



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

ABN 76 000 057 125 / ACN 000 057 125

A member of the Rio Tinto Group

**Annual Report (Combined Arrla Bay Project)  
For the Period 6 June 2008 to 5 June 2009  
EL 22744 Arrla Bay 1, EL 22708 Arrla Bay 2  
EL 24657 Arrla Bay 2a, EL 22707 Arrla Bay 3  
SD5301 Alligator River, SD5302 Milingimbi  
SC5313 Coburg Peninsula  
Northern Territory**

**Exploration Report No.28550**

Tenement Holder:	Rio Tinto Exploration Pty Limited
Date:	June 2009
Author:	G K Hartshorn
Submitted:	G M Rheinberger
Distribution:	Department of Primary Industry, Fisheries and Mines, NT 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**

The Arrla Bay Project consists of four granted Exploration Licences (EL) 22744, 22708, 24657 and 22707 that were applied for in 2000 by Rio Tinto Exploration Pty Limited (RTX). A further six applications that are in various stages of the grant process also form part of the project. The tenements are located approximately 60km northeast of Oenpelli in north-west Arnhem Land and consequently are processed under the Aboriginal Land Rights Act 1975 (ALRA).

The tenements were originally considered prospective for lateritic bauxite, however the drilling reported in the previous annual report has greatly downgraded the potential. The tenements still have uranium and manganese potential.

Lateritised Cretaceous sediments of the Arafura Basin extend over most of the tenement area. Outcropping basement of Proterozoic granites and metamorphics also occur.

Exploration completed during the reporting period included access negotiations on the surrounding tenement applications and participating in the GA (Geoscience Australia) Pine Creek (Kombolgie) multi-client airborne EM survey. Rio Tinto Exploration funded a total of 889 line kilometers of infill survey lines within the project.

At the time of reporting, the EM survey had been flown however the final data had not been received from Geoscience Australia.

No ground work was conducted.

**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	Arrla Bay_Annual Combined report 28550 pAI07_003	.pdf .pdf
Other (specify)		
<b>Airborne Exploration Surveys</b>		
Aeromagnetics		
Radiometrics		
Electromagnetics	pAI09_005	.pdf
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	pAI07_005	.pdf
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>	28550 Arrla Bay V	.pdf

