



## **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 2011 to 30 November 2012  
EL 25395 Jandapa 1 –  
SD5303 Arnhem Bay  
Northern Territory

**Exploration Report No. 29437**

Tenement Holder: TUC Resources Ltd

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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

**LIST OF APPENDICES**

<b>No.</b>	<b>Title</b>	<b>File Name</b>
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## **1. SUMMARY**

The Jandapa Hill Project consists of two granted Exploration Licences, EL 25395 and EL 27591, granted on 01/12/2009 and ELA 27592 under the name Territory Uranium Company Ltd. Territory Uranium have now been re-named as TUC Resources Ltd. Rio Tinto Exploration is the operator under an option agreement with TUC to conduct exploration on the project for bauxite. The Option period was extended for a further 2 years in 2012. This report covers activities on the tenement EL 25395, Jandapa 1 and does not include activities on EL 27591, Jandapa 2. Combined reporting will be sort for this project for the next period.

This is the Third annual report for the tenement.

The approved field exploration programme is still in dispute due to unresolved access issues over the key target areas. Informal discussions held by the NLC with the regard to the disputed area did not indicate any easy resolution.

No field work was conducted during the reporting period.

## **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 25395, Jandapa 1 and does not include activities on EL 27591, Jandapa 2. Remaining tenure within the Jandapa Hill project is contained within eight tenements ELA 27592 to ELA 27599 which remain 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).

After the tenement was granted in December 2009, a work programme clearance meeting was held on the 18<sup>th</sup> May 2010. The approved work programme was planned to be conducted in October 2010 following all necessary final approvals by the NLC and during the dry season to aid in access and general work conditions. Due to issues with community members and an early onset of the Northern Territory 2010 wet season, the approved work program was rescheduled for the 2011. However due to disputed access issues over the key target area, this work could not be undertaken. In 2012 the fundamental access issue with respect to the key target area remained unresolved and work was postponed.

### 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, ELA 27592 to ELA 27599 were 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**

<b>Tenement No.</b>	<b>Tenement Name</b>	<b>Ownership</b>	<b>Grant Date</b>	<b>Area Applied km<sup>2</sup></b>	<b>Area Granted km<sup>2</sup></b>
EL25395	Jandapa 1	TUC Resources Ltd	1/12/2009	483	174
EL27591	Jandapa 2	TUC Resources Ltd	1/12/2009		5
EL27592		TUC Resources Ltd	Application		-
EL27593		TUC Resources Ltd	Application		-
EL27594		TUC Resources Ltd	Application		-
EL27595		TUC Resources Ltd	Application		-
EL27596		TUC Resources Ltd	Application		-
EL27597		TUC Resources Ltd	Application		-
EL27598		TUC Resources Ltd	Application		-
EL27599		TUC Resources Ltd	Application		-

### 4. PREVIOUS EXPLORATION

Previous exploration within the area of Jandapa 1 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 further work has been conducted in the area since the late 1960's.

**Table 2: Previous Exploration Summary**

<b>Year</b>	<b>Company</b>	<b>Tenement</b>	<b>Exploration Completed</b>
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**

The primary target for the exploration programme within this license is lateritic bauxite of similar style as the nearby world class, Gove deposit. The main geological formation of interest is lateritic surfaces on Cretaceous sediments.

The geology of the license area is dominated by a northeast trending ridge of Neoproterozoic hard quartz rich sandstones of the Mantugula Fm, Roper Group (see geological survey map SD5303, figure 2). The coastal areas have low elevation gently sloping plateaus which are mapped as recent cover or laterite. It is these areas (shown in green on figures 2 and 3) which constitute the main geological target for bauxite.

Due to access issues the main areas of interest have not been visited or mapped.

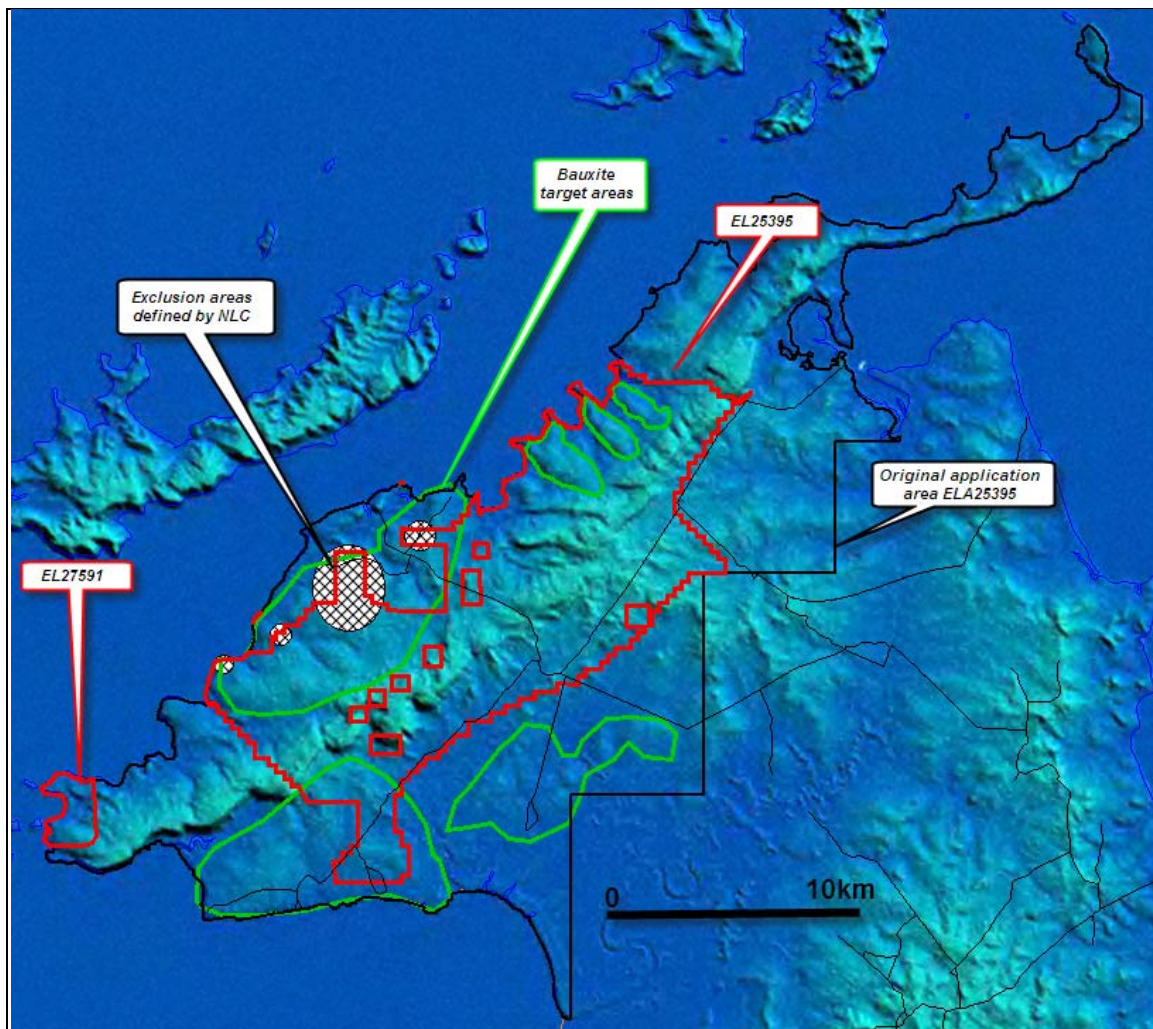


Figure 1: EL25395 showing the main target areas (in green) overlain on the SRTM digital terrain model data. Note the NE trending ridge if Neoproterozoic formations are clearly visible.

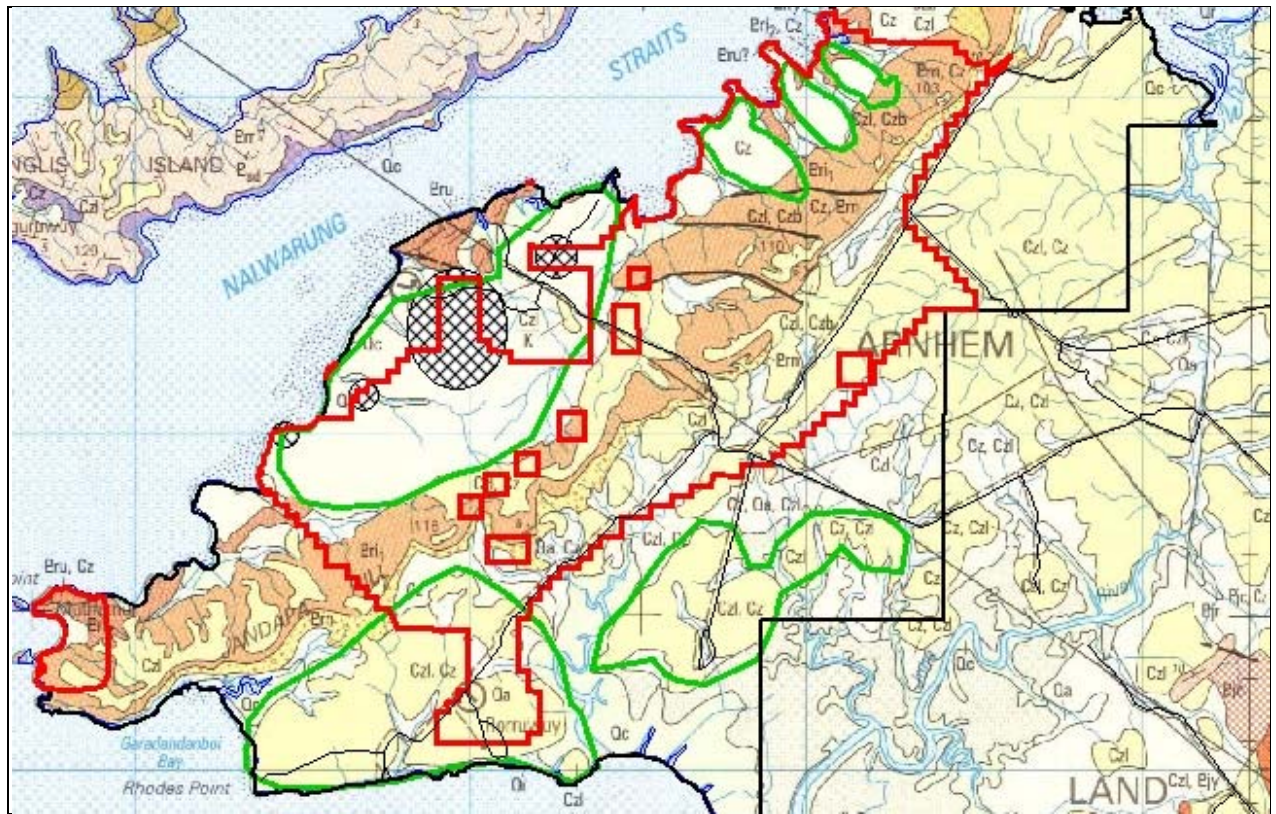


Figure 2: EL25395 showing the main target areas (in green) overlain on the SRTM digital terrain model data. Note the NE trending ridge if Neoproterozoic formations are clearly visible. The line style are the same as figure 1.



## 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.

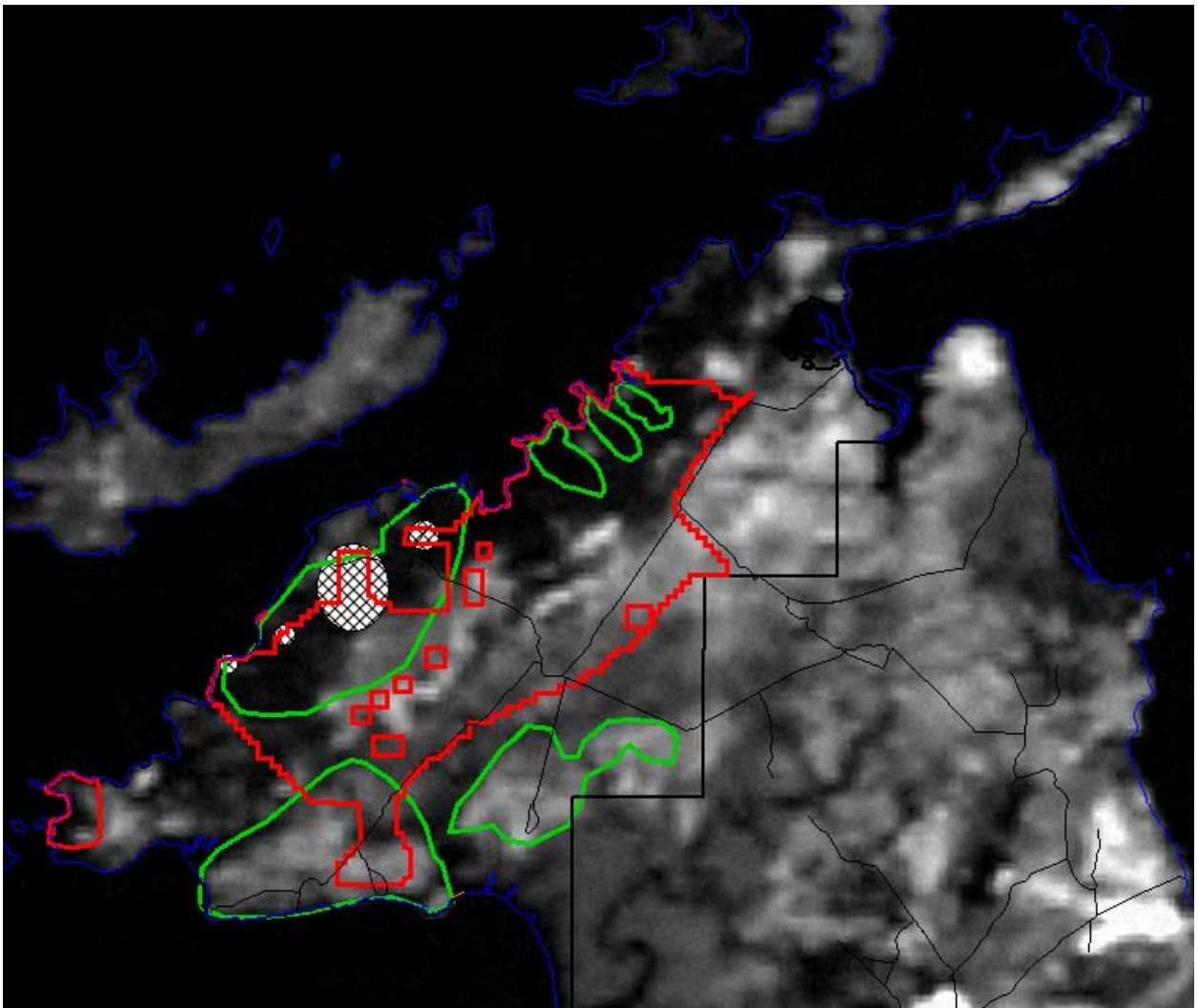


Figure 3: Exploration licence and targets overlain on the raw airborne radiometric data (Thorium channel). The line style is the same as figure 1

## 7. ENVIRONMENT/COMMUNITY

A work programme meeting was scheduled for the 27<sup>th</sup> July 2011 to re-assess the previously approved exploration however this was deferred and did not take place.

No ground disturbance activities took place within the EL.



Figure 4: The areas that have not been able to be accessed since late 2010. Pink outline areas were exclusion zones from the work programme meeting and the large red lines were imposed at a later time.

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

No field work was carried out during the period. Discussions with the NLC regarding the access issues over the key target area indicated that progress is unlikely to be made.

## **9. EXPLORATION EXPENDITURE**

The details of exploration expenditure for EL 25395 by RTX are presented separately in the Annual Expenditure Report.

## **10. PROPOSED EXPLORATION**

Completion of the approved work program is planned for the 2012 dry season pending suitable agreement over access. This work may need to be modified due to issues regarding access to the key target areas.

Rio Tinto Exploration intends to continue to explore the Jandapa Hill project, including EL 25395 and EL 27591 simultaneously.

## **11. CONCLUSIONS AND RECOMMENDATIONS**

No field work was completed due to issues gaining physical access to the key bauxite target areas. Rio Tinto will attempt to resolve this issue to allow the planned work programme to proceed in 2013.

Rio Tinto Exploration is committed to a staged approach to bauxite exploration in East Arnhem Land and is committed to the strictest environmental and cultural compliance. Rio Tinto Exploration intends to continue this exploration approach within the granted area of EL 25395 while obtaining the appropriate approvals and consents from the landowners.

## **REFERENCES**

Blake, J. 2010, Annual Report For Period Ending 30 November , 2010, EL 25395 Jandapa 1, Gove SD5304, Northern Territory. RTX Report Number 28912.

Hartshorn, G. 2011, Annual Report For Period Ending 30 November , 2012, EL Jandapa 1, Gove SD5304, Northern Territory. RTX Report Number 29194.

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 2012, EL 25395 Jandapa 1 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