Partial Surrender Report,
for the Period Ending 22\textsuperscript{nd} August 2005
EL 1640 Keats
Yambarra Project,
Northern Territory.

Exploration Report No. 27530

Tenement Holder: Rio Tinto Exploration Pty Limited
Date: November 2005
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LIST OF PLANS

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<th>Plan No.</th>
<th>Title</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAp46376</td>
<td>EL 1640 Partial Relinquishment Location Plan</td>
<td>1:300 000</td>
</tr>
</tbody>
</table>
1. **SUMMARY**

Exploration Licence (EL) 1640 Keats was applied for by Ashton Mining Limited and Ashton Operations Australia Limited (“Ashton”) in June 1977. This EL formed part of the Yambarra Project that was primarily focused on diamond exploration. The tenement is located approximately 230 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).

This partial surrender report describes the exploration completed up to the 22nd of August 2005. This is the first relinquishment with a total of 178 sub blocks relinquished and 178 sub blocks retained.

The tenement covers parts of the Palaeozoic Bonaparte Basin. Various degrees of weathering and lateritisation have occurred in the region.

No on-ground exploration was completed on the surrendered blocks. Exploration activities focused on reviewing data from the broader Yambarra Diamond Project and reviewing remote sensed data, including digital terrain images and TM scenes to identify areas of potential for bauxite.

2. **CONCLUSIONS AND RECOMMENDATIONS**

The area covered by EL 1640 is mostly flat and includes alluvial plains of the Moyle River and therefore diamond gravel sampling was deemed not an appropriate technique and hence no sampling was conducted within this tenement as part of the Yambarra diamond exploration programme. The diamond exploration results from adjacent tenements to the east were not encouraging and therefore further work for diamonds is not warranted in this tenement.

An assessment of the region for bauxite highlighted the elongate plateau to the southwest of the Moyle River plains as having potential.

3. **INTRODUCTION**

This tenement was applied for by Ashton Mining Limited and Ashton Operations Australia Limited (“Ashton”) on 2nd June 1977. This tenement formed part of a contiguous block of applications 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). This EL has been reported with the Yambarra Project in annual reports.
The tenement was granted to Ashton on 23rd September 2002. Ashton was acquired by Rio Tinto (RTE) in late 2000. This partial surrender on the 22nd of August covers 178 sub blocks with the retained tenement covering 178 sub blocks in two areas. Tenement details are included in Table 1 below. The relinquished area is shown on Plan WAp46376.

All exploration was completed in accordance with a DBIRD lodged and approved Mine Management Plan (Smith et al 2003). There was no exploration completed on this tenement however it formed part of the larger Yambarra Project.

**Table 1: Tenement Details**

<table>
<thead>
<tr>
<th>Tenement No.</th>
<th>Tenement Name</th>
<th>Owner/ship</th>
<th>Application Date</th>
<th>Grant Date</th>
<th>No. Blocks Applied</th>
<th>No. Blocks Granted</th>
<th>No. Blocks retained</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL1640</td>
<td>Keats</td>
<td>AO (Australia) Pty Limited</td>
<td>02/06/1977</td>
<td>23/09/2002</td>
<td>389</td>
<td>356</td>
<td>178</td>
</tr>
</tbody>
</table>

**4. PREVIOUS EXPLORATION**

Minimal previous exploration has been conducted within the project area. A search of previous tenement history shows that there has not been any mineral licences held over the area of EL1640. There has been exploration for petroleum with a seismic line across the area.

**Table 2: Previous Exploration Summary**

<table>
<thead>
<tr>
<th>Year</th>
<th>Company</th>
<th>Tenement</th>
<th>Exploration Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1968</td>
<td>Aquitane</td>
<td>?</td>
<td>Seismic traverse</td>
</tr>
<tr>
<td>1971</td>
<td>Utah Development Company</td>
<td>CL 173</td>
<td>Coal exploration – 18 holes on three traverses (CR1973-0082)</td>
</tr>
</tbody>
</table>

**5. GEOMORPHOLOGY**

The tenement sits within the Cambridge Gulf Lowlands (Paterson, 1970), which is underlain by sediments of the Bonaparte Basin. A few small hills of Permian sediments occur. The marshy lowlands of the Moyle River form a large part of the area and this is mostly included in the surrendered blocks.

**6. GEOLOGY**

The geology is described in the explanatory notes for the 1:250,000 Port Keats sheet by Morgan 1972.
The tenement is underlain by sediments of the Palaeozoic Bonaparte Basin.

The surrendered area is mostly covered by alluvium of the Moyle River plain with minor outcrops of Permian sediments of the Port Keats Group.

The dominant structural feature of the area the north trending Moyle River Fault that is mapped from seismic data.

7. **GEOPHYSICS**

The project area is covered by a regional scale aeromagnetic survey flown east west at 500m line spacing (100 m elevation) in 1994 by AGSO (Medusa Banks, Port Keats, Survey).

Digital terrain data has been acquired and processed to assess areas for plateaus that may be prospective for bauxite.

8. **EXPLORATION COMPLETED**

Exploration completed within the relinquished area included:

- Review of previous exploration.
- Review of the area for diamond gravel sample suitability.
- Interpretation of existing TM data.

9. **ENVIRONMENT**

No fieldwork was completed within the surrendered part of El 1640. All work on the Yambarra diamond project, which this tenement was part of, was done under the Mine Management Plan Report No. 25615 (Smith et al 2003).

10. **PROPOSED EXPLORATION**

There is potential for bauxite in the retained area. The proposed exploration includes a field inspection and possibly auger drilling the profile, however approval at a Work Clearance Meeting with the Traditional landowners will be required.
REFERENCES


Smith, S.L. & Curtis R. A., 2003 Mine Management Plan Yambarra, EL3403 Barwolla, EL6517 Cui-e-ci Creek, EL3404 Fitzmaurice, EL 6551 Greenwood, EL1640 Keats, EL1923 Keats 2, EL3406 Keyling, EL1641 Port Keats, EL1638 Port Keats 1, EL1639 Port Keats 2, EL6516 Tom Turners Creek, SD5211 Port Keats, SD5212 Fergusson River, SD5207 Cape Scott, Northern Territory. RTE Report Number 25615.


Rheinberger, G. M., Second annual report for the period ending 22 September 2004, EL 2004 1638 Port Keats 1, EL 1639 Port Keats 2, EL 1640 Keats, EL 1641 Port Keats, EL 1923 Keats 2, EL 3403 Barwolla, EL 3404 Fitzmaurice, EL 3406 Keyling, EL 3616 Tom Turner's Creek, EL 6517 Cui-e-ci Creek, EL 6551 Greenwood, EL 22218 Fitzmaurice 4, Yambarra project, Northern Territory. RTE Report Number 27166.

LOCALITY

Port Keats SD 5211 1:250 000

DESCRIPTOR

Partial Surrender Report for the period Ending 22 August 2005, EL 1640 Keats, Yambarra Project, Northern Territory. Located within the Daly River / Port Keats Aboriginal Land Trust, Northern Territory, Australia. Exploration activities were part of the larger diamond programme undertaken within the Yambarra region. No fieldwork was conducted within EL 1640. A review has indicated that there may be potential for bauxite in the retained blocks.

KEYWORDS

Port Keats, Diamonds, Bauxite, Permian.