Rio Tinto Exploration Pty. Limited

ABN 76 000 057 125 / ACN 000 057 125

A member of the Rio Tinto Group

First Annual Report
for the Period Ending 13 October 2005,
EL 4170 Cato Plateau
Gove Special SD 5304,
Northern Territory

Exploration Report No. 27518

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1. SUMMARY

EL 4170 Cato Plateau was applied for by BHP Minerals on 3rd October 1982 and was granted on 14th October 2004. Rio Tinto Exploration Pty Limited (RTE) signed an agreement with BHP on 27th March 2000 whereby RTE took over management of the tenement. The original tenement application covered an area of 593.5 km^2 of which only 57.0 km^2 was granted. The remainder of the area was split off into a new application, EL 24389 and put into moratorium. The tenement is located 22 km southwest of Nhulunbuy, east Arnhem Land and consequently is processed under the Aboriginal Land Rights Act 1975 (ALRA).

This first annual report describes the exploration completed during the first year of the tenement and includes auger drilling and stream sampling. EL 4170 forms part of the larger contiguous tenement package in east Arnhem Land, which is prospective for bauxite.

EL 4170 covers part of the Cato Plateau, which is a known area of bauxite of similar style to the nearby world class Gove deposit.

Exploration was focused on testing the area for bauxite. Stream sampling for diamonds was a secondary opportunistic target. Work completed during the period included:

- Review of previous exploration.
- Completion of consultation meetings and site clearance surveys.
- Interpretation of existing TM data.
- Establishment of an exploration camp.
- Clearing access for a small drill.
- Drilling 10 auger holes.
- Collecting 6 gravel, 9 –80# stream sediment and 2 rock samples.

This auger drilling programme showed similar results to that reported from the 1966 work. The potential for bauxite within the granted area of EL 4170 is very limited with the vast majority of the preserved bauxite plateau lying within the split off tenement application EL 24389. The stream sampling did not have any positive results. No work is planned in this tenement for a year two.

2. CONCLUSIONS AND RECOMMENDATIONS

Drilling with an auger drill returned similar results to the work conducted in 1966. The potential for bauxite within the granted area of EL 4170 is very limited.

There were no significant results from the stream sampling.

3. INTRODUCTION

EL 4170 Cato Plateau was applied for by BHP Minerals on 3rd October 1982 and was granted on 14th October 2004. RTE signed an agreement with BHP on 27th March 2000 whereby RTE took over management of the tenement. The original tenement application covered an area of 593.5 km^2 of which only 57.0 km^2 was granted. The remainder of the area was split off into a new application, EL 24389 and put into moratorium. The tenement is located 22 km southwest of Nhulunbuy, east Arnhem Land and consequently is processed under the Aboriginal Land Rights Act 1975 (ALRA).

Tenement details are included in Table 1 below. The tenement is located on Plan WAp46448.

All exploration was completed in accordance with a DBIRD lodged and approved Mine Management Plan (Lilley and Smith 2003).

Table 1: Tenement Details

Tenement No.	Tenement Name	Owner /ship	Application Date	Grant Date	Area applied for (Blocks)	Area granted (Blocks)
EL4170	Cato Plateau	BHPB	3/12/1982	14/10/2004	182	29.0
EL24389	Cato Plateau B	BHPB	14/10/2004	In veto	536.5 (km^2)	

4. PREVIOUS EXPLORATION

Previous exploration over this area is described by in Report 13 of the Northern Territory Geological Survey (Ferenczi, 2001).

New Guinea Resources drilled 19 auger holes in the northern end of the Cato Plateau and concluded that most of the bauxite had been eroded off. In 1966 BHP drilled 89 auger holes for a total of 778m into the Cato Plateau to test the area for bauxite. Of these, only six holes are located within EL 4170. The BHP data (Chestnut et al., 1966) shows that there is patchy

bauxite within the plateau however the silica values are generally high and the recoverable (ABEA) alumina is low. No further work has been conducted in the area since the late 1960's.

Table 2: Previous Exploration Summary

Year	Company	Tenement	Exploration Completed
1955	New Guinea Resources Prospecting Ltd	?	19 auger holes
1966	BHP Ltd	PA 1138	Bauxite exploration including the Cato Plateau area. 89 auger holes of which 6 are within the granted El 4170 area.

5. GEOMORPHOLOGY

EL 4170 lies within the Arafura Fall physiographic sub division adjacent to the western shore of Melville Bay (Rawlings et al., 1997). Most of the tenement is low lying (<50m elevation) and includes tributaries of the Giddy River. A spur of the Cato Plateau extends four kilometers across the centre of the tenement. The plateau has steep breakaways and a flat top at an elevation of approximately 100m.

6. GEOLOGY

The geology of the tenement area consists of Cretaceous sedimentary units (Yrrkala Fm) and younger Quaternary gravels and silts (Rawlings et al., 1997). The Yrrkala Fm consists of poorly sorted siltstone-sandstone units, which have a generally flat dip. This formation has undergone intense weathering to produce a lateritised land surface that in places is bauxitic. The laterite forms a flat topped plateau that has sharp breakaways at its margin, see plan WAp46452.

The basement to the Cretaceous in the tenement area is either the Palaeoproterozoic Bradshaw Complex or similar age granite.

7. GEOPHYSICS

The project area is covered by a regional scale aeromagnetic survey flown for the NTGS in 1990-92 (Rawlings et al., 1997). The radiometrics can be used to distinguish the laterite-covered areas from those of both basement and Quaternary sand cover.

Digital terrain data has been acquired and processed to assess areas for plateaus that may be prospective for bauxite. The Cato Plateau is clearly defined as a gently south-westerly dipping

flat surface of approximately 100 km^2 in area (see Plan WAp46452). Only about 3.5 km^2 of the Cato Plateau lies within the granted EL.

8. EXPLORATION COMPLETED DURING REPORTING PERIOD

Exploration completed during the reporting year included:

- Review of previous exploration.
- Completion of consultation meetings and site clearance surveys.
- Interpretation of existing TM data.
- Establishment of an exploration camp.
- Fixing the 1966 access track.
- Drilling 10 auger holes
- Collecting 6 diamond gravel, 9 stream sediment (–80#) and 2 rock samples

8.1 Auger Drilling

A total of 10 auger holes were drilled along the spur of the Cato Plateau that is within the granted tenement area. The holes were drilled using an RTE owned Edson auger rig mounted on a Toyota 4 wheel drive. The auger holes were drilled on the pre existing 1966 drill access track (see plan WAp46449). The holes approximated the locations of the 1966 drilling. The auger drill holes varied in depth from 2m to 11.5m with a total of 77m for the ten holes.

The drilling used spiral auger flights that are 8 cm in diameter with sampling at 1m intervals. The auger would drill the 1 metre interval and then the hole would be cleared with the material forming a cone around the top of the hole. A segment of the cone weighing about 2 kg was sampled for assay. The remaining material would be cleared and returned down the hole upon completion. The quality of the auger sample is reasonable however at depth there could be some contamination.

The auger drill hole samples were sent to Ultratrace Analytical Laboratories in Perth for analysis by XRF for elements relevant to bauxite exploration (see table 4 for details).

The results show that this data from 2004 approximates the auger results from 1966 (see table 3). The auger hole at the far west of the tenement, AG04CP10, was the only hole with significant pisolitic bauxite. This hole included a zone of 4m @ 45% Al_2O_3, 20.8% SiO_2, 8.9% Fe_2O_3 and 21.8% LOI. The high reactive silica results, average 18%, indicate that most of the

silica in this interval is associated with kaolinite. The texture within this zone is earthy with minor (10-20%) of small pisoliths.

Table 3: Comparison Of Al_2O_3 Between RTE Auger And 1966 BHP Auger Holes

Depth (m)	AG04CP10 % Al_2O_3	CL37 % Al2O3	AG04CP09 % Al2O3	CL38 % Al2O3
0-1	36.3	27	26.4	19
1-2	41.8	37.1	29.7	24.8
2-3	46.1	44.2	31.7	27.1
3-4	46.9	48.0	30.8	29.8
4-5	43.4	48.6	29.0	30.7
5-6	44.4	49.2	29.5	33.8
6-7	41.2	46.4	32.3	26.7
7-8	39.3	43.2	30.0	24.2
8-9	38.2	43.4	28.8	29.7
9-10	39.4	38.9	33.2	27.0
10-11	38.9			
** the depths for the 1966 data have been converted from the original 3 feet intervals into metres to approximate the 2004 data*				

Table 4: Analytical Details For Auger And Rock Samples

Element	Digest	Method	Units	Det_limit
Al_2O_3	XRF Fused bead	XRF bauxite suite	%	0.01
CaO	XRF Fused bead	XRF bauxite suite	%	0.01
Fe_2O_3	XRF Fused bead	XRF bauxite suite	%	0.01
K_2O	XRF Fused bead	XRF bauxite suite	%	0.01
MgO	XRF Fused bead	XRF bauxite suite	%	0.01
MnO	XRF Fused bead	XRF bauxite suite	%	0.01
Na_2O	XRF Fused bead	XRF bauxite suite	%	0.01
P_2O_5	XRF Fused bead	XRF bauxite suite	%	0.001
SiO_2	XRF Fused bead	XRF bauxite suite	%	0.01
SO_3	XRF Fused bead	XRF bauxite suite	%	0.01
TiO_2	XRF Fused bead	XRF bauxite suite	%	0.01
V_2O_5	XRF Fused bead	XRF bauxite suite	%	0.001
ZrO_2	XRF Fused bead	XRF bauxite suite	%	0.01
LOI	Thermo-gravimetric	bauxite suite	%	0.01
Reactive silica	Timed HF digest		%	0.1

8.2 Rock Sampling

A total of two rock grab samples of between 1 kg and 3 kg of material were collected. Sample ledgers and results are included as Appendix 2. Analysis was undertaken at Ultratrace Laboratories in Perth using the same techniques as for the auger samples (Table 4).

8.3 Stream Sediment Sampling

A total of 10, -80# stream sediment samples were collected from the active channel of selected drainages. Sample ledgers and results are included as Appendix 3. Analysis was undertaken at Ultratrace Laboratories in Perth using the protocols in Table 5.

Table 5: Stream Sediment Analysis Protocols

Preparation	Digest	Method	Elements (lower detection limit)
Dry and pulverise entire sample	Mixed acid (0.5 g aliquot)	ICPMS /ICPOES ICP302 ICP102	Ag* (0.5 ppm), Al (100 ppm), As* (0.5 ppm), Ba* (1 ppm), Ca (100 ppm), Cd* (0.5 ppm), Co (1 ppm), Cr (5 ppm), Cu (1 ppm), Bi* (0.1 ppm), Fe (100 ppm), K (100 ppm), Mg (100 ppm), Mn (1 ppm), Mo* (0.2 ppm), Na (100 ppm), Nb* (0.5 ppm), Ni (1 ppm), P (20 ppm), Pb* (1 ppm), Sb* (0.1 ppm), Sr* (0.1 ppm), Th* (0.05 ppm), Ti (10 ppm), U* (0.05 ppm), V (2 ppm), W* (0.5 ppm), Zn (1 ppm), Zr* (1 ppm).

**ICPMS*

8.4 Gravel Sampling

A total of six, -1mm gravel samples were collected from trap sites within active drainages across the tenement. Sample size was approximately 30 kg. Samples were processed at RTE's mineral processing laboratory in Perth and heavy mineral concentrates observed for diamond indicator minerals. Sample ledgers and results are included as Appendix 4. The concentrates had significant amounts of heavy minerals (ilmenite), which reduced the efficacy of the processing.

8.5 TM Data Interpretation And Digital Terrain Data

Thematic Mapper and digital terrain data sets were used to define the size of the potential bauxite target area (see plan WAp46452 and WAp46453). The Cato Plateau can be clearly seen on the digital terrain model of the region.

9. ENVIRONMENT

Exploration was completed in accordance with a DBIRD lodged and approved Mine Management Plan (Lilley and Smith 2003) (Appendix 5).

Access to RTE's exploration camp was via existing tracks and roads. The camp was sited in an area of existing disturbance and did not additionally impact on the environment. The access from the camp to the drill sites was by the old track from the 1966 work. This track had to be upgraded in places where small washouts and logs blocked the way. All work was done in consultation with the Traditional Landowners.

10. EXPLORATION EXPENDITURE

The exploration expenditure details attributed to the project by RTE for the first year of exploration are contained in the Northern Territory Exploration Expenditure for Mineral Tenement submitted with this report.

Table 6: Exploration Expenditure

Element Summary Group Description	EL4170
Computing Services	$8,382
Cont Exploration- Ext	$20,291
Drilling	$2,064
Field and Transport	$19,868
General Office Supp and Comm	$440
Indirect Costs	$21,489
Laboratory Analysis	$8,694
Payroll and Benefits	$53,093
Rent and Property	$4,554
Sundry Professional and Other	$520
Tenement Payments	$16,605
Travel and Accommodation	$9,402
Grand Total	$165,402

11. PROPOSED EXPLORATION

No further work is planned for this tenement. The area will be reassessed following the work on adjacent tenements.

Exploration Licence 4171 is being managed as a project with adjacent EL 4170. The proposed work programme for the forthcoming year on EL 4171 is largely dependent on the results of auger drilling conducted during 2005 on EL 4170. Further work on this tenement will be planned in conjunction with EL 4170 for further test or follow up any encouraging results achieved from the work carried out to date.

Proposed expenditure for the year will be $40,000 comprising:

- Meetings with Traditional owners and clearance surveys
- Review of assay results and interpretation
- Additional Auger drilling
- Possibly RAB drilling

REFERENCES

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

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

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.

Lilley, G.L. and Smith, S.L., 2004, Mine Management Plan, EL4170 Cato Plateau, Gove SD5304, Northern Territory. RTE Report Number 25807.

LOCALITY

Gove SD 5304 1:250 000

LIST OF DPO'S

DPO	No. Sample	Sample Range	Laboratory
206517	6	6023151 – 6023161	RTE Diamond Laboratory, Perth
206518	10	6023152 – 6023166	Ultratrace Analytical Laboratories, Perth
206519	79	6023201 – 6023279	Ultratrace Analytical Laboratories, Perth
201833	2	6023167 -6023168	Ultratrace Analytical Laboratories, Perth

DESCRIPTOR

First Annual Report for the Period Ending 13th October 2005 for EL 4170 Cato Plateau, Australia Bauxite Project, Northern Territory, located within Arnhem Land, Northern Territory, Australia. Exploration activities consisted of drilling 10 auger holes, collection and assay of 2 rock, 10 stream sediment and 6 diamond gravel samples. Results were not encouraging.

KEYWORDS

Gove, bauxite, Auger drilling, Cretaceous, stream sampling, diamond sampling.

APPENDIX 1

Auger Drilling Data

EL4170_2005_A_02_drillcollars.txt

EL4170_2005_A_03_lithology.txt

EL4170_2005_A_04_downholegeochem.txt

APPENDIX 2

Rock Sample Data

EL4170_2005_A_05_rockgeochem.txt

APPENDIX 3

Stream Sediment Sample Data

EL4170_2005_A_06_streamsediment.txt

APPENDIX 4

Diamond Gravel Sample Data

EL4170_2005_A_07_gravel.txt

APPENDIX 5

Cato Plateau Mine Management Plan

25807_Cato_Plateau_MMP.pdf