



Rio Tinto Exploration Pty. Limited

ABN 76 000 057 125 / ACN 000 057 125

A member of the Rio Tinto Group

Final Report
For the Period 12 November 2008 to January 2009
EL 22/2006
Yambacoona Mineral Sands Project
Yambacoona, King Island
Tasmania

Exploration Report No. 28386

Tenement Holder: Rio Tinto Exploration Pty Limited

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Author: S Bishop

Submitted: D Palmer

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LIST OF PLANS

| Plan No. | Title | Scale |
|-----------|-------------------|-----------|
| pTi07_016 | Tenement Location | 1:250 000 |

1. SUMMARY

The Exploration Licence (EL) 22/2006 Yambacoona was granted to Rio Tinto Exploration Pty Limited (RTX) on 13 November 2006 for a five year term. The EL is located in the north-western portion of King Island and covers Pleistocene sand units considered prospective for mineral sands within the lower and upper shore face sand units.

During the tenure period field work was undertaken by RTX which consisted of radiometric data processing and reconnaissance and soil auger sampling for heavy minerals over radiometric targets.

During the second year attempts were made to divest the tenement to a third party with the financial and technical wherewithal to undertake an aircore drilling programme to test the heavy mineral potential of the target sand units.

Commercial terms were received but no agreement has been concluded. Application was made to surrender the tenement in January 2009.

2. INTRODUCTION

EL 22/2006 Yambacoona was granted to RTX on 13 November 2006. The EL occupies an area of 179km² in the north-western portion of King Island. The initial term of the EL is for five years. RTX holds a 100% interest in the title. Plan pTi07_016 shows the location of the tenement.

Primary access to the EL is north from the town of Currie on the west coast of King Island. REX provides a daily air service from Melbourne to Currie airport using a SAAB turbo prop aircraft. Access within the tenement is via generally good council maintained roads and farm tracks on freehold farms. Dairy and beef cattle grazing are the dominant forms of land use within the tenement area.

The tenement was applied for to search for economic heavy mineral concentrations within shallow marine or shore face sand units within the Pleistocene sand units which occupy the north western portion of King Island.

This report details the exploration carried out during the period between 13 November 2007 and 12 November 2008 by RTX to satisfy statutory requirements of the Tasmanian Mineral Resources Development Act (1995).

3. LICENCE DETAILS**Table 1: Licence Details**

| Tenement Name | Tenement No. | Tenement Owner | Application Date | Grant Date | Current Area (km ²) |
|---------------|--------------|-----------------------------------|------------------|------------|---------------------------------|
| Yambacoona | 22/2006 | Rio Tinto Exploration Pty Limited | 5/05/2006 | 13/11/2006 | 179.00 |

4. GEOLOGY

Sedimentary units within the EL form part of the Pleistocene sand plain occupying the northern part of King Island between the Proterozoic-Palaeozoic granitic complex to the south of the island and isolated granitic outliers along the northern tip of King Island. This sand plain is interpreted to have been formed during the Pleistocene by a series of marine transgressions and regressions. Heavy minerals might have been concentrated in lower and upper shore face sand units in the resultant sedimentary package. Quaternary carbonate sand dunes occupy the western coastal margin of the tenement area.

The relationship of these stratigraphic units is shown in Table 2.

Table 2: Stratigraphy of EL 22/2006

| Age | Formation | Rock Types |
|-------------------|------------------|---------------------------------------|
| Quaternary | Undifferentiated | Carbonate dune sand. Gypsiferous clay |
| Pleistocene | Undifferentiated | Sand, silt, peat |
| Middle Palaeozoic | Undifferentiated | Undifferentiated granitic rocks |
| Proterozoic | Undifferentiated | Undifferentiated granitic rocks |

5. PREVIOUS EXPLORATION ACTIVITIES – TENURE YEAR ONE

During the first year of tenure a radiometric airborne survey data was processed and used to generate targets indicative of radioactive mineral bearing sands. A thorium/uranium radiometric anomaly located in the south west portion of the EL was examined by limited hand auger holes to depths of 2.0 to 4.2 metres. Sand samples from this augering programme were tested with heavy liquid separation with grades of 1.5 to 4.0% HMS being encountered. SEM modal mineralogy indicated zircon content of 7 to 12%, rutile content of 3 to 9.6%, leucoxene content of 3.2 to 19.6% and ilmenite content of 17.4 to 24.5%. (Muggeridge, 2007)

6. EXPLORATION ACTIVITIES – TENURE YEAR TWO

No field activities were undertaken by RTX during the second tenure year.

It was deemed that an aircore drilling programme be undertaken to test the heavy mineral potential of the target sand units within the southwestern portion of the EL.

Negotiations were undertaken with junior third parties to complete the aircore programme as part of the divestment of the King Island mineral sand project. Commercial terms were received but no agreement has been concluded.

7. ENVIRONMENT

No ground disturbing activity was undertaken during the tenure year.

8. EXPENDITURE

Exploration expenditure incurred by RTX for the period ending between November 2008 and January 2009 was \$0

The total expenditure on the tenement is \$81,693.00.

REFERENCES

Muggeridge, G D, 2007 Annual Report for the Period 13 November 2006 to 12 September 2007, Yambacoona Sands Project, EL 22/2006 Yambacoona, King Island, Tasmania. RTX Report No. 28098

LOCALITY

| | | |
|-------------|---------|-----------|
| King Island | SK55-01 | 1:250 000 |
|-------------|---------|-----------|

KEYWORDS

King Island, Pleistocene, Quaternary, Sand-Placer, Sandstone, Sand, Heavy Minerals, Divestment, rutile, ilmenite, leucosene, zircon, monazite