Boteti Kimberlite Project

NI 43-101 Technical Report on the Boteti Kimberlite Project, Botswana

Prepared by MSA Geoservices (Pty) Ltd on behalf of:
Lucara Diamond Corporation

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1 SUMMARY

The Boteti kimberlite project is focused on the AK6 kimberlite, situated in the Orapa kimberlite cluster in Botswana, an area with three currently operating diamond mines. The kimberlite was discovered by the De Beers Group (“De Beers”) in 1969, but the project was not pursued until 2000, when further drilling and geophysical surveys indicated that the pipe was larger than previously interpreted, due at least in part to a partial capping of basalt breccia.

De Beers released the project into a joint venture, along with a number of other kimberlite occurrences in April 2004. Detailed exploration between 2004 and 2006 resulted in the application for a mining permit in 28th September 2007 by Boteti Exploration (Pty) Ltd, which was at that time a joint venture between De Beers (70.3%), African Diamonds plc (28.3%) and Wati Ventures (1.4%). ML2008/6L AK6 was granted on 28th October 2008, valid for 15 years, with a requirement for production to commence by April 2011.

Following the completion of a feasibility study in October 2008, De Beers sold its interest in the project to Lucara Diamond Corporation (“Lucara”). Lucara have commissioned their own feasibility study on the project, and in terms of the Canadian Securities Administrator’s rules, are required to issue a National Instrument 43-101 technical report on the project within four months of acquisition (this report).

The Boteti project comprises a single, tri-lobate kimberlite pipe. The kimberlite is “pinched” at surface, and its sub-outcrop consists of a core of kimberlite, covering an area of 4.2 ha, surrounded by an area where the kimberlite is capped by basalt or basalt breccia. Drilling has shown that the kimberlite bulges to a maximum area of 7 ha at a depth of 120 m.

An indicated mineral resource to a depth of 400m, and an inferred resource from 400 m to a depth of 750 m were developed by De Beers (as operators of the Boteti joint venture) between 2004 and 2007 through successive drilling programmes, and a trench bulk sampling programme, which produced a total of 1,754 carats of diamonds. The diamonds have been valued at different times by three different entities. The most recent valuation was completed in February 2010 and this valuation has been modeled to produce an average production revenue of USD 194 per carat (+1.0 mm cut-off).

The mineral resource has been subjected to both internal and independent verification processes, leading to a significant revision of the geological model, and a relatively minor revision of the mineral resource. After these revisions were completed, Anglo American plc (a 45% shareholder in De Beers) described the mineral resource as comprehensive and realistic. The major risk identified by their review was in the diamond revenue models. Subsequent work on the revenue model suggests that it is robust.

The mineral resource is summarised as follows:

Boteti Project Diamond Resource

Class	Pipe	Volume x 1000	SG	Tonnes x1000	Grade cpht +1mm	Carats x1000	$/ct	$ x1000
INDICATED To 400 m	Center/North	4,504	2.46	11,100	26	2,886	223	64,358
	South	14,553	2.76	40,128	20	8,026	183	1,468,685
	Total	19,057	2.69	51,228	22	11,046	194	2,112,263
INFERRED from 400 to 750 m	Center/North	81	2.56	208	20	42	223	9,277
	South	7,019	2.96	20,771	19	3,946	183	722,207
	Total	7,100	2.95	20,979	19	3,988	183	731,484

The Boteti project was subjected to a new conceptual study by Paradigm Project Management (“PPM”) in June 2009, which established a strong business case to develop a profitable mine. The business case is based on a contract mining scenario, with two phases of plant development and utilizes autogenous milling rather than more expensive tertiary high pressure grinder roll crushing. A probable mineral reserve was determined through Whittle analysis as follows:

Boteti Project Mineral Reserve Estimate

Lobe	Category	Tonnes	Grade (cpht)	Revenue (USD/ct)	Revenue (USD/tonne)	Carats
North	Probable	1,654,000	26	223	58	430,000
Centre	Probable	8,349,200	26	223	58	2,170,800
South	Probable	25,341,500	20	183	36	5,068,300

The MSA Group ("MSA") has updated the financial model of the PPM conceptual study by adding the most recent diamond revenue figures, and by converting the financial model to an inflate/deflate model, such that all money inputs are escalated using an inflation scenario (to allow for the correct taxation and royalty calculations) and the resultant operating cash flow is then deflated to bring the money back to constant money terms for the determination of Net Present Value (NPV) and Internal Rate of Return (IRR).

With respect to the underlying economic assumptions made in the PPM study, the updated financial model verified the results of the PPM valuation and in fact enhanced them. The profitability figures (based on a 75:25 debt equity ratio; latest 6 month average of exchange rates and including inflation) are as follows:

Net Present Value10%	USD 147.1 million
Net Present Value15%	USD 109.9 million
Internal rate of return	70.0%
Life-of-Mine cash cost (real terms)	USD16.62/t kimberlite treated
Payback period	4.3 years

An important assumption in the PPM conceptual study financial model was the forward growth of diamond prices. In both the PPM model, and the updated version produced by MSA, the assumed real growth rate of diamond prices was 1.5% per annum. A review of published forecasts for diamond price growth over the next few years was conducted, and the figure of 1.5% appears conservative. Published independent forecast figures range from 2.5% to 7% real growth per annum over the next 3-10 years. Based on this review, it appears there is significant upside potential for the diamond revenue figures at Boteti.

The key conclusions of this technical report are that the mineral resource identified within the Boteti Project is robust and valid, and has been established by following best practice principles. The indicated mineral resource has been subject to a conceptual study, which has demonstrated a strong business case for pursuing the project. Technical and other risks on the project are considered relatively small because of the large amount of information generated on all aspects of the mining plan, both as part of the mineral resource development, and also as part of other pre-feasibility and feasibility studies completed by De Beers.

Based on the validated mineral resource, the results of the PPM conceptual study, and the updated financial model generated, it is the MSA Group's opinion that the Boteti

Project has the potential to become a significant diamond producer. No fatal flaws have been identified. In light of the extensive studies provided by previous pre-feasibility and feasibility programmes, The MSA Group finds no reason why the project should not advance directly to feasibility study level.

2 INTRODUCTION

2.1 Scope of Work

The MSA Group ("MSA") has been commissioned by Lucara Diamond Corporation ("Lucara") to provide an Independent Technical Report on the Company's Boteti Kimberlite Project ("Boteti Project") located in Botswana in which Lucara holds a 70.268 % interest. This Independent Technical Report has been prepared to comply with disclosure and reporting requirements set forth in the Toronto Venture Exchange (TSX-V) Corporate Finance Manual, Canadian National Instrument 43-101, Companion Policy 43-101CP, Form 43-101F1, the 'Standards of Disclosure for Mineral Projects' of January 2006 (the Instrument) and the Mineral Resource and Reserve classifications adopted by CIM Council in August 2000. This report may be included in future equity financing plans by the Company on the Toronto – Venture Exchange (TSX-V) to fund ongoing evaluation and development work for the Boteti Project.

All monetary figures expressed in this report are in United States of America dollars (USD) unless otherwise stated.

2.2 Principal Sources of Information

MSA has based its review of the Boteti Project on information provided by Lucara and its associates, along with technical reports by Government of Botswana agencies and other relevant published data. A large proportion of this information is recorded in reports prepared by the previous operator of the project, the De Beers Group ("De Beers"). A listing of the principal sources of information is included at the end of this Independent Technical Report. A site visit was made during the period 17th to 18th January 2010 to the Boteti Project in Botswana by Mr. Ian McGeorge MSc CGeol FGS, a qualified person in terms of NI43-101, and Mr. Mike Lynn MSc, a geologist with 24 years experience in diamond exploration, accompanied by Mr. Larry Ott, an officer of Lucara, and a qualified person under NI43-101. A visit was made to the marked drill locations and bulk sampling trenches in the AK6 kimberlite and to the De Beers exploration camp at Letlhakane where AK6 kimberlite drill core and samples are stored. Previous drafts of the report were provided to Lucara, along with a written request to identify any material errors or omissions prior to lodgement.

Lucara's Boteti mineral property is considered to represent an "Advanced Exploration Project" which carries inherent risk. However, MSA considers that the property has been acquired on the basis of sound technical and financial merit.

The Independent Technical Report has been prepared on information available up to and including 28th February 2010.

2.3 Qualifications, Experience and Independence

MSA is an exploration and resource consulting and contracting firm which has been providing services and advice to the international mineral industry and financial institutions since 1983. This report has been compiled by Ian McGeorge, Mike Lynn, Johannes Ferreira and Rob Croll.

Ian McGeorge is a professional geologist with 33 years experience, including geological mapping for the Geological Survey of South Africa, Government of Botswana groundwater surveys, and mineral exploration with various companies for commodities including diamonds, gold, platinum group metals, and base metals. He is Regional Consulting Geologist - Botswana with The MSA Group, a Chartered Geologist, Fellow of the Geological Society of London (CGeol FGS) and a Member of the Geological Society of South Africa (MGSSA). The author has the appropriate relevant qualifications, experience, competence and independence to act as a "Qualified Person" as that term is defined in National Instrument 43-101 (Standards of Disclosure for Mineral Projects). The author's certificate is attached in Section 24 of this report.

Mike Lynn is a professional geologist with 25 years experience, primarily in the exploration for and evaluation of diamond deposits in Southern, Central, West and East Africa and India. He is a member of the Geological Societies of South Africa and India, and of the Society of Economic Geologists. He is not yet registered as a Professional Natural Scientist with the South African Council for Natural Scientific Professions, and as such is not authorised to act as a "Qualified Person" as that term is defined in National Instrument 43-101.

Johannes Ferreira is a professional geostatistician with nearly 30 years experience of geostatistical modeling of diamond deposits worldwide. He is a member of the Geological Society of South Africa, and the Canadian Institute of Mining, Metallurgy and Petroleum and a Professional Natural Scientist (PrSciNat) registered with the South African Council for Natural Scientific Professions. The author has the appropriate relevant qualifications, experience, competence and independence to act as a "Qualified Person" as that term is defined in National Instrument 43-101 (Standards of Disclosure for Mineral Projects). The author's certificate is attached in section 24 of this report.

Rob Croll is a professional Mining Engineer with over 30 years experience on a wide variety of commodities including diamonds, gold and base metals. He is a fellow of the South African Institute of Mining and Metallurgy, and is a Qualified Valuator as described in the "Standards and Guidelines for Valuation of Mineral Properties" (the CIMVAL Code), and as defined in National Instrument 43-101 (Standards of Disclosure for Mineral Projects).

Peer review has been undertaken by Dr Frieder Reichhardt, who is a professional geologist with over 20 years experience in exploration and mining of mineral properties, within Africa and elsewhere internationally. Dr Reichhardt is a Member of the Geological Societies of South Africa and Germany, and is a registered professional natural scientist with the South African Council for Natural Scientific Professions.

Neither MSA, nor the authors of this report, have or have had previously, any material interest in Lucara or the mineral properties in which Lucara has an interest. Our relationship with Lucara is solely one of professional association between client and independent consultant. This report is prepared in return for professional fees based upon agreed commercial rates and the payment of these fees is in no way contingent on the results of this report.

3 RELIANCE ON OTHER EXPERTS

MSA assumed that all of the information and technical documents reviewed and listed in the "References" are accurate and complete in all material aspects. While MSA carefully reviewed all of this information, MSA has not concluded any extensive independent investigation to verify their accuracy and completeness. However, the validity of the information is considered robust based on reviews reported in section 14.

MSA has obtained a copy of Mining Licence 2008/6L, in the name of Boteti Exploration (Pty) Ltd, from Mr H S Biswas, Department of Mines, Gaborone, as evidence that the licence is valid and in good standing. It is however understood that Lucara's purchase of De Beers' stake in the Boteti Project will trigger the renegotiation of some of the Terms and Conditions contained in the licence.

The information and conclusions contained herein are based on information available to MSA at the time of preparation of this report.

Lucara has warranted that a full disclosure of all material information in its possession or control has been made to MSA. Lucara has agreed that neither it nor its associates will make any claim against MSA to recover any loss or damage suffered as a result of MSA's reliance upon the information provided by Lucara for use in preparation of this report. Lucara has also indemnified MSA against any claim arising out of the assignment to prepare this report, except where the claim arises as a result of proved wilful misconduct or negligence on the part of MSA. This indemnity is also applied to any consequential extension of work through queries, questions, public hearings or additional work required arising from MSA's performance of the engagement.

Lucara has reviewed draft copies of this report for factual errors. Any changes made as a result of these reviews did not involve any alteration to the conclusions made. Hence the statements and opinions expressed in this document are given in good faith and in the belief that such statements and opinions are not false and misleading at the date of this report.

MSA reserves the right to, but will not be obligated to, revise this report and conclusions thereto if additional information becomes known to MSA subsequent to the date of this report.

4 PROPERTY DESCRIPTION AND LOCATION

The property is Mining Licence No. 2008/6L issued in terms of the Mines and Minerals Act 1999, Part VI, and covering 9.056 km^2 in the Central District, Botswana. The licence is in north-central Botswana, 25 km south of the Orapa diamond mine and 23 km west of the Letlhakane diamond mine, centred on approximately 25° 28' 13" E / 21° 30' 35" S.

All mineral rights in Botswana are held by the State. Commercial mining takes place under Mining Licences issued on the authority of the Minister of Minerals, Energy and Water Affairs.

Licence 2008/6L is held by Boteti Exploration (Pty) Ltd ("Boteti"), a company incorporated in Botswana in 2004. It was issued on 28 October 2008. It is valid for 15 years and gives the right to mine for diamonds.

4.1 Area and Demarcation of Licence

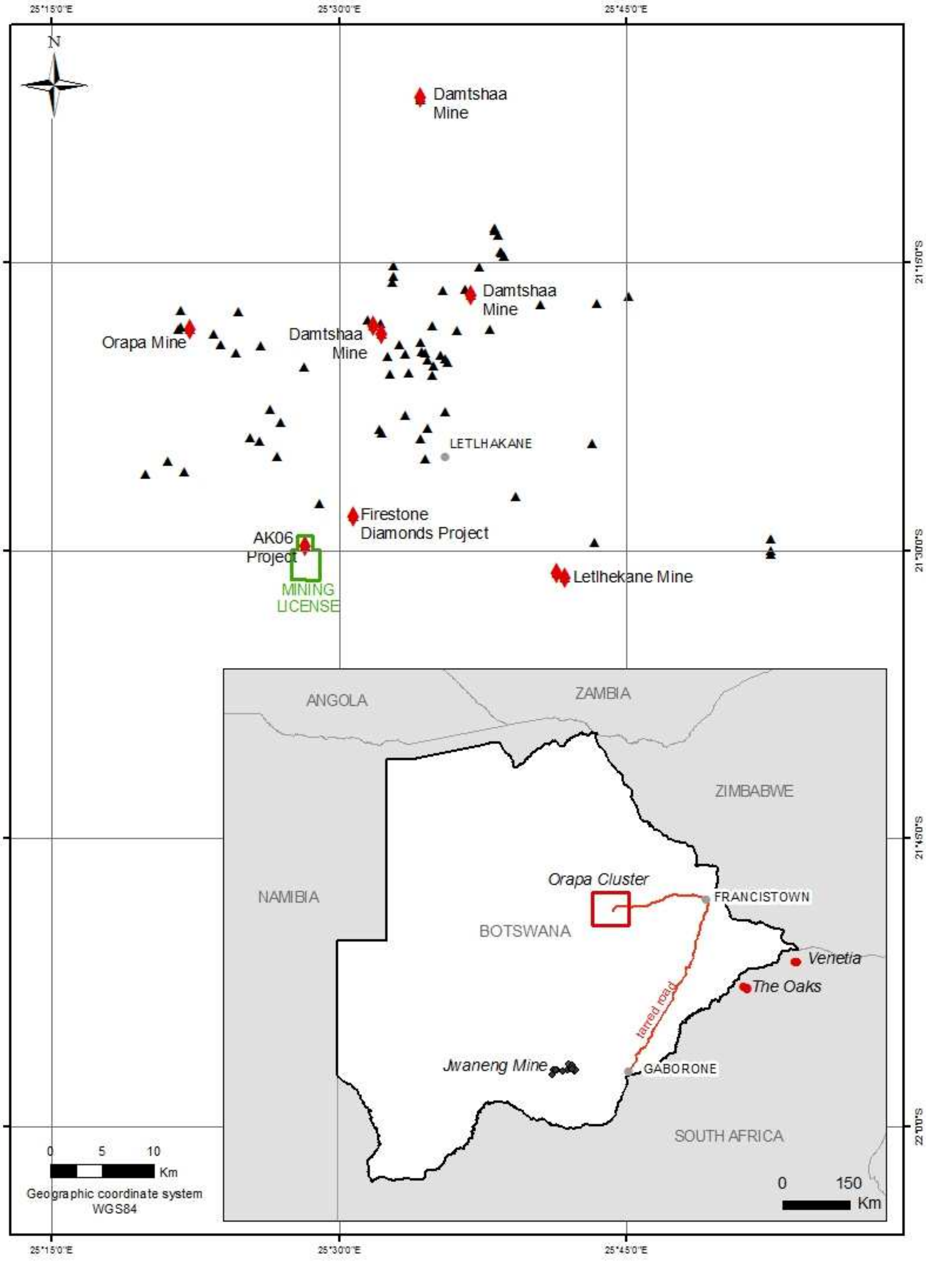
The corner points of ML2008/6L are given in Table 4-1 Coordinates of Mining License ML2008/6L AK6.

Table 4-1
Coordinates of Mining License ML2008/6L AK6

Datum WGS84, Area = 9.056 km^2

Point	Latitude (S)	Longitude (E)
1	21°29' 13.15"	25°28' 34.32"
2	21°29' 57.20"	25°28' 34.32"
3	21°29' 57.21"	25°28' 58.67"
4	21°30' 06.36"	25°28' 58.66"
5	21°31' 29.77"	25°28' 57.90"
6	21°31' 28.96"	25°27' 29.45"
7	21°29' 57.20"	25°27' 28.77"
8	21°29' 57.29"	25°27' 49.32"
9	21°29' 13.16"	25°27' 49.32"

Figure 4-1
Locality map of the Orapa Kimberlite Cluster and the AK6 Kimberlite



The corner points of the licence are currently only marked by brightly painted metal posts at the positions recorded in Table 4-1. Boteti has not demarcated the licence as required by Section 45(1) (c) and Section 80(1) (d) of the Mines and Minerals Act and The Mines and Minerals (Demarcation of Mining Lease Areas) Regulations (of 15 January 1971). These regulations require that concrete beacons mark corners and that boundaries are demarcated by cut-lines with line markers. However, it is reported that the Director of Surveys and Mapping (Government of Botswana) is aware of this and has indicated that the demarcation requirement will only be enforced once mining commences.

4.2 Surface Rights

The surface area of the Mining Licence is communal agricultural land administered by the Letlhakane Sub-Land Board, which falls under the Ngwato Land Board, Serowe. It is currently used for grazing livestock and limited arable farming. Boteti have obtained common law land rights for the Mining Licence area and the access road. These rights will remain in force for the life of mine.

4.3 Mineral Resource

The mineral resource is a kimberlite pipe, AK6, which has a surface area of 4.2 ha, and lies in the north of the licence area. There is a wide 18 m deep bulk sampling trench in the southern part of the kimberlite, but the natural surface of the area is flat lying with a covering of wind blown sand. A berm of waste rock flanks the trench excavations.

4.4 Issuer's Interest

As of the effective date of this report, the shareholders of Boteti Exploration (Pty) Ltd are (Table 4-2):

Table 4-2
Shareholdings in Boteti Exploration (Pty) Ltd

Shareholder	% interest
Lucara Diamond Corporation	70.268%
African Diamonds plc	28.381%
Wati Ventures (Pty) Ltd	1.351%
	100%

Lucara purchased its share from De Beers Prospecting Botswana (Pty) Ltd in November 2009 for USD49 m. The Government approval which, under the Mines and Minerals Act

Section 50, was a condition precedent for this transaction was given on 18 December 2009.

African Diamonds plc ("African Diamonds") has an option to increase its share by a further 10.268% for approximately USD 7 m. It may exercise this option within 120 days from the date of completion of the Lucara transaction. If African Diamonds were to exercise this option it would give them a 38.649% stake in Boteti. There is also an option for African Diamonds and Lucara to acquire Wati Venture's share for USD 700,000.

Under the terms of Mining Licence 2008/6L, the Government of Botswana will take no equity in Boteti.

Under a shareholders agreement, Lucara is the operator of Boteti.

4.5 Royalties

Per ML2008/6L, Boteti will pay a royalty to the Botswana Government in accordance with Section 66 of the Botswana Mines and Minerals Act, which amounts to 10% of actual sales price of its production. For Kimberley Process purposes, the value of the production will be agreed on between the Botswana Government Diamond Valuator and Boteti. This value may also be used to set a reserve price on production.

4.6 Sale of Production

Under ML2008/6L, as issued, Boteti undertook to sell its entire production to the Diamond Trading Company Botswana (Pty) Ltd at a price equal to 90% of the Standard Selling Value. This is a legacy from De Beers, and is being re-negotiated. Both Lucara and African Diamonds have agreed in principle to jointly market their respective share of diamond production through Boteti. In the event that a joint marketing agreement cannot be reached, the shareholders agreement between Lucara and African Diamonds provides that each party may independently market its share of production excluding any special stones, which would be marketed through open tender by Boteti.

4.7 Start of Production

It is a condition of Mining Licence 2008/6L that Boteti start mining within 30 months of its issue, in effect by end April 2011. However, Boteti is currently in discussion with the Government of Botswana to extend the start date to allow completion of the new feasibility study.

4.8 Environmental Liabilities

MSA is not aware of any existing environmental liabilities on the property. The Department of Environmental Affairs has approved both an environmental impact assessment (EIA) and environmental management plan (EMP) submitted by Boteti.

A Relocation Action Plan and Compensation Plan are currently being developed according to the Tribal Land Act and will be implemented in consultation with the Ngwato Land Board and affected parties.

4.9 Permits

From information provided by Boteti, MSA accepts that all necessary permits to carry out the proposed mining operations have either been obtained, or are expected to be obtained without undue difficulty.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The area lies on the northern fringe of the Kalahari Desert of central Botswana. It is described as being flat lying sand savannah which supports a natural vegetation of trees, shrubs and grasses. The trees and shrubs are dominantly mopane (*Colophospermum mopane*) and tend to form thickets with intervening grassy patches. The natural vegetation has been modified by many years of cattle grazing and limited arable farming.

The property is at an elevation of 1,022 m above sea level. The ground slopes imperceptibly to the north into the Makgadigadi Depression. The dry valley of the now fossil Letlhakane River, directed into the Depression, passes some 18 km to the northeast of the property and is the only notable physiographic feature in the immediate area.

The property area is communal agricultural land used mainly for cattle grazing with limited arable farming. Surface rights have been secured over the Mining Licence to provide sufficient space for rock dumps, tailings dams and mine infrastructure. The area adjacent to the property is open and undeveloped and it is anticipated that additional space can be negotiated if required.

5.1 Access

The property is accessed by 15 km of all weather gravel and sand road from the tarred Letlhakane to Orapa road. Letlhakane village is the closest settlement and offers basic facilities, including fuel. At the 2001 census Letlhakane had a population of 15,000 rising by 5.7% annually (Central Statistics Office, Gaborone), thus at present, probably has a population of 20,000 to 25,000. There are good telecommunications including cellular telephone networks in the area. Letlhakane is reached from the major cities of Gaborone and Francistown by good quality tarred roads. There is an airstrip within the nearby Debswana controlled Orapa township, but the closest airport with commercial flights is Francistown, some 200 km to the east and 2.5 hours away by road. Both Orapa and Francistown airstrips have immigration and customs facilities and can thus service international flights.

5.2 Climate

The climate is hot and semi-arid, with an average annual rainfall of 462 mm at Francistown, which falls almost entirely in the summer months from October to April (Dept of Meteorological Services, Gaborone). Summer maximum temperatures are high, generally >30°C, whilst winter days are mild and the nights cold (often <10°C) with occasional ground frost. High diurnal ranges are experienced in all seasons. The climate does not impede mining operations, which can continue year round.

5.3 Local Resources and Infrastructure

Electrical power will be provided at least in part by the Botswana Power Corporation's national grid. Diesel powered generating capacity will be installed at the mine to make up for any shortfall. Southern Africa is expected to experience power shortages over the period 2010 to 2014, thus this extra capacity may be essential.

Water will be provided by pit de-watering supplemented by a well field, which will be developed as required. The area is underlain by a strong aquifer at the contact of the Ntane Sandstone Formation and the overlying Karoo basalt.

The area has a history of diamond mining dating back to 1971 when operations started at the nearby Orapa Mine, one of the largest diamond mines in the world. In 2008, the Orapa Mine produced nearly 17 million carats. The smaller Letlhakane diamond mine commenced production in 1978 and produced a further 1.2 million carats in 2008. There is therefore a reserve of qualified and experienced manpower in the immediate area. The major Ni/Cu mining operations at Tati Nickel, near Francistown, and at BCL, Selebi-Phikwe, have also added to the supply of labour with mining related skills.

6 HISTORY

There has been no production from the Boteti property. The AK6 kimberlite was discovered by De Beers in 1969, but was initially considered to be small and low grade based on early work. Reassessment starting in 2003 revealed that the kimberlite was larger and had a higher grade than previously estimated. All historical work was carried out by De Beers.

6.1 Early Work; De Beers Prospecting Botswana (Pty) Ltd and De Beers Botswana Mining Company (Pty) Ltd.

The discovery of The AK6 kimberlite was part of the same exploration programme that discovered the Orapa kimberlite (named AK1) and the Letlhakane kimberlites (DK1 and DK2), in addition to some 25 other kimberlite intrusions.

De Beers Botswana Mining Company (the predecessor of Debswana) held State Grant (SG) 14/72 from 16 September 1972 until 15 December 1975. Under the grant, De Beers carried out evaluation and the delineation of kimberlites discovered previously. In addition they carried out reconnaissance and detailed soil sampling.

Little data from the initial discovery and evaluation of the AK6 kimberlite is available, but it is known that the discovery was made from the interpretation of an aeromagnetic survey. The kimberlite was delineated with 44 percussion boreholes, 20 of which were recorded as intersecting kimberlite and 24 as intersecting basalt. De Beers interpreted the AK6 kimberlite to have an area of 3.3 ha and three 20 ft deep pits excavated in 1973 gave a grade of 0.07 ct/m^3 (approximately 3.5 ct/100t).

One vertical cored borehole was drilled into the kimberlite to a depth of 61.0 m. Weathered primary kimberlite was recorded from 8 m (De Beers 1976).

Reconstruction from the later exploration programmes suggests that two of the pits were sunk into basalt breccia, as were many of the percussion boreholes. There were two cored holes, as well as possibly two large diameter holes drilled with a jumper (cable tool) rig.

6.2 Debswana Diamond Company (Pty) Ltd, PL17/86

The Boteti Project lies within former PL 17/86 held by Debswana from 1 July 1986 until 24 January 1998. The kimberlite lies within the area dropped at second relinquishment. The AK6 kimberlite was not the focus of work on this licence, which concentrated on the discovery of additional kimberlite bodies in the immediate Orapa area, but it was drilled for geological information and to test its diamond content (Debswana 1999). No details of how it was drilled or sampled are given, but it is stated as being 3.3 ha in area, comprising hard, dark green kimberlite breccia, and having a diamond grade of 0.42 ct/m^3 (approximately 15 ct/100t).

None of the above grade data is compliant with NI43-101.

6.3 De Beers Prospecting Botswana (Pty) Ltd, PL1/97

PL1/97 was issued to De Beers on 1 February 1997, which covered the AK6 kimberlite. However, the pipe was within the area dropped at first relinquishment in 2000, and no work was recorded on it.

6.4 De Beers Prospecting Botswana (Pty) Ltd, PL13/2000

In April 2000, De Beers was granted PL13/2000 with an area of 9.95 km^2 over the AK6 kimberlite. Three small diameter percussion boreholes showed the existence of the North and Central Lobes for the first time. The licence was renewed on 31 March 2003 with the area reduced to 4.90 km^2. In September 2003 De Beers carried out high resolution ground magnetic surveys over kimberlites AK6, AK10 and BK11. The results of this work suggested that the AK6 kimberlite had a surface area of 9.5 ha, although this proved to be largely made up of the surrounding basalt breccia.

In December 2003, De Beers started a programme of five 12¼" boreholes intended to collect a 100 t bulk sample. The drilling was completed in February 2004, but the encouraging results only became available in October 2004, after the licence had been included in the Boteti Joint Venture.

6.5 The Boteti Joint Venture

On 17 April 2004, a joint venture heads of agreement was entered into between Kukama Mining and Exploration (Pty) Ltd and De Beers Prospecting Botswana (Pty) Ltd for seven prospecting licences in the Orapa area totaling 1,344.27 km^2 and including 29 previously discovered kimberlites. De Beers PL13/2000 was included in this joint venture. A 12 month work programme was carried out per the heads of agreement, which resulted in the signing of a formal joint venture agreement on 20 October 2004 and the incorporation of Boteti Exploration (Pty) Ltd. PL13/2000 was transferred into Boteti.

6.6 Boteti Exploration (Pty) Ltd

The exploration works carried out by De Beers on behalf of Boteti Exploration is described in Sections 10 to 13 below.

A Mining Licence application was submitted on 28 September 2007. Previously, on 30 July 2007, Boteti had applied to Botswana Government under Section 25 of the Mines and Minerals Act for a Retention Licence over the AK6 kimberlite. On 9 September 2008, the Government informed Boteti that it would regard the period since the Retention Licence application as a negotiation period as allowed under Section 50 of the Act, and urged Boteti to apply for a Mining Licence. This was done, and Mining Licence 2008/6L was issued effective from 28 October 2008.

7 GEOLOGICAL SETTING

7.1 Regional Geology

The bedrock of the region is covered by at least a thin veneer of wind blown Kalahari sand and exposure is very poor. Rocks close to surface are often extensively calcretised and silcretised due to prolonged exposure on a late Tertiary erosion surface (the African Surface) which approximates to the present day land surface.

The tectonic setting of the property, and of the Orapa Kimberlite Field, is not immediately clear because of the scarcity of basement exposure. Relevant information and discussions can be found in James et al. (2001), Eglington et al. (2008) and Begg et al. (2009). However study and dating of basement inliers to the northeast, within Sua Pan, together with interpretations of regional aeromagnetic data, show that the setting is marginal to the Zimbabwe Craton and that at depth the property is underlain by tectonised rocks of the Palaeoproterozoic Magondi Mobile Belt (Figure 7-1) This Belt can be traced around the western margin of the Zimbabwe Craton from Zimbabwe through Botswana into South Africa, and may link with the Central Zone of the Limpopo Mobile Belt (C.J. Hatton, pers. comm.) which hosts the Venetia diamond mine. This interpretation is supported by the regional magnetic fabric. If it is correct, it can be deduced that the major tectonic events recorded within the Magondi and Limpopo Mobile Belts at approximately 2.0 and 2.7 Ga did not adversely affect the diamond potential of the sub-lithospheric Archaean keel, since these belts host at least four world class diamond mines.

The country rock at the AK6 site is sub-outcropping flood basalt of the Stormberg Lava Group which is underlain by a condensed sequence of Karoo sedimentary rocks. The Karoo rocks are terrestrial sediments of Upper Carboniferous to Triassic age and occur widely throughout southern Africa. The succession at the property is within the Northern Belt of the Central Kalahari Sub-Basin as defined by Smith (1984), and is divided into the Ecca Group and the overlying Lebung Group, which are separated by a pronounced unconformity. The basalts, which are very extensive and underlie much of central Botswana, are of Jurassic age (180 Ma) and lie unconformably on the sedimentary succession, but are traditionally regarded as part of the Karoo Supergroup.

The regional stratigraphy is given in Table 7-1 below. The glaciogenic Dwyka Group, termed the Dukwi Formation in Botswana, which regionally is the basal unit of the Karoo Supergroup, is mainly absent in this area, but may occur sporadically in palaeo-topographic depressions.

Table 7-1
Lithostratigraphic succession in the area of the Boteti property

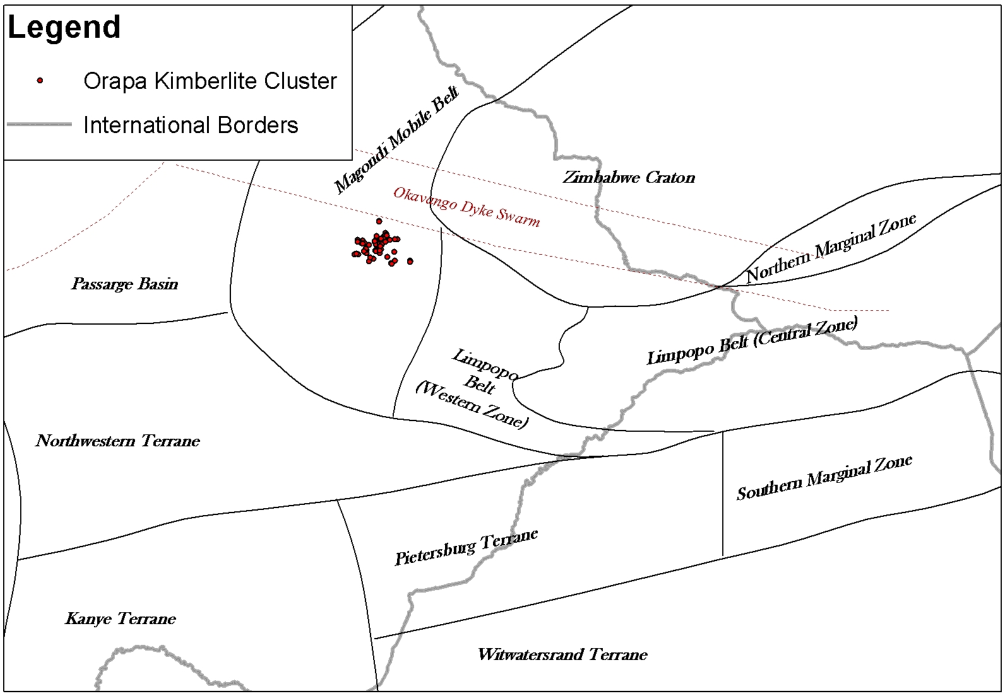
Stratigraphic Unit			Lithologies
Supergroup	**Group**	**Formation**	
	Kalahari Group	Not differentiated in this area	windblown sand, overlying duricrusts
~~*unconformity*~~~~~~~~~~~~~~~~~			
			kimberlite intrusions
~~*unconformity*~~~~~~~~~~~~~~~~~			
Karoo Supergroup	Stormberg Lava Group (Drakensberg Group)		very extensive flood basalts
~~*unconformity*~~~~~~~~~~~~~~~~~			
	Lebung Group	Ntane Sandstone Formation	Aeolian sandstone
		Mosolotsane Formation	Red mudstones (upper member), overlying red and green sandstones (lower member)
~~*unconformity*~~~~~~~~~~~~~~~~~			
	Ecca Group	Tlhabala Formation	Reddish grey non-carbonaceous siltstone, mudstone and shale. Weathers red, green or khaki
		Tlapana Formation	Black carbonaceous shale and coal
		Mea Arkose Formation	Coarse, white micaceous sandstone and dark shales
~~*unconformity*~~~~~~~~~~~~~~~~~			
			Granite gneiss and amphibolite

(Karoo nomenclature after Smith 1984)

The property lies on the southern flank of the Okavango dyke swarm, an intense concentration of WNW-ESE trending post-Stormberg dolerite dykes which can be followed from Zimbabwe through Botswana to Namibia (Figure 7-1).

Figure 7-1
Tectonic Setting of the Orapa Kimberlite Field and the AK6 Kimberlite

(Domain nomenclature after Eglington et al. 2009)



7.2 Local Geology

There are few outcrops in the Letlhakane area, as the bedrock is concealed by several meters of aeolian sand, reflecting the area's position on the edge of the Tertiary age Kalahari Basin. The sand is part of the Late Cretaceous-to-Recent continental sedimentary sequence of the Kalahari Group, which thickens to the west and south. The Letlhakane River has incised through this cover to expose Stormberg Basalt in parts of the river course. To the south and west of the Orapa Kimberlite Field, the bedrock may be overlain by up to 40 m of Kalahari Group sediments.

The Orapa Kimberlite Field lies on the northern edge of the Central Kalahari Karoo Basin along which the Karoo succession dips very gently to the SSW and off-laps against the Precambrian rocks which occur at shallow depth (although they are seldom actually exposed) within the Makgadikgadi Depression. The Karoo succession is condensed, with a total thickness of around 600 m, and is best preserved in WNW-ESE oriented grabens. The large AK1 kimberlite lies within such a graben (Coates et al. 1979). This direction of faulting is also the bearing of the post-Karoo dolerite dykes mentioned above. Although the main concentration of these dykes lies further north, there are a number of long dykes in the AK6 area identified by aeromagnetic data.

The Orapa Kimberlite Field includes at least 83 kimberlite bodies, varying in size from insignificant dykes to the 110 ha AK1 kimberlite which is Debswana's Orapa Mine. All are of post-Karoo age. Of the 83 known kimberlite intrusions, four (AK1, BK9, DK1 and DK2) have been or are currently being mined, and a further five (AK6, BK1, BK11, BK12 and BK15) are recognized as potentially economic deposits.

7.3 Property Geology

Drilling has shown the following country rock succession at the property. (Table 7-2). The volcanic and sedimentary units are almost flat lying.

Table 7-2
Stratigraphic thickness recorded on the Boteti Project property

Depth from surface	Stratigraphic Unit
surface – ~8 m	**Kalahari Group**
~8 – 135 m	**Karoo Basalt**
135 – 255 m	**Lebung Group**
255 – ~360 m	**Tlhabala Formation**
~360 – ~480 m	**Tlapana Formation**
>480 m	**Granitic basement**

The bedrock is covered by a top soil layer 1.0 - 1.5 m thick. This is reddish brown in colour and is made up largely of aeolian sand. There is a discontinuous thin gravel layer or 'stone line', <0.6 m thick, at the base of the soil with clasts from 20 - 50 mm in size. The gravel is partly calcretised. Testing by De Beers has shown it to be barren of diamonds. The soil and gravel are underlain by a friable calcrete to a depth of 3 - 4 m, below which is a massive silcrete horizon, often densely veined by calcite. Over the kimberlite, the silcrete grades downwards into highly weathered and partially silcretised kimberlite with extensive calcite veining. Indicator minerals and vaguely preserved macrocrystic kimberlite texture can be seen in places. Kimberlite can be clearly identified below about 8 - 10 metres depth.

7.4 Kimberlite Geology

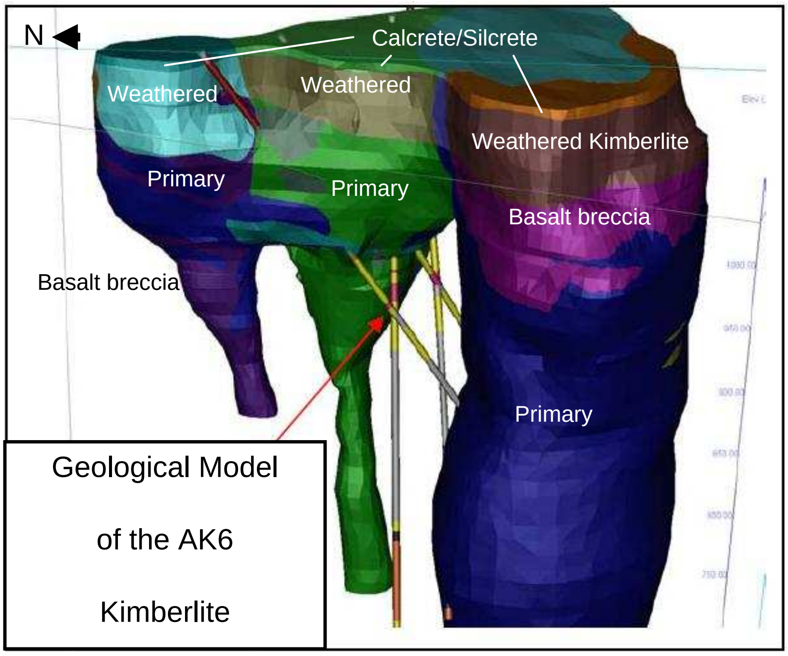
The geology of the AK6 kimberlite has been deduced from geophysics, drilling and trenching. Geophysical methods include high resolution ground magnetic, frequency-domain electromagnetic (FDEM), ground gravity and Controlled Source Audio-frequency Magneto-Tellurics (CSAMT) surveys. A total of 46 cored delineation boreholes, 23 vertical cored boreholes (drilled as pilot holes for large diameter drilling) and 44 percussion boreholes have been drilled into the kimberlite. There are also extensive exposures of weathered kimberlite in two 18 m deep trenches. The geological model (Figure 7-2) has been refined by successive drilling programmes.

Below the highly weathered layer, generally at a depth of 8 to 12 m below surface, the kimberlite is soft and friable, reddish brown to grey in colour, and intensely veined. The kimberlite tends to become softer with depth, although large lenses of calcrete and silcrete occur up to 15 m below surface.

The kimberlite is “pinched” at surface, and its sub-outcrop consists of a core, covering 4.2 ha, of kimberlite surrounded by an area where the kimberlite is capped by basalt or basalt breccia. This greater area was mapped as 9.5 ha by geophysical surveys. Drilling has shown that the true kimberlite bulges to a maximum area of 7 ha at a depth of 120 m below surface. The peripheral basalt breccias are not included as kimberlite in the geological model, and are thus excluded from the resource.

Percussion drilling under PL13/2000 showed the kimberlite to consist of three lobes, termed the North, Centre and South, which coalesce at surface. Previous to this work only the South Lobe was known. Geologically, the North and Central Lobes are very similar (and may be one intrusion), but the South Lobe is quite distinct, being harder, darker, denser and showing preferred orientation of lithic clasts. The contact between the South and Central Lobes is however rather indistinct. The contact has been mapped down hole using geochemistry, utilizing the Zr/Ni ratio. Such geochemical work led to a reappraisal of the position of the contact after the trenching operation. As a consequence, it was concluded that whilst it was intended that the northern trench should sample the Central Lobe, it was in fact mainly in the South Lobe, with only the northern extremity of the trench sampling the Central Lobe (section 17).

Figure 7-2
Geological Model of AK6 Kimberlite to 400m



Below about 120 m depth, the three lobes separate into distinct downward-tapering pipes. Displaced blocks of country rock intersected in borehole DDH020, which traversed the kimberlite from north to south, suggest however that the North and Central Lobes may be one intrusion, apparently separated only because of very large country rock xenoliths within the pipe. Below the North and Central Lobes the kimberlite tapers quite sharply, but the South Lobe is more cylindrical at depth (Figure 6-3). Clearly by far the greatest portion of the kimberlite resource is in the South Lobe, and from surface to 400 m (the base of the indicated resource as defined by De Beers), the South Lobe makes up 72% of the volume of the indicated resource.

Initial petrographic work suggested that the kimberlite is magmatic, and it was classified as an opaque mineral-rich, monticellite kimberlite with segregationary texture. However some samples have been identified as volcaniclastic, and possibly the texture is due to welding during cooling of volcanic ejecta. At present therefore the AK6 kimberlite is regarded as almost certainly a volcaniclastic kimberlite, possibly pyroclastic, showing various degrees of welding. The classification remains problematic, however, and may only be resolved by better exposure following the start of mining operations.

The Karoo basalt was a barrier to kimberlite emplacement and basalt xenoliths are abundant, though in general the South Lobe is less diluted.

Limited zircon U/Pb dating has given ages of 88±5 Ma for the Central Lobe and 93±2 Ma for the South Lobe. Although the data is inconclusive, it lends some support to the possibility that the North and Central Lobes are a separate and later intrusion. However the average age corresponds well to the age of the Orapa AK1 pipe and other kimberlites in the Orapa Field.

The most prominent lineaments around AK6 Kimberlite, seen in air photos, are a closely spaced set directed east-northeast but of uncertain origin. A possible northwest oriented fault is detected to the immediate south of the pipe.

8 DEPOSIT TYPE

The AK6 kimberlite intrusion is a kimberlite diatreme, or pipe, which was the feeder to a now eroded kimberlite volcano. Kimberlite is by far the most important primary source of diamond.

Diamonds are a high pressure (~50 Kbar) and temperature (~1,200℃) variety of carbon, which form at depths of at least 150 km below the earth's surface. Kimberlite is a volcanic rock, which originates at great depth, between 150 km and 300 km, in the asthenosphere. Rapidly ascending kimberlite magma entrains diamonds, together with other rocks and minerals present at those depths.

Kimberlite is named after the diamond-mining centre of Kimberley, South Africa, where the diamond bearing rock type was first discovered. Prior to the Kimberley discoveries, all world diamond production had been from alluvial deposits and a primary source was unknown.

Only a small minority of kimberlite bodies contain diamonds in sufficient concentrations to be considered as diamond ore. The great majority of kimberlites have zero or very low diamond contents. It has been found that those which do have elevated diamond tenors usually occur in areas of old and stable crust, which are typically found in the cratonic cores of continental blocks. Kimberlites within younger orogenic belts usually contain few diamonds. Cratonic areas are characterised by thick crust and low geothermal gradients. The occurrence of the Orapa kimberlite field within the Palaeoproterozoic Magondi Mobile Belt, suggests that the diamond potential of the sub-lithospheric Archaean keel, has not been adversely affected by this older orogenic episode.

The transportation of entrained diamonds to the surface must be rapid in order to prevent their resorption or retrogression to graphite as pressure is released. Kimberlite magma is very rich in volatiles, notably CO_2, which makes this rapid ascent possible, and explosive breakthrough to the surface may start at depths of 2 to 3 km, giving rise to the characteristic carrot shaped pipe, or diatreme. It is not uncommon for there to be several kimberlite intrusions in very close proximity to each other, so that the later intrude the earlier ones. This is probably the case at Boteti, where there appears to be at least two separate intrusions, which coalesce near the present day land surface. Kimberlite pipes are often composite in the manner seen at Boteti, and made up of several different kimberlite lithologies or facies. The tenor and quality of diamonds may vary between different facies and lithologies, therefore a good geological model and lithologically controlled sampling are important in evaluation.

Different facies may also vary in the proportion of country rock xenoliths they contain, which impacts on grade. They may also vary in metallurgical properties, resulting in varying plant efficiencies. All of these variables have been taken into account in the sampling programmes undertaken on the Boteti Project.

9 MINERALISATION

The property includes the AK6 kimberlite pipe which is demonstrably diamond bearing. Diamonds occur as xenocrysts which have been entrained by the kimberlite magma during its ascent to surface from depths ranging between approximately 150 and 180 km. Factors influencing the grade of mineralization include the quantity of diamonds originally entrained by rising magma, the rate of ascent to surface and possible resorption of some diamond into graphite, and dilution of the primary kimberlite magma by barren country rock material. The grade of the AK6 kimberlite has been estimated by successive sampling programmes to produce an indicated mineral resource to a depth of 400 m, and an inferred mineral resource to a depth of 750 m (section 17).

10 EXPLORATION

This section summarizes advanced exploration work on the AK6 kimberlite done by Boteti Exploration (Pty) Ltd from December 2003 until the completion of the final geological report in May 2007. All work was carried out by De Beers Prospecting Botswana (Pty) Ltd, the operator of the Boteti joint venture, under PL13/2000.

As described in section 6 prior to the work carried out by the Boteti Joint Venture, the AK6 kimberlite had been held continuously by De Beers or Debswana under a succession of prospecting licences since its discovery in 1969. Limited and shallow sampling had shown that it was diamondiferous, but it was thought to be very low grade and relatively small (3.3 ha), thus for many years it was not a priority for thorough exploration. As will be seen, it is the occurrence of basalt breccia around and over parts of the kimberlite, which was not fully appreciated, and the under-sampling of the deposit, that led to those erroneous conclusions.

10.1 Exploration approach and methodology

The exploration of AK6 kimberlite followed a staged approach, which can be summarized as follows:

Initial exploration work – prior to the Boteti Joint Venture, in late 2003, De Beers carried out geophysical surveys and drilled 5 x 12¼" holes, which gave a 97 t (in-situ) bulk sample. This resulted in a sampling grade of ~23 ct/100 t and good quality diamonds. Due to a 10-month lapse between the completion of drilling and the release of the sampling results, De Beers committed PL13/2000 to the Boteti Joint Venture prior to these encouraging results being known.

Advanced Exploration Phase 1 – Based on the initial work, the AK6 kimberlite was declared an "advanced exploration project". The next step was to define a high confidence inferred mineral resource and recover 500 ct from 13 large diameter drill holes at 70 m spacing. The external contacts and internal geology of the kimberlite were explored through an extensive programme of delineation drilling and high resolution geophysics.

Advanced Exploration Phase 2 – the results of phase 1 merited phase 2, the objective of which was to define an indicated mineral resource and recover a large diamond parcel, ideally 3,000 ct, to reduce revenue uncertainty. Large diameter drill holes were placed at 50 m centres and trenches prepared for recovery of the required parcel of diamonds. Further delineation drilling was also done.

Advanced Phases 1 and 2 overlapped in time, due to a decision to fast track the project.

Initial conceptual mining studies showed that exploration should extend to 400 m below surface in the South Lobe, and 250 m below surface in the North and Central Lobes. These were the limits of possible open pit mining based on an initial economic assessment. The studies concluded that AK6 kimberlite was not likely to be an underground mining proposition.

Exploration by Boteti is summarized in Table 10-1 below. The drilling programmes are discussed in detail in section 11 below.

Table 10-1
Summary of Exploration Programmes

Stage	Work done	Duration
100 tonne bulk sample	5 x 12¼" large diameter drill holes totaling 679 m.	2003 - 2005
	DMS and diamond recovery	
	geophysical surveys	
Advanced Exploration Program Phase 1	44 x 6½" percussion holes for delineation totaling 4,575 m	2005 - 2006
	12 x cored boreholes (NQ) as LDD pilots, totaling 2,980 m	
	17 x inclined boreholes (NQ) for delineation totaling 6,904 m	
	13 x 23" LDD totaling 3,699 m	
	DMS processing of 1,775 tonnes	
	diamond recovery from 112 tonnes of concentrate	
Advanced Exploration Program Phase 2	11 x cored boreholes (NQ) as LDD pilots totaling 4,181 m	2006 - 2008
	29 x inclined boreholes (NQ) for delineation totaling 8,679 m	
	12 x 23" LDD totaling 4,265 m	
	DMS processing of 2,235 tonnes	
	diamond recovery from 194 tonnes of concentrate	
	trenching	
	DMS processing	
	diamond recovery	

10.2 Geophysical Surveys

The AK6 kimberlite was first detected from an aeromagnetic survey in 1969. During 2005, the kimberlite was surveyed in great detail by five ground geophysical methods as outlined in Table 10-2 below. The geophysical data was used in the preparation of the first geological model and in volume calculations.

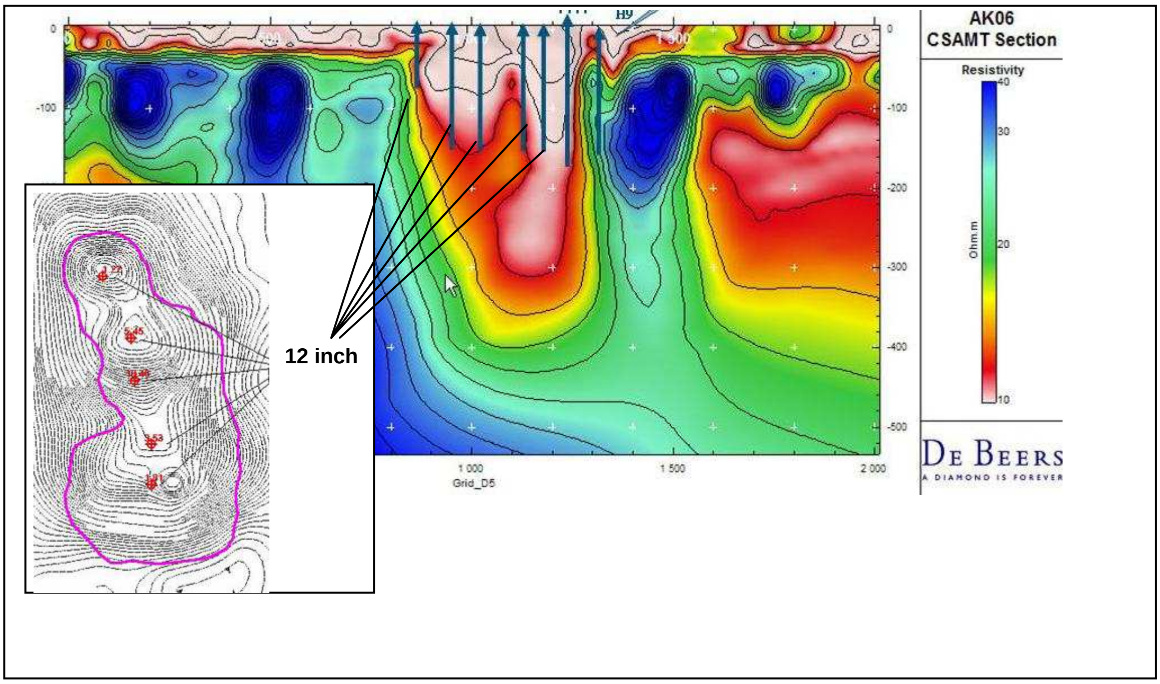
The geophysical surveys were carried out by De Beers, and images are shown in Figure 10-1, Figure 11-5 and Figure 11-6. The geophysical surveys were highly effective in delineating the kimberlite. However drilling results show that the geophysical interpretations lead to an overestimate of the surface area of the kimberlite, since the surveys interpreted associated basalt breccias as “kimberlite”. This over-estimation has been subsequently resolved by detailed drilling.

Table 10-2
Summary of high resolution geophysical surveys conducted over the AK6 Kimberlite

Method	line km	Comments
Magnetics	262.4	AK6 kimberlite has a very strong positive magnetic response, possibly influenced by basalt content.
Gravity	62.6	AK6 kimberlite is a complex anomaly but is overall a subtle Bouguer gravity negative due to the weathering of the pipe.
Electro-magnetics (Geonics EM34 frequency domain)	57.6	Defines kimberlite contacts
Controlled Source Audio-frequency Magneto-Tellurics (CSAMT)		Detected the three lobes at depth

A Controlled Source Audio-frequency MagnetoTellurics (CSAMT) (Figure 10-1) survey was conducted over the AK6 kimberlite. It is a frequency-domain measurement that constructs the apparent resistivity profile, which can be effective in mapping kimberlite intrusions. The modeled image shows the position of the 12.5-inch drillholes to confirm where the kimberlite was intersected. The CSAMT clearly shows the facies distinctions between the southern and northern (Centre and North) lobes, and that the South Lobe is much larger at depth to approximately 400m.

Figure 10-1
N-S CSAMT profile across the AK6 Kimberlite

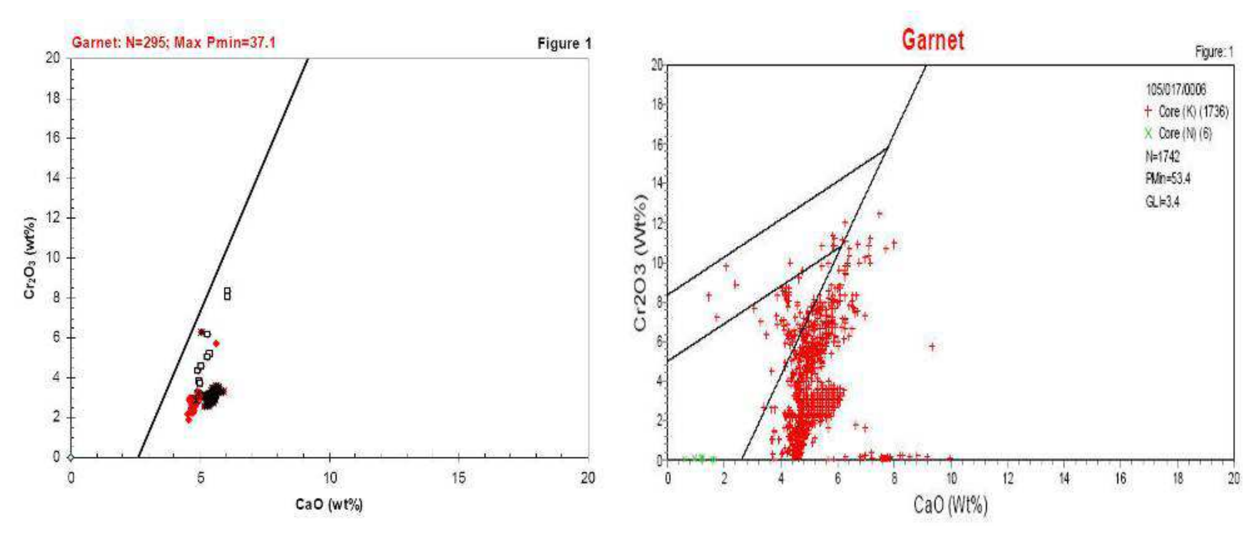


10.3 Garnet Mineral Chemistry

A suite of kimberlite indicator minerals was extracted from the Phase 1 delineation percussion drilling programme samples. Grains were analysed in-house by De Beers by electron microprobe and the results interpreted using standard methods. The garnet population carries a proportion of sub-calcic 'G10' grains, which are typical of diamondiferous kimberlites.

The garnet data are of special interest. During earlier work at Boteti, De Beers had probed a collection of 295 garnets, considered a statistically valid quantity at that time. A standard CaO v Cr_2O_3 plot shows a discouraging distribution with no grains in the sub-calcic G10 field. During the Boteti programme however, a population of 1,742 garnets were analysed, and the presence of sub-calcic grains became evident (Figure 10-2).

Figure 10-2
Garnet Mineral Chemistry of the AK6 Kimberlite. On the left, the data available in 2003 (n=295), and on the right, data available after 2003 (n=1742)



This study carries a strong message for the assessment of kimberlites using indicator mineral chemistry. Many kimberlites have been downgraded in terms of their diamond potential on the basis of a relatively small dataset.

11 DRILLING

Beginning in late 2003, extensive drilling works were undertaken on the AK6 kimberlite. The drilling can be divided into that done to delineate the extent of the kimberlite and to map its internal geology, and density, and that done to obtain large kimberlite samples for diamond grade and revenue estimation. The drilling is summarized in Table 11-1 below, grouped into the exploration phases described in section 10 above. Borehole locations are illustrated in Figures 11-4 to 11-9 and each drilling phase is summarized in Tables 11-1 to 11-9.

Table 11-1
Summary of exploration drilling programmes on the AK6 Kimberlite

Phase of programme	Purpose of drilling	Drill Type	Hole size	No. holes	Total metres	Duration
Initial exploration	Initial sampling	percussion (reverse circulation)	12¼"	5	679	late 2003-2/2004
Advanced Exploration Program Phase 1	delineation	percussion	6½"	44	4,575	2004-2005
	delineation	core	NQ	17	6,904	2/2005-10/2005
	piloting	core	NQ	12	2,979	
	bulk sampling	LDD	23"	13	3,699	7/2005-2/2006
Advance Exploration Program Phase 2	piloting	core	NQ	11	4,181	11/2005-08/2006
	delineation	core	NQ	29	8,679	04/2006-02/2007
	bulk sampling	LDD	23"	12	4,265	04/2006-08/2006

The work summarized in Table 11-1 totals 22,743 m of core drilling and 7,964 m of large diameter drilling, plus the initial 12¼" reverse circulation work and 6½" delineation drilling. The hole size refers to size at completion; starting size was generally larger.

Phase 1 pilot drilling was sub-contracted to R A Longstaff (Pty) Ltd of Selebi-Phikwe, but their services were discontinued after Phase 1. All prior and subsequent drilling was contracted to De Wet Drilling (Pty) Ltd of Rasesa, Botswana.

11.1 Drilling Methods

The core drilling during Phases 1 and 2 was conducted with three core drills: a Longyear LY44, a Boyles JKS300, and an Atlas Copco CS-13. All bits used were HUD 8C containing only synthetic industrial diamond (960 Grade, 40/50 mesh, General Electric). Figure 11-1 shows examples of these rigs.

All pilot and delineation core holes were logged in the field in detail according to a standard operating procedure, describing each kimberlitic unit, measuring contacts between various units as well as kimberlite/country rock contacts and brief descriptions of country rock. The country rock dilution and mantle content were logged using the scan-line method, logging 1m of kimberlite per 7m interval. Representative samples of each kimberlitic unit (approximately 10cm in size) and country rock units were collected from selected holes logged for mineral chemistry and petrographic analyses.

Core recovery and depth data were recorded as outlined in the core drilling procedure. Time motion data was collected by the drillers and captured in the database.

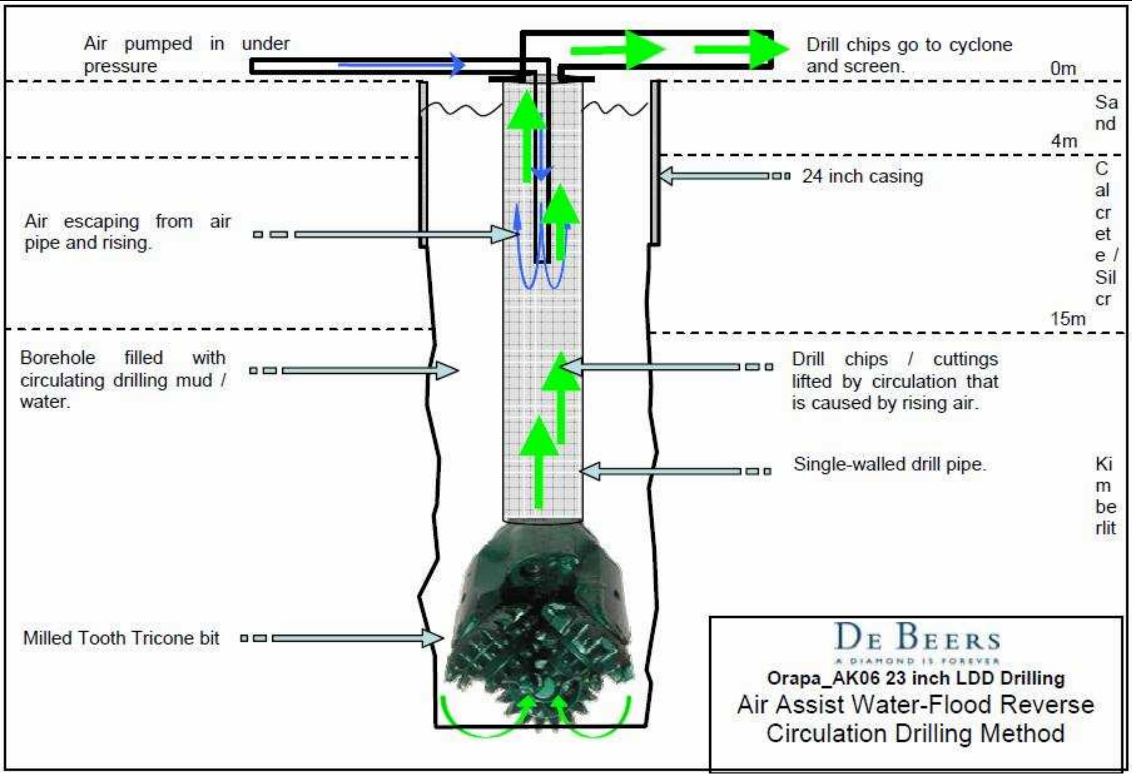
Core recovered from all the drilling was stored at the Letlhakane exploration camp at the time the field visit was conducted (Figure 11-2). The core is generally in very good condition and labelling remains clearly visible. The core has been labelled, photographed and the inventory stored in a Datamine Fusion database. Some sections of core are missing from the core boxes because they were sampled for microdiamonds, petrography, density, geochemistry and Ore Dressing Studies (ODS). Sampling records are also stored in the Fusion database.

Figure 11-1
Core Drill Rigs used in Phases 1 and 2

Figure 11-2
Core logging during the site visit conducted for this report

The Large Diameter Drilling (LDD) method used was the reverse flood airlift assist system. 23" tricone bits with tungsten carbide or mild steel teeth were used, the steel being used for softer varieties of kimberlite. Sample return to the surface is achieved by filling the borehole with water, and creating a lift on the inside of the drill rod by means of a narrow air pipe which goes down the centre of the rod (Figure 11-3). The amount of air injected is very small, and only a modest compressor is required. A current is created in the hole which lifts the sample up the centre of the drill rods, around the air pipe, and out onto a de-sliming screen. Downward pressure on the bit is achieved through the weight of the drill string, assisted by heavy collars which are put into the string above the bit. The system reduces abrasion during lift, and can deliver a relatively coarse sample with minimal fines.

Figure 11-3
Schematic of the Large Diameter reverse flood airlift assist drilling method



Because it requires a hydrostatic head (obtained by the water standing in the borehole around the rods) to operate, the method cannot function until the borehole is at least 12 m deep. Up to this depth, the hole is drilled with conventional circulation using mud, and sample return is imperfect. A section of 24" inside diameter casing is put into the hole to about 4 m.

The equipment used for both phases 1 and 2 was the De Wet Drilling Elephant 2 rig shown in Figure 11-4 in drilling mode with a compressor on the right, and a cyclone and in-field screen on the left.

Figure 11-4
LDD set-up with sample collection (inset)

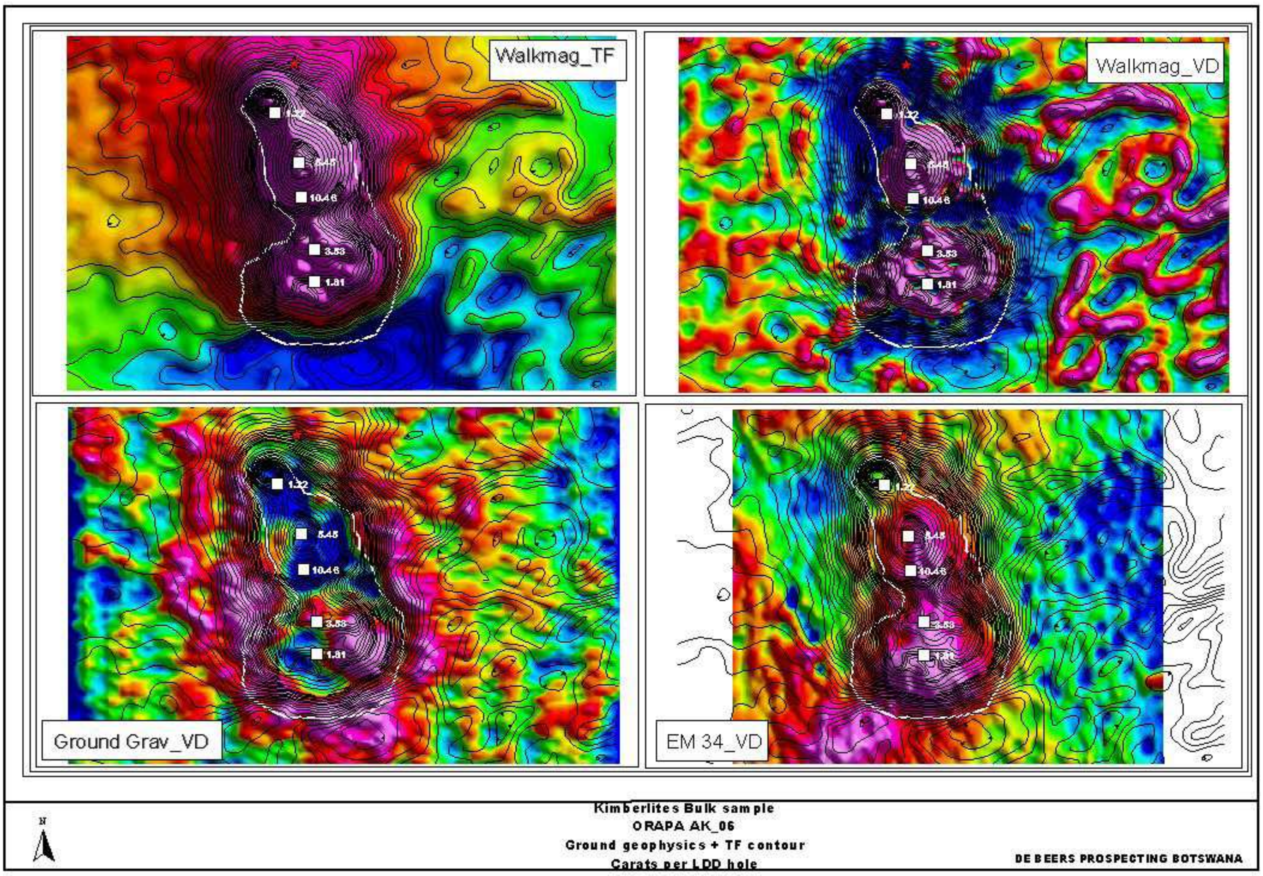
During the Phase 2 LDD work, two holes in the South Lobe were successfully drilled to 700 and 702 m, respectively, a record for this type of drilling.

The 50 m LDD grid was drilled with a view that no further sampling drilling would be required during the life of the mine. Experience had shown De Beers that LDD drilling within the pit of an operating mine was very difficult, if not impossible, and the AK6 kimberlite programme was designed to avoid this.

11.2 Initial 12 ¼ inch Reverse Circulation Drilling Programme

Preliminary bulk sampling to extract 100 tons (measured from theoretical bit diameter) of kimberlite material down to a depth of 150 m, was undertaken on the AK6 kimberlite from December 2003 to February 2004. The objective was to determine the macrodiamond (+1.47mm diamonds) potential of the kimberlite.

Figure 11-5
Location of 12 ¼ inch boreholes superimposed over the ground geophysical anomalies



The bulk sample was extracted from five $12^1/_4$ inch LDD holes spread across the extent of the kimberlite, as determined from very high-resolution ground geophysics (Figure 11-5). Each hole was drilled to a depth of approximately 150m. The holes were not calipered for drilled diameter, and hence the tonnage calculations were based on density determinations and the calculated volumes of each hole, assuming a $12^1/_4$ inch diameter. Material from each hole was combined and consigned as one sample. De-sliming at the on-site screens was at 1.47mm bottom cut-off. De Wet Drilling Botswana was contracted for this work using a Bomag RC rig. Tricone Tungsten Carbide (TC) drill bits were used.

Samples were consigned to the De Beers Evaluation Services Department (ESD) in Kimberley, South Africa to be processed through a dense media separation (DMS) plant to recover concentrate, which was sent to the Group Exploration Macro-diamond Laboratory (GEMDL) in Johannesburg for diamond recovery.

The results of this work are summarised in Table 11-2.

Table 11-2
Initial Bulk Sample Drilling (12 ¼ inch) Macrodiamond Results

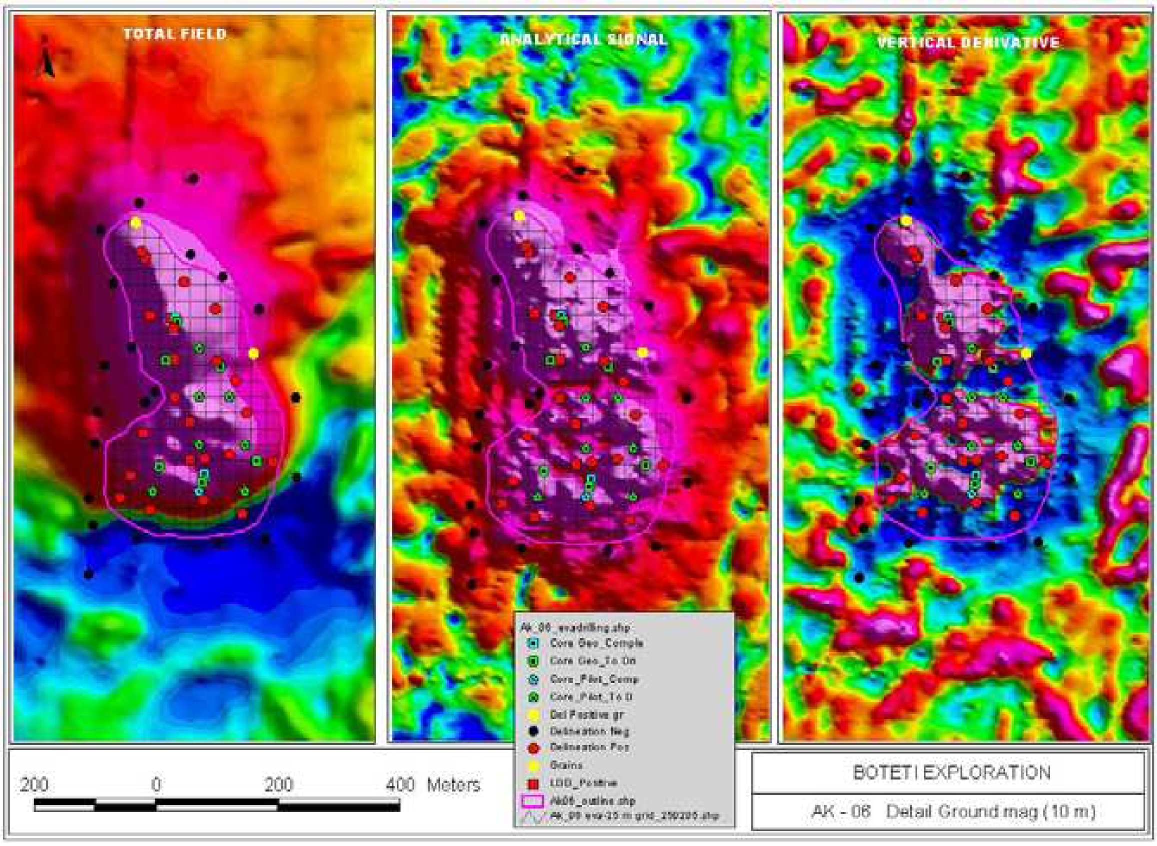
	Sample Interval					
Hole No	**From (m)**	**To (m)**	**Weight (kg)**	**Carats**	**No. of diamonds**	**Sampling grade (+1.47 mm) ct/100t**
H1	36.0	150.0	24,389.9	1.810	20	7.42
H2	30.0	150.0	22,733.8	3.530	36	15.53
H3	35.0	150.0	22,236.4	10.455	53	47.02
H4	47.0	145.0	18,613.4	5.450	41	29.28
H5	36.0	84.0	8,685.9	1.215	15	13.99
TOTALS			**96,659.3**	**22.460**	**165**	**23.24**

11.3 Phase 1 Percussion Drilling Programme

During 2005 and 2006, a 6½" percussion drilling programme was undertaken to delineate the perimeter of the kimberlite and to validate the geophysical model. A total of 44 holes, totaling 4,575 m, were drilled.

The location of the percussion delineation holes are shown in Figure 11-6. The red dots are drillholes where kimberlite was identified. Two holes marked yellow were not logged as kimberlite from the drill chips, but were found to contain indicator minerals once the samples were concentrated and examined in the laboratory. The indicator minerals confirm that these holes are within the kimberlite, but that it is probably a basalt rich breccia that is difficult to identify in drill chips. The black dots are drillholes where no kimberlite was identified and indicator minerals were not recovered.

Figure 11-6
Location of 6½ inch boreholes superimposed over the detailed ground magnetic images.



Fourteen holes which intersected kimberlite were sampled for macrodiamonds. The kimberlite material from each hole was combined as one sample and processed on-site using the mobile DMS plant. The samples yielded 443 kg of concentrate which was sent to GEMDL for diamond recovery. The results are given in Table 11-3”.

Table 11-3 Delineation Percussion Drilling (6½ inch) Macrodiamond Results						
	Sample Interval					
Hole No	From (m)	To (m)	Weight (kg)	Carats	No. of diamonds	Sampling grade (+1.00 mm) ct/100t
H11	18.0	122.0	1,871.0	1.455	9	77.77
H15	85.0	120.0	590.0	0.035	2	5.93
H16	30.0	60.0	100.0	0.00	0	0.00
H17	34.0	158.0	1,590.0	0.425	5	26.73
H20	66.0	149.0	2,390.0	0.505	9	21.13
H22	89.0	160.0	1,700.0	0.600	11	35.29
H26	96.0	150.0	1,840.0	0.090	4	4.89
H27	71.0	150.0	2,480.0	0.645	20	26.01
H28	12.0	162.0	2,920.0	0.570	13	19.52
H34	59.0	174.0	1,390.0	0.110	3	7.91
H36	108.0	156.0	1,680.0	1.515	6	90.18
H38	13.0	150.0	3,110.0	0.945	19	30.39
H39	7.0	151.0	4,590.0	0.630	18	13.73
H41	62.0	150.0	2,110.0	0.885	28	41.94
TOTALS			**28,361.0**	**8.410**	**145**	**29.65**

11.4 Phase 1 Delineation and Pilot Hole Core Drilling Programme

The delineation core drilling programme commenced on 07 February 2005 and was completed on 19 September 2005. Seventeen delineation holes comprising fourteen planned holes and three additional holes were completed to a cumulative depth of 6,904m. The three additional holes (DDH014-016) were planned to target the South Lobe and the sandstone bridge between the South and Centre Lobes. These holes confirmed the existence of the in-situ sandstone bridge separating the South and Centre Lobes and also intersected additional kimberlite below the South Lobe resulting in increased kimberlite volume. The Phase 1 delineation drilling is summarised in Table 11-4.

The pilot core drilling programme commenced on 23 April 2005 and was completed on 23 July 2005 with 12 core holes drilled to a cumulative depth of 2,979m. The pilot hole pattern was designed to achieve 70m grid hole spacing for Phase 1 LDD sampling (Figure 11-7). The objectives of the pilot holes were to improve the knowledge of the internal geology of the kimberlite and to guide the LDD drilling to ensure that suitable kimberlite intersections would be encountered. This also allowed for selection of appropriate drill bits based on rock hardness. Thirteen (13) holes were planned, however only 12 were drilled because one of the planned holes was located too close to a previously drilled hole. The Phase 1 pilot core drilling is summarised in Table 11-5.

Table 11-4
Summary of Phase 1 Delineation Core Drilling

Hole No.	northing	easting	elevation	azimuth	dip	EOH (m)
DDH001	7621950	341535	1021.75	0°	-90°	300.08
DDH002	7621700	341584	1022.73	0°	-90°	450.08
DDH003	7621704	341583	1022.57	348°	-60°	400.37
DDH004	7621722	341670	1022.27	230°	-60°	401.38
DDH005	7621870	341609	1021.91	250°	-70°	571.38
DDH006	7621722	341667	1022.17	270°	-60°	487.31
DDH007	7621871	341610	1021.84	300°	-50°	301.56
DDH008	7621880	341520	1022.18	45°	-50°	253.56
DDH009	7621690	341580	1022.68	256°	-60°	301.45
DDH010	7621941	341540	1021.88	160°	-50°	496.88
DDH010A	7621942	341544	1021.81	160°	-60°	550.9
DDH011	7621879	341520	1022.19	100°	-70°	331.9
DDH012	7621715	341511	1022.42	80°	-60°	350
DDH013	7621715	341511	1022.42	120°	-60°	332.08
DDH014	7621994	341523	1021.72	330°	-65°	201.28
DDH015	7621882	341695	1021.87	239°	-60°	524.3
DDH016	7621990	341494	1021.73	168°	-55°	649.88
						6904.39

Figure 11-7
Location of Phase 1 (DDH) delineation and pilot core holes

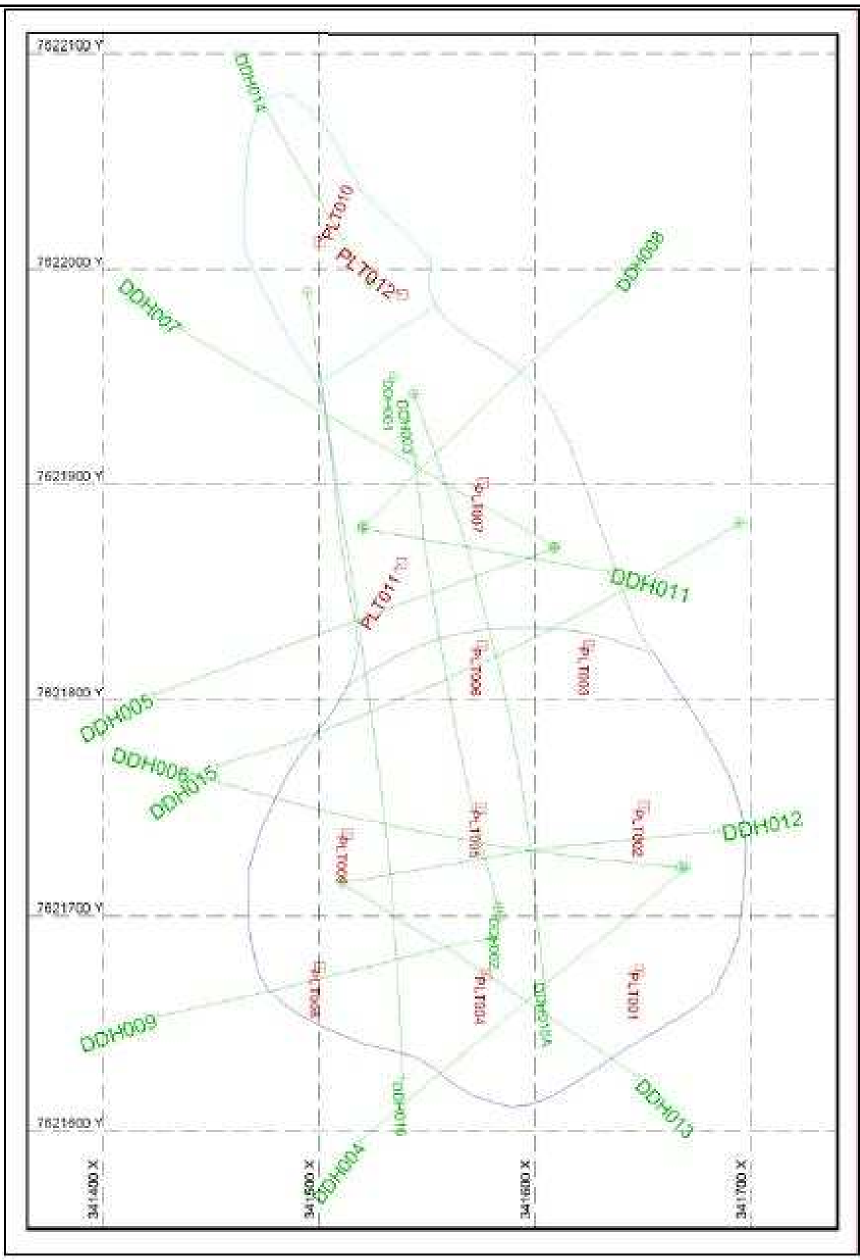


Table 11-5 Summary of Phase 1 Pilot Hole Core Drilling						
Hole No.	**northing**	**easting**	**elevation**	**azimuth**	**dip**	**EOH (m)**
PLT001	7621674	341648	1022.64	0	-90°	250.61
PLT002	7621751	341651	1022.19	0	-90°	250.18
PLT003	7621825	341625	1021.97	0	-90°	248.18
PLT004	7621672	341577	1022.88	0	-90°	247.51
PLT005	7621750	341575	1022.25	0	-90°	250.85
PLT006	7621825	341576	1021.77	0	-90°	200.18
PLT007	7621901	341576	1021.97	0	-90°	250.1
PLT008	7621675	341500	1022.13	0	-90°	280.23
PLT009	7621738	341513	1022.24	0	-90°	250.18
PLT010	7622012	341500	1021.81	0	-90°	250.23
PLT011	7621863	341538	1022.15	0	-90°	301.23
PLT012	7621988	341538	1021.89	0	-90°	200.23
						2979.71

11.5 Phase 1 LDD Programme

The objective of the LDD programme was to recover 500 carats of diamonds in order to gain accurate local and global grades as well as revenue estimates within the kimberlite down to 400m. The location of the Phase 1 LDD boreholes is shown in Figure 11-8.

The LDD programme commenced on 07 July 2005 and was completed on 08 February 2006 with 13 LDD holes completed to a cumulative depth of 3,699m. Sample was treated at the on-site DMS plant as described in sections 12 and 13 below. The drilling and macrodiamond results are given in Table 11-6.

Figure 11-8
Location of Phase 1 LDD holes

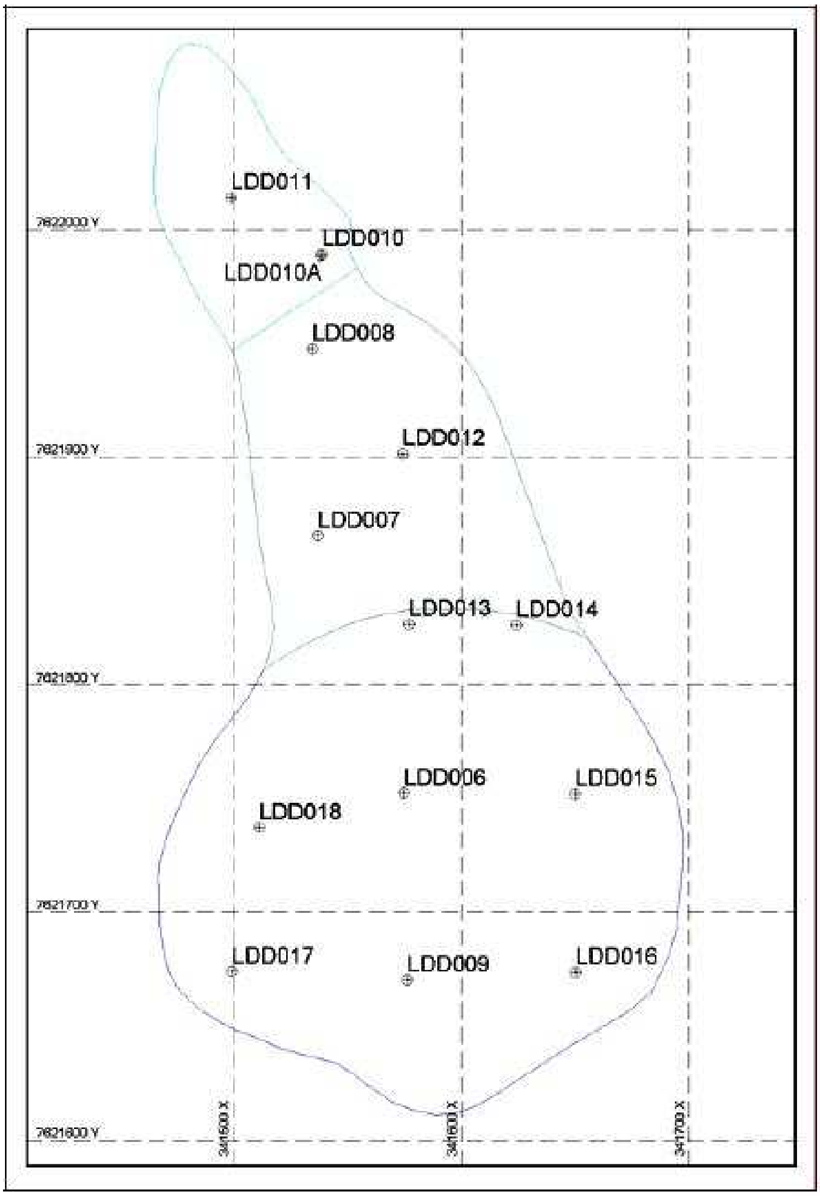


Table 11-6
Summary of Macrodiamond Results from Phase 1 LDD

Lobe	Hole No	EOH depth (m)	Calipered sample mass (tonnes)	DMS plant headfeed	total diamonds +1.00mm	carats post acidisation	Sample grade +1mm ct/100t
NORTH	LDD010	18	4	1	0	0.000	0.00
	LDD10A	180	120	73	377	37.46	32.22
	LDD011	197	132	83	414	37.62	28.50
CENTRAL	LDD007	222	155	89	513	32.67	21.08
	LDD008	180	131	72	500	33.08	25.25
	LDD012	198	132	85	636	37.29	28.25
	LDD013	180	116	70	534	32.84	28.31
	LDD014	180	116	68	488	46.97	40.49
SOUTH	LDD006	358	298	183	595	37.22	12.49
	LDD009	354	284	189	789	57.93	20.40
	LDD015	408	321	226	1,740	118.96	37.06
	LDD016	408	316	213	2,258	117.92	37.32
	LDD017	408	314	206	826	50.84	16.19
	LDD018	408	309	216	816	48.21	15.60
Totals		**3,699**	**2,748**	**1,774**	**10,486**	**689.01**	

11.6 Phase 2 Delineation and Pilot Hole Core Drilling Programme

The pilot core drilling for Phase 2 commenced on 23 November 2005, midway through the Phase 1 programme. This was to ensure that most of the on-site activities would be completed by the first quarter of 2006. The overlap between Phase 1 and Phase 2 evaluation programmes was decided taking into account De Beers' drive for more rapid and effective assessments of resources. The Phase 2 pilot core drilling was completed on 22 August 2006 with 11 holes completed to a cumulative depth of 4,181m. Phase 2 pilot core drilling programme took longer to complete because of a 4 month break before an additional pilot core hole (PLT023) was drilled to precede an additional LDD hole (LDD030). Phase 2 pilot hole drilling is summarised in Table 11-7.

Phase 2 delineation core drilling commenced on 08 April 2006 and was completed on 24 February 2007 with 29 holes completed to a cumulative depth of 8,679m (Figure 11-9). A deep inclined hole (DDH020) was completed to a record depth of 884m into kimberlite. This core hole was drilled from the north of the North Lobe to the South Lobe and proved the existence of kimberlite below and between the three lobes. It also intersected a record nine pierce points. Phase 2 delineation core drilling is summarised in Table 11-8.

Table 11-7
Summary of Phase 2 Pilot Hole Core Drilling

Hole No.	northing	easting	elevation	azimuth	dip	EOH (m)
PLT013	7621940	341591	1021.67	0	-90°	202.62
PLT014	7621900	341521	1021.86	0	-90°	172.86
PLT015	7621870	341600	1022	0	-90°	265.79
PLT016	7621630	341610	1022.8	0	-90°	400.00
PLT017	7621641	341545	1022.79	0	-90°	400.00
PLT018	7621790	341610	1022.12	0	-90°	400.00
PLT019	7621710	341682	1022.48	0	-90°	325.47
PLT020	7621710	341610	1022.43	0	-90°	663.35
PLT021	7621710	341545	1022.59	0	-90°	398.98
PLT022	7621710	341470	1022.07	0	-90°	506.67
PLT023	7621780	341550	1022.11	0	-90°	445.51
						4181.25

Figure 11-9
Location of Phase 2 Delineation and Pilot (DDH) core holes

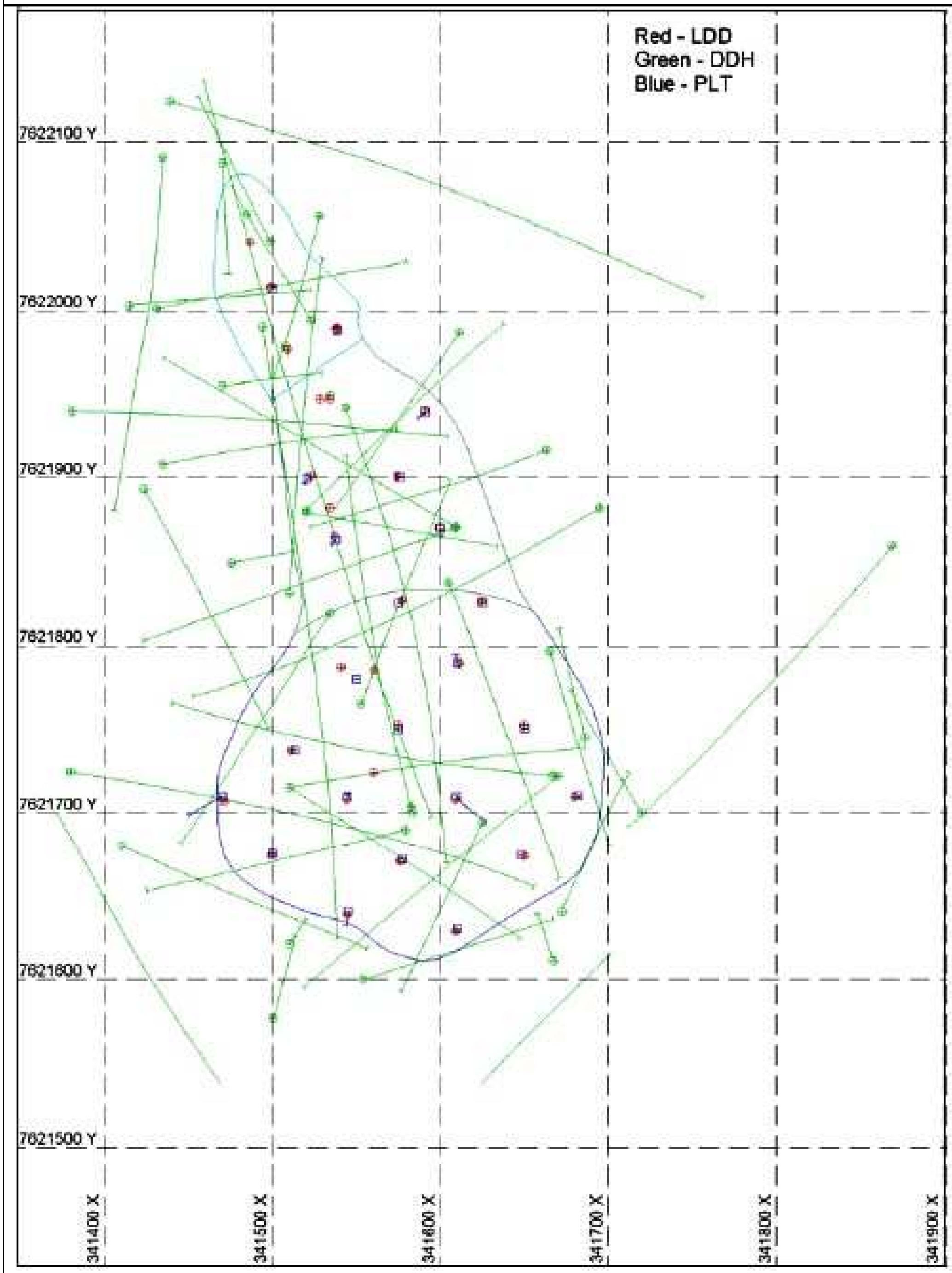


Table 11-8 Summary of Phase 2 Delineation Core Drilling						
Hole No.	**northing**	**easting**	**elevation**	**azimuth**	**dip**	**EOH (m)**
DDH017	7621765	341553	1022.57	20°	-60°	290.69
DDH018	7621837	341605	1022.09	190°	-60°	424.47
DDH019	7622057	341485	1021.97	0°	-90°	163.89
DDH020	7622139	341459	1021.86	160°	-55°	884.59
DDH021	7622041	341499	1021.77	360°	-45°	136.14
DDH022	7621831	341510	1022.26	5°	-55°	350
DDH023	7621797	341665	1022.21	165°	-65°	300.08
DDH024	7622001	341431	1022.16	80°	-45°	215
DDH025	7622056	341528	1021.87	195°	-70°	304.64
DDH026	7621700	341720	1022.72	330°	-68°	244.88
DDH027	7621908	341435	1021.81	80°	-60°	280.08
DDH028	7621917	341663	1021.94	250°	-73°	525.83
DDH029	7621979	341508	1021.95	0°	-90°	300.16
DDH030	7621819	341535	1022.17	213°	-68°	500.38
DDH031	7621987	341612	1021.49	220°	-75°	407.36
DDH032	7621725	341380	1021.24	100°	-60°	565.28
DDH033	7621695	341625	1022.43	205°	-60°	231.18
DDH034	7621745	341686	1022.31	345°	-65°	154.42
DDH035	7621640	341672	1022.88	25°	-65°	232.98
DDH036	7621621	341511	1022.69	30°	-80°	108.88
DDH037	7621849	341476	1022.09	80°	-70°	111.18
DDH038	7621680	341411	1021.63	117°	-65°	390.13
DDH039	7622088	341470	1022.02	175°	-60°	141.3
DDH041	7621955	341470	1021.66	80°	-78°	293.13
DDH047	7621611	341667	1022.61	30°	-80°	107.13
DDH043	7621577	341501	1023.01	15°	-70°	148.95
DDH049	7621600	341554	1022.94	70°	-60°	244.57
DDH050	7622003	341415	1021.75	80°	-60°	221.77
DDH051	7621940	341381	1022.31	90°	-55°	400
TOTAL						**8,679.09**

11.7 Phase 2 LDD Programme

The Phase 2 LDD drillhole pattern (Figure 11-10) was designed to produce a sample grid centre size of 50m in order to increase the confidence in the grade model to an Indicated level. The additional diamonds from this programme were also to be used for valuation purposes. The location of LDD holes coincided with the pilot core hole positions (Figure 11-9). Sample was treated at the on-site DMS plant as described in sections 12 and 13 below. The drilling and macrodiamond results are summarized in Table 11-9.

Figure 11-10
Location of Phase 2 LDD holes

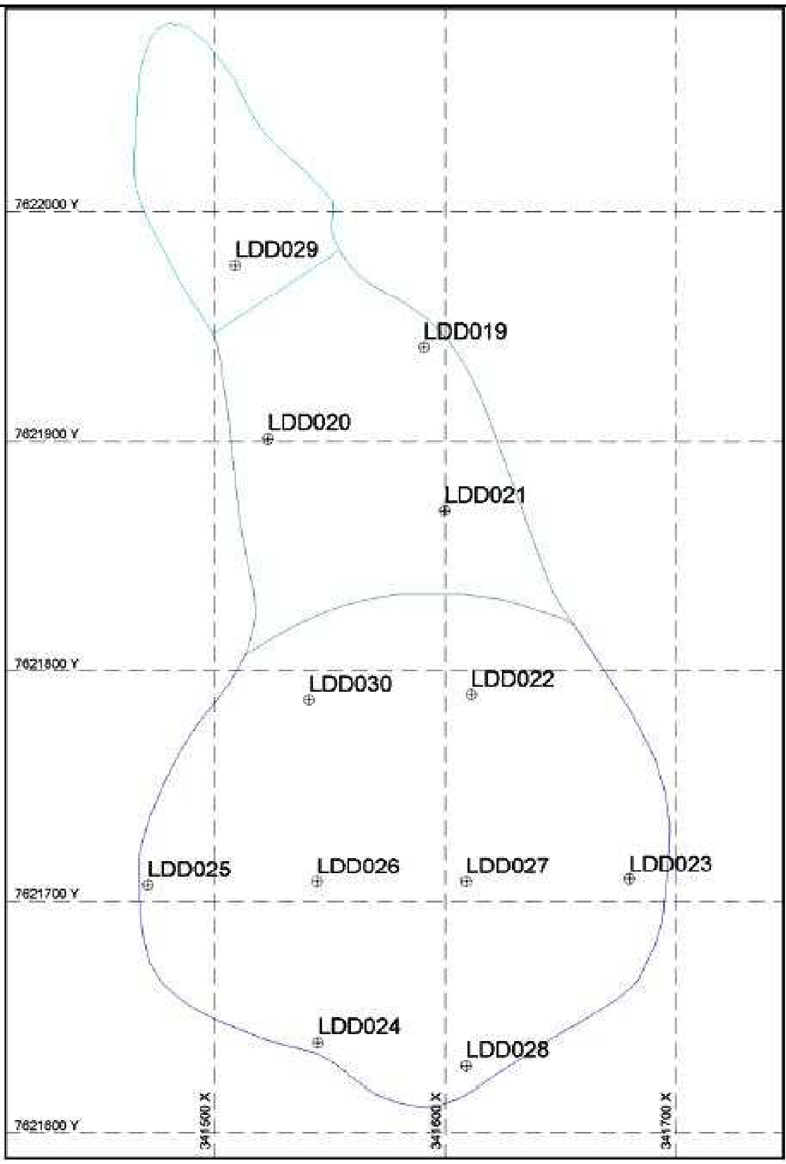


Table 11-9 Summary of Macrodiamond Results from Phase 2 LDD							
Lobe	**Hole No**	**EOH depth (m)**	**Calipered sample mass (tonnes)**	**DMS plant headfeed**	**total diamonds +1.00mm**	**carats post-acidisation**	**Sample grade +1mm ct/100t**
NORTH	LDD029	270	181.4	131.2	401	39.7	21.9
CENTRAL	LDD019	173	128.2	83.4	195	29.1	22.7
	LDD020	168	120.9	87.7	356	31.5	26.1
	LDD021	240	178.3	119.3	642	44.1	24.7
SOUTH	LDD022	241	180.6	130.1	760	37.7	20.9
	LDD023	450	345.3	222.4	2022	110.1	31.9
	LDD024	456	360.0	253.8	669	43.1	12.0
	LDD025	241	171.5	119.8	281	18.1	10.6
	LDD026	700	589.4	387.2	Sample not processed		
	LDD027	702	567.4	387.8	635	40.5	7.1
	LDD028	432	333.2	217.7	979	70.1	21.0
	LDD030	192	141.7	94.1	281	19.4	13.7
TOTALS	**12**	**4,265**	**3,297.9**	**2,234.5**	**7,221**	**483.4**	**17.8**

11.8 Borehole Surveying

The collar positions for the planned holes were established using a Leica DGPS 500 system with a theoretical accuracy of about 5mm in X, Y and Z (elevation). The co-ordinate system used for core drilling and LDD holes was WGS84, UTM35S. The planned hole collar position was marked with a peg with the drill hole number on it. For angled holes, two additional pegs were placed on the ground. One peg was placed approximately 10m in front of the collar position peg indicating the planned azimuth and dip of the hole. The second peg was placed approximately 10m behind the collar position peg to assist in lining up the drill.

Upon completion of drilling, all holes were rehabilitated, capped and marked. A De Beers geophysicist surveyed the final collar positions. Upon completion of a core hole, a down hole survey was undertaken to record the direction the hole had followed during drilling. The direction data together with the geological data was used to create the 3D geological model. During Phase 1, the pilot and delineation holes were down-hole surveyed with magnetometer based instruments. Due to the high magnetic susceptibility of the kimberlite, there was a low level of confidence in the data produced. All cored boreholes from Phase 2, and some from Phase 1, were down hole surveyed by Digital Surveying (Pty) Ltd using a gyroscope based instrument, a Target Inertial Navigating System (INS) Gyro, which is considered to be the best instrument available for this kind of work.

11.9 Volume Determinations

During drilling of the bulk sampling holes, the sample collected at the drill collar was de-slimed by passing it over an inclined vibrating in-field screen, generally set at 1 mm (1.47 mm during the initial drilling phase). The sample volume bagged is therefore much less that the true in-situ volume. The latter, which is vital for grade calculation, was obtained by caliper logs of the LDD holes plus density measurements on the corresponding interval of core in the pilot hole. Caliper results are subject to interpretation, as holes may cave during or after drilling. If a hole caves during drilling, this will be reflected in a larger than normal volume of sample from that sampling interval, and the caliper result can be accepted as is. If it is deduced that the hole caved after drilling, then the caving must be “smoothed over” in the caliper profile. Conversely, kimberlite may swell after drilling due to clays absorbing moisture, thus if a hole measures less than the bit diameter the caliper log must be edited to reflect the bit diameter as a minimum size for the hole. Boteti carried out approximate on-site interpretations of the caliper data. In the event, caved profiles were accepted as is, as it proved difficult to determine whether caving occurred during or after drilling.

Caliper surveys were carried out by contractor AquaEarth (Pty) Ltd from South Africa. A 4-arm Geovista caliper was used, which provides four independent estimates of the radius. The surveys were run 2 to 3 times for verification.

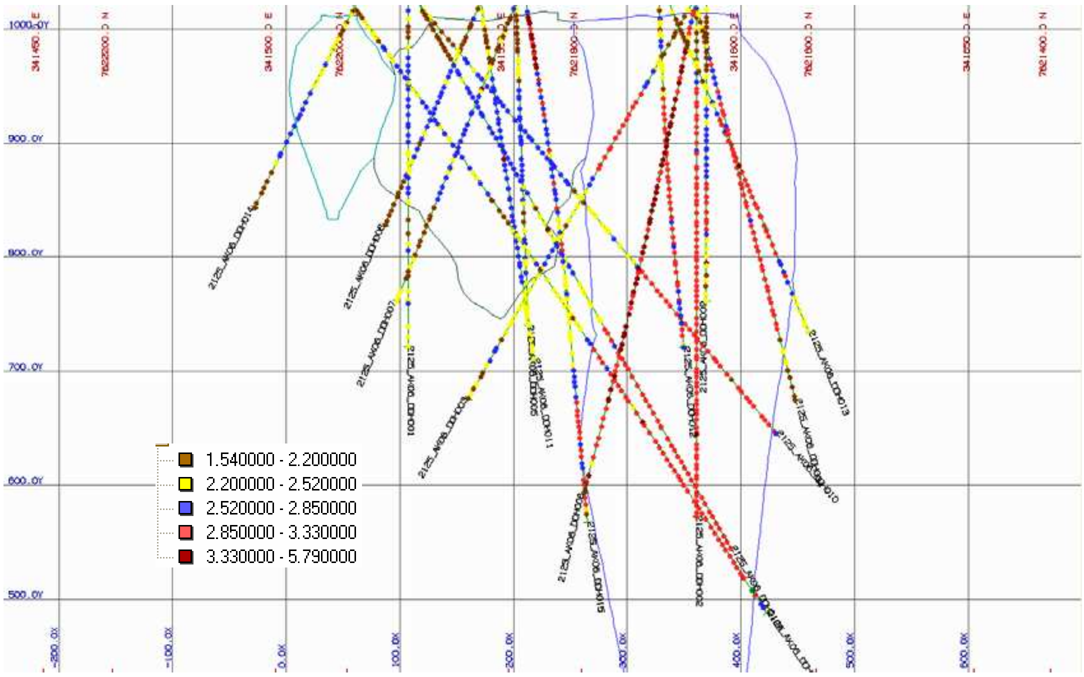
In the initial 12¼" bulk sampling drilling no calipers were run and the volume was calculated taking the nominal hole size.

11.10 Density Measurements

Density (specific gravity) measurements were done on core samples, by taking a 15 cm length of core and weighing it in air and in water. During Phase 1, one sample was taken per 7 m of drilling (one per box). During Phase 2, a density sample was measured every 3 m. Figure 11-11 shows a compilation of density data from the Phase 1 drilling programme.

Figure 11-11
Phase 1 down hole density variation derived from

density measurements on drill cores



11.11 Downhole Geophysical Logging

Core holes PLT002 and PLT004 were selected for orientation down hole geophysics conducted by QuickLog Geophysics with the interpretations done by GRS Consulting. The objective was to investigate if the technique could assist in identifying different facies of kimberlite within each lobe to aid in developing an internal model of the kimberlite. The zones that were identified by the geophysics were already identified from the visual core logging so the geophysical method did not provide any better resolution to the model and the method was not pursued further.

12 SAMPLING METHOD AND APPROACH

Kimberlite AK6 has been extensively sampled for macrodiamonds by drilling and trenching as summarised in Table 12-1. A total of over 25,000 tonnes (“t”) of sample have been collected, although not all of the trench sample has been processed, and the majority of sample from LDD hole 026 was not processed in the interest of rapid results turnaround, due to very high DMS yields from portions of the South Lobe. Core from the pilot holes was sampled for microdiamonds, to provide a comparison with LDD results, and to provide more robust grade and revenue estimation (see section 17). However, given the advanced nature of the programme, it is the macrodiamond (diamonds >1 mm) results which are given attention here.

In all cases sample collection was done by De Beers, except for the trench samples, which were collected by a mining contractor (Strata Mining (Pty) Ltd).

Table 12-1
Summary of Macrodiamond Sampling from AK6 Kimberlite

Exploration phase	Sampling Method	in-situ tonnes	DMS feed tonnes
initial bulk sample	12¼" RC drilling	97 t	64 t
Phase 1	delineation drilling	28 t	28 t
	Phase 1 LDD	2,747 t	1,775 t
Phase 2	Phase 2 LDD	3,298 t	2,235 t
	trenching, S Lobe	7,393 t	6,676 t
	trenching, Central Lobe	12,074 t	2,884 t
		25,634 t	**13,662 t**

12.1 Sampling Objectives

The objective of each sampling programme is summarized in Table 12-2.

Table 12-2
Summary of Sampling Objectives

Phase	Objective
initial bulk sampling	To sample AK6 kimberlite to 150 m depth, and especially to sample below uppermost parts which are diluted with basalt. Obtain a preliminary assessment of grade
Phase 1 LDD	To establish an inferred resource to 400 m (South Lobe) and 180 m (North and Central Lobes). Collect a parcel of 500 ct for valuation
Phase 2 LDD and trenching	To establish an indicated resource to 400 m (South Lobe) and 250 m (North and Central Lobes), an inferred resource to 700m, and to collect a parcel of 3,000 ct for valuation

12.2 Sampling Methods

12.2.1 Initial bulk sampling

The initial bulk samples are summarized in Tables 10-1 and 11-2 above. The samples were classified to +1.47 mm at the drill, the undersize being discarded. The material from each borehole was combined and taken as one sample. In-situ sample volume was calculated from the nominal hole diameter. Densities were taken at 2.47 g/cm^3 for the North and Central Lobes and 2.84 g/cm^3 for the South Lobe. The five boreholes were spaced quite evenly over the pipe (Figure 11-5 above), with two holes (1 and 2) in the South Lobe, two in the Central Lobe (3 and 4) and hole 5 in the North Lobe.

The accuracy of the results could be affected by the lack of caliper logs, and therefore inaccurate volume estimates, and in the density figures being inappropriate, as these are estimates rather than measured. The +1.47 mm cut-off makes the raw results incompatible with the later LDD results. Nevertheless the main objective of the programme was achieved, in that it showed the kimberlite to carry a potentially economic grade.

12.2.2 Phase 1 & Phase 2 LDD

The Phase 1 and 2 large diameter drilling samples are summarized in Tables 10-1, 11-6, 11-9 and 12-1 above.

The Phase 1 sampling objective was achieved, when 10,486 diamonds with a weight (after acidising) of 689 carat ("ct") were recovered. Phase 2 drilling recovered an additional 5,980 stones, weighing 484.95 ct.

The LDD samples were collected over 12 m intervals, corresponding to hypothetical mining benches. They were collected in cubic meter polypropylene bulk bags, with varying numbers of bags making up one sample. The bags were attached to the drill site shaker and received a feed of +1.00 mm material direct from the shaker.

The Phase 1 LDD holes were logged by caliper as described in section 11.9 above, and corrected caliper data was used to estimate the volume drilled. The density measurements used as tonnage factors were obtained from samples of core from the LDD pilot and core delineation holes.

Volume and tonnage estimates for the Phase I and 2 LDD work were an improvement over those for the initial 12¼" drilling. The reverse flood air-lift assist method also reduces diamond breakage relative to conventional reverse circulation drilling.

Representative chip samples were taken during LDD programmes for every meter where recovery was achieved. Each sample was placed in a plastic jar on a core tray.

The LDD sampling showed that the diamond populations of the South Lobe and of the Central/North Lobes are different, therefore they would have to be treated separately for trench sampling.

In order to reach an accurate estimation of revenue, a target was set to obtain 1,200 ct from the South Lobe and 1,800 ct from the Central Lobe.

12.2.3 Trench Sampling

The excavation of the trenches was contracted to Strata Mining (Pty) Ltd. The trench locations were chosen to be in the highest grade zones determined by kriging where kimberlite was closest to surface. Areas of basalt breccia in the South Lobe were avoided.

Trench positions are shown in Figure 12-1. The two trenches shared a common access ramp.

The highest kriged grades from drilling were for the North Lobe, but as the North Lobe's total carat contribution to the Central/North Lobe body is only 15%, it was decided to trench the Central Lobe and assume that the North Lobe would be similar.

Trenching proceeded by identifying the depth at which kimberlite dilution is minimal. Diluted material was stripped and stockpiled on site. Once the floor was prepared, the trench was surveyed, then re-surveyed on completion, thus deriving the total volume of kimberlite removed.

In the Central Lobe, the surveying was complicated by measuring a floor in material that had already been blasted. Because of this, a bulk factor of 0.81 was used in an attempt to correct the volume for this section (depths 7.5 – 10 m). This factor was derived by comparing the number of loads required to haul in the sample and applying an average volume per load as calculated from the commissioning sample.

Both trenches required blasting for fracturing the kimberlite. This was done using 89 mm holes drilled on a 2.5 m grid. The driller and surveyor calculated the depth for each hole to get down to the 10 m level. The powder factor used was a maximum of 0.68 kg/m^3. It was believed that this would not result in any significant diamond breakage.

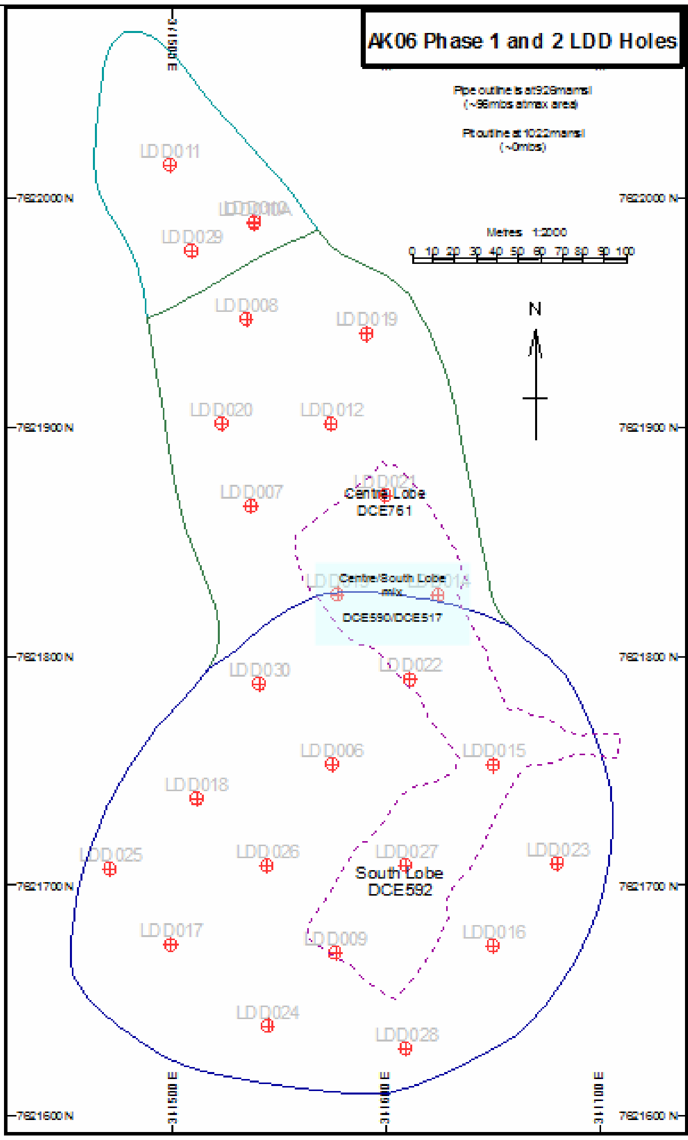
The Central Lobe trench was excavated first, and sampled between depths of 7.5 and 18 m. Identification of the top of the kimberlite was more difficult in the South Lobe, which was therefore sampled between 10 and 18 m depths.

The final volumes mined were measured by Strata Mining and by De Beers staff. There is a considerable discrepancy, especially in the South Lobe, which De Beers attribute to access difficulties due to flooding, which limited the effectiveness of their survey crew. The figures are given in Table 12-3 below.

Table 12-3
Trench Sample Volume Estimates

	Central Lobe Trench			**South Lobe Trench**		
	Planned (m^3)	**Strata Mining (m^3)**	**De Beers (m^3)**	**Planned (m^3)**	**Strata Mining (m^3)**	**De Beers (m^3)**
Estimate of kimberlite volume excavated	3,688	5,116	5,956	3,242	3,376	2,297

Figure 12-1
Location of Bulk Sample Trenches into the South and Central Lobes



The major flaw in the trench sampling was due to the uncertainty of the geological contact between the South and Central Lobes. Geochemical samples from pilot hole PLT006 suggested that the South to Central Lobe contact could be flaring to the north. This was entered into the geological model in May 2007, after the trenching work was finished. It means that most of the Central Lobe trench is in fact in the South Lobe. Because it had been established that the two lobes had different diamond populations, it was only possible to use a small amount of Centre Lobe trench data in revenue estimates.

13 SAMPLE PREPARATION, ANALYSES AND SECURITY

Samples for macrodiamonds (+1.0 mm diamonds) were taken by means of:

- Five 12¼" reverse circulation boreholes
- 25 x 23" reverse flood airlift assist drilling
- Trenching, where sample was loosened by blasting and/or earthmoving equipment

All sample preparation and analysis was done by De Beers.

13.1 Reverse Circulation, 12¼" Drilling

The sample returned by the drill was de-slimed on site, at the drill, using a 1.47 mm screen. No details of the quality control applied to this sample collection are available. For example, it is not known whether checks were made for +1.47 mm material passing into the undersize.

All the material from each borehole was combined and treated as a single sample.

The samples were sent to the De Beers Evaluation Services Department (ESD) laboratory in Kimberley, and a concentrate prepared using a DMS plant. No details of this work, or of quality control measures, are provided. The concentrate was shipped to the Group Exploration Macro-Diamond Laboratory (GEMDL) in Johannesburg for diamond recovery

Due to inadequate information, it is not possible to comment on the sample preparation, security and analytical procedures.

13.2 Reverse Flood Air-lift Assist Drilling (23"LDD)

There were two phases of LDD work, the first from July 2005 – February 2006 (13 holes, 3,699 m) and the second from April 2006 – August 2006 (12 holes, 4,265 m). Sample preparation and analysis procedures were the same for both phases.

Sample returned from the drill was de-slimed to +1.0 mm at the drill using a vibrating screen. The undersize was monitored for loss of +1.00 mm material, which was due to loosening of bolts on the screen. When a problem was seen, for example, sample loss due to a leaking hose, the drill was stopped until it was addressed.

The sample was collected from the screen in cubic meter sample bags, under supervision of a geologist. It was then shipped to the DMS plant at the Letlhakane camp on a flat bed lorry, also under the charge of the geologist. At the camp, the responsibility for the sample passed to the plant foreman.

The plant was a 10 t/hr dense media separation mobile unit. During phase 1, the plant received 1,775 t of headfeed, which produced 112 t of concentrate, giving an average DMS yield of 6%. Samples from the South Lobe had a significantly higher yield (7.8%) than those from the Central and North Lobes (mean 1.1%). This can be related to the higher density of the South Lobe (average 2.78 t/m^3) against the North and Central Lobes (average 2.43 t/m^3). During phase 2, the total headfeed was 2,235 t which produced 194 t of concentrate, a yield of 8%. Again the difference between the South Lobe and the remainder of the pipe was very clear.

Following processing, the concentrates were collected in plastic drums which were sealed with security tags, and stored within a secure cage. The drums were then placed in sea containers with infra-red motion detector surveillance.

Concentrates were shipped to GEMDL in Johannesburg inside sealed shipping containers which were carried on flat bed trucks. The loading of the trucks was supervised by Debswana security and the Letlhakane police. Both Debswana security and the Letlhakane police escorted the trucks to the Botswana / South Africa border. Once cleared through customs, the trucks were escorted within South Africa by De Beers security officials. The documentation accompanying the concentrates was in accordance with the Kimberley Process.

13.3 Trench Samples

The trench samples were concentrated at the Letlhakane camp in a similar manner to the LDD samples, except that in order to reduce the volume of sample to be processed through the plant and GEMDL, part of the sample was treated with a +2.00 mm bottom cut-off.

Coarse +6.00 mm tailings from the DMS plant were re-crushed to -6.00 mm and re-submitted to capture diamonds locked in the larger size fraction. Undersize tailings (+1-6 mm) were discarded.

The trench material required some modifications to the plant, which also allowed the average feed rate to be increased to 12 t/hr. The modifications were:

- A mobile jaw crusher pre-crushed the trench samples to -100 mm
- A tertiary scrubber was added
- The secondary jaw crusher was replaced by a cone crusher
- Installation of a tailings screen and conveyors
- Installation of a flocculant addition system at the de-sliming cyclone
- Replacement of the 200 mm degritting cyclone with a 350 mm degritting cyclone

Sample was taken to the Letlhakane camp in haul trucks owned by the contractor Strata Mining (Pty) Ltd. The samples were stockpiled within the camp security area and each pile marked with a metal tag bearing the sample number.

The concentrates were collected and shipped in the manner described above for the LDD samples. Their treatment at GEMDL and forwarding to Harry Oppenheimer House for acidising and re-weighing, was as for the LDD samples.

13.4 Diamond Recovery

Diamond recovery was done at GEMDL in Johannesburg. The diamond recovery parameters at GEMDL were the same for all phases. The GEMDL facility is fully ISO17025 certified. The recovery area of the GEMDL is a security “red area” and is subject to access control, three tier surveillance and hands off processing.

The concentrates arrived at GEMDL in the same sealed 50 litre drums they had left the sample plant in. Samples weighing 10 kg or more (wet) were treated through the main processing section. Drums within one specific sample were combined to expedite treatment and ease of handling. Material of -4 mm was passed through a dry X-ray sorting process with subsequent magnetic scalping of the X-ray tails to recover non-luminescent diamonds. Material +4 mm was passed through a wet X-ray process (Flowsort) with the X-ray tailings dispatched as process tailings.

Diamond sorters removed diamonds from the prepared sample fractions. This was done inside secure glove boxes and recovered diamonds were placed into magnetically sealed diamond canisters.

All of the X-ray concentrates were sorted three times, and non-magnetic fractions were sorted once or twice. The sorting efficiency was set at 98% diamond recovery (per carat weight). Recovered diamonds were sent to the final sorting section and stripped concentrate tailings to the hand sort tailings packaging section. Final sorting consisted of a number of processes aimed at arriving at a DTC sieve class for each sample. There was also a de-falsification process which involves the removal of mis-identified material which is not diamond. If necessary an infra-red spectrometer is used to confirm diamond. All equipment and floors were purged between consignments. For quality assurance, monitor diamonds were added to the sample by an external monitoring team. After de-falsification, the monitor diamonds were removed.

The diamonds were then sieved using DTC standard diamond sieves. Larger diamonds (+ 3 sieve) were photographed. Diamond breakage studies were done on a selection of diamonds (see section 17.6.4).

The diamonds were then sent to Harry Oppenheimer House in Kimberley, for acid cleaning, re-sieving and final re-weighing.

The X-ray tailings were reconstituted and put into 50 litres blue plastic drums, packed into 6 m shipping containers, and held at GEMDL pending a decision on their disposal.

13.5 Statement of Opinion on the Sample Preparation, Security and Analysis

From the information provided, the sample preparation, security and analytical procedures appear to be of very high quality. All analytical work was done "in house" by De Beers, within ISO certified facilities.

14 DATA VERIFICATION

Some in-house and external audit and assurance reviews were undertaken by various parties on the project, to determine the quality of data used to develop the mineral resource model. These are listed in Table 14-1.

Table 14-1
Summary of Audits and Data Reviews Conducted on the AK6 Kimberlite Mineral Resource

Review Title	Conducted by	Purpose	Dates
Phase 1 Mineral Resource Classification Data Review	De Beers Group Mineral Resource Management	To establish the quality of the mineral resource estimates applied to the Phase 1 Evaluation data	31 July 2006
Phase 2 Mineral Resource Classification Data Review	De Beers Group Mineral Resource Management	To establish the quality of the mineral resource estimates applied to the Phase 2 Evaluation data	1 August 2006
Review of the AK6 Mineral Resource Estimate	Z Star	Independent review of the mineral resource	Sept 2008
Independent Technical Review of the De Beers AK6 Close Out Review	Anglo American PLC	Independent risk assessment of the AK6 project	March 2009

The De Beers in-house Phase 1 and Phase 2 mineral resource classification data reviews were performed according to a validation template, and the methodology and data generated were rated accordingly. The validation procedure that was applied, scores the mineral resource estimates very highly. The template assesses parameters such as sample integrity, sample representivity, and estimation methodology, in determining the mineral resource models for geology, grade, volume, revenue and density. The recommended technical risk discount rate to be applied as a result of this assessment was 0%.

The review of the mineral resource by Z Star resulted in a small net decrease in the resource volume (1.3%) and total carats (0.35%). Following the issuing of this independent review, the De Beers Mineral Resource Classification Committee reviewed the classification of the mineral resource from 0 to 400 m and from 400 to 750 m. The mineral resource classifications remained unchanged as indicated and inferred respectively. This result increases confidence in the mineral resource model.

The independent review by Anglo American was more critical, but concluded that the project is realistic, and was supportive of the continuation of the project. The major risks identified by the Anglo American review were as follows:

- Geological Data – The review team identified different versions of the geological logs, and no data validation system or database audit trail in place. The risk was mitigated through migration of the data to an SQL database and auditing of data.

- Geological Logging – The review team identified inconsistencies between the original hard copy logs, and captured database logs. Also, logs of dilution of primary kimberlite had not been incorporated. These errors were fixed and the geological model now incorporates dilution data.

As a result of the mitigating steps taken, Anglo American describes the geological model as coherent and robust, and the mineral resource as comprehensive. The biggest risk identified was the revenue model, due to the relatively small parcel of diamonds valued. De Beers normally targets at least 3,000 carats to produce a +/- 15% revenue estimate, whereas a total of 1,760 carats have been valued from the AK6 kimberlite project, recovered from the Phase 1 and 2 drilling programmes, and the bulk sample trenching programme.

This technical report was commissioned over two years after completion of the bulk sampling programmes upon which the mineral resource is based. Limited verification of the work described in the report has been possible. However, the following measures have been taken:

- During the site visit, the location of boreholes was checked against the De Beers drilling reports and found to be accurate based on hand-held GPS measurements.

- At the time of the site visit, the drill core was stored by De Beers at its Letlhekane field camp. Despite the lack of activity at the camp during the intervening period, the core is in good condition and is well marked in neatly stacked core trays. Re-logging of two cores was undertaken (DDH020 and DDH 033) and found to correspond well to the original logging undertaken by De Beers, and the drill log data recorded in the database.

THE MSA GROUP

15 ADJACENT PROPERTIES

The Boteti Project lies within the Orapa kimberlite cluster. This area of kimberlite occurrences was first recognised in 1967 by De Beers Prospecting Botswana. It includes 83 known kimberlite intrusions, varying in size from the AK1 kimberlite, which at 110.6 ha is one of the largest kimberlite pipes in the world, to insignificant dykes and blows.

The AK1 kimberlite is the main resource of the Orapa Diamond Mine which started production in 1971 and was the first diamond mine in Botswana. All of the existing mines in the Orapa Field are owned by the Debswana Diamond Mining Company, a 50:50 joint venture between De Beers Centenary and the Republic of Botswana. The mines are operated by De Beers.

The Boteti Project lies 25 km south of the Orapa Mine, and 23 km west of the Letlhakane Diamond Mine which was opened in 1977 (Figure 15-1). In 2001, Debswana also opened the smaller Damtshaa Mine.

Figure 15-1
Orapa Kimberlite Field

The adjacent properties are summarized below.

15.1 Orapa Diamond Mine

Table 15-1
Orapa Diamond Mine

Owner:	Debswana Diamond Mining Company
Mining Licence:	ML 10/71. Valid until 2029.
Area of Licence:	269.4 km^2
Mining started;	1972
Mining method:	open pit
Grade:	~79 – 95 ct/100t Varies from year to year.
Production	16.9 M ct in 2007
Approx. value	~USD 60/ct (figure uncertain)
Geology	Kimberlite AK01, 110.6 ha. Some minor eluvial and alluvial deposits also included in the Mining Licence
Life of Mine	2029 and beyond.
Resource / Reserve	Debswana does not publish resource or reserve figures.

Orapa is the second largest commercially exploited kimberlite in the world. (The largest is Maduwi in Tanzania, currently being mined by Petra Diamonds, but the grade at Maduwi is very much lower than Orapa).

DMS concentrate from Letlhakane and Damtshaa is also processed at Orapa, where diamonds are recovered in a completely automated recovery plant (CARP). The product of the CARP is sent to Jwaneng for final sorting in the fully integrated sort house (FISH). These technologies remove the need for manual handling of diamonds, and therefore minimise theft.

15.2 Letlhakane Diamond Mine

Table 15-2 Letlhakane Diamond Mine	
Owner	Debswana Diamond Mining Company Ltd
Mining Licence	ML 8/75. Valid until 2029.
Area of Licence	25 km^2
Mining started	1977
Mining method	open pit
Grade	~25 ct/100t
Production	~1 Mct/year
Approx. value	~USD 191/ct (year 2000 planning revenue)
Geology	Mining kimberlite DK1 (11.6 ha). Previously kimberlite DK2 (3.6 ha) was also mined, together with elluvial deposits over the kimberlites. DK2 had a grade of about 15 ct/100t.
Life of Mine	2025?
Resource / Reserve	Debswana does not publish resource or reserve figures.

The Letlhakane mine is relatively low grade but produces diamonds of very high quality. There are plans to re-treat tailings at Letlhakane.

15.3 Damtshaa Mine

Table 15-3 Damtshaa Mine	
Owner	Debswana Diamond Mining Company Ltd
Mining Licence	ML 1/2000. Valid until 2029.
Area of Licence	10 km^2. The Mining Licence has three sub-areas, one including kimberlites BK9 + BK12; one for BK1 and one for BK15.
Mining started	2002
Mining method	Open pit. To date only the BK9 kimberlite has been exploited.
Grade	~24 ct/100t
Production	~300,000 ct/year
Approx. value	~USD 80/ct
Geology	kimberlites BK9 (11 ha); BK12 (3 ha); BK15 (2.5 ha); BK1 (5 ha)
Life of Mine	2020 and beyond?
Resource / Reserve	Debswana does not publish resource or reserve figures.

The Damtshaa Mine is designed to exploit four relatively low grade kimberlites which were discovered in the 1960s and 1970s.

Production at Damtshaa was suspended in January 2009 and the mine will remain closed until end of 2010.

15.4 Firestone Diamonds BK11

Firestone Diamonds plc (listed on the London AIM) is the controlling partner and operator in Monak Ventures (Pty) Ltd which is developing the BK11 kimberlite, 5.2 km northeast of the Boteti Project. Given their close proximity, and common access road, developments at BK11 are very relevant to the Boteti Project.

The history of BK11 echoes that of the AK6 kimberlite, in that it was held by De Beers and Debswana under a succession of prospecting licences but was not thoroughly investigated until when, under PL 1/97, it was incorporated in the Boteti Joint Venture. De

Beers carried out detailed geophysics and drilled one large diameter borehole on the pipe under the joint venture, before relinquishing the ground in 2005. The single large diameter borehole was drilled to 170 m and produced 115.2 t of sample from which a grade of 2.40 ct/100t (+1.47 mm diamonds) was obtained.

Monak has applied for a Mining Licence and is fast tracking the property with a view to production in the second quarter of 2010. The information below is taken from a Firestone Diamonds press release of 10 December 2009. The qualified person is Mr T Wilkes, Chief Operating Officer of Firestone, and the resource estimates are compliant with the South African SAMREC code.

Table 15-4
Firestone Diamonds BK11

Owner	Monak Ventures (Pty) Ltd Firestone Diamonds Botswana (Pty) Ltd 90%; undisclosed local interests 10%) Operator : Firestone Diamonds
Mining Licence	Applied for. Presently under PL 33/2007
Area of Licence	PL 33/2007 is 1.678 km^2
Mining started	plan for second quarter, 2010
Mining method	open pit.
Mining rate	plan full production of 1.5 Mt of ore per year by third quarter of 2010
Grade	~8-10 ct/100t (KW area stated as 10 ct/100t)
Production	should yield 150,000 – 225,000 ct/yr.
Approx. value	overall modeled at USD 137/ct
Geology	kimberlite BK11 (8 ha)
Life of Mine	10 years +
Category of resource/reserve	indicated and inferred resource
Resource / Reserve	12 mt containing 800,000 ct to 120 m depth. 2.3 mt indicated and 3.7 mt inferred resource in KW area.

As of December 2009 Firestone had valued a parcel of 500 ct. There is an area in the west of the pipe, called the KW area, where the diamonds have been valued at USD

157/ct, but the size of the parcel on which this figure is based is not stated. It is proposed to start mining in the KW area.

Firestone Diamonds has joint ventures with Tawana Resources over kimberlites BK24, BK19, BK20, BK21, BK22, BK25 and BK26, and with Kenrod Engineering on kimberlite BK16. Sampling has been done on BK16, and large diameter drilling is planned for BK24.

15.5 Early Stage Projects

A number of other companies remain active in exploration in the Orapa area. African Diamonds subsidiary Atlas Minerals Botswana (Pty) Ltd holds the small kimberlites AK8, AK9 and BK5 over which limited sampling has taken place. Early stage projects are still being conducted by Sekaka Diamonds (Pty) Ltd (controlled by Petra Diamonds), DiamonEx Botswana (Pty) Ltd and Geo Perspectives (Pty) Ltd.

16 MINERAL PROCESSING AND METALLURGICAL TESTING

A large amount of metallurgical test work has been conducted on the Boteti Project in terms of Ore Dressing Studies (ODS) and diamond recovery test work. This work and the implications to the project are discussed in this section. In addition, density distribution has been mapped throughout the ore resource which will have an impact on DMS yield during processing. A potentially high yield area was identified within the South Lobe. The metallurgical test work has been used by Paradigm Project Management (Pty) Ltd ("PPM") in a conceptual study ("Value Engineering Study") commissioned by African Diamonds plc in 2009, to propose different flow sheets for the project. The flow sheet recommended by this study is the basis for the financial model reviewed in section 18.2.

The ODS and diamond recovery data from the test work is of very high quality, and it is the opinion of MSA that it provides for reduced technical risk in the PPM conceptual study.

16.1 Ore Dressing Studies

ODS were performed by De Beers as part of a conceptual study focused on acquiring initial metallurgical knowledge of the AK6 kimberlite ore body. The study was conducted on 10 drill core samples from advanced exploration Phase 1, which provided an initial indication of the behaviour of the AK6 kimberlite material through a metallurgical flow sheet.

A more extensive ODS programme was commissioned for the pre-feasibility ODS during the advanced exploration Phase 2. The pre-feasibility ODS focused on gaining a better understanding of and more confidence in the characteristics of the AK6 kimberlite ore body.

The AK6 kimberlite pre-feasibility ODS focused on two areas, namely:

- Conducting ODS characterisation work on 40 drill core samples
- Conducting a pilot scale ODS focusing on:
    - Comminution pilot scale test work, including cone crusher pilot test work, High Pressure Rolls Crusher (HPRC) pilot test work and scrubbing laboratory and pilot scale test work.
    - Recovery pilot scale test including grease and milling test work
    - Slimes thickening, pumping and deposition pilot scale test work.

Whilst the flow sheet developed by De Beers through their conceptual, pre-feasibility and feasibility studies is no longer relevant, the data derived has been used subsequently in later studies, and significantly increases confidence in the flow-sheet proposed in the PPM conceptual study.

16.2 Diamond Recovery

Diamonds from advanced exploration Phase 1 totaling 689.01 carats were utilised to determine AK6 kimberlite diamond characteristics. The recovery tests included evaluating diamond Luminescence Intensity (LI) and rise-time properties, magnetic properties and laser Raman suitability as the final sorter for AK6 diamonds. It was determined that X-ray recovery is an appropriate technique for the Boteti Project.

In addition, diamonds from the advanced exploration Phase 2 were utilised to conduct grease test work. These diamonds were sourced from GEMDL from different Large Diameter Drill (LDD) holes across the AK6 kimberlite deposit. These diamonds were used to assess the hydrophobicity characteristics of the AK6 diamonds and recovery efficiencies of grease technology. It was determined that grease is an appropriate recovery technology for the Boteti Project.

17 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

The mineral resource was defined by De Beers and has been reviewed by MSA (Johannes Ferreira). The geological, grade, density and block models were created primarily on the basis of the Phase 1 and Phase 2 drilling programmes (Table 11-1). The mineral resource has been validated by independent reviews as summarised in Table 14-1. Nineteen different geological units were identified within the AK6 kimberlite and combined into five main groupings to represent the entire resource for the purpose of diamond content estimation. The groupings are; 1) South Lobe primary (SLP), 2) South Lobe weathered (SLW), 3) Centre/North Lobe primary (CNLP), 4) Centre/North Lobe weathered (CNLW), and 5) basalt breccias (BB).

The mineral resource estimate reviewed by MSA is based on data obtained from the two sampling phases of 23 inch LDD followed by a trench bulk sample to boost the diamond parcel for diamond value and revenue estimation as well as to provide production recovery information.

Diamond content was estimated in terms of ct/m^3 in regular ore blocks 25 x 25 x12 m in size from surface to 750m below surface. Sampling density allows local estimation to 400m depth (indicated resource). Global grades were calculated between 400m and 750m depth.

Block density and grade estimates were combined with block volume to calculate block tonnes and carats.

Kimberlite volume was estimated on the basis of NQ and BQ size core drilling directed at obtaining contacts between kimberlite and country rock as well as internal contacts between main geological units. Large diameter holes were accompanied by pilot core holes for guidance with respect to LDD, to facilitate geological logging of LDD samples and to further enhance internal pipe geometry.

Density estimation was based on high quality core sample density measurements. Sample size was measured by means of caliper logging and sample grade was expressed in terms of carats per cubic meter (ct/m^3). As in the case of diamond content, sampling data was grouped in accordance with similar density.

The diamond parcel was valued at different stages during the sampling campaign and the most recent valuation was done by Mercury Diamond in Geneva during February 2010. The valuation was based on the final diamond parcel comprising 1,754 carats split into 16 sub-parcels.

Average diamond value was based on estimates for expected diamond value and diamond content per diamond sieve class.

17.1 Grade Data

Diamond grade was estimated on the basis of Phase 1 and 2 LDD sampling (sections 11 and 12).

Phase I sampling delivered a total of 690.76 carats from thirteen 23-inch LDD holes drilled on 70m grid centre hole spacing. The total sample comprised an estimated 2,750 callipered tonnes with 1,775 tonnes reporting as DMS headfeed.

Phase 2 sampling was aimed at delivering a mineral resource at indicated category and drilling was therefore directed towards filling a 50m sampling grid. The programme comprised 12 holes, two of which went down to 700m depth. These holes yielded some 3,300 calipered tonnes and 2,235 tonnes reporting as DMS headfeed.

LDD samples comprised material from 12m sections to coincide with 12m bench heights selected for mining. As a consequence, subsequent regularisation for estimation purposes had very little effect on sample values.

Table 17-1 shows regularised sample grade per rock type from LDD sampling. Nineteen different rock types are shown with their allocation to South Breccia, South Primary, Centre/North Breccia and Centre/North Primary denoting groupings used for diamond content modeling.

Table 17-1
Sample grades (ct/m^3)

Code	Rock	Grouping	Samples	Min	Max	Mean	Variance
21	BBX(S)	BB	2	0.10	0.14	0.12	0.00
22	CBBX(S)	BB	0				
23	CKIMB(S)	SLP	2	0.01	0.05	0.03	0.00
24	EM/PK(S)	SLP	43	0.03	7.36	1.20	1.45
25	M/PK(S)	SLP	226	0.02	9.03	0.56	0.47
26	WBBX(S)	BB	6	0.00	0.58	0.13	0.04
27	WK(S)	SLP	50	0.00	4.93	0.50	0.55
28	WM/PK(S)	SLP	12	0.38	3.32	0.85	0.57
29	17+Yield	SLP	39	0.06	1.15	0.35	0.07
41	BBX	BB	20	0.00	2.12	0.45	0.31
42	CFK(C)	CNLP	41	0.06	4.51	0.86	0.59
43	CKIMB(C)	CNLP	0				
44	FK(C)	CNLP	28	0.00	2.15	0.58	0.21
45	WK(C)	CNLP	20	0.01	1.86	0.36	0.15
61	KBBX	BB	5	0.12	1.17	0.46	0.15
62	CKIMB(N)	CNLP	0				
63	FK(N)	CNLP	30	0.14	2.06	0.61	0.18
64	WBBX	BB	1	5.01	5.01	5.01	
65	WK(N)	CNLP	2	0.76	0.76	1.74	0.95

17.2 Grade analysis

Diamond content was estimated by means of geostatistical analysis of the regularised grade data in terms of ct/m^3. Variograms were modeled for each sample group and samples within a moving neighbourhood around a resource block were used to obtain a grade estimate by kriging.

Table 17-2 shows the variogram parameters used for kriging. The Breccia units contained insufficient data for variography and their estimation was based on variography for the primary units.

Table 17-2 Variogram parameters for diamond content estimation						
Rock type group	Nugget effect	Model type	Sill	Range X Y and Z directions (meter)		
South Primary	0.120	Spherical	0.175	115	115	83
Centre/North Primary	0.172	Spherical	0.133	90	90	77

Samples were not uniformly distributed in space and some blocks were less informed than others. Where the specified first pass kriging neighbourhood contained insufficient data for estimation the neighbourhood was increased to include more samples.

Table 17-3 shows neighbourhoods used in the first and second kriging passes.

Table 17-3 Moving neighbourhoods for diamond content estimation		
Rock type grouping	Pass	Search radius in x y and z directions
South Primary	First	100 x 100 x 48
	Second	150 x 150 x 96
Centre and North Primary	First	100 x 100 x 60
	Second	100 x 100 x 108

In all cases the neighbourhood was split into 4 sectors with the minimum and optimal number of samples per sector being 3 and 10. Blocks were discretised into 10x10x1 sub-blocks for kriging.

Appropriate adjustments were made to prevent single large sample values from adversely influencing blocks in their neighbourhood.

Kriging resulted in block values and average kriged estimates compared well with corresponding average sampling data as shown in Table 17-4.

Table 17-4
Average Kriged estimates and sample grades

Pipe	Diamond content in ct/m^3 (+1mm)	
	Sample	Estimate
North and Centre Lobes	0.63	0.63
South Lobe	0.60	0.56
Total	0.58	0.58

17.3 Density data

The methodology for measuring density is described in section 11.10. Density data was divided into four geological groupings for estimation purposes. Table 17-5 shows density data within each grouping and the corresponding rock code. Substantial numbers of samples were collected from the main rock types. Analysis of data in the main geological groups compensated for sparseness of data in some of the smaller rock groups.

Table 17-5
Density by rock type (g/cm^3)

Code	Rock	Grouping	Samples	Min	Max	Mean	Variance
21	BBX(S)	BB	4	2.50	2.80	2.70	0.019
22	CBBX(S)	BB	4	2.10	2.33	2.23	0.010
23	CKIMB(S)	SLW	19	1.89	3.04	2.39	0.084
24	EM/PK(S)	SLP	123	1.93	3.06	2.76	0.028
25	M/PK(S)	SLP	1040	1.81	3.23	2.86	0.047
26	WBBX(S)	SLW	46	1.81	2.86	2.23	0.081
27	WK(S)	SLW	202	1.80	3.12	2.21	0.079
28	WM/PK(S)	SLP	43	2.27	2.80	2.56	0.012
29	17+Yield	SLP	135	2.41	3.19	3.00	0.017
41	BBX	BB	160	1.98	2.88	2.53	0.028
42	CFK(C)	CNLP	171	2.05	3.93	2.61	0.026
43	CKIMB(C)	CNLW	8	1.87	2.60	2.35	0.097
44	FK(C)	CNLP	180	1.62	3.16	2.58	0.042
45	WK(C)	CNLW	102	1.80	2.64	2.10	0.035
61	KBBX	BB	23	1.96	2.83	2.58	0.038
62	CKIMB(N)	CNLW	7	2.01	2.45	2.29	0.026
63	FK(N)	CNLP	158	1.85	3.16	2.43	0.030
64	WBBX	CNLW	3	2.52	2.70	2.63	0.009
65	WK(N)	CNLW	26	1.84	2.45	2.16	0.026

17.4 Density analysis

Variograms were modeled for each sample group and samples within a moving neighbourhood around a resource block were used to obtain a density estimate by kriging. The use of hard boundaries prevented samples from different groupings to be included in the same kriging neighbourhood during kriging.

Table 17-6 shows variogram parameters and Table 17-7 shows associated kriging neighbourhoods used for kriging.

Table 17-6
Variogram parameters for density estimation

Rock type group	Nugget	Model type	Sill	Range X Y and Z		
South Primary	0.010	Spherical	0.037	90	90	150
South Weathered	0.025	Exponential	0.0564	61	61	61
Centre & North primary	0.011	Spherical	0.0236	173	173	173
Centre & North Weathered	0.024	Spherical	0.0200	55	55	55
Breccia (two structures)	0.017	Spherical	0.0080	17	17	17
		Spherical	0.0060	120	120	36

As for diamond content the search neighbourhood was split into 4 sectors and the minimum and optimal numbers of samples were set at 3 and 10 for all groupings, with 10x10x1 block discretisation for kriging.

Table 17-7
Kriging neighbourhoods for density estimation

Rock type grouping	Search radius in x y and z directions
South Lobe Primary	100 x 100 x 36
South Lobe Weathered	100 x 100 x 36
Centre & North Lobe Primary	120 x 120 x 48
Centre and North Lobe Weathered	100 x 100 x 36
Breccia	120 x 120 x 36

Although sufficient data was available to perform variography for all groupings, part of the Breccia grouping remained uninformed after the first kriging pass. In this zone the breccia unit was complemented with data from the fresh basalt unit. Three uninformed blocks in the Centre and North weathered grouping were informed by using average bench kriged density for the unit.

Average kriged estimates compared well with corresponding average sampling data per rock type as shown in Table 17-8.

Table 17-8
Average Kriged estimates and sample density per rock type

Code	Rock	Grouping	Sampled Mean	Kriged Mean
21	BBX(S)	BB	2.70	2.60
22	CBBX(S)	BB	2.23	2.33
23	CKIMB(S)	SLW	2.39	2.18
24	EM/PK(S)	SLP	2.76	2.77
25	M/PK(S)	SLP	2.86	2.85
26	WBBX(S)	SLW	2.23	2.21
27	WK(S)	SLW	2.21	2.23
28	WM/PK(S)	SLP	2.56	2.76
29	17+Yield	SLP	3.00	2.97
41	BBX	BB	2.53	2.54
42	CFK(C)	CNLP	2.61	2.59
43	CKIMB(C)	CNLW	2.35	2.15
44	FK(C)	CNLP	2.58	2.59
45	WK(C)	CNLW	2.10	2.15
61	KBBX	BB	2.58	2.59
62	CKIMB(N)	CNLW	2.29	2.20
63	FK(N)	CNLP	2.43	2.44
64	WBBX	CNLW	2.63	2.31
65	WK(N)	CNLW	2.16	2.21

17.5 Diamond content from density and grade analysis

Block grade and density estimates were used to calculate block tonnes and carats to compile diamond content to a depth of 400m below surface as shown in Table 17-9.

Table 17-9
AK6 resource summary to 400m (indicated)

Lobe	Volume	Density	Grade		Tonnes	Carats (+1mm)
	m3	t/m3	cts/m3	cpht		
North & Centre	4,503,600	2.46	0.63	26	11,099,800	2,849,200
South	14,552,500	2.76	0.56	20	40,127,800	8,196,700
Total	19,055,800	2.69	0.58	22	51,227,600	11,046,100

The resource was extended from 400m from 750m depth based on extrapolation of grades for the units extending to this depth.

The Centre and North Lobes do not extend the full depth and only the fragmental kimberlite unit extends below 400m. The average grade of 0.51cts/m^3 for kriged block estimates between 256m and 280m was used as an estimate for grade in the 208,000 tonnes below 400m.

A similar averaging process was used for South Lobe below 400 m, where three units extend below 400m, adding some 21 million tonnes to the resource.

Consequently this part of the resource is less reliable with a corresponding affect on its allocated resource category.

The additional resource below 400m is summarised in Table 17-10, with global grades per lobe.

Table 17-10 AK6 resource summary between 400m and 750m (inferred)						
Lobe	Volume	Density	Grade		Tonnes	Carats (+1mm)
	m3	t/m3	cts/m3	cpht		
North & centre	81,400	2.56	0.51	20	208,000	41,500
South	7,019,400	2.96	0.57	19	20,770,500	3,976,100
Total	7,100,800	2.95	0.57	19	20,978,500	4,017,600

17.6 Diamond Revenue

17.6.1 Introduction

The most recent diamond revenue modeling was performed by MSA (Johannes Ferreira) and is based on the valuation conducted by Mercury Diamond in February 2010, and size frequency distributions of the diamonds derived from Phase 1 and Phase 2 drilling and trenching micro- and macrodiamond size frequency data.

LDD sampling provided grade information suitable to form a 3-dimensional grade model, while trench sampling was aimed at increasing the diamond parcel to be large enough to satisfy regulatory requirements for diamond valuation. A further benefit of trench sampling was that the excavation method is similar to what would be encountered during production and would also provide a diamond size distribution which realistically represents the expected production.

Subsequent re-modeling of pipe geology indicated that the Centre Lobe trench intersected both the Centre and South Lobes and that the bulk of material sampled did not accurately represent the Centre Lobe (see section 12.2.3). An additional trench sample comprising some 2,500 tonnes of kimberlite from Centre/North Lobe was therefore collected.

Trench samples were treated slightly different from LDD samples from Phase I and II in that the mobile plant was upgraded to include a tertiary scrubber, cone crusher and a re-crush circuit. Initially a +1mm bottom screen size was used but this was changed to +2mm in order to speed up the resource delivery process. Therefore 50% of trench material was treated at +1mm bottom cut-off, with the remainder treated at +2mm. The change in recovery results is clearly visible in diamond size distribution analysis.

17.6.2 Diamond valuation

The most recent valuation of AK6 diamonds took place in Geneva and was carried out by Mercury Diamond. The diamonds were valued in 16 sub-parcels, and value models for the North, Centre and South Lobes were produced as shown in Table 17-11.

Table 17-11
AK6 Diamonds from LDD and surface trench sampling

Sampling	Rock Type	Carats	Value USD	Average Value USD/ct
LDD	North Lobe Breccia	36.83	5680.73	154.24
	North Lobe Kimberlite	76.71	7559.19	98.54
	TOTAL NORTH	113.54	13239.92	116.61
	Centre Lobe Breccia	21.15	1148.39	54.30
	Centre Lobe Weathered	26.67	2532.00	94.94
	Centre Lobe Carb-Rich Frag kimb	129.40	51426.00	397.42
	Centre Lobe Frag kimberlite	63.20	9117.00	144.26
	TOTAL CENTER	240.42	64223.39	267.13
	South Lobe Weathered	104.07	16264.00	156.28
	South Lobe PK Upper	151.61	13566.00	89.48
	South Lobe PK Middle	161.23	21684.00	134.49
	South Lobe PK Lower	147.31	10198.00	69.23
	South Lobe High Conc yield zone	46.39	2923.00	63.01
	South Lobe Eastern diluted	181.15	24059.00	132.81
	South Lobe Western diluted	26.25	1163.00	44.30
	TOTAL SOUTH	818.01	89857.00	109.85
TRENCH	Trench Centre/South Lobe	94.09	33062.00	351.39
	Trench South Lobe	255.03	35604.00	139.61
	Trench Centre Lobe	233.08	49486.00	212.31
TOTALS		**1754.17**	**285472.31**	**162.74**

Diamond value modeling comprises estimates of average diamond value per size class and an estimate of diamond content with size. Diamond breakage and different treatment processes applied during LDD and surface trench sampling introduced some complications with size modeling. To produce a more robust size frequency model, the microdiamond sampling results were used to augment the macrodiamond data. Value models by Mercury Diamonds were therefore complemented by an additional modeling exercise, focussed on establishing a robust diamond size frequency and based on a combination of microdiamond and macrodiamond sampling results.

Valuation results suggested different sets of values for the three lobes, with South Lobe size class values consistently lower than the Centre Lobe and with the North Lobe being consistently higher in all size classes. Because the geology for the North and Centre Lobes is reported as being very similar and with similar grades, a combined value profile was modeled for the two lobes.

17.6.3 Diamond size

North Lobe results suggest a finer size distribution than Centre and South Lobes, with South Lobe slightly finer than Centre Lobe. The North Lobe is represented by only 113 carats from LDD sampling and no diamonds from surface trenches. Centre Lobe LDD results were complemented by surface trench results and the two sets of sampling results indicate a similar size distribution. The fine size distribution seen in North Lobe LDD samples was due to the absence of large stones in the parcel. However the distribution of stones in the smaller size classes suggests a similar size distribution to the Centre Lobe. Furthermore, because of the similarity in geology between North and Centre Lobes a combined size distribution was modeled for North and Centre Lobes.

Microdiamond data were combined with macrodiamond results to model the diamond size frequency for the South and Centre Lobes. Sufficient stones were available for each lobe to permit a modeling exercise for all diamonds above 0.074mm in size.

The technology comprises an iterative simulation process of deriving model parameters and generating a diamond parcel for comparison with microdiamond sampling results, until simulated and actual diamond parcels display identical size distributions. The assumed model is tested by simulating a large typical diamond parcel including diamonds from the entire size range, which can be compared with microdiamonds and macrodiamonds from the sampling programme. The size distribution model is accepted if it reproduces both the micro- and macrodiamond size distributions as seen from sampling.

The use of microdiamonds for diamond size modeling has the potential to expose effects such as diamond breakage that may be present in macrodiamonds, which is often the case with diamonds from LDD sampling. Trench sampling results were therefore used as confirmation of the size models based on microdiamonds. For both the South and Centre Lobes it was possible to recreate respective size distributions similar to actual trench sampling results, thus confirming the applicability of the respective total diamond content size distribution models. Modeling based on microdiamonds also resulted in a slightly coarser size distribution for the Centre Lobe compared with the South Lobe, which corresponds with LDD and surface trench sampling results.

Average values modeled by Mercury Diamonds were combined with the revised size distribution models and overall average diamond values are shown in Table 17-12.

Table 17-12
Average diamond value from sampling and modeling

Pipe	Sample Carats	Actual value USD/ct	Mercury Value Estimate	Supplementary Value estimate
South Lobe	1073	117	148	183
Centre/North Lobe	681	216	178	223

The supplementary modeled values were based on value models by Mercury Diamond and revised size models based on microdiamond sampling. Supplementary model values are given at +1mm recovery similar to recovery at the LDD sampling plant.

17.6.4 Diamond Breakage

Sampling by means of large diamond drilling is normally accompanied with some degree of diamond breakage. Diamond treatment could also result in diamond breakage if crushing in the treatment plant takes place at inappropriate crusher apertures and is directly related to the coarseness of the diamond size distribution under treatment. The coarseness of AK6 diamonds makes this a likely scenario and could explain the high levels of diamond breakage that have been reported for this resource.

Significant breakage could affect diamond size and in some cases recovered grade as well. The AK6 resource grade has been estimated based on sample carat weight and not on sample stone count (stone density) in view of the possible effect of diamond breakage on stone counts. This however does not exclude losses in sample carat weight in cases where broken fragments were screened out with undersize material, resulting in reduction in sample grade. Therefore, significant upside grade potential exists. Furthermore, the South Lobe exhibits relatively high density (2.70 g/cm^3) which also suggests that grade estimates may be conservative.

Microdiamond analysis has been used to compensate for diamond breakage effects on diamond size and provides an improved model on which to assess the overall effect of breakage on diamond revenue.

17.7 Recovery factors:

The use of a total content model allows calculation of recovery losses during sample treatment. All LDD samples were treated with +1mm bottom screens, while surface trench sample treatment initially took place at +1mm bottom screen size, but was later switched to +2mm.

Factors for +1mm and +2mm were calculated from sampling information, while +1.47mm factors have been estimated (Table 17-13).

Table 17-13
Modifying factors between total diamond recovery and recovery at +1mm, +1.47mm and +2mm.

With total diamond content recovery	Recovery Modifying Factors		
	'+1mm	'+1.47mm	'+2mm
'+7ds	1	1	1
'+5ds	1	0.8	0.5
'+3ds	1	0.5	0.05
'+1ds	0.3	0.1	0.01

The factors for LDD and trench sampling are notable for apparent full recovery of diamonds in the bottom sieves, due to the high degree of comminution of diamond bearing particles achieved during sampling and treatment. The same degree of comminution may not be feasible or possible during production, with subsequent losses of diamonds in these lower sieves. However, calculations have shown that the effect on dollar per tonne will be marginal, because the bulk of revenue exists in the coarser stones.

17.8 Resource Classification

The AK6 mineral resource has been classified as an indicated mineral resource from surface to 400m, while the resource below 400m has been classified as an inferred resource, down to 750m. This was done on the basis of the geological, grade, density and revenue models according to a set of scorecards established by De Beers, which are fully compliant with NI 43-101 requirements.

The most recent valuation exercise has led to increases in average diamond value and the supplementary work done on diamond size suggests further potential increase in value. The revaluation exercise has not reduced the classification status for the resource.

17.9 Mineral Resource Statement

The bottom cut-off for treatment of the AK6 material has not been finalised and resource to reserve modifying factors were set at unity under the assumption that production treatment will be at least as efficient as during sampling.

The recovery factors listed in Table 17-13 above therefore remain the only factorisation to obtain diamond recovery realistically representing what is to be expected during mining.

The AK6 resource to 400m is estimated at 11 million carats in 51 million tonnes at an average grade of 22 ct/100t and an average value of USD 194/ct and is classified as indicated.

Between 400 and 750 m, the resource contains 4m carats at an average grade of 19 ct/100t and an average value of USD183/ct and is classified as inferred.

A summary of the mineral resource at +1mm is given in Table 17-14.

Table 17-14
Boteti Project AK6 Diamond Resource

Class	Lobe	Volume x 1000	SG	Tonnes x1000	Grade cpht +1mm	Carats x1000	USD/ ct	USD x1000
INDICATED To 400 m	Centre/North	4,504	2.46	11,100	26	2,886	223	64,358
	South	14,553	2.76	40,128	20	8,026	183	1,468,685
	Total	19,057	2.69	51,228	22	11,046	194	2,112,263
INFERRED from 400 to 750 m	Centre/North	81	2.56	208	20	42	223	9,277
	South	7,019	2.96	20,771	19	3,946	183	722,207
	Total	7,100	2.95	20,979	19	3,988	183	731,484

(Note, rounded values were used to recalculate values to be compatible within this table)

17.10 Mineral Reserve Estimate

The mineral resource was subject to a Whittle Four-X optimisation by PPM as part of the conceptual study to produce an open pit model (Figure 17-1) of the optimum mineable volume and tonnage from each lobe of the AK6 kimberlite. All of the optimally mineable mineral resource thus identified falls within the indicated resource portion of the kimberlite. The mineral reserve defined thus falls into the probable reserve category.

Annual mining schedules have been defined, starting with an initial cut on the North and Centre Lobes, and a second cut commencing on the South Lobe. Table 17-15 shows the probable reserve produced from the optimisation process. Note that this reserve is presented with the tonnages defined by the PPM study with a set of revenues provided by De Beers and African Diamonds in July 2008. These revenues were USD 151 per carat for the North and Centre Lobes, and USD 137 per carat for the South Lobe. The revenue figures in the table were produced in February 2010 from a valuation exercise by Mercury Diamond, and revenue modeling by MSA. The Whittle optimisation has not yet been repeated with the latest revenues. Potential therefore exists for the tonnages in the reserve statement to increase.

Figure 17-1
Whittle Optimised open pit shell

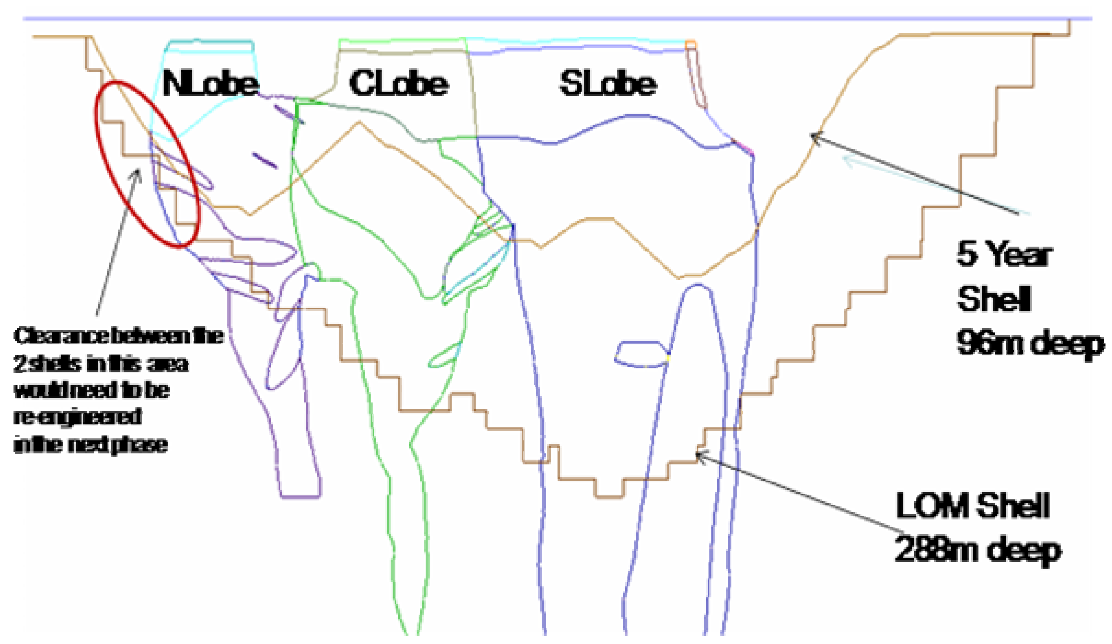


Table 17-15
Boteti Project Mineral Reserve Estimate

Lobe	Category	Tonnes	Grade (cpht)	Revenue (USD/ct)	Revenue (USD/tonne)	Carats
North	Probable	1,654,000	26	223	58	430,046
Centre	Probable	8,349,200	26	223	58	2,170,781
South	Probable	25,341,500	20	183	36	5,068,298

18 DEVELOPMENT PROPERTY TECHNICAL AND ECONOMIC STUDIES

The full lifecycle of a conventional capital project (such as mine development) contains a series of technical and economic studies which can be summarised as follows:

- Conceptual Study (CS) to investigate the viability and investment parameters and to develop the business case for a future project. Appropriate estimates for the downstream project phases will also be delivered.

- Pre-Feasibility Study (PFS). If a business case can be proven to exist in the conceptual study a pre-feasibility study will evaluate technical options, select the one most suitable to achieve the business case and estimate future costs to a level of accuracy +/-25%. A developer may elect to forego a pre-feasibility study and proceed directly to a feasibility study on the basis of a thorough conceptual study which indicates robust project economics.

- Feasibility Study (FS). If the pre-feasibility option is acceptable a feasibility study will design a solution based on the chosen option and final asset acquisition costs will be estimated to a level of accuracy +/- 15%.

- Implementation. Project financing and implementation.

The Boteti project has been subjected to a number of technical and economic studies to determine optimal mining and treatment methodology, and to value the project in terms of internal rate of return (IRR) and net present value (NPV). These studies are summarised in Table 18-1. All of the studies provide for a positive IRR, and only one of the studies determined a negative NPV based on a 10% hurdle rate (the De Beers feasibility study in 2008).

Table 18-1
Summary of Techno-Economic study reports completed on the Boteti Project

Study	Study Undertaken by	Study Undertaken for	Hurdle rate	Discounted NPV (USD)	IRR
CS 2007	De Beers	De Beers	17%	USD 10 Mn	19%
PFS 2007	PPM	African Diamonds	0%	USD 209 Mn	53%
FS 2008	De Beers	Boteti	10%	(- USD 70 Mn)	4.3%
CS 2009	PPM	African Diamonds	12%	USD 25.5 Mn	30%

All of these studies are technically and procedurally valid. The high variability in the financial outputs of these studies can be ascribed largely to the following reasons:

- Different approaches to project development.
- Different corporate cost structures.
- Different capex and opex requirements, particularly for different plant designs.
- Different hurdle rates applied.

A contrast in development plans is apparent between the De Beers studies and those conducted by PPM. The De Beers development plan adopted state-of-the-art technology, including high cost tertiary high pressure grinding roll crushing, and single particle diamond recovery units. This approach aspires to maximum diamond recovery, but results in high capital costs and operating costs in addition to higher corporate overheads inherent in a major multinational organisation. The PPM development plan has adopted autogenous milling technology and more conventional diamond liberation and recovery technology with the aim to maximise return on investment. As a result, capex and opex costs are lower, and the relatively reduced recovery of smaller diamonds through this approach has a comparatively minor affect on revenue generation. The loss of very small stones due to 'lock-up' has a very minor impact on overall revenue, particularly on a project with a coarse diamond size frequency distribution such as Boteti. The partners in the Boteti joint venture have elected to follow the PPM development plan, so the technical and economic study reviewed in this document is the most recent and most relevant one; that is the PPM conceptual study dated June 2009.

18.1 Conceptual Study

The 'Value Engineering Study' prepared by PPM in 2009 is essentially a conceptual study. Some key aspects of the conceptual study are summarised below.

18.1.1 Mineral Reserve

The mineral reserve is stated in section 17.10 above.

18.1.2 Mining

The requirement to minimise initial capital expenditure dictated that the mining process at AK6 would have to be undertaken by a contractor. The parameters of the contract were based on the mining plan in Table 18-2.

Table 18-2
Summary of Phased Mining Plan

Mine Phase	Kimberlite Mined (Millions of tonnes)	Waste Stripped (Millions of Tonnes)
Phase 1	8.5	19.2
Phase 2	27.2	70.7
Life of Mine (LOM)	35.7	89.9

Basil Read Mining was requested to produce a contractor mining cost based on the mine plan. In line with the requirement to minimise capex, a wet rate contract was derived which produced an overall LOM cost of USD10.03 per tonne of kimberlite delivered to the plant. A mining schedule is included in Appendix 1.

Pit dewatering will be undertaken by well fields around the perimeter of the pit. This water will be used for the ore processing plant process water. Any excess water will be stored in a separate storm water dam adjacent to the slimes dam return water dam.

The capital and operating costs are summarised in Appendix 2.

18.1.3 Ore Processing

The kimberlite treatment plant design was based on the requirement to minimise up-front capital expenditure. However, the selected design must still ensure an economic return for both Phases 1 and 2 of the project. It was therefore important to ensure that the Phase 1 plant design was adequate for both any future expansion in capacity and also any necessary process changes that may be required during Phase 2.

Three flow sheet options were considered and the technologies utilised in the most beneficial flow sheet consists of the following unit processes:

1. Primary crushing
2. Autogenous milling
3. Dewatering and screening
4. Dense medium separation (DMS)
5. Magnetic separation
6. X-ray machines
7. Grease belt
8. Hand sorting

The dewatering process makes use of a spiral classifier in order to reduce the overall plant water consumption and thereby remove the need for an expensive internal water recovery circuit. The DMS plant has also been designed to minimise water consumption without seriously compromising ferrosilicon consumption.

This study has determined that the operation of the plant should be contracted out in order to minimise capital expenditure.

The recoverability of diamonds from the AK6 kimberlite has been determined through X-ray luminosity and grease testwork (section 16). It is assumed that the plant will be at least as efficient as the sampling plant, and recovery factors have been established for smaller diamonds at different bottom screen size cut-offs (Table 17-13).

18.1.4 Diamond Market

All diamond projects are very sensitive to diamond revenue and diamond price fluctuations (Figure 20-1). Forward looking diamond demand and supply models in recent years have all indicated a steady rise in demand (driven largely by Chinese and Indian consumers) with a steady decrease in supply as major diamond resources are depleted, and few new mines coming into production. This scenario was driving diamond prices higher until the third quarter of 2008, when the global financial crisis caused a rapid decline in diamond prices. As signs of global economic recovery appear, the diamond price has resumed its upward trend. Polished diamond prices rose by nearly 3.5 percent between the beginning of January and the end of February 2010. “While that dramatic increase is not sustainable for any length of time, it illustrates the momentum that is building to push polished diamond prices higher, both near term and over the longer term.” (Idex online - http://www.idexonline.com). In a presentation given to the colloquium entitled “Diamonds - Source To Use” held in

Gaborone from 1 – 3 March 2010, Allan - Hochreiter (an independent corporate finance company) forecast real growth in diamond prices of 7% per annum from now until 2020. Royal Bank of Canada Europe Limited, an investment bank, published an equity research report on the diamond industry on 3rd March 2010. This report also forecasts a 7% increase between now and January 2011.

The preferred marketing arrangement for the Boteti production will be through auction. No sales contract is currently envisaged. However, no marketing methodology has yet been finalised.

18.1.5 Infrastructure and Logistics

Due to the decision to use a wet rate mining contract, very little provision is required for the capital cost of maintenance and other facilities. The capital and operating costs for maintenance of the earthmoving fleet are included in the earthmoving unit rate.

A fuel depot will be erected and operated by the fuel supplier.

The plant operating contractor will provide its own workshop and stores facilities to support the process plant maintenance activities.

Power will be supplied to the mine by the Botswana Power Corporation (BPC). A new 33 kV line will be erected from Orapa. Approximately 6 MVA is required to operate the mine in Phase 1, increasing to 10MVA in Phase 2.

Process water supply will be predominantly from the pit dewatering well field, supplemented by up to 4 additional wells initially, potentially increasing to 9 in Phase 2.

Potable water will be provided via a standard filtration/reverse osmosis/chlorination system. This water will be used for human consumption, in the offices and for selected equipment in the Recovery Plant.

Due to the decision to contract out the mining and plant operations, minimal infrastructure is required at the mine.

AK6 Mine personnel will be housed, or find accommodation in Letlhakane and the surrounding area. There will be minimal accommodation on site and this will mainly be for shift maintenance personnel and emergencies.

Communications will be provided by the Botswana Telecommunications Company via a broadband connection.

A first aid station will be established on the mine to treat injuries and minor ailments. Government facilities in Letlhakane and Serowe, and possibly Debswana facilities in Orapa will be utilised for more serious medical cases.

The capex figure used in the financial modeling includes a 30% contingency, which significantly reduces the risk regarding capital outlay at the start of mine development.

18.1.6 Environmental Considerations

A comprehensive Environmental Impact Assessment (EIA) was prepared by Geoflux (Pty) Ltd and reported on 28th September 2007. The Objectives of the EIA were:

- Compliance with the EIA Act of 2005 and facilitate approval from the Department of Environmental Affairs (DEA);
- To undertake an Archaeological / Heritage Impact Assessment to comply with the Monuments and Relics Act (1970) and facilitate approval by the Department of National Museums, Monuments and Art Gallery;
- To disseminate project information to the local community;
- To undertake a comprehensive Social Impact Assessment (SIA);
- To facilitate project development that will benefit the local community;
- To identify and facilitate compensation to all affected individuals;
- To articulate an Environmental Management Plan (EMP) that will allow for ongoing management and monitoring of impacts;
- To ensure compliance with national and international legislative requirements;
- To produce a report that would serve as supporting documentation to a Mining Licence application.

Four key potential impacts of the EIA were identified: resource use, economic benefits, visual/aesthetic disturbance, and social disruption. All of the negative impacts have been mitigated through management plans. The main impact of resource use relates to groundwater abstraction resulting from the pit dewatering and proposed well field. Water is a sensitive issue given its scarcity in the project area, and the presence of other users i.e. farmers and other mining operations. The EIA proposed that these impacts be addressed through monitoring and development of an integrated water management strategy jointly with other users and local and central government authorities. The EIA further suggests that the loss of grazing resources be addressed through an existing compensation framework and that a Relocation Action Plan be formulated.

Biophysically, the proposed mine will result in land dereliction in some areas and visual/aesthetic disturbance due to open pit and residue deposits and waste rock dumps. Although these impacts are irreversible, mitigation can be achieved through rehabilitation and re-vegetation where possible, and fencing off of the pit to render it safe for the local community and their livestock.

The overall recommendation of the EIA was that the project should proceed with the commitment to implement the proposed monitoring and management programmes in collaboration with stakeholders.

No major risk is perceived by MSA with respect to environmental issues.

18.1.7 Security

Security planning is based on the premise that product protection and security is a core business within a diamond mine.

The security systems have been designed to concentrate on the main areas of risk, i.e. the DMS cyclone spigot boxes, the transfer of concentrates to the Recovery Plant, the X-ray machines, the grease belts, the magnetic separator and the sort house. The design of the treatment plant is such that minimal contact with any concentrates and diamonds is the norm. A personnel X-ray machine was included in the scope of work due to the recent changes in the laws in Botswana. However, Boteti have subsequently indicated that they do not plan to use personnel X-ray technology on site.

18.1.8 Manpower

The zero based manpower plan indicates a Boteti complement of 97 people for Phase 1, increasing to 99 in Phase 2. This excludes the personnel for the contract mining and plant operations.

18.1.9 Feasibility Study

The Conceptual Study by PPM provided the basis on which a decision was made to proceed with a Feasibility Study.

The estimated cost for the Feasibility Study is USD 1,636,280. At the time of preparing this report the feasibility study is underway. PPM are the principal consultants undertaking the feasibility study.

18.1.10 Life of Mine

The Value Engineering Study is based on a two phased approach to the development of the mine. Phase 1 of the project is designed to treat 8.5 million tonnes of kimberlite during the first five years of operation (Figure 17-1). Phase 2 increases this production rate to 4 million tonnes per annum for the remaining life of mine, therefore treating a further 27.2 million tonnes of kimberlite. The total life of mine (LOM) plan would treat 35.3 million tonnes of kimberlite, yielding 7.6 million carats over 12 years.

The waste stripping required to expose the ore totals 90 million tonnes for the life of mine. Opportunities to reduce the amount of waste stripping are expected as the operations evolve, and the mine plan becomes more refined. The Phase 1 mine plan was derived, along with the rest of the study, to ensure that no lower grade kimberlite facies were sterilised.

18.2 Financial Model

The MSA Group has reviewed the financial model created by PPM and revised and updated it by converting it into an inflate/deflate model, and applying the most recent diamond revenue model. The result is a significant increase in the Boteti Project's NPV.

18.2.1 Valuation Methodology

In order to select an appropriate methodology to be applied in determining a value for the Boteti Project, reference has been made to the "Standards and Guidelines for Valuation of Mineral Properties" prepared by the Special Committee of the Canadian Institute of Mining, Metallurgy and Petroleum on the valuation of Mineral properties (the CIMVAL Code).

In terms of the CIMVAL Code, the Target Property may be described as a "Development Property", which is defined as follows:

> "a Mineral Asset that is being prepared for mineral production and for which economic viability has been demonstrated by a Feasibility Study or Pre-feasibility Study and includes a Mineral Asset which has a current positive Feasibility Study or Pre-feasibility Study but is not yet financed or under construction."

In terms of this definition, the Code indicates that two acceptable valuation approaches should be considered, and identifies two approaches that could be applied to a Development Property. These are, in order of preference:

- Income Approach – based on the principle of anticipation of benefits and includes all methods that are based on the income or cash flow generation potential of the Target property, and

- Market Approach – based primarily on the principle of substitution and is also called the Sales Comparison Approach. The Target property being valued is compared with the transaction value of similar Mineral Properties.

In terms of the above approaches, and given that there is no comparable transaction value for the Target Property, the most appropriate valuation method for the Target property is the "Discounted Cash Flow" method.

18.2.2 Development of the "Cash Flow" Valuation Model

A 12 year Life-of-Mine model for the AK6 deposit was received for review. Three different options, viz. Case A, B and C, for the development of the deposit were considered. The Value Engineering Study (carried out by PPM) concluded that only one of the cases (Case C) was viable based on economic and technical factors. A valuation model was developed in conjunction with all the relevant information contained in the Value Engineering Report. Subsequently, a sufficiently robust valuation model that would facilitate the verification of the profitability of the Boteti Project (Case C) was developed considering a production plan based on a 12 year Life-of-Mine operation.

In developing a suitably robust valuation model, a set of underlying economic assumptions relating to exchange rates, commodity prices, and inflation parameters was developed by MSA. This set of assumptions is detailed in the valuation model, and went through a number of revisions based on discussions with PPM. A final mine plan and valuation model was developed as follows:

- The final production plan has been based on a 12 year life-of-mine as given;

- The grade of the diamond reserve is based on a De Beers Feasibility Study for the Boteti Project dated October 2008;

- Capital expenditure estimates were based on the PPM Value Engineering Study Report Final, dated 22 June 2009;

- Operating costs for the plant are as reviewed by PPM;

- Corporate costs are based on the PPM CS;

- The mineral reserve used in the study was defined by Whittle analysis of the most recent mineral resource updated in 2008, and is classified as 'probable';

- Grades have been estimated using a 1.0mm bottom size cut-off while revenue is based on the revenue modeling applied to the most recent diamond valuation completed in February 2010;

- Annual power cost increases, based on the anticipated power costs to be charged by the BPC. These costs have been assumed for the Boteti Project despite the fact that they have not yet been ratified by the Government of Botswana. The costs have been escalated in real terms until 2014, and have been left constant thereafter as it is not known what inflationary increases will be applied after that date;

- Sensitivity "switches" were incorporated into the model including three sets of exchange rates, the option to include/exclude inflation and the option to select a pure equity form of financing or a debt/equity scenario;

- A set of financial statements including income statement, balance sheet, cash flow, debt schedule, depreciation and tax schedule were incorporated;

- In order to correctly reflect the after-tax returns and potential profitability of the Boteti Project, the valuation model incorporates the expected taxes and royalties that the project would be required to comply with.

18.2.3 Mining Taxation

The Boteti Project will be subject to taxation payments, on an annual basis, on the profits it generates, after allowing for any current and unredeemed capital expenditure balances that it may incur or have carried forward. The Project is taxed in accordance with the Twelfth Schedule of the Botswana Income Tax Act. Mining profits are taxed according to the following formula:

Annual Tax Rate equals: 70 - (1,500 divided by x)

Where x is the profitability ratio calculated as taxable income as a percentage of gross income, provided that the minimum rate applicable is the company flat rate of 25% of annual taxable income. Mining capital expenditure is deductible in full in the year in which the expenditure was incurred.

In preparing its valuation model, MSA has utilised an "inflate/deflate" methodology, whereby:

- All money inputs are escalated using an inflation scenario, so as to allow for the correct handling of any taxation and royalty calculations, and

- The resultant operating cash flow is then deflated to bring the money back to constant money terms for the determination of any Net Present Value (NPV) and Internal Rate of Return (IRR) calculations.

It must be noted that, given the above methodology, the NPV's reflected in the valuation model may be directly related to the real rate of return that that particular Model should deliver.

All input figures were assumed to be in real terms, i.e. 31 March 2010. Inflation/deflation techniques were applied to derive the correct after- tax real terms cash flows.

18.2.4 Mining Royalty

The Project is subject to a royalty of 10% on revenue.

18.2.5 Profitability of the Venture

In terms of the underlying economic assumptions in the PPM study, the probable mineral reserve and the updated financial model, and the results of the verification of the valuation of the property, the profitability, (based on a 75:25 debt : equity ratio; latest 6 month average of exchange rates and including inflation) is as follows:

Net Present Value10%	USD 147.1 million
Net Present Value15%	USD 109.9 million
Internal rate of return	70.0%
Life-of-Mine cash cost (real terms)	USD16.62/t kimberlite treated
Payback period	4.3 years

19 OTHER RELEVANT INFORMATION

None

20 INTERPRETATION AND CONCLUSIONS

The mineral resource identified within the Boteti Project is robust and valid, and has been established by following best practice principles. The indicated mineral resource has been subject to a conceptual study, which has demonstrated a strong business case for pursuing the project. Technical and other risks on the project are relatively small because of the large amount of information generated on all aspects of the mining plan, both as part of the mineral resource development, and also as part of other pre-feasibility and feasibility study programmes. Project risks are summarised below.

20.1 Project Risks

The following project risks were identified and are commented upon.

20.1.1 Mine Footprint

The Mining Licence is relatively small, which provides for little flexibility with respect to a mine footprint. It is therefore recommended that negotiations commence on acquiring adjacent land.

20.1.2 High Density Portions of the South Lobe

Portions of the South Lobe contain fresh olivine and consequently the specific gravity of the kimberlite is high. Since this fact was recognised early, the mine plan and plant specifications have been able to account for it, and the risk is considered low.

20.1.3 Manpower Accommodation

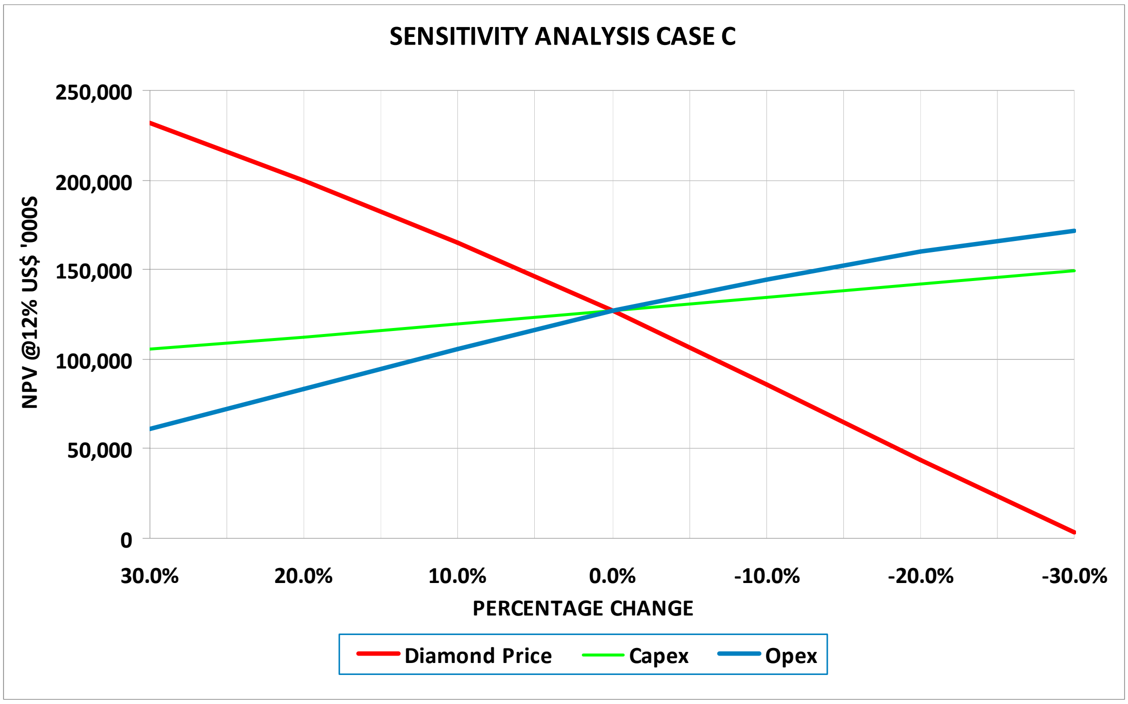
The conceptual study considered that the manpower would stay in the town of Letlhakane. However, the town has little available empty housing, and it is likely that additional housing would be required. One alternative might be to house staff at the Orapa township. This issue needs to be addressed, and may create an additional capital cost. The results of the financial modeling suggest that the project can absorb additional capital costs of this magnitude (Figure 20-1). In addition, a 30% contingency was built into the capex figure used for the financial modeling.

20.1.4 Diamond Price

The current state of the diamond market is discussed in section 18.1.4.

The financial model created by PPM and updated by MSA (section 18.2) assumes an annual real increase in diamond prices of 1.5% per annum. In the current climate of global economic recovery, and based on current industry forecasts, this figure appears conservative.

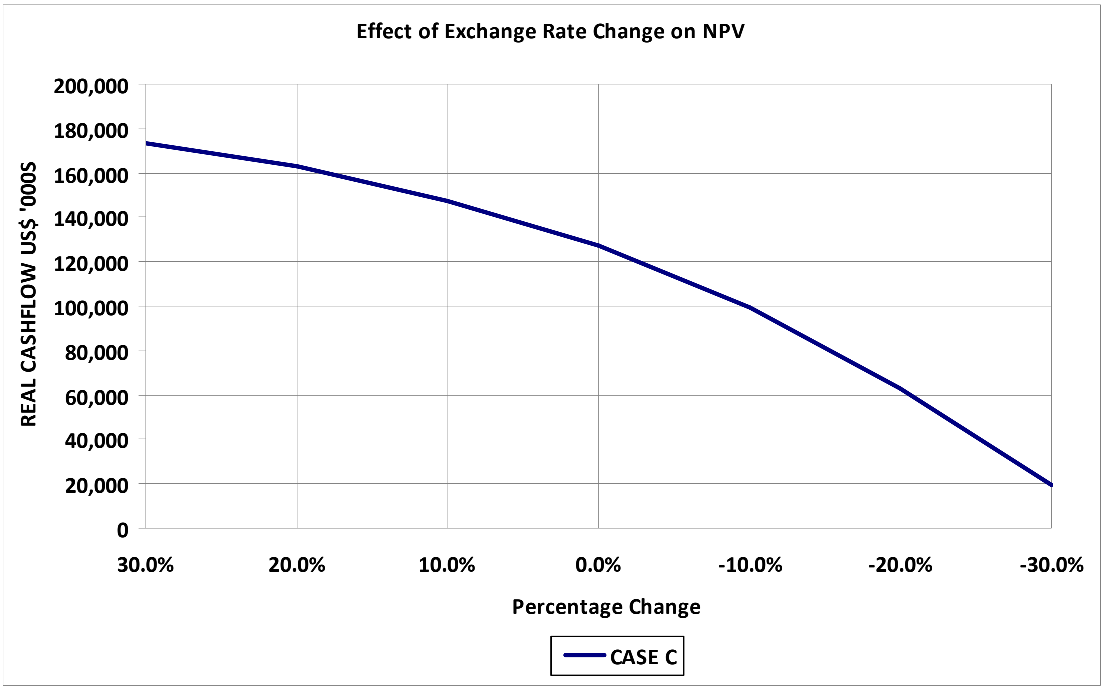
Figure 20-1
Project Sensitivity to diamond price, capex and opex



20.1.5 Exchange Rates

Because the costs of the mine are mainly in Botswana Pula and South African Rand, and the revenues are in United Stated Dollars, the project is exposed to exchange rate risks. The updated financial model created by MSA, and based upon the model created by PPM in their conceptual study, uses average exchange rates over the past six months. Nevertheless, both currencies have exhibited considerable volatility in the past. Figure 20-2 shows the sensitivity of the project to fluctuations in the USD/ South African Rand exchange rate. Zero percent is the average exchange rate for the six months ending 28th February 2010, -10% indicates a 10% strengthening of the rand, and so on.

Figure 20-2
Exchange Rate Sensitivity



20.1.6 Power Supply

PPM report that discussions have been held with BPC, and power supply will be provided in time for production. However, power is unlikely to be available during implementation. For this reason, diesel generator capacity is being established, which would later become a back-up power supply for the mine.

ESKOM, the parastatal electricity supplier in South Africa, sells some of its production to Botswana, and the project is therefore potentially impacted by changes in the power supply provided by ESKOM. It was recently announced that electricity price increases amounting to 25% per annum for three years will commence during 2010. This has the potential to impact on the operating costs for the mine. The financial model indicates that the project has potential to operate at significantly higher costs and still make a profit (Figure 20-1).

21 RECOMMENDATIONS

Based on the validated mineral resource, the results of the PPM conceptual study, and the updated financial model generated, it is the MSA Group's opinion that the Boteti Project has the potential to become a significant diamond producer. No fatal flaws have been identified. In light of the extensive studies provided by previous pre-feasibility and feasibility study programmes, The MSA Group finds no reason why the project should not advance directly to feasibility study level.

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23 DATE AND SIGNATURE PAGE

The undersigned, Ian McGeorge, contributed to sections 1-16 inclusive and sections 21-22 of this technical report, titled NATIONAL INSTRUMENT 43-101 TECHNICAL REPORT on THE AK6 DIAMOND PROPERTY, REPUBLIC OF BOTSWANA, FOR LUCARA DIAMOND CORPORATION, with an effective date of 28^{th} February 2010, in support of the public disclosure of technical aspects of the AK06 Property. The format and content of this report are intended to conform to Form 43-101F1 of National Instrument 43-101 of the Canadian Securities Administrators.

Signed,

……………………………………….

Ian McGeorge

22^{nd} March 2010

The undersigned, Rob Croll, contributed to section 18 of this technical report, titled NATIONAL INSTRUMENT 43-101 TECHNICAL REPORT on THE AK6 DIAMOND PROPERTY, REPUBLIC OF BOTSWANA, FOR LUCARA DIAMOND CORPORATION, with an effective date of 28^{th} February 2010, in support of the public disclosure of technical aspects of the AK06 Property. The format and content of this report are intended to conform to Form 43-101F1 of National Instrument 43-101 of the Canadian Securities Administrators.

Signed,

……………………………………….

Rob Croll

22^{nd} March 2010

The undersigned, Johannes Ferreira, contributed to section 17 of this technical report, titled NATIONAL INSTRUMENT 43-101 TECHNICAL REPORT on THE AK06 DIAMOND PROPERTY, REPUBLIC OF BOTSWANA, FOR LUCARA DIAMOND CORPORATION, with an effective date of 28th February 2010, in support of the public disclosure of technical aspects of the AK06 Property. The format and content of this report are intended to conform to Form 43-101F1 of National Instrument 43-101 of the Canadian Securities Administrators.

Signed,

……………………………………….

Johannes Ferreira

22nd March 2010

24 CERTIFICATES

CERTIFICATE OF QUALIFIED PERSON

I, Ian McGeorge, CGeol FGS, do hereby certify that:

1. I am a consulting geologist with The MSA Group, Unit 7, Plot 101, Gaborone International Commerce Park,,Gaborone Botswana .
2. I graduated with a B.Sc. Honours degree in geology from the University of Glasgow in 1975. I obtained a M.Sc. degree in mineral exploration from Rhodes University, Grahamstown, South Africa, in 1982.
3. I am validated as a Chartered Geologist by the Geological Society, London (Fellow Number 1003981).
4. I have worked as a geologist for 33 years since my graduation. My relevant experience for the purposes of this Technical Report is:

    a. Four years (1982-1986) as project geologist, Botswana, for African Selection Trust, engaged in exploration for kimberlite and diamonds.
    b. Five years (1987-1992) as project geologist for Molopo Australia NL, exploring for kimberlite and diamonds in Botswana.
    c. Twelve years (1995 – 2007) as consultant for MPH Consulting Ltd working on early stage and advanced diamond exploration properties in Botswana, South Africa and Lesotho.
    d. Previous independent reporting on diamond properties in Botswana, Guinea, Sierra Leone and Liberia.

5. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
6. I am responsible for sections 1 – 16 inclusive and sections 21 and 22 of this Technical Report entitled "NI 43-101 Technical Report on the AK6 Kimberlite Project, Botswana" and dated February 28 2010 related to the AK6 property. I visited the Boteti property on 17 and 18 January 2010.
7. I have had no prior involvement with the property which is the subject of the Technical Report.
8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
9. I am independent of the issuer applying all of the tests in section 1.4 of National Instrument 43-101.
10. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

11. I consent to the filing of this Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of this Technical Report.

Dated this 25th day of March 2010.

[signature]

……………………………………………….

Ian McGeorge MSc CGeol FGS

CERTIFICATE OF QUALIFIED PERSON

I, Robert Charles Croll, do hereby certify that:

1. I am an Associate Consultant of The MSA Group, 20B Rothesay Avenue, Craighall Park, Johannesburg, 2196.
2. I graduated with a BSc (Mining Engineering) degree from the University of the Witwatersrand in 1973 and a Master of Business Administration degree from the University of the Witwatersrand in 1977. In addition I have completed a Certificate Programme in Industrial Relations at the University of the Witwatersrand in 1987, a Graduate Diploma in Engineering at the University of the Witwatersrand in 1991, and an Advanced Management Programme at the University of Oxford in 2000
3. I have over 34 years of experience in the Mining Industry and have worked in the field of mining valuations for the last 19 years.
4. I was elected as a Fellow of the South African Institute of Mining and Metallurgy on 20th July 1990.
5. I was the Chairman, for some 4 years, of the Committee that developed the South African Code for the Reporting of Mineral Asset Valuation (the SAMVAL Code).
6. I have read the definition of “Qualified Valuator” set out in the “Standards and Guidelines for Valuation of Mineral Properties” (the CIMVAL Code) and certify that by reason of my education and past relevant work experience, I fulfill the requirements to be a “Qualified Valuator” for the purposes of National Instrument 43-101.
7. I am responsible for the preparation of section 18 of the technical report titled “NI43-101 Technical Report NI 43-101 Technical Report on the Boteti Kimberlite Project, Botswana” and dated 28th February, 2010 (the “Technical Report”) relating to the Boteti properties.
8. I have not had prior involvement with the property that is the subject of the Technical Report.
9. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
10. I am independent of the issuer applying all of the tests in section 1.4 of National Instrument 43-101.
11. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
12. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 28th day of February, 2010.

Robert Charles Croll

CERTIFICATE OF QUALIFIED PERSON

I, Johannes Jacobus Ferreira, Msc DEA Pr. Sci. Nat, do hereby certify that:

1. I am an Associate Consultant of The MSA Group, 20B Rothesay Avenue, Craighall Park, Johannesburg, 2196.
2. I graduated with a B.Sc. Honours degree in Mathematics and Mathematical Statistics from the University of Pretoria in 1967. I obtained a M.Sc. degree in Mathematical Statistics from the same university in 1974 and obtained the advanced diploma in Geostatistics from the Ecole des Mines in Paris (France) in 1993. I am currently busy with a PhD titled 'Sampling for Diamond in Kimberlite' at the Ecole des Mines for completion in 2010.
3. I am validated as a Professional Natural Scientist by the South African Council for Natural Scientific Professions (Registration Number 4000/4706).
4. I have worked as a Mineral Resource Evaluation Analyst for 29 years since I joined De Beers in 1981. My relevant experience for the purposes of this Technical Report is:

    a. 27 years (1981-2003) as diamond resource analyst for De Beers South Africa and performed resource and revenue estimation for the major kimberlites in Botswana (Jwaneng, Orapa, Letlhakane) and South Africa (Venetia, Finsch) and new discoveries In Canada (Victor, Snap Lake, Gacho Kue, Fort a la Corne).
    b. Six years (2003-2008) as Group Geostatistician Research for de Beers in the United Kingdom, researching the application of microdiamonds for kimberlite diamond content estimation.
    c. Two years (2008 – 2010) as independent consultant working on early stage and advanced diamond content estimation projects in Botswana, South Africa and Canada.

5. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI43-101.
6. I am responsible for section 17 of this Technical Report entitled "NI 43-101 Technical Report on the AK6 Kimberlite Project, Botswana" and dated March 2010 related to the AK6 property.
7. I have had no prior involvement with the property which is the subject of the Technical Report.
8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
9. I am independent of the issuer applying all of the tests in section 1.4 of National Instrument 43-101.
10. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
11. I consent to the filing of this Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of this Technical Report.

Dated this 28th day of February 2010.

……………………………………………….

Johannes Ferreira Pr. Sci. Nat., MSc , DA

25 GLOSSARY OF TECHNICAL TERMS

aeolian	an adjective to describe a sediment transported and deposited by wind
aeromagnetic survey	Surveys flown by helicopter or fixed wing aircraft to measure the magnetic susceptibility of rocks at or near the earth's surface. Kimberlite may be detected by these surveys.
alkaline rock	an igneous rock containing an excess of sodium and or potassium
alluvial	Transported and deposited in a river system, e.g. diamonds eroded from kimberlites and deposited in river gravel.
Archaean	The oldest rocks of the Precambrian era, older than about 2 500 Ma.
artisanal	Adjective to describe mining by workers operating without substantial capital, technical skills or training.
basalt	A common volcanic rock, dark and fine grained, relatively low in silica. May form very extensive lava flows.
basement	The igneous and metamorphic crust of the earth, underlying sedimentary deposits.
bedrock	the first hard and solid rock underlying soil or unconsolidated overburden
breccia	A coarse grained rock made up of large angular fragments, sometimes of various rock types. In kimberlite geology, often the filling of a kimberlite pipe made up of country rock fragments enveloped in kimberlite. The fragments may be transported within the pipe (an intrusive breccia) or essentially in-situ (an intrusion breccia)..

brecciated	Adjective applied to an intensely fractured body of rock.
bulk sample	a large sample, at least a hundred tonnes, usually excavated mechanically
carat	Standard unit of diamond weight, 1 carat = 0.2 grams
carbonate	A rock, usually of sedimentary origin, composed primarily of calcium, magnesium or iron and CO_3. Essential component of limestones and marbles.
caustic fusion	A laboratory method of recovering microdiamonds (and other resistant minerals) from kimberlite by means of fusing the rock with sodium hydroxide, which destroys the silicate phases and leaves a small residue of resistate, in which will be found any diamonds present.
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
core drilling	Method of obtaining cylindrical core of rock by drilling with a diamond set or diamond impregnated bit. For drilling of diamond deposits bits with synthetic rather than natural diamonds are used, to avoid possible contamination.
chrome diopside	A calcium, magnesium silicate, $Ca(Mg,Fe,Cr)(Si,Al)_2O_6$, with a high proportion of chromium substitution in the lattice, which is a common indicator mineral for diamond.
chromite	An oxide of chromium, $(Mg,Fe)Cr_2O_4$, some varieties of which can occur in kimberlite.
colluvium	sediment transported downslope by gravity; usually proximal to its source
conglomerate	A rock type composed predominantly of rounded pebbles, cobbles or boulders deposited by the action of water.
craton	Large, and usually ancient, stable mass of the earth's crust comprised of various crustal blocks amalgamated by tectonic processes. A cratonic nucleus is an older, core region embedded within a larger craton.
Cretaceous	Applied to the third and final period of the Mesozoic era,

	141 Ma to 65 Ma ago.
ct/100 t	Carats per hundred tonnes. A common way of expressing the grade of diamonds in a deposit.
ct/m^3	carats per cubic meter. A common way of expressing the grade of diamonds in a deposit, sometimes favoured because it does not require an estimation of rock density.
diamond drilling	synonymous with *core drilling*
diatreme	A volcanic vent created by gaseous magma sourced from the mantle. A common mode of occurrence of kimberlite and often referred to as pipes, because of their near vertical attitude and frequently approximately circular or oval shapes.
DMS	Dense media separation. A technique to produce a diamond bearing concentrate.
dyke	A vertical or near vertical sheet of igneous rock, the widths of which may range from centimeters to hundreds of meters. One of the typical modes of occurrence of kimberlite, in the case of which widths are usually narrow, less than 2 m.
EIA	Environmental Impact Assessment.
eluvium	sediment derived from the physical and/or chemical decomposition of the underlying bedrock.
EMP	Environmental Management Plan.
facies	The sum of the lithological (and palaeontological) characters of a particular rock. In the case of kimberlite there are usually four facies recognized – hypabyssal, diatreme, crater and transitional
fault	A fracture or fracture zone, along which displacement of opposing sides has occurred.
G9	A type of pyrope garnet often found in both diamond bearing and non diamond bearing kimberlite. Red to purple in colour.
G10	A type of pyrope garnet often associated with diamond bearing kimberlite. Lilac in colour.

Ga	Giga years (1 Ga = 1,000 million years)
garnet	A silicate mineral with many varieties. Specific compositions can be related to depths and pressures of formation, eg pyrope garnets are chrome rich and are common in kimberlite, and are a kimberlite indicator mineral.
geophysical surveys	instrumental surveys measuring small variations in the earth's magnetic field, gravity field or electrical conductivity (in addition to some other properties) related to local variations in rock type. Widely used to discover kimberlite pipes. Magnetic and some electrical methods can be carried out from an aircraft.
gneiss	A coarse grained, banded, high grade metamorphic rock.
gravity survey	A geophysical survey technique which detects variations in the earth's gravity field due to variations in the specific gravity of the underlying rock. Can used to detect kimberlite, which may have higher or lower specific gravity than surrounding rocks.
grease table	A device for recovering diamonds in a treatment plant using grease, to which the diamonds preferentially adhere due to their hydrophobic properties.
GPS	Global Positioning System. A satellite based navigation system able to give real time positions to approx ±5 m in X and Y using simple hand held instruments.
ha	Hectare = 10,000 m^2. A common unit for expressing the surface area of a kimberlite pipe.
hypabyssal	An adjective for an igneous rock, *e.g*. kimberlite, which has crystallized from a melt within the earth's crust, but at relatively shallow depth.
ilmenite	An iron, magnesium and titanium oxide ($(Fe,Mg)TiO_3$). The magnesium-rich ilmenite in kimberlite is called picro-ilmenite.
Indicated Resource *(Indicated Mineral Resource)*	An Indicated Mineral Resource is that part of a mineral resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of

	the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed. (CIM definition).
indicator minerals	A suite of resistant minerals with an origin and mode of occurrence similar to diamond, that can be indicative of the presence of primary diamond deposits.
Inferred Resource *(Inferred Mineral Resource)*	An Inferred Mineral Resource is that part of a mineral resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. (CIM definition).
isotope dating	A method of dating rocks by quantifying the relative ratio of isotopes.
joints	Regular planar fractures or fracture sets in massive rocks, usually created by unloading, along which no relative displacement has occurred.
Jurassic	Second period of the Mesozoic Era, 190 to 141 Ma ago
Kalahari	An extensive tract of flat, featureless sand savanna, mainly devoid of perennial surface water, which takes up all of central and western Botswana, in addition to areas of South Africa, Namibia, Angola, Zimbabwe and Zambia.
kelyphyte	An alteration rim on the surface of (pyrope) garnets in kimberlite resulting from reaction with kimberlite magma at depth or phase transformation reactions in peridotite-derived pyrope garnets.
kimberlite	An alkaline ultramafic igneous rock that is generated at great depths in the earth and emplaced at the surface in pipes (diatremes), dykes or sills. The principal source of primary diamonds.
KIM	Kimberlite Indicator Mineral: pyrope garnet, eclogitic

	garnet, picro-ilmenite, chromite and chrome diopside. These are distinctive resistive minerals which occur in kimberlite in much higher concentrations than diamond, and which can be found in streams and soils and traced back to their kimberlite source, thus acting as pathfinders for diamond. The chemical compositions of garnet, ilmenite and chromite are related to the diamond potential of their source kimberlites, thus their mineral chemistry can provide an initial, non quantitative, grade prognosis.
kriging	A mathematical technique which uses spatial statistics to calculate estimations of mineral resources.
LDD	Large diameter drilling. Drilling of non-cored holes of diameter >15"
lamproite	A peralkaline volcanic or subvolcanic rock of mafic to ultramafic composition. Rarely, lamproite contains diamonds in economic quantities.
limestone	A sedimentary rock containing at least 50% calcium or calcium-magnesium carbonates.
lineament	A significant linear feature of the earth's crust.
lithosphere	Mass of the mantle attached to the base of the crust that has a geological history related to that of the overlying crust, and that is cold and rigid relative to the deeper parts of the mantle.
loam sampling	Sampling the soil profile to recover resistant minerals. In the case of diamond exploration, loam sampling is intended to recover kimberlite indicator minerals.
Ma	Million years.
mafic	Descriptive of rocks composed dominantly of magnesium and iron rock-forming silicates.
magmatic	rock formed from crystallization of molten magma; an igneous rock. A descriptive of some kimberlite types which have crystallized without exploding. (Compare *volcaniclastic* kimberlite).

magnetic survey	A geophysical survey which measures variations in the earth's magnetic field caused by differences in the magnetic susceptibilities of underlying rock. Kimberlite may be detected by this method, as its susceptibility may be higher or lower than surrounding rock types.
mantle	The layer of the earth between the crust and the core. The upper mantle, which lies between depths of 50 and 650km beneath continents, is the principal region where diamonds are created and stored in the earth.
Measured Resource *(Measured Mineral Resource)*	A Measured Mineral Resource is that part of a mineral resource for which quantity, grade or quality, densities, shape and physical characteristics are so well established that they can be estimated with confidence sufficient to allow appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity. (CIM definition).
metamorphism	Alteration of rock and changes in mineral composition, most generally due to increase in pressure and/or temperature.
macrodiamond	Definitions vary, but a diamond which would be recovered in a full scale mine plant. Now generally taken as >0.85 mm in size.
microdiamond	A diamond <0.85 mm in size, although definitions vary. Usually considered to be of no commercial value and too small to be recovered in a full scale mining operation.
MiDA	Abbreviation for "microdiamond analysis"
mobile belt	An elongate belt in the earth's crust, usually occurring at the collision zone between two crustal blocks, within which major deformation, igneous activity and metamorphism has occurred.
orogeny	A deformation and/or magmatic event in the earth's crust,

	usually caused by collision between tectonic plates.
Palaeozoic	An era of geologic time between the Late Precambrian and the Mesozoic era, 545 Ma to 251 Ma ago.
petrography	The description and classification of rocks.
Percussion drilling	Drilling by means of an air hammer which breaks the rock into chips which are brought to surface by air circulation.
Precambrian	Pertaining to all rocks formed before Cambrian time (older than 545 Ma).
Probable Reserve *(Probable Mineral Reserve)*	A Probable Mineral Reserve is the economically mineable part of an Indicated, and in some circumstances a Measured Mineral Resource, demonstrated by at least a Preliminary Feasibility Study. This study must include adequate information on mining, processing, metallurgical, economic and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified. (CIM Definition)
Proven Reserve *(Proven Mineral Reserve)*	A Proven Mineral Reserve is the economically mineable part of a Measured Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This study must include adequate information on mining, processing, metallurgical, economic and other relevant factors that demonstrate, at the time of reporting, that economic extraction is justified. (CIM Definition).
Proterozoic	An era of geological time spanning the period from 2 500 Ma to 545 Ma before present.
pipe	When referring to kimberlite, a synonym of *diatreme*.
PL	Prospecting Licence
pyrope garnet	A ruby-coloured garnet, $Mg_3Al_2(SiO_4)_3$, common in deep-seated ultramafic intrusive rocks and common as a xenocryst in kimberlite.
RC drilling	Reverse circulation drilling. A percussion drilling technique in which the sample is brought to surface by air and/or water through the centre of the drill pipe. Used when accurate sampling is required as the method minimizes cross contamination of samples.

schist	A crystalline metamorphic rock having a foliated or parallel structure due to the recrystallisation of constituent minerals.
SAMREC	The South African code for the reporting of exploration results committee
spinel	A group of oxide minerals of various compositions, $(Mg,Fe,Mn)(Al,Fe,Cr)_2O_4$, commonly occurring as an accessory in basic igneous rocks.
stream sediment sampling	The collection of samples of stream sediment with, in diamond exploration, the intention of looking for kimberlite indicator minerals or diamonds.
strike	Horizontal direction or trend of a geological structure.
Tertiary (System)	The rocks formed between the end of the Cretaceous at 65 Ma and the start of the Quarternary at 1.7 Ma.
tonne	A metric tonne, 1,000 kg
tectonic	Pertaining to the forces involved in, or the resulting structures of, movement in the earth's crust.
volcaniclastic	rock formed by exploding magma in a volcano. Volcaniclastic kimberlite is common in kimberlite pipes.
ultramafic	Igneous rocks consisting essentially of ferromagnesian minerals with trace quartz and feldspar.
variogram	In spatial statistics, a graph which relates the variance of the difference in value between pairs of samples to the distance between them. Allows the weighting of a sample value in terms of its distance from the point where an estimate of sample value is required.
xenocryst	Applies to mineral crystals in igneous rocks that are foreign to the body of rock in which they occur. Very common in kimberlite, with diamond being an example.
xenolith	A piece of another pre-existing rock within an igneous intrusion. Very common in kimberites.

APPENDIX 1:

Conceptual study mining schedule

	Detailed Planning schedule					Whittle Schedule							
Tonnes	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Total
North	150,000	195,207	67,473	137,228	115,370	426,248	160,373	127,413	68,180	121,400	84,663	468	1,654,023
Centre	100,000	1,502,875	286,454	166,433	462,032	1,731,627	1,471,809	1,003,313	443,828	622,171	495,497	63,120	8,349,159
South		212,000	1,556,074	1,606,339	1,571,348	1,842,124	2,367,818	2,869,273	3,487,993	3,256,429	3,419,840	3,152,254	25,341,491
Total Ore	250,000	1,910,082	1,910,000	1,910,000	2,148,750	3,999,999	4,000,000	3,999,999	4,000,001	4,000,000	4,000,000	3,215,842	35,344,673
Waste Dilution													
North		9,198	3,179	6,466	5,436	0	0	0	0	0	0	3	24,282
centre		70,813	13,498	7,842	21,771	0	0	0	0	0	0	368	114,292
South		9,989	73,323	75,691	74,043	0	0	0	0	0	0	18,355	251,401
Waste Dilution	0	90,000	90,000	90,000	101,250	0	0	0	0	0	0	18,725	389,975
Total	250,000	2,000,082	2,000,000	2,000,000	2,250,000	3,999,999	4,000,000	3,999,999	4,000,001	4,000,000	4,000,000	3,234,567	35,734,648
Carats													
North	69,181	61,227	34,958	55,278	38,486	122,257	36,980	22,771	15,288	23,028	11,048	55	490,556
Centre	20,223	346,025	76,943	42,196	171,890	543,083	343,987	189,208	70,716	94,936	101,124	17,429	2,017,762
South		39,973	198,450	305,851	409,575	27,484	437,828	588,117	608,609	865,648	589,502	671,120	4,742,157
Total	89,404	447,225	310,351	403,325	619,951	692,824	818,796	800,096	694,614	983,613	701,673	688,604	7,250,475
Grade													
North	46.12	29.95	49.48	38.47	31.86	28.68	23.06	17.87	22.42	18.97	13.05	11.68	29.23
Centre	20.22	21.99	25.65	24.21	35.53	31.36	23.37	18.86	15.93	15.26	20.41	27.45	23.84
South		18.01	12.18	18.18	24.89	1.49	18.49	20.50	17.45	26.58	17.24	21.17	18.53
Total	35.76	22.36	15.52	20.17	27.55	17.32	20.47	20.00	17.37	24.59	17.54	21.29	20.29

APPENDIX 2:

Conceptual study capex, opex and income statement (inflate/deflate model)

OPERATING COSTS			Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
(NOMINAL)																	
Mining	US$'000s	587,387		8,639	23,670	24,988	31,768	39,763	67,340	77,584	82,237	78,111	69,695	49,528	34,064	-	
Plant	US$'000s	90,220		1,491	5,897	6,044	6,196	6,732	8,717	8,935	9,159	9,388	9,622	9,863	8,175	-	
Engineering	US$'000s	67,852		500	2,904	3,542	3,809	4,385	7,263	7,445	7,631	7,822	8,017	8,218	6,317	-	
Security	US$'000s	2,596		33	211	216	221	227	233	238	244	250	257	263	202	-	
Manpower	US$'000s	34,336		569	2,890	2,934	2,979	3,025	3,109	3,157	3,205	3,254	3,304	3,355	2,555	-	
Infrastructure	US$'000s	15,388		210	1,081	1,116	1,153	1,190	1,436	1,482	1,529	1,578	1,629	1,682	1,303	-	
Logistics	US$'000s	4,517		27	235	241	247	253	484	496	509	522	535	548	421	-	
Environmental	US$'000s	8,680		98	503	516	529	542	895	917	940	963	987	1,012	778	-	
Corporate costs	US$'000s	7,492		250	528	557	587	619	653	689	727	767	810	854	451	-	
TOTAL	US$'000s	818,470		11,816	37,918	40,154	47,489	56,736	90,130	100,943	106,181	102,655	94,856	75,323	54,266	-	-

CAPEX			Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
(NOMINAL)																	
Mining	US$'000s	583	-	357	-	-	-	226	-	-	-	-	-	-	-	-	
Plant	US$'000s	65,502	4,462	39,013	-	-	5,405	16,622	-	-	-	-	-	-	-	-	
Engineering	US$'000s	9,881	836	7,448	-	-	-	1,598	-	-	-	-	-	-	-	-	
Security	US$'000s	2,205	-	2,165	-	-	-	41	-	-	-	-	-	-	-	-	
Infrastructure	US$'000s	4,009	309	2,703	-	-	-	998	-	-	-	-	-	-	-	-	
Logistics	US$'000s	781	-	463	-	-	-	318	-	-	-	-	-	-	-	-	
Environmental	US$'000s	134	-	96	-	-	-	38	-	-	-	-	-	-	-	-	
Major replacement	US$'000s	16,132	-	-	608	993	1,018	1,044	1,070	1,785	1,829	1,875	1,922	1,970	2,019	-	
Feasibility Study	US$'000s	2,972	2,135	-	-	-	-	836	-	-	-	-	-	-	-	-	
Sub total	US$'000s	102,199	7,742	52,244	608	993	6,424	21,720	1,070	1,785	1,829	1,875	1,922	1,970	2,019	-	-
Contingency	US$'000s	25,820	1,800	16,196	-	-	1,622	6,203	-	-	-	-	-	-	-	-	
Project Management Fee	US$'000s	2,797	195	1,755	-	-	176	672	-	-	-	-	-	-	-	-	
TOTAL	US$'000s	130,817	9,736	70,194	608	993	8,221	28,595	1,070	1,785	1,829	1,875	1,922	1,970	2,019	-	-

INCOME STATEMENT		TOTALS	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
Total Revenue	US$'000s	1,821,201		20,231	115,113	70,015	92,384	139,027	180,144	201,688	196,887	172,651	254,146	190,219	188,696	-	-
less:																	
GRB Royalty (Revenue)	US$'000s	163,908		1,821	10,360	6,301	8,315	12,512	16,213	18,152	17,720	15,539	22,873	17,120	16,983	-	-
Marketing Fee (Revenue)	US$'000s	36,424		405	2,302	1,400	1,848	2,781	3,603	4,034	3,938	3,453	5,083	3,804	3,774	-	-
Operator's Fee (Opex)	US$'000s	40,923		591	1,896	2,008	2,374	2,837	4,507	5,047	5,309	5,133	4,743	3,766	2,713	-	-
Operating Costs	US$'000s	818,470		11,816	37,918	40,154	47,489	56,736	90,130	100,943	106,181	102,655	94,856	75,323	54,266	-	-
EBITDA	US$'000s	761,476		5,599	62,637	20,151	32,359	64,161	65,691	73,513	63,739	45,871	126,591	90,205	110,960	0	0
Depreciation	US$'000s	130,817		5,599	62,637	13,297	8,221	28,595	1,070	1,785	1,829	1,875	1,922	1,970	2,019	-	-
EBIT	US$'000s	630,659		0	0	6,855	24,138	35,565	64,621	71,728	61,910	43,996	124,669	88,235	108,941	0	0
Interest	US$'000s	14,902	584	4,843	4,908	1,352	751	1,716	64	107	110	112	115	118	121	0	0
Profit Before Tax	US$'000s	615,757	(584)	(4,843)	(4,908)	5,503	23,387	33,850	64,557	71,621	61,801	43,884	124,554	88,117	108,820	0	0
Tax Payable - Corporate Tax	US$'000s	210,240	-	-	-	1,376	5,847	8,462	18,168	19,881	15,450	10,971	49,066	33,149	47,869	-	-
Tax - Dividend Withholding Tax	US$'000s	-															
Profit after tax	US$'000s	405,517	(584)	(4,843)	(4,908)	4,127	17,540	25,387	46,389	51,740	46,350	32,913	75,488	54,968	60,950	0	0
Add back:																	
Depreciation	US$'000s	130,817		5,599	62,637	13,297	8,221	28,595	1,070	1,785	1,829	1,875	1,922	1,970	2,019	0	0
Capitalised Interest	US$'000s	14,902	584	4,843	4,908	1,352	751	1,716	64	107	110	112	115	118	121	0	0
Less: Capex	US$'000s	130,817	9,736	70,194	608	993	8,221	28,595	1,070	1,785	1,829	1,875	1,922	1,970	2,019	-	-
Cash Flow (nominal)	US$'000s	420,419	(9,736)	(64,596)	62,029	17,782	18,291	27,103	46,453	51,847	46,460	33,025	75,603	55,086	61,071	0	0
Funding:	US$'000s	-															
Debt	US$'000s	98,113	7,302	52,646	456	745	6,166	21,446	802	1,338	1,372	1,406	1,441	1,477	1,514	0	0
Cash Available for Debt Servicing	US$'000s	518,532	(2,434)	(11,950)	62,485	18,527	24,457	48,549	47,255	53,185	47,832	34,431	77,045	56,563	62,586	0	0
Debt Repayment	US$'000s	(113,014)	0	(4,479)	(50,109)	(15,020)	(10,144)	(23,162)	(866)	(1,445)	(1,482)	(1,519)	(1,557)	(1,596)	(1,635)	0	0
Net Csh Flow (Nominal)	US$'000s	405,517	(2,434)	(16,429)	12,375	3,507	14,313	25,387	46,389	51,740	46,350	32,913	75,488	54,968	60,950	0	0
Cash Flow (real)	US$'000s	326,087	(2,434)	(16,028)	11,779	3,256	12,967	22,439	40,001	43,527	38,042	26,354	58,971	41,893	45,320	0	0