



## **Rio Tinto Exploration Pty. Limited**

ABN 76 000 057 125 / ACN 000 057 125

A member of the Rio Tinto Group

Annual Report  
For the Period 18 May 2008 to 17 May 2009  
EL 22413 Baiguridji River  
Blue Mud Bay SD 5307  
Northern Territory

**Exploration Report No. 28498**

Tenement Holder:	Rio Tinto Exploration Pty Limited
Date:	June 2009
Author:	G K Hartshorn
Submitted:	G Rheinberger
Distribution:	Department of Primary Industry, Fisheries & Mines RTX Perth Information Centre

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.

## **SUMMARY OF ACTIVITES**

Exploration Licence (EL) 22413 Baiguridji River was applied for by Rio Tinto Exploration Pty Limited (RTX) on 11 February 2000 and was granted on 18 May 2006. RTX is the sole manager and operator of this tenement. The original tenement application covered an area of 117km<sup>2</sup> (35 sub blocks) of which only 66.9km<sup>2</sup> (20 sub blocks) gained consent. The remainder of the application area did not gain consent, and was subsequently relinquished. In 2008, 50% of the granted tenement (10 blocks) was relinquished. EL 22413 is located 150km southwest of Nhulunbuy, east Arnhem Land, and consequently is processed under the Aboriginal Land Rights Act 1975 (ALRA).

This is the third annual report and describes the exploration completed during the third year of the tenement. Work was to include shallow drill testing of the low laterite surface, however due to rig availability and access issues this was not completed prior to wet season. EL 22413 forms part of a larger contiguous tenement package in east Arnhem Land, which is prospective for bauxite and base metals.

EL 22413 covers part of the subtle plateaus south of the Frederick Hills, and east of the Mitchell Ranges. This area has undergone a similar geomorphological history to that of the Cato Plateau, which is a known area of bauxite mineralisation of similar style to the nearby world class Gove deposit. The area is also considered prospective for base metal mineralisation similar to that of McArthur River (HYC) in the McArthur Basin. Diamonds are a subsidiary target.

Exploration to test the low laterite surface for bauxite was attempted but was not successful due to rig availability. Issues with a river crossing to access the prospective area also hindered the programme. A meeting was held at Gan Gan on the 16<sup>th</sup> December 2008 to discuss the work programme and project with the Traditional Owners. Testing of the target is planned for late 2009 dry season when access is most likely possible.

**VERIFICATION LISTING**

Exploration Work Type	File Name	Format
<b>Office Studies</b>		
Literature search		
Database compilation		
Computer modelling		
Reprocessing of data		
General research		
Report preparation	28498 Baiguridji River	.pdf
Other (specify)	pAI09_004.pdf (Tenement Location)	.pdf
<b>Airborne Exploration Surveys</b>		
Aeromagnetics		
Radiometrics		
Electromagnetics		
Gravity		
Digital terrain modelling		
Other (specify)		
<b>Remote Sensing</b>		
Aerial photography		
LANDSAT		
SPOT		
MSS		
Radar		
Other (specify)		
<b>Ground Exploration Surveys</b>		
<b>Geological Mapping</b>		
Regional		
Reconnaissance		
Prospect		
Underground		
Costean		
<b>Ground Geophysics</b>		
Radiometrics		
Magnetics		
Gravity		
Digital terrain modelling		
Electromagnetics		
SP/AP/EP		
IP		
AMT		
Resistivity		
Complex resistivity		
Seismic reflection		
Seismic refraction		
Well logging		
Geophysical interpretation		
Other (specify)		
<b>Geochemical Surveying</b>		
Drill sample		
Stream sediment		
Soil		
Rock chip		
Regolith		
Water		
Biogeochemistry		
Isotope		
Whole rock		
Mineral analysis		
Other (specify)		
<b>Drilling</b>		
Aircore		
Auger		
Diamond		
Reverse circulation		
Rotary air blast		
Rotary percussion		
Tungsten carbide bit (coring)		
Groundwater drilling		
All drilling		
<b>File Verification Listing (this table)</b>	28498 Baiguridji River V.doc	.pdf