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LAKE MARGARET EL 5/85

TASMANIA

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Technical Progress Report
for the period
October 1993 - September 1994

Volume 1 of 2
Text and Appendices

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Dora rock chip samples (Tony Crawford).

Beatrice rock chip samples (Matt White).

Tyndall Creek drill core (Matt White).

APPENDIX II**Geochemical Assays:**

Tyndall Creek stream sediments.

Tyndall Creek pit.

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Tyndall Creek IP survey.

Tyndall Creek UTEM survey.

1. SUMMARY

The Newton Creek (Tyndall Creek) Prospect is part of a Cambrian intermediate to felsic volcano-sedimentary basin south of the Henty Fault. Work completed during the 1993-1994 exploration programme included diamond drilling at Tyndall Creek with follow-up gridding, 'wacker' sampling, IP and EM. The results of the work programme are as follows:

- Best results of 2.1m @ 0.2% Cu, 5.4% Pb, 7.8% Zn, 256 ppm Ag and 0.7 ppm Au in TC5.
- No IP response was detected over the Tyndall Creek mineralisation.
- Orientation 'wacker' sampling has been successful in penetrating glacial cover and recovering base metal anomalous bedrock samples from depths up to 12m.

A major review of exploration in the Newton Creek - Howards Anomaly - Tyndall Creek area was completed. Three deep (800m) diamond drill holes are planned to test the intersection at depth between Lower Tyndall Group volcanoclastics ('Howards Tuff') and the Great Lyell Fault.

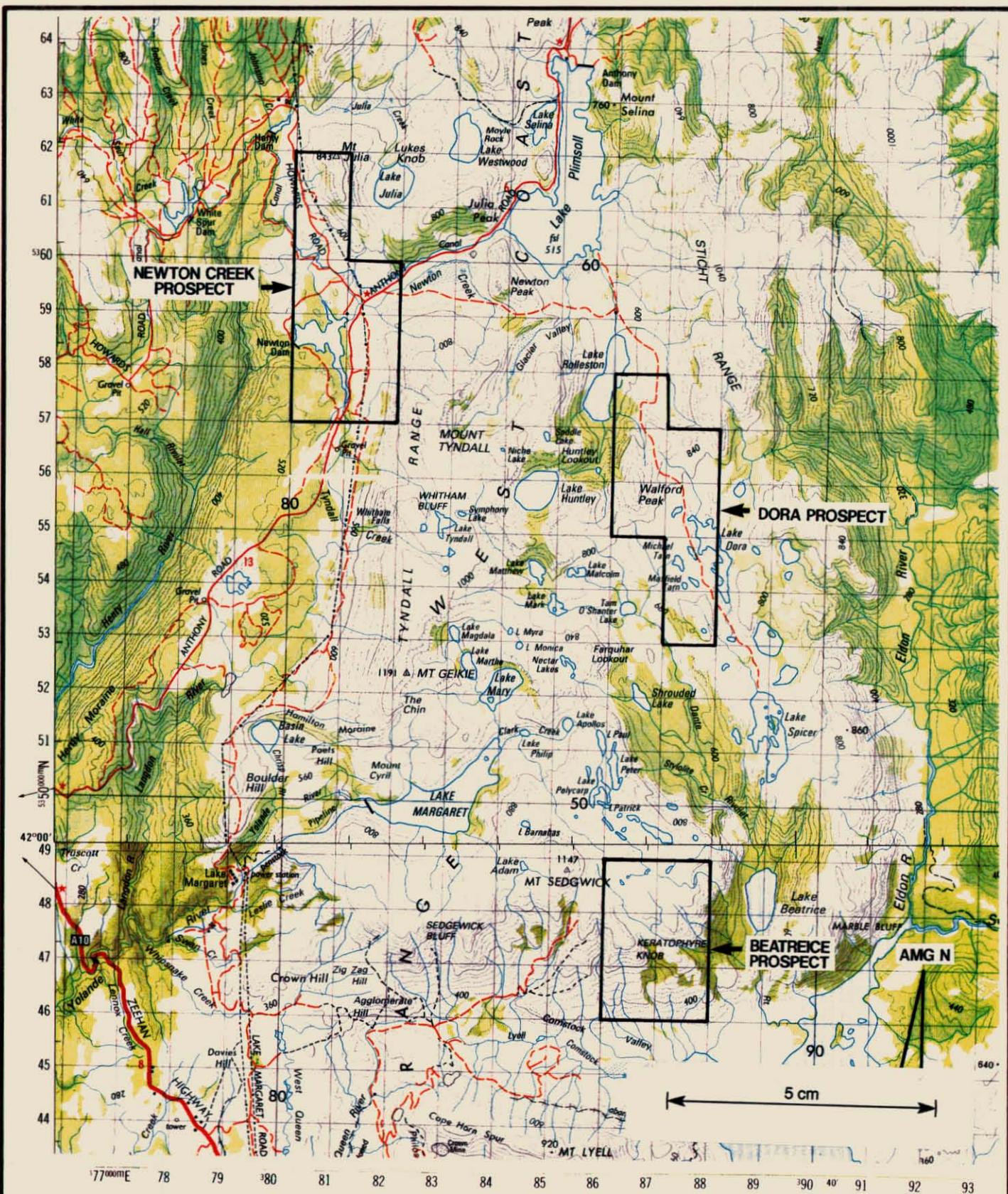
Limited reconnaissance mapping and sampling of the Dora and Beatrice prospects has been undertaken. Several small occurrences of Anthony Road - type andesite were discovered in units mapped as Eastern Quartz Phyric Sequence, suggesting a stratigraphic reappraisal of the area is required. Results from Beatrice indicate possible correlation between Tyndall Group units there and the Southwell Subgroup, north of the Henty Fault.

2. INTRODUCTION

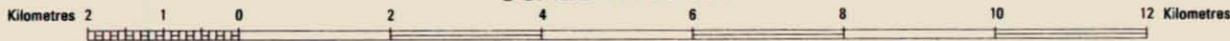
Exploration Licence 5/85 Lake Margaret was granted to CRA Exploration Pty. Ltd. (CRAE) on the 20th October 1985. From the 28th April 1988 exploration has been conducted by Aberfoyle Resources Limited under the terms of the Mount Read Volcanic joint venture with CRAE. The licence area was reduced from 145 to 75 square kilometers in October 1990 (Noonan 1990). A further 52 square kilometers was relinquished in November 1993 (Sharpe 1993b).

The present 21 square kilometers of EL 5/85 comprises 3 separate prospect areas: Newton Creek, Dora and Beatrice (Figure 1).

The following report documents exploration on EL 5/85 Lake Margaret for the period October 1993 to September 1994.



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EXPLORATION DIVISION

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E.L.5/85 LAKE MARGARET

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3. NEWTON CREEK PROSPECT

3.1 Introduction

The Newton Creek Prospect is an 8 square kilometer area including the Newton Dam Spillway, Howards Anomaly and Tyndall Creek. It forms the northern part of the Anthony Basin - a major felsic to intermediate volcano-sedimentary basin south of the Henty Fault.

The 1992-1993 work programme (Sharpe 1993a) included a geological-geophysical compilation which clarified the Cambrian structural framework. Banded barite-sulfide boulders assaying up to 12 g/t Au were discovered as float in Tyndall Creek and traced to a source beneath the Anthony Road bridge.

The main focus of exploration in the past year has been delineation of the Tyndall Creek barite-sulfide mineralisation. This work involved 5 short diamond drill holes (TC1-5) with follow-up petrology and geochemistry. A small grid was established over the Tyndall Creek Prospect and an IP survey, wacker sampling and EM survey completed. A number of conceptual structural-stratigraphic targets have been developed from our current understanding of the Tyndall Creek mineralisation and prospect-scale geological-geophysical compilation.

3.2 Previous Exploration

Previous exploration by Goldfields and CRAE in this area has focused on the chlorite-hematite-carbonate alteration and silver mineralisation at Howards Anomaly.

Discovery of high grade massive sulfide boulders in a dacitic breccia at the Newton Spillway has led to a renewed interest in the prospect. Aberfoyles focus has been on developing an integrated geological-structural understanding of the area through detailed mapping and geomagnetic interpretation (Richardson 1991, Sharpe 1992, Sharpe 1993a).

Work completed in the period 1966-93 is detailed below (adapted from Fitzgerald 1987).

Years	EL	Company	Work	Details	Reference
1966-67	EL9/66	Goldfields	Access: Geology: Geophysics:	Bradshaw's Road extension, gridding (East Tyndall) mapping reconnaissance dipole-dipole IP (McPhar)	Elms 1967
1967-68	EL9/66	Goldfields	Access: Geology: Geophysics:	infill gridding (East Tyndall) mapping detailed dipole-dipole IP (McPhar) ⇒ 5 anomalies	Newnham 1968

			Geochemistry:	stream, soil, rock chip	
1968-69	EL9/66	Goldfields	Access: Geology: Geophysics: Geochemistry:	gridding (Howards Anomaly) costeaning IP/geochem. anomalies fluxgate magnetics ⇒ 3 main anomalies limited detailed soil	Newnham 1969
1969-70	EL9/66	Goldfields	Access: Geophysics:	gridding (Newton Creek) vertical field magnetics	Newnham 1970
1970-71	EL9/66	Goldfields	Drilling:	HA1 (137m) abandoned HA2 (259m) ⇒ max 12.6m @ 8.8% FeS ₂ , 0.05% Cu & 18m @ 5.3% FeS ₂ , 0.1% Cu	McKibben 1971
1971-72	EL9/66	Goldfields	No work in this period		
1972-73	EL9/66	Goldfields	Geology: Geophysics:	mapping mercury vapor soil test	Wells 1973
1973-74	EL9/66	Goldfields	No work in this period		
1974-75	EL9/66	Goldfields	Access: Geology: Geophysics: Geochemistry: Drilling:	grading, recleared and infilled detailed mapping gradient array IP, proton magnetics (Scintrex) ⇒ 7 major anomalies detailed soil HA3 (244m) ⇒ narrow pyritic black shale	Stevens-Hoare 1975
1975-78	EL9/66	Goldfields	No work in this period		
1978-79	EL9/66	Goldfields	Access: Geology: Geophysics: Geochemistry:	re-establish grids data review, mapping Tyndall Mine aeromagnetic survey (Geoex) soil/rock sampling Tyndall Mine ⇒ anomalous Pb > Zn	Reid, Meares, Walter, Hutton & Drake 1979
1979-80	EL9/66	Goldfields	Access: Geology: Geophysics: Geochemistry: Drilling:	re-clearing and infill gridding detailed mapping, pits dug over soil anomalies, petrology (rock, HA4) gradient array IP, follow-up pole-dipole IP (Scintrex) ⇒ 14 main anomalies, limited detailed total field magnetics detailed soil sampling ⇒ max 1.0% Zn, detailed rock chip pit sampling ⇒ max 230 g/t Ag, 2.0% Pb, 5.0% Zn, reassay HA3 ⇒ 49m @ 8.4 g/t Ag including 1.5m @ 35 g/t Ag HA4 (403m) ⇒ 35m @ 34 g/t Ag including 2m @ 410 g/t Ag	Meares, Walter & Hutton 1980
1980-81	EL9/66	Goldfields	Access: Geology: Geophysics: Geochemistry:	road construction, grid extension costeans dug/sampled, additional mapping, petrology limited gradient array IP, detailed proton magnetics (Scintrex) ⇒ no anomalies detailed soil, limited stream sediment, rock chip, costean sampling ⇒ max 10m @ 73 g/t Ag, reassaying core HA1-2 ⇒ no significant Ag	Meares, Hutton & Komysan 1981

			Drilling:	HA5 (298m) ⇒ 8.6m @ 11.0 g/t Ag	
1981-82	EL9/86	Goldfields	Access: Geology: Geophysics: Geochemistry: Drilling:	infill gridding alteration study & petrography (Eastoe) dipole-dipole IP (Scintrex) ⇒ confirm anomalies limited detailed soil sampling HA6 (250m) ⇒ 4.1m @ 6.3 g/t Ag & 3m @ 0.2% Cu	Meares, Purvis, Hutton & Komyschan 1982
1982-83	EL9/86	Goldfields	Geology: Geochemistry:	comprehensive data review re-assaying core HA2-6 ⇒ HA2 9m @ 0.2 g/t Au	Purvis, Fitzgerald & Komyschan 1983
1983-84	EL9/86	Goldfields	Geology: Drilling:	petrology HA7 (234m) ⇒ broad pyritic zone, max 3m @ 0.2% Zn & 2m @ 10 g/t Ag HA8 (252m) ⇒ broad pyritic zone, av. 224.8m @ 0.2% Zn, 3 g/t Ag	Roberts & Cartwright 1984
1984-85	ETA		No work in this period		
1985-86	EL5/85	CRAE	Geophysics	26 line km UTEM ⇒ 4 anomalies	Sheppard 1986
1986-87	EL5/85	CRAE	Geology: Geochemistry:	mapping stream sediment, soil ⇒ max 0.4 g/t Au, rock chip	Funnell 1987
1987-88	EL5/85	CRAE	Geology:	review	von Storkirch 1988
1988-90	EL5/85	Aberfoyle	No work in this period		
1990-91	EL5/85	Aberfoyle	Geology: Geochemistry: Research:	mapping ⇒ Newton Dam Spillway sulfide boulders lithochemistry, Pb isotopes R. Gibson Honours Project	Richardson 1991 Gibson 1991
1991-92	EL5/85	Aberfoyle	Geology: Geochemistry:	mapping, petrology lithochemistry, soil, old drill core, S isotopes	Sharpe 1992
1992-93	EL5/85	Aberfoyle	Geology: Geophysics: Geochemistry:	1:5000 mapping, sampling, petrology ⇒ Barite sulfide boulders in Tyndall Creek helimag/radiometrics, EM(Tyndall Mine) lithochemistry, REE geochemistry	Sharpe 1993

3.3 Geology

Minor ground checking and infill mapping was completed during the 1993-94 field programme: these amendments are compiled in the 1:5000 outcrop geology map (PLATE LMARG50).

During the wacker programme (see below), a 2x2 metre pit was identified to the south of known mineralisation on Tyndall Creek grid line 500E. This old working was excavated and channel sampled. The pit contained altered sheared silicified Lower Tyndall Group (LTG) volcanoclastics with patchy barite and/or sulfide mineralisation; similar to stringer mineralisation identified in Tyndall Creek. Continuity of the stringer type mineralisation can be inferred

over approximately 15 metres parallel to the NNW Tyndall Creek Fault orientation.

Bedrock 'wacker' sampling over the Tyndall Creek grid revealed marked differences in crystal abundance (qtz \pm feldspar) and lithic content in LTG volcanoclastics. Although different LTG lithologies can be identified, a coherent stratigraphy cannot be inferred from the irregular distribution. Alteration assemblage overprint has variable composition and intensity.

3.4 Geochemistry

3.4.1 Whole Rock Geochemistry

Twelve continuous rock chip samples were taken from the small pit on Tyndall Creek grid line 500E. Assays returned anomalous base metals, gold and barium including 1m at 0.3% Cu, 2.9% Pb, 3.5% Zn, 41ppm Ag, 3.1ppm Au, 30.2% Ba and 323ppm As and a grab sample returning 0.1% Cu, 0.8% Pb, 1.8% Zn, 34ppm Ag, 0.97ppm Au, 15.8% Ba and 130ppm As. These results are typical of the barite stringer vein mineralisation. Full assay results are given in Appendix II.

3.4.2 Stream Sediment Geochemistry

A small number of bulk stream sediment samples were taken both up and downstream from the Tyndall Creek barite boulders in order to test for an anomalous dispersion signature. Assays (Appendix II) were low in base metals and gold with the exception of 624417 which returned 282ppm Zn and 0.074ppm Au.

3.5 Tyndall Creek Diamond Drilling

3.5.1 Introduction

A programme of five short diamond drill holes was completed on EL5/85. The drill holes, each of approximately 40 metres, were designed to test the down-dip extent, thickness and continuity of a previously identified barite-sulfide gold rich anastomosing vein system outcropping in Tyndall Creek.

Four of the five drill holes were collared on the eastern side of the Anthony Road beside Tyndall Creek. The fourth DDH was collared on the western side of the road (PLATE LMARG74).

3.5.2 Geology

Results for each of the DDH is as follows:

DDH TC1: Drilled toward the east the drill hole was abandoned at 31.1 metres due to drilling problems. These were caused by intense shearing and cleavage development in a Cambrian(?) NNW trending fault zone. High core loss and extremely broken ground resulted. No barite-sulfide mineralisation was intersected as the DDH failed to reach target depth, however abundant disseminations of pyrite were recorded. A brief geological summary of the drill hole is:

FROM (m)	TO (m)	GEOLOGY
0	1.8	Gravels/Glacial Sediments.
1.8	12.65	Pale gray banded, highly altered feldspar pyritic (up to 5% pyrite) sandstone to br�ccla. Minor galena (up to 1%); highly sheared zone.
12.65	16.4	Gray banded feldspar pyritic (3-5% pyrite) lithic volcanoclastic; distinctive pink feldspars.
16.4	18.25	Fault Zone
18.25	19.55	Gray feldspar lithic volcanoclastic with disseminated pyrite (1-2 %); distinctive pink feldspars.
19.55	21.1	No core recovery.
21.1	31.1	Highly Altered chloritic sandstone unit (trace pyrite).
EOH		

DDH TC2: Drilled toward the west, this DDH intersected barite-sulfide stockwork veining between 5 and 10 metres. A brief geological summary is as follows:

FROM (m)	TO (m)	GEOLOGY
0	5	Gravels/Glacial sediments.
5	10	Barite-sulfide stockwork veining.
10	16.5	Gray feldspar lithic volcanoclastic; distinctive pink feldspars (1-2% pyrite).
16.5	22.4	Green chlorite altered feldspar rich (+quartz) volcanoclastic sandstone.
EOH		

DDH TC3: Stepped back further to the east, DDH TC3 drilled under DDH TC2 to test the width of the barite-sulfide veining system intersected in the upper portions of DDH TC2. The result of drilling are summarized below:

FROM (m)	TO (m)	GEOLOGY
0	7.5	Gravels/Glacial sediments.
7.5	16.9	Intensely sheared siliceous chlorite hematitic volcanoclastics with abundant disseminations of pyrite and pyritic veinlets.
16.9	17.2	Banded barite-sulfide mineralisation.
17.2	22.5	Gray siliceous unit with occasional barite-galena veining and pyritic lenses (up to 5% pyrite).
22.5	26	Gray feldspar (pink) crystal rich volcanoclastic with minor disseminated pyrite (locally up to 10%) and galena (up to 1%).
26	32	Green chloritic feldspar crystal rich volcanoclastic sandstone (Trace pyrite).
EOH		

Mineralisation between 16.9 and 17.2 is identical to barite-sulfide float boulder mineralisation previously identified downstream in Tyndall Creek.

DDH TC4: Drilled toward the east DDH TC4 aimed to test the northern extension of the structurally controlled mineralizing system intersected in DDHs' TC2 and TC3. Geological summary of lithologies in TC4 is:

FROM (m)	TO (m)	GEOLOGY
0	14.4	Gray feldspar (pink) crystal rich lithic volcanoclastic. Disseminated pyrite (1-2%) and sphalerite (1%).
14.4	16.25	Fault Zone.
16.25	50.2	Green chlorite altered feldspar quartz lithic volcanoclastic sandstone. Disseminated pyrite (2-3%) and sphalerite (1-2%) in matrix.
EOH		

DDH TC4 did not intersect a northern extension to barite-sulfide mineralisation. This result can be interpreted to indicate that mineralisation is not continuous to the north or plunging. Alternatively, the spatial distribution of the veining system may be complicated by structural modification.

DDH TC5: TC5 was drilled to the west in order to test down dip extensions to the barite veining in Tyndall Creek, with the following results:

FROM (m)	TO (m)	GEOLOGY
0	1.8	No core recovery.
1.8	3.2	Sulfide-rich wash.
3.2	4.0	Gray barite-chert horizon.
4.0	6.1	Banded barite-galena-sphalerite.
6.1	13.7	Barite stockwork mineralisation in highly sheared and altered volcanoclastics.
13.7	18.8	Sheared and broken ground - no core recovery.
EOH		

Complete drill logs are given in Appendix IV.

3.5.3 Petrology

Eleven samples from the immediate footwall to the Tyndall Creek mineralisation were submitted for thin section description. Two dominant lithotypes were identified.

Samples 624188 (10.5m TC2) and 624191 (18.6m TC3) are **coherent feldspar phyric facies** of andesitic-dacitic composition. They may represent faulted slices of underlying Anthony Road Andesite or small intrusive bodies. Similar rocks are seen in the Anthony Road cutting immediately north of Tyndall Creek where the intrusive/extrusive setting is also unclear. Samples 624189(8.0m TC3) and 624190(14.3m TC3) are highly altered equivalents occurring stratigraphically above 624188 and 624191.

Samples 624192-197 are quartz-free plagioclase crystal-rich **redeposited volcanoclastic sandstone facies** containing K feldspar-quartz altered polycrystalline grains and dacite-andesite lithic clasts. These rocks are interpreted as mass flow deposits derived from rapid redeposition/elutriation of pyroclastic debris and are a common facies of the Lower Tyndall Group.

Full petrographic descriptions and report are given in Appendix I.

3.5.4 Geochemistry

Split drill core was sampled at 1 m and stratigraphic intervals and submitted for Cu, Pb, Zn, Ba, Ag, Au and As analysis. Complete results are presented in Appendix II and shown on PLATES LMARG77-81. A summary of these results is as follows:

DDH	WIDTH (m)	MINERALISATION	Cu(%)	Pb(%)	Zn(%)	Ag(ppm)	Au(ppm)
TC1	29.3	Altered/sheared footwall	52ppm	260ppm	232ppm	5.8	0.2
TC2	4.6	Barite stockwork veining	0.1	0.9	1.2	90	1.5
TC3	9.5	Hmt/cht alt Howards Tuff	0.1	0.2	0.3	79	0.07
	0.8	Banded barite-galena	0.1	1.5	2.7	80	3.8
	4.0	Barite stockwork veining	0.1	0.3	0.5	29	0.3
TC4		No mineralisation	Background values				
TC5	1.4	Sulfide-rich wash	0.4	6.29	3.0	39	0.01
	0.8	Barite-chert	0.1	0.2	0.8	249	0.02
	2.1	Barite-galena-sphalerite	0.2	5.4	7.8	256	0.7
	7.6	Barite stockwork veining	0.1	1.1	1.1	34	1.0

3.5.5 Results

Results of the drilling programme indicate potential for both base metal and gold-rich mineralisation in the vicinity of Tyndall Creek. The nearby Tyndall Creek structure forms a wide zone with associated highly altered and sheared host rocks. Intensely developed deformation fabric within banded barite + sulfide mineralisation in TC5 indicates the potential for structurally controlled mineralisation parallel to the Tyndall Creek Fault.

3.6 Geophysics

3.6.1 Introduction

The 1986 CRAE UTEM survey utilized an old RGC grid that was oriented at a low angle to the strike of the Tyndall Creek Fault and likely mineralized strike extent. In reviewing this data it was concluded that the Tyndall Creek prospect had not been tested properly by EM techniques. A 4.6 line km grid (Tyndall Creek grid) was established in a more favorable orientation (PLATE LMARG99). Part of this grid is cut over EL103/87 Basin Lake (Aberfoyle-Billiton JV).

3.6.2 IP Survey

A 4.2 line km IP survey in April-May 1994 did not detect an IP effect over the known barite-sulfide mineralisation. A geophysical report on the survey with IP pseudosections is presented in Appendix IV. Further IP was not recommended.

3.6.3 EM Survey

Attempts to survey the grid with EM using Aberfoyle's Zonge system were frustrated by a recurrence of the "ringing" effect near power lines. A one loop, 4.2 line km UTEM survey was carried out by Lamontagne Geophysics in early September 1994. Results are reported in Appendix IV.

3.7 Tyndall Creek 'Wacker' Sampling

3.7.1 Introduction

'Wacker' sampling of the Tyndall Creek grid was undertaken in order to sample bedrock beneath glacial cover and further delineate the extent of sub-cropping mineralisation. In total, 110 of 170 sample sites were successful in penetrating glacial cover and recovering bedrock samples. Successful sample locations and depth of glacial cover are shown in Plates LMARG87 and LMARG89.

3.7.2 Geochemistry

Geochemical investigations of 'wacker' sampling yielded anomalous values over LTG lithologies although Au values were generally below detection limit. Known sub-cropping Tyndall Creek Mineralisation returned 20.9% Ba, 2270 ppm Cu, 793ppm Pb, 8268ppm Zn, 95ppm Ag, 0.236ppm Au and 97ppm As. Although NNW sub-cropping continuity of the Tyndall Creek mineralisation cannot be definitively established, anomalism levels in altered LTG sandstone units along this NNW trend do not preclude barite/sulfide mineralisation continuity at depth. Some examples of the level of anomalism are indicated by samples 627131 on line 100E with 159ppm Cu, 1410ppm Pb, 2824ppm Zn, bd. Ag, 980ppm Ba, 28ppm As and sample 627155 on line 000E with 529ppm Cu, 505ppm Pb, 1400ppm Zn, bd. Ag, 0.05ppm Au, 1465ppm Ba and 49ppm As.

Assay data is presented in Appendix II and shown in plates LMARG88-96.

3.7.3 Results

'Wacker' sampling has provided a methodology through which geochemical and lithological variation of sub-cropping bedrock can be examined in detail through glacial cover. The high success rate of this programme was largely a result of judicious supervision during the wacker drilling which reduced the number of samples in areas of thick glacial cover.

The 'wacker' technique shows:

- Successful penetration to bedrock of up to 11.4 metres of glacial cover.
- Evidence that bedrock cover north of the Tyndall Creek Grid is not necessarily shallower in thickness, but more easily penetrable by 'wacker' methods. This probably reflects a change in the lithology of the glacial cover and/or an increase in thickness of the soil profile.
- On south western portions of the grid the majority of 'wacker' holes were stopped by a consolidated fine-grained siltstone to mudstone in the glacial stratigraphy.
- Broadly the thickness of the glacial cover increases to the south west and/or becomes coarser grained with boulders through which wacker drilling cannot penetrate.

4. DORA PROSPECT

4.1 Introduction

The Dora Prospect is a 7 square kilometer area in the vicinity of Lake Dora on the eastern side of the Tyndall Range. A three day helicopter supported reconnaissance visit was undertaken to assess the potential for further work. Field checking of existing mapping, rock chip sampling for petrology, litho geochemistry and lead isotope investigations were carried out.

4.2 Previous Exploration

The Lake Dora area was held by Goldfields Exploration between 1966 and 1985 as part of EL9/66 Tyndall during which time work focused on resampling and mapping old copper workings. CRAE took up the area as part of EL5/85 and completed a programme of gridding, mapping, EM and ground magnetics. Exploration during this time is summarized below (*from Fitzgerald 1987*).

Years	EL	Company	Work	Details	Reference
1969-70	EL9/66	Goldfields	Access: Geology: Geochemistry: Geophysics:	road construction, gridding mapping, petrology soil, rock chip pole-dipole IP, resistivity, SP, fluxgate magnetics (C.G.C.) ⇒ 7 anomalies	Newnham 1970
1971-79	EL9/66	Goldfields	No work during this period		
1980-81	EL9/66	Goldfields	Access: Geology: Geochemistry:	re-establish grid limited mapping, petrology limited rock chip	Meares, Hutton & Komyshan 1981
1981-82	EL9/66	Goldfields	Access: Geology: Geochemistry:	in-fill gridding Sirotem EM (Geoex) ⇒ no anomalies Reconnaissance Genie EM (Scintrex) ⇒ no anomalies limited rock chip	Meares, Purvis, Hutton & Komyshan 1982
1982-83	EL9/66	Goldfields	Geology: Geochemistry:	comprehensive data review rock chip sampling ⇒ Dora workings max 6.2% Cu, 2.3% Pb, 5.5%Zn, 152 g/t Ag, 2.0 g/t Au	Purvis, Fitzgerald & Komyshan 1983
1983-85	EL9/66	Goldfields	No work during this period		
1986-87	EL5/85	CRAE	Geochemistry: Geophysics:	soil, stream, rock chip, dump sampling 14 line km UTEM	Funnell 1987
1987-88	EL5/85	CRAE	Geophysics	ground magnetics	von Strokirch 1988
1988-93	EL5/85	Aberfoyle	No work during this period		

4.3 Geology

Reconnaissance work included ground checking of existing Mines Department and earlier exploration mapping, visiting old prospects and sampling. Two areas of hornblende plagioclase phyrlic coherent volcanics were located: where the Dora-Spicer Road crosses a small creek north west of Lake Dora and at the western end of CRA grid line 136S near Michael Tarn. There is a pervasive NNW trending cleavage throughout the area and most lithological contacts are highly sheared/faulted.

There appears to be a west to east transition from coherent volcanic facies (including andesite), through a NNW trending zone of chlorite alteration with sporadic Cu-Au mineralisation to a belt of volcanoclastic-epiclastics with intrusive pods of biotite porphyry. This sequence passes east into the volcanoclastic Dora Conglomerate.

4.3.1 Petrology

Nineteen samples were submitted for petrographic description. Samples 624584-587 are petrographically similar to Anthony Road Andesite with abundant apatite microphenocrysts. Sample 624580 from north west of Lake Dora is a plagioclase-hornblende-quartz phyrlic shallow intrusive dacite similar to the more evolved ARA. Samples 624577 and 624578 are coherent volcanics resembling the Bond Range Porphyry. In the east of the area, samples 624581, 624589, 624576 and 624601 form a mappable quartz-bearing epiclastic facies which includes a weakly altered/mineralized mudstone unit (624579 - 0.91% Pb). Full descriptions are given in Appendix I.

4.4 Geochemistry

4.4.1 Whole Rock Geochemistry

Sixteen rock chip samples were submitted for Cu, Pb, Zn, Ag, Au, Ba, As, Cr, Ti and Zr analysis. Assay results were generally low with the exception of 624579 (107ppm Cu, 0.91% Pb and 3615ppm Zn) and 624582 (4215ppm Cu and 0.15ppm Au) which were both from old workings. Seven samples of coherent volcanic rocktypes were submitted for whole rock geochemistry, in order to establish their geochemical affinity. Despite the strong petrographic similarity to Anthony Road Andesite, these units have low P_2O_5 more typical of Suite I CVC lavas (Crawford 1992).

Full analyses are given in Appendix II.

5. BEATRICE PROSPECT

5.1 Introduction

The Beatrice prospect is a 6 square kilometer area south southeast of Mount Sedgwick (Figure 1).

A two day helicopter supported reconnaissance visit to the Beatrice grid was undertaken to assess the potential for further work. Work included field checking for stratigraphic reappraisal of existing mapping, rock chip sampling for petrology, litho-geochemistry and lead isotope investigations with particular emphasis on units mapped as Tyndall Group.

5.2 Previous Exploration

The Beatrice area was originally held by Goldfields Exploration as part of the large Tyndall Licence EL9/66 and later in EL 10/69 which was re-amalgamated into EL9/66 in 1978. Previous work has concentrated on the Itat Creek area to the west of the Beatrice lava dome in what is now EL102/87. Work undertaken in the area now covered by EL5/85 Lake Margaret included gridding, geological mapping, IP and ground magnetics, soil and rock chip geochemistry and minor pitting (Meares et al 1980, Purvis et al 1983 and Fitzgerald 1987). Soil and IP anomalies to the east of the Beatrice dome were not considered worthy of follow up.

CRAE took up the area as part of EL5/85 Lake Margaret in September 1985. A limited stream sediment programme was undertaken to assess gold potential of the Beatrice lava dome and areas to the east.

Since 1988 work completed by Aberfoyle included gridding, geological mapping, EM, ground magnetics and soil geochemistry (Noonan 1991).

Previous work is summarized below.

Years	EL	Company	Work	Details	Reference
1970-71	EL10/69	Goldfields	Geology:	limited mapping	Wells 1972
1973-74	EL10/69	Goldfields	Geology:	preliminary mapping	Wells 1974
1975-76	EL10/69	Goldfields	Geology: Geochemistry:	mapping limited rock chip, stream sediment	Brophy 1976
1976-77	EL10/69	Goldfields	Access: Geology: Geophysics: Geochemistry:	road construction, gridding detailed mapping, petrology gradient array IP, proton magnetics (Scintrex) → 6 main anomalies limited rock chip	Walter 1977
1977-78	EL10/69	Goldfields	Access:	gridding extended	Hutton 1978

			Geology: Geochemistry:	limited mapping, petrology detailed soil ⇒ major Pb/Zn anomaly (Mt. Sedgwick)	
1979-85	EL9/86	Goldfields	Work at Beatrice in this period focused on the Mt. Sedgwick Pb/Zn anomaly which subsequently became part of EL102/87.		
1986-87	EL5/85	CRAE	Geology: Geochemistry:	limited mapping stream sediment	von Strokirch 1987
1988-89	EL5/85	Aberfoyle	Access: Geology: Geochemistry:	access track established preliminary sampling limited rock chip	McNeill 1989
1989-90	EL5/85	Aberfoyle	Access: Geology: Geophysics: Geochemistry:	20.2 line km grid established 1:2500 mapping, rock chip sampling, petrology 28 line km UTEM, ground magnetica rock chip, soil	Noonan 1990
1990-93	EL5/85	Aberfoyle	No work during this period.		

5.3 Geology

Historically, the steep heavily vegetated nature of the Beatrice prospect has severely hampered previous exploration and despite 2 generations of gridding/mapping, geological understanding of the area is poor. Noonan (1990) mapped the area as a dome of felsic CVC lavas flanked to the east by breccia and lapilli volcanoclastic facies transitional from CVC to Tyndall Group.

During the recent reconnaissance visit, lapilli volcanoclastics from near the mapped CVC-Tyndall Group contact were collected which bear some similarities to Southwell Subgroup lithotypes north of the Henty Fault: in particular, the presence of large 1-2mm rounded to sub-angular quartz with a visible regular fracture pattern in hand specimen. The sphalerite-galena mineralisation reported by Goldfields Exploration from thin shale horizons in the north east corner of the grid was not re-located.

5.3.1 Petrology

Seven samples of mapped Tyndall Group volcanoclastics were submitted for petrographic description. Samples 624850 and 624852 are matrix-supported quartz-feldspar-lithic bearing pebbly sandstone to conglomerate/breccia with rare large quartz having a subtle polygonal fracture pattern ('honeycomb texture'). 624854 is a volcanoclastic sandstone with abundant large quartz crystals having a very well preserved polygonal fracture pattern. This distinctive feature is common in Southwell Subgroup units overlying the Hellyer deposit and to our knowledge has not been previously recorded south of the Henty Fault. Sample 624851 is a quartz-feldspar crystal-rich volcanoclastic sandstone similar to the Comstock Tuff crystal-rich facies in the Mt. Lyell area.

Full petrographic descriptions are included in Appendix I.

5.4 Geochemistry

Seven rock chip samples were submitted for Cu, Pb, Zn, Ag, Au, Ba, As, Cr, Zr and Ti analysis. Base and precious metal assays were uniformly low. Full analyses are given in Appendix II.

6. CONCLUSIONS AND RECOMMENDATIONS

In almost every geological context the Newton Prospect has outstanding potential to host a large VHMS deposit. This potential is indicated by:

- Strong structural control to sub-basin development (Great Lyell Fault - Tyndall Creek Fault) and subsequent lithofacies variation.
- A large intense hydrothermal system operating to the end of Lower Tyndall Deposition evidenced by a 2 kilometer strike length of stratabound footwall alteration.
- Direct evidence of ore forming processes that include exhalative gold-bearing sulfate rich mineralisation at Tyndall Creek, a 1.8 kilometer strike length chemical exhalite type host horizon (Howards Tuff) and high grade massive sulfidé boulders in a debris flow breccia at Newton Dam Spillway.

These factors in combination define a high priority geological target at the intersection between the Lower Tyndall Group Howards Tuff horizon and the Great Lyell Fault. Three deep (800m) diamond drill holes with follow-up down hole geophysics are planned to test this target zone in the 1994-95 field season.

Several aspects of the Dora and Beatrice Prospect geology suggest that the prospective Lower Tyndall Group stratigraphy is preserved in these areas. Further petrological and geochemical investigations are required to clarify the stratigraphic setting of these areas and develop geological targets.

7. REFERENCES

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Sharpe, R.A., 1993a. Lake Margaret EL5/85 Tasmania Technical Progress Report for the period September 1992 to September 1993. Aberfoyle Resources Ltd. Unpublished Report.

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APPENDIX I
Petrographic Reports

Dora Prospect (Matt White)

File → L. Marg Dora/Spicer Pet.

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A B E R F O Y L E

23 March 1993

Matt White
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Geology Department
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Dear Matt

Please find accompanying this letter twenty samples for thin section description. Of the samples, thirteen were collected during our recent reconnaissance mapping programme at Lake Dora, whilst the remainder seven are from Beatrice. The accompanying maps show sample locality details; the geology is adapted from Mines Department 1:25000 mapping.

Could you please provide thin section descriptions for each sample together with your thoughts as to any observable affinities with Tyndall Group/Southwell Subgroup units elsewhere in the Mount Read Volcanics. In particular, with a couple of the "Eastern Sequence" correlates to the north of Lake Dora, it is not clear as to a cohesive/volcaniclastic nature (e.g. 624590).

Quartz "eyes" are present in a number of samples from Dora-Spicer and Beatrice. Quartz in sample 624590 appears to show a distinctive fracture pattern. How does this compare to the honeycomb fracture pattern in Jocelyns' Southwell Subgroup horizon? Perhaps Joc may be interested to examine some of these samples?

If there are any problems or queries, do not hesitate to call.

Regards



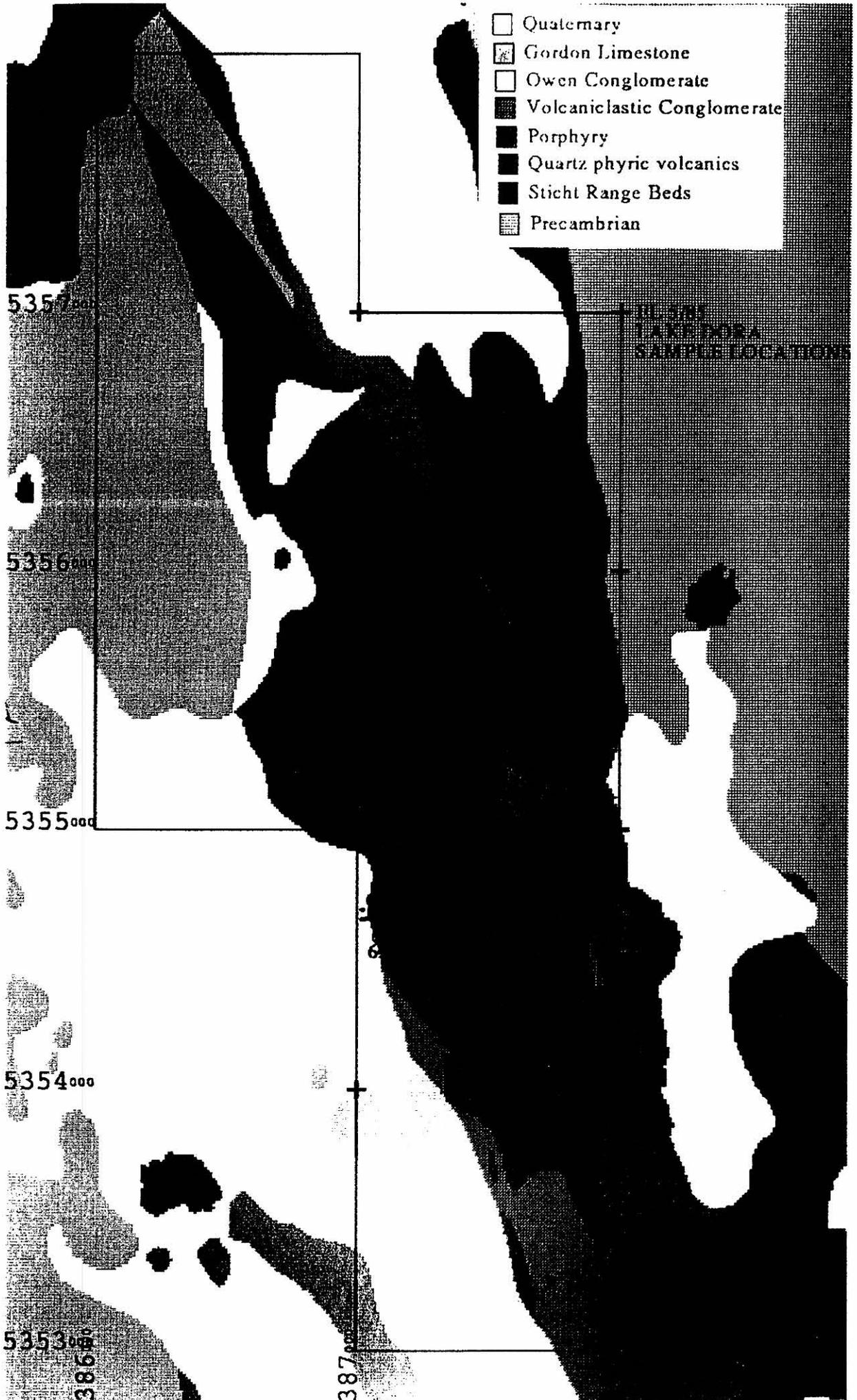
Robina Sharpe
GEOLOGIST

E.L. 5/85 LAKE MARGARET - RECONNAISSANCE

Dora-Spicer Prospect (585d)

AMG CO-ORDINATES

Area	Sample #	Description	Easting	Northing	Pet.	Gcm.	Susceptibility Range	Av. Sus
DS	624576	GntoPk Y R-bv, Gn Cl mtx	387535.4	5354952	Y	BM	750,700	725
DS	624577	Gn QzFdMgtMafic Sst/l?	387544.4	5354952	Y	-	105,350,160,250	220
DS	624578	Qz eye QzFdHb Ph R-l: possible vcl	387487.2	5354952	Y	-	70,60,60	65
DS	624579	Gy rock	387352.8	5355185	Y	BM	0,0	0
DS	624581	GyGn FdQzMt Y-lithic Epiclastic	387392.5	5355532	Y	BM	240,295,370,351	315
DS	624582	DkGy PClalt QzPh Sst - DsPyCpy	387547.2	5354485	Y	BM	0,5,5,10,108	25
DS	624583	PktoGn Qz-eye R-autobv	387438.8	5354745	Y	WRG	1000,800,1100,1230,1430	1110
DS	624588	Pk mas FdQzMgt Lithic Sst	386866.5	5356182	Y	BM	370, 395, 470	410
DS	624589	Pk mas FdQzmafia(?)Mgt Lithic crystal Sst	387338.4	5355413	Y	BM	430, 500, 280, 360	390
DS	624590	QzFdHb(?)Mgt D-l(?)	386948.4	5355316	TC	WRG	140, 135, 180, 280	185
DS	624591	FdQzMt Pumice(?) lithic well sorted Sst	388375.1	5353254	Y	BM	10, 20, 10	13
DS	624592	FdQzMgt bnd Lithic Sst	388388.2	5353159	Y	BM	7100, 5700, 9000, 6300	7025
DS	624601	Gy Y-bv to Epiclastic ?	387592	5354534	Y	BM	0,0	0



PETROGRAPHY OF LAKE DORA AND LAKE BEATRICE SAMPLES

(For Aberfoyle Resources Limited: Robina Sharpe)

Matt White CODES University of Tasmania May 1994

Individual petrographic descriptions are provided on separate sheets. The following is a summary of the results and a brief discussion of particular features of the samples. An excellent overview of the geology of this area is found in an unpublished Mines Department Report written by Keith Corbett (1982/25 - Stratigraphy and correlation of the Mt Read Volcanics and associated rocks in the Mt Sedgwick-Lake Beatrice area and the Lake Dora-Lake Spicer area).

Some of these samples correlate to the Tyndall Group crystal rich sandstone facies and two of the Lake Dora samples have a similar composition to the Bonds Range (intrusive) Porphyry. Some of the samples may correlate to the Southwell Subgroup and/or the Eastern Sequence, but my inexperience with those two sequences and the lack of diagnostic features prevents any confident correlations to be inferred.

Lake Dora Samples

The thirteen samples vary widely in their composition and texture. All samples show a pervasive cleavage foliation defined by alignment of platy alteration minerals (dominantly sericite/chlorite) and small veinlets that occur along cleavage planes. The cleavage foliation is strong and persistent throughout the Lake Dora area and strikes north-northwest, dipping steeply to the west. In outcrop, faulting and shearing is also evident subparallel to the cleavage foliation. The linear, strong chlorite dominated alteration zone that contains small pods of chlorite/magnetite/sulfide mineralisation and workings, also trends in this orientation (see Corbett and Jackson 1987 - 1:25 000 map No. 5).

The alteration minerals present in the samples comprise sericite, quartz, feldspar, chlorite, carbonate, epidote and opaque minerals including magnetite, hematite and pyrite. The alteration minerals have dominantly replaced fine grained matrix material and groundmass with some replacement of primary components (eg. feldspar and ferromagnesian phases). The alteration assemblage is typical of the Mount Read Volcanics and represents low grade greenschist metamorphism and/or hydrothermal alteration. The samples are dominantly felsic to intermediate coherent volcanic and volcanoclastic lithotypes. The presence of quartz in these samples is almost ubiquitous. Magnetite occurs as detrital grains within some of the volcanoclastic samples and also as a secondary alteration mineral. Apatite and zircon are common accessory minerals.

Samples 624577, 578 are interpreted as quartz-feldspar-altered ferromagnesian?-altered biotite-apatite phyric coherent volcanic rocks (dacite to andesite). The Bonds Range Porphyry intrusive rocks have a similar phenocryst composition (Pemberton et al. 1991 - Mines Department Geological report No. 4).

Sample 624588 has a volcanoclastic sandstone texture, and contains similar crystal components as the two coherent volcanic samples above (577, 578), but with added abundant detrital magnetite and lithics. The ferromagnesian phase has been altered to chlorite, opaques and epidote.

Samples 624581, 589, 576, 601, all consist of quartz-lithic±feldspar±magnetite bearing volcanoclastic sandstone/conglomerate/breccia. The samples are clearly redeposited volcanoclastic rocks and may be referred to as epiclastic rocks. The lithics are dominantly quartz phyric and aphyric, sand to pebble size, quartz altered clasts that resemble Precambrian quartzite clasts in places. Some of these contain other alteration minerals including sericite, chlorite and opaque minerals. They are interpreted as coarsely silicified (quartz altered) clasts, possibly with a volcanic origin. However, some may represent true Precambrian quartzite clasts. Clasts have subrounded to angular shapes. This group of samples occur on the eastern side of the area (just west of Lake Dora) and have a north-northwest trend. It may be possible to map this unit out in the field. Sample 624582 may also be part of this unit and consists of a quartz bearing matrix rich moderately fine grained volcanoclastic sandstone.

Samples 624591, 592 consist of quartz-feldspar crystal rich volcanoclastic sandstone ± detrital magnetite. Sample 592 contains abundant detrital magnetite grains (5-10% total volume) that are concentrated in bands, whereas 591 contains little or no magnetite. These 2 samples are compositionally and texturally similar to crystal rich volcanoclastic sandstone facies of the Tyndall Group. Quartz-feldspar-magnetite bearing volcanoclastic sandstone are common in the middle to lower parts of the Tyndall Group at Mount Lyell and in the Anthony Road area. The close spatial relationship of this unit to the Dora Conglomerate (interpreted as upper Tyndall Group polymict volcanoclastic conglomerate and sandstone) also suggests that these samples are equivalents of the Tyndall Group.

Sample 624583 comprises very strong quartz-chlorite-sericite-magnetite alteration within a quartz bearing volcanic rock of unknown origin. Chlorite-magnetite alteration is concentrated in linear zones and fractures within the altered host. The fractures may represent a hydraulic fracturing event that occurred during, or prior to, the chlorite-magnetite alteration event. This sample is probably located within or near the main chlorite dominated regional linear alteration zone ??

Sample 624579 consists of a grey coloured, fine grained, sericite-quartz-opaque altered rock that is probably an altered fine grained mudstone.

Sample 624590 consists of a quartz-feldspar phytic rock with minor possible altered ferromagnesian minerals and opaque grains (possibly magnetite) with accessory apatite and zircon?. The crystals (20-25% total volume) are crudely evenly distributed and lie within a sugary, granular textured quartz-altered groundmass that appears like a fine grained quartz sandstone at first glance. The sugary-textured groundmass consists of a mosaic of irregular shaped quartz crystals and thus is quartz (silica) alteration or a quartz recrystallisation texture. The sample is interpreted as a coherent volcanic rock (rhyolite-dacite). The fracture pattern within the quartz phenocrysts appears to be random and unremarkable, and probably formed during deformation. Honevcomb-type textures are present within some samples from Lake Beatrice.

PETROGRAPHIC DESCRIPTIONS

Sample: 624577

Date: 7/5/94

Location: Lake Dorca

Hand Specimen Name: Quartz - feldspar? phytic volcanic rock - prob. coherent volcanic rock - ser/chl/py alteration, mod. foliation. megacrysts - 2-6-3-1

Components: Quartz - subhedral shaped crystals - some rounded + highly embayed. ~5-10%
(Resorption in magma chamber causes embayments + rounding)
Phenocrysts - 1-4 mm av. - some fractured, some with alteration "inclusions."Feldspar? - subhedral prismatic crystal like shapes, totally pseudomorphed to ~10%
polycrystalline sericite and coarse white mica alteration.
No twinning visible but probably altered feldspar.Possible ex-biotite slabs pseudomorphed to chlorite/opaques/white mica. ~2-3%
Apatite - minor tiny 6-sided grains of apatite. ~0.1 mm. 1-2%

Opaque phase - abundant probably secondary pyrite but some magnetite may be present as rock is moderately magnetic. -?

Alteration/Groundmass/Matrix: Microcrystalline sericite/quartz/hematite/chlorite alteration of groundmass. Also secondary pyrite minor white mica, opaques. Probably some magnetite as rock is mod. magnetic. also pink visible in hand spec. Some chlorite alteration stretched out in wippy shaped "pseudocrystals."

Textures: Moderately even distribution of phenocrysts with altered groundmass. indicates coherent volcanic texture - ie lava or intrusive origin.
Strong cleavage foliation defined by strong ser alteration and veinlets + stringers of hematite/chlorite.

Minor quartz veinlets.

Comments: Strong foliation has attenuated primary texture. Strong alteration has destroyed many primary components and created new "pseudocrystals".
Ferromagnesian phase may have been present but completely destroyed + pseudomorphed.

Final Descriptive Name: Quartz - feldspar? - Biotite? - apatite phytic volcanic rock probably coherent volcanic rock (dacite?) with strong sericite/chlorite etc. alteration.

Sketch: Comment: Similar texture + composition to Bondas Range Periphyry.

PETROGRAPHIC DESCRIPTIONS

Sample:	624578	Date:	6/5/94
Location:	Lake Dora		
Hand Specimen Name:	Large qtz eye phytic volcanic unit in chl/ser mtx/adms - Max sus = 0.63 - 0.79 10×10^{-5} SI units.		
Components:	Quartz eyes - large phenocrysts up to 6mm across (8mm in Hand specimen) ~ 5-10% subhedral crystal shapes, some embayed, slightly undulose extinction some fractured probably by deformation event producing strong foliation in groundmass. Large quartz phenocrysts contain inclusions? - now altered to chlorite/sericite/quartz = volcanic qtz.		
Apatite	- 6-sided, moderately high relief, basal sections isotropic, others with low weak birefringence. Classic prismatic hexagonal shapes  0.1-0.5mm ~ 1-2%		
Zircon?	- possible zircon, prismatic shapes ~ 0.1mm across high birefringence < 1%		
Ferromagnesian phase?	- possible amphibole now totally pseudomorphed to chlorite, sericite, opaque mineral - ~ 1-2%		
Altered Biotite?	- small slabs of possible ex-biotite - now altered to chlorite ± opaques 3-5%?		
Possible feldspar?	- faint outlines of crystals in strong sericite altered zones. May be strongly sericitised feldspar ~ 5%?		
Alteration/Groundmass/Matrix:	Strong alteration of the groundmass. comprising chlorite/sericite/quartz/opaque minerals. - Strong sericite alteration in places. May have completely obliterated feldspar crystals. One area of quartz/chlorite/white mica alteration, probably different alt style (rather than altered lithic clast)		
Also chlorite altered wispy domains -	ie wispy chlorite pseudocrysts		
Textures:	Moderately even distribution of crystal components in altered groundmass suggests coherent volcanic origin. Groundmass is strongly altered - shows strong foliation (regional cleavage) Some qtz phenos subhedral also suggesting coherent volcanic origin. ie lava or intrusive origin		
Comments:	Phenocryst composition suggests - dacite to andesite composition. (apatite is a common accessory mineral in some volcanic units in the Hellyer area and Anthony Road area) - Similar composition + texture to Bonds Range Porphyry		
Final Descriptive Name:	Quartz-feld? - altered biotite - altered ferromagnesian - apatite phytic coherent volcanic rock (dacite to andesite)		

Sketch:

PETROGRAPHIC DESCRIPTIONS

Sample:	624588	Date:	6/5/94
Location:	Lake Dora		
Hand Specimen Name:	Quartz - feldspar - ferromagnesian? - lithic bearing volcanoclastic s/s. Max Sus = 7.3-7.7. 10×10^{-5} SI units		
Components:	Quartz - dominantly angular crystal fragments, also subhedral - highly embayed ~5-8% crystals of volcanic qtz - also some subrounded crystal grains. crystals av. 1-3mm max = 4mm. - some embayed qtz have delicate embayed boundaries. Some qtz - undulose extinction.		
	Feldspar - dominantly plagioclase - strongly sericitized in places, subhedral to subrounded ~15% crystals ~ av. 1-2mm.		
	Ex-biotite slabs 1-2mm long - pseudomorphed to chlorite/opaque mins/prehnite?/pumpellyite? ~3%		
	Apatite - rare prismatic euhedral 6-sided high relief grains ≤ 0.5 mm <1%		
	Opaques - discrete isolated grains - equant but irregular shapes ~0.1-0.5mm - prob. magnetite ~2%		
	Ferromagnesian phase? - poorly preserved - almost completely pseudomorphed to chlorite/opaque mins? ~2% and high birefringent mineral probably epidote, grains have semi-prismatic shapes 1-2mm.		
	Lithics - up to pebble size - subangular to angular shapes dominantly qtz/feld altered ~5% ashmic clasts = chlorite/ser/epidote?/opaque min alteration. Some lithics may be quartz phytic		
Alteration/Groundmass/Matrix:	Moderate intensity - matrix is dominantly quartz \pm feld alteration with minor chlorite, sericite, opaque mins, + epidote		
Textures:	Open framework, moderately poorly sorted volcanoclastic pebbly sandstone texture. Relatively matrix-rich sandstone. Massive structure. - (~30% crystals + lithics suspended in altered matrix) Probably redeposited volcanoclastic sandstone deposit.		
Comments:	High birefringent alteration mineral, probably epidote. Moderately magnetic so opaque phase = detrital magnetite.		
Final Descriptive Name:	Quartz-feldspar - biotite - magnetite - lithic bearing volcanoclastic sandstone with accessory apatite and altered ferromagnesian phase.		
Sketch:			

PETROGRAPHIC DESCRIPTIONS

Sample: 624581

Date: 6/5/94

Location: Lake Pora

Hand Specimen Name: Pebbly quartz-feldspar - lithic bearing volcanoclastic sandstone / to matrix-supported volcanoclastic lithic breccia/conglomerate.

Components:

Lithics - dom. angular shape sand to pebble size, various types. Clasts attenuated ~ 40% by strong foliation in rock. Some clasts subrounded

a) - Qtz phytic clasts with altered qtz/feld groundmass - prob. coherent mylonite (embayed qtz)

b) - Qtz phytic clasts altered qtz/feld/chl groundmass/matrix.

c) - Qtz phytic clasts with qtz/sericite alteration.

d) - Aphyric qtz/feld/±chl ± ser altered clasts.

e) - Classic (Precambrian?) quartzite clasts ie polycrystalline irregular quartz stabs - prob metamorphic.

"Matrix" material surrounding lithics = Volcanic quartz + sericitized feldspar, opaque mins, + sand sized lithics with abundant ser alt fine matrix material. ~ 20%

The Quartzite clasts are relatively abundant.

They may represent Precambrian clasts and/or Cambrian quartz altered (silicified) clasts

Alteration/Groundmass/Matrix: Dom. sericite alteration - mod strong intensity. minor qtz, chlorite alteration. Spots of opaque mineral - prob. alteration pyrite seen in hand specimen - many of the opaques are prob. pyrite.

Textures: Poorly sorted, closed framework, volcanoclastic pebbly s/s. Strong foliation in rock has attenuated primary texture.

Interpretal as - epiclastic rock

Comments: - Mag sus = 2.8-3.1.

Mixed provenance - felsic volcanic source + Precambrian source

Similar texture + composition to sample 624576

Final Descriptive Name: - Polymict poorly sorted lithic-quartz-feldspar bearing volcanoclastic pebbly sandstone (epiclastic rock)

Sketch:

PETROGRAPHIC DESCRIPTIONS

Sample: 624589

Date: 11/5/94

Location: Lake Dora

Hand Specimen Name: Quartz - feldspar - lithic - magnetite? bearing ^{pebbly} volcanoclastic sandstone
Mag sus = 4.9 - 5.3Components: Quartz - subhedral to subrounded and also angular quartz crystals. Most ^{highly embayed} - some angular crystal fragments av. 1-3mm ~10%Feldspar - subhedral to subrounded prismatic feldspar crystals - strongly sericitised ^{can see multiple twinning in places. Probably dominantly plagioclase.} ~20%
av. size 0.5-2mm.Altered Ferromagnesian Mineral - Possibly amphibole or pyroxene. Completely altered to ^{chlorite, opaques, ± quartz alteration minerals. Irregular shape in places. However some large prismatic shapes.} ~2-3%
0.5-1.5mm.Detrital? opaque phase - probably magnetite grains as rock is magnetic ~1-2%
Possible zircon - very tiny rare high relief grains <1%Lithics - subrounded to subangular sand to pebble size lithics - dominantly undifferentiated aphyric ^{clasts and quartz ± feldspar aphyric coherent volcanic clasts - (one clast - ~2cm across).} ~10%
Also some quartzite clasts - ie polycrystalline quartz prob coarse silicification or metamorphic quartzite

Alteration/Groundmass/Matrix:

Matrix is strongly sericite altered with minor quartz/chlorite/opaque alteration.

Textures: Poorly sorted, closed framework, pebbly sandstone texture.

Cleavage foliation visible - defined by alignment of sericite
iron opaque weathering or cleavage planes and opaque veinlets.Largest pebble clast shows even porphyritic texture = Quartz - feldspar -
apatite aphyric coherent volcanic clast. (subrounded clast) -
Polymict composition. many types of clasts.

Comments:

Final Descriptive Name: Feldspar - quartz - lithic - magnetite? bearing volcanoclastic
pebbly sandstone to matrix supported volcanoclastic lithic conglomerate.

Sketch:

PETROGRAPHIC DESCRIPTIONS

Sample: 624576

Date: 10/5/99

Location: Lake Pora

Hand Specimen Name: Matrix supported volcaniclastic lithic conglomerate/breccia

mag size 0.52 - 0.98

Components: lithics - subrounded to subangular pebble size clasts up to several cm's across ~
 dominant clast type is quartzite (polycrystalline quartz - possible Precambrian
 clasts - strong quartz alteration ± white mica ± opaque min prob. hematite
 - One large pebble is quartz phytic with quartz/sericite/hematite altered groundmass/matrix.
 probably coherent volcanic clast (ie rhyolite) - also contains rare zircon.
 - Other types include - aphyric clasts with quartz/sericite/chlorite alteration.

Coarse "Matrix" contains volcanic quartz crystal grains + fragments and sand size
 lithics (as above) in altered fine matrix material.
 No visible feldspar - may have been destroyed by alteration??
 Quartz is dom. 0.2-2mm - angular crystal fragments.

Fine

Alteration/Groundmass/Matrix: - Dominantly sericite alteration. with
 abundant quartz - chlorite - opaques (hematite/pyrite).

Textures: Poorly sorted pebbly sandstone to matrix-supported conglomerate.
 Polymict composition.

Moderately strong cleavage foliation attenuating primary texture.
 cleavage defined by alignment of sericite/chlorite + opaques along
 cleavage planes.

Quartz - hematite cross-cutting vein observed within large quartz phytic volc clast.
 Comments:

Similar texture and composition to sample 624581

Final Descriptive Name: Polymict matrix-supported volcaniclastic lithic conglomerate/
 (dom. quartzite + quartz phytic volcanic clasts) (epiclastic rock)

Sketch:

PETROGRAPHIC DESCRIPTIONS

Sample: 624601

Date: 7/5/94

Location: Lake Dora.

Hand Specimen Name: Volcaniclastic lithic breccia/conglomerate -
mag sus = 0.24-0.27

Components:

Lithics - All similar appearance = Quartz bearing or aphyric clasts with recrystallised Qtz-carbonate matrix. Cherty quartzite-type appearance in hand specimen. Subangular to subrounded clast shapes ~ 2-30 mm. Difficult to distinguish clast boundaries as they merge with each other and the matrix. Probably represent recrystallised quartz volcaniclastic sandstone clasts and/or rhyolite coherent volcanic clasts. ~50%

Sandy matrix = quartz + recrystallised/sericitised feldspar crystal grains. ~50%
0.5-2 mm. Fine material all secondary alteration.
Possible zircon accessory in matrix. (one grain ~ 0.1 mm)
Fine grained dominated matrix.

Alteration/Groundmass/Matrix: Strong secondary quartz-carbonate alteration
also sericite and opaques.
Also some chlorite alteration.

Textures: Poorly sorted volcaniclastic lithic breccia/conglomerate with quartz/feldspar sand/mud matrix. Appears to have a clast-supported framework?

Weak cleavage foliation with some chlorite/hematite along foliation

Comments: Unusual rock type

Final Descriptive Name: Rhyolitic volcaniclastic lithic breccia/conglomerate.

Sketch:

PETROGRAPHIC DESCRIPTIONS

Sample: 624582

Date: 9/5/94

Location: Lake Owa

Hand Specimen Name: Quartz phytic volcanic rock, ser/chl/py alteration ± cpy.

mag sus = 0.57 - 0.71 10×10^{-5} SI units

Components: Quartz - dom. subangular to angular quartz crystal fragments ~ 15-20%
 (volcanic quartz) - av. size ~ 0.2 - 1 mm across. Highly variable in size.
 Uneven distribution - i.e. concentrated in zones in places.

Zircon - high relief, high birefringence, small grains ~ < 0.1 mm

< 1%

No other components visible - some components (eg. feldspar) may be destroyed
 by strong quartz/chlorite/sericite etc. alteration.

Alteration/Groundmass/Matrix: Secondary quartz ± feldspar/chlorite alteration of
 matrix with minor sericite/carbonate/opaque minerals.

Opaques probably dominantly pyrite

Strong intensity of quartz/chlorite alteration.

Textures: Uneven distribution of crystal fragments suggests clastic origin.

Probably matrix-rich quartz bearing sandstone where matrix has
now altered to secondary minerals.

Lithology = ~ moderately fine-grained sandstone.

Matrix rich = greywacke texture.

Comments:

Final Descriptive Name: Quartz bearing matrix-rich volcanoclastic sandstone.

Sketch:

PETROGRAPHIC DESCRIPTIONS

858040

Sample: 624592

Date: 6/5/94

Location: Lake Doris

Hand Specimen Name: Quartz-feldspar-magnetite rch volcanoclastic sandstone

Grain of magnetite - high mag size - 37.0-44.0

Components: Quartz - subequal to angular quartz crystal fragments

some embayed - (- volcanic quartz) - dom. angular crystal fragments 0.5-2 mm

~20% Feldspar - subhedral to subrounded feldspar crystal + angular crystal fragments 0.5-1.5 mm

5-10% Magnetite - (titanomagnetite) - discrete equant grain - some primary, many subrounded - 0.5-1.5 mm - concentrated in bands

<1% Rare opaque/dark banded grain also. (magnetite? chlorite grain)

~1-5% L.M. - - aphyric quartz/feldspar altered clasts - probably thin (some maybe pseudotachylite formed by alteration)

<1% Zircon + Apatite accessories - rare tiny crystal grains ~0.1 mm

Alteration/Groundmass/Matrix: Shaly quartz/feldspar (albite?) alteration

also chlorite/opaque mineral alteration in places.

Also minor sericite.

Textures: Moderate, well sorted, closed framework crystal-nc

volcanoclastic? sandstone.

Excellent magnetite rch bands - probably represent bedding surfaces.

Comments: Detrital magnetite bands occur with some quartz-feldspar rch s/s of

the Tyndall Group in the Anthony Road area.

This sample is equivalent to lower to middle Tyndall Group crystal-nc facies.

Final Descriptive Name: As above - Hand specimen name

Sketch:

~1 cm



detrital magnetite
rch bands
quartz + feldspar

PETROGRAPHIC DESCRIPTIONS

Sample: 62459/ Date: 7/5/94

Location: Lake Dora

Hand Specimen Name: pink/purple coloured Quartz-feldspar-ferromagnesian?-lithic?
bearing volcanoclastic sandstone mag sus = 0.46-0.48

Components: Quartz - dominantly angular crystal fragments av. 0.5-1mm. ~30%
max 1.5mm.; some fractured, some with slight undulose extinction.
Rare subhedral or embayed quartz crystals - dom. all fragments.

Feldspar - dominantly plagioclase crystal fragments and subhedral crystals, strongly ~20%
dusted with sericite/white mica, difficult to see grain boundaries,
may blend with matrix.

Apatite? - small 6-sided high relief grains - quite rare. ~0.1-0.2mm. prob apatite. ~1-2%

Opaque grains - some may be detrital component - most probably secondary alteration. ~1-2%

No obvious ferromagnesian minerals or lithics apart from

Possible ex-biotite slabs - altered to chlorite ~1%

Alteration/Groundmass/Matrix: Quartz ± feldspar alteration of matrix with
minor sericite/hematite/chlorite/opaque minerals mainly concentrated
in zones subparallel to foliation.
Some zones of alteration (dom. sericite) form wispy shaped "pseudoclasts".

Textures: Mod. well sorted medium grained massive
Crystal-rich volcanoclastic sandstone texture.

Pseudoclastic wispy-shaped structures formed by alteration (sericite)
(May appear as pumice in hand-specimen) - all subparallel to cleavage foliation,
and probably all pseudoclasts.

Comments: Similar texture and composition to "Comstock Tuff" facies of the
Tyndall Group.

Final Descriptive Name: Quartz-feldspar crystal-rich volcanoclastic medium-grained
sandstone.

Sketch:

PETROGRAPHIC DESCRIPTIONS

Sample: 624583 Date: 7/5/94

Location: Lake Doru.

Hand Specimen Name: Large quartz eye phytic (brecciated) volcanic rock.
 may sus = 12.3 - 13.6.

Components: Quartz - angular large quartz crystals - highly fractured + disrupted ~ 5-10%
 + possibly redistributed. Crystals up to 5mm across. Showing undulose
 extinction, suggesting crystals have experienced some strain.
 Fractures appear to be controlled by dominant foliation direction + some in
 random orientations - fractures is filled with chlorite/sericite/quartz
 alteration as in matrix.

No other visible primary components.

Alteration/Groundmass/Matrix: Matrix/groundmass comprises coarsely
 crystalline secondary quartz and chlorite/sericite/opaque alteration (magnetite)
 Network of (brittle) fractures infilled with chlorite/opaque

Opagues probably dominantly magnetite as rock is highly magnetic.
 Habit indicates secondary origin for magnetite (fine grained - disseminated throughout and in
 fracture network.)

Textures: Primary texture destroyed by alteration and brittle-type
 deformation which has fractured rock and created new texture.
 along with overprinting alteration that has concentrated magnetite and
 chlorite in fractures.
 Fractures probably formed by hydraulic type fracturing processes
 (no evidence for autoclastic brecciation)

Comments: Origin unknown, but precursor was quartz-eye bearing
 volcanic deposit. - Abundant magnetite alteration -
 Was this sample collected near magnetite?/chlorite alteration zone (Map S:1:25000
 MRV Map)

Final Descriptive Name: Strongly quartz/sericite/chlorite/magnetite altered,
 and deformed quartz-eye phytic volcanic rock.

Sketch:



PETROGRAPHIC DESCRIPTIONS

Sample: 624579

Date: 7/5/94

Location: Lake Dorra

Hand Specimen Name: Grey coloured strongly altered silica/sericite/pyrite rock
with mod. strong foliation Mag sum = 0.63-0.79

Components:

Strongly altered sample - fine grained rock - no obvious primary components
apart from tiny quartz grains - (silt size)Tiny quartz grains (mud-silt size) may be primary grains within mudstone
as sericite along cleavage foliation wraps around grains. ~~in places~~ in places
Other possibility is the qtz "grains" represent pre-foliation qtz alteration
domains - as many have irregular shapes. ~5%Alteration/Groundmass/Matrix: Strong sericite/quartz/opaque alteration.
Opaque phase dom pyrite + hematite.Also hematite ± quartz ± sericite veinlets mainly subparallel to foliation
but some also oblique.

Also patches of carbonate alteration.

Textures:

Massive alteration, no primary textures.
Mod. strong foliation defined by sericite minerals and
veinlets of hematite.

Comments: Possible precursor = massive silt - mudstone.

Final Descriptive Name: massive sericite/quartz/pyrite/hematite altered rock.
(Possibly overprinting fine grained sedimentary rock eg. Mudstone)

Sketch:

PETROGRAPHIC DESCRIPTIONS

Sample: 624590 Date: 7/5/94

Location: Lake Para

Hand Specimen Name: Quartz-feldspar-ferromagnesian? phytic rock.
Mag sus = 1.9-2.0.

Components: Quartz - large "rounded" and embayed to subhedral quartz phenocrysts ~15%
"rounding" probably caused by resorption. Size - 0.5 - 5mm across.
large crystals are fractured - + contain some inclusions.

Feldspar - moderate large feldspar phenocrysts almost entirely sericitised + destroyed ~7%
phenocrysts up to 3-5 mm.

Accessory Zircon? + Apatite crystal grains - ~ 0.1 - 0.2 mm. ~2%

Opaque minerals - some may be primary phase - whole isolated grains. ~2%

Possible ferromagnesian phase? - crudely prismatic grain - altered to chlorite/sericite/opaque <1%

Alteration/Groundmass/Matrix: - Groundmass has sugary granular texture
like medium to fine grain quartz sandstone. But all irregular shaped
quartz crystals → interst = recrystallised (quartz-altered) groundmass
giving pseudoclastic granular texture.
Alteration = dominantly quartz + feldspar alteration
Also abundant sericite - and minor chlorite / opaque minerals

Textures: Moderately evenly distributed large quartz - feldspar phenocrysts in
quartz altered groundmass → coherent volcanic texture
ie lava or intrusive volcanic rock. (dacite - rhyolite)

Sericite/chlorite domains appear as ferromagnesian phase in hand specimen
but in thin section = dominantly irregular alteration, except for a couple
of crudely prismatic shapes which may be ex-ferromagnesian grains.
Irregular chlorite/sericite alteration parallel to cleavage foliation.

Comments:
Interpretation = coherent volcanic rock with "granular" altered groundmass.

Final Descriptive Name: Quartz - Feldspar - phytic coherent volcanic rock.
± ferromagnesian phenocrysts? (rhyolite to dacite?)

Sketch:

858045

Dora Prospect (Tony Crawford)

File L. Marg Petrology → DORA-SPICER.

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23 March 1993

← 1994?

A B E R F O Y L E

Dr Tony Crawford
University of Tasmania
Geology Department
G.P.O. Box 252C
HOBART TASMANIA 7001

Dear Tony

Please find accompanying this letter six samples for thin section description. The samples were collected during a recent reconnaissance mapping programme over the Lake Dora portion of our Lake Margaret E.L.

Four of the samples (624584 to 624587 inclusive) are taken from a feldspar + hornblende phyric andesitic unit, with an apparent mineralogy similar to the Anthony Road Andesite. Remainder samples (624590 and 624580) show a similar mineralogy, however contain relatively more quartz. As yet we have not checked out geochemical similarities, but are in the process of doing so.

I have attached some notes on these samples with specific questions relating to each. Magnetite is a significant component in most of these samples and susceptibilities for each sample have been measured and included.

Enclosed also find a map with sample locations. Your comments, including how these samples compare to each other and the Anthony Road Andesite, would be well appreciated. I look forward to hearing from you.

Regards



Robina Sharpe
GEOLOGIST

E.L. 5/85 LAKE MARGARET - RECONNAISSANCE								
Dora-Spicer Prospect			AMG CO-ORDINATES					
Area	Sample #	Description	Easting	Northing	Pet.	Gcm.	Susceptibility Range	Av. Sus
DS	624580	FdQzMgtHb(?) D-I	387343	5255366	Y	WRG	1224, 1231	1230
DS	624584	HbFdQzMgt A-I	387021.3	5354692	Y	WRG	2755, 2800, 2080	2545
DS	624585	HbFdMgt A-I	387019.3	5354655	Y	WRG	856, 874, 686	805
DS	624586	HbFdMgt A-I	387027.4	5354655	Y	WRG	700, 750	725
DS	624587	HbFdMgt A-I	387037	5354658	Y	WRG	430, 560, 470	490
DS	624590	QzFdHb(?)Mgt D-I	386948.4	5355316	Y	WRG	140, 135, 180, 280	185

E.L. 5/85 LAKE MARGARET DORA-SPICER PROSPECT

Samples 624585, 624586 and 624587 are taken from a single outcrop of a hornblende feldspar unit, from west to east as indicated on accompanying map. All three samples are proximal to an apparent non-intrusive contact with a quartz feldspar lithic volcanic sandstone unit (ascribed currently to Keith Corbetts' Eastern Sequence) to the south and west. In the hornblende feldspar unit a columnar style of jointing/banding is present at an oblique angle to the cleavage direction. Samples 624585, 624586 and 624587 were taken from three distinct columnar sets in order to investigate whether or not the columnar style of jointing/banding represents compositional variations close to the contact with the volcanoclastics.

624585

Susceptibility 690-875 S.I.

Western most sample of andesite

Similar to 624586. Massive pink feldspar + hornblende andesitic lava with minor magnetite. Pervasively sericite and lesser chlorite altered. Nature of altered hornblendes is fibrous and elongate to euhedral (8-10% modal).

Subrounded to equant magnetite inclusions in groundmass. Dustings of hematite often visible as rims around magnetite and lesser hornblende (possibly indicating magnetite inclusions in hornblende?). Magnetite 2-3% modal.

Are the pale green blocky phenocrysts relict feldspars?

624586

Susceptibility 700-750 S.I.

Sampled from the centre of a andesitic/dacitic mass. A pink massive rock with euhedral feldspar and hornblende phenocrysts in a fine grained pink matrix. Euhedral to subhedral hornblende is pervasively altered to a fibrous looking sericite + chlorite assemblage (8-10% modal). Note previously reported by RGC to be biotite, with the unit mapped as an intrusive body.

Abundant (2-3% modal) magnetite as equant grains often showing haematitic rims. Note magnetite commonly as discrete grains in groundmass and occasionally as tiny inclusions in hornblendes.

Appears to show crystal rich zones (hornblende + feldspar + magnetite), with

interlocking grains and groundmass rich zones. Is this a real feature or a product of alteration?. If so what does this indicate?

624587

Susceptibility 430-560 S.I.

Eastern most sample of andesite mass

Hornblende + feldspar + magnetite ARA-type porphyritic unit. Numerous "ghost crystals apparent.

Hornblende appears to form two types

- (i) Green mafic mineral generally corroded and pitted, containing abundant tiny feldspar inclusions. Hornblendes generally of a euhedral to subhedral nature with occasional magnetite and quartz inclusions
- (ii) Dark brown elongate euhedral, pervasively magnetite altered? Often showing haematite rims around grain boundaries. Fibrous nature with frequent needle like grain shapes, elongate parallel to cleavage. Contain magnetite and quartz (?) inclusions.

Feldspars are more visible in weathered crust of the slab. Generally pink to cream, occasionally showing internal zoning and a blocky grain nature.

Magnetite occurs as small irregular sub-rounded to equant/blocky grains in the pink groundmass, frequently showing haematitic rims. Infrequent small quartz grains are observed.

624584 is taken from the same inferred mass as samples **624585**, **624586** and **624587**, but further north of the previous sample locality. In this location the andesite is similar, however the unit is more massive, lacking a well defined cleavage with columnar jointing/banding sets also absent. Are there any obvious petrographic differences with the previous set of samples and if so what can be inferred?

624584

Susceptibility 2080-2800 S.I.

Dark pink massive feldspar + hornblende phyric ARA-type lava. hornblende forms euhedral well preserved grains, which are in places apparently almost completely pseudomorphed by magnetite. The fresher magnetite grains show quartz and

magnetite inclusions, whilst elongate mafics show corrosive alteration to a chlorite + sericite assemblage with a fibrous nature. Can a compositional difference of mafic minerals be inferred from this?

Minor rare quartz is present.

Sample 624580 is taken from a unit outcropping on RGCs' exploration track to lake Dora-Spicer. The unit appears to form a narrow zone in a quartz-lapilli lithic volcanoclastic and although no contacts were observed, was inferred to be a narrow intrusive lens into the surrounding volcanoclastic. Is there any evidence to support an intrusive nature to this unit?. How does it compare petrographically to 624585, 624586 and 624587 and in turn the Anthony Road Andesites?

624580

Susceptibility 1230 S.I.

Well foliated massive pink crystal rich rock. Is this sample a cohesive lava? Feldspars form approximately 30% modal and contain minor chloritic inclusions. Quartz is present as subrounded grains with a variable size and distribution.

Elongate patches may be relict of a mafic mineral. Could this have been hornblende? These patches are now altered to chlorite/sericite. Magnetite is common, generally occurring as rounded grains elongate into foliation.

How does this samples compare with previous massive ARA-type units especially in the light the apparent abundance of quartz?

Sample 624590 was taken west of location 624580 from an old RGC exploration grid line. According to the last edition of RGCs' map (1983), a biotite porphyry should be present at this sample locality. Rob Lewis and I went in search of this large mapped porphyry, suspecting it to be a correlate of the previously identified hornblende feldspar andesitic unit.

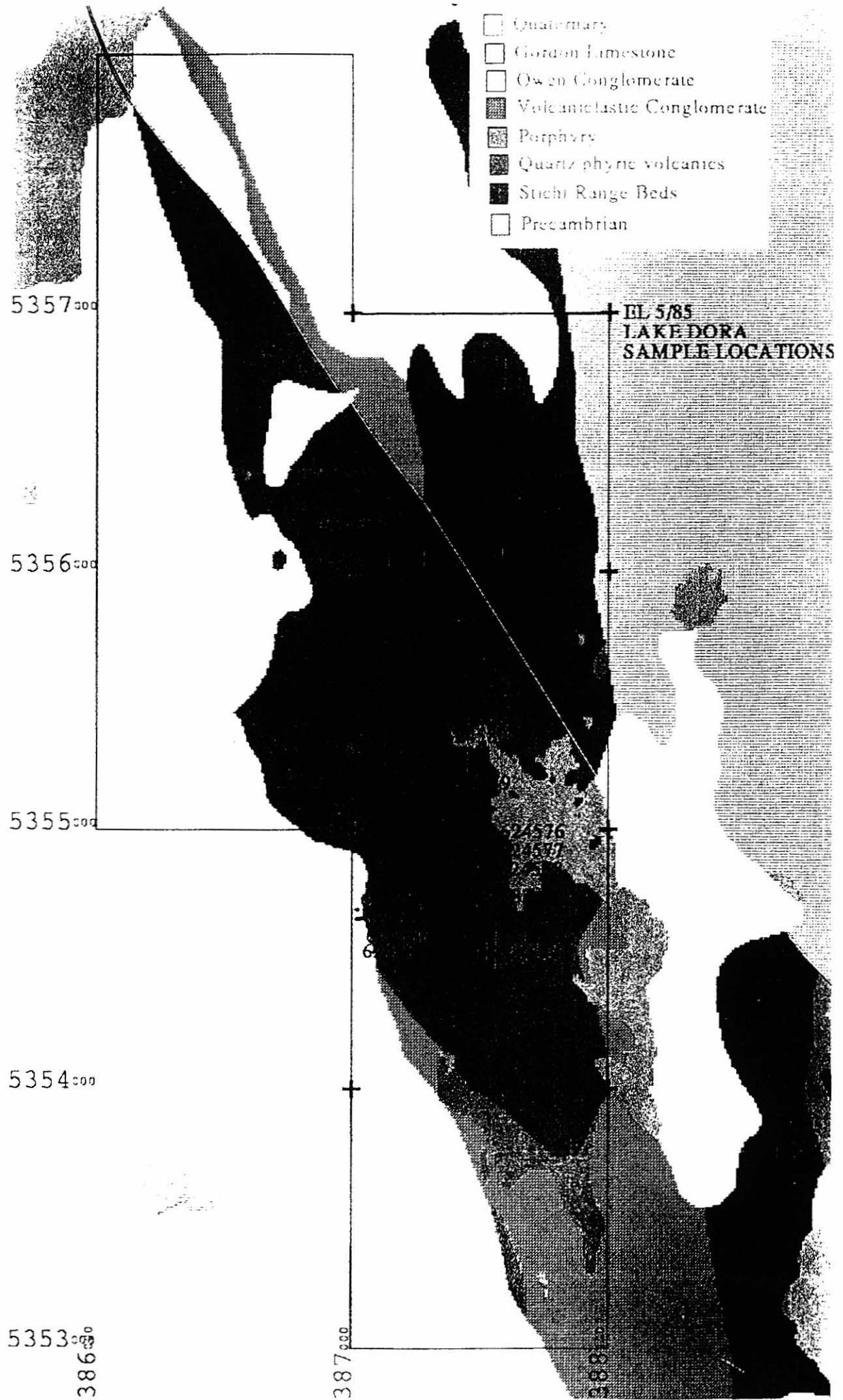
The rocks in this portion of the area are a right mess; altered and sheared and just plain difficult! In a fit of frustration with everything appearing the same unit, but different and a looming time constraint, we grabbed a few samples of the supposed quartz phytic volcanic "Eastern Sequence", not being able to locate anything of an apparent porphyry nature. Upon slabbing the samples back in Burnie one of the rocks is a bit strange..... so here it is!!!

624590

Susceptibility 135-280 S.I.

A green foliated quartz+feldspar+mafic mineral(?) dacitic lava(?). the groundmass is green and weakly chlorite±sericite altered. Quartz forms large rounded "eyes" upto 6-8mm diameter and also occurs as small broken/fractured to disaggregated grains. Occasional inclusions of magnetite in quartz are present. Feldspars are pale olive green to cream in colour and altered. Is this colour variation reflecting composition of feldspars due to alteration? If so what differences?

Magnetite grains are frequent as tiny rounded grains in the groundmass with sericitic rims(?). A mafic mineral (??Hb??) occurs infrequently and appears totally chloritised to wispy elongate into well developed foliation. What is this rock?? Does it have affiliation to previously considered samples?



ROCKS FROM THE LAKE DORA AREA

Dear Robina:

Sorry for the delay in getting these back to you. Molto excuses as usual. Anyway...

It is true that these rocks bear strong compositional similarities to the Anthony Road - Crown Hill hornblende andesites. However, in one sense it could also be claimed that they are petrographically similar to hornblende andesites from Ecuador and Turkey. I really only believe wholerock chemical data at the level of comparison you are trying to make. Although phenocryst biotite (as in sample 624384) is not common in Mount Read andesites, I have seen it in several rocks from the Anthony Rd area and the Dial Rge Trough (I think....I can check the latter). The trouble is that biotite is almost always thoroughly chloritized, and if it formed only a very small ($\ll 1$ modal% is typical) amount of the rock, then it is very difficult to recognize it amongst similarly altered, much more abundant hornblende phenocrysts.

I think that given the general petrographic similarity of these rocks to the Anthony Rd suite, and especially the striking size and abundance of the apatite microphenocrysts in your hornblende-phyric andesites, this argues strongly that the Lake Dora hornblende andesites are likely to be compositional correlates of the Anthony Rd rocks. This can easily be tested if you have the wholerock data. I have only a single sample of hornblende andesite from the 'Lake Dora canal' (old Departmental rock of Solomon's I think), and as you can see in the first AMIRA report (84P210) for sample 3403, it plots compositionally (on Crawford Corbett and Everard diags) on the boundary between the typical Tullah-Que Footwall-type Suite 1 plag-augite andesites, and the hornblende-phyric Anthony Rd-type Suite 2 andesites. That is, this one sample is not very instructive.

I don't have your notes here with me to check, so if I have failed to answer any questions you posed, please don't hesitate to ring me.

Best wishes , Tony Crawford

(PS Hard copy plus Steve's stuff is in the mail today).

SAMPLE NUMBER: 624580

SUMMARY:

This was a plagioclase+hornblende+quartz+FeTi oxide-phyric shallow intrusive dacite; a regional burial metamorphic overprint has chloritized the hornblende.

HAND SPECIMEN:

Susceptibility: 1230: This is a greenish-pink altered plagioclase+quartz-phyric felsic lava or intrusive porphyrite with pink albite(?) veinlets and a weak and discontinuous fracture 'cleavage'.

THIN SECTION:

This sample is a felsic lava or shallow intrusive rock composed of phenocrysts of albitized plagioclase, and subordinate quartz, altered hornblende and FeTi oxides in a fine-grained, fairly homogeneous groundmass. Albitized plagioclase phenocrysts make up around 15 modal% of the sample, and are up to 4mm long; most are lightly sericitized, and some contain small granules of epidote. The plagioclase phenocrysts often occur in clots of three or more crystals. Quartz phenocrysts make up around 1 modal % of the rock, and vary from slightly resorbed euhedral crystals to spherical, completely reacted and rounded crystal shapes; most are less than 1mm across. Former mafic phenocrysts probably make up about 2-3 modal% of this rock, and are now composed of chlorite and albite, with minor intergrown leucogenitic material. There are no convincingly diagnostic crystal shapes, but I am fairly confident that these were originally hornblende phenocrysts. FeTi oxide phenocrysts (~2 modal%) are notably well-formed equidimensional crystals, and vary from apparently unaltered, to grains now composed of intergrown magnetite(?) and chlorite. A significant feature of this rock is the relative abundance of large well-formed apatite and zircon microphenocrysts.

The groundmass of this sample consists of a fine-grained sugary quartz-feldspathic intergrowth with common interstitial chlorite and fine-grained FeTi oxides. This texture is like an fine-grained aplite, and suggests (in agreement with your field notes) that the rock is probably from a shallow intrusive sheet. Veinlets of intimately intergrown monomineralic albite cut the rock, the albite having pinkish staining along crystal margins. Discontinuous meandering fractures form subparallel sets that are defined by chlorite and calcite. The alteration is undoubtedly of regional burial degradation origin.

This sample is of broadly dacitic composition (62-65% SiO₂); the relatively abundant groundmass chlorite, and the association of rounded quartz and (altered) hornblende phenocrysts is typical of the more evolved Anthony Rd hornblende andesites. More comment is provided in the accompanying notes.

SAMPLE NUMBER: 624359

SUMMARY:

This is a quartz+plagioclase-phyric rhyolitic shallow intrusive with a moderate sericite-defined fracture cleavage.

HAND SPECIMEN:

Susceptibility: 185: This is a dark green-grey plagioclase+quartz+hornblende(?) -phyric dacitic lava or shallow intrusive rock with weathered and altered former feldspar and mafic phenocrysts.

THIN SECTION:

This sample is a very evolved quartz+plagioclase-phyric rhyolitic shallow intrusive rock. Slightly to totally rounded and resorbed quartz phenocrysts to at least 5mm across make up around 8-10 modal% of the rock, and often contain chloritized melt inclusions. Most are fractured and broken, and some are partially disaggregated. Plagioclase phenocrysts are mainly less than 3mm long, and are albitized prisms with variably intense sericite alteration. In more weathered parts of the rock, fractures in altered plagioclase phenocrysts are more intensely sericitized (possibly surficial clayey alteration), and Fe-stained. A few small chloritized prisms mainly less than 0.3mm long may have been augite microphenocrysts. Former FeTi oxide microphenocrysts are all altered to leucoxeneitic aggregates.

The groundmass of this sample is a medium-fine-grained quartzo-feldspathic intergrowth riddled with fine-grained sericite and minor chlorite. Dense meshes of sericite occur in places, picking out a subparallel fracture cleavage. This texture is probably a degenerated aplitic holocrystalline texture, rather than a recrystallized devitrified glass. Alteration is regional burial metamorphic-related, but significant brittle fracturing affected the sample.

SAMPLE NUMBER: 624585, 624586 and 624587

SUMMARY:

These are essentially identical burial metamorphosed plagioclase+hornblende+biotite+augite(?)+FeTi oxide+quartz +apatite-phyric andesitic lavas, probably from the same flow unit. They are petrographically typical of the Anthony Rd hornblende andesites.

HAND SPECIMEN:

Susceptibility: 805, 725 and 490 respectively: These are very similar dark red plagioclase+ hornblende (?) -phyric andesitic lavas with obvious chloritized hornblende phenocrysts, and less obvious sericite-altered plagioclase phenocrysts.

THIN SECTION:

These are texturally well-preserved plagioclase + hornblende+FeTi oxide+quartz-phyric andesitic lavas that are almost identical petrographically. Small tabular to blocky albitized plagioclase phenocrysts (mainly around 1mm long) make up around 20 modal% of each rock and are occasionally rather rounded and resorbed, and are always fairly heavily overprinted by very fine-grained sericite and chlorite. Former hornblende phenocrysts make up around 10 modal% of the rock, and are well-formed euhedra to 2mm long now composed of chlorite (riddled with ultra-fine-grained Fe oxides, and leucoxene blebs) and calcite. Many contain small euhedral plagioclase microphenocrystic inclusions. A number of altered phenocrysts in each sample, most notable in 624587, are tabular prisms now composed of chlorite with abundant fine-grained FeTi oxides that define a very strong cleavage; these are very reminiscent of biotite. Equigranular FeTi oxides are common, making up around 1 modal% of the rock, and are rather well-preserved, with only limited marginal leucoxene alteration in a few grains. A few quite rounded and resorbed quartz phenocrysts are present in the rock. Apatite microphenocrysts are surprisingly common, and up to almost 0.5mm long.

The groundmass of all three samples is a very fine-grained, homogeneous quartzo-feldspathic intergrowth probably developing from devitrified glass. It contains abundant disseminated chlorite and tiny equigranular FeTi oxides, and spotty fine-grained sericite.

These three very similar samples of hornblende andesite are probably from the same flow; no significant differences exist between the three samples. These rocks are petrographically very similar to the Anthony Rd andesites. The alteration is of regional burial metamorphic origin.

SAMPLE NUMBER: 624384

SUMMARY:

This is a very well-preserved plagioclase+hornblende +biotite+augite+apatite+FeTi oxide+quartz-phyric shallow intrusive andesite.

HAND SPECIMEN:

Susceptibility: 2545: This is a massive dark grey-red plagioclase+hornblende-phyric andesitic lava with a weak fracture cleavage.

THIN SECTION:

This sample is an exceptionally well-preserved plagioclase+hornblende+augite+biotite+FeTi oxide+apatite+quartz-phyric andesitic lava. Albitized plagioclase phenocrysts mainly around 1mm long are tabular to slightly rounded crystals with slight sericite speckling, and make up around 20 modal% of the rock. Fresh hornblende phenocrysts are prismatic elongate crystals to 3mm long, making up about 5-7 modal% of the rock; they show a deep olive-green to straw yellow pleochroism, and often contain four or five small plagioclase microphenocryst inclusions. Small equidimensional augite phenocrysts (mainly <0.5mm long) are clear to palest green, and make up around 2-4 modal% of the rock, and are partially chloritized. Former biotite phenocrysts make up perhaps 1-2 modal% of the rock and are now composed of a strongly cleaved chlorite-magnetite-albite-epidote intergrowth. FeTi oxide phenocrysts are common, and slightly smaller on average than in the other hornblende andesites in this set; they are apparently almost entirely fresh, with narrow rims of limonite or leucoxene. The apatite phenocrysts in this sample are extraordinarily large and abundant, some reaching 1mm long. A few rounded and resorbed quartz phenocrysts are also present.

The groundmass of this sample is a very homogeneous, even-textured, fine-grained quartzo-feldspathic intergrowth more reminiscent to me of a formerly holocrystalline microaplitic sugary texture than a texture derived from recrystallization of devitrified glass. The alteration is of regional burial metamorphic origin.

858058

Beatrice Prospect (Matt White)

Aberfoyle Resources Limited
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File → L. Marg

~~Dora/Spicer Pet.~~
~~Beatrice Pet.~~

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A B E R F O Y L E

23 March 1993

Matt White
University of Tasmania
Geology Department
G.P.O. Box 252C
HOBART TAS 7001

Dear Matt

Please find accompanying this letter twenty samples for thin section description. Of the samples, thirteeen were collected during our recent reconnaissance mapping programme at Lake Dora, whilst the remainder seven are from Beatrice. The accompanying maps show sample locality details; the geology is adapted from Mines Department 1:25000 mapping.

Could you please provide thin section descriptions for each sample together with your thoughts as to any observable affinities with Tyndall Group/Southwell Subgroup units elsewhere in the Mount Read Volcanics. In particular, with a couple of the "Eastern Sequence" correlates to the north of Lake Dora, it is not clear as to a cohesive/volcaniclastic nature (e.g. 624590).

Quartz "eyes" are present in a number of samples from Dora-Spicer and Beatrice. Quartz in sample 624590 appears to show a distinctive fracture pattern. How does this compare to the honeycomb fracture pattern in Jocelyns' Southwell Subgroup horizon? Perhaps Joc may be interested to examine some of these samples?

If there are any problems or queries, do not hesitate to call.

Regards



Robina Sharpe
GEOLOGIST

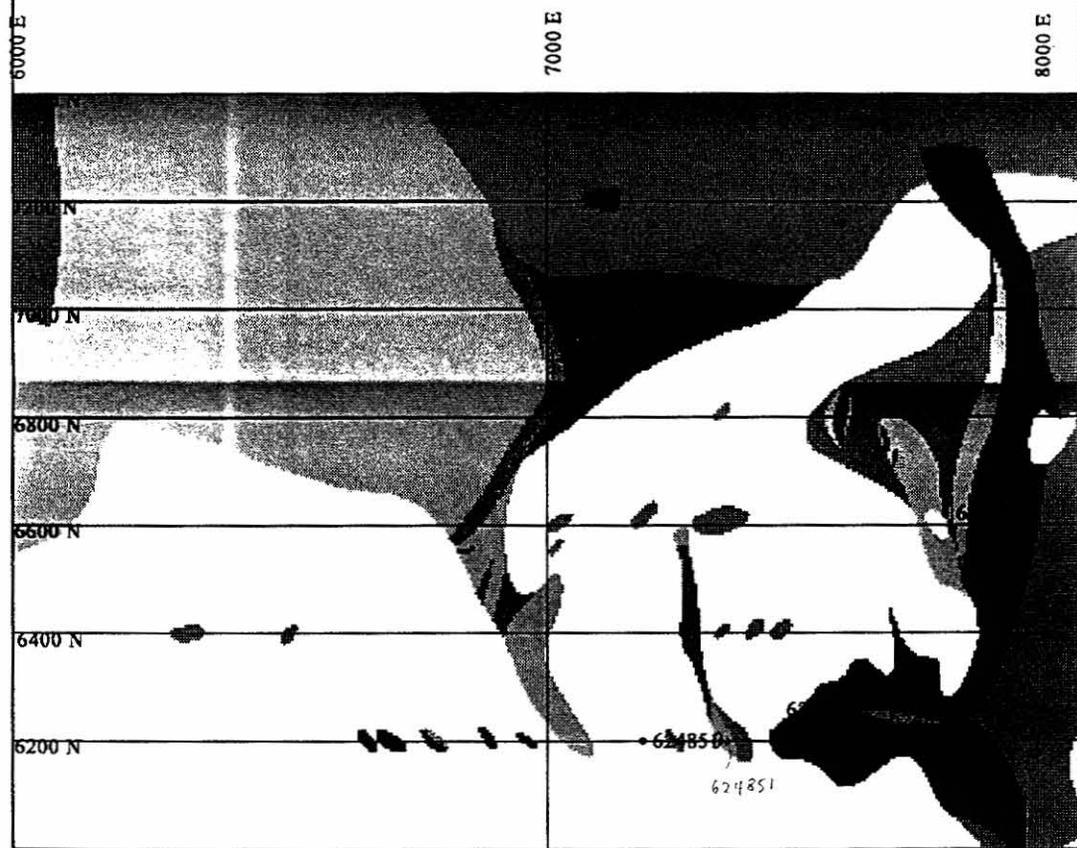
E.L. 5/85 LAKE MARGARET - RECONNAISSANCE

Beatrice Prospect (585b)			AMG CO-ORDINATES					
Area	Sample #	Description	Easting	Northing	Pet.	Gcm.	Susceptibility Range	Av. Sus
B	624850	GyGn FdQzMafic Y-lihtic Vlc Sst	-	-	Y	BM		
B	624851	PkRd QzFdMgt R-I/bv	387177	5346200	Y	BM	45,30,25	33
B	624852		387545	5346200	Y	BM	585,690,450	575
B	624853		387600	5346200	Y	BM	890,780,780	820
B	624854		387634	5346222	Y	BM	20,20,17	20
B	624855		387747	5346620	Y	BM	46,35,30,30	35

BEATRICE

1:10 000

-  Quaternary
-  Ctc
-  Porphyry
-  Ctlv
-  Ctdl
-  Ctav
-  Cesh
-  Cclv
-  Ccbv
-  Ccrb
-  Ccrl



534

534

386000

388000

858062

**PETROGRAPHY OF LAKE DORA AND LAKE BEATRICE
SAMPLES**

(For Aberfoyle Resources Limited: Robina Sharpe)

Matt White CODES University of Tasmania May 1994

Individual petrographic descriptions are provided on separate sheets. The following is a summary of the results and a brief discussion of particular features of the samples. An excellent overview of the geology of this area is found in an unpublished Mines Department Report written by Keith Corbett (1982/25 - Stratigraphy and correlation of the Mt Read Volcanics and associated rocks in the Mt Sedgwick-Lake Beatrice area and the Lake Dora-Lake Spicer area).

Some of these samples correlate to the Tyndall Group crystal rich sandstone facies and two of the Lake Dora samples have a similar composition to the Bonds Range (intrusive) Porphyry. Some of the samples may correlate to the Southwell Subgroup and/or the Eastern Sequence, but my inexperience with those two sequences and the lack of diagnostic features prevents any confident correlations to be inferred.

Lake Beatrice

All samples show a moderate to strong cleavage foliation and moderately strong alteration. In some samples the cleavage foliation has the appearance of attenuating some of the components (principally the lithics) (eg. 624850). The alteration assemblage includes principally sericite, quartz, chlorite and opaque minerals. The opaques include hematite, magnetite and possible rare pyrite.

Four of the seven samples (624850, 852, 853, 855) have a similar texture and composition, and consist of quartz-feldspar-lithic bearing volcanoclastic pebbly sandstone to matrix-supported volcanoclastic lithic conglomerate/breccia. Lithics consist of mainly subrounded to angular pebble size, altered aphyric clasts and quartz phyric volcanic clasts. The fine matrix material has largely altered to sericite-quartz-chlorite-opaque minerals. Some of these samples contain possible detrital magnetite, chloritised biotite and accessory apatite/zircon. Samples 850 and 852 contains rare large quartz crystals that have a subtle polygonal fracture pattern (honeycomb texture).

Sample 624854 comprises quartz, chloritised-biotite bearing matrix-rich volcanoclastic sandstone. The large quartz crystals show well preserved polygonal fracture pattern (honeycomb texture). The origin of the fracture pattern is unknown to my knowledge. However, the close resemblance to columnar jointing in coherent volcanic rocks may give a clue to its origin (ie. formed by cooling or quenching). The fractures are tiny hairline fractures that form 4 to 8 sided sub-millimetre polygons. Most of the polygon sides are straight-sided but some are curved. Jocelyn McPhie has reported unusual fracture patterns within quartz crystals in the Southwell Subgroup. Unfortunately Jocelyn is away at the moment and I am unable to discuss this with her.

Sample 624851 consists of a quartz-feldspar crystal rich volcanoclastic sandstone with a pink coloured quartz-feldspar altered matrix. This sample is remarkably similar to the crystal rich volcanoclastic sandstone facies of the Tyndall Group. The sample also contains possible minor detrital magnetite and rare myrmekite-textured grains. Both these are common minor constituents within the Tyndall Group crystal rich facies around Mount Lyell.

Sample 624856 consists of an undifferentiated, quartz-bearing, strongly sericite-quartz-opaque altered rock that shows a clastic type texture interpreted as a pseudoclastic texture formed by secondary alteration and deformation processes.

PETROGRAPHIC DESCRIPTIONS

Sample: 624850

Date: 9/5/94

Location: Lake Beatrice

Hand Specimen Name: Quartz - feldspar? - lithic bearing volcanoclastic sandstone.

may sus = 0.15 - 0.20

Components: Quartz - subrounded to angular volcanic quartz crystals + crystal fragments. Some with embayments + "inclusions" filled with chlorite ± sericite alteration minerals. Average size 0.5 - 3 mm. Largest crystals are fractured and show slight undulose extinction. - Some with polygonal fracture pattern ~15%

Feldspar? - tiny remnants of feldspar crystals seen that have been strongly sericitized, blending with matrix alteration. Can see faint outlines in places of subhedral equant feldspar. ~15%

Zircon? - rare tiny high relief grain - high birefringence. prob. zircon. <1%

Lithics - Quartz phytic lithics ~ 2-20 mm, subangular shapes - some probably intact. ~10-20%

Apatite? - 6-sided moderately high-relief crystal ~ 0.1 mm. "apparent isotropic" (apatite basal sections often apparently isotropic) <1%

Alteration/Groundmass/Matrix: Strong sericite alteration of matrix, obliterating feldspars and producing apparent open-framework texture. Also masks grain boundaries of lithics.

Also some quartz alteration mine

Also minor chlorite opaques. Concentrated in patches.

Textures: poorly-sorted closed framework? lithic rich (+ crystals) pebbly sandstone.

Moderately strong cleavage foliation defined by sericite/chlorite alignment attenuates primary texture.

Comments: Apatite/Zircon accessory minerals present in many samples at Lake Bora Loo. Polygonal fracture pattern in some quartz crystals. -

Final Descriptive Name: Quartz - feldspar - lithic bearing volcanoclastic pebbly sandstone.

Sketch:

PETROGRAPHIC DESCRIPTIONS

Sample: 62+852	Date: 11/5/94
Location: Lake Beatrice	
Hand Specimen Name: Quartz-feldspar? - lithic volcanoclastic sandstone/breccia. mag sus = 3.5 - 4.7	
Components: Quartz - subrounded whole quartz crystals - up to 4mm and abundant crystal fragments - angular shape av. 0.5-2mm. one large crystal has subtle polygonal fracture pattern.	~15%
Feldspar - strongly sericitised crystals + crystal fragments, subhedral shapes to angular fragments - plagioclase multiple twinning observed in places.	~15%
Lithic - pebble size lithics 2-30mm - many types - dom. subangular to angular. a) - aphyric quartz ± ser ± chl altered clasts. b) - quartz phytic ± apatite with quartz-ser ± chl ± opaque alteration Difficult to see boundaries of lithics in places	~20%
Magnetite - isolated opaque grains, probably magnetite as rock is magnetic.	2-3%
Accessory - zircon + apatite <0.1mm	<1%
Alteration/Groundmass/Matrix: sericite, quartz, chlorite opaque mineral alteration assemblage Opaques probably include pyrite, magnetite, hematite.	
Textures: Poorly sorted crystal-lithic rich volcanoclastic sandstone to matrix-supported lithic breccia. Closed framework Moderate cleavage foliation present. Cleavage has appearance of attenuating lithics.	
Comments:	
Final Descriptive Name: Quartz-feldspar-magnetite? - lithic bearing volcanoclastic pebbly sandstone.	

Sketch:

PETROGRAPHIC DESCRIPTIONS

Sample: 624853	Date: 12/5/94
Location: Lake Beatrice	
Hand Specimen Name: Quartz - feldspar - lithic bearing volcanoclastic sandstone. with possible magnetite. mag sus = 5.2-6.3	~15%
Components: Quartz - large embayed subrounded quartz crystals - up to 5mm and abundant angular qtz crystal fragments. -	
Feldspar - strongly sericite altered - some subhedral prismatic shapes + also subrounded grains and crystal fragments. - av. 0.5-1.5mm	~20%
Lithics - a) aphyric qtz/feld altered undifferentiated clasts subangular shapes i) quartz phytic clasts - alteration as in a) c) aphyric qtz/sericite/hematite altered clasts	total lithics ~5-10%
Opaque Minerals - isolated discrete grains - probably detrital magnetite	1-3%
Accessory Apatite + Accessory Zircon? - very rare	<1%
Alteration/Groundmass/Matrix: - Strong quartz/sericite alteration of matrix with minor chlorite/opaque (prob including hematite)	
Textures: Closed framework - ^{poorly} moderately sorted - volcanoclastic sandstone texture.	
Cleavage foliation present.	
Comments: -	
Final Descriptive Name: Quartz-feldspar-lithic-magnetite bearing crystal-rich volcanoclastic sandstone.	

Sketch:

PETROGRAPHIC DESCRIPTIONS

Sample: 624855

Date: 13/5/94

Location: Lake Beatrice

Hand Specimen Name: Quartz lithic bearing volcaniclastic sandstone / lithic breccia

Mag sus = 0.16 - 0.20

Components: Lithics - abundant angular to sub-angular shaped sand to pebble size ~20%

clasts - a) dominantly aphyric quartz \pm chlorite \pm opaque \pm sericite altered clasts

b) quartz phytic clasts with matrix/groundmass as in a)

c) hematite/quartz altered aphyric clasts.

Clasts 2 - 20mm av.

Sandy matrix - comprises sand sized lithics + angular quartz crystal fragments ~20%
within altered fine-grained material. (fine-grained rich sandy matrix)

Ex-biotite or muscovite slab - now white mica/chlorite altered ~ 1mm across. <1%

Rare accessory zircon. <1%

Alteration/Groundmass/Matrix: Strong sericite/quartz alteration of matrix
also lesser chlorite/opaque minerals.Textures: poorly sorted lithic rich volcaniclastic sandstone/matrix-supported breccia.
Generally open framework texture (ie matrix-rich)
Strong alteration + foliation overprinting primary texture.

Comments:

Final Descriptive Name: Lithic-quartz bearing volcaniclastic breccia/sandstone.

Sketch:

PETROGRAPHIC DESCRIPTIONS

Sample: 62+854

Date: 12/5/94

Location: Lake Beatrice

Hand Specimen Name: Strongly foliated quartz bearing volcanoclastic sandstone

Components: Quartz - wide range of sizes - up to 4 mm ^{mag size = 0.06 - 0.07} - large whole crystals ~20%
 subrounded to angular - and smaller angular crystal fragments
 large crystals have distinctive "honeycomb" type fracture pattern.
 Polygonal fracture pattern -

- Ex-biotite? - slabs of chloritized biotite? - with typical micaceous appearance ~5%
 ~2-3 mm long - with some opaque alteration minerals also.

Zircon accessory minerals - <1%

Alteration/Groundmass/Matrix: Very strong sericite alteration, with some domains of qtz alteration.
 Also minor chlorite/opaque minerals. (probably hematite and/or pyrite)

Textures: Moderately poorly sorted, open framework quartz-biotite volcanoclastic sandstone.

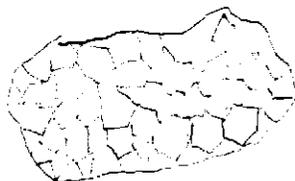
- Strong sericite alteration, aligned subparallel to cleavage foliation.

- Polygonal fracture pattern in quartz - unknown origin.
 Almost looks like columnar jointing - may have cooling or quench origin?

Comments: Excellent polygonal fracture pattern in large quartz crystals.

Final Descriptive Name: Quartz-biotite bearing volcanoclastic sandstone
 strongly foliated strong sericite alteration.

Sketch:



Quartz
 4 mm across
 Polygonal fracture pattern
 (generally 4-6 sided polygons)
 up to 8-sided
 some have curved boundaries

PETROGRAPHIC DESCRIPTIONS

Sample: 624851	Date: 11/5/94
Location: Lake Beatrice	
Hand Specimen Name: Quartz-feldspar-lithic? - magnetite? bearing volcanoclastic pebbly sandstone mag-sus = 3.1 - 5.2.	
Components:	
Quartz - dominantly angular quartz crystal fragments and some embayed whole crystal grains. av. ~ 0.5 - 2mm. very uneven distribution. some quartz crystals have honeycomb-type fracture pattern. Polyagonal fracture pattern.	~15%
Feldspar - subhedral prismatic plagioclase laths and lesser crystal fragments dom. 0.5 - 2mm.	~15%
Opaque minerals - discrete grains - probably magnetite	~2-3%
Lithic? - possible aphyric quartz/feldspar altered clasts, cannot see grain boundaries, as they blend with quartz/feldspar altered matrix.	~5%?
Myrmekite - textured grain - vermicular intergrowth of quartz/feldspar.	<1%
Alteration/Groundmass/Matrix: strong quartz/feldspar alteration of matrix with abundant sericite and opaque alteration minerals. Possible hematite giving pink/orange colour. Also rare chlorite.	
Textures: Matrix-rich open framework crystal sandstone. (strongly Qtz-feldspar altered matrix.)	
Texturally + compositionally similar to some of the crystal-rich facies of the Tyndall Group, except not quite as crystal-rich. Some samples collected at Zig Zag Hill are relatively less crystal-rich like this sample - and are part of the "Comstock Tuff" of Corbett et al. 1974.	
Comments: Myrmekite textured grains are rare accessory component within upper part of "Comstock Tuff" in Zig Zag Hill / Comstock area. This sample may be part of the Tyndall Group - "Comstock Tuff Formation"	
Final Descriptive Name: Quartz-feldspar crystal volcanoclastic sandstone.	
Sketch:	Comment: - Polyagonal fracture pattern seen in some quartz crystals.

PETROGRAPHIC DESCRIPTIONS

Sample: 624856 Date: 13/5/94 Black Friday

Location: Lake Beatrice

Hand Specimen Name: strongly altered, strongly foliated rock with "clastic" appearance
mag sus = 1.3 - 1.9.

Components: Strongly altered sample with
Pseudoclastic texture overprinting undifferentiated rock.

Only primary component is minor small quartz crystal fragments or whole grains ~5%
Also high relief accessory mineral probably zircon.

Alteration/Groundmass/Matrix: - Strong sericite/quartz alteration of rock containing
spherical shaped blebs of coarse quartz alteration + Also minor chlorite.
Veinlets + zones of hematite branching through rock forming
pseudoclastic texture? However some clasts appear moderately rounded??
Monomict composition - so interp = pseudoclastic texture.
However precursor may be quartz-bearing sandstone-siltstone?? or volcanic rock.
Also probably some magnetite alt = as rock is magnetic.

Textures: Anastomosing hematite veinlets + alteration "brecciating" through
rock forming pseudoclastic texture.

Precursor rock = qtz phytic rock of unknown origin.

Spherical shaped polycrystalline quartz blebs may be amygdaloids or
blebs of alteration??

Comments: Difficult rock to interpret - dominantly quartz-sericite-hematite alt.

Final Descriptive Name: Strongly sericite/quartz/hematite/magnetite? altered rock.

Sketch:

858072

Tyndall Creek drill core (Matt White)

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8 December 1993

A B E R F O Y L E

Matt White
CODES Key Centre
University of Tasmania
GPO Box 252C
HOBART TAS 7001

Dear Matt

Please find accompanying this letter eleven samples for thin section description. Ten of the samples are from our recent short drill holes at Tyndall Creek on the Lake Margaret E.L.

Could you please prepare thin section descriptions for each and a general summary of the results of the study. In particular, I am interested in the context of these samples with your current ideas on Lower Tyndall Group volcanics. The stratigraphic position of these samples is immediately below the contact between the Lower Tyndall units and Howards Tuff / Middle Tyndall Group along the Anthony Road. Could you please note the nature of magnetite: is it hydrothermal or detrital, as well as alteration styles and intensities.

In addition, to the Tyndall Creek samples, I am including a sample of the Lynchford Tuff for thin section description. Is there evidence of hornblende and basaltic detritus? What are your thoughts on this specimen and how does it compare to units along the Anthony Road?

Tony Crawford generally charges \$55 per thin section, which includes thin section preparation by Simon Stephens and descriptions. When completed could you please send remainder sample, thin sections, descriptions and invoice to me.

I appreciate your time with these descriptions and look forward to hearing from you in the near future. Should you have any questions at all, please don't hesitate to contact me.

Regards



Robina Sharpe
Geologist

ATTENTION : MATT WHITE

Total of 11 samples

LOWER TYNDALL GROUP - TYNDALL CREEK DRILLING SAMPLES

DDH TC2

624188 @ 10.5 m

DDH TC3

624189 @ 8.0 m

624190 @ 14.3 m

624191 @ 18.6 m

624192 @ 29.2 m

DDH TC4

624193 @ 5.6 m

624194 @ 10.7 m

624195 @ 22.1 m

624196 @ 36.3 m

624197 @ 47.8 m

LYNCHFORD TUFF SAMPLE HT1

**PETROGRAPHY OF TYNDALL GROUP SAMPLES
TYNDALL CREEK - LYNCHFORD
(For Aberfoyle Resources Limited)**

Matt White CODES University of Tasmania

Tyndall Creek

Samples 624188-97.

Three lithotypes were recognised in this group of samples.

- a) Feldspar porphyritic volcanic rock (andesite/dacite) - **(FCV)**.
- b) Feldspar bearing, crystal rich redeposited volcanoclastic sandstone - **(FVS)**
- c) Strongly altered, foliated rock (probably originally andesitic/dacitic volcanic) - **(AS)**

a) FCV

Samples 624188 and 91 are interpreted to be feldspar porphyritic volcanic rocks (andesite/dacite). The samples consist of an even distribution of euhedral to subhedral feldspar phenocrysts (dominantly plagioclase), within an altered groundmass comprised largely of sericite with minor opaque minerals, quartz/feldspar and chlorite. A foliation is present (slaty cleavage) defined by the alignment of sericite minerals. Some zones contain lath shaped feldspar phenocrysts that are aligned subparallel to one another, subparallel to the cleavage orientation. This is probably due to attenuation during cleavage development rather than primary development of trachytic-type texture.

The samples may be part of the underlying Andesite Group of rocks faulted into the area, or part of an andesite/dacite intrusive or extrusive body within the Tyndall Group. A unit which is similar in appearance to these two samples occurs within the Tyndall Group volcanoclastic units in the cutting just north of the Tyndall Creek crossing. Unfortunately poor exposure prevents determining whether the unit is intrusive or extrusive.

b) FVS

Samples 624192-97 are interpreted as feldspar bearing, crystal rich redeposited volcanoclastic sandstone. The samples contain an abundance of subhedral feldspar crystal grains (dominantly plagioclase), minor amounts of detrital magnetite, pebbly subangular to subrounded dacite/andesite lithic clasts and abundant polycrystalline feldspar±quartz altered grains. Quartz crystals are absent in these samples. Many of the polycrystalline grains have prismatic blocky crystal shapes, indicating that they were originally primary crystals of some type, and have been altered or pseudomorphed to polycrystalline feldspar (probably albite)±quartz. The primary crystal phase was not plagioclase as the other plagioclase crystal grains are only weakly altered, but may be K-spar or some other phase. This type of feldspar±quartz alteration also occurs as irregular domains in the matrix and as spherical shaped pods (possible amygdales) in andesite/dacite lithic clasts.

The internal structure of these samples is massive, displaying a closed framework or tight grain packing. The samples are also moderately well sorted, apart from areas that contain a minor admixture of pebbly lithics. The matrix is comprised of secondary alteration minerals, dominantly chlorite and sericite with minor opaque minerals (pyrite, possible magnetite, possible hematite), quartz, feldspar and carbonate.

These massive crystal rich volcaniclastic sandstone deposits are interpreted to be transported and deposited by sandy high-density mass flows (turbidity currents and/or debris flows) in a subaqueous, below wave base environment. An explosive subaerial to shallow marine volcanic source is envisaged. The crystals were probably released by explosive (pyroclastic) eruptions and rapidly redeposited into a subjacent marine basin. During transportation, fine material (ash) may be elutriated by various volcano-sedimentary processes, leading to crystal enrichment in the final deposits.

Feldspar bearing, crystal rich volcaniclastic sandstone deposits are common in the lower part of the Tyndall Group in the Anthony Road area. They outcrop in Tyndall Creek downstream from the Anthony Road crossing and also in the Henty Canal (associated with laminated mudstone etc.). At Zig Zag Hill, near Mount Lyell, feldspar-rich volcaniclastic rocks are also present near the base of the Tyndall Group sequence.

c) AS

These two samples (624189, 90) consist of a strongly altered, strongly foliated rock that contains no primary constituents. Both samples consist of quartz, feldspar, chlorite, sericite, opaque mineral (magnetite, pyrite, hematite) alteration assemblages. The foliation (slatey cleavage) is well developed and defined by the alignment of platy alteration minerals. The primary textures and origin of these samples cannot be determined due to the strong intensity of the alteration. However, they may have a similar origin to the other andesitic/dacitic rocks in close proximity.

Lynchford Sample HT1

This sample is a feldspar-clinopyroxene bearing crystal rich redeposited volcaniclastic sandstone. It is texturally similar to the feldspar rich volcaniclastic sandstone deposits of Tyndall Creek (samples 624192-97). The source of the deposit is clearly andesitic, as subhedral plagioclase and clinopyroxene crystals are abundant. The sample also contains minor quartz crystals, rhyolitic to andesitic pebbly lithic clasts and detrital magnetite grains. Hornblende was not found in this sample. The matrix comprises secondary alteration minerals; dominantly chlorite and minor opaque minerals, quartz, feldspar, sericite and carbonate.

This sample correlates to the lower Tyndall Group units at Zig Zag Hill (which contain minor clinopyroxene) and the basal volcaniclastic units in the Anthony Road area. Feldspar-quartz-clinopyroxene-lithic bearing redeposited volcaniclastic sandstone units are also present in the lower to middle Tyndall Group correlates along the Cradle Mountain Link Road.

Comments

Thin sections 624193, HT1 (FVS) were polished to enhance the resolution of the opaque minerals in order to establish their origin. The samples clearly show discrete subrounded grains of detrital magnetite. Many of these grains have been fractured and "redistributed" slightly, probably during deformation.

Thin section 624190 was also polished and contains two textural-types of magnetite. Relatively coarse grained euhedral magnetite and very fine grained irregular shaped disseminated magnetite. The later type is disseminated throughout this sample and is clearly secondary alteration. The euhedral magnetite grains however, may have a primary origin, (eg. magnetite phenocrysts within coherent volcanic rock).

858077

PETROGRAPHIC DESCRIPTIONS

Sample: 624188	Date: 11-1-94
Location: Tyndall Creek - DDH TC2 - 10.5 m	
Hand Specimen Name: Feldspar phytic rock, ~30% feldspar in green sericite alteration. Moderately foliated.	
Components: Feldspars - type of feldspar - unknown probably plagioclase (no obvious twinning, although some simple twinning) - dusted with sericite/opaque alt. (~25-30%) Dominantly euhedral everted to lath shape crystals + subhedral crystals av. size 0.5 - 1mm. Even distribution.	
Opagues - possible primary opagues - prismatic grains. (~5%) But most opagues probably secondary alteration. Some of the prismatic grains could be secondary pyrite.	
Alteration/Groundmass/Matrix: Pervasive strong sericite alteration of groundmass with patchy moderate alteration - opaque mineral.	
Alteration intensity - moderately strong.	
Textures: Even distribution of feldspars (25-30%) indicates porphyritic texture i.e. coherent volcanic rock - probably dacite or andesite.	
Also moderately strong foliation (cleavage) - defined by alignment of sericite minerals.	
Average Comments: Mag sus reading - 0.06 (10×10^{-5} SI units) on small sample	
Final Descriptive Name: Feldspar porphyritic volcanic rock (FCV) strong sericite alteration	

Sketch:

855078

PETROGRAPHIC DESCRIPTIONS

Sample: 62+189 Date: 11/1/94

Location: Tyndall Creek - DDH TC3 - 8.0 m

Hand Specimen Name: Strongly foliated, strongly altered undifferentiated rock.

Components: No primary constituents visible.

Aphyric rock
Strongly altered.

Alteration/Groundmass/Matrix: Strong pervasive quartz \pm feldspar alteration with wisps and irregular shaped zones of chlorite-opaque mineral alteration. Opaque minerals are red in colour in hand specimen - indicates hematite. Non-magnetic specimen indicates no or little magnetite. Some patches + "veins" of coarse polycrystalline secondary quartz. Also very minor sericite.

Alteration intensity - very strong

Textures: Aphyric rock, - massive alteration - destroyed primary textures. Primary volcanic textures destroyed.

Could be aphyric volcanic rock (qtz \pm feld alteration may be alteration of originally glassy rock).

Also moderately strong foliation throughout this rock.

Comments: Average mag sus reading = 0.0 on small sample

Final Descriptive Name: Quartz \pm feldspar / chlorite / hematite / sericite altered rock, with moderately strong cleavage. (AS)

Sketch:

PETROGRAPHIC DESCRIPTIONS

Sample: 624190

Date: 11/1/94

Location: Tyndall Creek - DDH TC3 - 14.3 m

Hand Specimen Name: Strongly altered, strongly foliated undifferentiated rock.

Components: Aphyric rock?

No primary constituents. - apart from euhedral magnetite grains which may be primary grains or phenocrysts?

Alteration/Groundmass/Matrix: Pervasive quartz ± feldspar alteration with blebs of opaque minerals and minor sericite + chlorite.

Opagves = dominantly magnetite + red coloured hematite + some pyrite. Relatively coarse opagves (euhedral shapes) throughout, some in trails and clusters and also fine grained disseminated irregular shaped opagves. (2 types of magnetite)

Alteration intensity - very strong.

Textures: Aphyric, strong alteration has destroyed primary textures. Moderately strong foliation.

Comments: Average mag sus reading = 4.1 (10×10^{-5} SI units)
Polish this section.

Final Descriptive Name: Quartz ± feldspar / magnetite / hematite / pyrite / ser / chlorite (A S)
altered rock.

Sketch: Comments after polishing: Fine grained magnetite throughout rock, irregular shapes + clearly secondary hydrothermal alteration product.

But coarse-grained euhedral shaped magnetite could either be a) alteration product or b) have primary magmatic origin.

The latter indicates that this rock may be a coherent volcanic rock with magnetite occurring as "phenocrysts".

Red hue in areas indicates presence of hematite.

Also some pyrite.

PETROGRAPHIC DESCRIPTIONS

Sample: 629191 Date: 12/1/94

Location: Tyndall Creek - DDH TC3 - 18.6 m.

Hand Specimen Name: Feldspar phytic rock - Strongly altered, foliated

Components: Feldspar - subhedral crystals - highly disrupted by foliation. ~10%
 Not well preserved, prob plagioclase? Dusted with sericite alteration.
 Probably originally evenly distributed - but texture destroyed by foliation and alteration. Some with unusual twinning - could be deformation twinning
 Whole crystals and glomerocrysts. $\sim 1-3$ mm across
 Also smaller plagioclase? laths in groundmass < 0.2 mm
 Some of these aligned parallel to foliation.

Alteration/Groundmass/Matrix: Moderately strong sericite alteration of groundmass (defining foliation) - also moderate intensity of opaque mineral alteration associated with sericite.

Opacives occur along foliation in fractures and also throughout. (dom. pyrite)
 Also veinlets and domains of quartz \pm feldspar alteration

Alteration intensity - moderately strong.
 Textures: Even distribution of feldspar interp = porphyritic texture.
 indicating coherent volcanic origin.
 Small feldspars aligned in groundmass could be trachytic texture
 but also subparallel to foliation hence probably caused by deformation.
 Foliation defined by sericite alteration.

Comments: Av. mag sus reading - 0.01 (10×10^{-5} SI units) on small sample.
 Ugly rock.

Final Descriptive Name: Feldspar porphyritic volcanic rock (probably andesite or dacite) (FCV)
 (strong sericite alteration)

Sketch:

PETROGRAPHIC DESCRIPTIONS

Sample:	624192	Date:	12/1/94
Location:	Tyndall Creek - DDH TC3 - 29.2m		
Hand Specimen Name:	Feldspar bearing - crystal rich volcanoclastic sandstone		
Components:	Feldspar - dominantly multiple twinned plagioclase also possible K-spar subhedral to euhedral crystal grains - some subrounded - av. 1-2 mm some grains highly fractured.		~30%
Polycrystalline Feldspar Grains:	(prob dominantly albite ± quartz ± sericite pseudomorphing primary crystal phase, some prismatic crystal shapes could be alteration of K-spar or other unknown phase? Not pseudomorphing plagioclase as other grains are relatively unaltered.		~10%
Opaque minerals	- discrete grains, possible detrital origin. Some with prismatic shapes, some fractured + irregular. Probably not magnetic as very low mag sus reading. Some of these could be secondary pyrite.		~2-3%
Lithics	One feldspar porphyritic volcanic clast ~6mm across and one possible lithic = chlorite altered wispy shaped clast, ~6mm.		<1%
Alteration/Groundmass/Matrix:	Dominantly sericite and chlorite alteration of matrix. Also some opaque mineral alteration - disseminated throughout the matrix. Minor quartz ± feldspar alteration - (feldspar laths - probably albite)		
Alteration intensity	- moderate to moderately weak		
Textures:	Closed framework moderately well sorted crystal rich volcanoclastic sandstone. Crystals dominantly subhedral to euhedral, only minor abrasion of crystals indicates rapid re-sedimentation. "Massive" structure. Moderate foliation in rock - defined by fractures in feldspar infilled with sericite alteration		
Comments:	Av. mag sus reading = 0.02 (10×10^{-5} SI units) on small sample. Polycrystalline feldspar phase - pseudomorphing primary phase No quartz at all		
Final Descriptive Name:	Feldspar bearing crystal rich volcanoclastic sandstone (FVS) with sericite, chlorite alteration.		

Sketch:

PETROGRAPHIC DESCRIPTIONS

Sample: 62+193 Date: 12/1/94

Location: Tyndall Creek - DDH TC4 - 5.6 m

Hand Specimen Name: Feldspar bearing crystal rich volcanoclastic sandstone
with some added lithics

Components: Feldspar - dominantly plagioclase, subhedral to euhedral crystal grain - some subrounded - dominantly 1-2 mm - dusted with sericite alt. ~30%

Polycrystalline Feldspar grains - dominantly 1-2 mm dominantly network of feldspar laths (probably albite) - generally subhedral blocky crystal shapes ~10-15%

Opaque minerals - isolated grains subhedral/subrounded grains. Some fractured and parts redistributed* within surrounding chlorite alterations. All magnetite - detrital origin. Grains ~ 0.2 - 1.0 mm size. ~2-5%

Alteration/Groundmass/Matrix: Chlorite alteration of matrix with minor opaque minerals (pyrite + rare magnetite)

Alteration intensity - Moderate to moderately weak

Textures: Closed framework, moderately well sorted, crystal rich volcanoclastic sandstone texture, massive structure

Comments: Av. mag sus. reading = 3.9 (10×10^{-5} SI units) on small sample.
Polish this thin section
No quartz in these FVS samples from Tyndall Creek

Final Descriptive Name: Feldspar bearing crystal rich volcanoclastic sandstone (FVS)
(moderate chlorite alteration)

Sketch: Comment after polishing: Clearly isolated subhedral to subrounded grains of detrital magnetite within crystal rich fabric.
Also some sparse pyrite alteration.

PETROGRAPHIC DESCRIPTIONS

Sample: 624/94

Date: 14/1/94

Location: Tyndall Creek DDH TCA, 10.7m

Hand Specimen Name: Feldspar rich (+ lithics) crystal rich volcanoclastic
SandstoneComponents: Feldspar - dominantly plagioclase, subhedral to euhedral + subrounded
crystal grains ~1-2mm av. dusted with sericite/carbonate alteration. ~25%Polycrystalline feldspar ± quartz ± carbonate grains ~0.5-1.5 av size ~10%
subhedral and subrounded crystal grainsLithics a) Feldspar porphyritic clasts up to 3cm across - subangular shapes, ~5%
groundmass = quartz/feldspar/chlorite/carbonate/opaque mineral alteration
some of these also contain polycrystalline feldspar ± quartz domains.

b) Fine-grained aphyric clasts also

Opaque Minerals - discrete subrounded to subhedral crystal grains,
probably dominantly magnetite ~0.1-1.0mm
Some fractured + infilled with chlorite alteration.Alteration/Groundmass/Matrix: Dominantly chlorite alteration of matrix
with some opaque minerals + minor feldspar/quartz alteration
and veinlets of carbonate.

Alteration intensity: Moderate to moderately weak

Textures: Closed framework - mod. unsorted massive crystal rich
volcanoclastic sandstoneComments: Av. mag sus reading = 3.0 (10×10^{-5} SI units) on small sample.
Very similar to 624/93Final Descriptive Name: Feldspar bearing crystal rich volcanoclastic sandstone (FVS)
with minor pebbly lithics - (moderate chlorite alteration)

Sketch:

858084

PETROGRAPHIC DESCRIPTIONS

Sample: 624195

Date: 14/1/94

Location: Tyndall Creek - DDH TC4 - 22.1 m.

Hand Specimen Name: Feldspar bearing capitol rich volcanoclastic sandstone

Components: Feldspar - dominantly plagioclase - subhedral to euhedral ~30%
 + subrounded crystal grains - 1-2 mm av. light dusting of
 sericite/carbonate alteration

Polycrystalline Feldspar grains - network of feldspar laths (prob. albite) ~10%
 pseudomorphing previous phase - some irregular shaped grains
 + some subhedral grains.
 (Also some alteration of matrix)

Opaque Minerals - Discrete opaque minerals - prob. dominantly magnetite ~2-5%
 fractured + infilled by chlorite alteration
 Probably detrital magnetite

Lithics - Feldspar porphyritic lithics - prob. andesite/dacite clasts ~1-2%

Alteration/Groundmass/Matrix: Dom. chlorite/quartz-feldspar alteration +
 disseminated opaque minerals. Also minor carbonate. Relatively
 stronger chlorite alteration in places giving pseudoclastic texture
 Alteration intensity: Moderate to moderately weak

Textures: Closed framework, moderately well sorted,
 massive structure

Comments: Av. mag sus. reading = 1.6 (10×10^{-5} SI units) on small sample

Final Descriptive Name: As above H.S. name

(FVS)

Sketch:

PETROGRAPHIC DESCRIPTIONS

Sample: 624196 Date: 11/1/94

Location: Tyndall Creek - DDH TC4 36-3 m

Hand Specimen Name: Feldspar bearing crystal rich vol/cl sandstone

Components: Feldspar - dom. plagioclase - subhedral/subrounded crystal ~30%
grains + some glomerocrysts (0.5 - 2 mm)

Polycrystalline Feldspar grains \pm quartz alteration ~10%
replacing earlier phase (0.5 - 2 mm)

Opaque Minerals - \leq 1mm, isolated grains prob. detrital ~2-5%
magnetite

Lithics - a) Angular feldspar porphyritic dacite/andesite clasts ~2%
up to 6mm, also has round shaped
polycrystalline feldspar (albite) domains = amygdales.

Alteration/Groundmass/Matrix: Moderate chlorite alteration of matrix
also some oquaves + quartz-feldspar alteration and
rare sericite/carbonate

Alteration intensity: Moderately weak to Moderate

Textures: Closed framework, moderately well sorted, massive

Comments: Av. mag sus reading = 2-3 (10×10^{-5} SI units) on small sample.

Final Descriptive Name: As above. (FVS)

Sketch:

858086

PETROGRAPHIC DESCRIPTIONS

Sample: 62+197

Date: 14/1/94

Location: Tyndall Creek TC4 - 47.8m

Hand Specimen Name: Feldspar bearing crystal rich volcanoclastic sandstone

Components: Feldspar - subhedral crystal grains, dominantly 1-2mm ~30%
dom. plagioclase

Polycrystalline Feldspar grains - ~0.5-1.5mm. ~10%

Lithics - minor lithics 2-5mm subangular shapes Feldspar porphyritic clasts ~5%

Opaque Minerals - Isolated subhedral to subrounded grains 0.3-1.0mm ~2-5%
broken, fractured, infilled with chlorite in places
prob dominantly magnetite (detrital)Alteration/Groundmass/Matrix: Moderate chlorite alteration of matrix, also
minor opaque mineral alteration
also minor feldspar/quartz alteration + rare sericite

Alteration intensity: Moderate

Textures: Closed framework, mod. well sorted massive sandstone

Comments: Av. mag sus reading = 1.2 (10×10^{-5} SI units) on small sample

Final Descriptive Name: As above

(FVS)

Sketch:

858087

APPENDIX II
Geochemical Assays

Tyndall Creek stream sediments

853089

ANALABSA Division of Inchcape Testing Services (Australia) Pty. Ltd.
A.C.N. 004 591 664

Phone (004) 316637

14 Thirkell St. GOOEE TAS 7320

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ANALYTICAL REPORT No.

100560.60.09743

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4545

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17/09/93

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No. OF PAGES
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OF COPIESTOTAL No.
OF SAMPLES

1

28/09/93

1

7

SAMPLE NUMBERS

SAMPLE DESCRIPTION

ELEMENT/METHOD

4416/17.624419/23

SS Prep : 6P031

Cu, Pb, Zn, Ag/6A101

Au, Au(S)/6B309

RESULTS
TOMiss R Sharpe
Aberfoyle Resources Limited
Exploration Division
P.O. Box 952
BURNIE TAS 7320RESULTS
TORESULTS
TO

REMARKS

TYNDALL CR.
S/SEDS

 AUTHORISED OFFICER

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REPORT No.

REPORT DATE

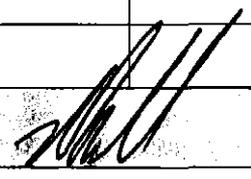
CLIENT ORDER No.

PAGE

SAMPLE PREFIX		REPORT No.				REPORT DATE		CLIENT ORDER No.		PAGE	
		100560.60.09743				28/09/93		4545		1 OF 1	
TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Au	Au (S)				
1	624416	21	99	140	<2	0.027	-	380954E	S357225N		
2	624417	23	103	282	<2	0.074	-	380977E	S357299N		
3	624419	13	32	27	<2	0.008	<0.008	380921E	S357415N		
4	624420	38	50	106	<2	<0.008	-	380849E	S357269N		
5	624421	<4	16	14	<2	<0.008	-	381076E	S357035N		
6											
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22											
23	DETECTION	4	5	4	2	0.008	0.008				
24	UNITS	ppm	ppm	ppm	ppm	ppm	ppm				
25	METHOD	GA101	GA101	GA101	GA101	GG309	GG309				

Results in ppm unless otherwise specified
 T = element present, but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

AUTHORISED OFFICER



Tyndall Creek pit

858092



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12 JUL 1994

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SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
627210/222	RD Prod : GP100 CHROME FREE BOWL	Cu, Zn, Ag/BA101 Ag/BA104 Au, Au(R)/86309 As, Pb/SX401 Pb/SX404 Sb/SX406

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

RESULTS TO

RESULTS TO

REMARKS
Results on sample 627221 subject to larger than normal errors due to unknown sample matrix.
TYNDALL PT.

[Signature]
ANALYSIS OFFICER



ANALYTICAL DATA

SAMPLE PREFIX	REPORT No.	REPORT DATE	CLIENT ORDER No.	PAGE
	100560.60.10241	11/07/94	6416	1 OF 2

	SAMPLE No.	Cu	Pb	Pb	Zn	Zn	Ag	Ag	Au	Au (R)
METHOD		GA101	GX401	GX404	GA101	GA104	GA101	GA104	GG309	GB309
1	627210	22	55	-	<4	-	5	-	0.031	-
2	627211	122	3057	-	383	-	25	-	0.036	-
3	627212	100	9313	-	863	-	35	-	0.082	0.083
4	627213	1140	-	1.90	-	1.810	34	-	0.971	-
5	627214	1005	7618	-	-	1.120	15	-	2.480	-
6	627215	1302	7608	-	8930	-	15	-	1.520	-
7	627216	138	3551	-	240	-	30	-	0.169	-
8	627217	139	7508	-	208	-	45	-	0.054	-
9	627218	52	-	1.83	261	-	-	56	0.021	-
10	627219	95	9827	-	173	-	-	59	0.020	-
11	627220	108	9946	-	1058	-	33	-	0.204	-
12	627221	2508	-	2.91	-	3.530	41	-	3.070	2.870
13	627222	1940	-	1.20	-	2.110	28	-	1.660	-
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24	DETECTION	4	5	0.01	4	0.002	2	10	0.008	0.008
25	UNITS	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm

Results in ppm unless otherwise specified
- = element not determined

IS = insufficient sample
SNR = sample not received

AUTHORISED OFFICER

858091



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ANALYTICAL DATA

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

100560.60.10241 11/07/94 6416 2 OF 2

METHOD	SAMPLE No.	Ba	As						
		DX406	GX401						
1	627210	49.10	59						
2	627211	49.80	<2						
3	627212	44.20	20						
4	627213	34.40	131						
5	627214	15.80	130						
6	627215	14.50	172						
7	627216	53.50	17						
8	627217	40.80	80						
9	627218	17.00	2						
10	627219	27.00	7						
11	627220	53.50	<2						
12	627221	30.20	323						
13	627222	22.40	123						
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24	DETECTION	0.01	2						
25	UNITS	%	ppm						

Results in ppm unless otherwise specified
- = element not determined

IS = insufficient sample
SNR = sample not received

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SAMPLE NUMBERS

627201/207

SAMPLE DESCRIPTION

RD Prep : GPO33 CHROME FREE BOWLS

ELEMENT/METHOD

Au,Au(S)/G6309

Cu,Pb,Zn,Ag/GA101 Zn,Ag/GA104

As/GX401

Ba/GX406

RESULTS TO

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

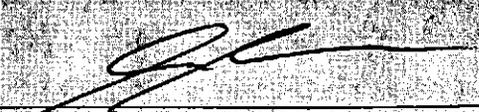
RESULTS TO

RESULTS TO

REMARKS

Due to unknown elements in Matrix for 627202 and 627207 results are subject to larger than normal errors

*TYNDALL CK. PMT
SEE REPEAT PB*


AUTHORISED OFFICER

858097



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ANALYTICAL DATA

SAMPLE PREFIX REPORT No REPORT DATE CLIENT ORDER No PAGE

100560.60.10227 20/06/94 6412 1 OF 2

METHOD	SAMPLE No	Cu	Pb	Zn	Mn	Co	Ag	Al	Au(S)	Bi
		GA101	BA101	BA101	BA104	SA101	BA104	BB309	BB309	DX408
1	627201	830	280	-	1.22	38	-	1.050	-	42.30
2	627202	1718	2290	-	1.58	27	-	0.686	-	29.70
3	627203	1284	185	8820	-	40	-	2.980	-	46.10
4	627204	426	945	-	2.36	43	-	0.074	-	17.30
5	627205	842	390	-	2.95	-	61	0.069	0.062	35.10
6	627206	133	45	1560	-	28	-	0.016	-	56.30
7	627207	2120	285	-	2.74	12	-	1.050	-	44.10
8										
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23										
24	DETECTION	4	5	4	0.02	2	10	0.008	0.008	0.01
25	UNITS	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%

Results in ppm unless otherwise specified

IS = Insufficient sample

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ANALYTICAL DATA

SAMPLE PREFIX	REPORT No.	REPORT DATE	CLIENT ORDER No.	PAGE
	100560.60.10227	20/06/94	6412	2 OF 2

METHOD	SAMPLE No.	As							
		GX401							
1	627201	202							
2	627202	147							
3	627203	549							
4	627204	59							
5	627205	110							
6	627206	27							
7	627207	119							
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21									
22									
23									
24	DETECTION	2							
25	UNITS	ppm							

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

IS = insufficient sample
SNR = sample not received

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859099



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A.C.N. 004 591 664

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7

SAMPLE NUMBERS

SAMPLE DESCRIPTION

ELEMENT/METHOD

52720/527207

Pb/BX401, Pb/BX104

REMARKS

RESULTS TO

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

RESULTS TO

RESULTS TO

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858100



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ANALYTICAL DATA

SAMPLE PREFIX

REPORT No.

REPORT DATE

CLIENT ORDER No.

PAGE

100560.60.10322

01/08/94

6412

1 OF 1

METHOD	SAMPLE No.	Pb							
		GX401	GX404						
1	627201	-	1.60						
2	627202	-	4.16						
3	627203	9136	-						
4	627204	-	2.72						
5	627205	-	2.06						
6	627206	1624	-						
7	627207	-	3.87						
8									
9									
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21									
22									
23									
24	DETECTION	5	0.01						
25	UNITS	ppm	%						

Results in ppm unless otherwise specified
- = element not determined

IS = insufficient sample
SNR = sample not received

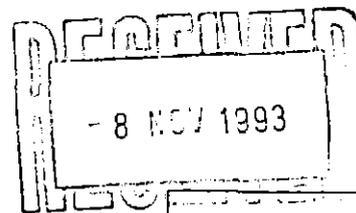
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Tyndall Creek drilling

858103



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Fax (004) 318890

ANALYTICAL REPORT No.

100560.60.09827

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No. OF PAGES OF RESULTS 4	DATE REPORTED 04/11/93	No. OF COPIES 1	TOTAL No. OF SAMPLES 24
------------------------------	---------------------------	--------------------	----------------------------

SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
524876/899	DC Prep : SP033- CHROME FREE BOWLS	Cu,Pb,Zn,Ag/GA101, Pb/GA104 Ag,Au(R),Au(S)/GG309 Ba,As/GX401, Ba/GX403

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

RESULTS TO

RESULTS TO

REMARKS
 TC-1 CUTTING 1.8-31.1m
 TC-2 CUTTING 11.6-22.4m

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ANALYTICAL DATA

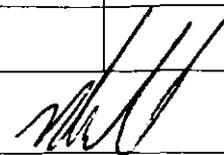
SAMPLE PREFIX REPORT No. REPORT DATE CLIENT ORDER No. PAGE

100560.60.09827 04/11/93 4574 1 OF 4

TUBE No.	SAMPLE No.	Cu	Pb	Pb	Zn	Ag	Au	Au(R)	Au(S)	Ba
1	624876	50	97	-	116	6	0.629	-	-	-
2	624877	49	254	-	126	7	0.755	-	-	-
3	624878	53	277	-	77	7	0.668	-	-	-
4	624879	62	462	-	282	7	0.627	-	-	-
5	624880	50	163	-	331	6	0.374	-	-	-
6	624881	55	155	-	122	9	0.774	-	-	-
7	624882	64	330	-	292	18	0.681	-	-	-
8	624883	37	100	-	187	5	0.040	-	-	-
9	624884	88	275	-	259	13	0.147	-	-	-
10	624885	81	266	-	449	8	0.119	-	-	-
11	624886	51	249	-	171	5	0.090	-	-	-
12	624887	39	204	-	344	5	0.073	0.068	-	-
13	624888	38	73	-	216	<2	0.040	-	-	-
14	624889	74	89	-	238	4	0.011	-	-	1171
15	624890	35	194	-	531	3	0.012	-	<0.008	1497
16	624891	14	289	-	412	2	0.009	-	-	1836
	624892	476	-	1.23	5523	19	0.220	-	-	2591
18	624893	53	240	-	292	2	0.016	-	-	2428
19	624894	35	59	-	174	<2	0.012	-	-	2451
20	624895	41	39	-	177	<2	0.009	-	-	976
21	624896	20	11	-	111	<2	0.009	-	<0.008	755
22	624897	16	7	-	103	<2	0.016	0.012	-	805
23	624898	15	13	-	89	<2	<0.008	-	-	577
24	624899	22	24	-	90	<2	<0.008	-	-	616
25										

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
- = element not determined

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A Division of Infratec Testing Services (Australia) Pty Ltd
A.C.N. 004 591 664

ANALYTICAL DATA

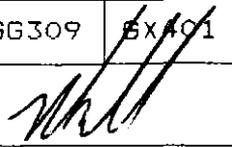
SAMPLE PREFIX REPORT No. REPORT DATE CLIENT ORDER No. PAGE

100560.60.09827 04/11/93 4574 2 OF 4

TUBE No.	SAMPLE No.	Cu	Pb	Pb	Zn	Ag	Au	Au(R)	Au(S)	Ba
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
18										
19										
20										
21										
22										
23	DETECTION	4	5	0.01	4	2	0.008	0.008	0.008	10
24	UNITS	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
25	METHOD	GA101	GA101	GA104	GA101	GA101	GG309	GG309	GG309	GX401

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
- = element not determined

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SAMPLE PREFIX

REPORT No.

REPORT DATE

CLIENT ORDER No.

PAGE

100560.60.09827

04/11/93

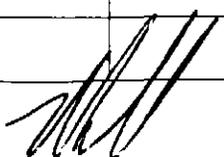
4574

3 OF 4

TUBE No.	SAMPLE No.	Ba	As						
1	624876	0.948	186						
2	624877	0.905	202						
3	624878	0.906	132						
4	624879	0.825	118						
5	624880	0.882	170						
6	624881	1.201	140						
7	624882	1.111	124						
8	624883	0.776	84						
9	624884	0.806	120						
10	624885	0.709	184						
11	624886	0.903	155						
12	624887	0.743	128						
13	624888	0.743	57						
14	624889	-	58						
15	624890	-	50						
16	624891	-	36						
	624892	-	148						
18	624893	-	22						
19	624894	-	43						
20	624895	-	11						
21	624896	-	11						
22	624897	-	12						
23	624898	-	14						
24	624899	-	3						
25									

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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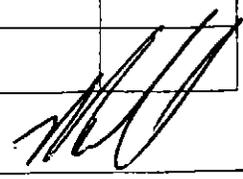
SAMPLE PREFIX REPORT No. REPORT DATE CLIENT ORDER No. PAGE

100560.60.09827 04/11/93 4574 4 OF 4

TUBE No.	SAMPLE No.	Ba	As						
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23	DETECTION	0.005	2						
24	UNITS	%	ppm						
25	METHOD	GX403	GX401						

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
-- = element not determined

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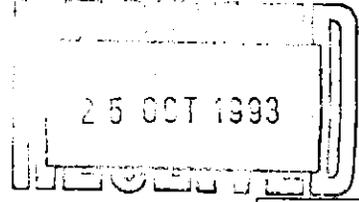


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A Division of Incape Testing Services (Australia) Pty. Ltd.
A.C.N. 004 591 664



Phone (004) 315837

14 Thirkell St. COOEE TAS 7320

Fax (004) 318890

ANALYTICAL REPORT No.

100560.60.09775

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

INVOICE TO:

Aberfoyle Resources Limited
Exploration Division
P.O. Box 952
BURNIE TAS 7320

ORDER No.	PROJECT
4548	
DATE RECEIVED	RESULTS REQUIRED
04/10/93	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES
2	22/10/93	1

TOTAL No. OF SAMPLES

7

SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
565705/711	DC Prep : 6P033	Cu, Pb, Zn, Ag/SA101 Au, Au(B)/66309 Ss/SX406, As/SX401

RESULTS TO

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

RESULTS TO

RESULTS TO

REMARKS

TC-2 S-3-11.6m

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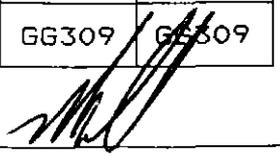
ANALABSA Division of Inchcape Testing Services (Australia) Pty. Ltd.
A.C.N. 004 591 664**ANALYTICAL DATA**

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

100560.60.09775 22/10/93 4548 1 OF 2

TUBE No.	SAMPLE No.	Cu	Pb	Pb	Zn	Zn	Ag	Ag	Au	Au(S)
1	565705	1039	2593	0.59	9571	0.93	>20	79	1.300	-
2	565706	1948	1830	1.44	>10000	2.18	>20	163	2.960	-
3	565707	708	3283	1.25	>10000	1.43	>20	65	1.610	-
4	565708	638	3032	0.54	5478	0.56	>20	91	0.734	-
5	565709	309	604	0.29	3657	0.39	>20	29	0.332	-
6	565710	300	2479	0.50	5489	0.56	>20	101	0.172	-
7	565711	305	2862	0.29	5798	0.60	>20	70	0.277	0.266
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	4	5	0.01	4	0.01	2	10	0.008	0.008
24	UNITS	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm
25	METHOD	GA101	GA101	GA104	GA101	GA104	GA101	GA104	GG309	GG309

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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A.C.N. 004 591 864**ANALYTICAL DATA**

SAMPLE PREFIX

REPORT No.

REPORT DATE

CLIENT ORDER No.

PAGE

100560.60.09775

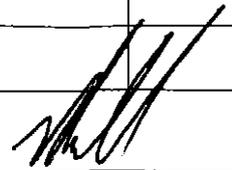
22/10/93

4548

2 OF 2

TUBE No.	SAMPLE No.	Ba	As						
1	565705	10.83	651						
2	565706	17.19	433						
3	565707	8.56	200						
4	565708	5.23	493						
5	565709	2.39	92						
6	565710	1.34	97						
7	565711	0.63	63						
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23	DETECTION	0.01	2						
24	UNITS	%	ppm						
25	METHOD	OX406	GX401						

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
-- = element not determined

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A Division of Inchcape Testing Services (Australia) Pty. Ltd.
A.C.N. 004 591 664

Phone (004) 316837

14 Thirkall St. COGEE TAS 7320

Fax (004) 318890

ANALYTICAL REPORT No.

100560.60.09789

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

INVOICE TO:	Aberfoyle Resources Limited Exploration Division P.O. Box 952 BURNIE TAS 7320	ORDER No.	PROJECT
		4552	
		DATE RECEIVED	RESULTS REQUIRED
		08/10/93	ASAP
No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
2	27/10/93	1	16

SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
625121/136	DC Pres : 6P033	Cu, Pb, Zn, Ag/6A101 Pb, Zn, Ag/6A104 Au, Au(R), Au(S)/66309 Ba/BX406, As/BX401

RESULTS TO	REMARKS
Mr R de Bonford Aberfoyle Resources Limited Exploration Division P.O. Box 952 BURNIE TAS 7320	TC-3 7.4-21.7


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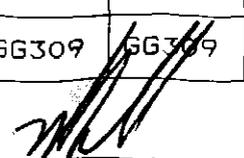
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ANALABSA Division of Inchcape Testing Services (Australia) Pty. Ltd.
A.C.N. 004 591 864**ANALYTICAL DATA**

SAMPLE PREFIX		REPORT No.				REPORT DATE		CLIENT ORDER No.		PAGE	
		100560.60.09789				27/10/93		4552		1 OF 2	
TUBE No.	SAMPLE No.	Cu	Pb	Pb	Zn	Zn	Ag	Ag	Au	Au(R)	
1	625121	477	255	-	315	-	<2	-	0.040	-	
2	625122	742	472	-	290	-	<2	-	0.027	-	
3	625123	231	892	-	279	-	<2	-	0.020	-	
4	625124	559	2667	-	388	-	<2	-	0.020	-	
5	625125	741	4586	-	341	-	17	-	0.029	-	
6	625126	327	1109	-	501	-	16	-	<0.008	-	
7	625127	456	-	0.21	-	0.31	-	46	0.012	-	
8	625128	685	-	0.75	-	0.90	-	229	0.018	-	
9	625129	729	-	0.68	-	0.69	-	201	0.254	-	
10	625130	2342	-	0.69	-	0.92	-	490	0.403	-	
11	625131	891	-	1.24	-	2.44	-	75	3.760	-	
12	625132	1664	-	2.08	-	3.52	-	94	4.010	4.070	
13	625133	934	-	0.41	-	0.42	-	33	0.250	-	
14	625134	563	-	0.50	-	0.70	-	50	0.362	-	
15	625135	378	1291	-	4592	-	16	-	0.268	-	
16	625136	640	1583	-	4632	-	18	-	0.261	-	
18											
19											
20											
21											
22											
23	DETECTION	4	5	0.01	4	0.01	2	10	0.008	0.008	
24	UNITS	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	
25	METHOD	GA101	GA101	GA104	GA101	GA104	GA101	GA104	GG309	GG309	

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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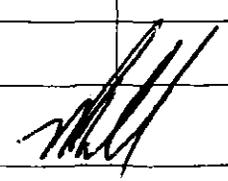


ANALABSA Division of Inchcape Testing Services (Australia) Pty. Ltd.
A.C.N. 004 591 664**ANALYTICAL DATA**

SAMPLE PREFIX		REPORT No.			REPORT DATE	CLIENT ORDER No.			PAGE	
		100560.60.09789			27/10/93	4552			2	OF 2
TUBE No.	SAMPLE No.	Au(S)	Ba	As						
1	625121	-	0.06	37						
2	625122	-	0.05	33						
3	625123	-	0.07	13						
4	625124	-	0.14	27						
5	625125	-	2.15	87						
6	625126	-	4.04	133						
7	625127	-	6.09	150						
8	625128	0.028	13.64	245						
9	625129	-	7.66	340						
10	625130	-	22.03	1599						
11	625131	-	16.42	3137						
12	625132	-	41.46	3099						
13	625133	-	4.48	369						
14	625134	-	4.74	146						
15	625135	-	2.96	51						
16	625136	-	2.90	47						
18										
19										
20										
21										
22										
23	DETECTION	0.008	0.01	2						
24	UNITS	ppm	%	ppm						
25	METHOD	GG309	OX406	GX401						

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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CORE GRIND SAMPLING

858117

PAGE 1 OF 1

HOLE No. TC4

DATE 21/10/93

No.	SAMPLE NUMBER	INTERVAL	ELEMENTS REQUIRED	ST	SAMPLE NUMBER	INTERVAL	ELEMENTS REQUIRED	ST
1	624801	0 - 0.9			624832	32.0 - 33.0		
2	802	0.9 - 1.9			833	33.0 - 34.0		
3	803	1.9 - 2.9			834	34.0 - 35.0		
4	804	2.9 - 3.9			835	35.0 - 36.0		
5	805	3.9 - 5.0			836	36.0 - 37.0		
6	806	5.0 - 6.0			837	37.0 - 38.0		
7	807	6.0 - 7.0			838	38.0 - 39.0		
8	808	7.0 - 8.0			839	39.0 - 40.0		
9	809	8.0 - 9.0			840	40.0 - 41.0		
10	810	9.0 - 10.0			841	41.0 - 42.0		
11	811	10.0 - 11.0			842	42.0 - 43.0		
12	812	11.0 - 12.0			843	43.0 - 44.0		
13	813	12.0 - 12.65			844	44.0 - 45.0		
14	814	12.65 - 13.2			845	45.0 - 46.0		
15	815	13.2 - 14.2			846	46.0 - 47.0		
16	816	14.2 - 14.9			847	47.0 - 48.0		
17	817	14.9 - 16.25			848	48.0 - 49.0		
18	818	16.25 - 17.6			849	49.0 - 50.2		
19	819	17.6 - 18.6						
20	820	18.6 - 19.7						
21	821	19.7 - 21.25						
22	822	21.25 - 21.5						
23	823	21.5 - 22.5						
24	824	22.5 - 23.9						
25	825	23.9 - 25.0						
26	826	25.0 - 26.0						
27	827	26.0 - 27.0						
28	828	27.0 - 28.0						
29	829	28.0 - 29.5						
30	830	29.5 - 30.5						
31	624831	30.5 - 32.0						

858118



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 A.C.N. 004 591 664

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ANALYTICAL REPORT No.

100560.60.09825

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INVOICE TO:	Aberfoyle Resources Limited Exploration Division P.O. Box 952 BURNIE TAS 7320	ORDER No.	PROJECT
		4572	LMO
		DATE RECEIVED	RESULTS REQUIRED
		22/10/93	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
3	04/11/93	1	60

SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
524634, 524651/558, 524901/849	DC Prep : 6P033- CHROME FREE BOWLS	Cu, Pb, Zn, Ag/6A101 Au, Au(R), Au(S)/6B309 Ba, As/81401

RESULTS TO	REMARKS
Mr R de Bomford Aberfoyle Resources Limited Exploration Division P.O. Box 952 BURNIE TAS 7320	POLISHED THIN SECTION REPORT WILL BE FORWARDED UNDER SEPARATE COVER TC-3 4.6-4.95 22.6-32.45 TC-4 0-50.2 TC-5 12.65-13.7
RESULTS TO	

RESULTS TO	
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Division of Inland Fisheries Services (Australia) Pty. Ltd.
A.C.N. 004 591 684

ANALYTICAL DATA

SAMPLE PREFIX

REPORT No.

REPORT DATE

CLIENT ORDER No.

PAGE

100560.60.09825

04/11/93

4572

2 OF 3

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Au	Au(R)	Au(S)	Ba	As
1	624817	19	92	209	<2	<0.008	-	-	287	13
2	624818	15	18	124	<2	<0.008	-	-	140	6
3	624819	24	49	102	<2	<0.008	-	-	165	184
4	624820	15	9	111	<2	<0.008	-	-	175	6
5	624821	16	9	98	<2	<0.008	-	-	144	4
6	624822	21	20	99	<2	<0.008	-	-	143	8
7	624823	22	5	83	<2	<0.008	-	-	124	3
8	624824	19	11	84	<2	<0.008	-	-	131	4
9	624825	19	9	99	<2	<0.008	-	-	144	8
10	624826	26	6	79	<2	<0.008	-	-	153	4
11	624827	16	<5	90	<2	<0.008	-	-	173	4
12	624828	13	<5	82	<2	<0.008	<0.008	-	186	5
13	624829	21	<5	96	<2	<0.008	-	<0.008	242	6
14	624830	15	14	102	<2	<0.008	-	-	190	6
15	624831	16	17	123	<2	0.009	-	-	232	8
16	624832	14	18	108	<2	<0.008	-	-	245	7
	624833	23	10	94	<2	<0.008	-	<0.008	244	7
18	624834	13	<5	87	<2	<0.008	-	-	268	7
19	624835	19	<5	79	<2	<0.008	-	-	172	5
20	624836	17	<5	78	<2	<0.008	-	-	204	7
21	624837	16	<5	98	<2	<0.008	-	-	194	5
22	624838	14	<5	104	<2	<0.008	<0.008	-	217	5
23	624839	19	6	104	<2	<0.008	-	-	189	6
24	624840	12	<5	107	<2	<0.008	-	-	333	6
25	624841	17	13	84	<2	<0.008	-	-	262	7

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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Division of In-charge Trading Services (Australia) Pty Ltd.
A.C.N. 004 591 664

ANALYTICAL DATA

SAMPLE PREFIX

REPORT No.

REPORT DATE

CLIENT ORDER No.

PAGE

100560.60.09825

04/11/93

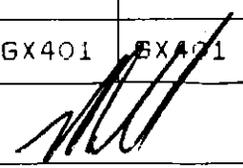
4572

3 OF 3

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Au	Au(R)	Au(S)	Ba	As
1	624842	16	<5	99	<2	0.017	-	-	175	4
2	624843	13	<5	201	<2	0.008	-	-	237	8
3	624844	13	18	97	<2	<0.008	-	-	292	7
4	624845	14	16	107	<2	<0.008	-	-	204	14
5	624846	13	11	105	<2	<0.008	-	-	185	10
6	624847	16	6	91	<2	<0.008	-	-	251	3
7	624848	18	28	94	<2	<0.008	-	-	252	8
8	624849	27	30	104	<2	<0.008	-	-	317	8
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	4	5	4	2	0.008	0.008	0.008	10	2
24	UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
25	METHOD	GA101	GA101	GA101	GA101	GG309	GG309	GG309	GX401	GX401

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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A Division of Incharge Testing Services (Australia) Pty. Ltd.
A.C.N. 004 591 664

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- 2 NOV 1993
Fax (004) 318890-

Phone (004) 316837

14 Thirkell St. CODEE TAS 7320

ANALYTICAL REPORT No.

100560.60.09811

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

INVOICE TO:

Aberfoyle Resources Limited
Exploration Division
P.O. Box 952
BURNIE TAS 7320

ORDER No.

PROJECT

4565

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29/10/93

1

8

SAMPLE NUMBERS

SAMPLE DESCRIPTION

ELEMENT/METHOD

524626/533

QC Prep : 9P033

Cu,Pb,Zn,Ag/6A101
Pb:1,Zn:1/6A104

Au,Au(S)/6B309

Ba/6X406,As/6X401

RESULTS
TO

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

RESULTS
TO

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RESULTS
TO

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REMARKS

TC-5
CONTAINS
3.1-12.65m.

AUTHORISED OFFICER

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ANALABSA Division of Inchcape Testing Services (Australia) Pty. Ltd.
A.C.N. 004 591 664**ANALYTICAL DATA**

SAMPLE PREFIX

REPORT No.

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29/10/93

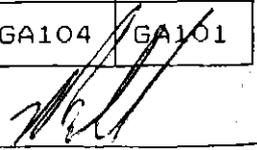
4565

1 OF 2

TUBE No.	SAMPLE No.	Cu	Cu	Pb	Pb	Pb:1	Zn	Zn	Zn:1	Ag
1	624626	1076	1077	236	0.16	-	8430	0.83	-	-
2	624627	1929	1859	3747	-	6.60	-	-	9.01	-
3	624628	1137	1075	1187	-	2.70	-	-	5.16	-
4	624629	1270	1207	3468	1.95	-	-	2.86	-	-
5	624630	1411	1325	292	1.43	-	-	1.83	-	-
6	624631	965	941	928	0.72	-	8362	0.84	-	-
7	624632	627	660	-	0.77	-	3163	0.32	-	14
8	624633	937	924	-	0.87	-	8512	0.83	-	15
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	4	20	5	0.01	0.01	4	0.01	0.01	2
24	UNITS	ppm	ppm	ppm	%	%	ppm	%	%	ppm
25	METHOD	GA101	GA104	GA101	GA104	GA104	GA101	GA104	GA104	GA101

Results in ppm unless otherwise specified
T = element present, but concentration too low to measure
X = element concentration is below detection limit
- = element not determined

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ANALABSA Division of Incheape Testing Services (Australia) Pty. Ltd.
A.C.N. 004 591 664**ANALYTICAL DATA**

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REPORT DATE

CLIENT ORDER No.

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29/10/93

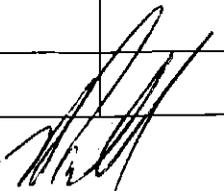
4565

2 OF 2

TUBE No.	SAMPLE No.	Ag	Au	Au(S)	Ba	As				
1	624626	249	0.017	-	25.00	162				
2	624627	311	0.532	-	16.64	519				
3	624628	138	1.140	-	30.92	177				
4	624629	47	1.330	-	8.57	559				
5	624630	46	1.630	-	8.28	457				
6	624631	64	1.540	-	6.58	455				
7	624632	13	0.346	-	0.47	59				
8	624633	15	0.497	0.436	1.08	44				
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	10	0.008	0.008	0.01	2				
24	UNITS	ppm	ppm	ppm	%	ppm				
25	METHOD	GA104	GG309	GG309	OX406	GX401				

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
-- = element not determined

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Tyndall Creek 'wacker' samples

Tyndall Creek
Wacker Sampling

	Sample No.	Northing	Wt. to Lab (grams)	Depth
	LINE 400E			
	627057	1010	257	4.3
	627058	990	275	1.5
	627059	975	363	1.2
	627060	962.5	191	1.2
	627061	950	403	1.6
	627062	937.5	268	2.4
	627063	925	310	2.8
	627064	912.5	294	3
	627065	900	152	2.5
	627066	887.5	226	2.5
	627067	875	66	4.3
	LINE 300E			
	627084	525	185	4
	627085	550	68	6.5
	627089	650	68	3
	627093	750	82	7.6
	627102	1050	109	3.5
	627104	1100	147	5
	627105	1125	114	5.6
	LINE 200E			
	627108	1200	108	5.8
	627109	1175	112	1
	627111	1050	130	2
	627112	1025	125	1.5
	627113	1000	120	2
	627114	975	113	2
	627115	950	119	1.8
	627116	925	132	1
	627117	900	214	2.2
	627118	875	169	1.6
	627119	850	158	2.5
	627120	825	138	1.8
	LINE 100			
	627125	500	101	3.8
	627126	700	134	3
	627127	800	170	6
	627128	850	149	5
	627129	875	189	1.6
	627130	900	120	2.4
	627131	925	193	2
	627132	950	149	2.4
	627133	975	159	0.6
	627134	1000	158	0.8
	627135	1025	119	1

**Tyndall Creek
Wacker Sampling**

	Sample No.	Northing	Wt. to Lab (grams)	Depth
	627136	1050	122	1
	627137	1075	139	5.9
	627138	1100	180	6
	627139	1125	111	7.8
	627140	1150	204	7
	627141	1175	102	1.6
	LINE 000 E			
	627144	1325	145	2
	627145	1300	168	11.4
	627146	1275	114	10.4
	627147	1250	106	8.2
	627148	1225	145	7
	627149	1200	150	7
	627150	1175	150	3.5
	627151	1150	169	5.5
	627152	1125	158	3
	627153	1100	276	0.5
	627154	1075	310	0.3
	627155	1050	166	1
	627156	1025	131	1
	627157	1000	160	1
	627158	975	126	1.6
	627159	950	123	1.1
	627160	925	168	1.8
	627161	900	140	7.3
	627162	875	156	6.8
	627163	850	128	3.6
	627164	825	154	0.8
	627165	800	115	0.6
	627166	775	152	1.6
	627167	750	173	2.1

858130



ANALABS

A Division of Indicatec Testing Services (Australia) Pty. Ltd.
A.C.N. 004 591 684

Phone (004) 315837

14 Thirkell St. COOEE TAS 7320

Fax (004) 319890

ANALYTICAL REPORT No.

100560.60.10105

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

INVOICE TO:

Aberfoyle Resources Limited
Exploration Division
P.O. Box 932
BURNIE TAS 7320

ORDER No.

PROJECT

7081

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29/04/94

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114

SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
827001/012 & others	SP Prep : 8P033 - CHROME FREE BOWLS	Co, Pb, Zn, Ag / 8A10; Au, Ag, Bi, Au, Bi / 8B005 Ba, As, Cr, Zn, Ti, Pb, Bi / 8M401 Zn / 8X405

RESULTS TO

Mr R de Bonford
Aberfoyle Resources Limited
Exploration Division
P.O. Box 932
BURNIE TAS 7320

RESULTS TO

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REMARKS

N.B. UNABLE TO ANALYSE FOR Cr AND Ti ON SAMPLE 827044 DUE TO SPECTRAL INTERFERENCE FROM Bi

TYNDALL CREEK WACKER

AUTHORISED OFFICER

858131



Analabs Pty. Ltd.

A.C.N. 004 591 664

ANALYTICAL DATA

SAMPLE PREFIX

REPORT No.

REPORT DATE

CLIENT ORDER No.

PAGE

100560.60.10105

28/04/94

7081

1 OF 10

	SAMPLE No.	Cu	Pb	Zn	Ag	Ag	Au	Au (R)	Au (S)	Ba
METHOD		GA101	GA101	GA101	GA101	GA104	GG309	GG309	GG309	GX401
1	627001	<4	<5	72	<2	-	<0.008	-	-	2128
2	627002	<4	9	141	<2	-	<0.008	-	-	697
3	627003	<4	<5	105	<2	-	<0.008	-	-	767
4	627004	<4	<5	52	<2	-	<0.008	-	-	528
5	627005	<4	<5	145	<2	-	<0.008	-	-	504
6	627006	6	<5	217	<2	-	<0.008	-	-	582
7	627007	<4	25	111	<2	-	<0.008	-	-	446
8	627008	<4	9	52	<2	-	<0.008	-	-	800
9	627009	<4	7	30	<2	-	<0.008	-	-	372
10	627010	15	<5	47	<2	-	<0.008	-	-	398
11	627011	<4	26	106	<2	-	<0.008	-	-	386
12	627012	7	20	14	<2	-	<0.008	<0.008	-	240
13	627014	<4	15	23	<2	-	<0.008	-	-	178
14	627015	8	11	79	<2	-	<0.008	-	-	176
15										
17										
18										
19										
20										
21										
22										
23										
24	627036	10	8	81	<2	-	<0.008	-	-	524
25	627037	34	<5	99	<2	-	0.072	-	-	205

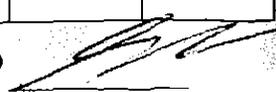
Results in ppm unless otherwise specified
- = element not determinedIS = insufficient sample
SNR = sample not receivedAUTHORISED
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ANALYTICAL DATA

SAMPLE PREFIX		REPORT No.				REPORT DATE		CLIENT ORDER No.			PAGE
		100560.60.10105				28/04/94		7081			2 OF 10
	SAMPLE No.	Cu	Pb	Zn	Ag	Ag	Au	Au(R)	Au(S)	Ba	
METHOD		GA101	GA101	GA101	GA101	GA104	GG309	GG309	GG309	GX401	
1	627038	10	41	101	<2	-	0.015	-	-	677	
2	627039	5	10	89	<2	-	0.012	-	-	416	
3	627040	186	28	193	<2	-	<0.008	-	-	1516	
4	627041	305	45	153	<2	-	<0.008	-	-	1262	
5	627042	170	6	159	<2	-	<0.008	-	-	1051	
6	627043	83	451	272	2	-	0.038	-	-	3622	
7	627044	2270	793	8268	-	95	0.236	-	-	-	
8	627045	82	13	124	<2	-	<0.008	-	-	1517	
9	627046	70	7	196	<2	-	<0.008	-	-	1127	
10	627047	45	79	50	<2	-	<0.008	-	-	1445	
11	627051	30	20	79	<2	-	<0.008	-	-	551	
12	627052	15	15	15	15	-	<0.008	<0.008	-	395	
13	627053	4	22	88	<2	-	<0.008	-	-	1248	
14	627054	<4	27	70	<2	-	<0.008	-	-	348	
15	627055	<4	36	29	<2	-	<0.008	-	-	218	
	627056	<4	5	81	<2	-	<0.008	-	-	821	
17	627057	72	<5	180	<2	-	<0.008	-	-	1679	
18	627058	7	16	177	<2	-	<0.008	-	-	389	
19	627059	29	640	2017	14	-	<0.008	-	-	2149	
20	627060	20	48	552	<2	-	<0.008	-	<0.008	1504	
21	627061	17	190	102	<2	-	<0.008	-	-	1655	
22	627062	39	11	245	<2	-	<0.008	<0.008	-	181	
23	627063	13	9	46	<2	-	<0.008	-	-	124	
24	627064	25	46	162	<2	-	<0.008	-	-	1133	
25	627065	9	8	92	<2	-	<0.008	-	-	345	

 Results in ppm unless otherwise specified
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ANALYTICAL DATA

SAMPLE PREFIX		REPORT No.				REPORT DATE		CLIENT ORDER No.		PAGE	
		100560.60.10105				28/04/94		7081		3 OF 10	
	SAMPLE No.	Cu	Pb	Zn	Ag	Ag	Au	Au(R)	Au(S)	Ba	
METHOD		GA101	GA101	GA101	GA101	GA104	GG309	GG309	GG309	GX401	
1	627066	18	79	105	<2	-	<0.008	-	-	419	
2	627067	29	37	86	<2	-	<0.008	-	-	365	
3											
4											
5	627084	35	<5	55	<2	-	<0.008	-	-	994	
6	627085	41	<5	49	<2	-	<0.008	-	-	1445	
7	627089	30	19	68	<2	-	<0.008	-	-	279	
8	627093	20	22	76	<2	-	<0.008	-	-	355	
9	627102	10	10	26	<2	-	<0.008	-	-	123	
10	627104	24	27	133	<2	-	<0.008	-	-	946	
11	627105	28	42	207	<2	-	<0.008	-	-	730	
12	627108	265	2064	381	14	-	<0.008	<0.008	-	2263	
13	627109	17	234	130	2	-	<0.008	-	-	1135	
14	627111	17	17	95	<2	-	<0.008	-	-	367	
15	627112	8	28	114	<2	-	<0.008	-	-	1331	
	627113	9	38	95	<2	-	<0.008	-	-	1848	
17	627114	14	87	237	<2	-	<0.008	-	-	345	
18	627115	87	26	174	<2	-	<0.008	-	-	1336	
19	627116	48	24	174	<2	-	<0.008	-	-	564	
20	627117	49	16	146	<2	-	<0.008	-	-	483	
21	627118	41	26	109	<2	-	<0.008	-	-	915	
22	627119	132	96	225	3	-	<0.008	<0.008	-	1643	
23	627120	56	33	175	<2	-	<0.008	-	-	884	
24	627125	15	<5	4	<2	-	<0.008	-	-	49	
25	627126	21	15	39	<2	-	<0.008	-	<0.008	171	

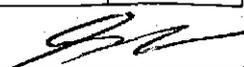
ANALYTICAL DATA

SAMPLE PREFIX		REPORT No.				REPORT DATE		CLIENT ORDER No.			PAGE
		100560.60.10105				28/04/94		7081			4 OF 10
	SAMPLE No.	Cu	Pb	Zn	Ag	Ag	Au	Au(R)	Au(S)	Ba	
METHOD		GA101	GA101	GA101	GA101	GA104	GG309	GG309	GG309	GX401	
1	627127	47	19	77	<2	-	<0.008	-	-	1034	
2	627128	40	76	764	<2	-	<0.008	-	-	794	
3	627129	41	706	1416	<2	-	<0.008	-	-	598	
4	627130	138	286	421	<2	-	<0.008	-	-	1063	
5	627131	159	1410	2824	<2	-	<0.008	-	-	980	
6	627132	55	108	290	<2	-	<0.008	-	-	1410	
7	627133	28	33	80	<2	-	<0.008	-	-	1430	
8	627134	51	98	117	<2	-	<0.008	-	-	1167	
9	627135	33	19	210	<2	-	<0.008	-	-	547	
10	627136	187	5	191	<2	-	<0.008	-	<0.008	1246	
11	627137	94	170	504	<2	-	0.014	-	-	835	
12	627138	81	47	273	<2	-	0.010	0.011	-	914	
13	627139	68	<5	364	<2	-	<0.008	-	-	835	
14	627140	65	1358	75	<2	-	<0.008	-	-	739	
15	627141	33	36	209	<2	-	<0.008	-	-	457	
	627144	163	68	126	<2	-	<0.008	-	-	768	
17	627145	17	<5	81	<2	-	<0.008	-	-	929	
18	627146	149	85	359	<2	-	<0.008	-	-	1091	
19	627147	59	10	232	<2	-	<0.008	-	-	589	
20	627148	157	33	193	<2	-	<0.008	-	-	1210	
21	627149	180	57	170	<2	-	<0.008	-	-	613	
22	627150	59	51	72	<2	-	<0.008	<0.008	-	607	
23	627151	155	203	426	<2	-	<0.008	-	-	569	
24	627152	24	34	192	<2	-	<0.008	-	-	1874	
25	627153	44	34	37	<2	-	0.015	-	-	2111	

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	
		100560.60.10105				29/04/94		7081		5 OF 10	
	SAMPLE No.	Cu	Pb	Zn	Ag	Ag	Au	Au(R)	Au(S)	Ba	
METHOD		GA101	GA101	GA101	GA101	GA104	BG309	BG309	BG309	GX401	
1	627154	76	112	824	<2	-	<0.008	-	-	2875	
2	627155	529	505	1400	<2	-	0.050	-	-	1465	
3	627156	46	75	120	<2	-	<0.008	-	<0.008	1527	
4	627157	46	101	158	<2	-	<0.008	-	-	1855	
5	627158	45	87	189	<2	-	0.011	-	-	935	
6	627159	204	266	301	<2	-	<0.008	-	-	1895	
7	627160	23	30	130	<2	-	0.019	-	-	908	
8	627161	163	339	661	<2	-	<0.008	-	-	1096	
9	627162	201	411	810	<2	-	<0.008	-	-	914	
10	627163	205	44	177	<2	-	<0.008	-	-	575	
11	627164	41	42	202	<2	-	<0.008	-	-	690	
12	627165	77	9	100	<2	-	<0.008	<0.008	-	441	
13	627166	58	5	135	<2	-	<0.008	-	-	230	
14	627167	26	20	142	<2	-	<0.008	-	-	891	
15											
16											
17											
18											
19											
20											
21											
22											
23	IS = INSUFFICIENT SAMPLE										
24	DETECTION	4	5	4	2	10	0.008	0.008	0.008	10	
25	UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	

Results in ppm unless otherwise specified
 - = element not determined

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ANALYTICAL DATA

SAMPLE PREFIX		REPORT No.		REPORT DATE		CLIENT ORDER No.		PAGE	
		100560.60.10105		29/04/94		7081		6 OF 10	
METHOD	SAMPLE No.	Ba	As	Cr	Zr	Ti	P205		
		GX406	GX401	GX401	GX401	GX401	GX401		
1	627001	-	<2	9	257	1692	0.025		
2	627002	-	<2	<5	369	3055	0.045		
3	627003	-	5	<5	284	2332	0.048		
4	627004	-	2	<5	282	2363	0.014		
5	627005	-	<2	13	208	5197	0.128		
6	627006	-	<2	15	209	5966	0.097		
7	627007	-	<2	15	326	6535	0.070		
8	627008	-	2	9	284	3059	0.043		
9	627009	-	<2	19	212	1541	0.054		
10	627010	-	<2	<5	332	1855	0.088		
11	627011	-	4	<5	365	1971	0.100		
12	627012	-	<2	51	277	1934	0.024		
13	627014	-	<2	33	207	1520	0.032		
14	627015	-	<2	46	254	2214	0.102		
15									
17									
18									
19									
20									
21									
22									
23									
24	627036	-	<2	23	206	9680	0.125		
25	627037	-	<2	64	181	6698	0.124		

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

 IS = insufficient sample
 SNR = sample not received

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858137



Analabs Pty. Ltd.

A.C.N. 004 591 664

ANALYTICAL DATA

SAMPLE PREFIX

REPORT No.

REPORT DATE

CLIENT ORDER No.

PAGE

SAMPLE PREFIX		REPORT No.				REPORT DATE	CLIENT ORDER No.		PAGE	
		100560.60.10105				29/04/94	7081		7 OF 10	
	SAMPLE No.	Ba	As	Cr	Zr	Ti	P205			
METHOD		GX406	GX401	GX401	GX401	GX401	GX401			
1	627038	-	7	23	147	7025	0.076			
2	627039	-	<2	15	189	5558	0.139			
3	627040	-	4	27	158	5084	0.098			
4	627041	-	4	29	157	4448	0.164			
5	627042	-	13	18	143	5325	0.168			
6	627043	-	55	36	156	2375	0.319			
7	627044	20.90	97	-	45	-	0.018			
8	627045	-	14	11	150	6175	0.029			
9	627046	-	10	21	192	5607	0.232			
10	627047	-	23	36	204	3526	0.097			
11	627051	-	<2	33	233	1938	0.022			
12	627052	-	<2	7	305	2728	0.030			
13	627053	-	2	10	256	5454	0.085			
14	627054	-	<2	9	223	5933	0.073			
15	627055	-	<2	5	229	5634	0.029			
	627056	-	<2	<5	269	2184	0.051			
17	627057	-	23	48	167	4724	0.221			
18	627058	-	10	6	246	2163	0.068			
19	627059	-	108	29	148	3445	0.210			
20	627060	-	6	31	160	2888	0.206			
21	627061	-	<2	34	178	3571	0.044			
22	627062	-	4	34	160	3823	0.029			
23	627063	-	4	61	144	3575	0.212			
24	627064	-	26	47	177	3544	0.136			
25	627065	-	<2	<5	296	1994	0.120			

Results in ppm unless otherwise specified
- = element not determinedIS = insufficient sample
SNR = sample not receivedAUTHORISED
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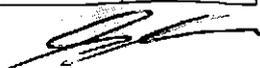
ANALYTICAL DATA

SAMPLE PREFIX		REPORT No.	REPORT DATE	CLIENT ORDER No.		PAGE				
		100560.60.10105	29/04/94	7081		8 OF 10				
	SAMPLE No.	Ba	As	Cr	Zr	Ti	P205			
METHOD		GX406	GX401	GX401	GX401	GX401	GX401			
1	627066	-	16	22	155	4919	0.101			
2	627067	-	42	44	167	1911	0.074			
3										
4										
5	627084	-	3	63	192	2866	0.379			
6	627085	-	<2	54	214	2378	0.290			
7	627089	-	5	41	153	1613	0.101			
8	627093	-	6	42	244	2348	0.079			
9	627102	-	<2	57	233	1006	0.036			
10	627104	-	20	20	194	3102	0.330			
11	627105	-	45	29	235	7380	0.162			
12	627108	-	145	5	163	5958	0.692			
13	627109	-	12	21	173	2653	0.087			
14	627111	-	2	8	260	3113	0.111			
15	627112	-	16	20	195	7181	0.155			
	627113	-	13	21	142	6410	0.143			
17	627114	-	<2	60	180	4010	0.132			
18	627115	-	7	64	154	3783	0.203			
19	627116	-	4	51	118	2635	0.206			
20	627117	-	12	58	147	2760	0.246			
21	627118	-	9	81	186	4152	0.309			
22	627119	-	100	25	139	3155	0.272			
23	627120	-	59	35	139	2797	0.151			
24	627125	-	<2	25	202	1027	0.017			
25	627126	-	<2	42	211	1165	0.057			

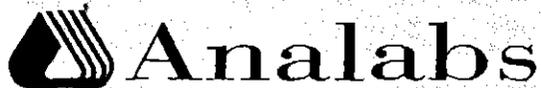
Results in ppm unless otherwise specified
 - = element not determined

IS = insufficient sample
 SNR = sample not received

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858139



Analabs Pty. Ltd

A.C.N. 004 591 06

ANALYTICAL DATA

SAMPLE PREFIX		REPORT No.				REPORT DATE		CLIENT ORDER No.		PAGE	
		100560.60.10105				29/04/94		7081		9 OF 10	
	SAMPLE No.	Ba	As	Cr	Zr	Tl	P205				
METHOD		OX406	GX401	GX401	GX401	GX401	GX401				
1	627127	-	4	58	189	2717	0.325				
2	627128	-	55	18	145	3767	0.172				
3	627129	-	<2	92	148	3608	0.288				
4	627130	-	14	72	141	3406	0.251				
5	627131	-	28	69	104	2594	1.208				
6	627132	-	19	51	164	3193	0.299				
7	627133	-	5	30	153	3323	0.085				
8	627134	-	12	49	200	3956	0.191				
9	627135	-	2	48	183	3951	0.140				
10	627136	-	18	81	201	3745	0.354				
11	627137	-	4	48	191	3816	0.280				
12	627138	-	15	58	218	4530	0.223				
13	627139	-	8	40	189	4300	0.131				
14	627140	-	51	17	296	3011	0.304				
15	627141	-	22	20	158	4170	0.085				
	627144	-	70	37	172	4852	0.301				
17	627145	-	664	22	186	7018	0.294				
18	627146	-	23	30	152	3552	0.125				
19	627147	-	59	24	240	5465	0.119				
20	627148	-	143	45	182	3614	0.992				
21	627149	-	54	60	168	3300	0.307				
22	627150	-	49	32	192	4765	0.215				
23	627151	-	413	65	138	2978	1.089				
24	627152	-	7	71	192	3820	0.203				
25	627153	-	8	72	238	3734	0.286				

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	
		100560.60.10105				29/04/94		7081		10 OF 10	
	SAMPLE No.	Ba	As	Cr	Zr	Ti	P205				
METHOD		DX406	GX401	GX401	GX401	GX401	GX401				
1	627154	-	20	62	216	4206	0.272				
2	627155	-	49	23	157	2214	0.069				
3	627156	-	9	47	182	3345	0.250				
4	627157	-	12	68	186	3306	0.181				
5	627158	-	9	81	176	3323	0.238				
6	627159	-	12	79	198	3526	0.278				
7	627160	-	3	60	199	2596	0.124				
8	627161	-	5	134	226	4950	0.292				
9	627162	-	19	54	171	4156	0.292				
10	627163	-	10	24	133	3368	0.113				
11	627164	-	7	28	143	3756	0.185				
12	627165	-	5	20	143	3914	0.215				
13	627166	-	2	34	243	4829	0.217				
14	627167	-	4	30	236	4678	0.119				
15											
17											
18											
19											
20											
21											
22											
23	IS = INSUFFICIENT SAMPLE										
24	DETECTION	0.01	2	5	5	50	0.007				
25	UNITS	%	ppm	ppm	ppm	ppm	%				

858141

Dora rock chips

PROJECT LMARG. DORA-SPKER	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 <input type="checkbox"/> OXIDIZED PRODUCTS O <input checked="" type="checkbox"/> FRESH ROCK R <input type="checkbox"/> STREAM SEDIMENTS S <input type="checkbox"/> WEATHERED BEDROCK W <input type="checkbox"/> SURFACE TRANSPORTED T <input type="checkbox"/> RESIDUAL SOIL E <input type="checkbox"/> MINE DUMP M	CARD PUNCH PRINT YES <input type="checkbox"/> NO <input type="checkbox"/>	VERIFY YES <input type="checkbox"/> NO <input type="checkbox"/>	DATE 22/3/94	SHEET 1/1
---	--	---	--	--	------------------------	---------------------

EASTINGS							NORTHINGS							SAMPLE NUMBER		DEPTH IN CMS		SIZE FRACTION		Sample Type	METAL VALUES PPM														GEOLOGICAL LOG																																												
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
387439							53547456							24583							Cu Pb Zn Ag by 107														Pk Gm Qz Ph R - anti ob v																																												
387021							53546926							24584							Au by 309														Hb Fd Qz Mg t And P or p																																												
387019							53546556							24585							Ba As Cr Zn Ti by 401														Hb Fd Qz Mg t And P or p																																												
387027							53546556							24586							Whole Rock by 408														Hb Fd Mg t And P or p																																												
387037							53546586							24587																					Hb Fd Mg t And P or p																																												
386948							53553166							24590																					Qz Fd Hb? Mg t R-1																																												
387343							52553666							24580																					F d Qz Mg t Hb (?) D-1																																												
TOTAL OF 7 SAMPLES																																																																															

858149



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A Division of Incharge Testing Services (Australia) Pty. Ltd.
A.C.N. 004 591 664

858143

Phone (004) 318837

14 Thirkell St. DOGEE TAS 7320

Fax (004) 318890

ANALYTICAL REPORT No.

100560.60.10102

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

INVOICE TO:

Aberfoyle Resources Limited
Exploration Division
P.O. Box 952
BURNIE TAS 7320

ORDER No.

PROJECT

7077

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23/03/94

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TOTAL No. OF SAMPLES

3

20/04/94

1

7

SAMPLE NUMBERS

SAMPLE DESCRIPTION

ELEMENT/METHOD

624583/87,624590,624590

RC Prep : GP033 - CHROME FREE BOWLS

Cu,Pb,Zn,Ag/6A101

Au/6G309

Ba,Pb,Dr,Zr,Ti/6X401

WHOLE ROCK/DX405

RESULTS TO

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

RESULTS TO

[Empty box for results recipient]

RESULTS TO

[Empty box for results recipient]

REMARKS

LAKE MARGARET
DORA-SPICER
ROCK CHIPS

AUTHORISED OFFICER

ANALYTICAL DATA

SAMPLE PREFIX

REPORT No.

REPORT DATE

CLIENT ORDER No.

PAGE

100560.60.10102

20/04/94

7077

1 OF 3

	SAMPLE No.	Cu	Pb	Zn	Ag	Au	Ba	As	Cr	Zr
METHOD		GA101	GA101	GA101	GA101	GG309	GX401	GX401	GX401	GX401
1	624580	14	25	172	<2	<0.008	1390	3	29	180
2	624583	26	392	400	<2	0.014	1121	51	5	162
3	624584	28	38	64	<2	<0.008	1139	6	27	191
4	624585	15	10	176	<2	<0.008	1162	6	24	197
5	624586	4	12	145	<2	<0.008	1062	2	25	187
6	624587	7	22	159	<2	0.025	1091	9	23	203
7	624590	6	69	81	<2	<0.008	1139	3	9	453
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24	DETECTION	4	5	4	2	0.008	10	2	5	5
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

AUTHORISED OFFICER



ANALYTICAL DATA

SAMPLE PREFIX		REPORT No.	REPORT DATE	CLIENT ORDER No.	PAGE					
		100560.60.10102	20/04/94	7077	2 OF 3					
	SAMPLE No.	Ti	Al2O3	SiO2	TiO2	Fe2O3	MnO	CaO	K2O	MgO
METHOD		OX408	OX408	OX408	OX408	OX408	OX408	OX408	OX408	OX408
1	624580	3854	14.94	64.20	0.64	6.18	0.15	0.59	5.81	2.60
2	624583	990	9.83	69.30	0.17	12.22	0.63	0.02	3.51	0.84
3	624584	4056	14.82	63.40	0.68	6.17	0.15	1.50	5.00	2.63
4	624585	4026	14.48	64.10	0.67	5.92	0.42	0.55	6.09	2.87
5	624586	3777	14.60	63.50	0.63	5.90	0.36	0.92	5.19	3.22
6	624587	4085	14.70	64.10	0.68	5.98	0.29	0.49	5.80	2.79
7	624590	3957	13.17	72.40	0.66	4.28	0.15	0.21	4.36	0.85
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24	DETECTION	50	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.05
25	UNITS	ppm	%	%	%	%	%	%	%	%

Results in ppm unless otherwise specified
- = element not determined

IS = insufficient sample
SNR = sample not received

AUTHORISED OFFICER 

ANALYTICAL DATA

SAMPLE PREFIX

REPORT No.

REPORT DATE

CLIENT ORDER No.

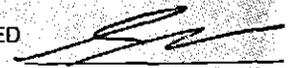
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SAMPLE PREFIX		REPORT No.				REPORT DATE	CLIENT ORDER No.		PAGE	
		100560.60.10102				20/04/94	7077		3 OF 3	
	SAMPLE No.	P205	S	Na2O	TOTAL	LOI				
METHOD		DX408	DX408	DX408	DX408	DM615				
1	624580	0.171	0.010	2.59	100.26	2.38				
2	624583	0.063	0.073	0.13	99.96	3.03				
3	624584	0.170	0.005	4.07	99.93	1.30				
4	624585	0.155	<0.005	1.85	100.04	2.93				
5	624586	0.172	<0.005	3.01	100.38	2.90				
6	624587	0.143	<0.005	2.42	100.18	2.82				
7	624590	0.089	<0.005	0.94	99.72	2.58				
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24	DETECTION	0.005	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



PROJECT E.L.5185	BSS SIEVE SIZE CODE - MESH NUMBER	SAMPLE TYPE CODE	<input type="checkbox"/> WEATHERED BEDROCK W <input type="checkbox"/> SURFACE TRANSPORTED T <input type="checkbox"/> RESIDUAL SOIL E <input type="checkbox"/> MINE DUMP M	CARD PUNCH PRINT	VERIFY	DATE	SHEET
LAKE MARGARET	A 200 D 80 G 30 B 150 E 60 H 20 C 100 F 40	<input type="checkbox"/> OXIDIZED PRODUCTS O <input type="checkbox"/> FRESH ROCK R <input type="checkbox"/> STREAM SEDIMENTS S		YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	23/3/94	1 OF 1
DORA-SPICER	T * TOTAL						

EASTINGS							NORTHINGS							SAMPLE NUMBER		DEPTH IN CMS		SIZE FRACTION		Sample Type		METAL VALUES PPM														GEOLOGICAL LOG																																											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
387535							535495							2624576				DORA-SPICER				Assay for;														GnPKYR-bv GnClmtx																																											
387353							5355185							624579				"		"		Cu Pb Zn Ag by 101														Gy rock																																											
387393							5355532							624581				"		"		Au by 309														GyGnFdQzAgtYEpcl																																											
387547							535448							624582				"		"		Ba As Cr Zr by 401														DkGyPCLaltQzPhSst																																											
387439							535474							624583				"		"		PktoGnGeyRantobv																																																									
386867							5356182							624588				"		"																PkmasFdQzAgLithicSst																																											
387338							5355413							624589				"		"																PkmasFdQzmafLithSst																																											
388375							5353254							624591				"		"																FdQzMtPumiceSst																																											
388388							5353159							624592				"		"																FdQzMgtbndLithicSst																																											
387592							5354534							624601				"		"																Gy Y-bv to Epcl.																																											
TOTAL OF 9 SAMPLES																																																																															

800147



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A Division of Incharge Testing Services (Australia) Pty. Ltd.
A.C.N. 004 591 664

858148

Phone (004) 316837

14 Thirkell St. COOEE TAS 7320

Fax (004) 318890

ANALYTICAL REPORT No.

100560.60.10103

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

INVOICE TO:

Aberfoyle Resources Limited
Exploration Division
P.O. Box 952
BURNIE TAS 7320

ORDER No.

PROJECT

7078

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20/04/94

1

16

SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
524, 576, 579, 581, 582, 588, 589, 591, 592, 501, 850-856	RC Prep : 6P033 - CHROME FREE BOWLS	Cu, Pb, Zn, Ag/6A101 Au, Au(R), Au(S)/6G309 Ba, As, Cr, Zr, Ti/6X401 Ti/6X403

REMARKS

LAKE MARGARET
BEATRICE/DORA-SPICER
Rock CHIPS

RESULTS TO

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

RESULTS TO

RESULTS TO

AUTHORISED OFFICER

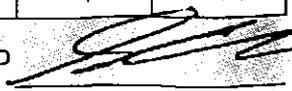
ANALYTICAL DATA

SAMPLE PREFIX		REPORT No.			REPORT DATE		CLIENT ORDER No.			PAGE
		100560.60.10103			20/04/94		7078			1 OF 2
METHOD	SAMPLE No.	Cu	Pb	Pb	Zn	Ag	Au	Au (R)	Au (S)	Ba
		GA101	GA101	GA104	GA101	GA101	GG309	GG309	GG309	GX401
1	624576	8	472	-	355	<2	<0.008	-	-	823
2	624579	107	-	0.91	3615	13	<0.008	-	-	384
3	624581	43	78	-	248	<2	<0.008	-	-	1044
4	624582	4215	146	-	354	6	0.150	-	-	249
5	624588	48	48	-	117	<2	<0.008	-	-	1172
6	624589	11	19	-	66	<2	<0.008	-	-	1042
7	624591	10	11	-	46	<2	<0.008	-	-	895
8	624592	7	22	-	91	<2	<0.008	-	-	768
9	624601	32	12	-	77	<2	<0.008	-	-	779
10	624850	41	28	-	108	<2	<0.008	-	-	1298
11	624851	68	13	-	55	<2	<0.008	-	-	838
12	624852	16	22	-	226	<2	0.010	<0.008	<0.008	1137
13	624853	13	23	-	157	<2	<0.008	-	-	1030
14	624854	23	58	-	178	<2	<0.008	-	-	1091
15	624855	18	145	-	126	<2	0.012	-	-	891
	624856	83	676	-	423	<2	0.028	-	-	339
17										
18										
19										
20										
21										
22										
23										
24	DETECTION	4	5	0.05	4	2	0.008	0.008	0.008	10
25	UNITS	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm

Results in ppm unless otherwise specified
- = element not determined

IS = insufficient sample
SNR = sample not received

AUTHORISED OFFICER

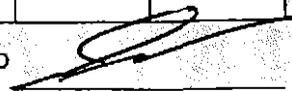


ANALYTICAL DATA

SAMPLE PREFIX		REPORT No.				REPORT DATE	CLIENT ORDER No.		PAGE	
		100560.60.10103				20/04/94	7078		2	OF 2
METHOD	SAMPLE No.	As	Cr	Zr	Ti	Ti				
		GX401	GX401	GX401	GX401	GX403				
1	624576	<2	113	196	2218	-				
2	624579	34	57	115	1042	-				
3	624581	9	<5	235	2476	-				
4	624582	6	<5	158	2137	-				
5	624588	11	<5	251	2384	-				
6	624589	4	<5	227	2261	-				
7	624591	6	<5	239	2204	-				
8	624592	8	26	455	-	1.24				
9	624601	5	<5	229	2094	-				
10	624850	7	10	312	3225	-				
11	624851	5	<5	153	1023	-				
12	624852	8	53	271	3474	-				
13	624853	6	17	278	2972	-				
14	624854	8	121	253	3153	-				
15	624855	9	<5	287	2786	-				
	624856	47	44	139	1661	-				
17										
18										
19										
20										
21										
22										
23										
24	DETECTION	2	5	5	50	0.01				
25	UNITS	ppm	ppm	ppm	ppm	%				

Results in ppm unless otherwise specified
- = element not determined

IS = insufficient sample
SNR = sample not received

AUTHORISED OFFICER 

858151

Beatrice rock chips

ANALABS

 A Division of Intertec Testing Services (Australia) Pty. Ltd.
 A.C.N. 004 591 684

858152

Phone (004) 316837

14 Thirkell St. CODEE TAS 7320

Fax (004) 318890

ANALYTICAL REPORT No.

100560.60.10103

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

ORDER No.

PROJECT

INVOICE TO:

Aberfoyle Resources Limited
 Exploration Division
 P.O. Box 952
 BURNIE TAS 7320

7078

DATE RECEIVED

RESULTS REQUIRED

23/03/94

ASAP

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DATE
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OF COPIES

TOTAL No.
OF SAMPLES

2

20/04/94

1

16

SAMPLE NUMBERS

SAMPLE DESCRIPTION

ELEMENT/METHOD

524, 576, 579, 581, 582, 583, 589, 591,
592, 601, 850-856

RC Prep : 6F033 - CHROME FREE BOWLS

Cu, Pb, Zn, Ag/6A101

Au, Au(R), Au(S)/6B309

Sr, As, Cr, Zr, Ti/6X401 Ti/6X403

RESULTS
TO

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

REMARKS

LAKE MARGARET
 BEATRICE/DORA-SPICER
 Rock CHIPS

RESULTS
TO

RESULTS
TO

AUTHORISED OFFICER

OFFICER

ANALYTICAL DATA

SAMPLE PREFIX

REPORT No.

REPORT DATE

CLIENT ORDER No.

PAGE

100560.60.10103

20/04/94

7078

1 OF 2

	SAMPLE No.	Cu	Pb	Pb	Zn	Ag	Au	Au (R)	Au (S)	Ba
METHOD		GA101	GA101	GA104	GA101	GA101	GG309	GG309	GG309	GX401
1	624576	8	472	-	355	<2	<0.008	-	-	823
2	624579	107	-	0.91	3615	13	<0.008	-	-	384
3	624581	43	78	-	248	<2	<0.008	-	-	1044
4	624582	4215	146	-	354	6	0.150	-	-	249
5	624588	48	48	-	117	<2	<0.008	-	-	1172
6	624589	11	19	-	66	<2	<0.008	-	-	1042
	624591	10	11	-	46	<2	<0.008	-	-	895
8	624592	7	22	-	91	<2	<0.008	-	-	768
9	624601	32	12	-	77	<2	<0.008	-	-	779
10	624850	41	28	-	108	<2	<0.008	-	-	1298
11	624851	68	13	-	55	<2	<0.008	-	-	838
12	624852	16	22	-	226	<2	0.010	<0.008	<0.008	1137
13	624853	13	23	-	157	<2	<0.008	-	-	1030
14	624854	23	58	-	178	<2	<0.008	-	-	1091
15	624855	18	145	-	126	<2	0.012	-	-	891
	624856	83	676	-	423	<2	0.028	-	-	339
17										
18										
19										
20										
21										
22										
23										
24	DETECTION	4	5	0.05	4	2	0.008	0.008	0.008	10
25	UNITS	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm

Results in ppm unless otherwise specified
- element not determined

IS = insufficient sample
SNR = sample not received

AUTHORISED OFFICER



ANALYTICAL DATA

SAMPLE PREFIX

REPORT No.

REPORT DATE

CLIENT ORDER No.

PAGE

100560.60.10103

20/04/94

7078

2 OF 2

	SAMPLE No.	As	Cr	Zr	Ti	Ti				
METHOD		GX401	GX401	GX401	GX401	GX403				
1	624576	<2	113	196	2218	-				
2	624579	34	57	115	1042	-				
3	624581	9	<5	235	2476	-				
4	624582	6	<5	158	2137	-				
5	624588	11	<5	251	2384	-				
6	624589	4	<5	227	2261	-				
7	624591	6	<5	239	2204	-				
8	624592	8	26	455	-	1.24				
9	624601	5	<5	229	2094	-				
10	624850	7	10	312	3225	-				
11	624851	5	<5	153	1023	-				
12	624852	8	53	271	3474	-				
13	624853	6	17	278	2972	-				
14	624854	8	121	253	3153	-				
15	624855	9	<5	287	2786	-				
16	624856	47	44	139	1661	-				
17										
18										
19										
20										
21										
22										
23										
24	DETECTION	2	5	5	50	0.01				
25	UNITS	ppm	ppm	ppm	ppm	%				

Results in ppm unless otherwise specified
- = element not determined

IS = insufficient sample
SNR = sample not received

AUTHORISED OFFICER

858156

APPENDIX III
DDH Logs TC1-5

APPENDIX IV
Geophysical Reports

858168

Tyndall Creek IP

858169

ABERFOYLE RESOURCES LIMITED

EXPLORATION DIVISION

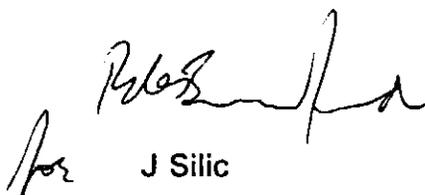
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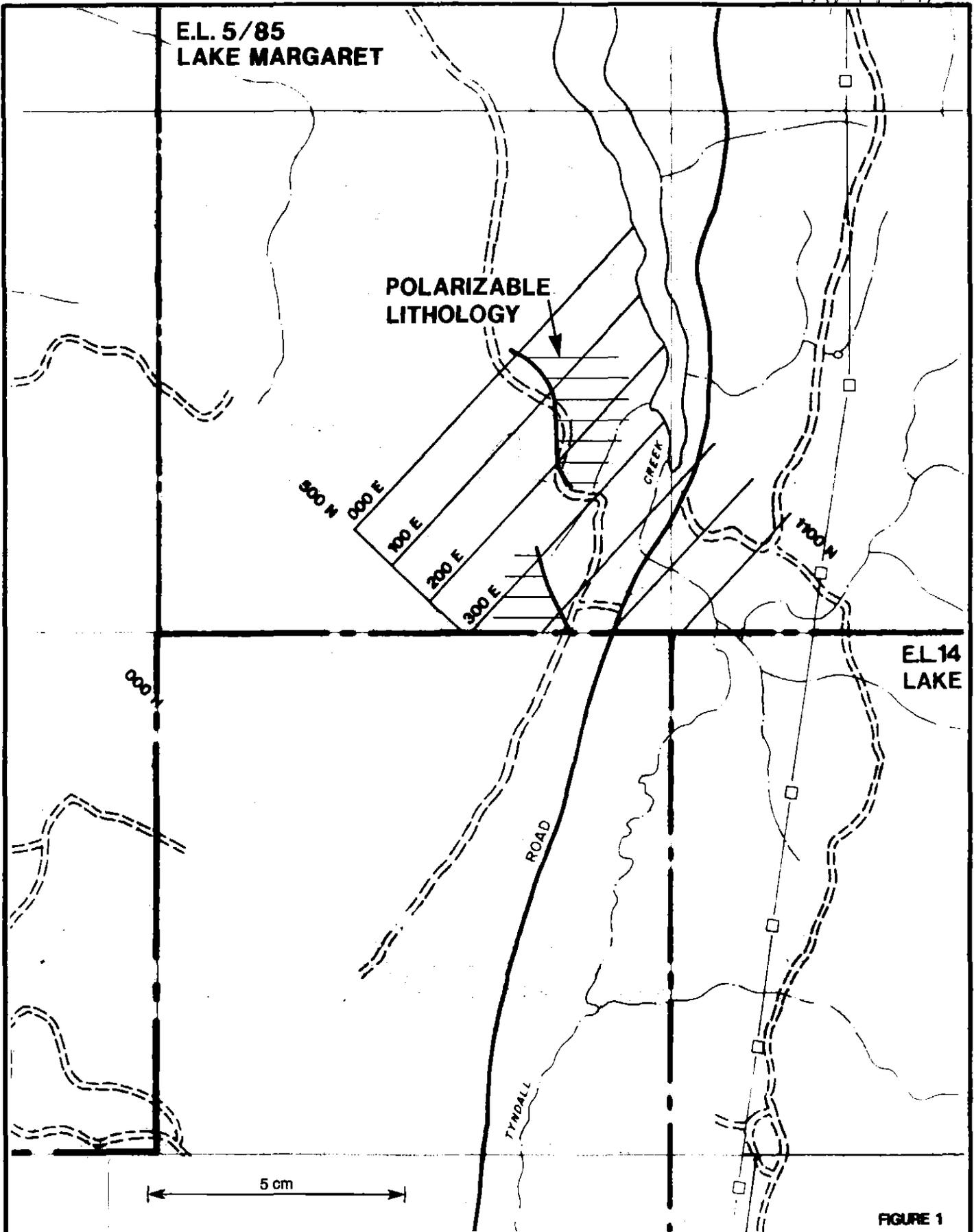
Date: 5 October 1994 **Ref:** 9410rdb2
To: R H Lewis **From:** J Silic
At: Burnie **At:** Hawthorn
Copies:

Subject: IP SURVEY (LAKE MARGARET)

A dipole-dipole IP survey at 50 metre dipole spacing, was conducted over a part of the Tyndall Creek grid (Figure 1). Aberfoyle's Zonge GDP16 equipment operating at 0.125 Hz in time domain mode was used to collect the data. Newmont standard chargeabilities are displayed on the attached data sections.

Interpretation of this data set results in the identification of two polarisable units with the N-W unit correlating with the already known Howards anomaly. No confined IP sources however, have been identified within these polarisable lithologies.


J Silic



Aberfoyle Resources Limited
EXPLORATION DIVISION

TASMANIA
EL 5/85 LAKE MARGARET
IP GRID
GEOPHYSICAL INTERPRETATION

Compiled : JS
Drawn : JS
Traced : MAR
Checked :
Plate No. : L.MARG 101

REVISIONS			
Init.	Date	Init.	Date

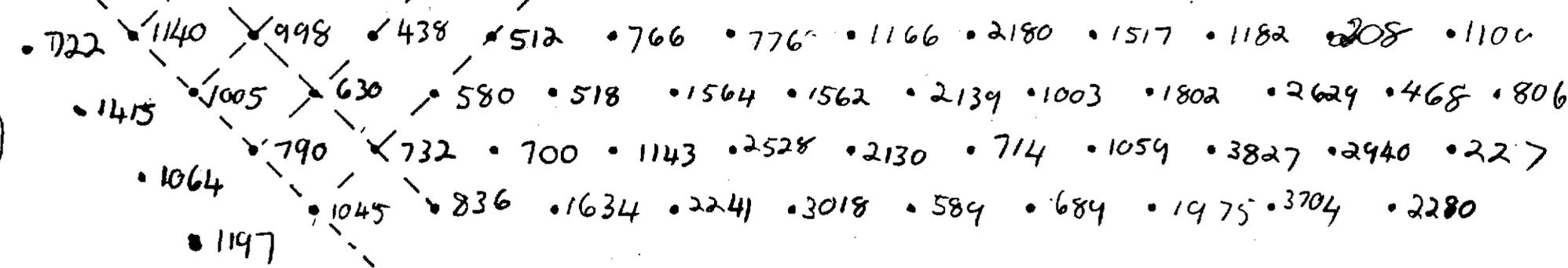
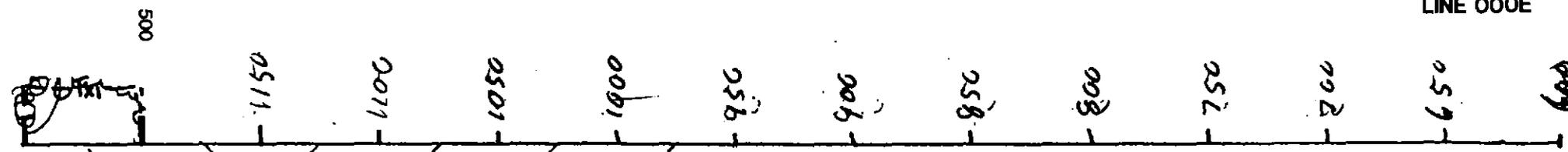
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Scale : 1:10 000

Date : October 1994

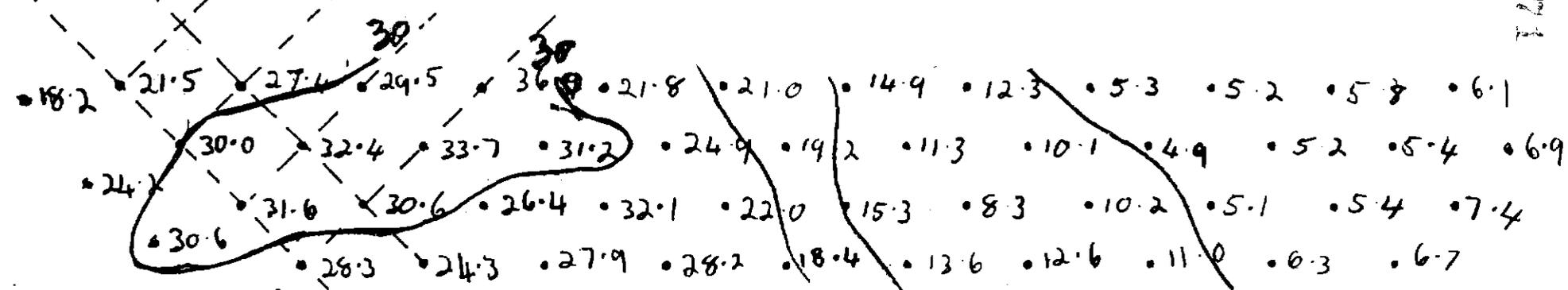
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LINE 000E



P

500



M

858171

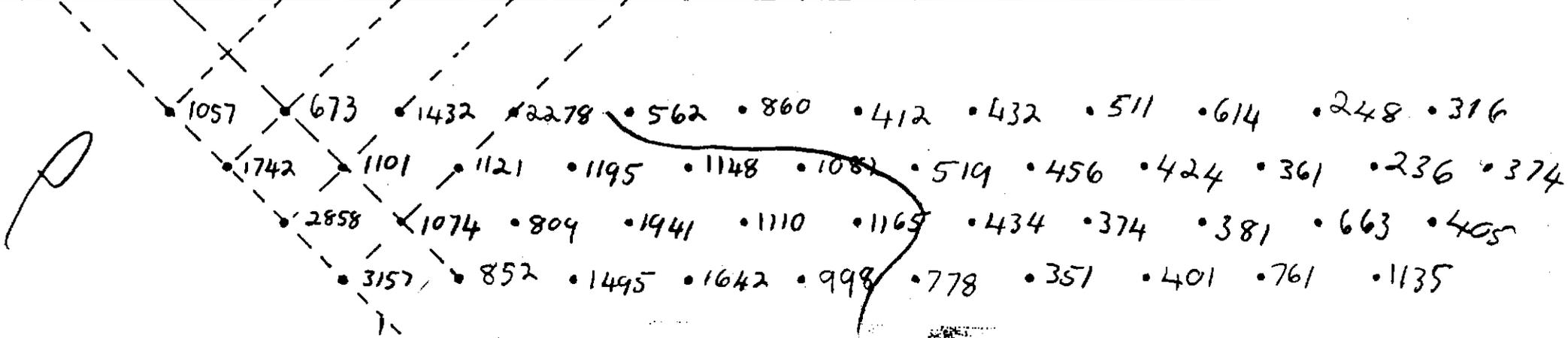
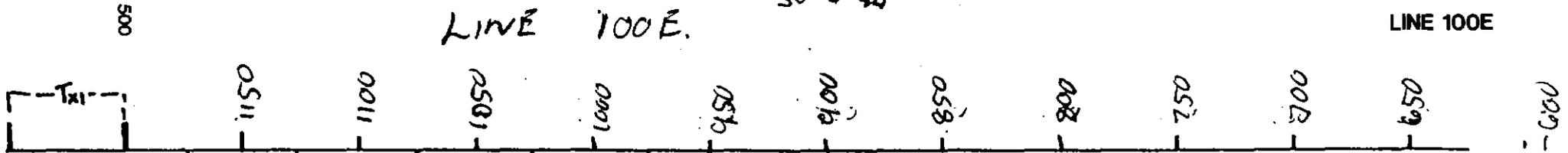
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20 15 10

30-4-44

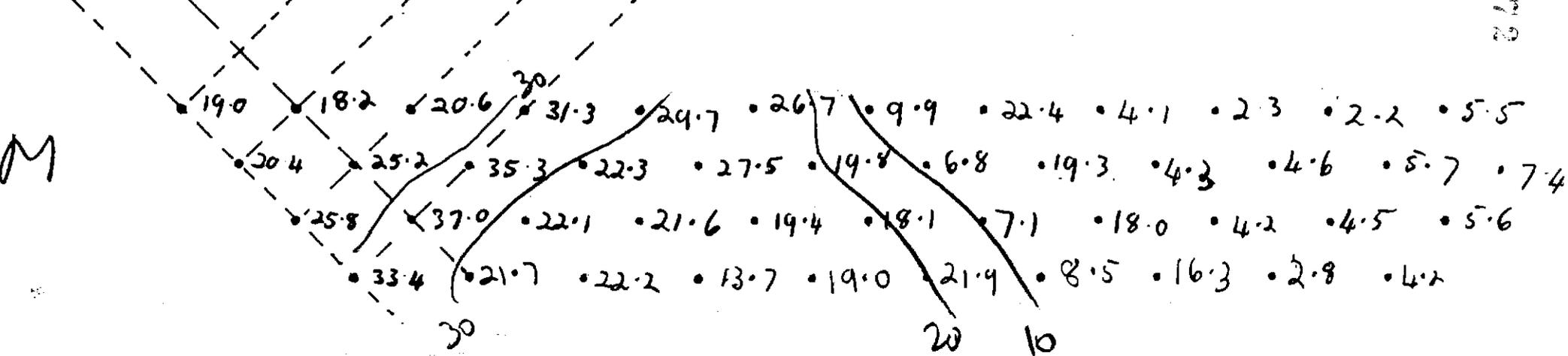
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LINE 100E



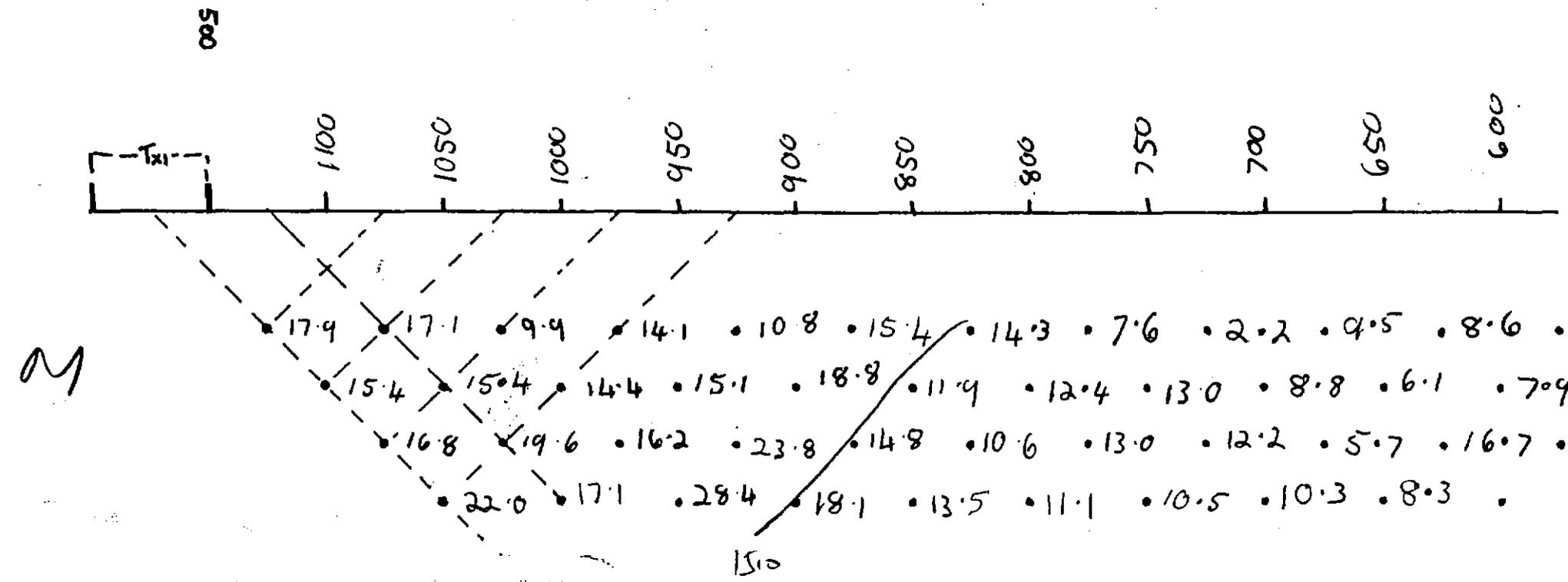
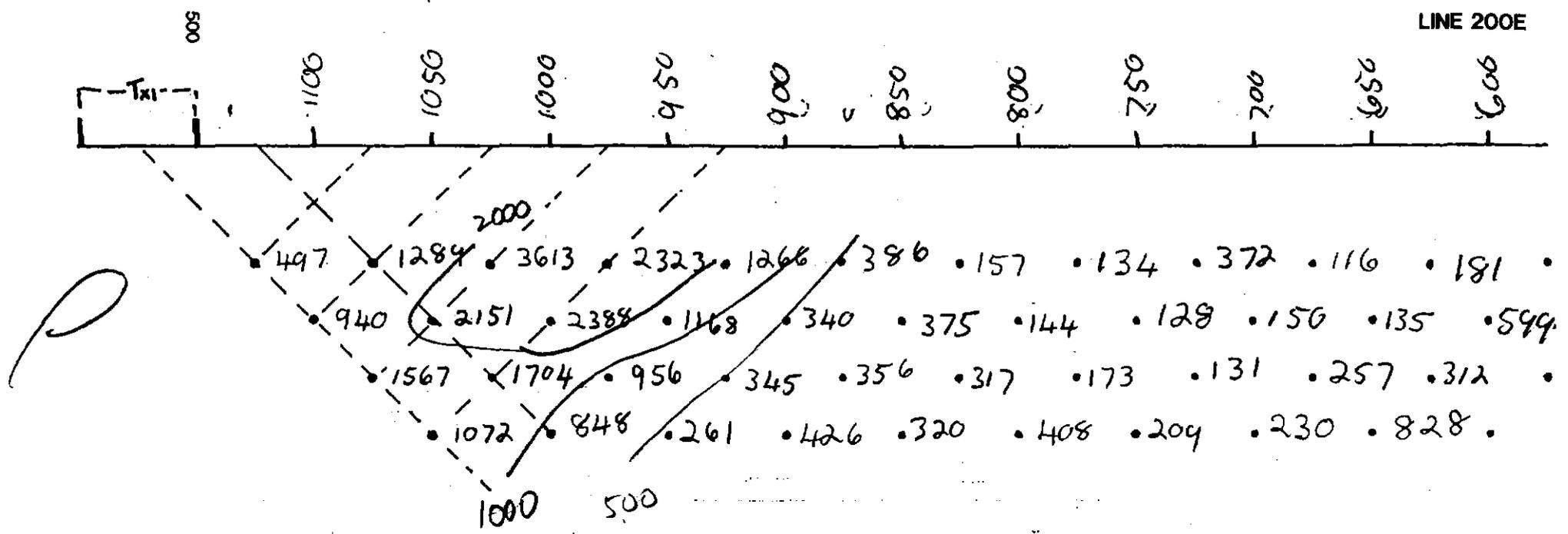
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500



858172

20 10



858173

LMG

300E

swamp

LINE 300E

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0501

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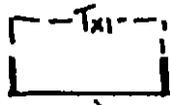
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700

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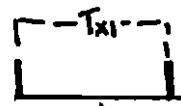
600



P

137	603	100	145	146	95	88	120	105	271	.
308	360	212	162	167	113	174	129	149	378	.
298	352	197	169	179	138	137	161	225	.	
344	309	214	202	233	199	451	229	.	.	

500



6.9	15.8	12.0	13.8	0.5	10.6	10.7	13.5	20.3	10.1	.
8.9	12.4	15.3	8.7	0.0	10.6	13.1	13.7	17.4	13.7	.
8.1	15.2	11.2	8.5	1.4	17.7	13.1	12.1	11.2	.	
16.9	12.7	10.1	9.8	15.0	12.6	14.6	13.1	9.0	.	

M

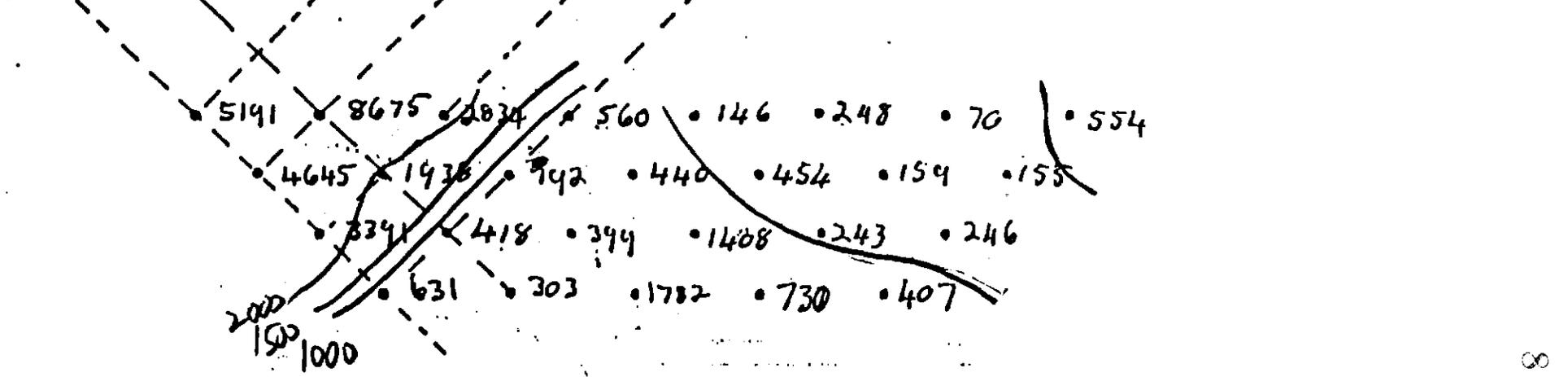
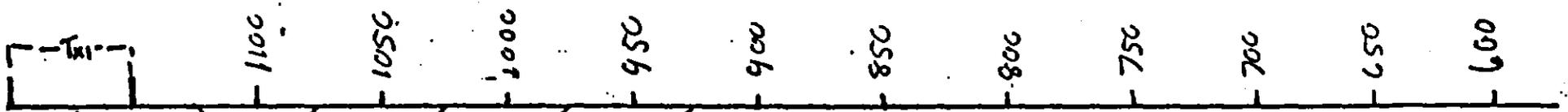
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LMC

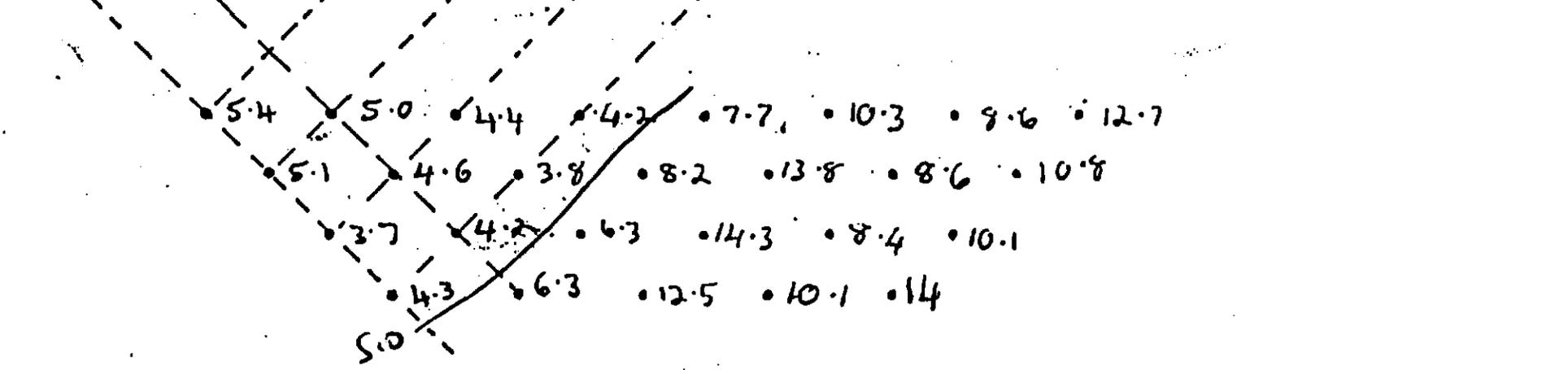
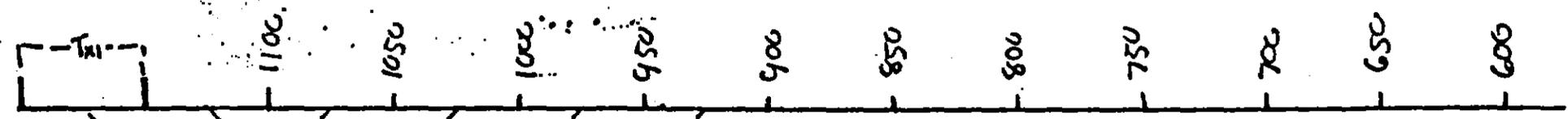
500

LINE 500 E.

LINE 500E

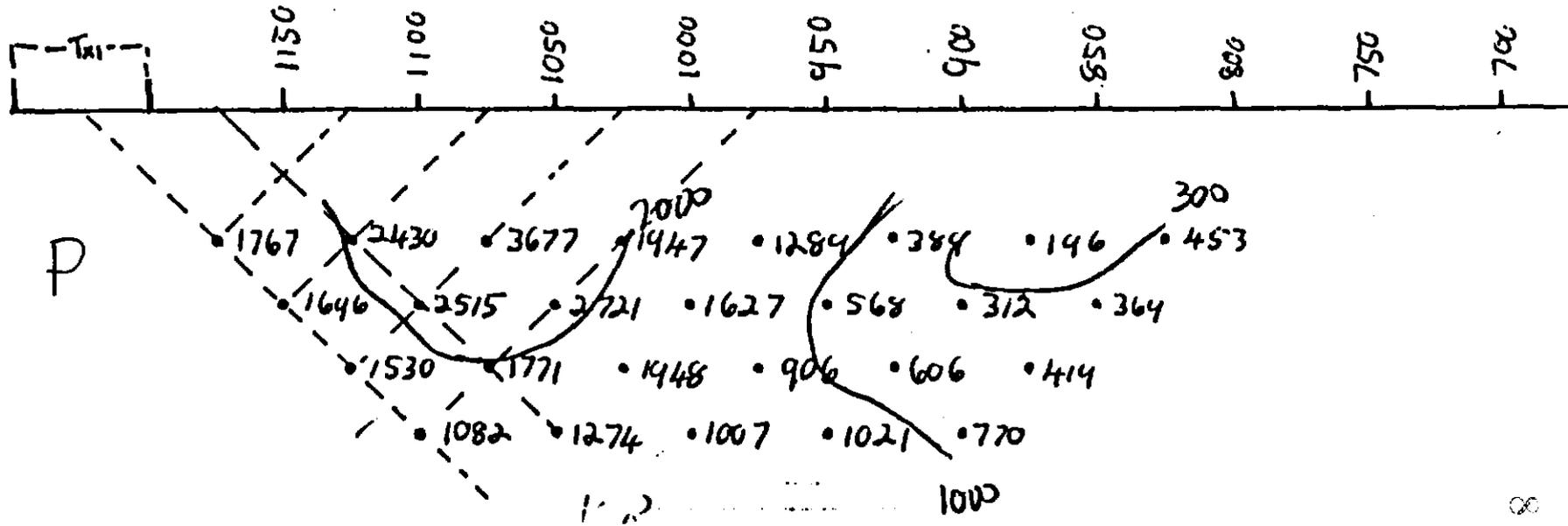


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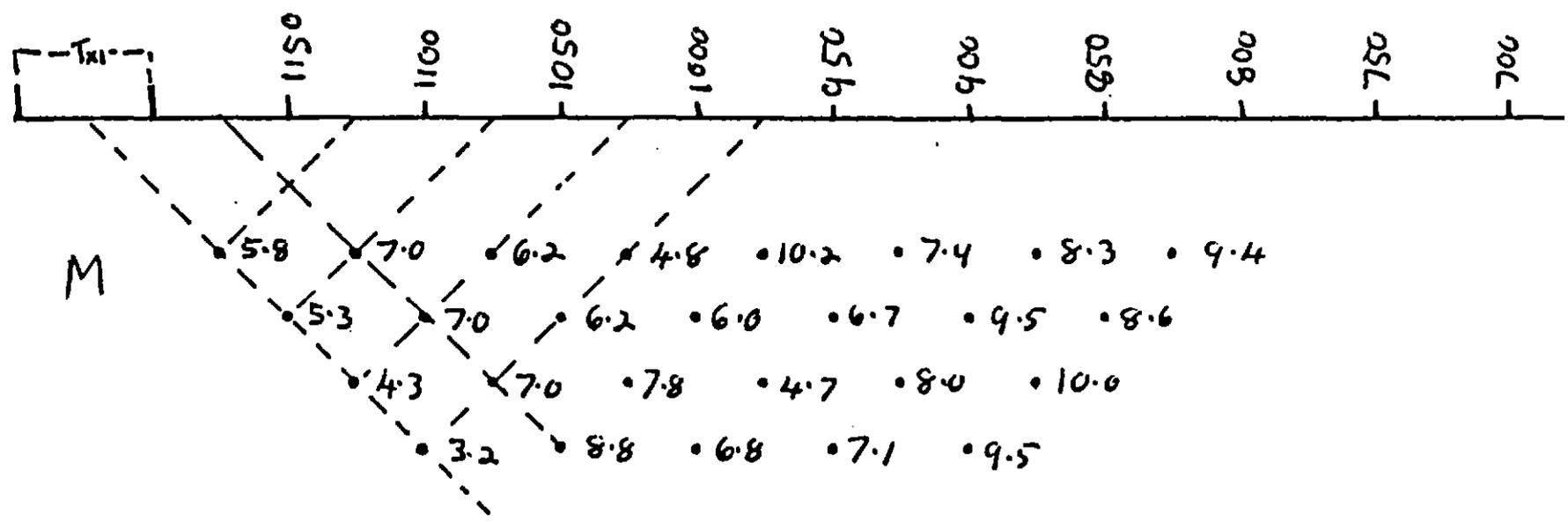


868176

LINE 600E



500



LINE 700E

808177

858178

Tyndall Creek UTEM

858179

ABERFOYLE RESOURCES LIMITED

EXPLORATION DIVISION

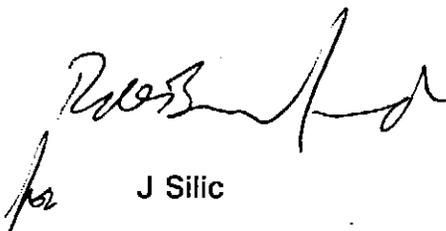
MEMORANDUM

Date: 5 October 1994 Ref: 9410rdb1
To: R H Lewis From: J Silic
At: Burnie At: Hawthorn

Copies:

Subject: UTEM SURVEY

A one loop UTEM survey operating at 26.29 Hz was conducted over the Tyndall Creek grid (Figure 1). Only the vertical component data was collected at a station spacing of 50 metres. No responses which could be attributed to bedrock conductive sources were detected by the survey.


J Silic

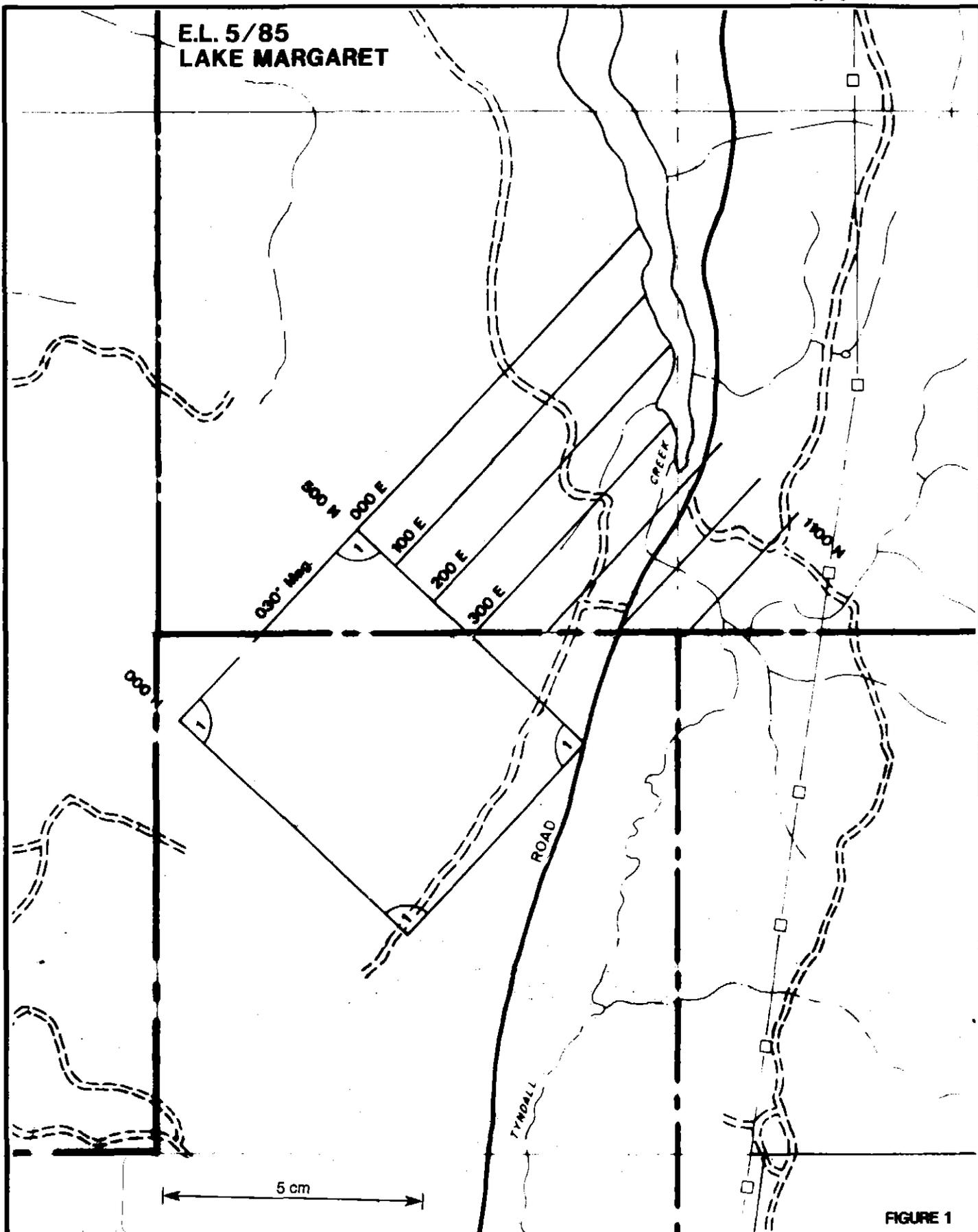


FIGURE 1

Aberfoyle Resources Limited

EXPLORATION DIVISION

REVISIONS			
Init.	Date	Init.	Date

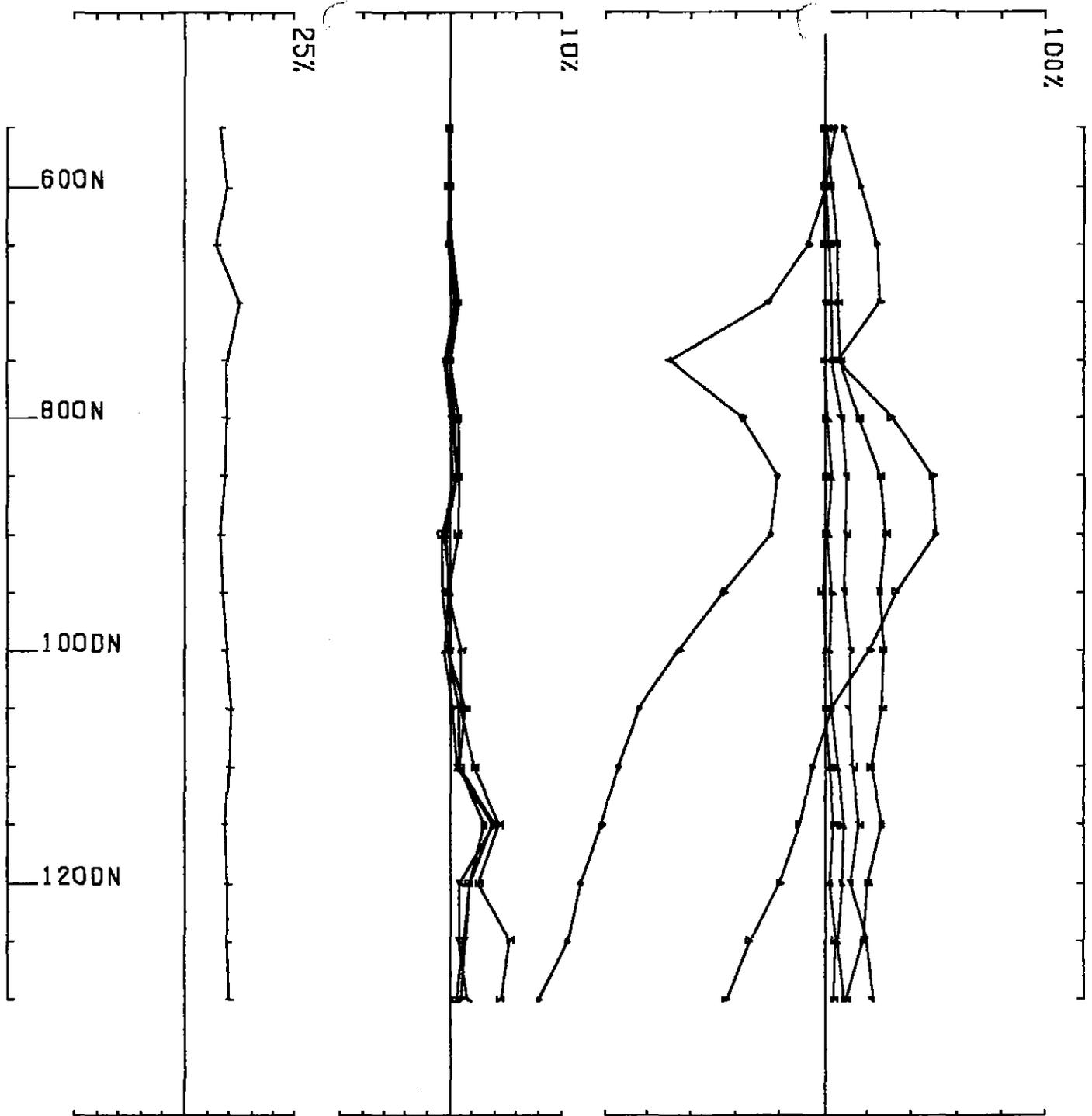
TASMANIA
 EL 5/85 LAKE MARGARET
UTEM GRID
GEOPHYSICAL INTERPRETATION

Compiled :	JS
Drawn :	JS
Traced :	MAR
Checked :	
Plate No. :	L.MARG 100

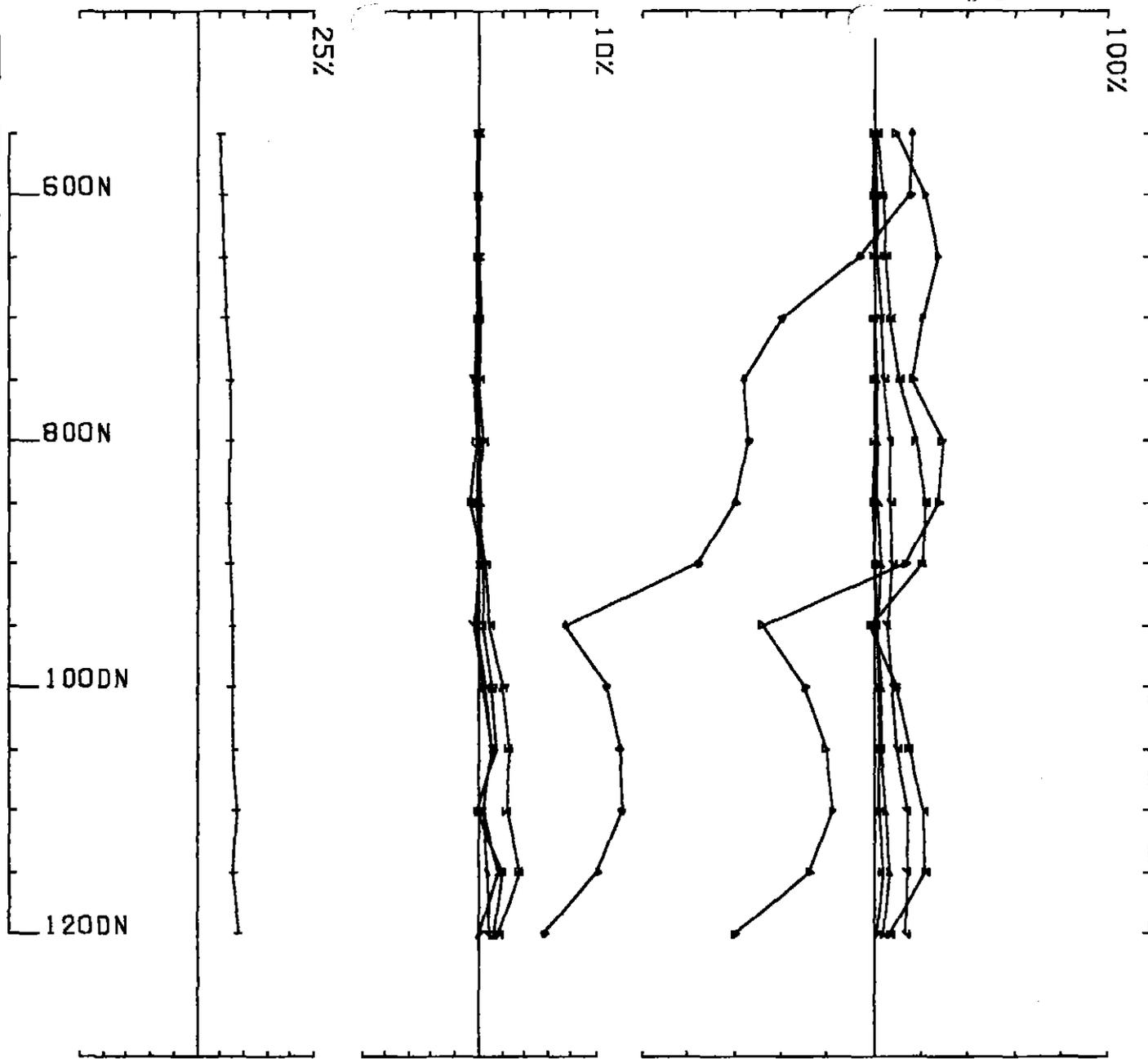
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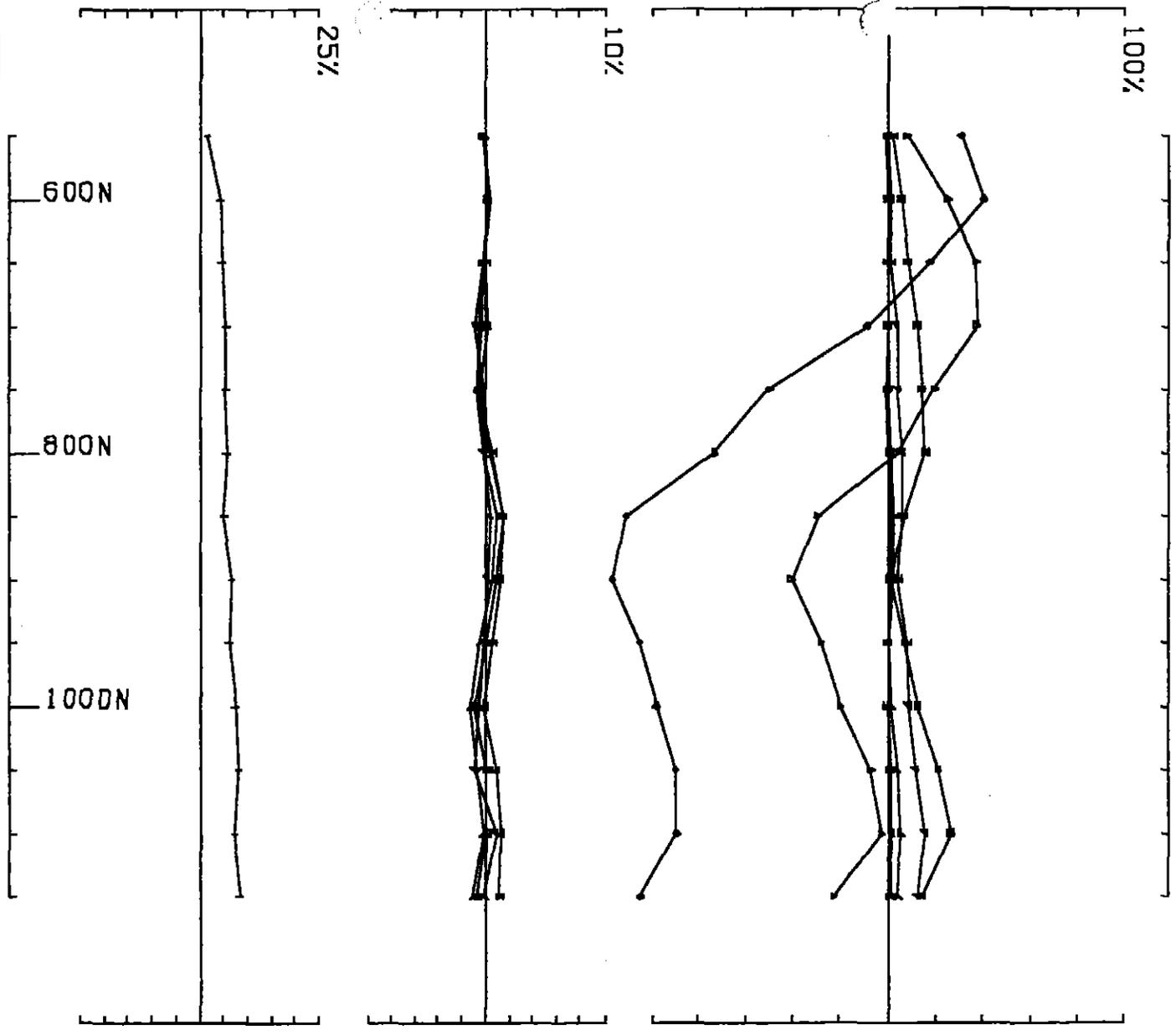
Date : October 1994



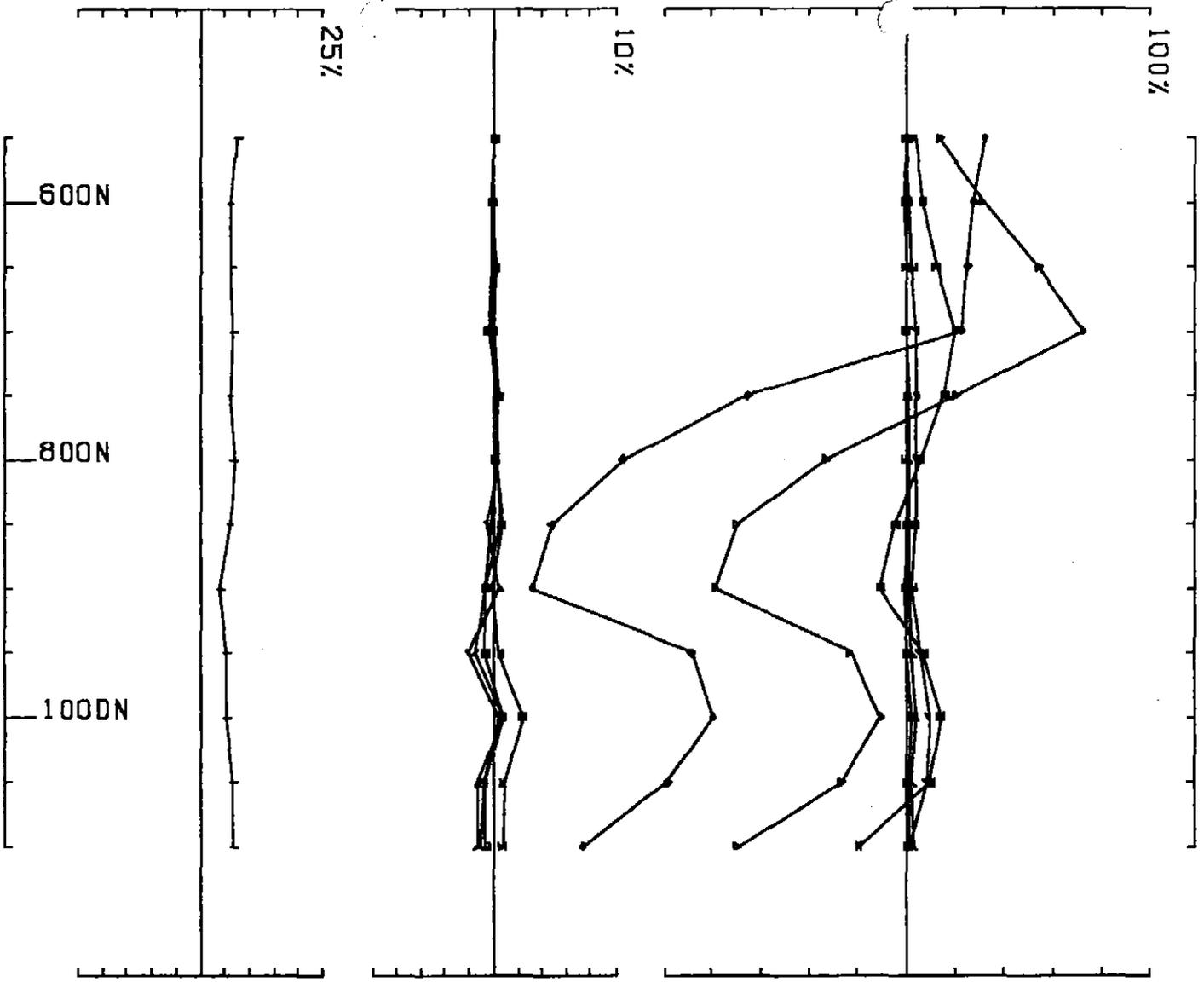
UTEM SURVEY AT BASIN LAKE FOR ABERFOYLE RESOURCES SEPTEMBER 1994
 CONDUCTED BY LAMONTAGNE GEOPHYSICS LTD JOB 9403 BASE FREQ 1HZ 25-23
 LOOP NO 1 LINE 000E COMPONENT HZ SECONDARY FIELD CHI CONTIN. NORM.



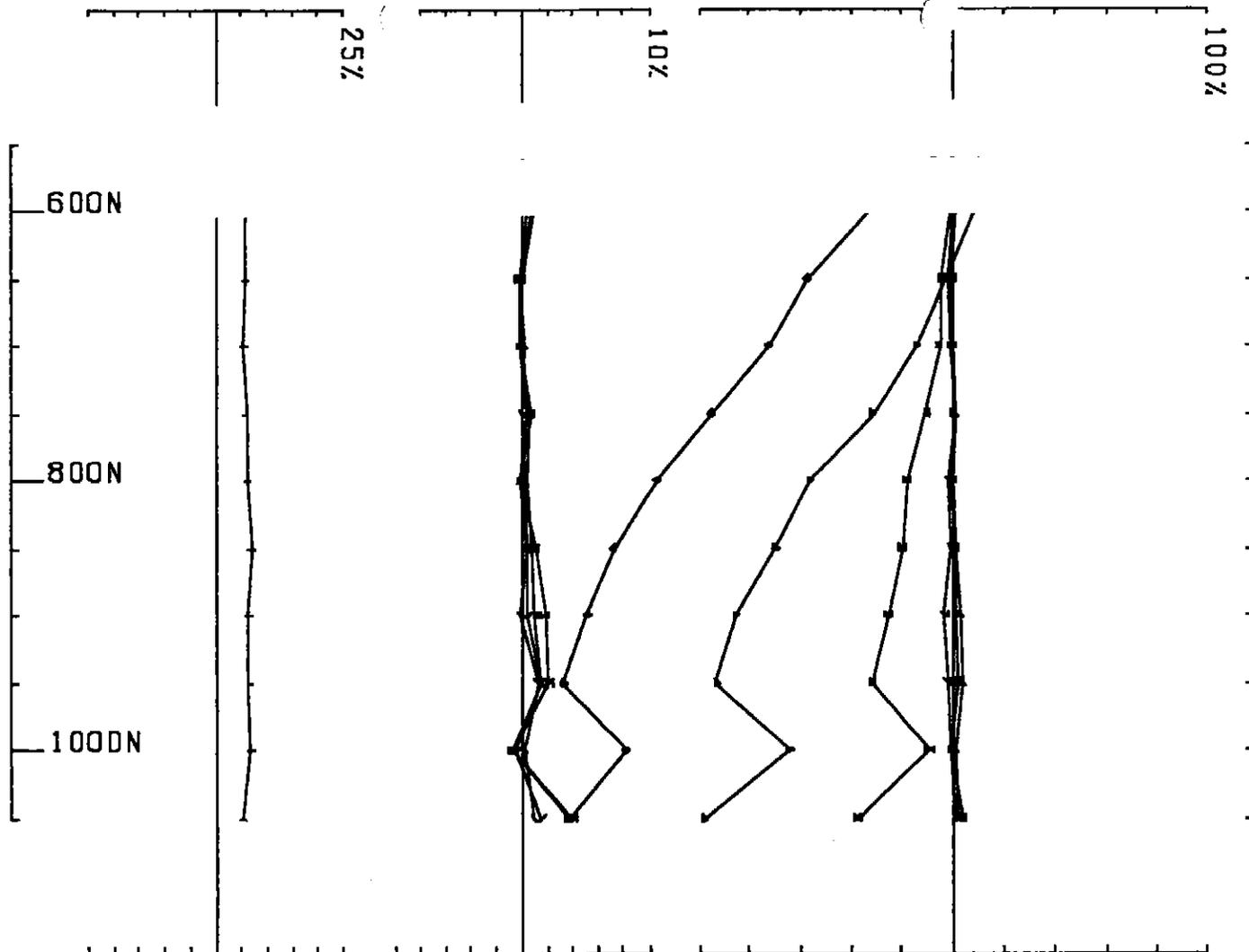
UTEM SURVEY AT BASIN LAKE FOR ABERFOYLE RESOURCES SEPTEMBER 1994
CONDUCTED BY LAMONTAGNE GEOPHYSICS LTD JOB 9403 BASE FREQ (HZ) 26.23
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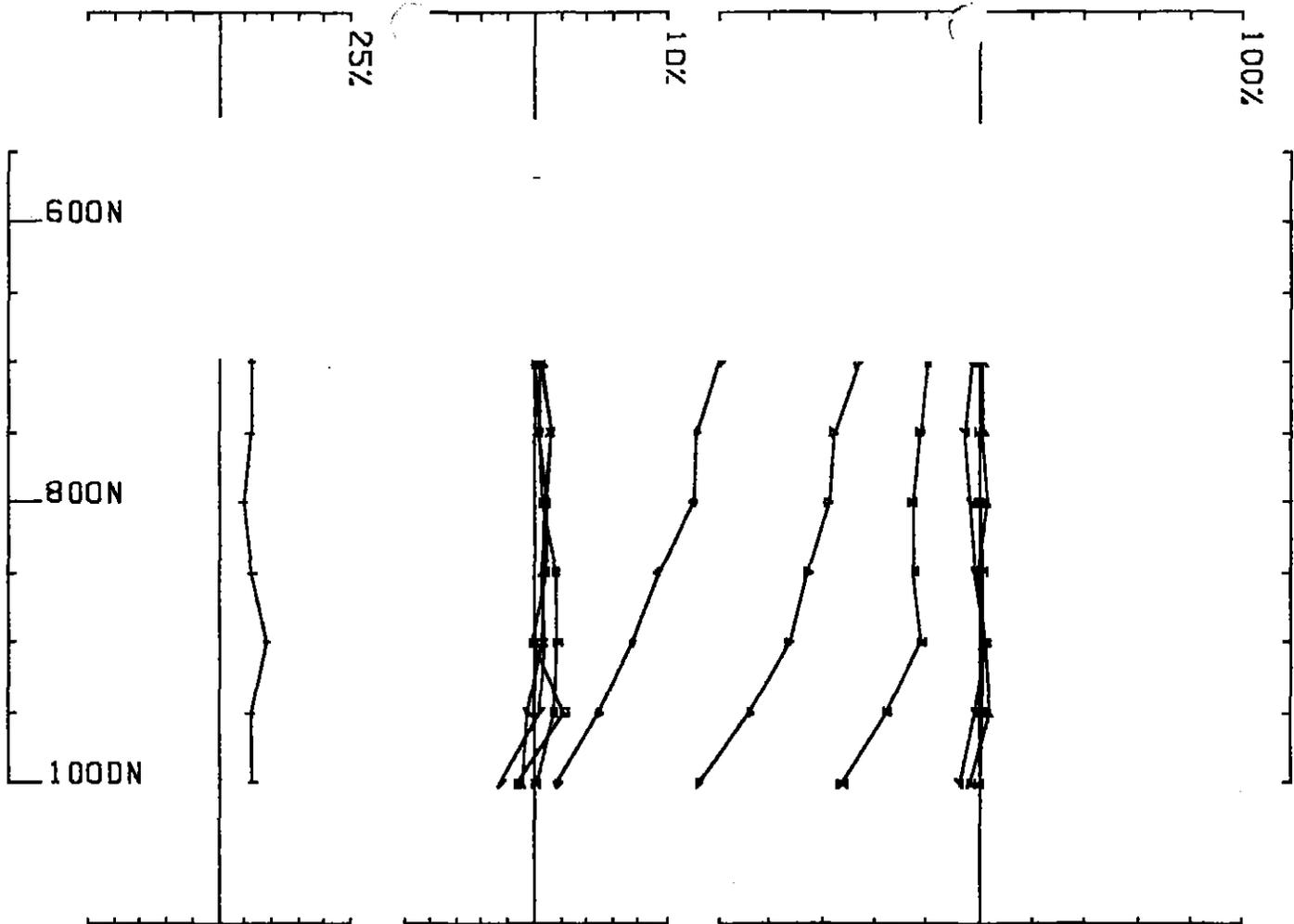
UTEM SURVEY AT BASIN LAKE FOR ABERFOYLE RESOURCES SEPTEMBER 1994
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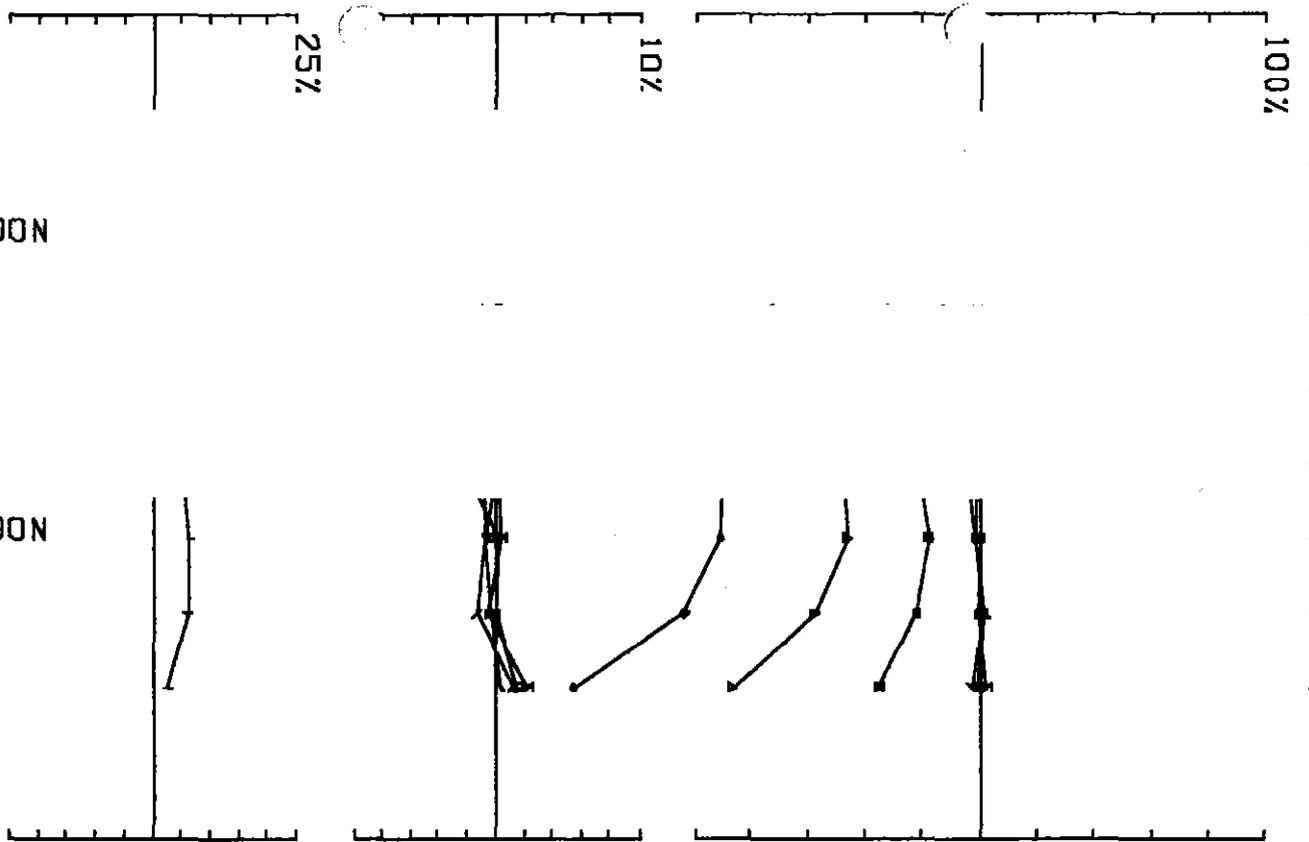
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CONDUCTED BY LAMONTAGNE GEOPHYSICS LTD JOB 9409 BASE FREQ (HZ) 28.29
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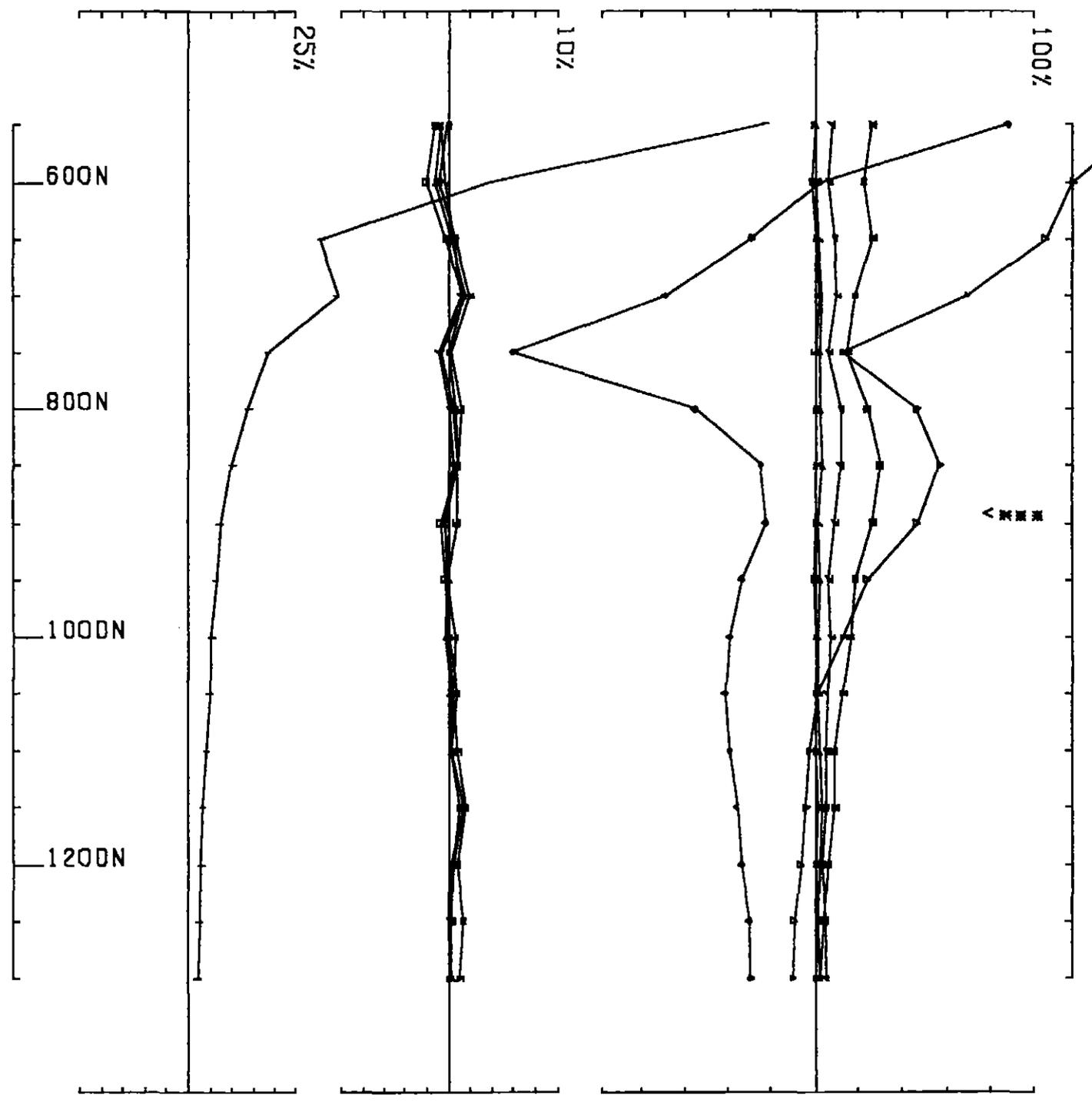
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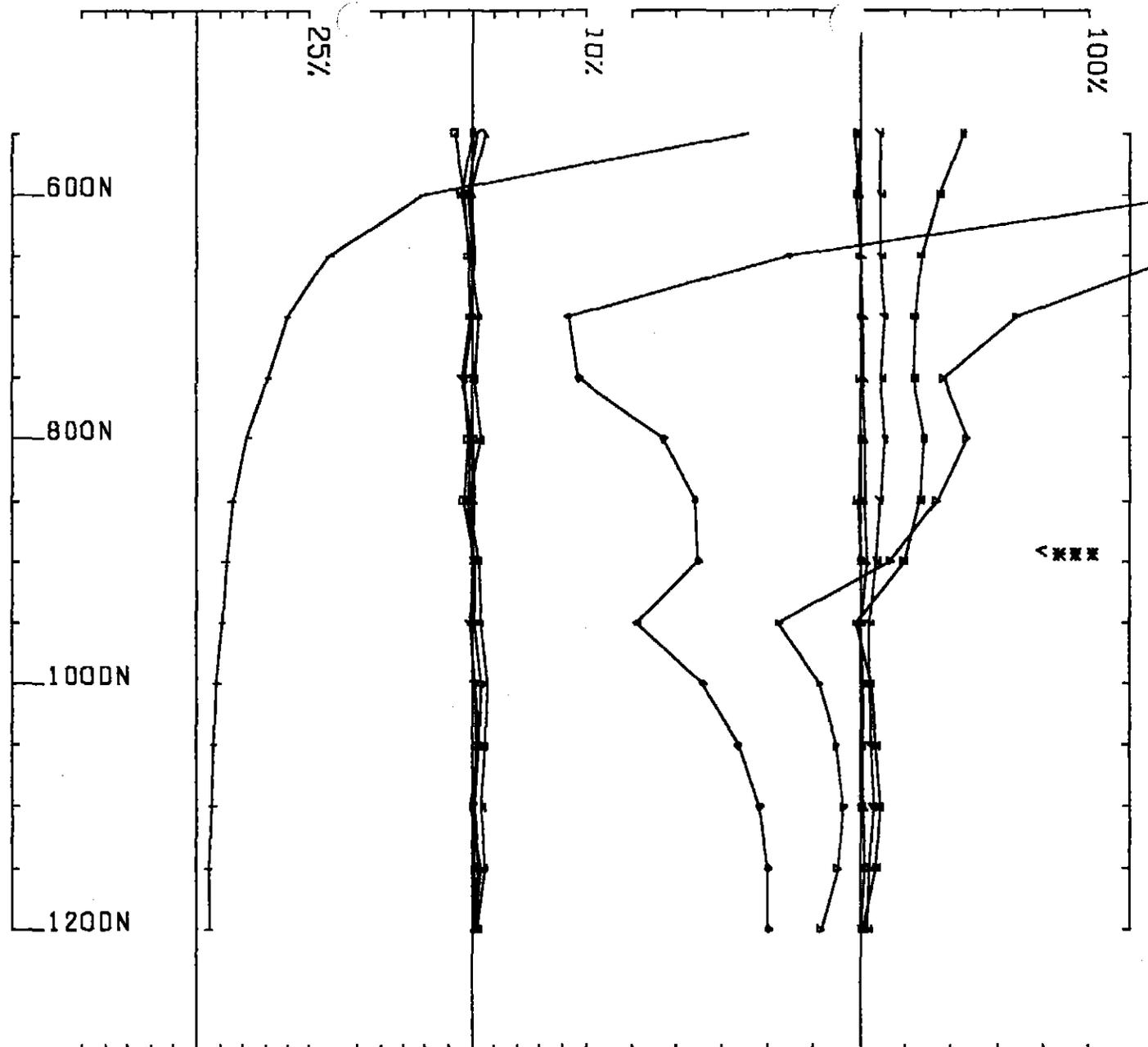
UTEM SURVEY AT BASIN LAKE FOR ABERFOYLE RESOURCES SEPTEMBER 1994
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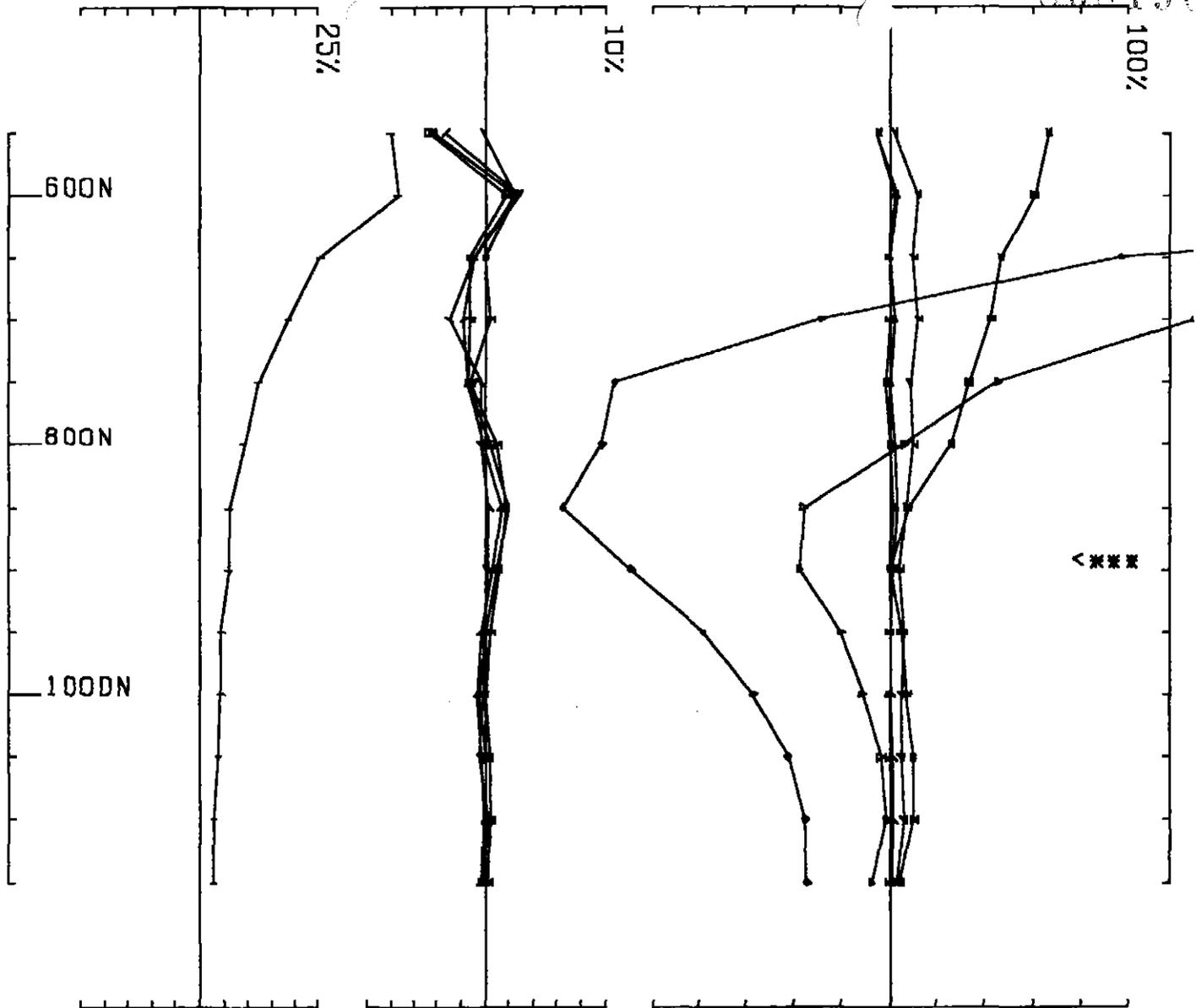
UTEM SURVEY AT BASIN LAKE FOR ABERFOYLE RESOURCES SEPTEMBER 1994
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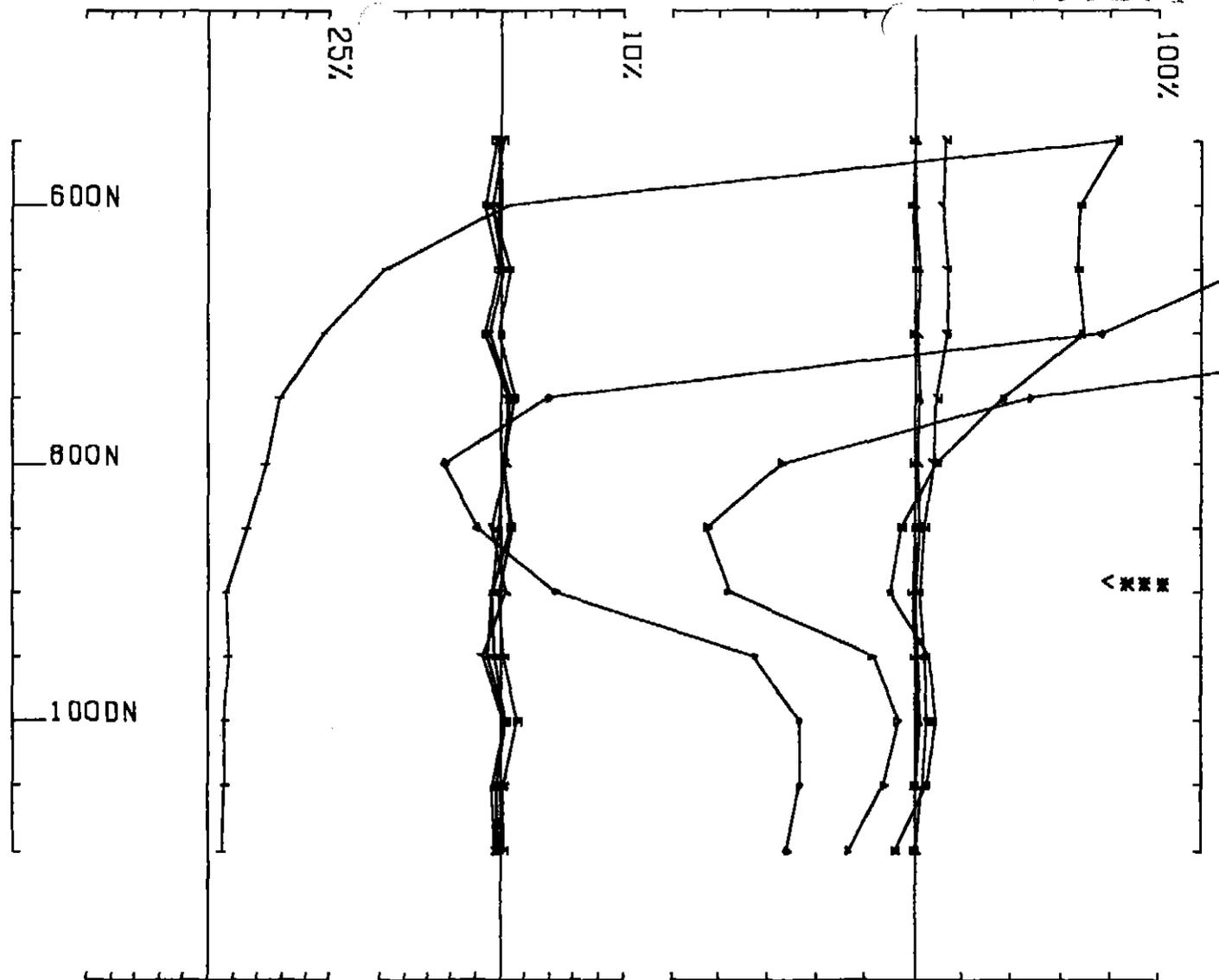
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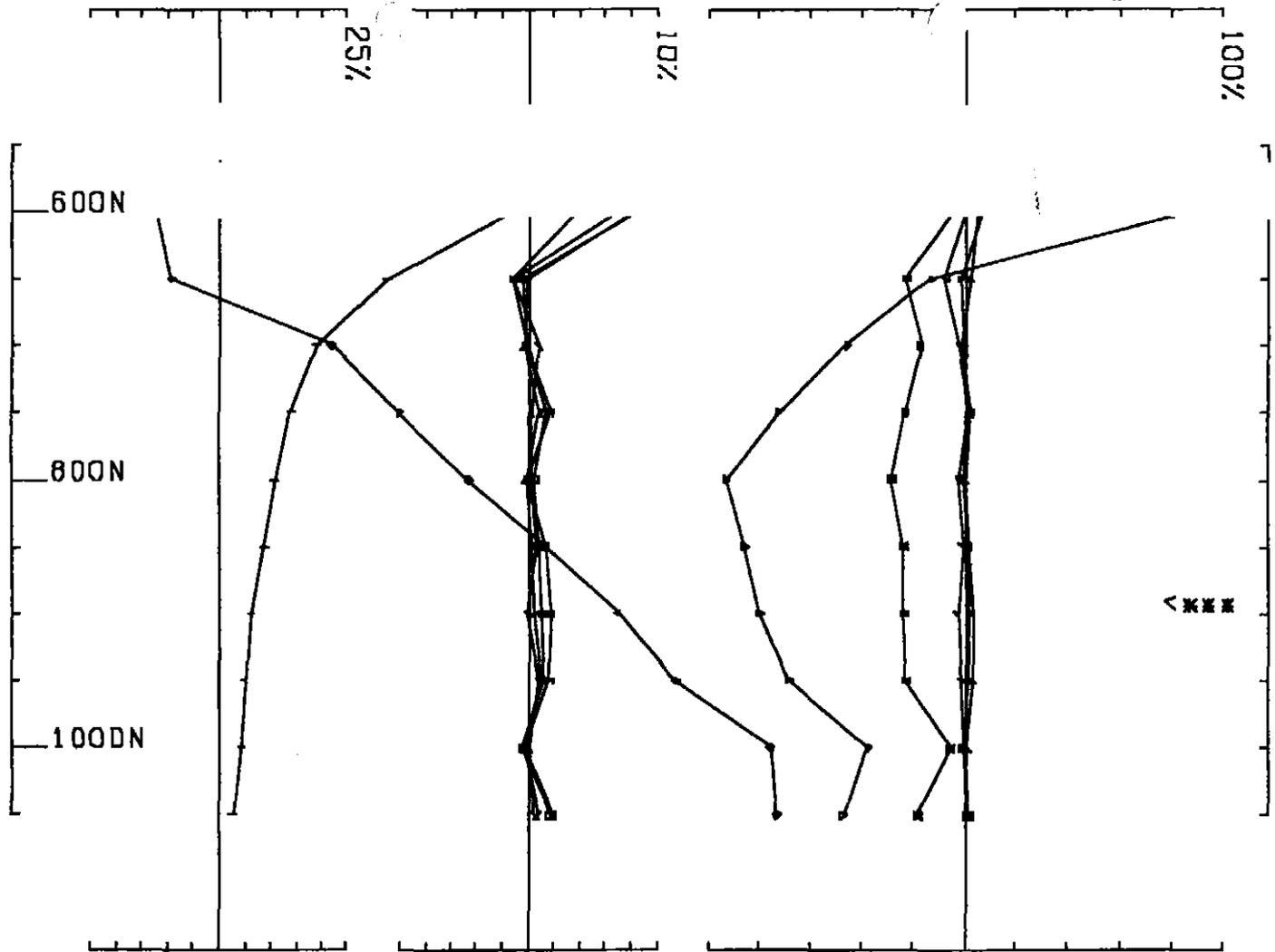
UTEM SURVEY AT BASIN LAKE FOR ABERFOYLE RESOURCES SEPTEMBER 1994
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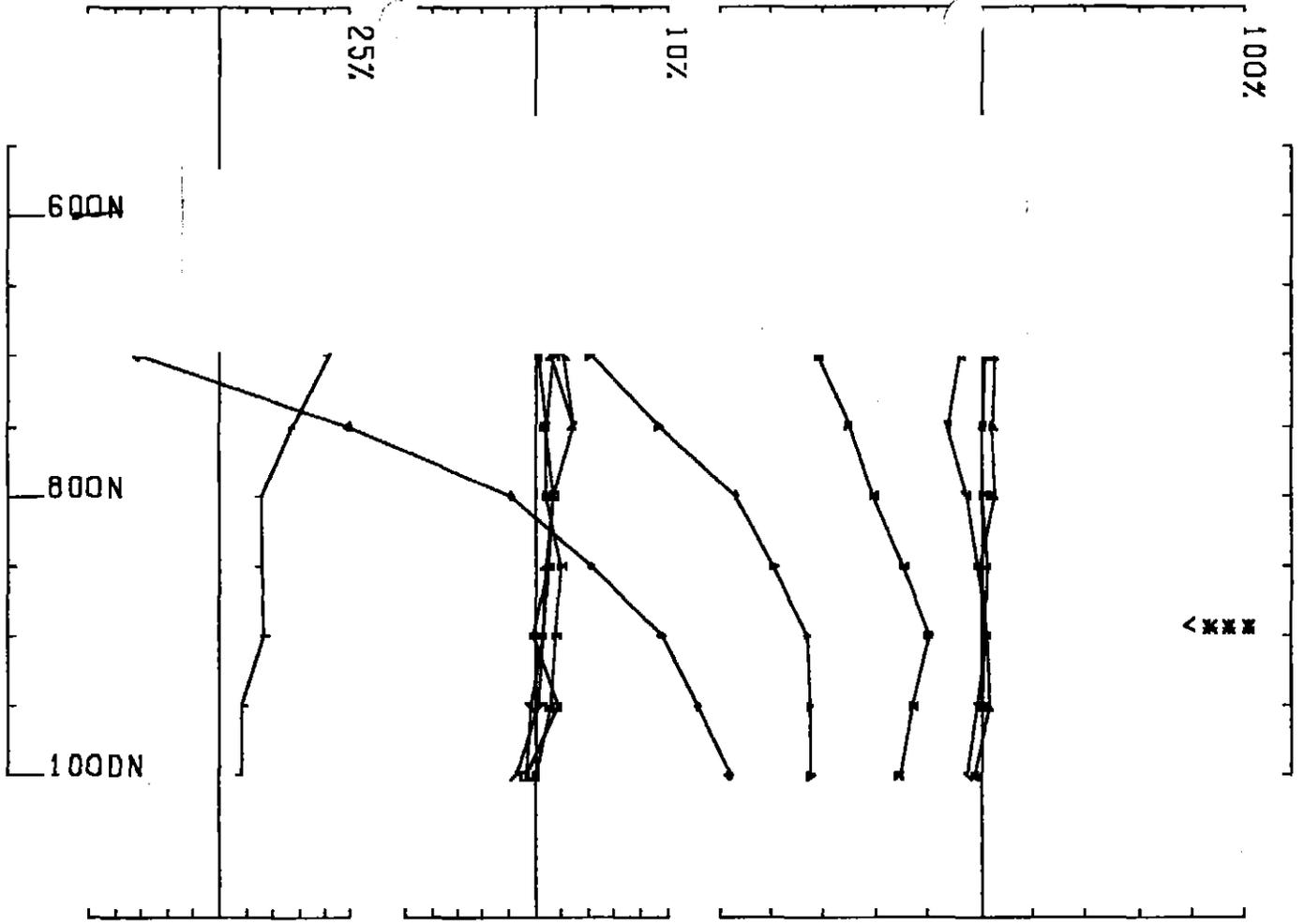
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CONDUCTED BY LAMONTAGNE GEOPHYSICS LTD JOB 9403 BASE FREQ 1HZ 26.23
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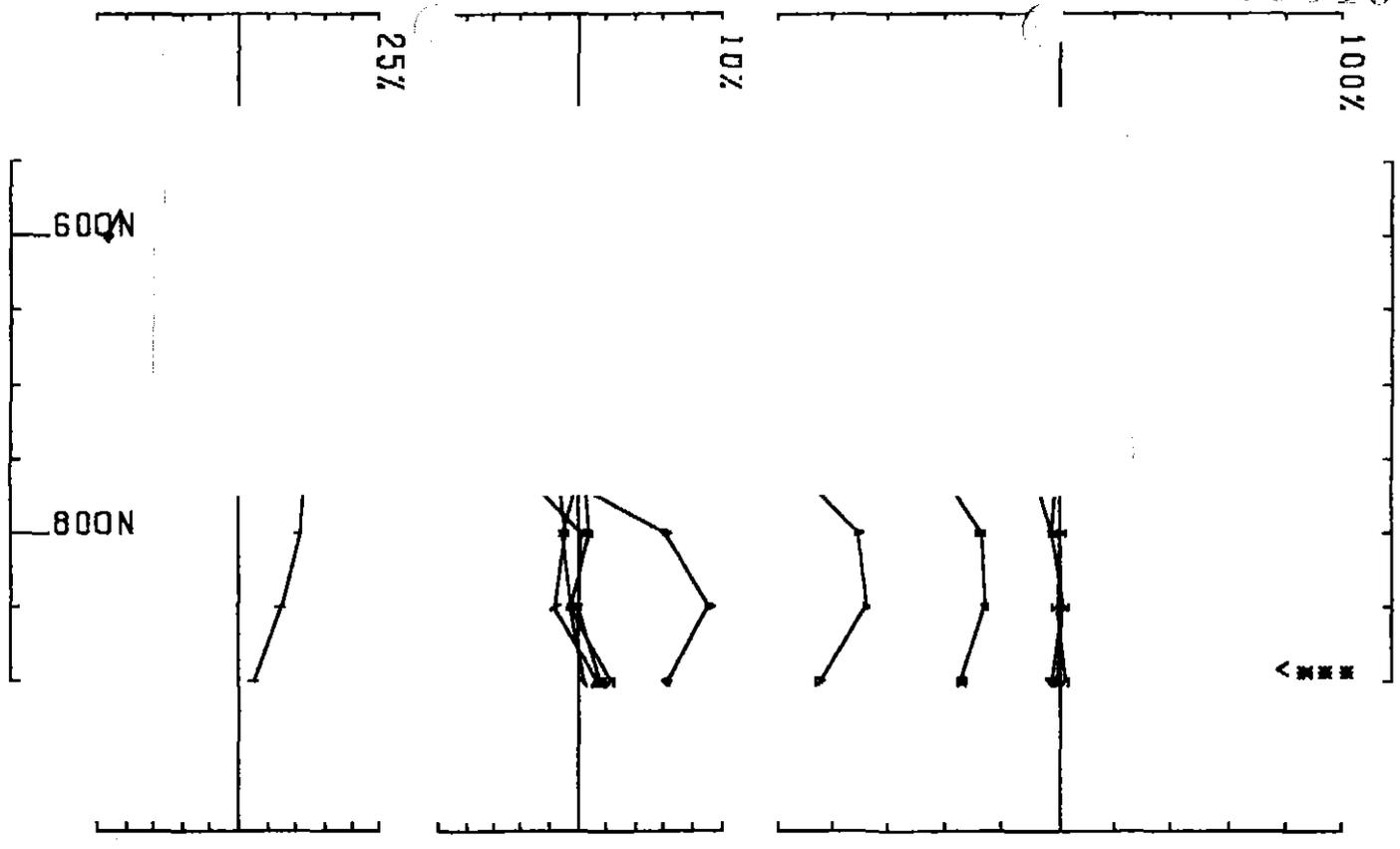
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UTEM SURVEY AT BASIN LAKE FOR ABERFOYLE RESOURCES SEPTEMBER 1994
 CONDUCTED BY LAMONTAGNE GEOPHYSICS LTD JOB 9403 BASE FREQ 1HZ 26.23
 LOOP NO 1 LINE 400 E COMPONENT HZ SECONDARY FIELD CH1 POINT NORM.



UTEM SURVEY AT BASIN LAKE FOR ABERFOYLE RESOURCES SEPTEMBER 1994
CONDUCTED BY LAMONTAGNE GEOPHYSICS LTD JOB 0403 BASE FREQ (HZ) 26-23
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UTEM SURVEY AT BASIN LAKE FOR ABERFOYLE RESOURCES SEPTEMBER 1994
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 LOOP NO 1 LINE 600 E COMPONENT HZ SECONDARY FIELD CH1 POINT NORM.

OPEN FILE

838135

Aberfoyle Resources Limited

EXPLORATION DIVISION

A.C.N. 004 664 108

LAKE MARGARET EL 5/85

TASMANIA

MICROFILMED
FICHE No. 013339 - 45

Technical Progress Report

for the period

October

September 1994

2

Plates

94-3338
Vol 2/2

Prepared by:

R Lewis

**R. Lewis
GEOLOGIST**

Endorsed by:

D.B. Wallace

**D.B. Wallace
REGIONAL EXPLORATION
MANAGER**

Distribution

- Aberfoyle - Burnie (1/4)
- Aberfoyle - Hawthorn (2/4)
- Department of Mines - Hobart (3/4)
- CRA Exploration - Canberra (4/4)

Internal Report No.: Lake Margaret 11

PH:\ABERFOYLE\EL5\WWW\WORD\REPORTS\6AR84.DOC

PROSPECT: img
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 N: 0
 RL: -36.8
 Forward extent: 10.0
 Backward extent: 10.0
 Section Strike: 90.0
 Section Length: 57.0
 PDF file: sh200tc1.pdf
 PCF file: sh200tc1.pcf
 PLOTfile: smarg77.pit

HOLE LEGEND - RHS:

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 Units per mm: 5.000
 Max dist in mm: 20

* HISTOGRAM *
 gch Pb (ppm)
 Base value: 0.000
 Units per mm: 30.000
 Max dist in mm: 20

* HISTOGRAM *
 gch Zn (ppm)
 Base value: 0.000
 Units per mm: 30.000
 Max dist in mm: 20

* HISTOGRAM *
 gch Ag (ppm)
 Base value: 0.000
 Units per mm: 1.000
 Max dist in mm: 20

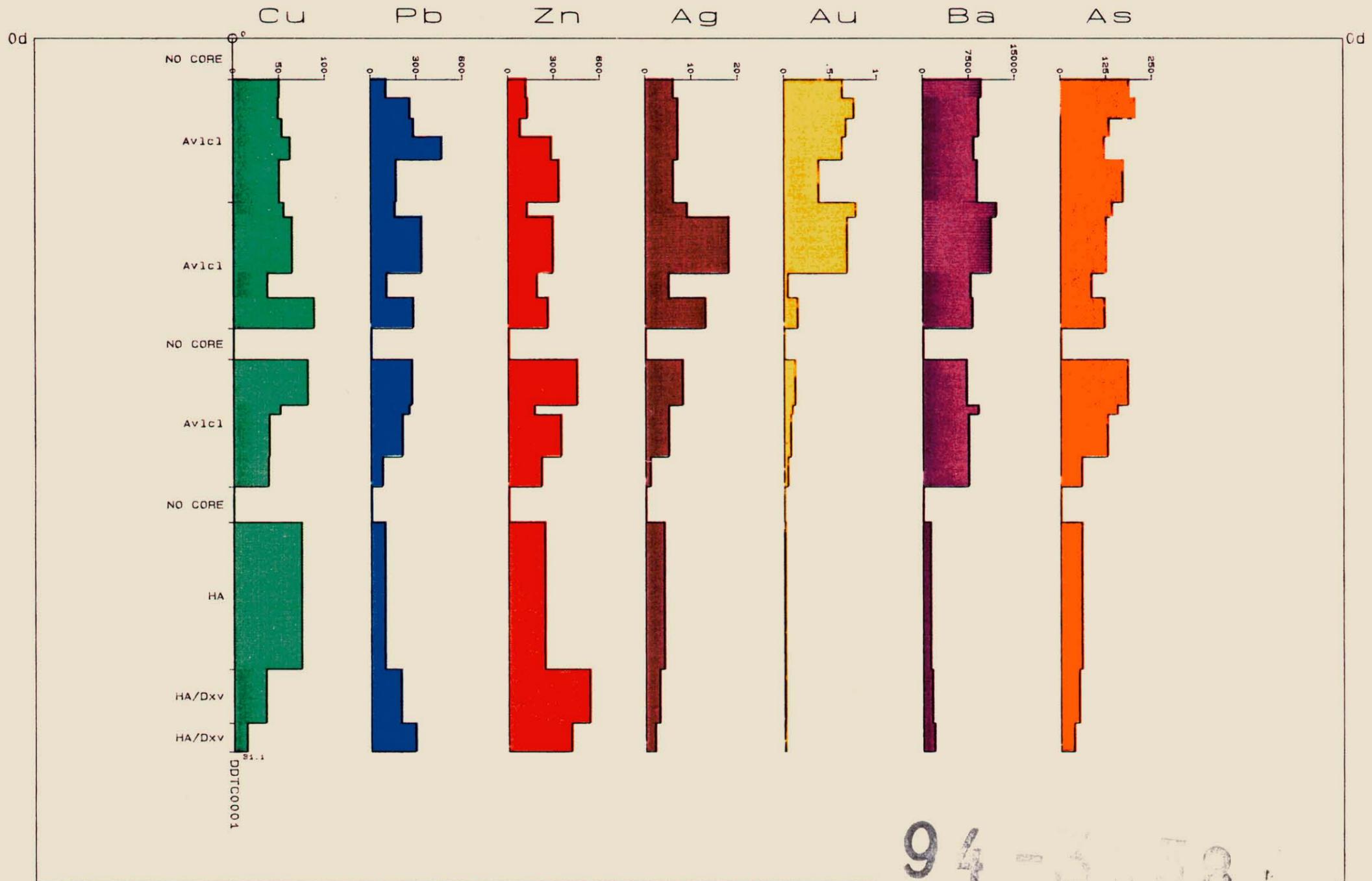
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 Units per mm: 0.500
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* HISTOGRAM *
 gch Ba (ppm)
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 Units per mm: 750.000
 Max dist in mm: 20

* HISTOGRAM *
 gch As (ppm)
 Base value: 0.000
 Units per mm: 12.500
 Max dist in mm: 20

HOLE LEGEND - LHS:

* ANNOTATION *
 geo Rock Type



94-3058

5 cm

Aberfoyle Resources Limited
 EXPLORATION DIVISION

REVISIONS			
Init.	Date	Init.	Date

Tasmania
 Lake Margaret E.L.5/85
 Geochemical Profiles
 DDH TC-1

Compiled: RAS
 Drawn: RdeB
 Traced:
 Checked: RAS
 Plate No.: LMAR677

Location Code:

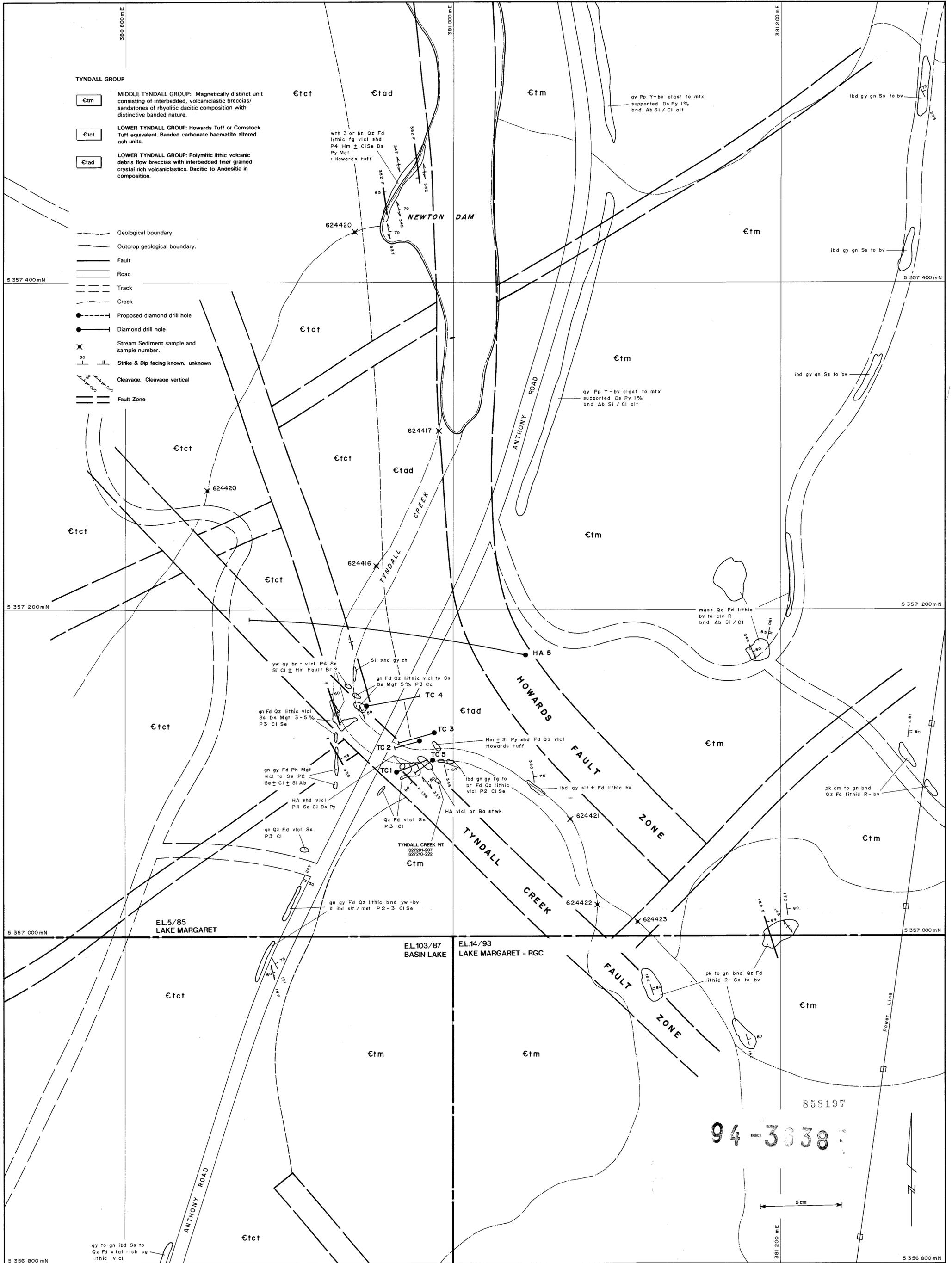
Scale: 1 : 200

Date: 05/11/93

TYNDALL GROUP

- €tm** MIDDLE TYNDALL GROUP: Magnetically distinct unit consisting of interbedded, volcanoclastic breccias/sandstones of rhyolitic dacitic composition with distinctive banded nature.
- €tct** LOWER TYNDALL GROUP: Howards Tuff or Comstock Tuff equivalent. Banded carbonate haematite altered ash units.
- €tad** LOWER TYNDALL GROUP: Polymictic lithic volcanic debris flow breccias with interbedded finer grained crystal rich volcanoclastics. Dacitic to Andesitic in composition.

- Geological boundary.
- Outcrop geological boundary.
- Fault
- Road
- Track
- Creek
- Proposed diamond drill hole
- Diamond drill hole
- Stream Sediment sample and sample number.
- Strike & Dip facing known, unknown
- Cleavage, Cleavage vertical
- Fault Zone



858197
94-3838

5 cm

Aberfoyle Resources Limited
EXPLORATION DIVISION

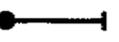
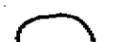
WESTERN TASMANIA
E.L. 5/85 LAKE MARGARET
TYNDALL CREEK PROSPECT AREA
GEOLOGY

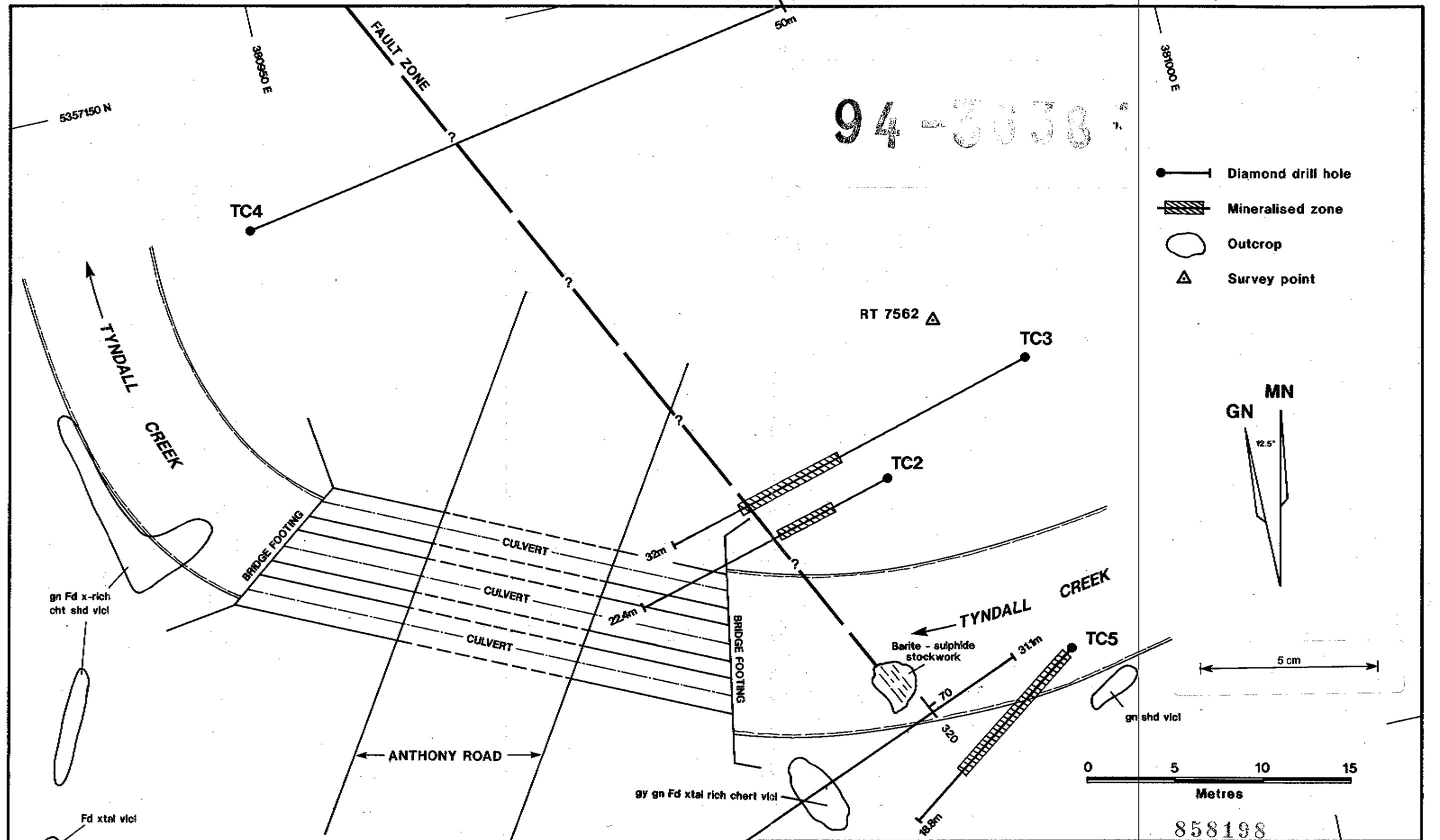
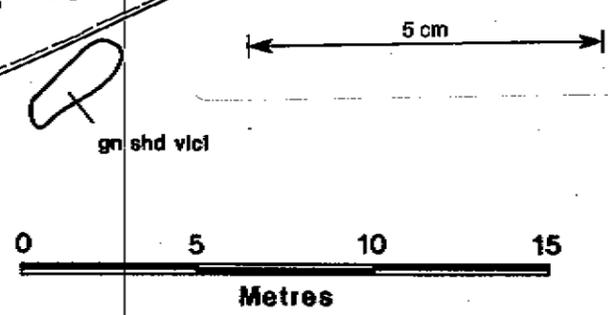
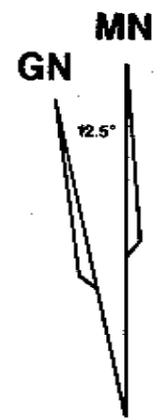
Compiled: R.A.S.
Drawn: J.M.S.
Traced:
Checked: R.A.S.
Plate No: L.MARG. 76

REVISIONS			
Init.	Date	Init.	Date

Location Code: Scale: 1:1000 Date: October 1993

94-3038

-  Diamond drill hole
-  Mineralised zone
-  Outcrop
-  Survey point



858198

Aberfoyle Resources Limited
EXPLORATION DIVISION

REVISIONS			
Init.	Date	Init.	Date

WESTERN TASMANIA
LAKE MARGARET E.L. 5/85
TYNDALL CREEK DRILLING

Compiled : **R.S.**
Drawn : **J.M.S.**
Traced :
Checked : **S.R.**
Plate No. : **L MARG 74**

Location Code : Scale : 1 : 200 Date : October 1993

5357100 N

PROSPECT: lmg
SECTION definition:
E: 57.0
N: 0
RL: -36.8
Forward extent: 10.0
Backward extent: 10.0
Section Strike: 90.0
Section Length: 57.0
PDF file: mh200tc2.pdf
PCF file: mh200tc2.pcf
PLOTfile: lmarg78.plt

HOLE LEGEND - RHS:

HISTOGRAM #
gch Cu [ppm]
Base value: .000
Units per mm: 100.000
Max dist in mm: 20

HISTOGRAM #
gch Pb [ppm]
Base value: .000
Units per mm: 750.000
Max dist in mm: 20

HISTOGRAM #
gch Zn [ppm]
Base value: .000
Units per mm: 1000.000
Max dist in mm: 20

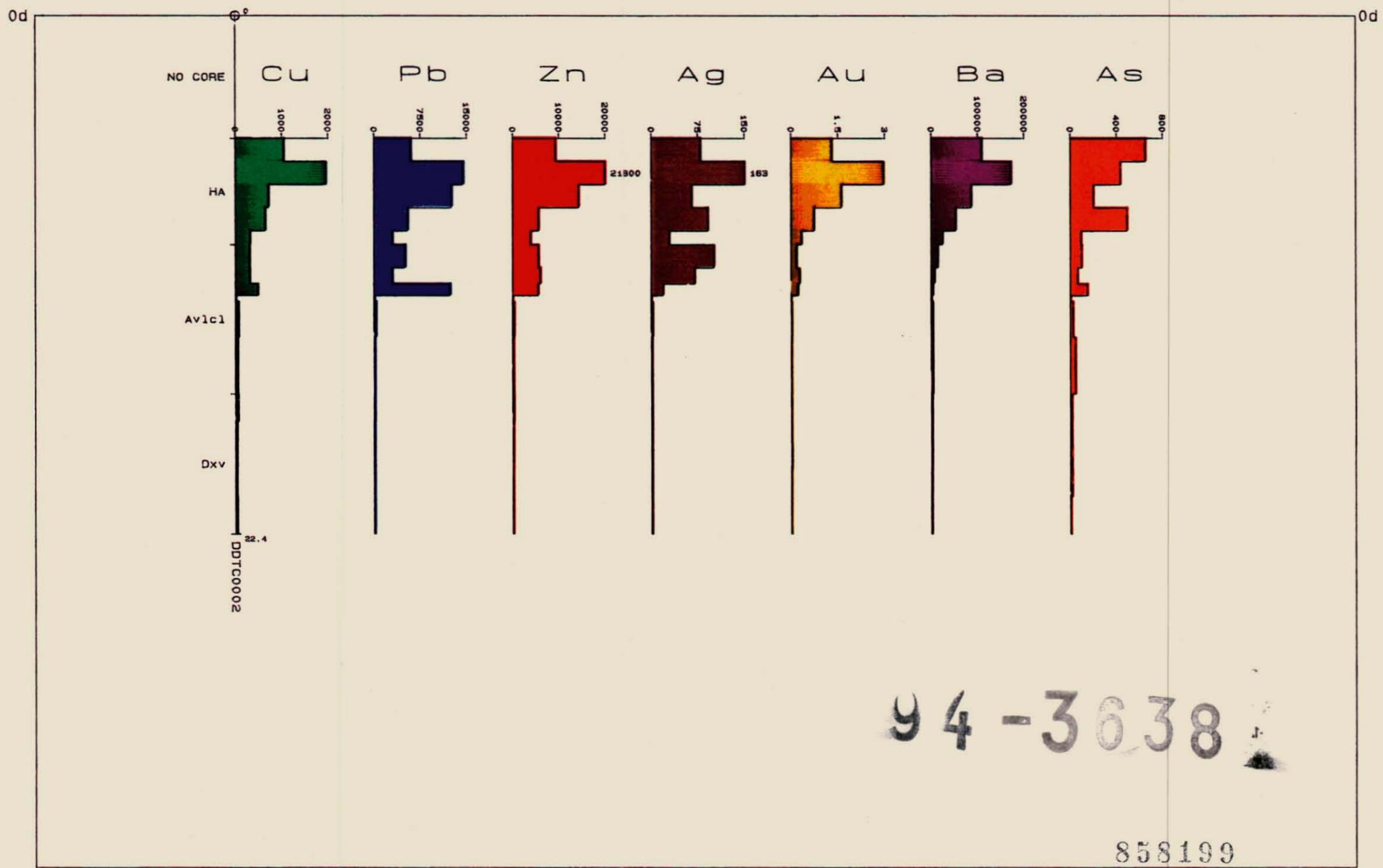
HISTOGRAM #
gch Ag [ppm]
Base value: .000
Units per mm: 7.500
Max dist in mm: 20

HISTOGRAM #
gch Au [ppm]
Base value: .000
Units per mm: .150
Max dist in mm: 20

HISTOGRAM #
gch Ba [ppm]
Base value: .000
Units per mm: #####
Max dist in mm: 20

HISTOGRAM #
gch As [ppm]
Base value: .000
Units per mm: 40.000
Max dist in mm: 20

HOLE LEGEND - LHS:
ANNOTATION #
geo Rock Type



Aberfoyle Resources Limited
EXPLORATION DIVISION

REVISIONS	
Init. Date	Init. Date

Tasmania
Lake Margaret E.L.5/85
Geochemical Profiles
DDH TC-2
Scale: 1 : 200
Date: 05/11/93

Compiled: RAS
Drawn: RdeB
Traced:
Checked: RAS
Plate No.: LMARG78

PROSPECT: img
 SECTION definition:
 E: 0 57.0
 N: 0 0
 RL: -38.8 0
 Forward extent: 10.0
 Backward extent: 10.0
 Section Strike: 90.0
 Section Length: 97.0
 PDF file: sh200tc5.pdf
 PCF file: sh200tc5.pcf
 PLOTfile: img81.plt

HOLE LEGEND - RHS:

* HISTOGRAM *
 gch Cu (ppm)
 Base value: .000
 Units per mm: 100.000
 Max dist in mm: 20

* HISTOGRAM *
 gch Pb (ppm)
 Base value: .000
 Units per mm: 2500.000
 Max dist in mm: 20

* HISTOGRAM *
 gch Zn (ppm)
 Base value: .000
 Units per mm: 5000.000
 Max dist in mm: 20

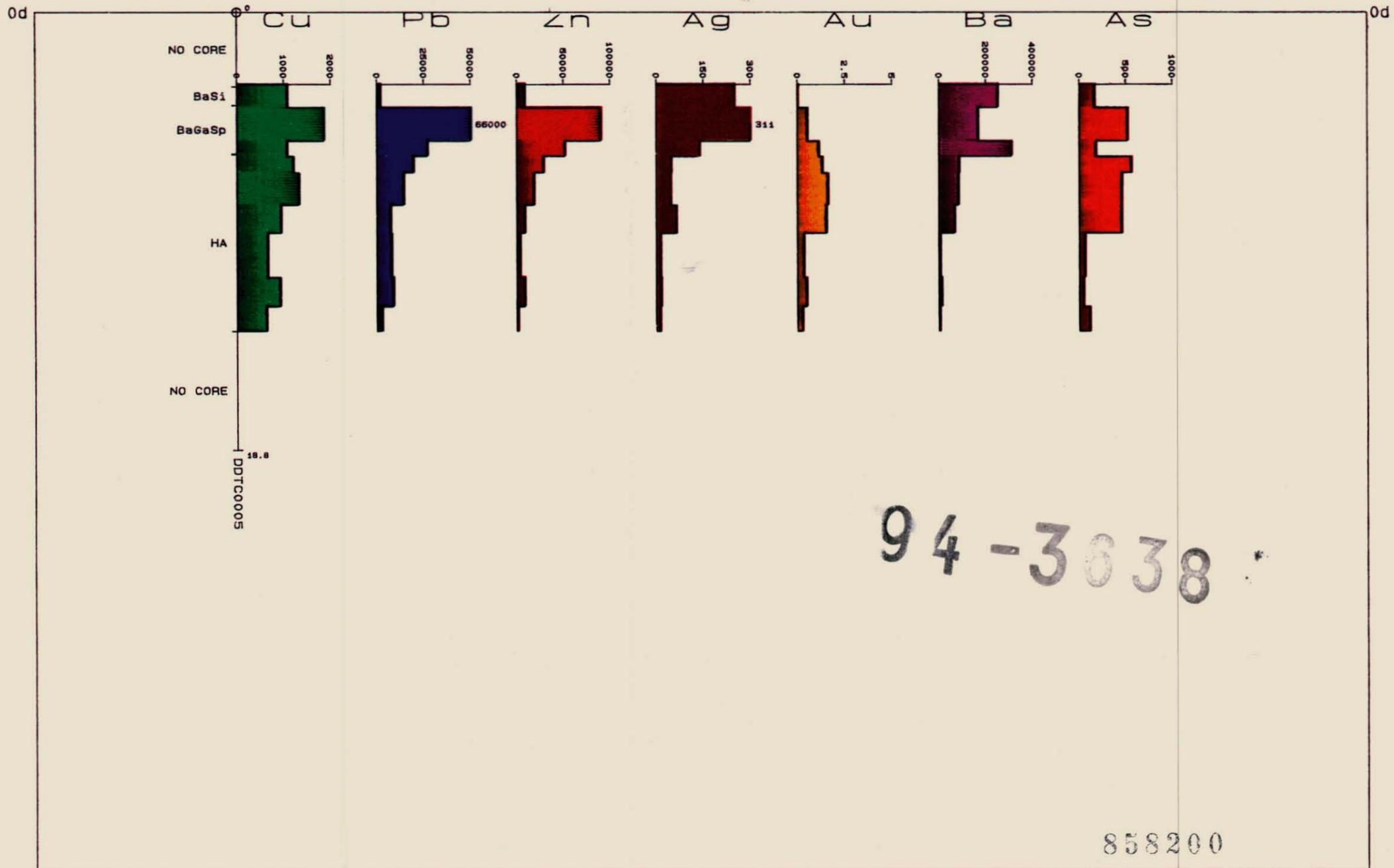
* HISTOGRAM *
 gch Ag (ppm)
 Base value: .000
 Units per mm: 15.000
 Max dist in mm: 20

* HISTOGRAM *
 gch Au (ppm)
 Base value: .000
 Units per mm: .250
 Max dist in mm: 20

* HISTOGRAM *
 gch Ba (ppm)
 Base value: .000
 Units per mm: 4000000
 Max dist in mm: 20

* HISTOGRAM *
 gch As (ppm)
 Base value: .000
 Units per mm: 50.000
 Max dist in mm: 20

HOLE LEGEND - LHS:
 * ANNOTATION *
 geo Rock Type



Aberfoyle Resources Limited
 EXPLORATION DIVISION

REVISIONS	
DATE	DATE

Tasmania
 Lake Margaret E.L.5/85
 Geochemical Profiles
 DDH TC-5
 Location Code: Scale: 1 : 200 Date: 05/11/93

Compiled: RAS
 Drawn: RdeB
 Traced:
 Checked: RAS
 Plate No.: LMAR881

PROSPECT: lmg
SECTION definition:
E: 0 114.0
N: 0
RL: -73.6
Forward extent: 10.0
Backward extent: 10.0
Section Strike: 90.0
Section Length: 114.0
PDF file: sh400tc4.pdf
PCF file: sh400tc4.pcf
PLOTfile: lmg80.pit

HOLE LEGEND - RHS:

HISTOGRAM #
gch Cu (ppm)
Base value: .000
Units per mm: 2.500
Max dist in mm: 20

HISTOGRAM #
gch Pb (ppm)
Base value: .000
Units per mm: 5.000
Max dist in mm: 20

HISTOGRAM #
gch Zn (ppm)
Base value: .000
Units per mm: 20.000
Max dist in mm: 20

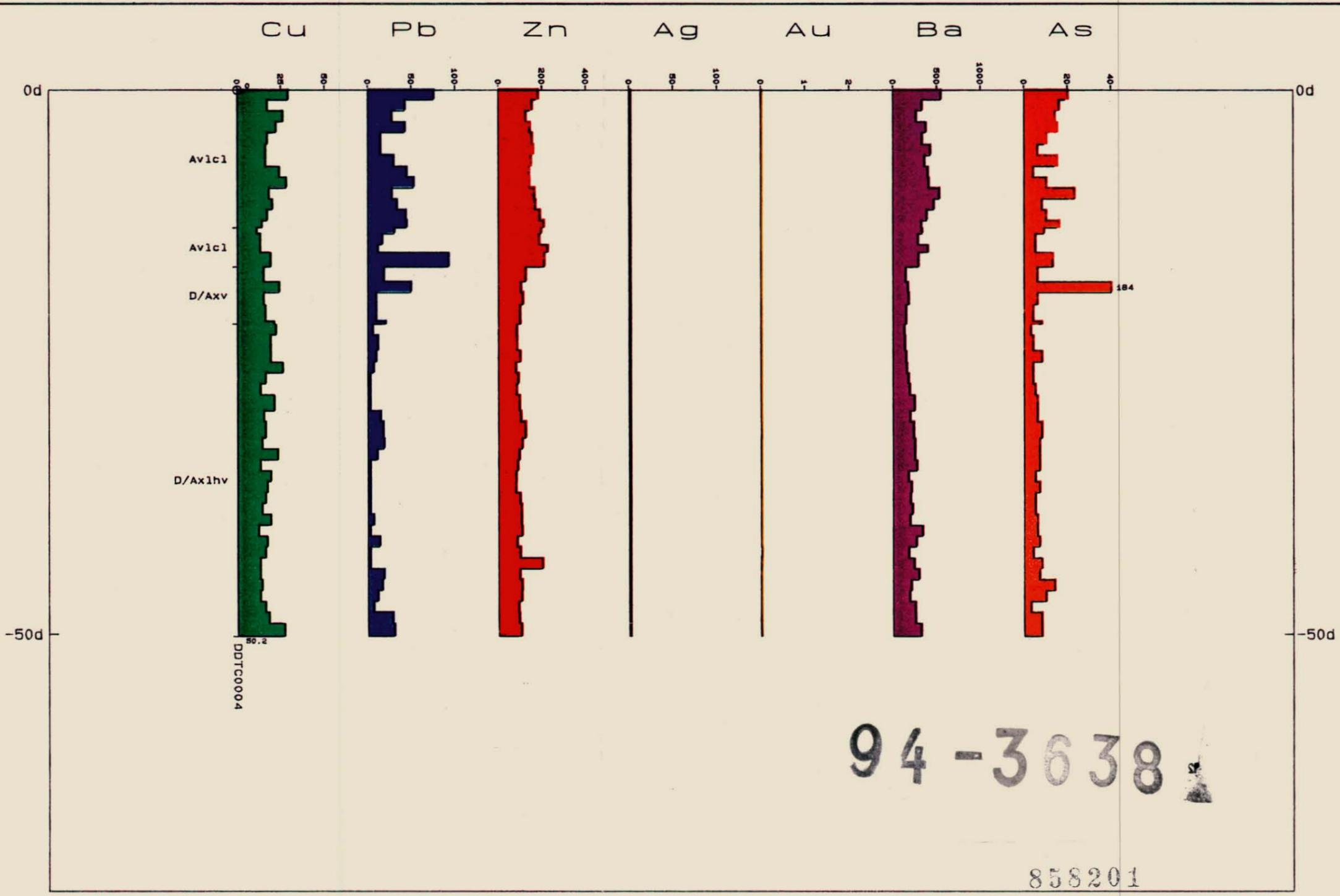
HISTOGRAM #
gch Ag (ppm)
Base value: .000
Units per mm: 5.000
Max dist in mm: 20

HISTOGRAM #
gch Au (ppm)
Base value: .000
Units per mm: 100
Max dist in mm: 20

HISTOGRAM #
gch Ba (ppm)
Base value: .000
Units per mm: 50.000
Max dist in mm: 20

HISTOGRAM #
gch As (ppm)
Base value: .000
Units per mm: 2.000
Max dist in mm: 20

HOLE LEGEND - LHS:
ANNOTATION #
geo Rock Type



5 cm

Aberfoyle Resources Limited
EXPLORATION DIVISION

REVISIONS			
Init.	Date	Init.	Date

Tasmania
Lake Margaret E.L.5/85
Geochemical Profiles
DDH TC-4

Compiled: RAS
Drawn: RdeB
Traced:
Checked: RAS
Plate No.: LMARG80

Location Code: Scale: 1 : 400 Date: 05/11/93

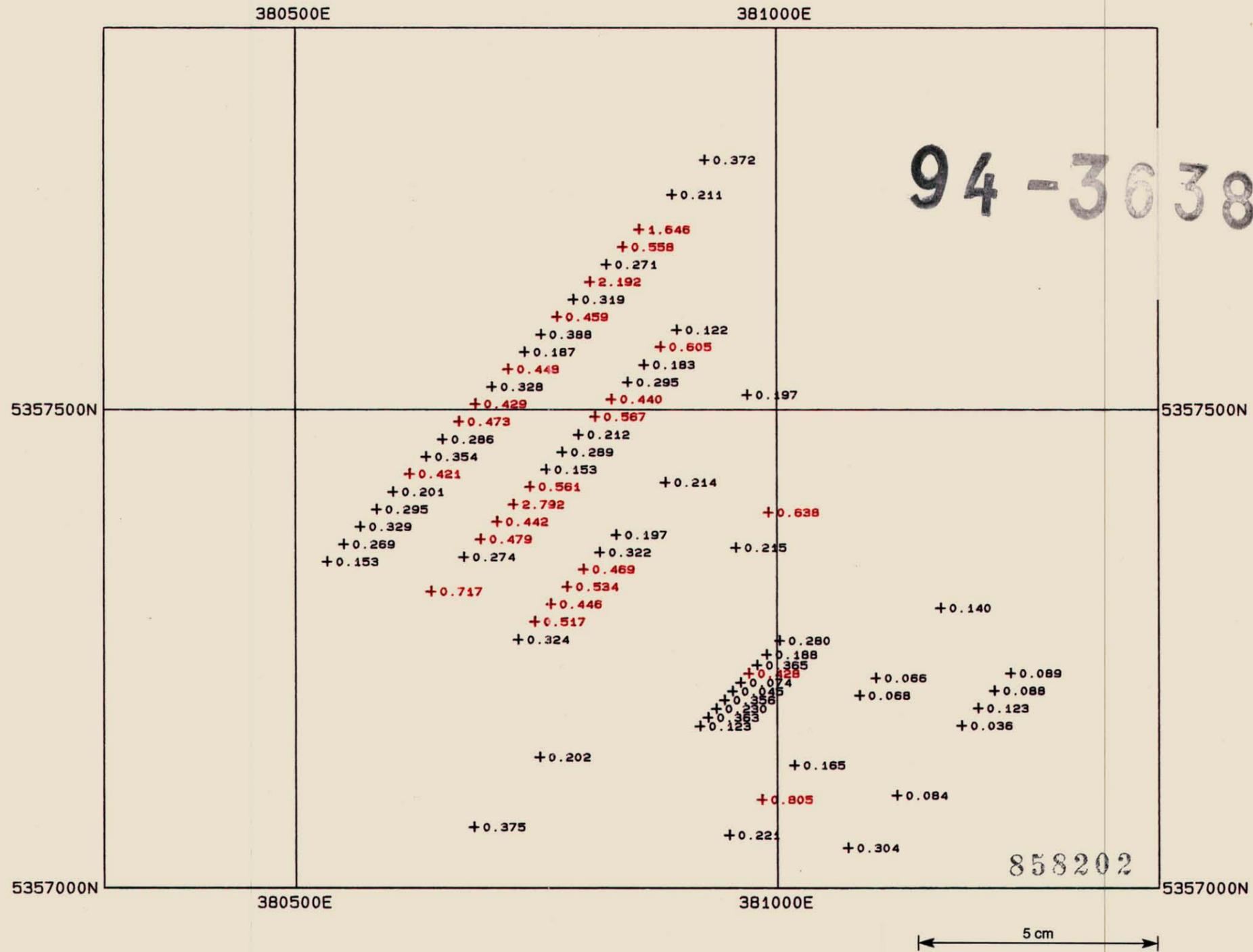
PROGRAM: gentry
 PROSPECT: lmg
 PLAN definition:
 GRID: AMS
 E: 380300.0 381400.0
 N: 5357000.0 5357900.0
 RL: 500.0 500.0
 Forward extent: 100.0
 Backward extent: 100.0
 PDF file: lmg888.pdf
 PLOT file: lmg888.pcf
 PLOT file: LMG888.plt
 CRI file: tc.cri

LEGEND - Right Side

LEGEND - Left Side

* LOCATION PLOT *

Dataset: sfg
 +
 Data: Ratio Colour Code
 Minimum Maximum
 Inclusive Exclusive
 0.000 0.400
 0.400 4.000



Aberfoyle Resources Limited
 EXPLORATION DIVISION

REVISIONS			
NO.	DATE	INIT.	DATE

Tasmania
 Lake Margaret E.L.5/85
 Tyndall Creek Prospect
 Wacker Geochemistry P205/T102
 Location Code: Scale: 1 : 5000 Date: 19/09/94

Compiled: RAS, RdeB
 Drawn:
 Traced:
 Checked: RAS
 Plate No.: LMG888

PROGRAM: gentry
 PROSPECT: lmj
 PLAN definition:
 GRID: AMS
 E: 380300.0 381400.0
 N: 5357000.0 5357900.0
 RL: 500.0 500.0
 Forward extent: 100.0
 Backward extent: 100.0
 PDF file: lmarg90.pdf
 PCF file: lmarg90.pcf
 PLOTfile: LMARG90.plt
 CRI file: tc.cri

LEGEND - Right Side

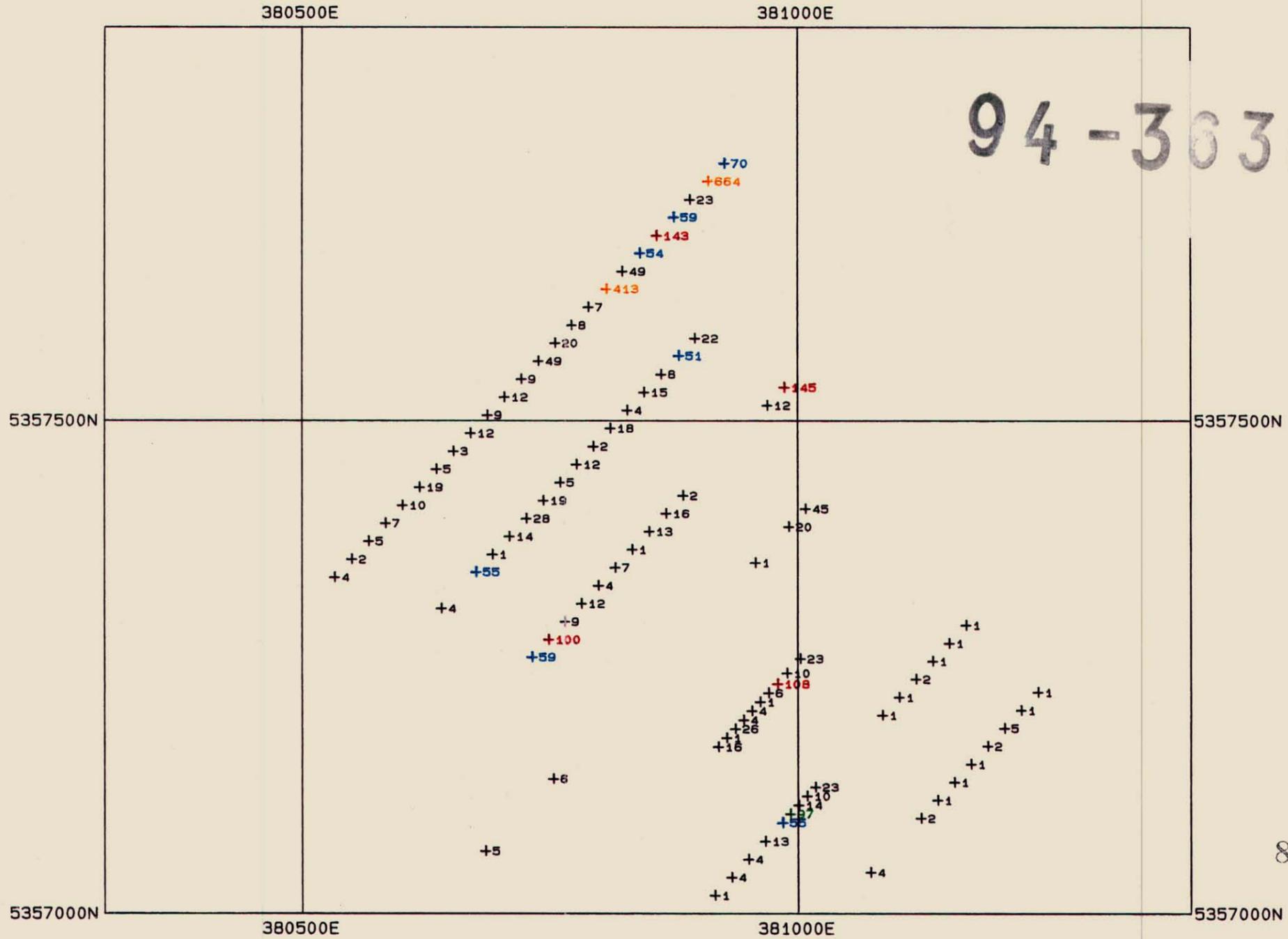
LEGEND - Left Side

W LOCATION PLOT W

Dataset: sfg

+

Data:	As	Code
Colour	Minimum	Maximum
Inclusive	Exclusive	
0.000	50.000	
50.000	75.000	
75.000	100.000	
100.000	200.000	
200.000	2000.000	



Aberfoyle Resources Limited
 EXPLORATION DIVISION

REVISIONS	
DATE	DESCRIPTION

Tasmania
 Lake Margaret E.L.5/85
 Tyndall Creek Prospect
 Wacker Geochemistry As
 Location Code: Scale: 1 : 5000 Date: 19/09/94

Compiled: RS, RdeB
Drawn:
Traced:
Checked: RS
Plate No.: LMARG90

PROGRAM: gentry
 PROSPECT: lmg
 PLAN definition:
 GRID: AMS
 E: 380300.0 381400.0
 N: 5357000.0 5357800.0
 RL: 500.0 500.0
 Forward extent: 100.0
 Backward extent: 100.0
 PDF file: lmg91.pdf
 PCF file: lmg91.pcf
 PLOTfile: LMARG91.plt
 ORI file: tc.cri

LEGEND - Right Side

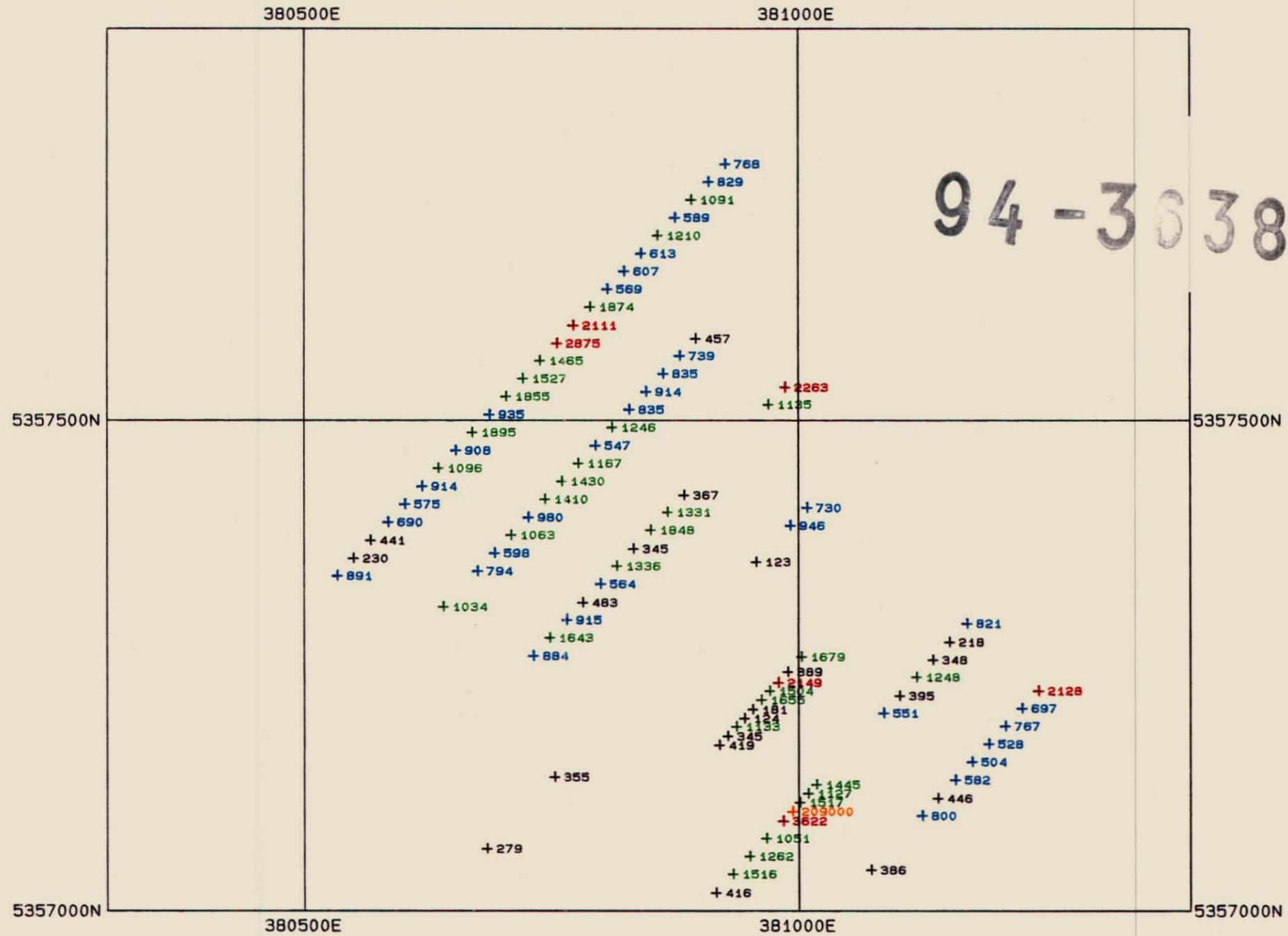
LEGEND - Left Side

* LOCATION PLOT *

Dataset: sfg

+

Data: Ba
 Colour Code
 Minimum Maximum
 Inclusive Exclusive
 0.000 500.000
 500.000 1000.000
 1000.000 2000.000
 2000.000 5000.000
 5000.000 500000.000



94-3638

5 cm

858205

Aberfoyle Resources Limited
 EXPLORATION DIVISION

REVISIONS			
DATE	BY	DATE	BY

Tasmania
 Lake Margaret E.L. 5/85
 Tyndall Creek Prospect
 Wacker Geochemistry Ba

Compiled: RS, AdeB
Drawn:
Traced:
Checked: RS
Plate No.: LMARG91

Location Code: Scale: 1 : 5000 Date: 19/09/94

PROGRAM: gentry
 PROSPECT: img
 PLAN definition:
 GRID: AMS
 E: 380300.0 381400.0
 N: 5357000.0 5357800.0
 RL: 500.0 500.0
 Forward extent: 100.0
 Backward extent: 100.0
 PDF file: img92.pdf
 PCF file: img92.pcf
 PLOTfile: LMARG92.plt
 CRI file: cc.cri

LEGEND - Right Side

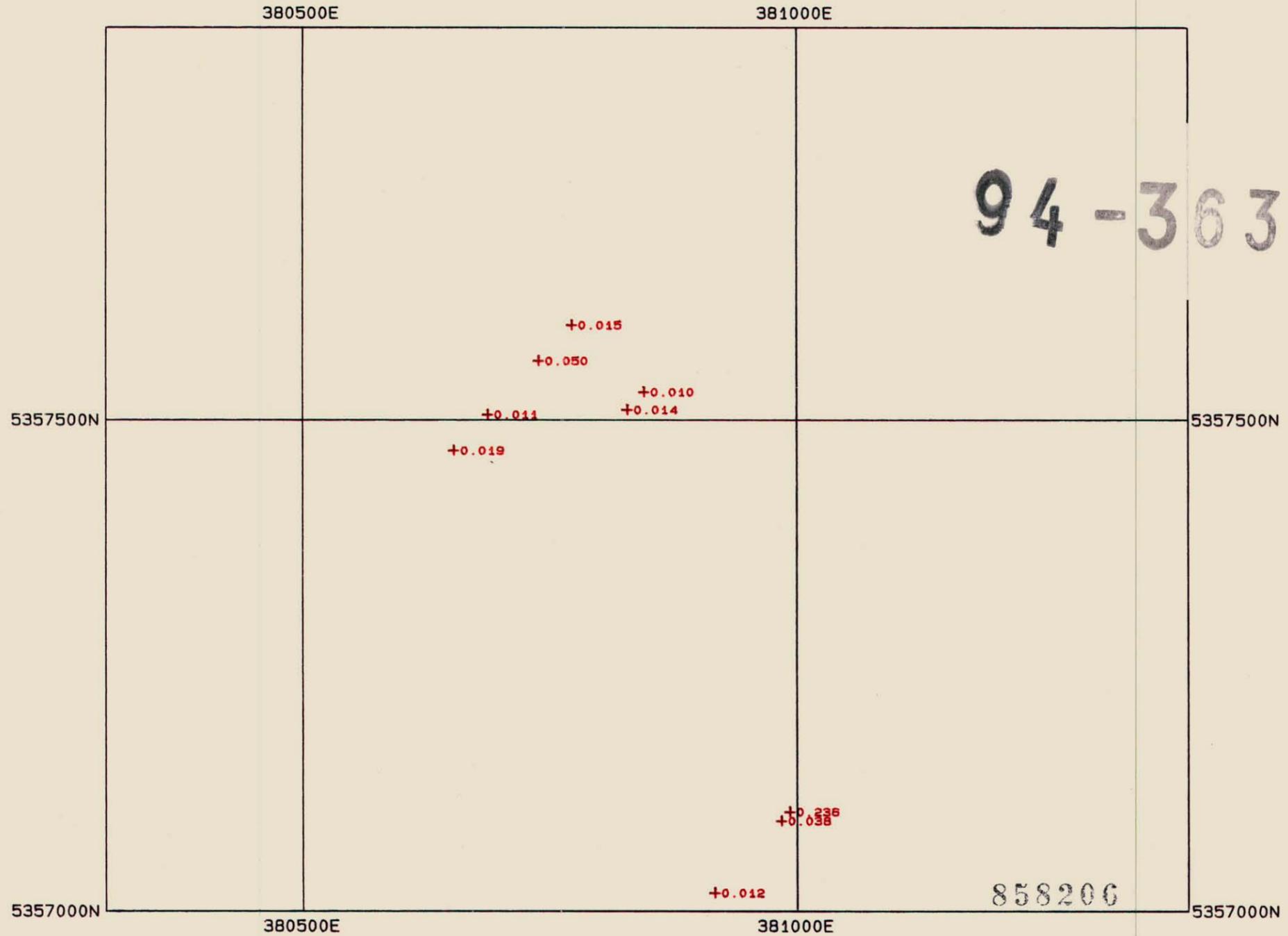
LEGEND - Left Side

* LOCATION PLOT *

Dataset: sfg

+

Data: AU
 Colour Code
 Minimum Maximum
 Inclusive Exclusive
 0.000 0.008
 0.008 80.000



Aberfoyle Resources Limited
 EXPLORATION DIVISION

REVISIONS	
DATE	DESCRIPTION

Tasmania
 Lake Margaret E.L. 5/85
 Tyndall Creek Prospect
 Wacker Geochemistry Au
 Location Code: Scale: 1 : 5000 Date: 19/09/94

Compiled: RS, RdeB
 Drawn:
 Traced:
 Checked: RS
 Plate No.: LMARG92

PROGRAM: gentry
 PROSPECT: img
 PLAN definition:
 GRID: AMS
 E: 380300.0 381400.0
 N: 5357000.0 5357900.0
 RL: 500.0 500.0
 Forward extent: 100.0
 Backward extent: 100.0
 PDF file: img96.pdf
 PCF file: img96.pcf
 PLOTfile: LMAR96.plt
 CRI file: cc.cri

LEGEND - Right Side

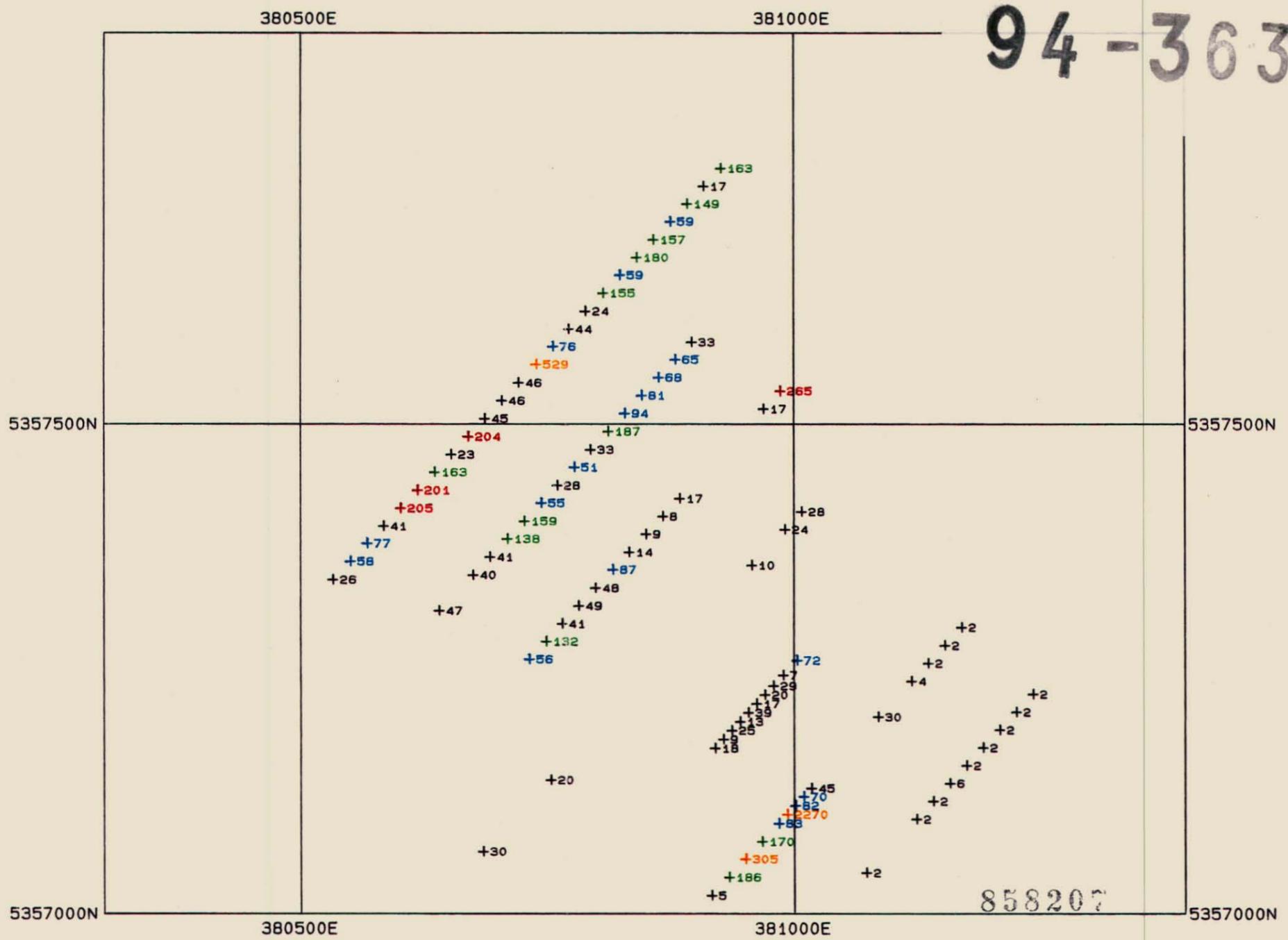
LEGEND - Left Side

* LOCATION PLOT *

Dataset: sfg

Data: Cu

Colour	Code
Minimum	Maximum
Inclusive	Exclusive
0.000	50.000
50.000	100.000
100.000	200.000
200.000	300.000
300.000	50000.000



94-3638

858207



Aberfeldy Resources Limited
 EXPLORATION DIVISION

REVISIONS	
DATE	BY

Tasmania
 Lake Margaret E.L.5/85
 Tyndall Creek Prospect
 Wacker Geochemistry Cu

Compiled: RS, RdeB
Drawn:
Traced:
Checked: RS
Plate No.: LMAR96

Location Code:

Scale: 1 : 5000

Date: 19/09/94

PROGRAM: gentry
 PROSPECT: img
 PLAN definition:
 GRID: AMS
 E: 380300.0 381400.0
 N: 5357000.0 5357900.0
 RL: 500.0 500.0
 Forward extent: 100.0
 Backward extent: 100.0
 PDF file: img95.pdf
 PCF file: img95.pcf
 PLDTfile: LMAR95.plt
 CRI file: co.cri

LEGEND - Right Side

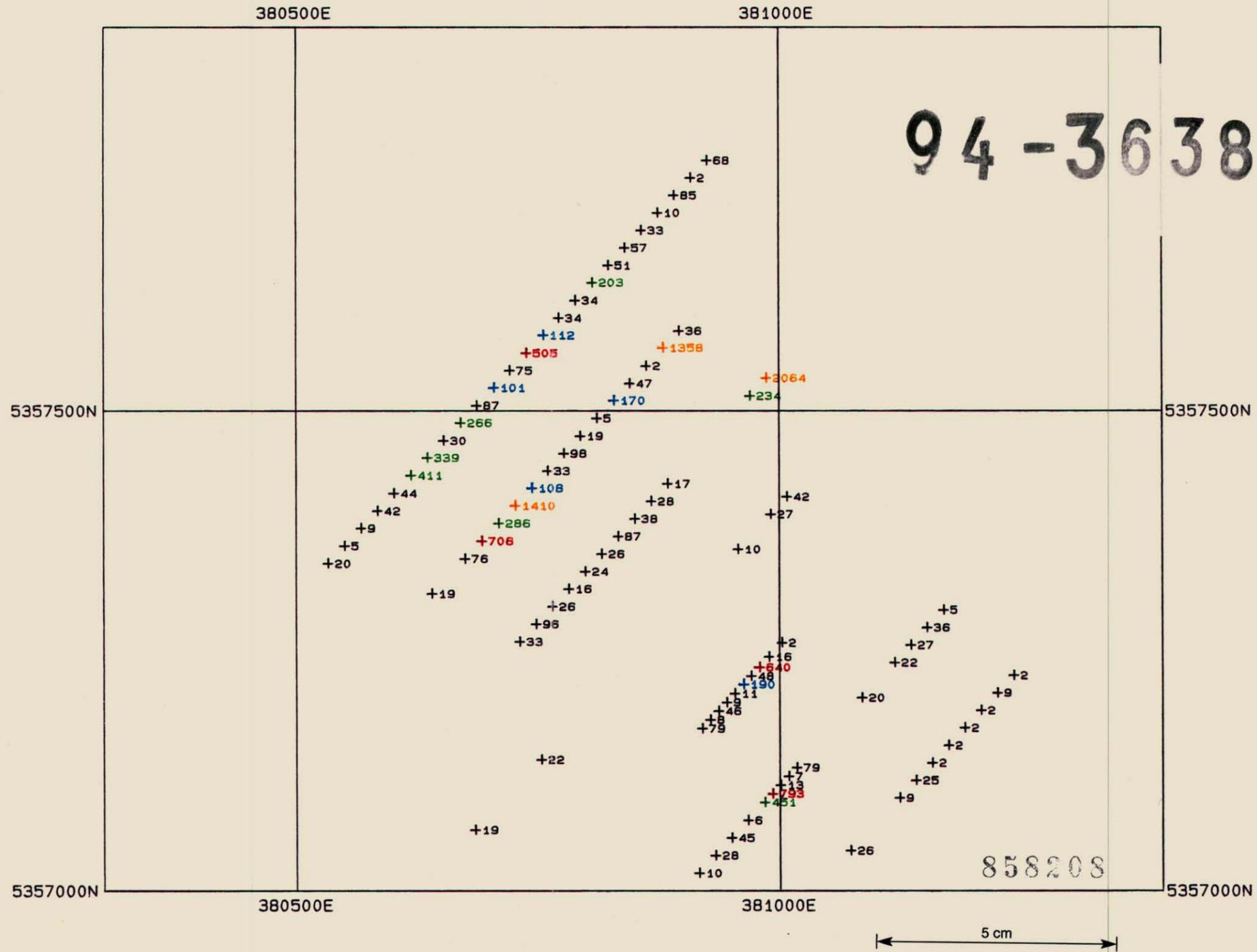
LEGEND - Left Side

* LOCATION PLOT *

Dataset: sfg

+
 +

Data:	Colour	Code
Minimum		Maximum
Inclusive		Exclusive
0.000		100.000
100.000		200.000
200.000		500.000
500.000		1000.000
1000.000		100000.000



Aberfoyle Resources Limited
 EXPLORATION DIVISION

REVISIONS			
Init.	Date	Init.	Date

Tasmania
 Lake Margaret E.L.5/85
 Tyndall Creek Prospect
 Wacker Geochemistry Pb

Compiled: RS, RdeB
 Drawn:
 Traced:
 Checked: RS
 Plate No.: LMAR95

Location Code:

Scale: 1 : 5000

Date: 19/09/94

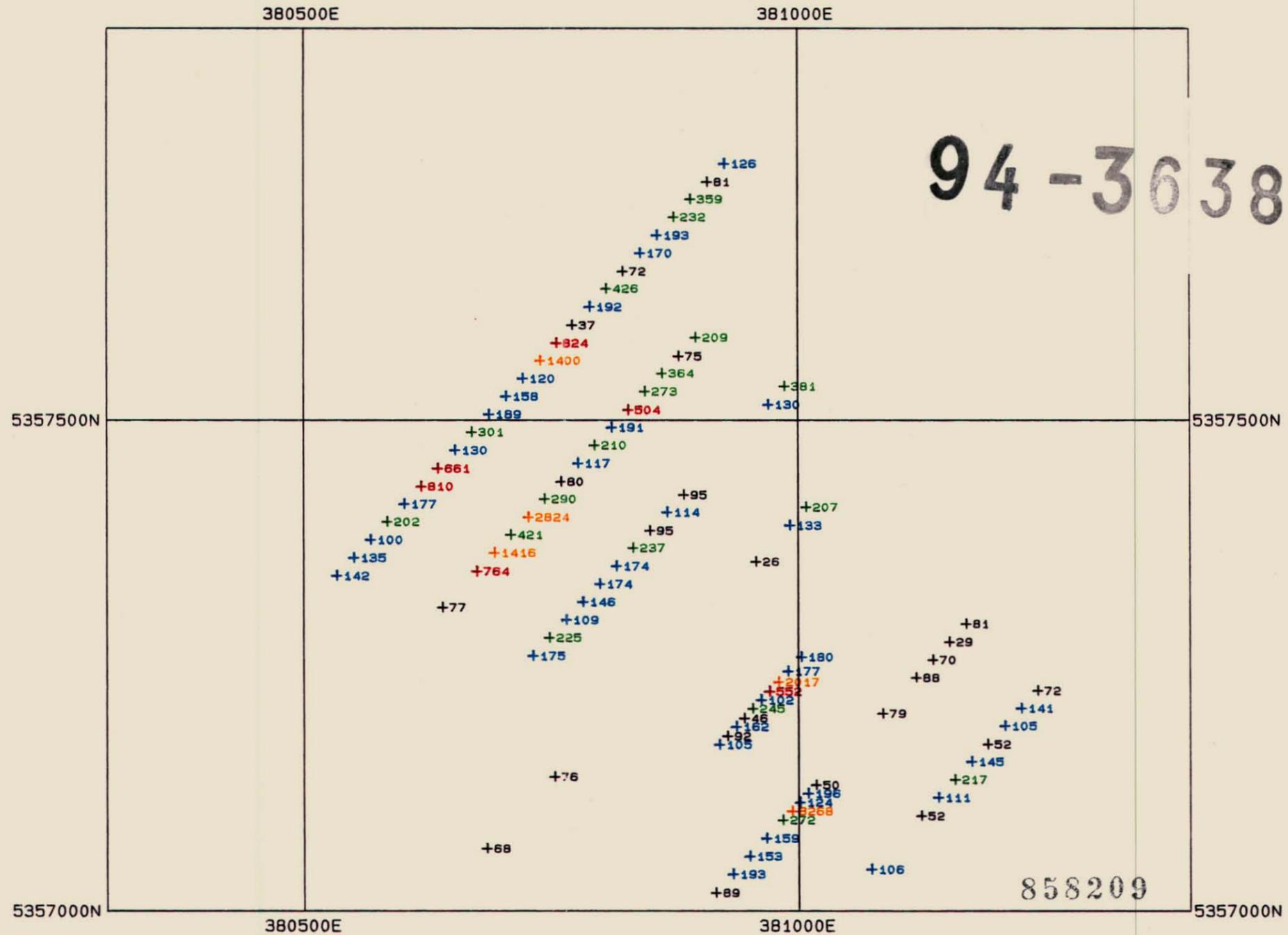
PROGRAM: gentry
 PROSPECT: img
 PLAN definition:
 GRID: AMS
 E: 380300.0 381400.0
 N: 5357000.0 5357000.0
 RL: 500.0 500.0
 Forward extent: 100.0
 Backward extent: 100.0
 PDF file: img94.pdf
 PCF file: img94.pcf
 PLOTfile: LMARG94.plt
 CRI file: cc.cri

LEGEND - Right Side

LEGEND - Left Side

* LOCATION PLOT *
 Dataset: sfg
 +
 Data: Zn

Colour	Code
Minimum	Maximum
Inclusive	Exclusive
0.000	100.000
100.000	200.000
200.000	500.000
500.000	1000.000
1000.000	100000.000



Aberfoyle Resources Limited
 EXPLORATION DIVISION

REVISIONS			
INIT.	DATE	INIT.	DATE

Tasmania
 Lake Margaret E.L. 5/85
 Tyndall Creek Prospect
 Wacker Geochemistry Zn

Compiled: RS, RdeB
Drawn:
Traced:
Checked: RS
Plate No.: LMARG94

Location Code: Scale: 1 : 5000 Date: 19/09/94

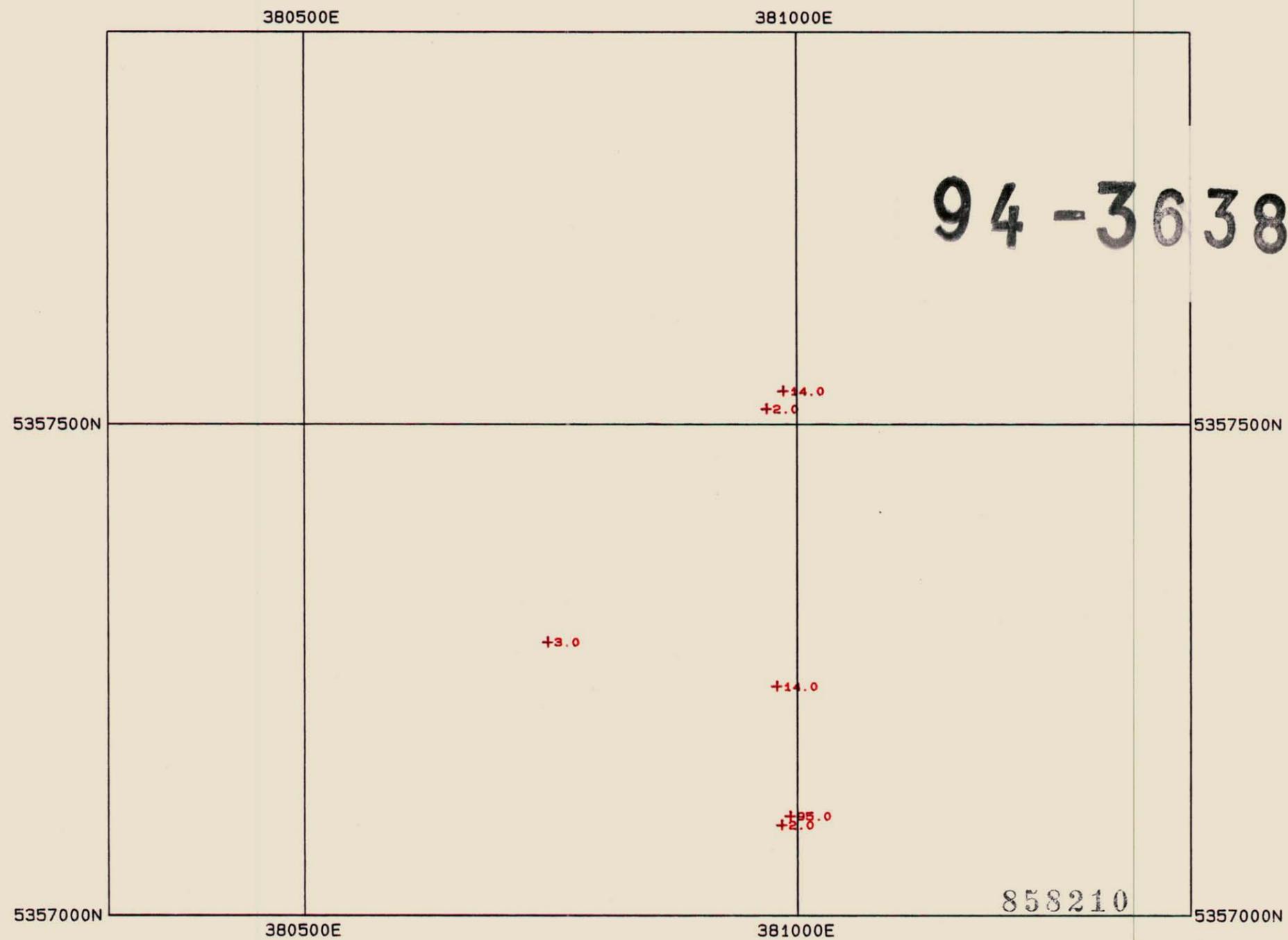
PROGRAM: gentry
 PROSPECT: lmg
 PLAN definition:
 GRID: AMS
 E: 380300.0 381400.0
 N: 5357000.0 5357900.0
 RL: 500.0 500.0
 Forward extent: 100.0
 Backward extent: 100.0
 PDF file: lmar93.pdf
 PCF file: lmar93.pcf
 PLOTfile: LMAR93.plt
 CRI file: tc.cri

LEGEND - Right Side

LEGEND - Left Side

W LOCATION PLOT #
 Dataset: sfg

Data: Ag
 Colour Minimum Maximum
 Inclusive Exclusive
 0.000 2.000
 2.000 200.000



Aberfoyle Resources Limited
 EXPLORATION DIVISION

REVISIONS	
INIT.	DATE

Tasmania
 Lake Margaret E.L.5/85
 Tyndall Creek Prospect
 Wacker Geochemistry Ag

Compiled: RS, RdeB
 Drawn:
 Traced:
 Checked: RS
 Plate No.: LMAR93

Location Code: Scale: 1 : 5000 Date: 19/09/94

PROGRAM: gentry
 PROSPECT: lmg
 PLAN definition:
 SRID: AMS
 E: 380300.0 381400.0
 N: 5357000.0 5357900.0
 RL: 500.0 500.0
 Forward extent: 100.0
 Backward extent: 100.0
 PDF file: lmg87.pdf
 PCF file: lmg87.pcf
 PLOTfile: LMARG87.plt
 CRI file: cc.cri

LEGEND - Right Side

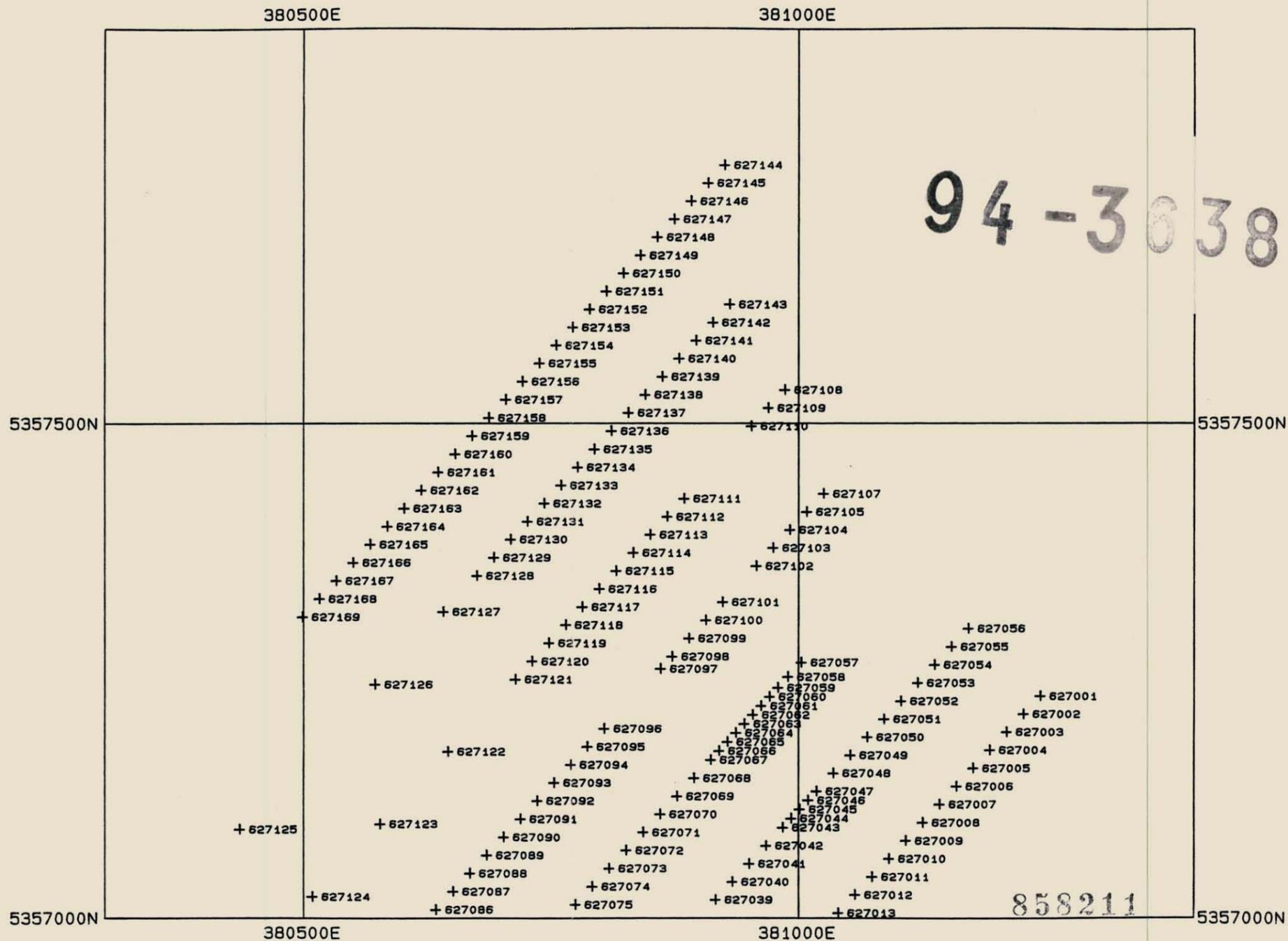
LEGEND - Left Side

LOCATION PLOT

Dataset: sfg

+

Data: Sample number



Aberfoyle Resources Limited
 EXPLORATION DIVISION

REVISIONS	
INIT.	DATE

Tasmania
 Lake Margaret E.L.5/85
 Tyndall Creek Prospect
 Sample Locations

Compiled: RS, RdeB
 Drawn:
 Traced:
 Checked: RS
 Plate No.: LMARG87

Location Code:

Scale: 1 : 5000

Date: 21/09/94

PROSPECT: lmg
SECTION definition:
E: 0 57.0
N: 0
AL: -36.8
Forward extent: 10.0
Backward extent: 10.0
Section Strike: 90.0
Section Length: 57.0
PDF file: sh200tc1.pdf
PCF file: sh200tc1.pcf
PLOTfile: lmg79.pit

HOLE LEGEND - RHS:

* HISTOGRAM *
gch Cu (ppm)
Base value: 000
Units per mm: 100.000
Max dist in mm: 20

* HISTOGRAM *
gch Pb (ppm)
Base value: 000
Units per mm: 1000.000
Max dist in mm: 20

* HISTOGRAM *
gch Zn (ppm)
Base value: 000
Units per mm: 1000.000
Max dist in mm: 20

* HISTOGRAM *
gch Ag (ppm)
Base value: 000
Units per mm: 25.000
Max dist in mm: 20

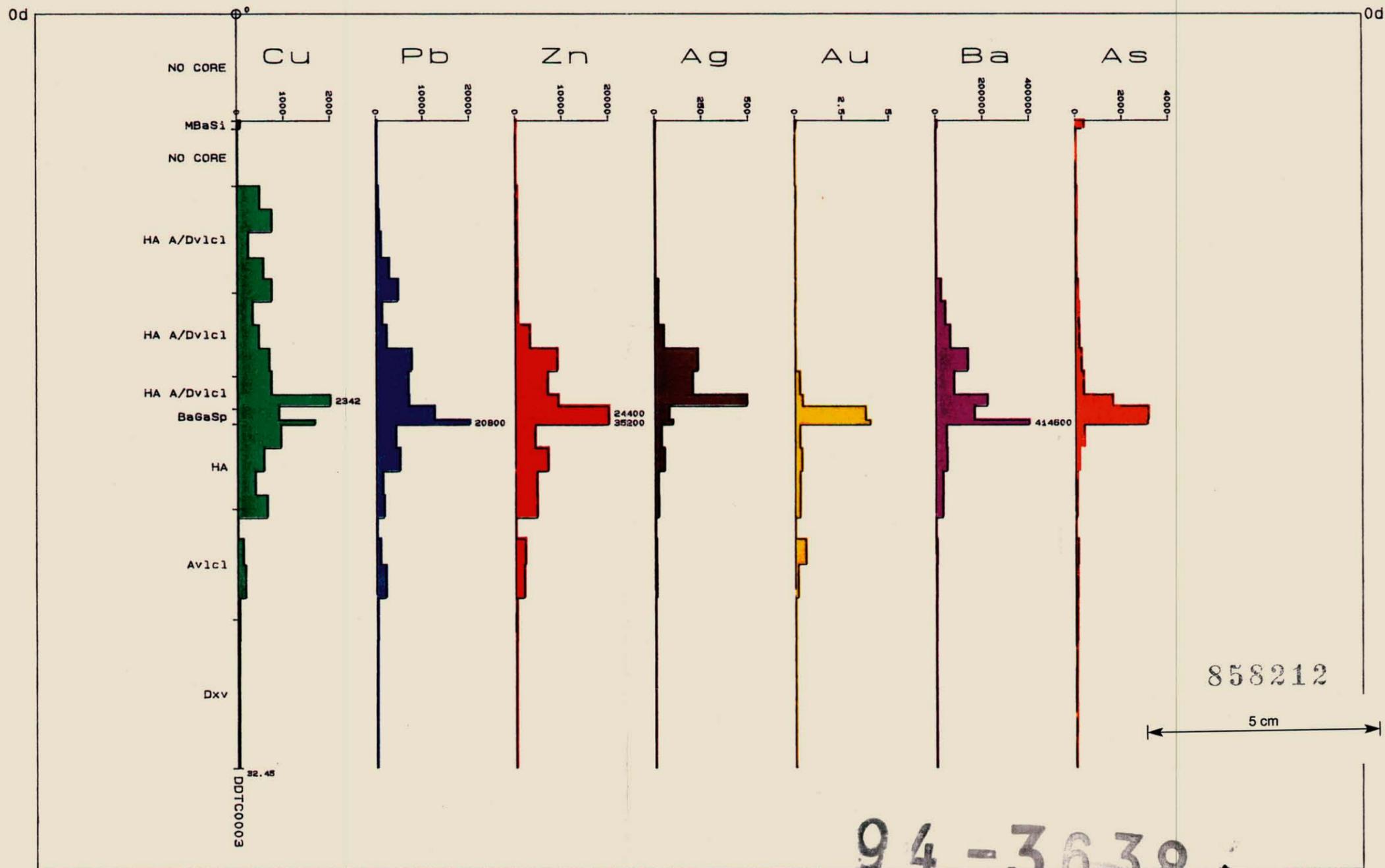
* HISTOGRAM *
gch Au (ppm)
Base value: 000
Units per mm: .250
Max dist in mm: 20

* HISTOGRAM *
gch Ba (ppm)
Base value: 000
Units per mm: *****
Max dist in mm: 20

* HISTOGRAM *
gch As (ppm)
Base value: 000
Units per mm: 200.000
Max dist in mm: 20

HOLE LEGEND - LHS:

* ANNOTATION *
geo Rock Type



94-3638

Aberfoyle Resources Limited
EXPLORATION DIVISION

REVISIONS	
Init.	Date

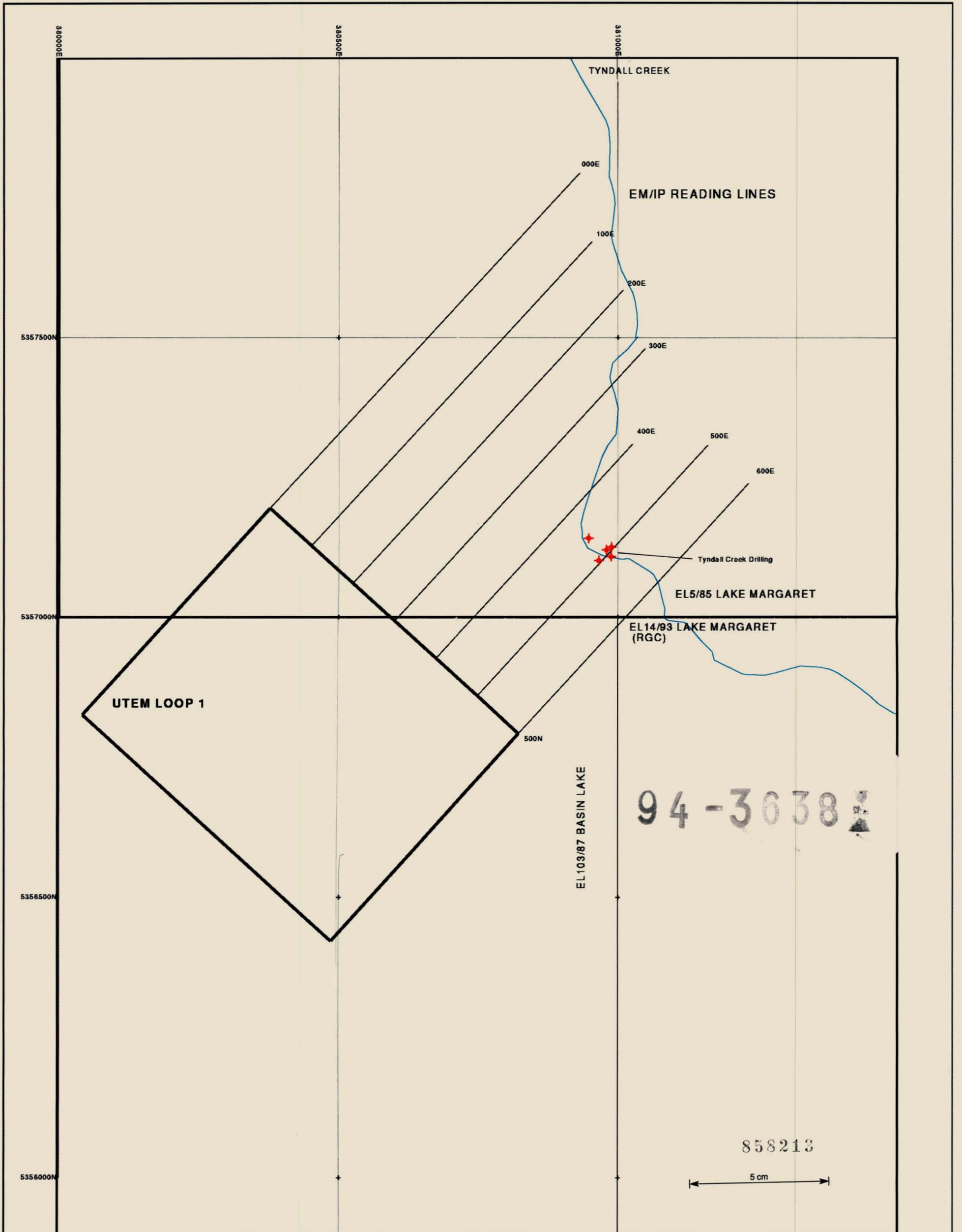
Tasmania
Lake Margaret E.L.5/85
Geochemical Profiles
DDH TC-3

Compiled: RAS
Drawn: RdeB
Traced:
Checked: RAS
Plate No.: LMAR679

Location Code:

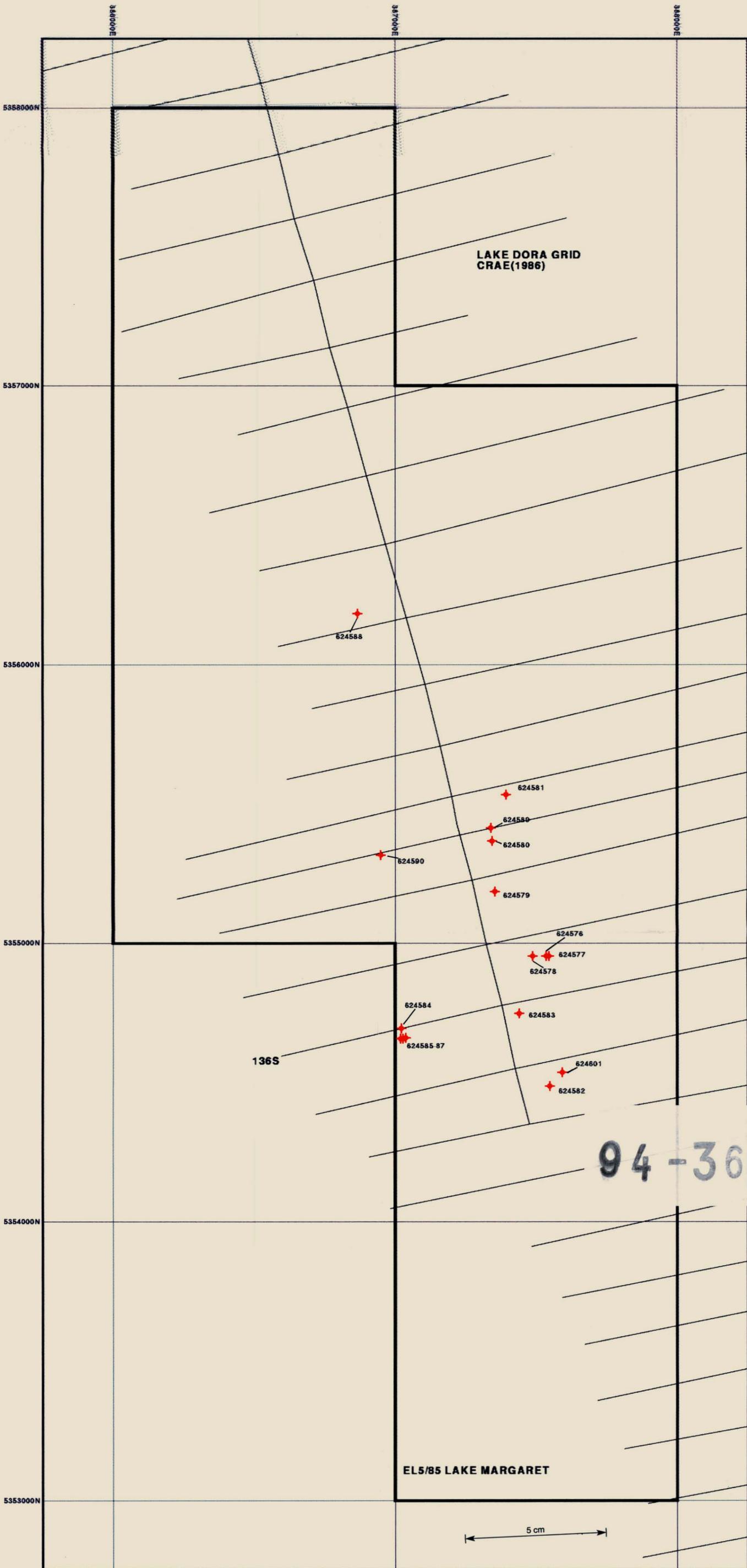
Scale: 1 : 200

Date: 05/11/93



REVISIONS			
Init.	Date	Init.	Date

ABERFOYLE RESOURCES LIMITED EXPLORATION DIVISION		Compiled: RHL Printed: JX-730 Traced: RHL Checked: RHL Plate No. LMARG99
Map Projection: TMAMG 55 Geodetic Datum: AGD66	NORTH WEST TASMANIA EL5/85 Lake Margaret Tyndall Creek Grid Gridding/Geophysics 1994 Algorithm: LMARG99	Date: September 1994
Location Code:	Scale: 1:5000	Date: September 1994



858214

ABERFOYLE RESOURCES LIMITED
EXPLORATION DIVISION

REVISIONS			
Init.	Date	Init.	Date

Map Projection: TMAMG 55
Geodetic Datum: AGD66

TASMANIA
EL5/85 Lake Margaret
Lake Dora Prospect
Samples - February 1994
Algorithm: LMARG97

Compiled: RHL
Printed: IX-730
Traced: RHL
Checked: RHL
Plate No. LMARG97

Location Code: Scale: 1:10000 Date: September 1994

386000E

387000E

388000E

ETA364 MT LYELL

5349000N

EL102/87
QUEENSTOWN (BHP)

EL5/85 LAKE MARGARET

5348000N

5347000N

5346000N

ETA364 MT LYELL

94-3638

7400N

7200N

7000N

6800N

6600N

6400N

6200N

6000N



624855

624850

624851

624852

624853

624854

858215

5 cm

ABERFOYLE RESOURCES LIMITED
EXPLORATION DIVISION

REVISIONS			
Init.	Date	Init.	Date

Map Projection: TMAMG 55
Geodetic Datum: AGD66

TASMANIA
EL5/85 Lake Margaret
Beatrice Prospect
Samples - February 1994
Algorithm: LMARG98

Compiled: RHL
Printed: JX-730
Traced: RHL
Checked: RHL

Location Code:

Scale: 1:10000

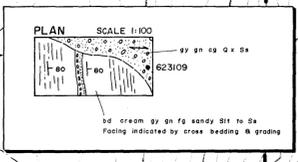
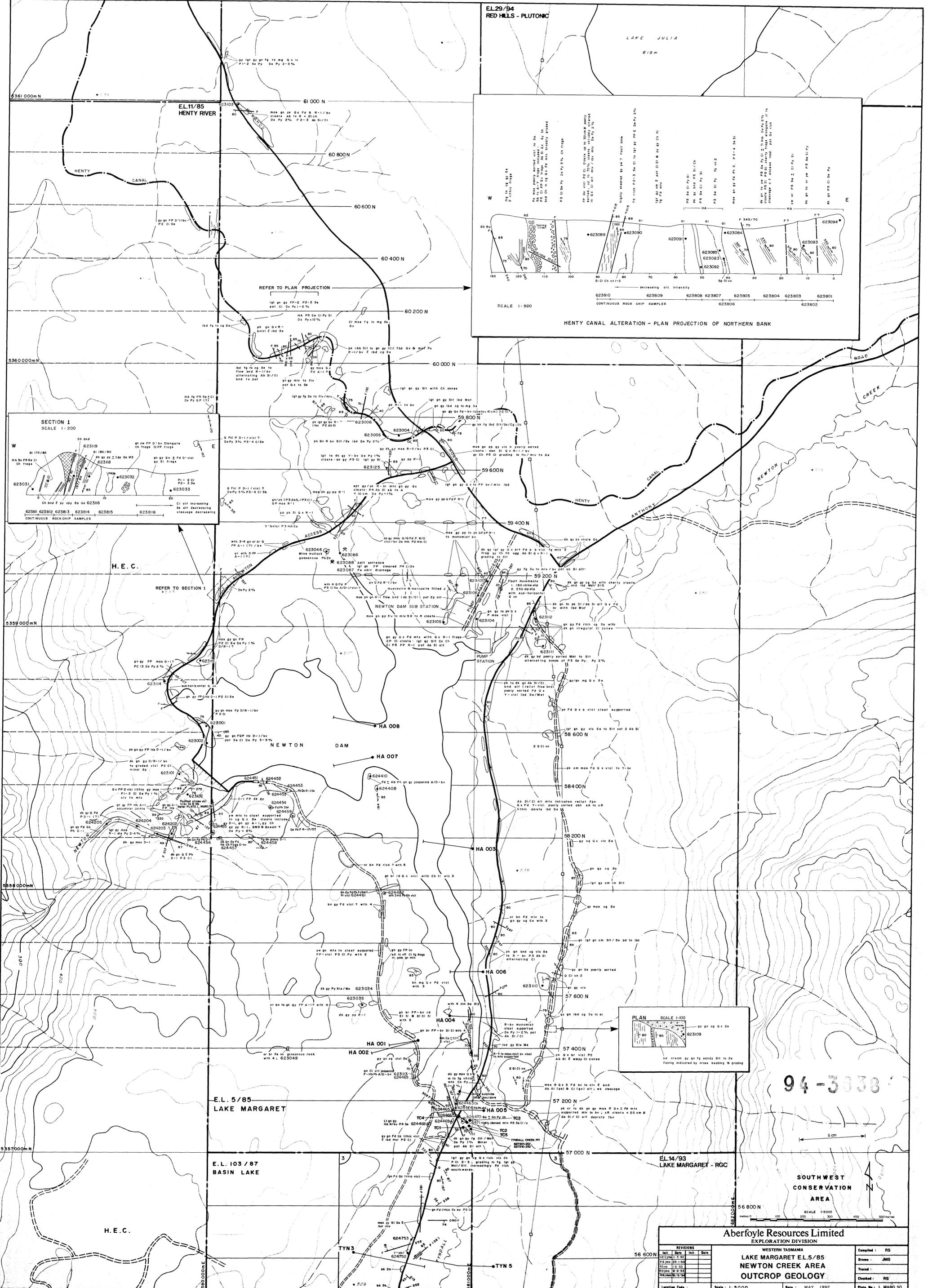
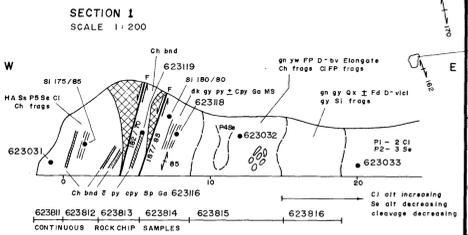
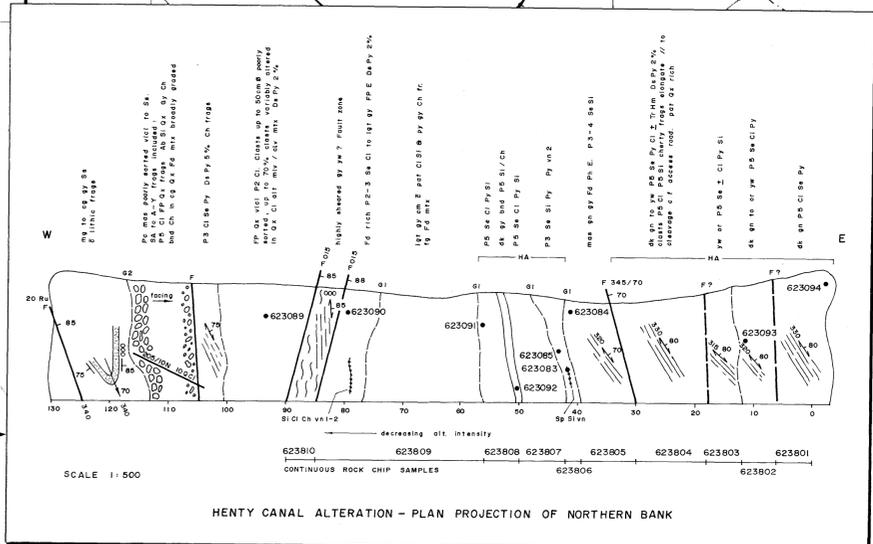
Date: May 1994

Plate No. LMARG98

EL 29/84
RED HILLS - PLUTONIC

LAKE JULIA
619m

EL 11/85
HENRY RIVER



94-3638

5cm

SOUTHWEST
CONSERVATION
AREA

Aberfoyle Resources Limited
EXPLORATION DIVISION

WESTERN TASMANIA
**LAKE MARGARET E.L.5/85
NEWTON CREEK AREA
OUTCROP GEOLOGY**

REVISIONS		Compiled: RS	
No.	Date	By	Date
1	25/10/92	JMS	
2	16/03/93	JMS	
3	19/03/93	JMS	
4	19/03/93	JMS	
5	19/03/93	JMS	
6	19/03/93	JMS	
7	19/03/93	JMS	
8	19/03/93	JMS	
9	19/03/93	JMS	
10	19/03/93	JMS	

Drawn: JMS
Traced:
Checked: RS

Location Code: Scale: 1:5000 Date: MAY 1992 Plate No: L.MARG 50