



Rio Tinto Exploration Pty. Limited

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A member of the Rio Tinto Group

First Annual Report
for the Period Ending 23 August 2003,
EL 10190 Puzzle Creek East, EL 10429 Robinson River South,
and EL 22754 Coanjula Creek,
McArthur Diamonds Programme,
Calvert Hills SE 53-08,
Northern Territory,
Australia

Exploration Report No. 26168

Tenement Holder:	Rio Tinto Exploration Pty Limited
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SUMMARY OF ACTIVITIES

EL 10190 Puzzle Creek East, EL 10429 Robinson River South and EL 22754 Coanjula Creek comprise part of Rio Tinto Exploration's McArthur Diamonds Project located on the margin of the McArthur Basin, Northern Territory, Australia. The three EL's were granted in July 2002.

During the current reporting period RTE completed a review of the results of all available previous exploration, geomorphological, geological and geophysical data for the McArthur Diamonds Project. Based on the results of the review RTE decided to divest all thirteen EL's comprising the Project. RTE's data was packaged and presented to interested resource companies. At the time of completion of this report the divestment was being finalised with a selected joint venture partner.

Both CRA Exploration and Ashton Mining had previously explored the areas now covered by the three EL's. Surface sampling had returned macrodiamonds, microdiamonds and other kimberlitic indicator mineral occurrences. Areas remained to be sampled and several indicator mineral occurrences had not been followed up in much detail. Other exploration techniques had not been applied to the area.

Geomorphology has had an influence on diamond exploration results in the McArthur region. There is an association between kimberlite fields and major diamond prospects with the outer margin of an intermediate level plateau. The three EL's reported here overlie the intermediate level plateau and portions of its outer margin.

The McArthur Diamonds Project tenements overlie the Batten Trough and Wearyan Shelf of the Mesoproterozoic McArthur Basin. Major faults associated with kimberlite fields in the region are interpreted to pass through the McArthur Diamonds Project area. Many of the major diamond prospects identified within the project area are located along, or proximal to, these major faults and/or their interpreted intersections or splays. Repetitions of the regional structure associated with the Merlin kimberlite field might exist within the three EL's.

Kimberlitic intrusions and other diatremes in the McArthur Basin region are commonly located proximal to major geophysical domain contacts probably mapping major deep-seated structures. The three EL's contain certain gravity and magnetic patterns and lineament trends that potentially represent favourable tectono-structural settings that control the locations of kimberlitic intrusions and other breccia pipes in the McArthur Basin.

VERIFICATION LISTING

Exploration Work Type	File Name	Format
Office Studies		
Literature search		
Database compilation		
Computer modelling		
Reprocessing of data		
General research		
Report preparation	26168 McArthur East.pdf	.pdf
Other (specify)	WAp45677 (Tenement Location Plan)	.pdf
Airborne Exploration Surveys		
Aeromagnetics		
Radiometrics		
Electromagnetics		
Gravity		
Digital terrain modelling		
Other (specify)		
Remote Sensing		
Aerial photography		
LANDSAT		
SPOT		
MSS		
Radar		
Other (specify)		
Ground Exploration Surveys		
Geological Mapping		
Regional		
Reconnaissance		
Prospect		
Underground		
Costean		
Ground Geophysics		
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)		
Geochemical Surveying		
Drill sample		
Stream sediment		
Soil		
Rock chip		
Regolith		
Water		
Biogeochemistry		
Isotope		
Whole rock		
Mineral analysis		
Other (specify)		
Drilling		
Aircore		
Auger		
Diamond		
Reverse circulation		
Rotary air blast		
Rotary percussion		
Tungsten carbide bit (coring)		
Groundwater drilling		
All drilling		
File Verification Listing (this table)	26168 McArthur East V.pdf	.pdf