Rio Tinto Exploration Pty. Limited

ABN 76 000 057 125 / ACN 000 057 125

A member of the Rio Tinto Group

Third Annual Report
for the Period Ending 22 September 2005,
EL1638 Port Keats 1, EL1639 Port Keats 2,
EL1640 Keats, EL1641 Port Keats,
EL1923 Keats 2, EL3403 Barwolla,
EL3404 Fitzmaurice, EL3406 Keyling,
EL6516 Tom Turners Creek,
EL6517 Cui-eci Creek, EL6551 Greenwood,
EL22218 Fitzmaurice 4,
Yambarra Project,
Northern Territory.

Exploration Report No. 27526

Tenement Holder:	Rio Tinto Exploration Pty Limited
Date:	November 2005
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Distribution:	Department of Primary Industry Fisheries & Mines RTE Perth Information Centre

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WAp46476	Tenement Location Plan	1:1,000,000
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1. SUMMARY

Exploration Licence (EL) 1638 Port Keats 1, EL1639 Port Keats 2, EL1640 Keats, EL1641 Port Keats, EL1923 Keats 2, EL3403 Barwolla, EL3404 Fitzmaurice, EL3406 Keyling, EL6516 Tom Turners Creek, EL6517 Cui-eci Creek, EL6551 Greenwood and EL22218 Fitzmaurice 4 were applied for by Ashton Mining Limited and Ashton Operations Australia Limited ("Ashton") in the late 1970's and early 1980's. The tenements are centered approximately 200 km south west of Darwin on the Daly River / Port Keats Aboriginal Land Trust and consequently are processed under the Aboriginal Land Rights Act 1975 (ALRA).

The project area covers parts of the Palaeoproterozoic Pine Creek Orogen, the Mesoproterozoic Victoria – Birrinduddu Basin and the Palaeozoic Bonaparte Basin.

No on-ground exploration was completed during the current reporting period. Exploration activities focused on reviewing existing indicator mineral chemistry and identification of bauxite target areas in the coastal areas of EL 1923 and EL 1640. Partial relinquishments were completed on EL 1923 and EL 1640.

Exploration in the upcoming twelve months will focus on testing the bauxite potential of the coastal tenements and continuing efforts to identify specific diamond targets.

2. CONCLUSIONS AND RECOMMENDATIONS

Further interpretation of indicator chemistry has not identified further grains of interest.

Further diamond exploration is not justified on the granted title until the remaining applications are granted and first pass sampling completed. Consultation meetings for these applications have not occurred. Pursuit of consultation meetings with the NLC is an ongoing priority.

Exploration has focused on evaluating the bauxite potential of the coastal tenements. Several target areas have been identified and these will be followed up with detailed interpretation and shallow drilling on regional traverses.

3. INTRODUCTION

Ashton Mining Limited and Ashton Operations Australia Limited ("Ashton") applied for the tenements in the late 1970's and early 1980's. The tenements form a contiguous block

centered approximately 200 km south west of Darwin on the Daly River / Port Keats Aboriginal Land Trust and consequently are processed under the Aboriginal Land Rights Act 1975 (ALRA).

The tenements were granted to Ashton on 23rd September 2003. Ashton was acquired by Rio Tinto Exploration Pty Limited (RTE) in late 2000. Partial relinquishments of 178 sub-blocks from EL 1640 and 196 sub-blocks from EL 1923 have been made. Current tenement details are included in Table 1 below. The tenements are located on Plan WAp45817.

Table 1: Tenement Details

Tenement No.	Tenement Name	Ownership	Application Date	Grant Date	Blocks Applied	Blocks Granted	Blocks Current
EL3403	Barwolla	Ashton Mining Limited	28/09/1981	23/09/2002	23	23	23
EL6517	Cui-eci Creek	Ashton Mining Limited	22/02/1989	23/09/2002	194	194	194
EL3404	Fitzmaurice	Ashton Mining Limited	28/09/1981	23/09/2002	118	118	118
EL6551	Greenwood	Ashton Mining Limited	23/03/89	23/09/2002	365	365	365
EL1640	Keats	AO (Australia) Pty Limited	02/06/1977	23/09/2002	389	356	178
EL1923	Keats 2	AO (Australia) Pty Limited	08/09/1978	23/09/2002	414	392	196
EL3406	Keyling	Ashton Mining Limited	28/09/1981	23/09/2002	214	187	187
EL1641	Port Keats	AO (Australia) Pty Limited	02/06/1977	23/09/2002	394	393	393
EL1638	Port Keats 1	AO (Australia) Pty Limited	02/06/1977	23/09/2002	358	355	355
EL1639	Port Keats 2	AO (Australia) Pty Limited	02/06/1977	23/09/2002	390	390	390
EL6516	Tom Turners Creek	Ashton Mining Limited	22/02/1989	23/09/2002	97	97	97
EL22218	Fitzmaurice 4	Ashton Mining Limited	28/9/1981	23/09/2002	51	51	51

4. GEOMORPHOLOGY

The geomorphology of the project area may be divided into five divisions: Lateritised mesa surfaces; Uplands; Escarpments and dissected hills; Elluvial lowlands and flood plains. (Edgoose, C J et al. 1989).

The lateritised mesa surface has developed on a thin sheet of Cretaceous sedimentary rocks. This sheet was once very extensive but is now reduced to isolated plateau and outlying remnant mesas. A thicker soil profile (than on other units) developed on this surface supports a tall, dense eucalypt forest.

The Mesa escarpments, Uplands and dissected hills form the ground between the mesa surfaces and lowlands. The escarpments form the flanks of mesa and usually consist of a small scarp topping a steep, talus-strewn slope. The dissected hills are formed on Early - Middle Proterozoic igneous, sedimentary and metamorphic rocks. The soils developed are dominantly skeletal and support sparse open woodland and hardy grasses.

The elluvial lowlands form over sedimentary, grantitic and metamorphic rocks which are largely concealed by elluvium. The lowlands are characterised by open woodland and perennial grasses.

The floodplains are extensively developed in the western half of the project area. The plains remain wet well into the dry season and are vegetated by swamp grasses and stands of Melaleuca. Extensive mud and salt tidal flat are also present, adjacent to the Fitzmaurice River and the Joseph Bonaparte Gulf.

5. GEOLOGY

The geological description below is dominantly taken from Edgoose et al 1989.

The project area covers parts of three geological regions within the Northern Territory. These are; the Palaeoproterozoic Pine Creek Orogen, the Mesoproterozoic Victoria – Birrinduddu Basin and the Palaeozoic Bonaparte Basin.

The oldest rocks in the project area are the Early Proterozoic Hermit Creek Metamorphics. This unit consists of pelitic schist and gneiss, phyllite, quartz-mica schist, sillimanite-andalusite-muscovite schist, andalusite-cordierite hornfels and quartzite. The Finniss River Group also of Early Proterozoic age is inferred to overlie the Hermit Creek Metamorphics although the exact nature of their relationship is unclear. Within the project area, the Finniss River Group is dominated by the extremely thick, monotonous quartz arenites of the Chilling Sandstone and Burrell Creek Formation. The Henschke Breccia, a massive breccia conglomerate is interpreted to be approximately synchronous with these units.

The Hermit Creek Metamorphics and Finniss River Group were intruded successively by the Early Proterozoic Muarra-Kamangee Granodiorite (weakly foliated, xenolithic, medium to coarse grained biotite tonalite, granodiorite and minor anamellite) and Peppimenarti Granite (fine aplitic to coarse grained pegmatitic phases of adamellite and granite).

The Middle Proterozoic Fitzmaurice Group unconformably overlies the Early Proterozoic basement. This Group consists of a thick sequence (in excess of 6000 m) of unmetamorphosed quartz rich sediments. The formations comprising the group are the basal Moyle River Formation (dominantly quartzarenite with lesser conglomerate, stromatolitic dolomite, dolomite and siltstone), the Goobaieri Formation (siltstone an quartzarenite) and the Lalngang Formation (quartzarenite). These units are intruded by Midldle Proterozoic intrusives of both basic (Murrenja Dolerite) and acid (Ti-Tree Granophyre) composition. The Murrenja Dolerite consists of altered gabbro and dolerite and the Ti-Tree Granophyre of significantly and variably altered adamellite.

Permian sediments of the Bonaparte Basin are present in the east of the project area. These sediments consist of quartzarenite, subarkose and mudstone with minor conglomerate and coal.

Creataceous rocks form an extensive unit within the project area. Friable, clayey, commonly ferruginous and mottled arenite is the dominant rock type.

Cainozoic sediments and Quaternary alluvium cover much of the bedrock.

The dominant structural features of the area are the extensive, regional transcurrent faults that are the northerly continuations of the major faults, which define the Middle Proterozoic Fitzmaurice Mobile Zone and the Early Proterozoic Halls Creek Mobile Zone.

6. GEOPHYSICS

The project area is covered by two regional scale aeromagnetic surveys. The western half was flown east west at 500 m line spacing (100 m elevation) in 1994 by AGSO (Medusa Banks, Port Keats, Survey). The eastern half was flown north south in 1984 by the NTGS (Litchfield South Survey) also at 500m line spacing (100 m elevation).

7. EXPLORATION COMPLETED DURING REPORTING PERIOD

Exploration completed during the reporting year included:

- Review of published geological and topographic information to identify areas of possible bauxite mineralisation.

- Thematic Mapper and digital terrain data sets were used to define the size of the potential bauxite target area (see plan WAp46477). The areas form discrete but subtle elevated plateaux with smooth edges and no breakaways or cliffs. The total area of interest is calculated at 509 km^2.

- Re-interpretation of indicator mineral chemistry and diamond results.

8. ENVIRONMENT

No surface disturbing activities were undertaken and no rehabilitation is required.

9. EXPLORATION EXPENDITURE

The exploration expenditure attributed to the project by RTE for the third year of exploration is detailed on Table 3 (next page).

10. PROPOSED EXPLORATION

Exploration in the next period will focus on evaluating the bauxite potential of the western coastal tenement. This work will include:

- Detailed interpretation of existing TM and topographic data to refine the target plateaux
- Establishment of an exploration camp.
- Clearing access for a small drill.
- Wide spaced auger / air core drilling.

Review of the sampling and mineral chemistry results is on-going.

A notional budget for the project area is listed as follows:

Table 2: Proposed Expenditure

Description	Amount $
Gravel and loam sampling	20,000
Sample processing	20,000
Field Support	50,000
Drilling	50,000
Payroll and Office	50,000
Total	**190,000**

Table 3: Exploration Expenditure

Cost Centre:	**11842**	**11843**	**11844**	**11845**	**11846**	**11849**	**11850**	**11852**	**11853**	**11854**	**11855**	**11992**	
Mines Ref:	**EL 1638**	**EL 1639**	**EL 1640**	**EL 1641**	**EL 1923**	**EL 3403**	**EL 3404**	**EL 3406**	**EL 6516**	**EL 6517**	**EL 6551**	**EL 22218**	**Total**
Element Summary Group													
Cont Exploration- Ext	124	322	1101	322			1163	413		1275	891	86	5702
Field & Transport	387	1007		1007			193			542	464	271	3874
Laboratory Analysis	200	520		520			100			280	240	140	2000
Tenement Payments	26761	43082	10405	43202	11125	4205	12618	10765.5	7165	24051	29026	8568	230979
Payroll & Benefits	1380	3588		3588			690			1932	1656	966	13802
Computing Services	218	567		567			109			305	261	152	2182
Sundry Prof & Other	29	75		75			14			40	35	20	291
Travel & Accomodation	44	115		115			22			62	53	31	444
Rent & Property	137	357		357			68			192	164	96	1373
Gen Office Supp & Comm	8	21		21			4			11	9	5	81
Indirect Costs	1779	4625	172	4625	8	8	1055	69	8	2657	2246	1245	18502
Total	**31070**	**54284**	**11680**	**54404**	**11133**	**4213**	**16040**	**11248**	**7173**	**31351**	**35050**	**11583**	**279235**

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Edgoose, C. J. et al, 1989 — 1 : 100 000 Geological Map Series Explanatory Notes. MOYLE 4969 Northern Territory Geological Survey.

Smith, S.L. & Williams, P. R. — Mine Management Plan Yambarra, EL3403 Barwolla, EL6517 Report on 1971 Drilling Programme on Coal Licence 173, Bonaparte Gulf Basin, NT. CR 1973-0082.

LOCALITY

Port Keats	SD 5211	1:250 000
Fergusson River	SD 5212	1:250 000
Cape Scott	SD 5207	1:250 000

DESCRIPTOR

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KEYWORDS

Port Keats, Fergusson River, Cape Scott gravel sample, -80 # stream sediment sample, rock chip sample, Chromite, Cretaceous, Diamond, Garnet, Indicator mineral, Kimberlite, Loam sample, Proterozoic.