ANNUAL REPORT

EXPLORATION LICENCE 8133
"William Creek"

24th September, 1995 to 23rd September, 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
Copies to: Ashton Mining Limited - Perth Office
          Ashton Mining Library

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October, 1996
Report Number: 51475
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SUMMARY

During the period between 24th September, 1995 to 23rd September, 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 8133. This report provides details of the work undertaken in the licence during this reporting period.

During the reporting period, Ashton’s exploration program consisted of regional reconnaissance stream gravel samples. Three gravel samples were collected and sent to Ashton’s Perth Laboratory. Results are outstanding and will be reported in the next period.

BHP Minerals undertook a GEOTEM aerial survey and geophysical interpretation during 1996. One small anomaly was defined and further work in this area is recommended.

Exploration expenditure for the reporting period amounted to $29,690 against a covenant of $28,000.

KEYWORDS:

Diamond exploration; Base metal exploration, Gravel sampling; Geophysical surveys; Aerial EM surveys; EM interpretation; EM anomalies

LOCATION:

Bauhinia Downs (SE5303), Gylde (6164)
1.0 INTRODUCTION

This report details exploration activities carried out by the ADE Joint Venture over Exploration Licence 8133 for the period 24th September, 1995 to 23rd September, 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 8133 was granted to Ashton Mining Ltd on the 24th September, 1993 for a period of 6 years. The original area of the licence was 108 blocks but after the first statutory relinquishment on the 12th January, 1996, the area was reduced to 54 blocks (173.34 km²). The relinquishment was delayed due to a request for a full waiver of reduction requirements in 1995, which was subsequently refused by the Department of Mines and Energy. 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 licences is diamond bearing kimberlitic intrusives and the principal exploration technique employed has been regional stream gravel sampling.

As this area 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. 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 on the 1st July, 1995.
EL 8133 became part of the McArthur River (Metals) Joint Venture on this date.

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

2.0 REGIONAL GEOLOGY

The ground is entirely covered by Cambrian Bukalara Sandstone. This unit overlies mid-Proterozoic sedimentary rocks. Major SE and N trending faults crosscut the Bukalara Sandstone and basement rocks.

3.0 DIAMOND EXPLORATION PROGRAMME

3.1 Gravel Sampling

A gravel sampling programme was undertaken during the third year of tenure. Three samples were collected and sent to Ashton’s Perth laboratory for diamond and indicator analysis. These results are not yet available.

Another three samples, BAU14222 to BAU14224, were collected in the third year but are located in the area which was subsequently relinquished in January, 1996. These samples are all negative and are reported in the relinquishment report (Ashton Mining Ltd. Report No.51351, Apr-1996).

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.

3.3 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.

4.0 BASE METAL EXPLORATION

4.1 Geophysics

GEOTEM Survey

An airborne GEOTEM survey (Boomerang Creek survey) was flown by Geoterrex Pty Ltd in May 1996 over EL8133. Approximately 320 line km were flown with lines oriented E-W and spaced 1,000 m apart (flight line diagram is given in Figure 2). Airborne EM profiles are being released in a separate report submitted to the NTGS

The survey was flown in an effort to detect conductive targets associated with SEDEX Pb-Zn and stratiform sediment-hosted Cu-Co mineralisation. Unfortunately, no anomalies worthy of ground follow-up were generated.

5.0 EXPLORATION EXPENDITURE

Exploration expenditure for the period 24th September, 1995 to 23rd September, 1996 amounted to $29,690. A detailed breakdown of expenditure is given in Appendix 2.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Diamond Exploration

Results are generally disappointing and unless the outstanding results prove interesting and warrant follow-up no further work by Ashton Mining is recommended.

6.2 Base Metal Exploration

The GEOTEM survey revealed no significant conductors. A small anomaly was located in the northeast area of the tenement. This region has been highlighted for further work.
7.0 PROPOSED PROGRAMME AND BUDGET

The proposed programme and budget for the period 24th September, 1996 to 23rd September, 1997 is given below.

Programme:

Diamond Exploration
1. Follow-up gravel sampling

Base Metal Exploration
1. Soil sampling (20 samples)
2. Drilling if warranted

Budget:

Geoscientist/Professional Staff $3,000
Field Support/Office Staff $1,000
Travel/Accommodation/Meals $1,000
Field Supplies $500
Freight/Storage $250
Helicopter Charter $3,000
Drilling $3,000
Geochemistry $300
Laboratory $2,000
Drafting/Computing $750

$14,800
8.0 REFERENCES


APPENDIX 1

Sample Results
<table>
<thead>
<tr>
<th>Sample</th>
<th>Type</th>
<th>Result</th>
<th>Diamond</th>
<th>Chromite</th>
<th>Other</th>
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<tbody>
<tr>
<td>96033-021</td>
<td>G</td>
<td>neg</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>96033-022</td>
<td>G</td>
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<tr>
<td>96033-024</td>
<td>G</td>
<td>neg</td>
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NOTE: G = Gravel sample
APPENDIX 2

GEOTEM Survey Specifications
**GEOTEM SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Aircraft</th>
<th>CASA C212-200 Turbo Prop</th>
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<tbody>
<tr>
<td>Magnetometer</td>
<td>Scintrex Cesium Vapour Optical Absorption</td>
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<tr>
<td>Resolution</td>
<td>0.01 nT</td>
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<tr>
<td>Cycle Rate</td>
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<td>Sample Interval</td>
<td>60 metres</td>
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<td>Electromagnetic System</td>
<td>GEOTEM III Time Domain EM</td>
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<td>Transmitter Base Frequency</td>
<td>25 Hz</td>
</tr>
<tr>
<td>Receiver</td>
<td>x and z, dual axis receiver coil in towed bird</td>
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<tr>
<td>Cycle Rate</td>
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<tr>
<td>Sample Interval</td>
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<tr>
<td>Window mean times (msec)</td>
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<tr>
<td>em1 0.4609</td>
<td>em2 0.4766</td>
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<tr>
<td>Data Acquisition</td>
<td>RMS GR33 Thermal Dot Matrix Recorder</td>
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<td></td>
<td>GEODAS Digital Acquisition System</td>
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<tr>
<td>Flight Line Direction</td>
<td>090 - 270 degrees</td>
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<tr>
<td>Flight Line Spacing</td>
<td>1,000 metres</td>
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<tr>
<td>Mean Terrain Clearance</td>
<td>105 metres</td>
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<td>Navigation</td>
<td>GPS satellite positioning / Doppler</td>
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APPENDIX 3

Statement of Expenditure
# Statement of Expenditure

**Exploration Licence 8133**

Annual Report

For the period
24th September, 1995 to 23rd September, 1996

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
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<tr>
<td>Geoscientist/Professional Staff</td>
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<td>Field Support/Office Staff</td>
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**Sub-Total** | **26,991**

**Overheads** | **2,699**

**Total:**  | **$29,690**