

TABLE OF CONTENTS

	PAGE NO
1.0 INTRODUCTION	1
2.0 TENURE	2
3.0 PREVIOUS EXPLORATION	2
4.0 SUMMARY OF EXPLORATION COMPLETED	3
4.1 Year ended April 1987 (Sise, 1987)	3
4.2 Year ended April 1988 (Jack, 1988)	4
4.2.1 Regional	4
4.2.2 Lower Beulah	4
4.3 Year ended April 1989 (Rand, 1989)	5
4.3.1 Lower Beulah	5
4.3.2 Stonebridge	5
4.4 Year ended April 1990 (Rand, 1990)	6
4.4.1 Lower Beulah	6
4.5 Year ended April 1991 (Wallace, 1991)	6
4.5.1 Regional	6
4.5.2 Lower Beulah	6
4.6 Current year	7
5.0 REHABILITATION	7
6.0 BIBLIOGRAPHY	8

LIST OF PLATES

	SCALE
BEUL 24 (in text) Summary of Exploration	As shown
BEUL 36 (in text) Beulah EL 43/85 Locality Map	As shown

1.0 INTRODUCTION

Regional geological interpretation, aided by the study of reports on exploration conducted by other companies, indicated a similarity of the stratigraphic sequence on ETA 8480 Lake Barrington, to that on Aberfoyle's Mackintosh property. In particular, the basic to intermediate lavas and volcanoclastics of the Cambrian Beulah Formation are, from the experience of work in similar lithologies at Hellyer, potential hosts of massive sulphides of the Que/Hellyer type. The occurrence of base metal sulphide-bearing baryte at Lower Beulah was seen as particularly encouraging. The local stratigraphic sequence with Beulah Formation overlain by Gog Range Greywacke and Minnow Keratophyre (rhyolitic volcanics) is a possible correlate of the Que Hellyer Volcanic-Que River Shale-Southwell Sub Group sequence in the Que-Hellyer region.

Previous explorers based their initial exploration programmes around regional stream sediment geochemistry. This was an appropriate reconnaissance technique, and lead to the identification of several base metal anomalies which were followed up by gridding, soil and rock geochemistry and selective mapping, without success.

The only geophysical exploration over the ETA area was an airborne electromagnetic/magnetic survey (DIGHEM) totalling 360 line km. and flown for AUSTAMAX. DIGHEM's principal application is in detecting shallow conductors and potential to apply deep search EM technology was recognised.

Application for Exploration Licence 43/85 was made on the basis of these opportunities.

2.0 TENURE

Exploration Licence 43/85 Beulah (80 sq. km.) was granted to Aberfoyle Exploration Pty Ltd on 29 May, 1986.

Statutory regulations require that 50% of the licence area be relinquished on the fifth anniversary of the tenement. This was effected on 29 May, 1991 (Plate BEUL 36). Details of exploration conducted in the relinquished area are described in Wallace, 1991.

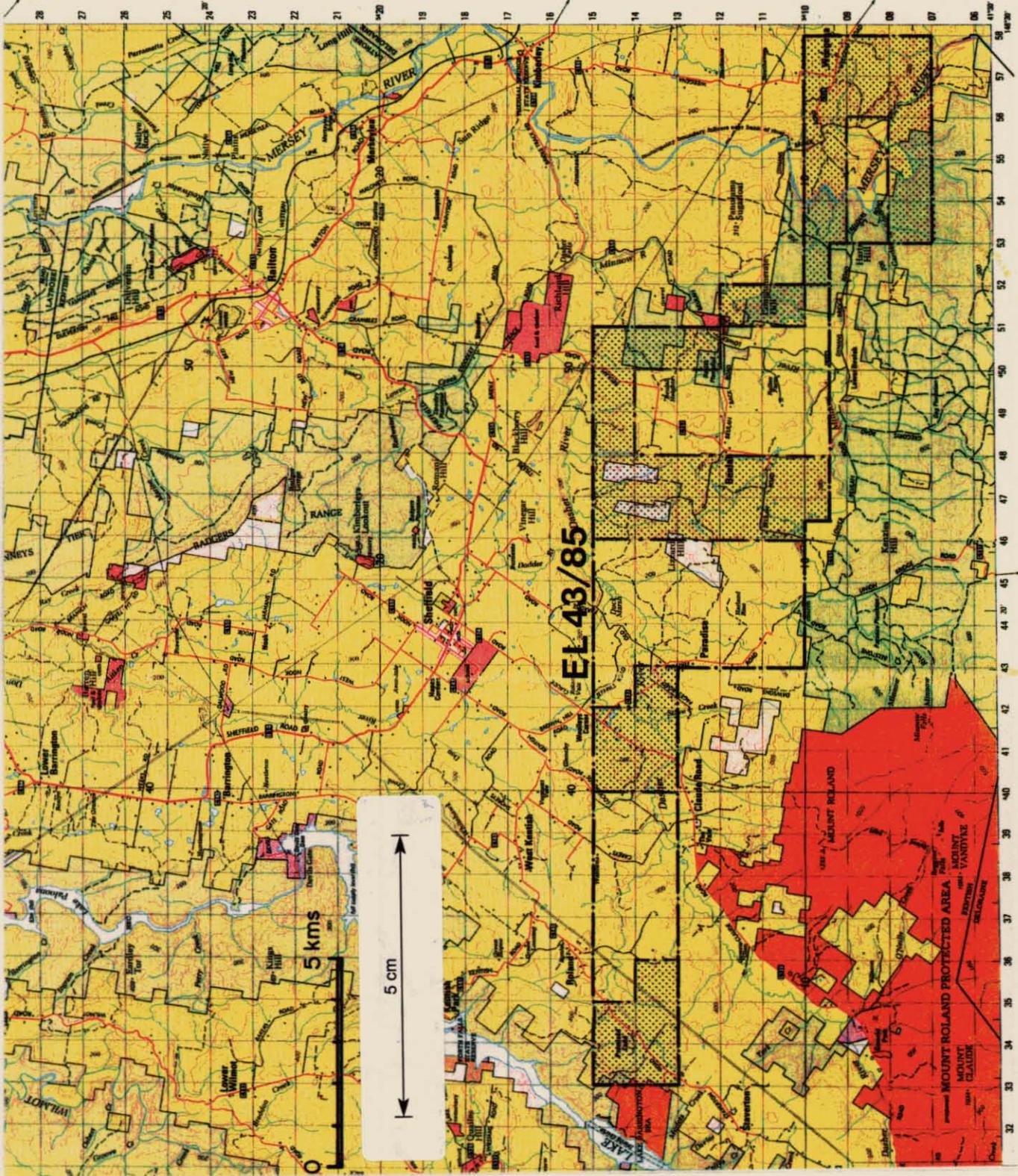
3.0 PREVIOUS EXPLORATION (Ref. Plate BEUL 24)

The Licence area has no recorded mines or mineral occurrences and consequently has no documented early prospecting history.

The first systematic base metal exploration was conducted by Asarco Australia Pty Ltd between 1973 and 1976 on Exploration Licence 7/73. Their ground exploration concentrated on a detailed regional stream sediment geochemical programme with a density of two samples per square kilometre (Baker, 1975). No anomalies were located within the current Beulah licence area, consequently no follow-up work was implemented by Asarco, and the property was relinquished.

Amax Australia (Operations) Pty Ltd were granted Exploration Licence 49/82 covering 243 sq. km. in the Wilmot-Beulah area on 29 August, 1983. On completion of the exploration work summarised below, Amax relinquished the ground in 1985 (Stewart, 1985), having determined that no significant mineralisation associated with the Cambrian volcanics is likely to outcrop or sub-crop on the licence, and that further exploration for deep mineralisation was economically unattractive. No surface geophysics or drilling was undertaken by Amax.

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AREA TO BE RELINQUISHED



AREA PREVIOUSLY RELINQUISHED

Aberfoyle Resources Limited
EXPLORATION DIVISION

NORTH WEST TASMANIA

BEULAH E.L. 43/85

LOCALITY MAP

Compiled : Lands Dept.

Drawn :

Traced : RJE

Checked :

Plate No. : BEUL. 36

REVISIONS			
Init.	Date	Init.	Date

Location Code :

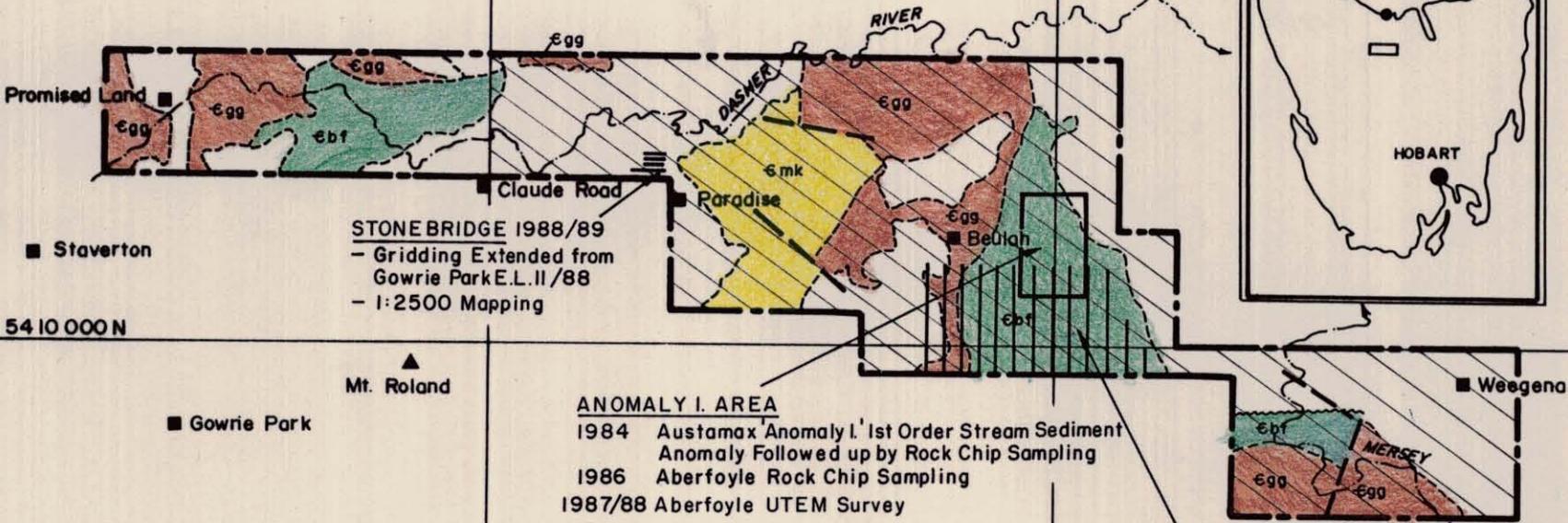
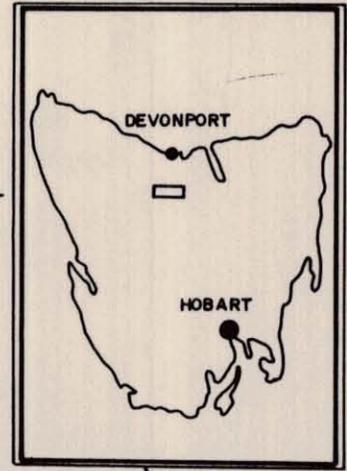
Scale : As shown

Date : May, 1990

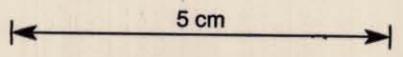
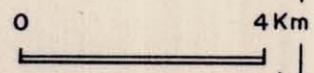
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- REGIONAL**
- 1973 Asarco Stream Sediment Sampling 2 Samples Km²
 - 1983 Austamax Follow-up Stream Sediment Programme
 - 1984 Austamax Airborne Dighem
 - 1987/88 Aberfoyle - Rock Chip Sampling
- Lead Isotope Analysis
-  SHEFFIELD



- CAMBRIAN ROCKS**
-  Acid volcanics
 -  Greywacke & other sediments
 -  Basalts, andesites & minor dacites



Aberfoyle Resources Limited
EXPLORATION DIVISION

NORTHERN TASMANIA

E.L.43/85 BEULAH
SUMMARY OF EXPLORATION

REVISIONS			
Init.	Date	Init.	Date

Location Code : K55/3

Scale : As shown

Date : May 1990

Plate No. : BEUL.24

Completed :	SWR
Drawn :	SWR
Traced :	JLR
Checked :	

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Amax reviewed the Asarco stream sediment data and concluded that a more detailed survey was not warranted. Instead, the original data was reinterpreted to locate second order anomalies. The threshold metal values chosen for this category were Cu 36 ppm, Pb 38 ppm, Zn 92 ppm. A further 82 stream sediment samples were collected by Amax (Vivian, 1984).

During January 1984 a combined electromagnetic-magnetic survey totalling 360 line km. was flown by DIGHEM Limited on behalf of Amax (Vivian, 1984). Part of this survey covered EL 43/85. The survey detected 82 EM anomalies with a conductor grade of 2 or better. There were no obvious massive sulphide conductors. Follow-up of most of these anomalies failed to generate any encouragement.

4.0 EXPLORATION COMPLETED (ref. Plate BEUL 24)

A summary of the exploration completed during the life of the tenure is given.

4.1 Year Ended April, 1987 (Sise, 1987)

- Eighteen rock chip samples collected and analysed for Cu, Pb, Zn, Ag, Ni and Mn. The highest values from a single sample were in ppm, 80 Cu, 725 Pb, 280 Zn.
- The private ownership of mineral rights issue became apparent after the granting of the licence. Research into the implications of this question affected the rate of progress during the first year of tenure and restricted work to regional assessment.

4.2 Year Ended April, 1988 (Jack, 1988)

4.2.1 Regional

- Twenty one rock chip samples submitted to petrographic consultants for description. Concluded that the lavas and lava breccias at Beulah are petrographically similar to the Que-Hellyer andesites.
- Sixty six rock chip samples assayed for various metallic and lithophile elements. Concluded from Ternary plots of the immobile elements Ti, Zr and Y that the Beulah volcanics are calc-alkaline and fall within the field for Mount Read Volcanics as reported by McClenaghan and Corbett, 1986. They also cluster in the field for footwall andesites and hangingwall andesite-basalts at Hellyer.
- Ten relatively high Pb samples were submitted to SIROTOPE for Pb isotopic characterisation. It was concluded that the Beulah Basalt has an isotopic composition consistent with derivation from Cambrian hydrothermal fluids, similar to those responsible for the formation of the massive sulphide deposits in western Tasmania.

4.2.2 Lower Beulah

- A 16.4 line km. UTEM survey completed over Cambrian volcanics hosting anomalous geochemistry on Sharmans Grid at Lower Beulah. No responses attributable to accumulations of massive sulphide were interpreted.

4.3 Year Ended April, 1989 (Rand, 1989)

4.3.1 Lower Beulah Area

- A 200m spaced grid was established over the Lower Beulah area and totalled 34.2 km of gridding.
- Approximately 1400 C horizon soil samples collected at 25m intervals using a power auger and analysed for Cu, Pb, Zn, Ag and As.
- Image processing indicated zones of anomalous Pb, Zn and Cu over Beulah Basalts between 48200-49500E and 9400-11000N. Maxima in ppm were 1050 Pb, 920 Zn and 165 Cu.
- Mapping in the Lower Beulah area indicated dominant Beulah Formation intermediate lavas with minor volcanoclastic rocks and Gog Range sediments.
- Twenty nine rock chip samples were collected from the area for routine petrology and/or geochemical analysis.

4.3.2 Stonebridge

- Extension of the Stonebridge grid near Paradise to cover Cambrian felsic and intermediate volcanic rocks, resulted in 3.65 km of gridding falling within the boundaries of EL 43/85 Beulah.
- Mapping established the position of the north trending Tertiary basalt/Cambrian volcanic contact.

4.4 Year Ended April, 1990 (Rand, 1990)

4.4.1 Lower Beulah

- Further mapping of the Lower Beulah grid located limited favourable indicators of massive sulphide mineralisation.
- Ground magnetics were surveyed over the Lower Beulah Grid to assist geological interpretation.
- A three loop, 32.5 line km. UTEM survey was completed over the existing grid. No responses attributable to massive sulphides were detected.

4.5 Year Ended April, 1991 (Wallace, 1991)

4.5.1 Regional

- Reconnaissance mapping completed in vicinity of Promised Land.

4.5.2 Lower Beulah

- Four stream sediment samples collected and analysed for Cu, Pb, Zn, Ag, Au, Ba and As. Results indicate that the technique is not capable of detecting broad Pb anomalism from soils in this environment.

4.6 Summary for Current Year

- No field work has been undertaken since the licence renewal in May 1991.

5.0 REHABILITATION

Gridding undertaken within the licence area to facilitate the various surveys, required the cutting of lines through bush to enable access. Grid lines where cut are revegetating naturally and do not require rehabilitation. All grid pegs and flagging have been removed.

No other exploration activities have disturbed the environment.

6.0 BIBLIOGRAPHY

- Baker, E. G., 1975. Report for the year ending 15 March, 1975. EL 7/73 Paradise, Tasmania. Asarco (Australia) Pty. Ltd.
- Bamford, A. L. and Green, G. R., 1988. Cethana Mineral Deposits Map Series Sheet 8111 IV - 8115 III.
- Jack, D. J., 1988. Exploration Licence 43/85 Beulah, Tasmania. Progress report for the year ended 29 April, 1988. Unpub. Rep. for Aberfoyle Resources Limited.
- Jennings, I. B., 1959. Sheffield Sheet, Geological Survey of Tasmania. Published by Department of Mines, Hobart.
- Rand, S. W., 1989. Exploration Licence 43/85 Beulah, Tasmania. Progress report for the year ended 29 April, 1989. Unpub. Rep. for Aberfoyle Resources Limited.
- Rand, S. W., 1990. Exploration Licence 43/85 Beulah, Tasmania. Progress report for the year ended 29 April, 1990. Unpub. Rep. for Aberfoyle Resources Limited.
- Sise, J. R., 1987. Exploration Licence 43/85 Beulah, Tasmania. Progress report for the year ended 29 April, 1987. Unpub. Rep. for Aberfoyle Resources Limited.
- Stewart, A. I. A., 1985. Final report on exploration activities within EL 49/82, Beulah, North Tasmania for the period 30/8/82 to 29/8/84. Austamax Resources Limited.

- Temby, P. A., 1985. EL 7/73 Sheffield Area, Northern Tasmania. Report on exploration for 12 months to 15 February, 1985. Unpub. Rep. to Tas. Dept. Mines (1822/85).
- Vivian, R. M., 1984. Annual report on exploration activities within EL 49/82 Beulah, North Tasmania, for the period 30/3/83 to 29/8/84. Unpub. Rep. to Tas. Dept. Mines.
- Wallace, D. B., 1991. Exploration Licence 43/85 Beulah, Tasmania. Progress report for the year ended 29 April, 1991. Unpub. Rep. for Aberfoyle Resources Limited.