Aberfoyle Resources Limited
A.C.N. 004 664 108

Exploration Division

EXPLORATION LICENCE 9146

'DESERT BORE'
(Alcoota and Napperby 1:250 000 sheets)

ANNUAL REPORT ON EXPLORATION
FOR THE YEAR ENDED
15 AUGUST 1997

Distribution:
Aberfoyle Resources Ltd, Perth (1)
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Prepared By:
A D Thompson
Geophysicist

J P Ashby
Exploration Geologist

R M Joyce
Exploration Manager

Issued By:
R M Joyce
Exploration Manager
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APPENDIX

Airborne Magnetics and Radiometrics Survey - Geophysicists Report
1. SUMMARY

Aberfoyle Resources is exploring the gold potential of EL 9146 with the Early Proterozoic sequences present on the licence seen as being potential host rocks for mineralisation of the type developed to the west in the Granites/Tanami. Existing deposits within the Granites/Tanami inlier are often immediately associated with magnetic anomalies and as such our exploration is directed towards the testing of magnetic features. Several such magnetic anomalies occur on EL 9146 and are targeted for exploration. The prospectivity of the area is enhanced by encouraging recent exploration results achieved by PosGold Limited at the Sabre prospect located along geological/structural strike in the Reynolds Ranges, to the west of EL 9146.

Work by Aberfoyle in the 12 months to 15/8/97 involved the commissioning of an Airborne Magnetic and Radiometric Survey to be flown over EL 9146. Preliminary interpretation was subsequently carried out by an ARL Geologist.

Several magnetic anomalies have been identified and further exploration is warranted. It is proposed that a programme of RAB/Aircore drilling be carried out at particular areas of interest across these anomalies. Previous drilling by Aberfoyle to obtain regolith information in June 1996 showed that Quaternary cover is various between 12 and greater than 38 metres in the central portions of EL 9146.
2. INTRODUCTION

2.1. Location and Access

EL 9146 ‘Desert Bore’ is located to the east of the settlement of Aileron, approximately 150 kilometres to the north of Alice Springs. The licence falls on the Alcoota and Napperby 1:250 000 map sheets (Plate DSB 005), occurring on the Aileron and Pine Hill Station Pastoral Leases. Access is via the Stuart Highway, by heading east. Access to the southern boundary of EL 9146 may be gained by travelling approximately 19km east from Aileron. Alternatively EL 9146 may be accessed by travelling approximately 9km from the Stuart Highway along a track east of Mt Boothby.

2.2. TENURE

EL 9146 ‘Desert Bore’ (477 square kilometres) was granted to Aberfoyle Resources Limited on 16 August 1995 for a period of six years.

Initially, Aberfoyle had applied for a larger area than that which now forms EL 9146. The application was amended following the recognition that large areas of the Early Proterozoic target stratigraphy in the original area were overlain by considerable thicknesses of Cainozoic cover. The thickness of this cover, often exceeding 100m, would preclude the use of cost effective exploration and future mining techniques.

A 50% tenement reduction was completed at the second tenement anniversary, with 74 blocks surrendered. An annual expenditure convenant of $23 000 applied to EL 9146 for the second year of tenure. Excluding tenement rentals, Aberfoyle Resources expended a total of $48 172.99 on exploration of EL 9146 in the second year of tenure.
Aberfoyle Resources Limited
EXPLORATION DIVISION

NORTHERN TERRITORY
EL 9146 - DESERT BORE
LOCATION PLAN

Location Code: SF 53-910  Scale: 1: 250,000  Date: SEPTEMBER 1996

Revisions
Init. Date  Init. Date
RMJ 9/97

Compiled: CGD
Drawn: HMR
Traced:
Checked:
Plate No.: DSB 005

Figure 1
3. WORK COMPLETED

3.1. Previous Work

Work in the first year of tenure included:

- Imaging of regional public domain aeromagnetic datasets.

- The application and subsequent granting of an AAPA Authority Certificate detailing the locations of sites of Aboriginal significance within the EL.

- The collection of ground magnetic anomalies along three existing station tracks which traverse airborne magnetic anomalies.

- Reconnaissance RAB drilling (6 holes/299 metres).

- Recognition that area within the EL may be covered by considerable thicknesses of Cainozoic sediments prompted Aberfoyle to alter its first year approach to exploration. Instead of flying a high resolution airborne magnetic survey to accurately locate magnetic anomalies on the EL prior to geochemical testing it was decided to first gather some widely spaced regolith information using RAB drilling. Essentially this was to determine the depth of Cainozoic cover above poorly defined magnetic trends, before committing funds to the airborne magnetic survey. Drilling was completed and indicates Cainozoic cover is not prohibitively thick.
3.2. Work by Aberfoyle in the 12 months to 15/8/97

- Airborne Magnetic and Radiometric Survey

To enable accurate targeting of surface and sub-surface geochemical exploration programmes, Aberfoyle contracted World Geoscience Corporation in November 1996 to conduct an airborne magnetic and radiometric survey over EL 9146.

A Logistic Report by an Aberfoyle Geophysicist is shown as Appendix 1, and a flight path plan and a total magnetic intensity image are enclosed (Plates DSB 12 and DSB 11).

Several apparently folded and faulted linear magnetic highs are apparent on EL 9146. The main feature appears to be an open fold which may have been faulted WNW along the entire length of its axial fold hinge, with possible rotation about the fault plane at a point roughly co-incident with the SE termination of the magnetic feature.

The SE portion of another major magnetic anomaly lies within the northern most area of EL 9146. This feature appears as a truncated ring or domal structure. This may be possibly faulted along its southern margin. Extending on from the SE edge of this is an EW trending anomaly. Detailed interpretation of the aeromagnetic data is in progress, a preliminary, simplified interpretation is shown on plate DSB 002.
4. EXPENDITURE

Excluding tenement rentals, Aberfoyle Resources expended a total of $48 172.99 on exploration of EL 9146 in the second year of tenure. A breakdown of expenditure is shown on page 8.

5. PROPOSED PROGRAMME AND BUDGET

With the acquisition of suitably detailed aeromagnetic data Aberfoyle’s programme of exploration will concentrate upon the geochemical sampling of magnetic features and their environs located within EL 9146. The high magnitude magnetic feature located in the centre of EL 9146 will be targeted for geochemical coverage. Selected, attractive features within this magnetic anomaly will be more accurately located by reading ground magnetic traverses, the ground data modelled and the magnetic bodies tested. It is recommended that RAB/Aircore drilling is employed since Quaternary cover is likely to preclude effective surface sampling.

The estimated costing of this programme is as follows:

a) Ground Magnetic Surveying $2 000

b) Access $1 500

c) RAB/Aircore drilling, geochemical sampling and assaying as appropriate $45 000

Total $48 500
ABERFOYLE RESOURCES LIMITED
EXPLORATION DIVISION

EXPLORATION LICENCE 9146 ‘DESERt BORE’

SUMMARY OF EXPENDITURE
FOR THE YEAR ENDED
15 AUGUST 1997

GEOLOGY $5 703.61

GEOPHYSICS $37 026.28

OTHER SERVICES $1 305.80

ADMINISTRATION $4 124.10

TOTAL $48 172.99
APPENDIX 1

Airborne Magnetic and Radiometric Survey

Geophysicist Report
ABERFOYLE RESOURCES

“DESSERT BORE - TIHARKIE BORE”

AIRBORNE MAGNETIC & RADIOMETRIC SURVEY

October-November 1996
Logistic Report

Prepared By:

A D Thompson
Geophysicist

August 1997
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1. **INTRODUCTION**

An airborne magnetic and radiometric survey was conducted over EL9145 Tinarkie Bore and EL9146 Desert Bore in the Northern Territory near the town of Ti-Tree approximately 100 km North of Alice Springs (Fig. 1).

The survey took place in mid November over a period of 3-4 days and was conducted by World Geoscience Corporation for Aberfoyle Resources Limited.

A total of 5248 line kilometres of data were collected over approximately 275 North-South lines. The line spacing were 500m apart in the northern half of the survey however was closed up to 250m in the Southern half after it became apparent that a closer line spacing was required to resolve features in this location (Fig. 2).

The survey was designed as a first pass exploration tool to locate those areas with interesting magnetic characteristics and to determine those areas within the Els where the depth to magnetic basement is shallow enough to effectively explore for mineralisation.
2. DATA COLLECTION

2.1 Instrumentation

The Airborne Magnetic and Radiometric data were collected using the following equipment.

**Aircraft** - Cessna 206

**Magnetic Sensor** - Scintrex VIW2321/CS2 split beam cesium vapour sensor.

**Magnetometer** - Picodas PDAS 1000 acquisition system.

**Spectrometer** - Picodas PGAM 256 channel self calibrating spectrometer.

**Spec Sensor** - Two 16.75 litre NaI crystal sensors.


**Elevation** - Radar Altimeter & Barometric Altimeter

2.2 Survey Specifications

The following specifications were used for data acquisition.

**Flight Line Spacing** - 500 metres throughout the Northern half of the survey and 250 metres throughout most of the Southern half of the survey. The increased line density in the South was due to the increased complexity of the magnetic features.

**Flight Line Direction** - N-S

**Tie Line Spacing** - 5000m.

**Tie Line Direction** - E-W

**Sensor Height** - 80 metres. Which is fairly high due to the large line spacing and several hills in the Western part of the survey area.

**Mag. Sample Interval** - 6m

**Mag. Cycle Rate** - 0.1 seconds

**Spec Sample Interval** - 60 m

**Spec Cycle Rate** - 1 second
GPS cycle Rate - 1 second

2.3 Magnetic Base Station

A Geometrics G856 proton precession magnetometer with 0.1 nT resolution, 0.5 nT noise envelope cycling every 5 seconds was used. The Base station and mobile magnetometer clocks were synchronised daily.

3.0 Comments

The survey was completed within the specified time however a slight delay was necessary when part of the navigation system broke down making location of flight lines unreliable. No other problems were encountered.

An image of the Total Magnetic Intensity with a Northeast-Southwest sunshade is included in Figure 3.