



North  
Australian  
Diamonds  
Limited  
ABN 86 009 153 119

# **Partial Relinquishment Report**

## **Exploration Licence 9768**

***Holder:*** Merlin Diamonds Pty Ltd

***Operator:*** North Australian Diamonds Limited

***Reporting Period:*** 10<sup>th</sup> September 2002 to 9<sup>th</sup> September 2007

***Sheet Reference:*** Bauhinia Downs 1:250,000 (SE53-03)

***Due Date:*** December 2007

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Date: 21<sup>st</sup> December 2007

Report No: 07-050

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NADL Library

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## SUMMARY

*This partial relinquishment report details exploration activity for diamond bearing kimberlite intrusives carried out by North Australian Diamonds Limited (NADL) and previous explorers over a relinquished portion of Exploration Licence EL 9768 for the period 10<sup>th</sup> September 2002 to 9<sup>th</sup> September 2007.*

*The exploration licence is located on the Bauhinia Downs (SE53-03) 1:250,000 map sheet and the Glyde (6164) 1:100,000 sheet. Access to the licence is via a 64 kilometre formed gravel access track from the Carpentaria Highway to the Merlin Diamond Mine, the turn-off is approximately 6 kilometres south-west of the McArthur River Mine turn-off.*

*The licence was granted to Ashton Mining (a subsidiary of Rio Tinto) on 10<sup>th</sup> September 2002 for a period of six years and originally comprised 44 blocks for a total of 144 km<sup>2</sup>. NADL acquired the licence from Rio Tinto in 2004.*

*NADL collected thirteen stream samples and seven loam samples over the relinquished portion of the licence. These samples were not processed. This partial relinquishment report covers 22 blocks of the original 44 blocks.*

## 1.0 INTRODUCTION

This report details exploration activity carried out by North Australian Diamonds Limited (NADL) and previous explorers over a relinquished portion of exploration licence EL 9768 for the period 10<sup>th</sup> September 2002 to 9<sup>th</sup> September 2007.

The target for exploration within the licence is diamond bearing kimberlite intrusives.

## 2.0 LICENCE DETAILS

The exploration licence is located on the Bauhinia Downs (SE53-03) 1:250,000 map sheet and the Glyde (6164) 1:100,000 sheet. Access to the licence is via a formed gravel access track from the Carpentaria Highway, the turn-off is approximately 6 kilometres south-west of the McArthur River Mine turn-off. The licence is held under Merlin Diamonds Pty Ltd, which is a subsidiary company of NADL and has changed name from Bulgurri Diamonds Pty Ltd. A location map is shown as Figure 1.

The licence was granted to Ashton Mining (a subsidiary of Rio Tinto) on 10<sup>th</sup> September 2002 for a period of six years and originally comprised 44 blocks for a total of 144 km<sup>2</sup>.

Table 1: Tenement Details

Project Name	Tenement No	Grant Date	Expiry Date	Sub-Blocks	Area (km <sup>2</sup> )
Merlin Orbit	EL9768	10/09/2002	09/09/2008	44	144

## 3.0 GEOLOGY

The exploration licence is located within the geomorphic region referred to as the Bukalara Ranges that consists of high level, dissected rocky plateau and ridges of resistant sediments. The lease is host to the Glyde River, a north-flowing major drainage within the region that discharges to the McArthur River north of the lease and ultimately into the Gulf of Carpentaria.

The oldest rocks that crop out over the lease are middle Proterozoic sediments of the Batten Subgroup of the McArthur River Group and mostly comprise dolomitic siltstones and sandstone. The sediments occur as Proterozoic inliers within the Neoproterozoic Bukalara Sandstone that attains a maximum thickness of up to 100m within the lease. Youngest sediments include surficial deposits of gravel, silt, sand and ferricrete. The lease is host to the Emu Fault, which is a north-northwesterly trending, subvertical fault that marks the approximate eastern boundary of the Batten Fault Zone. This zone is described as a syn-sedimentary graben containing up to 10km of McArthur Group

sediments. Additional associated faults occur within the lease.

The closest known mineral occurrences are the diamondiferous kimberlites of the Merlin kimberlite field located within 15km east of the licence. The proximity of the licence to the Merlin field consider it to be prospective for diamond bearing kimberlites.

#### **4.0 PREVIOUS EXPLORATION**

##### *Year 1 – 2002 to 2003 (Rio Tinto)*

Rio Tinto did not undertake any field based exploration. No samples were collected.

##### *Year 2 -2003 to 2004 (Rio Tinto/Striker Resources)*

Divestment of licence. Striker Resources entered into a 'letter of intent' with Rio Tinto and acquired 100% ownership of EL 22101.

##### *Year 3 – 2004 to 2005 (North Australian Diamonds Limited)*

No samples were collected during the reporting period. Field work involved ground reconnaissance and geological mapping of previously identified indicator mineral anomalies.

##### *Year 4 – 2005 to 2006 (North Australian Diamonds Limited)*

NADL collected thirteen stream gravel samples and seven loam samples on the relinquished portion of the licence as part of a larger sampling program (Figure 2). The samples (see table in Appendix 1) were collected as follow-up to previously identified indicator mineral anomalies and also reconnaissance samples. The samples have not been processed.

##### *Year 5 – 2006 to 2007 (North Australian Diamonds Limited)*

No field work was completed on the relinquished portion of the licence during the reporting period. A total of 22 blocks were surrendered from the original 44 blocks representing a 50% reduction (Figure 1).

#### **5.0 REFERENCES**

Department of Mines and Energy, Northern Territory Geological Survey. Bauhinia Downs 1:250,000 Geological Map Explanatory Notes. 1991.

Thompson, M.J. (2004). Annual Exploration Report – Year 2. Exploration Licence 9768. 10<sup>th</sup> September 2003 to 9<sup>th</sup> September 2004. Striker Resources Report Number 04-035.

Kammermann, M.S. (2005). Annual Exploration Report – Year 3. Exploration Licence 9768. 10<sup>th</sup> September 2004 to 9<sup>th</sup> September 2005. NADL Report Number 05-034.

Kammermann, M.S. (2006). Annual Exploration Report – Year 4. Exploration Licence 9768. 10<sup>th</sup> September 2005 to 9<sup>th</sup> September 2006. NADL Report Number 06-037.

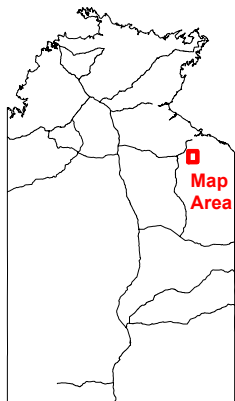
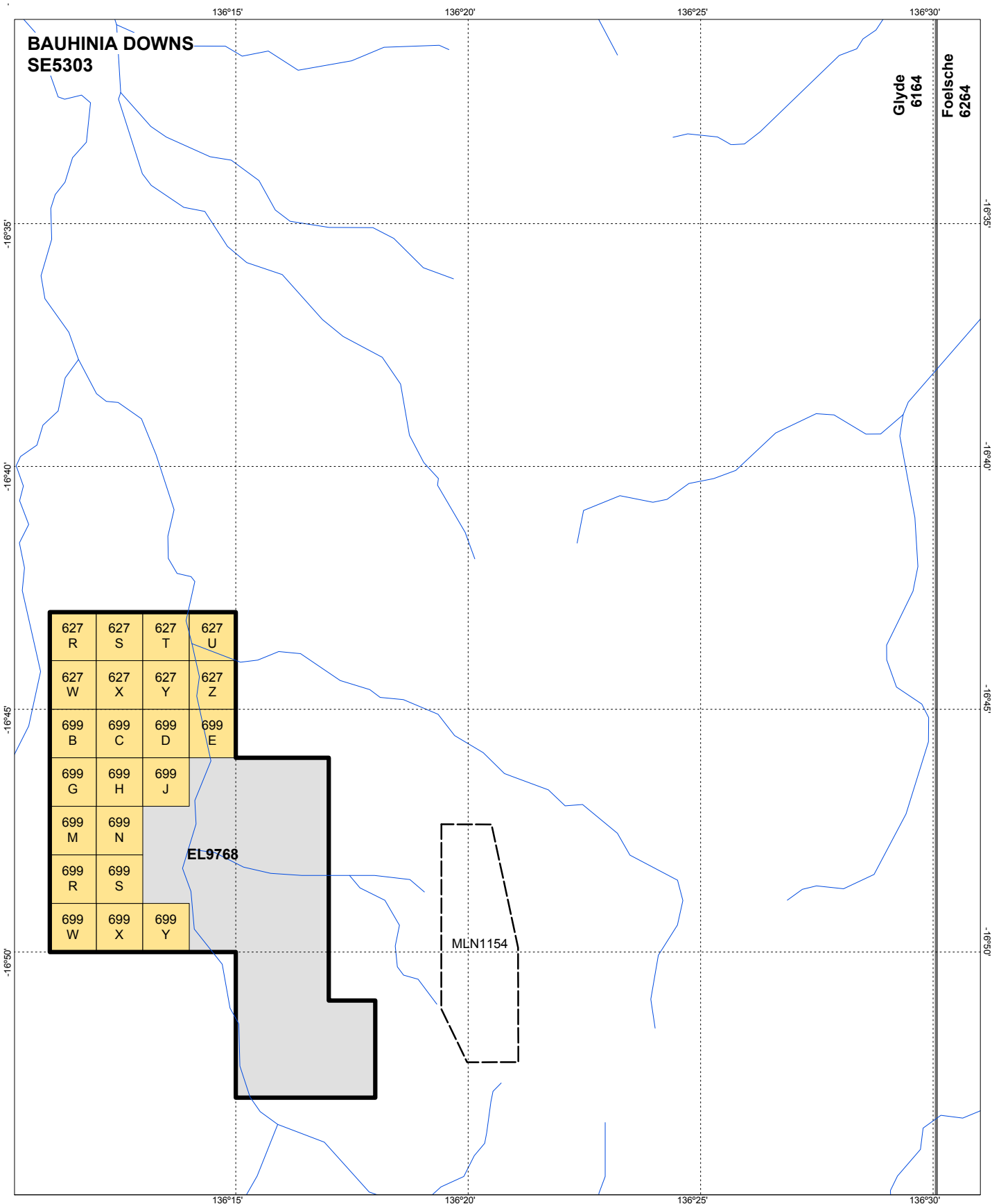
Kammermann, M.S. (2007). Annual Exploration Report – Year 5. Exploration Licence 9768. 10<sup>th</sup> September 2006 to 9<sup>th</sup> September 2007. NADL Report Number 07-043.

# **Appendix 1**

## **Sample Data**

Coordinates (AGD66, Zone 53K)						
Sample No	Easting	Northing	Sample Type	Sample Size (bags)	Sieved	Collection Date
9768-06-001	628,720	8,151,115	Stream	2	1.0mm	28/06/06
9768-06-002	627,535	8,151,000	Stream	2	1.0mm	28/06/06
9768-06-003	627,495	8,148,010	Stream	2	1.0mm	28/06/06
9768-06-004	629,395	8,148,890	Stream	2	1.0mm	28/06/06
9768-06-005	630,210	8,149,100	Stream	2	1.0mm	28/06/06
9768-06-006	630,300	8,147,315	Stream	2	1.0mm	28/06/06
9768-06-007	629,385	8,146,005	Stream	2	1.0mm	28/06/06
9768-06-008	627,610	8,144,950	Stream	2	1.0mm	29/06/06
9768-06-009	628,510	8,142,735	Stream	2	1.0mm	29/06/06
9768-06-010	627,005	8,142,690	Stream	4	1.0mm	29/06/06
9768-06-011	626,840	8,140,810	Stream	2	1.0mm	29/06/06
9768-06-012	628,460	8,140,605	Stream	2	1.0mm	29/06/06
9768-06-013	629,880	8,139,615	Stream	2	1.0mm	30/06/06
9768-06-021	630,030	8,150,020	Loam	4	1.0mm	28/06/06
9768-06-022	628,875	8,149,300	Loam	4	1.0mm	28/06/06
9768-06-023	628,400	8,149,310	Loam	4	1.0mm	28/06/06
9768-06-024	627,005	8,147,400	Loam	4	1.0mm	28/06/06
9768-06-025	627,000	8,146,410	Loam	4	1.0mm	28/06/06
9768-06-026	629,380	8,146,500	Loam	4	1.0mm	29/06/06
9768-06-027	629,800	8,146,900	Loam	4	1.0mm	29/06/06
9768-06-028	629,150	8,142,300	Loam	4	1.0mm	29/06/06
9768-06-039	628,525	8,142,380	Loam	4	1.0mm	1/07/06



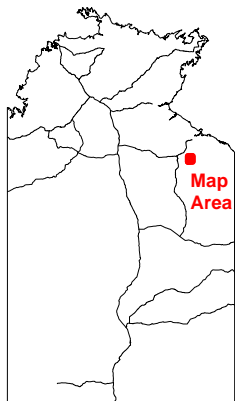
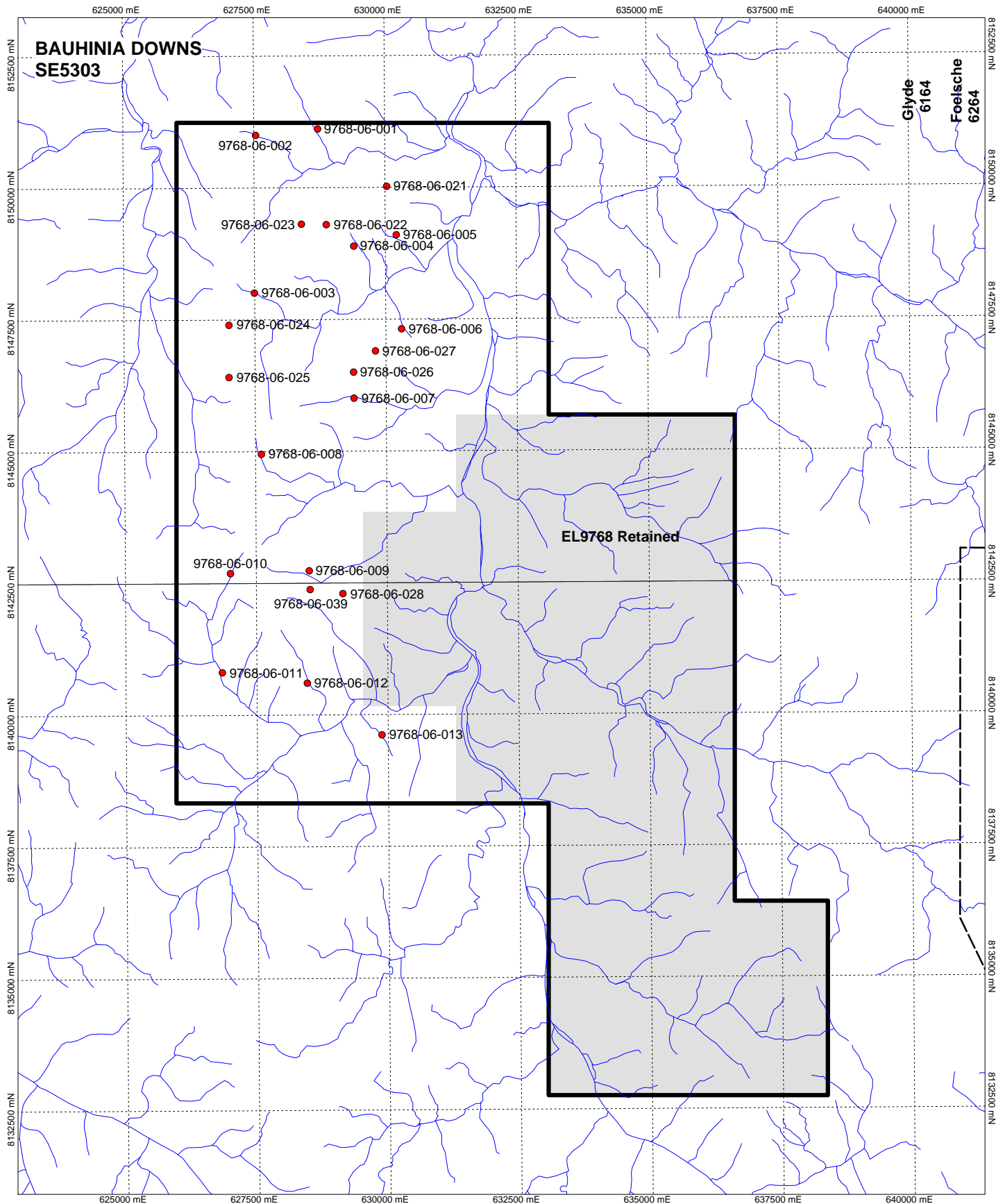


Map  
Area







#### Legend

- Merlin Mining Lease MLN1154
- Drainage
- 100k mapsheet boundary
- EL9768
- Blocks relinquished
- Blocks retained

North Australian Diamonds Ltd	
Date: 10/8/2007	<b>Figure 1</b> <b>Partial Relinquishment</b>
Author:	
Office:	
Drawing:	
Scale: 1:200000	Projection: Longitude / Latitude (Australia GDA94)



#### Legend

-  Merlin Mining Lease MLN1154
-  100k mapsheet boundary
-  EL9768
-  EL9768 Retained
-  Drainage
-  Sample location

North Australian Diamonds Ltd	
Date: 24/12/2007	<h3>Figure 2</h3> <h3>Exploration Index</h3>
Author:	
Office:	
Drawing:	
Scale: 1:100000	Projection: Longitude / Latitude (Australia GDA84)
