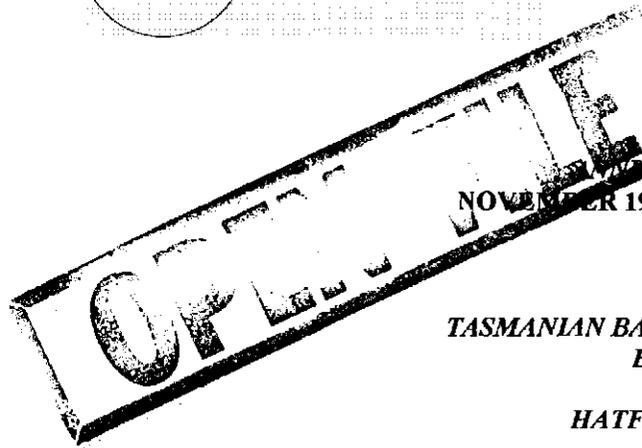


98-4126

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ANNUAL REPORT
NOVEMBER 1996 - NOVEMBER 1997

TASMANIAN BASE METALS PROJECT
EL 34/96

HATFIELD RIVER

MICROFILMED
FICHE No. 014611-

Vol 1 of 1

MINERAL RESOURCES	
FILE NO.	EL34/96
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HELD BY: RGC EXPLORATION PTY LTD

MANAGER & OPERATOR: RGC EXPLORATION PTY LTD

AUTHOR(s): Adam Elliston

October 1997

PROSPECTS: Hatfield

MAP SHEETS: 1:25,000: Charter 1:100,000: Sophia

GEOGRAPHIC COORDS Min East: 376000 mE Max East: 386000 mE
Min North: 5393000 mN Max North: 5402000 mN

COMMODITY(s): Pb, Zn, Cu, Au, Ag

KEY WORDS: Hatfield River, Volcanic hosted massive sulphide, Lead, Zinc, geochemical and geophysical surveys, gridding.

Distribution:

- o RGC Exploration Information Centre Referenc
- o RGC Exploration - Zeehan
- o Department of Mineral Resources, Tasmania

98-4126

ANNUAL REPORT-EL 34/96
RGC EXPLORATION-HATFIELD R.
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SUMMARY

Exploration Licence 34/96 "Hatfield River" was purposefully acquired in an effort to establish a reliable geological picture of the region and to ascertain if suitable favourable horizons/contacts exist for the development of volcanic hosted massive sulphide mineralisation.

Exploration for the first year of tenure has been severely hampered by access problems, with track cutting reliant on the Emu Bay Railway for access. A situation has evolved where track cutting can only be carried out during weekends and only if authorised by the Emu Bay Railway Company.

Access problems aside a literature review, limited regional 1:5000 scale mapping restricted to logging tracks, and approximately 7.5 line kilometres of gridding has been completed.

It is envisaged that with the completion of the gridding, mapping, geochemical programs and ground geophysical surveys will be employed to locate favourable alteration / mineralisation that will warrant further follow up work.

1.0 INTRODUCTION

The exploration licence is held and operated by RGC Exploration Pty Ltd and was granted on the 8th November 1996 for an initial term of five years. Geographically the tenement is situated on the rugged west coast area of Tasmania approximately 20 km north of the township of Tullah (fig 1).

Access to the area is via the Murchison Highway and then logging tracks which are not accessible unless a key for locked gates is obtained from North Forests.

Vegetation in the area varies from relatively flat button grass plains to the east to steep heavily wooded topography in the western two thirds of the licence; this area making access and therefore exploration difficult.

Exploration Licence 34/96 "Hatfield River" was purposefully acquired in an effort to establish a reliable geological picture of the region and to ascertain if suitable favourable horizons/contacts exist for the development of volcanic hosted massive sulphide mineralisation.

2.0 LAND TENURE

Exploration Licence 34/96 comprises:-

- Private property
- Crown Land - Subject to DELM Approval
- Crown Land
- Crown Land - Deferred Forest land
- State Forest - Multiple Use Forest Land

The area also contains part of the Tarkine Wilderness Area, under the auspices of the Australian Heritage Commission Act as an interim listing.

3.0 REGIONAL GEOLOGY

EL 34/96 is mostly made up of Cambrian sediments and volcanics of the Dundas Group with a sequence of greywackes, sandstones, siltstones and conglomerates dominating the west, quartz wackes, slates and siltstones present in the central portion and quartz feldspar porphyries and tuffaceous units to the east.

Younger cover rocks include Quaternary glacial alluvium east of the Emu Bay Railway Line and Tertiary basalts over the entire north of the tenement.

As presently understood, structurally the area is relatively uncomplicated with a series of antiforms and corresponding synforms (Everett 1972).

4.0 PREVIOUS EXPLORATION

4.1 1971-1985 EL 5/63 - COMSTAFF PTY LTD

Relevant exploration in the area started in the early seventies with Comstaff Pty Ltd in the 1971 winter field season conducting a programme of geological mapping and - 80 # stream sediment sampling over the north east portion of the Hatfield River.

Results of the stream sediment survey were considered of low order and did not warrant follow up work.

The summer field season of 71/72 conducted by Comstaff saw the continuance of regional geological mapping and the -80# stream sediment sampling of the Hatfield River and Que River drainages.

Elements assayed for the stream sediment samples by Comstaff for both field campaigns are as follows:-

- AAS - Cu, Zn, Ag, Ni, Bi
- XRF - Sb, Sn
- Spectron Scan - Co, Mo, Rb, W, U, As, Cd, Hg, Mn



Exploration

Hatfield River Project Location Plan

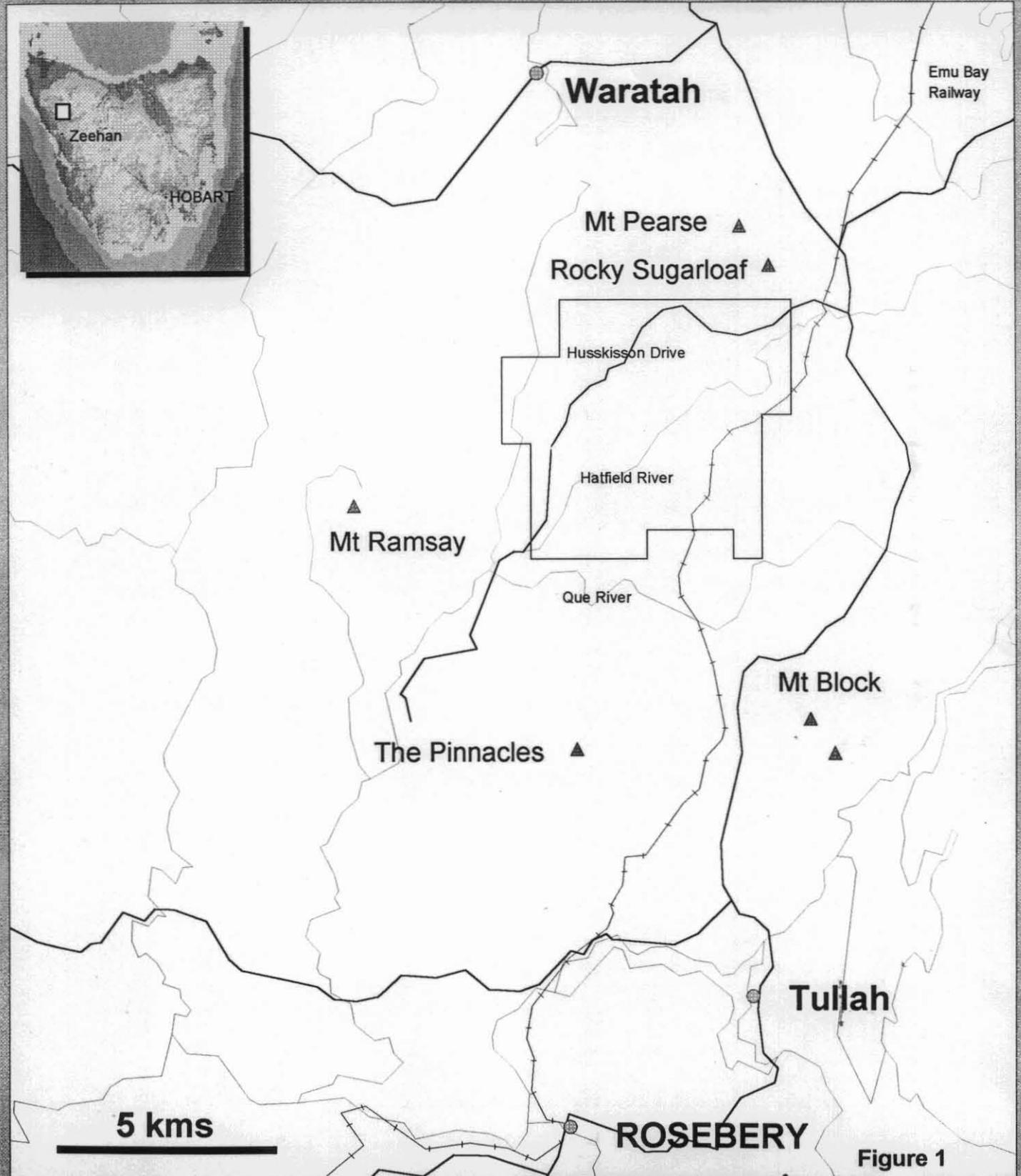
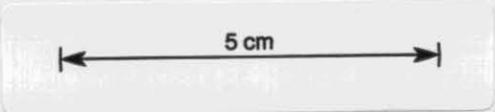


Figure 1



From the summer stream sediment survey two anomalous zones were generated within the current tenement boundaries, and these were termed anomalies C2 and C3.

C3 was a broad scale copper anomaly with peak response of up to 500ppm Cu. The anomalism was attributed to possible higher background levels in greywacke units found in the area.

Anomaly C2 gave anomalous Zn results > 300ppm in 2nd and 3rd Order streams draining into the Hatfield River. At the time it was thought that the anomalism was due to quartzites and basal conglomerates further to the north that were noted to have minor visible sphalerite mineralisation.

Although the tenement EL 5/63 was still held by Comstaff no further work was carried out in the Hatfield area until 1983 when a review of the C2 "Hatfield Zinc Anomaly" was undertaken by a J A Levings using statistical analysis to establish if a definite zinc anomaly did exist.

Levings' findings suggested that results greater than 190ppm Zn were anomalous and hence seven values ranging in order of 210-510ppm Zn, all located in two tributaries of the Hatfield river, deserved further attention.

Attempts at bulldozing an access track (Olympic Drive) to the area from Huskisson Drive was started in 1984, but due to weather and priorities was not completed until 1985. Prior to the track being finished the anomalous tributary was resampled in an effort to check previous results and to analyse for other elements such as lead, which was not previously sampled for. Results gave confirmed anomalous Zinc and apparent anomalies in gold, barium and arsenic.

In February and March 1985 the anomalous creeks and drainages were mapped along with parts of the access track which was also soil sampled in the corresponding traverses. No anomalous results from the soil sampling resulted.

After reviewing the new data Comstaff decided that there was a "lack of geological encouragement" with regards to rock types, alteration and mineralisation and attributed the anomalies to lithogeochemical changes within rocktypes and spurious statistical meanings with regard to Au, Ba and As.

No further work on the area was recommended and it was therefore relinquished from the rest of EL 5/63.

4.2 1977 - 1985 EL 12/72 - ELECTROLYTIC ZINC COMPANY of AUSTRALIA LTD

Electrolytic Zinc Company of Australia (EZ), held the northern and eastern most portion of the current tenement during 1977-85 as part of its Bulgobac Project.

Most of the work carried out within the confines of the current Exploration Licence involved the follow up of two Input EM anomalies called CS-27A and 27B in the Que River area and east of the Emu Bay Railway. These anomalies were generated from an airborne EM survey flown in April 1975 over EL 12/72 and was part of a larger survey flown by Geotrex Pty Ltd for both Comstaff and EZ.

During the 1977/78 field season, 20.5 line km was cut as a control to further test the anomalies and consequently the area was mapped and subjected to Schlumberger surveys to determine the depth of surficial fluvioglacial cover, the results of which suggested a cover sequence of 90-120m thick over anomaly CS-27A. A single line of gradient array IP was completed over the anomaly giving low chargeability and resistivity results. It was concluded that both anomalies CS-27A and 27B were the result of surficial features associated with fluvioglacial deposits and no follow up work was recommended.

Exploration activities during the period of 1978-82 involved sporadic mapping in the northern part of the tenement along Huskisson Drive and limited stream sediment sampling. No encouragement was given therefore the exploration effort moved south to the Boco Siding and North Pinnacles area.

Since the exploration efforts of EZ and Comstaff, no meaningful exploration has been done in the Hatfield area to date.

5.0 WORK COMPLETED 1996-1997

Exploration for the first year of tenure has been severely hampered by access problems, with track cutting reliant on the Emu Bay Railway for access. A situation has evolved where track cutting can only be carried out during weekends and only if authorised by the Emu Bay Railway Company.

During the year limited regional mapping restricted to logging tracks and accessible creeks, and approximately 7.5 line kilometres of gridding has been completed.

5.1 Literature Review and Target Generation

During the year a literature review was carried out of previous exploration and tenement holders using the services of the Mineral Resources of Tasmania offices in Hobart. From the information gained RGC could then assess the tenement with regards to further exploration.

One of the areas of focus for RGC is the NE-SW trending regional magnetic structure that is present in the south eastern area of the tenement. This feature could be of favourable stratigraphy with regards to prospective horizons or contacts, so sought after as exploration targets within the Mt Read Volcanics.

5.2 1:5000 Mapping

Mapping has been restricted to regional topographic mapping of the south western sheet utilising Huskisson Drive and some creeks for access and to the south east on the Emu Bay Railway. (plates 1-2). This was completed by D. Gregory over eight days during January 1997 using the North Forests Shack as a base camp at the junction of the Hatfield and Que River.

Cambrian Dundas Group and Southwell Subgroup rocks were encountered and short notes of differing rock types and geology are as follows:-

Dundas Group - sequence of Huskisson Drive and Hatfield River traverses

Conglomerates (Cgl - Plan 1)- These are red orange in weathered outcrop to dark purple in fresh outcrop. They consist of thickly bedded, massive, cobble to boulder size polymict conglomerates which are clast supported and, moderate to poorly sorted. Clasts are sub to well rounded and consist of green and red chert clasts and to a lesser extent, conglomerate clasts, dolomitic silt clasts and greywacke clasts. Minor jasper and mafic volcanic? clasts exist. Outcrops often contain finer grained greywacke and siltstone interbeds.

Dolomitic siltstones and Greywackes (Dol.silts, gwcke - Plan 2)- These consist of very thin to thinly bedded brown dolomitic siltstones. They are often interbedded with fine to medium grained greywacke beds often displaying detrital mica flakes. The greywackes are medium bedded, moderate - well sorted coarse grained greywackes composed of and sourced from the same environment as the conglomerates.

Southwell Subgroup - sequence of tributary traverse (539400mN - 378100mE ⇒ 379600mE)

Siltstones and Quartz sandstones - This sequence consists of interbedded siltstones and quartz sandstones. The siltstones are grey in colour and are mostly very thinly bedded. The sandstones are grey to cream in colour, medium grained, well sorted, mature quartz sandstones and are medium to thickly bedded. Minor carbonaceous sandy beds occur throughout the sequence.

Geology

The Hatfield River sequence dips and faces towards the east displaying shallow - moderate dips along the Huskisson Rd and steepening up to 70 - 80° east of the Hatfield River forming a syncline. The basal part of the sequence predominantly consists of interbedded conglomerates and greywackes with thinner lesser siltstone units. East of and including the Hatfield River the sequence becomes dominated by interbedded siltstones and greywackes.

Along Fish Ck there is an unexposed contact between the Hatfield River Sequence (HRS) and that of the Fish Ck Sequence (FCS), this contact may be exposed in the Hatfield River further to the north. Dips within the FCS dip steeply to the west and oppose the dips of the HRS further augmenting a synform (plate 1).

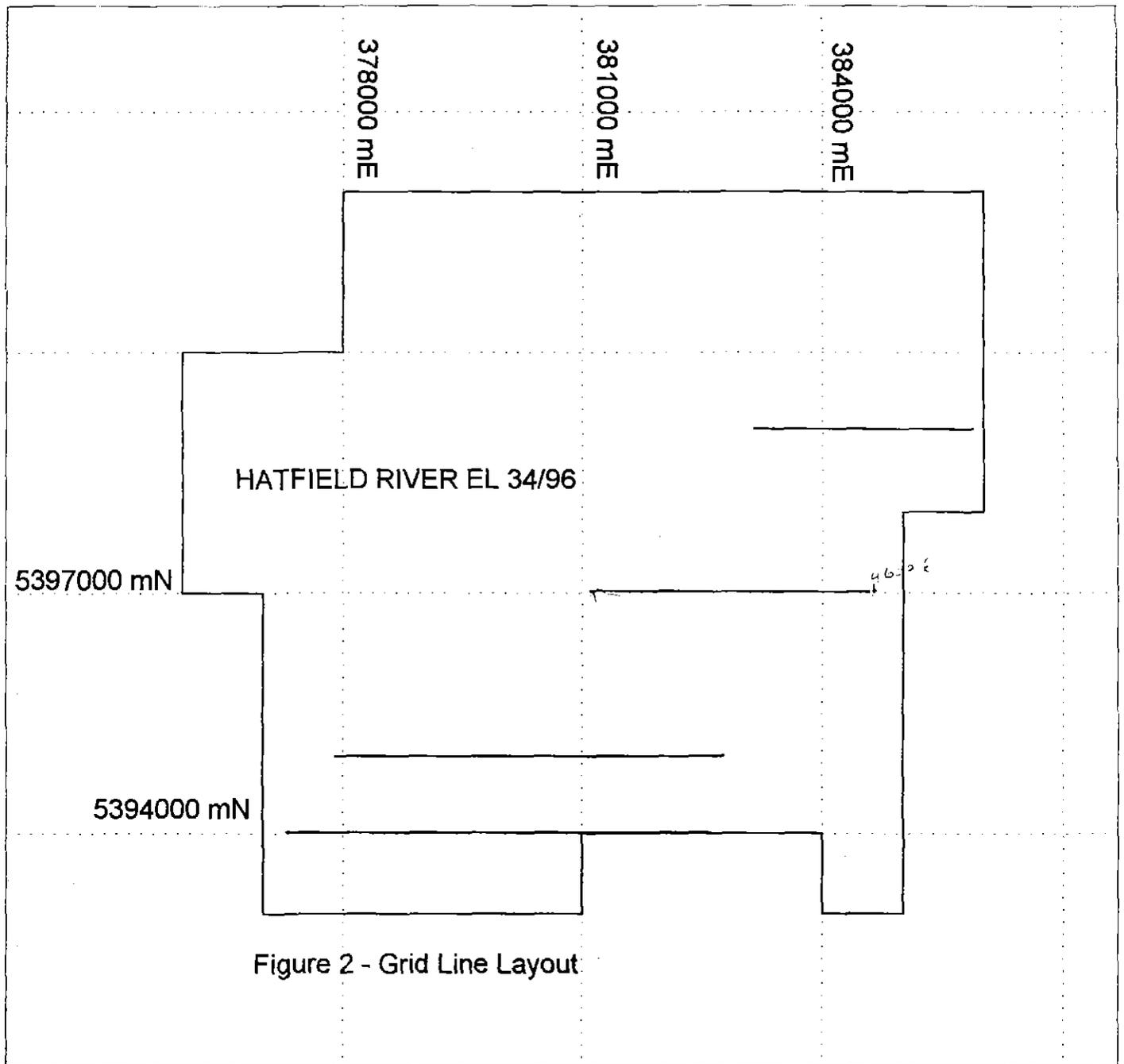
Rocks encountered on the Emu Bay Railway traverse consisted predominantly of tertiary basalt and some volcanics at the southern most extremities of the EL boundary (plate 2).

5.3 Grid Cutting

In an effort to gain east - west systematic access across the tenement, a series of grid lines were proposed, and at the time of writing this report were still being cut. Difficulties with access to origins of each of the lines is restricted cutting the lines to weekends and only when permission is granted by both North Forests (to enter the property) and the Emu Bay Railway Company to utilise the railway line for access to the eastern origins of each grid line. A total of 15.9 line kilometres is to be cut and at the time of writing approximately half of the proposed line kilometres had been completed. A plan of the grid line layout is included as Figure 2.

6.0 DISCUSSION AND RECOMMENDATIONS

It is envisaged that with the completion of the gridding, mapping, geochemical programs and ground geophysical surveys will be employed to locate favourable alteration / mineralisation that will warrant further follow up work with either infill mapping, geochemical and geophysical programs and or the drilling of suitable targets.



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243012

APPENDIX 1

RGC EXPLORATION (ZEEHAN) - ROCK CODES

RGC EXPLORATION (ZEEHAN) - ROCK CODES

243013

TYPE
U - Volcanic (general)
V - Volcaniclastic
E - Epiclastic
L - Lava
I - Intrusive

COMPOSITION
R - Rhyolite
Y - Rhyodacite
D - Dacite
A - Andesite
B - Basaltic
F - Felsic
M - Mafic
U - Ultramafic

CRYSTAL TYPE
X - Crystal rich
A - Aphyric
F - Feldspar phyrlic
< - Feldspar - quartz phyrlic
> - Quartz - feldspar phyrlic
Q - Quartz phyrlic
H - Hornblende phyrlic
P - Pyroxene phyrlic
B - Biotite phyrlic
V - Vitric / glassy
L - Lithic rich
R - Reworked, commonly with Carbonate matrix

OTHERS
TILL - Glacial moraine
CLAY - Glacial clays
SILT - Black pyritic siltstone
FALT - Fault
CARB - Massive Carbonate
CBBX - Carbonate breccia
VEIN - Vein
GWAC - Greywacke
CONG - Siliciclastic Conglomerate
SAND - Siliciclastic Sandstone

GRAINSIZE
B - Breccia
C - Coarse
M - Medium (Sandy)
F - Fine (Silty)
V - Very fine (Shaley)
A - Ashy
/ - Undifferentiated
X - Crystal Rich
P - Pumiceous

ALTERATION
P - Pyrite
\$ - Mineralised
Q - Quartz
O - Chlorite
C - Carbonate
H - Hematite
S - Sericite
K - K feldspar
A - Albite
E - Epidote
F - Fuchsite
M - Magnetite
L - Limonite

N - Scale
1 - Very Weak
3 - Weak
5 - Moderate
7 - Strong
9 - Intense

eg. AOC7
Strong albite-chlorite-carbonate alteration
(albite>chlorite>carbonate, albite = 7)

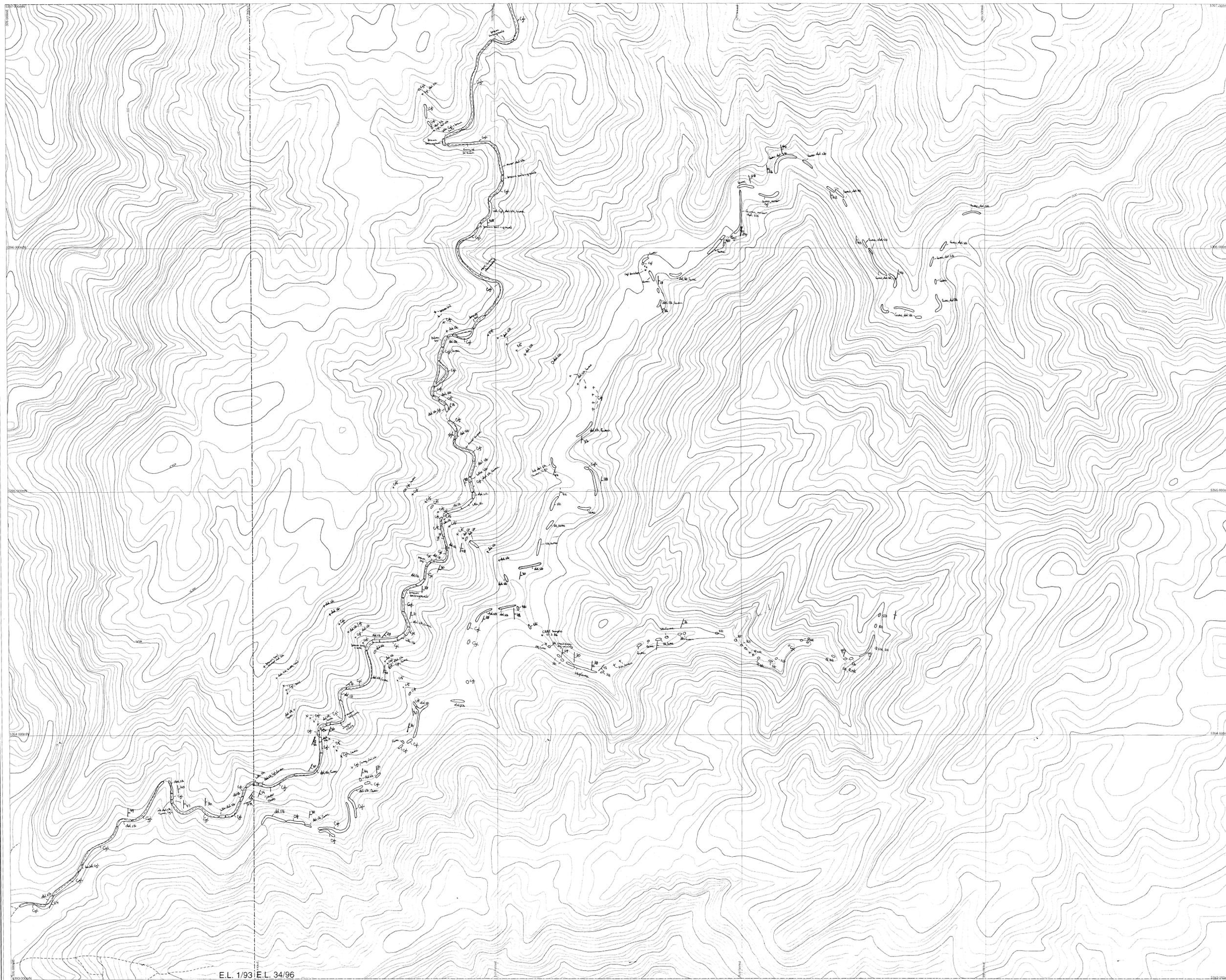
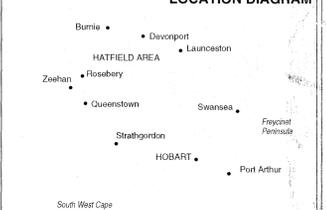


PLATE 1

TOPOGRAPHY

- Road
- - - - - Track
- - - - - Railway line
- ▭ Building
- - - - - Fence
- ▭ Warehouse
- ▭ Lake
- ▭ Wet Area
- ▭ Grid line
- - - - - Tenement Boundary
- ▭ Index contour with value
- ▭ Minor contour with value

LOCATION DIAGRAM



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HATFIELD PROJECT E.L. 34/96
FACT GEOLOGY

243014 SHEET 1 of 4

Reference Files:		3. Sampling	
1. Geology	2. Topography	4. Tenement	5. Cover Card
Compiled:		Date:	
M. Vicary, D. Gregory		December 1996	
Drawn:		Revision Date:	
M. Walter		-	
Drawing Path:		Drawing Name:	
c:\ms-draft\hatfield\base		23185001.dgn	
Scale:		1 : 5000	
A.M.G. Zone:		55	

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