ANNUAL REPORT

EXPLORATION LICENCE 8380
“Ten Mile Creek”

29th March 1999 to 28th March, 2000

Licensee: Ashton Mining Limited

Operator: Ashton Mining Limited

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

Author:

B. Thompson
ASHTON MINING LIMITED
21 Wynyard Street
BELMONT WA 6104

April, 2000
Report Number: 52449
FIGURES

Figure 1.  Tenement Location Map
Figure 2.  Sample Location Map

TABLES

Table 1.  Tenement History

APPENDICES

Appendix 1.  Sample Results
Appendix 2.  Statement of Expenditure
SUMMARY

During the period 29th March, 1998 to 28th March, 1999, Ashton Mining Limited, carried out an exploration programme over Exploration Licence 8380. This report provides details of work undertaken within the licence during the reporting period.

Abundant chromite indicator minerals of indeterminate origin have been recovered in a catchment of EL 8380. Rock samples collected from this area in the previous reporting period have produced negative results for chromite. A total of five further rock samples have been collected in the area that test newly identified volcanic dykes within the vicinity of the indicator minerals. The dykes appear to have an approximate E-W strike.

Sporadic scattered diamonds have been recovered in the Leila Creek area from small stream gravel samples and bulk drainage samples within EL 8380. The diamond distribution is suggestive of an origin from a conglomeritic sandstone unit of presumed Cretaceous. A bulk-sample has been planned to test this proposal, however due to equipment availability and the onset of an unusually long wet season, the sample has yet to be completed.

Exploration expenditure for the reporting period amounted to $15,881 against a covenant of $48,500.
1.0 INTRODUCTION

This report details exploration activities carried out by Ashton Mining Limited over Exploration Licence 8380 during the period 29th March, 1999 to 28th March, 2000.

Exploration licence 8380 was granted to Ashton Mining on the 29th March, 1994 for a period of six years. The licence, originally covered an area of 87 blocks, however through statutory reductions, now comprises 14 blocks. A tenement history is provided in Table 1. The tenement is located on the Bauhinia Downs (SE53-03) 1:250,000 map sheet and the Batten 1:100,000 map sheet. A tenement location map is shown in Figure 1.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EL 8380</td>
<td>87</td>
<td>87</td>
<td>53</td>
<td>27</td>
<td>14</td>
<td>7</td>
<td>7</td>
</tr>
</tbody>
</table>

In January 1992, an agreement was entered into between Ashton and BHP Minerals allowing Ashton to explore for diamonds on designated BHP tenements, and for BHP to undertake base metal exploration on selected Ashton tenements located in the Batten region. This joint venture was known as the McArthur River Joint Venture. On the 1st July 1995, the agreement was renegotiated and all existing joint venture tenements became subject to the McArthur River (Metals) Joint Venture.
BHP Minerals nominated EL 8380 as a project tenement on the 26th February, 1996. In November of the same year, BHP withdrew from the tenement, having completed their exploration programme. All work undertaken by BHP was reported in the annual report for the period 29th March, 1996 to 28th March, 1997 (report reference: 52083).

2.0 GEOLOGY

The geology of EL 8380 is dominated by exposures of the lower Proterozoic Tawallah Group that forms the southern part of the Tawallah Range. The area is dissected by a NNW oriented fault that separates the Lower Proterozoic Tawallah Group rocks from Lower-Mid Proterozoic McArthur Group rocks to the east. The McArthur group forms relatively flat undulating terrain dissected by a few meandering creeks that is in contrast to the generally steep sided hills of the Tawallah Group.

A large displacement has occurred along the structure separating the Tawallah and McArthur Groups and reactivation of this fault during the Cretaceous or later has formed a steep sided basin along its eastern margin. This basin is up to a kilometre wide in parts and several kilometres long. Previous drilling by Ashton Mining has identified various sequences of mudstone and claystone infilling this basin that have similarities to Cretaceous sequences seen in other parts of the McArthur Basin. Plant bearing Cretaceous quartzite of the Lower Cretaceous has been observed within the main project area of EL 8380.
Mafic volcanic intrusives have been observed in parts of the tenement. These intrusives outcrop in parts but are highly weathered and their origin is inconclusive. The age of these dykes cannot be significantly constrained but are presumed to be Palaeozoic.

Extensive Quaternary cover blankets parts of the tenement. This cover is restricted to areas of the McArthur Group and along the basin structure produced by the NNW trending fault.

3.0 DIAMOND EXPLORATION

3.1 Outstanding Sample Results

Two rock samples (98080-002 & 003) were collected late in the previous reporting period, however only one result was reported in the same period. Sample 98080-002 was processed in the current reporting period and returned a negative result.

A complete listing of results for samples processed by Ashton’s Diamond Laboratory is provided in Appendix 1.

3.2 Sampling

Sampling within the reporting period has concentrated on the catchment reporting abundant chromite indicator minerals where previous rock samples have reported negative. Several visits were made to the locality without identifying a likely source rock for the chromite.
An existing track along the scree slope that runs N-S was scraped using a front-end loader to give better visibility to any weathered volcanic unit, which are expected to be oriented roughly E-W. A total of five rock samples were collected from different units/dykes not previously sampled aimed at identifying the source of the chromite. It is assumed that the source of the chromite will be non-kimberlitic.

Sample locations are shown on Figure 2. The rock samples were sent to Ashton’s Perth laboratory but were not processed in the reporting period. Results are awaited.

### 3.3 Bulk Sampling

Within the broad Leila Creek project area and within EL 8380, previous bulk-stream samples have reported low concentrations of diamonds. Stream-gravel sampling has also reported micro-diamonds. A source for these diamonds has never been found and a correlation with the chromite that has been recovered in EL 8380 has not been made.

After careful field observations with respect to Cretaceous stratigraphy, a conglomerate/coarse-grained sandstone unit has been identified in the area, in particular adjacent to a drainage containing a +1mm diamond from a stream-gravel sample. Downstream of this drainage a previous bulk sample has reported diamonds from the relinquished part of EL 8380.
ASHTON MINING LIMITED
EXPLORATION LICENCE 8380
ANNUAL REPORT
FIGURE 2
SAMPLE LOCATIONS
APRIL 2000
1:50,000
The conglomerate/sandstone is ferrugenised and silicified, and is predominantly a coarse
grained sandstone but contains large angular and rounded clasts up to 15cm across.
Several wood fragment casts have been observed within the outcropping unit.
Stratigraphic relationships have been difficult to determine, however its age is presumed
to be Early Cretaceous or younger

Due to the conglomerate / sandstones proximity to reported diamonds, it is a potential
source of diamonds, having redistributed them from their primary source. To test the
potential of the unit as a diamond source, a site has been selected for the collection of a
50 tonne bulk sample of scree and weathered material surrounding the outcropping
conglomerate. Unfortunately due to restrictions in availability of earthmoving equipment
in the latter part of 1999, and then onset of the early wet-season, the sample was not
collected in the reporting period. The sample will be collected as soon as access is gained
after the unusually long wet season and is programmed as part of Ashton’s planned bulk-
stream-sampling program in the McArthur Basin.

3.4 Laboratory Procedure
All stream and loam samples were processed by the Ashton Mining Limited Laboratory
in Perth, where they were concentrated by Wilfley Table and heavy liquid separation
techniques.
The heavy liquid used was tetrabromoethane with a specific gravity of 2.96. The concentrates were 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 EXPLORATION EXPENDITURE

Exploration expenditure for the period 29th March, 1999 to 28th March, 2000 amounted to $15,881. A detailed breakdown of expenditure is given in Appendix 2.

5.0 CONCLUSIONS & RECOMMENDATIONS

The source of both chromite and microdiamond recovered in the tenement area remains elusive. Several further rock samples have been collected to determine the source of the chromite but results were not received in the reporting period.

The origin of the sporadic diamond occurrences in the Leila Creek area remains unresolved, but is thought to be likely from a secondary source, particularly if the origin of the abundant chromite is proved to be non-kimberlitic. With this in mind, the proposed work schedule includes sampling of a conglomeritic sandstone unit that is believed to be redistributing diamonds from further afield.

Future work will depend on the origin of indicators recovered in EL 8380, namely whether they are from a kimberlitic or non-kimberlitic source.
6.0 PROGRAMME AND BUDGET

The proposed programme and budget for the period 29th March, 1999 to 28th March, 2000 is as follows:-

♦ Analysis of rock samples collected during the reporting period 29th March, 1999 to 28th March, 2000.

♦ Bulk sample of weathered conglomerate / sandstone to test as a source of diamond in the Leila Creek area.

Further work will depend on the results of the rock samples and the proposed bulk sample. If a kimberlitic source is found then further work will involve:-

♦ Further heavy mineral sampling.
♦ Geochem sampling.
♦ Delineation drilling of diamondiferous sources.
♦ Bulk sampling of diamondiferous sources.

<table>
<thead>
<tr>
<th>Geoscientist/Professional Staff</th>
<th>4,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field Support/Office Staff</td>
<td>3,000</td>
</tr>
<tr>
<td>Travel/Accommodation/Meals</td>
<td>3,000</td>
</tr>
<tr>
<td>Field Supplies</td>
<td>2,000</td>
</tr>
<tr>
<td>Equipment</td>
<td>3,000</td>
</tr>
<tr>
<td>Vehicles</td>
<td>2,000</td>
</tr>
<tr>
<td>Freight/Storage</td>
<td>1,500</td>
</tr>
<tr>
<td>Drilling</td>
<td>5,000</td>
</tr>
<tr>
<td>Geophysics</td>
<td>1,000</td>
</tr>
<tr>
<td>Laboratory</td>
<td>9,000</td>
</tr>
<tr>
<td>Drafting/Computing</td>
<td>500</td>
</tr>
</tbody>
</table>

| **Total:**                      | **$ 34,000** |
APPENDIX 1

Sample Results
Sample Results for EL 8380  
*Annual Report for the period 29/03/99 to 28/03/00*

<table>
<thead>
<tr>
<th>Sample</th>
<th>Easting</th>
<th>Northing</th>
<th>SampleType</th>
<th>Result</th>
<th>Diamond Micro</th>
<th>Macro</th>
<th>Chromite</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>98080-002</td>
<td>562070</td>
<td>8210320</td>
<td>R</td>
<td>NEG</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>99064-001</td>
<td>562925</td>
<td>8210364</td>
<td>R</td>
<td>NP</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>99064-002</td>
<td>562938</td>
<td>8210356</td>
<td>R</td>
<td>NP</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>99064-003</td>
<td>562951</td>
<td>8210349</td>
<td>R</td>
<td>NP</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>99064-004</td>
<td>562964</td>
<td>8210340</td>
<td>R</td>
<td>NP</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>99064-005</td>
<td>562975</td>
<td>8210335</td>
<td>R</td>
<td>NP</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

NP = Not Processed

R = Rock
APPENDIX 2

Statement of Expenditure
STATEMENT OF EXPENDITURE

EXPLORATION LICENCE 8380

Annual Report

For the period
29\textsuperscript{th} March, 1999 to 28\textsuperscript{th} March, 2000

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geoscientist/Professional Staff</td>
<td>5,431</td>
</tr>
<tr>
<td>Field Support/Office Staff</td>
<td>3,281</td>
</tr>
<tr>
<td>Travel/Accommodation/Meals</td>
<td>2,052</td>
</tr>
<tr>
<td>Field Supplies</td>
<td>673</td>
</tr>
<tr>
<td>Equipment</td>
<td>345</td>
</tr>
<tr>
<td>Vehicles</td>
<td>1,147</td>
</tr>
<tr>
<td>Freight/Storage</td>
<td>124</td>
</tr>
<tr>
<td>Laboratory</td>
<td>1,207</td>
</tr>
<tr>
<td>Drafting/Computing</td>
<td>137</td>
</tr>
<tr>
<td>Other</td>
<td>41</td>
</tr>
<tr>
<td><strong>Sub-Total</strong></td>
<td>14,438</td>
</tr>
<tr>
<td>Overheads</td>
<td>1,443</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td>$15,881</td>
</tr>
</tbody>
</table>