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EXPLORATION LICENCE 5/85, LAKE MARGARET
TASMANIA

REPORT ON EXPLORATION IN
AREAS TO BE RELINQUISHED
20TH OCTOBER, 1990



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REGIONAL MANAGER

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FIGURES

1. Lake Margaret EL 5/85 C.R.A. J.V. Locality Map.
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PLATES

Plate	Scale	Title
TASh 3292 (CRA)	1:50,000	Lake Margaret EL 5/85 Reconnaissance sampling.
LMARG 31	1:10,000	Red Hills - UTEM location.

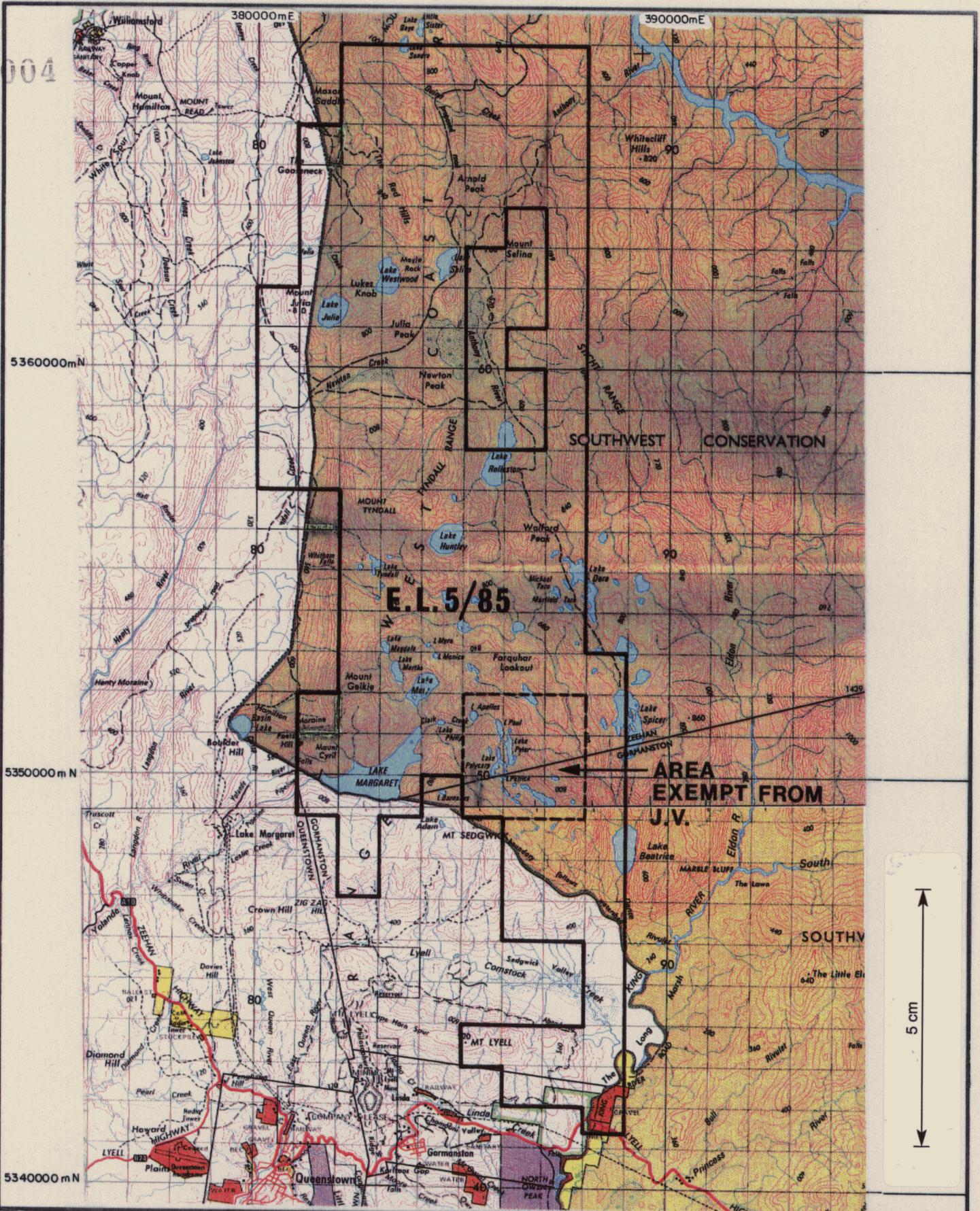
1.0 SUMMARY

In order to fulfil statutory requirements governing the retention of exploration licences in Tasmania, EL 5/85 Lake Margaret must be reduced to a maximum of half the original area of 145 sq. km. (which includes a 4.7 sq. km. area vested in the HEC) by 20 October, 1990.

An area of 72 sq. km. has been selected for relinquishment (see Figure 2 and Appendix 1 for location). The areas selected are considered the least prospective for VMS style base metal mineralisation.

Work over the five year duration of the licence in the areas selected for relinquishment, has been of a reconnaissance nature. Limited rock chip sampling and cyanide leach stream sediment sampling was undertaken by CRA Exploration Pty Ltd. The aim was to assess the possible gold bearing potential of the Owen Conglomerate. In 1989 Aberfoyle Resources Limited conducted a UTEM survey which straddled the boundary of the retained portion of the licence and the Lake Selina area considered for relinquishment. The survey did not identify any conductors attributable to an accumulation of massive sulphides.

The five areas selected for relinquishment have received minimal attention due to the perceived low prospectivity of each area.



Aberfoyle Resources Limited

Figure 1

EXPLORATION DIVISION

NORTH WEST TASMANIA

LAKE MARGARET E.L. 5/85 C.R.A. JV.

LOCALITY MAP 444005

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Location Code :

Scale : As shown

Date : September, 1989

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2.0 INTRODUCTION

The Lake Margaret EL 5/85 covers an area of 145 sq. km., to the north and east of Queenstown, from south of Mount Sedgwick to the south of Mount Murchison (Figure 1).

The exploration licence was granted to CRA Exploration Pty Ltd on the 20 October, 1985. Since the 28 April, 1988 exploration has been conducted by Aberfoyle Resources Limited under the terms of the Mount Read Volcanics joint venture with CRA Exploration Pty Ltd.

This report summarises the exploration completed over the last five years in the areas nominated for relinquishment (Figure 2).

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3.0 EXPLORATION HISTORY

3.1 Pre 1985 Exploration

The areas nominated for relinquishment received virtually no ground based exploration attention prior to 1985.

The modern phase of exploration by Rio Tinto Zinc and Electrolytic Zinc Co. during 1957-1961 concentrated on a number of prospects identified within Cambrian Mount Read Volcanics located within the retained portion of the Lake Margaret EL 5/85.

The recent phase of exploration by the Mount Lyell Mining and Railway Co. Ltd. (later Goldfields Exploration Pty Ltd) in joint venture with Getty Oil Development Co. Ltd (later by Little River Resources Pty Ltd) was similarly concentrated on a number of prospects located over areas of exposed volcanics within the retained portion of the Lake Margaret EL (Purvis et. al., 1983, Fitzgerald, 1987).

No record of any regional reconnaissance work undertaken within the area considered for relinquishment was located.

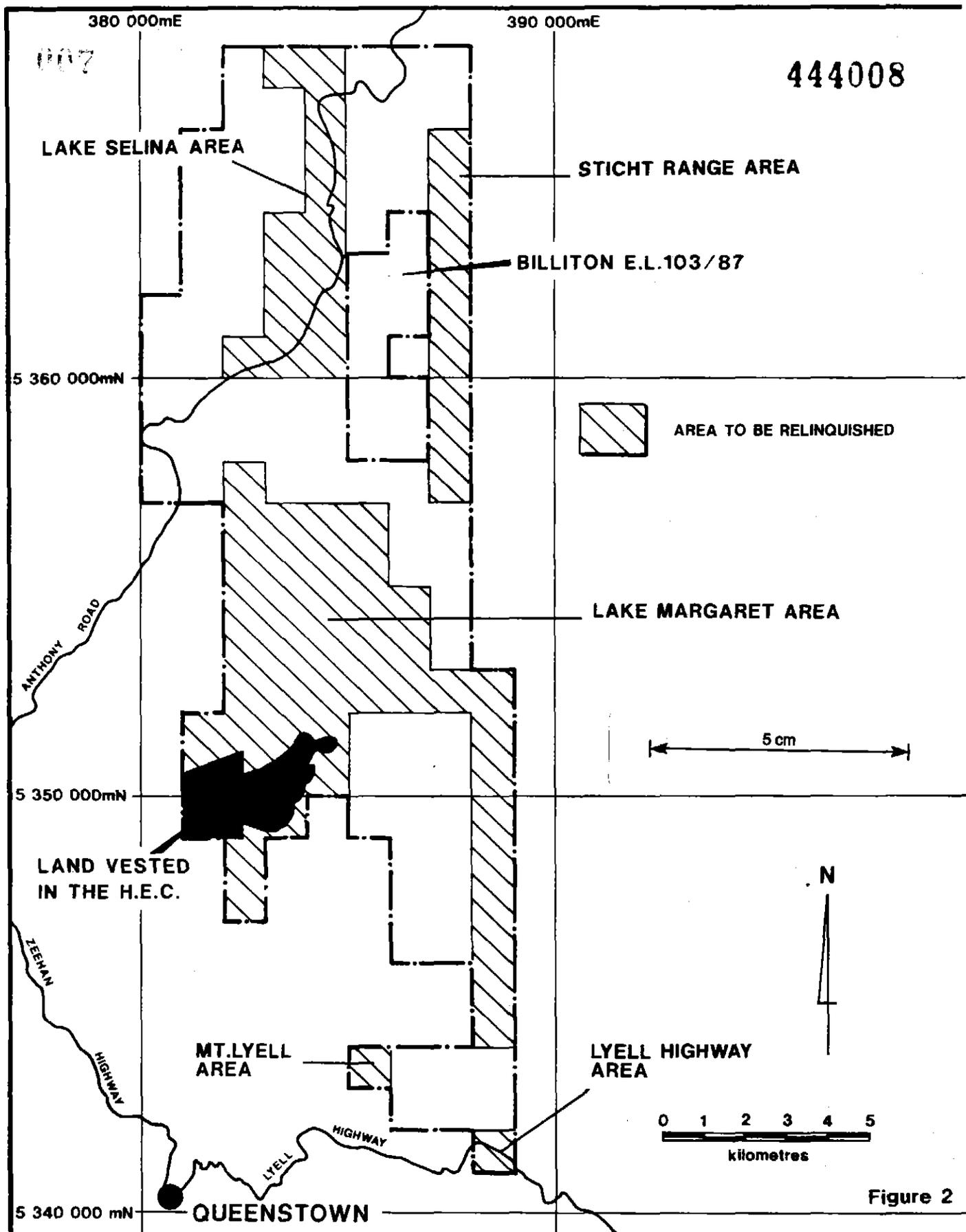


Figure 2

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REVISIONS			
Init.	Date	Init.	Date

NORTH WEST TASMANIA
LAKE MARGARET E.L.5/85 C.R.A. JV.
AREA TO BE RELINQUISHED

Compiled :	DJN
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Traced :	
Checked :	
Plate No. :	L.Marg 30A

Location Code :

Scale : AS SHOWN

Date : SEPTEMBER 1990

Plate No. : L.Marg 30A

3.2 Recent Exploration

3.2.1 Lake Selina Area

This area (see Figure 2 and Appendix 1 for location) is a 14 sq. km. area located within the central north of the licence.

GEOLOGY

No geological mapping has been completed by CRA Exploration Pty Ltd or by Aberfoyle Resources Ltd. within the area. Mapping by McNeill, 1987 indicates that this area is covered by Owen Conglomerate which in places is overlain by Pleistocene glacials.

No known prospects or historic workings occur within this area (Green and Bamford, 1986a).

GEOCHEMISTRY

Stream Sediment Survey

Two stream sediment samples (1198899, 1198900) were taken by CRA Exploration Pty Ltd during the regional cyanide leach survey conducted over the licence in 1986. No anomalous gold values were detected (Plate TASH 3292 CRA).

Rock Chip Survey

Six rock chip samples (119902-119907) were taken along the Henty-Anthony road as part of a regional rock chip sampling programme conducted in conjunction with the stream sediment survey. No anomalous Cu, Pb, Zn or precious metal values were detected (Plate TASH 3292 CRA).

GEOPHYSICS

i) UTEM Survey 1989

A UTEM survey was conducted by Aberfoyle Resources Ltd over the eastern flank of the Red Hills lava dome. The eastern portion of lines 64000-65600N fall within the Lake Selina area to be relinquished.

The UTEM survey was designed to test for a repetition of the Red Hills mineralised sequence beneath the Cambro-Ordovician Owen Conglomerate cover. The underlying Cambrian Mount Read Volcanics were interpreted to lie within range of effective UTEM.

A total of 2.7 line km. of 50m spaced single component (Hz) data was collected from the area to be relinquished. Stacked profiles are included in Appendix 2 and the loop location is outlined on Plate LMARG 31.

This survey did not identify any UTEM anomalies that were indicative of massive sulphide accumulations. An early time current gathering anomaly extending only to channel 9, occurred on every line surveyed. This anomaly was generated by currents flowing in the saturated button grass on the eastern side of the grid.

No known prospects or historic workings occur within this area (Green and Bamford, 1986 a, b).

3.2.2 Sticht Range Area

This area (see Figure 2 and Appendix 1 for location) is a 9 sq. km. area located along the eastern margin of the licence.

GEOLOGY

No geological mapping has been completed by CRA Exploration Pty Ltd or by Aberfoyle Resources Ltd within the area. Mapping by McNeill, 1987 and Corbett and Jackson, 1987 identified Pre-Cambrian basement (pelite and quartzite) flanked by the Cambrian Sticht Range Beds (siliciclastic grey conglomerate and sandstone and minor interbedded siltstone). In places the basement is overlain by Pleistocene glacials.

GEOPHYSICS

A review of the Department of Mines 1981 airborne magnetics survey data reveals that the area lacks any significant anomalies indicative of Red Hills style mineralisation.

3.2.3 Lake Margaret Area

This area forms the bulk of the area considered for relinquishment (47 sq. km.). (see Figure 2 and Appendix 1 for location).

GEOLOGY

No geological mapping has been completed by Aberfoyle Resources Ltd or by CRA Exploration Pty Ltd in the area. Mapping by Corbett and Jackson, 1987 identified a cover of Ordovician sediments (dominantly Owen Conglomerate with minor Gordon Limestone) in excess of 200m located over the bulk of the area. Cambrian sediments (Sticht Range Beds) and Tyndall Group volcanoclastic conglomerate (Dora Conglomerate) underlie the Ordovician sediments along the eastern margin of the area considered for relinquishment. In places Pleistocene glacials overlie the Cambro-Ordovician sediments.

No known prospects or historic workings occur within the area (Green and Bamford, 1986 b).

GEOCHEMISTRY

Rock Chip Sampling

Six rock chip samples (1153951-1153955, 1153959) were taken by CRA Exploration Pty Ltd to the east of Lake Mary as part of a regional rock chip sampling programme to assess the gold bearing potential of the Owen Conglomerate. No anomalous Cu, Pb, Zn or precious metal values were detected (Plate TASH 3292 CRA).

GEOPHYSICS

A review of the Department of Mines 1981 airborne magnetics survey data reveals that the area lacks any significant anomalies indicative of Red Hills style mineralisation.

3.2.4 Lyell Highway Area

This 1 sq. km. area is located at the southern end of the licence (see Figure 2 and Appendix 1 for location).

GEOLOGY

No geological mapping has been undertaken by Aberfoyle or CRA Exploration within this area. Mapping by Corbett et. al., 1989 identified outcrops of Devonian sediments (mudstone, siltstone and minor fine grained sandstone) overlain by Pleistocene outwash gravels and recent alluvials.

No known prospects or historic workings occur within the area (Green and Bamford, 1986 b).

3.2.5 Mount Lyell Area

This 1 sq. km. area is centred about the summit of Mount Lyell (see Figure 2 and Appendix 1 for location).

GEOLOGY

No geological mapping has been undertaken by Aberfoyle Resources Ltd or CRA Exploration Pty Ltd within this area. Mapping by Corbett et. al., 1989 identified extensive outcrops of Owen Conglomerate in places overlain by minor Pleistocene glacials.

No known prospects or historic workings occur within the area (Green and Bamford, 1986 b).

4.0 CONCLUSIONS AND RECOMMENDATIONS

The Lake Selina, Lake Margaret and Mount Lyell areas are covered by a substantial thickness of Ordovician sediments (predominantly Owen Conglomerate) and in places the basement is overlain by Pleistocene glacials. Based on interpretive sections (McNeill, 1987, Corbett and Jackson, 1987 and Corbett et. al., 1989) the depth to the top of the Mount Read Volcanics should be 200-400m in the Lake Selina area and in excess of 1000m over most of the Lake Margaret and Mount Lyell areas.

The Sticht Range area is dominated by outcrops of the Sticht Range Beds (siliciclastic conglomerate and sandstone) and of Pre-Cambrian basement (pelite and quartzite).

The Lyell Highway area is covered by Devonian sediments (predominantly mudstone and siltstone) overlain by Pleistocene glacial and recent alluvial cover.

These five areas are currently interpreted to have low VMS potential. The absence of any significant airborne magnetic anomalies, suggests that any blind, Red Hills like domal structures are unlikely to occur within explorable depths beneath the Cambro-Ordovician cover. The reconnaissance work by CRA Exploration Pty Ltd suggests that the auriferous potential of the Owen Conglomerate within these areas is minimal.

The compulsory 50% relinquishment of EL 5/85 Lake Margaret can be achieved without surrendering any areas of Mount Read Volcanics or any areas with good potential for the discovery of a blind Red Hills like domal structure beneath the Cambro-Ordovician cover.

5.0 REFERENCES

- Corbett, K. D., and Jackson, J. C., 1987. Geology of the Tyndall Range area. Map 5 Mount Read Volcanics project. Department of Mines, Tasmania.
- Corbett, K. D., Calver, C. R., Everard, J. L., Seymour, D. B., 1989. Geology of the Queenstown area 1:25000 scale Regional Mapping Programme. Department of Mines, Tasmania.
- Fitzgerald, F. G., 1987. EL 9/66 Tyndall area, Tasmania. Relinquishment Report. Report to the Department of Mines, Tasmania. Goldfields Exploration Pty Ltd. Unpub. Report.
- Green, G. R., and Bamford, A. L., 1986 a. Rosbery-Mount Read Volcanics Project, Mineral Deposit Map. Department of Mines, Tasmania.
- Green, G. R., and Bamford, A. L., 1986 b. Queenstown-Mount Read Volcanics Project, Mineral Deposit Map. Department of Mines, Tasmania.
- McNeill, A. W., 1987. Geology of the Mount Murchison Area. Map 4 Mount Read Volcanics Project. Department of Mines, Tasmania.
- Purvis, J. G., Jones, M. T., Fitzgerald, F. G., and Poltock, R. A., 1983. A Geological Review of the Tyndall Exploration Licence 9/66, Western Tasmania. Report to the Department of Mines, Tasmania. Goldfields Exploration Pty Ltd. Unpub. Report.

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APPENDIX 1

EL 5/85 LAKE MARGARETAreas Proposed for Relinquishment

Lake Selina an area of 14 sq. km. as described hereunder.

Schedule 1A

Commencing at a northwest corner of the area whose grid co-ordinates are 383000 mE 5368000 mN thence grid east to 385000 mE then grid south to 5360000 mN thence grid west 382000 mE then grid north to 5361000 mN again grid east to 383000 mE then grid north 5364000 mN thence grid east to 384000 mE afore said grid north to 5367000 mN then grid west 383000 mE afore said grid north to the point of commencement.

Sticht Range an area of 9 sq. km. as described hereunder.

Schedule 1B

Commencing at a northwest corner of the area whose grid co-ordinates are 387000 mE 5366000 mN thence grid east to 388000 mE then grid south to 5357000 mN thence grid west to 387000 mE then grid north to the point of commencement.

Lake Margaret an area of 47 sq. km. described hereunder.

Schedule 1C

Commencing at a northwest corner of the area whose grid co-ordinates are 382000 mE 5358000 mN thence grid east to 383000 mE thence grid south to 5357000 mN again grid east to 386000 mE thence grid south to 5355000 mN afore said grid east to 387000 mE afore said grid south to 5353000 mN thence grid east 389000 mE afore said grid south to 5344000 mN thence grid west to 388000 mE thence grid north 5352000 mN aforesaid grid west 385000 mE thence grid south to 5350000 mN aforesaid grid west to 384000 mE thence grid south 5349000 mN thence grid west 383000 mE aforesaid grid south to 5347000 mN thence grid west 382000 mE thence grid north to 5349000 mN aforesaid grid west to 381000 mE afore said grid north to 5352000 mN thence grid east to 382000 mE thence grid north to the point of commencement.

Lyell Highway an area or 1 sq. km. as described hereunder.

Schedule 1D

Commencing at a northwest corner of the area whose grid co-ordinates are 388000 mE 5342000 mN grid east to 389000 mE thence grid south to 5341000 mN then grid west to 388000 mE then grid north to the point of commencement.

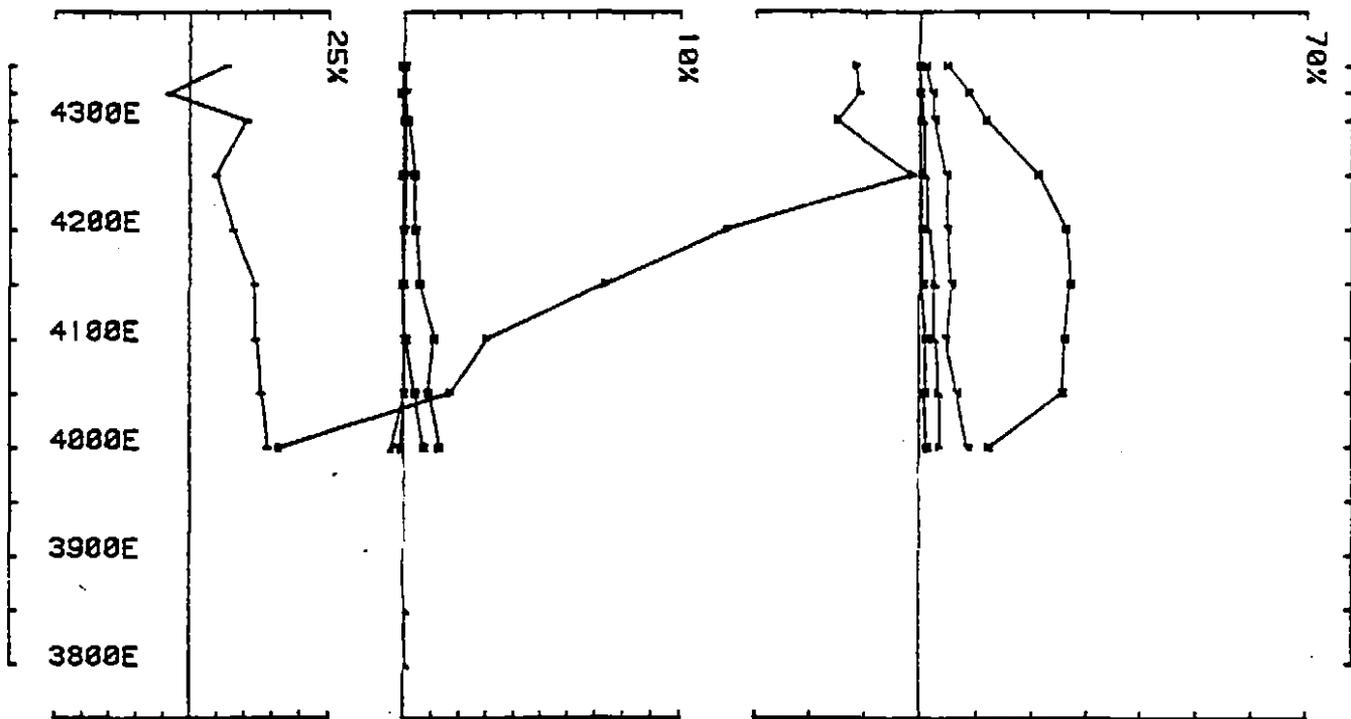
Mount Lyell an area of 1 sq. km. as described hereunder.

Schedule 1E

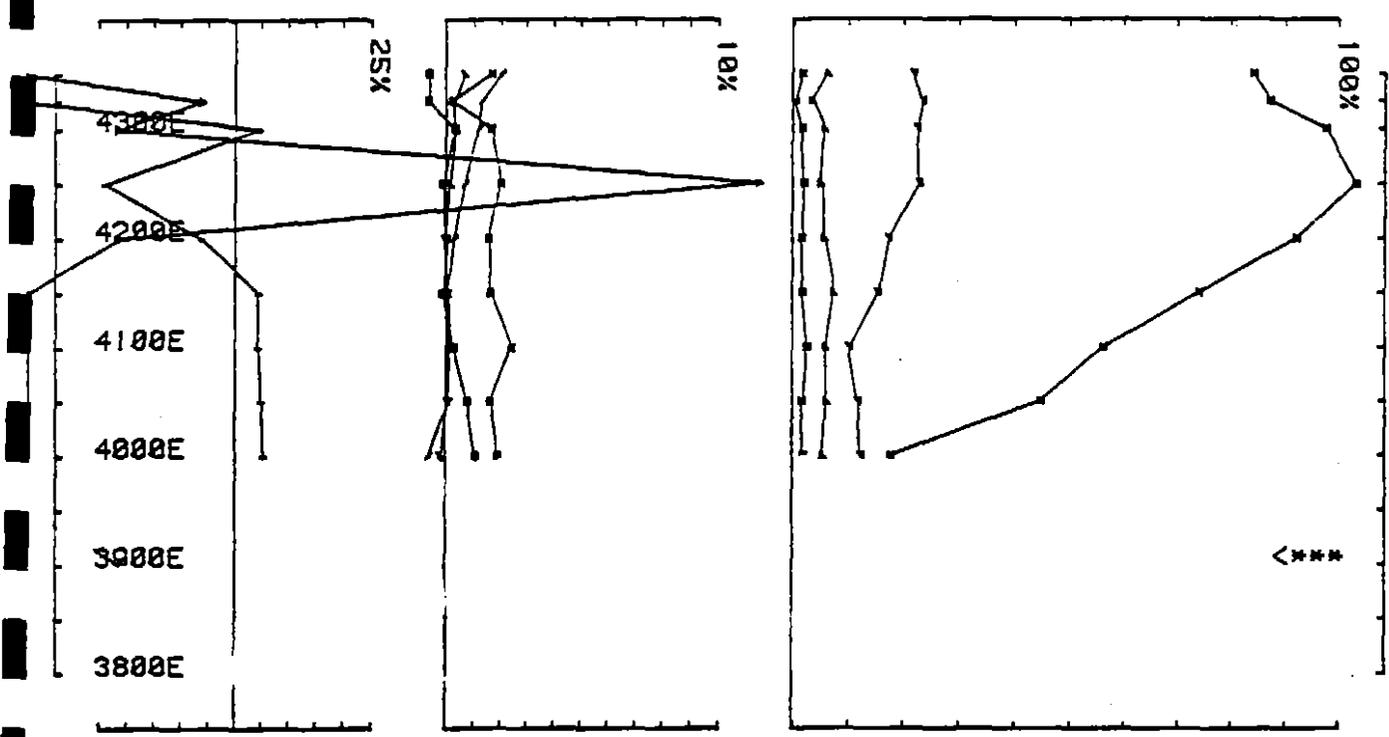
Commencing at a northwest corner of the area whose grid co-ordinates are 385000 mE 5344000 mN grid east to 386000 mE thence grid south 5343000 mN thence grid west to 385000 mE thence grid north to the point of commencement.

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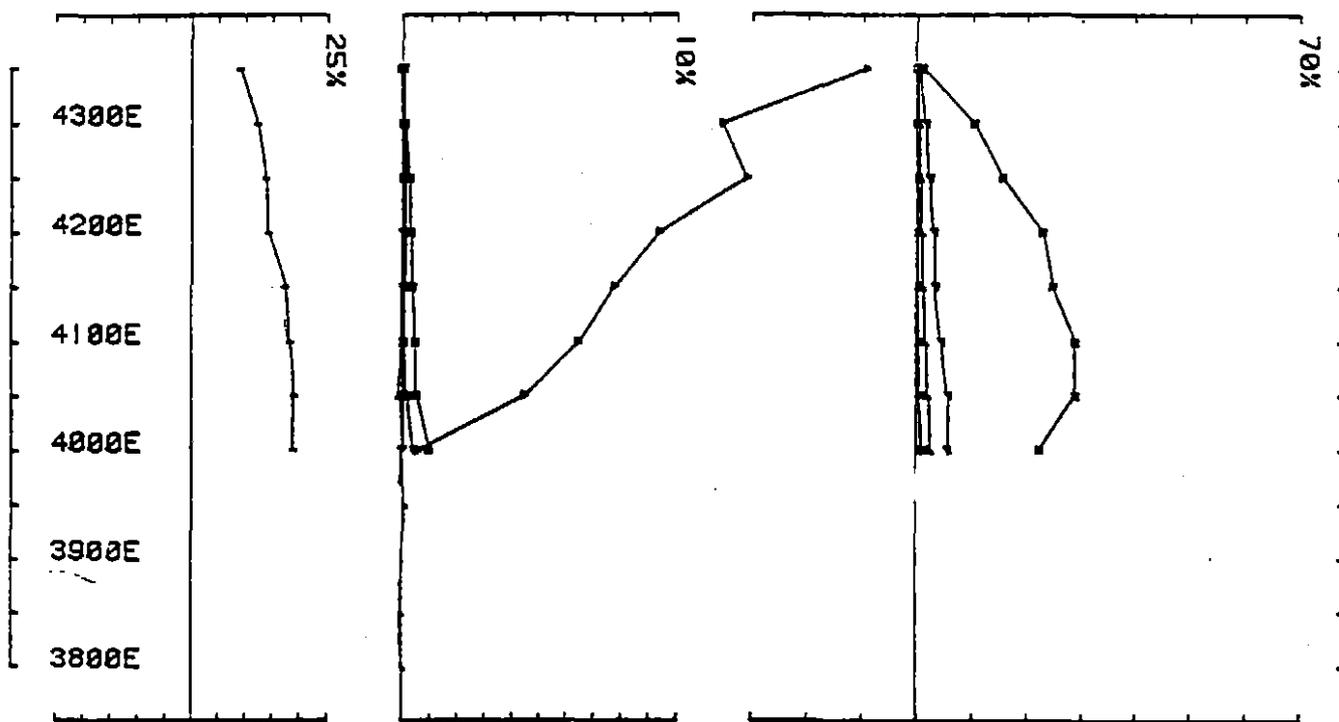
APPENDIX 2



UTEM SURVEY at EAST RED HILLS for ABERFOYLE RESOURCES LTD.
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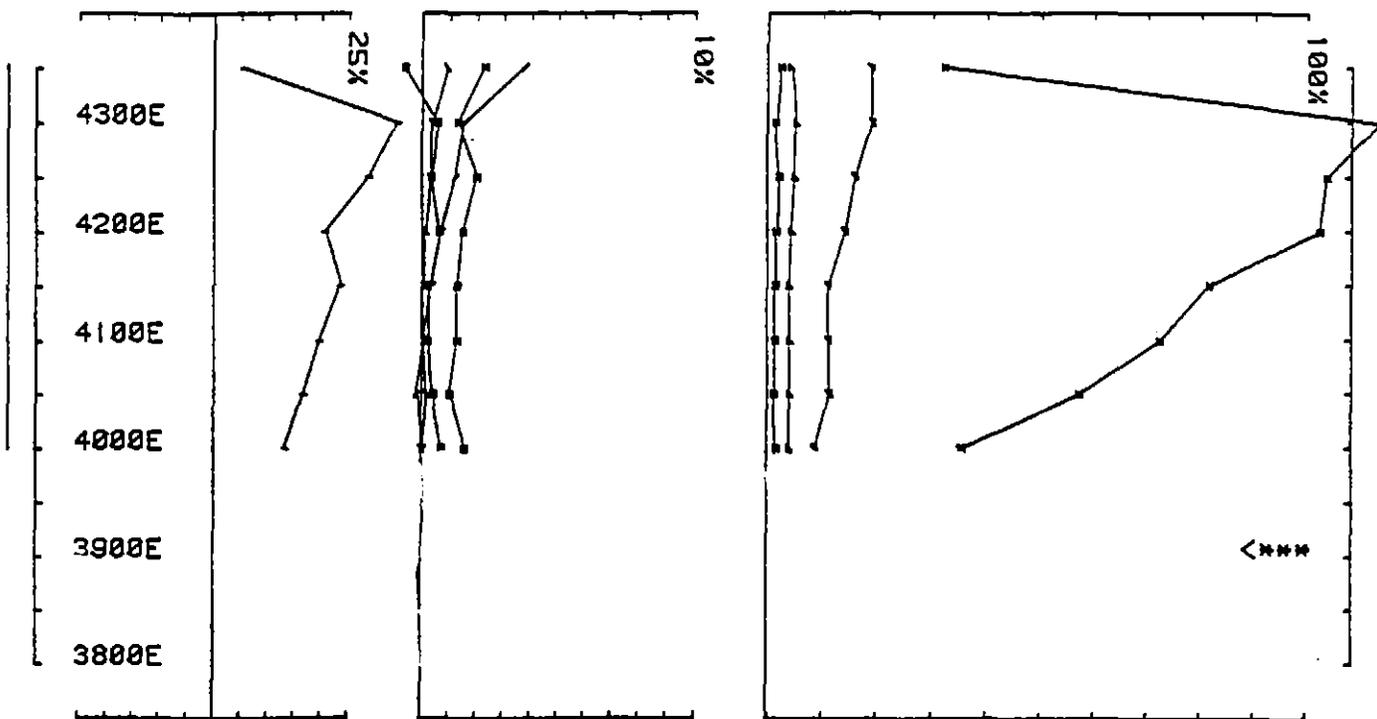


UTEM SURVEY at EAST RED HILLS for ABERFOYLE RESOURCES LTD.
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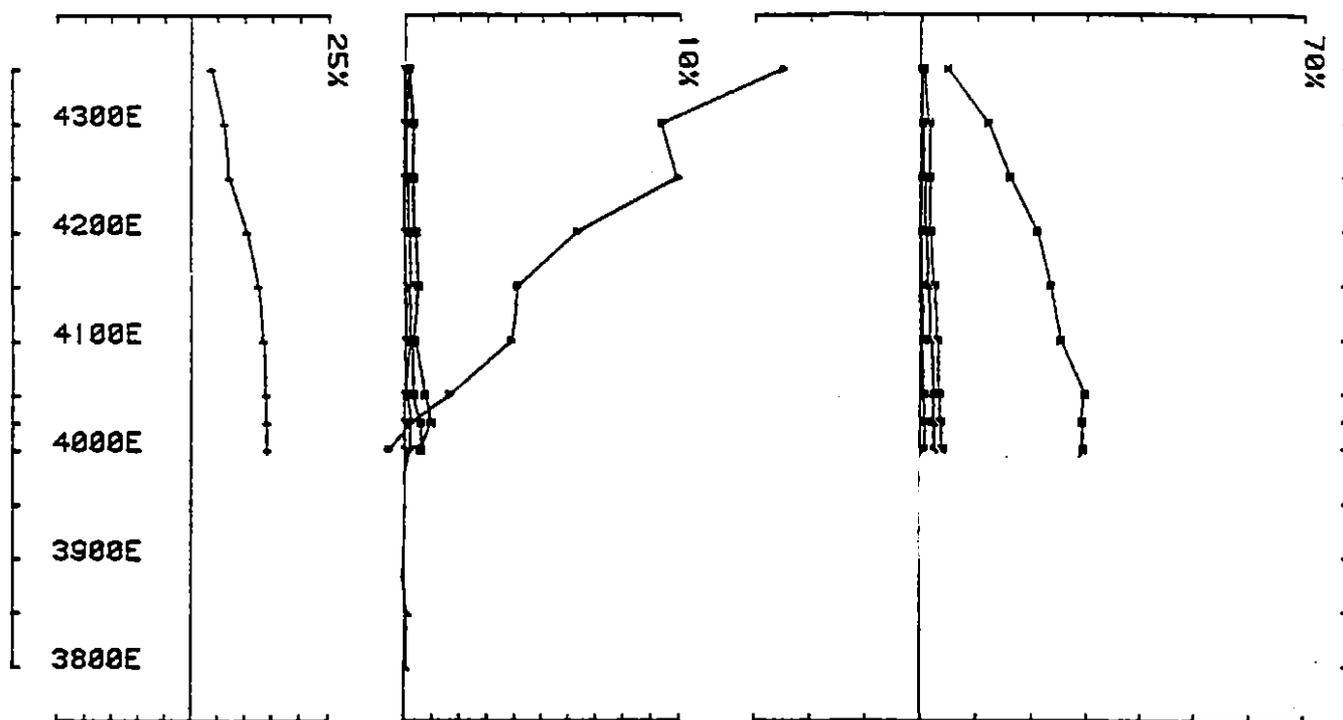
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UTEM SURVEY at EAST RED HILLS for ABERFOYLE RESOURCES LTD.

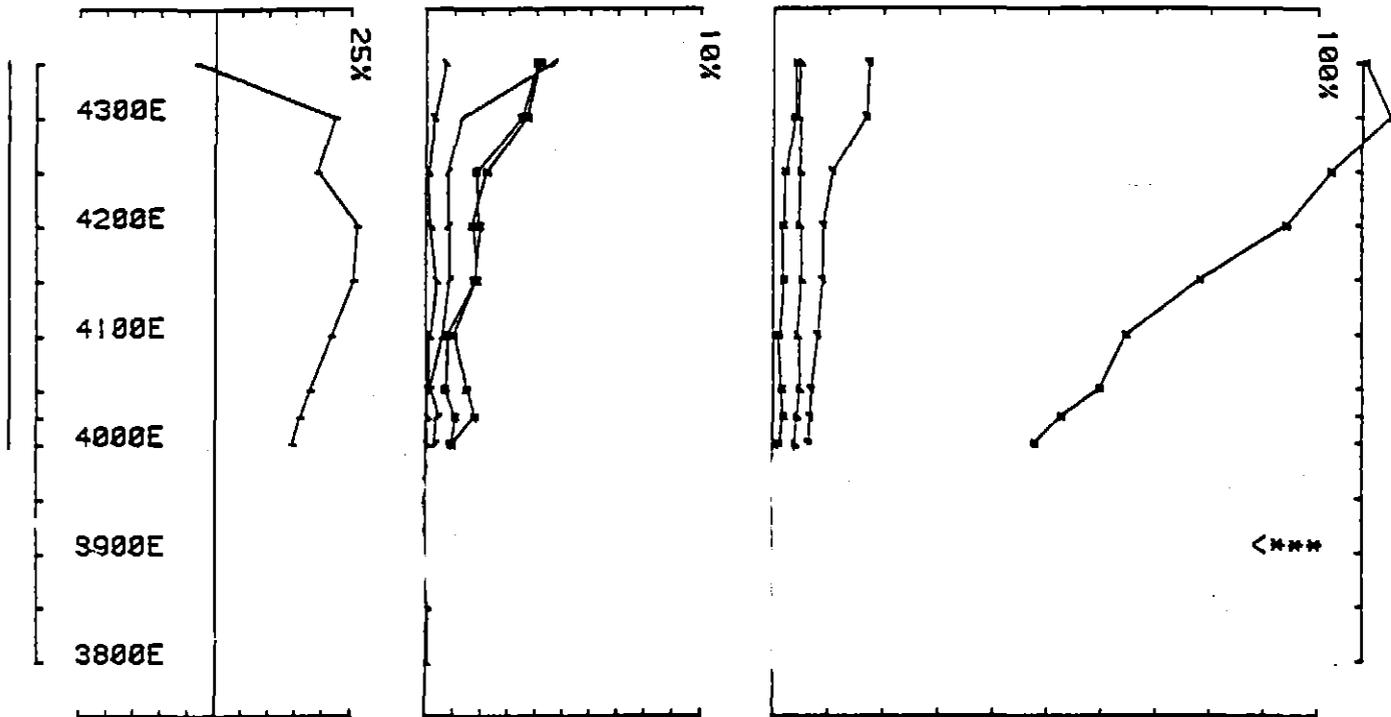
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UTEM SURVEY at EAST RED HILLS for ABERFOYLE RESOURCES LTD.
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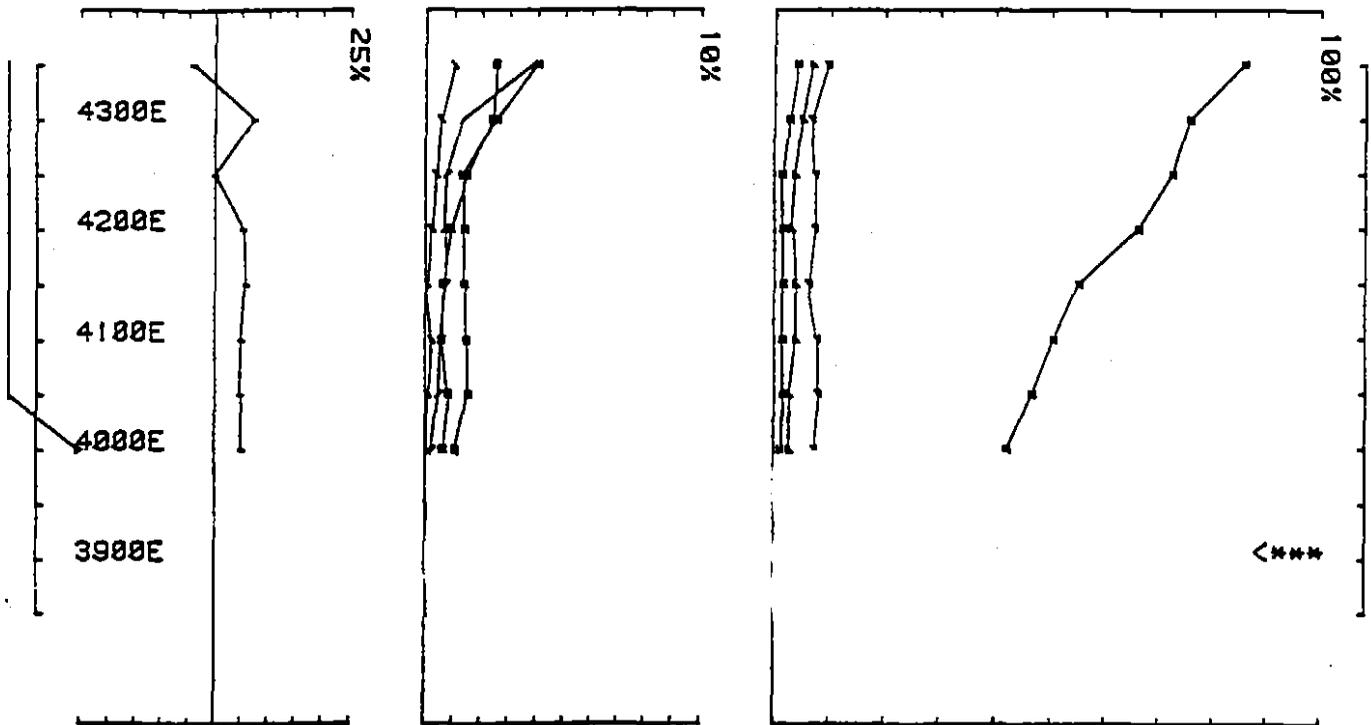
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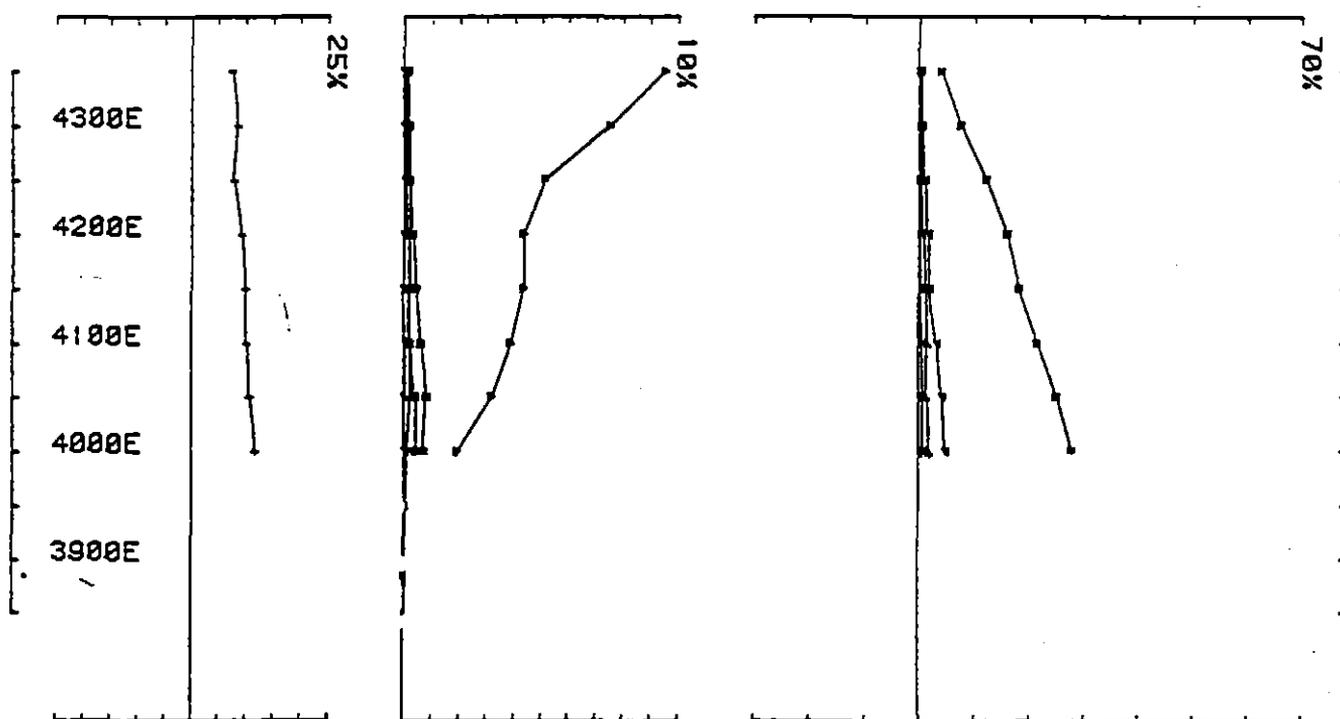
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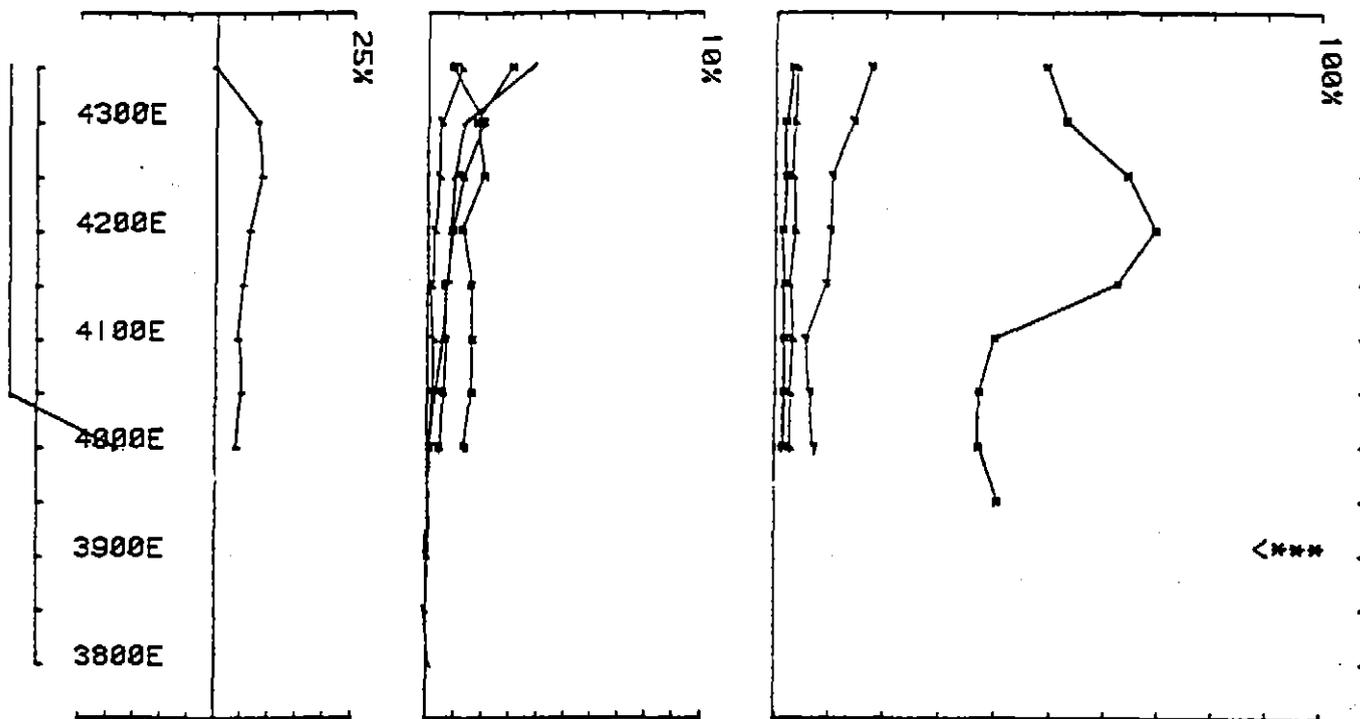
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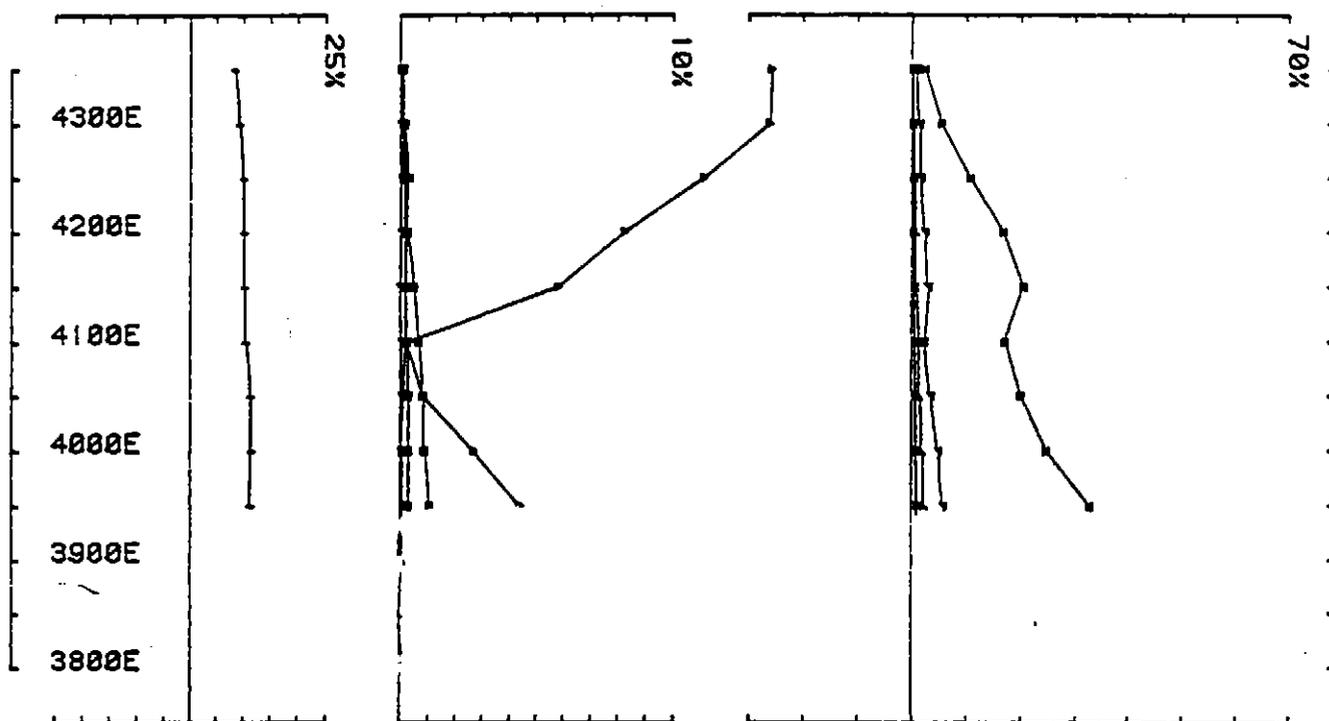
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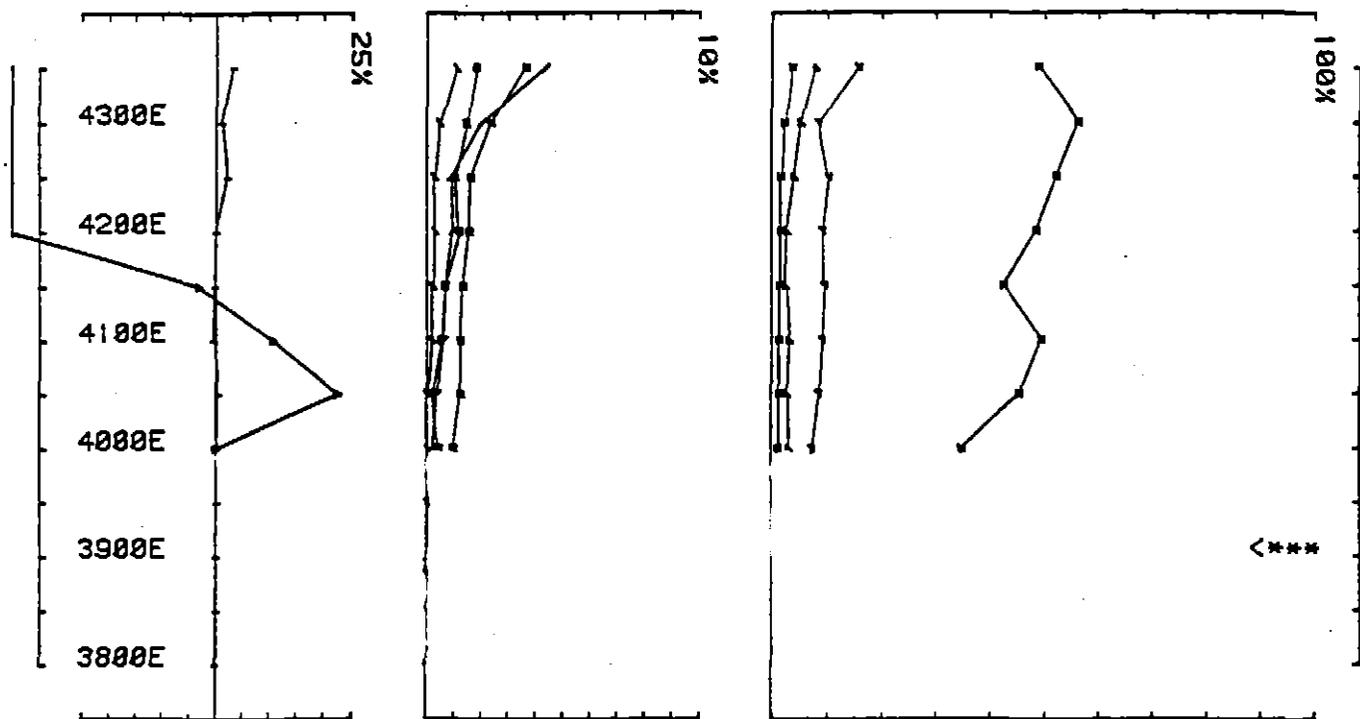
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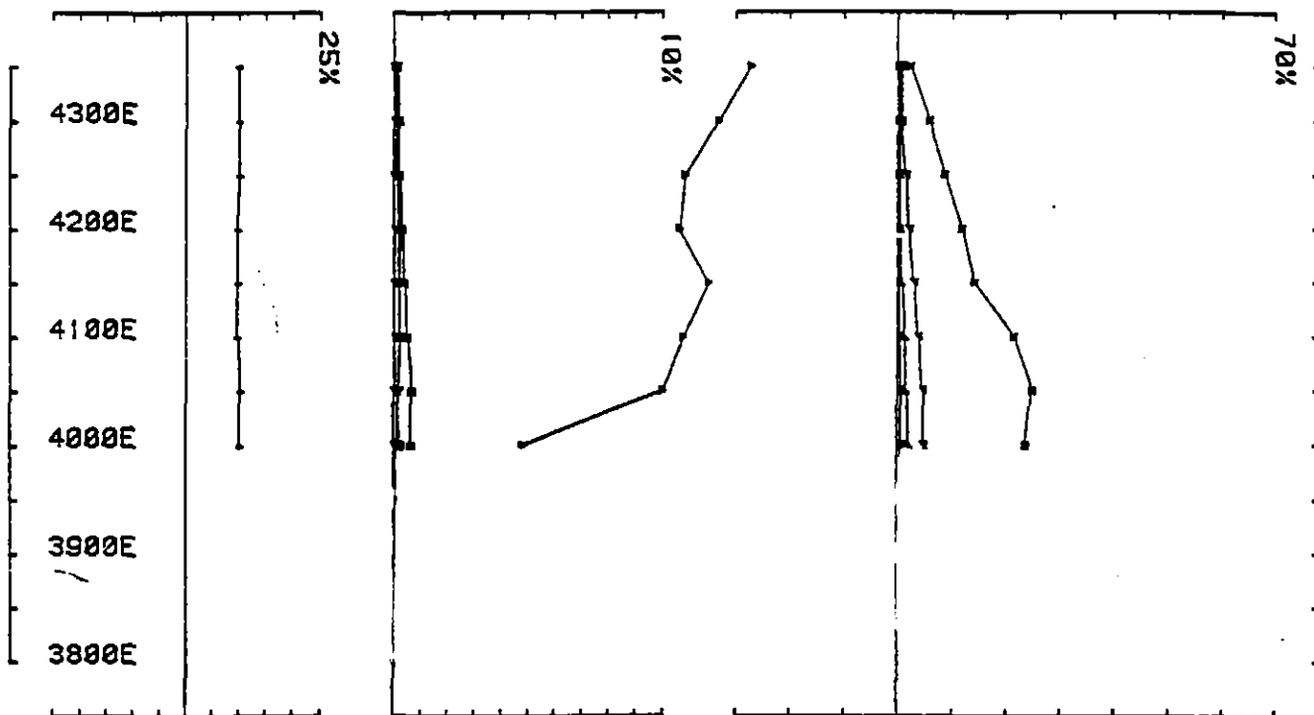
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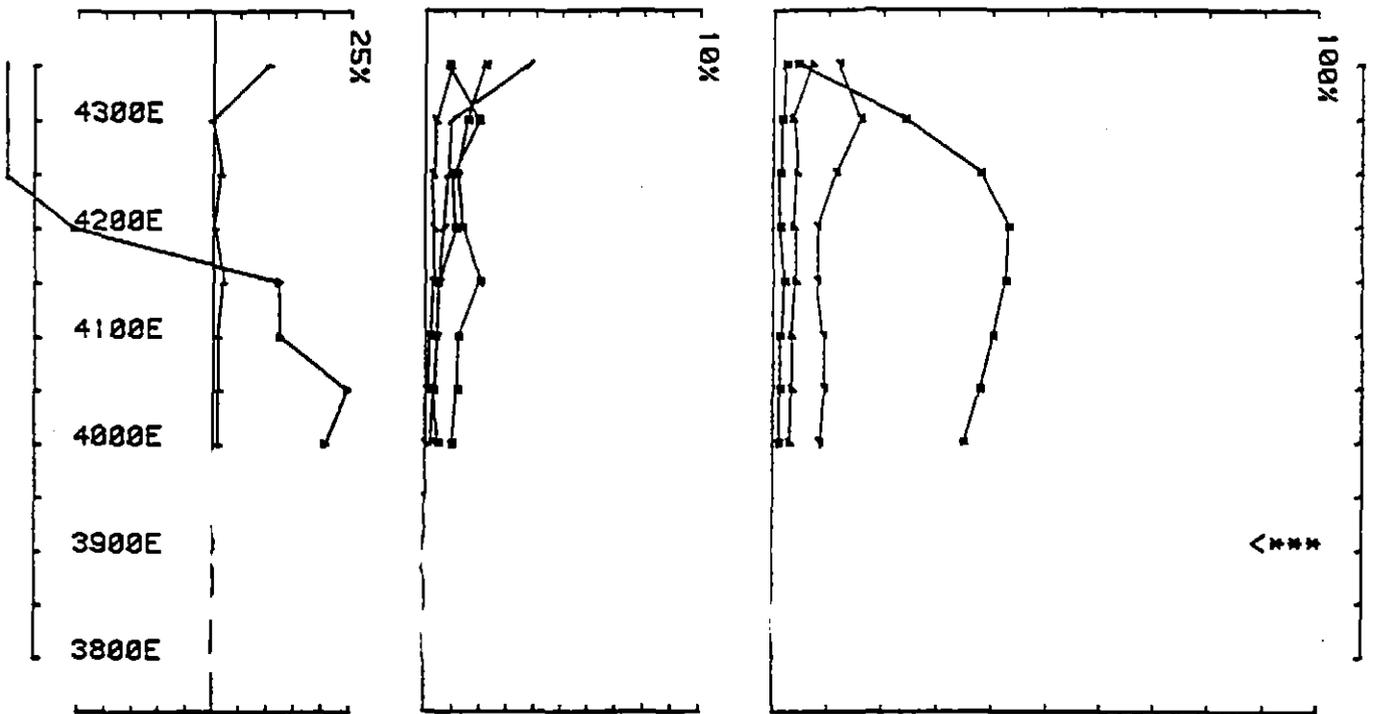
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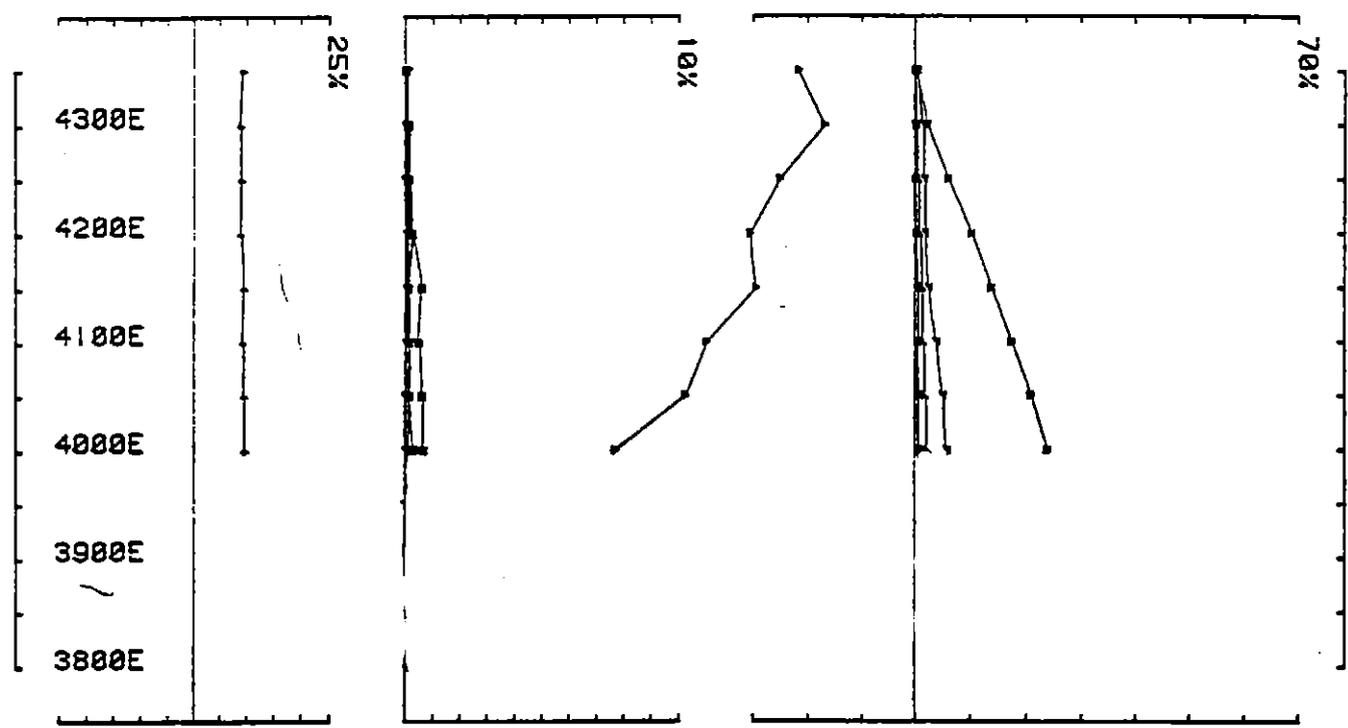
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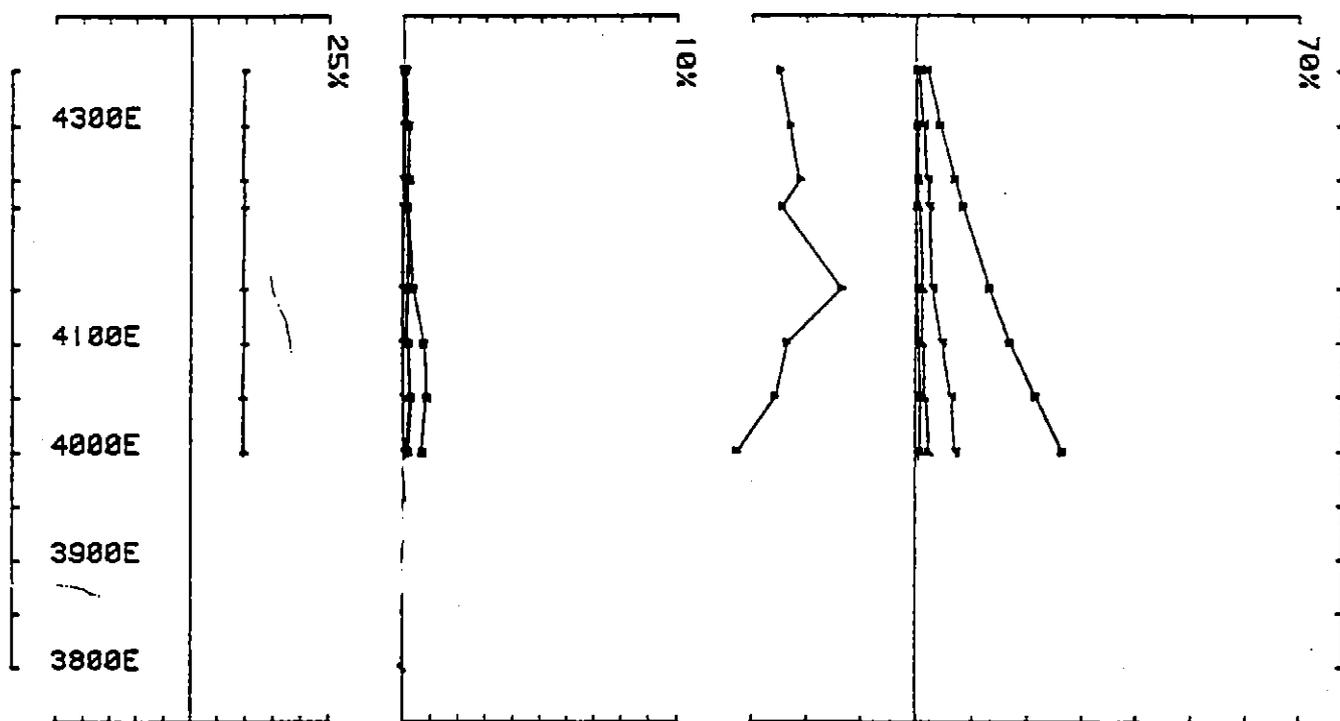
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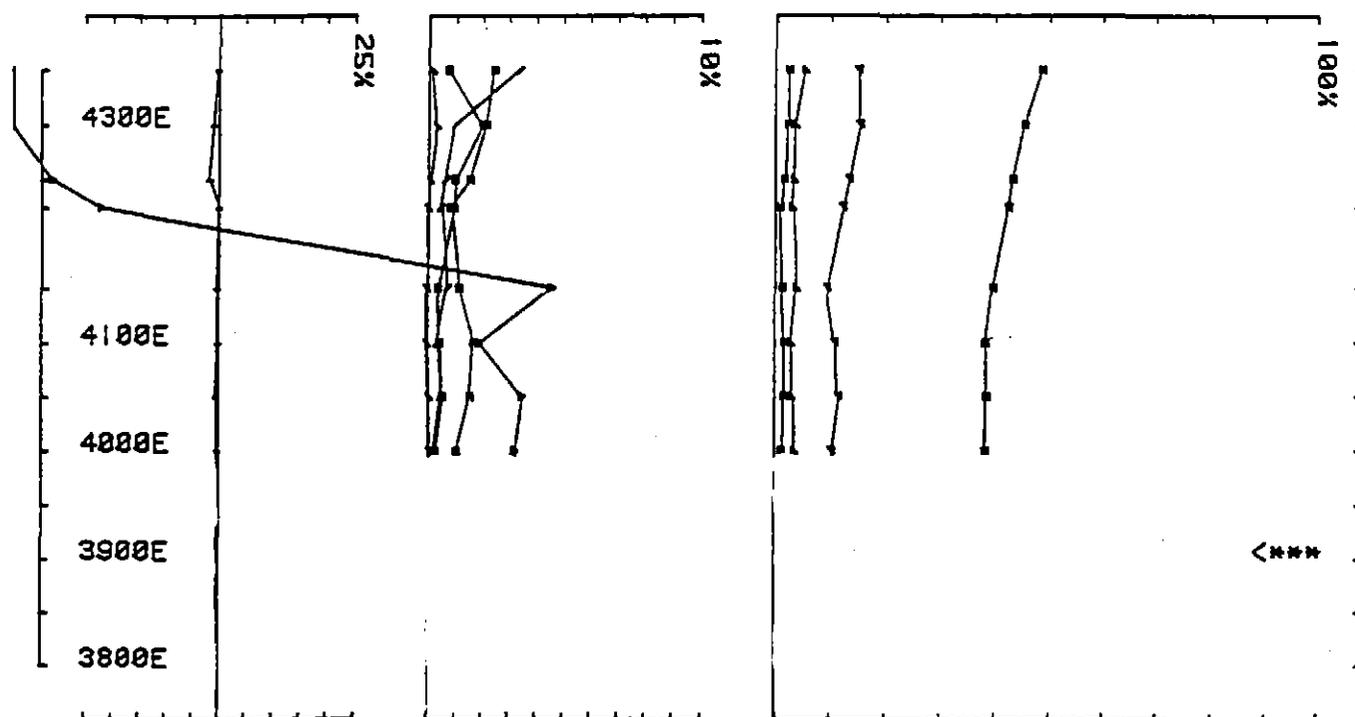
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UTEM SURVEY at EAST RED HILLS for ABERFOYLE RESOURCES LTD.
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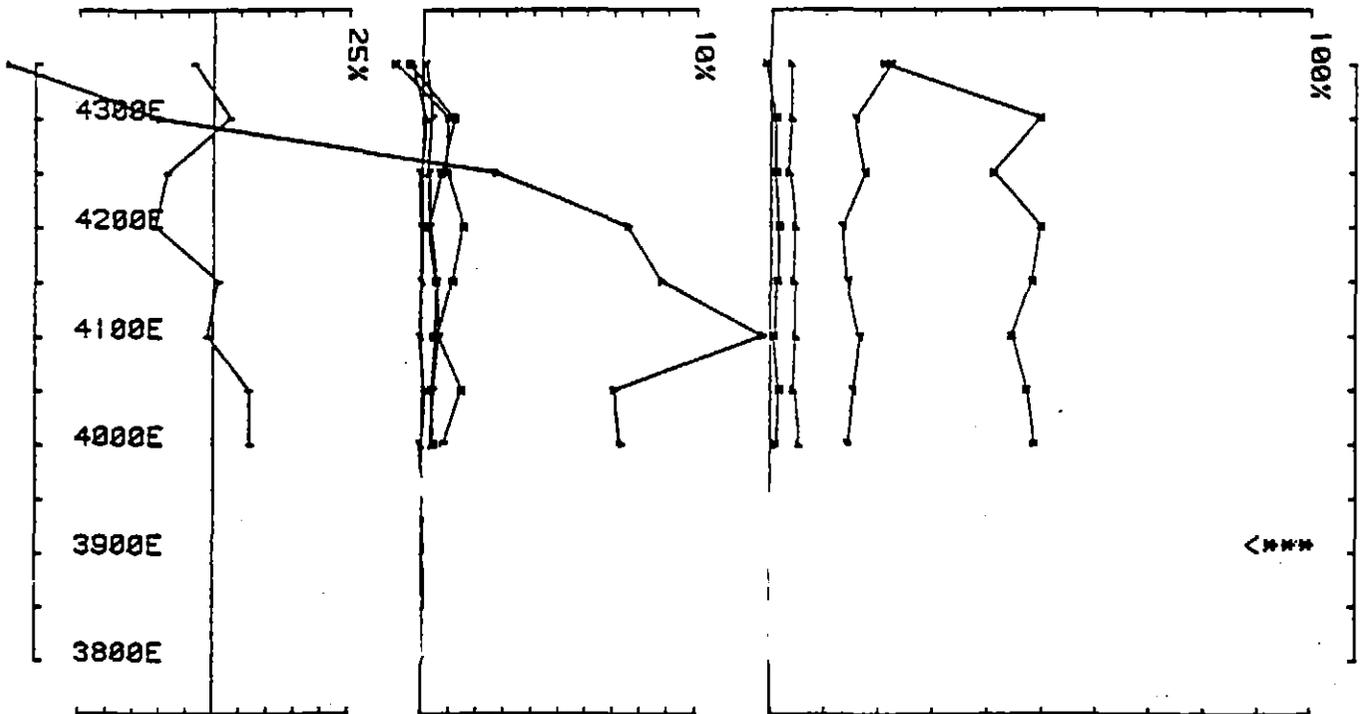
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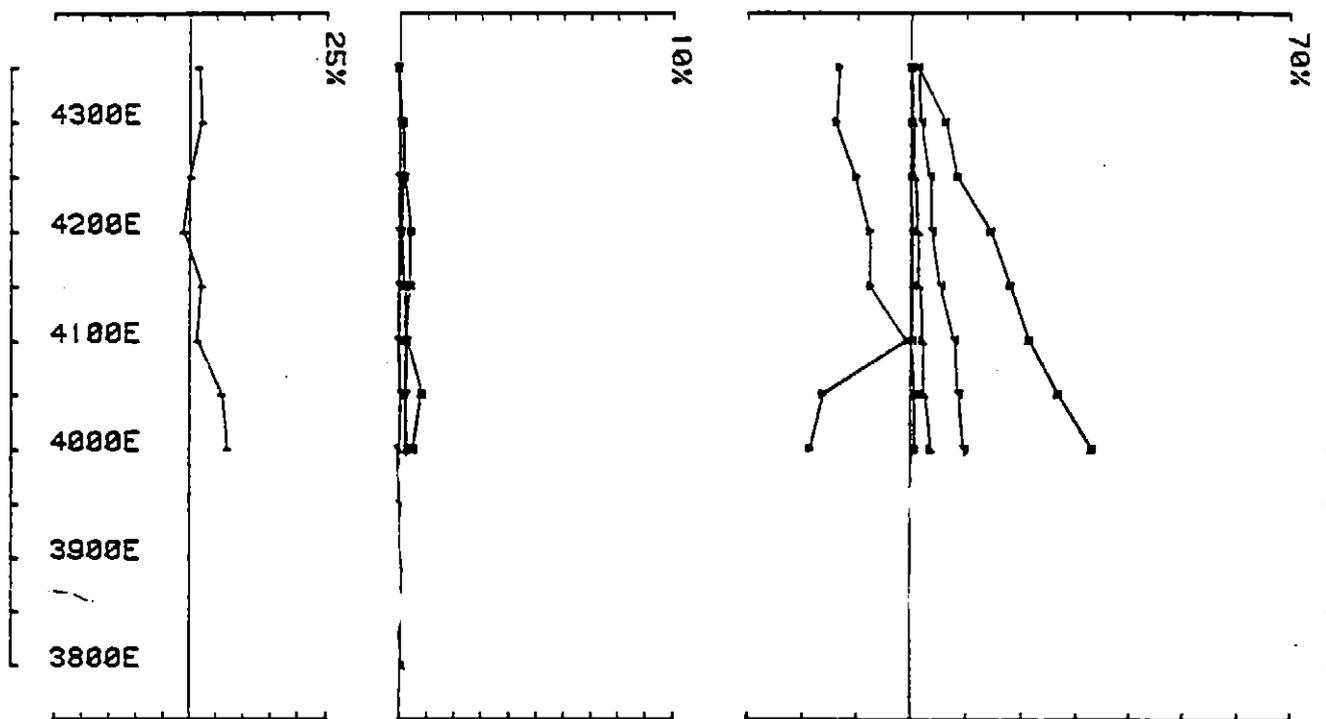
UTEM SURVEY at EAST RED HILLS for ABERFOYLE RESOURCES LTD.

conducted by SJV CONS., LAMONTAGNE job 8901 base freq (hz) 26.230 JAN 1989
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UTEM SURVEY at EAST RED HILLS for ABERFOYLE RESOURCES LTD.
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 loop no 4 line 5600N component Hz secondary field Ch 1 point norm.



UTEM SURVEY at EAST RED HILLS for ABERFOYLE RESOURCES LTD.
 conducted by SJV CONS., LAMONTAGNE Job 8901 base freq (hz) 26.230
 loop no 4 line 5600N component Hz secondary field Ch 1 contin. norm.

030

384000mE

385000mE

84400E
65600N

4

5365000mN

EAST RED HILLS PROSPECT

▲ Arnold Peak

5364000mN

5 cm

HEC

Aberfoyle Resources Limited

EXPLORATION DIVISION

NORTH WEST TASMANIA

**LAKE MARGARET E.L.5/85 - CRA J.V.
RED HILLS - UTEM LOCATION**

Compiled : DJN

Drawn : RJE

Traced : RJE

Checked : DJN

Plate No. : L.Marg 31

REVISIONS

Init.	Date	Init.	Date

Location Code :

Scale : 1:10,000

Date : September, 1990

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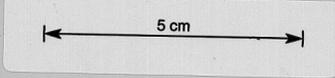
ROCK CHIP									STREAM SEDIMENT					
Sample No	Cu	Pb	Zn	Ag	As	Fe%	Mn	Ba	Auppb	Sample No.	ppt	ppm	ppb	Au
1198902	10	5	15	<1	19	0.93	95	-	<3	1198899	< 50	< 0.01	-	NB. ppt Au by Cyanide Leach
1198903	2	5	10	<1	7	2.92	40	-	<3	1198900	< 50	< 0.01	-	ppm Au using -80 mesh from excess fraction of Cyanide Leach sample
1198904	<2	<5	5	<1	7	2.48	35	-	<3					ppb Au from standard -80 mesh stream sediment sample.
1198905	2	<5	5	<1	5	1.73	25	-	<3					
1198906	45	5	5	<1	13	0.80	25	-	20					
1198907	10	<5	10	<1	3	0.98	20	-	<3					
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1153955	10	60	<5	<1	18	8.41	80	60	<3					
1153956														
1153959	10	20	<5	<1	70	37.7	80	30	<3					

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CRA EXPLORATION PTY. LIMITED

**LAKE MARGARET E.L.5/85
RECONNAISSANCE SAMPLING**



90-3176.

REF	SK55 - 5	(8013 - 8014)
SCALE	1 : 50 000	DRAWN R.T.
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