



COMPASS RESOURCES NL

ABN 51 010 536 820

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**EXPLORATION RETENTION LICENCE 146**

**EMBAYMENT**

**ANNUAL REPORT TO  
SEPTEMBER 2004**

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## **INTRODUCTION**

Exploration Retention Licence 146 surrounds the Browns Mining leases and covers the old Rum Jungle Mine Site; it is located approximately 7 kilometres north-northwest of town of Batchelor (Figure 1). Additional detailed gravity surveying was undertaken during the year, together with preliminary prospecting for iron ore.

Data from the western portion of the tenement was used in order to re-estimate the resource figures for the Browns Deposit.

## **TENEMENT DETAILS AND HISTORY**

Exploration Licence 4880 was granted to the Central Electricity Generating Board Exploration (Australia) Pty. Ltd. (CEGBEA) on 31 October, 1989, covering a larger area, but including that now covered by ERL 146.

EL 4880 was part of areas joint ventured by Compass Resources NL in 1989, with CEGBEA reverting to a net profit interest in 1992, leaving Compass with a 100% ownership. Guardian Resources, under a regional joint venture arrangement, obtained a 25% interest in the tenement.

A joint venture with Billiton Australia Gold Pty. Ltd. was signed on 11 August 1993 covering EL 4880 and other tenements. Billiton Australia Gold subsequently floated on the Australian Stock Exchange as Acacia Resources Limited. They withdrew from the joint venture on 16 June, 1997, retaining a small royalty interest.

The ownership of the ERL 146 is now 90% Compass Resources NL and 10% Guardian Resources Pty. Ltd.

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

ERL 146 was subsequently granted on 19 September 2001 for a period of five years.

Another joint venture (this time with Phelps Dodge Australasia Inc and Red Metal Limited) covered part of this tenement in the period 2003-2004.

In 2003 the size of the ERL was reduced to 880 hectares, of which part is covered by the Browns Mining Leases.

## **GEOLOGICAL SETTING**

The main zone of prospectivity for base metals occurs in an area known as "The Embayment". The term "Embayment" describes the structure hosting a line of mineralisation extending north-easterly from Browns through Intermediate, Whites and on to the Dysons uranium deposit. The structure of this zone is consistent with a tight and deep south-westerly plunging syncline, with the known mineralisation occurring on the northwestern limb of that structure.

Within this ERL, rock types include Archaean granitic basement and metasediments of Lower Proterozoic age. The Lower Proterozoic sediments belong to the Mt. Partridge Group which unconformably overlay the granitic basement. The oldest of these sediments belongs to the Crater Formation which is most commonly present as grits, arkoses and conglomerates.

Conformably overlying the Crater Formation is a major carbonate sequence named the Coomalie Dolomite. This unit contains dolomites, stromatolitic dolomite, tremolitic 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 containing fluorapatite as a major accessory mineral.

Overlying the Coomalie Dolomite is the Whites Formation; a sequence of pyritic carbonaceous argillites and dololutes. A transition zone often exists between these two formations. Minor dolerites and calcareous amphibolites are also present within the Whites Formation at higher stratigraphic levels. It is within the lower parts of the Whites Formation and in the transition zone that the stratabound and stratiform base metal sulphides occur.

Overlying the Whites Formation are sediments belonging to the Wildman Siltstone which is predominantly of a shaly nature. In the Embayment area, a pyritic carbonaceous orthoquartzite equated to the Acacia Gap Quartzite Member is the main outcropping rock which is assigned to the Wildman Siltstone. Intense deformation (up to 4 generations of folding have been reported) and regional metamorphism of upper greenschist-lower amphibolite facies, 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 and displaces it approximately 8km to the southwest.

## PREVIOUS PRODUCTION AND RESOURCE

W. Fraser in the Australian IMM Monograph 5, reports open pit production between 1953 and 1971 from the Rum Jungle Deposits in this tenement as:

Dysons	0.16 Mt @ 0.34% U <sub>3</sub> O <sub>8</sub>
Whites	0.40 Mt @ 2.7% Cu, 0.27% U <sub>3</sub> O <sub>8</sub> and 0.30 Mt @ 2.8% Cu, 0.31% Co and 0.085 Mt @ 0.8% Cu, 0.3% Co, 5.1% Pb
Intermediate	0.72 Mt @ 2.25% Cu

The remaining resources to a depth of 150' below the Dysons pit is reported as being 82,200 tons at a grade of 2.2 lb/t U<sub>3</sub>O<sub>8</sub>.

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

3.5 million tonnes averaging	2.8% Cu,	0.12% Co	and
1.5 million tonnes averaging	0.3% Cu,	8.3% Pb	0.23% Co

Following resource evaluation at the Browns Deposit by Snowden Mining Industry Consultants in 2001, an inferred resource of 29.1 million tonnes at 1.29% Cu, 1.28% Pb, 0.13% Co and 0.13% Ni (using a cut off of 0.5% Cu, 3.0% Pb and 0.06% Co) was reported by Compass for this zone within ERL 146.

Late in 2001, one deep precollared diamond drill hole was commenced to the southeast of the Whites Open Cut mine. This hole was planned to intersect the eastern extension of the known sulphide mineralisation. This hole was eventually abandoned as a result of the Northern Land Council's actions concerning sacred sites.

## **WORK COMPLETED DURING THE YEAR**

As part of a joint venture agreement with Phelps Dodge Australasia Inc. over the Browns Mining Leases and parts of the surrounding tenements, a detailed gravity survey was undertaken to help target sulphide accumulations at depth near the old Shaft at the Browns Deposit. The results of this survey have now been received, and are appended.

In addition, reconnaissance for massive haematite ores was undertaken in the tenement where areas of HQB (haematite quartz breccia) have been reported. Two areas have been identified associated with topographic highs to the north and northwest of the Browns leases. They are centred at the following co-ordinates (1994 datum): 8563700n, 715550e and 8563300n, 716200e.

Data from the area west of Intermediate copper mine was used in order to re-estimate the resource figures for the Browns Deposit.

## **PLANS FOR NEXT YEAR**

Follow up evaluation of the iron oxide occurrences will be undertaken. Provided that the necessary approvals are obtained, it is proposed that evaluation of the mineralisation on either side of the old Intermediate copper mine will start.

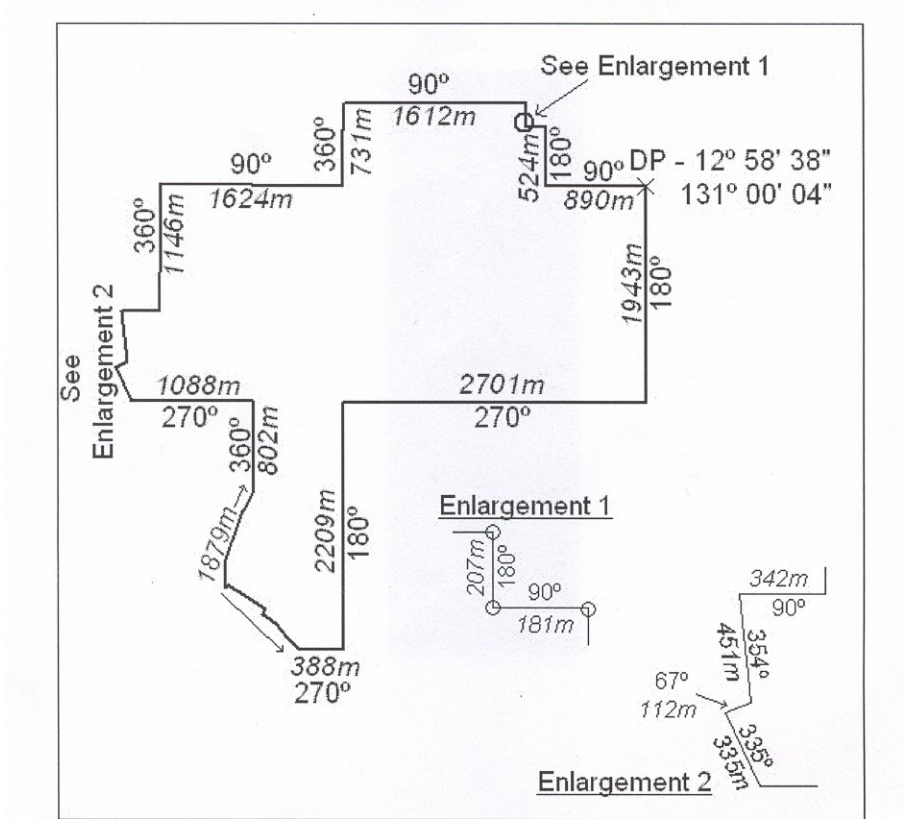
It is anticipated that expenditure for the year will exceed \$12,000.

**ERL 146 - EMBAYMENT  
EXPENDITURE REPORT FOR THE YEAR ENDED  
19 SEPTEMBER, 2004**

	\$
Salaries/wages/on costs	4,273.81
Land Services/searches	12,343.00
Field Costs	12,004.38
Consultant Costs	541.00
Geochemical Costs	600.00
Drilling Costs	511.36
Overheads	4,542.03
Total	\$34,814.58



# Retained Area (Plan of Area)



*Bearings and distances are approximate*

Datum GDA94

ERL146