

Aberfoyle Resources Limited
EXPLORATION DIVISION
ACN 004 664 108

EXPLORATION LICENCE 39/85

BULGOBAC RIVER

TASMANIA

Progress Report

April 1993 to January 1994

Volume 1 of 1

MICROFILMED
FICHE No.012898-99

OPEN FILE

MINES		
FILE REF. EL39/85		
11 JAN 1994		
DOC. REF.		
ORDER	FOR ACTION	FOR INFO.
SEE COVERING LETTER FOLIO. C8		
INDEXED TO	DATE	

Compiled by:

S. Richardson

S. Richardson
SENIOR GEOLOGIST

Endorsed by:

D B Wallace

D B Wallace
REGIONAL EXPLORATION
MANAGER

Distribution

Aberfoyle - Burnie (1/4)
Aberfoyle - Hawthorn (2/4)
Placer - Sydney (3/4)
Mineral Resources (4/4)
Tasmania

Internal Report No: Bulgobac 7

93-3533.

TABLE OF CONTENTS

	Page No:
1.0 SUMMARY	1
2.0 INTRODUCTION	2
3.0 WORK COMPLETED	3
3.1 Introduction	3
3.2 Geology	3
3.3 Geophysics	4
4.0 FUTURE PROGRAMME	6
4.1 Proposed Drill Hole	6
4.2 Gravity	6
5.0 REFERENCES	7

LIST OF PLATES

<u>No</u>	<u>Scale</u>	<u>Title</u>
BR 9	1:10,000	Interpretive Geology
BR 10	1:10,000	Aeromagnetic Interpretation - Geometric Skeleton
BR 11	1:10,000	Interpreted Structural Framework

LIST OF FIGURES

Figure 1	Locality Map
Figure 2	Proposed Drill Hole Location

1.0 SUMMARY

Work on EL 39/85 during the reporting period has focussed on data compilation and re-interpretation, aimed at inferring a synvolcanic fault network for the Bulgobac sub-basin. Dilatant areas at synvolcanic fault intersections are seen as potential Volcanic Hosted Massive Sulphide targets.

This work largely supported an earlier gravity based interpretation of the sub-basin by Dr. David Leaman. No new targets were generated so a drill hole is proposed to test the Mixed Sequence adjacent to a synvolcanic fault inferred by Leaman. The hole will provide stratigraphic information in a large gap between existing drill holes BRD 01 and BRD 03.

2.0 INTRODUCTION

Exploration Licence 39/85, Bulgobac River, is located 80 km. south west of Burnie and 3 km. west of the Que River and Hellyer Mines (Fig. 1).

The licence was granted to CSR Ltd. on 14 February, 1986. In mid 1988 CSR's Mineral Group was purchased by Placer Exploration Ltd. At about the same time the Department of Mines increased the original area of 11 sq. km. to 16 sq. km. to adjust the EL boundaries to AMG kilometre graticules.

In February, 1991 Aberfoyle Resources Ltd. concluded a joint venture agreement with Placer to fund and manage exploration on EL 39/85.

A reduction in the area of EL 39/85 was made in accordance with statutory requirements in February, 1992.

This report records exploration during the period April, 1993 to January, 1994.

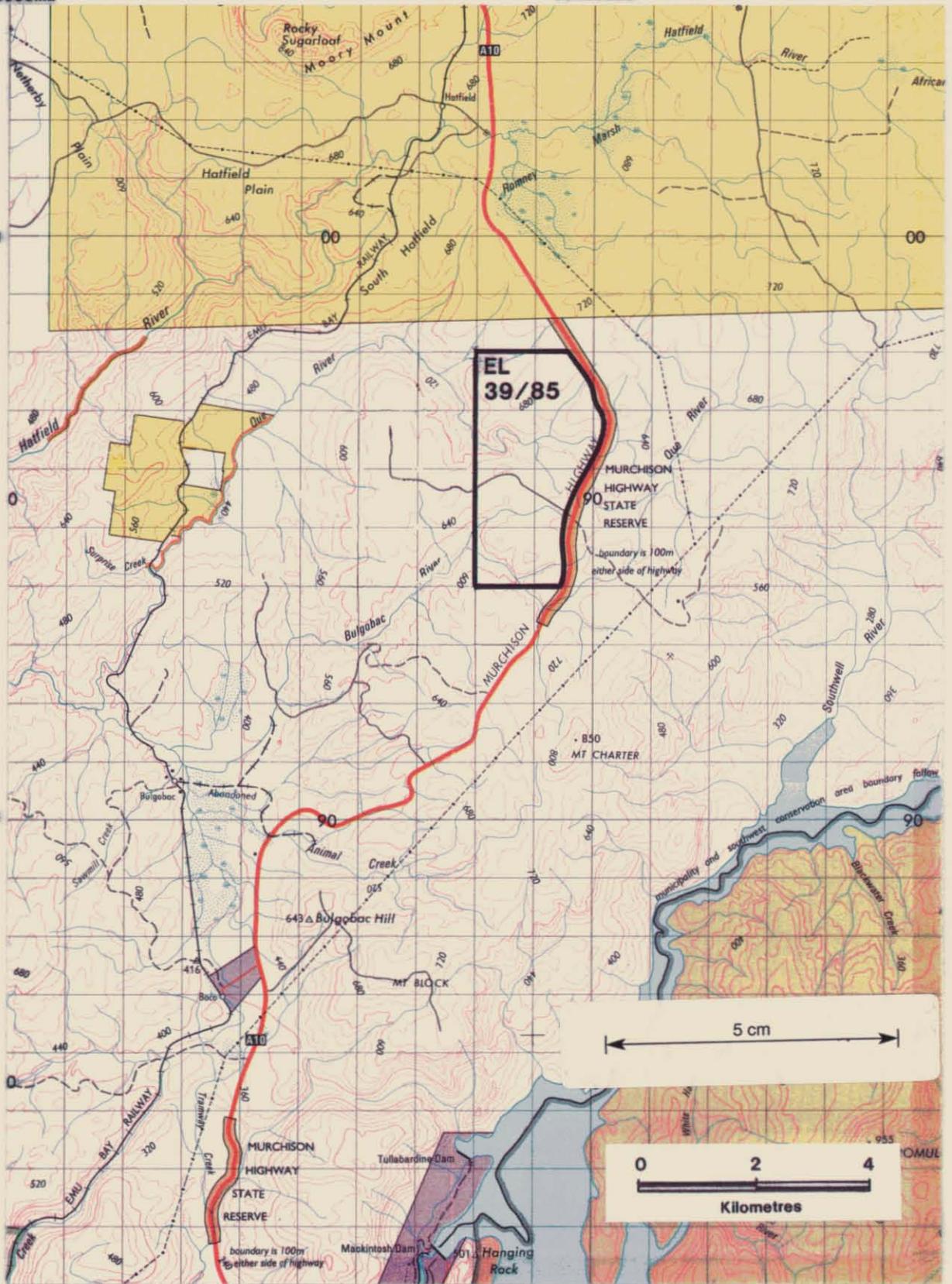
944006

380000mE

390000mE

5400000mN

5390000mN



Aberfoyle Resources Limited
EXPLORATION DIVISION

NORTH WEST TASMANIA
BULGOBAC RIVER E.L. 39/85
LOCALITY MAP

Compiled : Lands Dept.

Drawn :

Traced : **MAR**

Checked :

Plate No. : **BR 5**

REVISIONS			
Init.	Date	Init.	Date

Location Code :

Scale : 1:100 000

Date : January 1992

1-5-1

3.0 WORK COMPLETED

3.1 Introduction

It has long been recognised that base metal mineralisation in the Que-Hellyer Volcanics (QHV) is associated with Cambrian syndepositional structures that bounded and localised the narrow trench like basins with which footwall epiclastics, hydrothermal alteration and mineralisation are associated. In a more regional sense, syndepositional faults have long been suspected of controlling the thickness and distribution of stratigraphic units within the QHV. However, very few synvolcanic faults had been accurately located.

Such structures are seen as potential foci for venting hydrothermal fluids and localisation of massive sulphide deposition. It was felt that delineation of the synvolcanic fault network of the QHV basin would lead to geologically based, conceptual, deep drill targets.

During 1993 a major review was undertaken of the structural and stratigraphic setting of the QHV on EL 106/87. However, it was considered important to interpret the QHV basin as a whole. Therefore data sets from Bulgobac EL 39/85 and Pasminco's EL 14/89 (obtained through data exchange) were merged with those from the Mackintosh licence.

3.2 Geology

Mapping data was compiled, re-interpreted and then digitised into CAD format. That section of the digitised map covering EL 39/85 is included as Plate BR9.

Construction of regional sections through the entire QHV confirm on earlier interpretation by Placer that the QHV on EL 39/85 are largely confined to a fault bounded sub-basin within which depth to top and thickness increases to the south.

3.3 Geophysics

Completion of a helicopter borne magnetic survey over Mackintosh EL 106/87 means that the entire QHV is now covered by close spaced aeromagnetics.

Interpretation of this data set had the principal aim of delineating structure. Faults were interpreted from spatially continuous magnetic breaks. Most breaks are defined by shallow sources and probably reflect Devonian and later structures. However, all potentially reflect reactivation of earlier extensional synvolcanic structures during later compressional deformation. Only evidence such as rapid lithological thickness or facies changes across inferred faults or localisation of Cambrian alteration can support a synvolcanic origin.

Unfortunately the Placer data set covering EL 39/85 contained levelling problems that were highlighted by the stretch used during imaging of the total data set. Subtle magnetic features could not be discerned.

A geometric skeleton of magnetic breaks and sources is attached as Plate BR10. An interpretation showing potential synvolcanic faults is attached as Plate BR11.

Dr. David Leaman (Leaman, 1988) proposed several synvolcanic faults based on his interpretation of the 1987 gravity survey. Magnetic and geological interpretation of the SW portion of the QHV basin broadly support his interpretation. However, his synvolcanic fault trending WNW along 8000N does not have expression in the magnetics.

4.0 FUTURE PROGRAMME

4.1 Proposed Drill Hole

Re-interpretation of the QHV basin has not indicated any new synvolcanic structures on EL 39/85 that have not already been tested by drilling. The most prospective target at present is the poorly defined WNW trending structure inferred by Leaman from gravity. This structure passes through a 1.8 km gap in drill hole information between holes BRD 01 and BRD 03 (Fig. 2). A drill test of this area would also provide useful stratigraphic information.

An 800m percussion/diamond hole is proposed to test the Mixed Sequence at a depth of about 650m, adjacent to the inferred cross structure, close to the axis of the Bulgobac sub-basin. A 400m percussion pre-collar is planned to drill through the Southwell Subgroup and Que River Shale. A 400m diamond tail will drill through the QHV.

Drilling of the pre-collar is planned for Feb-March 1994.

4.2 Gravity

Levelling of infill gravity stations on Mackintosh EL 106/87 is in progress. When this work is complete data will be merged with the detailed Bulgobac survey to allow modelling of regional sections across the entire QHV basin.

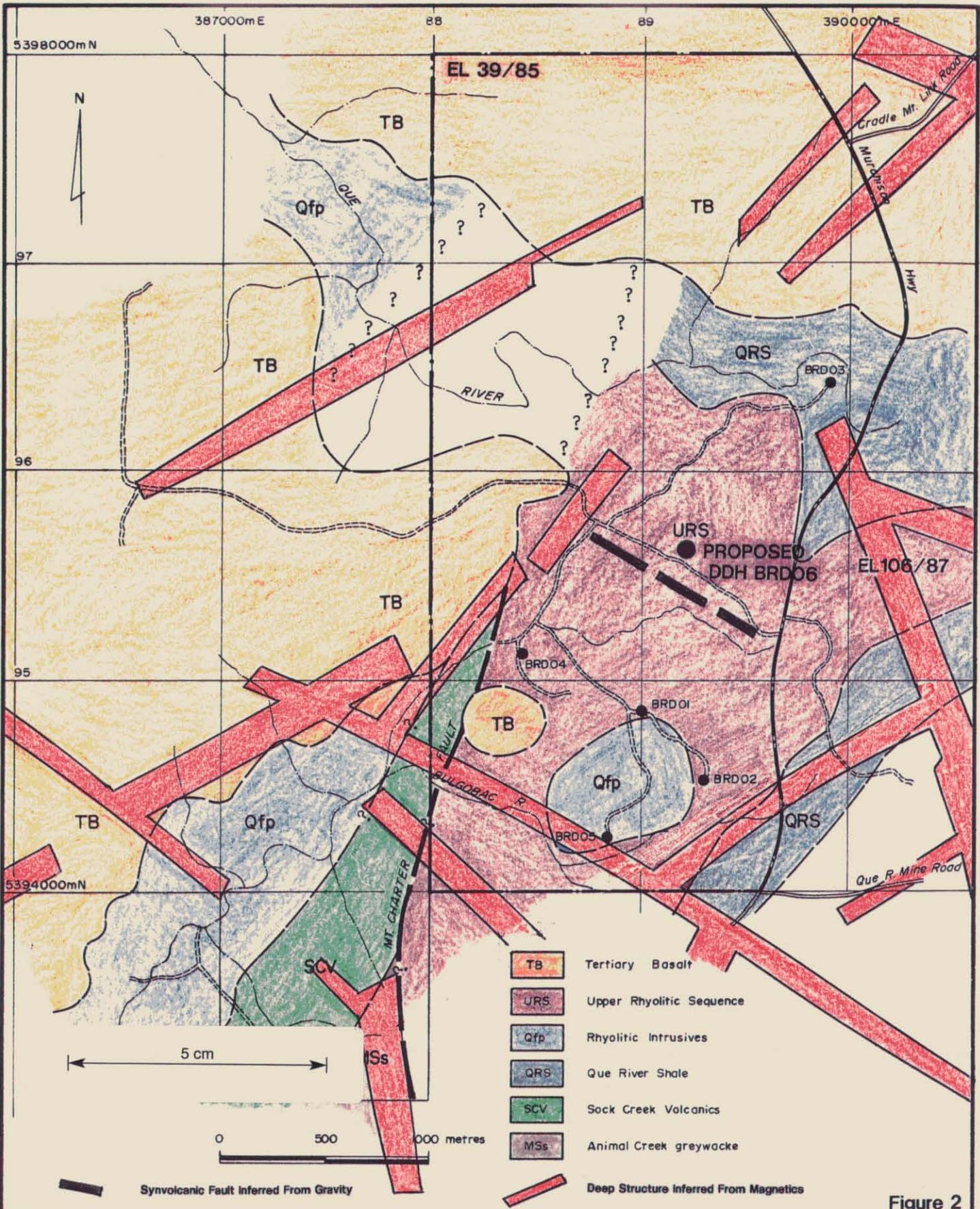


Figure 2

Aberfoyle Resources Limited
EXPLORATION DIVISION

NORTH WEST TASMANIA

BULGOBAC RIVER EL39/85 - PLACER
PROPOSED DRILL HOLE LOCATION

Compiled : RJE , AMcN

Drawn : Placer, April '87

Traced : RJE

Checked : DBW

Plate No. : BR 1

REVISIONS			
Init.	Date	Init.	Date
RdeB	5/93		
SR	12/93		

Location Code :

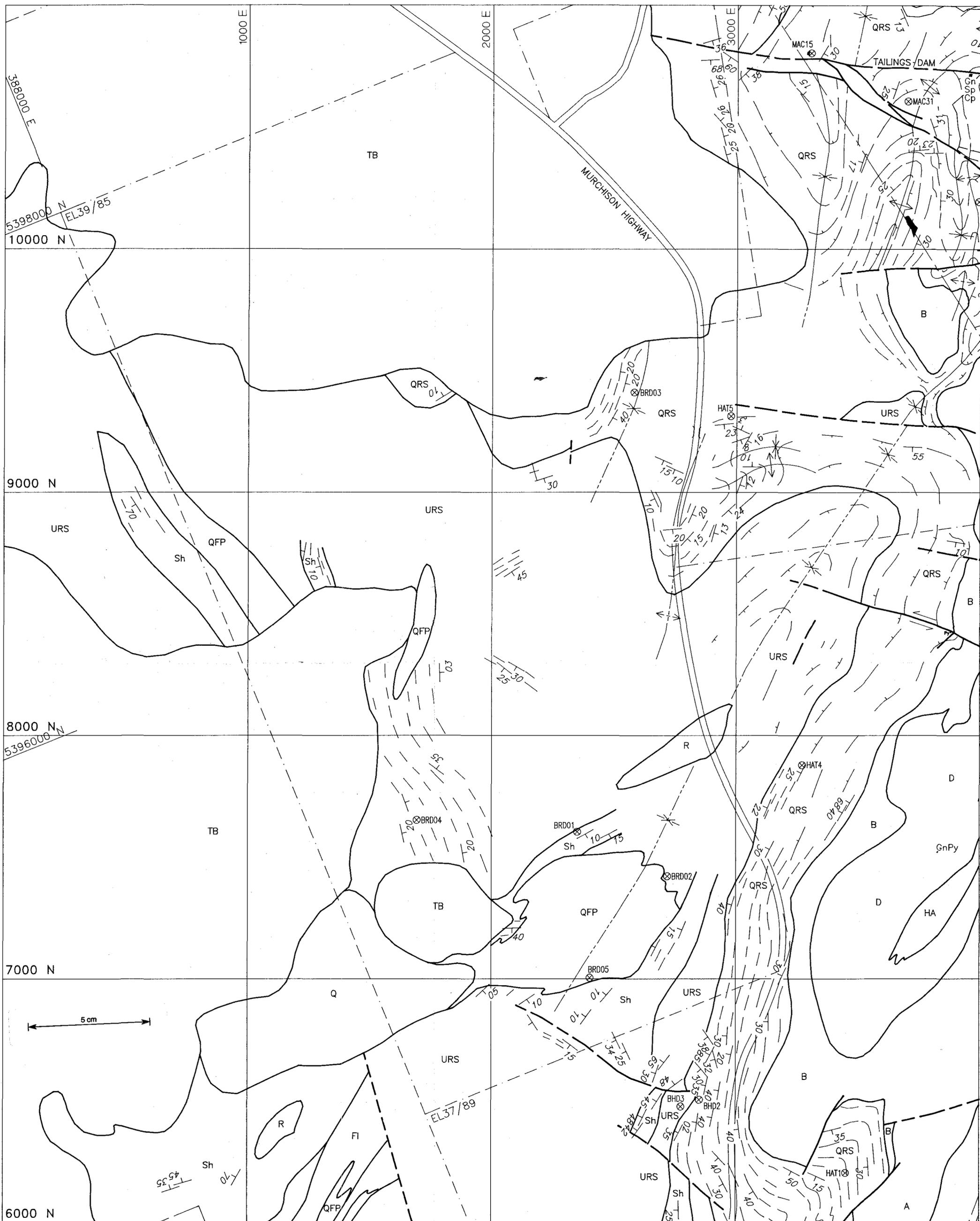
Scale : 1 : 25,000

Date : August, 1990

1511

5.0 REFERENCES

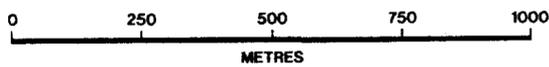
Leaman, D. E. 1988. EL 39/85 Bulgobac River. Que Road Gravity Survey Reduction and Interpretation Report. For CSR Minerals Division by Leaman Geophysics.



Aberfoyle Resources Limited
EXPLORATION DIVISION

BULGOZAC E.L.39/85
INTERPRETIVE
GEOLOGY

Compiled: SMR
Drawn: NWR
Plotted:
Checked: SMR
Plate No: BR 9



REVISIONS			
INIT.	DATE	INIT.	DATE

Location Code:

Scale: 1:10000

Date: December 93

944013

LEGEND

944014

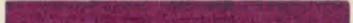
 SHALLOW MAG BREAK

 DEEP MAG BREAK

 DEEP MEGA BREAK

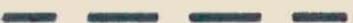
 SHALLOW MAG SOURCE

 MAG LOW

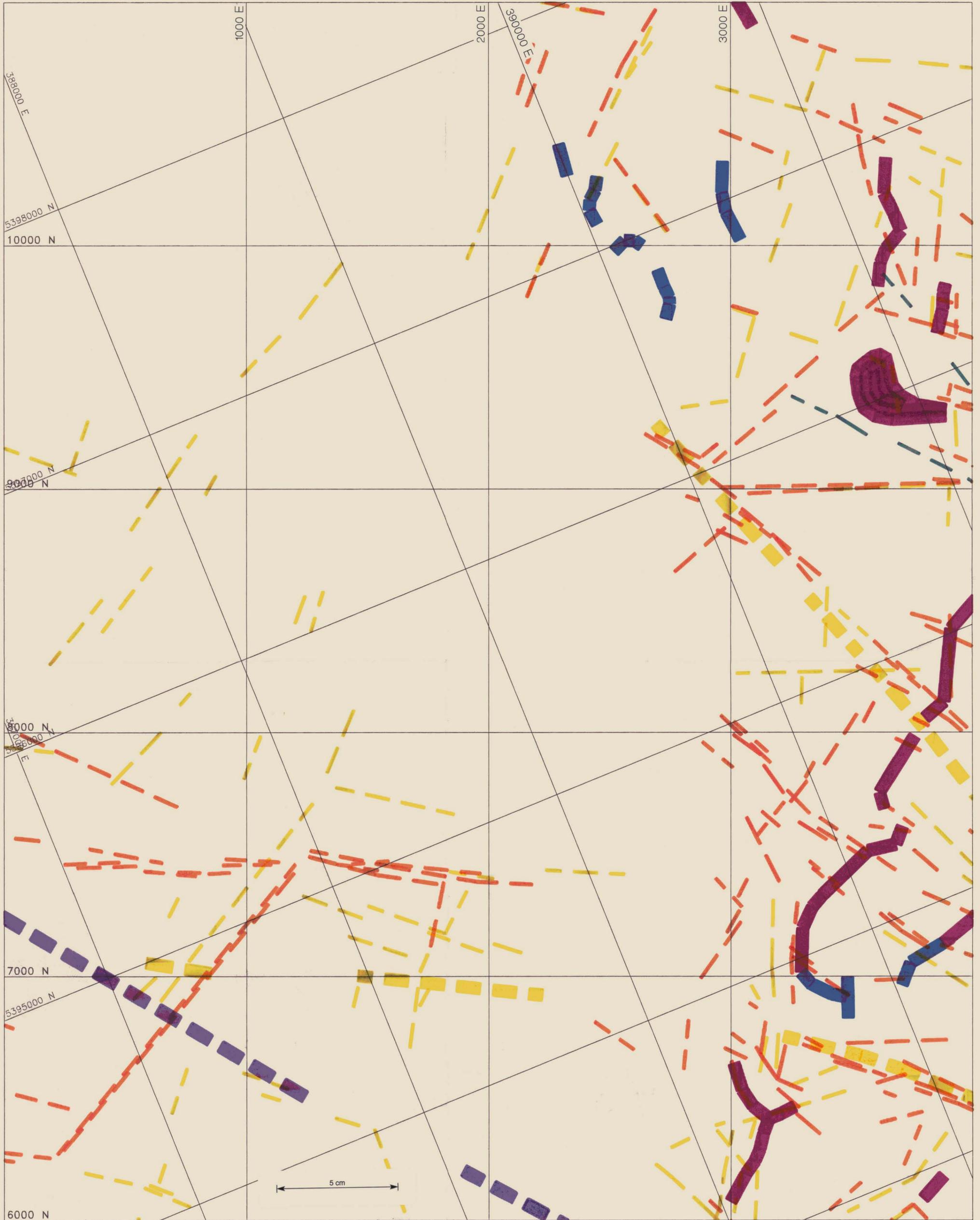
 DEEP MAG SOURCE

 MAG LOW

 COMBINED RED/BLUE/GREEN SHADE

 TOPOGRAPHIC LINEAR

 GRAVITY BREAK



Aberfoyle Resources Limited
EXPLORATION DIVISION

REVISIONS			
INIT.	DATE	INIT.	DATE

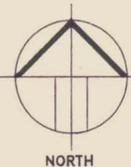
BULGOBAC E.L.39/85
AEROMAGNETIC INTERPRETATION
GEOMETRIC SKELETON

Compiled: SMR
Drawn: NWR
Plotted:
Checked: SMR
Plate No: BR 10

Location Code:

Scale: 1:10000

Date: December 93



NORTH



944015



 NORTH	944016 Aberfoyle Resources Limited EXPLORATION DIVISION		Computed: SMR																			
	BULGOBAC E.L.39/85 INTERPRETED STRUCTURAL FRAMEWORK		Drawn: NWR																			
REVISIONS <table border="1"> <thead> <tr> <th>INIT.</th> <th>DATE</th> <th>INIT.</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		INIT.	DATE	INIT.	DATE																	Checked: SMR
INIT.	DATE	INIT.	DATE																			
Location Code:	Scale: 1:10000	Date: December 93	Plate No: BR 11																			

