



Rio Tinto Exploration Pty. Limited

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A member of the Rio Tinto Group

First Annual Report
for the Period Ending 22 July 2003,
EL 22397 Mount Eleanor,
Hodgson Diamonds Programme,
Urapunga SD 53-10,
Northern Territory
Australia

Exploration Report No. 26173

Tenement Holder:	Rio Tinto Exploration Pty Limited
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SUMMARY OF ACTIVITIES

EL 22397 Mount Eleanor is located just to the north of the Roper Highway about 190 km ESE of Katherine, Northern Territory. The EL is not contiguous with, but comprises part of, a larger tenement group in the area held by Rio Tinto Exploration Pty Limited (RTE) and referred to as the Hodgson Diamonds Project.

During the current reporting period RTE reviewed available geomorphological, geological, geophysical and previous sampling data for EL 22397.

The Packsaddle and Blackjack kimberlites were discovered in the late 1980's about 10 km south of EL 22397. Previous reconnaissance gravel sampling within the area covered by the EL did not identify any kimberlitic indicator minerals.

EL 22397 overlies gently deformed Roper Group intruded by dolerite sills within the Mesoproterozoic McArthur Basin. Within EL 22397 a major ESE-WNW trending fault intersects a N-S trending fault zone that traverses the Packsaddle-Blackjack kimberlite field 10 km to the south. The intersection of interpreted regional N-S and ESE-WNW trending structural lineaments in the tenement block attracts comparisons with the regional structural configuration of the Merlin kimberlite field 340 km to the south east.

Interpretation of regional geophysical data sets by RTE indicates that EL 22397 and the Packsaddle-Blackjack kimberlites are located along the margin of a regional magnetic high similar to that observed at the Merlin Diamond Mine. The EL is also located proximal to the intersection of three interpreted cratonic-scale geophysical lineaments trending NE-SW, WNW-ESE and N-S. The interpretation suggests that the Packsaddle and Blackjack kimberlites and EL 22397 all lie proximal to the tectonised margin of cratonic-scale basement structural blocks, possibly a triple point junction of blocks.

Following the review RTE packaged the exploration data for the Hodgson Diamonds Project and presented it to various interested diamond exploration companies. The divestment is currently being finalised with a diamond exploration company that has the financial and geotechnical abilities to progress the project.

VERIFICATION LISTING

Exploration Work Type	File Name	Format
Office Studies		
Literature search		
Database compilation		
Computer modelling		
Reprocessing of data		
General research		
Report preparation	26173 Mount Eleanor.pdf	.pdf
Other (specify)	WAp45703.pdf (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)	26173 Mount Eleanor V.pdf	.pdf