



# Quarterly Report

Period ending 30 September 2006

## HIGHLIGHTS

### Flinders Ranges (SA)

- 76 macrodiamonds recovered from bulk sampling with encouraging results from the Eurelia area requiring follow up exploration
- Discovery of 5 new kimberlites in the September quarter

### Hammersley Project (WA)

- Recent mapping has located structurally controlled breccia zones thought to be source of previous diamonds and indicator minerals from the area
- Core drilling program testing Hammersley kimberlite targets in progress

### Twin Swamps (WA)

- Air core drill testing of Twin Swamps kimberlite targets about to commence

### Corporate

- Flinders Diamonds' shareholders received a priority offer in the successful \$14.75 million IPO of Eromanga Uranium Limited

## EXPLORATION ACTIVITIES REVIEW

The Company recently received results from the first phase of bulk sampling carried out between June and September, 2006. We treated eight 100-tonne individual samples of kimberlite from localities that have returned the highest microdiamond results to date. Results from kimberlites in the Peterborough area were disappointing, but in the Eurelia area, 74 diamonds totalling nearly one carat in weight were recovered from three kimberlites. These

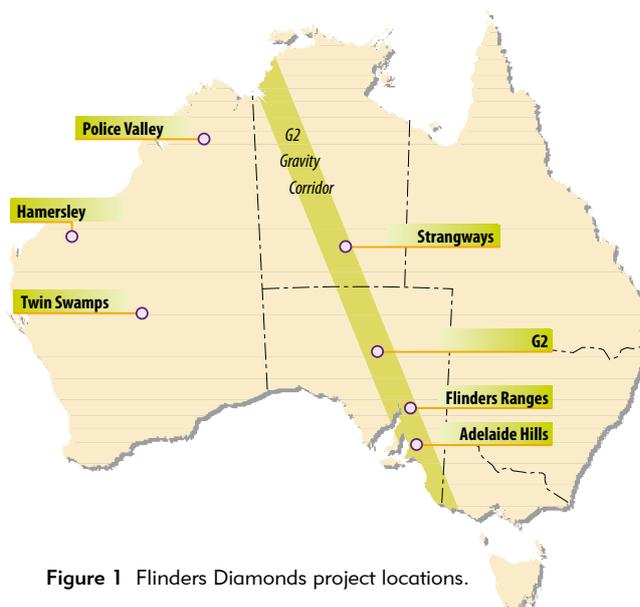


Figure 1 Flinders Diamonds project locations.

results are encouraging and justify follow up exploration in the Eurelia area. New helimag surveys are planned for this follow up.

In our flagship Flinders Ranges project, established methods resulted in the discovery of 40 new kimberlites in the last year, five of these were in the September quarter. Following the highly successful Peterborough helimag survey, an increasing focus on kimberlite pipes has been possible with over 50 pipe targets identified for evaluation. Following target identification by helimag, our evaluation involves ground magnetics followed by trenching or drilling to collect a kimberlite sample and assessment of the diamond-bearing potential by microdiamond analysis. Kimberlites with anomalously high microdiamond contents are evaluated by bulk sampling for macrodiamonds.

During the quarter, no new activities were undertaken at the Adelaide Hills and Strangways projects where expenditure obligations are now being met by Maximus



Figure 2 Dense media separation section of the bulk sampling plant near Terowie, South Australia.

Resources Limited. At the G2 project, a program of additional reconnaissance drilling was carried out in a continuing attempt to locate the source of diamonds on the Gawler Craton. At the time of writing, diamond indicator mineral results are awaited.

At the Hamersley project in the Pilbara Region of Western Australia, all hurdles to the commencement of drilling have been overcome and drilling commenced at the Hamersley exploration licence in mid October 2006. The targets being tested at Hamersley have previously returned diamonds and high-quality indicator minerals and their drill testing is the main reason Flinders Diamonds entered the project in June 2003.

**SOUTH AUSTRALIA**  
**Flinders Ranges Project**

**Tenure**

Flinders continued to add new prospective ground to its Flinders Ranges project in the September quarter. In an agreement with IR, MA and WJ Filsell, Flinders has obtained 100% of the diamond rights for ELs 2864 and 3378 (Figure 5) in exchange for providing a copy of new airborne magnetic surveys to the owners who are searching for gold and base metals. Together with two new ELs pegged earlier in 2006, (ELs 11 and 264/06) Flinders has obtained diamond rights to a total new area of 1,897 square kilometres. In contrast, late in 2006, Flinders Diamonds is due to make some statutory relinquishments,

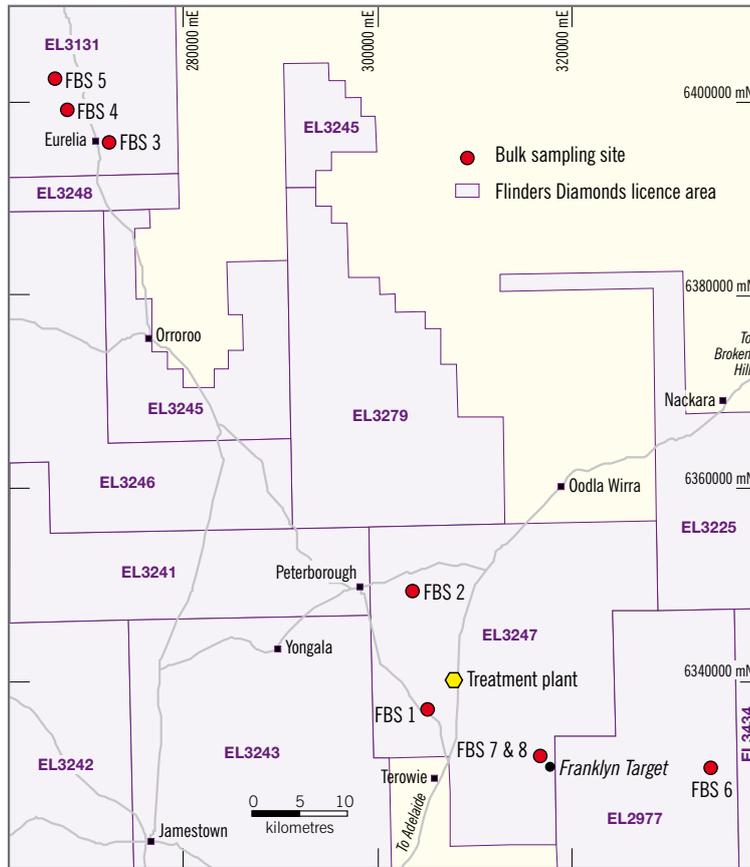


Figure 3 Bulk sampling sites and treatment plant location.

particularly to the Springfield and Jamestown Project areas.

**Bulk Sample Results**

FDL processed (Figure 2) a total of 794 tonnes of weathered kimberlite (approximately 100 tonnes per sample) obtained from excavated trenches. Sample locations are shown in Figure 3. After removal of oversized

material (12.6%), 694 tonnes of minus 50 millimetre material was processed for the recovery of 797 kilograms (0.1% of the minus 50 mm material) of heavy mineral concentrate (HMC) in four size fractions. A total of 76 diamonds were recovered between 0.5 and 3 mm in size, some are shown in Figure 4 and described in the following table:



**Figure 4** Diamonds from bulk sampling kimberlite from the Eureka area.

### Diamonds recovered in Bulk Sampling

See Figure 6 for location

Bulk Sample	1-3 mm	0.5-1 mm	Total Diamonds
FBS 1	-	-	-
FBS 2	-	1	1
FBS 3	7	17	25
FBS 4	3	15	18
FBS 5	8	23	31
FBS 6	-	-	-
FBS 7	-	1	1
FBS 8	-	-	-
<b>TOTALS</b>	<b>18</b>	<b>57</b>	<b>76</b>

NB - = no diamonds recovered ct = carat = 1/5th of a gram

None of the above results suggest that any of the bodies tested could be commercially exploited. The recovery of diamonds from all three samples tested within EL 3131 is however regarded as encouraging and supports previous results from the area that identify it as a diamondiferous province that warrants further detailed exploration.

#### Results from the Eureka Area

Processing of the HMC resulted in the recovery of 31 diamonds from FBS 5 (EL 3131) of which 23 are between 0.5 and 1 mm in size and eight between 1 and 3 mm in size. The weights of the larger diamonds are, 0.09ct, 0.07ct, 0.07ct, 0.06ct, 0.04ct, 0.03ct, 0.02ct and 0.02ct (total 0.37cts). The total weight of the 23 smaller diamonds recovered was 0.136ct of which 16 are colourless and 7 are pale colours (pale brown and one grey). One of the smaller diamonds was recovered after acid treatment of the 1 to 3 mm sized fraction to dissolve the carbonate.

FBS 4 (EL 3131) produced three diamonds between 0.5 and 1 mm in size. Two of the diamonds were colourless and one a pale brown. 15 diamonds were recovered from the 0.5 to 1 mm sized material. The largest of these stones was 0.02ct.

A third sample, FBS 3 (EL 3131), from the same general area as FBS 4 and 5 produced 7 diamonds in the 1 to 2 millimetre size range totalling 0.157cts. Two of the diamonds are colourless and 5 pale brown in colour. Individual stones

ranged from 0.009 up to 0.040cts. Following acid treatment to remove carbonate from the 3 to 6 mm sized concentrate, a single 0.8 mm pale brown diamond was recovered weighing 0.03cts. 17 diamonds were recovered from the 0.5 to 1 mm sized material.

#### Results from the Peterborough and Nackara Areas

Results from the Peterborough and Nackara areas were disappointing with only one diamond recovered from each area. Sample FBS 2 near Peterborough returned one diamond as did sample FBS 7 from one of the Franklyn kimberlite pipes. Samples FBS 1, 6 and 8 returned no diamonds.

#### Ground Magnetics

The Company now carries out ground magnetic surveys over identified helimag targets as a standard procedure. Ground magnetics are an essential part of the exploration process, largely because you register a very different signal only two metres above the ground than you detect from 25 metres in the air. For kimberlite pipe targets, this is not a major concern as if kimberlite is present at shallow depth it can generally be easily located by a shallow trench. However, for kimberlite dykes and sills, it is not always easy to know their exact location in the ground. However, by digging a trench at right angles to the trend of the ground magnetic anomaly, dykes and sills at shallow depth are usually located. During the quarter five new kimberlites were located by following

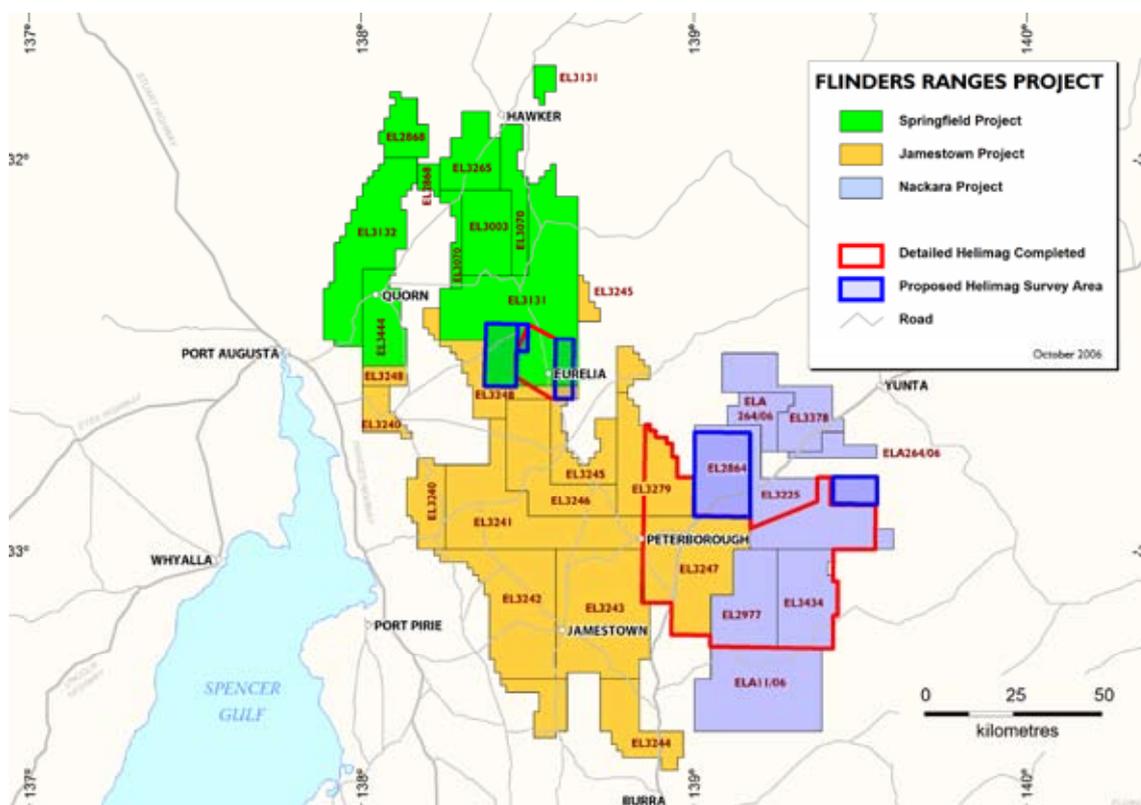


Figure 5 Flinders Ranges project areas and proposed new helimag surveys.

up ground magnetic anomalies. These consisted of 2 pipes, 2 sills and one dyke. At least 17 high-quality ground magnetic targets are currently awaiting testing.

#### Forward Program

In the past two years, Flinders Diamonds has located about 80 new kimberlites and so far has microdiamond results on 55 of these. Flinders has been waiting for the results of 26 microdiamond determinations from the Nackara area for three months. Recent news from the laboratory in Canada is that results should be available in the week beginning 30 October.

We are confident of discovering many more kimberlites with a new focus on kimberlite pipes. As about 30% of known kimberlites contain diamonds and about 1% of known kimberlites become mines, and as Flinders Diamonds has located 80 new kimberlites, it should become statistically likely that we will

encounter a commercial grade kimberlite as we find more of them. We therefore intend to continue to locate new kimberlites, believing that our chances of commercial success will increase.

We are also trying to understand the distribution of better diamond grades in the project area. To date we have evidence of clusters of diamondiferous kimberlites in the Eureka and Peterborough areas. In addition, we believe from the presence of alluvial diamonds at Springfield and in the eastern Nackara area, that two more clusters of undiscovered diamondiferous kimberlites are present. One of our priorities is to locate diamondiferous kimberlites from the Springfield and Nackara areas and the other is to see if we can expand the size of the Eureka cluster where we may find better grades.

In order to find more kimberlites, we need to carry out more detailed helimag surveys. Currently we are

planning one in the northeast of the Nackara area over the locations of alluvial diamonds and another east and northwest of Eureka where we believe grade may increase as we approach the Gawler Craton. Location of the proposed surveys is shown in Figure 5.

Flinders Diamonds is also supporting, with Adelaide University and PIRSA, an Australian Research Council project to better understand the geological evolution of the Flinders Ranges Diamond Province. A new post-doctoral research fellow has recently commenced research on the project and it is expected that new high quality chemical data on the new kimberlites and their minerals will lead to a much better geological understanding of diamond distribution.

#### Adelaide Hills Project

The Adelaide Hills project consists of seven exploration licences covering an area of 3,419 square kilometres. Exploration obligations have been



**Figure 6** Terrain in the G2 project area.

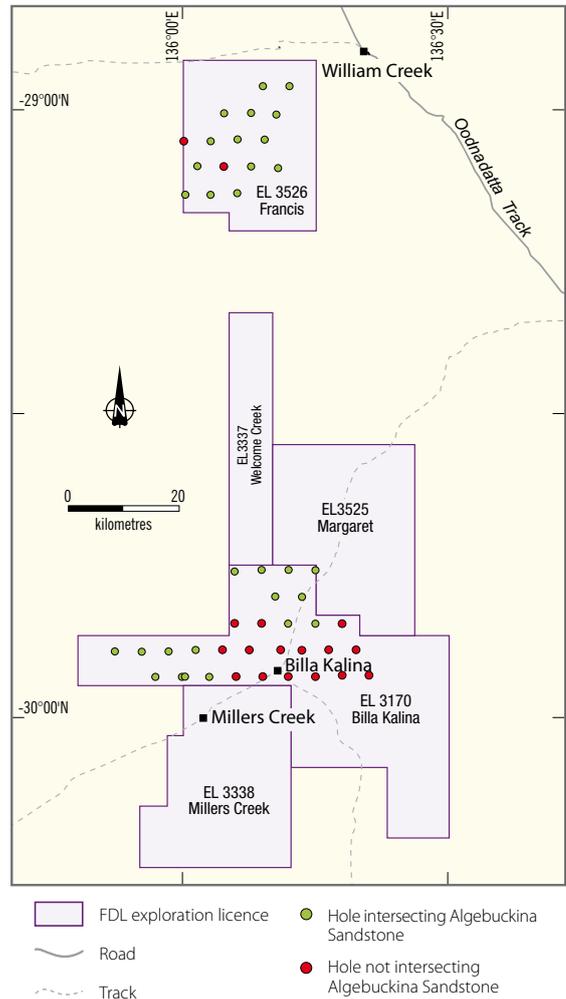
taken over by Maximus Resources Limited which has been focusing on gold exploration. That company has been successful in locating an inferred resource of 53,000 ounces of gold at the Bird-in-Hand mine. Bird in-Hand is located on the Lobethal EL 3215 where Flinders and Maximus have recently reached the level of \$1 million of exploration expenditure since 2001. This has satisfied the earning commitment of the joint venture with Indo Mines (formerly AKD Ltd) and Statelink Holdings Pty Ltd to earn a 75% interest. Flinders Diamonds now owns a 75 to 100% interest in the diamond rights for all its original Adelaide Hills tenements.

The Company is planning an independent assessment of existing data to create new exploration ideas and a new approach to exploration activities on this prospective project.

### G2 Project

Flinders Diamonds holds a 100% interest in diamond rights for this extensive project area consisting of five exploration licences totalling 4084 square kilometres located south of Lake Eyre in the centre of South Australia (Figure 6). Diamonds have been located to the north in the Peake and Denison Ranges eroding out of the Jurassic Algebuckina Sandstone. The sediments containing these alluvial diamonds are thought to have come from the south or southwest so Flinders is trying to locate the source by undercover drilling to the base of the Mesozoic sediments. The project area is on the Gawler Craton which Flinders believes is one of the most prospective areas for diamonds in Australia.

Our previous work has shown a large area contains diamond indicator minerals and this has recently been followed up to the south and southwest by a new program of undercover drilling. Forty-seven aircore holes for 1,852 metres were drilled, as shown on Figure 7, during the period between 8 and 19 August 2006. Twenty-seven of the holes were able to penetrate the target horizon (Figure 7) and heavy mineral concentrates are being prepared and examined. It is expected that if any site is close to a



**Figure 7** G2 Project area and holes drilled in August 2006.

buried kimberlite pipe, then the number and angularity of diamond indicator minerals will significantly increase. Our intention would then be to move to a geophysical methods such as gravity and magnetics in the expectation that any buried kimberlites will become apparent.

**NORTHERN TERRITORY**

**Strangways Project**

Flinders Diamonds retains the diamond rights to this project while Maximus is carrying out an exploration program for gold and base metals which is meeting Mines Department expenditure obligations. The Company is planning an independent assessment of project data to help create new ideas for future diamond exploration activities.

**WESTERN AUSTRALIA**

**Hamersley Project**

The Hamersley project is located in the Pilbara region of Western Australia and includes five Flinders-Prenti JV exploration licences and nine Fortescue Metals Group (FMG) exploration licences as shown on Figure 8. In the Flinders-Prenti JV, Flinders previously purchased 50% and will own 100% after spending \$2 million. Flinders has a commodity rights exchange agreement with FMG whereby Flinders owns the diamond rights and FMG owns the iron ore rights. Flinders also has a strategic data alliance with De Beers whereby, after Flinders has earned 100% in the Prenti JV, De Beers has the right to purchase 70% of the project for 3.5 times Flinders' expenditure.

Diamond exploration in the area has recently received a boost from the work of De Beers and Tawana Resources which has located the Blacktop Kimberlite about 100 kilometres northwest of Flinders' Hamersley project area (Figure 8). They have also recently reported the recovery of 20.89 carats of diamonds from 215 tonnes of kimberlite, and have been carrying out a helicopter supported sampling program, with encouraging results.

Recent structural mapping, as shown on Figure 9, has identified a number of potential kimberlite fissure targets on the Hamersley exploration licence. In the case of the Caduceus prospect, the targets closely relate to previous RC drill holes from which diamonds and indicator minerals, including pyrope garnet, picro-ilmenite and chromite have been recovered. In addition, the

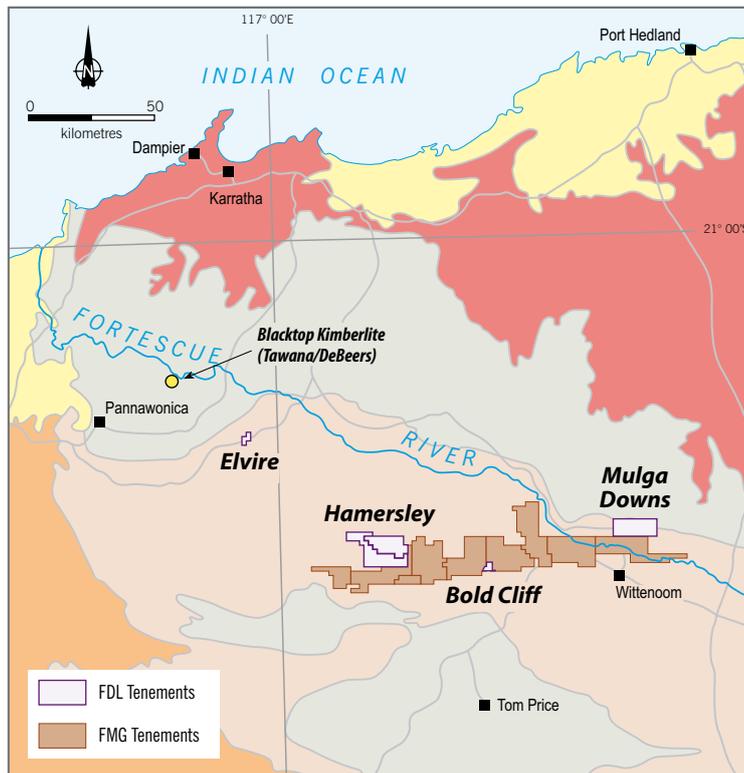


Figure 8 Regional geology and tenements for the Hamersley project.

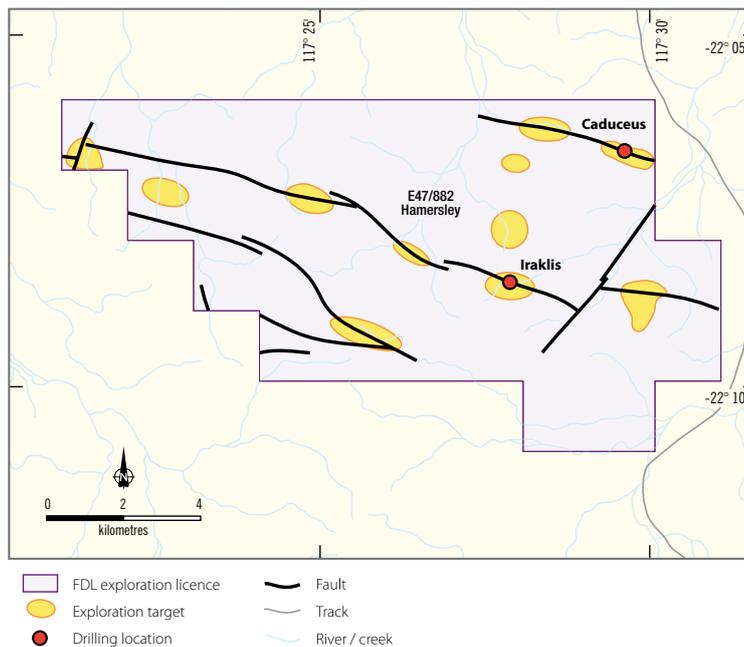


Figure 9 Drilling locations and structural targets in Hamersley E47/882.



Figure 10 Brecciated banded iron formation and grey clay from recent Hamersley project drill core.

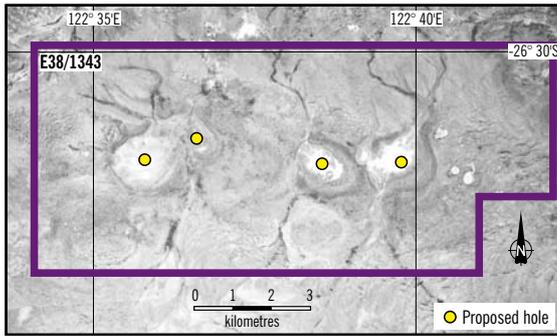


Figure 11 Twin Swamps proposed drill locations.



Figure 12 One of the swamps at Twin Swamps.

target is supported by aerial and ground magnetic data. Numerous alluvial diamond occurrences have also been reported by previous workers in proximity to the Caduceus target, the source of which remains unknown.

FDL was fortunate to secure, at short notice, a diamond drill rig to further investigate its Caduceus and Iraklis projects within tenement E47/882 in the Hamersley region of WA. Drilling is underway at two prospects – Caduceus and Iraklis (Figure 9). Previous RC drilling at the Iraklis target resulted in one positive sample (of two tested) containing pyrope and garnet.

The program of HQ drilling, consisting of 4 and possibly 5 holes up to 200 metres each, has been designed to test both targets and recover samples that will enable the identification of kimberlite. This has not been possible from previous drilling as the percussion samples were both extensively weathered and highly contaminated with ferruginous material from the Brockman Iron Formation. The program commenced in mid October 2006 and is anticipated to continue for about four to six weeks. Core from the first hole is shown in Figure 10. This contains a grey clay interval which could be kimberlite or dolerite. Analytical work will need to be undertaken to determine which.

### Twin Swamps Project

Drilling activities have not been possible for some time due to the swamp targets being waterlogged and unsuitable to support a drilling rig (Figure 11). Previous drilling has returned diamond indicator minerals from shallow depth but did not penetrate near-surface sediments and the swamps are thought to possibly be underlain by kimberlite pipes. At the time of writing the local pastoral lessee has reported that the swamps are nearly dry, and drilling

should be possible in October or November. Flinders has organised an aircore drilling rig to test a minimum of three targets, probably in late October 2006.

## CORPORATE

### Eromanga Uranium Limited's IPO

On July 25, Flinders Diamonds announced that its shareholders would be entitled to a priority offer in the IPO of Eromanga Uranium Limited. This is because Flinders Diamonds, as the registered holder of the G2 project tenements, has agreed to allow Maximus Resources Limited to farm out 50% of the non-diamond rights to Eromanga Uranium Resources Pty Ltd which is subject to a sale agreement with Eromanga Uranium Limited (ERO). Flinders Diamonds shareholders registered at the close of Business on August 9 received a priority offer in Eromanga's IPO. Eromanga Uranium has carried out its IPO during September and October and has raised \$14.75 million to fund its ongoing uranium exploration. It is listing on the ASX on 31 October 2006.

### Finance

On 30 September 2006, the Company had available funds of \$2.02 million. Exploration expenditure by the company during the September quarter was \$936,000 and forecast expenditure for the December quarter of 2006 is \$700,000.

**Dr Kevin J A Wills**  
Managing Director

31 October 2006

The information in this report has been compiled by Dr KJA Wills who is a Fellow of the Australasian Institute of Mining and Metallurgy and who is bound by and follows the Institute's codes and recommended practices. He has a minimum of five years experience in the types of activities being reported.

### Contact us

Enquires should be directed to Dr Kevin Wills, Managing Director on 1300 559 564 or 0419 850 997.

20 Boskenna Avenue Norwood South Australia 5067

PO Box 3126 Norwood South Australia 5067

telephone 61 8 8362 5900 facsimile 61 8 8362 5966

email info@flindersdiamonds.com

www.flindersdiamonds.com



# Appendix 5B

## Mining exploration entity quarterly report

Introduced 1/7/96. Origin: Appendix 8. Amended 1/7/97, 1/7/98, 30/9/2001.

Name of entity

Flinders Diamonds Limited

ABN

46 091 118 044

Quarter ended ("current quarter")

30 September 2006

### Consolidated statement of cash flows

Cash flows related to operating activities	Current quarter \$A'000	Year to date (3 months) \$A'000
1.1 Receipts from product sales and related debtors		
1.2 Payments for		
(a) exploration and evaluation	(936)	(936)
(b) development		
(c) production		
(d) administration	(120)	(120)
1.3 Dividends received		
1.4 Interest and other items of a similar nature received	37	37
1.5 Interest and other costs of finance paid		
1.6 Income taxes paid		
1.7 Other (provide details if material)		
<b>Net Operating Cash Flows</b>	<b>(1,019)</b>	<b>(1,019)</b>
<b>Cash flows related to investing activities</b>		
1.8 Payment for purchases of:		
(a) prospects		
(b) equity investments		
(c) other fixed assets	(32)	(32)
1.9 Proceeds from sale of:		
(a) prospects		
(b) equity investments		
(c) other fixed assets		
1.10 Loans to other entities	128	128
1.11 Loans repaid by other entities		
1.12 Other (provide details if material)		
<b>Net investing cash flows</b>	<b>96</b>	<b>96</b>
1.13 Total operating and investing cash flows (carried forward)	<b>(923)</b>	<b>(923)</b>

+ See chapter 19 for defined terms.

**Appendix 5B**  
**Mining exploration entity quarterly report**

1.13	Total operating and investing cash flows (brought forward)	(923)	(923)
	<b>Cash flows related to financing activities</b>		
1.14	Proceeds from issues of shares, options, etc.		
1.15	Proceeds from sale of forfeited shares		
1.16	Proceeds from borrowings		
1.17	Repayment of borrowings		
1.18	Dividends paid		
1.19	Other (provide details if material)		
	<b>Net financing cash flows</b>		
	<b>Net increase (decrease) in cash held</b>	(923)	(923)
1.20	Cash at beginning of quarter/year to date	2,938	2,938
1.21	Exchange rate adjustments to item 1.20		
1.22	<b>Cash at end of quarter</b>	2,015	2,015

**Payments to directors of the entity and associates of the directors**

**Payments to related entities of the entity and associates of the related entities**

		Current quarter \$A'000
1.23	Aggregate amount of payments to the parties included in item 1.2	62
1.24	Aggregate amount of loans to the parties included in item 1.10	

1.25 Explanation necessary for an understanding of the transactions

**Non-cash financing and investing activities**

2.1 Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows

2.2 Details of outlays made by other entities to establish or increase their share in projects in which the reporting entity has an interest

+ See chapter 19 for defined terms.

### Financing facilities available

Add notes as necessary for an understanding of the position.

	Amount available \$A'000	Amount used \$A'000
3.1 Loan facilities		
3.2 Credit standby arrangements		

### Estimated cash outflows for next quarter

	\$A'000
4.1 Exploration and evaluation	700
4.2 Development	
<b>Total</b>	

### Reconciliation of cash

Reconciliation of cash at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts is as follows.

	Current quarter \$A'000	Previous quarter \$A'000
5.1 Cash on hand and at bank	45	45
5.2 Deposits at call	1,970	1,970
5.3 Bank overdraft		
5.4 Other (provide details)		
<b>Total: cash at end of quarter</b> (item 1.22)	2,015	2,015

### Changes in interests in mining tenements

	Tenement reference	Nature of interest (note (2))	Interest at beginning of quarter	Interest at end of quarter
6.1	Interests in mining tenements relinquished, reduced or lapsed			
6.2	Interests in mining tenements acquired or increased	ELs 2864 and 3378, SA	0%	Can earn 100%

+ See chapter 19 for defined terms.

**Appendix 5B**  
**Mining exploration entity quarterly report**

**Issued and quoted securities at end of current quarter**

*Description includes rate of interest and any redemption or conversion rights together with prices and dates.*

	Total number	Number quoted	Issue price per security (see note 3) (cents)	Amount paid up per security (see note 3) (cents)
7.1 <b>Preference +securities</b> <i>(description)</i>				
7.2 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs, redemptions				
7.3 <b>+Ordinary securities</b>	485,549,708	485,549,708		
7.4 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs				
7.5 <b>+Convertible debt securities</b> <i>(description)</i>				
7.6 Changes during quarter (a) Increases through issues (b) Decreases through securities matured, converted				
7.7 <b>Options</b> <i>(description and conversion factor)</i>	381,653,978	381,653,978	<i>Exercise price</i> \$0.10	<i>Expiry date</i> 29/9/2008
7.8 Issued during quarter				
7.9 Exercised during quarter				
7.10 Expired during quarter				
7.11 <b>Debentures</b> <i>(totals only)</i>				
7.12 <b>Unsecured notes</b> <i>(totals only)</i>				

+ See chapter 19 for defined terms.

## Compliance statement

- 1 This statement has been prepared under accounting policies which comply with accounting standards as defined in the Corporations Act or other standards acceptable to ASX (see note 4).
- 2 This statement does give a true and fair view of the matters disclosed.



Richard W C Willson  
(Company secretary)

Date: 31 October 2006

## Notes

- 1 The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity wanting to disclose additional information is encouraged to do so, in a note or notes attached to this report.
- 2 The "Nature of interest" (items 6.1 and 6.2) includes options in respect of interests in mining tenements acquired, exercised or lapsed during the reporting period. If the entity is involved in a joint venture agreement and there are conditions precedent which will change its percentage interest in a mining tenement, it should disclose the change of percentage interest and conditions precedent in the list required for items 6.1 and 6.2.
- 3 **Issued and quoted securities** The issue price and amount paid up is not required in items 7.1 and 7.3 for fully paid securities.
- 4 The definitions in, and provisions of, *AASB 1022: Accounting for Extractive Industries* and *AASB 1026: Statement of Cash Flows* apply to this report.
- 5 **Accounting Standards** ASX will accept, for example, the use of International Accounting Standards for foreign entities. If the standards used do not address a topic, the Australian standard on that topic (if any) must be complied with.

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+ See chapter 19 for defined terms.