



## **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 1 December 2010 to 30 November 2011  
EL 27591 Jandapa 2 –  
SD5303 Arnhem Bay  
Northern Territory

### **Exploration Report No. 29195**

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**LIST OF PLANS**

<b>Plan No.</b>	<b>Title</b>	<b>Scale</b>
pAI10_004	Tenement location	1:400,000
pAI10_001	Planned auger and mapping traverses	1:150,000

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<b>No.</b>	<b>Title</b>	<b>File Name</b>
1	Jandapa Hill MMP	JandapaHill_MMP.pdf

## **1. SUMMARY**

The Jandapa Hill Project consists of two granted Exploration Licences, EL 25395 and EL 27591, granted on 01/12/2009 under the name Territory Uranium Company Ltd. Rio Tinto Exploration has an option agreement with Territory Uranium to conduct exploration on the project for bauxite. This report covers activities on the tenement EL 27591, Jandapa 2 and does not include activities on EL 25395, Jandapa 1.

EL27591 was split out of the original application area of EL25395 upon grant. This tenement covers 5km<sup>2</sup> which is approximately 1% of the original area. The area has bauxite potential however the work programmes are contingent on the completion of work and positive indications of bauxite within the granted area of EL25395.

To date, due to unforeseen access issues to the priority target area, the work has not been able to be completed.

No ground work was completed on EL27591.

## **2. INTRODUCTION**

The Jandapa Hill Project consists of two granted Exploration Licences, EL 25395 and EL 27591, granted on 01/12/2009 under the name Territory Uranium Company Ltd. Rio Tinto Exploration has an option agreement with Territory Uranium to conduct exploration on the project for bauxite. This report covers activities on the tenement EL 27591, Jandapa 2 and does not include activities on EL 25395, Jandapa 1. Remaining tenure within the Jandapa Hill project is contained within one tenement EL 27592 which remains in moratorium. The tenements are located approximately 60 km west of Nhulunbuy in north-east Arnhem Land and were consequently processed under the Aboriginal Land Rights Act 1975 (ALRA).

## **3. LICENSE DETAILS**

EL 25395 and EL 27591 were granted from the original application area of ELA 25395 following the consent process from the Northern Land Council. The remaining area was split out and put into moratorium under ELA 27592. The original EL 25395 tenement application covered 483 sq. km of which 174 sq. km as EL 25395 and 5 sq. km as EL 27591 were granted. Of the non-consent area, EL 27592 was returned into moratorium. Both granted tenements reside within

east Arnhem which is subject to the Aboriginal Land Rights Act 1975 (ALRA). Tenement details are listed in Table 1 below.

**Table 1: Tenement Details**

Tenement No.	Tenement Name	Ownership	Grant Date	Area Applied km <sup>2</sup>	Area Granted km <sup>2</sup>
EL25395	Jandapa 1	Territory Uranium Co. Ltd.	1/12/2009		174
EL27591	Jandapa 2	Territory Uranium Co. Ltd.	1/12/2009		5
EL27592		Territory Uranium Co. Ltd.	Application	483	-

#### 4. PREVIOUS EXPLORATION

Previous exploration within the area of Jandapa 2 is limited to early reconnaissance work completed by BHP for manganese and bauxite. Within the original application area, BHP had previously drilled 11 holes, of which 4 holes remain now in the granted area of EL 25395. Of these four holes drilled to an average depth of 37m, no geochemical assays are recorded. No holes were completed within the area of EL 27591. No further work has been conducted in the area since the late 1960's.

**Table 2: Previous Exploration Summary**

Year	Company	Tenement	Exploration Completed
1960-1970	BHP Ltd	ATP1138	Manganese and Bauxite reconnaissance exploration. Eleven (11) holes completed on the original ELA 25395 area, including four (4) within the granted area of EL 25395.

#### 5. GEOLOGY

Geology of the Jandapa Hill 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 Quaternary 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. 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 Jandapa Hill area contains clearly defined, gently dipping flat surfaces that may be interpreted as remnant laterite.

## **7. ENVIRONMENT/COMMUNITY**

No field work was completed during the period.

## **8. EXPLORATION COMPLETED DURING REPORTING PERIOD**

Work on the Jandapa project focussed on gaining access to the adjacent licence, EL25395.

## **9. EXPLORATION EXPENDITURE**

Expenditure on this licence was restricted to one day salary allocation.

## **10. PROPOSED EXPLORATION**

EL27591 forms part of the Jandapa project which is under option to Rio Tinto Exploration to explore for bauxite resources. Work on this licence has been linked to adequate access on the adjacent EL25395 where a similar landform target is to be tested. Due to unforeseen access issues on EL25395, any work on this licence has been deferred.

If access continues to be an issue, then a helicopter reconnaissance mapping programme will be considered and consent for this will be sort from the Traditional Owners.

## **11. CONCLUSIONS AND RECOMMENDATIONS**

Issues with land access continue to hamper progress on the Jandapa project. No ground work was completed on EL27591.

## **REFERENCES**

Blake, J. & Hartshorn., G., 2010, Combined Annual Report For Period Ending 14 September , 2010, EL 4170 Cato Plateau & EL 4171 Cato River 'Cato Project', Gove SD5304, Northern Territory. RTX Report Number 28823.

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.

Ferenczi P.A., 2001, Iron Ore, Manganese and Bauxite Deposits of the Northern Territory. Northern Territory Geological Survey Report No. 13.

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

## **LOCALITY**

Arnhem Bay                      SD5303                      1:250 000

## **DESCRIPTOR**

Annual Report for the Period 1 December 2010 to 30 November 2011, EL 27591 Jandapa 2 SD5303 Arnhem Bay, Northern Territory located within the Arnhem Lands Aboriginal Land Trust, Northern Territory, Australia. Exploration activities were delayed due to early onset of the wet season in the Northern Territory.

## **KEYWORDS**

Jandapa Hill, bauxite, community, Cretaceous laterite



**APPENDIX 1**  
**Jandapa Hill MMP**  
**JandapaHill\_MMP.pdf**