



**EL 10072 WATERLOO  
VICTORIA RIVER REGION, NT**

**ANNUAL REPORT**

**ON EXPLORATION ACTIVITIES  
YEAR TWO OF TENURE  
PERIOD ENDING 10 APRIL 2005**

**Submitted by**

**GRAVITY DIAMONDS LIMITED**

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**Level 7, Exchange Tower**

**530 Little Collins Street, Melbourne, Victoria, 3000**

**On behalf of**

**Diamond Mines Australia Pty Ltd**

**and**

**Ashton Mining Ltd**

EL 10072 'Waterloo'

Holder: Ashton Mining Ltd

Grant Date: 11 April 2003

1:250,000 Sheet: Waterloo

Minerals Sought: diamonds, base metals

## SUMMARY

EL 10072 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 (“Gravity”) is managing the farmin arrangement for DMA which is a wholly owned subsidiary of Gravity.

During the initial year of tenure, a review of historic exploration data, including surface sampling focussed on diamonds, was conducted by Gravity and a number of anomalous results were noted in and around EL 10072.

The planned program for EL 10072 during 2004 was contingent on Gravity achieving access clearance for follow up of Falcon survey targets in the nearby Tee Dee Hill area which, like EL 10072 forms part of the original Rio Tinto “Victoria Project Area”. Gravity was not able to get the required access clearances and this resulted in the postponement of planned exploration on EL 10072 during the 2004 field season. No on-ground work was completed in the tenement during year 2.

This work is now scheduled to commence in 2005.

The tenement however is considered to be prospective for diamondiferous kimberlite pipes on the basis of its geological setting, its general proximity to the Timber Creek kimberlites and because positive indicator mineral results have been returned from sampling on neighboring tenements.

Expenditure on the tenement during the reporting period totalled **\$6,568**.

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1. EL 10072 Tenement Location
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## **INTRODUCTION**

EL 10072 was granted to Ashton Mining Pty Ltd, a wholly owned subsidiary of the Rio Tinto Group (“Rio Tinto”), on 11 April 2003. Rio Tinto was at that time in negotiation with Gravity Capital Limited (“Gravity”) renamed Gravity Diamonds Ltd, concerning the deployment of the Falcon™ airborne gravity gradiometer system over Rio Tinto’s diamond tenements in northern Australia. The Falcon™ system is a unique exploration tool developed by BHPB and it has particular application in diamond exploration.

BHPB and Gravity concluded an arrangement on Falcon™ deployment in Australia during 2003 and then formed a farmin joint venture, through its wholly owned subsidiary company, Diamond Mines Australia Pty Ltd (“DMA”) with Rio Tinto Exploration, concerning the diamond and base metal exploration over a large number of Rio Tinto-controlled tenements in the Northern Territory

On the basis of these agreements, Gravity (on behalf of DMA) commenced flying Falcon Surveys in the Northern Territory during July 2003.

The flying program carried out in 2003 was focussed on areas of strongly anomalous diamond indicator mineral sampling results, obtained from Rio Tinto. Surveys were conducted in the McArthur, Hodgson and Arnhem Land regions of the NT as well as in the Victoria River region which is the general locality of EL 10072. EL 10072 was not covered in the Victoria River survey, the closest flying being at Tee Dee Hill some 15 kilometres to the north.

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

## **LOCATION AND ACCESS**

EL 10072 lies in the northwest and north central portion of the Waterloo 1:250 000 map sheet area in the NW of the Northern Territory. The nearest major towns are Kununurra (75km to the northwest) and Timber Creek (140km to the northeast). EL 10072 is located 140 kilometres southwest of Timber Creek and 30 kilometres southeast of the Waterloo homestead (figure 1). Access to the area is via roads connecting the Waterloo and Limbunya districts.

The eastern half of the EL lies within the Limbunya pastoral lease (PPL1136) with the western part located within the Waterloo pastoral lease (PPL1047).

## **GEOLOGICAL SETTING AND ECONOMIC POTENTIAL**

EL 10072 lies within the Victoria River District of north-western Northern Territory. Sedimentary rocks of the Neoproterozoic Auvergne Group dominated by the Jasper Gorge Sandstone and the Angalarri Siltstone are the most extensively exposed rock types within the EL.

The Jasper Gorge Sandstone is described as a blocky medium quartz sandstone which is strongly cross-bedded and ripple marked. It lies unconformably over shallow marinesediments of the Wondoan Hill Formation and the Wattie Group. The Angalarri Siltstone is a khaki green siltstone with interbeds of fine sandstone and shale, and minor limestone. It lies conformably on the Jasper Gorge Sandstone.

In the southeastern and southwestern parts of EL 10072 the Neoproterozoic lithologies are in part overlain by the Lower Cambrian Antrim Plateau Volcanics that are described as massive and porphyritic basalt flows averaging 30m thick. Sediments and volcanics within EL 10072 are only gently folded, with bed dips rarely exceeding 10 degrees, except where adjacent to faults.

Significant mineralization is not known to occur within the Auvergne Group. The tenement however is considered to be prospective for diamondiferous kimberlite pipes on the basis of its geological setting, its general proximity to the Timber Creek kimberlites and because positive indicator mineral results have been returned from sampling on neighboring tenements.

## **PREVIOUS EXPLORATION**

Historic work in the area included regional aeromagnetic surveys and reconnaissance sampling for diamonds and base metals. While no strongly anomalous results have been returned from the sampling recorded within the tenement, there a number of sample sites in tenements adjacent to EL 10072 which have returned anomalous indicator minerals and/or microdiamonds.

## **WORK COMPLETED IN YEAR 2**

During the 2004 field season, field testing of specific Falcon gravity and magnetic anomalies was scheduled on the adjacent tenement EL 8915 – Tee Dee Hill where a Falcon survey had been completed. The planned program for EL 10072 during 2004 was contingent on Gravity achieving access clearance for follow up of Falcon survey targets in the nearby Tee Dee Hill area which, like EL 10072 forms part of the original Rio Tinto “Victoria Project Area”.

Despite submitting work programs for traditional owner clearance early in 2004, approval to proceed was not forthcoming before the onset of the wet season. This resulted in the postponement of planned exploration on EL 10072 during the 2004 field season.

This work is now scheduled to commence in 2005

## ENVIRONMENT AND REHABILITATION

No requirement for rehabilitation arose during the second year of tenure as no field work was carried out.

## CONCLUSIONS AND RECOMMENDATIONS

EL 10072 lies within an area generally held to be prospective for diamonds. A nearby area was flown with the Falcon airborne gravity system in late 2003 and resulting kimberlite targets were to undergo field testing during 2004. Approval for ground exploration access was not forthcoming during 2004. Approval is likely to be granted in 2005. The outcome of work carried out to test the Falcon targets identified to the north of the tenement in the 2005 field season will determine the degree of exploration during the forthcoming year of tenure.

## PROPOSED EXPLORATION AND BUDGET

Aerial Photography and satellite imagery	\$2,500
Interpretation costs	\$2,500
Field reconnaissance	\$10,000
Sampling and sample analysis costs	\$10,000
<b>TOTAL</b>	<b><u>\$25,000</u></b>

## EXPENDITURE STATEMENT

Legal/Tenement management costs	\$3,689
Professional personnel costs	\$1,850
Data processing / computing costs	\$110
Cartography	\$225
Travel and accommodation costs	\$154
Administration/overhead	\$540
<b>Total</b>	<b><u>\$6,568</u></b>





