



Final Surrender Report Exploration Licence 25976

11th May 2007 to 21st May 2014
Northern Territory, Australia

Holder: Merlin Diamonds Limited
Operator: Merlin Diamonds Limited
Reporting Period: 11th May 2007 to 21st May 2014
Sheet Reference: Milingimbi (SD53-02) 1:250,000
Due Date: 7th June 2014

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TABLE OF CONTENTS

LIST OF FIGURES.....	2
1.0 INTRODUCTION	4
2.0 LOCATION AND ACCESS	4
3.0 PHYSIOGRAPHY.....	4
4.0 PREVIOUS EXPLORATION.....	6
5.0 EXPENDITURE STATEMENT	9
6.0 CONCLUSION	9
7.0 REFERENCES	10

LIST OF TABLES

Table 1	Licence Details for EL25976
Table 2	2010-2011 Sample Details
Table 3	2011-2012 Sample Details
Table 4	2011-2012 Stream Geochemical Data
Table 5	2011-2012 Rock Chip Geochemical Data

LIST OF FIGURES

Figure 1	Licence Location Map
Figure 2	Sample Location Map

APPENDICES

Appendix 1 - A Report on Airborne Survey Magnetic Data in Areas Where NADL (North Australian Diamonds Limited) Has Identified Anomalous Chromite Indicator Grains EL 10229 and 25976, ARNHAM LAND N.T., August 2010, Keith Jones

SUMMARY

This report details exploration activity carried out by Merlin Diamonds Limited (MDL) and Top End Minerals over Exploration Licence EL25976 for the period 11th May 2007 to 9th May 2014. The target for exploration within the Licence was diamonds and uranium.

The Licence is on Aboriginal Land and is subject to ALRA (1976) access conditions. The Licence was transferred from De Beers Australia Exploration Pty Ltd (DBAE) to MDL in early 2009. EL25976 is located on the Milingimbi (SD53-02) 1:250,000 geological mapsheet and the Cadell (5772) and Blyth River (5872) 1:100,000 topographic map sheets.

A number of sample collection programmes have been undertaken on this Licence and have not returned any significant results. Recovered chromite grains were probably derived from crustal rock and not kimberlite. Sufficient diamond exploration samples have now been collected to conclude the potential for discovery of kimberlites is low. Anomalous gold and uranium rock chip results were considered to represent minor secondary mineralisation and are not high priority. Therefore the Licence has been surrendered.

Expenditure for the total reporting period of the Licence amounted to \$253,909.76.

1.0 INTRODUCTION

This report details exploration activity carried out by Merlin Diamonds Limited (MDL) and Top End Minerals (TEM) over Exploration Licence EL25976 for the period 11th May 2007 to 21st May 2014. The target for exploration within the Licence was diamonds and uranium.

2.0 LOCATION AND ACCESS

EL25976 is located on the Milingimbi (SD53-02) 1:250,000 geological mapsheet and the Cadell (5772) and Blyth River (5872) 1:100,000 topographic map sheets. The Licence has an irregular shape resulting from ‘no-go areas’ defined by Traditional Owners during the anthropological surveys.

Exploration Licence was granted on 11th May 2007 for a period of six years. The license was reduced in size during April of 2010 following a partial surrender of 48 blocks. A Waiver of Reduction was submitted in 2012 retaining 46 blocks. A compulsory Area Reduction was submitted in 2013 with the Licence retaining 22 blocks. An application for renewal was granted in May 2013, renewing the Licence for a further two years. The Licence details are included in Table 1 below and a location map is shown as Figure 1.

Table 1: Licence Details for EL25976

Project Name	Licence No	Application Date	Grant Date	Expiry Date	Blocks	Holder
Arnhem Land	EL25976	11/11/1998	11/05/2007	10/05/2015	22	Merlin Diamonds Limited

3.0 PHYSIOGRAPHY

3.1 Geomorphology

Two major physiographic subdivisions occur within the project area, the Arnhem Land Plateau, which is dominated by sub-horizontal Palaeoproterozoic sandstone and volcanics, and the Arafura Fall, which comprises gently undulating country covered by Cainozoic sands and ferricrete. The Arnhem Land Plateau merges gradually with the Arafura Fall from approximately 170m above sea level to approximately 50m

above sea level within the Licence. The Licence contains plateaux that are drained by tributaries to Imimbar Creek, which itself is located within EL25976.

3.2 Geology

The Licence is located predominantly within the Merlin Craton on the tectonically stable Arnhem Shelf, that part of the northwestern McArthur Basin characterised by comparatively mild deformation. The northern parts of the Licence host sediments of the Arafura Basin, which is post-McArthur Basin.

The oldest rock unit is the Palaeoproterozoic Gumarrirbang Sandstone of the Kombolgie Subgroup of the Katherine River Group. Northeast-trending linear dunes with wavelengths up to 60m and crests up to 3.5m have developed within the Gumarrirbang Sandstone. The Marlgowa Sandstone (of Kombolgie Subgroup) overlies the Gumarrirbang Sandstone to the south in EL25976. A northeast-northwest conjugate joint set has developed on the above sandstone units and vertical to sub-vertical dolerite dykes of undetermined age intrude the sediments and volcanics of the Katherine River Group and occur generally as infill to north-east trending faults and joints. The dykes are evident on the aeromagnetic image. The Gilruth Volcanic Member occurs as an interpreted topographic bench in EL25976 conformably separating the underlying Gumarrirbang Sandstone from the overlying Marlgowa Sandstone. It is not observed in outcrop but is evident in the uranium channel on the radiometric image. It is described as a 5m thick band of tuffaceous siltstone, tuff, banded jasper and amygdaloidal and vesicular basalt.

The Oenpelli Dolerite occurs as an intrusion to the Marlgowa Sandstone in the southern parts of the EL25976 and is described as continental tholeiitic magma. In the northern parts of the Licence younger sediments of the Arafura Basin crop out including the Neoproterozoic Buckingham Bay Sandstone and overlying Raiwalla Shale. The unconformity between the Arnhem Shelf units and the Arafura Basin units is covered by Cainozoic sands and soils and does not crop out within the Licence. The youngest sediments include Quaternary sands, silts and gravels that occur within recent drainage channels.

3.3 Geophysics

Airborne regional data was acquired in the early 1990's during surveys contracted to the NTGS and include the 'Milingimbi' survey. Magnetic and gamma-ray spectrometry datasets were collected along east-west flight lines 500m apart 100m above the ground.

Magnetic data clearly highlights prominent features such as faults and several mapped dolerite dykes. The radiometric data, in particular the uranium channel highlights the Gilruth Volcanic Member as discussed above.

In addition, regional gravity surveys were conducted by Australian Geological Survey Organisation (AGSO). The gravity measurements are at 11 km station spacing and therefore do not provide useful information for near surface geological interpretation and in particular detection of kimberlite pipes.

No company geophysical surveys have been completed over the Licences other than several lines of airborne spectrometry acquired by DBAE during 1971 in their search for uranium. The data acquired was total radiometric count collected on flight lines 2 miles apart at a height of 300 feet. No anomalies were identified. DBAE have completed aeromagnetic surveys over adjoining Licences (historic) that identified numerous kimberlite targets, however no kimberlites were discovered.

4.0 PREVIOUS EXPLORATION

In addition to the spectrometry data discussed above DBAE collected approximately six stream gravel samples in Imimbar Creek during 1971 that returned negative results. The stream samples were only approximately 50 pounds (22kg) of -1/4" (6mm) gravel and may be considered too small to provide a meaningful result. It is MDL practice to collect approximately 40kg of -1mm gravel.

Stream sampling and airborne geophysical surveys by DBAE in adjoining Licences (historic) have recovered kimberlitic chrome diopside and identified numerous kimberlite targets.

Since the early 1970's no exploration has been undertaken due to access restrictions. The sampling undertaken by DBAE is not considered to be exhaustive and the Licence remains prospective for diamondiferous kimberlites.

2008-2009

A reconnaissance stream sampling program was undertaken on the tenement during 2008-2009 with a total of 16 x 40kg samples collected. These samples were taken where vehicle access allowed. The samples were dispatched to MDL's heavy mineral laboratory in Perth for processing and recovery of indicator minerals and microdiamonds. A total of 8 samples reported positive for chromites. The chromites were described by a mineralogist as being unlikely to be kimberlitic and more likely to be derived from crustal rocks.

2010-2011

Geochemical Sampling

During the 2010-2011 reporting period a stream geochemical sampling program was undertaken following up positive results from work done during 2009. Due to wet conditions only three samples were collected 10-101-010, 10-101-011 and 10-101-012. A further four stream samples and one soil sample were collected later on in the year once site and access conditions had improved, samples 10-107-002, 10-107-005, 10-107-010, 10-107-011 and 10-107-013. Sample data results are shown in Table 2.

Heavy Mineral Sampling

A total of two stream gravel samples were collected for diamond exploration. One sample reported positive with 24 chromites, which were considered to be non-kimberlitic and of no interest. Results and sample data are included in Table 2.

Geophysical Study

A desktop geophysical study was completed by an external geophysical consultant to determine whether there any magnetic anomalies exist potentially indicative of kimberlite source rocks. A number of targets were identified that require further investigation in the next field season.

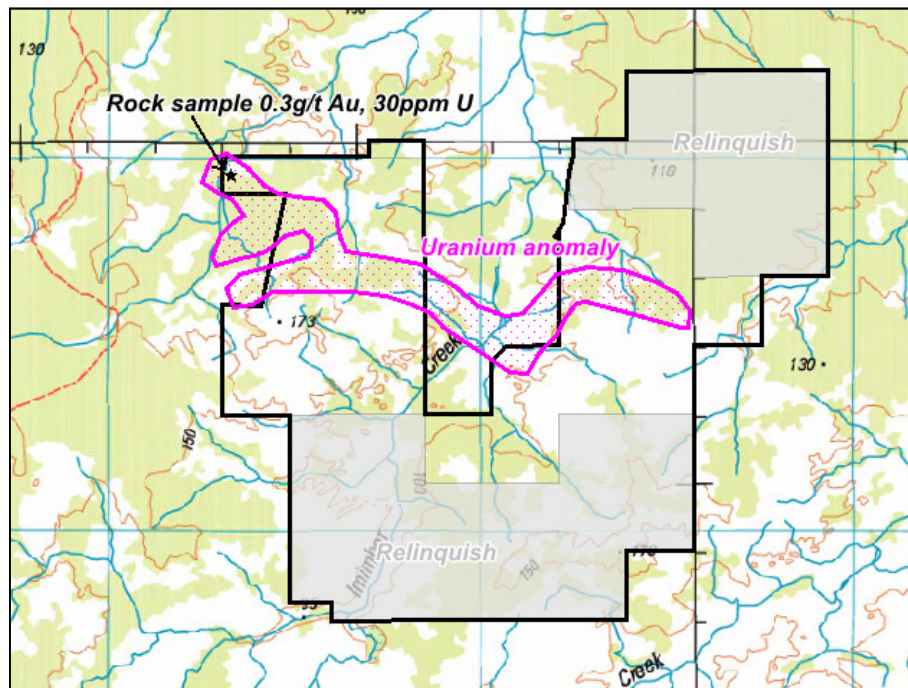
2011-2012

During the 2011-2012 reporting period a total of 5 stream gravel samples were collected and processed at the company's diamond laboratory in Perth. These results are shown in Table 3.

5 stream geochemical samples were collected and 5 rock chip samples were assayed at Genalysis in Perth for multi-element analysis. The results are shown in Tables 4 & 5. Several anomalous results were reported including a rock chip sample with 310ppb Au and 22ppm U. This anomalous result is possibly associated with the Gilruth Volcanic unit and represents mineralisation typical of the area.

2012-2013

During the 2012-2013 reporting period no fieldwork activities were undertaken. A reduction notice was submitted with a total of 24 blocks recommended for surrender as per the figure below. A total of 22 blocks were recommended to be retained to allow further exploration of the airborne uranium anomaly.



Areas recommended for relinquishment at the end of Year 6

2013-2014

No fieldwork or exploration activities were undertaken during this reporting period. Sufficient diamond exploration samples have now been collected to conclude the

potential for discovery of kimberlites is low. In addition the uranium and gold results are considered to represent a minor secondary mineralisation and are not considered high priority. Therefore the Licence has been surrendered.

5.0 EXPENDITURE STATEMENT

The exploration expenditure attributed to EL25976 during the reporting period amounted to \$253,909.76 and is detailed in the accompanying Exploration Expenditure reporting form.

Year 1 2007-2008	\$13,100
Year 2 2008-2009	\$50,391
Year 3 2009-2010	\$53,600
Year 4 2010-2011	\$57,800
Year 5 2011-2012	\$38,806.81
Year 6 2012-2013	\$26,009.69
Year 7 2013-2014	\$14,202.26
Total	\$253,909.76

6.0 CONCLUSION

Sufficient diamond exploration samples have now been collected to conclude the potential for discovery of kimberlites is low. In addition the uranium and gold results are considered to represent a minor secondary mineralisation and are not considered high priority. Therefore the Licence has been surrendered.

7.0 REFERENCES

Carson L J, Haines P W, Brakel A, Pietsche B A and Ferenczi P A. 1999. Milingimbi SD53-02 1:250,000: Explanatory Notes, *Northern Territory Geological Survey, Darwin.*

Stockdale Prospecting Limited. Prospecting Authorities 2612 and 3133. Final Report for the Period 22nd December 1970 to 21st December 1971. Reference CR1971-0112.

Striker Resources (2004) Arnhem Land Diamond Project Exploration Program. Internal Report 04-007.

Reddicliffe, T. (2009) Combined Annual Exploration Report EL 10229 and EL25976 for the Period 11th May 2008 to 10th May 2009 Report No 09-025, Merlin Diamonds Ltd.

Reddicliffe, T. (2010) Combined Annual Exploration Report EL 10229 and EL25976 for the Period 10th May 2009 to 9th May 2010, Ref: 10-010, Merlin Diamonds Ltd.

Reddicliffe, T. (2011) Annual Report EL25976 for the Period 10th May 2010 to 9th May 2011, Ref: 11-031, Merlin Diamonds Ltd.

Kammermann, M. (2012) Annual Report EL25976 for the Period 10th May 2011 to 9th May 2012, Ref: 12-035, Merlin Diamonds Ltd.

Kammermann, M. (2013) Annual Report EL25976 for the Period 10th May 2012 to 9th May 2013, Ref: 13-017, Merlin Diamonds Ltd.

Table 2. 2010-2011 Sample Data

Geochemical Samples

SAMPLE	TYPE	TENEMENT	EASTING	NORTHING	DATUM	ZONE
10-101-010	STREAM CLAY	EL25976	435098	8585141	GDA94	53
10-101-011	STREAM CLAY	EL25976	434927	8585069	GDA94	53
10-101-012	STREAM CLAY	EL25976	435185	8585448	GDA94	53
10-107-002	STREAM CLAY	EL25976	449327	8587157	GDA94	53
10-107-005	STREAM CLAY	EL25976	446817	8585263	GDA94	53
10-107-010	STREAM CLAY	EL25976	444068	8586009	GDA94	53
10-107-011	STREAM CLAY	EL25976	443670	8586609	GDA94	53
10-107-013	SOIL	EL25976	433193	8589663	GDA94	53

Indicator Mineral Samples

SAMPLE	TYPE	TENEMENT	EASTING	NORTHING	DATUM	ZONE	RESULTS	DIAMOND	CHROMITE
10-030-002	STREAM GRAVEL	EL25976	444067	8586015	GDA94	53	POSITIVE	0	24
10-030-003	STREAM GRAVEL	EL25976	438249	8590649	GDA94	53	NEGATIVE	0	0

Table 3. 2011-2012 Sample Data

SAMPLE	TYPE	EASTING	NORTHING	DATUM	ZONE	RESULTS	DIAMONDS	CHROMITES
11-019-001	STREAM GRAVEL	438026	8586410	GDA94	53	NEGATIVE	0	0
11-019-002	STREAM GRAVEL	437919	8588736	GDA94	53	NEGATIVE	0	0
11-019-003	STREAM GRAVEL	433335	8584978	GDA94	53	NEGATIVE	0	0
11-019-006	STREAM GRAVEL	440716	8579955	GDA94	53	NEGATIVE	0	0
11-019-007	STREAM GRAVEL	442496	8578413	GDA94	53	NEGATIVE	0	0

Table 4. Stream Geochemical Sample Details

ELEMENTS	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cs	Cu	Fe	Ga	Ge
UNITS	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
DETECTION	1	0.1	50	1	1	0.5	0.05	50	0.05	0.1	5	0.1	1	0.01	0.1	0.1
METHOD	FA25/MS	4A/MS	4A/OE	4A/MS	4A/MS	4A/MS	4A/MS	4A/OE	4A/MS	4A/MS	4A/OE	4A/MS	4A/OE	4A/OE	4A/MS	4A/MS
11-108-001	4	X	52361	1	106	0.7	0.23	236	X	2.8	83	2.1	9	1.77	12.8	1
11-108-002	2	X	50273	3	124	1.1	0.19	233	X	9.7	237	3.8	11	4.3	11.4	1.4
11-108-003	I/S	0.3	27220	3	108	X	0.16	405	X	2.9	332	1.6	13	4.38	6.9	1.1
11-108-006	1	X	37360	2	51	X	0.21	259	X	3.4	209	1.8	10	1.9	9.4	1
11-108-007	2	0.1	30174	2	82	0.7	0.13	1727	X	7.2	161	1.2	24	5.82	8.2	1.1

ELEMENTS	Hf	In	K	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Pd	Pt	Rb	Re
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppb	ppm	ppm
DETECTION	0.1	0.05	20	0.1	20	1	0.1	20	0.1	1	50	1	1	1	0.1	0.05
METHOD	4A/MS	4A/MS	4A/OE	4A/MS	4A/OE	4A/OE	4A/MS	4A/OE	4A/MS	4A/OE	4A/OE	4A/MS	FA25/MS	FA25/MS	4A/MS	4A/MS
11-108-001	6.4	0.06	1414	16.7	791	114	0.9	244	12.4	8	716	12	2	1	12.3	X
11-108-002	7.9	0.05	1946	22.8	1427	225	1.1	682	16.7	12	451	10	1	X	18.5	X
11-108-003	13.3	X	1263	8.9	665	434	1.4	312	11	10	347	8	I/S	I/S	9.8	X
11-108-006	8.6	X	829	12.6	490	139	1.2	280	12.1	9	263	11	X	X	8.6	X
11-108-007	6.8	0.06	759	11.6	1179	557	0.9	280	16.4	9	358	7	1	X	6.4	X

ELEMENTS	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION	50	0.1	1	1	0.1	0.5	0.05	0.1	0.05	5	0.02	0.05	1	0.1	0.1	1
METHOD	4A/OE	4A/MS	4A/OE	4A/MS	4A/MS	4A/MS	4A/MS	4A/MS	4A/MS	4A/OE	4A/MS	4A/MS	4A/OE	4A/MS	4A/MS	4A/OE
11-108-001	311	0.4	9	1	2.4	47.9	0.91	X	17.07	6020	0.09	7.51	59	1.5	24.9	9
11-108-002	205	0.5	13	1	2.2	40.8	1.15	X	14.93	8574	0.14	5.06	71	1.6	28.7	10
11-108-003	434	0.4	6	X	2.3	23.4	0.63	X	12.35	5060	0.07	3.95	31	0.8	16.6	11
11-108-006	238	0.3	9	X	1.9	19.3	0.87	X	13.42	6503	0.06	3.08	56	1.3	16.1	10
11-108-007	304	0.4	12	X	2	25.1	0.76	X	9.41	11364	0.05	2.17	103	0.7	18.6	19

ELEMENTS	Zr
UNITS	ppm
DETECTION	0.5
METHOD	4A/MS
11-108-001	233.8
11-108-002	287.1
11-108-003	507.1
11-108-006	304
11-108-007	244.6

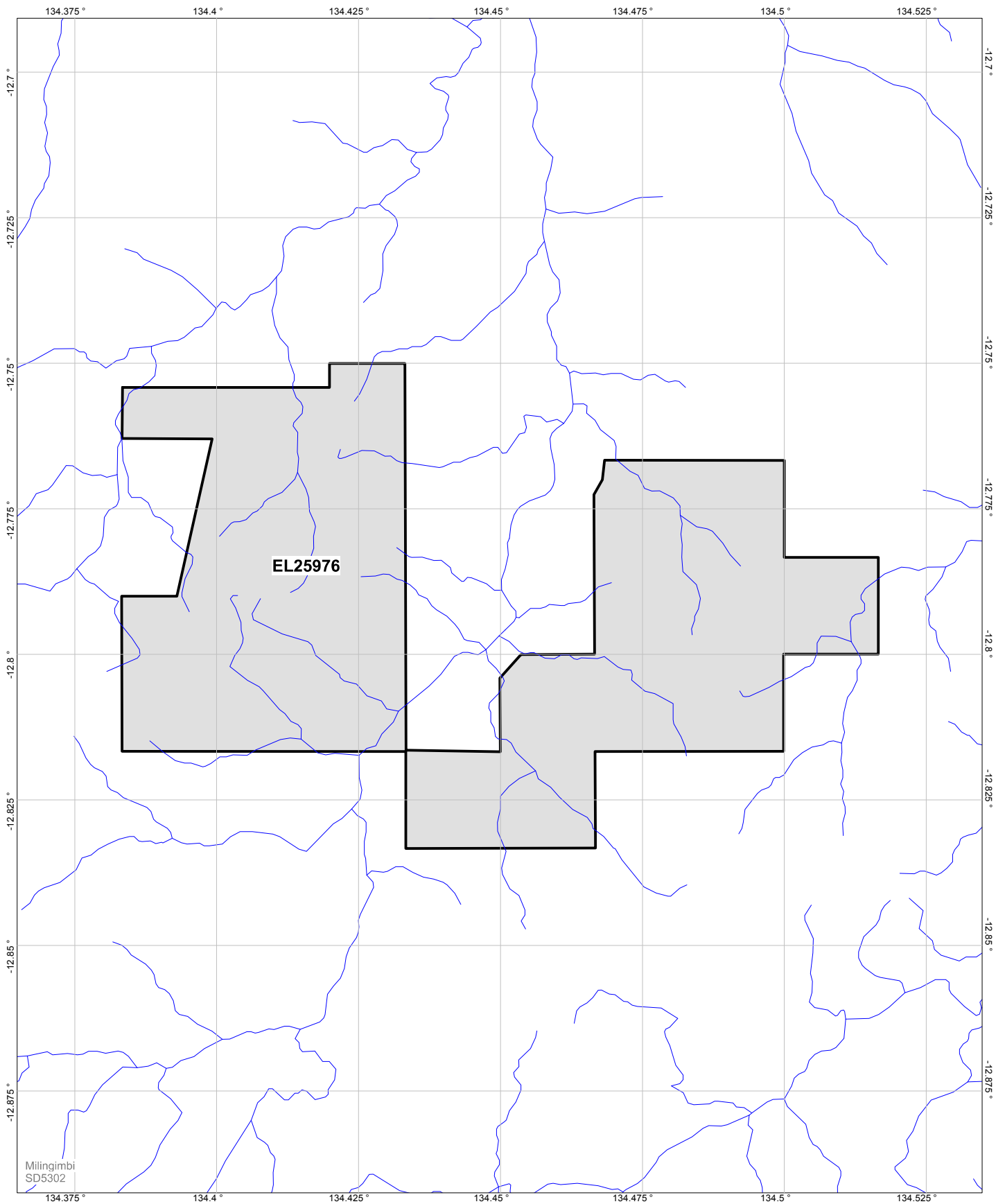
Table 5. Rock Chip Geochemical Details

ELEMENTS	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cs	Cu	Fe	Ga	Ge
UNITS	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
DETECTION	1	0.1	50	1	1	0.5	0.05	50	0.05	0.1	5	0.1	1	0.01	0.1	0.1
METHOD	FA25/MS	4A/MS	4A/OE	4A/MS	4A/MS	4A/MS	4A/MS	4A/OE	4A/MS	4A/MS	4A/OE	4A/MS	4A/OE	4A/OE	4A/MS	4A/MS
11-109-001	2	X	22340	6	147	7.4	X	1843	X	11.5	X	0.3	15	52.34	8	1
11-109-002	97	0.2	128996	21	394	4.8	0.09	11638	X	6.7	58	1.5	29	14.36	39.8	1
11-109-003	8	X	29762	14	107	0.8	X	1220	X	4.2	X	0.4	7	14.05	13.6	0.9
11-109-005	310	0.1	117427	30	286	4	0.06	7664	X	9.6	15	1.3	29	17.64	30.8	1
11-109-007	36	X	15342	4	74	3.6	X	1702	X	18.6	X	0.4	26	21.39	5.6	0.9

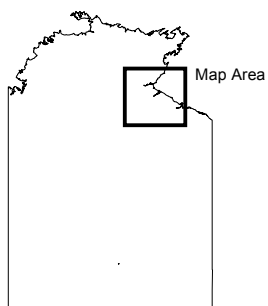
ELEMENTS	Hf	In	K	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Pd	Pt	Rb	Re
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppb	ppm	ppm
DETECTION	0.1	0.05	20	0.1	20	1	0.1	20	0.1	1	50	1	1	1	0.1	0.05
METHOD	4A/MS	4A/MS	4A/OE	4A/MS	4A/OE	4A/OE	4A/MS	4A/OE	4A/MS	4A/OE	4A/OE	4A/MS	FA25/MS	FA25/MS	4A/MS	4A/MS
11-109-001	1.7	X	5630	4.5	1675	236	1.6	2122	4.1	96	16392	4	X	X	13.4	X
11-109-002	10.9	X	18272	377.4	3233	197	1.6	1994	23.1	28	5812	20	2	X	30	X
11-109-003	4.2	0.11	1543	15.3	1043	114	0.9	530	2.1	19	788	4	4	2	5.7	X
11-109-005	9.1	X	14749	212	3500	221	2.7	1306	18	42	3579	24	30	1	28.9	X
11-109-007	0.7	0.09	1228	44.9	1148	214	0.6	447	1.5	50	2756	4	4	2	4.3	X

ELEMENTS	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION	50	0.1	1	1	0.1	0.5	0.05	0.1	0.05	5	0.02	0.05	1	0.1	0.1	1
METHOD	4A/OE	4A/MS	4A/OE	4A/MS	4A/MS	4A/MS	4A/MS	4A/MS	4A/MS	4A/OE	4A/MS	4A/MS	4A/OE	4A/MS	4A/MS	4A/OE
11-109-001	121	1.8	9	X	0.7	23.4	0.21	0.1	2.82	4266	0.05	19.06	111	0.3	15.8	158
11-109-002	182	0.9	42	X	2.2	31.4	1.24	X	18.27	24286	0.24	20.84	382	0.6	62.3	42
11-109-003	155	0.6	12	X	0.8	13.9	0.15	X	4.93	1539	0.03	6.28	102	0.6	9.2	12
11-109-005	128	0.6	43	X	2.2	63.9	0.99	X	18.72	19992	0.14	22.92	256	0.4	61.4	37
11-109-007	189	0.6	9	X	0.3	19.6	0.07	X	1.62	1356	0.03	2.28	50	0.2	13.6	87



ELEMENTS	Zr
UNITS	ppm
DETECTION	0.5
METHOD	4A/MS
11-109-001	71.1
11-109-002	440.1
11-109-003	147.9
11-109-005	364.2
11-109-007	27.1



Milingimbi
SD5302



Legend

-  Tenement
-  Drainage

Merlin Diamonds Limited

Date: 9/04/2014

Author: Perth Office

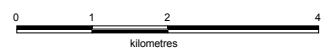
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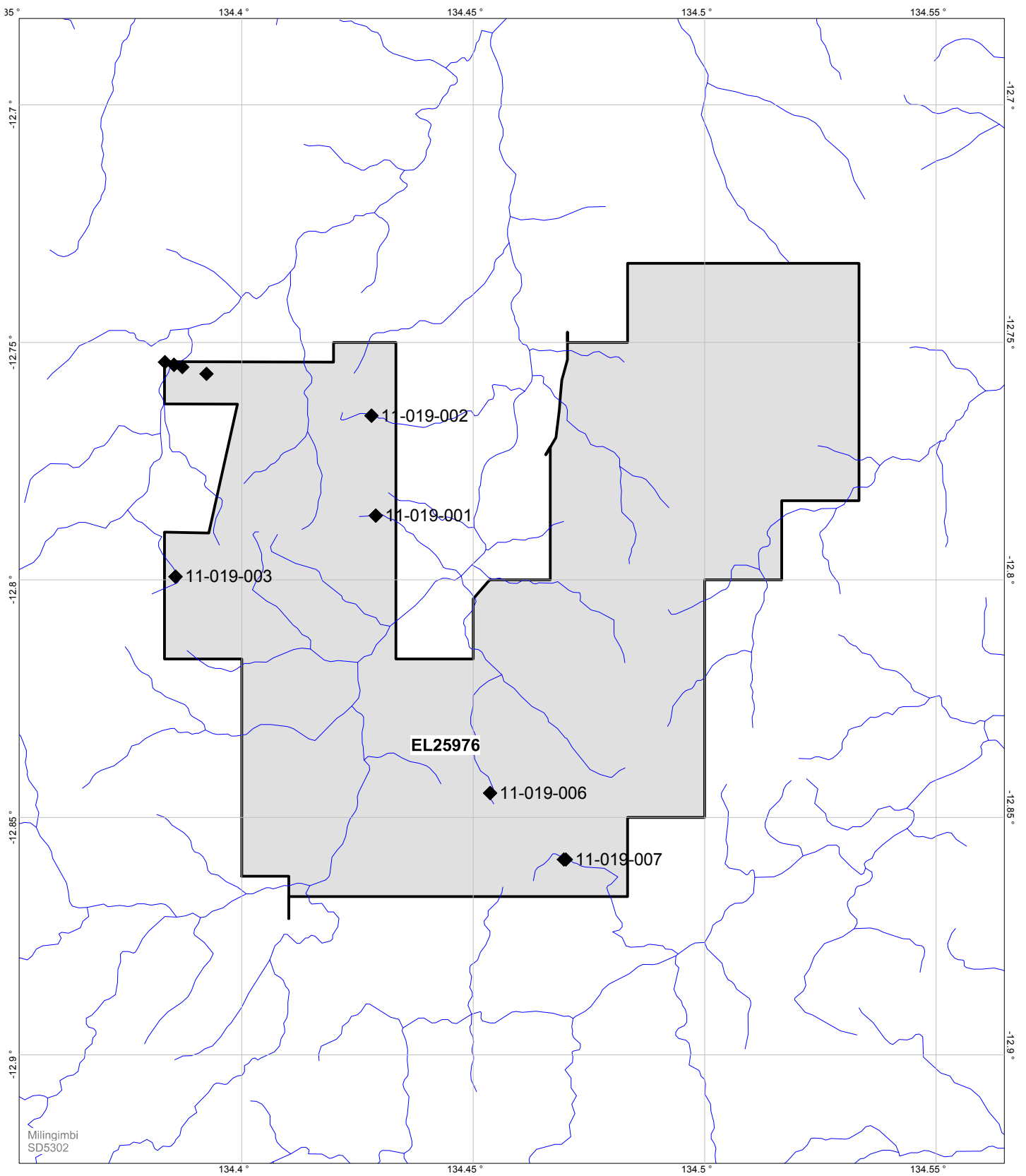
Drawing:

Scale: 1:100000

Projection: Longitude / Latitude (Australia GDA94)

**Figure 1
Location Plan**





Legend

- Tenement
- Sample Locations
- Drainage

North Australian Diamonds Ltd	
Date: 5/6/2012 Author: Office: Drawing:	Figure 2 Sample Location Plan
Scale: 1:125000 Projection: Longitude / Latitude (Australia GDA94)	