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Aberfoyle Resources Limited
EXPLORATION DIVISION

91-3289

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EXPLORATION LICENCE

11/88

GOWRIE PARK

TASMANIA

Progress Report for the Year Ended

1st July, 1991

MICROFILMED

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Distribution

- Aberfoyle - Burnie 1/3
- Aberfoyle - Hawthorn 2/3
- Department of Resources & Energy 3/3

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004

149005

1.0 SUMMARY

Exploration by Aberfoyle Resources Limited within Exploration Licence 11/88 Gowrie Park during the 1990/1991 field season continued from work described in Rand and Noonan (1989) and Rand (1990). Work concentrated on three main areas at Beulah Barite, Mount Roland (including the Mount Roland prospect), and at Gowrie Park.

In the Beulah Barite area, minor work was completed. This was aimed at mapping surface outcrop in the vicinity of a recently mapped and sampled adit (Rand, 1990). As a result, outcrop of weakly fuchsite-spotted basalt was located. No other features of interest were noted.

The Mount Roland area was the focus for activity during this current field season. On the southeast flank of Mount Roland, previously unmapped basaltic lavas were identified within a more acid volcano-sedimentary sequence. Also, northeast of the Mount Roland grid (Rand, 1990) further outcrops of strongly silica-sericite-pyrite altered volcanics were discovered. Stream sediment samples were collected for assay from the general area, along with rock chips for petrology and assay.

Activity in the Gowrie Park area this reporting year comprised reconnaissance mapping. To the north of Gowrie Park (the Silver Ridge area) mapping confirmed previously interpreted geology, and did not locate any additional areas of alteration and/or mineralisation.

2.0 INTRODUCTION

Exploration Licence 11/88, Gowrie Park was granted to Aberfoyle Resources Limited on the 1st August, 1988, for ten years, with a 50% reduction required after five years.

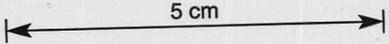
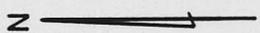
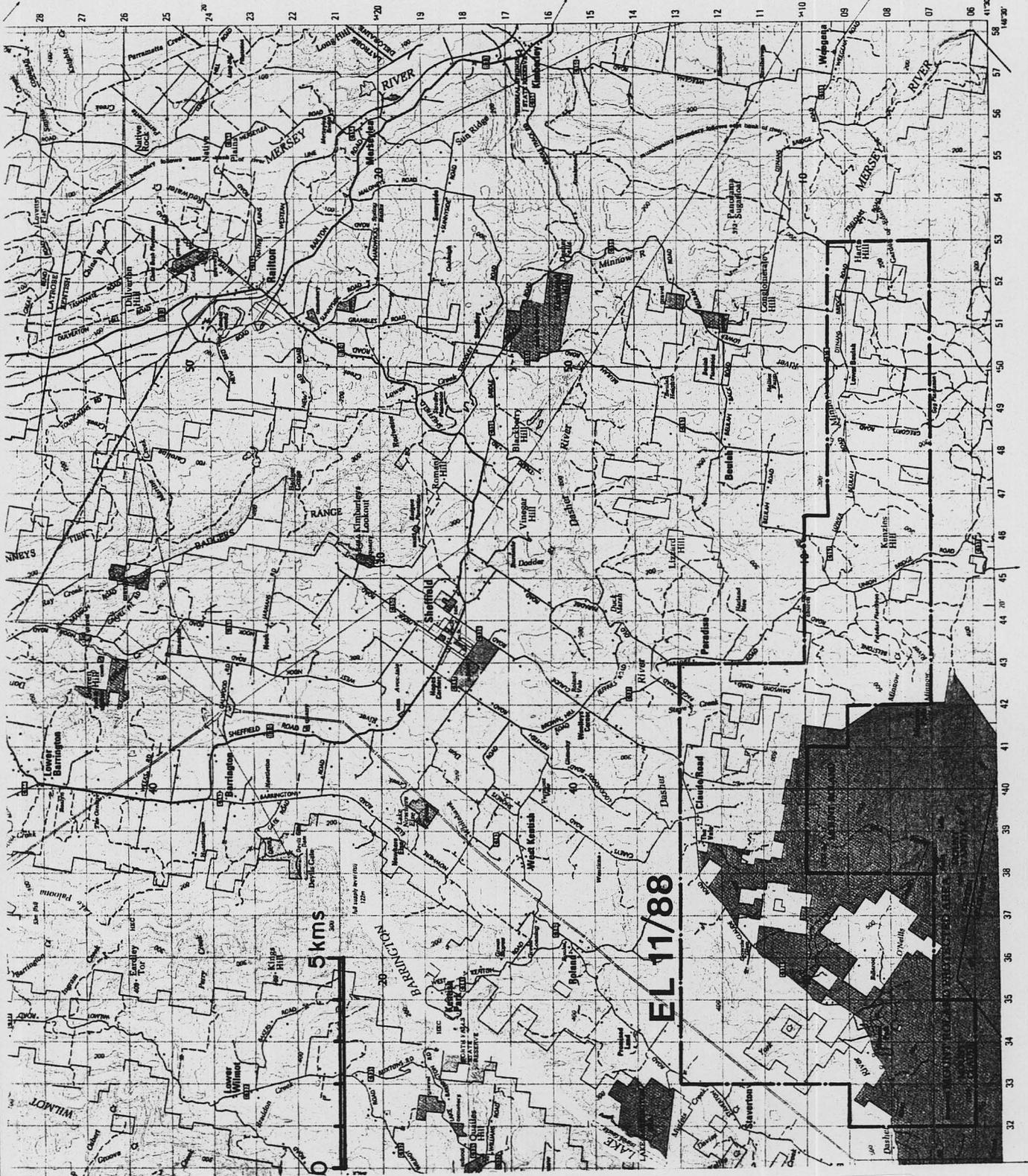
The Licence covers an area of 79 square kilometres south of Sheffield in Tasmania's northwest. The ground covered by the Licence extends from the peaks of Mount Claude-Mount Van Dyke to the Dasher River in the north, and east from near Cethana and Staverton to the Mersey River in the Lower Beulah area (Plate GP44).

The area covered by the licence is predominantly pastoral freehold land with some forestry operations. The topography varies from undulating to steep.

This report details exploration undertaken on EL 11/88 for the year ending 1st July, 1991, and continues the record previously reported in Rand and Noonan (1989), and Rand (1990).

Work undertaken on the licence during the reporting period is summarised on Plate GP47. The work undertaken involved:

1. Continuation of the program of reconnaissance mapping of streams and tracks, especially over the northern most part of the licence (1:2,500 scale).
2. Reconnaissance mapping on the south east flanks of Mount Roland.
3. Mapping on the northern flank of Mount Roland, off the Mount Roland grid.
4. Stream sediment and rock chip sampling from various locations near Mount Roland and Gowrie Park.



Aberfoyle Resources Limited

EXPLORATION DIVISION

NORTH WEST TASMANIA

GOWRIE PARK E.L. 11/88

LOCALITY MAP

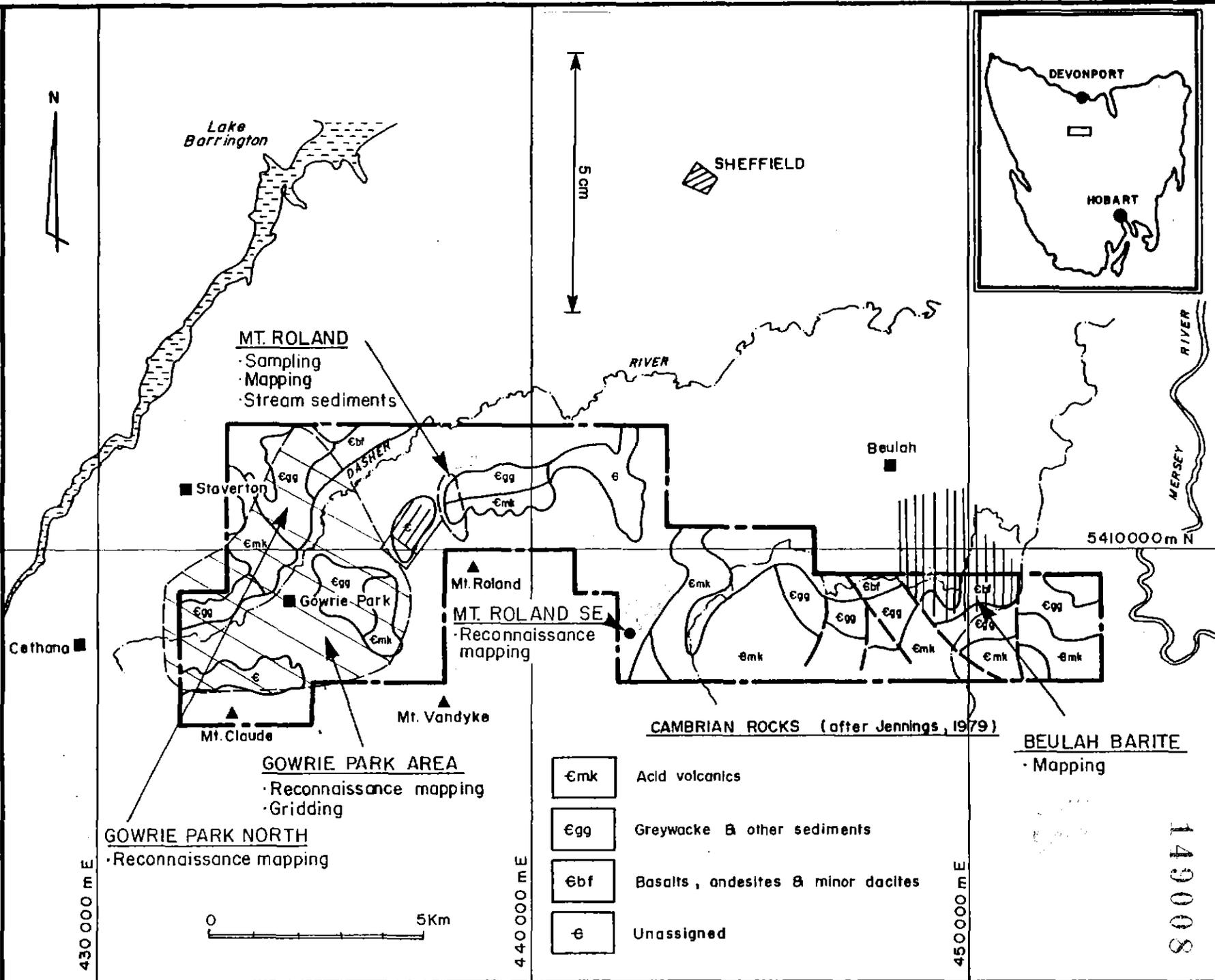
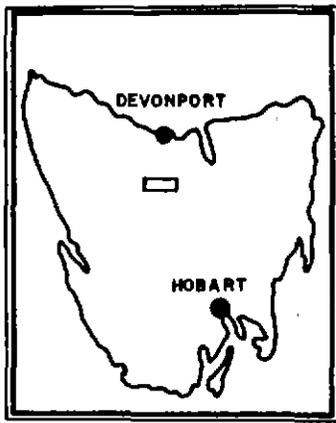
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Location Code :

Scale : As shown

Date : May , 1990

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Plate No. :	GP 44



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Date : July, 1990

Aberfoyle Resources Limited
EXPLORATION DIVISION

NORTHERN TASMANIA

E.L.11/88 GOWRIE PARK
Summary of 1990/1991 Exploration

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3.0 PREVIOUS EXPLORATION

Systematic exploration for volcanogenic massive sulphide mineralisation was initially conducted on the licence by Asarco during the period 1973 to 1976. CRA Exploration obtained the licence in 1976 and undertook a number of varied programmes until its relinquishment in 1987. The exploration undertaken prior to Aberfoyle securing the licence is described in Rand and Noonan (1989) and summarised on Plate GP26.

Previous exploration undertaken by Aberfoyle Resources Limited up until July, 1989 is described in Rand and Noonan, 1989.

A large grid was established in the Lower Beulah area over which mapping, soil sampling and ground magnetic surveys were completed. This work produced a number of anomalous zones along a trend from barite mineralisation at the Beulah Barite prospect. Follow-up geology and further geophysics were recommended.

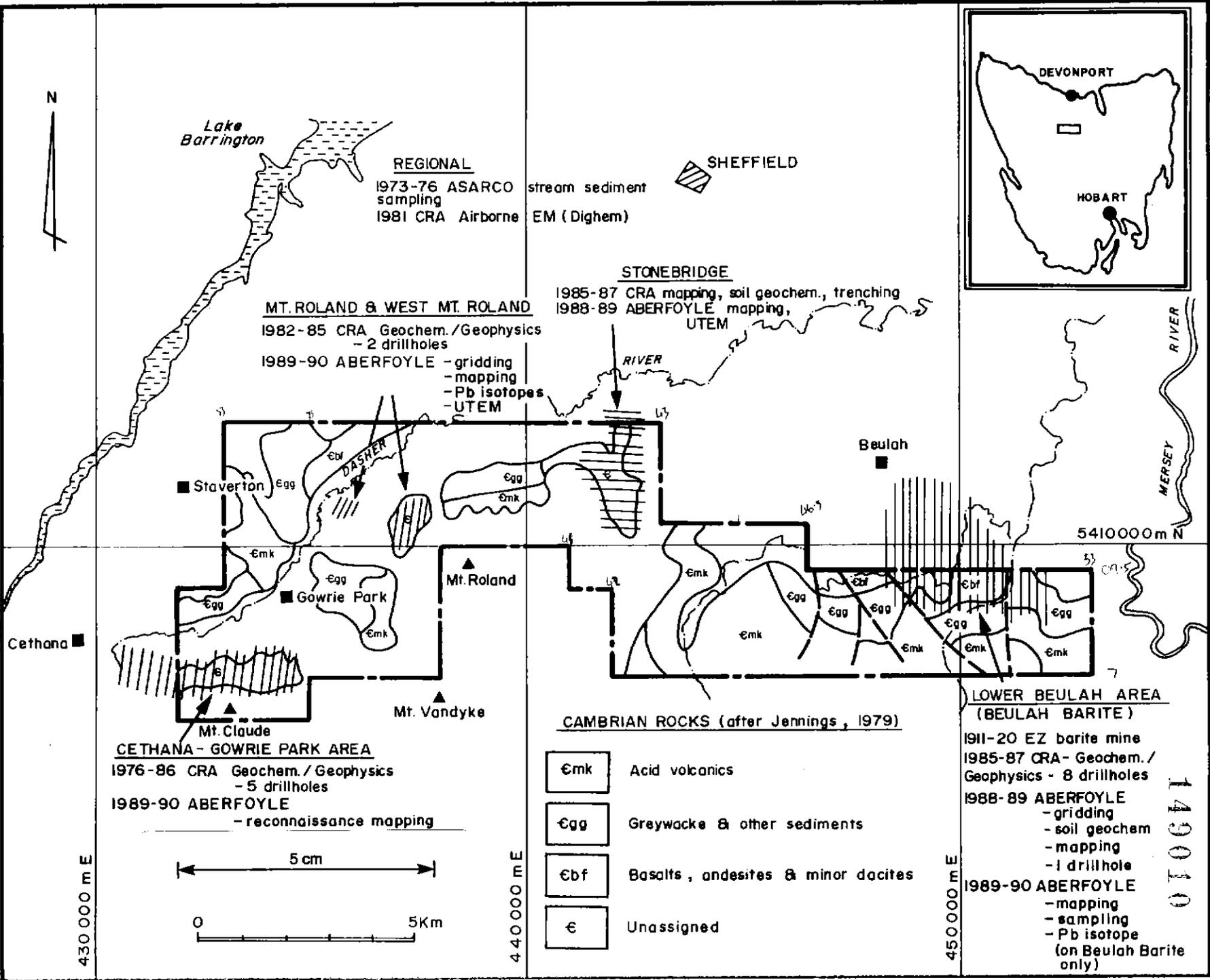
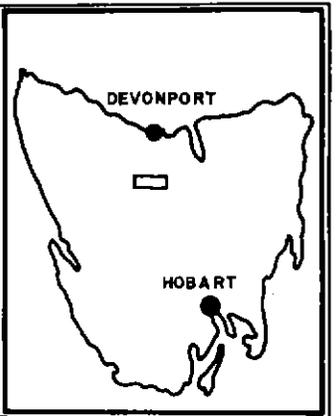
On the Beulah Barite prospect (within the above grid), mapping and re-assessment of previous work produced a diamond drill target. Drilling of the hole (BB6) at a combined geological/geochemical target was completed in July 1989 with no base metal mineralisation intersected. It was considered, however, that the lack of mineralisation in the drill hole did not significantly downgrade the potential for economic mineralisation in the area and further assessment was recommended.

In the Stonebridge area, gridding, mapping and UTEM was completed in late 1988 with no significant anomalies detected. No further work was recommended for the area.

Regional assessment of the licence up until July, 1989, produced a number of encouraging results in the Mount Roland-Gowrie Park areas. Sampling of surface outcrops and drill core (CRAE) indicated the presence of probable Cambrian hydrothermal alteration and mineralisation. Further assessment of the potential for economic mineralisation in the area was recommended (Rand, 1990).

The program for the year ending July, 1990 is detailed in Rand (1990). It is summarised below:

1. Lower Beulah Grid: Mapping at 1:2,500 scale and sampling did not define the full extent of the Cambrian Volcanics. Similarly, the alteration located in the Beulah Barite area has not yet been closed off to the east.



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Location Code : _____

Scale : AS SHOWN

Date : July, 1989

SUMMARY OF PREVIOUS EXPLORATION

E.L. 11/88 GOWRIE PARK

Aberfoyle Resources Limited

NORTHERN TASMANIA

EXPLORATION DIVISION

Compiled :	SWR
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Traced :	RJE
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Plate No. :	GP 26

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149011

Detailed work around the Beulah Barite prospect, included mapping and sampling at 1:1,000 scale, detailed mapping and channel sampling of an old adit on the prospect, petrology and geochemistry on samples from DDH BB6, along with a DHEM survey of this hole; and a Pb-isotope study of mineralisation from the prospect.

2. Mount Roland Area: A grid was established over an old lead-zinc mine, with mapping, sampling, UTEM and Pb-isotope surveys completed. Results were disappointing and no further work, except some reconnaissance mapping to the northeast of the grid, was recommended.
3. Gowrie Park Area: Work in this area was limited to reconnaissance mapping and sampling and a lead isotope study. Only limited reconnaissance was recommended for this area.

149012

4.0 WORK COMPLETED 1990/91

Exploration during 1990-1991 comprised the following activities:

Beulah Barite Prospect

- Mapping at 1:2,500 scale near the adit mapped in previous years exploration.

Mount Roland Area

- Detailed mapping and sampling to the north of Mount Roland, off the end of the established grid.
- Similar reconnaissance mapping on the SE flank of Mount Roland.
- Stream sediment sampling from the Mount Roland area.

Gowrie Park Area

- Further mapping, sampling and interpretation at a 1:2,500 scale over an area around Gowrie Park.

4.1 Beulah Barite Prospect

During the current reporting period, mapping in the vicinity of the adit located minor fuchsite spotting in basalts to the west of the adit. The recent mapping data is presented on Plate GP15.

4.2 Mount Roland

As part of previous exploration efforts by Aberfoyle, the old Mount Roland lead-zinc mine on the northern slope of Mount Roland was examined and sampled. The presence of strongly hydrothermally altered Cambrian andesites which contained, in places, sphalerite-galena-pyrite veining (Rand, 1990), and the probable Cambrian Pb-isotopic signature of the mineralisation, indicated good potential for the rocks to host economic mineralisation.

Work conducted during the reporting period comprised reconnaissance mapping. On the south east flank of Mount Roland (around Bellstone Road) massive basaltic lavas were located within previously mapped rhyolitic lavas and sediments (Plate GP5B).

012

149013

Mapping to the north east of the Mount Roland grid located strongly silica-sericite-pyrite altered volcanics (Plates GP35/I3 and I4). These occur in an area where modern exploration techniques have not yet been applied. A number of stream sediment samples and rock chips/grab samples were submitted for assay from the Mount Roland area. Despite a lack of outstanding assays, broadly anomalous drainages were highlighted. Results are attached as Appendix 3.

4.3 Gowrie Park

Exploration activity over the last twelve months has included reconnaissance mapping. Mapping to the north of Gowrie Park (the Silver Ridge area) has confirmed previously mapped Beulah Formation massive basalts in the northern most part of the licence. Some andesite lavas appear intercalated with sediments close to the contact with the basalt. No significant mineralisation or alteration was located. Reconnaissance mapping on the western half of the licence is therefore complete.

Mapping is shown on Plates GP35/H3, H5 and H6. Geochemical results are attached as Appendix 5.

5.0 RECOMMENDATIONS

5.1 Beulah Barite Area

Due to a re-focussing of activities elsewhere in the licence, little work was completed in this area. Consequently, the recommendations of Rand (1990) remain untested. There is scope for more work in the Beulah Barite Prospect area, especially along the lines of previous recommendations.

5.2 Mount Roland Area

The discovery of strongly altered volcanics off the Mount Roland grid requires follow up. Possible programs would include gridding, mapping, and soil/rock chip assays depending on the physiology of the area. This would be used in advancing the alteration zone to target status for geophysical testing. Apart from this work, little else remains to be done in the Mount Roland area, except possibly following up the stream geochemistry and any remaining reconnaissance mapping.

5.3 Gowrie Park Area

Exploration during 1990/1991 in the Gowrie Park area continued from the previous years program. Reconnaissance mapping defined lithological changes suggesting a hangingwall sequence exists east and north of the Cethana Alteration Zone. No significant mineralisation or alteration was noted to the north of Gowrie Park (Silver Ridge area) and reconnaissance mapping is complete over this portion of the licence.

Future work should concentrate on the footwall/hangingwall sequence associated with the Cethana Alteration Zone and testing with deep penetrating EM is recommended.

5.4 Conclusion

Recommendations of Rand (1990) yet to be tested are still valid. Two areas where further work is warranted includes the Mount Roland "alteration zone" and the Cethana-Gowrie Park area.

149015

6.0 REFERENCES

- Read, J. J., 1989. Exploration Licence 11/88, Gowrie Park, Tasmania. Technical Report; UTEM Survey, Mount Roland Grid, December 1989. Unpub. Rep. for Aberfoyle Resources Ltd.
- Rand, S. W. and Noonan, D. J., 1989. Exploration Licence 11/88, Gowrie Park, Tasmania. Progress Report for the Year Ended July 1, 1989. Unpub. Rep. for Aberfoyle Resources Ltd. Vols. I and II.
- Rand, S. W., 1990. Exploration Licence 11/88, Gowrie Park, Tasmania. Progress Report for the Year Ended July 1, 1990. Unpub. Rep. for Aberfoyle Resources Ltd. Vols. I and II.

APPENDIX 1

ABBREVIATIONS FOR OUTCROP GEOLOGY SHEETS

GEOLOGICAL ABBREVIATIONS

Abundant	abn	Fluorite	Fl	Rehealed	rhd
Adularia	Adl	Foliated	fo	Reworked	rw
Agglomerate	agg	Fragments	fr	Rhyodacite	RO
Albite	Ab	Fuchsite	Fu	Rhyolite	R
Alkali feldspar	Afd	Gabbro	Gb	Ripple marks	rmk
Altered	alt	Galena	Gn	Round	rnd
Amphibolitic	amb	Glass	Gl	Rubble	rbb
Amphibole	Amb	Glassy	gl	Sandstone	Ss
Amygdales	amg	Gossan	Gos	Schist	Sch
Andalusite	An	Granite	Gr	Schistose	sch
Andesite	A	Granodiorite	Gd	Sediment	sed
Angular	ang	Granular	gr	Selected fragments	sfr
Ankerite	An	Graphite	Gt	Sericite	Se
Aplite	Ap	Graphitic	gt	Serpentine	Srp
Approximate	apx	Green	gn	Shale	Sh
Arcuate	ar	Grey	gy	Sheared	shd
Arenaceous	arn	Greywacke	Gw	Sheeted	sht
Argillaceous	arg	Groundmass	gm	Siderite	Sid
Argillite	Arg	Haematite	Hmt	Silica	Si
Arkose	Ak	Hanging wall vcl	HVS	Siliceous	sil
Arkosic	ak	Hornblende	Hb	Siltstone	Slt
Arsenopyrite	Ap	Ignimbrite	Ig	Slickenside	slk
Ash volcanoclastic	av	Illite	Il	Sphalerite	Sp
Autobrecciated	aub	Interbedded	ibd	Spotted	spt
Average	ave	Intercalated	icl	Spotty	spt
Banded	bnd	Intrusive	int	Stockwork	stw
Barite	Ba	Joint	J	Stratabound	stb
Basalt	B	Jurassic	Ju	Strong	str
Bedded	bd	K-Feldspar	Kfd	Structure controlled	stc
Biotite	Bio	Khaki	kh	Syngenetic	syn
Black	bk	Laminated	lm	Talc	Tc
Black shale	Bsh	Lapilli volcanoclastic	lv	Tertiary	T
Blue	bl	Lava	l	Tourmaline	Tm
Boulder	blb	Lava breccia	lb	Trace	tr
Breccia	b	Leached	lch	Trachyte	Tr
Breccia volcanoclastic	bv	Leucite	Lct	Tuff	Tf
Bright	brt	Leucitite	Ltt	Tuffaceous	tf
Brown	br	Limonic	Lim	Variable	var
Calcareous	cc	Light	lgt	Variolitic	vr
Calcite	Cc	Limestone	Lst	Vein	vn
Carbonaceous	carb	Lithic	Lh	Vein concordant to bedd	cv
Carbonate	Co	Magnetite	Mt	Vein discordant to bedd	dv
Cassiterite	Cass	Manganese	Mn	Very	v
Cavernous	cav	Marl	Ml	Vesicular	ves
Cemented	cem	Massive	mas	Vitric	vtr
Chalcopyrite	Cp	Matrix	mtx	Volcanic	vlc
Chert	Ch	Matrix dominated	md	Volcanoclastic	vcl
Chlorite	Cl	Medium	med	Weak	wk
Chromite	Cr	Medium grained	mg	Weathered	wth
Chromiferous	cr	Metamorphosed	meta	White	wh
Clay	cy	Mica	mic	Yellow	yw
Coarse	c	Micaceous	mic		
Coarse grained	cg	Mineralised	min		
Colloform	coll	Minor	mnr		
Colour	col	Mixed	mx		
Common	com	Mottled	mtl		
Conglomerate	Cg	Mudstone	Mst		
Conglomeratic	cg	Nodule	nd		
Crimson	cm	Off white	ow		
Crystal	x	Olivine	ol		
Crystal volcanoclastic	xv	Oolitic	oo		
Dacite	D	Orange	or		
Dark	dk	Ordovician	O		
Dense	dns	Oxidised	ox		
Devitrification	dv	Pale	p?		
Diorite	Di	Patchy	pat		
Disseminated	dis	Peperitic	pep		
Dolerite	Dol	Perlitic	prl		
Dolomite	Dm	Pervasive	per		
Dyke	dy	Phenocrysts	phn		
Elongated	el	Phyllite	phy?		
Emphasised	emp	Phyric	p		
Epiclastic (noun)	E	Picrite	Pic		
Epidote	Ep	Pillow lava	pl		
Euhedral	euh	Pink	pk		
Eutaxitic	eux	Polymict	Y		
Fabric	fab	Porphyritic	por		
Fault	F	Predominantly	pred		
Fault zone	FZ	Pumice	Pu		
Feldspar	Fd	Pumiceous	pu		
Feldspathoid	Fdd	Purple	pp		
Feldspar phyric	fp	Pyrite	Py		
Feldspathic	fel	Pyritic	py		
Ferruginous	fer	Pyrolysite	Pr		
Fibrous	fb	Pyroxene	Px		
Fine	f	Pyrrhotite	Po		
Fine grained	fg	Quartz	Q		
Fissile	fis	Quartzite	Qtz		
Flowbanded	fbn	Quellite	Qll		
		Questionable	?		
		Recrystallised	rx		
		Red	rd		

APPENDIX 2

LEGENDS FOR INTERPRETATIVE GEOLOGY SHEETS

LEGEND FOR INTERPRETATIVE GEOLOGY SHEETS

GOWRIE PARK AREA (Sheet GP43).

POST CAMBRIAN LITHOLOGIES

Qt Talus deposits derived predominantly from Cambro-Ordovician quartz conglomerate and sandstone detritus.

Qra Alluvium deposits accumulated in valley floors.

Tb Tertiary basalt flows

Oc and Om

Quartz pebble to boulder conglomerates interbedded with fine quartz sandstones (Oc) [Roland Conglomerate]. Quartz sandstones and minor shales, typically haematite altered to pink-purple [Moina Sandstone].

CAMBRIAN LITHOLOGIES

Not in any stratigraphic order.

FELSIC VOLCANIC ROCKS.

These rocks have previously been grouped under the general heading (Cf, Cambrian felsic volcanic rocks, Bamford and Green, 1986, and Cmk, Minnow Keratophyre, Jennings, 1979).

qpR1.

qfpR1.

Rhyolite lavas and rarely lava breccias. These are typically pale to dark brown and contain quartz phenocrysts (qp) to 4mm (commonly slightly resorbed) plus occasionally also stubby feldspar phenocrysts (qfp) to 4mm. The lavas typically have a fine grained glassy matrix which devitrifies to a quartz-albite and sericite mixture.

qpRlv.

qfpRlv.

Rhyolite lapilli volcanoclastics. These are typically very fine to fine grained pale brown to pale yellow rocks with quartz phenocrysts (qp) to 4mm and rarely feldspar phenocrysts (qfp). The phenocrysts vary from being rounded and resorbed to fragmented crystalline. The rocks usually contain rare lithic fragments of predominantly dacitic to rhyolitic lavas and occasionally flattened pumice fragments. Weak alignment of the matrix is best seen in weathered specimens.

POLYMICT VOLCANICLASTICS AND OTHER SEDIMENTS

These rocks have previously been broadly grouped under the term Gog Range Greywacke (Cgg)(Jennings,1979), or (Clv) lapilli volcanoclastics (Bamford and Green,1986).

Ya-clv.
qpYa-clv.
YRa-clv.
YAA-clv.
Sh.

Polymict ash to coarse lapilli volcanoclastics. These are typically interbedded mixtures of fine grained orange finely laminated ash volcanoclastics or volcanic siltstones to coarse grained polymict lithic volcanoclastic sandstones to fine conglomerates. These are occasionally quartz and or feldspar phyrlic (qp,qfp). Lithic fragments vary from predominantly felsic (YRa-clv) to predominantly intermediate (YAA-clv). Interbedded within the polymict volcanoclastic units are units of fine grained grey, blue-grey or black finely laminated shales (Sh) occasionally with recognisable finely graded bedding.

INTERMEDIATE VOLCANIC LITHOLOGIES

These volcanics have previously not been recognised in the Gowrie Park area.

fpAl.
HbfpAl.

Andesite lavas and rarely lava breccias. These are typically medium grained, feldspar phyrlic (fp) and also hornblende phyrlic (Hbfp). Accessory phenocrysts are often augite and occasionally apatite, and resorbed quartz. The lavas are occasionally coarse grained and porphyritic sometimes with visible flow textures. The andesite lava units are sometimes weakly magnetic.

fpAlv.

Andesitic lapilli volcanoclastics. These are typically dark brown, fine to coarse grained feldspar crystal lithic volcanoclastics. Phenocrysts present comprise common feldspar, less common hornblende +/- augite and occasionally apatite and quartz. Slight alignment of feldspar phenocrysts is sometimes visible along probable bedding planes. The units are often weakly magnetic reflecting detrital magnetite?

ALTERED VOLCANIC ROCKS

HA

Volcanic rocks that have been hydrothermally altered so that the original precursor is generally not recognisable in hand specimen. Alteration typically comprises strong sericite and silica alteration with minor pyrite and/or carbonate alteration. In the Gowrie Park area hydrothermally altered rocks are often quartz phyrlic suggesting they were originally of rhyolitic composition. The alteration has occasionally resulted in a strong schistosity producing quartz-sericite schists.

LEGEND FOR LOWER BEULAH AREA INTERPRETATIVE GEOLOGY
(Sheets GP41, 42A and 42B).

Cbfl

Beulah Formation andesitic to basaltic lavas and minor lava breccias. These are typically massive units with feldspar and mafic (augite) phenocrysts.

Cbfaa

Beulah Formation aphyric andesite lavas. These are typically very fine grained pale yellow lavas.

Cbfal

Beulah Formation feldspar phyric andesite lava. These are typically light green, sparsely feldspar phyric lavas with a fine grained matrix.

CbFRvlcl

Fine grained lapilli volcanoclastic of rhyolitic composition derived predominantly from a felsic volcanic source.

CbFDvlcl

Medium to coarse grained dacitic lithic epiclastic sandstone. The rock contains common detrital quartz fragments and lithic fragments derived predominantly from felsic volcanics with some minor pelitic metamorphics and rarely greywacke.

Cgg

Orange medium grained quartz and feldspar sandstones interbedded with grey to black, occasionally pyritic, shales.

APPENDIX 3

MOUNT ROLAND AREA - ROCK CHIP
AND STREAM SEDIMENT GEOCHEMISTRY

Aberthaw Exploration

PROJECT NAME: **MINNOW FALLS**

PROJECT Mt. ROLAND AREA	ENS	SIEVE	SIZE	CORE	DEPTH	REMARKS	TEST	TYPE	NO.	ANALYSIS	DATE	SHEET
	1	2	3	4	5	6	7	8	9	10	11	12
											16-8-90	1 of 1

PROJECT	ENS	SIEVE	SIZE	CORE	DEPTH	REMARKS	TEST	TYPE	NO.	ANALYSIS	DATE	SHEET
438240	5410450	562	085				RC			Cu Pb Zn Ag Au As Ba Cr Ti Zr		
438250	5410430	562	097				RC			" " " "		
438295	5410820	562	098				RC			" " " "		
<u>BELLSTONE RD. - MINNOW FALLS AREA</u>												
443000	5408000	562	090				RC			Cu Pb Zn Ag Au As Ba Cr Zr Ti		
443100	5407550	562	099				RC			" " " "		

Extended grid area float
Ext. grid o/c si se py alt, l?
" " mg. l.v.

pp fp + mafic A.L. o/c.
fg. wk. fp bl. gn. B.C float

022

149023

023

ANALABS

149024

A Division of Inchcape Inspection and Testing Services Australia Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

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05/09/90

10060

1 OF 2

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Au	AuChk	Ba	As	Cr
1										
2										
3	562085	23	29	77	3.0	<0.008	-	416	<2	60
4	562090	29	<5	83	<0.5	0.012	-	897	<2	49
5	562097	34	14	98	<0.5	<0.008	-	1018	<2	12
6	562098	39	18	214	<0.5	<0.008	-	1693	<2	48
7	562099	10	30	286	<0.5	<0.008	-	1216	<2	46
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	5	5	5	0.5	0.008	0.008	10	2	5
24	UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
25	METHOD	101	101	101	101	309	309	401	401	401

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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OFFICER

Jenkins

024

ANALABS

A Division of Inchcape Inspection and Testing Services Australia Pty. Ltd.

149025

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No

PAGE

23.3.08.07320

05/09/90

10060

2 OF 2

TUBE No.	SAMPLE No.	Zr	Ti	Ti:Zr					
1									
2									
3	562085	133	2735	20.6					
4	562090	141	3077	21.8					
5	562097	155	2556	16.5					
6	562098	110	3029	27.5					
7	562099	176	4743	26.9					
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23	DETECTION	5	50	0.1					
24	UNITS	ppm	ppm	%					
25	METHOD	401	401	9825					

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

ANALABS

A division of MacDonal Hamilton & Co. Pty. Ltd.

Phone (09) 458 7999

52 Murray Road, Welshpool, W.A. 6106

Telex AA92560

FAX: 004 31 8890

ANALYTICAL REPORT No. 23.3.08.07316

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

ORDER No.

PROJECT

Aberfoyle Resources Limited
 Exploration Division
 P.O. Box 952
 Burnie Tasmania 7320

10058

Gowrie Park

DATE RECEIVED

RESULTS REQUIRED

20/08/90

ASAP

No. OF PAGES OF RESULTS

DATE REPORTED

No. OF COPIES

TOTAL No. OF SAMPLES

1

03/09/90

1

6

STATE OF SAMPLES REFER BELOW	SAMPLE NUMBERS	PRE-TREATMENT							ANALYSIS					
		DRY	CRUSH	SPLIT	PULVERISE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	METHOD			
	<562,091/096	SS	Prep: 018									Cu, Pb, Zn/101		
	<562,091/096	SS										Au, AuChk/309		
	<562,091/096	SS										Ba, As/401		
	<562,091/096	SS	Prep: 018									Ag/101		

RESULTS

TO

R. de Bomford
 Aberfoyle Resources Limited
 Exploration Division
 P.O. Box 952
 Burnie Tasmania 7320

RESULTS

TO

REMARKS

STATE OF SAMPLES	ANALYSIS	PREPARATION	ANALYSIS	METHOD
whole core	perchloric acid	A1	cold acid	AAS
split core	hydrochloric acid	A2	specific sulphide	XRF
cutting	nitric acid	A3	other mixed acids	SPEC
rock	aqua regia	A4	alkaline attack	COL
soil	nitric-perchloric	A5	volatilization	CHR
pulp	HF mixture	A6	ignition	ITTN
water	HF under pressure	A7	pressed powder (XRF)	CHEM
tissue	fusion	A8	glass fusion (XRF)	MISC
stream sediments				FLUOR
heavy metal				

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027

ANALABS

A Division of Incharge Inspection and Testing Services Australia Pty Ltd.

149028

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

23.3.08.07316

03/09/90

10058

1 OF 1

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Au	AuChk	Ba	As	
1	562091	30	130	375	0.5	0.011	-	960	6	
2	562092	10	65	105	0.5	<0.008	-	290	<2	
3	562093	15	105	410	0.5	0.008	-	1100	6	
4	562094	10	35	175	<0.5	<0.008	-	650	5	
5	562095	35	190	960	0.5	0.009	-	1050	<2	
6	562096	15	100	240	0.5	0.012	-	1700	10	
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	5	5	5	0.5	0.008	0.008	10	2	
24	UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
25	METHOD	101	101	101	101	309	309	401	401	

Feature ID

Sample No

70491

562081

70481

562091

70482

562092

83

562093

86

562094

85

562095

86

562096

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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*

APPENDIX 4

MOUNT ROLAND AREA

- PETROLOGY DESCRIPTIONS

SEE PLATE 9P 35 I 4

SAMPLE NUMBER: 562097

5410430 N
438250 E AMG

149030

SUMMARY:

This sample is a plagioclase+augite+hornblende-phyric meta-andesite, with notably common small apatite microphenocrysts, and a low greenschist facies metamorphic assemblage. It can be confidently correlated with

HAND SPECIMEN:

This is a grey-green finely porphyritic intermediate lava, with phenocrysts of both altered plagioclase and one or more mafic phases.

THIN SECTION:

This is a quite strongly porphyritic andesitic lava, made up of around 20-25 modal% of former plagioclase phenocrysts and about 5-8 modal% of altered former mafic phenocrysts, and sparse FeTi oxide and apatite microphenocrysts in a very fine-grained groundmass probably recrystallized from devitrified glass. The former plagioclase phenocrysts are mainly well-formed small prisms less than 1mm long, and all are totally altered to very fine-grained sericite. Former mafic phenocrysts are also mainly less than 1mm long, and entirely altered, in this case to fibrous very pale green actinolite. However, relict crystal shapes suggest that two different mafic phases may have been present. Most have shapes suggestive of derivation from augite, but a significant number of phenocrysts had both shapes and occasional relict cleavage more typical of primary hornblende phenocrysts. Former small FeTi oxide microphenocrysts have altered largely to leucoxene, and prismatic apatite microphenocrysts are notable by their relative abundance.

The groundmass of this rock is very fine-grained, being composed of an interlocking mosaic of anhedral grains of quartz, albite(?) and quite common pale green chlorite after devitrified glass. Occasional patches of more coarse-grained groundmass, or more- or less-chloritic groundmass were noted.

The presence and relative abundance of actinolite after former mafic phenocrysts in this rock is unusual for Mt Read Volcanics, and indicates low greenschist facies of metamorphism. The absence of epidote suggests that the sample was probably much less calcic than basalt. The rock is a plagioclase+augite+hornblende-phyric andesite with abundant apatite. It is easily correlated with

APPENDIX 5

GOWRIE PARK AREA

- ROCK CHIP GEOCHEMISTRY

GOWRIE
PARK

NO. 100
SIEVE SIZE 100
DATE 10-8-90

ANALYST
LABORATORY

WEIGHT 100g
METHOD

DATE 16-8-90
SHEET 10 of 1

NO.	DESCRIPTION	ANALYST	LABORATORY	WEIGHT	METHOD	DATE	SHEET
433650	5406725562078						
433815	5407160562079						

Re
Re

Cu Pb Zn Ag Au As Ba Cr Ti Zr
" " " "

G.P. Sample
Adit mouth sample
SEE PLATE GP35/H6

031

149032

032

ANALABS

149033

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ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

23.3.08.07320

05/09/90

10060

1 OF 2

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Au	AuChk.	Ba	As	Cr
1	562078	49	1670	305	2.0	<0.008	-	671	42	75
2	562079	5	150	117	1.0	<0.008	-	1018	<2	39
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	5	5	5	0.5	0.008	0.008	10	2	5
24	UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
25	METHOD	101	101	101	101	309	309	401	401	401

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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ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

23.3.08.07320

05/09/90

10060

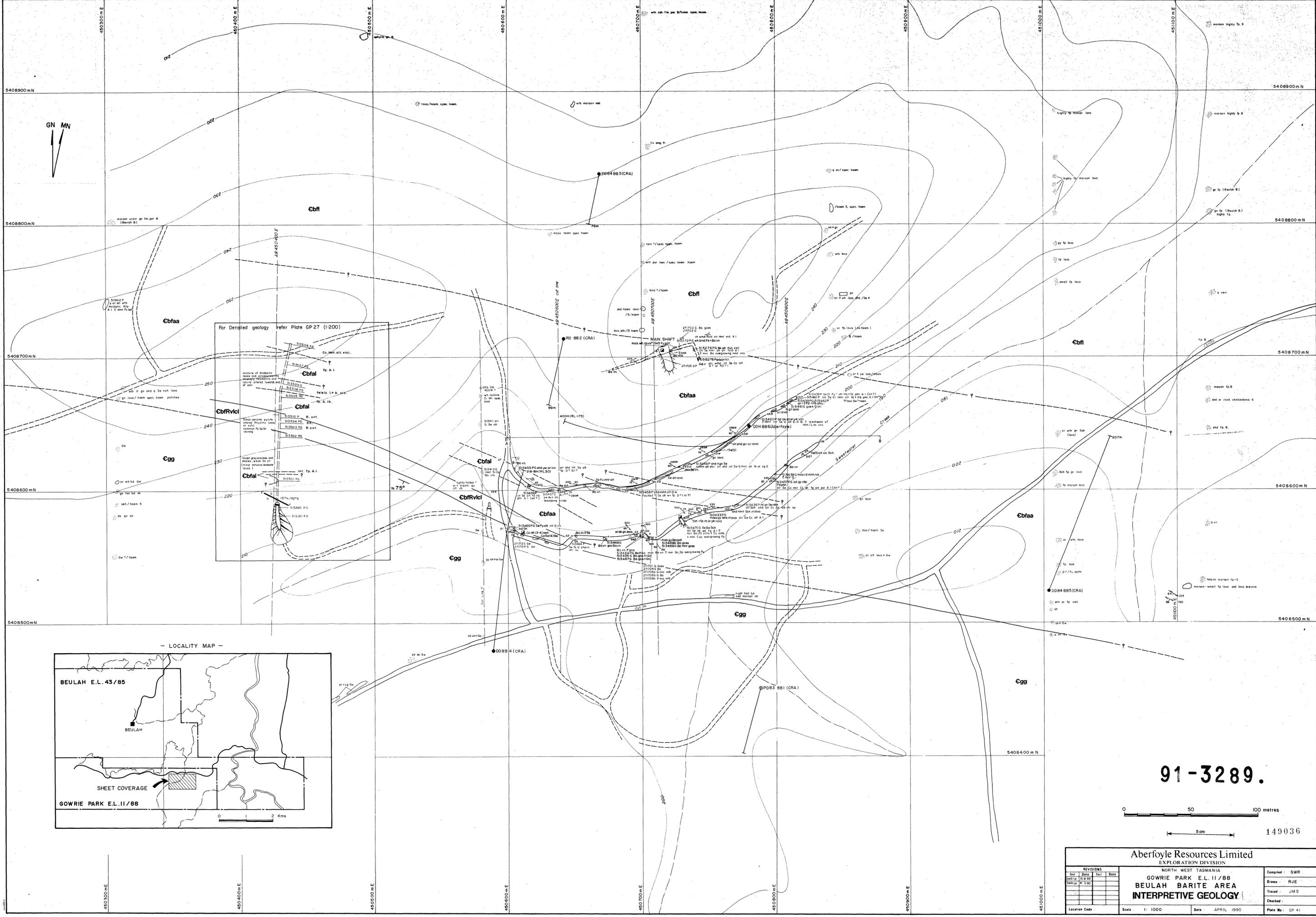
2 OF 2

TUBE No.	SAMPLE No.	Zr	Ti	Ti:Zr					
1	562078	206	1267	6.1					
2	562079	115	1375	11.9					
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
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15									
16									
17									
18									
19									
20									
21									
22									
23	DETECTION	5	50	0.1					
24	UNITS	ppm	ppm	%					
25	METHOD	401	401	9825					

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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91-3289.

0 50 100 metres

5cm

149036

Aberfoyle Resources Limited
EXPLORATION DIVISION

NORTH WEST TASMANIA
GOWRIE PARK E.L. 11/88
BEULAH BARITE AREA
INTERPRETIVE GEOLOGY

Compiled: SWR
Drawn: RJE
Traced: JMS
Checked:

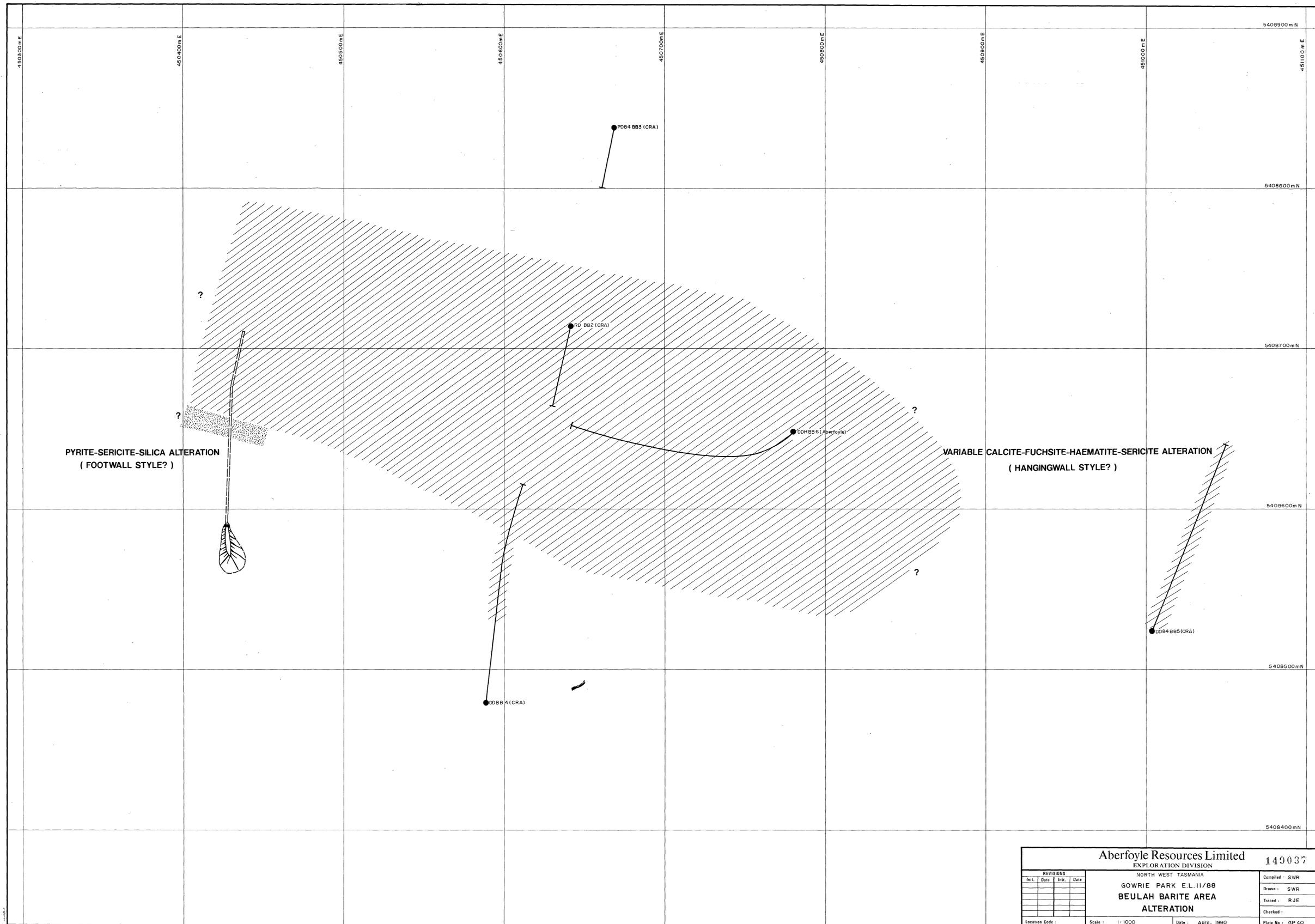
REVISIONS			
Rev	Date	Init	Date
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2	16.3.92		

Location Code

Scale 1:1000

Date APRIL 1990

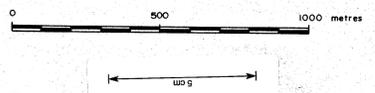
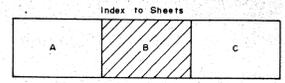
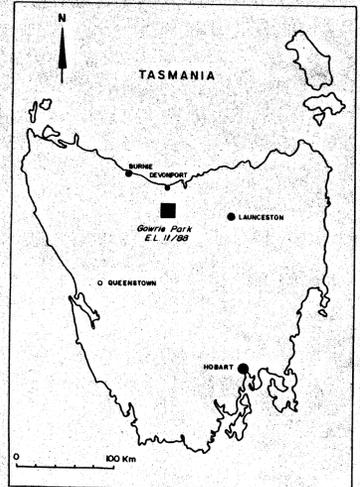
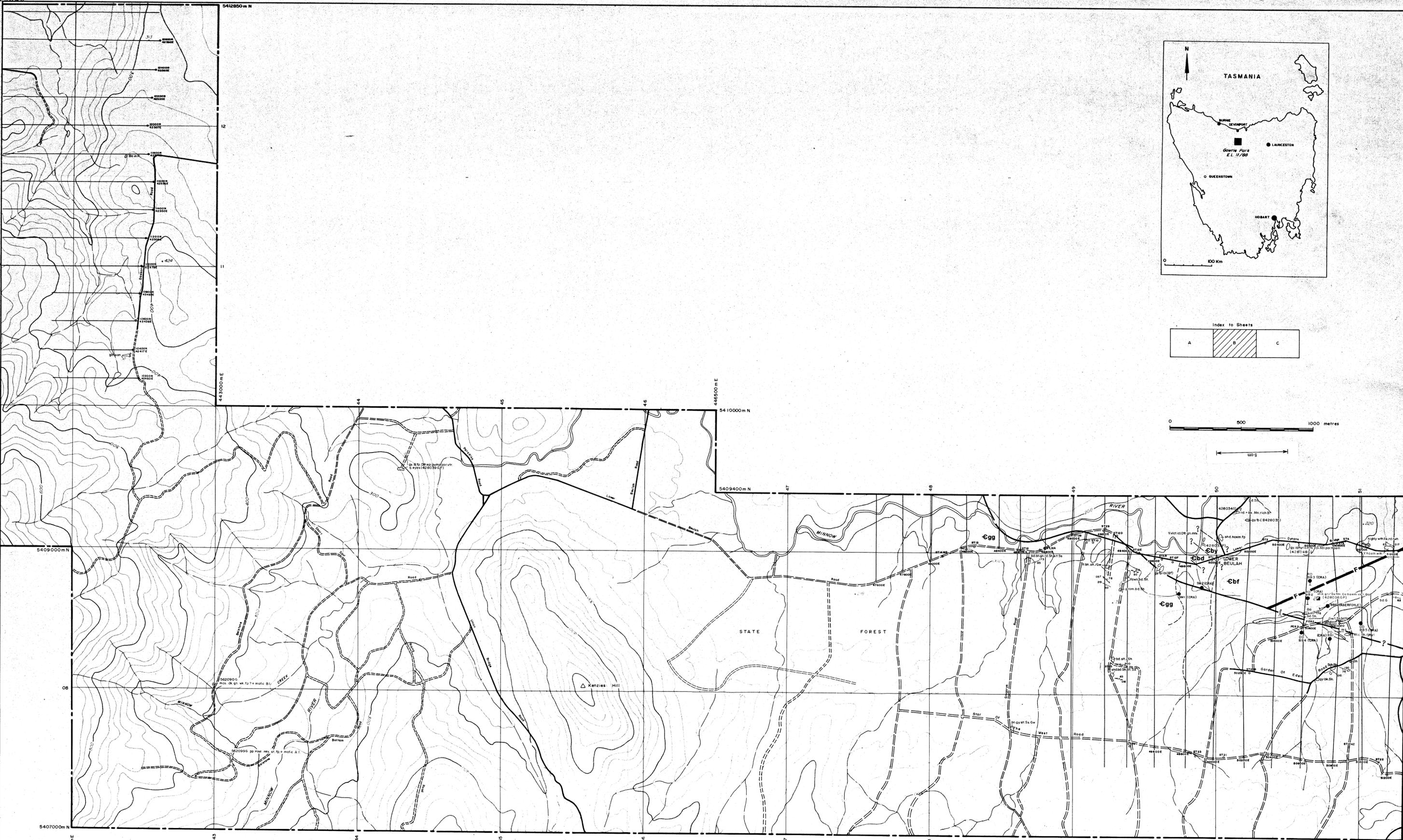
Plate No: GP 41



Aberfoyle Resources Limited EXPLORATION DIVISION NORTH WEST TASMANIA GOWRIE PARK E.L. 11/88 BEULAH BARITE AREA ALTERATION		149037 Compiled: SWR Drawn: SWR Traced: RJE Checked: Plate No: GP 40
REVISIONS Int. Date Int. Date Int. Date Int. Date	Location Code: Scale: 1:1000 Date: April, 1990	

91-3289.

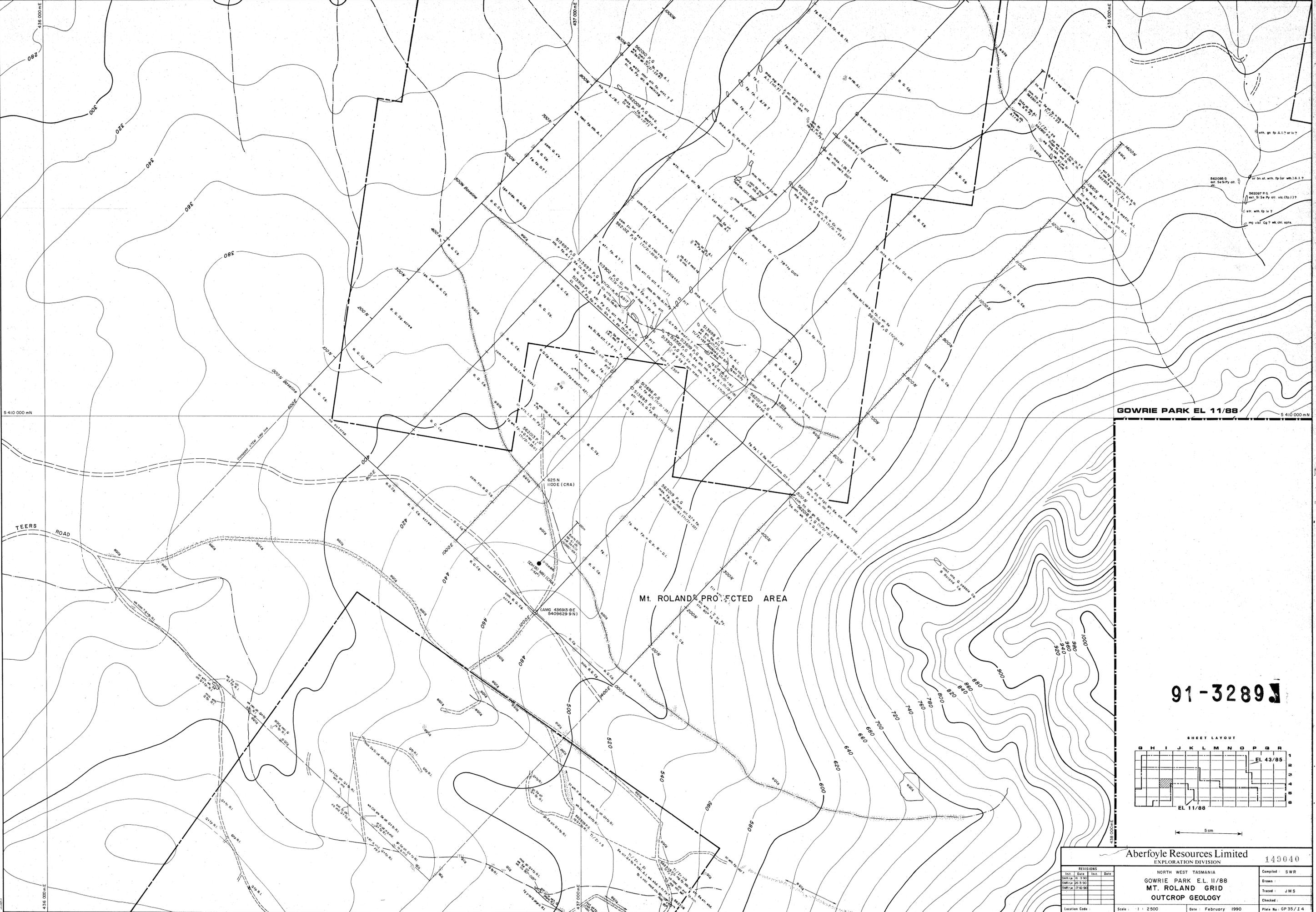
5 cm



- cgg Gog Range Greywacke - dominantly greywacke sequence & mudstone
- cbf Beulah Formation - basic to intermediate lavas, pyroclastics & breccia
- cby Polymict volcanoclastic
- cbd Dache lava
- Fault interpreted from magnetometer survey

91-3289.

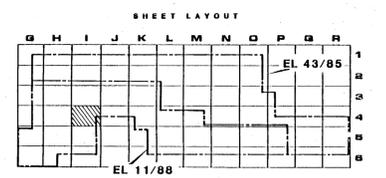
14903 Aberfoyle Resources Limited																							
EXPLORATION DIVISION																							
NORTHERN TASMANIA																							
GOWRIE PARK E.L. 11/88																							
SUMMARY GEOLOGY																							
<table border="1"> <thead> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <th>Int.</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>01/11/88</td> <td>RJE</td> </tr> <tr> <td>02/01/88</td> <td>RJE</td> </tr> <tr> <td>03/01/88</td> <td>RJE</td> </tr> </tbody> </table>		REVISIONS		Int.	Date	01/11/88	RJE	02/01/88	RJE	03/01/88	RJE	<table border="1"> <tr> <td>Compiled</td> <td>SWR DJJ</td> </tr> <tr> <td>Drawn</td> <td>RJE</td> </tr> <tr> <td>Traced</td> <td>RJE JLR</td> </tr> <tr> <td>Checked</td> <td>SWR</td> </tr> <tr> <td>Plotted</td> <td>GP B</td> </tr> </table>		Compiled	SWR DJJ	Drawn	RJE	Traced	RJE JLR	Checked	SWR	Plotted	GP B
REVISIONS																							
Int.	Date																						
01/11/88	RJE																						
02/01/88	RJE																						
03/01/88	RJE																						
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Drawn	RJE																						
Traced	RJE JLR																						
Checked	SWR																						
Plotted	GP B																						
Location Code: K55/3	Scale: 1:10,000	Date: July, 1988	Sheet No: GP B																				



GOWRIE PARK EL 11/88

Mt. ROLAND PROTECTED AREA

91-3289



5 cm

Aberfoyle Resources Limited
EXPLORATION DIVISION
NORTH WEST TASMANIA
GOWRIE PARK E.L. 11/88
MT. ROLAND GRID
OUTCROP GEOLOGY

149040

REVISIONS	
NO.	DATE

Location Code: _____ Scale: 1 : 2500 Date: February 1990 Plate No: GP 35/14

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Drawn: _____
Traced: JMS
Checked: _____

436 000mE

437 000mE

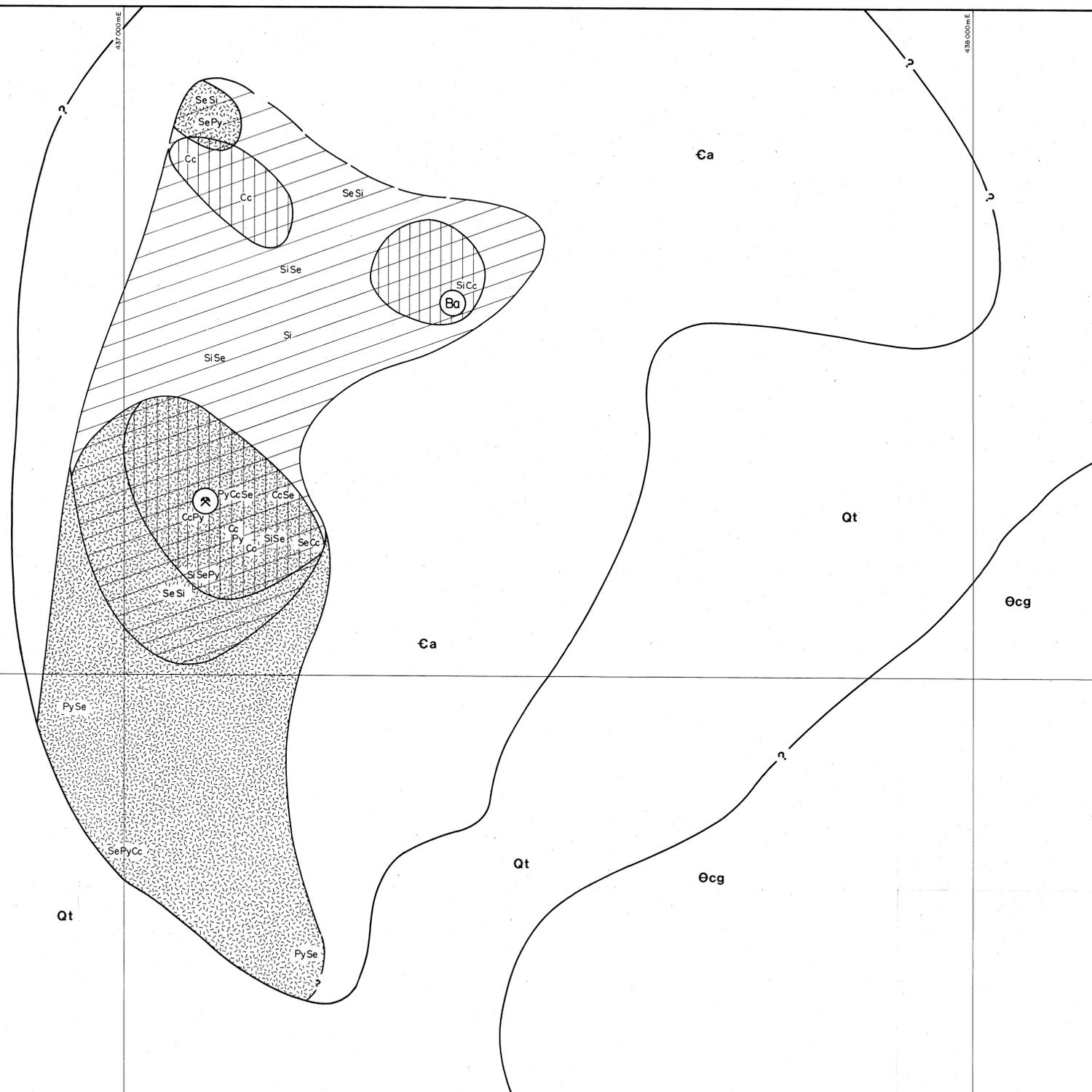
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5 410 000mN

5 410 000mN

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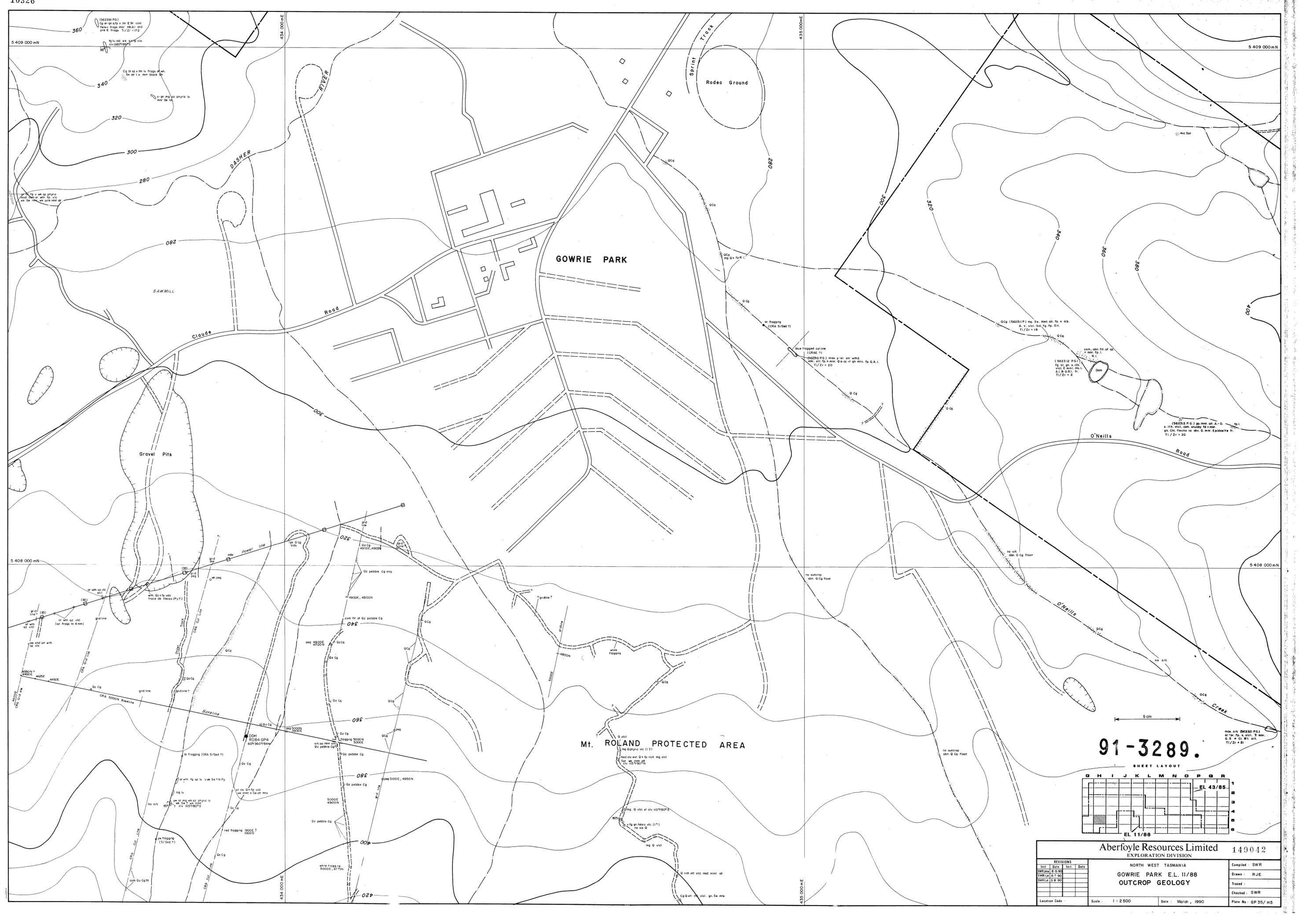
- Qt** Quaternary talus - Ordovician conglomerate rubble
- θcg** Ordovician - quartz pebble conglomerate (Roland Conglomerate)
- Ca** Cambrian Volcanics - Hornblende + Augite + feldspar ± quartz
± apatite phyric andesite lava
- Si** Variable silica alteration - weak silicification of matrix to intense silicification of whole rock
- Cc** Moderate to intense calcite alteration of whole rock
- Py** Weak to moderate pyrite alteration producing disseminations and veins of pyrite
- Ba** Anomalous Ba in rock chip (0.39% Ba)
- ⚡** Adit ± Sph, Gn minor Cpy + Py veins in str. Si Cc Py altered rock



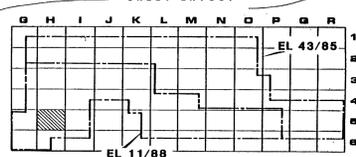
5 cm

91-3289.

Aberfoyle Resources Limited EXPLORATION DIVISION NORTH WEST TASMANIA GOWRIE PARK E.L.11/88 MT. ROLAND GRID OVERLAY TO OUTCROP GEOLOGY				149041 Compiled: SWR Drawn: SWR Traced: RJE Checked: Plate No: GP35/14/A																				
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Int.	Date	Int.	Date																					



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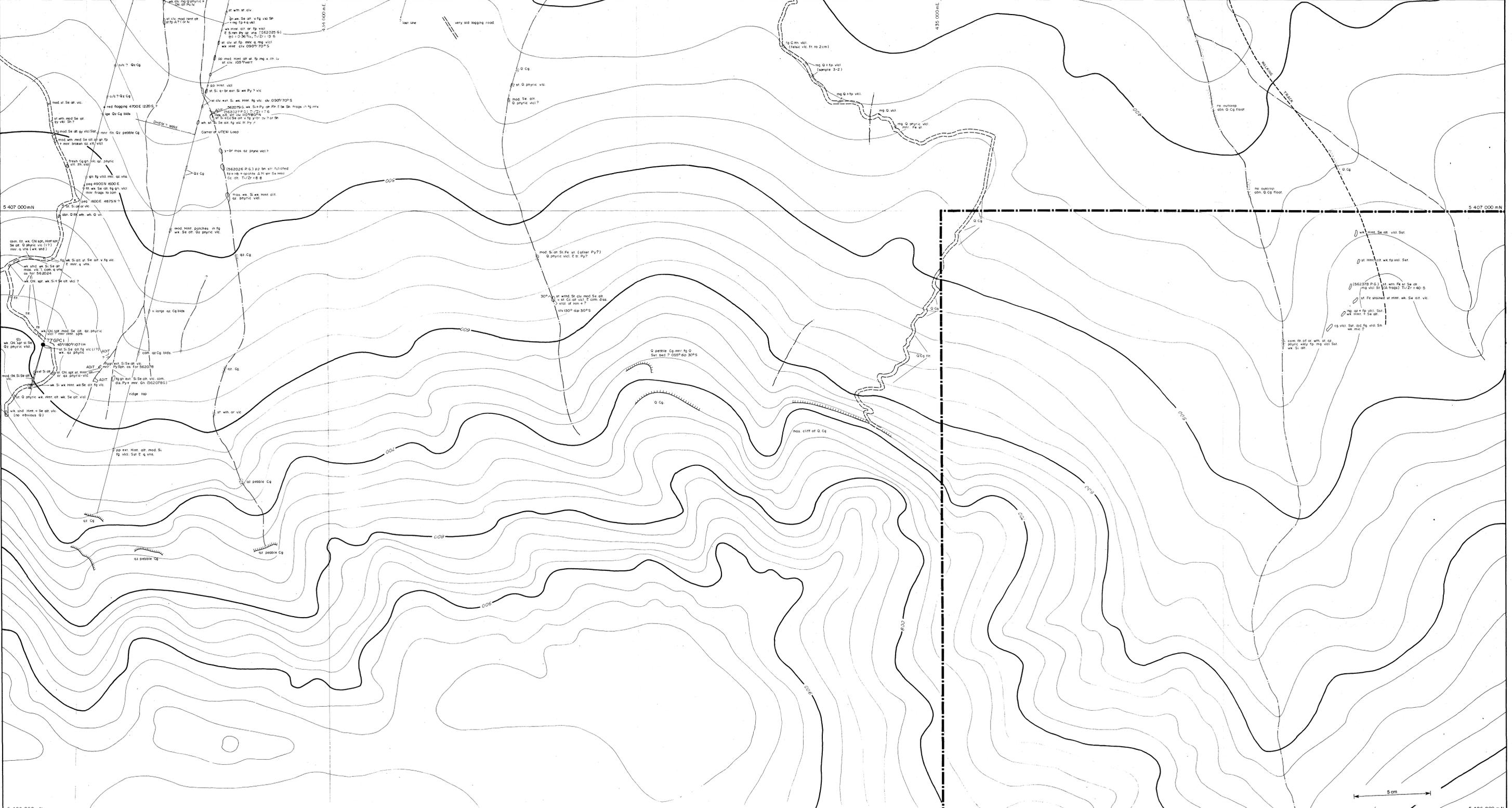
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 EXPLORATION DIVISION

GOWRIE PARK E.L. 11/88
OUTCROP GEOLOGY

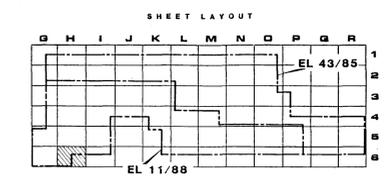
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 Drawn: RJE
 Traced:
 Checked: SWR



91-3289.



Aberfoyle Resources Limited EXPLORATION DIVISION		149043
NORTH WEST TASMANIA GOWRIE PARK E.L. 11/88 OUTCROP GEOLOGY		Compiled: SWR Drawn: RJE Traced: RJE Checked: SWR
REVISIONS Iss. Date Iss. Date SWR 6-7-90 SWR 13-9-90	Location Code Scale: 1 : 2 500 Date: May, 1990	Plate No: GP 35 / H6

