CORONATION HILL GOLD MINES N.L.  
(wholly owned subsidiary of Oceania Exploration & Mining N.L.)

MJW: 90.461

17th October, 1990

The Titles Manager  
Department of Mines & Energy  
Centrepoint Towers  
The Mall  
DARWIN NT  0800

Dear Sir,


Please find enclosed an Annual Report for the above Mineral Claims known as the Union Extended Group.

The claims were subject to the McKinlay Joint Venture Agreement between Coronation Hill Gold Mines NL and The Shell Company of Australia Limited. Shell withdrew from the Joint Venture on the 14th September, 1990.

At this stage results of work are currently being assessed to determine whether further work within the area is warranted.

Yours faithfully,

[Signature]

Melissa Wheeler  
ASSISTANT TENEMENT MANAGER

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BILLITON AUSTRALIA
THE METALS DIVISION OF THE
SHELL COMPANY OF AUSTRALIA LIMITED

ANNUAL REPORT FOR EXPLORATION ON
UNION EXTENDED GROUP OF MCN's

AUTHOR: C J CREACH
DATE: AUGUST 1990
REPORT NO: 08.5067
COPY NO: 1
SUMMARY

The Union Extended Group of MCN's are located approximately 25 km north-northwest of Pine Creek.

The group of MCN's are the subject of a Joint Venture Agreement between Coronation Hill Gold Mines NL, and The Shell Company of Australia Limited, which commenced on the 1st July, 1988. Coronation Hill Gold Mines NL hold the tenements with The Shell Company of Australia being manager and operator of the joint venture until their withdrawal effective from 14th September, 1990.

The geology within the group of MCN's consists predominantly of interbedded siltstones, shales and greywackes of the Early Proterozoic Burrell Creek Formation of the Finns River Group. Granite of the Early Proterozoic Cullen Batholith (McKinlay Granite) intrudes the Burrell Creek Formation on the northern margin of the MCN's.

This report contains a summary of all previous work carried out on the group of MCN's, with respect to the joint venture and details recent work carried out during the current reporting period. Recent work has consisted of follow-up geological reconnaissance on anomalous stream sediment results. Results from this recent work have not been encouraging and no further work is planned.
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HJ26.74/01
1.0 INTRODUCTION

The Union Extended Claims consist of a group of 78 MCN's, which were granted between the 28th October, 1988 and the 28th February, 1989 to Coronation Hill Gold Mines NL, each for a period of five years.

On the 21st March, 1989 the 78 MCN's were added to the McKinlay Joint Venture, between Coronation Hill Gold Mines NL and The Shell Company of Australia Limited, which commenced on the 1st July 1988. Shell has been manager and operator of the joint venture until their withdrawal on 14th September 1990.

Combined reporting on all of the 78 MCN's was approved by the NT. Department of Mines and Energy on the 23rd May, 1989.

This report details the work completed by Billiton Australia, The Metals Division of The Shell Company of Australia Limited, on behalf of the McKinlay Joint Venture, during the current reporting period.

Exploration within the group of MCN's has focused on locating near surface bulk tonnage gold mineralisation.
2.0 TENEMENT STATUS

Tenement details regarding the 78 MCN's (Union Extended Claims) are listed in the table below:

<table>
<thead>
<tr>
<th>MCN NUMBERS</th>
<th>DATE GRANTED</th>
<th>EXPIRY DATE</th>
<th>SIZE</th>
</tr>
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<tbody>
<tr>
<td>1962 - 1965</td>
<td>28/10/88</td>
<td>27/10/93</td>
<td>57 ha</td>
</tr>
<tr>
<td>1968 - 1969</td>
<td>28/10/88</td>
<td>27/10/93</td>
<td>40 ha</td>
</tr>
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<td>1971 - 1973</td>
<td>28/10/88</td>
<td>27/10/93</td>
<td>60 ha</td>
</tr>
<tr>
<td>2116</td>
<td>28/10/88</td>
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<td>20 ha</td>
</tr>
<tr>
<td>2176</td>
<td>28/02/89</td>
<td>27/02/94</td>
<td>20 ha</td>
</tr>
<tr>
<td>2247 - 2260</td>
<td>28/10/88</td>
<td>27/10/93</td>
<td>237 ha</td>
</tr>
<tr>
<td>2262 - 2269</td>
<td>28/10/88</td>
<td>27/10/93</td>
<td>132 ha</td>
</tr>
<tr>
<td>2275</td>
<td>31/10/88</td>
<td>30/10/93</td>
<td>20 ha</td>
</tr>
<tr>
<td>2278 - 2279</td>
<td>31/10/88</td>
<td>30/10/93</td>
<td>34 ha</td>
</tr>
<tr>
<td>2281 - 2282</td>
<td>31/10/88</td>
<td>30/10/93</td>
<td>36 ha</td>
</tr>
<tr>
<td>2284 - 2293</td>
<td>31/10/88</td>
<td>30/10/93</td>
<td>194 ha</td>
</tr>
<tr>
<td>2309 - 2312</td>
<td>01/12/88</td>
<td>30/11/93</td>
<td>66 ha</td>
</tr>
<tr>
<td>2313 - 2319</td>
<td>31/10/88</td>
<td>31/10/93</td>
<td>127 ha</td>
</tr>
<tr>
<td>2347 - 2358</td>
<td>31/10/88</td>
<td>30/10/93</td>
<td>186 ha</td>
</tr>
<tr>
<td>2692 - 2698</td>
<td>31/10/88</td>
<td>30/10/93</td>
<td>68 ha</td>
</tr>
</tbody>
</table>

3.0 GEOLOGY

The geology within the group of MCN's consists predominantly of interbedded siltstones, shales and greywackes of the Early Proterozoic Burrell Creek Formation of the Finniss River Group (Figure 1).

Granite of the Early Proterozoic McKinlay Granite can be found intruding the Burrell Creek Formation on the northern margin of the MCN's. Hornfelsing of rocks of the Burrell Creek Formation produced by contact metamorphic effects of the McKinlay Granite is relatively common close to the granite, extending to hundreds of metres from the granite. Areas of
weathering resistant hornfels form distinct topographic highs at the 
granite margin.

A north-northwesterly trending dolerite dyke, marking the eastern margin 
of the Pine Creek Shear Zone, intrudes the Burrell Creek Formation in the 
centre of the licence area.

4.0 MINERALISATION

The group of MCN’s lie in the central portion of the Pine Creek Shear Zone, 
a structure which can be traced for a considerable distance to the 
northwest and southeast, and which hosts major gold mineralisation at Pine 
Creek, Union Reefs, Woolwonga and Goodall.

An operating alluvial gold mine, the Union Extended Mine, lies in a number 
of MCN’s not held by the Joint Venture in the centre of the 78 MCN’s. No 
bedrock source for the alluvial gold has been identified.

5.0 PREVIOUS WORK

5.1 Stream Sediment Sampling

A total of 33 composite 5kg, -8# BCL Au and 200, -80# Ag,Cu, Pb, Zn, As 
stream sediment samples were collected within the area of the MCN’s. 
BCL Au results delineated a number of anomalous Au catchment areas, with 
the highest values obtained being 13.6 ppb and 9.5 ppb Au. Base metal 
results were low, not exceeding background levels.
5.2 **Aeromagnetics**

Detailed airborne magnetic and radiometric data was acquired from Aerodata Holdings, as part of a major multi-client survey over the Pine Creek Geosyncline. This survey was completed using a 200m flight line spacing, 5000m tie line spacing and 70m mean sensor height. Image processing was completed by GeoImage of Brisbane.

No discrete aeromagnetic targets were delineated. A north-northwest trending dolerite dyke forms a distinct magnetic high ridge.

6.0 **WORK COMPLETED**

A geological reconnaissance traverse was carried out as part of a follow-up programme on an anomalous BCL Au stream sediment sample (13.6 ppb), which is located in a stream which drains the western block of MCN's (Figure 2). The results of this work indicate the anomalous sample is due to some abandoned alluvial workings, upstream from the sample site. No bedrock source for the anomalous stream sample could be located.

7.0 **CONCLUSION**

Exploration to-date has failed to locate significant near surface bulk tonnage gold mineralisation. Due to the negative exploration results, no further exploration is proposed for the group of MCN's.
# Expenditure Statement

<table>
<thead>
<tr>
<th></th>
<th>Current Reporting Period</th>
<th>Total Expenditure</th>
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<tr>
<td><strong>Regional Office - Staffing</strong></td>
<td>3,964</td>
<td>5,592</td>
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<td>- Support</td>
<td>3,637</td>
<td>4,029</td>
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<td><strong>Tenement Costs</strong></td>
<td>810</td>
<td>7,295</td>
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<td><strong>Analyses</strong></td>
<td>600</td>
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<td><strong>Geophysical Surveys</strong></td>
<td>1,000</td>
<td>1,000</td>
</tr>
<tr>
<td><strong>Head Office Management, Administration &amp; Technical Services</strong></td>
<td>1,698</td>
<td>1,790</td>
</tr>
<tr>
<td><strong>Overheads</strong></td>
<td>1,171</td>
<td>2,031</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>12,880</strong></td>
<td><strong>22,337</strong></td>
</tr>
</tbody>
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