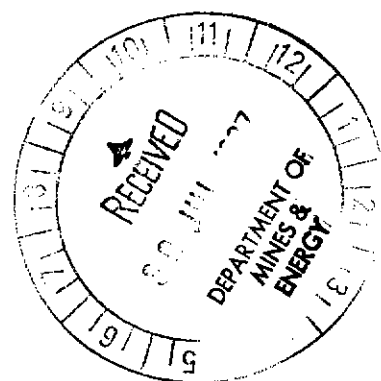


**ABERFOYLE RESOURCES LIMITED**  
ACN 004 664 108  
**Exploration Division**



**EXPLORATION LICENCE 9105 (CRESSWELL DOWNS)**

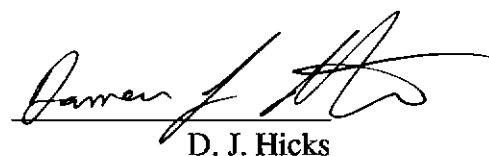
**(Walhallow 1:250,000 sheets)**

**PARTIAL RELINQUISHMENT REPORT**

**June 13, 1997**

**Title holder: ABERFOYLE RESOURCES LIMITED**

**Compiled by:**

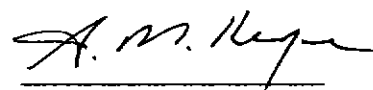
  
D. J. Hicks

**Distribution:**

**1. NT DME**

2. Aberfoyle Resources Ltd, Melbourne
3. Aberfoyle Resources Ltd, Townsville

**Issued by:**

  
A. M. HESPE

**Report No. NT0022 -7/97**

**CR 97 / 580**

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1. **SUMMARY:**

Exploration Licence 9105 was granted to Aberfoyle Resources Ltd on June 14, 1995. The tenement was pegged to explore for Shale-hosted Zn-Pb-Cu mineralisation in the Middle Proterozoic lithologies of the McArthur Basin. The tenement was reduced from 154 sub-blocks to 77 sub-blocks on June 13, 1997. This report describes work completed within the relinquished 77 sub-blocks, since granting on June 13, 1995.

Relinquished areas targeted in EL 9105 are covered by Palaeozoic, Mesozoic and Cainozoic rocks of variable thickness, well to the south of the exposed portions of the McArthur Basin. Aeromagnetics (public domain data) interpretations suggest continuation of regionally important structures into the tenement. If these structures come into contact with favourable lithologies, such as McArthur Group sediments, the main ingredients for a SEDEX style base metal deposit are present.

Work completed on the relinquished portions of EL 9105 since June 13, 1995 has been minor, in lieu of more detailed exploration completed on the more prospective ground in the northwest of the licence area. No features requiring follow-up were detected from the work completed.

## 2. INTRODUCTION:

### 2.1 Location and Access:

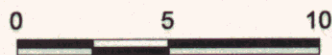
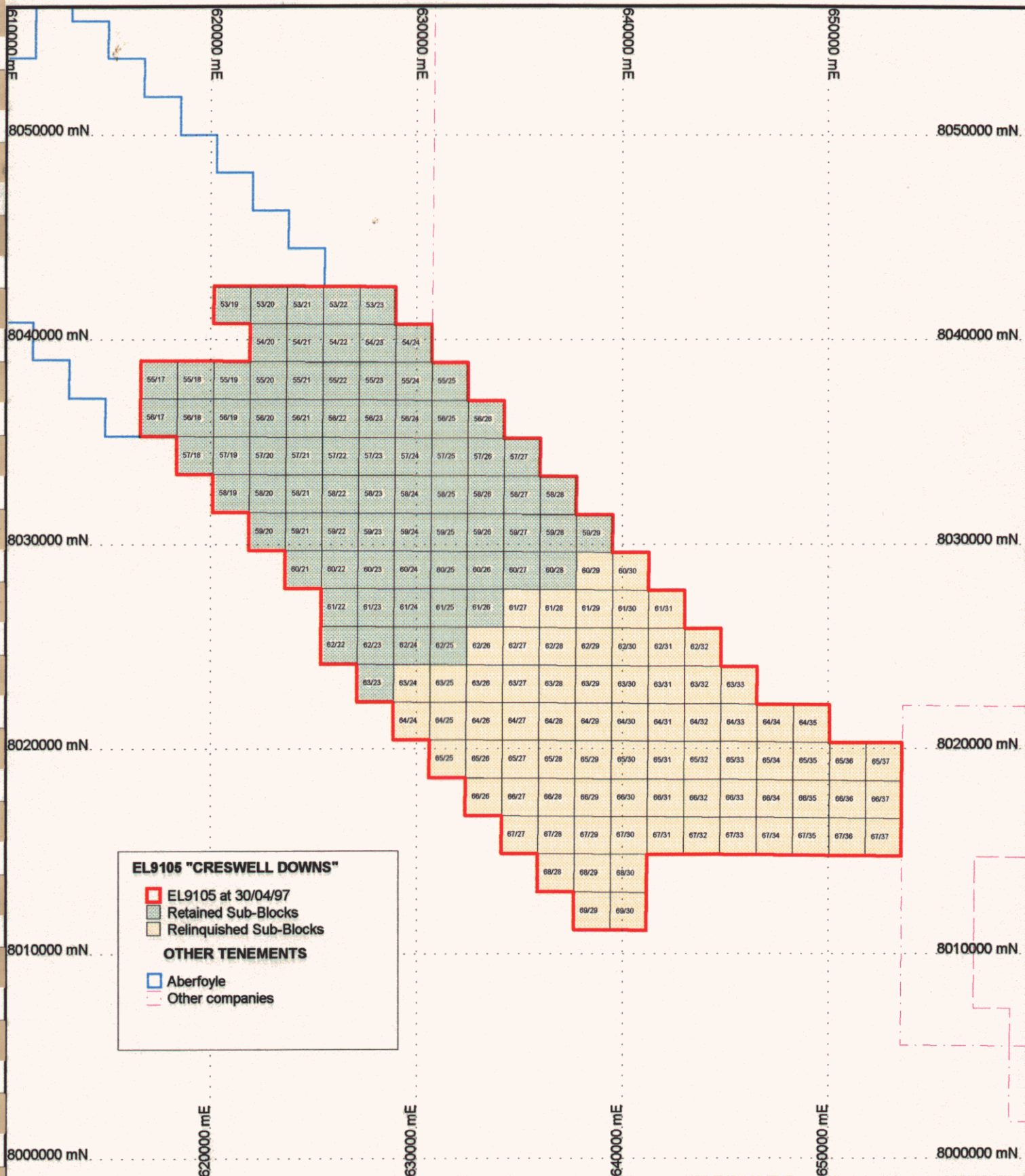
EL 9105 is located approximately 310 kilometres northeast of Tennant Creek, and 185 kilometres south of Booraloola on the Barkly Tablelands of the Northern Territory (see Figure 1). Access to the tenement is by sealed road (Barkly or Carpentaria Highways then the Tablelands Highway) then by station dirt road through Creswell Downs and Walhallow Stations. Wet weather prevents access once off the bitumen.

### 2.2 Tenure

Exploration Licence 9105 - Creswell Downs (154 sub-blocks) was granted to Aberfoyle Resources Ltd on June 14, 1995 for a period of six years. A reduction of 50% of sub-blocks occurred at the end of the second year of tenure (77 sub-blocks were relinquished on June 13, 1997). Sub-block details, including relinquishments, are shown on Figure 2.

### 2.3 Regional Geology

The tenement lies on covered portions of the southern McArthur Basin. Proterozoic lithologies beneath EL 9105 are speculative, but are most likely a mixture of McArthur Group sediments and Tawallah Group lithologies. Interpolations from nearest outcrop to this tenement are unreliable, and water bore data indicate a mix of sediments and volcanics, suggesting Tawallah Group is the dominant unit in this area.



kilometres  
Scale 1:250 000



## Aberfoyle Resources Limited

### EXPLORATION DIVISION

REVISIONS			
Init	Date	Init	Date

Template: EL9105\_250kwp

Northern Territory  
McArthur Project  
EL9105 "Creswell Downs"  
Current Tenure - April 1997

Workspace: \\HALVING\SVL\SWT\DOMAINS\MCA\PLATES\MCA-033.WOR

Compiled: JAB/RRL

Printed: DJ-1200C

Office: TSV

Date: 30/04/97

Plate No: MCA-033

## 2.4 Mineralisation

The McArthur Basin is host to numerous mineral occurrences both large and small. These range in style from replacement copper to vein-style lead-zinc to SEDEX style stratiform mineralisation. The best example of this latter style is the HYC deposit, situated approximately 150 kilometres north-northwest of EL 9105.

A number of papers have been published describing all aspects of HYC geology, genesis, mineralisation, sedimentology and so on, but the most pertinent reference for exploration in EL 9105 is by Shalley and Harvey (1992). This paper deals with the geophysical response of the HYC deposit, providing useful data to compare to what is expected to be generated from the delayed geophysically driven exploration program for these two tenements. A general reference to the HYC deposit is given in Logan, et al. (1990).

### **3. WORK COMPLETED:**

#### **3.1 1995/96 Season**

Work completed on the relinquished parts of the tenement includes a regional geophysical interpretation to highlight areas of greater prospectivity, and commissioning of an AAPA Authority Certificate over areas expected to require ground follow-up during the forthcoming year. Open file reports from the NT DME Library were also reviewed to determine the approximate depth to bedrock and possible bedrock lithologies.

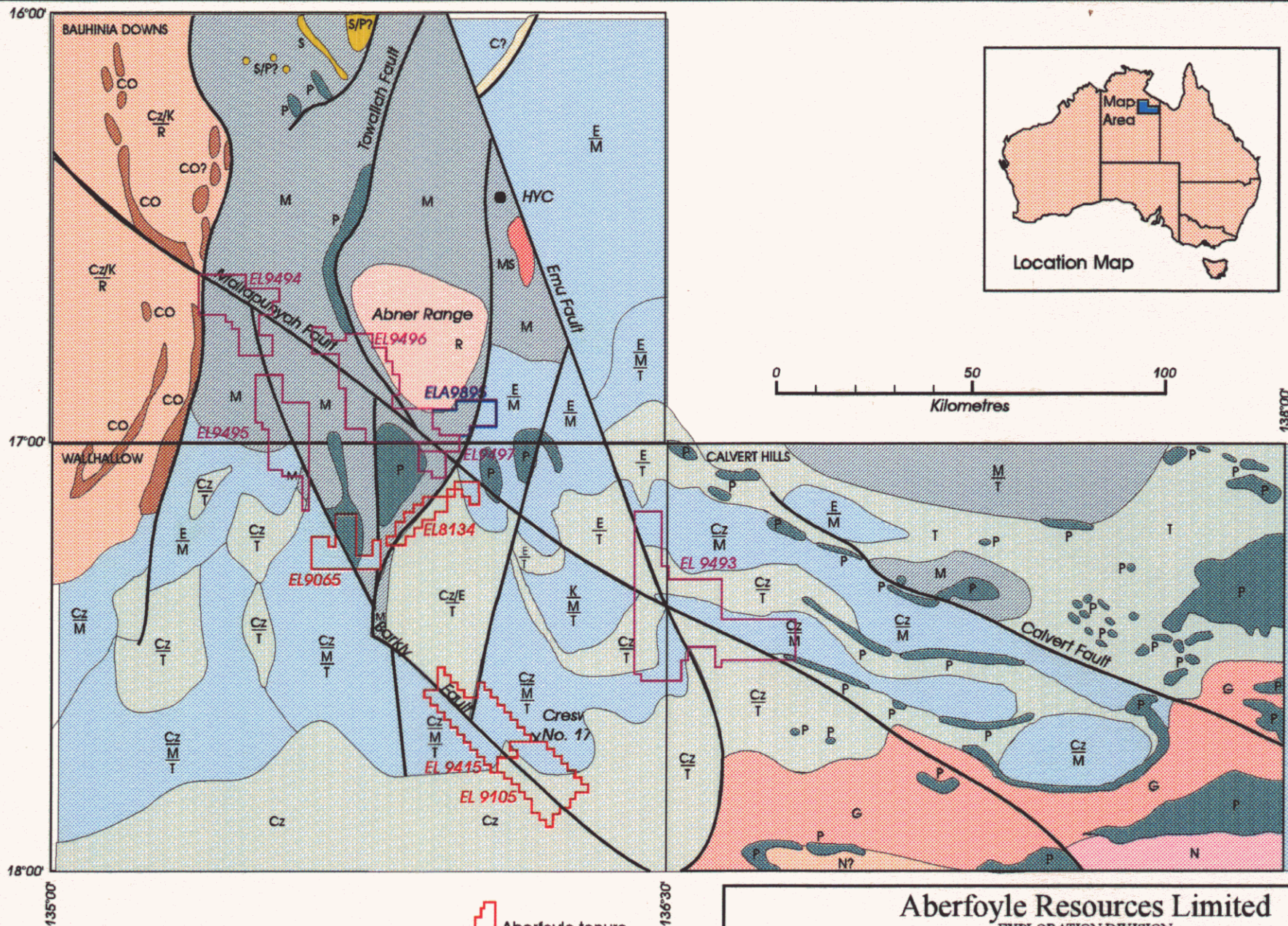
A regional geophysical interpretation of the three 1:250,000 sheets adjacent to and including EL 9105 was completed. The source of data was the BMR 1:1,000,000 aeromagnetic anomaly pixel map series for Newcastle Waters (E 53) total magnetic intensity, second generation compilation. Results of this interpretation are presented on Plate NT42A, with the accompanying legend on Plate NT42B.

The Aboriginal Areas Protection Authority (Darwin Branch) was contacted to prepare a search of an area including EL 9105, as well as several other tenements in the district. This work resulted in the issuing of an Authority Certificate identifying all known sites of significance to the traditional owners of this area. Aberfoyle intends to explore this ground in full accordance with the conditions set out in the Authority Certificate. Details and maps of this work are contained in Appendix 1.

#### **3.2 1996/97 Season**

No fieldwork was completed on the relinquished portion of EL 9105 during the second year of tenure. The year's activities were confined to the retained section of tenure to the northwest which was flown with airborne EM.





 Aberfoyle tenure  
May 1997  
EL 9063

## Aberfoyle Resources Limited

EXPLORATION DIVISION

Northern Territory  
Bauhinia Downs, Wallhallow, Calvert Hills  
1:250,000 Map Areas  
Aeromagnetics Interpretation & Location

REVISIONS			
Init.	Date	Init.	Date
GBW	11/95		
KM	2/96		
KM	4/96		
ES	11/96		
ES	05/97		

Location Code :

Scale : 1:1,000,000

Date : May, 1997

See Plate No. NT42B  
(nth1012h.cdr)  
for legend

Compiled : GBW

Drawn : GLC

Checked : GBW

File Name : nth1011t.cdr

Plate No. : NT 42A



## CAINOZOIC

Cz Sand, laterite, soil.

## MESOZOIC

Lower Cretaceous

K Sediments.

## PALEOZOIC

Lower - Middle Cambrian

E Limestone, sandstone.

## PRECAMBRIAN

Upper Proterozoic - Roper Group

CO Corcoran Formation - includes ferruginous sandstone.

" "

C Crawford Formation - includes glauconitic, feldspathic sandstone.

R Sandstones, siltstones.

Upper(?) Proterozoic - South Nicholson Group

N Sandstone, siltstones.

McArthur Group / Nathan Group

M Dolomite, limestone, shale, sandstone, siltstone, chert.

Lower Proterozoic

MS Microsenite, syenite.

Lower Proterozoic - Tallawah Group

P Peters Ck and Settlement Ck Volcanics - basalt.

S Scrutton Volcanics - dacite, minor basalt.

T Undifferentiated Tallawah Group rocks

Lower Proterozoic

G Granite.

	Cz/K R	Roper Group beneath Cainozoic / Cretaceous cover
Cz M		McArthur Group beneath Cainozoic cover
	E M	" " " Cambrian cover
Cz T		Tallawah Group beneath Cainozoic cover
	E T	" " " Cambrian cover
Cz M T		Tallawah Group beneath McArthur Group beneath Cainozoic cover
	K M T	" " " " " " Cretaceous cover

Legend for Plate No. NT42A

## Aberfoyle Resources Limited

EXPLORATION DIVISION

REVISIONS				<p>Northern Territory</p> <p>Bauhinia Downs, Wallhallow, Calvert Hills</p> <p>1:250,000 Map Areas</p> <p>Magnetic Stratigraphy and Legend</p>	<p>Compiled : GBW</p> <p>Drawn : GLC</p> <p>Checked : GBW</p> <p>File Name : ntht012h.cdr</p> <p>Plate No. : NT 42B</p>
Init.	Date	Init.	Date		
Location Code :				Scale : 1:1,000,000	Date : January 1995

4. **INTERPRETATIONS AND CONCLUSIONS:**

Exploration completed during the reporting period has produced no features of interest in the relinquished portions of EL 9105. The deep cover causes speculative interpretation of bedrock for the southeastern (relinquished) portion of the tenement, and further work was not proposed.

5. **REFERENCES:**

- Logan, R. G., Murray, W. J., and Williams, N. (1990). 'HYC Silver-Lead-Zinc Deposit, McArthur River.' in 'Geology of the Mineral Deposits of Australia and Papua New Guinea' Vol 1 (F. E. Hughes ed.). Aust. Inst. of Mining and Metallurgy, 907-911
- Shalley, M. J. & Harvey, T. V. (1992). 'Geophysical Responses of the HYC Deposit.' *Exploration Geophysics*. **23**, 299-304.
- Hicks, D.J. (1996): Exploration Licence 9105 (Creswell Downs). Annual Exploration Report to June 13, 1996. Unpublished Aberfoyle Report No. NT 0006-6/96.
- Hicks, D.J. (1997): Exploration Licence 9105 (Creswell Downs). Annual Exploration Report to June 13, 1997. Unpublished Aberfoyle Report No. NT 0017-6/97.

**APPENDIX 1:**

AAPA Authority Certificate for EL 9105



## ABERFOYLE RESOURCES LTD

6 Exploration Licences in the -

WALLHALLOW / CALVERT HILLS Area of the NT

SHEET SE 53-7  
WALLHALLOW  
NORTHERN TERRITORY  
EDITION 1CALVERT HILLS  
SHEET SE 53-8  
NORTHERN TERRITORY  
EDITION 1

Aboriginal Areas Protection Authority

MAP FORMING PART OF AUTHORITY CERTIFICATE No. C96/017

ISSUED TO Aberfoyle ON 6/1/1996

EL 7239

EL(A) 9415

EL 9105

EL 9063

EL 9065

SCALE 1:250 000

Kilometres 5 0 5 10 15 20 25 30 35 40 45 50 Kilometres



# ABORIGINAL AREAS PROTECTION AUTHORITY AUTHORITY CERTIFICATE

Issued in accordance with Section 22 of the Aboriginal Sacred Sites Act

REFERENCE: 89/1203 (Doc No 17370) C96/017

APPLYING TO: Exploration Licences EL 9063, 9065, 9105, 7239 & 8134 and EL(A) 9415 as shown on the attached Wallhallow (SE 53-7) and Calvert Hills (SE 53-8) 1:250,000 topographical sheets.

PROPOSED WORK OR USE: Ground geophysics, surface geochemical sampling (rocks & soil), RAB drilling and subsequent percussion/diamond drilling. Clearing of tracks.

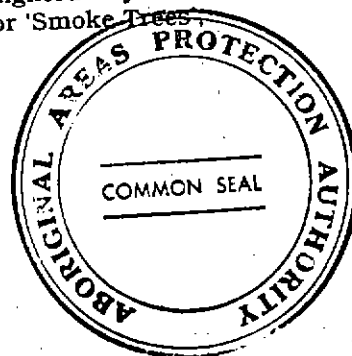
ISSUED TO: Aberfoyle Resources Ltd  
Level 31, 525 Collins Street  
MELBOURNE VIC 3000

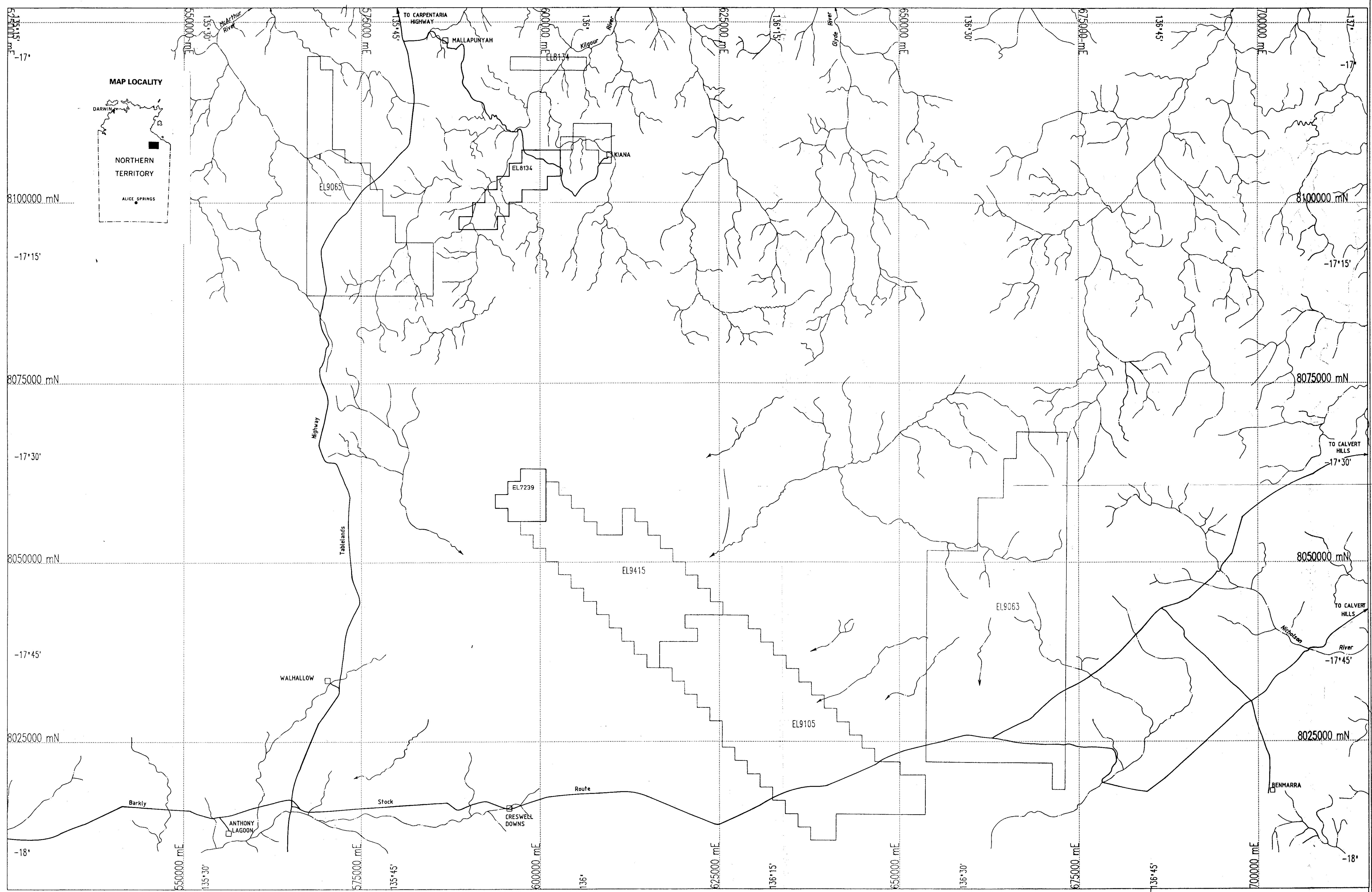
## CONDITIONS:

1. It is the responsibility of the recipient of this Certificate to:
  - (i) Include the conditions of this Certificate in any subsequent contract or tender document commissioning works described in this Certificate.
  - (ii) Otherwise inform agents and employees of the conditions of this Certificate and obligations under the *Aboriginal Sacred Sites (NT) Act 1989*.
2. The proposed use or works covered by this Certificate must commence within 24 months of the date of issue.
3. The information on the maps relates specifically to the areas of the Certificate as marked and the fact that sites are not shown in other areas should not be taken as a definitive indication of the existence or lack of existence of sites in these areas.
4. The two (2) maps attached to the Certificate form part of the Certificate.
5. EL(A) 9415 and EL 8134  
No works may occur within areas highlighted in red on the maps attached to the Certificate.
6. EL 9065  
No works may occur within areas highlighted in red on the maps attached to the Certificate.
7. Surface sampling ie. stream gravel/surface soil is permitted within areas delineated by hatching as indicated on the maps attached to the Certificate. For any additional sub surface work, ie. drilling, costeaning, mining etc., permission must first be obtained from custodians Bruce Joy and Gordon Lanson.
8. The mining company is required to ensure the following mature tree species are not damaged within the clear area (B) as shown highlighted in yellow on the maps attached to the Certificate: (i) *Eucalyptus pruinosa* or 'Smoke Trees',  
(ii) *Eucalyptus leucophloia* or Snappy Gums.

The COMMON SEAL of the  
ABORIGINAL AREAS PROTECTION AUTHORITY  
was hereto affixed on the 5<sup>th</sup> day of  
February 1996

DAVID RITCHIE  
Chief Executive Officer





LEGEND :

- Major roads
- Homesteads
- ~ Drainage systems

0 12.5 25  
Kilometers  
Scale 1:250 000

FIGURE 1

ABERFOYLE RESOURCES LIMITED  
Exploration Division  
Northern Territory  
McArthur Basin Project  
Current Tenement Holdings  
December 1995

CR 97 / 580