

EAST ARNHEM ANNUAL REPORT 2016 EL24524

Groote Eylandt Mining Company Pty Ltd

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Author:

Kalem Wright

Principal Brownfields Exploration Planner, South32 Australia Region

Reviewed:

David Hope

Manager Resource Geology, South32 Australia Region

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EXECUTIVE SUMMARY

East Arnhem Land is Aboriginal-owned land, as granted under the *Aboriginal Land Rights (NT) Act 1976 (ALRA)*. The Groote Eylandt Mining Company Pty Ltd (GEMCO) has its obligations defined in various lease documents. During the reporting period, work completed consisted of desktop reviews and planning for a proposed geophysical survey. Future work planned will involve the execution of the proposed trial geophysical and review of results.





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1. INTRODUCTION

The Exploration Licence (EL) 24524 was applied for by BHP Billiton Minerals Pty Ltd (BHPB) on 17 December 2004. This application is located within Aboriginal Freehold Land and consequently were lodged under the Aboriginal Land Rights (NT) Act 1976 (ALRA). Although the original application covered a much larger area, the Northern Land Council (NLC) gave consent only to only parts of the application. As a result, four new ELs were established to cover the non-contiguous consent areas.

Since this time, a partial surrender of EL 24524 has occurred. This report summarised the activities for the retained portion of EL24524 during the reported period.

2. TENURE

2.1. LAND STATUS

Aboriginal Freehold Land – Northern Land Council

2.2. TITLES

EL24524 was granted to the Groote Eylandt Mining Company (GEMCO) on the 20th April 2009. The lease was renewed in April 2015 at which time 15 of the original 48 blocks were retained.

Table 1 East Arnhem Land Exploration titles for upcoming season

Title No.	Holder	Grant Date	No. of Blocks	Area (sq km)	Expiry date
EL24524	Groote Eylandt Mining Company Pty Ltd	20/04/2009	15	48	19/04/2017



Figure 1 East Arnhem Land Exploration tenure location map



3. PREVIOUS EXPLORATION ACTIVITIES

Previous exploration over this area is described in Report 13 of the Northern Territory Geological Survey (Ferenczi, 2001).

In the mid 1960's, BHPB (then BHP Ltd) explored parts of the eastern Arnhem Land area for sedimentary-diagenetic Mn after the discovery of the Groote Eylandt deposit. A variety of exploration campaigns were completed by BHPB in the 1960's, including helicopter reconnaissance work, regional mapping, pitting and regional drilling at some prospects (e.g. Caledon Bay, Peter John River, Lake Evella).

The Peter John River prospect extends over an area of about 10 sq km straddling EL24524 (BHPB 100%) and EL4171 (RTX). In 1965, a total of 33 exploration pits were dug. Subsequently 11 holes were drilled to various depths to test the manganese potential. However, no significant manganese mineralisation occurrences were identified at this prospect.

Between July and September 2009, BHPB Minerals Exploration (MinEx) completed a drilling program in EL24524. The programme involved the drilling of 27 shallow Reverse Circulation (RC) holes and establishment of access tracks (~ 27 km) to reach the drill sites. The drilling concluded in August 2009 and all the drill sites and access tracks were rehabilitated in the following month prior to closure of the field camp and withdrawal from the project site.

Due to a shift in exploration focus by BHP Billiton, MinEx did not conduct any exploration on the East Arnhem Project during the 2011 dry season.

During 2012 BHPB Manganese Australia (Mn Australia) completed three diamond drillholes in EL24524, again to establish stratigraphic control in the area. The holes were planned along the existing Mata Mata Road requiring only drill pad construction.

A follow up infill drill program was conducted in 2013. A total of 39 aircore holes for 1,803m were drilled from which 461 samples were collected for analysis. Results indicated that a deep chemical weathering profile where iron oxides are prevalent affects most of the target horizon. Some grades at very low yields were found to be preserved in areas of deeper cover. An additional two diamond holes were drilled to support the stratigraphic model.

4. EXPLORATION ACTIVITIES

Work completed during the 2015 field season was restricted to desktop reviews and subsequent adjacent tenure relinquishment. A proposed geophysical survey was also planned and contractor support was sought. No further work was completed.

5. FUTURE WORK PROGRAM

A proposed multi-technique geophysical survey is planned across a portion of EL24524. The aim of the surveys will be to determine the best survey methods to delineate the presence or absence of a targeted Mn rich sandstone layer. Proposed survey methods are SubAudio Magnetics (SAM), and Induced Polarisation (IP). Orientation field visits are planned to familiarise geophysical contractors with the area which will enable further refinement of geophysical work plans

6. CONCLUSIONS AND RECOMMENDATIONS

Mn Australia's long term plan for exploration in the area is currently hampered by access to land currently under application and in moratorium. Australia Mn has undergone further tenure relinquishment during the year and larger scale exploration in the area will only be economically viable when more land becomes available.