OPEN FILE

RELINQUISHMENT REPORT

EXPLORATION LICENCE 7266
“Little Rosie Creek”

24th May, 1991 to 23rd May, 1996

Licensee: Ashton Mining Limited

Operator: Ashton Mining Limited
BHP Minerals Pty Ltd

Sheet Reference: 1:250,000 Bauhinia Downs (SE53-03)

Submitted to: Department of Mines and Energy, Darwin

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Ashton Mining Library

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SUMMARY

During the period 24th May, 1991 to 23rd May, 1996, Ashton Mining Limited, through the Australian Diamond Exploration Joint Venture (ADE JV), and BHP Minerals, through the McArthur River ( Metals) Joint Venture, carried out exploration activities on EL 7266. On the 23rd May, 1996 the licence was reduced from 25 blocks to 13 blocks. This report provides details of the work undertaken in the relinquished portion of the tenement.

In the relinquished area, Ashton's exploration program consisted of regional reconnaissance stream gravel samples. A total of nine gravel samples were collected. All samples were sent to Ashton’s Perth Laboratory. All samples reported negative results.

BHP Minerals undertook airborne TEM and magnetic surveys, both as part of much larger regional surveys over small areas of the tenement, and helicopter supported soil and rock sampling in three discrete areas to follow up stream sediment Cu anomalies identified from Open File data. No significant geophysical or geochemical anomalies were identified and BHP Minerals withdrew from this tenement on 20th June, 1995. No details of the base metal exploration work are included in this report as BHP included all work undertaken on EL 7266 in the 1995 relinquishment report.

Diamond exploration expenditure for the relinquished area amounted to $17,873.
KEYWORDS:

Diamond exploration; Base metal exploration; Gravel sampling

LOCATION:

Bauhinia Downs (SE53-03); Batten (6065)
1.0 INTRODUCTION

This report details exploration activities carried out by the ADE Joint Venture over the relinquished portion of Exploration Licence 7266 for the period 24th May, 1991 to 23rd May, 1996. Ashton Mining Limited is manager of the licence on behalf of the Australian Diamond Exploration Joint Venture (ADEJV). Participants of the ADE Joint Venture also include Aberfoyle Resources Ltd and Australian Diamond Exploration Pty Ltd (ADEX).

Exploration Licence 7266 was granted to Ashton Mining Ltd on the 24th May, 1991 for a period of six years. The original area of the licence was 205 blocks but after statutory relinquishments in 1993, 1994 and 1995 the area was reduced to 103, 52 and 25 blocks respectively. On the 23rd May, 1996, and in accordance with Section 26 of the Northern Territory Mining Act, the licence was further reduced by 12 blocks, leaving an area of 13 blocks (41.73 km²). The current area of the tenement is located on the Bauhinia Downs 1:250,000 map sheet (Figure 1).

The target for exploration by the ADE JV within the licence is diamond bearing kimberlitic intrusives and the principal exploration technique employed has been regional stream gravel sampling.

As this tenement is situated in what is a recognised base metal province, a joint venture was negotiated with BHP Minerals Pty Ltd on the 24th January, 1992 which allowed them to earn up to 80% of the base metal rights to designated licences, including EL 7266. This joint venture was known as the McArthur River Joint Venture. This agreement was renegotiated and all existing joint venture tenements became subject to the McArthur River (Metals) Joint Venture

BHP Minerals withdrew from EL 7266 on the 20th June, 1995. All work undertaken by BHP Minerals was reported in the 1995 relinquishment report and therefore no details of the base metal exploration work are included in this report.

A statement of diamond exploration expenditure for the licence is included in this report.

2.0 EXPLORATION PROGRAMME

2.1 Data Review

Prior to commencing field work, a comprehensive data review of results and previous exploration in the tenement area was undertaken. In addition, a study of available photography was made to assist in delineating structural and geomorphic features which could represent kimberlitic intrusives. Areas of low relief and poor drainages were also highlighted as these could contain preserved intrusives which had not shed significantly into the present drainage. Areas that had not been adequately explored were targeted for sampling. Proposed gravel sample locations were plotted in the office on 1:100,000 maps sheets.

2.2 Gravel Sampling

Sampling programmes were planned which concentrated on poorly sampled areas, especially poorly drained planation surfaces. Programmes were undertaken in the second, fourth and fifth years of tenure. Three samples from the second year, four
samples from the fourth year and one sample from the fifth year, a total of nine samples, are located within the relinquished area. All the samples are negative.

Sampling was completed using helicopters as they are the most practical mode of transport with the advantage of ease of access and navigation. They also enable the geologist to scan the area for prospective trap sites. The best quality heavy mineral trap in the vicinity of the pre-selected site is chosen for sampling.

Once a suitable site is located, approximately 40kg of gravel is gathered, sieved and the minus 4mm fraction collected in calico bags for laboratory examination. This fraction generally weighs between 25 and 30kg and is usually contained within two bags. The bags are sent to Ashton’s Perth laboratory for diamond and indicator analysis.

A sample listing appears in Appendix 1, and sample locations are shown in Figure 2.

2.3 Geophysics

Interpretation of an aerial magnetic/radiometric survey flown by BHP, and obtained by Ashton through a data swap with BHP, was undertaken. No targets were identified. The results of this survey were reported in the base metals section of the 1995 relinquishment report.
2.4 **Laboratory Procedure**

All samples are processed by the Ashton Mining Limited Laboratory in Perth, where they are concentrated by Wilfley table and heavy liquid separation techniques.

The heavy liquid used is tetrabromomethane with a specific gravity of 2.96. The concentrates are then screened into various size fractions, further concentrated by magnetic and electrostatic separation techniques and a comprehensive grain by grain examination carried out on the minus 1.0mm plus 0.425mm fractions.

3.0 **EXPLORATION EXPENDITURE**

Exploration expenditure over the relinquished area for the period 24th May, 1991 to 23rd May, 1996 amounted to $17,873. A detailed breakdown of expenditure is given in Appendix 2.

4.0 **CONCLUSIONS**

The samples within the area are all negative and warrant no further work. Therefore relinquishment of this area was recommended.

6.0 **REFERENCES**


APPENDIX 1

Sample Results
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NOTE: G = Gravel sample
APPENDIX 2

Statement of Expenditure
STATEMENT OF EXPENDITURE

EXPLORATION LICENCE 7266

Relinquishment Report

For the period
24th May, 1991 to 23rd May, 1996

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