EXPLORATION LICENCE 4880

EMBAYMENT

EIGHTH ANNUAL REPORT FOR THE YEAR ENDED 30 OCTOBER 1997

ANNUAL REPORT

Distribution:

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Department of Mines & Energy
Guardian Resources NL
Compass Resources NL

M. K. Boots
November 1997
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INTRODUCTION

Exploration Licence 4880 surrounds the old Rum Jungle Mine Site and is located 7 kilometres north-northwest of Batchelor township (Figure 1).

The Licence was granted to Central electricity Generating Board Exploration (Australia) Pty. Ltd. on 31 October, 1989.

The tenement was joint ventured by Compass Resources NL in 1989 and CEGBEA reverted to a net profit interest in 1992.

A joint venture with Billiton Australia Gold Pty. Ltd. was signed on 11 August 1993. Billiton Australia Gold has since been renamed and floated on the Australian Stock Exchange as Acacia Resources Limited.

The Rum Jungle Mine Site is a restricted entry area and under the management of the NT Conservation Commission, who monitor rehabilitation work on the old mine workings.

An application for renewal was lodged on 27 July, 1995 and an application for an Exploration Retention Licence (ERL(A)) was lodged on 30 October, 1995.

This report details all work carried out on EL 4880 in its eighth year of tenure.

Compass Resource became operator of this and other tenement on 16 June, 1997 when Acacia Resources Ltd. withdrew from the joint venture. The ownership of the Exploration Licence is now 90% Compass and 10% Guardian Resources NL.
GEOLOGICAL SETTING  (as per Sewell, 1995)

The main zone of prospectivity occurs in "The Embayment". The term "Embayment" describes the structure hosting a line of mineralisation extending from Browns through intermediate, Whites and on to the Dysons deposit. The structure of this zone suggests a tight southwesterly plunging syncline with the known mineralisation occurring on the northwestern limb.

Within this Exploration Licence rock types include Archaean granitic basement and metasediments of Lower Proterozoic age. The Lower Proterozoic Sediments belong to the Mt. Partridge Group which are reported to unconformably lie on the granitic basement. The oldest of these sediments belong to the Crater Formation which is most commonly present as deformed grits, arkoses and conglomerates.

Conformably overlying the Crater Formation is a major carbonate sequence known as the Coomalie Dolomite. This unit contains dolomites, stromatolitic dolomite, tremolite dolomite and magnesite as the major rock types. Several periods of karstification, silicification and haematisation has resulted in the formation of many collapse zones within the dolomite. These zones are often referred to as "Haematite Quartz Breccias" with a variety of origins being proposed. Compass Resources suggest that the precursor rock is most likely to have been chloritised dolomitic breccias.

Overlying the Coomalie Dolomite is the Whites Formation; a sequence of pyritic carbonaceous dololulites and argillites. A transition zone may exist between these two formations. Minor dolerites and calcareous amphibolites are also present within the Whites Formation. It is within the lower parts of this formation and the transition zone that the stratabound and stratiform base metal sulphides occur.

Overlying the Whites Formation are sediments belonging to the Wildman Slitstone which is predominantly shale and argillites. In the Embayment area a pyritic carbonaceous orthoquartzite belonging to the Acacia Gap Quartzite Member is the main outcropping
rock assigned to the Wildman Siltstone. Intense deformation (up to 4 generations of folding have been reported) and upper greenschist facies of regional metamorphism together with complex faulting and shearing have resulted in a complex pattern of rock type distribution.

The major fault in the area - the Giants Reef Fault limits the southern and southeastern outcrop pattern of the Lower Proterozoic sequence.

**PREVIOUS PRODUCTION AND RESOURCE**

We. Fraser in Australian IMM Monograph 5, gives open pit production between 1953 and 1971 from the Rum Jungle Deposits as:

<table>
<thead>
<tr>
<th>Deposit</th>
<th>Tonnage (Mt)</th>
<th>Cu (%)</th>
<th>U3O8 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dysons</td>
<td>0.16</td>
<td>0.34</td>
<td></td>
</tr>
<tr>
<td>Whites</td>
<td>0.4</td>
<td>2.7</td>
<td>0.27</td>
</tr>
<tr>
<td></td>
<td>0.3</td>
<td>2.8</td>
<td>0.35</td>
</tr>
<tr>
<td>Intermediate</td>
<td>0.7</td>
<td>2.25</td>
<td></td>
</tr>
</tbody>
</table>

In 1993 Compass reported the following inferred resource in the Intermediate-Whites section:

- 3.5 million tonnes at 2.8% Cu, 0.12% Co
- 1.5 million tonnes at 0.3% Cu, 8.3% Pb, 0.23% Co
WORK COMPLETED YEAR 8

EL 4880 is part of a major tenement holding in which Compass and Guardian are evaluating several base metal deposits and exploring for additional resources.

The importance of the mineralisation currently known within EL 4880 is that it is a continuation of that defined within the Browns Mining Leases. As part of the current pre-feasibility study for mining at Browns, many aspects of the mineralisation within the Exploration Licence are being evaluated.

For computer modelling of the Browns orebody, the following holes from EL 4880 have been entered into the computer database and used to help elucidate the structural nature of the mineralisation near and at the boundary of these two tenements.

<table>
<thead>
<tr>
<th>Hole</th>
<th>Location E</th>
<th>AMG N</th>
<th>Elev</th>
<th>Dec.</th>
<th>Azi (T)</th>
<th>Total Depth (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DDH 153</td>
<td>716806</td>
<td>8562806</td>
<td>560.50</td>
<td>60°</td>
<td>335°</td>
<td>50.60</td>
</tr>
<tr>
<td>DDH 182</td>
<td>716844</td>
<td>8562710</td>
<td>562.00</td>
<td>68°</td>
<td>336.43°</td>
<td>124.36</td>
</tr>
<tr>
<td>DDH 356</td>
<td>716870</td>
<td>8562665</td>
<td>560.00</td>
<td>71°</td>
<td>336°</td>
<td>326.44</td>
</tr>
<tr>
<td>DDH 150</td>
<td>716933</td>
<td>8562832</td>
<td>559.00</td>
<td>60°</td>
<td>335°</td>
<td>45.57</td>
</tr>
<tr>
<td>DDH 151</td>
<td>716955</td>
<td>8562783</td>
<td>558.50</td>
<td>58°</td>
<td>337°</td>
<td>107.29</td>
</tr>
<tr>
<td>DDH 336</td>
<td>716985</td>
<td>8562716</td>
<td>559.00</td>
<td>70°</td>
<td>331°</td>
<td>273.10</td>
</tr>
<tr>
<td>DDH 70B55A</td>
<td>717090</td>
<td>8562520</td>
<td>564.00</td>
<td>68°</td>
<td>336°</td>
<td>394.41</td>
</tr>
</tbody>
</table>

Unfortunately, assay data are incomplete for many of these drill holes. For example hole DDH 150 records base metal oxides and sulphides between 29.7 and 42.9 metres and records only one assay, that being 9.62% copper over the interval 41.8 to 42.9 metres. However, it is possible to use this limited data to define the likely limits of economic grade mineralisation.
Hydrology

As part of the ongoing investigation into potential mining of the Browns sulphide deposit, it has become necessary to understand the hydrology of the old mining areas in EL 4880. To this end, all available data are being assembled and evaluated. From this work it has become apparent that little is known of groundwater movements at depth within this area. As a result of the rehabilitation work and ongoing monitoring, near surface and surface water movements appear to be much better known.

Airborne Geophysical Survey

During the year airborne magnetic and radiometric survey data was purchased from World Geoscience Corporation, and processed using ER Mapper software. Although this data also covers adjoining tenements controlled by Compass/Guardian, copies of the final data is included for completeness.

FUTURE WORK

The go ahead of the full feasibility study being undertaken on the adjoining Browns Mining Leases will dictate the work to be undertaken on this tenement.

Hydrological and similar studies will be required, as well as possible evaluation of mining along the mutual boundary of the tenements. Approximately $7,500 will be spent on this Exploration Licence during the forthcoming year.
EL 4880 - EMBAYMENT  
EXPENDITURE REPORT FOR THE YEAR ENDED  
31 OCTOBER, 1997  

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Acacia Resources Expenditure 549.00  

Compass Resources Expenditure whilst Acacia operator  

Salaries/wages/on costs 2,025.58  
Travel & Accommodation 94.00  
Land Services 200.00  
Field Costs 83.17  
Motor Vehicle Costs 159.42  
Metallurgy Testwork 806.55  
Overheads 505.31  
Total 3,874.03  

Compass Resources Expenditure 16 June - 31 October, 1997  

Salaries/wages/on costs 6,822.91  
Land Services 1,945.00  
Field Costs 6.42  
Geophysical Data 130.00  
Overheads 1,333.99  
Total 10,227.32  

NT4880rep/010.97
REFERENCES


