ANNUAL REPORT

EXPLORATION LICENCE 7239

24th May, 1993
to
23rd May, 1994

Licensee: Ashton Mining Limited
Operator: Ashton Mining Limited
BHP Minerals Pty Ltd
Sheet Reference: 1:250,000 Wallhallow (SE 53-07)
Submitted to: Department of Mines & Energy
DARWIN

Authors:
T.H. Reddicaliffe I. R. Brown
ASHTON MINING LIMITED BHP MINERALS PTY LTD
24 Outram Street 3 Plain Street
WEST PERTH WA 6005 EAST PERTH WA 6004

June, 1994
Report Number: 40546

CE 94/427
CONTENTS

SUMMARY (i)

1.0 INTRODUCTION 1

2.0 BASE METAL EXPLORATION PROGRAMME 1
   2.1 Geophysics 1
   2.2 Drilling 2

3.0 EXPLORATION EXPENDITURE 3

4.0 CONCLUSIONS AND RECOMMENDATIONS 3

5.0 PROPOSED PROGRAMME AND BUDGET 4

FIGURES

Figure 1. Tenement Location Plan
Figure 2. Drill Hole Locations
Figure 3. Graphic Log - WBP 1
Figure 4. Graphic Log - WBP 2

TABLES

Table 1. Wallhallow Bore Drilling Details
Table 2. Drill Chip Sampling

APPENDICES

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

Exploration licence 7239 was applied for by Ashton Mining Limited, to cover a McArthur Basin
look-alike structure identified from aeromagnetic data. Under the McArthur River Joint Venture
agreement, BHP Minerals are undertaking follow-up of this structure.

During the period 24th May, 1993 to 23rd May, 1994 BHP Minerals carried out an exploration
programme for base metals over the licence. Work focussed on a prominent northwest-southeast
trending structure referred to as the Wallhallow Bore Fault. Two RC drill holes were drilled
to test the depth to Proterozoic basement, however both holes were unsuccessful. Cambrian
Bukalara Sandstone and Anthony Lagoon Beds were intersected.

Ashton Mining Limited did not undertake any exploration work during the reporting period and
has no further plans for exploration over the licence area.

Exploration expenditure amounted to $15,287 against a covenant of $15,000.
1.0 INTRODUCTION

Exploration Licence 7239 was granted to Ashton Mining Limited on the 24th May, 1991 for a period of six years. The licence covers an area of 169 blocks and is located on the Wallhallow 1:250,000 map sheet (Figure 1).

On the 24th January, 1992, Ashton Mining Limited, on behalf of the Australian Diamond Exploration Joint Venture (ADE JV), entered into a joint venture agreement with BHP Minerals Pty Ltd which would allow BHP to earn up to 80% of the base metal rights to this tenement. This joint venture is known as the McArthur River Joint Venture.

This report provides a summary of work undertaken by BHP Minerals during the reporting period 24th May, 1993 to 23rd May, 1994. No work was carried out by Ashton Mining Limited. A statement of expenditure is included in this report.

2.0 BASE METAL EXPLORATION PROGRAMME

2.1 Geophysics

Airborne magnetic data over EL 7239 was obtained from Ashton. Mottled magnetic signatures characteristic of Cambrian basalt flow dominate the tenement. The northwest-southeast trending Wallhallow Bore structure is prominent through this basalt cover, indicating post Cambrian movement. This is the same structure which is obvious on the regional AGSO magnetics. Data at the southeast end of the tenement probably reflects
the presence of buried Early Proterozoic Murphy Metamorphics.

2.2 Drilling

Gaden Drilling of Batchelor, Northern Territory was contracted to drill two reverse circulation (RC) holes totalling 251 metres. A UDR 650 rig was used for this drilling. The aim of the drilling was to determine the depth to Proterozoic basement.

Drill hole locations are plotted on Figure 2 and graphic logs are presented as Figures 3 and 4. Drilling details can be seen in Table 1.

<table>
<thead>
<tr>
<th>Drill Hole Number</th>
<th>Easting</th>
<th>Northing</th>
<th>Total Depth (m)</th>
<th>Stratigraphic Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>WBP1</td>
<td>614700</td>
<td>8041400</td>
<td>142</td>
<td>Anthony Lagoon Beds</td>
</tr>
<tr>
<td>WBP2</td>
<td>640400</td>
<td>8017700</td>
<td>109</td>
<td>Bukalara Sandstone</td>
</tr>
</tbody>
</table>

Neither drill hole intersected Proterozoic basement. Summary drill logs are as follows:

WBP 1

0 - 4 m : Canozoic

Soil cover

4 - 142 m : Cambrian Anthony Lagoon Beds

Calcereous sandstone and minor siltstone; minor chert and limestone.

End of Hole.
Section line 8017620N

- soil
- clay
- sandstone
- sandstone, clay, minor shale

BHP MINERALS Ltd

EL 7239 NORTHERN TERRITORY
DRILL HOLE WBP 2
DOWNHOLE LITHOLOGY

Prepared: PRD Date: 2 APR 94 Centre: Hawthorn
x scale 1:1000 Revised:
y scale 1:500 Drawing No.: Figure 4
WPB 2

0 - 4 m : Cainozoic Soil
4 - 40 m : Cambrian Anthony Lagoon Beds Calcareous sandstone and chert
40 - 109 m : Cambrian Bukalara Sandstone Coarse-grained ferruginous sandstone
End of Hole.

The two holes were drilled on the interpreted Wallhallow Bore structure. Base of hole drill chip samples were collected and analysed by standard AAS techniques at Assaycorp, Pine Creek. The aim of the sampling was to detect leakage of basement mineralisation if present. The slightly elevated Pb and Zn values in WBP 1 may be significant. Assays for WBP 2 are all low. Analytical results are presented in Table 2 and Appendix 2.

3.0 EXPLOREX EXPENDINURE

Exploration expenditure for the period 24th May, 1993 to 23rd May, 1994 amounted to $15,287. A detailed breakdown is given in Appendix 1.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Airborne magnetic data identified a prominent structure which is referred to as the Wallhallow Bore Fault. This appears to be a long lived structure which shows post-Proterozoic movement.
**TABLE 2**

**DRILL CHIP SAMPLING**

<table>
<thead>
<tr>
<th>HOLE NO</th>
<th>SAMPLE NO</th>
<th>FROM (m)</th>
<th>TO (m)</th>
<th>Cu</th>
<th>Pb</th>
<th>Zn</th>
<th>Ag</th>
<th>As</th>
<th>Mn</th>
<th>Fe</th>
</tr>
</thead>
<tbody>
<tr>
<td>WBP1</td>
<td>DZ831</td>
<td>132</td>
<td>142</td>
<td>3</td>
<td>36</td>
<td>128</td>
<td>BLD</td>
<td>1</td>
<td>393</td>
<td>8600</td>
</tr>
<tr>
<td>WBP2</td>
<td>DZ833</td>
<td>98</td>
<td>109</td>
<td>5</td>
<td>8</td>
<td>10</td>
<td>-</td>
<td>BLD</td>
<td>55</td>
<td>1.02%</td>
</tr>
</tbody>
</table>

**NOTE:**
Assay Results in ppm.
BLD = below level of detection
EL 7239 is covered with Cainozoic sediments. RC holes (109m and 142m deep) were drilled to determine the depth to the Proterozoic basement. Neither hole intersected Proterozoic basement rocks.

It is recommended that future exploration concentrate on the northern end of the Wallhallow Bore Fault, and that EM soundings be used to investigate a coincident magnetic and gravity feature in this vicinity.

5.0 PROPOSED PROGRAMME AND BUDGET

<table>
<thead>
<tr>
<th>Activity</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geophysical processing of current magnetic and gravity data</td>
<td>800</td>
</tr>
<tr>
<td>2 days @ $400/day</td>
<td></td>
</tr>
<tr>
<td>Ground magnetic traverses</td>
<td>1,000</td>
</tr>
<tr>
<td>2 days @ $500/day including interpretation</td>
<td></td>
</tr>
<tr>
<td>TEM soundings over geophysical feature</td>
<td>11,200</td>
</tr>
<tr>
<td>16 soundings at $700 including access</td>
<td></td>
</tr>
<tr>
<td>Data interpretation and reporting</td>
<td>1,200</td>
</tr>
<tr>
<td>3 days @ $400/day</td>
<td></td>
</tr>
<tr>
<td>Report writing and office costs</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$ 15,200</strong></td>
</tr>
</tbody>
</table>
APPENDIX 1

Analytical Results
<table>
<thead>
<tr>
<th>Sample</th>
<th>Cu (ppm)</th>
<th>Pb (ppm)</th>
<th>Zn (ppm)</th>
<th>Ag (ppm)</th>
<th>As (ppm)</th>
<th>Mn (ppm)</th>
<th>Fe (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DZ 831</td>
<td>3</td>
<td>36</td>
<td>128</td>
<td>&lt;0.5</td>
<td>1</td>
<td>393</td>
<td>8600</td>
</tr>
<tr>
<td>Sample</td>
<td>Cu (ppm)</td>
<td>Pb (ppm)</td>
<td>Zn (ppm)</td>
<td>As (ppm)</td>
<td>Mn (ppm)</td>
<td>Fe (ppm)</td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td></td>
</tr>
<tr>
<td>DZ0833</td>
<td>8</td>
<td>10</td>
<td>&lt;1</td>
<td>55</td>
<td>1.02%</td>
<td>WBP2</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX 2

Statement of Expenditure
STATEMENT OF EXPENDITURE

EXPLORATION LICENCE 7239

For the Period
24th May, 1993 to 23rd May, 1994

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geoscientist/Professional</td>
<td>2,897</td>
</tr>
<tr>
<td>Field Support/Office Staff</td>
<td>766</td>
</tr>
<tr>
<td>Other Contractors</td>
<td>117</td>
</tr>
<tr>
<td>Field Supplies</td>
<td>261</td>
</tr>
<tr>
<td>Equipment Hire</td>
<td>342</td>
</tr>
<tr>
<td>Vehicles</td>
<td>169</td>
</tr>
<tr>
<td>Geophysics</td>
<td>567</td>
</tr>
<tr>
<td>Drilling</td>
<td>8,645</td>
</tr>
<tr>
<td>Geochemistry</td>
<td>45</td>
</tr>
<tr>
<td>Office Expenses</td>
<td>89</td>
</tr>
<tr>
<td></td>
<td>13,898</td>
</tr>
<tr>
<td>Overheads 10%</td>
<td>1,389</td>
</tr>
<tr>
<td>Total:</td>
<td>$15,287</td>
</tr>
</tbody>
</table>