

# Open File Envelope

## No. 10,511

**EL 2759**

**MARGARET CREEK**

### **FIRST AND SECOND PARTIAL RELINQUISHMENTS' COMBINED REPORT FOR THE PERIOD 13/10/2000 TO 12/10/2004**

Submitted by  
Flinders Diamonds Ltd  
2005

© 12/3/2006

This report was supplied as part of the requirement to hold a mineral or petroleum exploration tenement in the State of South Australia.  
PIRSA accepts no responsibility for statements made, or conclusions drawn, in the report or for the quality of text or drawings.  
This report is subject to copyright. Apart from fair dealing for the purposes of study, research, criticism or review as permitted under the Copyright Act, no part may be reproduced without written permission of the Chief Executive of Primary Industries and Resources South Australia, GPO Box 1671, Adelaide, SA 5001.

**Enquiries:** Customer Services Branch  
Minerals and Energy Resources  
7th Floor  
101 Grenfell Street, Adelaide 5000

Telephone: (08) 8463 3000  
Facsimile: (08) 8204 1880



**Government of South Australia**  
**Primary Industries and Resources SA**

**G2 PROJECT**

**EL 2759 Margaret**

**COMBINED PARTIAL SURRENDER REPORT**

**For the two year period to 12 October 2004**

**Tenement Holder: Flinders Diamonds Limited**

Author:	Brenton Newell
Date:	February 2005
Report No:	05/4
Distribution:	PIRSA – 1digital, 1 hard copy FDL – 2 digital, 2 hardcopies

## CONTENTS

	Page No
<b>SUMMARY</b>	1
<b>1. INTRODUCTION</b>	2
<b>2. LOCATION AND ACCESS</b>	2
<b>3. TENURE</b>	2
<b>4. NATIVE TITLE</b>	2
<b>5. PHYSIOGRAPHY</b>	3
<b>5.1 Climate</b>	3
<b>5.2 Topography</b>	3
<b>5.3 Drainage</b>	3
<b>6. GEOLOGY</b>	3
<b>7. EXPLORATION ACTIVITIES</b>	4
<b>7.1 Iron-Oxide-Copper-Gold Deposits</b>	4
<b>7.2 Diamonds</b>	5
7.2.1 Introduction	5
7.2.2 Indicator Mineral Sampling	6
7.2.2.1 Equipment	6
7.2.2.2 Rehabilitation	6
7.2.2.3 Sampling	6
<b>8. REFERENCES</b>	7

<b>LIST OF FIGURES</b>	Following page
Figure 1: Tenement Location Plan	2
Figure 2: Previous Exploration Drillholes with TMI Background	5
Figure 3: Drill hole Location and Sample Number Plan	6

## LIST OF APPENDICES

Appendix - Lithological Drill Logs	8
------------------------------------	---

## SUMMARY

This report summarises the exploration activity undertaken by Flinders Diamonds Limited (FDL) within the relinquished portion of Exploration Licence 2759 (Margaret) to 12 October 2004. The tenement forms part of the G2 Project, which is considered prospective for diamonds because:

- (i) previously recovered indicator minerals from the area are fresh, suggesting the primary source rocks are in the general region
- (ii) the interpreted palaeocurrent direction indicates fluvial flow towards the north, thus passing through EL 2759
- (iii) post-Permian cover is relatively shallow in EL 2759, so undercover sampling can be done in a cost effective manner
- (iv) EL 2759 falls on the G2 lineament

A first pass sampling programme was designed to drill to Permian basement on a grid basis with one hole approximately every 25 square kilometres, equating to a hole spacing of around 4.8 kilometres on an offset grid. Twenty-five drillholes were completed. Suitable material immediately overlying the Permian basement was observed for indicator minerals and diamonds.

During the tenure of the relinquished area various activities were completed in order to comply with statutory requirements of Part 9B of the South Australian *Mining Act* relating to Native Title issues. Prior to commencement of exploration, members of the Kujani and Arabunna Native Title Claimants groups undertook separate site clearance surveys.

The G2 project area lies within the Olympic Dam Province, approximately 70 km north-northwest of Olympic Dam, one of the world's largest iron oxide copper-gold (IOCG) deposits, and 50 km east of Minotaur Resources' Prominent Hill discovery. FDL considers there is potential for IOCG deposits to occur within the G2 Project area.

## **1. INTRODUCTION**

The G2 Project consists of three exploration licences, EL 2758, EL 2759 and EL 3170. This report summarises Flinders Diamonds Limited's activity within the relinquished portion of Exploration Licence 2759 (Margaret) to 12 October 2004.

The project area covers the northeast margin of the Gawler Craton, within the Adelaide Geosyncline, in an area intersected by the north-northwesterly trending G2 gravity corridor. The area is known to host abundant kimberlitic indicator minerals derived from a Jurassic age secondary source, which sourced the minerals from a Permian land surface. FDL's exploration program used undercover drill sampling through the cover rock in a search for trails of indicator minerals to lead to concealed diamond-bearing rock.

## **2. LOCATION AND ACCESS**

EL 2759 lies in the north-eastern part of the Billa Kalina 1:250 000 scale map sheet (SH53-7) and the western part of the Curdimurka 1:250 000 scale map sheet (SH53-8). The licence area is approximately 750 kilometres north of Adelaide (Figure 1). Access is via Roxby Downs or Maree to the Oodnadatta Track, then to William Creek. The tenement lies immediately south of William Creek and south and west of the Oodnadatta Track. Good access is available within the project area via a network of station tracks linking dams, bores or trucking yards.

## **3. TENURE**

Exploration Licence No 2759, covering approximately 2489 square kilometres, was granted to Flinders Diamonds Limited on 13 October 2000, for a period of 12 months. It was subsequently renewed for a further two 12-month periods to 12 October 2003.

In December 2002 FDL applied for a partial surrender to reduce the area of EL 2759 from 2489 sq km to 2059 sq km. The area was further reduced to 1454 sq km on renewal in October 2003, and a further reduction to 1058 sq km was made on renewal in October 2004 (Figure 1). The licence expires on 12 October 2005.

## **4. NATIVE TITLE**

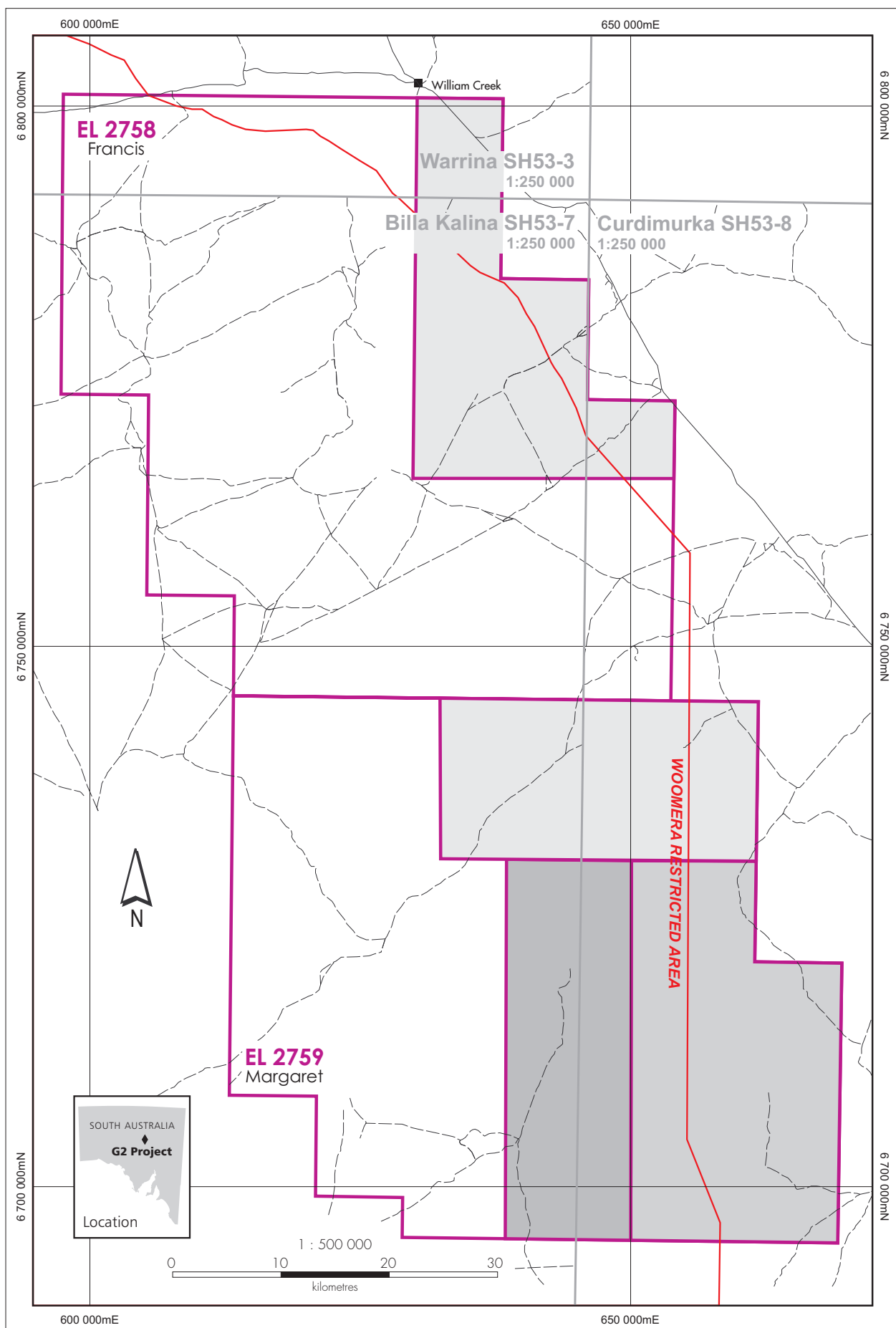
There are two overlapping Native Title Claims covering the G2 Project area. They are:

The Arabunna Peoples Native Title Claim (SC 98/2) – accepted for Registration.  
Claim (SC 00/03) – currently identified for Registration Test

Consequently FDL was required to negotiate with the two groups with respect to satisfying Part 9B of the SA Mining Act covering Native Title issues.

During the tenure of the surrendered portion of the exploration licence, a large amount of time and money was expended on various activities with respect to satisfying Part 9B of the SA Mining Act. With overlapping claims, all activities were duplicated as neither group would coordinate with the other, and the legal representatives were unreliable, being "involved in other matters". Consequently long delays were experienced in organising field trips and obtaining clearance reports. This resulted in postponement of the proposed drilling program until October 2002.

Site clearance surveys were undertaken by and Arabunna Native Title Claimants. Their reports are of poor quality, reflecting the view by their legal representatives that "only



- Legend**
- Tracks
  - Area surrendered October 2002
  - Area surrendered October 2003
  - Area surrendered October 2004

**Figure 1** Tenement location plan

minimal data should be made available to the exploration companies and that a long version should only be written for their legal representatives”.

The Claimants agreed there was “no impediment to the proposed sampling works and vehicular access in the general area” up until production planning, when another survey would be required.

The Arabunna Claimants recommended that a clearance for the mineral exploration program be given subject to general provisions of using existing tracks where possible, no drilling on sand dunes, avoid creeks and watercourses, and avoid registered and recorded sites. The last provision was impossible to comply with as their legal representative would not allow disclosure of the location of the 19 sites held in the Aboriginal Site Register!

## **5 PHYSIOGRAPHY**

### **5.1 Climate**

The climate for the area is typical for Central Australia, with a low annual rainfall of 150 mm, occurring mainly during the summer months and associated thunderstorm activity. The mean maximum temperature ranges from 35° C for January to 20° C in July.

### **5.2 Topography**

Most of the tenement consists of gently undulating plains between major creeks. The plains are covered by a dense surface lag of silcrete and quartzite gibbers, formed during the breakdown and gradual recession of the Tertiary land surface. These plains are treeless and characterised by a gilgai micro-relief of low mounds and hollows covered by sparse low vegetation.

Unconsolidated, but essentially vegetation-fixed, longitudinal sand dunes fringe the southern margin of the tenement. Individual dunes, trending north-east/south-west, may be up to 15 m high and 20 km long, separated by interdunal corridors containing numerous claypans.

### **5.3 Drainage**

Margaret Creek drains across the north of the tenement from west to east into Lake Eyre South and consists of a well-braided sand-choked system with wide flood channels. It is fed by three large tributaries, namely North Creek, Mudla Wantamarran Creek and Emu Creek.

## **6. GEOLOGY**

The project area covers the northeast margin of the Gawler Craton, south of the Peake and Denison Inlier. It lies to the north of the plunging/faulted margin of the Stuart Shelf in an area intersected by the north-north-westerly trending G2 gravity corridor.

The area is known to host abundant kimberlitic indicator minerals derived from a Jurassic age secondary source, which sourced the minerals from a Permian land surface. FDL’s exploration program used undercover drill sampling through the cover rock in a search for trails of indicator minerals to lead to concealed diamond-bearing rock.

The Gawler Craton has a history of Archaean and early Proterozoic orogenic evolution terminating during the Carpentarian with a relatively stable platform. Deposition on the Stuart Shelf commenced 1400 my ago (Adelaidean System) with continental siltstones and shales accompanied by flood basalts, followed by shallow water sedimentation until Cambrian times.

Reactivation of faults, initiated during the Devonian, formed the Boorthanna Trough, a north-south half-graben structure, which represents the southerly extension of the Arckaringa Basin. Glaciation in the upland areas flanking the basin and contemporaneous subsidence during the Upper Carboniferous/Lower Permian accounted for the deposition of the Boorthanna Formation.

Later tectonic stability in the Permian produced a low energy, marine environment during which the Stuart Range Formation was deposited, followed by regression and deposition of the freshwater Mount Toondina Beds.

Major tectonic movements during the Late Jurassic/Early Cretaceous period caused uplift of the Gawler Platform in faulted blocks and marked the start of the Cretaceous transgressions. The Algebuckina Sandstone comprises fluvial sandstone and gravels, mineralogically mature but with a kaolinitic matrix in the lower part, reflecting the derivation from a deeply weathered peneplain surface. The fluvial-deltaic Mount Anna Sandstone Member comprises the greater part of the Neocomian Cadna-owie Formation that disconformably overlies the Algebuckina Sandstone.

The Cadna-owie Formation represents the onset of a marine transgression, with lithologies ranging from conglomeratic sandstone containing abundant clasts of porphyritic acid volcanics derived from the south-west, through to silty and clayey, very fine to medium quartz sandstone with thin interbeds of claystone and siltstone. The Bulldog Shale conformably overlies the Cadna-owie Formation but locally onlaps the underlying Mesozoic units directly overlying basement and comprises medium to dark grey clayey and silty mudstone with thin lenses and laminae of pale grey to yellow grey micaceous silt to very fine sand. The lower part of the formation is characterised by numerous well-rounded clasts, dominantly of Adelaidean quartzite. The Bulldog Shale blankets the gibber plain area.

The post Cretaceous period has mainly been one of erosion, deep weathering and formation of duricrust. Silcrete, dominantly pedogenic in character, caps units of Adelaidean to Tertiary age and occurs as clasts in younger sediments. Artesian mound springs related to faulting are present along the eastern margin of the tenement.

## **7. EXPLORATION ACTIVITIES**

### **7.1 Iron-Oxide-Copper-Gold Deposits**

The G2 project area lies within the Olympic Dam Province, approximately 70 km north-northwest of Olympic Dam, one of the world's largest IOCG deposits, and 50 km east of Minotaur's Prominent Hill discovery. Flinders Diamonds considers there is potential for IOCG deposits to occur within the G2 Project area.

IOCG ore deposits are typically hosted by quartz-hematite breccias and have a range of deposit styles. The deposits usually occur in areas of significant magnetic relief, but are not always coincident with discrete magnetic anomalies. While there may be a genetic relationship between mineralisation and magnetics, *the magnetic anomaly is often associated with a source deeper than the mineralisation*. This is a significant factor when interpreting possible IOCG targets from magnetics where the apparent depth to magnetic source appears deep. Gravity is more effective as most significant IOCG deposits have an associated gravity anomaly.

Previous exploration within G2 targeted coincident gravity/magnetic anomalies and in all cases failed to intersect magnetic basement, despite the deepest hole (SR 17/2) terminating at 1500 metres (Figure 2). All work to date implies the younger cover sequences (Adelaidean and Permian) are extensive and thick over the central portions of the G2 tenements.



There are few exploration drillholes within G2 that targeted IOCG mineralisation and they were all based on coincident magnetic/gravity targets. Recent modelling of IOCG deposits suggests targeting gravity anomalies may lead to greater success.

Reinterpretation of available magnetic and gravity data by Chris Anderson from Euro Exploration Pty Ltd has identified target areas where major structural breaks are possibly related to mineralisation. Follow-up ground geophysics is recommended to collect quality data for geophysical modelling in order to define possible drill targets.

The target selected by Chris Anderson within the relinquished portion of the tenement is known as Ferguson Hill, a combined magnetic/gravity high. The existing hole FHD01 (743 m) failed to penetrate the magnetic source, and this very prominent magnetic feature therefore remains unexplained.

Recent drilling by Minotaur Resources Ltd at their adjacent Prominent Hill Project confirms that multi episodes of haematite brecciation and flooding have occurred at several locations, immediately west of EL 2759. This increases the confidence that similar mineralising activity has occurred on Flinders Diamonds' G2 tenements.

Pitt Research and Stewart Geophysical Consultants were contracted to undertake a "Spectral Depth Analysis" of EL 2759 with the aim of identifying areas of shallow crystalline magnetic basement that may provide targets.

The analysis is based on methods that follow the theory of Spector and Grant (1970). The advantage of Spectral Depth Analysis is that it is able to cover the entire area in a reasonable timeframe. The PIRSA 35 m magnetic grid over the G2 project area was used. Although the grid is of poor quality with numerous levelling and gridding artefacts it has been possible to map the broad variations in magnetic topography both within the overlying sediments and the crystalline basement. However, the results were not as unambiguous as hoped for.

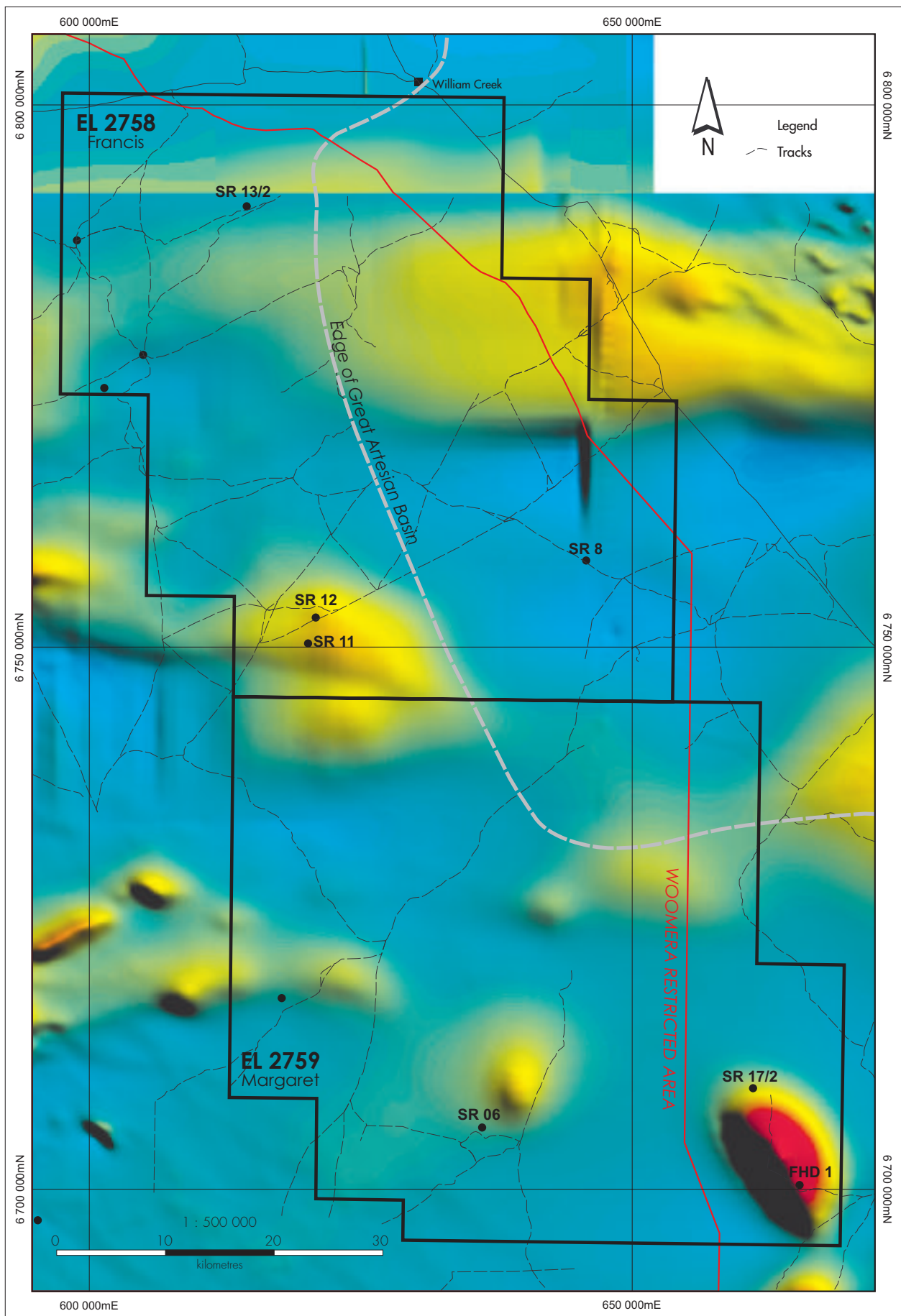
Half slope modelling on the prominent magnetic anomaly in the south east corner of EL 2759 (Ferguson Hill) suggests a depth to magnetic source of 1900 m for the main "core", surrounded by an "annulus" of shallower magnetic material, possibly 1200 m deep. This confirms that modelling with better quality data may enable shallow drill targets to be identified.

## **7.2 Diamonds**

### **7.2.1 Introduction**

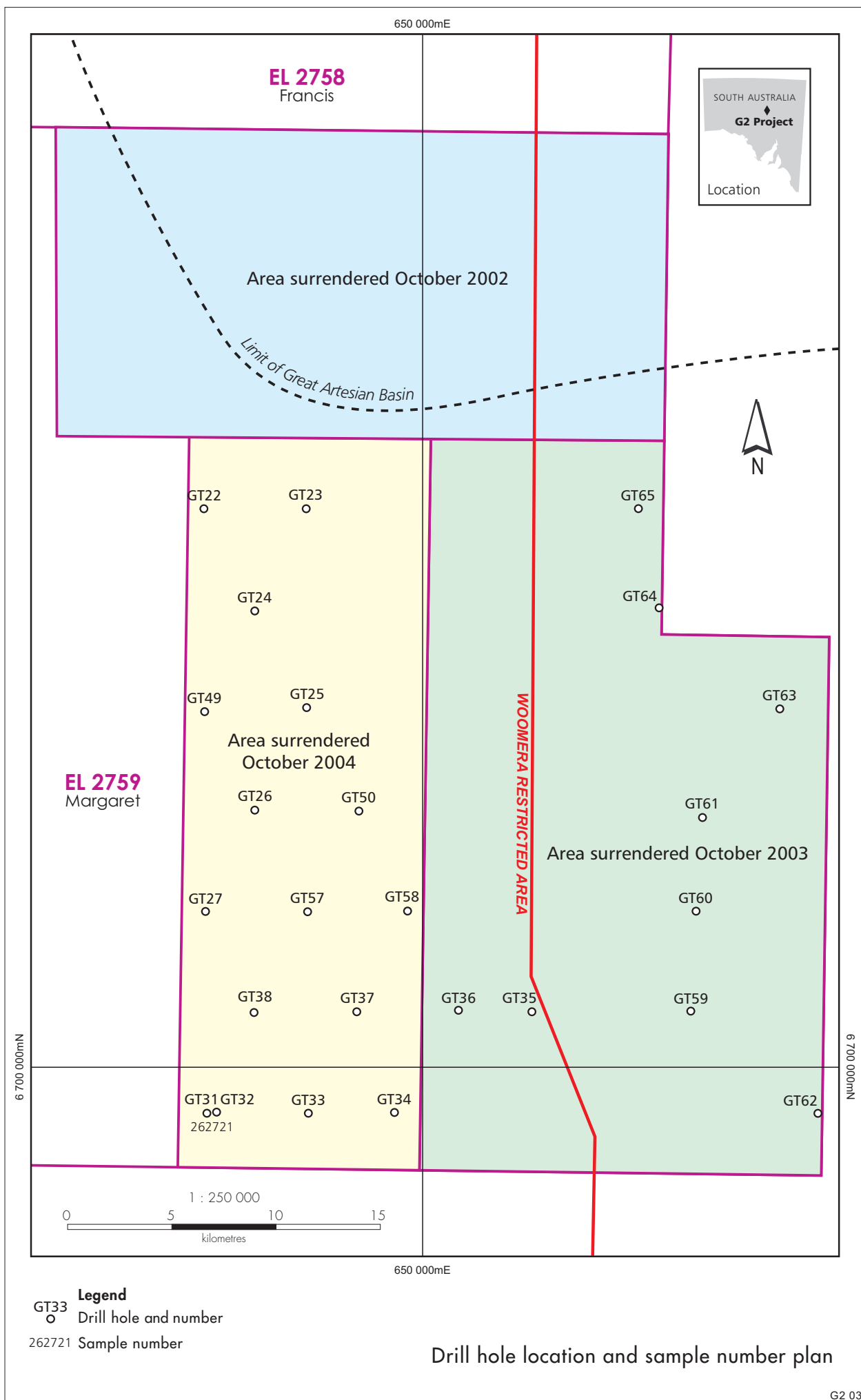
Several major companies, including CRAE and Stockdale Prospecting Limited, conducted similar style exploration programs over the tenement. Stream or loam samples were collected and screened on site to remove the plus 2 mm material. The retained finer fractions were treated and examined by specialist laboratories to recover indicator minerals or diamonds from heavy mineral concentrates.

Diamond indicator minerals were recovered from many samples, but despite intensive exploration, no exposed kimberlitic rock was located. Eventually it was proved that the Jurassic Algebuckina Sandstone, representing the first sedimentation to occur following the period of uplift and cessation of the Permian marine basin development, was shedding the indicator minerals. These sediments were eroded from the Permian land surface, which featured sedimentary marine basin rocks of Permian age surrounded by Proterozoic basement. Source kimberlites were exposed on this Permian land surface, and were subjected to erosion that occurred in the Late Jurassic, leading to incorporation of their component minerals in the Algebuckina Sandstone.



G2 04

Figure 2 Previous Exploration Drillholes with TMI Background



Flinders Diamonds considers EL 2759 to be prospective for kimberlites because:

- (i) previously recovered indicator minerals from the area are fresh, suggesting the primary source rocks are in the general region
- (ii) the interpreted palaeocurrent direction indicates fluvial flow towards the north, thus passing through EL 2759
- (iii) post-Permian cover is relatively shallow in EL 2759, so undercover sampling can be done in a cost effective manner
- (iv) EL 2759 falls on the G2 lineament.

#### 7.2.2 Indicator Mineral Sampling

A first pass sampling program was designed to drill to Permian basement on a grid basis with one hole approximately every 25 square kilometres, equating to a hole spacing of around 4.8 kilometres on an offset grid. Samples of material immediately overlying the Permian basement were observed for indicator minerals and diamonds.

##### 7.2.2.1 Equipment

The contractor was Rob Budd Drilling, using a Warman 250 with a Sullair 150/300 compressor. The drill rig was mounted on a 6 x 4 Acco with a Landcruiser and trailer as support. Flinders Diamonds had a Landcruiser and trailer. This kept the drilling crew mobile so no base camps were established and no access tracks were necessary. The crew camped at a collar site each night.

Initially the drilling was planned to be RAB but attempts at various locations demonstrated the technique was unsatisfactory in the Bulldog Shale, with loss of air circulation at 6 to 9 metres. Consequently all drilling was by Aircore, which overcame loss of circulation problems, but reduced the ability to penetrate harder rock. Aircore has the advantage of providing un-contaminated samples and large pieces for petrology, but has penetration limitations when presented with hard rock – either silicified in situ rock or large cobbles/boulders within conglomerate horizons. The quartz sand in the Mt Anna Sandstone Member and Algebuckina Sandstone is quite abrasive and led to unexpected wear on the drill rods.

##### 7.2.2.2 Rehabilitation

All drill holes were backfilled with drill cuttings and any remaining drill spoil was scattered using a rake and spade. No “octoplugs” were used. Cement slurry was poured down drillholes that intersected water. All rehabilitation was completed by hand before commencing the next drill hole. Photographs were taken of selected drillsites “before drilling” and “after drilling”. Access tracks were also photographed on a similar basis.

##### 7.2.2.3 Sampling

All holes were aircored and prefixed by AC02GT. Lithological logs are included in the Appendix, while drill hole locations and sample numbers are shown in Figure 3.

Samples were collected at 3 metre intervals, with each interval lithologically logged and heavy mineral samples collected from the appropriate basal horizon where intersected. Most samples collected weighed approximately 20 kg and were derived from good quality basal cobble horizons.

Sample collection was limited by:

- Absence of Algebuckina/Mt Anna Formation material
- Silicified rock unable to be drilled by aircore method

## **8. REFERENCES**

Spector, A. and Grant, F.S., 1970: Statistical models for interpreting aeromagnetic data.  
*Geophysics*, vol. 35, pp 293-302.

## **APPENDIX**

### **LITHOLOGICAL DRILLHOLE LOGS**

**EL 2759 DRILLHOLE LOCATIONS - RELINQUISHED AREA**

Hole No	amgE	amgN	Depth (m)	Sample No
GT22	639598	6726850	43	
GT23	644413	6726854	35	
GT24	642003	6722004	39	
GT25	644400	6717314	33	
GT26	642005	6712400	43	
GT27	639602	6707601	17	
GT31	639608	6697999	1	
GT32	640118	6698001	30.5	262721
GT33	644400	6698001	4	
GT34	648495	6698005	16.5	
GT35	655001	6702801	4	
GT36	651602	6702800	4	
GT37	646798	6702801	13	
GT38	641917	6702796	40	
GT49	639599	6717199	18	
GT50	646814	6712394	39	
GT57	644404	6707600	15.5	
GT58	649200	6707599	10	
GT59	662554	6702800	36	
GT60	662856	6707600	4	
GT61	663223	6712101	36	
GT62	669191	6697999	24	
GT63	666848	6717208	36	
GT64	661324	6722047	24	
GT65	660140	6726799	24	

# Drill Log

Flinders Diamonds Limited



Project/Prospect		G2: EL 2759 "Margaret"													
Hole Name		AC 02 GT22				Azimuth				Driller		Rob Budd Drilling			
Co-ordinates		639 598 mE			6 726 850 mN			Dip		-90		Drill type		Warman 250	
Collar RL		Surface						Total Depth		43 m		Casing depth		none	
Depth		Formn.	Depth	Lithological description	Sample Number										
From(m)	To(m)														
0	3	Kmb		Khaki shale with numerous fractures filled with yellow-bn limonite.											
3	6			As above, with zone of gypsum filled fractures.											
6	9			Yellow-bn sandy, hard gypsum filled band to 7m. Sudden change to dark bn shale.											
9	12			Dark bn slightly sandy shale with fractures filled with gypsum or yellow-bn limonite.											
12	15			As above, with increase in gypsum filled fractures. Thin light bn sandy bed, matrix dominated.											
15	18			As above; becomes dark grey-green down interval.											
18	21			Dark grey micaceous shale with "greasy" texture.											
21	24			As above.											
24	27			As above.											
27	30			As above.											
30	33			As above.											
33	36			As above. Water inject.											
36	39			As above. Thin siliceous band of matrix dominated very fine quartz sandstone. Water inject.											
39	42			Dark grey micaceous shale with "greasy" texture. Water inject.											
42	43			Dark grey medium grained quartz sandstone with interstitial pyrite. Too hard to drill.											
				E of H 43 m											
				No sample. Collar RL too high to get to Jua/Knc?											
Summary/comments		On rise adjacent to low breakaway to south. Dense lag of pebbles of silcrete, siliceous siltstone & quartzite.						Logged by BHN		Date		11/10/02			
										Sheet		1 of 1			



## Drill Log

**Flinders Diamonds Limited**

Project/Prospect		G2: EL 2759 "Margaret"													
Hole Name		AC 02 GT23				Azimuth				Driller		Rob Budd Drilling			
Co-ordinates		644 413		mE		6 726 854 mN		Dip		-90		Drill type		Warman 250	
Collar RL		Surface						Total Depth		35 m		Casing depth		none	
Depth		Formn.	Depth	Lithological description						Sample Number					
From(m)	To(m)														
0	3	Kmb		Light grey-bn shale with numerous fractures filled with yellow-bn limonite.											
3	6			As above. Gypsum filled fractures towards base of interval.											
6	9			As above.											
9	12			Brown shale with occasional yellow-bn limonite or gypsum filled fractures. Sandy interbeds up to 300											
12	15			Dark grey sandy shale with accessory interstitial pyrite. Fractures filled with red-bn hematite.											
15	18			As above. White fine grained sandy interbed at 16-16.5m.											
18	21			Dark grey shale with "greasy" texture.											
21	24			As above. Water inject.											
24	27			As above. Water inject.											
27	30			As above. Water inject.											
30	33			As above. Fine sandy interbed 250mm thick at 32m.											
33	35	Knc(?)	33m	Sudden change. Dark grey fine quartz sandstone with accessory white feldspar and dark green angu											
				Rare interstitial pyrite. Becomes too hard to aircore.											
				E of H 35m.											
				No sample: Too hard to drill											
				Note: Difficult to drill due to accumulation of "greasy" Kmb in hose, then commpressed by solid stick											
				hose. Requires lot of water injection to drill.											
Summary/comments		Edge of small drainage, draining south. Thick lag of cobbles of qtzite, siliceous siltstone, silcrete on soft Kmb silt. Logged by BHN										Date	12/10/02		
												Sheet	1 of 1		

# Drill Log

Flinders Diamonds Limited



Project/Prospect		G2: EL 2759 "Margaret"											
Hole Name		AC 02 GT24			Azimuth		Driller		Rob Budd Drilling				
Co-ordinates		642 003 mE		6 722 004 mN		Dip		Drill type		Warman 250			
Collar RL		Surface			Total Depth		39 m		Casing depth		none		
Depth		Formn.	Depth	Lithological description	Sample Number								
From(m)	To(m)												
0	3	Kmb		Light grey shale with numerous fractures filled with yellow-bn limonite or gypsum.									
3	6			Dark brown shale with numerous fractures filled with yellow-bn limonite or gypsum.									
6	9			As above.									
9	12			As above to 11m. Black shale with "greasy" texture.									
12	15			Black shale with "greasy" texture. Occasional well developed gypsum filled fractures.									
15	18			Gradational change to slightly sandy black shale with fine interstitial pyrite. Water inject.									
18	21			As above. Irregular wispy interlamination of sand within shale. Accessory interstitial pyrite. Water inject.									
21	24			As above. Scattered black carbonaceous flecks (carbonised wood?). Water inject.									
24	27			As above. Decrease in interstitial sandy wisps. Water inject.									
27	30			As above.									
30	33			As above with thin black siltstone interbeds. Water inject.									
33	36	P-t(?)	33m	Grey fine grained quartz sandstone with brownish codominant matrix. Accessory fine black and dark									
36	39			As above. Water inject.									
				E of H 39 m .									
				No sample: No recognisable Jua/Knc. Probably Kmb to P-t.									
Summary/comments		Undulating area covered by thick lag of cobbles of qtzite, siliceous sltn, ferricrete, chert; loosely packed on Kmb sil								Logged by BHN		Date	12/10/02
												Sheet	1 of 1

# Drill Log

Flinders Diamonds Limited



Project/Prospect		G2: EL 2759 "Margaret"										
Hole Name		AC 02 GT25			Azimuth		Driller		Rob Budd Drilling			
Co-ordinates		644 400 mE		6 717 314 mN		Dip		Drill type		Warman 250		
Collar RL		Surface			Total Depth		33 m		Casing depth		none	
Depth		Formn.	Depth	Lithological description	Sample Number							
From(m)	To(m)											
0	3	Recent		Unconsolidated gravels dominated by silcrete ("greybilly"), chert and siliceous siltstone pebbles.								
3	6	Kmb	3m	Khaki shale with numerous fractures filled with yellow-bn limonite.								
6	9			As above.								
9	12			As above.								
12	15			As above; minor gypsum as fracture fill.								
15	18			As above, with thicker gypsum filled fractures. Becomes dark grey towards base of interval.								
18	21			As above.								
21	24			Grey-green shale, becoming darker down interval. Rare yellow-bn limonite filled fractures.								
24	27			Dark grey shale with numerous 10mm thick gypsum filled fractures towards base of interval.								
27	30			Light grey-green sandy shale with accessory gypsum crystals to 29m. Sudden change to black "gre								
30	33			Dark grey shale with lighter grey fine sandy lenticles up to 5mm thick. Accessory black and dark gre								
				interstitial pyrite. Rods bogging.								
				E of H 33m								
				No sample: no suitable material.								
Summary/comments					Adjacent to creek to south. Lag of densely packed cobbles of qtzite, siliceous sltn, ferricrete & chert on Kmb soft si					Logged by BHN		
										Date		
										12/10/02		
										Sheet		
										1 of 1		

# Drill Log

Flinders Diamonds Limited



Project/Prospect		G2: EL 2759 "Margaret"										
Hole Name		AC 02 GT26				Azimuth		Driller		Rob Budd Drilling		
Co-ordinates		642 005 mE		6 712 400 mN		Dip		Drill type		Warman 250		
Collar RL		Surface				Total Depth		43 m		Casing depth none		
Depth		Formn.	Depth	Lithological description	Sample Number							
From(m)	To(m)											
0	3	Kmb		Light brown shale, variably fractured with light yellow-bn limonite as fracture fill.								
3	6			As above, with gypsum as fracture fill from 5m.								
6	9			Yellow-bn and red-bn limonite rich silt 6-8m. Sudden change to light brown shale with accessory gy								
9	12			Light brown shale with accessory gypsum.								
12	15			As above, with bands of gypsum filled fractures.								
15	18			As above; becomes darker brown shale towards base of interval.								
18	21			As above. Thin fractures filled with yellow-bn limonite or gypsum.								
21	24			As above.								
24	27			As above. Thin white filled fractures<1mm thick and several qypsum filled fractures 25mm thick.								
27	30			Yellow-bn silty to fine sandy shale. Part of well rounded qtzite pebble about 25mmx50mm; possibly								
30	33			Light grey-green slightly sandy shale with gypsum filled fractures. 31-31.5m zone of yellow-bn limon								
33	36			Light grey-green silty shale with thin red-bn bands.								
36	39			Sudden change. Red-bn micaceous shale, variably hard and soft to drill.								
39	42			As above, with thin grey-green soft bands (clay).								
42	43			Red brown fine grained micaceous sandstone. Becomes too hard to Aircore.								
				E of H 43m								
				No sample: Hole terminated in basal Kmb; no suitable material.								
Summary/comments		Flat plain covered by densely packed lag of small pebbles containing 3m diameter deflation hollows of Kmb silt. Logged byBHN								Date Sheet		13/10/02 1 of 1

# Drill Log

Flinders Diamonds Limited



Project/Prospect		G2: EL 2759 "Margaret"													
Hole Name		AC 02 GT27				Azimuth				Driller		Rob Budd Drilling			
Co-ordinates		639 602 mE			6 707 601 mN			Dip		-90		Drill type		Warman 250	
Collar RL		Surface				Total Depth		17m		Casing depth		none			
Depth		Formn.	Depth	Lithological description	Sample Number										
From(m)	To(m)														
0	3	Recent		Red-bn sand with accessory lag pebbles to 2m. 2-3m: Light grey shale.											
3	6	Kmb	2m	Light bn shale with minor yellow-bn limonite filled fractures.											
6	9			As above with fractures filled with gypsum or yellow-bn limonite.											
9	12			As above; gypsum filled fractures more numerous.											
12	15			Grey-bn shale with small off-white flecks. Abundant gypsum.											
15	17	Pwo	17m	15-16m: Dark brown shale with "greasy" texture. White fine sandy lenticles. 16-17m: Light grey fine											
				rich matrix. Sudden change. Very hard. Light grey very fine grained quartzite. Unable to drill with Air											
				E of H 17 m.											
				No sample: No suitable material. Kmb to Pwo (Arcoona Quartzite Member)											
Summary/comments					Flat area adjacent to small drainages. Loose lag of pebbles & small cobbles of qtzite, si sltn & ferricrete on soft Krr Logged by BHN				Date		13/10/02				
									Sheet		1 of 1				

# Drill Log

Flinders Diamonds Limited



Project/Prospect		G2: EL 2759 "Margaret"													
Hole Name		AC 02 GT31				Azimuth				Driller		Rob Budd Drilling			
Co-ordinates		639 608 mE			6 697 999 mN			Dip		-90		Drill type		Warman 250	
Collar RL		Surface				Total Depth		0.5 m		Casing depth		none			
Depth		Formn.	Depth	Lithological description	Sample Number										
From(m)	To(m)														
0	0.5	Recent		Silcrete fragments.											
				E of H 0.5 m											
				Note:Tried two collar positions. Both too hard to drill with Aircore. Move site east to AC 02 GT32, av											
				ridge.											
				No sample. No suitable material.											
Summary/comments		Top of rise covered by scree of very angular, sharp silcrete "greybilly".								Logged by BHN		Date		14/10/02	
										Sheet		1 of 1			

# Drill Log

Flinders Diamonds Limited



Project/Prospect		G2: EL 2759 "Margaret"							
Hole Name		AC 02 GT32		Azimuth		Driller		Rob Budd Drilling	
Co-ordinates		640 118 mE		6 698 001 mN		Dip		Warman 250	
Collar RL		Surface		Total Depth		30.5 m		Casing depth none	
Depth		Formn.	Depth	Lithological description	Sample Number				
From(m)	To(m)								
0	3	Kmb		Light grey shale with minor silcrete fragments near surface. Thick gypsum filled fractures.					
3	6			Grey-bn to brown shale with numerous fractures filled with yellow-bn limonite or gypsum.					
6	9			As above, with fine sandy interbeds < 2mm thick.					
9	12			As above, with occasional bands of shale with discontinuous laminae of very fine off-white sand.					
12	15			As above to 13m. Rapid change to grey-white fine grained micaceous qtz sandstone with dominant					
15	18			As above, with occasional gypsum filled fractures.					
18	21			As above, with grey-bn slightly sandy shale beds. Zone of yellow-bn limonite alteration 20-20.3m.					
21	24			As above, with scattered limonite or gypsum filled fractures.					
24	27			Sudden change. Very dark brown shale with occasional limonite or gypsum filled fractures. "Grease"					
27	30	Knc	27m	Sudden change. Light yellow to grey very fine clay rich qtz sandstone. Sudden change at 29m. Dark					
				altered fine grained quartz sandstone.					
30	30.5	Pwo	30.5m	Sudden change. Offwhite very fine grained qtz sandstone. Rapidly becomes very hard offwhite fine	262721				
				E of H 30.5 m.					
				Sample 262721: 30 - 30.5 m; small bag of very poor quality material.					
Summary/comments		Base of silcrete ridge. Scattered silcrete scree on Kmb silt.				Logged by BHN		Date	14/10/02
						Sheet		1 of 1	

# Drill Log

Flinders Diamonds Limited



Project/Prospect		G2: EL 2759 "Margaret"													
Hole Name		AC 02 GT33				Azimuth				Driller		Rob Budd Drilling			
Co-ordinates		644 400 mE			6 698 001 mN			Dip		-90		Drill type		Warman 250	
Collar RL		Surface				Total Depth		4 m		Casing depth		none			
Depth		Formn.	Depth	Lithological description	Sample Number										
From(m)	To(m)														
0	3	Recent		White gypsum rich clay with hard grey-green silcrete fragments. Matrix becomes sandier down inter											
3	4			As above. Becomes too hard to drill with Aircore technique.											
				E of H 4 m.											
				No sample. Too hard to drill.											
Summary/comments		Plain of thick silcrete scree on soft Kmb silt. Scattered bluebush.						Logged by		BHN		Date		14/10/02	
												Sheet		1 of 1	



# Drill Log

Flinders Diamonds Limited



Project/Prospect		G2: EL 2759 "Margaret"							
Hole Name		AC 02 GT34		Azimuth		Driller		Rob Budd Drilling	
Co-ordinates		648 495 mE		6 698 005 mN		Dip		Drill type	
Collar RL		Surface		Total Depth		16.5 m		Casing depth	
Collar RL		Surface		Total Depth		16.5 m		Casing depth	
Depth		Formn.	Depth	Lithological description	Sample Number				
From(m)	To(m)								
0	3	Kmb		Light brown shale, variably sandy with minor fractures filled with gypsum or yellow-bn limonite.					
3	6			Light, becoming dark brown silty shale with scattered lenticles of off-white very fine sandstone.					
6	9			Light grey, very fine grained qtz sandstone with clay matrix. Fractures filled with dark yellow-bn or red					
9	12			Light brown strongly fractured, variably silty shale.					
12	15			Dark bn and off-white mottled silty to sine sandy shale. Thick gypsum filled fractures.					
15	18	Pwo	16m	Sudden change to black shale. Sudden change at 16m to off-white to grey-green fine to medium gr					
				E of H 16.5 m.					
				No sample: Kmb to Pwo. No suitable material to sample.					
Summary/comments		At base of ridge. Hole shifted because no access up steep ridge. Scree of silcrete and black ferricrete.				Logged by BHN		Date	14/10/02
						Sheet		1 of 1	

# Drill Log

Flinders Diamonds Limited



Project/Prospect		G2: EL 2759 "Margaret"													
Hole Name		AC 02 GT35				Azimuth				Driller		Rob Budd Drilling			
Co-ordinates		655 001 mE			6 702 801 mN			Dip		-90		Drill type		Warman 250	
Collar RL		Surface				Total Depth		4 m		Casing depth		none			
Depth		Formn.	Depth	Lithological description	Sample Number										
From(m)	To(m)														
0	3	Kmb		Light brown shale with numerous fractures filled with yellow-bn limonite of gypsum.											
3	4	Pwo	4m	Sudden change to dark brown shale with basal dark red-bn hematitic clay. Sudden change at 4m. V											
				fine grained quartzite.											
				E of H 4 m.											
				No sample: Kmb to Pwo. No suitable material.											
Summary/comments					Dismal Plain floodout. Thick lag of tabular qtzite cobbles, grey qtzite & silcrete boulders, black fericrete pebbles. Logged by BHN			Date	14/10/02						
								Sheet	1 of 1						

# Drill Log

Flinders Diamonds Limited



Project/Prospect		G2: EL 2759 "Margaret"													
Hole Name		AC 02 GT36				Azimuth				Driller		Rob Budd Drilling			
Co-ordinates		651 602 mE			6 702 800 mN			Dip		-90		Drill type		Warman 250	
Collar RL		Surface				Total Depth		4 m		Casing depth		none			
Depth		Formn.	Depth	Lithological description	Sample Number										
From(m)	To(m)														
0	3	Recent		Yellow-brown fine sand with scattered pebbles of brown qtzite and siliceous siltstone.											
3	4	Pwo	4m	Light bn becoming dark bn shale with basal gypsum filled fracture. Sudden change at 4m. Very hard banded fine grained quartzite.											
				E of H 4 m.											
				No sample: Kmb to Pwo. No suitable material.											
Summary/comments		Dismal Plain floodout. Scattered cobbles& pebbles of qtzite & flaggy sltn; scattered boulders of grey qtzite on Kmb Logged by BHN													
Date		14/10/02													
Sheet		1 of 1													

# Drill Log

Flinders Diamonds Limited



Project/Prospect		G2: EL 2759 "Margaret"							
Hole Name		AC 02 GT37		Azimuth		Driller		Rob Budd Drilling	
Co-ordinates		646 798 mE		6 702 801 mN		Dip		-90	
Collar RL		Surface		Total Depth		13 m		Casing depth none	
Depth		Formn.	Depth	Lithological description	Sample Number				
From(m)	To(m)								
0	3	Kmb		Light grey-green shale with accessory gypsum filled fractures.					
3	6			Dark brown shale with numerous gypsum filled fractures.					
6	9			As above, with bands of yellow-bn limonite alteration.					
9	12			As above.					
12	13	Pwo	12.5m	As above to 12.5m. Sudden change to hard, light grey medium grained quartzite. Contains a few we					
				grained quartzite pebbles.					
				E of H 13 m.					
				No sample: Kmb to Pwo. No suitable material.					
Summary/comments		Dismal Plain floodout. Scattered pebbles of qtzite, siliceous siltstone and ferricrete on soft Kmb silt.				Logged by BHN		Date	14/10/02
						Sheet		1 of 1	

# Drill Log

Flinders Diamonds Limited



Project/Prospect		G2: EL 2759 "Margaret"									
Hole Name		AC 02 GT38				Azimuth		Driller		Rob Budd Drilling	
Co-ordinates		641 917 mE			6 702 796 mN		Dip		Drill type		Warman 250
Collar RL		Surface				Total Depth		40 m		Casing depth none	
Depth		Formn.	Depth	Lithological description	Sample Number						
From(m)	To(m)										
0	3	Kmb		Dark brown shale with numerous gypsum filled fractures; minor yellow-bn limonite filled fractures.							
3	6			Dark bn gritty shale; accessory gypsum filled fractures. Minor off-white sandier beds.							
6	9			Light grey-bn gritty shale with bands of darker red-bn hematite alteration. Thick gypsum filled fractures.							
9	12			Dark grey slightly sandy shale; numerous yellow-bn limonite filled fractures.							
12	15			Dark grey shale, fractured as above. Minor gypsum filled fractures.							
15	18			As above. Bands with scattered individual rounded qtz grains<2mm. Occasional lenticles of off-white.							
18	21			As above with thin sandy interbeds and red-bn to yellow-bn limonite filled fractures.							
21	24			As above to 22m. Sudden change to jet black shale with "greasy" texture.							
24	27			As above, including hard, dark grey quartzitic band with subrounded pebbles at 26-26.5m.							
27	30			Light grey clay altered fine sandstone with scattered lighter coloured ellipsoids and blue-green aggr							
30	33			As above. Varies from light grey to off-white in colour.							
33	36			Black fine sandy shale with accessory carbonaceous flecks.							
36	39			Light brown fine sandy shale.							
39	40	Pwo(?)	40m	Sudden change. Bright grey-green soapy fine grained sandstone and shale with irregular off-white, (?)sandstone <25mm across. Sudden change at 40m. Hard, off-white fine quartzite.							
				E of H 40 m .							
				No sample: Kmb to Pwo. No suitable material.							
Summary/comments		Moved collar 100m west of ridge. Scattered scree of qtzite, silcrete & siliceous Sltm on soft Kmb silt.						Logged by BHN		Date	14/10/02
Subcropping gypsum crystals on ridge.										Sheet	1 of 1

# Drill Log

Flinders Diamonds Limited



Project/Prospect		G2: EL 2759 "Margaret"							
Hole Name		AC 02 GT49		Azimuth		Driller		Rob Budd Drilling	
Co-ordinates		639 599 mE		6 717 199 mN		Dip		-90	
Collar RL		Surface		Total Depth		18 m.		Casing depth none	
Depth		Formn.	Depth	Lithological description	Sample Number				
From(m)	To(m)								
0	3	Recent		Red-bn clay with scattered silcrete pebbles to 2m. Sudden change to grey-bn fine sandy shale.					
3	6	Kmb	2m	As above, with scattered gypsum filled fractures.					
6	9	P-t(?)	6m	Sudden change. Dark grey sandy shale with off-white sandy ellipsoids <5mm long; convolute bedding.					
9	12			Interbedded dark grey shale and sandy shale. Fractures filled with clear sheets of gypsum.					
12	15			Black shale, weakly fractured. Texture becomes very "greasy" at 14m.					
15	18			As above, variably fractured.					
				E of H 18m					
				No sample: Kmb to P-t(?). No suitable material.					
				Note: Possible hole still in Kmb, not P-t(?)					
Summary/comments					Low breakaways/undulating. Dense lag of brown siliceous siltstone, ferricrete and scattered grey Tertiary silcrete. Logged by BHN				
					Date 17/10/02				
					Sheet 1 of 1				

## Drill Log

**Flinders Diamonds Limited**



Project/Prospect		G2: EL 2759 "Margaret"											
Hole Name		AC 02 GT50				Azimuth				Driller		Rob Budd Drilling	
Co-ordinates		646 814 mE			6 712 394 mN			Dip		-90		Drill type Warman 250	
Collar RL		Surface				Total Depth		39 m.		Casing depth		none	
Depth		Formn.	Depth	Lithological description	Sample Number								
From(m)	To(m)												
0	3	Recent		Red-bn clay to 2m. Rapid change to light brown fine sand with accessory grey Tertiary silcrete frag									
3	6	Kmb	4m	As above to 4m. Sudden change to bright yellow-bn clay with minor sand with accessory clear gyps									
6	9			As above to 8m. Grades into light grey shale cut by network of fine yellow-bn limonite filled fractures									
9	12			As above with thin zones of yellow-bn limonite alteration.									
12	15			As above. Minor gypsum filled fractures.									
15	18			Light grey shale cut by network of fine fractures filled with gypsum or yellow-bn limonite.									
18	21			As above. Minor gypsum filled fractures.									
21	24			As above, becoming dark grey towards base.									
24	27			Dark grey shale with "greasy" texture; variably fractured. Fracture fill of yellow-bn linomite of gypsum									
27	30	P-t	27m	Sudden change. Black shale with sandy aggregates <5mm across (convolute bedding) and scattere									
30	33			Black shale with thin off-white fine sandy lamellae. Minor to rare very fine pyrite in matrix.									
33	36			Black shale with minor black carbonaceous(?) flecks parallel to bedding. Cross cutting fractures fille									
36	39			Black to dark grey shale with scattered black flacks. Occasional light grey very fine sandy lamellae.									
				E of H 39 m.									
				No sample: Kmb to P-t(?). No suitable material.									
Summary/comments					Move proposed collar 1 km SE due to Tertiary silcrete. Undulating area of dense pebbly lag of brown quartzite anc Logged by BHN				Date	17/10/02			
siliceous siltstone on soft Kmb silt. Scattered grey silcrete cobbles.									Sheet	1 of 1			

# Drill Log

Flinders Diamonds Limited



Project/Prospect		G2: EL 2759 "Margaret"													
Hole Name		AC 02 GT57				Azimuth				Driller		Rob Budd Drilling			
Co-ordinates		644 404 mE			6 707 600 mN			Dip		-90		Drill type		Warman 250	
Collar RL		Surface				Total Depth		15.5 m		Casing depth		none			
Depth		Formn.	Depth	Lithological description	Sample Number										
From(m)	To(m)														
0	3	Recent		Orange-bn fine sand to silt with silcrete fragments; beomes clay rich towards base of interval.											
3	6	Kmb	3m	Brown shale, variably fractured. Fracture fill of gypsum or yellow-bn limonite. Yellow-bn limonite alte											
6	9			Brown shale, variably sandy with scattered white grains < 1mm. Minor gypsum filled fractures.											
9	12			As above, grading into dark brown shale.											
12	15			Dark brown shale, variably fractured with yelow-bn limonite fill; grades into grey-bn fine sandy shale											
15	15.5	Pwo	15.5m	Dark grey clay rich shale with thick gypsum filled fractures. Sudden change at 15.5m. Light grey fine											
				Very hard.											
				E of H 15.5 m											
				No sample: Kmb to Pwo. No suitable material. Too hard to drill with Aircore.											
Summary/comments		Flat plain. Dense lag of brown pebbles of quartzite, silcrete, ferricrete on soft Kmb silt.								Logged by BHN		Date 18/10/02			
										Sheet		1 of 1			



## Drill Log

**Flinders Diamonds Limited**



Project/Prospect		G2: EL 2759 "Margaret"													
Hole Name		AC 02 GT58				Azimuth				Driller		Rob Budd Drilling			
Co-ordinates		649 200 mE			6 707 599 mN			Dip		-90		Drill type		Warman 250	
Collar RL		Surface				Total Depth		10 m.		Casing depth		none			
Depth		Formn.	Depth	Lithological description	Sample Number										
From(m)	To(m)														
0	3	Kmb		Dark grey-brown shale.											
3	6			Dark brown silty shale, variably fractured. Most fractures filled with gypsum.											
6	9			As above.											
9	10	Pwo	10m	As above. Rapid change to dark grey plastic clay with gypsum filled fractures. Sudden change at 10											
				grey-green fine quartzite.											
				E of H 10 m.											
				No Sample: Kmb to Pwo. No suitable material. Too hard to drill with Aircore.											
Summary/comments		Plain covered with dense lag of brown quartzite, siltstone and ferricrete pebbles on soft Kmb silt.								Logged by BHN		Date		18/10/02	
Rare small quartzite boulders. Low hills start to the east.												Sheet		1 of 1	

# Drill Log

Flinders Diamonds Limited



Project/Prospect		G2: EL 2759 "Margaret"									
Hole Name		AC 02 GT59		Azimuth		Driller		Rob Budd Drilling			
Co-ordinates		662 554 mE		6 702 800 mN		Dip		-90			
Collar RL		Surface		Total Depth		36 m.		Casing depth		none	
Depth		Formn.	Depth	Lithological description	Sample Number						
From(m)	To(m)										
0	3	Recent		Orange-bn silt and fine sand with co-dominant silcrete fragments.							
3	6	Kmb	3m	Khaki fine sandy shale grading to dark brown shale, variably fractured. Minor yellow-bn limonite frag							
6	9	Knc	7m	As above to 7m. Rapid change to dark red-bn medium quartz sandstone (hard) to 8m. Sudden char							
				clay rich fine quartz sandstone.							
9	12			Yellow-bn to red-bn to pink-bn hematite altered fine to occasionally medium grained sandstone.							
12	15			Dark red-bn hematite altered fine quartz sandstone, becoming clay rich down interval. Scattered gy							
15	18			Pink-bn fine grained sandstone becoming light grey towards base of interval. Interbands of grey-gre							
18	21			Pink-brown to light grey fine grained quartz sandstone.							
21	24	Pwb(?)	23m	As above to 23m. Sudden change to bright blue-grey shale.							
24	27			Alternating variably thick bands of dark chocolate brown and bright blue-grey shale.							
27	30			As above; thinly banded.							
30	33			As above.							
33	36			As above.							
				E of H 36 m.							
				No sample. No suitable material.							
Summary/comments		Slightly undulating, on west side of drainage. Dense scree/lag dominated by Tertiary grey silcrete with less brown quartzite and flaggy siliceous siltstone.				Logged by		BHN		Date	18/10/02
										Sheet	1 of 1

# Drill Log

Flinders Diamonds Limited



Project/Prospect		G2: EL 2759 "Margaret"											
Hole Name		AC 02 GT60				Azimuth				Driller		Rob Budd Drilling	
Co-ordinates		662 856 mE		6 707 600 mN		Dip		-90		Drill type		Warman 250	
Collar RL		Surface				Total Depth		4 m.		Casing depth		none	
Depth		Formn.	Depth	Lithological description	Sample Number								
From(m)	To(m)												
0	3	Recent		Light yellow-bn sandy silt with accessory angular to rounded grey silcrete pebbles and fragments.									
3	4	Pwo	3.5m	As above to 3.5m. Sudden change. Hard off-white fine grained quartzite.									
				E of H 4 m.									
				No sample: Recent to Pwo. No suitable material.									
Summary/comments		Hole shifted due to access problems. Collared up on plateau. Pebble and cobble scree of light grey silcrete with accessory red-brown "knobbly" siltstone.								Logged by BHN		Date	19/10/02
												Sheet	1 of 1

# Drill Log

Flinders Diamonds Limited



Project/Prospect		G2: EL 2759 "Margaret"							
Hole Name		AC 02 GT61		Azimuth		Driller		Rob Budd Drilling	
Co-ordinates		663 223 mE		6 712 101 mN		Dip		Warman 250	
Collar RL		Surface		Total Depth		36 m		Casing depth none	
Depth		Formn.	Depth	Lithological description				Sample Number	
From(m)	To(m)								
0	3	Pwo(?)		Off-white, very fine, soft quartz sandstone, variably kaolinised.					
3	6			As above, becoming finer down interval. Grades into light grey kaolinised siltstone.					
6	9			Off-white medium grained quartz sandstone grading into light grey-green plastic clay.					
9	12	Pwm(?)	9m	Pink-brown grading to light grey plastic clay after shale.					
12	15			Light grey plastic clay after shale; variable hematite staining of red-brown and yellow-brown.					
15	18			Light grey plastic clay after shale with sandy yellow-bn bed at 16 - 16.5m.					
18	21			Light grey shale with minor red-bn hematite alteration, becoming darker grey and less plastic toward					
21	24			Dark grey shale; gypsum filled fractures at base of interval.					
24	27			Dark grey shale.					
27	30			As above, with thin fine sandy interbeds.					
30	33			Dark grey to black shale.					
33	36			As above. Rods starting to bog. Hole abandoned.					
				E of H 36 m.					
				No sample: No suitable material. Weathered Arcoona Quartzite into weathered Woomera Shale Me					
Summary/comments		Collar moved due to access problems. Valley area adjacent to drainage. Scree of silcrete and brown fine sandstone Logged by BHN						Date	19/10/02
on soft fine sand.								Sheet	1 of 1

## Drill Log

**Flinders Diamonds Limited**



Project/Prospect		G2: EL 2759 "Margaret"													
Hole Name		AC 02 GT62					Azimuth				Driller		Rob Budd Drilling		
Co-ordinates		669 207 mE			6 697 999 mN			Dip		-90		Drill type		Warman 250	
Collar RL		Surface						Total Depth		24 m.		Casing depth		none	
Depth		Formn.	Depth	Lithological description	Sample Number										
From(m)	To(m)														
0	3	Recent		Orange-bn fine sand with fragments of qtzite and siltstone, becoming yellow-bn and clay rich down											
3	6	Knc	3m	Pale yellow to off-white fine sand, slightly clay rich with spotty hematite alteration.											
6	9			As above, with yellow-bn limonite and thick gypsum filled fractures at 8.5m. Scattered qtzite pebbles											
		Pwo	8.5m	at 8.5 m to light grey plastic clay.											
9	12			Light grey-bn sandy shale with numerous fractures filled with yellow-bn limonite or gypsum.											
12	15			Light grey plastic shale with dark red-bn and yellow-bn limonite alteration zones and scattered gyps											
15	18	Pwm	17m	Hard light yellow-bn very fine grained quartz sandstone to 17m. Sudden change to brown shale with											
				interbands.											
18	21			Dark brown shale with interbands of blue-grey, variably micaceous shale. Rare gypsum filled fractu											
21	24			As above.											
				E of H 24 m.											
				No sample: All late Proterozoic sediments; Arcoona Quartzite (Pwo) into Woomera Shale Member											
Summary/comments					Plain area adjacent to road. Dense lag of brown tabluar siltstone and cobbles of brown qtzite on soft orange-bn sa Logged by BHN					Date		19/10/02			
										Sheet		1 of 1			

# Drill Log

Flinders Diamonds Limited



Project/Prospect		G2: EL 2759 "Margaret"								
Hole Name		AC 02 GT63		Azimuth		Driller		Rob Budd Drilling		
Co-ordinates		666 848 mE		6 712 208 mN		Dip		-90		
Collar RL		Surface		Total Depth		36 m.		Casing depth		none

Depth		Formn.	Depth	Lithological description	Sample Number			
From(m)	To(m)							
0	3	Recent		Orange-bn fine sand with accessory grey silcrete fragments.				
3	6	Kmb	3m	Dark grey slightly sandy shale with mottled yellow-bn limonite staining. Accessory gypsum filled frac				
6	9			As above.				
9	12			As above with zones of slightly sandier, yellow-bn limonite altered shale.				
12	15			Dark grey shale with accessory yellow-bn limonite mottling and gypsum to 14m. Sudden change to				
15	18			Very dark grey, very fine sandy shale with accessory clear gypsum flakes.				
18	21			Very dark grey, very fine sandy shale with "greasy" texture.				
21	24			As above.				
24	27			As above with 200mm thick off-white very fine grained qtzite at 25m - part of cobble/dropstone?. Als				
27	30			Very dark grey, fine sandy shale.				
30	33			As above.				
33	36			As above. Becoming very sticky and rods bogging. Hole abandoned.				
				E of H 36 m.				
				No sample: No suitable material.				
Summary/comments					Collared on road in valley adjacent to drainage between high mesas. Scattered scree of grey angular silcrete cobb: Logged by BHN			
and pebbles on silty Kmb.					Date 19/10/02			
					Sheet 1 of 1			

# Drill Log

Flinders Diamonds Limited



Project/Prospect		G2: EL 2759 "Margaret"													
Hole Name		AC 02 GT64				Azimuth				Driller		Rob Budd Drilling			
Co-ordinates		661 881 mE			6 722 047 mN			Dip		-90		Drill type		Warman 250	
Collar RL		Surface				Total Depth		24 m.		Casing depth		none			
Depth		Formn.	Depth	Lithological description	Sample Number										
From(m)	To(m)														
0	3	Kmb		Light grey shale with yellow-bn limonite mottling. Fractures filled with yellow-bn or orange-bn limonite											
3	6			As above, with zone of more intensive yellow-bn limonite alteration. Occasional gypsum filled fractures											
6	9			As above. Occasional gypsum filled fractures.											
9	12	P-t	9m	Sudden change. Dark grey, variably sandy shale with zones of accessory carbonaceous laminae <3											
12	15			Very dark grey, variably fine sandy shale with accessory carbonaceous laminae.											
15	18			Interbedded very dark grey shale and sandy shale. More carbonaceous flecks in sandier beds.											
18	21			As above, with medium grained sandy beds with interstitial pyrite. Accessory gypsum filled fractures											
				siliceous, very fine grained pyritic sandstone.											
21	24			Very dark grey sandy and silty shale, variably pyritic with black carbonaceous flecks and dark green											
				Becoming very sticky and blocking rods. Clean rods and re-enter hole. Rods starting to bog. Hole at											
				E of H 24 m.											
				No sample: No suitable material. Hole abandoned.											
Summary/comments					Collar shifted east due to impassable creek and fence. Adjacent to drainage. Area of dense lag of brown quartzite, Logged by BHN				Date	20/10/02					
siliceous siltstone and silcrete pebbles.									Sheet	1 of 1					

# Drill Log

Flinders Diamonds Limited



Project/Prospect		G2: EL 2759 "Margaret"											
Hole Name		AC 02 GT65			Azimuth				Driller		Rob Budd Drilling		
Co-ordinates		660 140 mE		6 726 799 mN		Dip		-90		Drill type		Warman 250	
Collar RL		Surface			Total Depth		24 m.		Casing depth/type		none		
Depth		Formn.	Depth	Lithological description	Sample Number								
From(m)	To(m)												
0	3	Recent		Light brown clay rich medium grained sand with accessory angular grey silcrete fragments < 50 mm across.									
3	6	Kmb	3m	Sudden change. Light grey slightly sandy shale, variably fractured with yellow-bn limonite or clear gypsum fill.									
6	9	Pls	8m	As above to 8m. Rapid change to very dark grey shale with rare interstitial pyrite aggregates <2mm across.									
9	12			Dark grey fine sandy siltstone and shale. Numerous ellipsoids < 5mm of off-white fine sand. Accessory interstitial pyrite.									
12	15			As above.									
15	18			As above.									
18	21			As above. Layer containing bivalve shells about 6mm across.									
21	24			As above. Becoming very sticky and rods beginning to bog.									
				E of H 24 m.									
				No sample. Kmb to Pls. No suitable material.									
Summary/comments					Logged by BHN		Date		20/10/02				
Move collar due to access problems. Drill east side of sandy creek adjacent to road. Creek flood area at rise. Scree of angular Tertiary silcrete pebbles and cobbles. Accessory flaggy siltstone.							Sheet		1 of 1				