



Rio Tinto Exploration Pty. Limited

ABN 76 000 057 125 / ACN 000 057 125

A member of the Rio Tinto Group

Partial Relinquishment Report for the Period ending 14th September 2010

EL 4171 Cato River,
Gove Special SD5304,
Northern Territory

Exploration Report No. 28822

Tenement Holder:	Rio Tinto Exploration Pty Limited
Date:	October 2010
Author:	J R Blake, G K Hartshorn
Submitted:	G M Rheinberger
Distribution:	Department of Primary Industry, Fisheries & Mines,NT RTX Perth Information Centre BHP Billiton Minerals Exploration

This report and its contents are confidential. All rights to the report and its contents (including, without limitation, rights to confidential information and copyright in all works (including photographs, diagrams, charts, maps and graphs) comprised in the report) remain the property of Rio Tinto Exploration Pty. Limited. No part of this report or the information contained in it may be disclosed to any person without the consent of Rio Tinto Exploration Pty. Limited. No part of this report, or the information contained in it may be reproduced (including being stored in any form), transmitted, published or used for any purpose without the prior consent of Rio Tinto Exploration Pty. Limited.

LIST OF CONTENTS

LIST OF CONTENTS ii

LIST OF TABLES iii

LIST OF APPENDICES iii

LIST OF PLANS iii

1. SUMMARY 1

2. INTRODUCTION 1

3. LICENCE DETAILS 1

4. GEOLOGY 2

5. GEOPHYSICS 2

6. REMOTE SENSING DATA **Error! Bookmark not defined.**

7. SURFACE GEOCHEMISTRY **Error! Bookmark not defined.**

8. DRILLING **Error! Bookmark not defined.**

9. ENVIRONMENT 3

10. EXPENDITURE STATEMENT **Error! Bookmark not defined.**

11. PROPOSED PROGRAMME AND EXPENDITURE **Error! Bookmark not defined.**

12. CONCLUSIONS AND RECOMMENDATIONS 4

REFERENCES 5

LOCALITY 5

LIST OF DPO'S **Error! Bookmark not defined.**

DESCRIPTOR 5

KEYWORDS 6

LIST OF TABLES

Table 1: Tenement Details	1
Table 2: Historical Drill Hole Details	4

LIST OF APPENDICES

No.	Title	File Name
1	Drill Hole Collar Data	EL4171_A_02_Collar.txt
2	Drill Hole Lithology Data	EL4171_A_02_Lithology.txt
3	Drill Hole Sample Data	EL4171_A_02_Sample.txt

LIST OF PLANS

Plan No.	Title	Scale
pAI10_023	Tenement Location Plan	1:350 000
pAI10_025	Relinquishment Map	1:250 000

1. SUMMARY

This report covers the first relinquishment of EL 4171 which includes 110 blocks, or 53% relinquished. A remaining 96 blocks are to be retained for further exploration by Rio Tinto Exploration and joint venture partner, BHP Billiton. Exploration activity for the area relinquished from EL 4171 "Cato River" for the period of 12th September 2005 to 14th September 2010 is also summarized in this report.

During the 1960's, BHP Ltd. conducted an extensive exploration program over east Arnhem Land in search for manganese and secondly bauxite following the discovery of Groote Eylandt. During this exploration program, three drill holes were completed within the area of relinquishment on EL 4171.

Rio Tinto completed three air-core drill holes along a north-south trending track prepared for access to EL 4171 in 2007. Two air-core drill holes were completed by Rio Tinto Exploration on a south-west trending, pre-existing track between the Central Arnhem Road and the Dhalinybuy community. Results from the five holes were deemed non-bauxitic, with the highest value for Al₂O₃ being 29.9%. In a joint venture agreement with RTX, BHP Billiton has simultaneously explored the area of EL 4171 for manganese.

2. INTRODUCTION

EL 4171 "Cato River" is located 30 km west of Nhulunbuy, east Arnhem Land and consequently are processed under the Aboriginal Land Rights Act 1975 (ALRA). The original EL 4171 tenement application covered an area of 846 km² of which 598.2 km² was granted. Combined reporting of EL 4171 with the adjacent "Cato Plateau" EL 4170 tenement 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. Through an agreement with BHP Billiton, Rio Tinto is the title owner of EL 4171 and are active in exploration for bauxite while, BHP Billiton retain the right to explore for manganese.

In the 5 years since the granting of the "Cato River" EL 4171 tenement, Rio Tinto Exploration in collaboration with joint venture partners, BHP Billiton have spent in excess of \$600,000 on bauxite exploration on EL 4171.

3. LICENCE DETAILS

EL 4171 Cato River was applied for by BHP Minerals Pty. Ltd. on 3rd October 1982 and 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. This agreement was amended in 2008 to allow simultaneous exploration by Rio

Tinto Exporation, searching for bauxite, and BHP Billiton, searching for manganese to be conducted on the tenure package included in the joint venture. The original EL 4171 tenement application covered an area of 851.8 km² of which 598.2 km² was granted. The remainder of the original application was split off into two new applications, EL 24830 and EL24829. Both tenements entered into a five-year period of moratorium, in which following this, EL24830 is in negotiation, and EL 24829 was relinquished.

Table 1: Tenement Details

Name	Owner	Tenement No.	Application Date	Grant Date	Area applied (km ²)	Area granted (km ²)	Area Relinquished (km ²)
Cato River	RTX	EL 4171	3/12/1982	12/09/2005	846.0	598.2	369.3

4. **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 Gove Special SD 5304 – GSNT Geology Map). During the Tertiary period, the Yirrkala Formation has undergone extensive lateritisation in the east Arnhem area, of which some is bauxitic. 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.

5. **PREVIOUS EXPLORATION**

During the 1960's, BHP Ltd. conducted an extensive exporation program over east Arnhem Land in search for manganese following the discovery of Groote Eylandt. During this exploration program, three drill holes were completed within the area of relinquishment on EL 4171. The details are listed as follows:

Table 2: Historical Drill Hole Details

Hole No.	Prospect	Easting (AGD66 Z53)	Northing (AGD66 Z53)	Year	Company	Total Depth (m)
FD 28	Mn Recon.	661 840	8 660 520	1966	BHP Ltd.	36.2
FD 72	Mn Recon.	644 980	8 625 030	1966	BHP Ltd.	7.5
FD 74	Mn Recon.	645 190	8 627 420	1966	BHP Ltd.	33.2

FD 28 is located in the north of the tenement, in a prominent drainage channel. FD 72 and FD 74 are located in the south-western corner of the lease in equally low-lying topography. Results from the historical BHP drill hole were negative for bauxite.

6. EXPLORATION COMPLETED DURING CURRENT REPORTING PERIOD

Following the grant of tenure and negotiation of land access, Rio Tinto completed a structured exploration program over the Exploration License 4171. Field work on EL 4171 was completed in order of exploration priority and within the relinquished area, included the following:

- Five air-core drill holes completed in 2007.

Three air-core drill holes were completed along a north-south trending track prepared by Rio Tinto Exploration for access to EL4171 in 2007. The remaining two air-core drill holes were completed on a south-west trending, pre-existing track between the Central Arnhem Road and the Dhalinybuy community. A summary of Rio Tinto Exploration air-core holes located on the relinquishment area of EL 4171 is listed below:

Table 3: Rio Tinto Exploration Drill Hole Details

Hole No.	Date	Latitude	Longitude	Elevation	Total Depth (m)
AC07CR020	1/08/2007	-12.4313	136.335	56	6
AC07CR021	1/08/2007	-12.4268	136.336	84	9
AC07CR022	1/08/2007	-12.4239	136.336	130	9
AC07CR041	3/08/2007	-12.4005	136.428	60	3
AC07CR042	3/08/2007	-12.4032	136.425	47	6

Results from the five holes were deemed non-bauxitic, with the highest value for Al₂O₃ being 29.9%. Full results are available in Appendix 1-3.

BHP Billiton assessed the area of EL 4171 for manganese potential in 2009 and considered the area non-prospective. No field work was completed by BHP Billiton within the relinquished area.

7. ENVIRONMENT

Discussions were held with the Traditional Owners at Dhalinybuy, and accompanied RTX personnel during the completion of field work. All work was completed in accordance with the Mine Management Plan (Appendix 2).

8. CONCLUSIONS AND RECOMMENDATIONS

Within the relinquished area of EL 4171, five air-core drill holes were completed by Rio Tinto Exploration. No field work was completed by joint venture partner, BHP Billiton within the relinquished area of EL 4171. A structured exploration program was conducted based on geological evaluation of regional data-sets. Results of the field work in the relinquished area were non-bauxitic. BHP Billiton assessed the area for Mn potential and considered the area non-prospective for manganese. The area of tenure has been recommended for relinquishment due to limited bauxite resource potential.

REFERENCES

- Chestnut W., Gunn, M. and McGregor, P., BHP Pty Ltd., 1968. Report on Exploration Within AP1138, Eastern Arnhem Land. Northern Territory Department of Mines and Energy, Open File Company Report CR1968-0011.
- Chestnut W., Blayden, I., Edyvean, M. & Gee, C., BHP Pty Ltd., 1966. Report on Exploration Within AP1138, Eastern Arnhem Land. Northern Territory Department of Mines and Energy Open File Report CR1966-0008.
- Hartshorn., 2005, First Annual Report For Period Ending 13 October , 2005, EL 4170 Cato Plateau, Gove SD5304, Northern Territory. RTE Report Number 257518.
- Hartshorn., 2006, First Annual Report For Period Ending 13 October , 2006, EL 4170 Cato Plateau, Gove SD5304, Northern Territory. RTX Report Number 27895.
- Hartshorn G., 2008, Combined Annual Report For Period Ending 13 October 2008, EL 4170 Cato Plateau & EL 4171 Cato River Gove SD5304, Northern Territory. RTX Report Number 28396.
- Hartshorn G., 2009, Combined Annual Report For Period Ending 13 October 2009, EL 4170 Cato Plateau & EL 4171 Cato River Gove SD5304, Northern Territory. RTX Report Number 28595.
- Ferenczi P.A., 2001, Iron Ore, Manganese and Bauxite Deposits of the Northern Territory. Northern Territory Geological Survey Report No. 13.
- 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

DESCRIPTOR

Partial Surrender Report for EL 4171 for the period ending 14th September 2010. A review of previous exploration was completed and as a consequence of this work, 110 sub-blocks have been surrender.

KEYWORDS

Cato, Cato River, Gove, Bauxite, Aircore drilling, Laterite, Cretaceous, Manganese.

APPENDIX 1

Drill Hole Collar Data

EL4171_A_02_Collar.txt

APPENDIX 2

Drill Hole Lithology Data

EL4171_A_02_Lithology.txt

APPENDIX 3

Drill Hole Sample Data

EL4171_A_02_sample.txt