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FORM 6-K

REPORT OF FOREIGN ISSUER PURSUANT TO
RULE 13a-16 AND 15d-16 UNDER THE
SECURITIES EXCHANGE ACT OF 1934

For the month of: June 2004
Commission File Number: 000-24980

KENSINGTON RESOURCES LTD.

(Translation of registrant's name into English)

Suite 2100, 650 W. Georgia Street, Vancouver, British Columbia, Canada, V6B 4N9
(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F.
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Summary of Exploration and Evaluation of the Fort à la Corne Kimberlite Field, East-Central Saskatchewan

A Technical Report Prepared for:

KENSINGTON RESOURCES

By:

Brent C. Jellicoe, P.Geo.
Jellicoe Resource Associates

Updated on May 18, 2004

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Summary

The Fort à la Corne Diamond Project is located in central Saskatchewan. The largest claim block lies approximately 65 km east of Prince Albert and extends northward from the Saskatchewan River to a few kilometers north of Shipman. An additional smaller claim covers magnetic anomalies near Snowden, located some 120 km northeast of Prince Albert. As of December 31, 2002, land holdings held under the joint-venture agreement include 121 claims totaling 22,544 hectares that are divided into four groups for assessment purposes. The Fort à la Corne Project is a joint venture among Kensington Resources Ltd., (42.25%), De Beers Canada Exploration Inc. (DBCEI) (42.25%), Cameco Corporation (5.5%) and UEM Inc. (10% - carried). Cameco Corporation and Cogema Ltd hold UEM's North American interests. DBCEI is a wholly owned subsidiary of De Beers Consolidated Mines Limited.

The Fort à la Corne Joint Venture currently holds 52 kimberlite bodies located in the main northwesterly trend and an additional 11 kimberlites in a satellite cluster located some 60 km to the east. This kimberlite field is distinctive in that many of the world's largest kimberlite bodies were remarkably well-preserved after emplacement during Cretaceous time some 100 million years ago. The kimberlite bodies range in size from 3 to >250 hectares with early estimates of individual mass as high as 675 million tonnes. Of the 74 kimberlite targets identified in the Fort a la Corne field, all but one has been drilled at least once since the inception of drilling in 1989. In total, 300 drillholes have either penetrated kimberlite or have been terminated above kimberlite. In general, the kimberlites dominantly are composed of crater, volcaniclastic Type 1 kimberlites with an irregular "champagne-glass" to disc-shaped form, typically described as thicker in the middle and attenuating towards the margins. The areal outline and estimated mass of the kimberlites were based on geophysical modeling of ground magnetic data and drillhole intersections based on an outside 30 metre thickness cut-off. Kimberlite bodies in the Fort à la Corne Field range from 3 to >500 million tonnes in mass and 3 to 250 hectares in area. Kimberlite bodies with combination of recent magnetic and gravity data (2000 onward) are currently undergoing re-modeling to delineate more accurate outlines to the estimated 30 metre thickness cut-off. The architecture of the kimberlite bodies ranges from simple to complex in terms of number of discrete units or layers and occurrence and coalescence of proximal eruptive centers. The overall horizontal to sub-horizontal attitude of the kimberlite units changes with proximity to eruptive centres where more vertical kimberlite phase relationships and vent margins, and structural faults are present.

Diamond recovery from kimberlite samples from the tested bodies indicate approximately 70% of the kimberlites are diamond-bearing, and 50% are macrodiamond-bearing (based on recovery of stones >0.85 mm in one dimension). These figures indicate Fort à la Corne to be the largest macrodiamond-bearing kimberlite field in the world. Some targets have become the focus of more detailed exploratory and evaluation work during the life of the project (e.g. kimberlite bodies 120, 122, 140, 141, 145, 148, 169) utilizing various drilling methods ranging from small diameter core to large diameter reverse circulation drilling, and sampling protocols that have evolved from single sample per drillhole to interval testing with resolution as fine as several metres. In addition to testing for diamond content, a series of geophysical surveys, geochemical, and petrologic studies have contributed to understanding the architecture and emplacement history of the kimberlites.

The project objective is to delineate mineable diamond resources from high-priority kimberlite bodies in a methodical and step-wise approach. Five bodies were prioritized in 2000 on the basis of kimberlite size, diamond content, and overall economic potential. The current focus is on further evaluation of diamond content, diamond distribution, and average diamond value in kimberlite body 140/141 utilizing phased core drilling for investigation of geological relationships and recovery of microdiamonds, followed by strategic placement of large diameter reverse circulation drillholes for acquisition of minibulk samples for macrodiamond recovery. This level of investigation ultimately is geared towards defining an inferred resource within the 140/141 kimberlite body. In addition, advanced exploration/early evaluation work is underway on other high-priority kimberlites including body 122, 148, and 150.

Sample grades for the eleven 610 mm diameter boreholes drilled in 2000 and 2001 range up to 41.5 carats per 100 tonnes (cpht) and cumulatively average 5.5 cpht. Notably, the high-end sample grade includes the 3.335 carat stone recovered from a 2001 sample. Grade estimates derived from statistical modeling of diamond size distributions for kimberlite 141, by DBCEI ranged from 5 to 12 cpht. These estimates are extrapolations for stones greater than 1.5 mm in size and pertain only to the central portion of kimberlite 141 where testing was conducted during 2000 and 2001. Actual average parcel diamond values for the 2001 stones were posted at $US 52.60/carat, reflecting a substantial increase from $US 33.67/carat for the 2000 stones.

Modeled dollar per carat values in diamond exploration takes account of the expected diamond size distribution from any potential, future production scenario. An average dollar/carat value is based on diamond values extrapolated upwards to include recoveries modeled in the larger diamond sieve sizes. A model for 141 was fitted around the actual dollar per carat per sieve class recoveries leading to average values for all of the applicable diamond sieve categories. Combination of the modeled revenue curve and diamond size distribution yielded updated dollar per carat value estimates. This gave modeled values for macrodiamonds from 141 that range from $US 20 to $US 220/carat. Modeled values were combined with grade estimates and dollar per tonne values were calculated for the modeled size distributions. Hence, as a preliminary assessment of revenue based on value and grade estimates, De Beers indicates a range from $US 1 to $US 26/tonne. Confidence limits of 80% for the modeled values and preliminary assessment of revenue reflect variability in diamond size distribution and diamond value, and not of grade. However, the Company considers all estimates, particularly those of grade, with low confidence in respect of newly-defined geological complexity (at least 4 phases of kimberlite) and variations in diamond size distribution in the 141 and 140 bodies, overall small diamond parcel sizes, and low levels of sampling across the breadth of the body (nugget-effect).

Valuation of the 2000/2001 diamonds was conducted during November 2002 by WWW International Diamond Consultants Ltd. (hereafter, WWW). WWW indicated an overall average value based on its open market price book some 15-20% higher than that listed by De Beers for the same diamond parcels. The De Beers valuations were made utilizing the DTC June 2002 price book. The single large stone measuring 3.335 carats that was recovered from large diameter drillhole 141-20 was given a value of $US 450/carat, compared to $US 390/carat attributed by De Beers. WWW also pointed out the technical difficulties of putting a realistic market value on a relatively small geological sample. The principals of WWW are associated with the Kensington Technical Committee and also may have a financial interest in Kensington Resources.

A total of 669 macrodiamonds weighing 93.76 carats were recovered from the 2002 kimberlite samples. A cluster of three 36" diameter holes were drilled within close proximity of 141-04 and a total of 48.24 carats were recovered. In addition, MRM recommended improving understanding of the geological model for the kimberlite through core drilling that would also provide opportunities for identification of coarser grained zones. A substantial amount of geological investigation continues on core drilled from the 140/141 body. In summary, five geological subdivisions were utilized for modeling evaluating diamond results. Based on kimberlite intersections in these coreholes, five - 24 inch diameter drillholes were drilled in locations extending from the 141 central area to the 140 central area. Of these holes, one was targeted to investigate the "fine-grained vent" intersected at corehole 141-33, and the others to test the assumed extension of the mega-graded bed. A total of 45.09 carats were recovered from these drillholes. A total of 54 macrodiamonds larger than 0.25 carats weighing 42.0255 carats were recovered from the samples. Recovery of large stones included the following: 10.23 cts., 3.61 cts., 2.59 cts., 2.57 cts., and 1.82 cts. from the five - 24 inch diameter drillholes.

The coarsest diamond size distributions were seen in the Mega-graded-coarse, Kimberlite Breccia and Fine-grained Vent units, although the distribution of the latter unit appears anomalously coarse due to the presence of a 10.23 carat stone. The Mega-graded bed-coarse shows the most consistency across the micro- and macro-diamond size ranges reflecting the larger number of recovered stones of all sizes, particularly with addition of the diamonds from the three - 36 inch diameter holes. The other kimberlite units show varying numbers of stone counts, but all are substantially less than the coarse mega-graded bed and highlight the uncertainty associated with grade results generated in this report.

The average borehole sample grades ranged from 2.86 – 17.026 cpht, while grade forecasts based on statistical extrapolation of combined micro- and macrodiamond recoveries show a range of averages per kimberlite phase from 5 to 15 cpht. Corresponding modeled value figures derived from average grades and actual values ranged from $US 67 – 97 per carat.

A considerable expansion of exploratory work was implemented in 2003 with the drilling of 49 HQ coreholes over 4 different bodies. The southern and western parts of 140/141 were targeted with 10 coreholes to test kimberlite phases with perceived higher grades. The remainder of the program drilling was divided between kimberlites 122, 148, and 150. In each body the core was logged in detail to identify discrete phases and contacts to guide sampling for diamond recovery using caustic dissolution methods. Diamond recoveries for kimberlites 148, 140/141, and 122 totaled 3,545 stones (2,059, 1,159, and 327, respectively). Diamond abundances for 148 and 140/141 were both exceptionally high compared to historical results for those bodies, and for the Kimberlite Field as a whole. Diamond recoveries for samples from Kimberlite 150 will be reported as they are received from the operator. Recent diamond recoveries from these four high-priority kimberlites will be utilized for grade forecasts based on statistical evaluation of size distribution data. This information, and estimates for the size and extent of the high-grade zones, will be used to determine the scope and direction of field programs during 2004. In addition to caustic recoveries, a single white, clear 0.77 carat octahedroid macrodiamond was encountered while splitting core from the top of kimberlite in drillhole 140-34. This stone was not incorporated in the stone counts or dataset utilized for grade forecasts. Rather it stands alone as further proof for the large stone potential of the 140/141 kimberlite.

A notable and relevant aspect of diamond resource evaluation at Fort à la Corne is that most historical microdiamond recovery, all current macrodiamond recovery, and all diamond content interpretation is conducted by DBCEI or corporate affiliates/subsidiaries of De Beers Consolidated Mines Limited of South Africa. DBCEI is the operator of the project and a senior participating partner of the Fort à la Corne Joint Venture Project. Hence, all analytical work, diamond recovery, and interpretive diamond evaluation is done "within arms reach", although Kensington Resources Ltd. frequently monitors, audits, and reviews procedures and results utilizing both affiliated and independent consultants. Reports and diamond results received from DBCEI for the project are reviewed and utilized by Kensington Resources under the supervision of Brent C. Jellicoe, P.Geo., who is the recognized Qualified Person for the Company. The Company is gradually enlisting the help of appropriate, independent Qualified Persons to help in the review and approval of technical material outside of the realm of Mr. Jellicoe's expertise, or where an independent opinion or approval must be provided.

1.0 Introduction and Terms of Reference

A technical report detailing exploration and evaluation of the Fort à la Corne Kimberlite Field in east-central Saskatchewan was prepared for Kensington Resources Ltd. for various informational uses, though primarily for an updated description of technical work carried out by the Fort à la Corne Joint Venture (FalC JV) and results reported by the operators of the FalC JV. In addition, some results are included from independent consultants working for the Company. This report was prepared by Brent C. Jellicoe, of Jellicoe Resource Associates (Saskatoon). Mr. Jellicoe is a professional geoscientist, registered in the Province of Saskatchewan, who operates a sole proprietorship consulting business, focused on project management, drilling, kimberlite exploration and evaluation, and regional subsurface geology. Mr. Jellicoe is currently working with Kensington as a consultant under the title of Project Manager, and periodically as the onsite Drilling Manager for the FalC JV partners during implementation of field programs. From time to time, the consultant also conducts independent geological investigations and drilling programs for other companies operating in the Fort à la Corne vicinity.

Sources of data for this report include:

- public reports issued by Saskatchewan Industry and Resources (SIR), typically in the form of Assessment Reports and Open File Reports,
- non-proprietary descriptions and results released by the FalC JV,
- information derived from various journals and scientific papers, and
- data and interpretations collected by, and formed by the author during an extended period of time intimately associated with the project area (1992-2002).

The author has worked in and around the Fort à la Corne area since 1992 as a consultant and employee, both in the office and in the field, for several different organizations including those considered to be junior exploration companies and for senior mining companies. In addition, the author has previous experience garnered from 5 years of research concerning geochemical and stratigraphic concepts of the kimberlite host rocks within the Western Canada sedimentary Basin, and most particularly within Saskatchewan

The purpose of the report is to summarize historical investigations into the geology, size, and diamond content of the Fort à la Corne kimberlites and to document recent and results, particularly those relevant to the current focus of attention. This report is to be updated as required and utilized as the technical basis for legal, financial, and securities related business of Kensington Resources Ltd.

2.0 Disclaimer

Analytical results and interpretations specifically including indicator mineral abundances and geochemistry, Ni-thermo-barometry, PIMA, received during the period 1992-1997 and not including any actual diamond recovery and statistical results, are not relied upon for qualification or estimate of economic potential for any kimberlite bodies. Analytical procedures, personnel, and facilities typically were "within arms reach" and it is not known if the authors of those reports were "Qualified Persons" as defined by National Instrument 43-101.

Although macro- and microdiamond recoveries from kimberlite bodies are noted where relevant, the economic significance of these values is not discussed and is beyond the intended scope of this report. The FalC-JV, Shore Gold and the Candle Lake joint venture have reported diamond recoveries in various news releases. The FalC-JV announced revenue modeling results completed by De Beers for the 122 and 141 bodies (2000 drilling and sampling program) based on stone size population projections and value models. The modeling process utilizes accumulated historical information which is proprietary to De Beers and cannot be directly verified by Kensington Resources Ltd. at this time.

Sources of information on prior exploration work in the Fort à la Corne area are available as technical reports filed with Saskatchewan Industry and Resources in fulfillment of annual assessment requirements that become non-confidential after 3 years. These reports, dating from 1989, do not necessarily provide a complete record of exploration work. Assessment reports have not been filed for the last two years because sufficient assessment credits remain available to the FalC Joint Venture to retain claim to most of the land base for the maximum allowable time period. Other sources are peer-reviewed papers which contain data believed to be accurate, along with interpretations which may be subject to change.

The Phanerozoic stratigraphy in the Fort à la Corne area and the processes of kimberlite emplacement, erosion and preservation are topics of on-going research by the Geological Survey of Canada, Saskatchewan Geological Survey, and the FalC-JV. Detailed stratigraphic correlations have not been attempted within the present report, and inferences drawn from previously reported stratigraphy may be subject to revision, pending a compilation of available information.

Property descriptions and land status were provided for this report by Barbara Stehwien, a consultant in Saskatoon, tasked with maintaining the land records of the project by DBCEI.

Results and interpretations for the 2001 diamond recovery program were summarized from a report signed by Wynand Kleingeld (identified as the De Beers Qualified Person) and a team of geoscientists working for De Beers Mineral Resource Services (MRS). This report comments on statistical grade forecasts, modeled diamond valuations, and correlation of described lithology with distribution of diamond size frequency models. These interpretive results are very important for providing indicators of economic potential and for influencing exploration strategy. Results from the MRS Report are considered controversial at this time and a third party opinion of the report assertions was sought from an independent Qualified Person. Reports from the independent QP indicated assertions concerning certain concepts and associations included in the interpretive results were premature, or not well supported. In order to provide timely release of material information, the main results of the MRS grade forecast results were reported by Kensington Resources Ltd. in a news release, but without explanation of the controversial interpretations or dissenting opinion. The decision to release a summary of the MRS interpretive results as ranges of values, without a full discussion, is supported by consideration of the early stage of evaluation for the 140/141 kimberlite. Also, results from the 2002 drilling and sampling program will either corroborate or disprove the somewhat premature and not fully supported assertions made in the MRS Report that were identified in the report by the independent Qualified Person.

In November 2002, the FalC-JV partners initiated a Conceptual Modeling Study for the Fort à la Corne diamond property through the operator, DBCEI. The main objectives of the study were to determine the ore values ($/t) that would be needed to reach minimum hurdle rates for a number of diamond mining scenarios. Also tasked in the study was identification of critical information that would be needed if the project proceeds to more detailed engineering studies and to identify high-risk areas, which require planning of mitigation measures as the project evolves. Most information comprising the bulk of the investigation was available through the operator, derived from expertise gained in similar mining venture elsewhere in the world, from local sources, and from multi-disciplinary input from AMEC experts and the FalC-JV partners. No engineering designs were produced and assumptions and estimates were made in many areas given the generic sense of the report and that the project is still in the early phase of evaluation. Consequently, grades and diamond values were not utilized in calculating revenue streams, nor was any reference given to an inferred resource, which as yet, does not exist. The study was facilitated by framing the mine modeling after the basic characteristics of some of the larger Fort à la Corne kimberlite bodies, primarily the 140/141 kimberlite, which is the focus of current exploration by the FalC-JV partners. The primary use of the financial models and results from the study is to indicate resource and revenue criteria that would be required to meet the stated joint venture pre-tax hurdle rate. Hence, the study is primarily an internal tool designed to provide direction for further exploration and evaluation in the project area. Any release of information to the public is purely as a matter of record in regard to certain aspects of the report being deemed material to Kensington Resources Ltd.. At present, the results of this study have not been made public by Kensington Resources Ltd. in deference to the JV partners who have indicated a desire to maintain the document as an "in-house" reference.

3.0 Property Description and Location

The Fort à la Corne Project is located in central Saskatchewan (Figure 1), and is contained within NTS map sheet 73H. A legally surveyed claim block covering much of the main trend of kimberlites lies approximately 65 km east of Prince Albert and extends northward from the Saskatchewan River to a few kilometers north of Shipman. An additional smaller claim (also legally surveyed) covers magnetic anomalies near Snowden, located some 120 km northeast of Prince Albert.

Claims which fall within the surveyed (southern) portion of the province are defined in terms of legal sections or subdivisions. Road allowances, typically 20 m in width, fall between sections and are separate legal entities. In November 2001, Saskatchewan Energy and Mines (now Saskatchewan Industry and Resources or SIR) amended the description of mineral claims in the surveyed portion of the province to allocate road allowances to adjacent claim holders so that claim coverage can be seamless. The FalC-JV land holdings are spread across portions of township blocks from T.49 to T.52 and R.18 to R.21. Approximately 70% of the claims are within the boundaries of the Fort à la Corne Provincial Forest Reserve (Government of Saskatchewan crown lands) and the remainder is under private landholder's surface rights, but without freehold mineral rights. Surface access to private land is by negotiation usually resulting in payment of an access fee. A map indicating kimberlite outlines and the FalC-JV's land holdings is shown in Figure 1 on page 10. A total of 63 kimberlite bodies are held by the FalC-JV at this time.

After ten years, the annual expenditure requirement to maintain good standing for claims increases from $12 to $25 per hectare. Grouping of contiguous claims is allowed to a maximum block size of 10,000 hectares. Reports submitted in support of assessment fillings are held confidential by Saskatchewan Industry and Resources for a period of 3 years.

In agricultural areas, surface access must be negotiated with individual landholders, and with the approval of the Rural Municipality (in this case, the RM of Torch River, with offices in White Fox, Saskatchewan). The Rural Municipalities commonly impose heavy vehicle restrictions (road bans) during spring thaw (2-3 weeks). Permits for all exploration field activities are administered by Saskatchewan Environment and Resource Management (SERM), in this case from their Prince Albert office. No part of the project lands are subject to specific environmental liabilities above or beyond those responsibilities assumed under permitting of exploration programs.

As of December 31, 2002, land holdings held under the joint-venture agreement include 121 claims totaling 22,544 hectares that are divided into four groups for assessment purposes. The property status for the FalC-JV land holdings is shown in Table 1. All claims were acquired during the period 1988-1990 and are subject to assessment rates proscribed for claims older than 10 years. All disposition groups are protected until at least 2009, with the main claims of interest in group FalC (E) protected until at least 2021. A summary of titles is shown in Table 1 below. Assessment credits for Group 44961 (known as FalC East) were not applied for in 2002 for the 2001 expenditures given consideration of the new Saskatchewan Mining legislation that puts a maximum on the number of years to hold an exploration disposition (21 years total, from 2002 onwards). Suitability of application for assessment credits will be reviewed by the FalC-JV partners on a yearly basis.

Table 1: FalC-JV Property Status as of December 01, 2003

Claim Group	Area (Ha)	Annual Assessment	Year Protected To
44961 FalC East	9,984	$249,600	2021
45031 Snowden	2,176	$54,400	2009
45130 FalC Southwest	5,328	$128,208	2027
45131 FalC Northwest	5,056	$111,008	2014/15/16
Total:	**22,544**	**$543,216**	

The Fort à la Corne Project is a joint venture among Kensington Resources Ltd., (42.25%), De Beers Canada Exploration Inc. (DBCEI) (42.25%), Cameco Corporation (5.5%) and UEM Inc. (10%). Cameco Corporation and Cogema Ltd hold UEM's North American interests. Neither UEM nor Cameco elected to fund exploration in 1999 or 2000, although Cameco did fund to their percentage interest in the FalC-JV during the 2001 and 2002 programs. UEM retains a 10% free carried interest in the project. Monopros Limited (later DBCEI) replaced Uranerz as operator of the FalC-JV in December 1998. At the end of November 2002, participating interests (PI's) in the FalC-JV remains as follows:

Kensington Resources Limited 42.25%
De Beers Canada Exploration Inc. (operator) 42.25%
Cameco Corporation 5.50%
UEM Inc. 10.00%

3.1 Historical Landmarks for the Fort á la Corne Diamond Project

- In August of 1988, spurred by rumors of kimberlite discoveries near Prince Albert, the presence of kimberlite-type intrusions in and around the Fort à la Corne Provincial Forest were interpreted by Uranerz Exploration and Mining Ltd. using published aeromagnetic maps of the area compiled by the Geological Survey of Canada.

- In June of 1989, the Fort à la Corne joint-venture project was created between Uranerz Exploration and Mining Ltd. and Cameco Corporation; Uranerz remained as project operator until 1998. Kimberlite was successfully intersected in each of 7 drillholes targeted on geophysical anomalies.

- DBCEI joined the joint venture in 1992 under a three-year earning-in period, after which time, the three partners each held a 331/3% equity in the project. DBCEI satisfied earn-in requirements by the end of 1994.

- Kensington Resources Ltd, a junior exploration company involved in the search for diamonds in Saskatchewan, was invited to the joint venture in 1995 under a three-year earning-in period, after which time the four partners each held a 25% equity in the project. Kensington satisfied earn-in requirements by the end of 1997.

- Cameco Corporation acquired Uranerz Exploration and Mining Ltd. during the third quarter of 1998. Cameco assumed the 10% carried participating interest held by Uranerz and became interim operator of the project.

- DBCEI became operator of the project effective December 1998.

- Kensington and DBCEI have actively funded exploration throughout their involvement in the project, while the participating interests of Uranerz and Cameco have been reduced due to periods of non-funding from 1992 to 1999 (not including periods of time when new joint venture partners were earning-in).

- During 2001, the FalC JV sold a block of 4 claims located near Weirdale (1024 ha in area) which contain 2 drilled kimberlite bodies,

- During 2002, the FalC-JV sold a block of 12 claims near Foxford (1088 ha), which contain 2 drilled kimberlite bodies, and a block of 5 claims located northeast of Birchbark Lake (320 ha) which contains a single drilled kimberlite body to Shore Gold Inc.

- All FalC-JV partners funded exploration and evaluation programs during 2001, 2002, and 2003 except for UEM.

4.0 Accessibility, Climate, Local Resources, Infrastructure and Physiography

The property lies 65 km northeast of the City of Prince Albert, population 42,000, which is served by road, rail and scheduled air links. The closest settlements are a series of villages located along Provincial Highway 55, which link Prince Albert and the town of Nipawin. The highway roughly marks the northern margin of an agricultural belt which extends to the White Fox River in the south. This region is close to the northern limit of arable agriculture in this segment of the province. The nearest point of juncture for power and phone lines is approximately 25 km towards the Town of Smeaton.

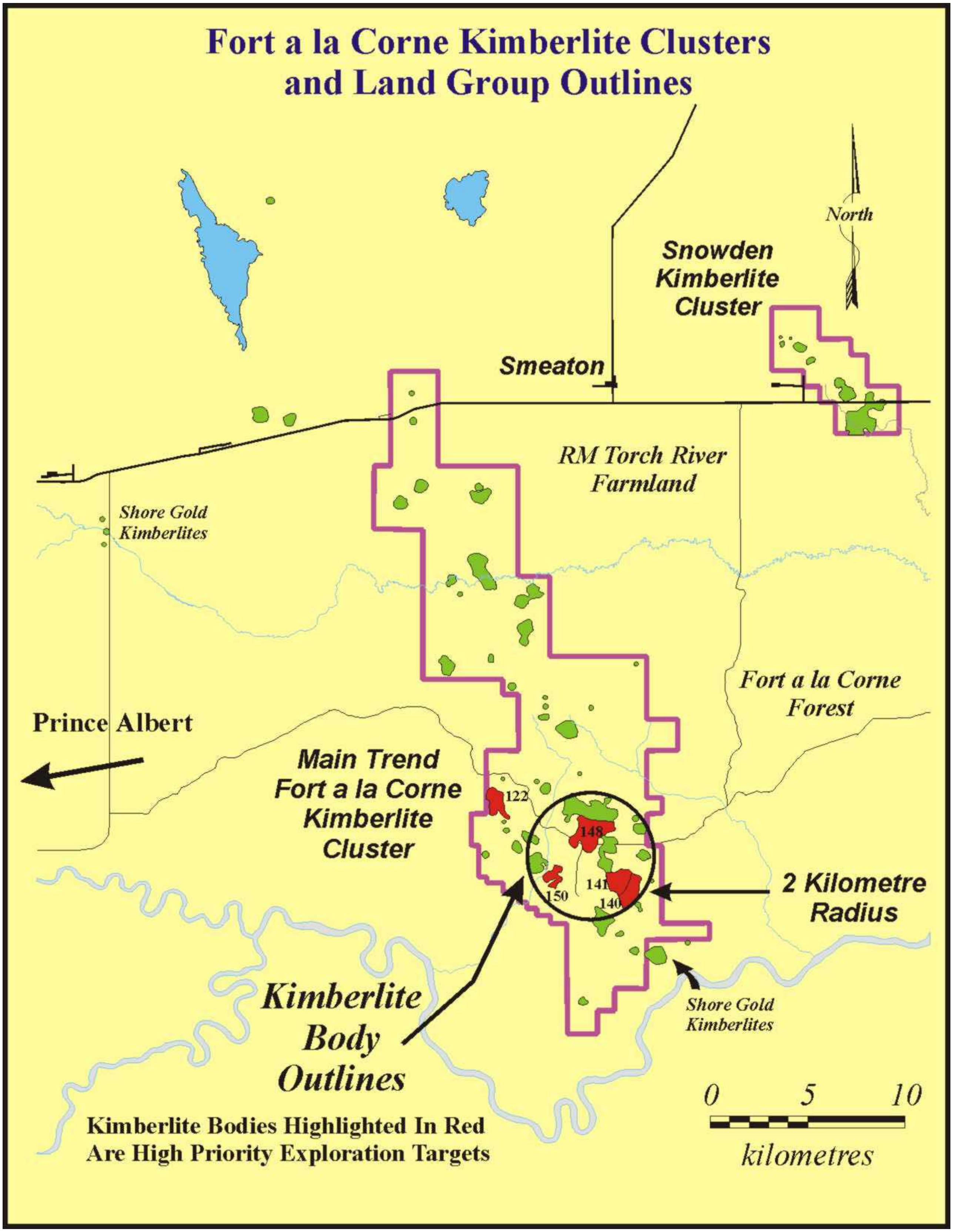
A network of logging roads and 4-wheel drive trails provides access within the forested areas. The best of these sand roads are open all year and are maintained by area logging companies and by the FalC-JV during field operations. Provincial Highway 55 traverses the Snowden claims and also is a main trunk road from which gravel grid roads surround the northern claims situated under cultivated land.

The Fort à la Corne Forest and this portion of the Northern Provincial Forest fall within the boreal transition eco-region which defines the gradation from the grasslands and aspen groves of the south to the true boreal forest of the north. The Forests are mature, with a predominance of jack pine. Aspen, alder, white and black spruce, poplar and tamarack are found in local stands. The average elevation of the area is 450 metres above sea level, with local relief of less than 50 metres in narrow creek valleys. The immediate area of the main exploration/evaluation focus around kimberlite 1140/141 has local relief of less than 20 metres and is predominantly flat or with subtle hills.

Climate data has recently been compiled by the University of Saskatchewan Geography Department as part of the Atlas of Saskatchewan Project (1999). The climate of the Prince Albert region is described as humid continental, cool summers (Köppen temperature and precipitation classification). The annual mean temperature (100 year average) is 0.8°C. Monthly mean temperatures vary from -19°C (January) to +17°C (July). The average annual number of hot days (30°C or higher) is 6. The average annual number of very cold days (-30°C or lower) is 29. The annual mean precipitation is 406 mm, with precipitation (0.2 mm or greater) in 21 days per year, on average.

The uranium and gold mining operations of northern Saskatchewan are serviced in part by Prince Albert area businesses, and draw skilled labour from this area. Electrical power is generated nearby (the E.B. Campbell Hydro Generating Station on the Saskatchewan River east of Nipawin) and telecommunications infrastructure is in place.

Figure 1: Map showing Fort à la Corne Joint Venture Claim Groups and Kimberlite Body Outlines



5.0 History

The area has not been explored for the occurrence of kimberlites previously, although there are reports of a prospector having found as many as five diamonds in the Melfort-Nipawin area sometime prior to the Second World War. The story however, remains unsubstantiated as the diamonds were reportedly lost in a fire. A prospector hoping to follow-up on this report requested a permit from the provincial government in 1948 for exclusive diamond prospecting within Saskatchewan. The venture was abandoned because the government was only willing to grant a permit area of 259 km2.

The next report of diamond related activity was in 1961 when several stones were reportedly discovered in gravels downstream from Sturgeon Lake (northwest of Prince Albert). However, nothing of any substance developed as a result. At around the same time, a subsidiary of De Beers was reportedly conducting a regional exploration program throughout southern Saskatchewan. A full description of exploration activities leading up to the discovery of diamondiferous kimberlites in the Fort à la Corne area is given in Lehnert-Thiel *et al*. (1992). To date, no formal mineral resource or mineral reserve estimates for diamond have been made in the Fort à la Corne area.

Other than several aggregate deposits, no economic occurrences of minerals, oil or gas are known in the project area. Zones of banded iron formation in the Precambrian basement near Choiceland were investigated in 1955 by IREX and IPSCO. The IREX-Zone (155 Mt grading 28% Fe) and the IPSCO-Zone (55 Mt grading 27% to 29% Fe) were found to be uneconomic. A third body, the Kelsey Lake Zone investigated in 1975 (390 Mt at 34% Fe), was also found to be uneconomic. These deposits lie approximately 600 m below surface and were found to consist of interlayered bands of magnetite and hematite dipping 65 to 70 degrees to the east.

Oil and gas exploration wells have been drilled throughout the area, but none of them currently produces hydrocarbons. Groundwater exploration holes, water well, and oil and gas exploration holes are the main sources of information on the sub-Quaternary geology within the project area. Notably, none of these holes was ever reported to have encountered kimberlite.

Geological information on the area is available from groundwater testholes and oil and gas exploration wells. Geological maps of Quaternary deposits and other Phanerozoic units are available at a scale of 1:250,000. Information on the Precambrian basement within the project area is largely restricted to inferences gathered from airborne magnetic surveys. Data from a 1969 GSC airborne magnetic survey is available on 1:253,440 scale map sheets.

5.1 Activities by Competitors in the Fort à la Corne Area

Spurred by the public interest generated both by the results obtained from the Fort à la Corne Project and by the activities of the large number of companies actively exploring for diamonds across much of Canada, an area in excess of 100 km north-south x 80 km east-west, centred on the FalC-JV dispositions, is almost completely staked by in excess of 20 different companies. (NTS mapsheets 63L, 73G, H, I, and J).

Great Western Gold Corp. (GWG) and War Eagle Mining Co. Inc. jointly control two blocks of claims, termed the Candle Lake properties, at the north end of the Fort à la Corne kimberlite field. The southern block of claims is adjacent to the Rampton/Consolidated Pine Channel/United Carina Smeaton Property and contains the Candle Lake #28 kimberlite body. In all, and including a block of claims registered to Northmin Development, Great Western Gold and War Eagle Mining control 48 claims for a total of 22,882 ha. GWG conducted delineation drilling on Kimberlites 28, 29, and 30 during the mid 1990's and was joined by Kennecott Canada in a joint venture to bulk sample Kimberlite 28. Kennecott collected a small minibulk kimberlite sample from drilling, but experienced severe drilling difficulties due to poor ground conditions. Kennecott eventually defaulted withdrew from the earn-in agreement due to corporate reasons. During 2003, GWG expanded their interest in the Candle Lake kimberlite properties with corresponding dilution of participating interest held by War Eagle Mining Company. A new core drilling program was implemented in 2003 and results have not yet been released by GWG.

United Carina Resources and Consolidated Pine Channel Gold were major participants in the exploration boom of 1993-94, with programs of aeromagnetic and follow-up ground magnetic surveys and drilling in the Montreal Lake – Wapawekka Lake area to the north, and the Torch River area east of Fort à la Corne. These companies recently renewed their kimberlite exploration programs by acquiring sizeable properties in the wider Fort à la Corne area and claims adjacent to the Cameco/DBCEI/Kensington kimberlite 122 on the west side of the main kimberlite cluster, during 2000. United Carina and Consolidated Pine Channel currently hold 55,147 hectares in 259 claims in the Fort à la Crone area.

A very large land position was acquired by Buckshot Holdings and Commando Holdings during 2001, and has been increased during 2002. The 597 claims cover 237,388 ha and extend from the Paddockwood area north of Prince Albert to Choiceland and Highway 6 in the east, surrounding the FalC-JV land on all sides except south of the Saskatchewan River.

Two more large land positions were acquired in December 2001. Twin Oaks Management staked most of 3 townships near Foxford and northeast of Birchbark Lake. The 30 claims cover 24,736 ha. General Resources Inc. acquired 46,694 ha in 100 claims, which incorporate most of 5 townships and parts of 2 more, extending north and northwest of the Rampton/Consolidated Pine Channel/United Carina Smeaton Property towards Candle Lake and also in the Weirdale area. In addition, Geodex and Forest Gate Resources each have claims located south and east of the FalC-JV lands, respectively.

Up to 2003, some limited drilling has been completed in the immediate vicinity of the FalC Kimberlite Field as well as further to the north (Smeaton, Wapawekka, and Candle Lake), although much of the work is of a speculative and promotional nature. These activities have indicated the presence of three kimberlites north of the Fort à la Corne area and two kimberlites (anomalies 137 and 139) in the former Crown Reserve along the southeast margin of the joint-venture land holdings. Shore Gold Inc. continues to maintain an interest in these southern-most bodies, and has extensively drilled the Star Kimberlite Body (anomaly #139) including core drilling and one 24 inch diameter, reverse circulation drillhole. On the basis of extensive work to produce a geological model for the Star Kimberlite by the Geological Survey of Canada, the Saskatchewan Geological Survey, Dr. John Bowles of Mineral Science Ltd., and consultants with ACA Howe, Shore Gold planned and initiated a bulk sample program to sample up to 25,000 tonnes of kimberlite for diamond recovery. A 4.5 metre diameter shaft was excavated during 2003 and 2004, and work continues on sampling the vertical and horizontal extend of kimberlite near the interpreted main vent of the Star Kimberlite. The shaft is currently at a depth greater than 230 metres and both horizontal drifting and underground delineation drilling are ongoing. Kimberlite samples are being processed through a 10 tonne per hour Dense Media Separation facility with final diamond recovery from DMS concentrate in a procedure combining x-ray sorting, grease table technology, and hand-picking.

In addition to the Weirdale, Foxford, and Birchbark Lake claims recently purchased from the FalC-JV, Shore Gold Inc. have progressively increased their land holdings at the southern margin of the Fort à la Corne area since 1995. Their most recent staking acquisitions were 3 small claims (60 ha) located at the junction of the North and South Saskatchewan Rivers. Shore Gold Inc. currently holds 138 claims for a total of 23,952 ha. Under an earn-in agreement with Shore Gold, Skeena Resources drilled two NQ coreholes into two different kimberlites within the Weirdale cluster. Both holes intersected kimberlite and core samples were submitted for diamond recovery. The evaluation program did not continue due to low diamond recoveries and Skeena withdrew from the earn-in agreement.

IPSCO maintains a small, scattered land base within a few 10's of kilometers of the joint venture land holdings. A core-drilling program, reputed to include 3-4 drillholes, was conducted during the third quarter of 1999 on claims located east of the joint venture land holdings and close to Highway #6, which bisects the Fort à la Corne Forest Reserve from north to south. Results from these drillholes have not been reported yet.

Shane Resources Ltd. and a small consortium of companies have several coreholes in the vicinity of Smeaton, in the southern part of the Fort à la Corne Forest, and immediately west of the joint venture holdings near the

122 kimberlite body. Drilling in the Smeaton area intersected thin kimberlite stringers on the margin of a known kimberlite body and a few, thin kimberlitic horizons were interpreted from the more recent drillholes (2001) located near the 122 kimberlite. The latter claims are now being managed by Forest Gate Resources Inc.

Forest Gate Resources drilled a small geophysical anomaly east of the Joint Venture landholdings approximately 2 kilometres from kimberlite body 119 during the 2nd quarter of 2003. Their first NQ drillhole intersected kimberlite, but the hole was lost after intersecting some 26 metres of kimberlite. Subsequent attempts to intersect kimberlite by NQ and HQ coreholes were defeated due to bad ground conditions in the glacial overburden causing the holes to be lost above kimberlite. Forest Gate resumed investigation of the Dizzy Kimberlite during November 2003. Five NQ holes were targeted on the central part of the magnetic anomaly, all within some 50 metres of the discovery hole. Details and results of the drilling program have not yet been released by Forest Gate.

Casavant Mining Kimberlite International (CMKM) drilled a known, small kimberlite body (the "Smeaton Kimberlite") located approximately 10 km north of the northwestern end of the main FalC kimberlite trend. Their drillhole encountered kimberlite, but the extent of sampling currently is unknown. The drillhole was completed during the first quarter of 2004. Historically, the Smeaton Kimberlite has been penetrated during at least three other drilling programs by junior exploration companies including Shane Resources Ltd. Meager recovery of microdiamonds has previously been reported, but no effort has been made to substantially sample the kimberlite.

During April of 2004, Garnet Point Resources Corp. and Global Prospecting Ventures Inc. created a joint venture to evaluate potential for small-scale mining of the Sturgeon Lake glacially-rafted kimberlite block located west of Prince Albert. The companies also mobilized a drill to their Candle Lake Claims located east of the narrow Hills Provincial Park for a 5 hole NQ drilling program. Geophysical anomalies identified in a ground geophysical program by contractor, Spectra management Corp., were targeted by the holes, but no kimberlite was intersected. The target anomalies occur in a broad tract of land that was thought to be in line with the northwest trend of the main FalC Kimberlite Field.

6.0 Geological Setting

6.1 Basement Geology

The project area lies near the northeastern rim of the Interior Platform of North America. The platform is covered by a series of sedimentary rocks over Precambrian basement in a 600 to 1,200 km wide belt between the Rocky Mountains to the west, and the Canadian Shield, which crops out towards the northeast. Little is known of the metamorphic basement underlying the kimberlite area except from 1950's- and 1960's era exploration work at the nearby Choiceland banded iron formation deposit. Aeromagnetic and gravity data suggest that crystalline basement in the Fort à la Corne area is geologically similar to the Glennie Domain, which is exposed further to the north in the vicinity of Lac La Ronge (Lewry, 1981; Green *et al.*, 1985 Collerson *et al.*, 1989; Kjarsgaard, 1995; Leclair and Lucas, 1995). The Glennie Domain is part of the Reindeer Zone of the 1.8 Ga Trans-Hudson Orogen (Lewry *et al*., 1994) and is composed of Paleoproterozoic island arc volcanogenic successions separated by reworked Archean granitoids and granitic gneisses (McNichol *et al*., 1992). Recent integration of field mapping, radiometric dating and LITHOPROBE seismic investigations, summarized by Chiarenzelli *et al.* (1996), indicates that the Glennie Domain blankets the apex of a largely buried Archean microcontinent (see also, Ashton *et al.*, 1997; Ansdell *et al.*, 1995), which has been named the Saskatchewan Craton (Chiarenzelli *et al.*, 1996).

The shape and size of the Saskatchewan Craton is poorly understood; however it has been described as a roughly 500 km long by 200 km wide westward convex bow bounded on the west by (and dipping under) the La Ronge belt and on the east by the Flin Flon belt and Caisson Domain (Chiarenzelli *et al.* 1996; Green *et al.*, 1985). It is suggested that the Saskatchewan Craton probably provided a thick lithospheric keel, which is a feature of diamondiferous kimberlite provinces elsewhere. A recent teleseismic study of south-central Saskatchewan (Bank *et al.*, 1997) supports this model.

6.2 Phanerozoic Geological Setting

Throughout much of Phanerozoic time, most of Saskatchewan was the site of episodic marine deposition, with periodic intervals of erosion brought about both by craton uplift and by regression of marginal and epeiric seas which extended over much of the North American continent (Kauffman and Caldwell, 1993).

The central Saskatchewan region is underlain by over 700 metres of Phanerozoic sedimentary rocks. The basal 440 metres consist of Cambro-Ordovician to Devonian sandstones and carbonates, followed by 150-170 metres of Cretaceous shale and sandstone which are overlain by up to 130 metres of unconsolidated Quaternary deposits. Paleozoic and Mesozoic strata dip gently toward the southwest. In central Saskatchewan, this results in successively lower strata being exposed at the sub-Quaternary interface towards the northeast. Within the project area, subcrops of Cretaceous Colorado Group and Mannville Group strata underlie the topographically irregular basal Tertiary/Quaternary unconformity.

Potential diamond-bearing strata in Saskatchewan are dominantly of Cretaceous age and were emplaced along the northeastern margin of a broad sedimentary basin known as the "Western Canada Sedimentary Basin" during a time of broadly oscillating sealevel, affecting a variously embayed to confluent seaway cutting north-south through the Prairie region. This feature was bound to the east by the Precambrian Shield and to the west by the Jura-Cretaceous Rocky Mountain geosyncline. In Saskatchewan, deposition of generally fine-grained and laterally continuous Lower Cretaceous sedimentary strata occurred within or proximal to the seaway during a series of cyclic transgressive-regressive sequences. Complete stratigraphic sections of the Colorado Group lithostratigraphy, as determined in cored drillholes, show this area to be closely comparable to the west-central Saskatchewan stratigraphic column.

The regional Quaternary geology consists of several till sheets of diverse origin and variable areal continuity from several glacial episodes as well as interglacial fluvial and lacustrine sediments. As a first approximation, the Quaternary section can be described as alternating layers of predominantly shale-derived, impermeable till, and sandy to gravelly aquifers (Schreiner, 1990; Christiansen and Sauer, 1993). In some areas, these aquifers are exploited for potable water.

6.3 Cretaceous Bedrock Stratigraphy

In a regional stratigraphic section, a sequence of Quaternary tills and outwash gravels overlie light grey, non-calcareous mudstones of the Pierre Shale and a thin interval of Gammon Member carbonaceous mudstone. Both bedrock units form the lower part of the Montana Group. Dark grey, calcareous, shaly mudstones and shales of the Single White Speckled Shale are separated from the overlying Pierre Shale by an unconformity of regional extent. The presence of only a single white-speckled zone (dominantly the Upper White-Speckled Shale) corresponds to a regional unconformity at the base of the unit and probably represents the exclusion of all or most of the Lower White Speckled Shale and the intervening Morden Formation. Where both speckled shales are present, the base of the Lower White-Speckled Shale overlies another major unconformity of regional extent representing loss of the middle to uppermost portion of the Cenomanian Belle Fourche Formation. Upper and Middle Cretaceous sedimentary units are preserved only sporadically in the areas of kimberlite and are much more continuously preserved to the immediate northwest of the Fort à la Corne area.

Partially preserved intervals of sandy and shaly mudstones of the Belle Fourche Formation are chronologically equivalent in part to the Belle Fourche Shale Member of the Ashville Formation in Manitoba (McNeil and Caldwell, 1981) and to the upper portion of the Big River Formation in central Saskatchewan (Simpson, 1982). The base of this formation is delineated by the regionally extensive Fish Scale Marker, a vaguely expressed lithologic zone of slightly higher organic carbon content, silty interbeds, and comminuted fish debris including fish scales. The Fish Scale Marker separates nearly identical mudstones of the Westgate Formation below from those of the Belle Fourche formation above. Sandy and shaly mudstones of the Westgate Formation are equivalent to the Westgate Member of the Ashville Formation (McNeil and Caldwell, 1981) and the lower portion of the Big River Formation (Simpson, 1982). The Westgate Formation is interrupted by silty and sandy units of the southward extending St. Walburg Sandstone and terminates above the Flotten Lake Sandstone.

Siltstones, sandstones, and sandy mudstones of the Flotten Lake Sandstone in central Saskatchewan are the stratigraphic equivalent to the Viking Formation found throughout the subsurface of southern Saskatchewan and eastern Alberta (Simpson, 1982). Following the paleogeographic propositions made by Koziol (1988), a shaly fine-grained equivalent of the westward attenuating Newcastle Member may be present between the Flotten Lake Sandstone and St. Walburg Sandstone east of Shipman.

Below the Flotten Lake Sandstone, laminated to thinly bedded shaly mudstones of the Joli Fou Formation encase an interval of glauconitic sandstones and mudstones of the Spinney Hill Member. Generally, the Spinney Hill is a westward attenuating wedge of coarser clastics marked by emerald-green glauconite clusters in mudstone and carbonate-cemented lenses of pale green glauconitic sandstone. The lower portion of the Joli Fou Formation (informally, the Lower Joli Fou in this report) is characterized by glauconitic mudstones and often includes areally disjunct, thin, bimodal, muddy sandstones related to the Basal Colorado Sandstone (informally, the Basal Colorado in this report), a unit that is thicker and better developed basinward in Alberta (Banerjee et al., 1994). Stratigraphic variability of these distinctive muddy sandstones is related to episodic shallowing and reworking of sandstones during the initial Colorado transgression. As such, delineation of the muddy sandstones as a separate stratigraphic entity is not always practical and the Lower Joli Fou and Basal Colorado sandstone are combined.

Table 2: Generalized Stratigraphic Table for the Fort à la Corne Area

Period/Epoch/Stage	Group/Formation	Approx. Depth (m)	Basal Boundary Age (Ma)
QUATERNARY			
Holocene	post-glacial sediments		0.011
Pleistocene	Saskatoon Group		
	Sutherland Group		
	Empress Group	100	1.6
CRETACEOUS			
Late Cretaceous			
Campanian	Montana Group		84.0
Santonian	Upper Colorado Subgroup		87.5
Coniacian	Upper Colorado Subgroup		88.5
Early Cretaceous			
Turonian	Upper Colorado Subgroup		91
Cenomanian	Lower Colorado Subgroup		98.5
Albian	Lower Colorado Subgroup		*102**
	Mannville Group	200	112
Aptian	Mannville Group		119
DEVONIAN			
Middle Devonian	Manitoba Group	300	
	Elk Point Group	400	387
SILURIAN			
Early Silurian	Interlake Group	500	438
ORDOVICIAN			
Late Ordovician	Big Horn Group		458
Middle Ordovician	Big Horn Group	600	478
Early Ordovician	Winnipeg Formation		505
CAMBRIAN			
Late Cambrian	Deadwood Formation	700	523
PRECAMBRIAN			
Palaeoproterozoic	Glennie Domain	720+	2100-1800

**Approximate age for the base of the Colorado group*

Beneath a thin basal tongue of Joli Fou black shale, underlying the Spinney Hill, is the regional unconformity separating the shale dominated Colorado Group from the Mannville Group characterized by interbedded nearshore marine and terrestrial sands, silts, and mudstones. Dominantly marine mudstones and sandstones of the Pense Formation form a variably thick veneer over a thick interval of sandstone-shale bedding sequences comprising the six members of the Cantuar Formation including the Waseca, Sparky, General Petroleums, Rex, Lloydminster, Cummings, and Dina at the base of the formation (Christopher, 1983). The Pense Formation is equivalent to the combined Colony and McLaren formations, both of which are prevalent in west-central Saskatchewan. Some portion of the upper Cantuar Formation is correlatable to the Swan River Formation, a distinctive northeastern-derived facies of quartzose-dominated, stacked fluvial and fluviodeltaic sequences, which is present in the northeastern and north-central Saskatchewan.

7.0 Deposit Types

The main group of kimberlites is located within the Fort à la Corne Provincial Forest and forms a north-northwest elongated cluster approximately 32 km in length, extending from the Saskatchewan River to Highway 55 near Shipman. Smaller outlying kimberlite clusters occur near Weirdale in the west, near Foxford in the north and near Snowden in the northeast. A main grouping of very large kimberlite bodies occurs in the southern part of the trend.

The footprint sizes of 69 kimberlite bodies originally held by the FalC JV were estimated from geophysical models to fall in the range 2.7 to 184 hectares. The mass of kimberlite at each body was also estimated, using a conservative density value of 2.5 gm/cc, and was reported to range form 3 to 675 million tonnes. From the same report, the cumulative surface area of the kimberlite bodies contained within the FalC JV was estimated to be 2,818 hectares, and the total mass of these kimberlites was estimated at 9 billion tonnes. More recently, the 140 and 141 kimberlites were shown to be part of a single large structure with estimated footprint of 250 hectares and >500 million tonnes, based on a density value of approximately 2.2 gm/cc.

7.1 Kimberlite Emplacement and Post-depositional Modification

During Cretaceous time, kimberlite volcanoes erupted into the sedimentary basin in the Weirdale, Foxford, White Fox, Snowden, and Fort à la Corne areas. Stratigraphic constraints on kimberlite emplacement and radiometric ages suggest that formation of the main bodies was likely in the range of 112 to 98.5 Ma (Kjarsgaard *et a*l., 1995). Rb/Sr age dates of 94-96 Ma were acquired from phlogopite separates analyzed by the Anglo American Research Laboratory (1991 UEM Seasonal Report). Significant precursor kimberlites were also deposited at the base, middle and top of the Mannville Group beneath the base of the main kimberlite sequences. If the base of the Mannville Group is about 119 Ma, and the youngest kimberlite was transgressed over during the waning stages of eruption at about 94 Ma during deposition of the St. Walburg Sandstone, then kimberlite activity in Fort à la Corne area spanned some 25 Ma.

In general, most episodes or pulses of kimberlite volcanism occurred during intervals of sedimentary deposition over a time span of about eight million years corresponding to middle to late Albian time. At this time, central Saskatchewan was either proximal to-, or covered by shallow Cretaceous epeiric seas during an extended period of oscillatory transgressive-regressive conditions that helped to preserve the volcanic and sedimentary facies. Since the exact time of each kimberlite eruption is loosely constrained, only broad interpretations of the prevalent depositional environments can be made. Older precursor kimberlites encased within brownish-grey sands and mudstones of the Mannville Group were deposited in dominantly regressive/ fluvial/deltaic/terrigenous-dominated, terrestrial to nearshore shallow marine sedimentary regimes. Kimberlite is also found as thinly bedded ashfalls throughout much of the Mannville Group section.

Younger kimberlites which are thought to have erupted during deposition of the Lower Colorado Group are interpreted to have formed in dominantly subaerial conditions; however, some evidence indicates deposition of water-lain and resedimented kimberlite. Cretaceous sediments preserved above the main kimberlites are often sand- and silt-dominated facies, which are associated with one of the regressive seaway episodes that deposited the St. Walburg, Newcastle, or Viking/Flotten Lake coarser terrigenous units. However, some kimberlites bodies have a preserved upper transitional sequence of interbedded kimberlitic siltstones, marine mudstones, and ashfall tuffs. Furthermore, interbedded marine mudstones and kimberlitic mudstones are common towards the margins of some kimberlite bodies. These younger kimberlites are thought to have erupted into shallow seaway conditions subject to periodic strandline migration.

Geologically, the Fort à la Corne kimberlites are somewhat unique in that they apparently consist only of crater volcaniclastic material (Scott-Smith, 1996). Texturally, these rocks are classified as pyroclastic kimberlites, which may have accumulated within shallow blast-excavated craters that built upwards into low-relief tuff-cones. Many of the kimberlites appear to have formed in a two stage process including initial excavation of a relatively shallow and wide crater followed by infilling by both primary pyroclastic kimberlite and slumping of kimberlitic material from the margins of the crater. In general, the kimberlites have geometries ranging from narrow steep-sided pseudo-pipes to moderately steeply dipping funnel shapes to large irregular "champagne-glass" to disc-shaped forms, typically described as thicker in the middle and attenuating towards the margins. The architecture of the kimberlite bodies ranges from simple to complex in terms of number of discrete units or layers and occurrence and coalescence of proximal eruptive centers. The overall horizontal to sub-horizontal attitude of the kimberlite units changes with proximity to eruptive centres where more vertical kimberlite phase relationships and vent margins are anticipated. Feeders for the kimberlite bodies are probably small in area and steep. Some drill holes penetrate what are thought to be feeder zones filled with crater and pipe volcaniclastic material. Diatreme volcaniclastic kimberlite has only tentatively been identified from the deepest of these intersections.

Pyroclastic airfall kimberlites composed of variable proportions of olivine and lapilli formed subtly graded beds resulting from physical separation of grain components within high energy eruptive columns**.** These columns were the product of rapid degassing of volatile-rich magma at the vent and may be considered to be the extrusive equivalent of diatremes in other kimberlites (Scott-Smith *et al.*, 1994). The fine ash component of these eruptive columns may have reached up to 15 km high and been effectively removed by wind action, allowing concentration of distinct grain size and density populations dependent on local weather conditions and proximity to the vent (Scott Smith *et al.*, 1994). Olivine-dominated crystal tuffs with absent to rare lapilli are thought to have formed through extreme examples of this process or possibly by the disintegration of lapilli followed by winnowing of fines in a sedimentary environment. Juvenile lapilli form as the result of fragmentation of fluidal magmas in explosive to relatively passive eruptive conditions, and may be most concentrated in areas proximal to eruptive vents. Some lapilli are vesicular, but scoriaceous clasts are extremely rare. Up to four distinct generations of lapilli have been observed to coexist in the same rock type in some Fort à la Corne kimberlites, indicating that material from old eruptions is recycled to a limited extent during later eruptions in some bodies (Scott Smith *et al.*, 1994).

The internal geology of each kimberlite body varies considerably. Pyroclastic airfall and lava-spattering are interpreted as the principle modes of kimberlite accumulation and are likely the result of several styles of eruption due to variations in volatile content and degree of interaction with groundwater. Reworked kimberlite and intervening fine-grained sediments occur occasionally and provide time markers within the pyroclastic piles. These markers are thought to record times of erosion, transgression, and/or shallow marine deposition. Changes in eruptive style, both within and between discrete pulses of kimberlite volcanism ultimately resulted in complex layering of stratigraphically distinct kimberlite lithotypes during late Mannville time and throughout much of early Colorado time. The specific physical setting of each of the bodies would impact the formation and character of graded and massive bedded lapilli tuffs and olivine-dominated crystal tuffs. Some factors to consider include the location of eruptive centres, depositional environment, original magma composition, and morphology of the crater-cone development. Within a single pulse, progressive loss of abundant, primal volatile content (CO2 and H2O) and an increase in magma viscosity would have dampened the escape of pyroclastic material from the vent, allowing the formation of thicker mega-graded beds and lapilli-rich lithotypes characteristic of lava-spattering. Collectively, these deposits may have overfilled the shallow crater allowing a period of cone development dependent on the volume of material extruded and the size of the crater. Cone-margin deposits formed and were composed of coarse-grained xenolith-rich base surge and airfall deposits overlain by distal, finer-grained, xenolith-poor, airfall facies (Leckie *et al.*, 1997). Different eruptive styles ranging from explosive Strombolian-type ash columns to more passive Hawaiian-style lava fountaining which are thought to be appropriate for the Fort à la Corne eruptions based on petrographic examination of kimberlite core and chips (Scott-Smith *et al.*, 1994; Leckie *et al.*, 1997). The close stratigraphic and spatial association of kimberlites produced from different eruptive styles indicates some alternation of styles or perhaps the presence of a composite eruptive mode.

The morphologies and resulting pyroclastic assemblages of the Fort à la Corne kimberlites are the product of the local geology. In contrast to kimberlites elsewhere in the world, the broad, initially shallow craters and low-relief cones are the result of having been emplaced within several hundred metres of poorly consolidated sediments, which could not effectively cap or contain the volatile-rich magmas. The bodies began as craters, which were explosively excavated into the Mannville Group and Lower Colorado Group sediments. The base of the kimberlite bodies appear to flare upwards at either the Mannville/Paleozoic carbonate contact or within the uppermost portion of the Mannville Group, just below the contact with the Colorado Group. Synthesis of petrographic information, interpretations of body geometry, and internal correlation of kimberlite and marker strata indicate kimberlite body architectures that range from simple, mono-eruptive, essentially stratiform bodies to stratigraphically complex, temporally diverse, multi-centered, multi-eruptive edifices marked by stacking of lensoidal to pancake shaped eruptive deposits. Correlation of internal marker beds and erosive horizons indicate the very common occurrence of stacked severely beveled kimberlite masses at several stratigraphic levels. In larger bodies, coalescence of kimberlite lenses sourced from proximal eruptive centres produced clusters of intercalated kimberlites.

Subsequent to each eruption, terrestrial or marine depositional and erosional processes may have affected the exposed portions of the body causing truncation of beds and accumulation of reworked kimberlites. Furthermore, continued eruption from the current vent or proximal new vents may have locally truncated existing beds. The bulk of petrographic evidence suggests that most of the kimberlites accumulated in dominantly subaerial conditions as crater-fill pyroclastic deposits (Scott-Smith *et al.*, 1994), however, it is not known to what extent positive-relief cone building occurred above the plane of the surrounding surface. Some vent-distal deposits indicate deposition of water-lain kimberlite, but drillhole control is typically poor away from the centres of the kimberlite bodies. Lower Colorado Group sediments preserved above the top of the main kimberlites are often sand- and silt-dominated facies which were associated with one of several regressive seaway episodes coeval with deposition of the St. Walburg, Newcastle, or Viking/Flotten Lake coarser terrigenous units. However, some kimberlite bodies have a preserved upper transitional sequence of interbedded kimberlitic siltstones, marine mudstones, and ashfall tuffs. Furthermore, interbedded marine mudstones and kimberlitic mudstones are common towards the margins of some kimberlite bodies. These particular kimberlites are thought to have erupted into nearshore terrestrial to shallow marine seaway conditions subject to periodic strandline migration and erosion.

The current project objective is to delineate mineable diamond resources from high-priority kimberlite bodies in a methodical and step-wise approach. Five bodies were prioritized in 2000 on the basis of kimberlite size, diamond content, and overall economic potential. The immediate focus is on further evaluation of diamond content, diamond distribution, and average diamond value in kimberlite body 140/141 utilizing phased core drilling for investigation of geological relationships and recovery of microdiamonds, followed by strategic placement of large diameter reverse circulation drillholes for acquisition of minibulk samples for macrodiamond recovery. This level of investigation ultimately is geared towards defining an inferred resource within the 140/141 kimberlite body. In addition, advanced exploration/early evaluation work is conducted, to a much lesser degree, on other high-priority kimberlites including body 122 and 150.

8.0 Mineralization

Diamond recovery from kimberlite samples from the tested bodies indicate approximately 70% of the kimberlites are diamond-bearing, and 50% are macrodiamond-bearing (based on recovery of stones >1.0 mm in one dimension). These figures indicate Fort à la Corne to be the largest macrodiamond-bearing kimberlite field in the world. Given the large number of predominantly very large and heterogeneous (for the most part) kimberlites in this field, coupled with the chaotic occurrence of diamonds, means that only a small, poorly representative sample was acquired from most of the bodies. Regardless, best efforts were made to categorize the kimberlites based on size, petrography, and diamond content. Typically resolution of discrete mineralized zones within the kimberlite bodies has not been attempted except for those bodies prioritized by the FalC-JV in 2000, due to time and cost restraints. For prioritized bodies such as 140/141, grid drilling is only just now providing evidence of patterns in areal and vertical diamond distribution patterns.

8.1 Petrographic Characteristics of Fort à la Corne Kimberlite

The Fort à la Corne bodies are classified as Group 1 kimberlites based upon a composition including two generations of olivine (phenocrysts and macrocrysts) and a groundmass of monticellite, spinel, perovskite, mica, primary serpentine and carbonate (Scott Smith *et al.*, 1994). Most bodies also contain rare amounts of mantle-derived, xenocrystic/xenolithic constituents including garnet, ilmenite, and olivine macro- and megacrysts, as well as eclogites and coarse grained, garnet-bearing peridotites. Basement rocks, Paleozoic carbonates and Cretaceous terrigenous and marine lithologies may also be found as fine to very coarse xenolithic fragments within the kimberlites. The Fort à la Corne kimberlites are dominated by olivine/lapilli pyroclastics of variable composition with rare to common country rock and mantle xenoliths, minor very fine-grained inter-clast matrix, and rare garnet, ilmenite, and chromite.

Texturally, these rocks are classified as pyroclastic kimberlites, however, reworked kimberlite sediments occur occasionally throughout the sequence, but are usually found in the upper few tens of metres of the body.

The main rock type end-members are juvenile lapilli-dominated kimberlites and olivine-dominated crystal tuffs. While pure end-member rock types do occur, they are rare with olivine/lapilli kimberlite of variable composition being most common. Clast sizes range from <1 mm to 10 cm, although most rocks are dominated by fine to medium-grained textures ranging from 0.5 to 5 mm with a notable paucity of fines or material less than 0.2 mm in size. The pyroclastic components are dominated by varying sizes and proportions of juvenile lapilli and single crystals of olivine. Lapilli vary in shape from spherical to ovoid, to more commonly fluidal, irregular amoeboid forms and are composed of olivine grains and rare garnet and black macrocrysts set within very fine-grained matrix. Lapilli generally show definable edges and subtle to striking differences in colour compared to the inter-clast matrix or cement.

Olivine occurs in two significantly different populations, which often coexist in varying proportions (and seemingly were both present in the postulated precursor magma and in hypabyssal equivalents) that were controlled by physical separation processes either prior to, or during eruption. A finer grained population is composed of euhedral to subhedral olivine phenocrysts generally <2 mm in size and most probably crystallized from the precursor kimberlitic magma. A second, coarser-grained population consists of subhedral to anhedral olivine macrocrysts usually >2 mm in size and is xenolithic in nature, having been derived from either the kimberlite magma source or from mantle wallrocks during ascent. Olivine-dominated crystal tuffs with absent to rare lapilli are thought to have formed through the physical separation of discrete crystals from fine and coarse ash during violently explosive eruptions, or possibly by the disintegration of lapilli followed by winnowing of fines in a sedimentary environment.

The inter-clast matrix of the rock and intra-lapilli matrix are composed of dense, often massive serpentine, carbonate, magnetite and a highly variable assortment of very fine grains including spinel, apatite, monticellite, perovskite, mica, primary carbonate and coarse ash-sized olivine microphenocrysts (Scott Smith *et al.*, 1994). Inter-clast matrix or cement may form through the crystallization of minerals from kimberlitic fluids derived from subsequent eruptions, or may be the alteration product of fine ash deposited coevally with the coarser grains. Scott-Smith noted the common absence of matrix fines in many of the kimberlites. As these fines may be representative of the pre-eruptive kimberlite "magma", their absence indicates syn-eruptive sorting and removal. Multiple and sequential phases of identifiable cementation show that lithification occurred early on, but with modification of the cementing components during subsequent eruptive pulses, subsidence and compaction (Scott Smith *et al.*, 1994). Hence, the matrix of the kimberlite is highly variable in appearance and composition. In comparison, the presence of very fine, microphenocrysts of olivine, and what is thought to be spinel, perovskite, mica, and monticellite often characterize intra-lapilli matrix and may represent preserved fines and ash derived from explosive eruption of the original, highly-fragmented "magma".

8.2 Indicator Mineral Geochemistry

Major and trace element geochemistry of garnets can be used in conjunction with garnet Ni-thermometry to synthesize an interpretation of the mantle source rocks for kimberlite (Gurney *et al*., 1993; Griffin and Ryan, 1995). Garnet geochemical data from Fort à la Corne kimberlites indicate a predominantly lherzolitic population with lesser harzburgitic, websteritic, megacrystic and eclogitic components. Ni-thermometry data are trimodal, which is a strong indication that mantle material at three separate depths was sampled by the ascending kimberlitic magma. Geochemical analyses of ilmenite and chromite also have provided clues to the potential for diamonds and the magmatic history of the kimberlites.

The main mantle sampling interval or depth straddles the lower threshold of the diamond window based on application of a cratonic geotherm of 40 mWm-2. Most of the kimberlites are dominated by G9 lherzolitic garnets, but also include other peridotitic, eclogitic and macrocrystic garnets. Garnet Ni-thermometry data indicates a common triple sampling pattern or entrainment of lithospheric mantle material variably split between the 700-800°C, 950°C, and 1150-1200°C temperature regimes. The middle sampling interval (950°C) is the dominant peak in the temperature distributions and it lies just within the lower threshold of the diamond stability field. The abundance of high-TiO_2 lherzolitic garnets close to 1200°C suggests that this temperature marks the base of the lithosphere and the lower depth of diamond entrainment.

Prospective harzburgitic G10 garnets are present in most of the kimberlites, but generally in low abundance (<7 percent of total garnet, averaging 3.4 percent) and are usually associated with sampling in the 950°C range. Sampling of the mantle was dominantly at or near 950°C, however, the source rocks seem to have been fertile lherzolites (i.e. not melt-fractionated), thus diamond grades could be low. Where material was entrained over the lower temperature interval (700-800°C), the mantle also was fertile and consequently of low diamond potential. Mantle material from the upper temperature interval (1200-1400°C) was enriched by melt-metasomatic processes and is considered to have low diamond preservation potential.

Chrome spinel is common in most of the kimberlites tested. On a plot of weight percent MgO vs Cr_2O_3, chrome spinels often plot in an inverted U pattern or portion thereof, representing entrainment of material from a number of different mantle sources. High interest spinels have very high Cr_2O_3 contents (>61 percent), which may place them within the diamond inclusion field at appropriate MgO contents (11.5-16.5 wt. percent). Generally, Fort à la Corne kimberlites may contain only a few percent chrome spinel grains that plot in the diamond inclusion window, but a few bodies range up to 8 percent. Picroilmenite is also common in most of the kimberlite bodies. Most of the ilmenites have major chemistry signatures indicative of the megacryst suit, although distinct populations are seen in some Cr_2O_3 vs. MgO plots that probably reflect sampling from several different sources in the lithosphere. Some kimberlite bodies have ilmenite subpopulations characterized by low MgO contents (<7 wt. percent). In general, Gurney *et al.* (1993) consider the presence of picroilmenites with low MgO compositions to be indicative of exposure to conditions promoting low diamond preservation potential. In the past, De Beers considered these low MgO and low Cr_2O_3 ilmenites simply to be non-kimberlitic. Recently, Schulze *et al.* (in press) found no evidence to support the hypothesis that oxidized ilmenite populations were indicative of increased potential for diamond resorption in kimberlites.

Although many Fort à la Corne kimberlites incorporated mantle material from within the diamond stability field, the contribution of diamonds from depleted, harzburgitic mantle and eclogitic mantle appears to have been diluted by potentially diamond-poor, fertile and enriched lherzolites. An understanding of the relative contribution of xenocrysts (including picroilmenite, chrome spinel, and diamonds) to the kimberlite magma from distinct mantle lithosphere sources including harzburgite, lherzolite, websterite, and eclogite from within distinct temperature ranges, contributes to the explanation of why the diamond contents of the Fort à la Corne kimberlites are highly variable. However, for many of the Fort à la Corne kimberlites, major and minor element chemistry have identified abundant peridotitic garnets potentially from diamondiferous mantle source rocks (G1, G9, G10, and G11), which justifies continued exploration interest.

9.0 Exploration

Exploration activities in the field were conducted every year since 1989, except 1998, and included local and regional geophysical surveys, drilling, and sampling for the recovery of macrodiamonds, microdiamonds, and indicator minerals.

9.1 Geophysical Exploration

A total of 88 magnetic targets were obtained from 15,500 line-kilometres of airborne magnetic survey. Seventy-one anomalies were interpreted as kimberlite-type signatures. Extensive ground magnetic surveys were utilized to refine the area and estimated thickness of each of the anomalies and in many cases further work was done subsequent to discovery drilling of the kimberlite bodies. While the geophysical emphasis has been on magnetics and gravity, several other methods including CSAMT, seismic, and GEOTEM have been tested. Information and results of geophysical surveys are briefly described in this section, but more detail is provided in the year by year summaries described in section 9.2.

9.1.1 Magnetic Survey Coverage

The Fort à la Corne kimberlite bodies lie beneath 75 to 150 m of overburden and have no surface expression. During the 1988 staking rush, Uranerz Exploration and Mining Limited acquired a large land position in the Fort à la Corne area, some 60 km east of Prince Albert. The ground was chosen on the basis of aeromagnetic anomalies which were thought to resemble kimberlite-type targets in the available GSC regional aeromagnetic coverage. Twenty-eight isolated contour highs were identified and staked. Since the known kimberlite bodies were discovered from aeromagnetics, all are magnetic to some degree. Apparent magnetite contents for the kimberlites range from 0.1% to 4%, in contrast to the non-magnetic Phanerozoic sediments, which host the kimberlites. Magnetic responses from crystalline basement, which is greater than 600 m below the ground surface, are sufficiently longer in wavelength to be clearly differentiated from the sharper signatures of the kimberlite bodies. The cost effectiveness of magnetic surveys in delineating the kimberlites was recognized at an early stage, although some refinements in interpretation and modeling have been necessary to comply with the unusual geometry of these bodies as subsequently revealed by drilling.

Additional geophysical coverage of the 140/141 kimberlite was completed during the Fall of 2002, including new ground magnetic survey, ground gravity survey, and magneto-telluric methods. Results will be submitted as they are finalized by the operator of the FalC-JV.

In 2003, work commenced with a fixed-wing airborne tri-sensor magnetic gradiometer survey over the entire Joint Venture project claim area that was run by Goldak Airborne Surveys. The survey had some over-run beyond the claim boundaries. Two blocks were flown for a total of 3,090 line kilometres at a 150 metre line spacing. The airborne survey provides a much improved magnetic dataset compared to previous airborne data acquired in 1989 and 1990. The survey results were evaluated for new potential kimberlite targets, and where necessary, higher-priority kimberlites will be re-modeled to update body outlines based on a 30 metre thickness cut-off. An example of the survey results is shown in Figure 3 in Section 9.2.16.1.

9.1.2 3D Models from Magnetic Survey Coverage

A working model for the Fort à la Corne kimberlite bodies, up until late 1990, consisted of a vertical, near-circular pipe based on the published and widely accepted diatreme-type occurrences of Southern Africa (Gerryts, 1970, Macnae, 1979), although quite significantly under 100 m of overburden in this case. Magnetic signatures, particularly over some smaller bodies, were found to be reasonably consistent with this model. The larger magnetic features were assumed to be aggregates of coalesced pipes. Drilling in 1989 had sampled only the top few tens of metres of seven kimberlite bodies. More intensive drilling, beginning in 1990, soon revealed that many of the kimberlite bodies were limited to +/- 100 m in thickness. Revised geophysical modelling confirmed that the typical pipe-like magnetic signatures could also be caused by lensoidal magnetic bodies, which would be somewhat larger in footprint area than the prior pipe-type models. Grid-style ground magnetic coverage over most kimberlite bodies in the central Fort à la Corne Forest area also revealed irregular shaped outlines, implying that a considerable amount of detailed ground magnetic survey work would be necessary to fully define the outlines of the seventy or so suspected kimberlite bodies.

A further refinement to modelling was in recognizing that many bodies appear to have a weakly magnetic halo, which commonly seems to be developed more extensively towards the south or southwest of the main magnetic feature. This could represent a reworked peripheral apron of kimberlite, or perhaps distally deposited material, which might be down-current or down-wind from a volcanic centre. The working geophysical model at this point could be described in terms of a central thick kimberlite block, 100 m to 200 m in thickness, with an irregular, peripheral apron perhaps 30 m to 50 m in thickness. The apron areas of many of the kimberlite bodies can be quite large and contributes significantly to overall footprint areas, requiring more extensive ground magnetic coverage to assess. Ultimately, in support of mapping these bodies in detail, almost 1000 km of ground magnetic profiles were completed over the 71 kimberlite targets, much of it with 100 m line spacing and 25 m stations.

The sizes of the kimberlite bodies, estimated according to current geophysical models for each body, fall in the range 2.7 to 184 hectares. The mass of kimberlite at each body has also been estimated, using a conservative density value of 2.5 gm/cc, and ranges from 3 to 675 million tonnes. The total kimberlite footprint area for the 71 bodies is estimated to be 2818 ha. The total mass of kimberlite is estimated at close to 9 billion tonnes.

The "puck and apron" model is recognized to be inadequate for many of the larger kimberlite bodies, where kimberlite thicknesses are difficult to predict from magnetics due to uneven distribution of magnetite. Many bodies contain multiple magnetic peaks, which do not correspond to thick kimberlite segments but which are more likely caused by zones of strongly magnetic kimberlite near the top of the kimberlite section. A more complex but probably more realistic working model is to simulate each kimberlite body by a stack of horizontal disks of varying dimensions, corresponding to stratigraphically discrete kimberlite layers. This is supported by geological evidence of sub-horizontal stratification, which is thought to be caused by sequences of kimberlite deposition separated by erosional intervals. Models of this complexity need control from drilling and detailed stratigraphic input. However, several of the Fort à la Corne kimberlites are already at this stage of exploration.

9.1.3 Magnetic Susceptibility Logging

Magnetic susceptibility measurements were completed on core from 16 drillholes obtained from 11 different kimberlites. In all, over 7,500 magnetic susceptibility measurements were acquired. The data were used to establish reasonable average magnetic susceptibility values for the kimberlites for comparison with model-derived values from ground magnetic data and to assess the variability of magnetic properties within each body. Magnetic susceptibility logging indicates that some segments of some kimberlites are essentially non-magnetic. Whether wholly non-magnetic kimberlites might exist is conjectural, and none have been detected, thus far. However, gravity, resistivity (airborne and ground surveys) and seismics might be employed if such targets were suspected. Recent gravity surveys conducted in 2002 and 2003 indicate the presence of potential kimberlite anomalies that have subtle or no significant associated magnetic signature. Follow-up interpretation of these data is on-going by the operator. Magnetic susceptibility measurements were routinely taken on all kimberlite and host rock core acquired during the 2001, 2002, and 2003 field programs. This information is utilized in interpretation of recent ground magnetic surveys conducted on the 140/141kimberlite and other high priority bodies in 2002 and 2003.

9.1.4 Gravity Coverage

Since kimberlite can have significantly higher density than the Phanerozoic sediments (i.e. perhaps 2.6 gm/cc versus 2.4 gm/cc), gravity surveys have proved to be effective. Gravity surveys were completed in 1989, '90, '91 and '93 with a total of 219 km of profiles. The surveys provide gravity signatures from 29 of the kimberlite targets, which are all positive peak anomalies ranging from 0.1 to over 1.0 milliGals in amplitude. The gravity data provides assistance in modelling some of the larger kimberlite bodies, where kimberlite thicknesses are difficult to predict from magnetics. Also, some weak magnetic anomalies have been screened by gravity coverage to ascertain their cause, since magnetite concentrations in till or within the Phanerozoic sediments are possible sources of false anomalies. Three large bodies in the central Fort à la Corne Forest area provided the highest amplitude gravity signatures (1.0 milliGal), and drilling has confirmed that thick (>200 m) kimberlite segments are present.

A more detailed and extensive gravity survey of Kimberlite 140/141 was completed in October 2002. In addition to expanding the footprint of the kimberlite body, two new anomalies were discovered close to the 140/141 body, but lacking any substantial anomalous magnetic signature (compared to background).

Gravity coverage was acquired in 2003 for the 148, 150, and 122 kimberlite bodies. The individual surveys around 150, 148, and 140/141 were extended to provide unbroken coverage in the central part of the main kimberlite trend.

9.1.5 Galvanic Resistivity Surveys

In comparison to the enclosing Phanerozoic sediments, which are largely mudstones and shales, the kimberlite bodies should tend to be more resistive, although contrast between the two rock types is minimal. This tends to reduce the utility of electro-magnetic data in highlighting kimberlite based anomalies, and more specifically, in delineating geometry of the kimberlite bodies. The 100 m-thick overburden comprises various interbedded sands and sandy tills grading to clayey tills that average 10 to 20 ohm-metres in resistivity. Bedrock is composed of the Phanerozoic Colorado Group shales with resistivity of perhaps 5 ohm-metres, overlying Mannville Group sandstone units, which might have resistivities in the 100 ohm-metre range. Kimberlite resistivities can be highly variable, depending on the degree of alteration and porosity. From test survey data over a low number of bodies it seems that these kimberlites fall in the range 20 to 100 ohm-metres.

Ground resistivity surveys were conducted at 4 sites in 1990. Dipole-dipole array tests were not successful, presumably due to the thick, conductive overburden. However, a gradient array survey provided clear, high resistivity anomaly signatures at two of the four sites. Dipole-dipole array and gradient array coverage was tested over Kimberlite 219. The gradient array resistivity peak corresponds with the centre of the 219 kimberlite as defined by magnetic and gravity coverage and as also confirmed by drilling. At the two other sites, the resistivity profiles did not extend beyond the kimberlite outlines as presently recognized.

9.1.6 GEOTEM Test Survey

Resistivity mapping can also be performed from the air using electromagnetics. A time domain EM and aeromagnetic survey (GEOTEM) was flown over a 12 km x 4 km block in 1996. The line spacing for this work was 300 m. The survey area contained 10 known kimberlite bodies and a variety of surficial conditions ranging from cultivated farmland to forest, with a belt of swamp along the White Fox River. Overburden thicknesses range from 130 m in the north to 90 m at the White Fox River and increasing again to 110 m in the south.

All of the known kimberlite bodies are represented by prominent magnetic anomalies in the GEOTEM aeromagnetic coverage. Coincident EM data are presented as apparent resistivity contours. Nine of the 10 kimberlites are detected as high resistivity anomalies, and one (target 326) is associated with a low resistivity anomaly. Kimberlite 326 is also one of the most strongly magnetic features at Fort à la Corne, with an estimated magnetite content of over 2%. Analysis of borehole logging data from a nearby kimberlite body by the Geological Survey of Canada (GSC) indicated a strong correlation of lower kimberlite resistivities with higher magnetic responses (Richardson *et al.*, 1995), presumably due to the high metallic magnetite content. However, an equally strongly magnetic anomaly located 4 km further west (Kimberlite 126) is represented by a conductivity low. An alternative possible cause of the high conductivity feature is an overlying conductive zone, which might mask the kimberlite response. A prominent east-west conductivity low which traverses the north part of the GEOTEM survey correlates with deeper overburden (up to 130 m in drilling) and is probably a glacial erosion feature.

Overall, the EM-derived resistivity background is quite active, which might tend to mask kimberlite signatures. Nevertheless, the combination of aeromagnetics and coincident EM data provided by the GEOTEM system is a powerful exploration tool in this environment.

9.1.7 TEM In-loop Soundings

As a follow-up to the GEOTEM survey, three profiles of in-loop time domain electromagnetic (TEM) depth soundings were obtained at Kimberlite 169. Instrumentation for this work was a Geonics EM-37 unit using 100 m x 100 m transmitter loop and a 30 Hz pulse repetition rate, with the receiver at the centre of the loop.

Soundings were obtained at 100 m intervals on each profile. This work confirmed that a reasonable resistivity target exists and can be detected by this method. A benefit of in-loop TEM soundings is that 1D inversions may be performed to image the ground resistivity in a pseudo-depth section format, producing a conductivity-depth image section.

The 169 image begins at around bedrock level. A 100 m-thick layer of high conductivity material (0.2 Siemens/metre) represents the Lower Colorado shales. The underlying Mannville sandstones are less conductive (0.02 Siemens/metre). A prominent 300 m-wide disruption in the horizontally stratified conductivity section correlates with the shallowest and thickest portion of the 169 kimberlite body. The kimberlite conductivity seems to be less than the Lower Colorado shales and greater than the Mannville sandstones.

9.1.8 Seismic Test

During 1992 and 1993, high resolution reflection seismic data were obtained over Kimberlite 169 in farm land near Smeaton. This work was performed under the supervision of Don Gendzwill of the University of Saskatchewan in collaboration with the Geological Survey of Canada (Matieshin, 1998; Gendzwill and Matieshin, 1996). Seismic data complemented a suite of studies including multi-parameter borehole logging also conducted by the GSC on a corehole at the same kimberlite target. The strong velocity and density contrasts between kimberlite and host sediments, and the normally horizontal stratification of the Phanerozoic sediments provided a favourable setting for seismic imaging. After suitable processing, the upper kimberlite surface and two possible intra-kimberlite horizons were well-resolved. The base of kimberlite is not distinctly imaged and appears to diverge from drill-indicated data in some regions. The overall size of the kimberlite body indicated by the seismic coverage is considerably larger than that from magnetic modelling, apparently due to an extensively developed, thin apron zone, which was not fully identified in magnetics. Kimberlite 169 is enclosed and overlain by Colorado Group sediments and displays subdued topographic relief on the upper surface with a domal feature at its centre. Many other kimberlite bodies seem to be eroded to a flat upper surface, which is commonly at the subcrop level of the Colorado Group strata below glacial overburden. The sub-horizontal intra-kimberlite reflectors were interpreted as erosion surfaces separating distinct eruptive packages (Matieshin and Gendzwill, 1995). This multi-temporal, multi-erosional genetic model has since been confirmed by intra-body petrographic comparisons and stratigraphic correlations derived from drilling sections from numerous bodies.

A similar, but more detailed 2D seismic survey was completed on Kimberlite 140/141 body late in 2002 by a combined effort of the Geological Survey of Canada and the Saskatchewan Geological Survey. Processing of data is ongoing and results are expected during 2003.

9.1.9 GSC Downhole Geophysical Logging

During 1992, the Geological Survey of Canada funded drilling of a 242 m vertical corehole near the centre of Kimberlite 169, which intersected approximately 100 metres of kimberlite. Borehole geophysical measurements were obtained in the drillhole with a near comprehensive suite of logs acquired including seismic velocity, density, natural gamma-ray spectroscopy, and magnetic susceptibility, which complemented ground geophysical surveys in the area. The wide range of geophysical parameters investigated assisted in characterization of the physical properties of the kimberlites and in the interpretation of other, geophysical measurements (Richardson *et al.*, 1995; Mwenifumbo *et al.*, 1996).

A second study of multi-parameter downhole geophysical logging was completed on four additional coreholes on the 140/141 kimberlite body in 2001. This work was associated with the multi-disciplinary Targeted Geoscience Initiative (TGI) project mounted in 2001-2002 which encompassed petrographic logging, geochemistry, and 2-dimensional seismic on the 140/141 kimberlite. More details of this work are discussed in the section of this report concerned with 2002 exploration activities.

9.2 Yearly Exploration Programs – Geophysics Surveys, Drilling, and Diamond Recovery

A total of 251 drillholes have been completed using various methods to produce core or chips from boreholes ranging from small to very large diameter (64 to 914 mm). As of 1997, 69 of the original 71 (98.6%) targets in the project area were tested by drilling. Of these, all but one of the 45 anomalies with estimated areas >20 ha have been drilled. The FalC-JV currently retains 63 kimberlite bodies after selling several lower priority satellite kimberlite clusters. Approximately 4,360 tonnes of kimberlite have been tested for macrodiamond content and thousands of samples for complete diamond recovery were completed using caustic fusion or jigging procedures and continue to be run to present-day. Close to half of this mass of kimberlite has come from Kimberlite 140/141. Other investigations have included: grade estimate studies, diamond valuations, diamond breakage studies, tracer studies, core and chip logging, microscopic petrography, sedimentary and volcanological studies, stratigraphic studies, radiometric age dating, zonation studies, downhole geophysical logging, caliper logging, lithogeochemistry, micropaleontology studies, magnetic susceptibility measurements, specific gravity measurements, and drillhole location surveys. A historical accounting of exploration activities and results from 1988 to 1997 is available in Jellicoe *et al*. (1998) and Lehnert-Thiel *et al*. (1992). During 1999 and the early part of 2000, an in-depth evaluation and synthesis of all available information for each kimberlite body was conducted separately by DBCEI and Kensington staff. Based on these studies, DBCEI identified 17 kimberlites having sufficient information on which to prioritize their diamond resource potential. From this list, five targets were selected for continued evaluation of diamond content and value.

9.2.1 1988 Exploration and Sampling Program

In August, spurred by rumors of kimberlite discoveries near Prince Albert, the possible presence of kimberlite-type intrusions in and around the Fort à la Corne Provincial Forest were interpreted by UEM using published GSC aeromagnetic maps of the area. Ground-mag investigations of several anomalies in the area indicated that they were caused by sources in the Phanerozoic sediment cover, and not sources in the metamorphic basement. A detailed airborne magnetic survey completed over the main cluster of GSC anomalies resulted in the identification of 29 discrete anomalies.

9.2.2 1989 Exploration and Sampling Program

In June, the FalC-JV Project was created between UEM and Cameco. Exploration consisted of 7 shallow 120.65 mm diameter rotary testholes, airborne magnetic surveys by *Terraquest Ltd.* (10,254 km), ground magnetic surveys (108.7 km), and gravity surveys (17.5 km). Kimberlite was intersected in all seven drillholes and microdiamonds were recovered in five of the seven drill-chip samples (<100 kg) submitted to *C.F. Minerals*. The recovered stones were small, but of generally gem quality. A total of seven macrodiamonds were recovered having an aggregate weight of 0.0155 carats. The largest individual stone had a diameter of 1.27 mm and weighed 0.0035 carats. Geophysical surveys showed the Fort à la Corne kimberlite field to consist of three clusters (Weirdale, Snowden, and Fort à la Corne proper) with a total of some 82 anomalies. The first age date for these kimberlites was obtained by *American Research Laboratories.* An Rb/Sr age of 94±3 Ma was derived from four mica separates from the 122 kimberlite body. During 1989, reconnaissance ground magnetic surveys were completed at 29 anomaly sites derived from the aeromagnetic survey. This work involved minimal profile coverage to establish the location and approximate size of each magnetic target. The profiles indicated at least seven kimberlites had surface areas >20 ha.

9.2.3 1990 Exploration and Sampling Program

Geophysical work (ground magnetic, gravity and resistivity) involved surveys at 42 sites, bringing the total number of aeromagnetic anomalies investigated to 54 (out of 88 indicated by the 1989 Terraquest survey). Geophysical surveys consisted of 126.1 km of ground mag, 19.15 line-km of gravity, and 8.75 km of resistivity profiles. Forty-seven of the targets investigated during this period were interpreted to be kimberlites; the remaining seven being either basement or cultural features.

Seven targets were tested by 171.45 mm RCA drillholes. A total of 15 drillholes intersected a combined total of 3,684 m of kimberlite. Five of the targets, including the 120, 169, 180, 216 and 426 bodies had not been drill tested previously, while the remaining two (219 and 611) had been tested earlier during the 1989 reconnaissance program. The drillholes produced a total of 97.088 tonnes of kimberlite of which 41.297 t (material >1.7 mm) was retained for macrodiamond recoveries.

Five macrodiamonds with a combined weight of 0.84 carats were recovered from Kimberlite 169. All were brown industrial grade diamonds.. Eleven macrodiamonds were also recovered from Kimberlite 120 having an aggregate weight of 1.19 carats with a mix of gem quality stones, and brown industrial-grade stones.

In every case deep drilling passed through kimberlite into the underlying country rock, suggesting that the kimberlites were tabular in shape. Feeder dykes were not identified among any of the targets drilled. Rb/Sr age determinations of 96 Ma were obtained from micas separates in the 120 kimberlite. Radiometric ages determined in 1989 and 1990 were corroborated in part by micropaleontology studies of country rocks proximal to Kimberlites 169 and 611, which gave ages between 94 and 98 Ma in terms of the K/Ar radiometric time scale, and fall within the lower portion of the Lower Colorado Group.

During 1990, detailed ground magnetic coverage was obtained over six of the larger kimberlite bodies which revealed a greater degree of complexity in the outline and magnetic zonation of the bodies than that represented by the earlier reconnaissance-style magnetic coverage. As a consequence, many of the kimberlite bodies were thought to be more extensive in area than originally believed.

9.2.4 1991 Exploration and Sampling Program

A geophysics program involving 106.8 line-km of linecutting, 283.75 km of ground magnetic and 99.15 km of gravity was completed which was intended to evaluate the remaining aeromagnetic targets from the 1989 *Terraquest* survey and to upgrade coverage over a number of potentially large targets (>20 ha in size). A detailed grid of handcut lines was established over the main grouping of large targets in the Fort à la Corne Forest (120/147/148) with a network of 17 GPS control points established to provide precise geographic control for the grid network. Gravity coverage was significantly increased and was used to enhance the interpretation of kimberlite body outlines and thicknesses.

A total of 26 drillholes (7,223.8 m) were completed by a combination of drilling techniques: (158.8 mm diameter RCA plus 279.4 mm diameter underreaming). In all, 253.758 tonnes of kimberlite was recovered with individual bulk samples ranging between 1.499 and 28.638 tonnes. The sample recovery cut-off in the field varied between 30 and 50 mesh, with 145.302 tonnes of kimberlite retained and processed for macrodiamond recoveries.

Total diamond recovery in 1991 was 146 stones, with an aggregate weight of 5.109 carats. Diamond grades for individual drillholes ranged between 0 and 0.083 carats/tonne, with the best overall average from one target being 0.082 carats/tonne for the 150/151 kimberlite.

9.2.5 1992 Exploration and Sampling Program

Monopros Limited joined the joint venture under a three-year earning-in period, after which the three partners would each hold 33% equity in the project. The 1992 geophysical program included 5,475 line-km of airborne magnetometer survey by *Sander Geophysics Limited* in the Forest Gate area in order to obtain magnetic coverage in the area immediately northwest of the FalC-JV's claims. Delineation of a possible source of the rafted kimberlite blocks in the Sturgeon Lake area was one of the major objectives of this program. A follow-up program of 19.05 line-km of ground magnetometer survey was conducted over 12 anomalies identified by the aeromagnetic survey. In the Fort à la Corne area, 102.05 line-km of ground magnetic survey was completed over 14 anomalies. At ten of the sites, the objective of the work was to improve the outlines of shallow magnetic bodies located by earlier ground magnetic surveys. Four new targets derived from the 1969 GSC aeromagnetic coverage in the Bittern Lake and Weirdale area were also investigated. Two test reflection seismic profiles were obtained in the vicinity of Kimberlite 169 by the Department of Geological Sciences, University of Saskatchewan. This work was funded primarily by the Geological Survey of Canada. The purpose of the seismic modeling was to delineate morphological features of the buried kimberlite which may be pertinent to further exploration for non magnetic kimberlites in the area.

The Geological Survey of Canada drilled a 242 m vertical corehole near the centre of the 169 kimberlite that intersected approximately 100 metres of kimberlite. Borehole geophysical measurements were obtained in the drillhole with a near comprehensive suite of logs acquired including seismic velocity and magnetic susceptibility which complement ground geophysical surveys in the area. The wide range of geophysical parameters investigated assisted in characterization of the physical properties of the kimberlites and in the interpretation of other, more remote geophysical measurements. Magnetic susceptibility measurements were completed on 16 coreholes from 11 different kimberlites, resulting in the acquisition of over 7,500 data points. The data was used to establish reasonable average magnetic susceptibility values for the kimberlites for comparison with model-derived values from ground magnetic data and to assess the variability of magnetic properties within each body.

Nineteen targets were tested by HQ corehole drilling (7,041.5 m). Eight of the targets were previously untested geophysical anomalies. Ten large diameter RCA drillholes (260 mm diameter) were completed at several follow-up targets for a total of 2,177 m. In all, 237.713 tonnes of material (27.825 tonnes core and 209.888 tonnes chip cuttings) were recovered with 161.7 tonnes of sample retained for diamond recovery. Unfortunately, kimberlite samples destined for processing were hijacked en-route to the facility in South Africa, with 21 drillholes samples and approximately 10.3 tonnes of kimberlite affected. A total of 187 macrodiamonds collectively weighing 9.475 carats were separated from the samples including a large composite sample composed of kimberlite recovered from the hijacked material. Grade forecasts based on diamond recoveries ranged from 0 to 0.234 carats/tonne.

Microdiamond analyses were completed on 200 samples of approximately 20 kg size from selected drillholes by caustic dissolution. An additional 93 samples were submitted for heavy mineral separation (including microdiamonds) and indicator mineral chemistry. A total of 602 samples were collected for detailed petrographic examination.

9.2.6 1993 Exploration and Sampling Program

Geophysical investigations included ground magnetic and gravity surveys. A total of 252.775 line-km of ground magnetometer survey was completed over 29 separate targets in order to define better the outlines of several shallow magnetic anomalies. Gravity coverage at 11 sites representing 14 kimberlite-type targets was also obtained with the objective of continuing the reconnaissance scale assessment of various kimberlite gravity signatures. This work was meant to demonstrate which kimberlites were most amenable to mapping by gravity among targets with little or no magnetite and to enhance interpretation of kimberlite thicknesses among some of the larger bodies. The acquisition of magnetic susceptibility data for a range of kimberlites was continued this year with over 3,000 data points measured in 18 coreholes.

The 1993 drill program consisted of 35 reconnaissance and redrill coreholes (63.5 mm diameter), RCA holes (311.2 mm diameter), and rotary testholes (101.6 mm diameter). Thirty-three drillholes successfully intersected kimberlite. A total of 4,883.0 m of HQ coring was completed at 19 locations providing 13.212 tonnes of kimberlite for diamond recovery processing. Ten RCA drillholes penetrated 2,414.2 m of kimberlite resulting in 126.315 tonnes of retained kimberlite submitted for diamond recovery processing. Six testholes yielded an additional 9.900 tonnes of material from 5 targets. A total of 61 macrodiamonds having a cumulative weight of 2.291 carats were recovered from 15 of the drillholes. Grade estimates for the tested intervals range from 0 to 0.300 carats/tonne

Microdiamond analysis was conducted on 148 samples from 16 drillholes. An additional 56 samples from 15 drillholes were submitted for heavy mineral separation (including microdiamonds) and analysis of indicator mineral chemistry. A total of 1,760 microdiamonds were recovered from 14 drillholes.

Petrographic examination of 562 samples was completed along with separate consultant studies of the stratigraphy, sedimentology, and volcanology of the Fort à la Corne area.

9.2.7 1994 Exploration and Sampling Program

The 1994 exploration program concentrated on the acquisition of bulk samples to assess macrodiamond potential, hence, only minor geophysical surveys were conducted in three locations requiring sufficient coverage to spot drillholes (9.45 line-km).

Large diameter drilling (298.45 mm diameter) was completed in order to maximize the size of minibulk samples. Drillhole selection was based on completion of the first-pass drill-testing of anomalies which were about 20 ha in size, as well as the need for additional sample material from inadequately tested kimberlites. Seven previously untested targets and five kimberlites which had indications of positive potential based upon earlier corehole drilling were tested by 13 drillholes which provided 209.300 tonnes of kimberlite for macrodiamond processing in 29 petrographically defined sample intervals. A total of 147 macrodiamonds with a cumulative weight of 10.080 carats were recovered from 11 drillholes. Grade estimates for the tested targets ranged from 0 to 0.157 carats/tonne.

Microdiamond analysis was conducted on 29 samples from the 13 drillholes corresponding to the intervals defined for the bulk samples. In addition, one sample was selected from each drillhole for heavy mineral separation (including microdiamonds) and indicator mineral chemistry. A total of 227 microdiamonds were recovered from 11 drillholes.

9.2.8 1995 Exploration and Sampling Program

Kensington Resources Ltd. joined the joint venture under a three-year earning-in period, after which the four partners would each hold a 25% interest in the project.

Eight large diameter drillholes (LDDH) with diameters of approximately 300 mm were completed on eight different kimberlite bodies. A total of 247.721 tonnes of kimberlite were recovered (168.669 t actually retained for analyses) from a cumulative kimberlite intersection of 1,355.6 m. Four LDDH were targeted on untested magnetic anomalies (Kimberlites 116, 126, 133, 163). The remaining four drillholes tested kimberlites where earlier drilling warranted additional work (Kimberlites 119, 122, 140, 147). A total of 28 microdiamond and 16 indicator mineral chemistry samples were also submitted for analysis. Seven additional samples from DH 145-04 completed earlier were also analyzed for microdiamonds. Microdiamonds were recovered in 5 of 8 LDDH, with 242 microdiamonds recovered by both caustic dissolution and jigging methods. A total of 51 macrodiamonds cumulatively weighing 2.815 carats were recovered from 13 of the 35 minibulk samples processed in 1995. The best recoveries were noted in drillholes 140-08 and 147-03, yielding average grades of 0.0123 and 0.0751 carats/tonne, respectively. Individual samples were found to range in grade from 0 to 0.11857 carats/tonne. The largest diamond recovered was 0.27 carats from LDDH 147-03. Valuations on macrodiamond parcels were performed by De Beers, with a value as high as $US 104.20 assigned to a two stone parcel from DH 140-08 weighing 0.225 carats.

9.2.9 1996 Exploration and Sampling Program

Thirty rotary testholes (7,079.6 m) tested 22 previously untested kimberlite-type anomalies with the purpose of recovering samples for indicator mineral chemistry and microdiamond analyses. The drillholes also yielded small tonnage samples for macrodiamond processing. Eight additional drillholes were also completed on previously tested targets were existing results warranted further investigation. In all of the drillholes, sampling was directed at testing geologically distinct kimberlite intervals for microdiamonds (2,308 kg, 180 samples) as well as macrodiamonds (67.751 t kimberlite retained, 28.404 t processed). An additional 84 intervals from 20 different drillholes drilled in previous years also were tested for microdiamond content. A total of 24 representative samples from 24 different kimberlite bodies drilled in 1996 were submitted for indicator mineral studies.

Prior to drilling, ground magnetic profiles were completed across 17 targets (90.125 line-km) to complete the ground magnetic coverage of all known targets in the project area. Airborne GEOTEM (400 line-km) and time-domain TEM test surveys (4.5 line-km) were also undertaken to test the applicability of these geophysical methods in delineating kimberlites in the Fort à la Corne environment.

A total of 66 macrodiamonds with an aggregate weight of 1.2 carats were recovered from the minibulk samples processed during 1996. A consultant's valuation of all the Fort à la Corne diamonds recovered to date (689 stones submitted, 34.7 carats) indicates the average carat price for the parcel is US$ 43/carat, with the potential for many kimberlites to yield stones in the range of US$50-100/carat range.

9.2.10 1997 Exploration and Sampling Program

The primary objective of the 1997 Fort à la Corne drilling program was to collect minibulk samples for macrodiamond recoveries and small representative samples for microdiamond and indicator mineral recoveries. A total of two small diameter drillholes with 130.2 mm diameter (SDDH) and three RCA underreammed large diameter drillholes with 444.6 mm diameter (LDDH-UR) were completed on five different kimberlite bodies. A total of 137.294 tonnes of kimberlite (theoretical) were recovered giving an actual minibulk sample of 72.897 t from a cumulative kimberlite intersection of 592.0 m. Twenty-seven composite intervals of kimberlite ranging from 18 to 51 m thick were created from 135 individual sample bags and were then submitted for macrodiamond recoveries. A downhole tracer program was initiated to test the recovery efficiency of materials from the borehole environment during both reverse circulation drilling and underreaming.

A total of 31 macrodiamonds cumulatively weighing 2.520 carats was recovered from three of the five drillholes processed in 1997. The best recoveries were from LDDH-UR 220-02, which yielded a weighted average grade of 4.4 cpht. Individual sample grades ranged from 1 to 10.9 cpht. The largest diamond recovered was 0.7 carats from drillhole 220-02. SDDH 605-01 and SDDH 612-01 were barren of macrodiamonds. Fourteen intervals were tested for microdiamond contents from composite representative grab samples. Microdiamonds were produced from four of five drillholes including 150-05, 176-02, 220-02, and 605-01. Microdiamonds were not recovered from SDDH 612-01 and it is considered to be barren. A total of 206 stones, collectively weighing 0.04421 carats, were recovered by the caustic fusion process.

9.2.11 1998 Exploration and Sampling Program

The primary objective of the 1997 Fort à la Corne drilling program was to maintain the joint venture assets and to promote interest in testing selected prospective kimberlites. No exploration activities were conducted in the field during 1998, although a drilling program was planned for the winter of 1999. Results for 1997 program initiatives received in 1998 were evaluated and reported.

Other work included preparation of a summary of exploration activities from 1992 to 1997, which was disseminated to the public by way of technical papers and slide presentations. In addition, much of the petrographic and stratigraphic data available from downhole studies were integrated with geophysical modeling in a new interpretation of the geometry and architecture of the Fort à la Corne kimberlite bodies. At the end of 1998, Monopros (now DBCEI) became operator of the project.

9.2.12 1999 Exploration and Sampling Program

A large diameter drill program was conducted with four holes placed in two kimberlites (147 and 220), yielding a theoretical mass of 87 tonnes and 130 macrodiamonds (4.045cts) recovered. A large diameter drilling program was conducted by *SDS Drilling* within the Fort à la Corne forest over kimberlites 147 and 220 during the winter of early 1999. Two holes were placed into each kimberlite, yielding an extracted total theoretical mass of 87,438 kg over a kimberlite interval of 475.1m. The weighted average recovery was in the order of 65%.

Processing of the resulting minibulk samples produced 127 diamonds, 69 of which were recovered from x-ray tails. A total of 400 kg of kimberlite was sent for microdiamond analysis, and further grab samples were extracted for moisture, density, magnetic susceptibility and granulometry tests. Results of the kimberlite processing were somewhat disappointing in that neither the macrodiamond grade, nor the extrapolated microdiamond grades (both by Terraconsult and MINRED, the research arm of De Beers) were significantly upgraded by the 1999 work. In addition, low confidence average stone valuations for these two bodies indicated low prospectivity and further evaluation work was discontinued. The additional microdiamond work however improved confidence levels on grade prediction figures.

9.2.13 2000 Exploration and Sampling Program

A full review of all diamond recovery including 1999 work was completed by MINRED in early 2000. This prioritization was based on body size, depth, grade, and diamond size frequency distribution. Two kimberlites were chosen for further work (large diameter drilling). Three 609 mm holes were placed into body 122 and two were placed into 141. A total of 487 macrodiamonds weighing 38.37 carats were recovered from the entire exercise. Best-fit and optimistic modeled ore value estimates at +1.5 mm ranged from $US 11-18 per tonne for Kimberlite 122 and $US 28-32 per tonne for Kimberlite 141. These estimates provided the basis for the 2001 field program.

9.2.13.1 Grade Forecasts and Focus on Prioritized Kimberlites

Evaluation of the Fort à la Corne kimberlite bodies during 2000 and early 2001 utilized a synthesis of diamond recoveries, previous diamond valuations, and estimated body size to prioritize the bodies with the most potential for economic diamond deposits. Results of the desktop studies conducted in 1999 and 2000 are summarized in Table 3. Despite incomplete testing and difficulties in rationalizing diamond recoveries from a variety of drilling and processing methods, exploration is now focused on five high-priority bodies. Prioritization was greatly facilitated by development of enhanced grade forecasts by De Beers that have a higher degree of confidence than previously available for Fort à la Corne kimberlites.

Kimberlites with grade forecasts indicating robust, commercial-sized stone populations were given the highest priority and it is significant that De Beers grade experts consider the bodies listed in Table 4 to have very favourable potential. Grade forecasts and sample information for Kimberlites 122 and 141 were updated to reflect macrodiamond recoveries from 2000.

Table 3: Kimberlite and Diamond Information Utilized in 2000 Prioritization Study

Body	Size of Body	Total Micro-diamonds	Sample wt (kg)	Total Microdiamond weight (octacarats*)	Total Macro-diamonds	Total carats	Sample weight (tonnes)	Average Stone size (carats)	Sample Grade (cpht)
101	15.8	1	210.0	6,450	Not sampled				
116	27.3	0	17.0	0	0	0.000	27.8		0.0
118	76.0	81	410.4	2,692,565	2	0.020	8.8	0.010	0.2
119	23.7	7	267.6	71,750	0	0.000	34.9		0.0
120	134.1	655	884.0	9,895,830	149	5.746	205.7	0.039	2.8
121	34.8	357	776.5	9,196,102	63	2.340	60.6	0.037	3.9
122	108.0	211	622.0	6,436,950	77	5.820	87.4	0.076	6.7
123	24.4	153	300.3	29,207,503	7	0.132	18.3	0.019	0.7
126	21.6	0	73.0	0	1	0.130	38.5	0.130	0.3
133	17.0	42	152.0	87,400	1	0.045	42.7	0.045	0.1
134	17.0	11	84.9	74,345	1	0.010	3.2	0.010	0.3
135	41.0	1	52.8	18,597	Not sampled				
140	143.6	391	1122.6	12,410,200	39	2.010	77.6	0.052	2.6
141	106.8	102	574.2	4,175,600	18	0.925	34.8	0.051	2.7
144	32.0	2	68.8	11,250	Not sampled				
145	42.7	490	985.4	22,711,356	32	0.908	52.7	0.028	1.7
147	135.4	658	207.0	12,113,910	114	4.180	78.3	0.037	5.3
148	184.0	374	262.0	3,711,050	70	2.369	121.4	0.034	2.0
150	67.2	162	473.0	9,894,000	37	2.885	117.1	0.078	2.5
151	No data				4	0.460	5.5	0.115	8.3
152	24.8	47	166.0	697,500	0	0.000	0.4		0.0
154	32.0	4	100.0	95,345	Not sampled				
155	18.0	12	105.6	1,093,587	7	0.080	4.3	0.011	1.9
156	6.9	11	140.8	209,621	0	0.000	5.8		0.0
157	2.7	3	58.7	19,185	Not sampled				
159	10.0	2	52.8	4,233	Not sampled				
162	55.5	33	234.0	262,950	3	0.120	17.9	0.040	0.7
166	15.0	19	88.0	177,821	3	0.042	3.0	0.014	1.4
167	69.5	30	252.0	50,000	8	0.315	15.4	0.039	2.0
168	31.9	1	20.0	1,450	5	0.215	30.6	0.043	0.7
169	78.5	128	626.4	4,581,540	47	4.075	74.0	0.087	5.5
170	25.0	36	93.6	573,415	7	0.099	5.1	0.014	1.9
174	37.8	112	296.8	9,632,700	2	0.035	11.7	0.018	0.3
175	36.8	47	251.6	343,500	5	0.290	10.1	0.058	2.9
176	26.0	172	258.7	15,993,385	17	0.966	49.3	0.057	2.0
181	13.0	2	339.6	17,750	0	0.000	30.7		0.0
218	22.0	5	143.0	8,400	2	0.180	17.8	0.090	1.0
219	42.4	47	192.2	1,927,950	4	0.185	39.9	0.046	0.5
220	23.7	409	199.4	13,195,244	69	3.133	69.7	0.045	4.5
221	7.2	73	264.4	7,658,734	21	0.341	5.5	0.016	6.2
223	4.7	10	60.5	227,442	2	0.123	2.2	0.062	5.6
269	8.3	3	8.3	9,884	Not sampled				
326	43.4	0	18.0	0	2	0.060	20.2	0.030	0.3
601	86.2	24	100.1	108,158	1	0.008	4.8	0.008	0.2
602	68.3	4	234.0	36,200	0	0.000	3.0		0.0
603	19.3	1	18.0	4,850	1	0.270	36.2	0.270	0.7
606	43.8	21	213.0	229,550	0	0.000	3.9		0.0
611	1.8	1	57.3	1,000	0	0.000	2.9		0.0
614	24.0	1	139.0	900	17	1.425	26.7	0.084	5.3
615	12.2	3	68.6	4,632	Not sampled				

* 1 octacarat is equivalent to 1 X 10-8 carat

Table 4: Prioritized Kimberlite Bodies

Kimberlite Body	Est. Area (Ha)	Modeled Mass (millions of tonnes)	# of Drill Holes	Minibulk Mass (tonnes)	Average Micro-diamond (stones/tonne)	Macro-diamond Grade (cpht)	De Beers Forecast Commercial Grade (cpht)
122	108	540	11	388	340	5.2	16
140	144	537	8	74	377	4.4	5-19
141	107	395	5	271	180	4.8	19
147	135	497	5	73	3,180	7.2	15
148	184	675	12	121	1,425	2.2	10
150/151	112	336	6	120	340	4.8	16

9.2.13.2 Large Diameter Drilling, Sampling, and Macrodiamond Recovery

The primary objective of the 2000 program was to obtain large minibulk samples from two high priority bodies. The drilling program was structured to enable maximum recovery of macrodiamonds in order to provide a first-order, average value ($US/carat) of the stones in each body. Five – 24 inch diameter reverse circulation mudflood with air-assist drillholes were completed in the 2000 program. Three holes were located over the deeper-going part of the 122 kimberlite body and two over the central part of Kimberlite 141. The holes were place within 200 metres of known kimberlite intersections, so a small measure of geological control was available. A 1.2 mm screen was utilized in the field to separate fines from the minibulk samples. All minibulk sample material was processed at the De Beers-owned dense media separation (DMS) plant located in Grande Prairie, Alberta. Heavy mineral concentrates produced here were then air-freighted to Johannesburg, South Africa for final diamond recovery by De Beers under high-security conditions in a process utilizing screening to specific size fractions followed by hand sorting.

9.2.13.3 Macrodiamond Recovery Results

A total of 487 macrodiamonds were recovered form this program and specific results are shown in Table 5. Past stone valuations were considered rough estimates only due to very small parcel sizes and a lack of larger stones. Due to these factors, average diamond values per body were often understated, despite a large fraction of gem-quality stones. Concern for these problems by Kensington and DBCEI have led to the use of two methods to understand the quality of diamond at Fort à la Corne. De Beers formulates *modeled values* based on integration of average sieve fractions for commercial-sized stones with the diamond size distributions and grade forecasts. In concert with this approach, individual stone values and average body values are currently being assessed by an independent diamond consultant with specific expertise in this area. All forecast grades and modeled values are evaluated during revenue modeling for the prioritized bodies. Modeled values and revenues for kimberlite bodies 122 and 141 are shown in Table 6, although the conservative figures are not included.

9.2.13.4 Microdiamond Recovery

Samples slated for microdiamond recovery were collected by hand from the oversize pieces of kimberlite prior to DMS processing. This kimberlite was collected on a per sample basis and represented 12 metre intervals of the full kimberlite intersection from selected drillholes. Microdiamond recovery was primarily undertaken by Kimberley Acid Laboratory (KAL) in South Africa, although approximately one third of the samples were processed at Lakefield Laboratories in Ontario for a comparative check on recovery at the De Beers facility.

Microdiamonds recovered from this program were integrated into the existing diamond database for the 122 and 141 kimberlites and utilized for grade forecasts based on statistical diamond size distribution methods.

Table 5: Macrodiamond Recoveries from 2000 Drillholes

Drillhole	Kimberlite Intersection (metres)	Minibulk Mass (kilograms)	Number Of Stones	Carats	Average Sample Grade (cpht)	Large Stone Recovery
122-09	155.7	129.153	63	4.235	3.3	1 stone >0.5 carats
122-10	146.0	118.092	57	5.105	4.3	1 stone >0.5 carats
122-11	102.8	81.078	92	7.970	9.7	4 stones >0.5 carats
Subtotal	**404.5**	**328.324**	**212**	**17.310**	**5.3**	
141-04	168.1	138.590	169	12.840	9.3	2 stones >0.5 carats; 2 stones >1.0 carat
141-05	144.5	113.260	106	8.220	47.2	4 stones >0.5 carats
Subtotal	**312.6**	**251.850**	**275**	**21.060**	**8.4**	
2000 Total	**717.1**	**580.175**	**487**	**38.370**		

Table 6: Modeled Values and Revenue for Kimberlites 122 and 141

Body	Sample Carats (+1mm)	Grade Forecast/ cpht(+1mm)	Grade Forecast/ cpht (+1.5mm)	Model Value US$/ct. (+1mm)	Model Value US$/ct. (+1.5mm)	Model Revenue US$/t (+1.0mm)	Model Revenue US$/t (+1.5mm)	Model Description
122	17.31	8	7.5	133	144	11	11	Best fit
122		13	12	136	147	18	18	Optimistic
141	21.06	19	18	148	153	28	28	Best fit
141		19	18	173	179	33	32	Optimistic

9.2.14 2001 Exploration and Sampling Program

The 2001 kimberlite evaluation program was a combined drilling program of core and large diameter, reverse circulation holes that will be followed by macrodiamond recovery from the acquired kimberlite bulk samples. Following the initial macrodiamond recoveries, and subsequent revenue modeling by MINRED in 2000 and early 2001, it was noted that at the middle and upper end of ore value estimates, the 141 kimberlite had the potential to be economic, when compared to the 1996 *Fluor Daniel Wright* Scoping Study.

A program was designed to collect sufficient diamonds to reduce the uncertainty surrounding the diamond value estimates for Kimberlite 141. MINRED suggested that 100 carats (total recovery) should be sufficient to achieve this aim. Some discussion was held to determine the best method to collect these stones as well as to test or investigate a larger part of the kimberlite.

Added to this was the possibility that both Kimberlites 141 and 140 were in fact part of the same body. Barbara Scott Smith first suggested this possibility in 1994 after viewing core and data from both kimberlite areas. While diamond size frequency plots for the two bodies looked quite different, it was felt that this difference may have been a reflection of sample bias. Removing some questionable drill hole diamond size frequency data from plots of kimberlite 140 flattened the curve to resemble the relatively coarse size frequency distribution of kimberlite 141.

MINRED stated they would require 100 carats from Kimberlite 141 to enable them to model diamond value with a higher degree of confidence. Calculated from the 2000 kimberlite intersections and results, eight large diameter drill holes would be necessary to recover the additional 80cts required. Some work was proposed on Kimberlite 150 as this was the third prioritized target from the MINRED 2000 review. Two large diameter drill holes were planned for 150. As the 2000 Large Diameter Drillhole (LDDH) program produced high volumes, diamonds larger than one carat and minimal breakage, the 24” reverse flood method was again chosen as the preferred drilling technique.

9.2.14.1Core Drilling Program

The high cost of large diameter drilling, along with the poorly understood but possibly complex kimberlite geology of kimberlite 141 prompted a proposed program of core drilling to ensure planned LDDH's were correctly sited. Up to eight PQ sized holes were originally proposed but upon receiving drill quotes from contractors, and discussing petrographic requirements with the De Beers' petrographic consultant, Barbara Scott Smith, it was decided that up to 16 NQ sized (47.6 mm) core holes could be installed for the same cost and benefit.

A core hole was therefore planned for each proposed large diameter site to gain some geological control before the larger diameter work. This left a further 6 core holes available for geology only investigations. Large diameter drill holes were planned in the expectation that reasonable intersections of kimberlite could be obtained around the 2000 sites. All drill holes were sighted on a UTM grid established over the kimberlites and field staff were prepared to relocate large diameter sites based on corehole intersections. The final program therefore called for 16 core holes (14 planned on Kimberlite 140/141 and 2 on Kimberlite 150) and 10 x 24" drill holes (8 holes into Kimberlite 141, 2 holes into Kimberlite 150).

Drilling of sixteen NQ (1.875 inch diameter) cores, predominantly from the 141 body, permitted geological evaluation of the kimberlites and was a means to spot the locations of the large diameter drillholes. Large diameter drilling is used for acquisition of bulk samples for macrodiamond recovery and stone valuation. Sixteen NQ (47.6 mm) diameter drill holes were completed, comprising 13 holes on Kimberlite 141, one hole into Kimberlite 140 and two core holes into Kimberlite 150. A summary of corehole statistics is summarized in Table 7.

In general, coreholes were constructed with the use of three bits of different size. Surface holes were installed using a mud circulation system and an HW tricone milled tooth bit (130.2 mm diameter). At around 30 m, the HW tricone was replaced with a NW tricone bit (98.4 mm) and again mud was used for circulation. This was used until around 93-96 m when an NQ core bit replaced the tricone and coring commenced. Core drilling was generally conducted with either fresh water or at least low viscosity mud. Casing was generally installed to around 80 m although on occasion this dropped so additional lengths had to be added.

Two exceptionally thick intersections of kimberlite were sampled. The first was in hole 141-09 (Table 7) where 257.8 m of kimberlite was intersected. This hole was located on the modeled margin of kimberlite 141. The second deep intersection was seen in hole 141-13. Kimberlite was intersected between 111 m and the bottom of the hole at 450 m. The hole was terminated in kimberlite. It is believed that both holes are located near or within the main feeder vent of the 141 body.

Table 7: 2001 Core Intersection Summary

	Top of Kimberlite	Bottom of Kimberlite	Kimberlite Thickness
141-06	103.5	246.0	142.5
141-07	109.5	238.5	129.0
141-08	109.5	273.5	164.0
141-09	105.0	362.8	257.8
141-10	101.5	254.9	153.4
141-11	102.5	192.0	89.5
141-12	112.5	266.5	154.0
141-13	111.16	450+	338.84
141-14	105.01	207.8	102.79
141-15	115.3	233.6	118.3
141-16	105.8	221.1	115.3
141-17	114	250.8	136.8
141-18	110.95	201	90.05
140-09	116	229.5	113.5
150-06	97.4	282.6	185.2
150-07	95.6	236.4	140.8
Total:			**2,431.78**

Petrographic studies suggest that the core hole geology can be broadly separated into three main types. These features were the "megagraded bed", "multigraded beds" and fine grained dominated texture. Descriptions by Dr. Barbara Scott-Smith of these beds are as follows:

Megagraded bed: (Holes dominated by a single mega-graded bed up to 130 m thick)
The brief macroscopic examination of the chips from 141-04, the 2001 macrodiamond results, and the 1994 macrodiamond results for 141-03 all suggest that significant diamond contents found in previous drilling were derived from the mega-graded bed.

Fine Grained Kimberlite: (Holes dominated by fine grained kimberlite (FK), although of variable type and with other types of kimberlite present)
Based on the nature of the nature of 141-04 drill chips, the nature of 141-02 and the related microdiamond results, it appears that at least some FK's have low grade or is barren. Thus it is recommended that these areas not be used for the 2001 RC drilling program, which is aimed at recovering carats. It is suggested, however, that these holes should be extensively sampled for microdiamonds.

Multigraded beds: (Holes dominated by repetitive graded beds <10m thick).
The third group of cores reflect a mode of pyroclastic deposition not previously encountered in 141. It is not known, therefore, whether this type of kimberlite will yield the required relatively high quantities of diamond. Thus taking bulk samples at these sites has an element of risk. However, the kimberlitic constituents forming these kimberlites more closely resemble those of the mega-graded bed and are also typical of kimberlites in general. It seems, therefore, that drilling at these sites is a reasonable risk.

The dominant kimberlite phase intersected in each drillhole is as follows:

141-01 – mega-graded bed
141-06 – mega-graded bed
141-07 – mega-graded bed
141-08 – mega-graded bed plus additional complex kimberlite below
141-14 – mega-graded bed
140-09 – mega-graded bed
141-12 – multiple graded beds
141-15 – multiple graded beds
141-17 - multiple graded beds

141-02 – dominated by FK
141-09 – dominated by FK plus deeper different kimberlite
141-10 – dominated by FK plus deeper different kimberlite
141-11 – dominated by FK plus deeper different kimberlite
141-13 – dominated by FK plus deeper different kimberlite

The geology of 141-16, 141-17 and 141-18 were described as being somewhat nondescript and it was not clear how they fit the present geological model. Each of these three holes is dominated by pyroclastic kimberlite (PK) composed of constituents, which are similar to those forming the multi and megagraded kimberlites. Drillcore 141-17 contains sufficient recognizable repeated graded beds to suggest that it belongs to the multigraded group. The dominant kimberlite in holes 141-16 and 141-18 is similar to the mega-graded bed but the full sequence is not represented; for example, the basal kimberlite breccia is missing. It is distinctly possible that these intersections may represent distal lateral equivalents of the mega-graded bed. 141-16 and 141-18 also display some internal fluctuations that could alternatively suggest that they belong to the multigraded group.

At Kimberlite 150, Scott Smith used her previous notes on drillhole 150-02 to help interpret the geology of the core holes completed in 2001. Her on-site comments are as follows: *"The total drillcore can be subdivided into at least 5 different, and mostly distinctive, phases of pyroclastic kimberlite (PK). The contrasting phases of kimberlite are very likely to have different diamond grades showing that the internal geology of this pipe should have an important impact of the evaluation of this body. Two of these kimberlites form extensive intersections and are repeated in different holes".*

(1) A medium grey poorly sorted medium to coarse grained (M-CK) olivine lapilli tuff forms the uppermost parts of all three holes and occurs in the following intersections:

150-02 105-244.6m
150-06 97.4-221.8m
150-07 95.1-134m.

(2) A pale green coloured better sorted bedded very very fine to medium grained olivine tuff forms the following intersections :

150-02 254.1-265.3m
150-06 134-235.75m (probable, in disintegrated core).

Based on these recommendations and the intersection thicknesses encountered, it was decided that ten 2001 large diameter drill holes would be placed next to (within 5m) the following core holes: 141-06, 141-07, 141-08, 141-12, 141-14, 141-15, 141-16, 150-06, 150-07, and one additional site located 100m east of 141-15 (actually between 141-15 and 141-03).

9.2.14.2 Large Diameter Drilling and Minibulk Sampling Program

The main objective of the 2001 program was to obtain sufficient macrodiamonds to give approximately 60 additional carats for valuation in order to increase the confidence level of reported modeled values and revenue for the 141 kimberlite. Also, the shape, size, diamond distribution, and internal architecture of the body will be estimated using the 3D capabilities of GEMCOM, a computer program that plots drillhole and diamond recovery information. A combined kimberlite intersection of 1,327.2 metres facilitated excavation of a total of 889.8 tonnes of kimberlite of which 471 tonnes of wet chips greater than 1.5 mm in size were retained for diamond recovery. Of these totals, 120.96 tonnes were excavated from the kimberlite 150 body with 60.37 tonnes of wet, coarser chips saved for processing. A total of 768.85 tonnes of wet chips were excavated from kimberlite 141. Theoretical (excavated) kimberlite masses shown in Table 8 were calculated using continual borehole diameter information from downhole caliper surveys. Some sample information listed here was revised from previous news releases.

Table 8: 2001 Summary of Minibulk Sampling

Drillhole Number	Kimberlite Intersection (metres)	Theoretical Mass Kimberlite (tonnes)	Total Depth of Hole (metres)
141-20	145.5	95.586	255.2
141-21	142.2	93.399	245.0
141-22	119.0	84.129	231.0
141-23	160.8	104.589	267.0
141-24	115.7	76.940	231.0
141-25	101.3	66.681	206.6
141-26	126.1	82.472	236.2
141-27	115.6	76.463	219.5
141-28	135.2	88.589	244.7
150-08	165.9	120.958	262.0
Total:	**1,327.2**	**889.8**	**2,398.2**

Initial processing of 117 samples (each representing approximately 12 metres of kimberlite intersection) was conducted at the De Beers Dense Media Separation (DMS) facility at Grande Prairie between September 19, 2001 and October 20, 2001. The total headfeed weight of drained kimberlite was 413.134 tonnes for the bulk sample from kimberlite 141 and 57.988 tonnes for the kimberlite 150 minibulk sample. Reduction of material for diamond recovery by concentration of heavy minerals (and diamonds) resulted in a 99.2% decrease in mass. Consequently, only 3,773 kilograms of +1.5mm material were shipped to De Beers facilities in South Africa for final diamond recovery and sorting (Table 9). Ten audit samples and 5 repeat samples were run during processing.

Table 9: Summary of 2001 Initial Processing by Dense Media Separation

Drillholes	Number of Samples	Dense Media Headfeed Mass (tonnes)	Heavy Mineral Concentrate Weight (kilograms)	Concentrate % of Headfeed Mass
141-20 to 28	103	413.134	2,852.08	0.7
150-08	14	57.988	920.90	1.6
Program Total:	**117**	**471.122**	**3,772.98**	**0.8**

9.2.14.3 Macrodiamond Recovery and Grade Estimates

A total of 769 tonnes of kimberlite was excavated in 2001 from kimberlite 141 utilizing large diameter drillholes. Final diamond recovery from 3,773 kilograms of heavy mineral concentrate, derived from the dense media separation process, gave recovery of a total of 466 stones with cumulative mass of 45.59 carats. Of this total, 431 macrodiamonds (>1.5 mm in size) weighing 42.455 carats were recovered and added to the existing kimberlite 141 inventory of 248 stones weighing 21.22 carats recovered from program samples acquired in 2000. Notably, a single stone weighing 3.335 carats was recovered from the 141 samples. The average sample grade (total program carats divided by total sample tonnes) was 0.055 carats per tonne or 5.5 carats per hundred tonne; this compares with 18 cpht from forecast grades, which are expected to better reflect the average grade over the entire kimberlite rather than localized (areal and stratigraphic) deficiencies or abundances due to extreme nugget effects known to be common to heterogeneous diamond deposits. Diamond recovery for the samples from kimberlite 150 yielded 35 stones weighing 3.135 carats were recovered from kimberlite 150. Fewer carats than initially anticipated were recovered from the 2001 program resulting in lower minibulk sample grades and less stones in the greater than 0.5 carat range (particularly, in comparison to 2000 samples for kimberlite 141). Some reasons for this discrepancy include:

i) Poor drilling completion in 3 of 10 holes resulting in inability to sample the bottom-most kimberlite strata that were expected to yield significant numbers of stones;
ii) Change in lower treatment size cut-off from 1.0 mm to 1.5 mm in 2001, which resulted in fewer stones and less carats recovered;
iii) Re-calculation of kimberlite density from 2.5 to 2.21, based on several hundreds of sample measurements; this re-calculation impacts on the sample grade calculation; and
iv) Complexity in kimberlite lithotype encountered by drilling that may reflect variations in diamond distribution.

9.2.14.4 Microdiamond Recovery

Representative core samples from drillholes 141-09 and 141-12 were selected for total diamond recovery using caustic dissolution methods in De Beers facilities. A total of 424 microdiamonds were recovered from this procedure with a cumulative weight of 0.143 carats. Data derived from this exercise were incorporated in the forecast grades estimates for parts of Kimberlite 141.

Table 10 shows sample grades for the eleven 610 mm diameter boreholes drilled in 2000 and 2001 that range up to 41.5 carats per 100 tonnes (cpht) and cumulatively average 5.5 cpht. Notably, the high-end sample grade includes the 3.335-carat stone recovered from a 2001 sample. Individual minibulk sample grades are not considered representative of the average grade of the kimberlite, rather the range of values likely brackets the actual grade of specific kimberlite phases or units, of which there may be several within a given drillhole. Grade estimates derived from statistical modeling of diamond size distributions for Kimberlite 141 ranged from 5 to 12 cpht. These estimates are extrapolations for stones greater than 1.5 mm in size and pertain only to the central portion of Kimberlite 141 where testing was conducted during 2000 and 2001.

Table 10: Minibulk Sample Grades for 2000 and 2001 Drillholes in Kimberlite 141

Drillhole	Year Drilled	Range of Minibulk Sample Grade (cpht)	Average Borehole Sample Grade (cpht)	Preliminary Estimate of Number of Kimberlite Phases
141-20	2001	0 - 41.5	6.6	3
141-21	2001	0 - 16.1	6.4	4
141-22	2001	0 - 17.7	7.2	2
141-23	2001	0 - 11.4	5.5	2
141-24	2001	0 - 21.3	5.2	3
141-25	2001	0 - 9.7	2.7	2
141-26	2001	0 - 17.2	5.5	at least 2
141-27	2001	0 - 6.9	2.1	2
141-28	2001	0 - 13.9	4.2	3
141-04	2000	0 - 34.3	8.4	4
141-05	2000	0 - 19.7	7.1	4

9.2.14.5 Interpretive Results for 2001 Drilling and Sampling Program

DBCEI, the operator of the project, oversaw preparation of an evaluation report authored by managers and geoscientists in Mineral Resource Services (MRS) a department of De Beers located in Johannesburg, South Africa. The report, for which preliminary results were supplied during July 2002, was finalized in November 2002 from currently available information and modeled by De Beers using proprietary techniques. Macrodiamond recoveries for 2000 and 2001 were carried out at De Beers' facilities located in Canada and South Africa. The total microdiamond inventory that was recovered in early 2002 and utilized in the current grade forecasts was recovered both from Lakefield Laboratory in Canada and De Beers' laboratories in Kimberley, South Africa. Services and interpretations rendered to the FalC-JV by De Beers are not independent or "at arms-length" due to their involvement in the project as a partner.

9.2.14.6 Modeled Diamond Values and Preliminary Assessment of Revenue

Actual average parcel diamond values for the 2001 stones were posted at $US 52.60/carat, reflecting a substantial increase from $US 33.67/carat for the 2000 stones. De Beers notes that since the valuation of the 2000 diamond parcel, the rough market has undergone a negative shift, a trend that only recently is showing signs of a reversal. For the purpose of modeling diamond value, the 2000 and 2001 parcels were not valued as a single parcel; rather they were combined on paper only, keeping the diamonds separate for later layout exercises that are used to determine if the recovered diamonds differ in a gross sense across the 140/141 kimberlite body as drilled to date.

Modeled dollar per carat values in diamond exploration takes account of the expected diamond size distribution from any potential, future production scenario. An average dollar/carat value is based on diamond values extrapolated upwards to include recoveries modeled in the larger diamond sieve sizes. A model for 141 was fitted around the actual dollar per carat per sieve class recoveries leading to average values for all of the applicable diamond sieve categories. Combination of the modeled revenue curve and diamond size distribution yielded updated dollar per carat value estimates. This gave modeled values for macrodiamonds from 141 that range from $US 20 to $US 220/carat. In light of the difference between modeled parcel and actual values, De Beers suggests that for small diamond samples, the actual parcel value is highly variable and the actual dollar per carat value for a potential producer is usually understated.

Modeled values were combined with grade estimates and dollar per tonne values were calculated for the modeled size distributions. Hence, as a preliminary assessment of revenue based on value and grade estimates, De Beers indicates a range from $US 1 to 26/tonne. Confidence limits of 80% for the modeled values and preliminary assessment of revenue reflect variability in diamond size distribution and diamond value, and not of grade. However, the Company considers all estimates, particularly those of grade, with low confidence in respect of newly-defined geological complexity (at least 4 phases of kimberlite) and variations in diamond size distribution in the 141 and 140 bodies, overall small diamond parcel sizes, and low levels of sampling across the breadth of the body (nugget-effect).

Valuation of the 2000/2001 diamonds was conducted during November 2002 by WWW International Diamond Consultants Ltd. (hereafter, WWW). WWW indicated an overall average value based on its open market price book some 15-20% higher than that listed by De Beers for the same diamond parcels. The De Beers valuations were made utilizing the DTC June 2002 price book. The single large stone measuring 3.335 carats that was recovered from large diameter drillhole 141-20 was given a value of $US 450/carat, compared to $US 390/carat attributed by De Beers. WWW also pointed out the technical difficulties of putting a realistic market value on a relatively small geological sample. The principals of WWW are associated with the Kensington Technical Committee and also may have a financial interest in Kensington Resources.

9.2.14.7 2001 Macrodiamond Breakage Study

A total of 441 macrodiamonds from Kimberlites 141 and 150 were examined for fresh, unetched surfaces that are considered the result of man-made breakage caused by drilling or diamond recovery procedures. Of the 33 stones examined from kimberlite 150, thirteen were significantly broken with estimated loss of diamond ranging from 50% to >75%. Two stones were "fragments", which are defined as diamonds that have no original faces intact, thus obscuring determination of the size of the original stone, and three stones were "minor" to "very minor" fragments with estimated diamond loss of greater than 50% of the stone that strongly suggests shattering of larger diamonds. In total, 39.4% of the diamonds from Kimberlite 150 were broken to some degree. All stones recovered from Kimberlite 150 were captured in round diamond sieves having openings 2.845 mm and smaller. The increased breakage is due to the relatively harder and higher density rock in kimberlite 150 compared to softer, more altered kimberlites as seen in bodies 141 and 122.

Seventy-six macrodiamonds of a total of 407 examined from kimberlite 141 samples were damaged to some degree. Of the total number from Kimberlite 141, approximately 3% (12 stones) were "fragments" and 4% (17 stones) classed as "minor" to "very minor" pieces that strongly suggest shattering of a larger diamond. The remaining 47 broken stones constitute 10.8% of the diamonds making a cumulative macrodiamond breakage of 18.7%. This figure is marginally higher than the 17% breakage observed in the investigation of samples from body 141 in 2000 and is considered an acceptable low level of breakage by De Beers during a large diameter drill program. Of the 98 stones captured by a 2.464 mm round diamond sieve or larger, 11 stones had estimates of greater than 25% loss due to breakage, although, most of the largest stones captured by 3.454 mm sieves and larger did not have significant breakage. However, loss of "fragments" and "minor" pieces to the discarded, undersize fraction of the excavated kimberlite (<1.5 mm) cannot be adequately quantified and shattering of larger diamonds may still be an issue beyond simple estimation of loss from recovered stones. Estimation of the actual amount of diamond lost from broken pieces is not factored in to the grade calculations or grade forecasts, which are based on size distribution of the recovered stones.

9.2.15 2002 Exploration and Sampling Program

The budget for this program was pegged at $5.2 million based on recommendations put forward by geoscientists of the De Beers Mineral Resource Services Group (MRS) following evaluation of draft interpretations of results from the combined 2000 and 2001 programs. A two-stage drilling program (coring and minibulk sampling) was focused on improving the understanding of geology, diamond distribution, and diamond values within the combined 140/141 body with a goal of ultimately proving up resource tonnage. Minibulk samples were acquired from three very large diameter, reverse-circulation drillholes (914.4 mm or 36 inch), which were targeted on the central part of the northwest eruptive centre. These drillholes were targeted to provide additional stones that will improve confidence levels in diamond valuations for this part of the body. In addition, five favourable locations were chosen from the sparsely-tested southeastern and central portions of the 140/141 body for minibulk sampling using large diameter (609 mm or 24 inch) reverse circulation drilling.

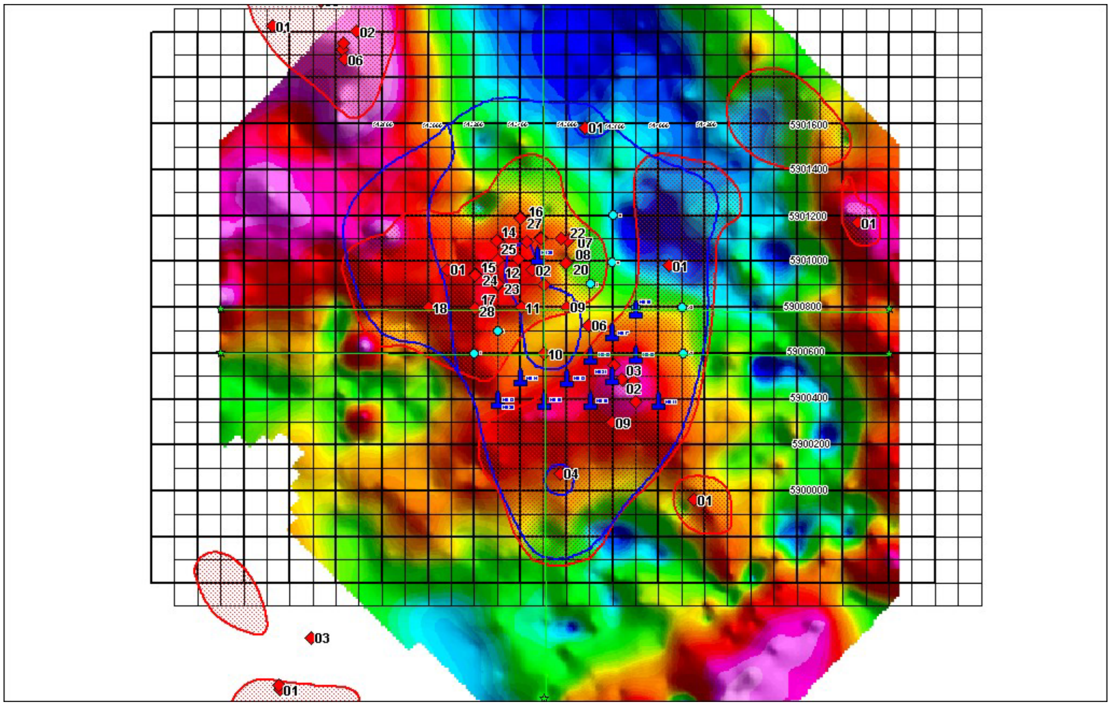
The program gave emphasis to the following:

i) A 2 Phase Drilling Program composed of 25 NQ coreholes (1.875 inch diameter), three - 36 inch diameter RC boreholes, and five - 24 inch diameter RC boreholes;
ii) Geophysical Studies: Ground Magnetic and Gravity Surveys, and a Magneto-Telluric Survey;
iii) De Beers Evaluation by MRS: Grade Forecasts, Valuation, and Revenue Calculations;
iv) Geotechnical Studies – Test structural integrity of bedrock and kimberlite;
v) GEMCOM Modeling of the Kimberlite and Economic Parameters; and
vi) Conceptual Modeling Exercise: an in-house study conducted by AMEC engineering with assistance from the JV partners, to define thresholds for continued economic evaluation of the kimberlites. This is an internal report that is not specifically applicable to a single body.

Large diameter, air-assist, mud-flood, reverse circulation drilling (LDDH) was conducted by Layne-Christensen Drilling. Three cased 36-inch LDDH are targeted in a tight cluster around corehole 141-29 and LDDH 140-04 which returned significant grades and larger stones in 2000. The remainder of the LDDH program included five 24-inch boreholes strategically placed in locations of favourable corehole intervals with indications of higher diamond prospectivity. The eight large diameter drillholes will provide additional carats to increase the level of confidence in grade forecasts, valuations and revenue modeling by De Beers.

9.2.15.1 Geophysical Program

Ground geophysical surveys completed in summer 2002 on the 140/141 body and surrounding areas indicated the possibility of thicker kimberlite than originally expected in areas extending from and close to the combined body. One such adjacent area was shown by coincident gravity and magnetic anomalies as a large extension (approx. 600 x 600 metres) westwards from the southern part of kimberlite body 140. In addition, an intense gravity anomaly coincident with a weak magnetic dipole occurs off the western flank of 141. Another gravity anomaly of similar magnitude and size (approx. 600 x 600 metres) exists approximately 800 metres to the southeast of body 140. These anomalies fit in well with the linear northwest trend apparent in the main kimberlite cluster. Joint venture geophysicists are evaluating these anomalies to ascertain whether they are prospective for new areas of kimberlite.



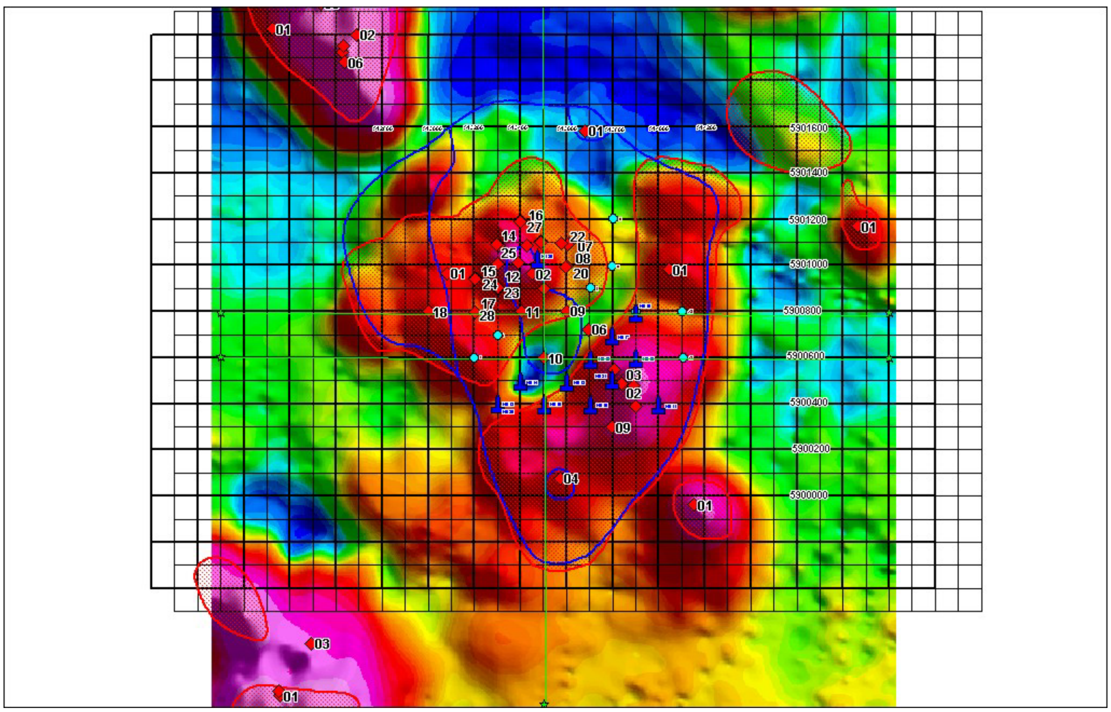


Figure 2: **2002 Geophysical Surveys on Kimberlite 140/141**
Ground gravity above and Ground magnetic below. Grid is 100 metre spacing; symbols represent current and historical drillholes.

9.2.15.2 Core Drilling Program

A total of 25 NQ coreholes (diameter of 1.875 inches or 47.6 mm) were completed on kimberlite 141/140. Drillhole 141-36 intersected 171.0 metres of kimberlite, and corehole 140-21 produced 264.2 metres (approx. 865 feet) of kimberlite and was terminated while still in kimberlite due to poor drilling conditions. The coarseness of kimberlite and thicker interval may indicate that this hole is on or near the vent of kimberlite 141/140 and is considered highly prospective for diamonds due to indicator mineral abundance, coarse grain size, and presence of mantle xenoliths. Geological modeling has given strong support for the concept that both kimberlite form a single body. Preliminary evaluation of core from the south-central portion of the 140/141 body indicates a new area of stratigraphically distinct upper kimberlite which exhibits characteristics that are considered prospective for diamond grade. Boreholes 141-18 and 141-37 were both terminated in kimberlite due to lost steel downhole, and borehole 140-20 was shut down in kimberlite due to drilling difficulties. Table 11 summarizes the core drilling program.

Table 11: Summary of 2002 Core Drilling Program

Drillhole Number	Top of Kimberlite (metres)	Bottom of Kimberlite (metres)	Kimberlite Thickness (metres)	Total Drill Depth (metres)
140-10	110.0	242.0	132.0	250.8
140-11	102.0	167.0	65.0	201.0
140-12	102.0	242.9	140.9	247.5
140-13	110.0	236.6	126.6	243.0
140-14	109.0	244.3	135.3	249.0
140-15	102.0	336.5	234.5	342.0
140-16	99.7	237.3	137.6	243.0
140-17	104.1	258.2	154.1	261.0
140-18	99.8	120.0	20.2	120.0
140-19	104.1	218.1	114.0	231.0
140-20	99.5	221.0	121.5	221.0
140-21	105.3	369.5	264.2	369.5
140-22	107.8	185.0	77.2	198.0
140-23	125.0	180.9	55.9	192.0
140-24	110.7	214.8	104.1	225.0
140-25	108.2	189.6	81.4	195.0
140-26	110.7	218.5	107.8	225.0
140-27	118.7	207.4	88.7	219.0
141-29	105.8	273.0	167.2	279.0
141-34	101.4	238.1	136.7	246.0
141-35	109.0	215.0	106.0	222.0
141-36	102.5	273.5	171.0	280.0
141-37	104.8	124.0	19.2	124.0
141-37	104.8	255.1	150.3	261.0
141-38	106.2	218.5	112.3	231.0
Totals:			**3,023.7**	**5,875.8**

9.2.15.3 Reverse Circulation Drilling and Sampling for Macrodiamond Recovery

Three very large diameter drillholes (914.4 mm or 36 inch) were targeted on the central part of the northwest eruptive centre in order to maximize recovery of diamonds to improve confidence levels for diamond valuations in this part of the body. Each of the three drillholes were spotted within 15 metres of a centrally located NQ corehole (141-29) that was drilled in 2002 to permit better understanding of the kimberlite intersection, which provided the best macrodiamond recoveries in 2000 (large diameter drillhole 141-04).

Subsequent to core drilling, several of the most prospective kimberlite intersections were identified for minibulk sampling by large diameter (609 mm or 24 inch) reverse circulation, mud-flood with air-assist drilling methods, which were conducted from September 29th to November 22nd. A total of 1,271.9 tonnes of kimberlite was excavated from the boreholes and then screened onsite for disposal of fines <1.5 mm in size. Drilling and sampling information for all eight large diameter boreholes is shown in Table 12.

Table 12: Kimberlite Intersections and Sample Tonnages for 2002 Program

RCmud[1] Drillhole Number	Hole Diameter (mm)	Proximal NQ Corehole[2] (Pilot hole)	Kimberlite Thickness (metres)	Number of Samples[3]	Total Drill Depth (metres)	Excavated Mass (tonnes)	Sample Mass (tonnes)
141-30	914.4	141-29	161.6	14	264.6	233.82	104.09
141-31	914.4	141-29	166.8	14	269.8	241.39	95.88
141-32	914.4	141-29	165.8	28[4]	268.8	253.78	96.59
141-33	609	141-09	252.6	23	359.0	176.48	100.83
140-28[5]	609	140-21	111.8	10	217.1	72.16	57.65
140-29	609	140-16	131.2	12	230.8	84.87	58.22
140-30	609	140-17	150.0	13	259.0	100.10	63.82
140-31	906	~80 metres from 140-21	166.4	15	274.7	109.24	69.93
Totals:			1,306.3	129	2,143.8	1,271.87	647.01

1 = RCmud refers to Reverse Circulation, mud-flood with air-assist drilling methods
2 = Information for the core drilling program was reported in a news release by Kensington Resources dated Oct. 15, 2002
3 = Typically 12 metre sample interval
4 = 6 metre sample interval utilized to improve resolution
5 = Drillhole terminated prematurely at a depth of 217.1 metres due to downhole problems

The initial stage of diamond recovery was conducted at a Dense Media Separation plant (DMS) with 5 tonnes/hour capacity that treated material in the size range of 1.5 mm to 12.5 mm after preparations to remove clayey fines and crushing of >12.5 mm oversize material. The plant is located in Grande Prairie and is operated by DBCEI. Preliminary data indicates separation procedures produced approximately 1.5 tonnes of diamond-bearing heavy mineral concentrate from the eight large diameter drillholes. Final diamond recovery is underway at high-security facilities operated by De Beers in Johannesburg, South Africa.

9.2.15.4 Results of Macrodiamond Recovery

On March 28, 2003, the Company reported the initiation of final diamond recovery for minibulk samples from the 2002 program. Approximately 1.5 tonnes of DMS heavy mineral concentrate samples containing macrodiamonds were separated from 1,272 tonnes of kimberlite excavated by three 914 mm (36 inch) and five 610 mm (24 inch) diameter drillholes targeted on the 140/141 composite kimberlite body. The Company conducted on-site due-diligence auditing and monitoring of the final diamond recovery procedures by Brent C.

Jellicoe, P.Geo., the Company's Qualified Person, and Anthony Bloomer of Venmyn Rand (Pty) Ltd. of Johannesburg, South Africa, an independent firm of mining and minerals management advisors. Final diamond recovery for the Fort à la Corne drillholes was conducted at the newly renovated De Beers' Group Exploration Macro-diamond Laboratory (GEMDL), located in Johannesburg, South Africa. Laboratory renovations completed during 2003 focused on increasing the levels of efficiency and security in the facility, while in compliance with ISO 17025 accreditation standards.

The final macrodiamond recovery values were reported to the Joint Venture partners in July of 2003. A summary of all recoveries is shown in the table below, followed by a summary of large stone recovery by drillhole. Recovered macrodiamonds were subjected to characterization studies including; luminescence, magnetic susceptibility, and photography. The stones were then cleaned, re-weighed, and re-sized before valuation in Charter House, London England, a De Beers facility. The stones were then sent back to Kimberley, South Africa for a Breakage Study.

Table 13: Summary of Final Macrodiamond Recovery Results and Grades for 2002 Program

RCmud1 Drillhole Number	Kimberlite Thickness (metres)	Excavated Mass (tonnes)	Sample Mass (tonnes)	Total Stones	Total Carats	Range of Minibulk Sample Grade (cpht)	Average Borehole Sample Grade (cpht)
141-30	161.6	233.82	104.09	155	14.77	0 – 15.6	6.317
141-31	166.8	241.39	95.88	153	16.62	0- 22.1	6.885
141-32	165.8	253.78	96.59	144	16.93	0 – 17.6	6.671
Subtotal 36" LDDH	494.2	729.99	296.56	452	48.32		
141-33	252.6	176.48	100.83	45	16.795	0 – 114.4	9.516
140-282	111.8	72.16	57.65	15	1.22	0 – 8.2	1.691
140-29	131.2	84.87	58.22	72	14.45	1.6 – 58.1	17.026
140-30	150.0	100.10	63.82	55	9.49	0 – 46.7	9.490
140-31	166.4	109.24	69.93	29	3.125	0 – 16.6	2.861
Subtotal 24" LDDH	812.0	542.87	350.45	216	45.09		
Other3				1	0.35		
Totals:	1,306.3	1,271.87	647.01	669	93.760		

1 = RCmud refers to Reverse Circulation, mud-flood with air-assist drilling methods
2 = Drillhole terminated prematurely at a depth of 217.1 metres due to downhole problems
3 = Recovery from composite granulometry samples and Gravel Purge after processing

A total of 54 macrodiamonds larger than 0.25 carats were recovered from the samples. These stones had a combined weight of 42.0255 carats. Only 5 macrodiamonds weighing 0.645 carats were recovered from concentrate cage cleanups, DMS Audits, and composited granulometry samples. This is less than 1% of the total stone recovery.

Table 14: Summary of Large Stone Recovery for 2002 Program

RCmud1 Drillhole Number	>0.25 and <0.5 ct.		>05. and <0.75 ct.		>0.75 and <1.0 ct.		>1.0 carat	
	Number of Stones	Number of Carats	Number of Stones	Number of Carats	Number of Stones	Number of Carats	Number of Stones	Number of Carats
141-30	8	2.910	0	0	0	0	0	0
141-31	8	2.985	1	0.695	1	0.860	0	0
141-32	7	2.320	4	2.230	0	0	1	1.045
141-33	4	1.340	1	0.630	1	0.855	1	10.230
140-282	0	0	0	0	0	0	0	0
140-29	5	1.490	0	0	0	0	4	8.145
140-30	3	0.825	0	0	1	0.895	1	3.610
140-31	1	0.325	1	0.515	0	0	0	0
Other3	1	0.35	0	0	0	0	0	0
Totals:	37	12.545	7	4.070	3	2.610	7	23.030

1 = RCmud refers to Reverse Circulation, mud-flood with air-assist drilling methods
2 = Drillhole terminated prematurely at a depth of 217.1 metres due to downhole problems
3 = Recovery from composite granulometry samples and Gravel Purge after processing

9.2.15.5 Results of Macrodiamond Breakage Study

Macrodiamond breakage studies are important because they can indicate potential diamond loss due to adverse drilling methods and recovery procedures. Recent breaks in a diamond caused by mechanical damage can often be discriminated from those formed by natural causes. A total of 644 diamonds recovered from the Fort à la Corne kimberlite bodies 140 and 141 during 2002 were examined for fresh breakage by the Harry Oppenheimer House (HOH) Geology team. Only breakage with unetched (i.e. "fresh") surfaces is considered. "Chipped" stones, or those that have less than 5% of the original diamond having being removed through fresh breakage, are considered "whole". "Significantly broken" is defined as more than 5% of the original diamond lost due to fresh (man-made) breakage. "Major" particles refer to the breakage of diamonds to the extent where more than 50%, but less than 95% of the original diamond is remaining A "minor" fragment constitutes less than half of the original diamond. The presence of minor fragments, especially very minor or "less than 25% remaining and fragment", strongly suggests the shattering of stones. A fragment is defined as a diamond that has no original faces remaining, rendering it impossible to determine the original size of the stone.

Some 22% of the total 644 diamonds examined from kimberlite 140/141 samples were damaged to some degree. Approximately 10.4% were chipped and are considered "whole". Seventy diamonds or 10.87% are major particles with greater than 50% of the stone remaining. Only three diamonds or 0.47% are "minor" fragments that have less 50% remaining. This indicates that shattering of larger stones was minimal in 2002, and much lower than the 3-4% seen in 2001. However, loss of "fragments" and "minor" pieces to the discarded, undersize fraction of the excavated kimberlite (<1.5 mm) cannot be adequately quantified and shattering of larger diamonds may still be an issue beyond simple estimation of loss from recovered stones. Total diamond breakage (not including "chipped" stones) is 11.34%, which is significantly lower than total breakage seen in 2000 and 2001. In 2002, Kimberlite 141 displayed a higher level of breakage (13.66%) than body 140 (4.35%). However, due to the small number of stones recovered from each drillhole from 140, comparison on a percentage basis should be made with considerable caution. Estimation of the actual amount of diamond lost from broken pieces is not factored in to the grade calculations or grade forecasts, which are based on size distribution of the recovered stones only.

9.2.15.6 Raw Valuations of Macrodiamonds

Macrodiamonds recovered from the 2002 drill program were valued in August 2003 using the De Beers July 2003 price book. Macrodiamonds from the 2000 and 2001 programs were updated to this price book at the same time. The following table summarizes raw macrodiamond values. The full spread of values per sieve size were utilized to calculate modeled values, which are reported in the De Beers' Mineral Resource Management (MRM) Report summarized later in this overview.

Table 15: Raw Stone Values Based on the De Beers' July 2003 Price Book

2000			2001			2002		
Carats	Value	Av/Pr ($/ct)	Carats	Value	Av/Pr ($/ct)	Carats	Value	Av/Pr ($/ct)
21.6	**806.62**	**37.34**	**42.08**	**2,733.38**	**64.96**	**90.96**	**3,371.12**	**37.06**

9.2.15.7 Results of Microdiamond Recoveries

Representative core samples from drillholes 140-16 and 140-17 were selected for total diamond recovery using caustic dissolution methods at Lakefield Research in Ontario. Residues from the caustic procedures conducted at Lakefield were shipped to the De Beers' Kimberley Acid laboratory in South Africa for final picking and imaging. The coreholes intersected previously untested kimberlite phases including thick intervals of xenolith-rich breccia, coarse olivine pyroclastic kimberlite, and matrix-supported kimberlite located in the south and central part of the combined 140/141 kimberlite body. Recoveries of a total of 446 microdiamonds (206 stones from 140-016 and 240 stones from 140-17) were combined with the existing diamond dataset and incorporated into the 2002 grade modeling exercise conducted by De Beers.

Samples also were collected from corehole 140-12 for the dual purpose of increasing the microdiamond inventory from two distinct kimberlite phases identified in the southern part of the 140/141 kimberlite, and to test diamond recovery procedures at the Saskatchewan Research Council (SRC). Thirty-one microdiamonds were recovered from 41.54 kg sampled from the "speckled beds"; this calculates to 74.6 stones per 100kg. Eighty microdiamonds were recovered from 40.92 kg sampled from the "kimberlite breccia beds"; this calculates to 195.9 stones per 100kg. Comparable stone concentrations numbers are as follows,

Pense Breccia in 140-16:	162.5 stones/100kg
Pense Breccia in 140-17:	120.3 stones/100kg
Speckled beds in 140-16:	72 to 128 stones/100kg
Speckled beds in 140-17:	88 to 102 stones/100kg
Range for "Coarse" Megagraded bed:	5 to 194, but averaging about 75 stones/100kg
Range for "Fine" Megagraded bed:	5 to 175, but averaging about 50 stones/100kg

It is very important to keep in mind that it is the *size distribution of the stones* that is most important, not the stone concentration. Five stones were large enough to be recovered on the +212 micron screen and one stone was recovered on a +1180 micron screen; this single large stone weighed in at 9.52 mg or 0.0476 carats and is considered a macrodiamond; the three axes of the stone measure 2.14 x 1.78 x 1.70 mm. Proper allocation of diamonds to specific kimberlite phases by De Beers in the 140/141 body remains contentious until the geology of this complex body is better resolved.

A PQ corehole was drilled proximal to the three 36 inch diameter drillholes near the centre of the 141 deeper-going zone. This core was slabbed and then representatively sampled for diamond recovery using caustic dissolution at Lakefield Research Laboratory. All diamonds and residues from processing were forwarded to Kimberley Microdiamond Laboratory for routine weighing, shape classification, and normal due diligence. A total of 396 stones were recovered from 636.9 kg of kimberlite sample. These stones were added to the diamond inventory for the megagraded beds of 141 and form part of the diamond dataset utilized for grade forecasting by De Beers.

9.2.15.8 Grade Forecasts, Modeled Values, and Modeled Revenue Estimates

The Mineral Resource Management (MRM) department of De Beers Consolidated Mines has carried out annual reviews of the Fort a la Corne project since 1999 that included resource estimation work as well as recommendations for prioritization of the kimberlite bodies. MRM prepared an update for kimberlite 140/141 incorporating all relevant historical microdiamond and macrodiamond diamond recovery data as well as geological information current to Spring of 2003. This report was received in a final format during September 2003.

In 2002, the 140/141 body was classified at the "deposit" level for all variables considered including geology, grade, revenue, and sampling data. The 2002 Fort a la Corne MRM review utilized data to differentiate the kimberlite into coarse and fine zones based on diamond size frequency. Grade forecasts for these zones ranged from 7 to 12 cpht and corresponding revenues, US$ 20-220/tonne.

Based on these findings, MRM recommended a program of large diameter drilling in the vicinity of holes 141-04 and 141-05 aimed at increasing the macrodiamond parcel for revenue modeling. A cluster of three 36" diameter holes were drilled within close proximity of 141-04 and a total of 48.24 carats were recovered. In addition, MRM recommended improving understanding of the geological model for the kimberlite through core drilling that would also provide opportunities for identification of coarser grained zones. Based on kimberlite intersections in these coreholes, five 24" diameter drillholes were drilled in locations extending from the 141 central area to the 140 central area. Of these holes, one was targeted to investigate the "fine-grained vent" intersected at corehole 141-33, and the others to test the assumed extension of the mega-graded bed. A total of 45.09 carats were recovered from these drillholes

9.2.15.8.1 Geological Subdivisions of the 140/141 Kimberlite

A substantial amount of geological investigation continues on core drilled from the 140/141 body. In summary, five geological subdivisions were utilized for modeling evaluating diamond results.

These units are very briefly described as follows:

- **Mega-graded Bed** – overall fining-upwards kimberlite commencing with xenolith-rich breccia units at the base and terminating in fine to very fine-grained material on top; the mega-graded bed itself can be separated into "fine" and "coarse" size distributions, which in terms of spatial location, are related to proximity to the interpreted eruptive centre of the 141 mega-graded bed – i.e., coarser diamond distribution closer to the centre of eruption.

- **Cyclic/repeated gradational Beds** – similar to the mega-graded bed but consisting of stacked, internally fining-upwards beds with subtle to very obvious subdivisions or contacts in an overall fining-upwards sequence; these beds likely represent clear changes in energy levels during eruption and asymmetry within the eruption column.

- **Fine-grained Kimberlite (Vent)** – postulated younger central vent feature characterized by relatively fine-grained kimberlite.

- **Kimberlite Breccia** – a separate xenolith-rich unit distinguished from the breccias located at the base of the mega-graded unit containing variably abundant mantle-derived material.

- **Speckled Kimberlite** – a distinctive matrix-supported kimberlite containing variably abundant mantle-derived material (ilmenites and garnets, in particular); this phase contains subordinate units of both kimberlite breccia and macrocrystic, coarse olivine kimberlites.

Microdiamond samples were selected from two coreholes to increase the data on the “speckled” kimberlite, and to provide the first recoveries from the “breccia” unit.

9.2.15.8.2 Grade Forecasts

The relatively sparse data, particularly when separated into the different geological units, implies that global estimates per geological subdivision are the only meaningful calculations possible. A grade-size plot was derived from the combination of micro- and macro-diamond data for each of the 5 geological units. Size frequency distributions were plotted from these data leading to calculation of grade estimates that were then both incorporated into revenue models. A sixth unit was created by division of the mega-graded bed into fine and coarse size frequency distributions.

The coarsest diamond size distributions were seen in the Mega-graded-coarse, Kimberlite Breccia and Fine-grained Vent units, although the distribution of the latter unit appears anomalously coarse due to the presence of a 10.23 carat stone. The Mega-graded bed-coarse shows the most consistency across the micro- and macro-diamond size ranges reflecting the larger number of recovered stones of all sizes, particularly with addition of the diamonds from the three 36 inch diameter holes. The other kimberlite units show varying numbers of stone counts, but all are substantially less than the coarse mega-graded bed and highlight the uncertainty associated with grade results generated in this report. Stone counts utilized in the size frequency distributions and grade forecast results are shown in Table 1.

9.2.15.8.3 Revenue Models

Raw values of the macrodiamonds were determined by the Diamond Trading Company (DTC) in London, England based on the July 2003 price book. Valuation data was electronically compiled into six geological/size distribution units as previously described. Raw valuation data is shown in Table 2 with revenue per geological unit in dollars per carat.

Table 16: Total Microdiamond and Macrodiamond Stone Counts and Weights

Geological Unit	Tonnes1 of Kimberlite	Stone Counts		Carats	
		Micro-diamond	Macro-diamond	Total	>1.5 mm
Mega-graded-coarse	1,048.9	311	888	95.8	88.6
Mega-graded-fine	371.1	226	86	10.9	10.0
Mega-graded-repeated	254.9	180	155	13.6	12.7
Fine Kimberlite (Vent)	176.5	171	43	16.5	16.5
Speckled kimberlite	93.9	126	45	4.6	4.3
Kimberlite Breccia	74.0	183	67	14.3	13.7

1 Some barren samples have been excluded for grade calculation purposes

Table 17: 2002 Evaluation Program – Actual and Modeled Grade and Revenue Data with Comparison to 2001 Program

Geological Unit	Grade in cpht (>1.5 mm)			Revenue in US$/carat (>1.5 mm)		
	Actual Sample	2001 Forecast	2002 Forecast	2002 Raw Values	2001 Forecast	2002 Forecast
Mega-graded-coarse	8.4	12	**12**	32.9	115	**97**
Mega-graded-fine	2.7	5	**7**	17.2	38	**71**
Mega-graded-repeated	5.0	-	**8**	22.2	-	**75**
Fine Kimberlite (Vent)	9.3	-	**5**	33.7	-	**93**
Speckled kimberlite	4.5	-	**9**	40.0	-	**67**
Kimberlite Breccia	18.6	-	**15**	53.6	-	**97**

Each of these sub-parcels was then plotted in log-space showing average sieve size against dollar per carat. Some 150 carats of macrodiamonds were available for revenue modeling, but the number per sub-parcel was considerably smaller. As would be expected, the extremely small parcels showed no consistent trends or obvious differentiation and the decision was made to combine electronically the complete data and model a single dollar per carat per sieve class. A geologically-based revenue split could be made in the future if sufficiently more stones are added to each dataset.

Plotted in log-space, the combined data showed a degree of consistency from a revenue perspective in the smaller sieve classes below +13 diamond sieve (4.521 mm). Very few carats exist in the larger size classes (only 15% by weight of the total parcel) and considerable modeling of assortment (model, quality, and colour) is required. Existing data from De Beers' group operations, combined with the assortment profile of the smaller diamonds was then used to extrapolate the revenue curve up to the +23 diamond sieve (10.312 mm). The resultant dollar per carat per sieve class table has subsequently been applied to the six modeled size frequency distributions. Variations in diamond coarseness of the units lead to six distinct overall dollar per carat figures at a bottom cut-off of 1.5 mm and at SSV on the DTC July 2003 price book.

9.2.15.8.4 Deposit Risk

Attempting to define confidence limits or upside and/or downside potential on deposit level resource data is problematic. By definition deposit level resources imply considerable risk and hence broad confidence limits. The estimation of the micro macro diamond relationship and hence grade estimation from limited data is, to some degree, a subjective process

Furthermore it is likely that the emplacement model of the Fort a la Corne deposits will have some bearing on the micro- macrodiamond relationship. The microdiamond content (and size distribution) can vary as a function of emplacement, under-recovery of micro diamonds from wind action during the sub-aerial pyroclastic event(s), and gravity sorting, which will result in different ratios of macrocrysts, phenocrysts and interstitial material. These processes can cause either dilution or concentration of micro diamond potential.

The impact of dilution or concentration of micro diamonds can affect the grade estimation process. In addition any physical "sorting" within the micro diamond size ranges will affect the size frequency distribution and hence revenue estimation.

The deposit risk can be summarized into four main areas:

- Internal geology, the lateral and vertical extent (i.e. volume) of each geological identified unit
- The grade of each geological unit
- The size distribution of each geological unit, and
- The assortment (US$/carat/per size) per geological unit.

The risk associated with grade and size frequency distribution has been mentioned previously. In terms of the assortment profile the revenue modeling process was forced to assume a similar assortment for all the geological units. Despite this amalgamation the diamond parcel consists of about 150 carats, which is well below the 2000 to 5000 carats considered necessary to make a forecast with reasonable levels of confidence.

9.2.15.8.5 Conclusions and Recommendations from the MRM Report

The advances made in the geological model of 140/141 necessitated a complete rethinking of the grade and revenue estimation processes. It is likely that as geological knowledge and deposit delineation evolve so will the estimation methodologies. A natural consequence of refining a geological model is that the available sampling data has to be separated into the relevant geological subdivisions. This frequently results in creating a situation where there is insufficient data per geological subdivision for evaluation purposes.

The 2002 Fort a la Corne update classified the project at the Deposit stage for all variables and parameters. Subsequent to the report the geological model has been revised and further LDD drilling has been conducted. The recognition of a more complex internal geology resulted in the necessity of more detailed data per geological unit. Thus despite additional data from the 2002 program, the project status has not changed significantly and remains at the Deposit stage for geology, volume, grade, density and revenue.

Based on the current geological understanding of 140/141 the following recommendations can be made:

- Petrographic studies from existing material (chemical fingerprint, XRF etc) should be done to assist in geological unit identification, differentiation and the emplacement model.
- Increase micro diamond database (presumably from existing core) for the fine, speckled and breccia kimberlites.
- Investigate the potential for diluting and or concentrating micro diamonds as a function of the host kimberlite.
- Improve the geological understanding and the extent of the kimberlite breccia unit by delineation drilling.
- Should the volumetric extent of the kimberlite warrant further investigation this should be in the form of single 36" diameter LDD holes on a systematic grid.

9.2.15.8.6 Discussion Points Concerning the MRM Report

In consideration of the MRM Report, the following discussion points are relevant:

1. The 140/141 kimberlite is characterized by stratigraphic complexity and there appears to be a high degree of variability in grade and diamond size distribution; it is very likely that the 140/141 kimberlite is the product of at least two eruptive centres or feeders that have produced a coalescent kimberlite body; at present the geological model is complex and it is very important to recognize different kimberlite phases and then to properly allocate diamond recoveries to these units in preparation for modeling grade and revenue; *it is the opinion of the author that further work is required on the geological model and that allocation of diamond results may change as the geological model evolves.*

2. Most data relates to the mega-graded bed; the mega-graded bed is more a local feature rather than a pervasive kimberlite wide feature; 50% of the mega-graded samples are "Fine" and are tested only in the central part of the 141 sector (about 20 ha); the grades and values are not representative of the entire body; combining data from the mega-graded bed at 140 and from 141 is not advisable as they likely came from two different vents and eruptive events.

3. Considerable additional sampling will be required to obtain a confident geological model for the entire kimberlite; this model requires broad distribution of drillholes and representative sampling both vertically and horizontally in order to model the spatial distribution of diamonds in terms of size and number; however, delineation of the extent of higher grade zones may permit early estimation of the volume and tonnage of that phase – this becomes a relevant evaluation criterion that may discourage further work if the calculated tonnage falls below that which is thought to be required for an economic deposit.

4. In previous years, grade forecasts for Fort à la Corne Grade kimberlites typically have been 2-3 times higher than actual sample grades. Two forecasts this year are lower than the actual sample grades. De Beers has explained that this is the other side of the nugget-effect whereby a greater amount of diamond is recovered from a sample than that which would be representative of a larger sample. Both the *breccia* and *Fine Kimberlite (Vent)* would fall under this explanation if the kimberlite unit contacts and corresponding allocation of diamonds were correctly determined.
5. Recovery derived from total content models for the subdivisions was factorised in respect of the smaller diamond to represent a probable production type diamond size distribution, thus eliminating smaller diamonds that would normally be screened out to undersize or locked in tailings during production.
6. Small parcel sizes limit confidence in the modeled grades, values, and revenues; in particular, all phases besides the mega-graded bed have very small diamond parcels.
7. It is difficult to compare results from 2000, 2001, and 2002 due to different presentation formats and different (evolving) ways of modeling the data.

9.2.15.8.7 Disclaimers and Cautionary Points

1. Grade was derived from the total diamond content model. This procedure assumes that the observed diamond content distribution with size is reflected correctly by sampling and provides a global grade estimate for the part of the kimberlite covered by sampling.
2. Revenue figures supplied in this report are based on very small amounts of diamonds and could vary substantially from actual average values determined from larger diamond parcels.
3. Actual parcel value is calculated by dividing total dollar value by total carats in the parcel. For small samples, this value is highly variable and simulations have shown that the actual dollar per carat value for a producer is usually understated this way.
4. Modeled dollar per carat value takes account of the expected diamond size distribution for the producer and is based on average values extrapolated for larger diamond sieves.
5. Under normal conditions, it is possible to draw a valid comparison only if the diamond parcel contains more than 2000 carats. The absence of a sufficient number of large stones means that there is still considerable uncertainty associated with the revenue model.
6. If the presence of any part of the size distribution has been influenced by secondary events in any part of the body, local grade derived from these methods would not be valid and serious difference in diamond size distribution and grade may occur locally within the kimberlite.
7. More confidence in the extrapolated values can only be achieved by having a larger diamond parcel for valuation.
8. Diamonds could be lost during sampling and treatment as a result of breakage or non-recovery due to low luminescence; breakage is not accounted for in any of the modeling, despite the preponderance of breakage in larger stones.

9.2.15.9 Targeted Geoscience Initiative

A joint Federal / Provincial Targeted Geoscience Initiative (TGI) was established between the Geological Survey of Canada (GSC) and the Saskatchewan Energy and Mines (SEM, now Saskatchewan Industry and Resources or SIR, and including the Saskatchewan Geological Survey or SGS) to further the study of the Fort à la Corne kimberlite field. The project was initiated in 2001 and was designed to encourage an interest and understanding of the diamond potential of central Saskatchewan. The TGI group primarily is driven by Gary Delaney (SGS), J.P Zonneveld (GSC), and Bruce Kjarsgaard (GSC).

The TGI is made up of two main components/phases. The first is an update of the Diamonds of Saskatchewan SEM review. The second is to involve both a limited 3D seismic survey over the Star Kimberlite (located on ground held by Shore Gold Inc.) and a more extensive 2D survey over kimberlite 141 (now defined as the northwest part of the combined 140/141 complex) held by the FalC-JV. The FalC-JV indicated an interest in participating in the second phase of the program as it was seen as a way of increasing an understanding of what is thought to be a relatively complex kimberlite without the need for further drilling. The FalC-JV agreed to donate $10,000 to the exercise, and Cameco later agreed to complement an additional $5,000 to the program.

The TGI group suggested that it would be useful to run downhole logs in a number of core holes to aid in the eventual seismic profile. The FalC-JV therefore purchased and installed 2” PVC casing in four drill holes. Casings were installed in drillholes 140-09, 141-11, 141-12, and 141-15 to depths of 183m, 171m, 240m, and 243 m, respectively. Multi-parameter downhole geophysics was conducted in these holes by the Geological Survey of Canada/Saskatchewan Geological Survey group (and therefore independent to the JV) between the 16th and 19th of August. Geophysical tools run included natural gamma ray, magnetic susceptibility, density and sonic (porosity). The GSC and SEM have been allowed full access to the core for geological logging. The need for additional sampling will be assessed on a case by case basis. Samples collected from core to date will be used for micropaleontological studies (examination of foraminifera for biostratigraphic age and paleoenvironment), sedimentology (polished slabs to be photographed and returned), petrology/volcanology (geochemistry using an SEM) and geochronology (perovskite/phlogopite/zircon recovery – small samples).

Data from the multi-parameter downhole geophysics program on four FalC drillholes has been integrated into the TGI results. Field work for a broad 2D survey over most of the 140/141 kimberlite was completed during the first quarter of 2003. Data from both of these surveys was processed during the remainder of 2003. The Joint Venture expects results from this program during December 2003.

Coreholes from 2002 and before have at least a simple log showing major contacts; works continues on constructing full petrographic and stratigraphic logs for each of the coreholes. These graphic logs will be incorporated into fence diagrams that approximate the 2D seismic lines and several other cross-sectional views. Coreholes drilled in 2003 from kimberlite 140/141 have been logged and incorporated into cross-sections and 3D block diagrams. The geological model for this body is undergoing review by the JV partners and a final report is in preparation. Approximately 128 samples have been collected from core to date, which will be used for micropaleontological studies (foraminifera examination for biostratigraphic age and paleoenvironment), sedimentology (polished slabs to be photographed and returned), petrology/volcanology (geochemistry using an SEM) and geochronology (perovskite/phlogopite/zircon recovery – small samples).

9.2.15.10 Venmyn Rand Mini-Audit Report on Macrodiamond Recovery

Venmyn Rand (Pty) Ltd. was hired by the Company to evaluate efficiency and suitability of final diamond recovery procedures and equipment at the newly renovated GEMDL facility. The end-product of the evaluation was an independent Qualified Person’s report documenting the new configuration of the laboratory and recommendations for future analytical work. This report remains as an internal reference document for the company and is not considered material. In addition to monitoring diamond recovery, Mr. Jellicoe (Kensington’s Qualified Person) visited several highly successful De Beers-operated, small to large, open pit mines in Botswana and South Africa. During these visits, he familiarized himself with scales of mining and ore processing that may one day be applied to high priority Fort à la Corne Joint Venture kimberlite bodies.

9.2.16 2003 Exploration and Sampling Program

During the first eight months of 2003, no field programs were conducted at Fort à la Corne while the bulk of the 2002 diamond recovery and interpretation program was underway. In August 2003, the Joint Venture partners met to discuss a work program for 2003 and decided to implement a $3.0 million program in part based on recommendations put forward by geoscientists of De Beers' Mineral Resource Management (MRM) following evaluation of draft interpretations of results from the combined 2000, 2001, and 2002 programs. This program focused on improving the understanding of geology, diamond distribution, and diamond values of the southern part of the 140/141 body with a goal of ultimately proving up resource tonnage for the "kimberlite breccia". In addition, a significant drilling and sampling effort was aimed at investigating the geology and diamond distribution in other high priority bodies including Kimberlites 122, 148, and 150.

9.2.16.1 Airborne Geophysical Survey

The 2003 work program commenced with a fixed-wing airborne tri-sensor magnetic gradiometer survey over the entire Joint Venture project claim area that was run by *Goldak Airborne Surveys*. The survey had some over-run beyond the claim boundaries and the affected claim holders will be offered hard copy results covering their land. Two blocks were flown for a total of 3,090 line kilometres at a 150 metre line spacing. The airborne survey provides a much improved magnetic dataset compared to previous airborne data acquired in 1989 and 1990. An example of the survey results is shown in Figure 3.

Kensington has received a final report documenting the program and including a full digital record of the results. The project operator has produced full scale colour maps and interpreted the results. Six new magnetic anomalies potentially representing un-tested kimberlite bodies have been identified. These targets require drill-testing to confirm the presence of kimberlite and to permit logging for petrographic character. In the event these targets are drilled in subsequent programs, potentially mineralized core will be sampled and submitted for diamond recovery.

9.2.16.2 CSAMT

Although CSAMT (a type of magneto-telluric survey) was unsuccessful in 2002, this type of geophysical survey was attempted again using a different array of frequencies to produce a better resistivity differentiation between kimberlite and country rock. The survey was run by *Empulse Geophysics* in September 2003 over the 140/141 kimberlite. Results are expected from the project operator during January 2004 after completion of processing and mapping.

9.2.16.3 Ground Gravity Surveys

Ground gravity surveys accompanied by differential GPS were conducted by an in-house De Beers' crew over kimberlite 122, a large area embracing kimberlites 148, 150, and the area around kimberlite 140/141, which was partially surveyed in 2002. The surveys used 100 metre line spacing and 100 metre stations; a total of 2482 stations were acquired over a 3 month period. A large gravity anomaly of significant amplitude was delineated immediately east of, and contiguous to, the 150 kimberlite (shown as the central mass of red colour contours in Figure 4). The anomaly covers an area approximately three times that of the known 150 kimberlite body, or about 200 additional hectares. This target requires drill testing for the presence and thickness of kimberlite. If the anomaly does represent a substantial body, then it could be the largest body identified in the entire Kimberlite Field. Both the gravity and magnetic data indicate that some kimberlites may have greater extents than previously outlined. The outlined extent of kimberlite bodies to a 30 metre thickness cut-off by modeling geophysical data is in progress by the operator. Kensington has received a final report documenting the program and including a full digital record of the results. The project operator has produced full scale colour maps and interpreted the results.

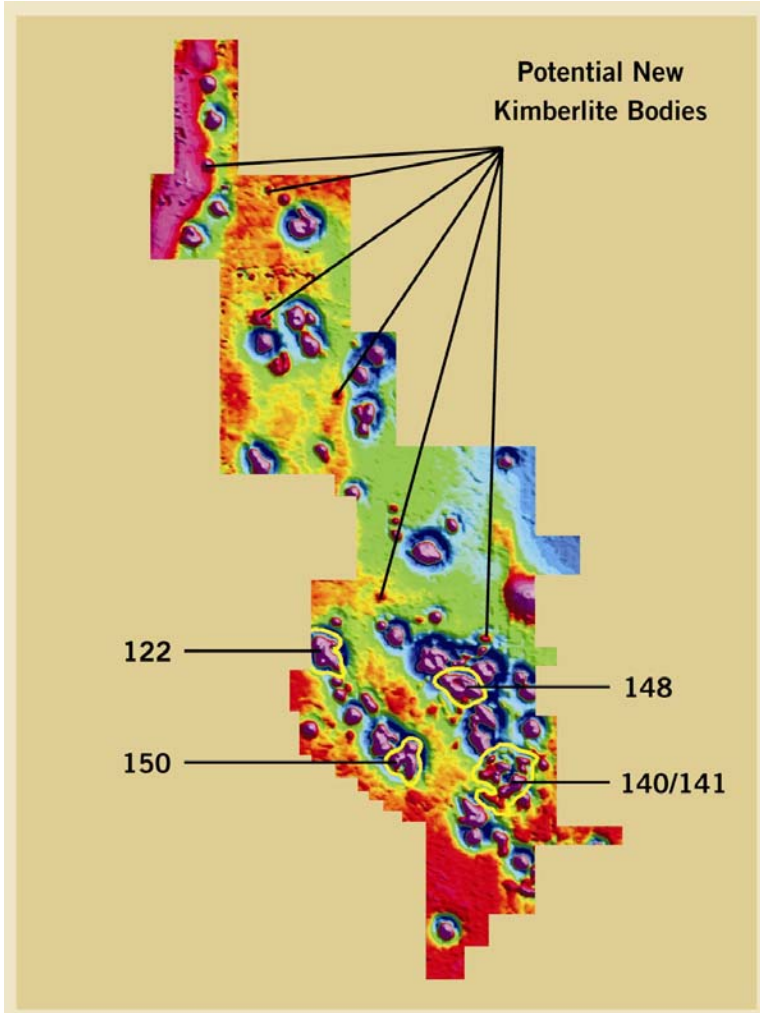


Figure 3: **2003 Airborne Tri-sensor Magnetic Gradiometer Survey**
Colour contour map of gradiometer results; circular to ovoid purple masses are FalC kimberlites held by the FalC Joint Venture

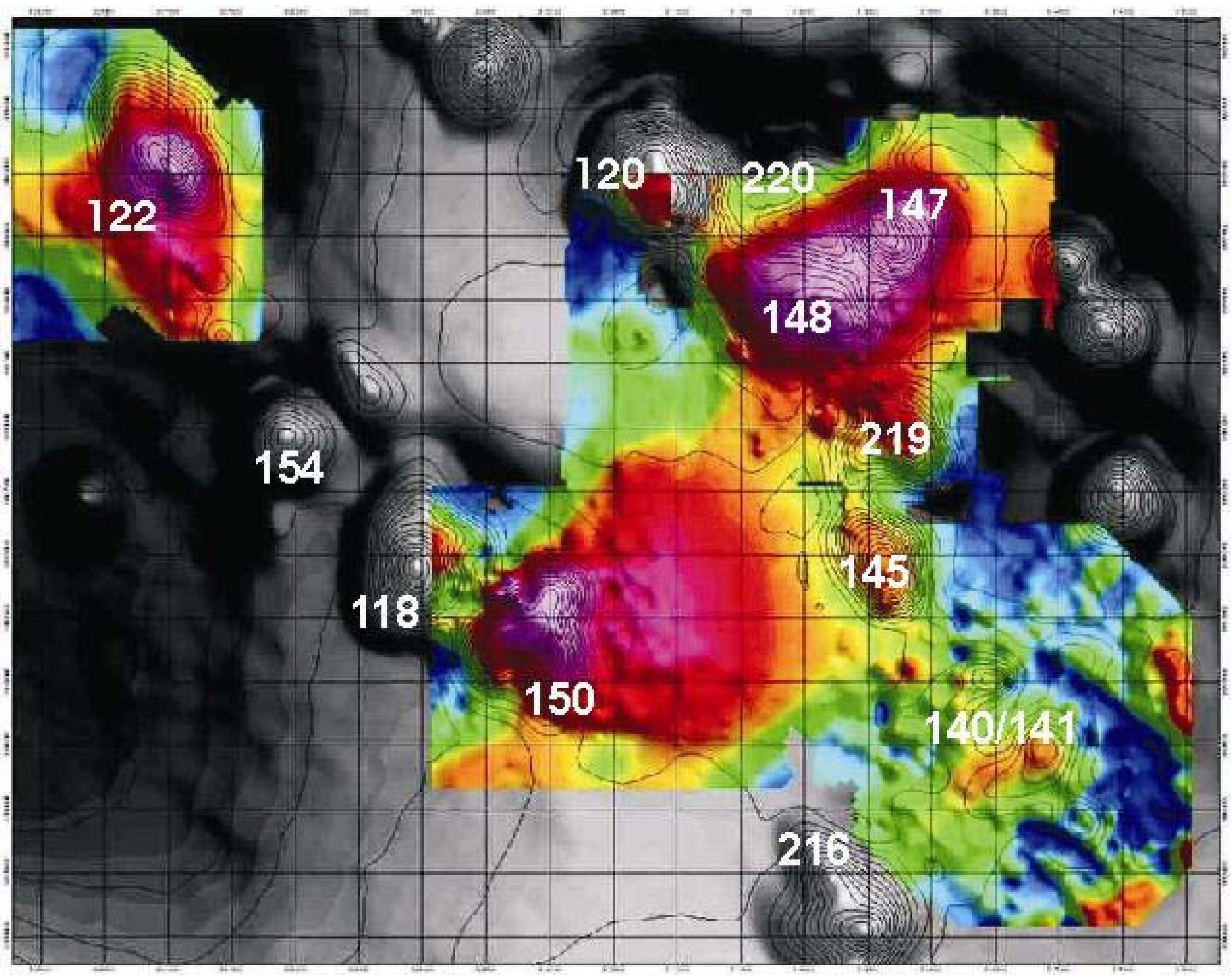


Figure 4: Compilation of 2002 and 2003 Ground Gravity Survey and 2003 Magnetic Survey
Ground gravity data superimposed over a gray-tone image of airborne magnetic contours.

9.2.16.4 Core Drilling Program for 2003

Boart-Longyear mobilized three LF-70 hydraulic core drilling rigs for this program. A total of 49 core holes provide significant opportunities for understanding the geology of 4 separate, prioritized kimberlite bodies and for diamond recovery geared to better understanding their diamond content and distribution.

Drilling concluded during mid-November with a total of 48 HQ (63.5 mm or 2.5 inches) coreholes and one NQ (47.6 mm or 1.875 inches) corehole. Diamond core bits are composed of traceable synthetic cutting diamonds that can easily be distinguished from natural stones. Significant intersections of prospective kimberlite were encountered in each of the kimberlite bodies investigated and sufficient coverage of the bodies from this program and previous drilling will permit construction of geological models. The table shown below summarizes the drilling program. During the next half year, the core will be petrographically logged in detail and then sampled for microdiamond recovery and geochemistry according to priority and prospectivity. Kimberlites 148 and 140/141 are the current focus of investigation by the Joint Venture. A summary of kimberlite core intersections is shown in Table 18.

Table 18: Preliminary Summary of 2003 Core Drilling at Fort à la Corne

Kimberlite Body / Drillhole	Thickness of Till (m)	Top of Main Kimberlite (m)	Base of Main Kimberlite (m)	Thickness of Main Kimberlite (m)	Thickness of Total Kimberlite (m)	End of Hole (m)
140-32	101.06	101.06	244.30	143.24	146.29	291.00
140-33	100.42	100.42	199.35	98.93	98.93	208.00
140-34	100.20	100.20	205.50	105.3	105.72	219.00
140-35	104.95	113.60	152.43	38.83	56.85	216.00
140-36	99.00	99.00	139.62	40.62	40.62	142.00
140-37	102.92	131.93	142.33 **1**	10.40	10.40	147.00
140-38	101.90	105.00	214.96	109.96	109.96	228.00
141-40	109.20	138.93	161.35	22.42	25.23	272.00
140-39	100.17	100.17	243.40	143.23	143.23	249.00
140-40	102.00	102.00	237.35	135.35	138.55	246.00
140/141 Total	**1,021.82**			**837.88**	**875.78**	**2,218.00**
03-150-01	106.32	106.32	198.85	92.53	92.53	207.00
03-150-02	112.78	112.78	214.13	101.35	101.35	225.00
03-150-03	110.42	123.96	169.17	45.21	45.21	180.00
03-150-04	106.80	111.23	169.70	58.47	60.59	192.00
03-150-05	99.90	104.53	154.90	50.37	50.42	174.00
03-150-06	96.28	96.28	216.16	119.88	119.88	222.00
03-150-07	104.15	121.49	157.56	36.07	36.07	165.00
03-150-08	113.73	117.67	205.96	88.29	88.29	213.00
03-150-09	99.00	101.16	183.05	81.89	81.89	192.00
03-150-10	103.47	109.63	135.00 **2**	31.60	31.60	135.00
03-150-11	113.47	120.90	158.00 **3**	35.33	35.33	158.00
03-150-12	102.90	102.90	192.50	89.60	89.60	201.00
150 Total	**1,269.22**			**763.66**	**832.76**	**2,264.00**
03-148-01	92.39	92.39	251.20	158.81	158.81	258.00
03-148-02	93.65	93.65	201.50	107.85	107.85	231.00
03-148-03	92.75	92.75	203.87	111.12	111.12	216.00
03-148-04	99.15	99.15	153.38	54.23	54.23	183.00
03-148-05					0.00 4	67.00
03-148-05a	92.18	92.18	181.00	88.82	91.77	204.00
03-148-06	91.80	91.80	200.09	108.29	108.29	207.00
03-148-07	100.88	100.88	147.24	46.36	46.36	153.00
03-148-08	99.31	99.31	147.12	47.81	47.81	156.00
03-148-09	109.90	109.90	124.93	15.03	16.95	156.00
03-148-10	112.54	112.54	152.31	39.77	39.77	159.00
03-148-11	102.49	102.49	134.80	32.31	36.64	150.00
03-148-12	92.20	92.20	272.85	180.65	180.65	282.00
03-148-13	96.00	96.00	193.33	97.33	97.33	210.00
03-148-14	93.02	93.02	222.85	129.83	129.83	234.00
03-148-15	92.56	92.56	198.31	105.75	105.75	207.00
148 Total	**1,460.82**			**1,323.96**	**1,333.16**	**3,073.00**
03-122-01	117.05	140.36	204.25	63.89	63.89	213.00
03-122-02	117.10	118.70	230.29	111.59	111.59	249.00
03-122-03	119.45	119.45	195.00	75.55	75.55	204.00

03-122-04	107.20	107.20	225.00	117.80	117.80	231.00
03-122-05	108.48	113.80	183.20	69.40	69.60	195.00
03-122-06	112.41	112.41	178.24	65.83	66.02	186.00
03-122-07	106.80	119.25	195.28	76.03	83.63	204.00
03-122-08	114.00	114.00	193.92	79.92	79.92	204.00
03-122-09	111.60	111.60	268.30	156.70	158.06	279.00
03-122-10	112.00	112.00	140.62	28.62	28.89	144.00
03-122-11	108.00	108.00	153.39	45.39	45.39	165.00
122 Total	**1,234.09**			**890.72**	**900.34**	**2,274.00**
Grand Total	**4,985.95**			**3,816.22**	**3,942.04**	**9,829.00**
% of Total	50.7			38.8	40.1	

1 = drillhole 140-37 prematurely terminated in disturbed kimberlitic sediments
2 = drillhole 03-150-10 prematurely terminated in kimberlite due to drilling difficulties
3 = drillhole 03-150-11 prematurely terminated in kimberlite due to drilling difficulties
4 = drillhole 03-148-05 prematurely terminated in overburden due to drilling difficulties

An initial allocation of 12 drillholes was targeted on Kimberlite 148 (drillhole 03-148-05 was terminated prematurely due to downhole problems). This was later complimented by an additional 4 holes located on the north-central portion of the body where highly prospective, medium- to coarse-grained, macrocrystic kimberlites were identified. Seven of the drillholes intersected greater than 100 m of kimberlite, with an additional two between 90-100 m. Prospective core intersections range up to 150 m in thickness and occur over an area of at least 800x400 m in size. Figure 5 shows the locations of coreholes drilled in 2003.

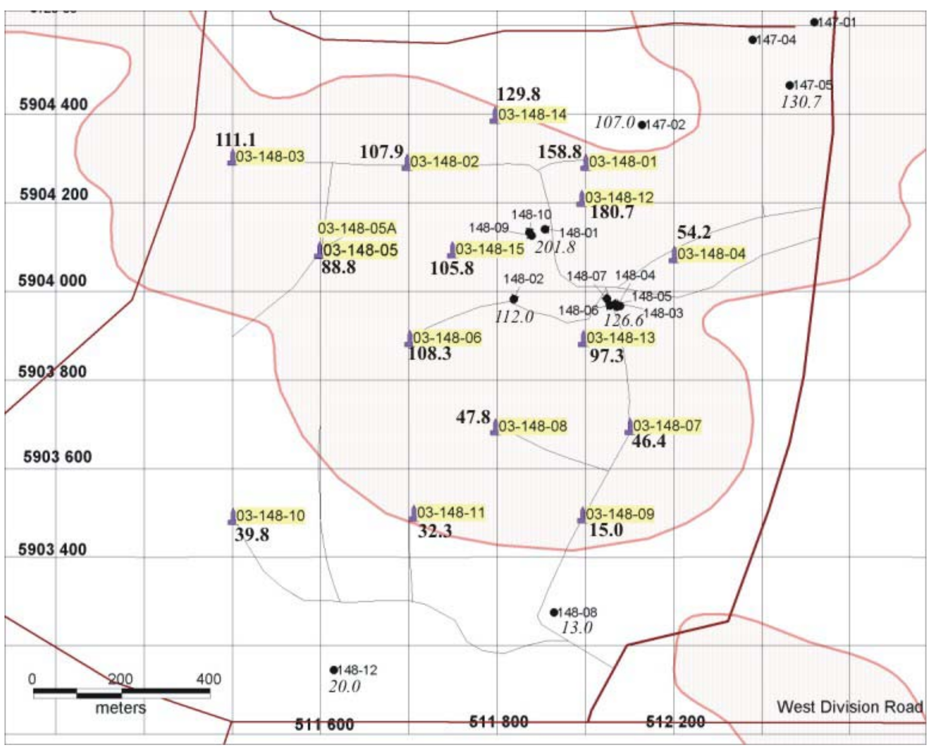


Figure 5: Location of 2003 Coreholes on Body 148 Showing Main Kimberlite Thicknesses

Drillholes were widely spread over a grid encompassing most of the deeper-going zone interpreted from geophysical surveys in the 1990's. The deepest intersections were encountered over the north-centrally located gravity anomaly. Prospective core from 03-148-01, 02, 12,14, and 15 proved to be susceptible to varying amounts and degrees of disintegration due to hydration and swelling. Several of the 140/141 kimberlite cores were digitally imaged using a test machine by De Beers. The core was split and sampled for diamond recovery utilizing caustic dissolution methods at the Saskatchewan Research Council, in Saskatoon. Diamonds recovered from these samples will be added to the inventory for this body. See Figure 5 for location of the 148 drillholes.

A broad pattern of drilling across Kimberlite 150 produced an additional two 100+ m intersections. Kimberlite thicknesses show a significant deeper-going zone located in the west central part of the body. Prospective medium-grained, macrocrystic kimberlite types were common in this area. The core was split and sampled for diamond recovery utilizing caustic dissolution methods at the Saskatchewan Research Council, in Saskatoon. Diamonds recovered from these samples will be added to the inventory for this body. See Figure 6 for location of the 150 drillholes.

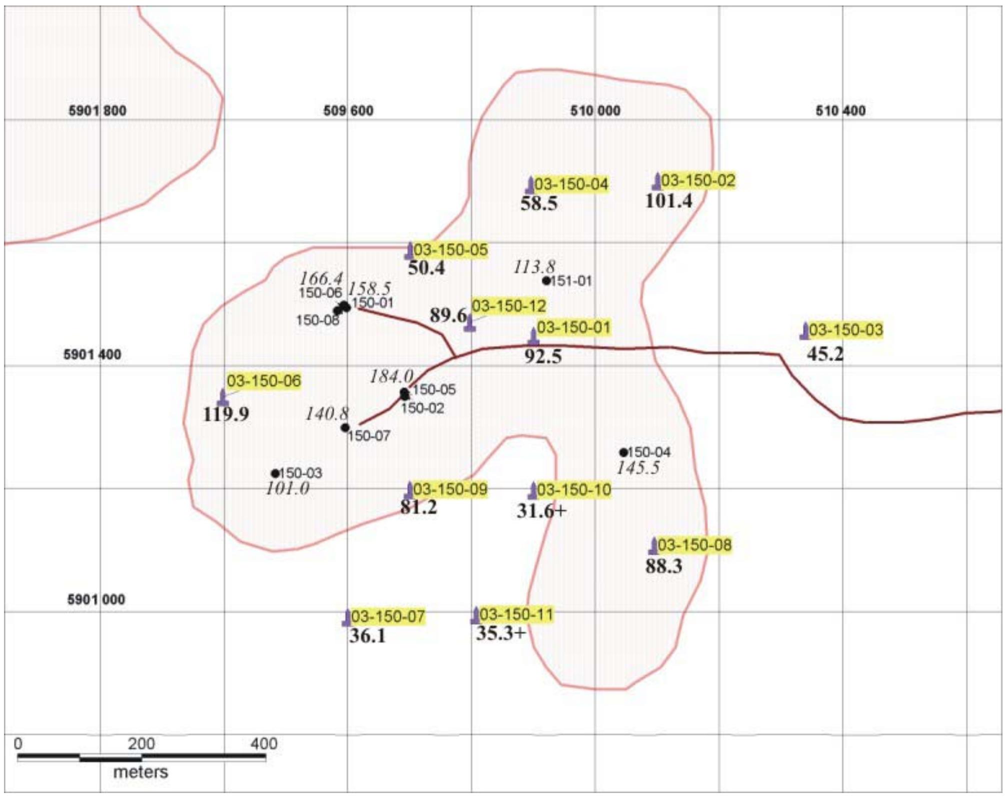


Figure 6: Location of 2003 Coreholes on Body 150 Showing Main Kimberlite Thicknesses

Drillhole placement on Kimberlite 140/141 was targeted to maximize intersection of kimberlite phases including the "speckled beds" and the "breccia beds". The objective of this drilling was to delineate the vertical and areal extent of the breccia beds in particular. These prospective kimberlite units appear to thin towards the southwest and the west into the interpreted extension of the 140/141 body as delineated in the 2002 geophysical program. Geological interpretation and modeling of deposit tonnages for this body are a priority for the operator.

Corehole 141-40 was targeted on a significant gravity anomaly located to the west of the 140/141 body; only 25.23 metres of kimberlite were intersected within mudstones of the Colorado Shale. Hence the anomaly is not attributed to a substantial new kimberlite body. Similarly, corehole 141-37 intersected only 10.4 meters of main kimberlite, indicating significant kimberlite thickness is not through-going to the southwest extension, or the gravity anomaly may not be entirely related to the presence of kimberlite. At least 4 of the 140/141 kimberlite cores will be digitally imaged using a test machine by De Beers. See Figure 7 for location of the 140/141 drillholes.

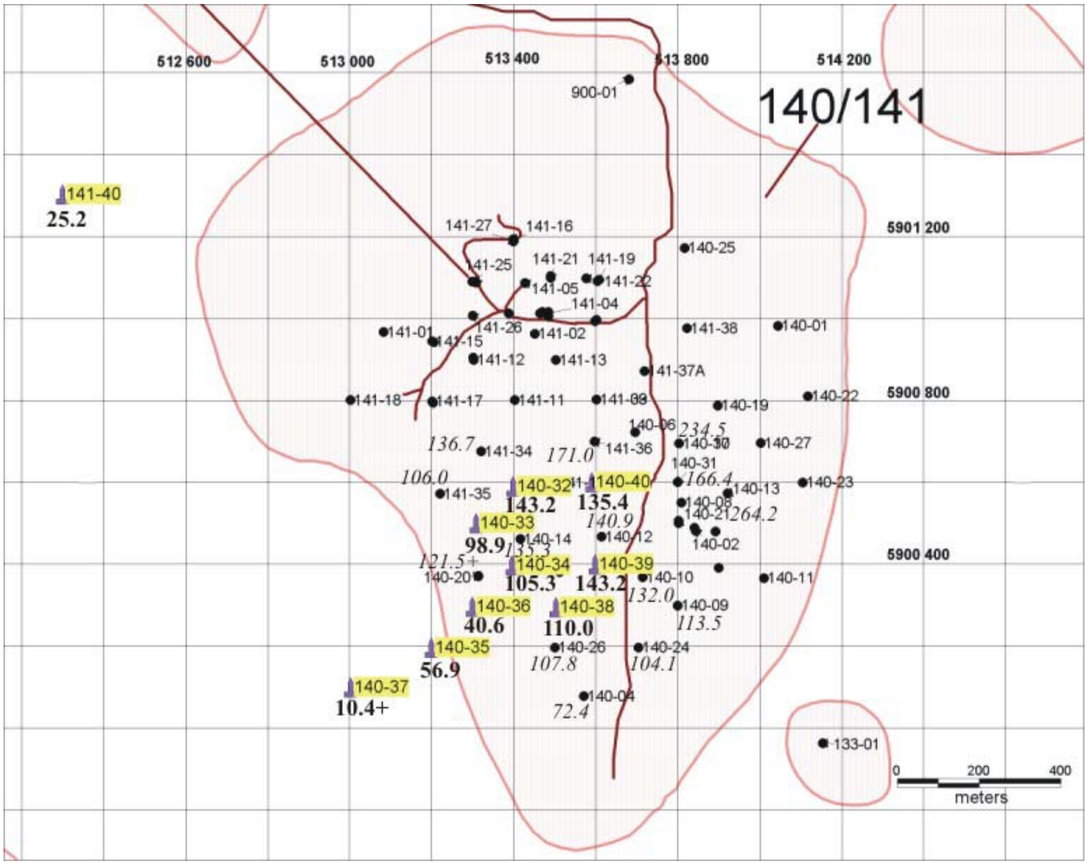


Figure 7: Location of 2003 Coreholes on Body 140/141 Showing Main Kimberlte Thicknesses

Drillholes targeted on Kimberlite 122 were placed over a broad grid to provide better representivity over the body for both an understanding of the geology and for microdiamond sampling. Three drillholes encountered intervals of greater than 100 m of kimberlite and prospective medium- to coarse-grained, macrocrystic kimberlite phases were intersected in 8 of the drillholes. The core was split and sampled for diamond recovery utilizing caustic dissolution methods at the Saskatchewan Research Council, in Saskatoon. Diamonds recovered from these samples will be added to the inventory for this body. See Figure 8 for location of the 122 drillholes.

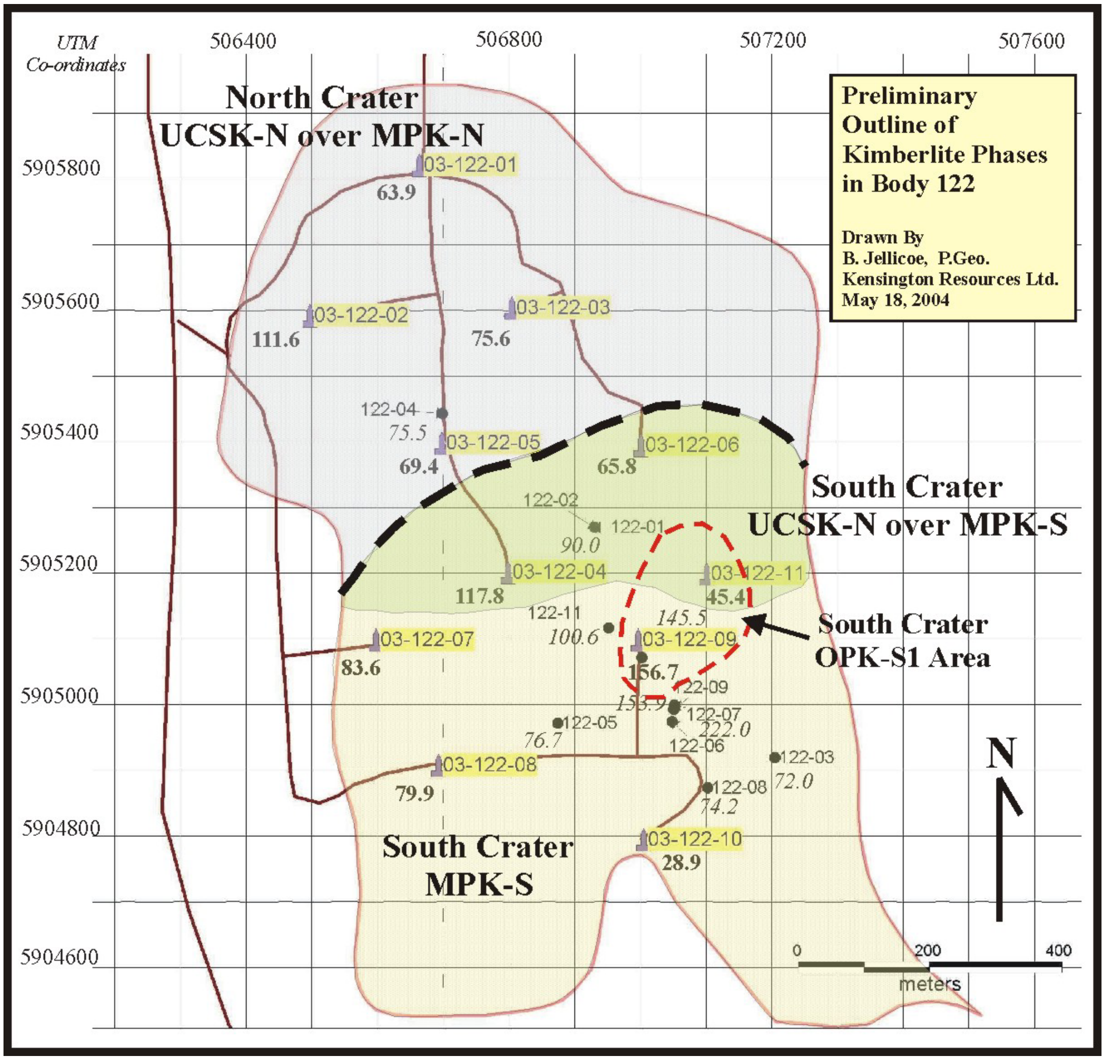


Figure 8: **Location of 2003 Coreholes on Body 122 Showing Main Kimberlite Thicknesses and Areas Dominated by Discrete Kimberlite Phases**
Roads are shown in red and the dashed lines indicate estimated boundaries between sectors based on lithological predominance. The light grey grid denotes UTM lines.

9.2.16.5 Geology of Kimberlite Bodies Drilled in 2003

9.2.16.5.1 Kimberlite 140/141

Geological modeling of Kimberlite 140/141 shows it is dominated by a thick interval of graded fine to coarse-grained olivine pyroclastic kimberlite that have relatively thin intervals of xenolith-rich, breccia beds in the northern part of the body. Diamond grades and revenue modeling for these units were reported during 2000 to 2003. Investigation of the southern part of the extensive body during 2002 and 2003 by core drilling and limited numbers of 24-inch reverse circulation drillholes showed the presence of several new kimberlite phases, although the dominant kimberlite types are medium to very coarse grain xenolith-rich breccias and matrix-supported kimberlites ("speckled" kimberlites) considered to be older than the overlying, relatively thin veneer of graded olivine-rich pyroclastic beds.

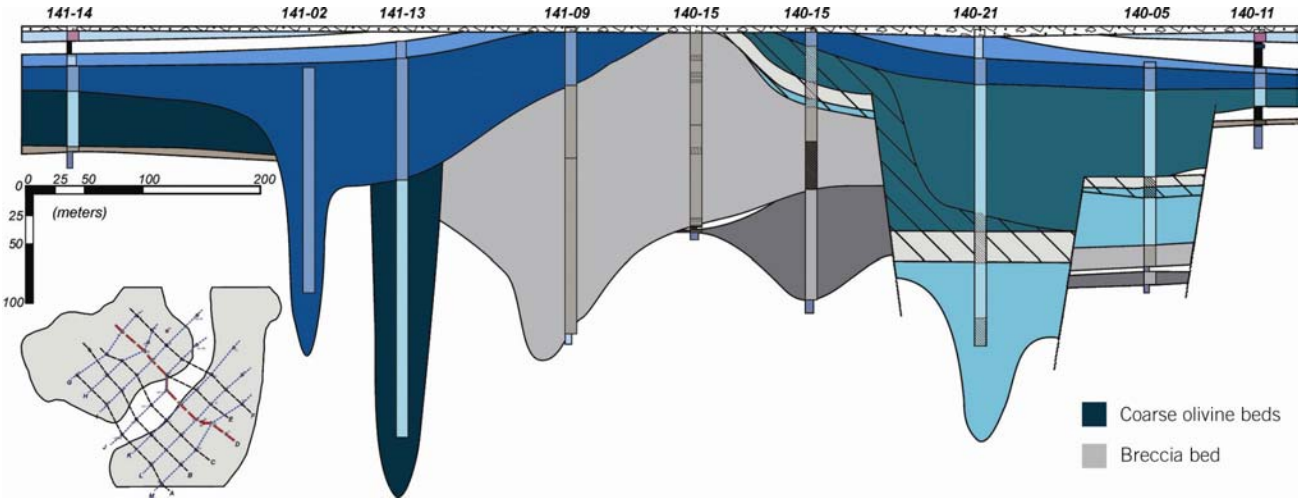


Figure 9: **Geological Cross-section oriented NW-SE Across the 140/141 Kimberlite Body (Courtesy of the Geological Survey of Canada and Saskatchewan Geological Survey)**

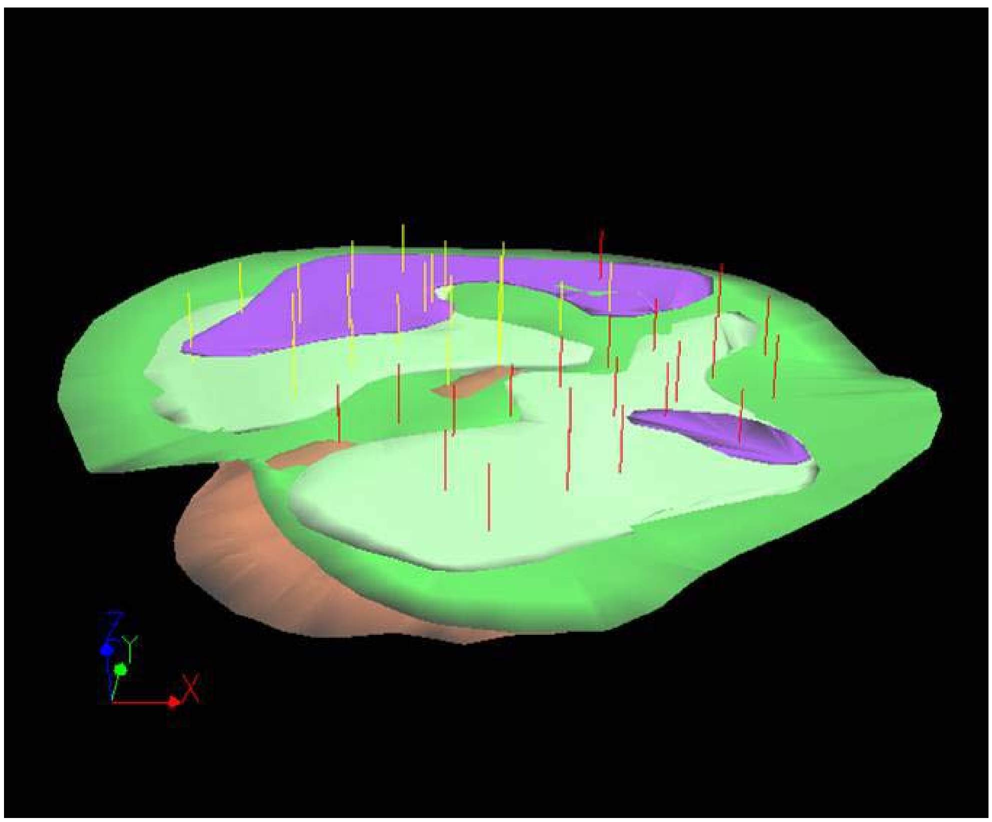


Figure 10: **3D Diagram of Geological Model for Kimberlite 140/141**

Preliminary geological modeling of the southern part of the body, in part from the new core intersections revealed four main phases of kimberlite including: repeated graded beds similar to the graded fine to coarse-grained olivine pyroclastic kimberlite beds located to the north and east, a moderately thick interval of older breccia beds having a closer textural affinity to the speckled beds below, variably thick intervals of underlying "speckled", matrix-supported kimberlite containing thin areally limited, interbedded coarse-olivine pyroclastic beds and breccias (speckled beds)), and several stratigraphically diverse "other" kimberlites that currently are grouped together until better differentiation of the phases can be made.

The current GEMCOM 3D model for Kimberlite 140/141 is being updated by De Beers to include information from the 2003 drillholes with due consideration given to recent work by the GSC under the TGI Program in this area. Figure 9 shows a cross-section through the central part of the 140/141 body constructed by the Geological Survey of Canada (GSC) and Saskatchewan Geological Survey (SGS). Several discrete kimberlite units are shown in different colours and the development of this geological model is still in progress. A 3D block diagram constructed by the GSC and SGS is shown in Figure 10. These two figures give an approximation of the size, geometry, and complex architecture of a large, multi-vent Fort à la Corne kimberlite.

9.2.16.5.2 Kimberlite 148

Preliminary geological modeling of Kimberlite 148 shows the body is dominated by a relatively uniform and extensive, medium to coarse-grained olivine pyroclastic kimberlite (MPK) that contains thin intervals of xenolith-rich, breccia beds (MPK-B). Three other subordinate kimberlite types have been identified to date from core drilled in 2003 at kimberlite 148, although geological interpretation of the body continues. The additional kimberlite phases include: finely bedded volcaniclastic kimberlite (FBVK), other pyroclastic kimberlite units (OPK), and well sorted – fines enriched pyroclastic kimberlite (WS-FE).

9.2.16.5.3 Kimberlite 122

Initial geological modeling of distinct kimberlite phases by De Beers based on drill core from Kimberlite 122 shows the body is divisible into two main craters, and a subordinate third area based on relatively sparse information. Figure 8 shows the estimated areal extent of the craters in Kimberlite 122. Also shown are kimberlite intersection thicknesses for the 2003 drillholes (normal text) and for historical drillholes (in italicized text). The northern half of the body is dominated by massive to graded beds of olivine/lapilli pyroclastic kimberlite (MPK-N) with common indicator minerals to a thickness of some 74 metres in recent drillholes. This is overlain by up to 43 metres of interbedded sediments, resedimented kimberlite, and kimberlite (UCSK-N).

Similarly, the south crater is dominated by variably massive to bedded, fine-grained to coarse-grained, olivine/lapilli pyroclastic kimberlite (MPK-S) to a thickness of some 103 metres in the 2003 drillholes. The thicker, more massive intersections occur proximal to drillhole 03-122-09 with more obvious bedding intervals increasing in abundance and thickness towards the north and west, and being more pronounced in the upper part of the MPK intersections of the closer drillholes. The northern fringe of the southern crater has a partial cap of interbedded sediments and resedimented kimberlite ranging from 0 to 12 metres thick (UCSK-S). In general, the pyroclastic kimberlite within the north crater is finer grained than the pyroclastic kimberlite within the south. Towards the southeast and southern-most part of the body, at least three distinct intervals of other pyroclastic kimberlite (OPK) were noted. OPK dominates the kimberlite intersection at drillhole 03-122-10, but the overall kimberlite intersection here has attenuated to 28.9 metres from a thicker interval of 53.4 metres in drillhole 03-122-09. The distribution of OPK beds are not shown in detail in Figure 8 with the exception of OPK-S1 which forms a small pod near the centre of the southern crater. The OPK (and limited occurrence of other volcaniclastic kimberlite (OVK) phases will be better understood as more drillholes provide data that allows the geological model to be further refined. As such, results for the OPK beds in 03-122-10 were added to the MPK-S unit. Drillhole 03-122-07 is the only intersection that has a basal unit of interbedded sediments and kimberlite (SAK).

In general, average grain size of the kimberlites and thickness of kimberlite intersection decreases towards the margins of the body. The order of emplacement for the individual kimberlites and their contact relationships within, and between, the two main parts of body 122 are not fully understood at this time.

9.2.16.5.4 Kimberlite 150

A revised description of the geology of Kimberlite 150 based on drilling and core logging is currently in progress.

9.2.16.6 Sampling and Diamond Recovery

A selection of representative intervals were sampled from each of the kimberlite bodies drilled in 2003. Core from each of the bodies drilled in 2003 were macroscopically logged, slabbed longitudinally by saw, and then selectively sampled. The main sampling effort was two-fold: to collect representative samples for petrographic examination and archiving, and for complete diamond recovery down to a lower cut-off of 75 microns using caustic dissolution methods. Samples of slabbed core measuring up to 40 cm long were collected for archiving and future petrographic studies. Representative samples for diamond recovery were collected over variable intervals, but from within discrete phase of kimberlite.

Diamond recovery was completed in two stages. The *Saskatchewan Research Council* (SRC) recovered diamonds using caustic dissolution and concentrate beneficiation methods. Stones were hand-picked from the resulting residue, and then described and weighed. Recently, the SRC was certified under ISO 17025 for Diamonds (see CAN-P-1579 in the Guide to the Accreditation of Mineral Analysis Lab). The second stage involved shipping the recovered diamonds and selected caustic residue to the De Beers' *Kimberley Microdiamond Lab* (KMDL), in South Africa for further auditing and verification of individual stone size, shape, and sieve category using proprietary techniques. Both sets of data were released to the Joint Venture partners, however, the KMDL weighs were utilized in grade forecasting based on statistical evaluation of diamond size distributions.

For results following in this section, the reader is cautioned that viewed in isolation, microdiamond stone counts can be misleading and the estimation of macrodiamond grade from microdiamond results will require an interpretation of the diamond size frequency distributions.

9.2.16.6.1 Diamond Recovery from Kimberlite 140/141

A total of 1,159 microdiamonds were recovered utilizing caustic dissolution methods from 595.15 kilograms of core submitted to the SRC from Kimberlite 140/141. Samples for microdiamond recovery were extracted from six of the corehole intersections. The SRC reported 97% recovery of internal tracers during diamond recovery and stone picking was routinely audited by a supervisor. The microdiamond results from these drillholes will be integrated with the 140/141 dataset including results from similar kimberlite types intersected in earlier drillholes (140-12, 140-16, 140-17, and 141-09), followed by modeling of grade forecasts for the southern part of the 140/141 body. A summary of diamond recovery results for the drillholes and these phases are reported in Tables 19 and 20 showing the best stone abundances for the repeated graded beds and the breccias immediately underlying them. Table 21 shows diamond recovery results by sieve size range for the same kimberlite types. Locations for the 2003 coreholes are shown in Figure 7.

Average microdiamond recoveries from three of the 2002 coreholes targeted on the central and southern parts of the body ranged from 12.7 to 13.5 stones per 10 kg, but these averages reflect sampling of at least three different kimberlite phases. These drillhole averages are at least twice that seen for similar recoveries from other parts of the body. Allocation of diamonds to appropriate kimberlite phases by De Beers' experts facilitated an early grade forecast of 18.6 cpht for the breccia beds and 4.5 cpht for the speckled beds. Given the relatively small numbers of microdiamonds in the dataset for discrete kimberlite types or phases, and the need to better delineate the extent of the new kimberlite phases, nine HQ coreholes (2.5 inch or 63.5 mm diameter) were drilled.

Table 19: Summary of 140/141 Microdiamond Results by Drillhole

Drillhole	Sample Mass (kg)	# of Stones	Average Stones/10kg	Stones larger than 0.5 mm
140-32	99.90	173	17.3	1
140-33	92.65	219	23.6	1
140-38	100.80	173	17.2	2
140-34	91.85	166	18.1	1
140-39	110.60	199	18.0	1
140-40	99.35	229	23.0	1
Total:	**595.15**	**1159**	**19.5**	**7**

Table 20: Summary of 140/141 Microdiamond Results by Kimberlite Type

Kimberlite Type	Sample Mass (kg)	# of Stones	Average Stones/10kg	Stones larger than 0.5 mm
Repeated Graded Beds	142.55	323	22.7	3
Breccia Beds	274.90	593	21.6	4
Other Kimberlite Units	68.00	109	16.0	0
Speckled Beds	109.70	134	12.2	0
Total:	**595.15**	**1159**	**19.5**	**7**

Table 21: 140/141 Microdiamond Recoveries by Sieve Category and Kimberlite Type

Kimberlite Type	+0.075mm Sieve	+0.106mm Sieve	+0.150mm Sieve	+0.212mm Sieve	+0.300mm Sieve	+0.425mm Sieve	+0.600mm Sieve	+0.850mm Sieve
Repeated Graded Beds	176	94	30	17	3	1	0	2
Breccia Beds	309	159	87	26	9	1	2	0
Other Kimb. Units	58	34	10	5	2	0	0	0
Speckled Beds	66	40	20	6	2	0	0	0
Total:	**609**	**327**	**147**	**54**	**16**	**2**	**2**	**2**

The "repeated graded beds" and the "breccia beds" immediately underlying them yielded the best stone abundances. The average microdiamond abundance for all 140/141 samples is 19.5 stones per 10 kg while the repeated graded beds and breccia beds yielded average microdiamond abundances of 22.5 and 21.6 stones per 10 kg, respectively. This is much higher than previous results for Kimberlite 140/141. A total of seven stones larger than 0.5 mm were recovered from the repeated graded beds and the breccia beds, one of which was recovered from the 0.300 sieve screen. Simple evaluation of microdiamond stone counts in isolation are insufficient to estimate macrodiamond contents, but can be utilized in diamond size frequency distributions to give grade forecasts.

The SRC reported 97% recovery of internal tracers during diamond recovery and stone picking was routinely audited by a supervisor. Microdiamond results from these drillholes were integrated with the 140/141 dataset including results from similar kimberlite types intersected in earlier drillholes (140-12, 140-16, 140-17, and 141-09), followed by modeling of grade forecasts for the southern part of the 140/141 body.

In addition to the results from caustic dissolution, a high quality diamond weighing 0.77 carats was encountered during sample preparation of kimberlite core in the Fort à la Corne Joint Venture warehouse. The diamond was liberated while HQ core, from a depth of 117.86 metres in drillhole 140-34, was being slabbed by a rock saw utilizing a non-diamond masonry blade. The diamond was not damaged by the blade, although the stone halted the cutting process and scored the blade. Both halves of the slabbed core retained a clear impression of the stone within kimberlite of the repeated graded beds. The diamond was weighed and measured by the SRC in Saskatoon. According to the SRC, the stone measures 5.50 x 4.40 x 4.20 mm in three dimensions and was described as a colourless, clear octahedroid with etched trigons and hillocks (Figure 10).

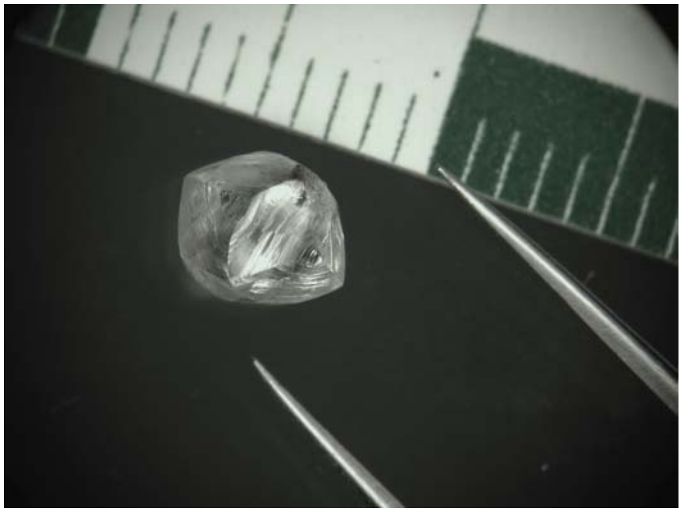


Figure 11: Photograph of the 0.77 carat stone recovered from 140-34 core (117.86 metres depth)

In addition to testing new core, ten kimberlite core samples collectively weighing 82.46 kg were collected from a 55 metre interval of hole 140-12 (drilled in 2002) located on the southern part of Kimberlite 140/141 during the 4th Quarter of 2003 for a due diligence audit of the SRC diamond recovery process. A total of 127 diamonds were recovered, of which 6 stones were larger than a 0.212 square sieve. The larger stones ranged in size from 0.36 x 0.34 x 0.3 mm up to 2.14 x 1.78 x 1.7 mm. These diamond recoveries were added to the 140/141 diamond dataset for grade forecasting.

9.2.16.6.2 Diamond Recovery from Kimberlite 148

A total of 2,059 microdiamonds were recovered from 739.8 kilograms of core sampled from Kimberlite 148. The average diamond grade for all samples was 28.4 stones per 10 kg, which compares favourably to previous results from corehole 148-09 (drilled and tested in 1993) showing 14.3 stones per 10 kg from a total of 262 kg of sample. The highest stone abundance figures for previous Fort à la Corne samples range up to 18.3 stones per 10 kg.

The best stone abundances were seen in the FBVK and the MPK units, although the three largest stones were recovered from OPK. A total of 14 macrodiamonds with at least one dimension larger than 0.5 mm were recovered from the samples. Diamond results by kimberlite type are shown in Table 22. Diamond results by kimberlite type and sieve category are shown in Table 23.

Table 22: 148 Microdiamond Results by Kimberlite Type

Kimberlite Type	Sample Mass (kilograms)	Number of Stones	Carat Weight (milligrams)	Microdiamond Abundance (stones/10 kilograms)	Stones larger than 0.5 mm
FBVK	194.75	708	10.033	36.4	4
MPK	316.95	983	10.809	31.0	4
WS-FE	40.70	79	3.705	19.4	0
OPK	146.55	226	5.785	15.4	4
MPK-B	40.85	63	1.008	15.4	2
Total	**739.80**	**2,059**	**31.340**	**Average of 27.8**	

Table 23: 148 Microdiamond Results by Sieve Category and Kimberlite Type

Kimberlite Type	+0.075mm Sieve	+0.106mm Sieve	+0.150mm Sieve	+0.212mm Sieve	+0.300mm Sieve	+0.425mm Sieve	+0.600mm Sieve	+0.850mm Sieve
FBVK	310	195	121	60	15	5	2	0
MPK	422	336	135	63	21	4	2	0
WS-FE	29	22	12	10	3	2	0	1
OPK	116	53	30	18	5	1	2	1
MPK-B	26	20	9	7	0	1	0	0
Total	**903**	**626**	**307**	**158**	**44**	**13**	**6**	**2**

The SRC reported 97% recovery of internal tracers during diamond recovery and stone picking was routinely audited by a supervisor. Microdiamond results from these drillholes were integrated with the 148 dataset including results from similar kimberlite types intersected in earlier drillholes. Modeling of grade forecasts for the different major kimberlite units currently is in progress.

9.2.16.6.3 Diamond Recovery from Kimberlite 122

A total of 327 microdiamonds were recovered from 412.65 kilograms of core sampled from Kimberlite 122 (Table 24). Representative slabbed core samples were collected from 11 HQ coreholes widely spaced across the 122 body. Six of these stones have at least one dimension exceeding 0.5 mm in length and are considered to be macrodiamonds.

Samples from the north crater of Kimberlite 122 gave total recovery of 133 stones, of which 2 macrodiamonds had at least one dimension greater than 0.5 mm. Most of the stones were recovered from the MPK-N kimberlite phase producing the second best average stone abundance of 9.8 stones/10kg, however, the overlying UCSK-N gave an average abundance of 7.5 stones/10kg based on recovery of 18 stones from a much smaller sample mass. Table 24 shows the recovery of stones by kimberlite type and area.

Table 24: Summary of 122 Microdiamond Results by Kimberlite Type

Kimberlite Type	Range of Sampled Phase Thickness (metres)	Sample Mass (kg)	# of Stones	Average Stones/10kg	Stones larger than 0.5 mm
North Main Pyroclastic Kimberlite (MPK-N)	56 - 74	117.55	115	9.8	1
North Upper Complex sediments and Kimberlite (UCSK-N)	11 – 43	23.95	18	7.5	1
Total 122 North Crater:		**141.50**	**133**	**9.4**	**2**
South Main Pyroclastic Kimberlite (MPK-S)	36 – 103	222.55	163	7.3	4
South Upper Complex sediments and Kimberlite (UCSK-S)	3 – 12	7.75	3	3.9	0
South Other Pyroclastic Kimberlite (OPK-S1)	23 – 53	32.40	26	8.0	0
Total 122 South Crater:		**262.70**	**192**	**7.3**	**4**
Basal Sediments and Kimberlite (SAK), south periphery of body	7	8.45	2	2.4	0
Total 122:		**412.65**	**327**	**7.9**	**6**

Table 25: 122 Microdiamond Recoveries by Sieve Category and Kimberlite Type

Kimberlite Type	+0.075mm Sieve	+0.106mm Sieve	+0.150mm Sieve	+0.212mm Sieve	+0.300mm Sieve	+0.425mm Sieve	+0.600mm Sieve	+0.850mm Sieve
MPK-N	50	30	19	8	4	3	0	1
UCSK-N	4	7	4	2	0	1	0	0
North Crater:	**54**	**37**	**23**	**10**	**4**	**4**	**0**	**1**
% of North:	***40.6***	***27.8***	***17.3***	***7.6***	***3.0***	***3.0***	***0***	***0.7***
MPK-S	61	48	26	16	5	3	4	0
UCSK-S	0	3	0	0	0	0	0	0
OPK-S1	8	4	6	7	1	0	0	0
South Crater:	**69**	**55**	**32**	**23**	**6**	**3**	**4**	**0**
% of South:	***35.9***	***28.6***	***16.7***	***12.0***	***3.1***	***1.6***	***2.1***	***0***
SAK	1	0	1	0	0	0	0	0
Total 122:	**124**	**92**	**56**	**33**	**10**	**7**	**4**	**1**
% of 122:	***37.9***	***28.1***	***17.1***	***10.2***	***3.1***	***2.1***	***1.2***	***0.3***

By comparison, samples from the south crater returned lesser stone abundances of 7.3 and 3.9 stones/10kg for the MPK-S and UCSK-S phases, respectively. The MPK-S unit had four macrodiamonds with at least one dimension greater than 0.5 mm. OPK-S1 in the southeastern part of the body returned an average value of 8.1 stones/10kg based on the recovery of 26 stones from 32.40 kg of sample.

In terms of size fractions, approximately 38% of the stones were recovered on the 0.075 mm sieve and 83% of the stones retained in sieves less than 0.212 mm (Table 25). Overall, percentage recoveries by sieve class were very similar for the north and south sectors.

Stone recoveries from 122 can not easily be compared to those from bodies 148 and 140/141 as these kimberlites were formed from separate volcanic eruptions that most likely have a distinct population of micro-and macrodiamonds. Simple evaluation of microdiamond stone counts in isolation are insufficient to estimate macrodiamond contents, but can be utilized in diamond size frequency distributions to give grade forecasts.

A comparison of recent stone recoveries from caustic dissolution to similar types of historical results can be made on a limited basis. For the 122 north crater, combined MPK-N/UCSK-N diamond abundances are 3 times that seen in rotary hole 122-01, which was drilled in 1989. This drillhole produced kimberlite samples in the form of chips. Diamond recovery was achieved by combined crushing, jigging, heavy liquid separation, and caustic fusion. A total of 77 kg of kimberlite chips were analyzed for diamond content and produced 22 stones, of which five were macrodiamonds having at least one dimension greater than 0.5 mm and two of the stones had their largest dimension close to 1 mm. It is not known what the bottom cutoff for recovery was for this procedure, although the smallest stone size recovered from these samples was 0.10 mm, a relatively coarse bottom cut-off may explain the comparatively low stone abundances for 122-01, despite recovery of a significant proportion of larger diamonds. Table 26 shows a comparison of diamond abundances for historical and recent results.

Table 26: Comparison of Recent and Historical 122 Microdiamond Results by Area

Drillhole/Area Comparison	Year of Diamond Recovery	Diamond Recovery Facility1	Diamond Recovery Bottom Cut-off (mm)	Sample Mass (kg)	# of Stones	Average Stones/10kg
122 North Crater						
122-01	1989	C.F. Minerals	?	77	22	2.9
MPK-N, UCSK-N	2003	SRC	0.075	141.5	133	9.4
122 South Crater						
122-05	1992	KAL	0.074	169	42	2.8
122-06	1993	KAL	0.074	239	99	4.5
122-07	1994	KAL	0.074	181	51	2.5
122-08	1995	KAL	0.074	71	26	4.1
122-09	2001	KAL	0.074	264	22	0.8
122-10	2001	KAL, Lakefield	0.074	417	38	0.9
122-11	2001	KAL	0.074	167	20	1.2
MPK-S, UCSK-S, OPK-S1	2003	SRC	0.075	262.70	192	7.3

1 = Abbreviated forms are as follows: Saskatchewan Research Council, Saskatoon (SRC), De Beers' Kimberley Acid Laboratory, South Africa (KAL), Lakefield Research Labs, Ontario (Lakefield)

Several drillholes located on the south part of 122 were tested for diamond content from 1993 to 1996. Diamond abundances for these drillholes ranged from 2.5 to 4.5 stones/10kg compared to an average of 7.3 stones/10kg for the 2003 coreholes located in the 122 south crater (MPK-S and OPK areas). Kimberlite core samples totaling over 400 kg from coreholes 122-05 and 122-06, and an additional 252 kg of chip samples from large diameter reverse circulation drillholes 122-07 and 122-08 averaged between 2.5 to 4.5 stones/10kg based on recovery of 218 diamonds. All four of these drillholes are located within the south and southeastern part of body 122 (Figure 1). Stone abundances for 2003 coreholes in the 122 south crater (MPK-S and OPK-S1 areas) were about twice these recoveries with an average of 7.3 stones/10kg.

The SRC reported 95.3% recovery of internal tracers during diamond recovery and stone picking was routinely audited by a supervisor. Microdiamond results from these drillholes were integrated with the 122 dataset including results from similar kimberlite types intersected in earlier drillholes (122-01, 122-05, 122-06, 122-07, 122-08). Modeling of grade forecasts for the southern and northern parts of the body, as well as by major kimberlite unit currently is in progress.

9.2.16.6.4 Diamond Recovery from Kimberlite 150

A total of 421 kg of representative core was collected from Kimberlite 150. Diamond recovery for these samples is in progress.

10.0 Drilling

Drilling has been conducted at Fort à la Corne since 1989.and has totaled some 300 holes using a wide range of drilling techniques. Early drilling utilized conventional rotary or small diameter reverse circulation methods. Core drilling was done extensively in 1993 and 1994, and larger diameter reverse circulation drilling has been used since 1994. Underreaming was used to enlarge drillholes in 1993 and 1997. Reverse flood drilling at 610 mm diameter has been conducted since 2000 and a 914 mm version in 2002. Methodologies for conducting reverse circulation drilling have evolved significantly since the early 1990's primarily in attempts to optimize drilling chip product and to minimize potential for diamond damage.

Drill material has been used for all geochemical, mineralogical, and diamond recovery. Extensive indicator mineral chemistry data are available for many kimberlites, and microdiamond samples have been analyzed for most kimberlites. Macrodiamond sampling has been done on roughly half of the kimberlites in the field, particularly those with microdiamond contents.

Due to the changing nature of drilling programs over a long period of time (1989-2003), a description of drilling and sampling programs for each year is included in the Exploration section. The reader specifically is directed to the section concerning prioritization of kimberlites and an evaluation of all data and information from 1989 to 1999 investigated during a desktop study in 2000.

11.0 Sampling Method and Approach

Diamond recovery information and results for each drillhole and kimberlite are recorded in tabular form. De Beers (Mineral Resource Management) and independent consultants/experts use this data for grade calculation exercises and prediction of stone sizes. For some bodies, microdiamond data are relatively sparse, sometimes being derived from a single drillhole, and represent the only diamond data (macro or micro) available for a given body. Due to the changing nature of drilling programs over a long period of time (1989-2002), a description of drilling and sampling programs for each year is included in the *Exploration* section.

11.1 Grab Samples for Recovery of Microdiamonds and Indicator Minerals

More than 18,000 kg of kimberlite comprising over 1,200 samples have been analyzed for microdiamonds on a project-wide basis, and some 9,000 stones have been recovered. Samples have been treated in four main facilities: Kimberley Microdiamond Lab (KMDL), Anglo American Research Lab (AARL), Saskatchewan Research Council (SRC), and Lakefield Research. In general, all labs except AARL utilized similar bottom screen cut-points (74 or 75 microns) and results were reported and compiled in standard sieve size ranges. Typically, microdiamonds were recovered utilizing caustic fusion/caustic dissolution methods, although, rarely microdiamonds (to 150 microns bottom cut-off) were recovered along with indicator minerals using jigging methods.

Kimberlite samples derived from chip material were methodically collected as representative grab samples from the stream of kimberlite over the shaker table. Samples collected from core material were assembled by collecting representative whole core pieces over set intervals. Only one corehole was first slabbed and then sampled; this was PQ corehole 141-39 which was drilled and sampled during 2002-2003. Choice of sample interval for the microdiamond and indicator mineral recovery changed over the course of the project. During the first three years of the project, sample intervals ranged from a few metres to covering the entire thickness of kimberlite intersected in the drillhole. From 1993 to 1999, sample intervals were variable and primarily based on lithological contacts. After 1999, samples for microdiamond recovery were selected from representative intervals of core only.

In 2003, the Joint Venture partners constructed a core slabbing facility in Saskatoon to accommodate the larger number of core drilled. Samples were first logged, then the selected or entire kimberlite intervals slabbed longitudinally. In this way, a permanent record of the kimberlite interval is maintained for future comparison, thin-sectioning, and geochemical sampling.

Diamond recovery information and results for each drillhole and kimberlite are recorded in tabular form. De Beers (Mineral Resource Management Department or MRM) and independent consultants/experts use this data for grade calculation exercises and prediction of stone sizes. For some bodies, microdiamond data are relatively sparse, sometimes being derived from a single drillhole, and represent the only diamond data (macro or micro) available for a given body.

11.2 Samples for Recovery of Macrodiamond

Macrodiamond samples have been collected within the project area since 1989. Bottom screen processing cutoffs have generally varied between 0.85 mm and 1.5 mm. Samples have been taken from a range of drill products including core, rotary drill chips, and reverse circulation drill chips. Project-wide, 569 macrodiamond samples having a collective total theoretical mass of just over 3,100 tonnes were collected prior to 2002. This work produced 1,780 diamonds weighing 102.66 carats. Approximately half of the diamonds recovered by weight were from the 140/141 kimberlite. The drilling and sampling program for 2002 produced sample theoretical mass of 1,271 tonnes from the 140/141 kimberlite.

Kimberlite samples derived from chip material were methodically collected in plastic mesh bags after sizing on shaker tables to remove undersize material. Samples collected from core material were crushed prior to diamond recovery. Choice of sample interval for the microdiamond and indicator mineral recovery changed over the course of the project. During 1993 and 1994, several variably thick samples were taken from each drillhole intersection of interest with some samples covering over 100 metres of kimberlite. From 1995 – 1999, sample intervals were tied to interpreted lithofacies boundaries, and then from 2000 onwards to more consistent, 6 or 12 metre intervals that were either keyed to drill rod use or a uniform datum within the kimberlite.

11.3 Representative Samples from Core

Prior to 2003, core was only selectively slabbed for collection of archive or petrographic samples. Most samples for diamond recoveries were collected as broken or whole sections of core. Also, sample intervals were defined by depth (keyed to a datum) and may have crossed lithological contacts. Some samples were taken as grabs from intervals covering 10's of metres.

In 2003, core was methodically slabbed longitudinally prior to sampling. At present, the sampling strategy for diamond recovery utilizing caustic dissolution methods is based on collection of representative material from within boundaries marking lithological contacts. Samples are made up to a maximum of 8 kg each and closed with numbered seals that cannot be tampered with. In addition during 2003, samples of slabbed core measuring up to 40 cm long were collected for archiving and future petrographic studies. The number of samples collected per drillhole is a function of several factors including:

-budgetary considerations for the diamond recovery program
-number of discrete phases present in the drillhole and in the kimberlite as a whole (complexity of geology)
-thickness of intersection and discrete kimberlite phases
-estimate of diamonds required for further evaluation

12.0 Sample Preparation, Analyses and Security

Sample preparation in advance of the lab was minimal and typically consisted only of drying the material. Samples were collected and prepared by contract and permanent employees of the project field management or operators.

Detailed descriptions of analytical work for a wide range of diamond and indicator mineral recovery procedures are not included in this document, but are available upon request or in a much summarized form in Lehnert-Thiel *et. al.* (1992) and Jellicoe *et. al.* (1998).

Security on-site during collection of samples was minimal during 1998 to 1999. Security protocols were implemented during 2000 and have been expanded since to minimize any probability of diamond theft or salting. These measures typically involve restricting or minimizing access to the shaker table during sample collection. In addition, security tags and visual inspections of bag security were standardized and documented in chain of custody documents.

All diamond recovery was conducted in secure facilities with varying degrees of anti-theft or anti-contamination measures. Facilities located in Canada that were utilized for the 1989, 1990, 1991, and 1996 programs had minimal to moderate levels of security. Diamond recoveries conducted by De Beers invariably involved moderate to very high levels of security designed to minimize human contact with diamond-bearing concentrates and diamonds. De Beers' lab facilities are now in compliance with ISO 17025 accreditation standards.

A wide variety of microdiamond recovery facilities have been used over the course of the project since 1989. The primary verification for microdiamond recovery is to monitor the stones for loss due to dissolution in the caustic medium and by running additional aliquots from the sample interval. These measures were employed throughout the project.

A number of verification routines for assessing drilling damage and processing integrity have been utilized during macrodiamond recovery procedures. The main types of audits and quality control measures are listed below including the program years in which they apply:

- Downhole tracer studies to monitor recovery and diamond damage; 1997, 1999 reverse circulation drilling programs
- Density tests during DMS concentration; all macrodiamond recoveries by De Beers
- Re-run of DMS tailings; all macrodiamond recoveries by De Beers
- Re-run of x-ray sortex tailings; 1990 and 1991, 1997 onwards for all macrodiamond recoveries by De Beers
- Jigging tracers; macrodiamond recovery by the SRC in 1996
- Grease table diamond tracers; De Beers recovery from 1992-1997
- X-ray sorter tracers; 1990 and 1991, 1997 onwards for all macrodiamond recoveries by De Beers
- Hand-picking of tails from x-ray sorting; primarily 1999 onwards by De Beers facilities
- Hand-picking of separated magnetic fraction; primarily 1999 onwards by De Beers facilities
- Full independent audit of diamond recovery facilities and procedures utilized in South Africa and Alberta, Canada during 2001 by MPH, an engineering firm located in South Africa
- Inspection and monitoring of DMS and final diamond recovery facilities in South Africa and Alberta, Canada by personnel of Kensington Resources Ltd. during processing of 2001 and 2002 samples.

13.0 Data Verification

Quality assessment and quality control of the diamond recovery procedures for microdiamond and macrodiamond recoveries were the responsibility of the individual labs utilized, as described in the preceding section. Monitoring of the QA and QC programs by the operator (DBCEI, in particular), field program management teams, and project managers was inherent in the news release process and vetting procedures developed within the FalC-Joint Venture. There have not been any significant failures in data verification.

14.0 Adjacent Properties

No information is reported from work conducted on adjacent properties.

15.0 Mineral Processing and Metallurgical Testing

A preliminary Ore Dressing Study recently was completed, but is not considered material at this time.

16.0 Mineral Resource and Mineral Reserve Estimates

Most of the kimberlite bodies identified on the FalC-JV property are considered as early to mid- exploration stage targets. Only kimberlite 140/141is in the advanced exploration/evaluation stage and as such, it remains a diamond *deposit* until sufficient grid drilling and minibulk sampling allows determination of a reasonable, low to medium confidence estimate of grade and average diamond value. Furthermore, grid drilling must be completed on the body with sufficient coverage and density so that continuity of geology and diamond distribution patterns can be resolved with a reasonable amount of assurance. Additional drilling and sampling is required on 140/141 to acquire sufficient geological representivity of the body and statistically significant quantities of diamond.

17.0 Other Relevant Data and Information

No other data and information is considered necessary at this time.

18.0 Interpretations and Conclusions

- 49 of the 69 tested (71%) bodies are diamondiferous (microdiamonds or macrodiamonds).

- 34 of the 69 (49%) kimberlites tested contain macrodiamonds. This frequency is exceptional compared to other kimberlite fields.

- A total of 1,844 macrodiamonds (minimum size of 0.85 mm in one dimension) with a cumulative weight of 218.45 carats were recovered during exploration programs conducted from 1989 to 2002; of this total, 1,427 macrodiamonds with cumulative weight of 159.51 carats were recovered from kimberlite body 140/141; approximately 8500 microdiamonds have been recovered from all kimberlites to mid 2004

- Kimberlite body grades based on macrodiamond recovery alone range up to 7.7 cpht; these values are considered to be significantly understated due to the limited amount of minibulk sample from each body.

- Grade estimates for individual bulk samples range up to 114.44 cpht; sample intervals range from 12 to 194 metres.

- Grades forecasts for commercial size stones modeled by De Beers range up to 20 cpht based on size distributions of combined microdiamonds and macrodiamonds. A total of 17 kimberlite bodies with sufficient diamond recoveries were prioritized in 2000. The best five of these bodies are now the focus of advanced exploration efforts.

- Age of emplacement of the various kimberlites occurred within the interval from approximately 90-112 Ma, during Cretaceous time. The kimberlites range from simple mono-eruptive bodies to multi-eruptive, multi-vent bodies characterized by complex stacking and interlayering of multi-temporal kimberlite units. Ongoing studies of larger bodies indicate discernible vertical and areal zonation of kimberlite units and diamond distribution.

- Ongoing acquisition of large minibulk samples from prioritized bodies permits preliminary revenue modeling and evaluation of the economic potential of select Fort à la Corne diamondiferous kimberlites.

- Fort à la Corne kimberlites are best categorized as very large tonnage, lower grade diamond deposits overall, but with zones of higher grade potential.

- The largest stone recovered to date is 10.23 carats; the largest and most valuable stone recovered to date is 3.335 carats and has a value of $US 390/carat as determined by De Beers and a value of $US 450/carat as determined by WWW International Diamond Consultants; the two other largest stones are 2.595 and 3.61 carats in size.

- Modeled average macrodiamond values determined by De Beers for kimberlite ore from Kimberlite 122 range from $US 133 to 147 per carat; best fit to optimistic modeled revenue values range from $US 11 to 18 per tonne. These grades, values, and revenue figures are based on recovery of approximately 23.3 carats from the 122 body to date.

- Based on 2000 data only, modeled average macrodiamond values determined by De Beers for kimberlite ore from body 141 ranged from $US 148 to 179 per carat; best fit to optimistic modeled revenue values range from $US 28 to 33 per tonne. Modeled stone values and projected revenue ranges for Kimberlites 122 and 141 have low confidence levels because of low numbers of diamonds included in the evaluation.

- Interpretation of 2001 to 2002 data indicates that grades for specific parts of the 141 body are variable depending on diamond distribution and continuity of lithological facies, and that a greater degree of testing is required to substantiate grade forecasts over the entire body, and to permit higher levels of confidence in calculation of average of diamond value; evaluation of small parcels of commercial-size stones shows preliminary indications (considered low confidence until larger parcels are evaluated) that the average value of diamonds from Kimberlite140/141 range from $US 67 to 97 per carat and *Modeled Revenue* figures range up to $US 14.65 per tonne depending on the phase (or type) of kimberlite. Further work is ongoing to delineate all discrete kimberlite phases in this body and to model estimated stone distributions and revenue per tonne.

- Kimberlite body areas range from 2.7 to 250 hectares, typically based on a 30 metre thickness cut-off.

- The estimated mass of individual kimberlite bodies, based on geophysical modeling, ranges from 3 million to 675 million tonnes. The integration of 140 and 141 indicates a combined mass of 500+ million tones as derived from GEMCOM modeling, based on core drilling in 2001 and 2002 with a minimum thickness threshold of 50 metres.

- Three of four high priority, potentially economic kimberlites (bodies 140/141, 148, and 150) are located within a two mile radius in the central portion of the Fort à la Corne trend; the modeled mass of diamond-bearing kimberlite in these bodies is estimated to be 1.5 billion tonnes; the total macro-diamondiferous kimberlite mass in this same radius (12 bodies), is some 3.6 billion tonnes. The other prioritized kimberlite, body 122, is located some 5 km to the west.

- The Fort à la Corne Kimberlite Field has the largest concentration of diamondiferous kimberlite in the world; the total modeled mass for the entire field is estimated at upwards of 9 billion tonnes. Kimberlite 140/141, with an estimated mass of >500 million tonnes, is the largest macrodiamond-bearing kimberlite in the world. ***The main objective for Kensington in this project is to delineate an economic diamond resource at Fort à la Corne using a methodical stepwise approach.***

- Overall, the kimberlites remain insufficiently tested in consideration of their large size. Only three bodies have minibulk testing for macrodiamonds to a level greater than 100 tonnes. Considerable effort and money was expended simply in order to reconnoiter the majority of kimberlite bodies in this field. Since most of the minibulk sampling efforts in the past were directed to testing to some degree, each of the 69 targets, many of the larger bodies have very limited coverage in an areal sense. Furthermore, vertical zonation has not been adequately tested in most of the existing drillholes due to large sampling intervals. Due to the prevalence of the "nugget effect" in kimberlites, average macrodiamond grades are expected to closely approach forecasted grade levels as sample tonnage increases.

- Evaluation work continues on Kimberlite 140/141 in order to better understand geological complexity of the deposit, to determine an understanding of diamond distribution and diamond grade for mineable resources, to upgrade confidence in determination of the average value of diamonds (in $/carat) and, to determine the economic value of the body as represented by potential revenue calculations for a diamond deposit given as an in-situ diamond value in $ per tonne (as per CIM recommendations) compared to best initial estimates of capital and operating expenses.

- Additional work is required to satisfy two main goals in the overall objective of the project. The first goal involves two phase drilling programs that include grid core drilling of the main part of the combined 140/141 body is needed to increase the understanding of geology (geometry and architecture of the body). This is then followed by identifying a subset of coreholes that are suitable targets for minibulk sampling in order to test diamond distribution and to provide a representative sample of kimberlites from all phases and across the vertical and areal extent of the kimberlite body. The second goal is reached when a *go - no go* decision for acquisition of a bulk sample is facilitated after detailed evaluation of this information. The bulk sample information coupled with the grid drilling and sampling information should be adequate for at least a determination of inferred resource over a significant part of the 140/141 body. If results are still positive at this point, then a decision point for continued work into the feasibility stage of evaluation would be undertaken.

19.0 Recommendations

- Further work on the 140/141 body may be required during 2004. The scope, nature, and level of expenditure for a program in 2004 cannot be rigorously defined in the absence of a completed geological model and up to date grade forecast results from the 2003 program. However, in light of the extent of the 2002 and 2003 programs, it is the opinion of the Qualified Person that additional information, above and beyond the scope of work conducted to date on the 140/141 body, is required before a *go – no go* decision is made on this body. This work would include large diameter reverse circulation drilling in the southern part of the 140 sector to obtain sufficient macrodiamonds to permit higher-confidence grade forecasting.

- Continued evaluation work should be conducted on high priority targets including Kimberlites 122, 150, and 148. This work should be conducted in the same methodical stepwise approach utilized on Kimberlite 140/141, namely, a combination of core drilling and large diameter reverse circulation drilling for minibulk samples.

- Complete diamond recovery utilizing recognized caustic dissolution methods should be conducted on core at a reasonable spacing across the 122 and 148 kimberlite bodies, particularly when new kimberlite phases are encountered. Large diameter reverse circulation drillholes should be undertaken for acquisition of minibulk samples on a 200 metre grid spacing over high-potential target zones in both bodies.

- New magnetic anomalies identified in the airborne tri-axial gradiometer magnetic survey should be drill-tested with NQ coreholes. Given positive diamond results from caustic recovery, these exploration-scale targets would then be considered for initial minibulk sampling for the purpose of diamond recovery if the carrying-capacity of the kimberlite is prospective.

- Selected higher potential bodies with insufficient or suspect drilling and processing histories should be re-drilled with HQ coreholes to permit further sampling and diamond recovery using caustic dissolution methods. Given positive diamond results from caustic recovery, these exploration-scale targets would then be considered for initial minibulk sampling for the purpose of diamond recovery if the carrying-capacity of the kimberlite is prospective.

- New gravity anomalies having variably low amplitude magnetic signatures should be tested for the presence and thickness of kimberlite using NQ coreholes followed by HQ coreholes if significant kimberlite is intersected. Given positive diamond results from caustic recovery, these exploration-scale targets would then be considered for initial minibulk sampling for the purpose of diamond recovery if the carrying-capacity of the kimberlite is prospective.

Dated and Sealed at Saskatoon, Saskatchewan this 18th day of May, 2004.

PROFESSIONAL SEAL

(signed) "Brent C. Jellicoe"

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Statement of Certification by Qualified Person

I, Brent C. Jellicoe of the city of Saskatoon, in the province of Saskatchewan do certify the following:

- I am a consulting geologist and principal of *Jellicoe Resource Associates* with an office located in Suite 210 – 3502 Taylor Street East, Saskatoon, Saskatchewan, Canada S7H 5H9.

- I am a member in good standing of the Association of Professional Engineers and Geoscientists of Saskatchewan registered as "Professional Geoscientist" number 10319.

- I have practiced my profession since 1992.

- I am a geological consultant and have been practicing in this capacity since December 1998.

- I am a graduate of the Faculty of Arts and Science at the University of Saskatchewan and earned a Bachelor of Science (Honours) Degree in Geology in 1987. This was followed by five years of post-graduate work in the College of Graduate Studies concerned with a variety of geological and geochemical investigations of strata deposited within the Cretaceous Western Canada Sedimentary Basin located within Manitoba, Saskatchewan, and Alberta.

- I am a member of the Saskatoon Section of the Canadian Institute of Mining (CIM), a constituent society of the Canadian Institute of Mining, Metallurgy, and Petroleum.

- I have been involved with all aspects of diamond exploration and drilling/sampling project management in the Fort à la Corne area of Saskatchewan, since 1992. This experience is summarized in the following:

    - I worked as a contract geologist for North Rim Exploration Ltd. from December 1992 to October 1993 and was tasked with logging and interpretation of Cretaceous bedrock and kimberlite drillcore from a 15-hole program in, and proximal to, the Fort à la Corne kimberlite Field.

    - I was employed as a long-term, contract geologist by Rhonda Mining Corporation as a drillsite geologist (1993-1994) and then Kensington Resources Ltd. (1994 to 1997) as a senior geologist and field program manager for reverse circulation, reverse circulation - underream, and rotary drillhole programs conducted by the Fort à la Corne Joint Venture in Saskatchewan. I also logged all kimberlite chip samples, prepared sampling strategies, evaluated results for heavy mineral abundance/indicator mineral chemistry studies and diamond results, and wrote all reports for the exploration programs conducted during 1995 and 1996. In addition, I investigated bedrock stratigraphic relationships in conjunction with intra-body correlation of Fort à la Corne kimberlites towards delineation of zonation and continuity of petrographic character and diamond content. Also, during employment with Kensington, I was a team member involved in summarizing the known and potential diamond and copper-gold resources of selected areas of Shandong Province, China.

    - I was employed as a Project Geologist by Uranerz Exploration and Mining Limited from 1997 to November 1998 (including a three month extension of employment during acquisition of Uranerz by Cameco) and continued managing drilling/sampling programs and with reporting responsibilities for the Fort à la Corne Joint Venture diamond project.

    - From December 1998 to October 1999, I was Project Geologist under contract with Monopros Limited and acting in a similar capacity as at Uranerz, again for the Fort à la Corne Joint Venture. Along with reporting responsibilities, an internal study outlining new models for the geometry, architecture, and emplacement of Fort à la Corne kimberlites was completed.

During this time period, I spent a two-week term as shift supervisor for geologists at the Kennady Lake Diamond Project in the NWT. In addition, I was contracted as a drilling specialist responsible for drilling optimization and data acquisition for a large diameter ODEX (hammer) and reverse circulation (RC) waterflood drillhole program at the Lomonosov Diamond Project in Russia. In this program, I supervised drilling and sampling procedures as well as continued database management and processing of data from: digital drilling parameter recorder, volume and mass calculations from caliper logs, and drilling chip geology. This contract culminated in a suite of detailed drillhole resumes and an extensive final Drilling and Sampling report.

- From December 1999 to present, I have acted as the Project Manager and Chief Geologist for Kensington Resources Limited. My primary responsibilities include:
  - review of all technical information and results from the operator of the Fort à la Corne Joint Venture (De Beers Canada Exploration Inc.)
  - petrographic description and interpretation of all core and drillhole intersections
  - composing all technical news releases for Kensington; including reporting of joint venture project results
  - observation of field program activities for Kensington
  - observation and informal audit of diamond recovery procedures
  - creation and composition of all technical presentations, public talks, and internal summaries for Kensington
  - oral and graphic presentation of all public, scientific, and investor talks

- I have acted as the onsite Drilling Manager for the Fort à la Corne Joint Venture field programs during 2000, 2001, and 2002 reporting primarily to the operator (De Beers Canada Exploration Inc.). Duties for this position includes day to day oversight of the drilling operations with optimization of product quality (core and reverse-circulation chips), compliance with sampling procedures, liaison with the drilling supervisors, and supervision of other onsite contractors.

- During 2000, 2001, and 2002, I completed extended monitoring visits to dense media separation and final diamond recovery facilities operated by De Beers both in Canada and South Africa.. I visited the Lakefield diamond recovery facility in 2001 and 2002 to conduct due diligence on their procedures and security measures. In 2003 and 2004, I visited the Saskatchewan Research Council diamond recovery facility in Saskatoon to conduct due diligence on their procedures and security measures. In all cases, lab and site visit were conducted while samples from Fort a la Corne were in some stage of diamond recovery.

- I have consulted for drilling projects mounted by Skeena Resources and Shore Gold Inc. as Project Manager/Geologist in the Fort à la Corne area during 2000, 2001, and 2002. Responsibilities have included assessment report writing, core-logging, and project management.

- I have authored diamond exploration program reports for Uranerz Exploration and Mining (now UEM Inc. a subsidiary of Cameco Corp.), Monopros Limited (now De Beers Canada Exploration Inc.) and Kensington Resources Ltd. I have also authored numerous in-house studies on the status of exploration as well as detailed kimberlite studies for the companies listed above. Also, I have prepared detailed kimberlite petrography and logging reports for the companies listed. The sum objective of these studies and programs was to elucidate the character of kimberlites in Saskatchewan and to determine the resource potential of the diamondiferous kimberlites. I continue to undertake independent and contracted studies on kimberlites in Saskatchewan for Saskatchewan Industry and Resources (Diamonds in Saskatchewan 2002) and for several of the companies listed above.

  - I have been lead author in diamond exploration-related scientific papers for the Saskatchewan Geological Survey (1998 Summary of Investigations) and a CIM volume on Industrial Minerals In Canada (2002).

  - I was third author for a peer-reviewed scientific paper published in the Proceedings of the Eighth International Kimberlite Conference (2004). The paper was written on the geology and diamond recovery of the 140/141 Kimberlite Body of the Fort a la Corne Diamond Field.

  - I have provided numerous free information sessions to the general public in the form of digital slide presentations that summarize current diamond exploration and historical results in the province of Saskatchewan. These presentations contained a very subordinate element of promotion for the diamond exploration efforts of Kensington Resources Limited.

- As a result of my experience and qualifications, I am a *Qualified Person* as defined in National Instrument 43-101.

- As a matter of record, I do hold shares and option for warrants, as well as stock options in two junior exploration companies that undertake active diamond exploration on land located within 15 to 100 kilometres of the Weirdale Group. I verify that my interest in these companies will not affect the validity and objectivity of this report.

- Opinions and geological interpretations expressed herein are based on the information provided and the general experience and expertise possessed by the consultant. These opinions are offered up as further information for the consideration of the general public and are subject to change as new data is acquired and digested.

- I am not aware of any material fact or material change with respect to the subject matter of this technical report, which is not reflected in this report, the omission to disclose that would make this report misleading in any way.

- I have read National Instrument 43-101 and Form 43-101 F1. In addition, I have completed a two-day seminar focused on reviewing and discussing these regulations that was prepared by *The National Conference Board of Canada* during December of 2002. This report has been prepared in compliance with these documents to the best of the author's understanding.

Dated and Sealed at Saskatoon, Saskatchewan this 18th day of May, 2004.

PROFESSIONAL SEAL

(signed) "Brent C. Jellicoe"

Brent C. Jellicoe, B.Sc. P.Geo.

CONSENT of AUTHOR

TO: TSX Venture Exchange
B.C. Securities Commission
Alberta Securities Commission
Saskatchewan Securities Commission

I, Brent C. Jellicoe, do hereby consent to the filing, with the regulatory authorities referred to above, of the technical report titled *Summary of Exploration and Evaluation of the Fort à la Corne Kimberlite Field, East-central Saskatchewan* and dated May 18, 2004 (the "Technical Report") and to the written disclosure of the Technical Report and of extracts from or a summary of the Technical Report in the written disclosure in the Annual Information Form of Kensington Resources Ltd. being filed.

I also certify that I have read the written disclosure being filed and I do not have any reason to believe that there are any misrepresentations in the information derived from the Technical Report or that the written disclosure in the Annual Information Form of Kensington Resources Ltd. contains any misrepresentation of the information contained in the Technical Report.

Dated this 22nd day of June, 2004.

[Seal or stamp of Qualified Person]

(signed) "Brent C. Jellicoe"

Signature of Qualified Person

Brent C. Jellicoe, P.Geo.
Member No. 10319

Print name of Qualified Person

Signatures

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

KENSINGTON RESOURCES LTD.
(Registrant)

October 13, 2005	By: /s/ Robert A. McCallum
Date	Robert A. McCallum
	President, CEO and Director