EL 5953 MOUNT LEAN
ARNHEM LAND, NT

ANNUAL REPORT

ON EXPLORATION ACTIVITIES
YEAR FIVE OF TENURE
3 AUGUST 2004 – 2 AUGUST 2005

submitted by

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on behalf of
Diamond Mines Australia Pty Ltd
and
Rio Tinto Exploration Pty Ltd

EL 5953 Mount Lean
Holder: Rio Tinto Exploration Pty Ltd
Grant Date: 3 August 2000
1:250,000 Sheet : Urapunga SD 53-10,
Minerals Sought: Diamonds, Base metals
SUMMARY

EL 5953 forms part of a farmin agreement between Rio Tinto Exploration Pty Ltd (“Rio Tinto”) and Diamond Mines Australia Pty Ltd (“DMA”) covering numerous Rio Tinto-controlled tenements and applications in the Northern Territory. Under this agreement, DMA is conducting predominantly diamond exploration over the tenements and is utilising the newly-developed Falcon® airborne gravity gradiometer system, which has been shown to be very effective in detecting kimberlite pipes.

Gravity Diamonds Ltd is managing the farmin arrangement for Diamond Mines Australia and owns 100% of DMA.

During year 4 of tenure (2003-2004), a portion of the tenement was flown with the Falcon® system. The survey covered an area of approximately 75 km² (825 line kms) at the southern margin of the tenement with the greater part of the survey being over the neighbouring tenement to the south, which is also included in the farmin agreement between Rio Tinto and DMA.

Survey results were processed in early 2004 and the interpretation / target definition activities were completed in late 2004. Field follow up was planned during the latter stages of the 2004 dry season but work and access clearances sought from Traditional Owners through the Northern Land Council were not forthcoming until February 2005.

Eight target areas have been identified as warranting field testing and a helicopter-supported sampling and mapping program is scheduled for September 2005.

Expenditure on the tenement during the reporting period totalled $60,442.
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1. EL 5953 Tenement Location
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INTRODUCTION

EL 5953 was granted to Rio Tinto Exploration Pty Ltd (“Rio Tinto”) on 3 August 2000. Since that time, Rio Tinto has established the diamond prospectivity of the area with helicopter-supported surface sampling. During 2003, Rio Tinto concluded an exploration agreement with Gravity Capital Limited (“Gravity”, now renamed Gravity Diamonds Limited) and Diamond Mines Australia Pty Ltd concerning the deployment of the Falcon™ airborne gravity gradiometer system over Rio Tinto’s diamond tenements in northern Australia (ASX announcement by Gravity 25/07/2003). The Falcon® system is a unique exploration tool developed by BHP Billiton and it has particular application in diamond exploration. In essence, the agreement provides for DMA to deploy the Falcon® system and earn an interest in any discovery. BHP Billiton retains a right to buy into DMA’s interest in any discovery. Gravity is managing all exploration for DMA and owns 100% of DMA.

On the basis of this agreement, Gravity (on behalf of DMA) commenced diamond exploration in the Northern Territory during July 2003.

The 2003 flying program covered parts of EL’s 5953 and the adjacent EL 5954, and focussed on areas of strongly anomalous diamond indicator mineral sampling results, obtained from Rio Tinto’s prior work.

While the principal target in the area is diamonds, some interest is also directed toward base metal deposits.

LOCATION AND ACCESS

EL 5953 Mount Lean is located in an isolated area within the freehold Arnhem Land Aboriginal Land Trust, Northern Territory (figure 1). Access to the area is via the Central Arnhem Highway that passes through the Bulman Zn-Pb district which lies 25 km northwest of the EL. Rio Tinto has only accessed the project area by helicopter.
GEOLOGICAL SETTING and ECONOMIC POTENTIAL

EL 5953 lies on the Arnhem Shelf of the northern and central portion of the 1800-1400Ma McArthur Basin. The broad stratigraphy on the Shelf is as follows:

- **Cretaceous sediments** form isolated plateaus.
- **Cambrian Bukalara Sandstone/Wessel Group** (Arafura Basin).
- **Dolerite dyke and sill intrusions.**
- **1400Ma Roper Group** sandstone, iron formations and shales.
- **1550Ma Mt Rigg Group/Nathan Group** carbonates, minor sandstone; Bulman Zn-Pb mineralisation.
- **1700Ma Katherine River Group** sandstone. Uranium mineralisation occurs in the basal Kombolgie Formation at Jabiluka, Pine Creek Inlier.
- **+1800Ma granite basement.**

EL 5953 comprises gently deformed Roper Group sediments containing dolerite sills and dykes that form part of the Urapunga Tectonic Ridge that separates the Walker and Batten troughs to the north and south respectively. Proximal to the tenement, the regional NW-SE Bulman Fault corridor intersects a major N-S trending fault zones related to the Walker Trough. The regional structural configuration of the basin in this area is considered favourable to the development of base metal deposits and the intrusion of kimberlite diatremes.

PREVIOUS EXPLORATION

EL 5953 lies in the Arnhem Land region of the Northern Territory where very little modern mineral exploration has been carried out. Western Nuclear completed some reconnaissance regional exploration in the region between 1965 and 1969 but failed to locate any mineralisation.

During the first reporting period Rio Tinto completed reconnaissance drainage sampling for kimberlite indicator minerals. This sampling returned grains of chromite, garnet, ilmenite and picroilmenite but no micro diamonds. It was interpreted that the chromite, garnet and ilmenite were of crustal origin, while the picroilmenite might be sourced from kimberlite.

Reconnaissance stream sediment samples were also collected by Rio Tinto and assayed for a broad multi-element suite. No significant geochemical anomalies for base metals were identified.

Subsequent work by Rio Tinto consisted of a review of the exploration data for EL 5953 relative to it’s Australia-wide diamond exploration tenement holdings. It was recognised that:

- The reconnaissance sampling completed during the initial reporting period did not provide a comprehensive coverage of the tenement and large areas remain to be tested for the first time with reconnaissance sampling.
More detailed reconnaissance sampling coverage on EL 5954, the contiguous tenement immediately to the south, provided some encouragement to persist.

During 2002 Rio Tinto assessed the status of its extensive diamond exploration tenement holdings around Australia. EL 5953 and the contiguous EL 5954 were selected for divestment and this resulted in the above mentioned Exploration Agreement with Gravity and DMA.

Review of available geophysical and geochemical data was carried out by Gravity (managing the project on behalf of DMA) in 2003 and this confirmed considerable potential for diamondiferous kimberlites. EL 5953 and particularly the neighbouring tenement EL 5954 which also forms part of the Exploration Agreement were shown to contain numerous microdiamonds and kimberlitic indicator minerals. On this basis, the decision was made to fly the Falcon system over part of EL 5953.

The Falcon airborne gravity gradiometer survey was flown in November 2003. In addition to the gravity gradiometer data, the Falcon™ system recorded total magnetic intensity and laser scanner data, which is used to construct a very accurate (1m vertical resolution) digital elevation model.

The survey was flown by Fugro Airborne Surveys under contract to BHP Billiton, who developed the Falcon system and controls its deployment worldwide. Coverage was flown on north-south oriented lines, 100m apart at a height of 80m above ground level. A total of approximately 75 km² within the tenement comprising a total of approximately 825 line kilometres was completed.

Processing and preliminary interpretation was carried out by BHP Billiton and delivered to Gravity in March 2004.

Interpretation and exploration targeting proceeded during 2004 with a number of target areas being recognised for initial investigation.

WORK COMPLETED IN YEAR 5

On completion of interpretation and targeting, a total of 8 areas were identified for field sampling and mapping (figure 3). The process of obtaining clearance for access and approval of work programs through the Northern Land Council commenced during 2004 but approvals were not forthcoming until February 2005. A helicopter-supported field program to test these target areas is scheduled for September 2005.

ENVIRONMENT AND REHABILITATION

No requirement for rehabilitation arose during the reporting period as no on-ground field work was carried out.
CONCLUSIONS AND RECOMMENDATIONS

EL 5953 lies within an area of anomalous kimberlitic indicator sampling results. A critical part of the tenement has been flown with the Falcon™ system airborne gravity gradiometer system and eight initial target areas have been recognised. Field testing of these targets will occur within the 2005 field season.

Recommendations for further exploration will be based on further interpretation of the Falcon data and the results of initial reconnaissance field sampling.

PROPOSED EXPLORATION BUDGET

Field support & logistics $8,000
Personnel costs $7,000
Sampling and sample analysis costs $10,000
Administration, legal, overhead $5000
TOTAL $30,000

EXPENDITURE STATEMENT

Tenure/Legal $27,047
Consultants $12,517
Professional personnel $10,683
Data processing / computing $2,438
Cartography $540
Travel and accommodation $1,722
Administration/overhead $5,495
TOTAL $60,442
NORTHERN ARNHEM ELA's IN MORATORIUM

ARNHEM PROJECT BENDA-MT LEAN EL's

Legend

- EL5953
- Other local tenements included in the Rio-DMA Joint Venture

Figure 1

Arnhem Project Area
EL5953 Location Map

Diamond Mines Australia

Date: 28/07/2005
Author: D Isles
Office: West Perth
Software: nicolcad
Projection: Longitude / Latitude (NAD 83)
Scale: 1:1000000

Workspace
Figure 2

Arnhem Project Data
EL5953
Regional Geology and FALCON® Survey

REFERENCE

EL5953
FALCON® Survey boundary
Talbo Formation
Derim Derim Dolomite
Hodgson Sandstone
Corozon Formation
Arnold Sandstone
Crawford Formation
Minoru Formation

Talboi Formation
Derim Derim Dolerite
Hodgson Sandstone
Corozon Formation
Arnold Sandstone
Crawford Formation
Minoru Formation
Rio Tinto / DMA Joint Venture Licence

Target Areas cleared for reconnaissance sampling

Extract of Benda, Nymbilli & Phelp 1:100 000 topographic maps.

FALCON® Gravity Gradiometer Survey.

Figure 3

Rio Tinto / DMA Joint Venture Licence

Target Areas cleared for reconnaissance sampling

Extract of Benda, Nymbilli & Phelp 1:100 000 topographic maps.

FALCON® Gravity Gradiometer Survey.