.104	12.21	24.42	48.83	97.67	195.3	390.7
20	3.837	7.675	15.35	30.70	61.40	122.8	245.6	491.2
21	4.820	9.639	19.28	38.56	77.11	154.2	308.4	616.9
22	6.070	12.14	24.28	48.56	97.12	194.2	388.5	777.0
23	7.658	15.32	30.63	61.26	122.5	245.0	490.1	980.2
24	9.622	19.24	38.49	76.98	154.0	307.9	615.8	1231.6
25	12.10	24.19	48.39	96.77	193.5	387.1	774.2	1548.3
26	15.24	30.47	60.95	121.9	243.8	487.6	975.2	1950.3
27	19.18	38.35	76.72	153.4	306.9	613.7	1227.5	2455.0
28	24.15	48.29	96.58	193.2	386.3	772.6	1545.3	3090.6
29	30.41	60.83	121.65	243.3	486.6	973.2	1946.4	3892.8
30	38.27	76.53	153.07	306.1	612.3	1224.6	2449.1	4898.2
31	48.19	96.39	192.78	385.6	771.1	1542.2	3084.5	6168.9

For 4 Hz and below, we get 28 windows for 50% and 31 windows for 100% duty cycle.

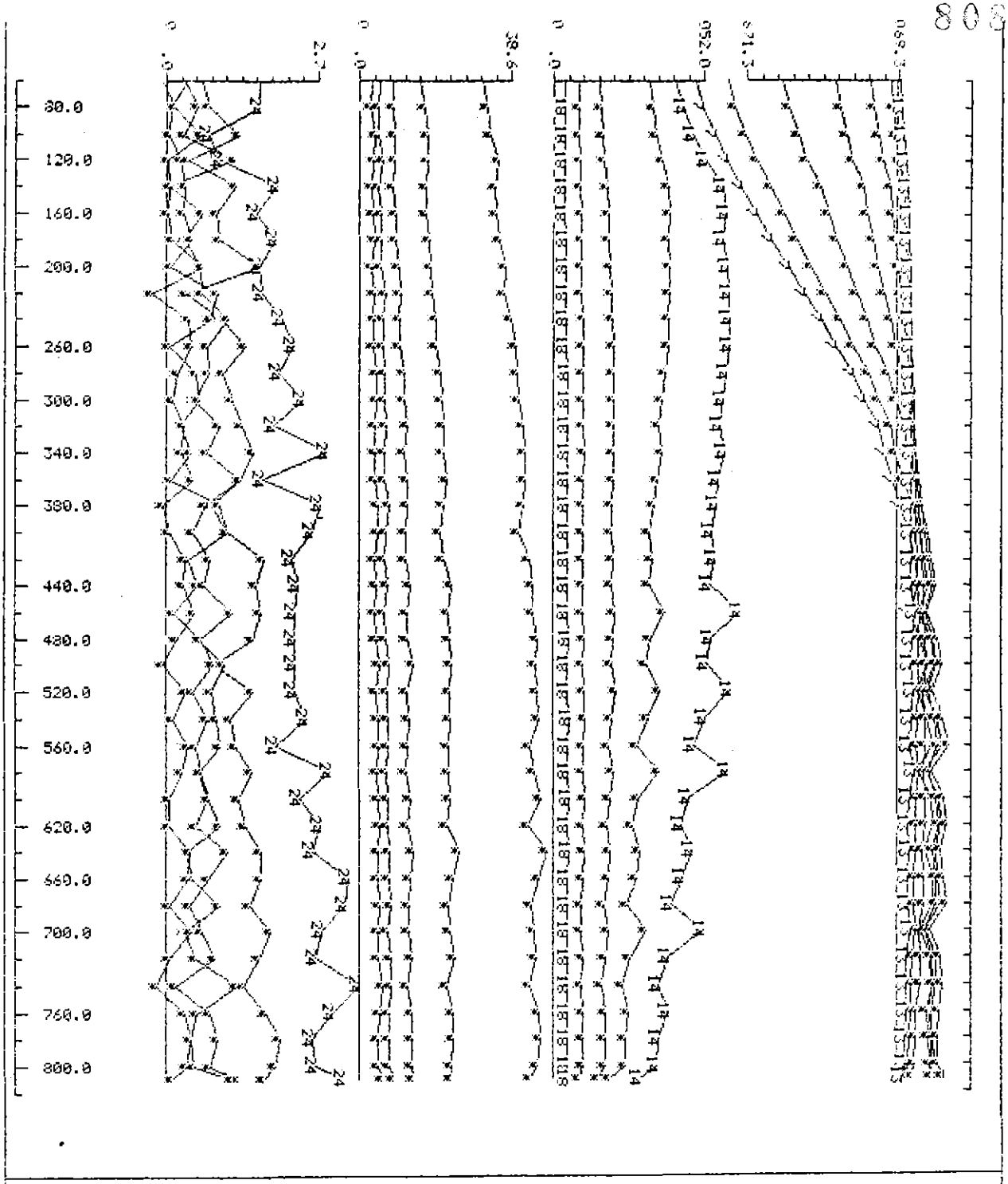
At 32 Hz we get 22 windows for 50% and 25 windows for 100% duty cycle

At 16 Hz we get 25 windows for 50% and 28 windows for 100% duty cycle

At 8 Hz we get 26 windows for 50% and 31 windows for 100% duty cycle

Window center times saved in the cache during data acquisition will be the above values plus the delay after turnoff. See Section 8. SAMPLE DATA BLOCKS for more information.

TABLE 1



Program PLOTEM
Aberfoyle Resources Ltd
DataFile: mI36.d2av
LOOP: 1
LINE: ~~1.00N~~
Horiz scale 1: 4545.5

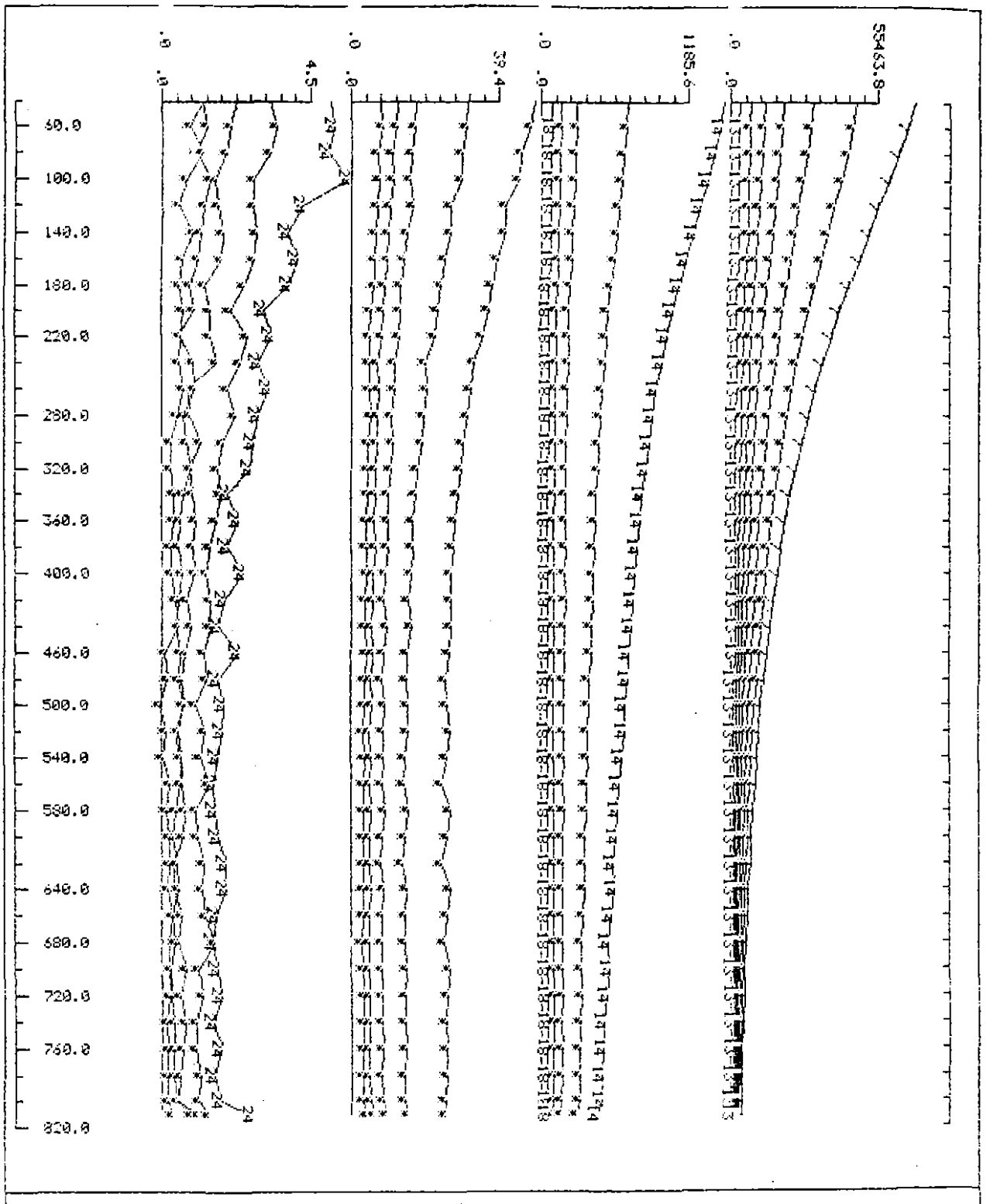
MAC 36 DHEM
READ BY JWH
PLOTTED BY JWH
ZONGE GDP_16
32H

MAC 36 LOOP 1

OUR PROBE.

16-3-94.

FIG 2

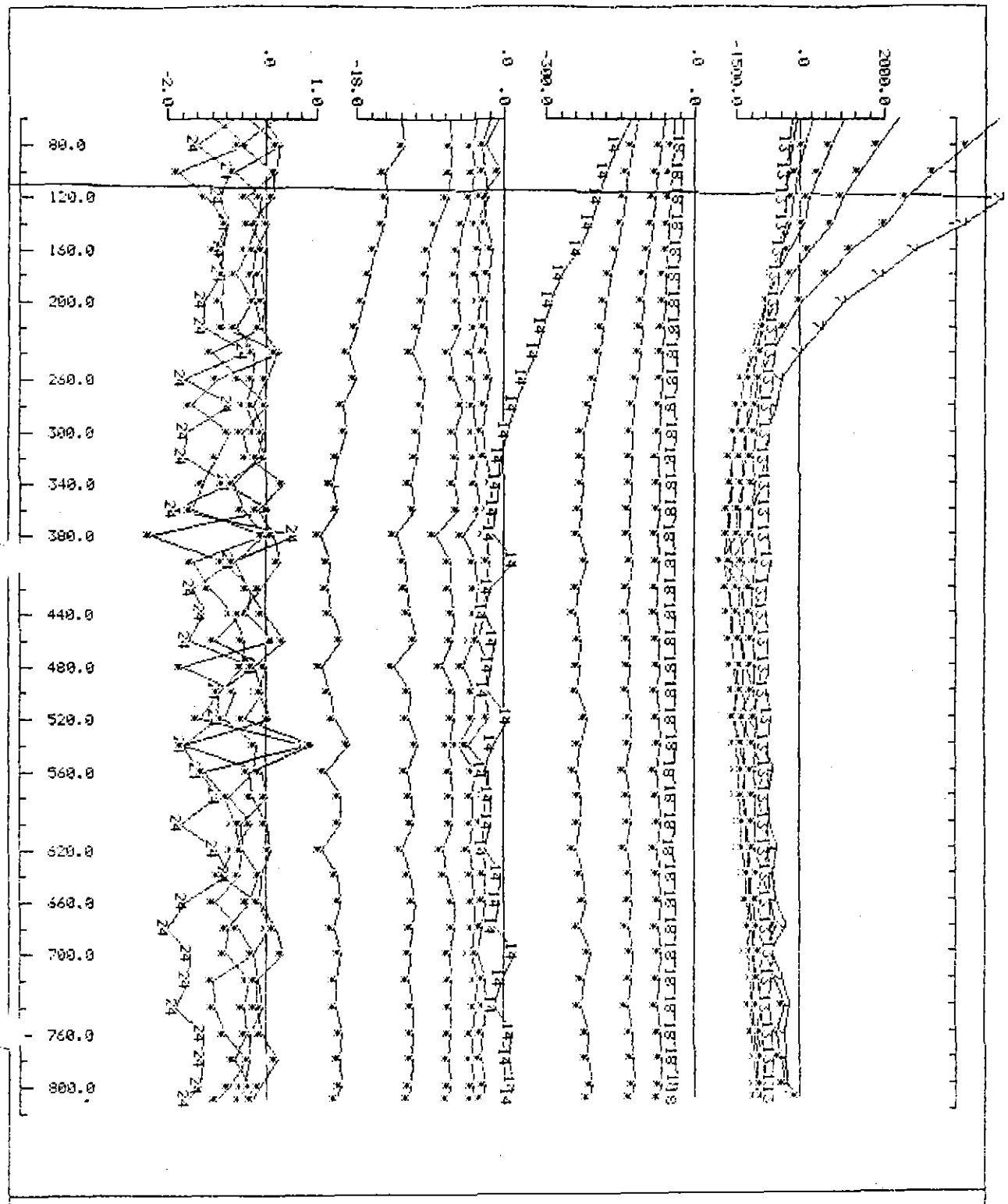


Program PLOTEM
Aberfoyle Resources Ltd
Datafile: m36.avi
LOOP: 2
LINE: 36.00N
Horiz scale 1: 4500.0

MAC 36 DHEM
READ BY JWH
PLOTTED BY JWH
ZONGE GDP_16
32H

MAC 36 LOOP 2

FIG2A



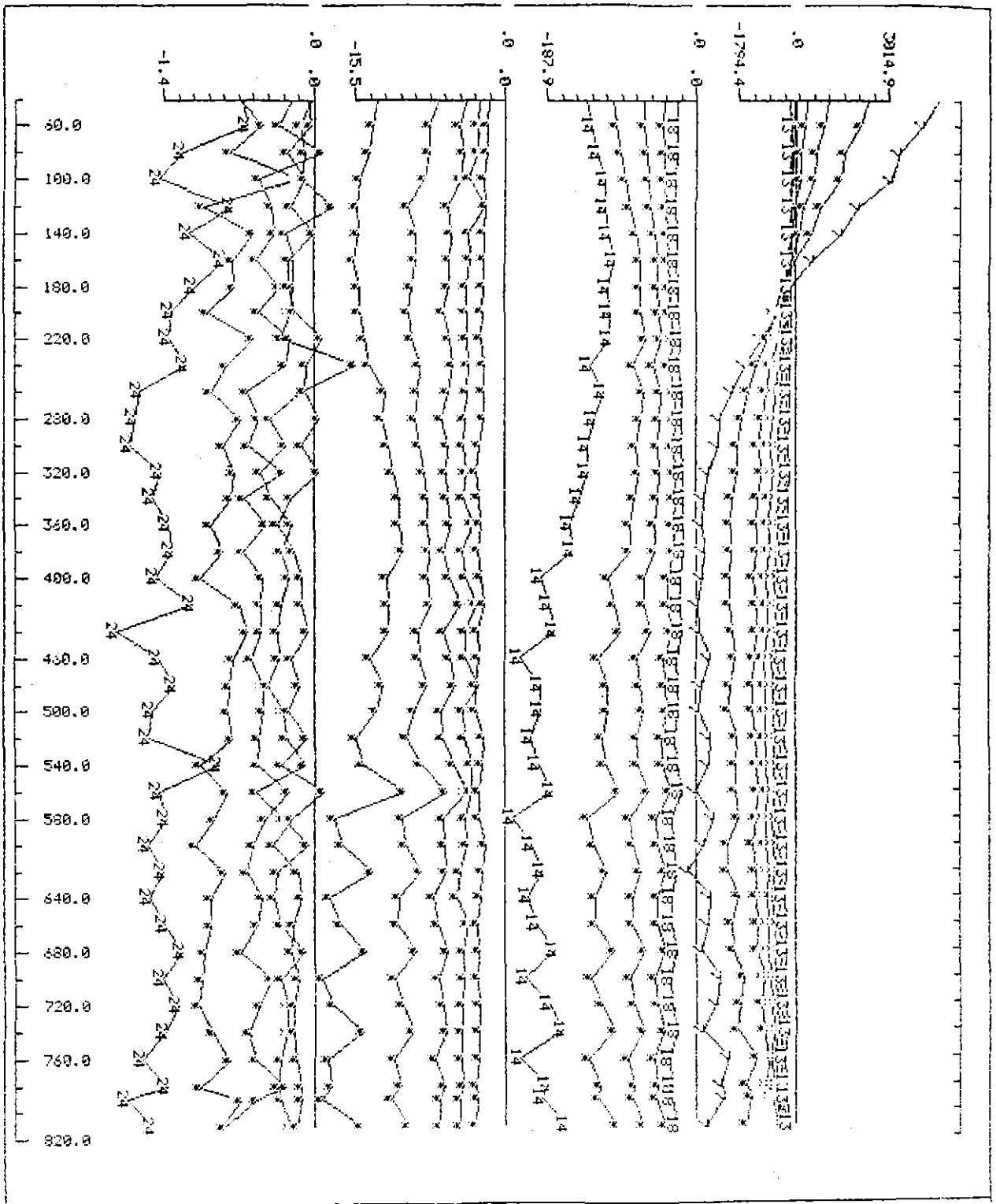
Program PLOTEM
Aberfoyle Resources Ltd
Datafile: m36.d3av
LOOP: 3
LINE: 36.00N
Horiz scale 1: 4545.5

MAC 36 DHEM
READ BY JWH
PLOTTED BY JWH
ZONGE GDP_16
32H

MAC 36 LOOP 3
OUR PROBE.

17-3-94

FIG2B



Program PLOTEM
Aberfoyle Resources Ltd
Datafile: m36.sv1
LOOP: 4
LINE: 36.00N
Horiz scale 1: 4500.0

MAC 36 DHEM
READ BY JWH
PLOTTED BY JWH
ZONGE GDP_16
32HZ

MAC 36
LOOP 4
OUR PROBE.

25th FEB 1994

FIG 2C

APPENDIX IV

DOWNHOLE EM - MAC 36 AND MAC 37

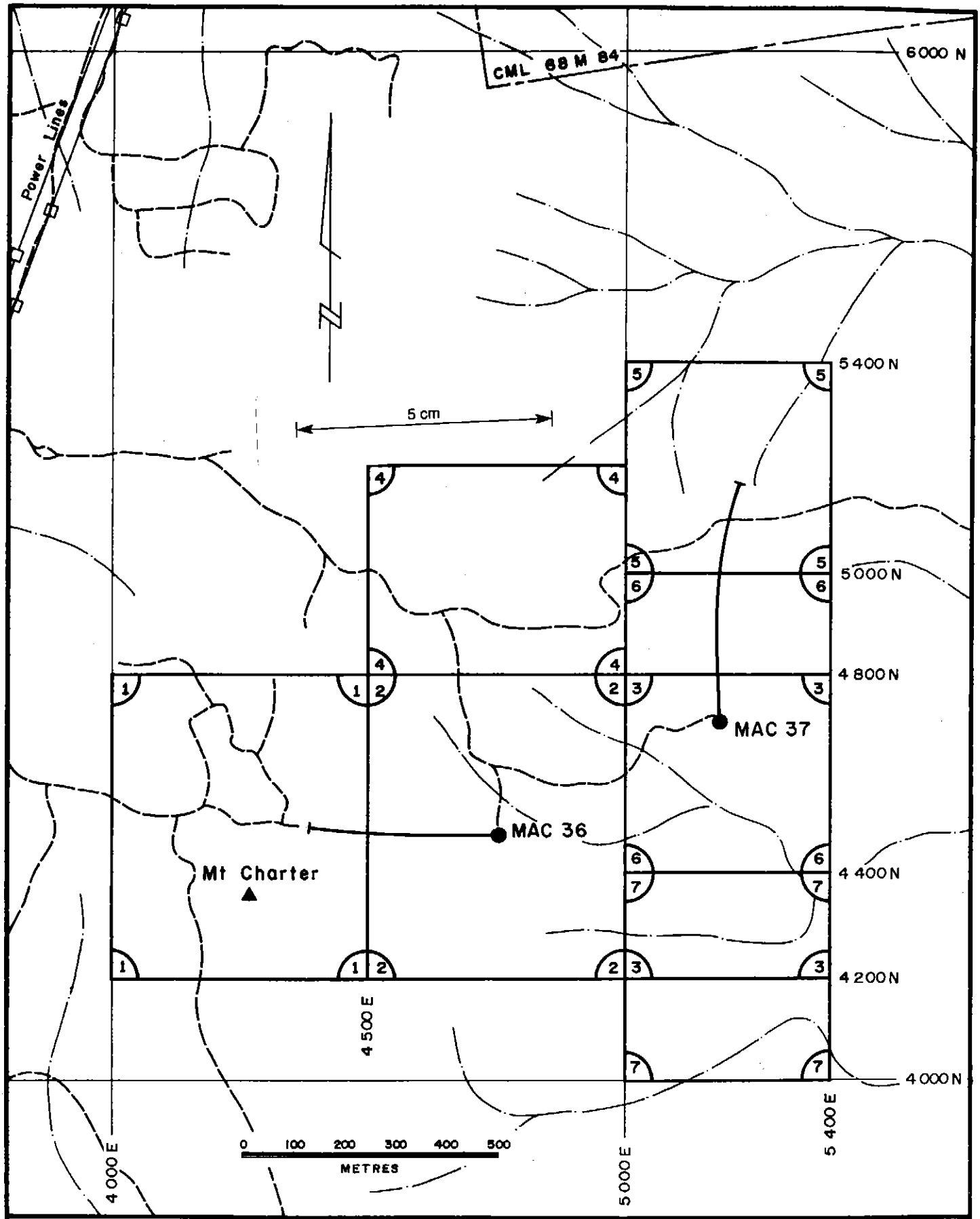
In order to search for conductive mineralisation in the vicinity of MAC 36 and MAC 37 drillholes , eight loops were used to energise the ground (Fig 1), and DHEM data was collected in the drillholes.

DHEM data was collected using Zonge GDP 16 equipment operating at 32 Hz. Table 1 gives the time windows for the Zonge receiver operating in this mode.

Analysis of the data from MAC 36 (Fig 2-2c), however, shows that no "confined" conductive targets are influencing the data set. Only "normal" background responses are evident.

Initially from the data set collected in MAC37 (Fig 3-3G), the peaking of the response in the medium time windows (eg. time windows 13-18, Fig 3) at about 420 meters down the drillholes was interpreted as an effect from an offhole conductive source. However, because it was difficult to reconcile the data set from different loops, as being due to "normal" EM effects, probe malfunction was suspected as causing the stationary peak in the response. Collecting data with other probes (e.g. Hired probe, Fig 3A) confirmed that this suspicion was justified with the medium time peak not being re-produced when the equipment was used in conjunction with other probes (e.g. Fig 3A). On the basis of these results, it was concluded that no conductive targets exist in the immediate vicinity of MAC 37. Subsequent checks performed on the probe with which the initial data set was collected did indeed show that the probe was malfunctioning.

803036



Aberfoyle Resources Limited

EXPLORATION DIVISION

Figure 1

REVISIONS			
Init.	Date	Init.	Date
jms	30-11-93		

Location Code :

NORTH WEST TASMANIA

MACKINTOSH E.L. 106/87

DDH MAC 36,37 - DHEM LOOPS

Scale : 1 : 10 000

Date : October 1993

Compiled : R deB

Drawn : JMS

Traced :

Checked : R deB

Plate No. : MAC 407

TABLE 1

6. TEM WINDOW CENTERS FOR ZERO DELAY

WINDOW #'S	32, 16, 8 Hz	4 Hz	2 Hz	1 Hz	.5 Hz	.25 Hz	.125 Hz	.0625 Hz
1	0.0 µs	0.0 µs	0.0 µs	0.0 µs	0.0 µs	0.0 ms	0.0 ms	0.0 ms
2	30.4	60.8	121.6	243.2	486.4	.9728	1.946	3.891
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5	121.6	243.2	486.4	972.8	1.946	3.891	7.782	15.56
6	152.0	304.0	608.0	1.216 ms	2.432	4.864	9.728	19.46
7	197.0	394.0	788.1	1.576	3.152	6.304	12.61	25.22
8	258.0	515.9	1.032 ms	2.064	4.127	8.254	16.51	33.02
9	318.8	637.7	1.275	2.551	5.101	10.20	20.41	40.81
10	394.0	788.1	1.576	3.152	6.304	12.61	25.22	50.44
11	485.4	970.9	1.942	3.884	7.767	15.53	31.07	62.14
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13	771.5	1.543	3.086	6.172	12.34	24.69	49.37	98.75
14	968.5	1.937	3.874	7.748	15.50	30.99	61.98	124.0
15	1.210 ms	2.420	4.840	9.679	19.36	38.72	77.43	154.9
16	1.512	3.025	6.050	12.10	24.20	48.40	96.79	193.6
17	1.903	3.807	7.613	15.23	30.45	60.91	121.8	243.6
18	2.417	4.833	9.666	19.33	38.66	77.33	154.7	309.3
19	3.052	6.104	12.21	24.42	48.83	97.67	195.3	390.7
20	3.837	7.675	15.35	30.70	61.40	122.8	245.6	491.2
21	4.820	9.639	19.28	38.56	77.11	154.2	308.4	616.9
22	6.070	12.14	24.28	48.56	97.12	194.2	388.5	777.0
23	7.658	15.32	30.63	61.26	122.5	245.0	490.1	980.2
24	9.622	19.24	38.49	76.98	154.0	307.9	615.8	1231.6
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26	15.24	30.47	60.95	121.9	243.8	487.6	975.2	1950.3
27	19.18	38.35	76.72	153.4	306.9	613.7	1227.5	2455.0
28	24.15	48.29	96.58	193.2	386.3	772.6	1545.3	3090.6
29	30.41	60.83	121.65	243.3	486.6	973.2	1946.4	3892.8
30	38.27	76.53	153.07	306.1	612.3	1224.6	2449.1	4898.2
31	48.19	96.39	192.78	385.6	771.1	1542.2	3084.5	6168.9

For 4 Hz and below, we get 28 windows for 50% and 31 windows for 100% duty cycle.

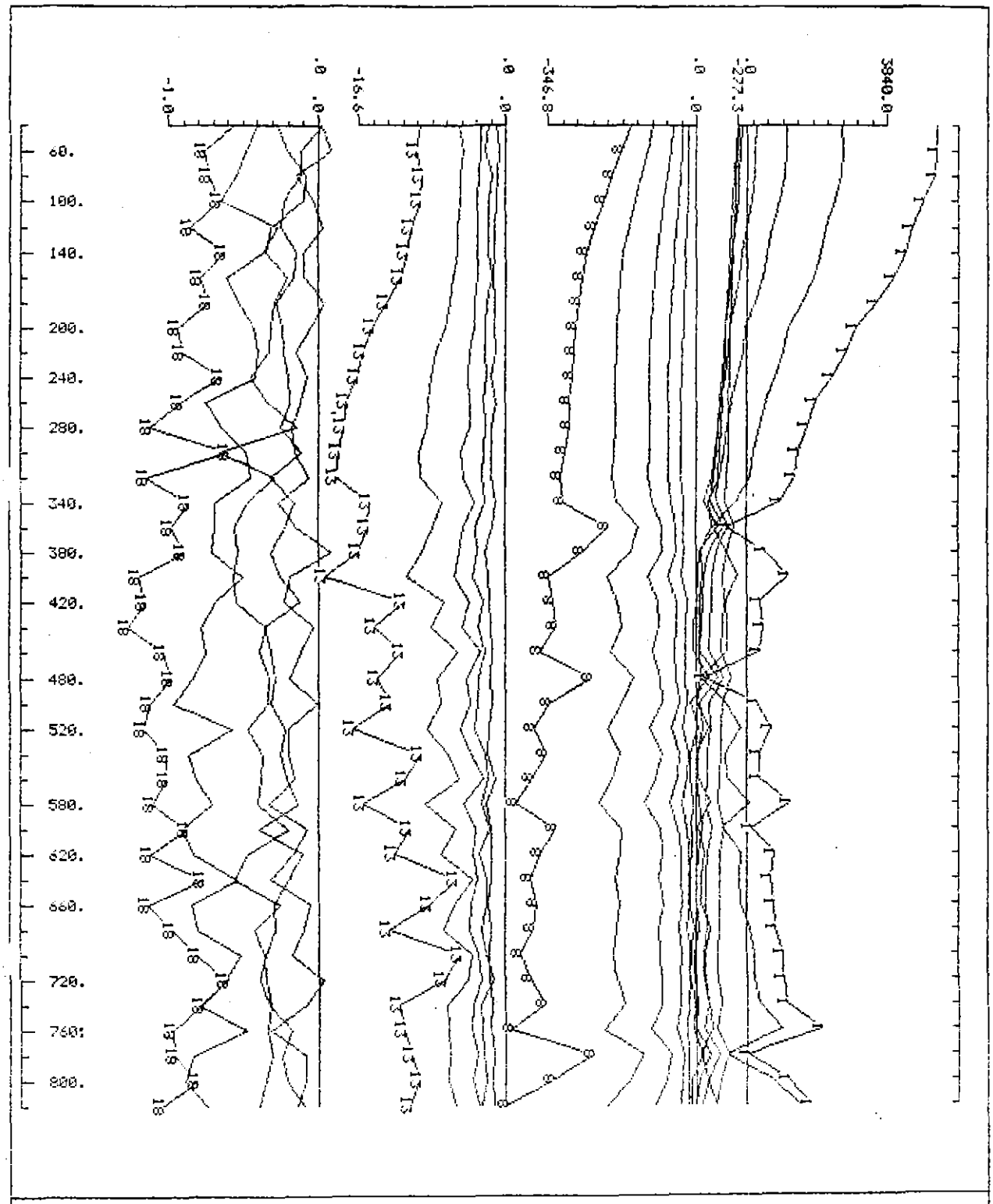
At 32 Hz we get 22 windows for 50% and 25 windows for 100% duty cycle

At 16 Hz we get 25 windows for 50% and 28 windows for 100% duty cycle

At 8 Hz we get 28 windows for 50% and 31 windows for 100% duty cycle

Window center times saved in the cache during data acquisition will be the above values plus the delay after turnoff. See Section 8. SAMPLE DATA BLOCKS for more information.

TABLE 1



Program PLOTEM
Aberfoyle Resources Ltd
Datafile: m37.avl
LOOP: 4
LINE: 37.00
Horiz scale 1: 4727.3

DHEM PLOT MAC 37

READ BY JWH
PLOTTED BY JWH

ZONE

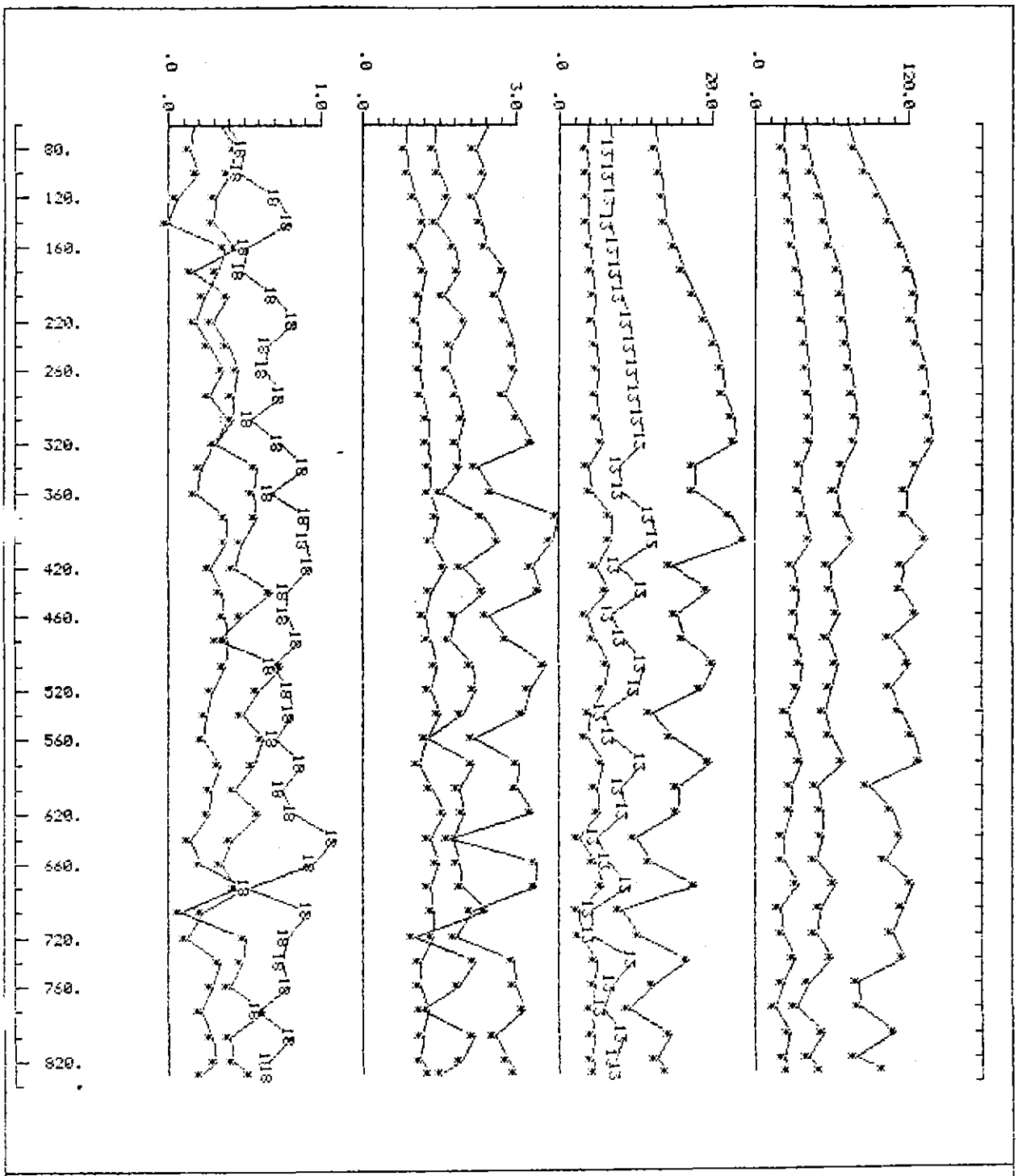
5 cm

MAC 37 LOOP 4

OUR PROBE

21st MARCH 1944.

FIG 3



Program PLOTEM
Aberfoyle Resources Ltd
Datafile: m3714.av
LOOP: 4
LINE: 37.00
Horiz scale 1: 4967.7

DHEM PLOT MAC 37
READ BY JWH
PLOTTED BY JWH
ZONGE GDP-16 32Hz

LOOP

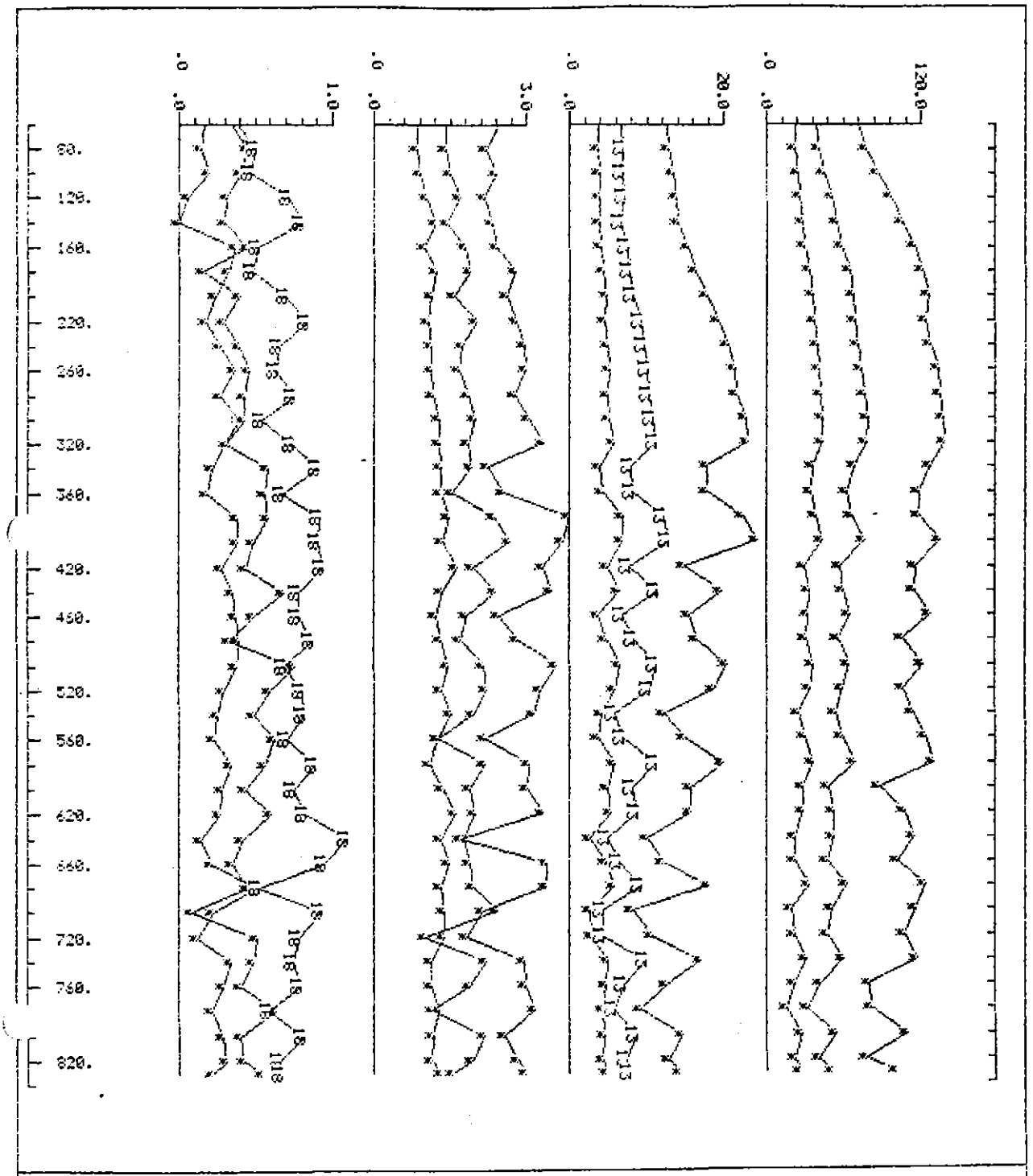
5 cm

M-37 LOOP 4

8th APRIL.

3 WINDOW / AXIS PLOT.

FIG 3A



Program PLOTEM
Aberfoyle Resources Ltd
Datafile: m3714.av
LOOP: 4
LINE: 37.00
Horiz scale 1: 4967.7

DMEM PLOT MAC 37
READ BY JWH
PLOTTED BY JWH
ZONGE GDP-16 32Hz

LOOP

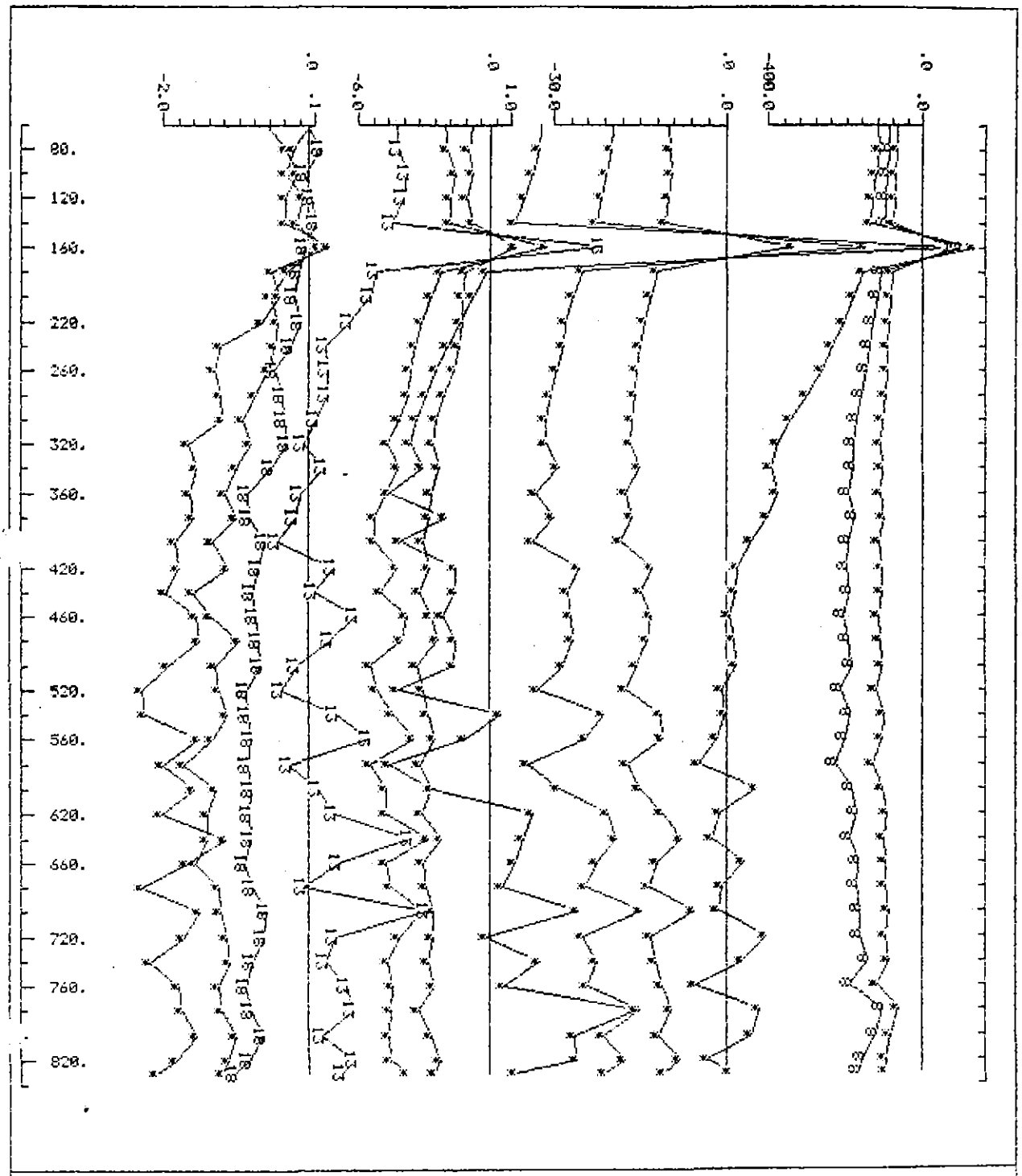
5 cm

M37- LOOP 4
HIRE PROBE

6th APRIL 1994.

FIG 3B

808101



Program PLOTEM
Aberfoyle Resources Ltd
Datafile: mac37.av
LOOP: 5
LINE: 37.00
Horiz scale 1: 4967.7

DHEM PLOT MAC 37
READ BY JWH
PLOTTED BY JWH
ZONG

5 cm

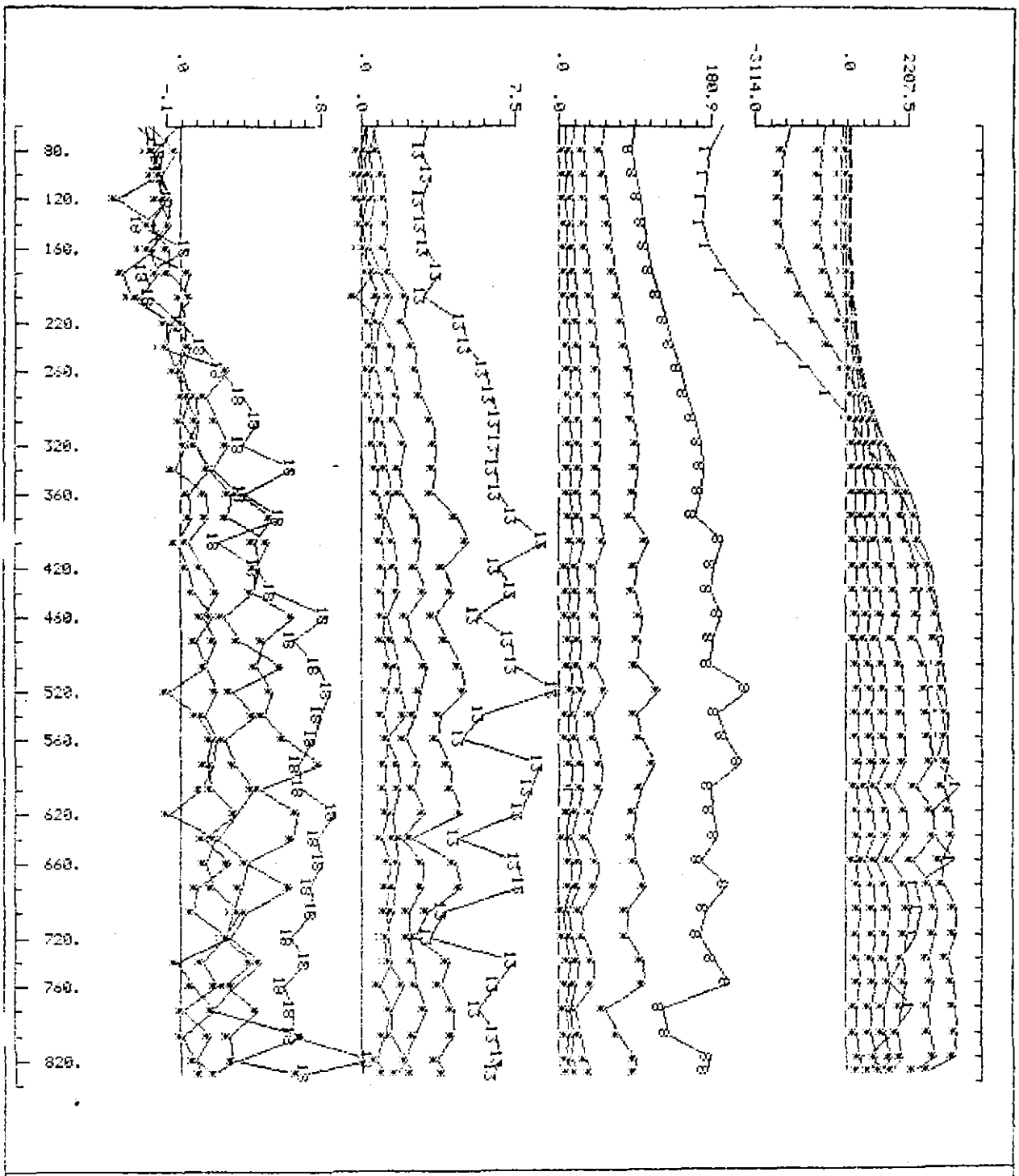
MAC 37 LOOP 5

S.A. PROBE.

23rd MARCH 1994

FIG 3C

806102



Program PLOTEM
Aberfoyle Resources Ltd
Datafile: m37.av2
LOOP: S
LINE: 37.00
Horiz scale 1: 4967.7

DHEM PLOT MAC 37
READ BY JWH
PLOTTED BY JWH
ZONG

5 cm

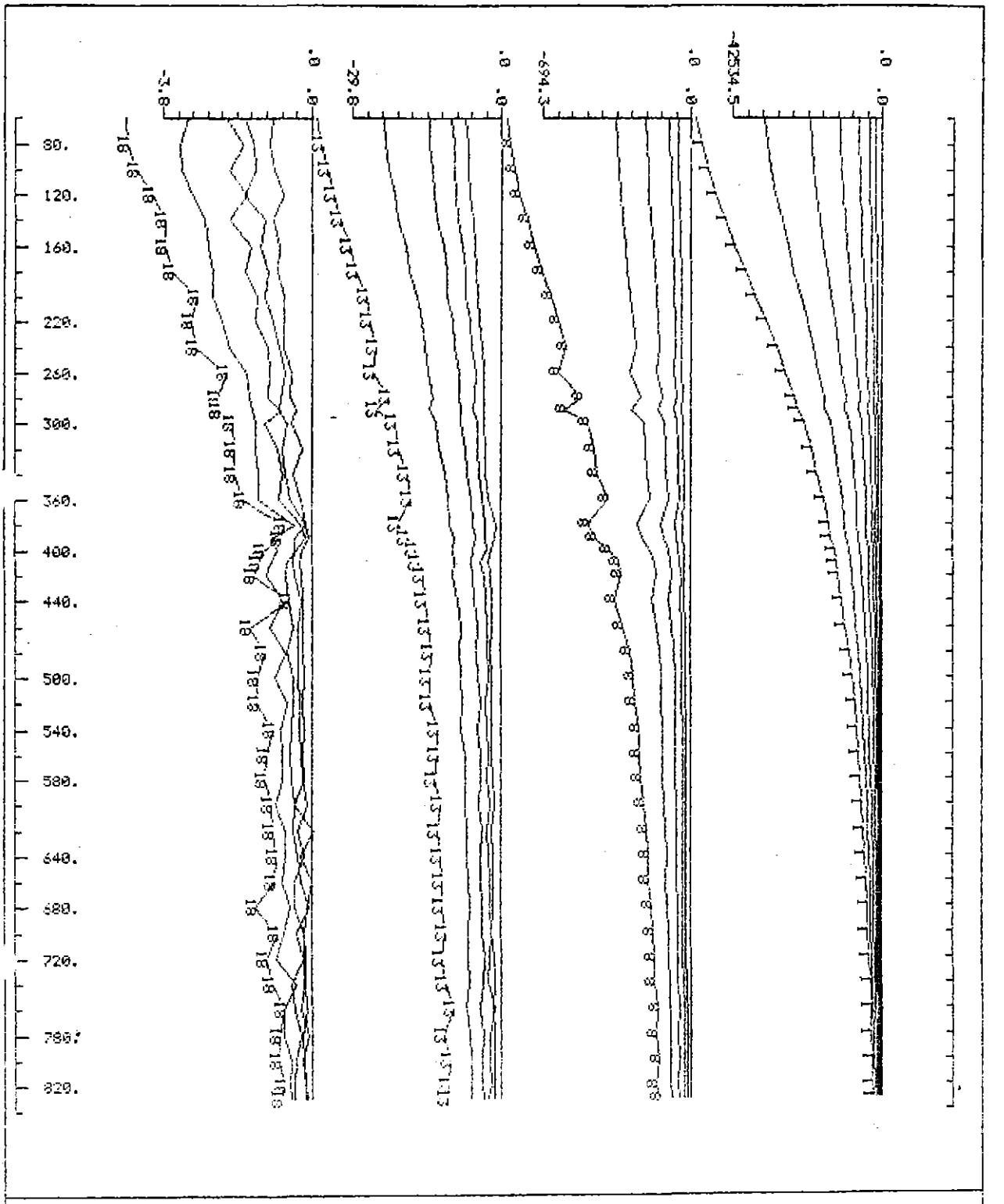
MAC 37 LOOP 5

HIRE PROBE.

7th APRIL. 1994

FIG 3D

806103



Program PLOTEM
Aberfoyle Resources Ltd
Datafile: mac37.av3
LOOP: 6
LINE: 37.00
Horiz scale 1: 4666.7

DHEM PLOT MAC 37
READ BY JWH
PLOTTED BY JWH
ZONG

5 cm

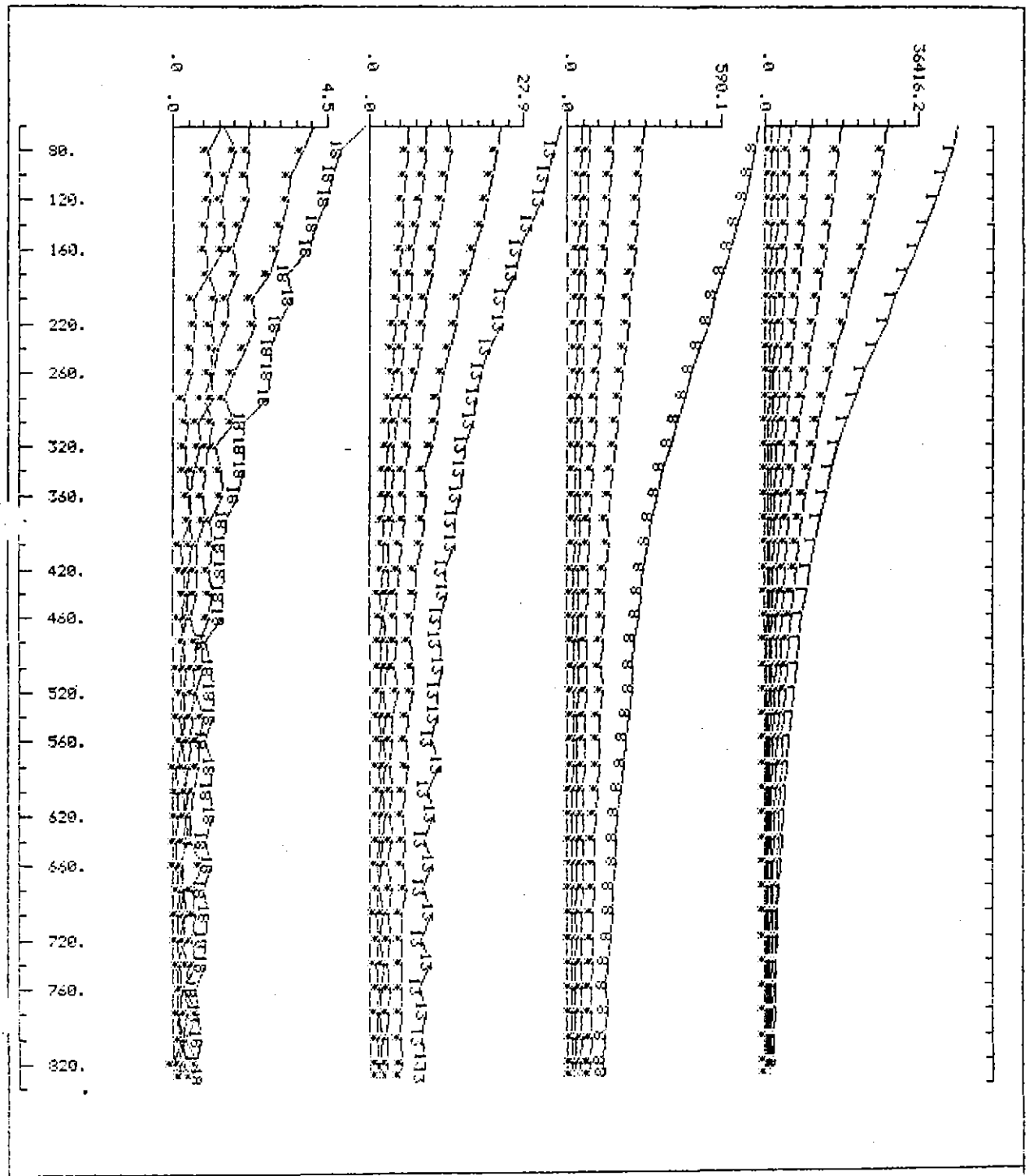
MAC 37 LOOP 6

S.A. PROBE

24 MARCH 1944.

FIG 3E

806104



Program PLOTEM
Aberfoyle Resources Ltd
Datafile: m3716.av
LOOP: 6
LINE: 37.00
Horiz scale 1: 4967.7

DHEM PLOT MAC 37
READ BY JWH
PLOTTED BY JWH
ZONGE GDP-16 32Hz

LOOP

5 cm

M37 - LOOP 6.

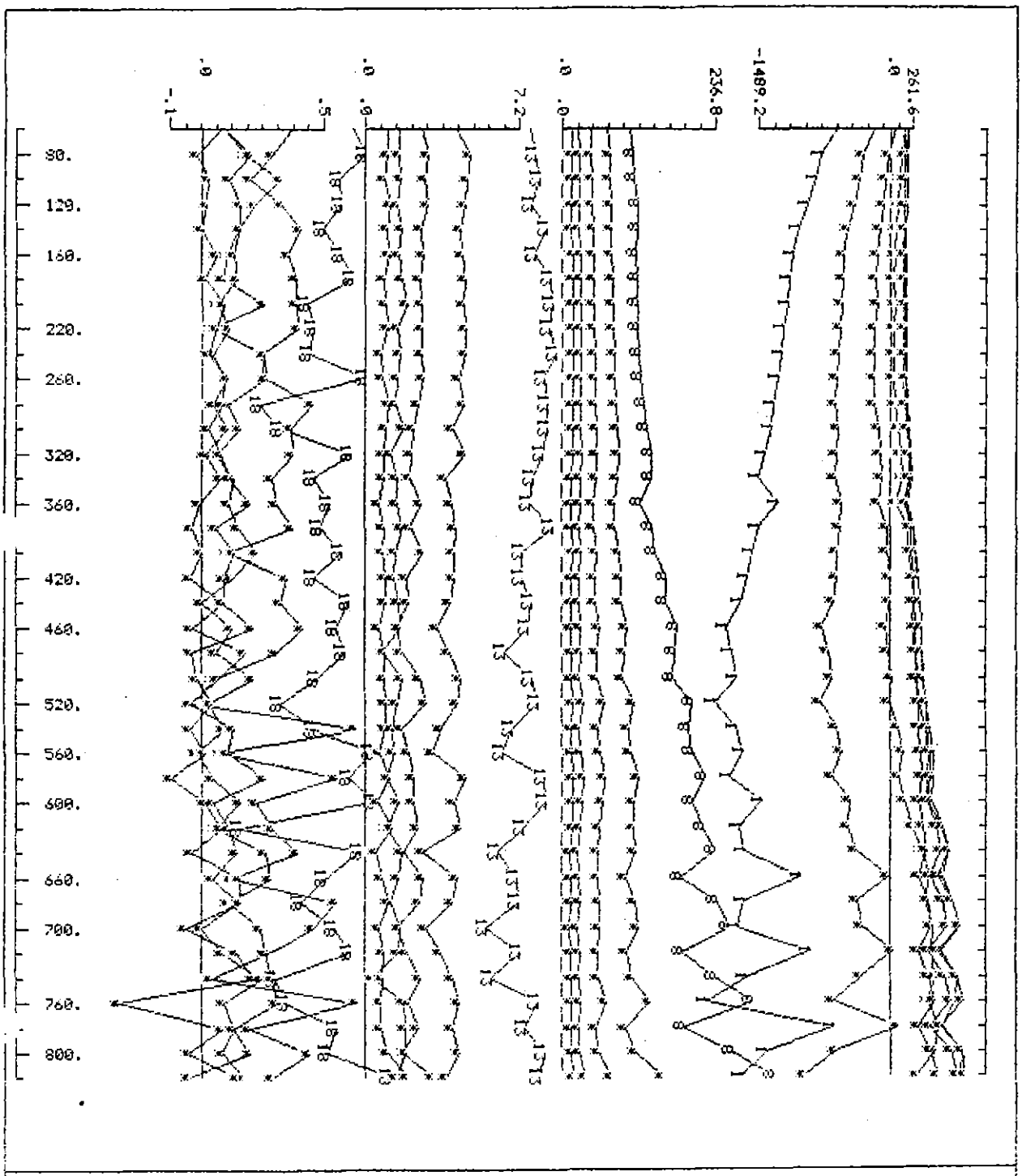
HMÈ PROBÈ.

AÈ · SOLDERED CABLÈ HEAD.

9th APRIL 1994.

FIG 3f

808105



Program PLOTEM
Aberfoyle Resources Ltd
Datafile: t.av
LOOP: 8
LINE: 37.00
Horiz scale 1: 4983.2

DHEM PLOT MAC 37
READ BY JWH
PLOTTED BY JWH
ZONG

5 cm

M-37 LOOP 8

HIRE PROBE

LIGHTNING ALL DAY

LOCAL FROM 600 m TO BOTTOM.

6th APRIL 1994

FIG 3G

4200E 4300E 4400E 4500E 4600E 4700E 4800E 4900E

900RL

800RL

Andesite (Upper Basalt)

700RL

MAC 036

Dacite

600RL

500RL

400RL

Feldspar Phyric Andesite

300RL

200RL

100RL

0RL

Altered Epiclastics

Lower Basalt?

Mica Sandstone

-100RL

5cm

95-3719.

808106

4200E 4300E 4400E 4500E 4600E 4700E 4800E 4900E

ABERFOYLE RESOURCES LIMITED
EXPLORATION DIVISION

CROSS SECTION 4500N
DDH MAC 036

DRAWING No.

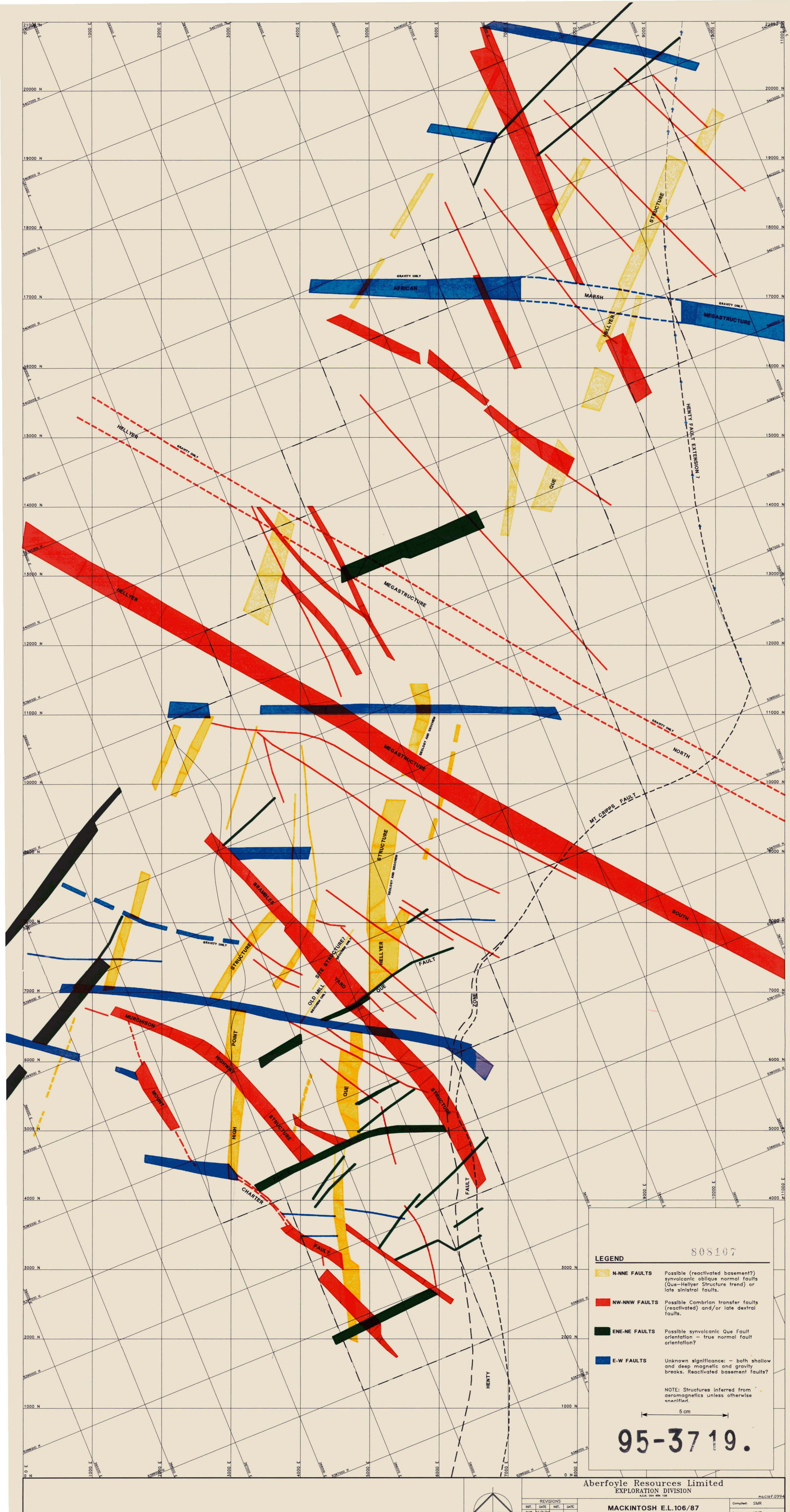
REVISION 13/03/95

SCALE 1000

DRAWN
CHECKED
DESIGNED
DESIGN CKD
DESIGN APP
PROJECT APP

NORTH

REV DATE REVISION DRAWN APP APP



LEGEND

808107

N-NNE FAULTS	Possible (reactivated basement?) synvolcanic oblique normal faults (Que–Hellyer Structure trend) or late sinistral faults.
NW-NNW FAULTS	Possible Cambrian transfer faults (reactivated) and/or late dextral faults.
ENE-NE FAULTS	Possible synvolcanic Que Fault orientation – true normal fault orientation?
E-W FAULTS	Unknown significance: – both shallow and deep magnetic and gravity breaks. Reactivated basement faults?

NOTE: Structures inferred from aeromagnetics unless otherwise specified.

5 cm

95-3719.

MINE GRID NORTH

Aberfoyle Resources Limited
EXPLORATION DIVISION
A.C.N. 004 684 108

macisf.0994

MACKINTOSH E.L.106/87
INTERPRETED
STRUCTURAL FRAMEWORK

REVISIONS			
INT.	DATE	INT.	DATE
SMR	12/7/94		

Compiled:	SMR
Drawn:	NWR
Plotted:	-
Checked:	SMR
Plate No:	MAC411

Location Codes:
Scale: 1:25000
Date: NOV 1993

PROGRAM: dhs
PROSPECT: mac
SECTION definition:
E: 0.0 725.0
N: 0.0 0.0
RL: -1050.0 0.0
Forward extent : 10.0
Backward extent: 10.0
Section Strike: 90.0
Section Length: 725.0
PDF file: shma36b.pdf
PCF file: shma36b.pcf
PLOTfile: MAC417B.plt
CRI file: shma36.cri

LEGEND - Right Side

* HISTOGRAM *
Dataset: gch
Field Na2O [%]
Base value: 0.000
Top value: 4.400
Units per mm: 0.110
Max dist in mm: 40

* HISTOGRAM *
Dataset: gch
Field MgO [%]
Base value: 0.000
Top value: 8.000
Units per mm: 0.200
Max dist in mm: 40

* HISTOGRAM *
Dataset: gch
Field K2O [%]
Base value: 0.000
Top value: 5.000
Units per mm: 0.125
Max dist in mm: 40

* HISTOGRAM *
Dataset: gch
Field CaO [%]
Base value: 0.000
Top value: 8.000
Units per mm: 0.200
Max dist in mm: 40

* HISTOGRAM *
Dataset: gch
Field Altn.Ind.
Base value: 0.000
Top value: 100.000
Units per mm: 2.500
Max dist in mm: 40

* HISTOGRAM *
Dataset: gch
Field S [%]
Base value: 0.000
Top value: 0.500
Units per mm: 0.013
Max dist in mm: 40

* HISTOGRAM *
Dataset: gch
Field Cu [ppm]
Base value: 0.000
Top value: 150.000
Units per mm: 3.750
Max dist in mm: 40

* HISTOGRAM *
Dataset: gch
Field Pb [ppm]
Base value: 0.000
Top value: 120.000
Units per mm: 3.000
Max dist in mm: 40

* HISTOGRAM *
Dataset: gch
Field Zn [ppm]
Base value: 0.000
Top value: 500.000
Units per mm: 12.500
Max dist in mm: 40

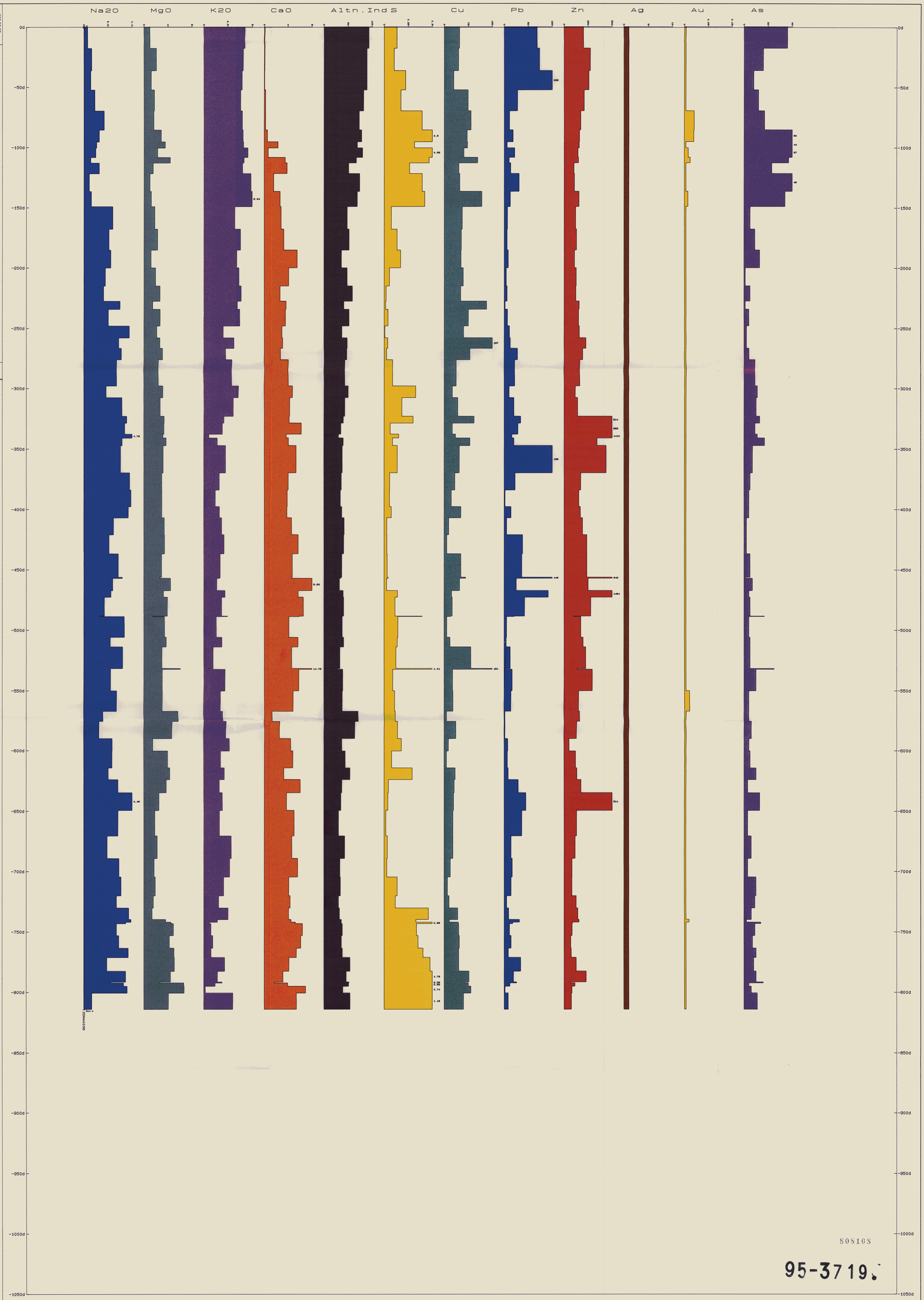
* HISTOGRAM *
Dataset: gch
Field Ag [ppm]
Base value: 0.000
Top value: 10.000
Units per mm: 0.250
Max dist in mm: 40

* HISTOGRAM *
Dataset: gch
Field Au [ppm]
Base value: 0.000
Top value: 0.120
Units per mm: 0.003
Max dist in mm: 40

* HISTOGRAM *
Dataset: gch
Field As [ppm]
Base value: 0.000
Top value: 40.000
Units per mm: 1.000
Max dist in mm: 40

LEGEND - Left Side

* ANNOTATION *
Dataset: geo
Field Rock Type



808108

95-3719

5 cm

Aberfoyle Resources Limited
EXPLORATION DIVISION

REVISIONS				Tasmania	Compiled: RdeB
Init.	Date	Init.	Date	Mackintosh E.L.106/87	Drawn:
				Geochemical Profiles	Traced:
				DDH MAC-36 (sheet 2 of 2)	Checked: SMR
Location Code:				Scale: 1 : 1000 Date: 27/06/94	Plate No.: MAC417B

PROGRAM: dhe
PROSPECT: mac
SECTION definition:
N: 0.0 795.0
E: 0.0 0.0
ADJ: -1000.0 0.0

Forward extent: 10.0
Backward extent: 10.0

Section Strike: 90.0
Section Length: 795.0

PDF file: sham36a.pdf
PCF file: sham36a.pcf
PLOTfile: MAC417A.plt
GRI file: sham36.dri

LEGEND - Right Side

* HISTOGRAM *
Dataset: geh
Field SiO2 [%]
Base value: 0.000
Top value: 100.000
Units per mm: 2.500
Max dist in mm: 40

* HISTOGRAM *
Dataset: geh
Field Al2O3 [%]
Base value: 0.000
Top value: 24.000
Units per mm: 0.600
Max dist in mm: 40

* HISTOGRAM *
Dataset: geh
Field Fe2O3 [%]
Base value: 0.000
Top value: 12.000
Units per mm: 0.300
Max dist in mm: 40

* HISTOGRAM *
Dataset: geh
Field MnO [%]
Base value: 0.000
Top value: 0.400
Units per mm: 0.010
Max dist in mm: 40

* HISTOGRAM *
Dataset: geh
Field Ba [ppm]
Base value: 0.000
Top value: 4000.000
Units per mm: 100.000
Max dist in mm: 40

* HISTOGRAM *
Dataset: geh
Field LOI [%]
Base value: 0.000
Top value: 15.000
Units per mm: 0.375
Max dist in mm: 40

* HISTOGRAM *
Dataset: geh
Field Zr [ppm]
Base value: 0.000
Top value: 320.000
Units per mm: 8.000
Max dist in mm: 40

* HISTOGRAM *
Dataset: geh
Field TiO2 [%]
Base value: 0.000
Top value: 1.000
Units per mm: 0.025
Max dist in mm: 40

* HISTOGRAM *
Dataset: geh
Field P2O5 [%]
Base value: 0.000
Top value: 0.400
Units per mm: 0.010
Max dist in mm: 40

* HISTOGRAM *
Dataset: geh
Field Cr [ppm]
Base value: 0.000
Top value: 300.000
Units per mm: 7.500
Max dist in mm: 40

* HISTOGRAM *
Dataset: geh
Field Ti/Zr
Base value: 0.000
Top value: 60.000
Units per mm: 1.250
Max dist in mm: 40

* HISTOGRAM *
Dataset: geh
Field P2O5/TiO2
Base value: 0.000
Top value: 0.600
Units per mm: 0.015
Max dist in mm: 40

LEGEND - Left Side

* ANNOTATION *
Dataset: geo
Field Rock Type

SiO2 Al2O3 Fe2O3 MnO Ba LOI Zr TiO2 P2O5 Cr Ti/Zr P2O5/TiO2

0d -50d -100d -150d -200d -250d -300d -350d -400d -450d -500d -550d -600d -650d -700d -750d -800d -850d -900d -950d -1000d -1050d

814.4

DDH MAC0036

808109

95-3719.

5 cm

Aberfoyle Resources Limited
EXPLORATION DIVISION

REVISIONS			
Init.	Date	Init.	Date

Location Code:

Tasmania
Mackintosh E.L.106/87
Geochemical Profiles
DDH MAC-36 (sheet 1 of 2)

Scale: 1 : 1000
Date: 27/06/94

Compiled: RdeB
Drawn:
Traced:
Checked: SMR
Plate No.: MAC417A

PROGRAM: gentry
PROSPECT: gps
PLAN definition.
GRID: Mack

E.	-400 0	9400.0
N.	7500.0	14350.0
RL.	410.0	410.0

Forward extent . 1000 0
Backward extent 1000 0

PDF file: mac413b.pdf
PCF file mac413b.pcf
PLOTfile. MAC413b plt
CRI file: pl10000b cri

LEGEND - Right Side

LEGEND - Left Side

* LOCATION PLOT *
Dataset: afg
+
Data: Gravity stn

* LOCATION PLOT *
Dataset: afg
Data: Gravity rdg

808110

5 cm

95-3719

Aberfoyle Resources Limited
EXPLORATION DIVISION

REVISIONS				Tasmania Mackintosh E.L.106/87 Gravity Station Locations and Reduced Values (sheet B)		Compiled: JWH/RdeB
Init.	Date	Init	Date			Drawn:
						Traced:
						Checked: JWH
Location Code				Scale: 1 : 10000	Date 12/04/95	Plate No.. MAC413b

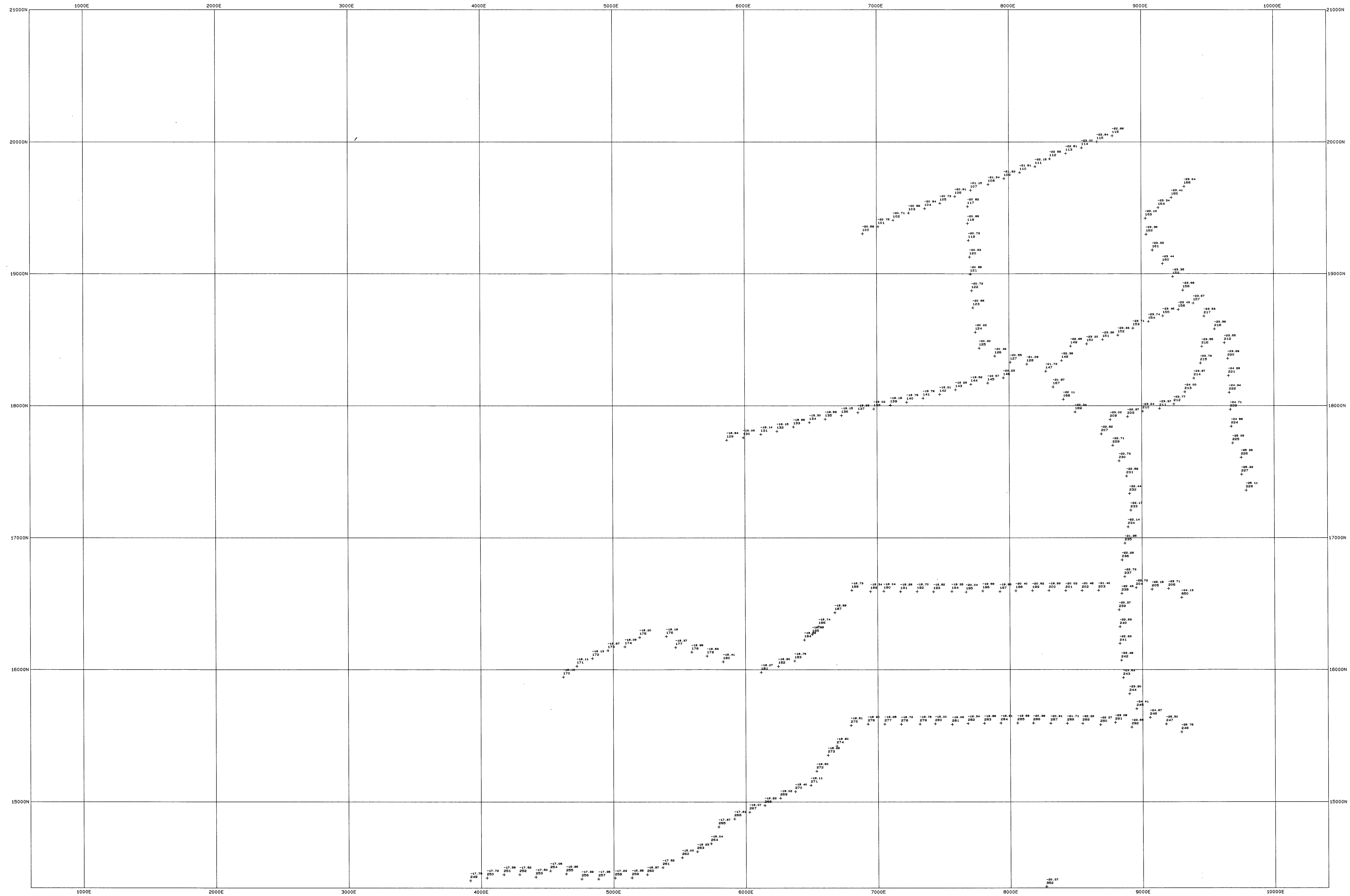
PROGRAM: gentry
PROSPECT: gps
PLAN definition:
GRID: Mack
E: 600.0 10400 0
N: 14350.0 21000 0
RL: 410.0 410.0
Forward extent : 1000.0
Backward extent: 1000 0
PDF file: mac413a.pdf
PCF file: mac413a.pcf
PLOTfile: MAC413a.plt
CRI file: pl10000a.cri

LEGEND - Right Side

LEGEND - Left Side

* LOCATION PLOT *
Dataset: sfg
Data: Gravity stn.

* LOCATION PLOT *
Dataset: sfg
Data. Gravity rdg.



808111

5 cm

95-3719

Aberfoyle Resources Limited
EXPLORATION DIVISION

REVISIONS				Tasmania Mackintosh E.L.106/87 Gravity Station Locations and Reduced Values Sheets A & E		Compiled: JWH/RdeB
Init.	Date	Init.	Date			Drawn.
						Traced:
						Checked: JWH
Location Code:				Scale: 1 : 10000	Date: 12/04/95	Plate No.: MAC413a

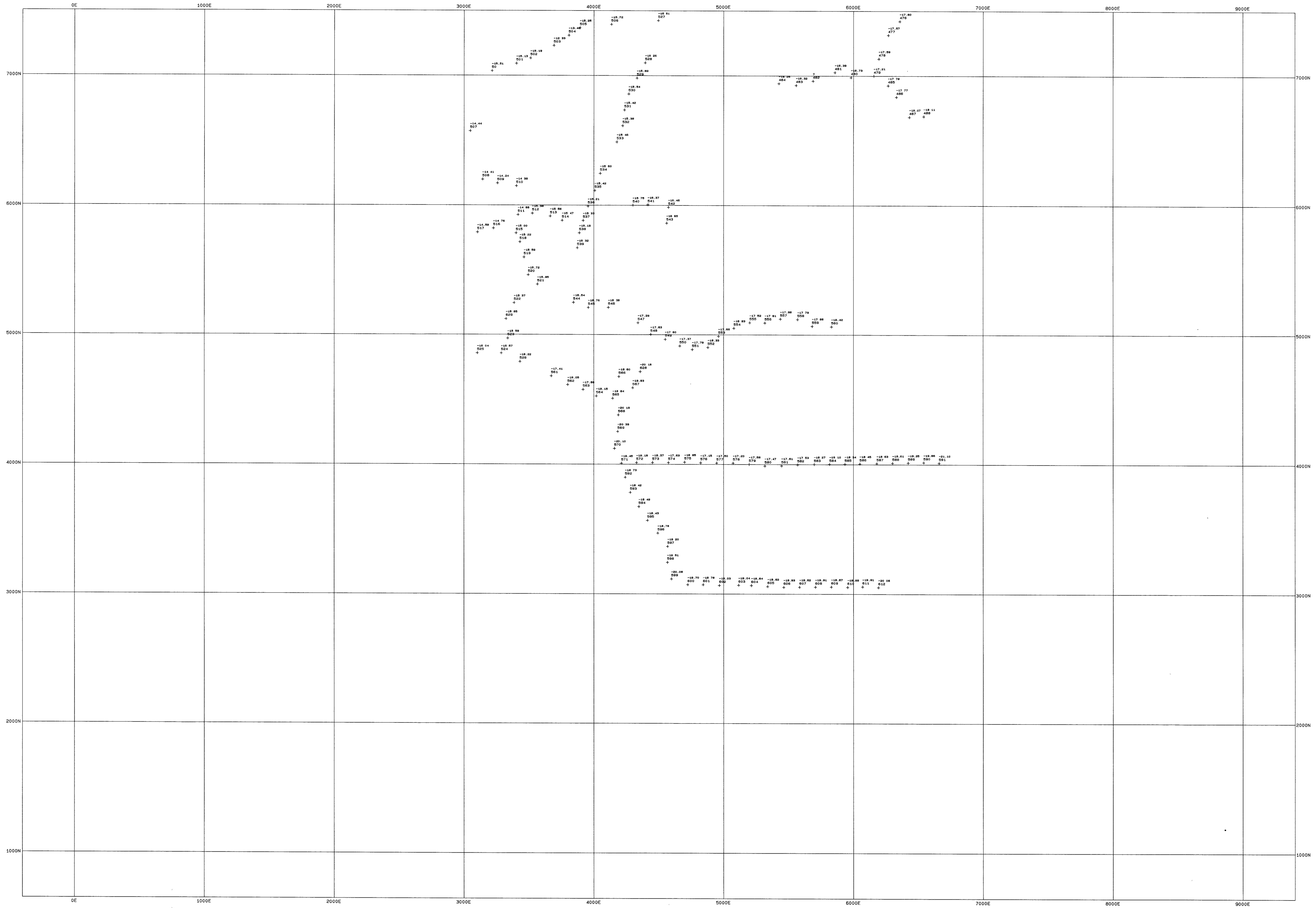
PROGRAM: gentry
PROSPECT: gps
PLAN definition:
GRID: Mack
E: -400.0 9400.0
N: 650.0 7500.0
RL: 410.0 410.0
Forward extent 1000.0
Backward extent 1000.0
PDF file: mac413c pdf
PCF file: mac413c pcf
PLOTfile: MAC413c.plt
CRI file. pl10000c.cri

LEGEND - Right Side

LEGEND - Left Side

* LOCATION PLOT *
Dataset: sfg
+
Data: Gravity stn.

* LOCATION PLOT *
Dataset. sfg
Data: Gravity rdg.



808112

5 cm

95-3719

Aberfoyle Resources Limited
EXPLORATION DIVISION

REVISIONS			
Init.	Date	Init.	Date

Location Code

Tasmania
Mackintosh E.L.106/87
Gravity Station Locations
and Reduced Values (sheet C)

Compiled: JWH/RdeB
Drawn.
Traced:
Checked. JWH

Scale: 1 : 10000
Date: 12/04/95
Plate No. MAC413c