



Rio Tinto Exploration Pty. Limited

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A member of the Rio Tinto Group

Combined Annual Report for the Period Ending 14 September 2010

**EL4170 Cato Plateau & EL4171 Cato River
'Cato Project'
Gove Special SD5304, Northern Territory**

Exploration Report No. 28823

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1 SUMMARY

EL 4170 Cato Plateau and EL 4171 Cato River were applied for by BHP Minerals Pty. Ltd. on 3rd October 1982. EL 4170 was granted on 14th October 2004, EL 4171 was granted on 12th September 2005. Rio Tinto Exploration Pty Limited (RTX, previously RTE) signed an agreement with BHP on 27th March 2000 whereby RTX took over management of the tenements. The original EL 4170 tenement application covered an area of 593.5 km² of which only 57.0 km² was granted. The remainder of the area was split off into a new application, EL 24389 and put into moratorium. The original EL 4171 tenement application covered an area of 846 km² of which 598.2 km² was granted. The tenements are located 30 km west of Nhulunbuy, east Arnhem Land and consequently are processed under the Aboriginal Land Rights Act 1975 (ALRA). Combined reporting of EL 4171 and EL 4170 was granted on 3 August 2007, and called the 'Cato Project'. The Cato Project forms part of the larger contiguous tenement package in east Arnhem Land, which is prospective for bauxite.

The Cato project area covers part of the Cato Plateau, which is a well-documented occurrence of bauxite within the east Arnhem area. The Cato Plateau target, has the potential to contain resources similar in style to the nearby Gove deposit. BHP Billiton, through an agreement with RTX, retains the right to explore for manganese (Mn) on EL4170 and EL4171.

This combined annual report describes the exploration work completed by RTX and BHPB within Exploration License (EL) 4170 and EL4171 during the reporting period. Between 15 September 2009 and 14 September 2010, RTX completed the following work on EL4170 and EL4171:

- Analysis of 20 surface rock samples;
- Partial relinquishment of EL 4171

BHP Billiton completed the following work on EL4170 and EL4171:

- Re-processing of EM survey data on EL4171.

No ground disturbing work was completed during the annual reporting period ending 14 September 2010.

2 INTRODUCTION

EL 4170 Cato Plateau and EL 4171 Cato River were applied for by BHP Minerals on 3rd October 1982. EL 4170 was granted on 14th October 2004, EL 4171 was granted on 12th September 2005. Rio Tinto Exploration Pty Limited (RTX) signed an agreement with BHP on 27th March 2000 whereby RTX took over management of the tenements. The original EL 4170 tenement application covered an area of 593.5 km² of which only 57.0 km² was granted. The remainder of the area was split off into a new application, EL 24389 and put into moratorium. The original EL 4171 tenement application covered an area of 846 km² of which 598.2 km² was granted. The tenements are located 30 km west of Nhulunbuy, east Arnhem Land and consequently are processed under the Aboriginal Land Rights Act 1975 (ALRA). Combined reporting was granted on 3 August 2007, and called the 'Cato Project'. The Cato Project forms part of the larger contiguous tenement package in east Arnhem Land, which is prospective for bauxite.

3 LICENCE DETAILS

The original EL4171 tenement application covered 846.0 sq. km of which 598.2 sq. km was granted. Of the non-consent area, EL 24389 was split and entered into moratorium. Both tenements reside within east Arnhem which is subject to the Aboriginal Land Rights Act 1975 (ALRA). Tenement details are listed in Table 1 below. Combined reporting of EL4171 and EL4170 was granted to RTX on 3 August 2007.

Table 1: Tenement Details

| Name | Owner | Tenement No. | Application Date | Grant Date | Area applied (km ²) | Area granted (km ²) |
|--------------|-------|--------------|------------------|------------|---------------------------------|---------------------------------|
| Cato Plateau | RTX | EL 4170 | 3/12/1982 | 14/10/2004 | 593.5 | 57.0 |
| Cato River | RTX | EL 4171 | 3/12/1982 | 12/09/2005 | 846.0 | 598.2 |

4 PREVIOUS EXPLORATION

Previous exploration over this area is described in Report 13 of the Northern Territory Geological Survey (Ferenczi, 2001). New Guinea Resources drilled 19 auger holes in the northern end of the Cato Plateau and concluded that most of the bauxite had been eroded off. In 1966 BHP drilled 89 auger holes for a total of 778m into the Cato Plateau to test the area for bauxite. Of these, only six holes are located within EL 4170. The BHP data (Chestnut et al., 1966) shows that there is patchy bauxite within the plateau however the silica values are generally high and the recoverable (ABEA) alumina is low. No further work has been conducted in the area since the late 1960's.

RTX completed a series of auger holes (10 holes) in late 2004 to try and replicate the original BHP data (Hartshorn, 2005).

Table 2: Previous Exploration Summary

| Year | Company | Tenement | Exploration Completed |
|------|--------------------------------------|----------|---|
| 1955 | New Guinea Resources Prospecting Ltd | ? | 19 auger holes |
| 1966 | BHP Ltd | PA 1138 | Bauxite exploration including the Cato Plateau area. 89 auger holes of which 6 are within the granted EI 4170 area. |
| 2004 | RTX | EL 4171 | Auger drilling of small part of the Cato Plateau. |
| 2007 | RTX | EL 4171 | Aircore drilling – 62 holes. |
| 2008 | RTX | EL 4170 | Vacuum drilling – 52 holes. |
| 2009 | BHPB | EL 4171 | RC Drilling for Mn – 21 holes. |

5 GEOLOGY

Geology of the Cato area comprises of a sequence of sedimentary sandstones and claystones belonging to the Walker River Formation (Middle Cretaceous) and the younger Yirrkala Formation (Upper Cretaceous) (Refer to SD5304 – Gove Special GSNT Geology Map). During the tertiary period, the Yirrkala Formation has undergone extensive lateritisation in the east Arnhem area, of which some is bauxite. The cretaceous sediments are overlain by Quarternary alluvials in places where the original laterite surface has been eroded.

While many occurrences of bauxite have been recorded in the east Arnhem area, large, economic deposits outside the general vicinity of the Gove mine site, have not been delineated.

6 GEOMORPHOLOGY

The Cato Project lies within the Arafura Fall physiographic sub division between the western shore of Melville Bay, and the eastern shore of Arnhem Bay (Rawlings et al., 1997). Most of the granted tenement is low lying (<50m elevation) and includes the Cato River, and tributaries of the Cato and Giddy Rivers. A spur of the Cato Plateau extends four kilometers across the centre of EL 4170, and another spur extends 3 kilometers into EL 4171 from the east. The plateau has steep breakaways and a flat top at an elevation of approximately 100m.

7 GEOPHYSICS

The project area is covered by a regional scale aeromagnetic survey flown for the NTGS in 1990-92 (Rawlings et al., 1997). The radiometric data can be used to help distinguish the

laterite-covered areas from those of both basement and Quaternary sand cover. This method does not distinguish between bauxitic and non-bauxitic laterite.

Digital terrain data has been acquired and processed to assess areas for plateaus that may be prospective for bauxite. The Cato Plateau is clearly defined as a gently south-westerly dipping flat surface of approximately 100 km² in area. Less than 10 km² of the Cato Plateau lies within the granted ELs.

8 ENVIRONMENT/COMMUNITY

Discussions were held with the Traditional Owners at Dhalinbuy, and accompanied RTX personnel during the collection of surface rock samples. All work was completed in accordance with the Mine Management Plan (Appendix 2).

9 EXPLORATION WORK

Exploration completed by RTX during the reporting year included:

- Analysis of 20 surface grab samples.
- Partial relinquishment of EL 4171

Twenty surface rock samples (No's. 10043861 to 10043880) were collected within the area of EL 4171 within the previous reporting period, however were not received for analysis until within the next years reporting period. Sample locations were based on areas of good access and originated from either graded windrows of tracks, or float from nearby streams (Plan No. pAI09_011). A summary of sample details is contained within Table 3 below, with full results found in the ledger file in Appendix 1. All samples were deemed non-bauxitic with the highest result for Al₂O₃ at 34.1%. Majority of results are interpreted as the lower margins of a laterite which, if once bauxitic has now been exposed to erosion. It is unclear whether other areas of the target may contain remnant bauxitic laterite at surface.

Table 3: Summary of Surface Rock Samples from EL4171

| Sample ID | Colour | Lithology | Al2O3 | Fe2O3 | SiO2 |
|-----------|--------|------------------|-------|-------|------|
| 10043861 | Orange | Blocky Laterite | 24.1 | 33.4 | 29.5 |
| 10043862 | Grey | Mottled Laterite | 22.7 | 37.4 | 26.4 |
| 10043863 | Brown | Massive Laterite | 23.3 | 35.2 | 28.4 |
| 10043864 | Brown | Nodular Laterite | 22.4 | 45.2 | 21 |

| | | | | | |
|----------|--------|-------------------|------|------|------|
| 10043865 | Brown | Nodular Laterite | 21.2 | 45 | 22.6 |
| 10043866 | Brown | Blocky Laterite | 26 | 30.8 | 29.9 |
| 10043867 | Orange | Massive Laterite | 32.1 | 12.2 | 41.2 |
| 10043868 | Orange | Massive Laterite | 32.2 | 13.4 | 38.8 |
| 10043869 | White | Massive Saprolite | 34.1 | 6.51 | 44.2 |
| 10043870 | Brown | Massive Laterite | 11.1 | 69 | 10.5 |
| 10043871 | Brown | Nodular Laterite | 18.8 | 50.4 | 21.3 |
| 10043872 | Orange | Mottled Laterite | 32.7 | 12.7 | 39.6 |
| 10043873 | Orange | Mottled Saprolite | 34 | 10.2 | 40.2 |
| 10043874 | Brown | Nodular Soil | 25.3 | 31 | 31.6 |
| 10043875 | Brown | Mottled Laterite | 25.2 | 31.1 | 30.5 |
| 10043876 | Brown | Massive Laterite | 6.5 | 76.7 | 6.01 |
| 10043877 | Brown | Nodular Laterite | 28.9 | 23.1 | 34.6 |
| 10043878 | Orange | Mottled Laterite | 23.4 | 30.4 | 33.7 |
| 10043879 | Brown | Massive Laterite | 20.1 | 45.8 | 24 |
| 10043880 | Orange | Mottled Laterite | 17.5 | 48.6 | 21.6 |

An area of the Cato River (EL4171) tenement was submitted for surrender as part of a mandatory 50% relinquishment. The area chosen was based on an evaluation by RTX geologists in communication with JV Partners BHP Billiton. Bauxite prospectivity and the area to retain was determined by topography and drainage as well as regional radiometric – thorium images. Plan No. pAI10_025 shows the area of surrender and retainment on EL4171.

BHPB expenditure claimed within the reporting period, is attributed to the re-processing of a previous EM survey conducted over an area of EL 4171.

10 EXPLORATION EXPENDITURE

The details of exploration expenditure for EL4170/EL4171 by RTX combined with the expenditure of BHP Billiton for the same period, is presented separately in the Annual Expenditure Report.

11 PROPOSED PROGRAMME AND EXPENDITURE

Proposed expenditure for the annual reporting period post October 2010 will be \$40,000 comprising:

- Meetings with Traditional owners and clearance surveys

- Hand-auger sampling of an area within the retained block of EL 4171.
- Review by BHPB of Mn potential on EL 4171.
- Access surveys for negotiation on adjacent ELA 24389.

Rio Tinto Exploration is currently in consultation with the Northern Land Council (NLC) with regards to the Cato Plateau 2 (EL24389) Exploration License Application. Due to the nature and location of the Cato Plateau target with respect to adjacent tenure blocks, including Cato Plateau EL4170 and Cato River EL4171, it is likely exploration plans on these tenements will be subject to thorough review in light of any change of terms on Cato Plateau 2 EL 24389.

12 CONCLUSIONS AND RECOMMENDATIONS

Results from surface rock analysis completed in the annual reporting period were non-bauxitic. Rio Tinto Exploration is committed to a staged approach to bauxite exploration in East Arnhem Land in order to ensure the strictest environmental and cultural compliance. Rio Tinto Exploration intends to continue this exploration approach on the retained areas within EL 4170 and EL 4171 following the 50% relinquishment recently performed. Activities to gain access to exploration license application ELA 24389 which was split out of the original EL 4170 application is a high priority for this project.

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- Fry K, 2006, First Annual Report for the Period Ending 11 September 2006, EL 4171 Cato River Gove Special SD 5304, Northern Territory. RTX Report No. 27882

Rawlings, D.J., 1997, 1:250 000 Geological Map. Explanatory Notes. Arnhem Bay Gove SD5303-04, Northern Territory Geological Survey.

Moharana, L., 2009, BHP Billiton - Combined Annual Report (Cato Project) For the Period 14 October 2008 to 13 October 2009 EL4170 Cato Plateau and EL4171 Cato River, Gove Special SD5304, Northern Territory.

LOCALITY

Gove Special

SD 5304

1:250 000

LIST OF DPO'S

| DPO (Work Order) | No. Sample | Sample Range | Laboratory |
|-------------------------|-------------------|----------------------|-------------------|
| 224659 | 20 | 10043861 to 10043880 | Ultratrace Perth |

DESCRIPTOR

Combined Annual Report for the Period Ending 13 October 2010, EL 4170 Cato Plateau, EL4171 Cato River, Gove Special SD 5304, Northern Territory. Exploration activities consisted of collecting 20 surface rock samples.

KEYWORDS

Cato, Gove, Bauxite, Surface Sampling, Laterite, Cretaceous.

APPENDIX 1

Surface Rock Sample Ledger

EL4171_2010_A_02_rockgeochem.txt

APPENDIX 2

Cato Mine Management Plan

Cato_MMP.pdf