



## **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 24 July 2003,  
EL 22333 Mucka Waterhole,  
Victoria Diamond Programme,  
Limbunya SE52-07,  
Northern Territory,  
Australia

### **Exploration Report No. 26184**

Tenement Holder: Rio Tinto Exploration Pty Limited

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## **SUMMARY OF ACTIVITIES**

EL 22333 Mucka Waterhole is located in the south east corner of the Limbunya SE 52-07 1:250,000 map sheet, 400 km SW of Katherine, western Northern Territory, Australia. EL 22333 was granted to Ashton Exploration Australia Pty Ltd on 9 July 2002. Ashton and the EL application were acquired by Rio Tinto Ltd in late 2000. The EL is one of a group of 21 contiguous granted EL's and EL applications held by Rio Tinto Exploration Pty Ltd (RTE) in the region and referred to as the Victoria Diamonds Project.

Ashton Exploration had previously gravel sampled the area now covered by EL 22333. One sample central to the EL returned a diamond just downstream from three tributaries containing chromite. Samples containing indicator minerals cluster into six areas within the EL.

EL 22333 overlies the dissected and well drained Cambrian basalt terrain lying at a lower topographic level just to the south of the Limbunya Plateau. Microdiamonds and other indicator minerals have been found in existing creeks draining the plateau and on the plateau surface. A number of geomorphological lineaments can be interpreted traversing the EL. One east-west trending lineament is associated with the river from which the gravel sample containing the diamond was collected.

In the central south of the EL there is a prominent magnetic belt trending north-south that has yet to be explained. This belt might represent uplifted, magnetised Proterozoic metamorphics beneath the Cambrian basalts. The single diamond-bearing gravel sample overlies the margin of the magnetic belt.

During the current reporting period RTE assessed available geomorphological, geological, geophysical and historical sampling datasets for EL 22333 but no field-based exploration was carried out. As no advanced kimberlite targets were identified from the data review it was decided that EL 22333 should be divested along with neighbouring tenement of the Victoria Diamond Project. During the reporting year exploration data was packaged and presented to interested parties. At the time of writing this report the divestment was being finalised with one of these parties.

## VERIFICATION LISTING

Exploration Work Type	File Name	Format
<b>Office Studies</b>		
Literature search		
Database compilation		
Computer modeling		
Reprocessing of data		
General research		
Report preparation	26184 Mucka Waterhole.pdf	.pdf
Other (specify)	WAp45719.pdf (Tenement Location Plan)	.pdf
<b>Airborne Exploration Surveys</b>		
Aeromagnetics		
Radiometrics		
Electromagnetics		
Gravity		
Digital terrain modelling		
Other (specify)		
<b>Remote Sensing</b>		
Aerial photography		
LANDSAT		
SPOT		
MSS		
Radar		
Other (specify)		
<b>Ground Exploration Surveys</b>		
<b>Geological Mapping</b>		
Regional		
Reconnaissance		
Prospect		
Underground		
Costean		
<b>Ground Geophysics</b>		
Radiometrics		
Magnetics		
Gravity		
Digital terrain modelling		
Electromagnetics		
SP/AP/EP		
IP		
AMT		
Resistivity		
Complex resistivity		
Seismic reflection		
Seismic refraction		
Well logging		
Geophysical interpretation		
Other (specify)		
<b>Geochemical Surveying</b>		
Drill sample		
Stream sediment		
Soil		
Rock chip		
Regolith		
Water		
Biogeochemistry		
Isotope		
Whole rock		
Mineral analysis		
Other (specify)		
<b>Drilling</b>		
Aircore		
Auger		
Diamond		
Reverse circulation		
Rotary air blast		
Rotary percussion		
Tungsten carbide bit (coring)		
Groundwater drilling		
All drilling		
<b>File Verification Listing (this table)</b>	26184 Mucka Waterhole V.pdf	.pdf