



FLINDERS  
DIAMONDS

## Australian Stock Exchange Announcement

### **FIRST DIAMONDS FROM BULK SAMPLING IN THE FLINDERS RANGES, SA**

3 August 2006

The Manager  
Companies Announcements Office  
Australian Stock Exchange  
20 Bridge Street SYDNEY NSW 2000

#### **Highlights**

- 30 diamonds recovered from first bulk sample from Eureka area, Flinders Ranges, South Australia
- Larger diamonds of good quality are highly encouraging.
- Further results in next month and further bulk sampling later in 2006.

#### **Diamond Results**

The Company is pleased to announce that 30 diamonds have been recovered from the first sample processed from the current bulk sampling program (Figure 1).

The sample referenced FBS 05 was obtained from a "blow" on a kimberlite dyke in the Eureka area located within the Company's Gilbert Hill Exploration Licence area EL 3131 (Figure 2). Previous work undertaken by Flinders Diamonds Limited (Flinders) and others has confirmed, based upon consistent positive diamond results from a large number of independent samples, that the dyke is diamondiferous.

Flinders processed 100.05 tonnes of weathered kimberlite obtained from an excavated trench at the Eureka site. From the site the material was trucked 95 kilometres to the Dense Media Separation (DMS) Processing Plant that has been



**Figure 1** Eight diamonds recovered from FBS 05 that were greater than one millimetre in size.

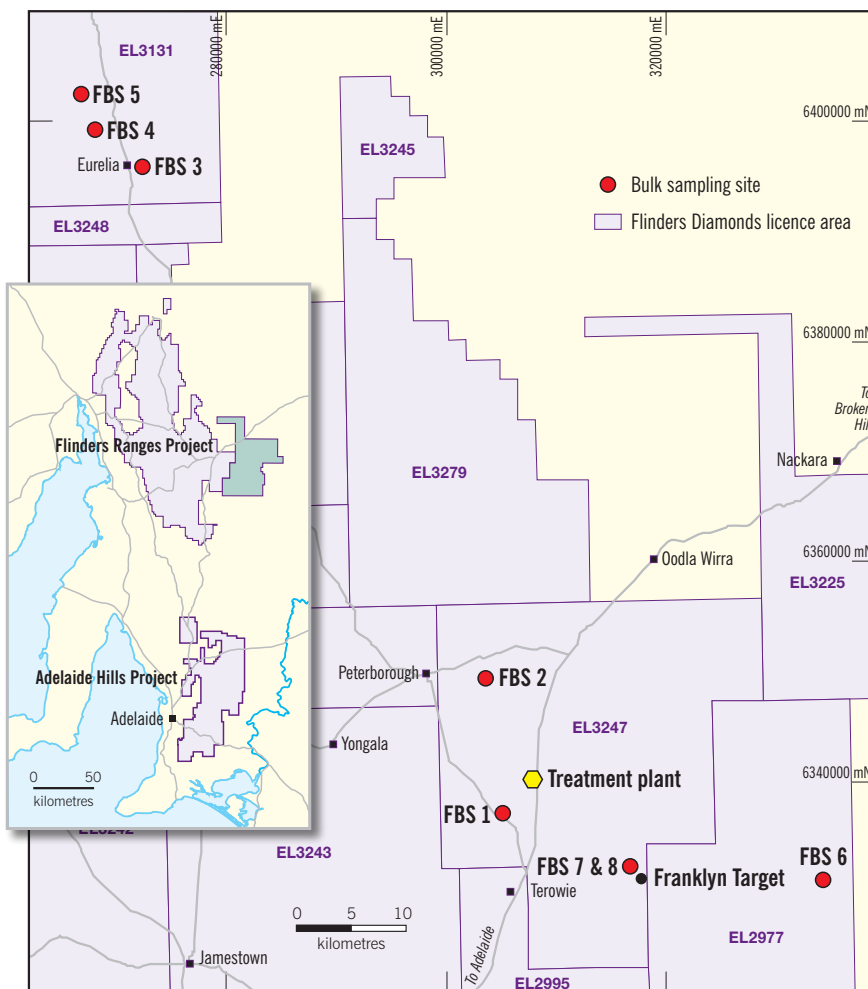
established near Terowie. The plant is located central to the eight locations selected by Flinders for the current and probable future bulk sampling programs.

Processing of the HMC resulted in the recovery of 30 diamonds of which 22 are between 0.5 and 1 mm in size and eight between 1 and 3 mm in size. The weights of the larger diamonds were 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 22 smaller diamonds recovered was 0.136ct of

which 15 were colourless and 7 were pale colours (pale brown and one grey).

An independent report of the less than 1 mm sized diamonds states that "The majority of diamonds inspected are considered to represent the coarse end of a standard microdiamond population, due to the predominance of primary growth forms (octahedra, modified octahedra and cubes – 15/22 stones) compared with resorbed forms (5/22). The colours too are consistent with this finding, with only colourless or very pale colours present".



**Figure 1** Bulk sample and treatment plant locations.

### Treatment Details

The DMS plant consists of a feed hopper fitted with a 50 mm grizzly to remove the oversize material prior to delivery to a scrubbing trommel fitted with a minimum of 0.5 mm and a maximum of 10 mm screens. In the scrubbing unit the sample is disaggregated and de-slimed, with the fine clay and sand fractions being removed and piped to the tailings pond and the plus 10 mm material rejected to the oversize stockpile. Essentially the plant from this point forward does not have the capacity to treat any material coarser than 10 mm.

From the scrubbing trommel the plus 0.5 mm and minus 10 mm fraction is pumped to a dewatering screen after which it is introduced to the dense media slurry that via a cyclone enables the separation of the material into heavy and light mineral fractions. Whereas the light fraction is discarded by the cyclone the heavy fraction, consisting of a range of minerals including any diamonds that may be present, is recovered as a Heavy Mineral Concentrate (HMC) that is henceforth treated by X-ray, heavy liquid and final hand sorting processes to recover the diamonds. These final stages of the processing, and in particular the hand sorting process, were undertaken by specialist laboratories and personnel in Perth.

Of the 100.05 tonnes of kimberlite processed approximately 8% was rejected at the grizzly as being too large for processing. Of the remaining material 5% was rejected at the scrubber and 10% by the cyclone (light mineral fraction). The balance of the material consisted of material finer than 0.5 mm (sent to the tailings pond) and 101 kilograms (0.11%) of heavy mineral concentrate.

The Company is pleased with the operation of the processing plant and it is envisaged that further bulk sampling programs will be undertaken during 2006 once the results of the ongoing testing of new kimberlite targets are received.

The results obtained from FBS 05 are considered by the Company to be both significant and highly encouraging. The recovery of good quality macrodiamonds from the Eureka area confirms that the area is both highly prospective and a proven diamondiferous province. The area warrants further exploration and the application of low level Helimag surveying which has resulted in the identification of multiple, previously unknown, kimberlite targets within other exploration tenements being investigated by the Company.

Six of the eight bulk samples from the current program have now been

processed in the field. Two of these are being evaluated in Perth and three HMC's are being prepared for dispatch to the laboratory. Further results from the program are anticipated within the next month.

Microdiamonds are less than 0.5 mm in size and testing prospective bodies for the presence of these fine diamonds is a normal part of the exploration sequence adopted by diamond explorers during the quest for commercial deposits.

**Dr Kevin Wills**  
Managing Director

For further information please contact:  
Phone: 1300 559 564  
Mobile: 0419 850 997  
Email: kwills@flindersdiamonds.com

The information in this report that relates to Exploration Results, Mineral Resources and Ore Reserves is based on information compiled by Dr K Wills who is a Fellow of the Australasian Institute of Mining and Metallurgy and acts as a geological consultant to Flinders Diamonds Limited. Dr Wills has more than five years relevant experience in the style of mineralisation and types of deposit under consideration and consents to inclusion of the information in this report in the form and context in which it appears. He qualifies as Competent Person as defined in the 2004 Edition of the "Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves".

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# NEWS

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• **RELEASE** •

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FOR IMMEDIATE RELEASE

3<sup>rd</sup> August 2006

## **THIRTY DIAMONDS RECOVERED FROM**

### **NEW S.A. BULK SAMPLE**

Thirty diamonds have been recovered from first sample from a bulk sampling program being undertaken by Flinders Diamonds Limited (ASX code: "FDL") in a prime diamondiferous prospect in South Australia's southern Flinders Ranges.

Dr Kevin Wills, Flinders Diamonds' Managing Director, today described preliminary test results as "significant and highly encouraging".

"The recovery of good quality diamonds from the Eurelia area confirms that the region is both highly prospective and a proven diamondiferous province," Dr Wills said.

"The area warrants further exploration, including the application of low level Helimag surveying which has already resulted in the identification of multiple, previously unknown, kimberlite targets within other tenements being investigated by the company."

The 30 diamonds were recovered after Flinders Diamonds trucked the 100 tonne Eurelia bulk sample for testing at the Company's Dense Media Separation (DMS) processing plant located near Terowie in SA's mid-north.

Processing of the bulk sample resulted in the recovery of 30 diamonds of which 22 are between 0.5 and 1 mm in size and eight diamonds between 1 and 3 mm in size.

The total weight of the larger diamonds was 0.37 carats and the total weight of the 22 smaller diamonds recovered was 0.136 carats of which 15 were colorless and seven were pale colors.

Dr Wills said an independent report for the less than 1 mm sized diamonds stated that "The majority of diamonds inspected are considered to represent the coarse end of standard microdiamond population, due to the predominance of primary growth forms (octahedral, modified octahedral and cubes – 15/22 stones) compared with resorbed forms (5/22). The colors too are consistent with this finding, with only colorless very pale colors present".

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**FIELD PUBLIC RELATIONS PTY LTD ABN 74 008 222 311**

231 South Road, MILE END SA 5031

Ph: 08 8234 9555 Fax: 08 8234 9566

admin@fieldpr.com.au

Dr Wills said further results from tests on the bulk sampling program were expected during the next month.

“The Company is very pleased with the operation of the processing plant and it is envisaged that further bulk sampling programs will be undertaken during 2006 once the results of the current phase of testing new kimberlite targets are received,” he said.

Flinders Diamonds’ current bulk sampling program is a key step in the Company’s program of determining the potential presence of economic quantities of diamonds in the area.

Eight kimberlite samples weighing 100 tonnes each are being extracted and treated in a six week program with all results due by the end of August.

The program culminates a successful exploration period for Flinders Diamonds this year. Two new kimberlite pipes at least 100 metres across and discovered in recent months, were given priority and rushed into the current bulk sampling schedule.

In the past two years, Flinders Diamonds has located more than 75 new kimberlite bodies – the host rock source for commercial and non commercial deposits of diamonds - with at least 21 so far containing diamonds.

The most promising of these have been selected for the current bulk sampling program from the Eurelia region.

#### **MEDIA CONTACTS:**

**Dr Kevin Wills**  
**Flinders Diamonds Limited**  
**0419 850 997**

**John Field**  
**Field Public Relations**  
**(08) 82324 9555**  
**0418 819 527**