



## **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 8 July 2003,  
EL 22740 Larrimah 1, EL 22741 Larrimah 2,  
EL 22742 Larrimah 3, EL 22743 Larrimah 4,  
EL 22340 Nutwood Downs and EL 22343 Kempsey Creek,  
Hodgson Diamonds Programme,  
Hodgson Downs SD 53-14, Larrimah SD 53-13,  
Daly Waters SE 53-01, Tanumbirini SE 53-02,  
Northern Territory,  
Australia

**Exploration Report No. 26167**

Tenement Holder: Rio Tinto Exploration Pty Limited

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## **SUMMARY OF ACTIVITIES**

EL 22740 Larrimah 1, EL 22741 Larrimah 2, EL 22742 Larrimah 3, EL 22743 Larrimah 4, EL 22340 Nutwood Downs and EL 22343 Kempsey Creek are located about 215 km SE of Katherine and east of the Larrimah and Maryfield Station homesteads adjacent to the Stuart Highway. All six EL's were granted on 9 July 2002. They comprise part of a larger tenement block held by RTE in the area and referred to as the Hodgson Diamonds Project.

During the current reporting period RTE reviewed all available geomorphological, geological, geophysical, drilling and previous diamond sampling data for the six EL's.

The tenement block overlies the north east margin of the lateritised Cretaceous Dunmarra Basin that forms a large, poorly drained plateau. Drainage is better developed in the eastern half of the tenement block. Lateritised Cretaceous sediments overlie Cambrian Nutwood Volcanics flood basalts, Neoproterozoic Bukalara Sandstone and Mesoproterozoic Roper Group. The Packsaddle and Blackjack kimberlite dykes are located about 50 km to the north. Major NW-SE, N-S and NE-SW trending structural lineaments that intersect within the tenement block can be interpreted from geomorphological, geological and geophysical data. Some of these lineaments can be extrapolated along strike to other kimberlite provinces in northern Australia.

Both CRA Exploration and Ashton Exploration Australia previously explored the area covered by the tenement block for diamondiferous kimberlites. Both companies focussed most of their effort into gravel sampling the well-developed drainages within the eastern half of the block, i.e., within the Strangways and Hodgson River catchments. Microdiamonds and other indicator minerals (kimberlitic and non-kimberlitic chromite) were identified in a number of drainages. The distribution of the indicator minerals suggests multiple geographic sources on the lateritised plateau. The source of the indicator minerals remains enigmatic. Ashton Exploration tested a sinkhole crater with one RAB hole without success.

RTE failed to identify any high priority kimberlite targets requiring immediate attention from the review. Divestment of the Larrimah tenement block is currently being finalised.

### VERIFICATION LISTING

Exploration Work Type	File Name	Format
<b>Office Studies</b>		
Literature search		
Database compilation		
Computer modelling		
Reprocessing of data		
General research		
Report preparation	26167 Larrimah.pdf	.pdf
Other (specify)	WAp45676 (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>	26167 Larrimah V.pdf	.pdf