TECHNICAL REPORT
SPIDER # 1 and # 3 PROJECTS
(JAMES BAY JOINT VENTURE)
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AND
KWG RESOURCES INC.

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1 SUMMARY

The Spider # 1 and # 3 Projects comprise the James Bay Joint Venture between Spider Resources Inc. and KWG Resources Inc. The area of influence of the Spider # 1 Project includes approximately 105,000 square kilometres comprising the land lying between latitudes 50° N and 54° N and longitudes 83° W and 86° W. The area of influence of the Spider # 3 project includes approximately 13,000 square kilometres comprising the land lying between 52° N 86° W, 52° 30' N 87°W, 54° 10' N 87° W and 53° 40' N 86° W. The Spider # 1 Project lies entirely within the Porcupine Mining District whereas the Spider # 3 Project lies within the Porcupine and Thunder Bay Mining Districts. Within these areas, the Joint Venture owns 15 claims covering all of the kimberlites found to date as well as other isolated geophysical targets, one block of 50 claims covering the Kitchie Lake platinum-palladium project and one block of 134 claims which comprise the McFaulds Lake copper-gold project. Under the terms of a joint venture agreement, KWG Resources Inc. and Spider Resources Inc. are presently approximately equal partners in the Spider # 1 and # 3 projects. This report is concerned only with the diamond or kimberlite activities of the joint venture partners and is not concerned with either the McFaulds Projector the Kitchie Lake Projects.

Spider and KWG have evaluated their Ontario Joint Venture contributions during 2003. In accordance with their joint venture agreement, their individual interest is dependent on the pro rata contribution of each party. As of the end of 2003, Spider has a 49% interest and KWG has a 52% interest in the Ontario Joint Venture.

The Spider #1 diamond project was developed by D. A. MacFadyen who, from his work with regional magnetic data obtained by various government surveys, identified an area west of James Bay as having potential for kimberlite emplacement. A joint venture agreement was then formed with Ashton Mining of Canada Inc. for the Spider #1 area. The Spider #3 project was and extension of the Spider #1 project and was located to the west of the terrain subject to the Ashton Joint Venture agreement. Ashton Mining of Canada Inc. subsequently withdrew from the Joint Venture agreement. After initial exploration, a Joint Venture agreement was signed with De Beers Canada Ltd. to include all of the Spider #1 and #3 areas. After some exploration and evaluation, De Beers withdrew from the agreement.

Spider Resources Inc. and KWG Resources Inc. have utilized the concepts of D. MacFadyen in designing an exploration model and have carried out more detailed fixed-wing magnetic surveys. Anomalies selected from this survey were then flown in more detail by helicopter magnetic surveys and geophysically modelled. Some of these have been located on the ground using ground magnetic surveys and have been tested by diamond drilling between 1992 and the spring of 1997. In addition, 630 stream sediment, till and glaciofluvial samples have been taken in the Spider # 3 area. They have been analysed for kimberlite indicator minerals, gold, base metals and 51 other elements. Preliminary results show several areas of concentration of samples containing kimberlite indicator minerals.

Over 200 fixed-wing magnetic targets have been identified and flown by helicopter magnetic surveys. Only 43 of these potential kimberlite targets have so far been drilled. The drilling has been successful in discovering 10 kimberlites: five in the Attawapiskat Swarm and five Kyle-type kimberlites over 100 km distant to the west. The Attawapiskat kimberlites are Phanerozoic in age, are fairly fresh and have intruded through the Paleozoic cover, whereas the Kyle-type kimberlites are Precambrian in age, are somewhat altered and do not penetrate the Paleozoic cover. All of the kimberlites found to date, for which analyses are available, contain some diamonds. However, some of the Kyle-type kimberlites are quite rich in diamonds and contain some stones over 1.5 mm in diameter. Two of the Kyle-type kimberlites, Kyle 1 and Kyle 3 have been further evaluated by collection and analysis of approximately 10 tonne and 3 tonne samples respectively.

KWG Resources Inc. and Spider Resources Inc., through an expanded program, have shown the commitment to continue the search for kimberlites in the James Bay Lowlands. A budget for this work is proposed at $1,000,000 for ground geophysical surveys and diamond drilling. This will extend the program through the spring of 2005.

2 INTRODUCTION AND TERMS OF REFERENCE

This technical report has been prepared at the request of the Board of Directors of Spider Resources Inc. and KWG Resources Inc. to form a basis for the re-evaluation of their interest in the Spider # 1 and Spider # 3 Projects in light of the significant recent discoveries of kimberlite in the area of the MacFadyen pipes (Appendix I). The author has been given full access to all of the technical data collected by Spider Resources Inc. and KWG Resources Inc. in order to write this report. This report is therefore based on this proprietary information as well as the standard published geological literature.

Joint venture partners, Spider Resources Inc. (Spider) and KWG Resources Inc. (KWG), operate the James Bay Joint Venture which grew out of a geophysical modelling project in 1991 to become the Spider # 1 Project (Figure 1). At the present time the Spider # 1 Project operators hold 13 claims consisting of 170 units totalling 2720 hectares (Figure 2, 3). The Spider # 3 project was formed in 1995 to encompass the terrain to the west of the Spider # 1 Project (Figure 1). At present, the Spider # 3 Project comprises 2 claims totalling 32 units comprising 512 ha (Figure 2, 4). The details of all of these claims are presented in Appendix II.

Ashton Mining of Canada Inc. (Ashton) became involved in the Spider # 1 Project between July 1993 and March 1996 on "an individual kimberlite pipe earn-in basis". On April 18, 1996 Spider Resources Inc. and KWG Resources Inc. announced that Ashton Mining of Canada Inc. had relinquished its 51% entitlement to any diamondiferous discovery in the James Bay Joint Venture (Spider # 1) area subject to a 25% clawback right and various cash settlements. In the fall of 1995, the area of search for kimberlites was expanded to the west by the initiation of the Spider # 3 Project (Figure 1).

In March 2001, KWG and Spider signed a multi-year agreement with De Beers on the Spider #3 area. After completing an evaluation of the Spider/KWG data, De Beers completed some detailed sampling and drilled five magnetic targets, none of which intersected kimberlite. De Beers has since withdraw from the Joint Venture and has turn over the one claim of value, which now forms part of the McFaulds Lake Project, to Spider/KWG. The other claims which they staked have been allowed to lapse.

Roger D. Thomas became involved with the Spider # 1 Project as the field geologist responsible for the supervision of field operations and diamond drilling operations, including core logging, in March 1995, replacing Derek E. McBride. He became involved in the same capacity with the Spider # 3 Project at its inception in August 1995. During this time, diamond drill holes DR 95-32 to DR 95-70 and holes SPQ-04-01 to SPQ-04-06 were drilled and logged, 113 ground geophysical surveys on 88 anomalies were completed and over 61 claim blocks were staked and recorded. In addition, the regional fixed-wing aeromagnetic survey was extended to fill in a former gap north of the Attawapiskat River and to obtain data at 200 m line spacing in the western part of the Spider # 1 area. Heli-mag surveys of 37 areas covering 44 anomalies were also

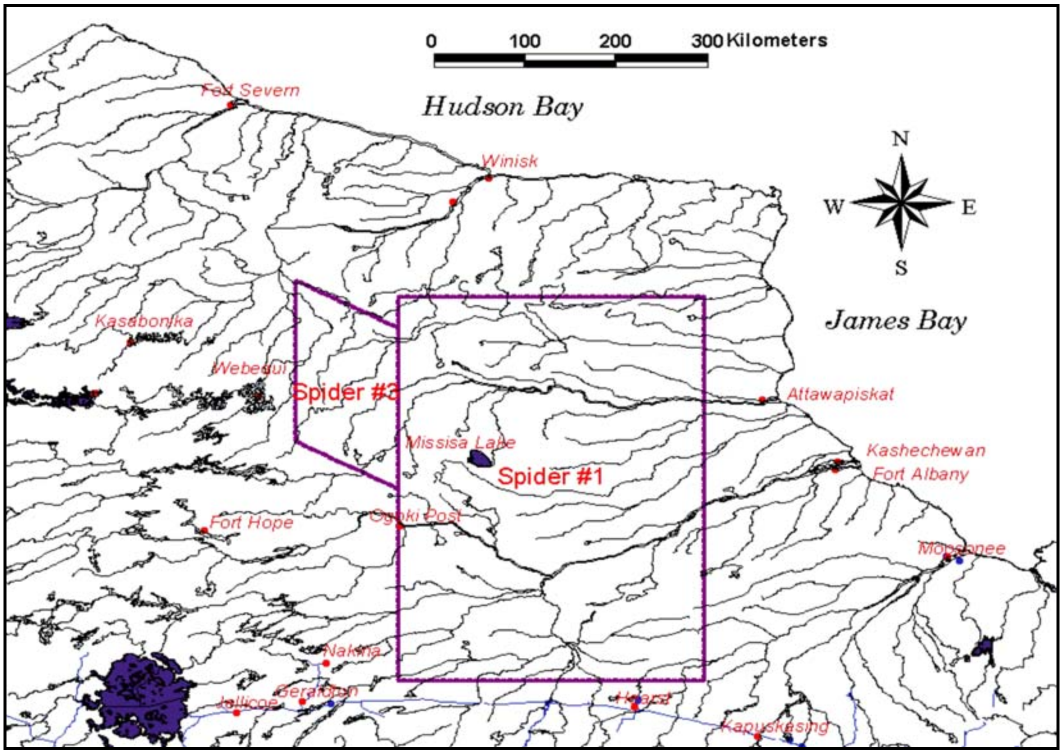

Figure 1. Location of the Spider #1 and Spider #3 Projects.

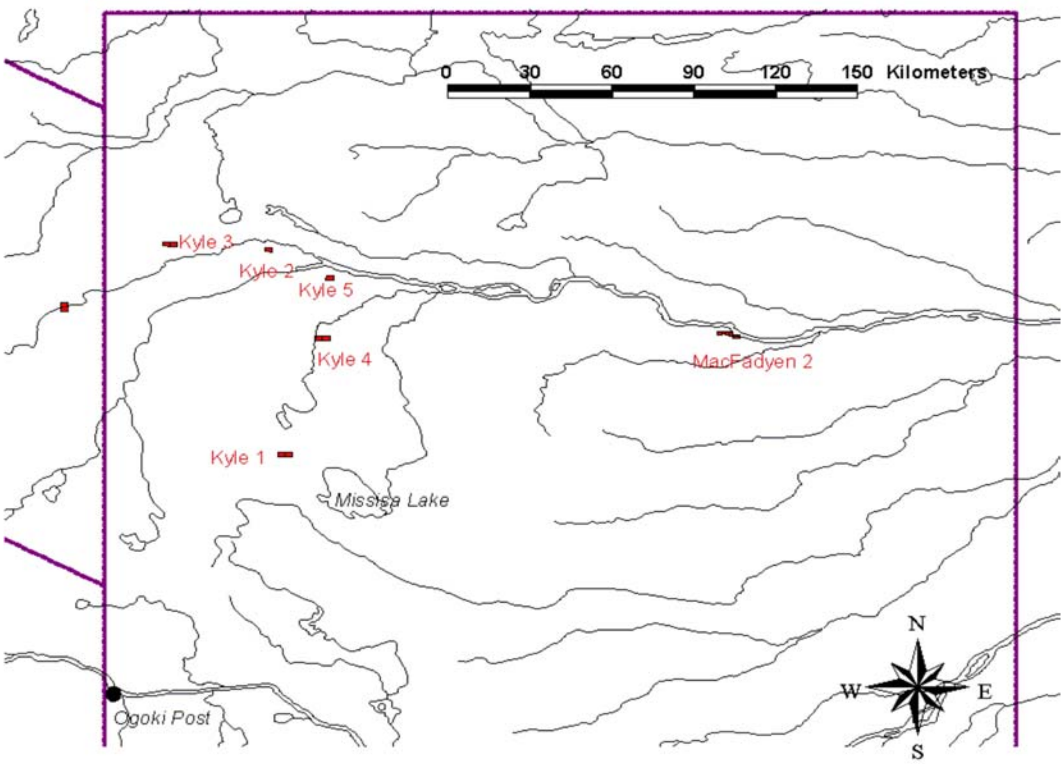

Figure 2. Location of Spider/KWG claims and kimberlites within the Spider #1 & #3 Projects.

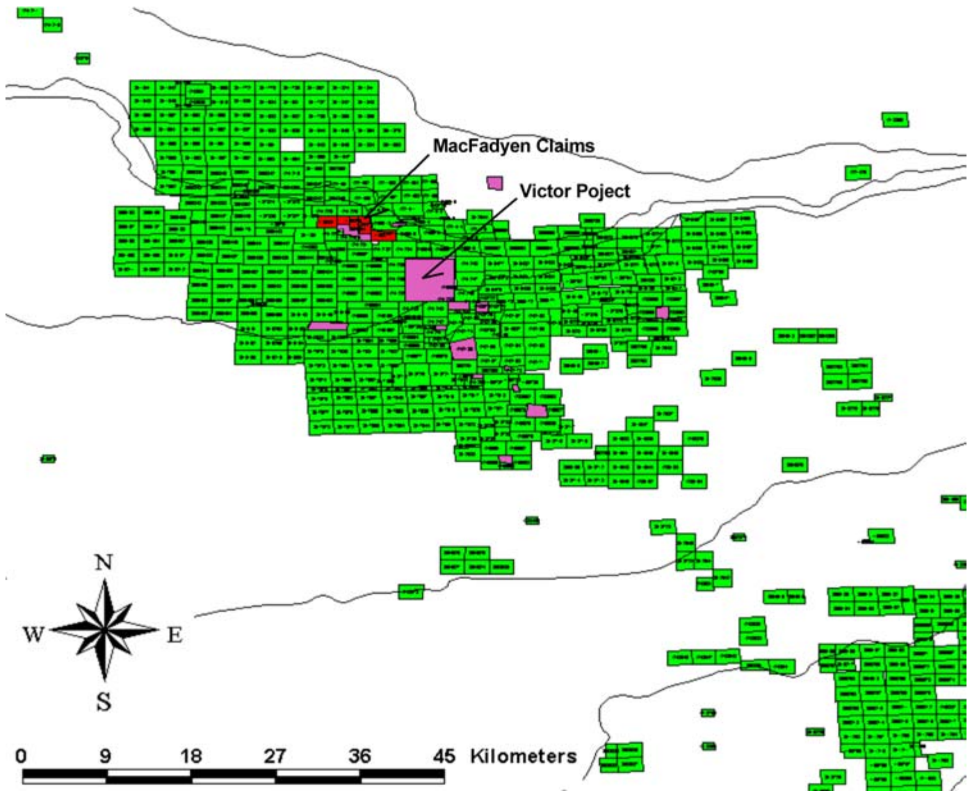

Figure 3. Location of the Spider/KWG MacFadyen claims (in red) within the Attawapiskat kimberlite field. De Beers' claims are shown in purple.

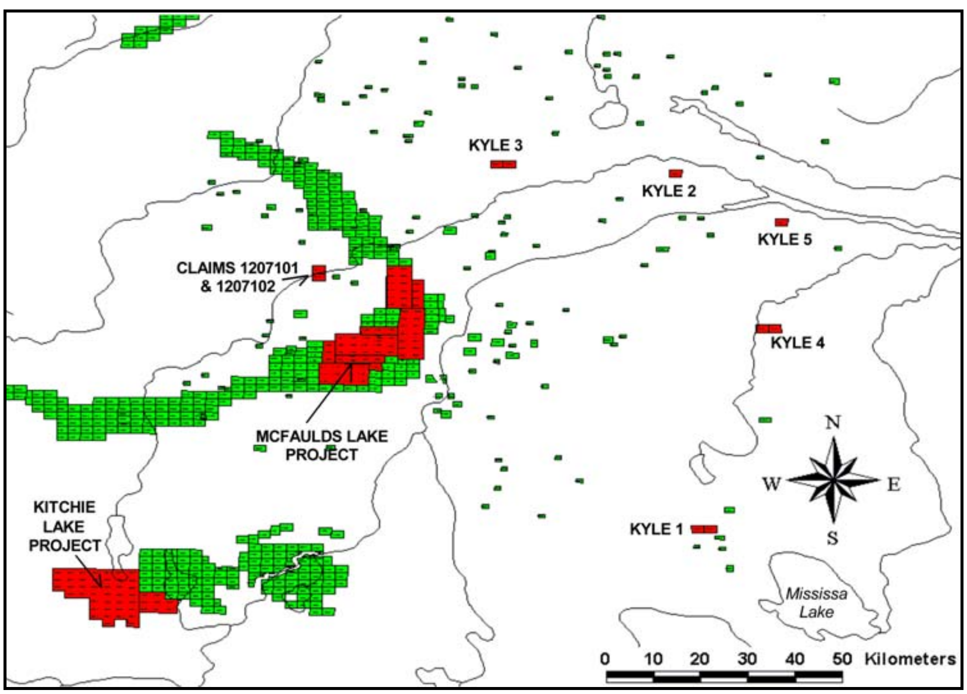

Figure 4. Map showing the locations of the Spider/KWG claims, in red, covering the Kyle kimberlites and the McFaulds Lake Project and the Kitchie Lake Projects.

completed. A stream sediment sampling program, covering the Spider # 3 area, was also completed. This latter program involved taking 630 stream sediment, till and glaciofluvial samples for heavy mineral and geochemical analysis. A reconnaissance level map of the bedrock geology of the Spider # 3 area was also completed as part of this program. Roger Thomas was also responsible for the preparation of the technical reports that were prepared during that time period for Spider Resources Inc as identified in the list of references.

The geophysical operations and interpretation is under the supervision of Don MacFadyen and Scott Hogg. In addition, two campaigns of diamond drilling have been executed under the supervision of Neil Novak, Jim Burns, and Jason Brewster. These campaigns were designed to evaluate the Kyle # 3 kimberlite. A total of 16 holes were drilled to obtain a 2 tonne sample of kimberlite.

Apart from seven fixed-wing aeromagnetic surveys (Hogg, 1993, 1994a, b, c, d, e) and various claim staking campaigns, eleven field programs have been completed in the Spider # 1 area by the KWG/Spider Joint Venture: Fall 1993 (Various ground investigations) (Novak, 1993a, b; Gleeson, 1993), Spring 1994 (Heli-mag survey and diamond drilling) (McBride 1994a, b), Fall 1994 (Diamond drilling)(McBride 1994c, d), Winter-Spring 1995 (Heli-mag survey and diamond drilling) (McBride 1995; Thomas 1995a, b), Summer-Fall 1995 (Ground geophysics and diamond drilling) (Thomas 1995b, c, 1996a), Spring 1996 (Diamond drilling, ground geophysics and heli-mag) (Thomas, 1996c, 2000), Summer 1996 (Ground geophysics and diamond drilling) (Thomas, 1997a), Spring 1997 (Ground geophysics and diamond drilling) (Thomas, 1997b, c) Spring 2004 (Diamond drilling) (Thomas, 2004). Four programs have also been completed in the Spider # 3 area: Summer-Fall 1995 (staking, ground geophysics and diamond drilling) (Thomas, 1995d, 1996b), Winter 1996 (heli-mag, ground geophysics and diamond drilling) (Thomas, 1996c), Summer-Fall 1996 (stream sediment sampling, bedrock mapping and ground geophysics) (Gleeson and Thomas, 1997), and Spring 1997 (Ground geophysics and diamond drilling) (Thomas, 1997c). Between March 2001 to December 2002, De Beers has conducted several campaigns of field work which has included geochemical sampling, geophysical surveying and reverse circulation drilling as described below (Section 9.13). The reports on these programs are pending. Ashton also completed limited evaluation of three kimberlite bodies by the completion of various ground geophysical surveys and five diamond drill holes.

This report reviews and discusses the results of all of these programs with emphasis of the latest programs and makes recommendations for future work. The technical data presented is based on these reports as well as on laboratory analytical reports and published information as referenced in the text. SI units are used throughout this report except for the weights of diamonds which are given in carats (ct), octacarats (OCt) [1 octacarat = 10^8 carats] and diamond grades which are given in carats per hundred tonnes (cpht). For the purposes of this report, macrodiamonds are defined as diamonds which have at least one dimension greater than 0.5 mm. Microdiamonds have all dimensions smaller than 0.5 mm. The latest diamond analysis data from Lakefield has separated the diamonds based on a screen with a 0.425 mm aperture which they now use to classify microdiamonds. Where this classification is employed, it will be identified in the text. Where the figures used are converted from British Units, the original British units are given in brackets. All financial figures are given in Canadian dollars. Geochemical results are given in parts per million (ppm) or parts per billion (ppb) where 1 billion = 10^9.

3 PROPERTY DESCRIPTION AND LOCATION

3.1 General

All claims were staked in accordance with the Province of Ontario Mining Act, Revised Statutes of Ontario, 1990 Chapter M.14. The properties are all included in the definition of "Crown Land" and as such are claimable by individuals or companies acting in accordance with the said Mining Act. Appendix II contains the Mining Recorder's client list of ownership of each claim in the area, current to June 24, 2004. Within the Porcupine Mining District, KWG Resources Inc. is on record as having 100% interest in 8 mining claims, 70% interest in 5 mining claims, and 50% interest in 152 mining claims, while Spider Resources Inc. is on record as having 30% interest in the same 5 mining claims and 50% in the same 152 mining claims. Within the Thunder Bay Mining District, both parties are shown to have 50% interest in the same 34 mining claims. Some staking has been recorded 100% in favour of Spider Resources Inc. whereas other staking has been recorded as joint ownership. Under the KWG/Spider Resources Inc. joint venture agreement, both parties now have an approximately 50% ownership of all claims. The actual percentage of the ownership is calculated based on the total expenditure of each party at the end of each year.

Only fifteen of the above claims are of interest for diamond exploration; the others were staked for the McFaulds Lake Cu-Au project or the Kitchie Lake PT-Pd and will not be discussed further. It should be noted that one of the McFaulds Project claims was initially staked by De Beers when searching for diamonds. It is very probably that a kimberlite exists on one of the McFaulds claims in this general area.

Ashton Mining Canada Inc. has elected not to continue its evaluation of the kimberlite pipes found to date, but has expressed interest in being offered the opportunity to evaluate any other kimberlite pipes that may be found in the future. Moreover they have agreed to a clawback right into any diamond discovery in the area, subject to the reimbursement by Ashton to KWG/Spider of 300% of exploration and evaluation costs of the discovery prior to the decision to mine, with the notable exception of the Kyle # 1 pipe.

Initial assessment work is due before the second anniversary date of each recorded claim in the amount of $400.00 per 16 hectare unit. Subsequent requirements are $400.00 per 16 hectare unit per annum. Assessment work requirements may be applied to the claim on which the work was completed and to any or all of the claims which form a contiguous block. Five of the kimberlite claims, P 1189377 to P 1189381 have a due date of August 24, 2004. In order to extend these claims, the reserve and the recent drilling program will be applied in the next few weeks. This work should put these claims in good standing for several years. Claims P1199771 and P1199772 will expire on July 2, 2004. A crew is on stand-by to restake these claims when they expire.

There are no former mine workings, tailings or waste deposits in the area. The only permits required to perform work on the property is for crossing creeks or other bodies of water. These permits are required for specific water crossings and are for a limited period of time. Thus they can only be obtained immediately prior to executing the work. Because this project has been totally airborne in the past, permits have not been required. There are some areas of concern to the local First Nations of Attawapiskat, Webequi and Martin River (Ogoki), but these have generally been resolved by holding information sessions with the local communities each year. Most of the areas of concern have been related to burial grounds adjacent to the main rivers. The Otoskwin-Attawapiskat River Provincial Park includes a 200 m wide band along both sides of the Attawapiskat River; staking of claims and mineral exploration is not permitted within this park.

3.2 Spider # 1 Project

The Spider # 1 Project area includes approximately 105,000 square kilometers comprising the land lying between latitudes 50° N and 54° N and longitudes 83° W and 86° W (Figure 1). It is located in the James Bay Lowlands of Ontario, Canada, within the Porcupine Mining District. The centre of the area lies 175 km southwest of Attawapiskat and 195 km west-southwest of Fort Albany, both being Indian Reserve villages near the mouths of the Attawapiskat and Albany Rivers, on James Bay, respectively. Geraldton lies approximately 300 km to the southwest. The Indian Reserve community of Ogoki (Marten Falls Indian Reserve 65) lies near the middle of the western boundary of the project area (Lat. 51° 38' N, Long. 85° 57.5' N).

Ground was acquired by staking claim blocks in areas deemed to have economic potential. Most of the staking has been in the northern part of the project area in the Attawapiskat River basin. Limited staking was completed in the southern half of the area, in the Albany River Basin, however the claims have all expired. Initial staking in 1992 by KWG concentrated along the Attawapiskat River in the vicinity of the known kimberlite pipes and over similar geophysical targets further west along the Attawapiskat River, and near Missisa Lake. After the discovery of the Kyle # 1 (Kyle Lake) kimberlite, on March 11, 1994, smaller areas were staked to cover airborne (fixed-wing or heli-borne) magnetic targets. In the spring of 1995, a large area north of the Attawapiskat River, containing abundant magnetic targets, was staked. In 1997, single claim groups covering the prime anomalies, was staked prior to commencing the ground geophysical surveys or drilling. In addition, claims were added to those covering the Kyle # 5 pipe in order to completely cover the anomaly and its possible extensions. The claims covering known kimberlites have been maintained whereas claims that do not cover proven kimberlites have been allowed to lapse. As a result, there are presently 13 claims in 6 groups covering the ten known kimberlites as identified in Table 1. Therefore, the Spider # 1 Diamond Project presently encompasses 13 unpatented mining claims comprising 170 16-hectare units, totaling 2,720 ha in the 6 separate claim groups (Appendix II).

Part of the McFaulds Lake Cu-Au project lies within the Spider #1 area and therefore is subject to the Spider/KWG Spider #1 Joint Venture Agreement. Twenty-four claims of the McFaulds Lake Project lie within the Spider #1 area and comprise 384 16-hectare claim units or 6144 ha. Thus the total of the Spider #1 Project includes 37 claims comprising 554 16-hectare units for a total of 8864 ha.

Kimberlite	Claim No.	Due date	Work required	Total Reserve	Claim size	
					(units)	(ha)
MacFadyen 1 & 2	1189377	2004-AUG-24	4800	10710	12	192
	1189378	2004-AUG-24	3600	8033	9	144
	1189379	2004-AUG-24	2000	3397	5	80
	1189380	2004-AUG-24	1600	4865	4	64
	1189381	2004-AUG-24	4800	10709	12	192
Kyle # 1	P 1160174	2007-MAR-21	6400	87870	16	256
	P 1160175	2007-MAR-21	6400	172606	16	256
Kyle # 2	P 1199772	2004-JUL-02	6400	0	16	256
Kyle # 3	P 1207222	2007-MAY-01	6400	24697	16	256
	P 1207223	2007-MAY-01	6400	0	16	256
Kyle # 4	P 1160154	2007-OCT-08	6400	75832	16	256
	P 1160155	2007-OCT-08	6400	0	16	256
Kyle # 5	P 1199771	2004-JUL-02	6400	0	16	256

Table 1. List of claims that cover kimberlite bodies

The only known significant mineral resource is the Victor Kimberlite pipe which is presently being developed by De Beers Canada Exploration Inc. It is located 7.5 km to the southeast of the MacFadyen # 2 kimberlite. De Beers has announced that the Victor kimberlite is economic and hope to commence construction in 2005.

Several other kimberlites have been discovered in the region and are located on Figure 5. Most of these have been found by De Beers Canada Exploration Inc., however one has been discovered by Navigator/Canabrava Joint Venture and a possible kimberlite has been discovered by the Arctic Star - Metalex Joint Venture who have reported finding a “kimberlitic clay” (Arctic Star Diamonds Corp., press release April 1, 2004) later found to be kimberlite (Arctic Star Diamonds Corp., press release April 28, 2004). The Spider kimberlites will be discussed in detail in section 8 of this report.

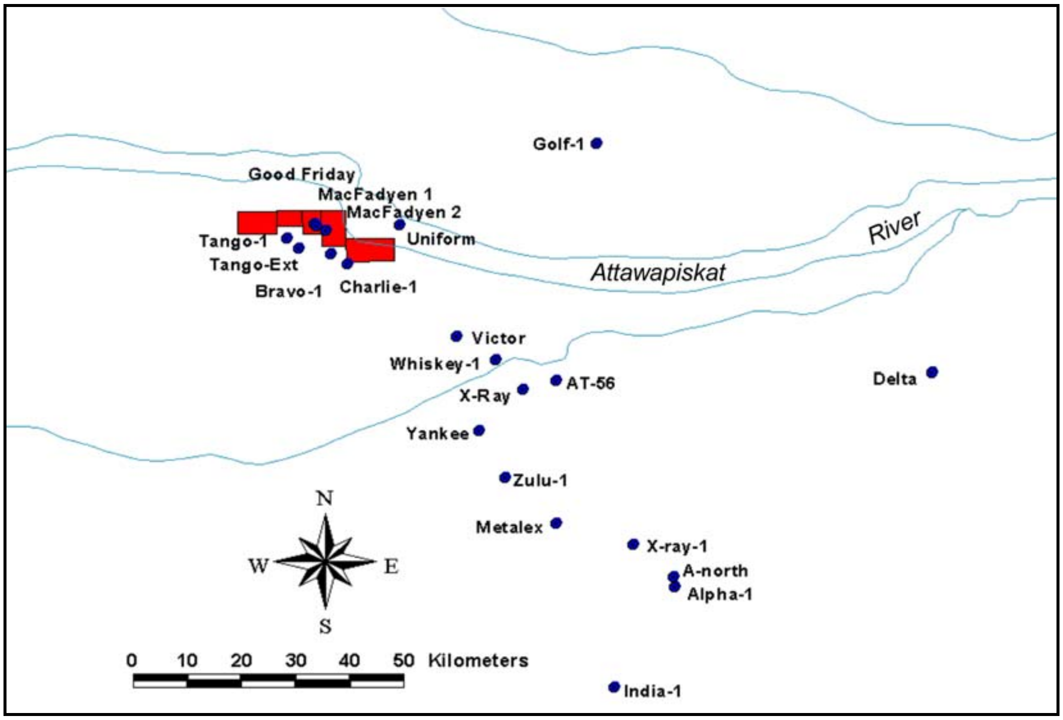

Figure 5. Map of the known kimberlites in the Attawapiskat swarm. Spider/KWG claims are shown in red.

No base or precious metal resources are known in the main area of interest of either the Spider # 1 project. Although some past mineral exploration has been conducted in the past in the very southern part of the Spider # 1 area and to the north of the Spider # 1 area in the Sutton Inlier (Figure 6), the region is generally unexplored and nothing of economic importance has been reported to date.

3.3 Spider # 3 Project

The Spider # 3 project area includes approximately 13,000 square kilometers comprising the land lying between 52° N 86° W, 52° 30' N 87°W, 54° 10' N 87° W and 53° 40' N 86° W (Figure 1). The area is located in the James Bay Lowlands of Ontario, Canada, within the Porcupine and Thunder Bay Mining District. The centre of the area lies 260 km west of Attawapiskat, 68 km east-northeast of Webequie, and 155 km northeast of Lansdowne House, all being Indian Reserve villages. Geraldton lies approximately 300 km to the south-southwest.

Ground was acquired by staking claim blocks to cover geochemical and airborne geophysical anomalies. Most of the staking was in the central part of the project area because that area is closest to the known kimberlites in the Spider # 1 area, however all of these claims, except two, have been allowed to lapse since kimberlites were not found. The two which have not yet lapsed are claims P 1207101 and P 01207102 which have sufficient assessment work applied to them to be in good status until Sept 18, 2005,

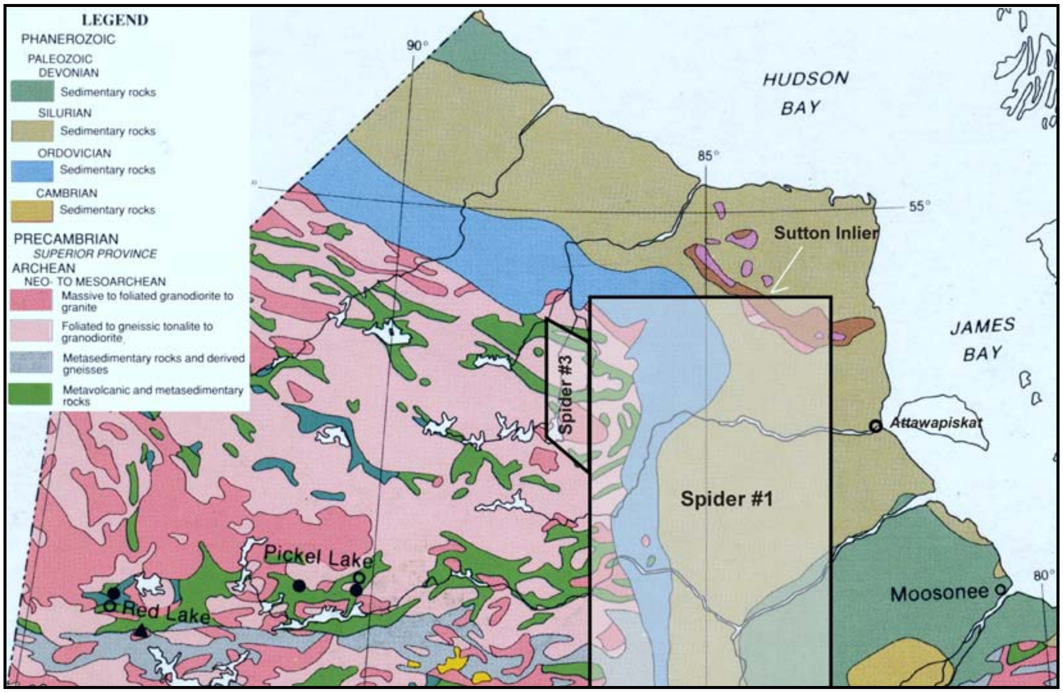

Figure 6. Geology map of northern Ontario showing the Spider #1 and #3 areas and the Sutton Inlier. (after, Ministry of Northern Development and Mines, 1991).

and Sept 18, 2004 respectively. Two other claims, P 124319 and P 124329, were initially staked as kimberlite targets by De Beers. De Beers did not find kimberlite, but did find a Cu-Au occurrence which has since been pursued as the McFaulds Lake Cu-Au Project. As a result, the claims now form part of that project and will be discussed in a separate report, however, the there is still a potential for finding kimberlite on the McFaulds Lake Project claims. The Spider/KWG Joint Venture also holds a large block of 57 claims totaling 896 units or 14,336 ha which was staked to cover chromium geochemical anomaly with potential for platinum group metal mineralization as the Kitchie Lake Project. Details of all claims are presented in Appendix II.

The Spider # 3 Project presently encompasses 50 unpatented mining claims comprising 928 16-hectare units, totaling 14,848 ha in 3 separate claim groups (Figures 3 and 4, Appendix II).

Project	Claim No.	Total claims	Total claim units	Total area
Diamonds claims	P 1207101	1	16	256
	P 1207102	1	16	256
McFaulds Lake		110	1996	31936
Kitchie Lake		50	800	12800
Total		162	2828	45248

Table 2. Spider/KWG holdings in Spider #3 area.

Some mineral exploration has occurred in the past within the Spider # 3 area, however, nothing of economic importance has been defined. Recently, several companies including Freewest Resources Canada Inc., Noront Resources Ltd., Probe Mines Limited, Candor Ventures Corp., Fancamp Exploration Ltd., MacDonald Mines Exploration Limited and others have staked claims which adjoin those of the McFaulds Lake Project. Aurora Platinum Corporation has staked the adjoining ground to the Kitchie Lake Project and is actively exploring.

4 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

4.1 Physiography

The Spider # 1 project area lies to the west of James Bay and to the south of Hudson Bay, covering portions of the drainage basins of the Winisk, Attawapiskat, Albany and Missinaibi rivers. The Spider # 3 project area which lies to the west of the Spider # 1 Project area, covers parts of the western portions of the drainage basins of the, Attawapiskat, and Ekwan rivers and also includes parts of the Winisk and Shamattawa river drainage basins. Missisa Lake, the largest fresh water lake in the area, lies near the centre of the area. The Otoskwin-Attawapiskat River Provincial Park includes a 200 m wide band along both sides of the Attawapiskat River, generally to the west of the Spider #1 area. There is also a 1 km water reserve along the eastern part of the Attawapiskat River. The Attawapiskat Indian Reserve 91 lies along the Ekwan River in the north-central, the Marten Falls Indian Reserve 65 lies in the extreme west-central, and the English River Indian Reserve 66 lies in the extreme south parts of the area. The Canadian National Railways transcontinental line crosses the extreme southern part of the area where the town of Pagwa River is located.

4.2 Relief and Drainage

The Spider # 1 area is generally flat with a mean altitude of 150 m asl. Within the Spider # 3 area, the ground rises from an altitude of 120 m in the northeast to 220 m in the west-central to southwest part. The local relief of both areas is very low, generally less than 10 m. Streams and rivers are generally incised only 5 to 10 m below the surrounding terrain. Raised beach ridges form 1 to 2 m local topographic highs which are slightly better drained than the surrounding ground and support a local ecosystem.

Throughout most of the project area, the ground is poorly drained with abundant small ponds and creeks. The main rivers which drain the area include, from south to north, the Albany River, the Atikameg River, the Attawapiskat River and the Ekwan River, all of which flow eastward into James Bay. Only the extreme northwest part of the area is drained by the Shamattawa River and the Winiskis Channel, a tributary to the Winisk River, into Hudson Bay.

4.3 Accessibility

The area is accessible by bush plane equipped with floats in the summer and skis, or, in favourable weather, wheels during the winter. In previous programs, fuel for the camp and helicopters, along with food, and equipment were flown into the camps and garbage, empty drums and samples are flown out on the back-hauls. Charter air service is available from Nakina, 255 km to the south-southwest, and Pickle Lake, 400 km to the west-southwest. Access for mineral exploration within the area is generally by helicopter and on foot, but most rivers and creeks are navigable by canoe. People from the nearby communities commonly travel the main rivers in large canoes in the summer and with snow mobiles in the winter on their hunting and fishing expeditions. The closest all weather road is in Nakina, but the winter road system which services the communities of Ogoki, Webequie, Lansdowne House, Fort Albany and Attawapiskat, could be extended to give access to the area. In recent years, the a side road to the winter road from Moosonee to Attawapiskat has been built to service the De Beers Canada Exploration Inc. camp at the Victor Project.

A tent base camp was established at Spider Lake (Latitude 52° 42' N, Longitude 84° 44' W), known as Cup Lake by the natives, in October 1992 and was used as the centre of operations for all subsequent land based field operations until 1999 when the camp was removed. A second camp was established by Ashton at Kyle Lake (Latitude 52° 28' N, Longitude 85° 23' W). This camp was smaller than the Spider Lake camp and has since been removed. On site storage of fuel and equipment at this site was very limited because of the swampy nature of the terrain. The 2000 and 2001 drilling programs were run from a temporary camp located at within 200 m of the Kyle # 3 kimberlite (Latitude 52° 12' N, Longitude 84° 47' W) which was the focus of the exploration. The various programs conducted by De Beers Canada Exploration Inc. were run out of a camp located on Highbank Lake (52° 10'N 86° 10'W). Part of this camp was bought by Billiken Management Services Inc. and moved to McFaulds Lake where it is used as for the McFaulds Lake Project. The 2004 spring drilling program was run from the Pele Mountain Resources Inc. camp on the Attawapiskat River, approximately 5 km from the MacFadyen pipes.

Diamond drilling on most programs has been accomplished by utilizing a drill designed for moving with a helicopter. This drill could be moved for short distances by a Bell 206L helicopter, but an A-Star S350-BA or S350-B2 or Bell 407 is required for longer moves. This drill was demobilized to Winnipeg in 1999. A second drill was mobilized to the area by Ashton for the evaluation of the kimberlites. This latter drill was larger and was capable of drilling larger diameter core to greater depths. The drill was moved by winching for very short distances or by A-Star helicopter for long distances. This drill was also used for the Winter 1996 program on Kyle Lake and by Jonpol Explorations Ltd. during the winter of 1997, and was demobilized to Winnipeg by Jonpol. Fuel for the drill and drill moves is cached on nearby lakes where possible. Empty drums and discarded equipment are removed on back-hauls. The 2000 and 2001 diamond drilling programs have been executed using a standard diamond drill as the distance of the moves was short. This drill was mobilized and demobilized from the area by fixed wing aircraft. De Beers Canada Exploration Inc. has used a helicopter portable reverse circulation drill to complete their drilling programs. The 2004 diamond drilling program in the vicinity of the MacFadyen kimberlites used a light weight hydraulic drill which could be moved using a Hughes Notar helicopter.

4.4 Climate

The James Bay Lowlands of northern Ontario has a humid continental climate with cool summers and no dry season. The local climate is greatly affected by Hudson Bay and James Bay. Commonly, the weather at the Spider Lake base camp was quite different from the weather to the south or west. Usually there were only one or two days per month when the weather was too foggy to work in the summer or it was too stormy to work in the winter.

The summer temperatures are generally between 10°C and 20°C with the mean July temperature of 13°C and a mean maximum summer temperature of 29°C. The extreme maximum summer temperature is 35°C. Winter temperatures are generally between -10°C and -30°C with a mean January temperature of -23°C and a mean minimum temperature of -45°C. The extreme winter minimum is -55°C; in January 1996 the minimum recorded temperature at the camp was -57/C. The period from June 15 to September 15 is generally frost free. Lakes start to freeze in mid-October and start to thaw in mid-April.

The average annual precipitation is 610 mm with approximately 200 mm falling as 2 m of snow. Measurable precipitation falls on an average of 140 days during the year with snow falling on 70 of those days. The average maximum depth of snow on the ground is 750 mm.

Winds are commonly strong and from the west to northwest in the winter and from the west to southwest in the summer. Easterly winds commonly bring fog from James Bay and are the precursors of bad weather. Fog is common in the early morning, but may last all day during the summer months.

4.5 Vegetation

The Spider # 1 and # 3 Project areas span the Subarctic Forest and Tundra Transition Zone. In the southern part of the area, large black and white spruce (*Picea glauca* and *mariana*) and tamarack (*Larix laricina*) are fairly common, however they become smaller toward the north where larger trees are restricted to narrow bands along rivers and creeks and on the well drained raised beaches. Trembling aspen (*Populus tremuloides*), balsam poplar (*Populus balsamifera*) and white birch (*Betula papyrifera*) are present to the south, but occur only on the driest sites in the northern part of the area. Willows (*Salix*) and alders (*Alnus*) are present along creeks and in poorly drained areas. North of the Attawapiskat River, tundra terrain and vegetation is prevalent; in this region, trees are very small or are not present.

4.6 Fauna

Field personnel have observed beaver, black bear, otter, red fox, marten, wolf, moose and woodland caribou in the area. Muskrat and mink are also known to occur. Native hunting for food and furs is limited to areas that are accessible from the main rivers, but the harvest is for personal consumption and not commercial exploitation. Similarly their harvesting of fish and birds is for personal consumption. Commercial (tourist) exploitation of the fauna as fishing and hunting camps is restricted to the land south of the Albany River. North of the Albany River, where most of the mineral exploration has taken place to date, a few fishing and hunting camps do exist, primarily along the major rivers and on Missisa Lake where float planes can land. Several hunting or fishing camps, probably used by the residents of Webequie, have been observed on some of the lakes in the Spider # 3 area. The Webequie First Nation is presently developing a tourist-fishing industry. A commercial fish farm was attempted at Missisa Lake but was a failure.

4.7 Local resources

The local services available at Attawapiskat, Webequie and Ogoki are limited, but include an airport, hospital, public schools, mail, telephone/facsimile, and various community stores, and services. There are two hotels in Attawapiskat and one, in Webequie. Hunting and fishing camps for both locals and tourists are present in the western and southern parts of the area. Attawapiskat is supplied by barge in the summer and all communities are connected to the south via winter roads in the winter although the winter road to Ogoki is generally of poor quality and is not well maintained. None of the communities have a base for charter air service and hence cannot support field operations. Camp supplies and equipment must be brought in through Nakina, Pickle Lake or if special arrangements are made, through Hearst.

5 HISTORY

5.1 Previous exploration by others

5.1.1 Spider # 1 Project Area

The Spider # 1 Project area has seen very little mineral exploration. A review of government land maps dated in early 1992 showed that no claim maps existed for most of the project area. The few maps with recorded claims were concentrated in the northeast part of the project area and proved to be owned by Monopros Ltd., the Canadian exploration division of Anglo-American De Beers now called De Beers Canada Exploration Inc. Subsequent research has shown that most of the exploration activity recorded for the northern half of the area has been related to the search for diamond bearing kimberlites. The only other assessment file was submitted by Stadacona Rouyn Mines Ltd. who, in 1957, diamond drilled 12 holes near Desolation Lake, in the northeastern part of the Spider # 1 area. The vertical holes were drilled from 61 to 181 m (200 to 593 feet) in length and intersected Paleozoic rocks. The core was not analyzed and there is no indication in the assessment files as to the commodity that was being sought.

Mineral exploration has been more active in the southern part of the area, probably reflecting the accessibility by rail and road. A list of the filed assessment reports for diamond drilling and geophysics in the southern half of the area is presented in Appendix III. Most of the exploration appears to have been for precious and base metals, although some was in search of phosphate (Camchib Resources Inc.). Since 1956, a total of 10 companies have reported a total of 265 diamond drill holes representing almost 35,000 m of drilling. Exploration has diminished since 1988, but some recent staking has taken place just north of Nakina.

Several claims covering magnetic anomalies, recommended by Iaian Downie as having potential to be kimberlites, were staked in the vicinity of Missisa Lake by Jonpol Explorations Ltd.. An airborne survey was completed on these 19 claim blocks. During March, 1996, Jonpol conducted ground geophysical surveys on some of their claims from a camp established on Missisa Lake. In the winter of 1997, Jonpol drilled several holes into magnetic anomalies to the east of the Attawapiskat River. The results of this work has not been made available to the public. Monopros Ltd. was also active in the winter of 1997. They obtained several bulk samples from their kimberlites of the Attawapiskat Swarm. Pure Gold Resources Inc. has also been active in the Ekwan River area.

In the spring of 1998, Monopros Ltd. began a re-evaluation of their previously discovered Attawapiskat kimberlites. This initial program has grown into an economic assessment of the Victor pipe as well as other pipes in the area by means of large bulk sample (>10 000 tonnes) obtained with large diameter drills. This activity caused other companies to become active in the area, mainly by staking claims around the De Beers and Spider/KWG claims. The companies involved include Canabrava Diamond Corporation, Condor Diamond Corp., Dumont Nickel Inc., Dia Bras Exploration Inc., and Greenstone Exploration Company Ltd. Some of these companies have completed geophysical surveys, however, Canabrava Diamond Corporation, in joint venture with Navigator Exploration Corp. have succeeded in finding and drilling the AT-56, Attawapiskat-type, kimberlite in April 2001. Recently, a joint venture between Kel-Ex, 1387197 Ontario, Arctic Star and Metalex has discovered macrodiamonds in the till and a blue clay which they believe to be kimberlitic in origin, near the Victor Project. Their latest press release of April 28, 2004, states that “another four vertical augur holes drilled along a 150-metre line have all bottomed in kimberlite.” Both these latter kimberlites are part of the Attawapiskat swarm originally discovered by De Beers Canada Exploration Inc.

5.1.2 Spider # 3 Project Area

The Spider # 3 project area has seen virtually no mineral exploration. A review of government land maps in late 1995 showed that no claim maps existed for most of the project area. A search of the Ontario Geological Survey's ERLIS assessment file system in December 1995, did not discover any reports filed for this project area. Some exploration by Henson Mines Ltd., Geophysical Engineering and Surveys Ltd., Teck Mining Group Ltd., Cominco Ltd., International Nickel Co. of Canada Ltd., Kennco Explorations (Canada) Ltd., and C. John Sullivan has occurred prior to 1973 along the Winisk Fault Zone in the extreme northern part of the Spider # 3 area (Thurston *et al*, 1979). This exploration was in part directed to finding an extension of the Thompson Nickel Belt (C. F. Gleeson, pers. comm.).

Apart from the work of De Beers Canada Exploration Inc. in Joint Venture with Spider/KWG Resources Inc., as reported below, the only major exploration that has occurred recently in the Spider # 3 area was carried out by Canabrava Diamond Corporation in joint Venture with Navigator Exploration Corp and by Aurora Platinum Corp. (19% held by Southwestern Resources Corp who also holds 39% of Canabrava). Canabrava has complete an extensive program of sampling surficial materials for heavy minerals throughout the Severn Joint Venture project area, however nothing has been specifically reported pertaining to the Spider # 3 area. Aurora Platinum Corp has staked approximately 37 16-unit claim blocks adjacent to the Spider/KWG PGE claims.

5.2 Previous exploration by KWG/Spider Resources Joint Venture

Apart from filing assessment reports to maintain the claims (Appendix III), KWG Resources Inc. has not filed any of the previously completed exploration with any regulatory bodies. As a result, all of the work completed to date by the KWG/Spider Resources Joint Venture will be described in Section 9 below. Note also that the areas of the claims had never been staked by any other party before.

6 GEOLOGICAL SETTING

The Spider # 1 area contains very few outcrops except in its southern part and along some of the rivers. Outcrops are more common throughout the Spider # 3 area particularly along the main rivers and the Winiskis Channel. As a result, neither the federal nor the provincial governments have spent much money or resources on defining the geology of the region. The first geological mapping was a series of "track surveys" along the major rivers. Bell (1872 and 1887) completed surveys of the Albany and Attawapiskat Rivers. McInnes (1906a, 1906b and 1909) completed surveys of the Winisk and upper parts of the Attawapiskat Rivers from 1903 to 1908. Dowling (1904) mapped the Ekwan River and Wilson (1906) completed parts of the Nagagami, Little Current, Kébinakagami, and other branches of the Kenogami River in the southern part of the area. Subsequent surveys included Operation Winisk (Norris and Sandford, 1968) which covered part of the northwestern part of the area, various air-borne geophysical surveys and specific studies, (Prest, 1963; Duffell *et al*, 1963, Emslie and Holman, 1966; Bostock, 1962; and Thurston, *et al*, 1979) and studies related to palaeontology in the Moose River Basin (Flower, 1968; Norris *et al*., 1992).

6.1 Precambrian Geology

The Precambrian geology of the area (Figure 6) is inferred from airborne geophysical surveys, limited diamond drilling, ground based seismic surveys and limited mapping of the outcrops mainly along the rivers. Magnetic patterns show that the basement consists of magnetically complex rocks consisting of Archean volcanic and sedimentary rocks within large blocks of granite and high grade gneissic rocks of probable sedimentary derivation. The outcrop lying 30 km due north of Missisa Lake is composed of mafic volcanics, mainly coarse-grained fragmental and pillowed lavas (McBride, 1994d). The outcrop area 55 km to the north-northwest of Missisa Lake is fine- to medium-grained intermediate to felsic volcanic rock. Rocks of the Sutton Ridge Formation (predominantly iron formation, greywacke and other clastic sediments), Nowashe Formation (dolomite, limestone and minor argillite), both of Aphebian (Proterozoic) age and various gneisses of the Archean Basement Complex are exposed in the Sutton Ridges in the northeast corner of the region (Bostock, 1971). Outcrops of highly sheared mafic to intermediate metavolcanics occur in the northeastern part of the Spider # 3 area (Thomas, 1995d).

Along the Winiskis Channel, the outcrops are predominantly of coarse-grained to porphyritic granite. The southern part of the Spider # 3 area is underlain by mafic to intermediate volcanics and porphyritic granite with local intrusions of diorite and gabbro. Locally, bands of iron formation occur within the volcanic pile (Duffell *et al*, 1963). Along the southern margin of the Spider # 1 area, the rocks comprise felsic to mafic volcanics. Diabase dikes are common throughout the region; in places mafic intrusions are present.

The structure of the region is quite complex. The Spider #1 and #3 areas lie totally within the Superior Archon. The Trans-Hudson Belt Orogen follows a general east-southeast trend from the Nelson River area in Manitoba, to the Sutton Ridges, to the north of the Ekwan River, from whence it turns sharply northward toward the Cape Smith Fold Belt on the Ungava Peninsula of Quebec (Janse, 1992 and Sutcliffe and Bennett, 1992).

The Winisk Fault Zone trends southeast in the northwest part of the region changing to east-southeast in the northeast. To the south of this main structure, parallel magnetic linears are apparent in the magnetic patterns (Hogg, 1994a). Two prominent magnetic linear pairs, the Spider arms, christened GREMLINs by D. MacFadyen, intersect east of Missisa Lake and trend southwest-northeast and south-southeast-north-northwest from this point. The former pair consists of a negative linear on the west and a positive linear on the east with an intervening zone of relatively lower magnetization. This zone has been called the Gremlin Rift. The north-northwest trending pair are both negatively magnetized. These have been called the Gremlin dykes.

The Gremlin Rift is perpendicular to the Winisk Fault Zone and can be traced across it; there is some indication that the Winisk Fault Zone is displaced by the Gremlin Rift (Hogg, 1994a). The Gremlin Rift is characteristic of transform faults associated with plate margins. The Gremlin Dykes are also possibly evidence of transform faulting reflecting a second plate motion. The altered magnetization, or rift between the linears is suggestive of spreading that might have been aided by strike slip motion along the Winisk Fault Zone (Hogg, 1994a).

Other fault and dyke directions are also evident in the aeromagnetic maps (Hogg, 1994a). The most prominent of these has a general north-south orientation, but features with east-west to east-northeast orientation are also evident. These features are not as continuous as the Winisk Fault Zone nor the Gremlin features and are interpreted as being older.

Preliminary interpretation of the structural data collected during the stream sediment sampling program indicates the following sequence of events in the Spider # 3 area. Deposition of volcanic and sedimentary units probably on top of a gneissic basement. The general trend of the gneissic rocks is 290/T - 310/T, but this gneissosity has been overprinted by two, and possibly three, 'early' deformations. The trend of the volcanic-sedimentary rocks is variable, but mainly east-west. The deposition of the volcanic-sedimentary rocks was followed by the peak thermal metamorphic event, probably associated with the intrusion of the coarse-grained granitic rocks. The ensuing period of folding produced type 2, asymmetric folds with northwest plunging fold axes and some interference folding. Subsequent open warping with cleavage and shearing to the north-northeast to north-northwest was probably associated with the emplacement of gabbroic bodies. The later formation of the Winisk River Fault System immediately predates, or postdates, the late gabbroic intrusions. The last event recorded in the Spider # 3 area is the intrusion of pegmatitic granitoid rocks.

6.2 Paleozoic Geology

Drilling (Appendix IV) shows that the Paleozoic sequence varies in thickness from less than 30 metres in the northwestern part of the area to more than 200 metres in the east and southeast. A seismic survey (Hobson, 1964, 1965) indicates that the Paleozoic cover should vary from greater than 500 m thick in the southeast part of the project area, south of the Albany River, to 150 m to 300 m thick along the Attawapiskat River, to being absent along the border between the Spider # 1 and # 3 areas. It is unlikely that Paleozoic rocks are common on the Precambrian basement in the central and western parts of the Spider # 3 area, although they may be preserved locally in deep depressions in the surface of the Precambrian. Moreover, the lowermost units of the Paleozoic sequence comprise very soft, poorly consolidated sandstones and siltstones, lithologies that would probably have been easily eroded. No outliers of Paleozoic rock have yet been encountered in drilling, although one is present on the Winiskis Channel in the northwestern part of the Spider # 3 area.

Where the Precambrian rocks are covered by Paleozoic rocks (Figure 6), the top 10 to 20 m of the Precambrian rocks are weathered, a result of sub-aerial weathering during the late Precambrian and early Paleozoic.

The lowermost Paleozoic unit (Figure 6) is the Middle to Upper Ordovician Bad Cache Rapids Group comprising a basal, somewhat conglomeratic, calcareous sandstone grading upwards into siltstone and cherty limestone (Sandford, 1987). Where intersected in drill holes, the unit is several metres thick and contains significant fine-grained, disseminated pyrite or marcasite. This unit is interpreted to have been deposited in an intertidal to subtidal environment in the Moose River Basin (Sandford, 1987) but to be of possible fluvial genesis further north (D. Armstrong, pers. comm.). This unit is very poorly cemented and has caused some drilling problems.

The Upper Ordovician (Figure 6), Churchill River Group comprising open marine, platform carbonates overlain by the Red Head Rapids Formation comprising limestones and dolomites (Johnson, *et al.*, 1991). The latter formation becomes more clastic toward the south. The early Silurian was a period of non-deposition on the Hudson Platform. This is represented by a weak zone of oxidation of the underlying Ordovician rocks. The overlying Middle Silurian rocks are conformable and comprise the Severn River Formation which is predominantly carbonate sediments with minor craton derived clastic units (Johnson, *et al.*, 1991). The Middle Silurian Ekwan River and the Attawapiskat Formations overlie the Severn River Formation. The lower Ekwan River Formation is composed of bioclastic limestones and dolomites which are locally biostromal. The overlying Attawapiskat Formation (Suchy and Stearn, 1993a) is composed of biohermal dolostones and limestones with associated bioclastic flank beds and interbiohermal dolostones and limestones. This latter formation has produced some spectacular geology and scenery along the the Attawapiskat River to the northeast of Spider Lake.

The Upper Silurian to Lower Devonian, Kenogami River Formation overlies the Attawapiskat Formation south of the Albany River and as far north as the Lawashi River. It is composed of dolostones and minor evaporites at the base, clastic carbonates and craton-derived red-bed sediments in the middle and oolitic and brecciated dolostone at the top (Johnson, *et al.*, 1991). Five diamond drill holes south of the Attawapiskat River penetrated a red bed sequence with beds and disseminations of fibrous selenite gypsum up to 100 mm thick below 150 m depth. Similar rocks were found in the 1993 diamond drilling north of the Attawapiskat River in the north-central portion of the project area. These evaporite rocks could either be Kenogami Formation or they might be part of the older Red Head Rapids Formation which, in places, contains thin beds of halite and anhydrite.

The most dominant structure of Paleozoic time was the Cape Henrietta Maria Arch (Transcontinental Arch) which trends northeast-southwest across the northern part of the project area. The rising of this arch started in the Early Silurian. This feature has raised the basement rocks to the surface to form the Sutton Ridges north of the Ekwan River, and is the cause of the thinning of the Paleozoic rocks toward the west. Related warping to the south has probably caused most of the variation in total thickness of the Paleozoic section as determined by Hobson (1964).

There is some evidence that the Temiskaming Graben, or a related structure, extends through the Spider # 1 area and could be the cause of the sudden deepening of the Moose River Basin north of Hearst. Mesozoic tectonic activity could have occurred in the Spider # 1 area from 180 to 150 my as indicated by the Mesozoic melilite-rich alnoite sills and dykes near Coral Rapids, and the buried alnoitic diatremes 30 km north of Hearst (Janse, 1992). These ages are similar to those of the kimberlite events along the Temiskaming Graben.

Based on the stratigraphy and distribution of outcrops along the Attawapiskat River, Suchy and Stearn (1993b) have postulated the existence of a continent-wide fault system. They show evidence for a conjugate set of faults striking approximately 060/T and 280/T. They interpret these faults as indicating a major episode of movement in late Llandovery time. They also believe that the faults have been active from the Proterozoic to present time.

6.3 Quaternary Geology

The Quaternary sequence encountered in the diamond drill holes generally consists of 1 - 2 m of sandy (Wisconsin) till overlain by sand (proximal varves ?) grading upwards into clays (distal varves ?) and marine clays. The complete section ranges from 3.5 to 74.4 m in thickness, with the thickest section occurring in the central part of the area.

Glacial striations measured on the outcrops north of Missisa Lake and along the Attawapiskat (Bell, 1878) and Albany Rivers (Bell, 1872) and shown by Fulton (1995) indicate that the ice flowed toward the southwest in the east and southeast parts of the area and to the southeast to the west of longitude 85°. At one outcrop in the northern part of the Spider # 3 area, there was evidence that the southeast flow predates the southern flow. Similar patterns of ice flow were interpreted by Hudec (1960) from striae at Big Trout Lake. Recent regional syntheses by Jean Veillette and Harvey Thorliefson (pers. comm.) indicate that the predominant ice flow direction that deposited most of the Late Wisconsin till possibly flowed toward the west or northwest migrating through time to the southwest. They believe that the south to southeast flow pattern shown by Fulton (1995) is a late, short lived flow known as the Winisk Ice Stream. This sequence of ice-flow directions is supported by observations of glacial striae taken during the summer 1996 program. Others have believed it to be related to the Cochrane event, but there is no evidence to support this.

The possibility of encountering pre-Wisconsin till in some buried valleys is high. One hole (DR 95-47) in the Spider # 3 area encountered pre-Wisconsin lacustrine (?) clays with an underlying till in a buried valley. Bostock (Prest, 1963) found pre-Wisconsin stratified sediments beneath 4 - 5 m of till along the Attawapiskat River in the extreme southeast corner of the area. These latter sediments contained organic material which was dated at >30 000 yrs BP (Dyck and Fyles, 1962). Prest (1963) correlates these sediments to the Missinaibi beds exposed in sections along the Missinaibi River which contain up to three tills below the pre-Wisconsin Missinaibi Interglacial sediments (Terasmae, 1958; Terasmae and Hughes, 1960; McDonald, 1969; Skinner, 1973). Similar exposures of pre-Wisconsin deposits have been reported from elsewhere in the Moose River Basin and from the western side of Hudson Bay (Tyrrell, 1913).

Prest (1963) shows that marine sediments are not present in the southern part of the Spider # 3 area. Till and, in places, eskers and possibly some marine beaches, occur at surface. Prest (1963) marks the marine limit as a north-south line at approximately longitude 86° 05' W, but indicates that the terrain to the west of this was probably covered in part by a proglacial lake. After the Tyrrell Sea retreated from the area, beaches formed along its margins. These beaches produce much of the topographic relief of the Spider # 1 area and provide moderate to well drained areas for camps. The intervening terrain, constituting over 50% of the area, is poorly drained and underlain by up to 2 m of peat forming bogs and fens (Tarnocai, *et al.*, 1995). Isolated permafrost occurs south of latitude 52° N to the Albany River (Heginbottom, 1995). Within this area, <10% of the ground is considered to be underlain by permafrost. North of latitude 52° N, sporadic permafrost (10-50%) is present. The effects of permafrost are evident in the round, shallow lakes and patterned ground characteristic of periglacial processes that were probably active subsequent to the retreat of the Tyrrell Sea. During the stream sampling program in the Spider # 3 area, several occurrences of permafrost were encountered. These are characterized by 2 - 3 m of positive relief covered with dense black spruce and underlain by thick peat deposits. "Drunken forests" are common along the margins of these occurrences.

7 DEPOSIT TYPES

The James Bay Lowlands and northern Ontario are generally under explored. Thus even though the main thrust of the exploration has been to discover kimberlites, several other types of mineralization have been encountered. When encountered, these alternate types of mineralization have been quickly assessed to determine if they have a potential for economic exploitation. As a result, the deposit types being investigated at any one time will vary depending on what has been recently found. In addition, two areas have been split off into separate projects still under the general Spider #3 Joint Venture. These are the McFaulds Lake Cu-Au Project which will be the subject of another technical report, and the Kitchie Lake PGM Project. These projects will not be discussed in this report.

7.1 Carboniferous kimberlites (Attawapiskat Swarm)

The Carboniferous kimberlites that occur in the James Bay Lowlands (Figure 5) are fairly typical of kimberlites as described by Kjarsgaard (1996a). They are cone-shaped (carrot-shaped) bodies, 10s of metres to 100s of metres in diameter. It is unlikely that the tops of these kimberlites will be preserved because of the lengthy period of erosion that has occurred since they were formed. Although some crater and diatreme facies material is present, much of the kimberlitic material in the pipes is of hypabyssal facies. The hypabyssal facies is generally strongly magnetic and this makes them easy to find beneath the shallow overburden particularly when hosted in non-magnetic Paleozoic limestones.

The strong magnetic signature of the kimberlite relative to the non-magnetic Paleozoic carbonate rocks, make them easy to find using magnetic techniques. The exploration methodology used by Spider/KWG to date involved the analysis of airborne geophysical magnetic data and picking the potential targets. The targets were then located on the ground by means of a ground magnetic survey which was also used to pick the best spot to drill in order to test the anomaly. The target was then drilled and, if kimberlite was encountered, it was sampled and analyzed for its diamond content.

These kimberlites were eroded by the Quaternary glaciers and as such can also be found by tracing the glacial dispersal patterns formed in either the glacial deposits or the Holocene deposits derived from the glacial deposits. The materials are sampled and heavy mineral concentrates are prepared from the samples. These are examined beneath a microscope for the typical kimberlite indicator minerals. Sufficient samples are required to define the dispersal pattern such that the source of the indicator minerals can be identified. Stream sediment sampling is a bit more useful than till sampling in the James Bay Lowlands because of the thick layer of marine clays that overlie the tills. In the Spider # 3 area, the marine deposits are not as thick and till is present at surface in some areas. Note that it was by sampling the rivers that flowed into James Bay that De Beers found the Attawapiskat kimberlite field. Also, some of the early Press releases from Metalex Ventures Inc. suggested that the kimberlite they were tracing was non-magnetic and hence the reason it had not been previously discovered. Such kimberlites can only be found by following-up dispersal trains of kimberlite indicator minerals in the glacial drift.

7.2 Mid-Paleozoic kimberlites

There is evidence to suggest that one of the recently discovered kimberlites, near the MacFadyen Pipes, is of mid-Paleozoic age. The pipe does not reach the top of the bedrock surface, but terminates below 50 m of Paleozoic rock. The top of the kimberlite is deeply weathered which suggest that it may be equivalent to the weathering surface of late Ordovician to early Silurian age found in the Paleozoic sequence. A sample of the core from this kimberlite has been submitted for radiometric dating to confirm this hypothesis. If this kimberlite is mid-Paleozoic in age, then there is a strong possibility that there will be more of these types of kimberlites to be found in the area.

7.3 Pre-Paleozoic kimberlites (Kyle type)

The Kyle-type kimberlites are much older than the MacFadyen-type kimberlites and did not penetrate the Paleozoic cover. They were emplaced during the late Precambrian and were subjected to a fairly long period of erosion prior to the deposition of the Paleozoic rocks that cover them. To date, five of these types of kimberlites have been found beneath 20 to 120 m of Paleozoic and Quaternary overburden (Figure 5). The ones that have been found are composed mainly of diatreme and hypabyssal material which is highly magnetic. They are however highly altered and most of the typical indicator minerals have also been altered. These kimberlites are either conical or dykes with blows in morphology, however, this might be more a function of the geophysical modeling which is looking for a cylindrical to rod-shaped body.

In the Spider # 1 area and the eastern Spider # 3 area, where the Paleozoic cover is present, these bodies can only be found using geophysical techniques. The airborne magnetic survey data is analyzed and potential targets are selected. These are then surveyed in more detail by either helicopter (heli-mag) or ground magnetic surveys. The data is analyzed and modeled and the best targets are drilled. If kimberlite is encountered, the kimberlite is sampled and analyzed for diamonds. In the Spider # 3 area, west of the Paleozoic cover rocks, these kimberlites would have been eroded by the Quaternary glaciers which would have produced dispersal trains of kimberlite indicator minerals that should be detectable by sampling the tills. These kimberlites do not contain a very large quantity of unaltered garnets and diopsides, the most commonly identified kimberlite indicator minerals and therefore the dispersal trains of these minerals would be difficult to identify. It should be able to identify dispersal rains of chromite and ilmenite from these bodies, however, it is much more difficult to prove that these dispersal patterns are being derived from kimberlitic sources.

8 MINERALIZATION

The main objective of the Spider # 1 and # 3 Projects is, and has been, to locate diamondiferous kimberlite pipes. To date, ten kimberlite pipes have been found in four separate geographic areas by the KWG/Spider Joint Venture. These are in addition to the 13 or so kimberlites discovered by Monopros Ltd. and the one found by the Navigator/Canabrava joint venture. The kimberlites are of at least two different ages, Carboniferous (Attawapiskat Swarm) and Precambrian (Kyle-type), indicating at least two major events of kimberlite emplacement. All of these kimberlites are within the Spider # 1 project area, however because the trend of the main structures and of the northernmost kimberlites pass through the middle of the Spider # 3 project area, it is therefore very possible that new Kyle-type or Attawapiskat-type kimberlites will be found in the Spider # 3 area. This interpretation has been reinforced by the stream sediment sampling program that has discovered concentrations of kimberlite indicator minerals associated with this trend in the Spider # 3 area.

It should be noted that up until the Winter 1996 program, all of the KWG/Spider drill holes were completed using BQ sized equipment, whereas the Ashton drilling was completed with larger, NQ equipment. BQ, produces a smaller diameter core and is considered by some to be too small to return a representative sample. The winter drilling program on Kyle # 1 was completed using the two drills, one using BQ, and the other using NQ equipment. The 2004 drilling program used a BTT (thin walled) core barrel which recovered NQ sized core by drilling a BQ sized hole.

8.1 Attawapiskat Kimberlite Swarm

This swarm of some 19 kimberlites is located on both sides of the Attawapiskat River located with 16 km of Latitude 52° 48' N Longitude 83° 50' W (Figure 5). It comprises five kimberlites, MacFadyen # 1 and # 2, Good Friday, and two other unnamed bodies, all within 1.5 km of each other, found by the KWG/Spider Joint Venture; one, AT-56, found by Navigator Exploration Corp.; one possible body found by Metalex; and some 13 found by Monopros Ltd. The logs of the Monopros Ltd. drill holes are available in the Assessment Files of the Mining Recorder, however, the related geophysics is not included. As a result, it is difficult to determine exactly how many geophysical anomalies, and hence the number of kimberlites, were drilled by Monopros Ltd. All of these kimberlites except one have intruded through the Paleozoic rocks and are believed to be Carboniferous in age. The one kimberlite which does not reach the top of the Paleozoic cover is believed to be earlier in age. The following discussion will concentrate on the five kimberlites discovered as a result of the Spider # 1 project.

The four of the five pipes have several features in common and therefore are probably related. All of the pipes penetrate through the limestones and exhibit hypabyssal facies. Crater and breccia facies are present in some of the bodies. Fragments of numerous rock types are present including eclogite, metavolcanic, metasedimentary, granitic gneiss, granites and Silurian limestone. Limestone predominates in the crater facies and near the top margin of the breccia. Rounded olivine, garnets (including orange and ruby red), ilmenite, and chrome diopside are visible in all pipes. All of the pipes are in close proximity to each other and occur along the same lineament or structure. They all probably used the same conduit or path during eruption. An attempted was made to drill into the deep magnetic feature that may be the conduit, but the hole was halted because of poor drilling conditions and the onset of spring break-up. The hole will be resumed in the summer of 2004. Details of this program are given in Thomas (2004).

8.1.1 MacFadyen # 1

The MacFadyen # 1 pipe lies to the northeast of the Monopros TE pipe. It is defined by a 220 m by 160 m (200 nT) positive anomaly which lies along the axis of a 500 m wide northwest trending, magnetic feature generally 50 - 100 nT above the regional magnetic field. Three holes drilled along the northeastern side of the anomaly intersected kimberlite. A fourth hole did not insect kimberlite, thus defining one edge of the body. The collars of the holes were within three meters of each other, the first hole being drilled vertically, the second being drilled to the northwest, the third, to the northeast and the fourth, vertically. The purpose of the last hole was to collect more sample. In 1995, Ashton Mining of Canada Inc. drilled one vertical hole into this body, near the center of the anomaly.

The body is estimated to be 60 m in diameter at the bedrock surface. The overburden thickness is between 9.5 m and 10.1 m at the side of the body, and is 32.2 m at the center of the anomaly in the Ashton hole. The drilling implies that the kimberlite pipe is vertical with steeply dipping sides. The Ashton hole ran out of the kimberlite and into 15 m of Paleozoic limestone overlying 6 m of granitic gneiss, at a depth of 249 m. This could be compatible with the steep sloping sides of the pipe as determined from the KWG/Spider drilling. Alternatively, the limestone and gneiss intersected in the Ashton hole could be a large, 21 m diameter, xenolith; this interpretation is reasonable considering that only 0.5 m of basal sandstone was encountered. The texture of the upper part of the kimberlite is complex with coarse globular structures and some characteristics of a tuffacitic breccia and crater facies kimberlites. This is typical of kimberlites (Scott-Smith, 1995a, b). Below 126 m, the kimberlite is a very uniform hypabyssal variety.

A total of 163 kg of sample from three of the KWG/Spider holes was analyzed at Ashton Mining Limited's Perth Australia laboratory and at Lakefield Research, Ontario. Two macrodiamonds and seven microdiamonds were recovered. The largest had a maximum dimension of 1.8 mm, is off-white towards brown in colour and shows pitting and slight resorption. The other macrodiamond is similar but 1.2 mm in size. The microdiamonds are between 0.15 mm and 0.3 mm in diameter and are clear octahedra, twinned octahedra, and stepped octahedra.

Ashton Mining of Canada Inc. elected to explore this diamondiferous pipe. They completed one hole as described above. Ashton crushed the core and submitted the >0.5 mm fraction to DMS in Michigan for analysis. No macrodiamonds were recovered. The rejects and the <0.5 mm fraction was returned to KWG/Spider for further analysis.

Perovskite from this hole has recently been dated at the University of Alberta by the Pb^{206}-U^{238} method to give an age of 256.3 my.

8.1.2 MacFadyen # 2

The MacFadyen # 2 pipe is marked by a 150 nT anomaly on the same northwest trending magnetic feature as the MacFadyen # 1 pipe. It lies 400 m to the southwest of MacFadyen # 1. The highest part of the anomaly is 90 m by 130 m, being elongated parallel to the main feature. The first attempt to drill this hole (DR 94-5) failed because of a chainage error. Later in the same program, the anomaly was redrilled at the correct location (DR 94-17).

Hole DR 94-17 was drilled vertically on the eastern side of the anomaly and intersected 88 m of kimberlite beneath 37.5 m of overburden and 59 m of Paleozoic limestone. The hole ended in 33 m of limestone. The geometry of this kimberlite is unknown, however the magnetic anomaly implies that it is smaller than MacFadyen # 1.

The upper 50 m of kimberlite was logged as deep crater facies and overlies kimberlite that is identical to the hypabyssal material that was recovered from the MacFadyen # 1. Diamond analysis of this kimberlite recovered three microdiamonds (McBride, 1994d).

8.1.3 Good Friday Kimberlite

The Good Friday kimberlite was discovered on Good Friday, 2004. The magnetic survey outlined a slightly elliptical 400 nT anomaly approximately 125 x 100 m in size. It is well defined and separated from the MacFadyen #1 anomaly (Figure 7). The hole was sited at the centre of this anomaly on L112E at 0+25N.

The drill hole intersected kimberlite directly under 47.5 m of Quaternary overburden. The uppermost part of the kimberlite was found to be weathered to a depth of 3.5 m. Below this, the kimberlite was of a hypabyssal facies and contained two sizes of olivine as well as phlogopite, and xenoliths of limestone and a few of sandstone and shale. Chrome diopside, pyrope and orange garnets were quite rare. A total of 139 m of kimberlite was intersected before the hole exited the body and continued in the Paleozoic dolomite and limestone.

A total of 121 diamonds were recovered from the 23 samples of kimberlite submitted for analysis from this hole. The richest contained 15 diamonds followed by three samples which contained 11, 10 and 10 diamonds respectively. All of the samples contained at least one diamond. The largest diamond (1.45 x 0.96 x 0.77 mm, 1886438.4 OCt) was found in sample 00018, followed by one found in sample 00019 (0.96 x 0.46 x 0.20 mm, 155443.2 OCt) and two in sample 13 (0.76 x 0.55 x 0.63 mm, 463478.4 OCt; 0.65 x 0.24 x 0.12 mm, 32947.2 OCt).

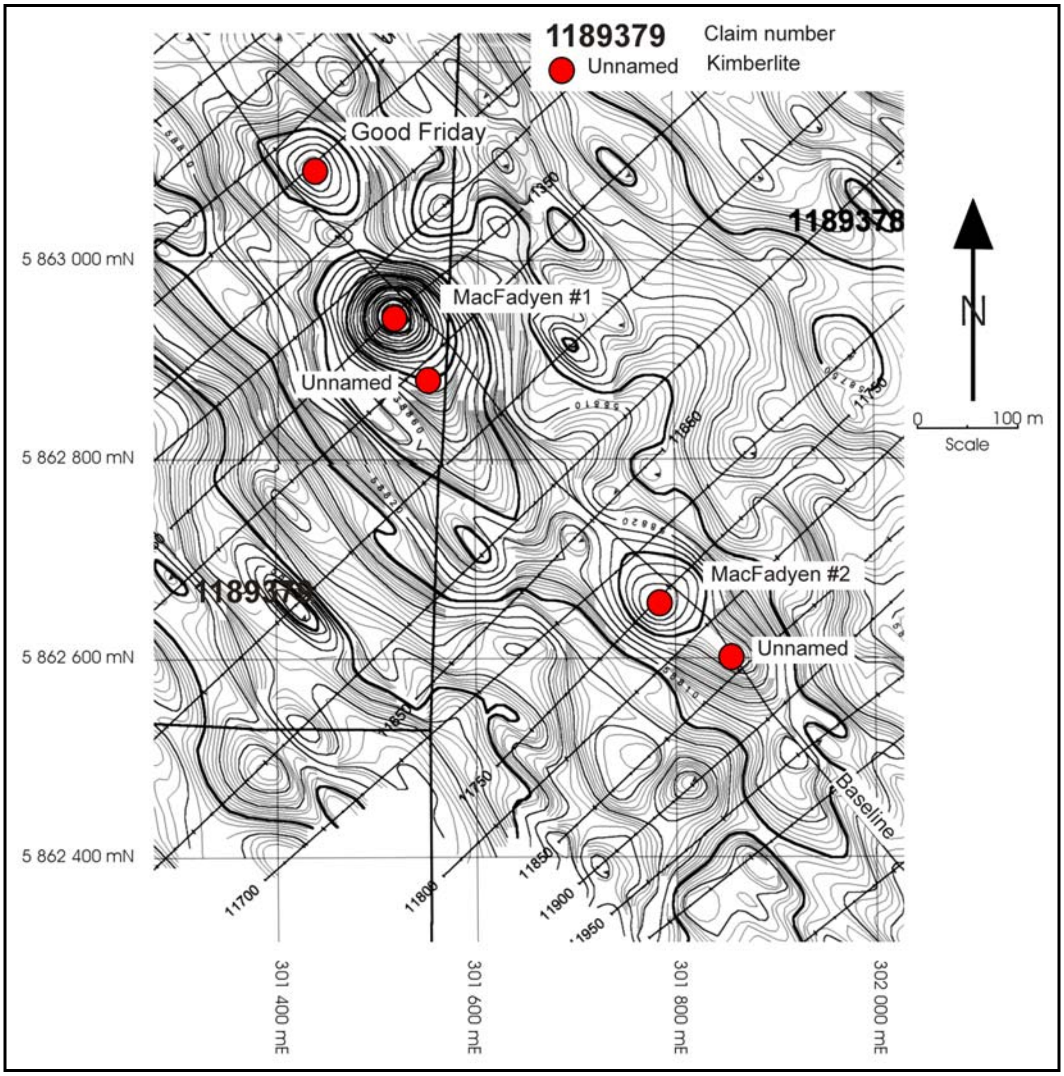

Figure 7. Magnetic survey showing the locations of the MacFadyen type kimberlites on the Spider/KWG claims.

8.1.4 SPQ-04-03

The ground magnetic survey outlined an elliptical protrusion on the southeast side of the magnetic anomaly associated with the MacFadyen #2 anomaly (Figure 7). This feature, 50 - 75 m in length and 50 - 75 m wide, was interpreted to be either a protrusion on the side of the MacFadyen #2 kimberlite, or a second smaller kimberlite just beside the MacFadyen #2 kimberlite. A drill hole was spotted on the baseline at 11,850 E and was drilled northwesterly (315°T) at an inclination of -60°.

The drill hole entered kimberlite after intersecting 62.7 m of overburden. The kimberlite was weathered or highly oxidized to a depth of 83.5 m (72.3 m vertically), and the core was broken and recovery was poor. The rock was easily identifiable as a hypabyssal phase kimberlite and chrome diopsides and a pink and a pyrope garnet were observed. Below 72.5 m, the core was more competent, was less oxidized and was seen to contain traces of pyrite. At 92.05 m depth, the kimberlite changed from dark greenish grey to light grey in colour and was observed to contain very little olivine. It is believed that the lower kimberlite is either a diatreme or a contact phase. At 96.70 m the hole exited the kimberlite into lithographic limestone and then arenaceous limestone.

Fifteen diamonds were recovered from the six samples collected from this hole. Although one sample did not contain any diamonds, one sample did contain six. None of the diamonds exceeded 0.5 mm in any dimension, the largest stone measuring 0.37 x 0.27 x 0.16 mm.

8.1.5 SPQ-04-05

The ground magnetic survey outlined an elongated protrusion on the southeast side of the MacFadyen #1 kimberlite (Figure 7). This 40 nT anomaly was initially found by Scott Hogg & Associates Ltd. (2001) and was called the MacFadyen #1 South anomaly. It was unclear to whether the anomaly represented a separate kimberlite or whether it was part of the MacFadyen #1 body. A hole was spotted and was drilled vertically, on the recommendation of Steve Munro of Scott Hogg & Associates Ltd.

The hole intersected 67.58 m of Paleozoic rocks under 37.5 m of Quaternary overburden. A 0.74 m wide kimberlite dyke was intersected at 82.00-82.74 m depth. The central part of the dyke was fresh, however, the surrounding limestones and the lowermost 0.03 m of the dyke were highly oxidized. Below the Paleozoic rocks, at the depth of 105.08 m, the hole intersected 26.3 m of hypabyssal kimberlite. The upper 0.69 m of kimberlite were very highly oxidized and graded downwards into 0.58 m of light grey kimberlite. Below this, the kimberlite was quite variable but was dark coloured, contained some chrome diopsides, orange and pyrope garnets, and was not oxidized. Below 131.38 m the hole intersected Paleozoic mudstone, limestone and sandstone, finishing at a total depth of 142.50 in a brecciated sandstone and limestone unit. The thickness of the weathering and depth at which the top of this kimberlite occurs in the Paleozoic pile, implies that it is much older than the other MacFadyen-type kimberlites and that it is probably late Ordovician to early Silurian in age. A sample has been submitted for radiometric dating to confirm the age of this body.

No diamonds were recovered from the upper kimberlite dyke. The lower, older, pipe was found to contain a total of five diamonds with the largest being 0.51 x 0.40 x 0.19 mm in size.

8.2 Kyle # 1 / Kyle Lake

8.2.1 General

The Kyle # 1 kimberlite pipe is located 100 km southwest of the MacFadyen Pipes at approximately latitude 52° 30' N longitude 85° 25' W, lying beneath Kyle Lake (Figure 2). This kimberlite is different from the MacFadyen pipes in that it is much older, 1100±40 my (Geospec Consultants Ltd. Rb/Sr date on phlogopite), and does not penetrate the Paleozoic cover. Initially there was much discussion as to whether this body was a true kimberlite because indicator minerals are not evident. Detailed analysis has shown that indicator minerals are present in small amounts and recently most agree that the body is a true kimberlite. The Winter 1996 drilling has shown that indicator minerals are present but that they have been highly altered as described below. Similarly the xenoliths are much more highly altered in the Kyle-type than in the MacFadyen-type kimberlites, and, in many cases, it is difficult to identify the parent lithology. It is unknown whether this alteration is an attribute of the kimberlite emplacement or whether it is a later phenomenon.

8.2.2 Previous work and interpretations

The pipe is defined by an almost perfectly circular ground magnetic anomaly. The anomaly is 550 m in diameter reaching a maximum of 95 nT above the regional background. Eighteen holes have been drilled in the Kyle Lake area; fifteen have intersected kimberlite. The body lies at an average depth of 132 m below an average of 58 m of overburden and 74 m of Paleozoic sediments. The upper 20 m of the kimberlite is weathered, the result of pre-Silurian subaerial weathering that formed a 0.5-1.0 m thick soil profile on the top of the kimberlite and adjacent Precambrian rocks.

The geology of the Kyle # 1 body is complex and has given rise to some controversy as to whether it is a true kimberlite. Based primarily on petrographic and geochemical studies of three samples from the first drill hole (DR 94-9), Mitchell (1995) concluded that the body was possibly a melilitoid and was definitely not a kimberlite, lamproite, minette or orangeite. More extensive studies by Scott-Smith (1995a, 1995b) has shown that the body is complex and highly altered, but is definitely of kimberlitic affinity. Early interpretation suggested that the body was emplaced by multiple intrusions which produced the main body and multiple sheets, sills or dykes in the adjacent country rock. Scott-Smith (1995b) proposes a model, of multiple intrusions comprising a macrocryst-rich kimberlite upper zone, over, in sequence downwards, a xenolith-rich layer, a macrocryst-poor kimberlite, and a macrocryst-rich kimberlite. This layered intrusion is 65 m thick and overlies a 200 m thick unit of *in situ* country rock cut by an irregular network of kimberlite sheets comprising 50% of the rock. This latter unit grades downward into *in situ* country rock with patchy development of country rock breccia with a few kimberlite sheets.

The geophysical interpretation, based mainly on the heli-mag and detailed ground magnetometer data and the results of some of the drilling, predict a 140 m diameter body with a steep (75°) dip to the east. Drilling prior to the Winter 1996 program had only defined the southeast side of the body.

During the winter 1996, a detailed drilling program was undertaken to define the size and geometry of the kimberlite pipe, to define the distribution of the various types of kimberlite and associated lithologies within and hosting the kimberlite, and to obtain a 10 tonne sample in order to more statistically evaluate the diamond content of the pipe. The results of the preliminary diamond results are reported herein; the drill hole logs have been compiled in Thomas (2000).

8.2.3 Geometry of the body

The Winter 1996 program has defined a conical shaped body with minimum dimensions of 220 m in the north-south direction and 195 m in the east-west direction at the base of the Paleozoic section (Figure 8). At a depth of 500 m, the body has a minimum diameter of 85 m. These results infer a body with surface area of 3.4 ha at the 132 m depth and 0.57 ha at the 500 m depth. This correlates to a volume of approximately 6.5 x 10^6 m^3. Note that these dimensions include xenolithic material and assume regular, straight contacts. It should also be noted that these sizes are conservative because the northeast part of the pipe is still poorly defined and few holes, other than two drilled by Ashton, have been totally outside the kimberlite.

Figure 8. Model of the Kyle #1 kimberlite looking from above.

The centre of the kimberlite at the 500 m depth is offset 40 m to the northeast from the centre at 132 m depth. This indicates that the body plunges to the northeast at approximately 84°. Both centres are displaced significantly to the north of the peak of the ground magnetic anomaly. This may imply that the body has a more north-northeasterly plunge or that there is a significant remnant component to the magnetic field.

8.2.4 Geology

The top of the Kyle # 1 kimberlite lies at an average depth of 132 m beneath the surface of Kyle Lake (Figure 9). The lake is 4.4 km by 1.0 km in size, elongated in a northwest-southeast orientation, and has a depth of 2 m with fairly hard bottom. It is believed to be a relict permafrost lake as indicated by it shallow depth and arcuate shorelines.

The Quaternary section underlying the lake has an average thickness of 58 m comprising marine clays grading downwards into proglacial marine or lacustrine clays, silts and sands. The base of the section is marked by several metres of silty, pebbly glacial till. In places, boulders were encountered in the upper part of the marine sequence. The magnetic susceptibility of the till is generally between 0.8 and 2.0 x 10^{-3} SI units. Where the marine sediments were recovered, their magnetic susceptibilities were in the same range.

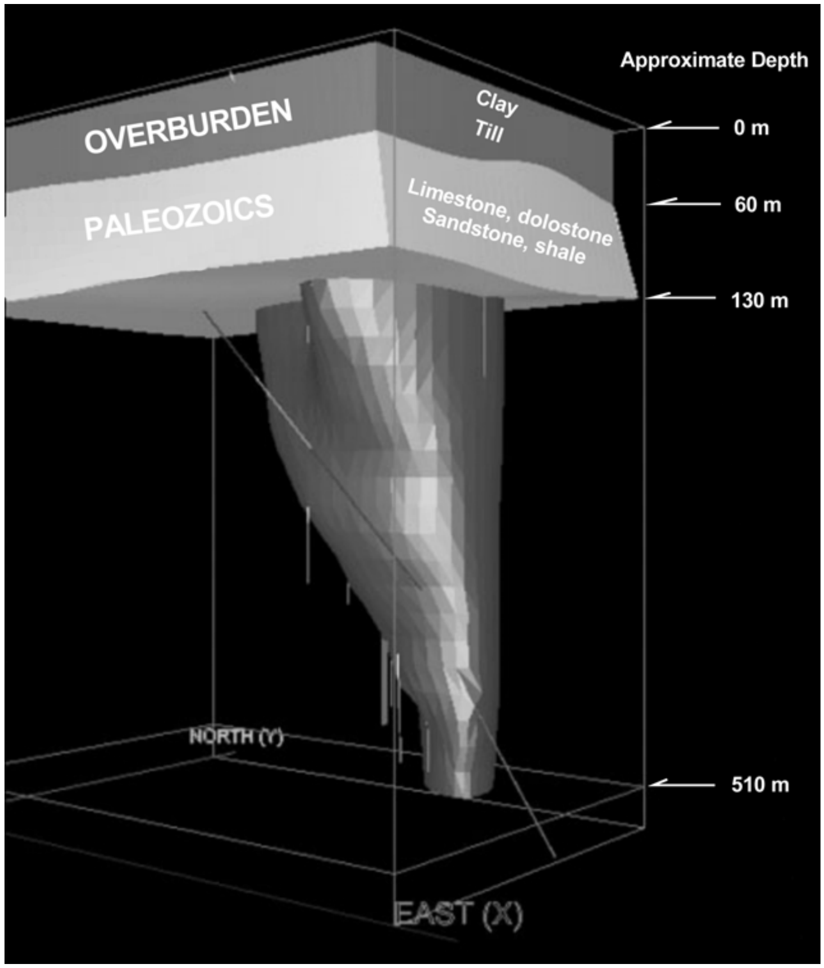

Figure 9. Computer model of the Kyle #1 kimberlite.

An average of 74 m of Paleozoic rocks underlie the Quaternary section. These rocks, from the top down, comprise up to 20 m of cherty limestone, 5 m of interbedded sandstone and mudstone, 7 m of interbedded limestone and sandstone, 5 m of interbedded sandstone and mudstone, 1 m of dolomite, 23 m of interbedded dolomite, sandstone and mudstone, 18 m of dolomite, 1 m of sandstone and 2 m of mudstone. In general the carbonate units are fairly competent but the clastic units, particularly the sandstones, are soft to uncemented and cause problems when drilling. Because these units are also good aquifers, they will pose considerable problems for underground development. The lowermost mudstone is of particular interest because in places it contains clasts, up to 20 mm in size, of the underlying kimberlite and gneiss. This unit is believed to be of either shallow water marine or fluvial origin and the material in it may have been derived locally. As a result it may contain pockets where diamonds, derived from the kimberlite, are concentrated.

The Paleozoic units are quite uniform in thickness and composition throughout the Kyle Lake area. Their magnetic susceptibility is low, generally less than 0.1 x 10^{-3} SI units. Greater values, up to 1.0 x 10^{-3} SI units were recorded for some of the sandier units.

Three basic Precambrian lithologies were intersected in the drill holes. They are kimberlite, gneiss and breccia:

KIMBERLITE: The pure kimberlite is dark grey to dark olive grey in colour, moderately hard, competent, and cores well with good core retrieval. Generally it is composed of 20 - 35% 5-10 mm, grey to black subhedral, rounded, in places embayed, olivine; 10 - 40% dark grey, well rounded 0.1 - 0.5 mm olivine; 10 - 30% very fine-grained mica (biotite and or phlogopite); and 20 - 40% very fine-grained to aphanitic groundmass. The colour of the groundmass varies from black to light greenish grey, presumably reflecting the amount of wallrock contamination of the kimberlite. In places, the kimberlite contains up to 5% pervasive calcite, and up to 3% fine-grained, white, disseminated serpentine.

The uppermost 10 m of the kimberlite, underlying the Paleozoic cover rocks, is weathered. The weathering grades from very highly weathered at the top to slightly iron stained at the base. In the uppermost part of this section, both the kimberlite and the xenoliths are very highly weathered and are unrecognizable as to lithology. It is interesting to note that at the very top of the section, boulders of unweathered kimberlite were intersected in a few holes. The origin of these boulders and the explanation as to why they are not weathered is unknown. Also the altitude of the top of the kimberlite appears to be 1 - 2 m higher than the adjacent gneiss. However, it should be noted that the gneiss was intersected adjacent to the kimberlite in only three holes. The gneiss is oxidized immediately below the Paleozoic cover, but the degree of weathering is much less than that of the kimberlite and its texture and mineralogy are easily ascertained.

"Mantle xenoliths", also referred to as "nodules" are present in the lower parts of the pipe. These are generally well rounded and up to 90 mm in diameter. They occur as isolated fragments or as clusters constituting 10 - 50% of the core over 1 - 2 m sections. In the latter occurrences, the fragments are more angular as if they have been derived from the break up of a large xenolith. The "mantle xenoliths" are commonly composed of fine- to medium-grained olivine with up to 15% micaceous (phlogopite ?) material forming a reticulate structure between the olivine crystals. The magnetic susceptibility of the masses is generally >100 x 10^{-3} SI units, indicating a high magnetite content. Visible 2 x 5 mm masses of very fine-grained magnetite was only rarely noted. Pyrrhotite, as disseminated fine-grained masses and fracture fillings, occurred very rarely. These xenoliths therefore belong to the Peridotite-Pyroxenite Suite of dunite "mantle xenoliths" (Palidwor, 1994). "Mantle xenoliths" containing garnets and epidote constitute a small percentage of the xenoliths. These xenoliths contain up to 10% garnets, but most commonly contain only one or two crystals. The garnets are subhedral to euhedral, 3 - 8 mm in diameter and white to brownish white to pinkish white in colour. In a few places, fresh, 1 mm masses of purple (pyrope) and other (orange) eclogitic garnet were observed. The milky white appearance is therefore an alteration of the garnet, but it is unknown whether this alteration occurred during emplacement or after emplacement of the kimberlite. The brownish or pinkish tint to the milky white alteration does not appear to correlate to the original composition of the garnet. Typical brilliant green chrome diopside was observed in a few of the mantle xenoliths. More typically, the diopside has been altered to a white mineral, but are recognizable by their tabular habit and basal parting. Chrome diopside is generally less abundant than garnet.

Two types of wallrock xenoliths occur in the kimberlite: gneiss and breccia derived from the rocks described below. The gneissic xenoliths are generally angular and fresh to well rounded and highly altered, constituting up to 50% of the section. They range in size from several centimeters to several tens of metres in diameter. Where the xenoliths are fresh, they are only slightly embayed and the adjacent kimberlite is dark in colour. Where the xenoliths are highly altered to amorphous to crypto-crystalline dark green serpentine, their margins exhibit reaction rims and the adjacent kimberlite is much lighter in colour. The light coloured kimberlite consists of very light toned groundmass and brownish olivine.

Xenoliths of the breccia are generally fresh and angular, constituting 20 - 90% of the rock mass. The fragments range in size from several centimeters to several metres and the kimberlite is generally dark coloured. The fragments have sharp margins, but the adjacent 5 - 10 mm of kimberlite shows the effects of reaction with the xenolith. Commonly this reaction material also occurs along fractures and microfractures within the larger xenoliths. This is interpreted to indicate rapid cooling of the kimberlite. It is believed that the breccia is a fairly friable rock and that it rapidly disaggregated in large volumes into the kimberlite causing rapid cooling.

GNEISS: The regional country rock of the Kyle Lake area is a well banded paragneiss composed of 30% medium dark grey, fine-grained mafic-rich bands, 10% pinkish, medium- to coarse-grained, granitic bands, and 60% very light grey to yellowish light grey medium-grained dioritic bands. The rock is hard and cores well. The mafic bands contain an average of 60% plagioclase, 5% quartz, 15% black amphibole and 20% chloritized feldspar. The granitic bands contain an average of 20% quartz, 75% pink feldspar and 5% black amphibole. The dioritic bands contain an average of 20% quartz, 70% plagioclase and 10% black amphibole. The magnetic susceptibility is generally between 1.0 and 10.0 x 10^{-3} SI units. Anomalous values up to 120 x 10^{-3} SI units occur in isolated bands containing up to 2% magnetite or fractures coated with magnetite. Traces of pyrite, pyrrhotite and chalcopyrite are rarely present.

Adjacent to the kimberlite, the gneiss is slightly altered. This alteration is in the form of serpentine filled fractures up to 5 mm wide. The gneiss in contact with the fractures is slightly serpentinized and contains traces of pervasive calcite. Where the gneiss is in contact with the breccia, the gneiss is highly hematized to an orange colour. The degree of hematization decreases away from the breccia to being absent at a distance of 10 - 15 m. The granitic gneiss is commonly very coarse-grained to pegmatitic in areas adjacent to the breccia. It is uncertain whether this feature is a characteristic of the gneiss or whether it is an alteration related to the period of brecciation. Because this form is always hematized, it is believed to be related to the latter.

BRECCIA: Breccia occurs mainly in the southwest part of the kimberlite body. It is moderate reddish orange in colour being composed of angular centimetre to metre sized fragments of gneiss as described above in a matrix of medium- to coarse-grained quartz and feldspar. In places, rare fragments of other lithologies, including volcanic, Precambrian clastic sediments, and actinolite gneiss are present. The reddish orange colour is the result of extensive hematization. In places, individual xenoliths and up to one metre sections of core are bluish in color, the result of the presence of celestite. Also, 10 - 20 mm pods of celestite were noted. Although celestite most commonly occurs in sedimentary evaporite sequences, it is also found associated with carbonatite bodies. Traces of fine-grained disseminated pyrite is commonly associated with pervasive carbonatization which is present in some sections. The rock is hard although there was no evidence of cement or other bonding material between the fragments as seen in hand specimen. It cores well and core retrieval is good. The magnetic susceptibility of the breccia is between 0.4 and 2.5×10^{-3} SI units.

The contact between the breccia and kimberlite is gradational as the kimberlite has invaded the breccia along fractures. The breccia-kimberlite series of rocks vary from kimberlite with 20% breccia fragments to 98% breccia fragments with isolated 10 - 20 mm diameter pods of kimberlite to breccia with 0.1 to 1.0 m dikes of kimberlite. The contact between the breccia and gneiss is marked by a 0.75 m, highly weathered grus-like zone containing abundant calcite and serpentine filled fractures and disseminated fine-grained pyrite. Quartz veins were noted in this zone in one hole.

GENESIS: Preliminary interpretation of the physical characteristics of the Kyle # 1 body indicates that the kimberlite was intruded into a breccia zone within gneissic terrane. The breccia must precede the kimberlite as shown by the distribution of the hematization which is restricted to the breccia and gneiss. The breccia must represent a major feature because of its thickness and its content of fragments of exotic lithologies. From the distribution of the breccia in the drill holes, the breccia zone probably strikes northwest and dips steeply to the northeast. The northwest orientation is roughly parallel to the orientation of Kyle Lake and many of the other topographic features of the region. This trend is also parallel one of the Gremlin arms.

The importance of the breccia zone is two-fold. Firstly it formed a major zone of weakness which permitted the emplacement of the kimberlite. Secondly, because of its physical nature, it appears to cause rapid cooling of the kimberlite and may have aided in the preservation of the diamonds. Results to date indicate that the richest parts of the kimberlite are adjacent to the breccia.

The kimberlite itself appears to be horizontally layered. The uppermost 25 - 50 m part of the body is a kimberlite with a moderate content of medium-sized xenoliths. Below this is 40 - 60 m of kimberlite with abundant large xenoliths. Up to 100 m of fairly pure, xenolith deficient, kimberlite underlies this section. Below this unit, at a depth of approximately 300 m, the xenolith content gradually increases downwards. This latter increase in the xenolith content is in part a result of the presence of breccia in the narrowest part of the pipe.

8.2.5 Diamond Results

The drill core obtained from pervious holes was analyzed at various laboratories by various methods. The diamond content of the KWG/Spider core was analyzed at Lakefield Research, Lakefield, Ontario and Mineral Indicateur Almaz Inc., Rouyn-Noranda, Quebec, whereas the Ashton core was processed at the AML facility in Perth, Australia.

Hole DR 95-09 intersected approximately 67 m of kimberlite and the results suggested that the grades increased with depth. A 10.9 kg sample from hole DR 95-09 was analyzed by caustic dissolution after crushing to -3/8" to -1", at Lakefield Research (Davison, 1994). Twenty-four diamonds weighing a total of 0.048 carats were recovered from 44.8 kg of sample (Table 2). This gives an average grade of 1.08 ct/tonne. The largest stone, 1.56 x 0.88 x 0.81 mm, weighs 1 981 806 OCt (octacarats), and was described as a brown, clear fragment of a complex crystal. Most of the other diamonds were <1 mm clear fragments, octahedra or dodecahedra. One other had one dimension >1 mm. Eighteen of the diamonds, with a total weight of 4 462 692 OCt, were recovered from one 10.9 kg sample at the bottom of the hole, giving this sample a grade of 4.09 ct/tonne. Ashton analyzed their half of the core at AML, Perth, Australia and reported recovering 24 macrodiamonds and 77 microdiamonds from 106.6 kg of core (Table 2). Again their results showed a high degree of variability from 1 microdiamond from a 28.2 kg sample of core to 15 macrodiamonds and 53 microdiamonds from a 28.8 kg sample.

Hole No	Weight of Diamonds	Weight of Sample	Average Grade of kimberlite	Number of Diamonds			
	(mg)	(kg)	(Ct/tonne)	<0.5 mm	0.5-0.8 mm	>0.8mm	Total
DR94-09	9.693	151.4	1.08	90	81	2	173
DR95-26	90.06	560.0	0.80	291	59	20	370
A94-1A	n/a	109.6	n/a	5	2		7
Mini-Bulk Test							
DR96-48	132.877	1450.9	0.65	708	127	16	851
DR96-49	147.317	1795.8	0.84	651	195	39	885
DR96-50	55.143	901.4	0.47	224	54	3	281
DR96-51	60.703	614.8	1.42	211	39	8	258
DR96-52	50.39	999.0	0.37	356	51	10	417
DR96-53	32.025	601.8	0.44	295	30	4	329
DR96-54*	n/a	0	n/a	0	0	0	0
DR96-55**	0	812.3	0	175	25	6	206
DR96-56*	n/a	1059.8	n/a	266	9	2	277
DR96-57*	n/a	629	n/a	0	28	0	28
DR96-58*	n/a	641.59	n/a	0	18	0	18

Total (mini-bulk test)	478.455	9506.4		2886	576	88	3743

* data not available ** data incomplete

Table 2. Summary of diamond results, Kyle #1 kimberlite.

Hole DR 95-26 (Figure 10) was analyzed in 6 m sections where kimberlite was present (Table 2) (Davison, 1995a). In total, 319.6 m of core weighing 560 kg and containing 65% kimberlite, was analysed. 291 microdiamonds and 79 macrodiamonds weighing a total of 45 030 099 OCt were recovered. This gives an average grade of 0.80 ct/tonne for the whole rock and 1.24 ct/tonne for the kimberlite sections. Two diamonds are greater than 2 mm in their largest dimension; these are both from sample 95-26-39 at a depth of 413 - 419 m. The diamonds are 2.19 x 1.71 x 0.98 mm (6 497 106 OCt) and 2.16 x 1.62 x 0.86 mm (5 346 121 OCt) in size and are described as clear, brown, complex crystals. Seven other diamonds had at least one dimension greater than 1 mm, some of these are also clear and brown but many are clear and white. Grades varied widely between samples, ranging from 0 to 12.01 ct/tonne for the whole rock and 0 to 15.01 ct/tonne for the kimberlite part of a 6 m section.

The Ashton drilling produced poor results. A 33.4 kg sample (94-1A) produced 2 diamonds >0.5 mm and 5 diamonds <0.5 mm; a 27.6 kg sample (94-2A) contained no diamonds; a 25.6 kg sample (94-4A) contained 2 diamonds <0.5 mm and a 23 kg sample (94-4B) contained 1 diamond <0.5 mm. Part of the reason for the poor diamond recoveries was the sample processing. Some of material that was rejected and not analyzed by Ashton was acquired by Spider and analyzed by caustic dissolution. A total of 117 diamonds consisting of 101 microdiamonds, 14 macrodiamonds and 2 commercial diamonds were recovered from 448.8 kg of this material.

During the winter 1996, eleven diamond drill holes were drilled into the Kyle # 1 body in order to determine its geology (Figure 10a and b) and also to obtain sufficient sample to statistically evaluate the diamond content. The summary of the results is presented in Table 2. During this program, 9,868.4 kg of rock was sampled, bringing the total amount of kimberlite from the Kyle # 1 body that has been processed to 10,689.4 kg. A total of 4,450 diamonds weighing 358,199,741 Octacarats have been recovered. The diamonds comprise 121 commercials (>0.8 mm), 741 macrodiamonds (0.5 - 0.8 mm) and 3,588 microdiamonds (<0.5 mm). The average grade of the kimberlite is 0.34 Ct/tonne of the bulk rock (including xenoliths). This grade was calculated from the bulk weight of all samples without reduction for xenoliths or for sections of core in the breccia zones which were devoid of diamonds. The grade of the pure kimberlite is 0.55 cpt, with maximum grades over one 6 m section of 8.46 cpt. It should be noted that the diamond analysis was completed by two different laboratories by two different methods. In addition, one laboratory, Mineral Indicateur Almaz Inc., does not record the weights of the diamonds. The carat weights and grades for these holes, DR 96-55 to DR 96-58 inclusive, have been estimated from averaging the dimensional size and shape versus weight data from the other holes. Note also that the results from this laboratory are consistently lower than those from Lakefield probably the result of the processing. The Whilfy table is only good at recovering the larger stones. The xenolith content was fairly accurately determined by actually measuring the core.

The diamond results have only recently been compiled and have not yet been intensively analyzed. The largest stone reported to date is from DR95-26 and measures 2.19 x 1.71 x 0.98 mm. The highest grade sections are from holes DR 96-50 and DR 96-51 where 6 m sections attained bulk grades of 5.04 and 4.82 cpt and kimberlite grades of 6.46 and 8.46 cpt respectively. The highest grades in all holes are in the deeper parts of the kimberlite, but it is has not yet been determined whether these high results are from a continuous zone.

Hole DR96-51 appears to have intersected the best part of the kimberlite found to date and has an average grade of 1.42 cpt for the kimberlite fraction and 0.49 cpt for the bulk rock. Grades up to 8.46 cpt for the kimberlite fraction and 4.82 cpt for the bulk rock, were obtained from a 6 m section at 143-149 m depth. This sample contained 3 commercial diamonds and 2 macrodiamonds. This hole lies towards the northwest side of the kimberlite body. Hole DR96-49 passed 25 m to the south of DR96-51 and had kimberlite grades up to 1.08 cpt in the top of the kimberlite, in the section closest to DR96-51. The top part of DR96-53, the next closest hole to the northeast, has low grades throughout, with the highest grade of 1.39 cpt being present near the top of the kimberlite at 188-194 m depth. Similarly, DR96-57, had fairly low grades throughout, but had the exceptional bulk grade of 2.32 cpt and kimberlite grade of 5.16 cpt at the depth 251 - 257 m. Kimberlite grades attained values slightly over 1.0 cpt in part of the top of this latter hole.

Another high grade section was intersected in DR96-52 at 389-395 m depth with a kimberlite grade of 6.30 cpt and a bulk grade of 1.32 cpt. Kimberlite grades up to 3.54 cpt and bulk grades up to 2.02 cpt are present at a depth of 355 - 361 m in hole DR96-48 as it passed 50 m west of DR96-52. Also, kimberlite grades up to 4.10 cpt and bulk grades of 3.49 cpt were intersected in DR96-48 at the depth of 469-475 m, approximately the same vertical depth as the richest section of DR96-52 but 75m to the northwest. Kimberlite grades at this same depth in DR96-50 are less than 0.80 cpt with bulk grades generally less than 0.65 cpt. DR96-49 (Figure 10b) has low (<0.5 cpt) kimberlite and low (<0.35 cpt) bulk grades at this same depth, 413-482 m, as it passes 75 m to the south of DR96-52, however, the section just above this point (341-413 m depth) has kimberlite grades up to 2.95 cpt and bulk grades up to 2.16 cpt over 6 m sections and an average kimberlite grade of 1.15 cpt, and average bulk grade of 0.68 cpt over the entire 72 m section. The section 482-572 m in DR96-49 (Figure 10) is also very rich in diamonds. It has an average kimberlite grade of 2.14 cpt and average bulk grade of 0.88 cpt over the 90 m section, with maximum kimberlite grades of 5.66 cpt and bulk grades of 2.47 cpt over 6 m sections within this zone. At this depth in DR96-55, which lies 50 m south of DR96-52 on the section drilled by DR96-49, the diamond grades are very low, primarily because of the abundance of xenoliths in this part of the pipe at this depth.

Even though most of the kimberlite grades in Hole DR96-50 are very low, the highest bulk grade of 5.04 cpt was obtained in this hole. The 6 m section contained one commercial diamond and three microdiamonds. The highest kimberlite grade of 8.46 cpt, came from hole DR 96-51 from a 6 m section containing 25 microdiamonds, 2 macrodiamonds and 3 commercial diamonds. Another high section in this latter hole, 167-173 m, has an average kimberlite grade of 5.20 cpt and bulk grade of 2.76 cpt. Hole DR 96-50 has kimberlite grades of 2.07 and 3.67 cpt (bulk grades of 0.58 and 0.11 cpt) from depths of 494-500 m and 506-512 m respectively. These sections are within dikes in the

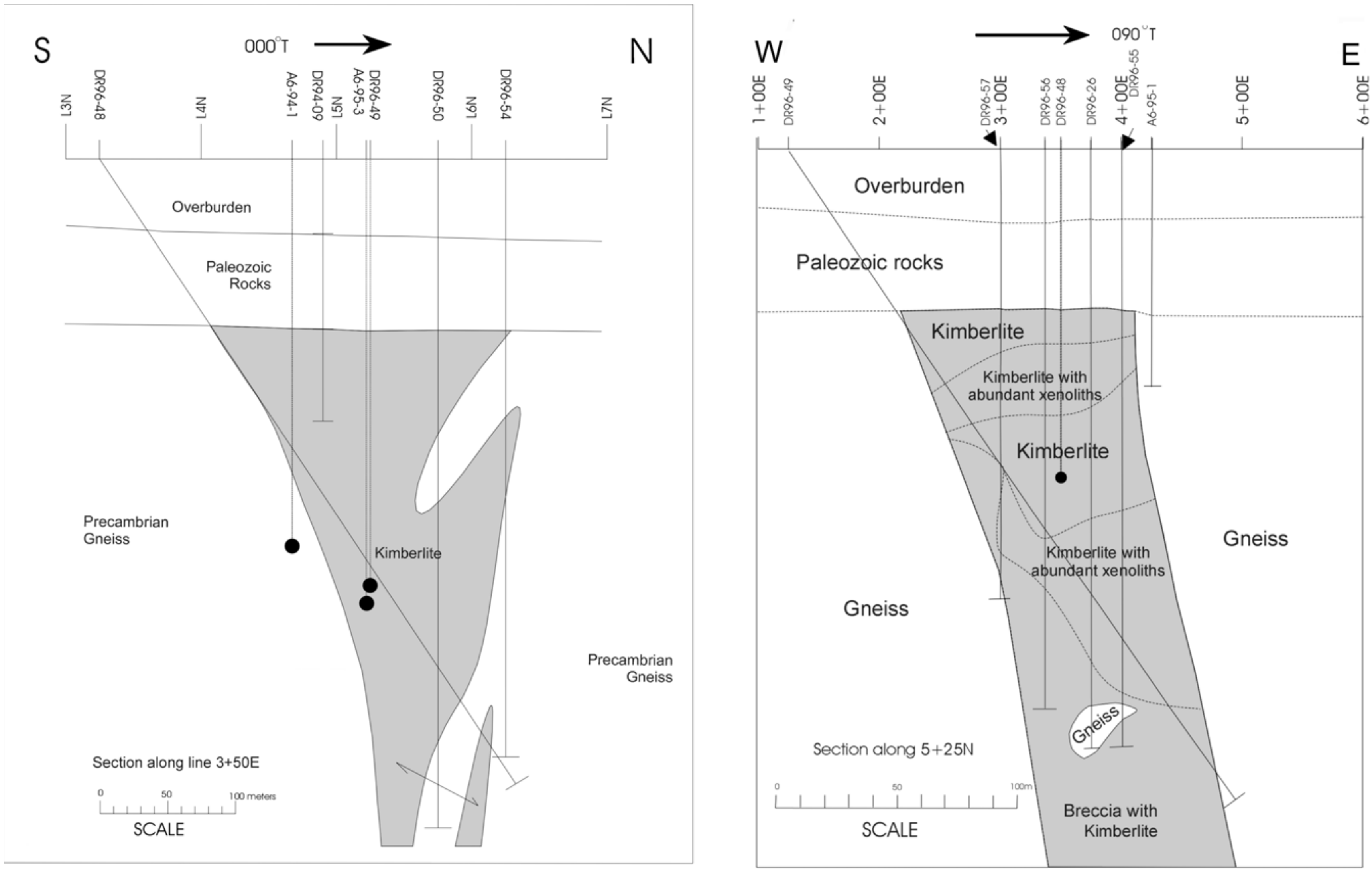

Figure 10. a North-south section through Kyle #1 kimberlite. 10b east-west section through Kyle #1.

wall rock and not in the main body. Similarly the high section with a kimberlite grade of 4.17 cpt (bulk grade of 0.12 cpt) in DR 96-51 at a depth of 263-269 m is in a dike.

From the distribution of the above enriched sections of the various drill holes, it appears that the diamonds are found in the greatest concentrations near the margins of the kimberlite body, in parts of the kimberlite adjacent to large xenoliths, in facies of the kimberlite containing abundant xenoliths, or in kimberlite dikes outside the main body. This may be the result of more rapid cooling in these locations enhancing the preservation of the diamonds. It should be noted that the samples of pure breccia that were submitted for analysis did not contain any diamonds.

The nitrogen content of the Kyle # 1 kimberlite diamonds has been studied by I. L. Chinn of De Beers Geoscience Centre. One hundred and eleven diamonds were analyzed using an infra-red spectrometer to determine their nitrogen content and nitrogen aggregation state. Chinn (2000) concluded that the Kyle # 1 diamonds are characterized by low nitrogen contents with a moderate nitrogen aggregation state (70% type IaAB diamonds) and that this indicates that the diamonds are consistent with preferential sampling of peridotitic mantle.

The results of the work by Chinn (2000) were incorporated into a further study of the diamonds by Kaminsky and Khachatryan (2002). Their conclusions were that the Kyle # 1 kimberlite is more akin to the South African kimberlites (Jagersfontein or Premier kimberlites) than the Slave Province kimberlites (DO-27, Point Lake, and Panda pipes). The Premier Mine is famous for its super-large stones of high quality, and, based on this study, they conclude that Kyle # 1 also has this potential to contain super-large stones. They also note that there is a bi-modal distribution of N_A in the diamonds and thus there may be two populations of diamonds.

8.3 Kyle # 2

The Kyle # 2 kimberlite is located 75 km almost due north of Kyle # 1 at latitude 53° 10.5' N longitude 85° 27.5' W and lies partially beneath a small lake. It is known as Kyle # 2 because it did not penetrate the Paleozoic cover, and it is highly altered and lithologically similar to Kyle # 1. The upper part of the pipe has been weathered and a late Precambrian to early Paleozoic soil profile is present.

The heli-mag survey outlined an 800 m diameter, fairly circular, very intense anomaly. On the ground, the anomaly is 300 nT above background. Modeling of the ground magnetic data indicates an 85 m diameter body at a depth of 42.5 m.

One vertical hole has been drilled to date into the kimberlite (Figure 11). The hole started into the kimberlite below 7.7 m of overburden and 53 m of Paleozoic rocks. The bottom of the hole was still in kimberlite at 383 m. The kimberlite contains approximately 24% large xenoliths of granitic and dioritic gneiss. The smaller xenoliths are highly altered to serpentine, the degree of alteration, in general, is inversely proportional to the size of the xenolith. The kimberlite is texturally similar to the Kyle # 1 pipe with its

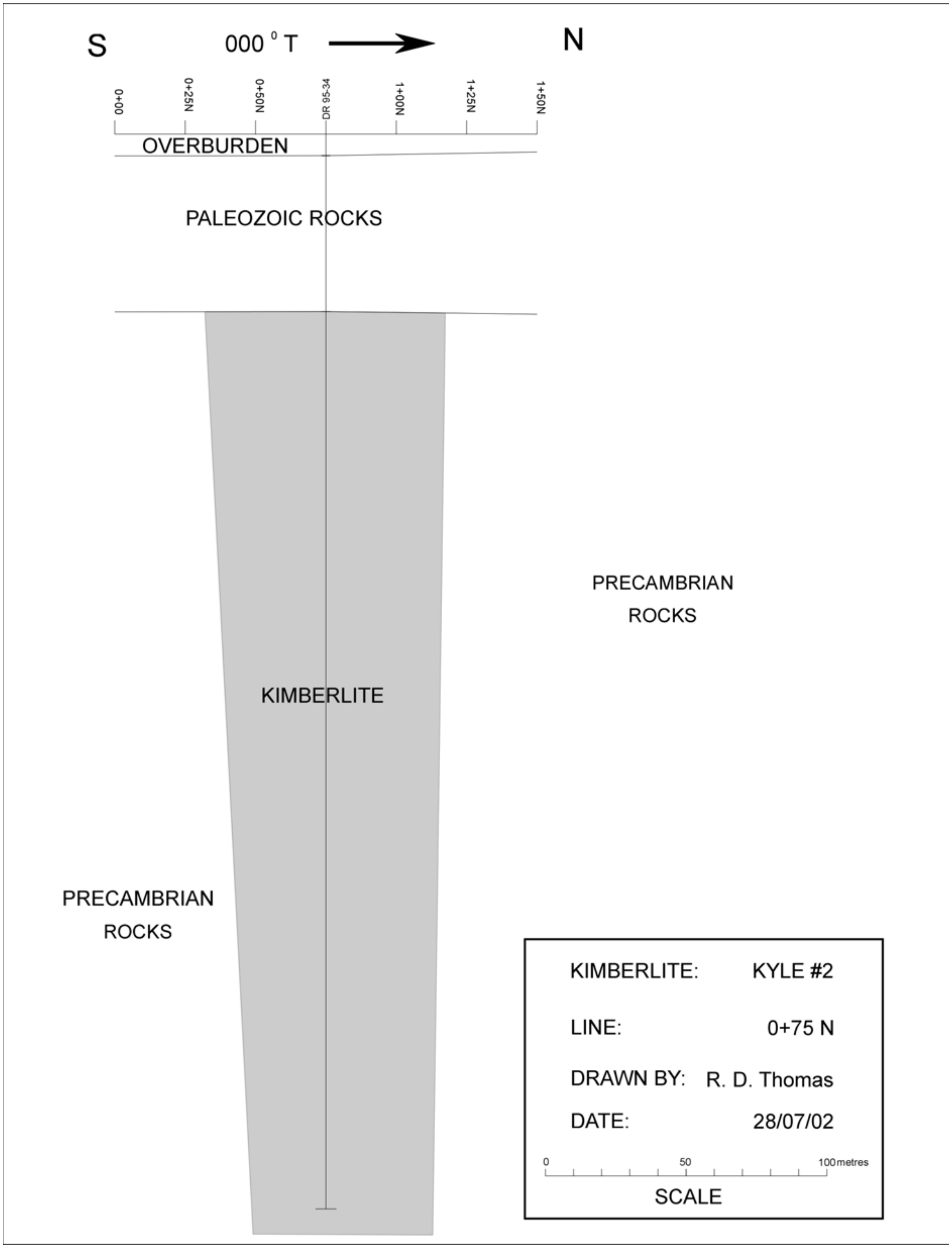

Figure 11. Section through Kyle #2 kimberlite.

large olivine megacrysts and its lack of abundant indicator minerals. Samples of the rock were submitted to Minéraux Indicateurs Almaz Inc. (Tremblay, 1995) for special treatment by heavy mineral separation using a low temperature fusion and Wilfey Table for heavy mineral separation. This technique did separate some chrome diopside, dark reddish brown, pink and yellow-brown garnets as well as purple (chrome-rich) pyropes, zircons, and kimberlitic ilmenites.

Thirty-eight samples of the kimberlite were submitted to Lakefield Research for diamond analysis (Davison, 1995b) by Spider. An additional 109.6 kg of kimberlite, split from the core from the upper part of the hole, were analyzed by Ashton. The results are presented in Table 3. A total of 25 diamonds, composed of 16 microdiamond, and 5 macrodiamonds were recovered. Based on the Spider analyses, 818,692 Octacarats were recovered from 1483.0 kg of rock giving a grade of 0.01 cpt.

Hole No	Weight of Diamonds	Weight of Sample	Average Grade of kimberlite	Number of Diamonds			
	(mg)	(kg)	(Ct/tonne)	<0.5 mm	0.5-0.8 mm	>0.8mm	Total
DR 95-34	1.637	1483.0	0.01	14	4	0	18
Ashton		109.6		2	5	0	7
Totals	n/a	1592.6		16	9	0	25

Table 3. Summary of diamond results, Kyle # 2 kimberlite

8.4 Kyle # 3

Kyle # 3 is located 30 km almost due west of Kyle # 2 or approximately 90 km north-northwest of Kyle # 1 at latitude 53° 12' N longitude 85° 47' W. It is similar to Kyle # 1 and # 2 in being pre-Paleozoic in age, highly altered and of similar lithology. The upper part of the pipe has been weathered and a Precambrian soil profile is present.

The Kyle # 3 kimberlite is marked by a 270 nT magnetic anomaly on the ground that is 600 m long by 225 m wide. It is elongated in the east-northeast to west-southwest direction with the widest and strongest part of the anomaly lying towards the eastern side of the centre. A magnetic low indentation into the north-central part of the anomaly is considered to be a large xenolith or a block of wall rock.

Twenty-one holes have been drilled into the body: twenty by KWG/Spider and one by Ashton. All of the holes intersected kimberlite. The drilling has defined the shape of the body to be a 700 m long, dyke-like feature (Figure 12). Drill hole 2000-05, the most eastern hole drilled (Figure 12a), intersected kimberlite over a 9.95 m interval at 79.15 - 89.10 m depth;. The kimberlite was present either as two dykes, 2.0 and 2.95 m wide or as one dyke containing a 1 m diameter xenolith of gneiss. If it is assumed that the dyke

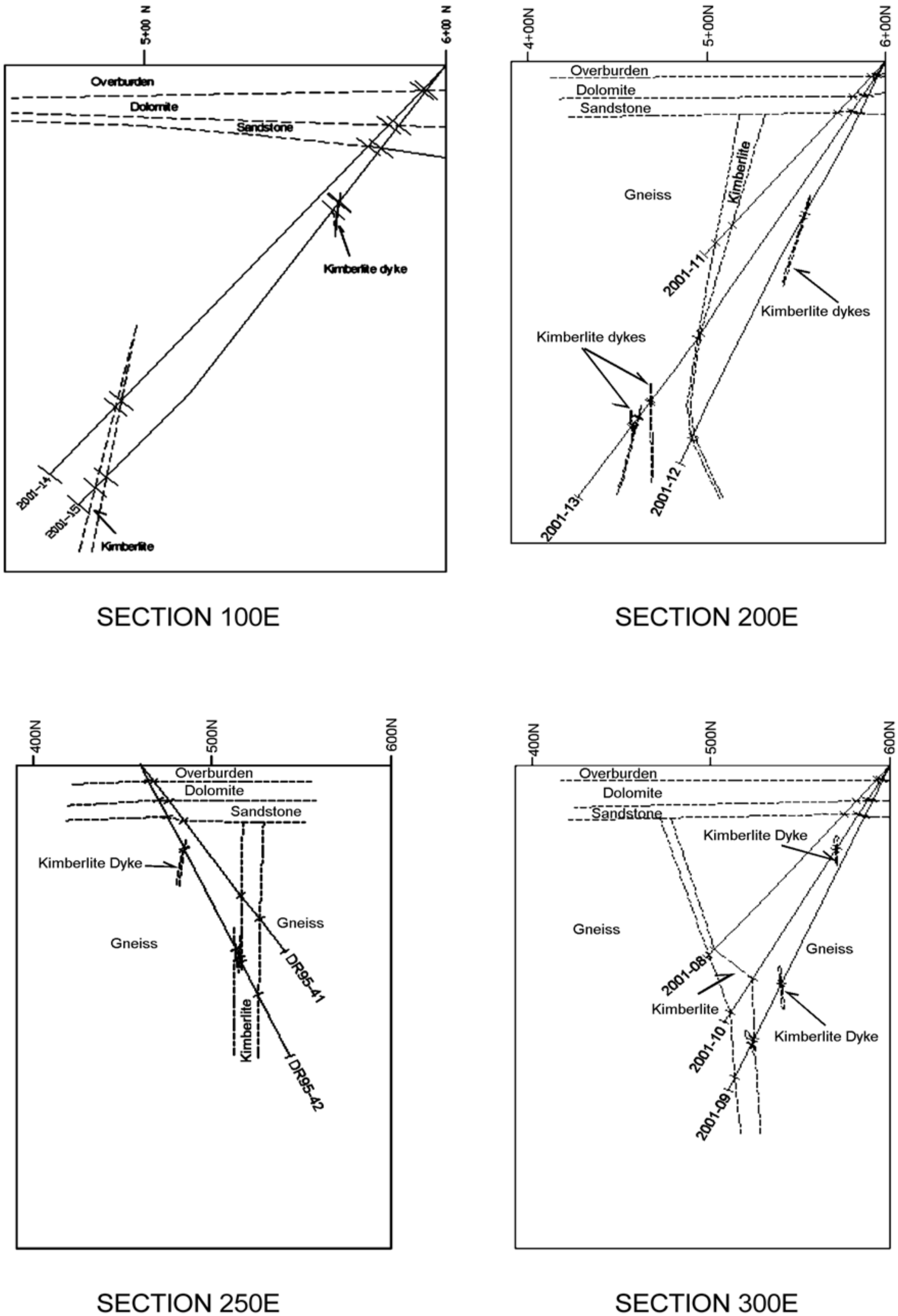

Figure 12a. sections through the Kyle #3 kimberlite; eastern part.

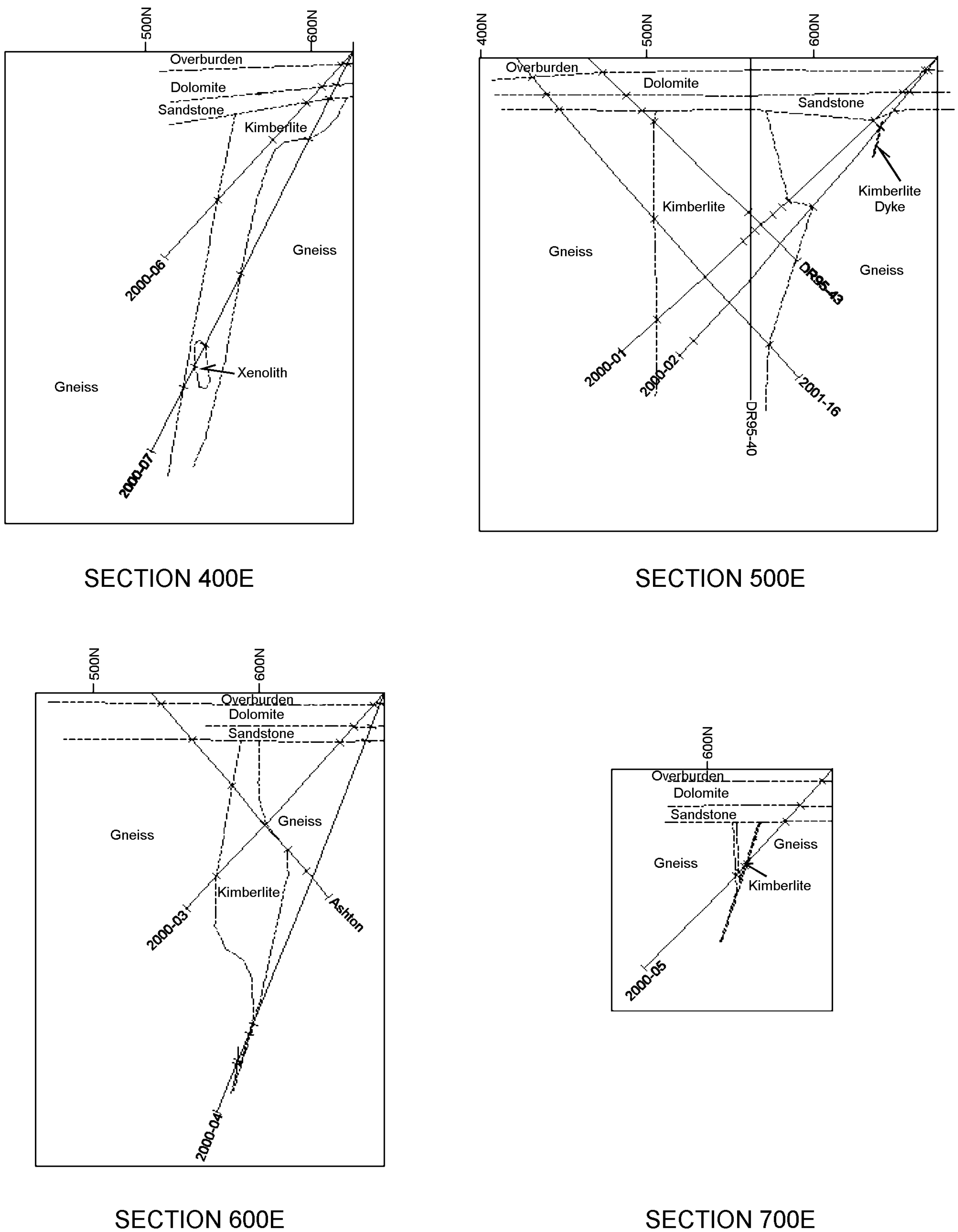

Figure 12b. Sections through the Kyle #3 kimberlite; western part.

is roughly vertical, it would have a true width of 6.6 m at this point. The western end of the dyke was intersected in two drill holes, 2000-14 and 2000-15, which intersected the main body of kimberlite over 2.85 m and 5.50 m of kimberlite at depths of 165 m and 190 m respectively. Assuming a vertically dipping dyke, the true thickness at these depths are 1.9 m and 3.7 m respectively. Both holes also intersected thin seams of kimberlite on either side of the main dyke, these being up to 0.35 m in width. The central part of the dyke is marked by a distinct enlargement or blow, approximately 125 m in diameter (Figure 13).

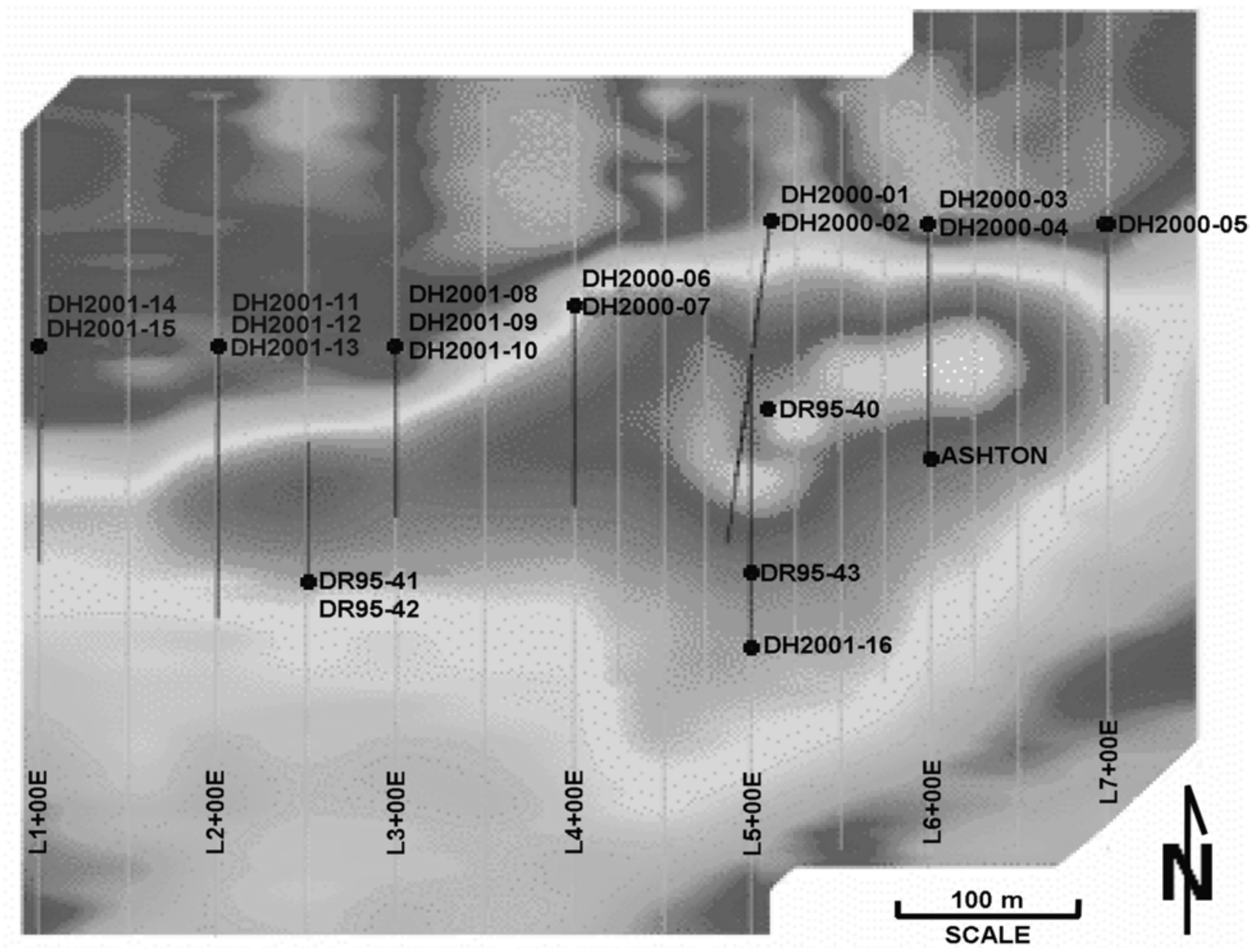

Figure 13. Magnetic survey over the Kyle #3 kimberlite.

Samples from the KWG/Spider holes were submitted to Lakefield Research for analysis (Davison, 1995c,d). Prior to 2000, a total of 175 diamonds had been recovered from 681.1 kg of core (Table 4). One of the large diamonds, measuring 1.36 x 0.68 x 0.35 mm and weighing 578 592 octacarats, was described as clear, slightly yellowish-white, fragmented dodecahedron. The largest diamond recovered to date measures 1.51 x 1.08 x 1.01 mm and weighs 2 918 990 octacarats. This stone is described as a clear, white, complex crystal. It should be noted that most of the diamonds recovered from this kimberlite pipe are clear and white. The results of the Ashton drilling recovered a total of 19 diamonds from 101.8 kg of core. This latter hole was drilled using NQ size coring equipment.

Hole No	Weight of Diamonds	Weight of Sample	Average Grade	Number of Diamonds			
	(mg)	(kg)	(Ct/tonne)	<0.5 mm	0.5-0.8 mm	>0.8mm	Total
95-40	3.059	300.7	0	50	2	0	52
95-41	0.268	42	0.032	8	0	0	8
95-42	8.934	57.4	0.778	34	14	1	49
95-43	8.869	179.2	0.247	42	4	1	47
Ashton 95-1B	3.274	101.8	0.16	18	1	0	19
				<0.425 mm	>0.425 mm		
2000-01	12.473	417.8	0.149	370	12		382
2000-02	16.912	436.42	0.194	271	17		288
2000-03	5.196	215.17	0.121	70	6		76
2000-04	0	41.11	0	0	0		0
2000-05	0	12.57	0	0	0		0
2000-06	1.218	355.31	0.017	39	1		40
2000-07	9.881	608.36	0.081	287	8		295
2000-08	0	22.48	0	0	0		0
2000-09	2.259	123.63	0.091	52	12		64
2000-10	6.913	92.62	6.913	114	14		128
2000-11	3.068	88.35	3.068	62	7		69
2000-12	0.022	22.81	0.01	1	0		1
2000-13	0.009	33.2	0	1	0		1
2000-14	4.693	12.75	1.84	12	1		13
2000-15	0.004	26	0	1	0		1
2000-16	5.955	412.03	0.115	188	12		200
Totals	93.006	3601.7		n/a	n/a	n/a	1733

Table 4. Summary of diamond results, Kyle # 3 kimberlite.

There is a zone of diamond enrichment within the main kimberlite body where the grades are up to 2.53 cpt over a 6 m section. It was encountered in holes DR 95-42 (2.26 cpt), DR 95-43 (2.53 cpt) and the Ashton hole 95-1B (1.57 cpt). This zone can therefore be followed along the length of the body and may vary in thickness along the dyke.

The results of the 2000 and 2001 drilling programs revealed that the Kyle # 3 body was formed by multiple intrusions of kimberlite, some of which appear to be barren of diamonds whereas other phases contain abundant diamonds. In total 1468 diamonds <0.425 mm in one dimension and 90 diamonds >0.425 mm in one dimension, weighing a total of 0.343 carats, were obtained from 2041 kg of kimberlite. Note that the northeastern side of the dyke is quite barren of diamonds.

8.5 Kyle # 4

The Kyle # 4 kimberlite is located 45 km north-northeast of Kyle # 1 at latitude 52/ 51.736' N longitude 85/ 17.183' W. It has been called the Kyle # 4 because it is of similar lithology to the Kyle # 1 kimberlite and does not penetrate the Paleozoic cover. The upper 12 m is highly weathered and a late Precambrian to early Paleozoic soil profile is present.

The heli-mag survey outlined a 800 m diameter, almost circular isolated magnetic anomaly with a weak tail to the east. The peak is 160 nT above the background. On the ground, the magnetic anomaly is 240 nT above background and is 400 m in diameter. A slight asymmetry to the magnetic pattern implies that the magnetic body plunges steeply to the southwest. Computer modeling of the ground magnetic data resolved a 93 m diameter body at a depth of 115 m. One vertical hole and one inclined, south to north, hole have been drilled into this body (Figure 14).

The vertical, discovery drill hole (DR 96-61) encountered the kimberlite below 7.6 m of overburden and 87.8 m of Paleozoic rocks. The hole intersected mainly kimberlite from 95.4 m to 401.1 m depths. From 401.1 m to its bottom at 458.2 m, the hole intersected felsic intrusive rocks with dykes of kimberlite up to 4 m wide. The kimberlite is mainly a hypabyssal phase with 20% large xenoliths up to 39 m in diameter and generally less than 5% small xenoliths. The large xenoliths are of felsic intrusive rock. The small xenoliths are probably of the same rock but they are highly altered to serpentine. One section, 161.3 - 200.2 m, was considered to be of diatreme facies based on the abundance of very highly altered, small xenoliths. Mantle nodules were observed in both facies of the kimberlite. The bottom of the hole was in a fairly fresh felsic intrusive rock. This could either be the wall rock or it could be a large xenolith. Only 6 m of this lithology had been drilled below the last kimberlite 'dike' and 57 m had been drilled below the main body of the kimberlite. Further up the hole, a 39 m xenolith had been intersected.

The second hole (DR 97-64) was drilled on a 45/ angle from south to north in an attempt to cross the body. It intersected 25 m of overburden, 118 m of Paleozoic rocks and 102 m of Precambrian gneiss before reaching the kimberlite. The hole then intersected 18 m of kimberlite with abundant large xenoliths (contact or diatreme facies) before penetrating 70 m of hypabyssal kimberlite including one 12 m xenolith of granite gneiss. The hole ended after penetrating 8 m of granite gneiss presumed to be a xenolith, when the drill string broke. All large xenolith sections contain dikes of kimberlite. The kimberlite intersected in this hole is similar to that found in the vertical hole, however small xenoliths of other than the granite gneiss wall rock were observed. Some xenoliths were altered by the presence of celestite, similar to the Kyle # 1 pipe.

Many of the textures and lithologies present in this kimberlite are similar to those of the Kyle # 1 kimberlite. Hematization of the wall rock, the occurrence of celestite,

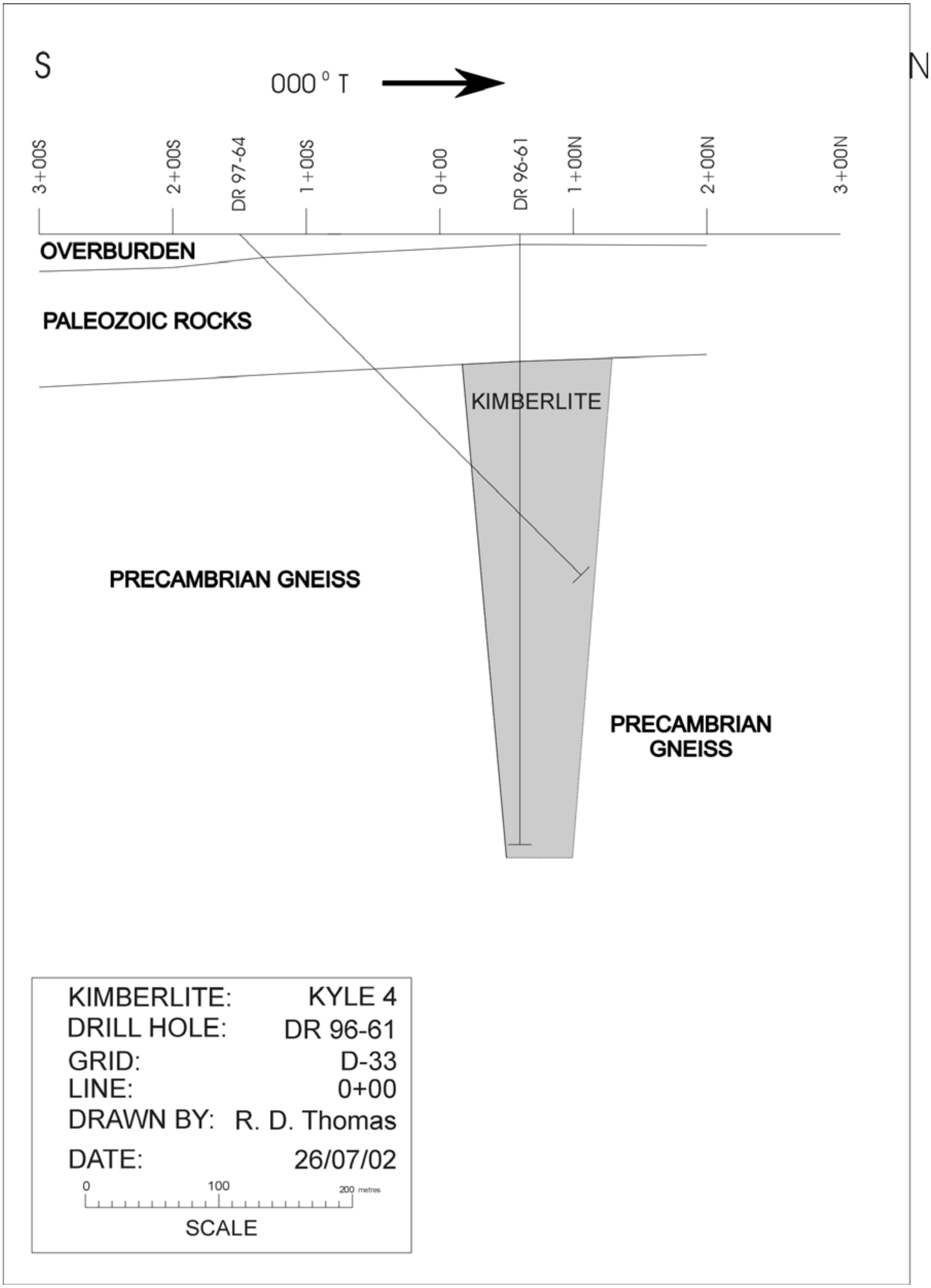

Figure 14. Section through the Kyle #4 kimberlite.

the presence of a brecciated wall rock or large xenoliths, the high degree of serpentinization of the xenoliths and the presence of the mantle nodules are features that are common to both kimberlites.

Sixty-one 6 m samples, weighing a total of 919.6 kg, were submitted to Lakefield Research for diamond analysis by caustic fusion. The results are summarized in Table 5. A total of 17 diamonds comprising 13 microdiamonds, 2 macrodiamonds and 2 commercial diamonds, weighing 1,292,575 octacarats, were recovered from 10 samples. Although grades over the 6 m length of individual samples reached a maximum of 0.32 cpht in a sample from DR 96-61 at a depth of 290-296 m, the average grade of the whole deposit is 0.014 cpht. The two largest diamonds that were recovered are both less than 1 mm in greatest dimension.

Hole No	Weight of Diamonds	Weight of Sample	Average Grade in kimberlite	Number of Diamonds			
	(mg)	(kg)	(Ct/tonne)	<0.5 mm	0.5-0.8 mm	>0.8 mm	Total
DR 96-61	1.821	666.8	0.01	11	1	2	14
DR 97-64	0.764	252.8	0.02	2	1	0	3
Totals	1292575	919.6	0.01	13	2	2	17

Table 5. Summary of diamond results, Kyle # 4 kimberlite.

8.6 Kyle # 5

The Kyle # 5 kimberlite is located 6 km south of the confluence of the Muketei and Attawapiskat Rivers at latitude 53/ 04.511' N, longitude 85/ 15.727' W. It is believed to be of Precambrian age because the geophysics shows that it does not come up to surface. It has been designated as a Kyle-type kimberlite because of its inferred age and because it has some features that are similar to the other Kyle-type kimberlites. Ron Sage (Ontario Geological Survey, pers. comm.) has examined some core from this body and found that it has some features more akin to a lamperoid.

The Kyle # 5 kimberlite is marked by a north-south elongated, moderately strong but well isolated heli-mag anomaly. The anomaly peak is 110 nT above the regional background and is 100 m east-west by 220 m north-south. The ground magnetic anomaly reaches a peak of 180 nT above background. It is 600 m long by 400 m wide. The free fit computer model based on the ground magnetic data interpreted a 234 m by 25 m body with a steep dip to the east. Because of the suspected thin nature of the body, one hole (DR 96-62) inclined at 60/ to the west was initially drilled into the target (Figure 15). In 1997, a second hole was drilled beneath the first at 70/ to intersect the body.

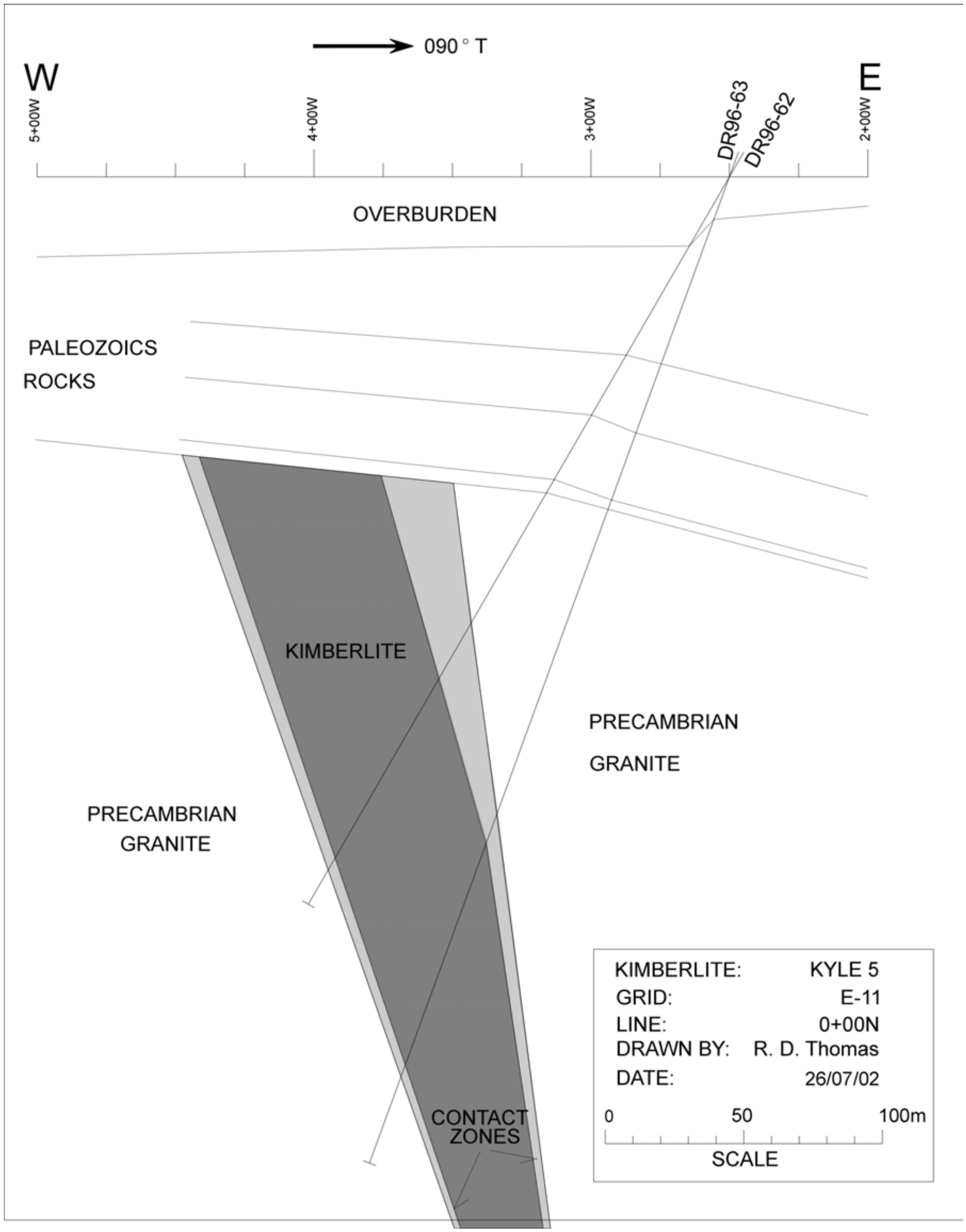

Figure 15. Section through the Kyle #5 kimberlite.

The first hole intersected Precambrian gneiss below a vertical thickness of 11.6 m of overburden and 112.8 m of Paleozoic rocks. After drilling another 54.1 m of gneiss with one 0.65 m kimberlite dike, the main kimberlite body was intersected for a hole length of 103.5 m. The hole finished in 15 m of granitic rock. The core angle of the upper contact was 17/, and of the lower contact, 40/. The second hole intersected the kimberlite at a vertical depth of 231 m. After drilling through 101 m of kimberlite, the hole entered the granite gneiss wall rock.

The true width of the kimberlite body measured in the horizontal direction would be of the order of 35 m (Figure 15). The dip of the body is either vertical or steep to the west. The dike was noted to be zoned with a hypabyssal core, with adjacent diatreme facies on either side. A thin contact zone lies between the diatreme facies and the wall rock. The hypabyssal core is dark grey to medium dark grey, in places banded, composed of 2% 1 - 2 mm altered granitic xenoliths; 40% 2 mm masses of olivine; 23% biotite; and 30% white, aphanitic serpentine. The diatreme facies is fairly uniform and is composed of 25% highly altered, 30 - 90 mm xenoliths, 10% biotite, 15% calcite, 5% magnetite and 20% aphanitic serpentine. The contact zone is composed of 80% very highly altered granitic xenoliths with 20% diatreme facies kimberlite.

The rock generally resembles the very highly contaminated kimberlite found in parts of the Kyle # 1 and Kyle # 3 bodies. Sections of typical kimberlite are rare. The rock is composed primarily of 10 - 20% large xenoliths of very highly altered granitoid, 20 - 50% fine, micaceous xenoliths, up to 20% euhedral olivine, commonly highly altered, 15% coarse biotite, 10% very fine grained mica in a very fine grained serpentine ground mass with up to 2% very fine grained disseminated magnetite.

Along the drill section the body varies in horizontal width from 75 m at a vertical depth of 200 m to 53 m at 300 m depth. The sub-crop width at the Paleozoic-Precambrian contact is estimated to be 98 m. The body dips at approximately 75/ to the east. From the geophysics, it is estimated to be 200 m in length which would result in a body of approximately $3x10^6$ m^3 in size.

Hole No	Weight of Diamonds	Weight of Sample	Average Grade in kimberlite	Number of Diamonds			
	(mg)	(kg)	(Ct/tonne)	<0.5 mm	0.5-0.8 mm	>0.8mm	Total
DR 96-62	0.024	309.5	0.00	1	0	0	1
DR 96-63	0	297	0	0	0	0	0
Totals	0.024	606.5		1	0	0	1

Table 6. Summary of diamond results, Kyle # 5 kimberlite.

Thirty-five 6 m samples, weighing a total of 606.5 kg, were submitted to Lakefield Research for diamond analysis by caustic fusion. The results are summarized in Table 6. Only one microdiamond, weighing 12054 octacarats, was recovered from a sample taken near the middle of the body.

9 EXPLORATION

9.1 Spider # 1 Project - Inception (1991-1993)

In late December 1991, a large scale (1:1,000,000) aeromagnetic survey compilation, based on a federal and provincial high altitude, low density, fixed-wing magnetic survey covering all of the Province of Ontario, was released to the public for the first time. This particular compilation illustrated some subtle magnetic trends which resembled features that Donald A. MacFadyen had recognized, in his kimberlite related work about the world, particularly in Brazil, as representing crustal scale geotectonic structures indicative of areas of kimberlite emplacement. With this in mind, a conceptual project was developed to determine the diamond prospectivity of the James Bay Lowland area. The existing magnetic data base was acquired from the Ontario government in digital form and was reworked, using various filters and enhancement techniques to better illustrate the magnetic trends of interest. During the early part of 1992, several versions of the enhanced data were reviewed with the objective of isolating a particular area for immediate field investigation. Part of this follow-up involved the use of a conversion of the data set to the Universal Transverse Mercator (NAD27 - UTM) geographic control format from the acquired geographic (Longitude/Latitude) format. This conversion enabled the establishment of a grid control system which could be easily switched from system to system as required for field use. Isolated magnetic features could then be identified by their UTM co-ordinates and thus located with a certain degree of confidence in the field, using a portable Global Positioning System (GPS) (McBride, 1994b).

By April 1992, several potential investigative priorities had been selected and it became time to inquire about land availability in the prospective areas. A review of the land claim maps for the district indicated that past activity had occurred. Several claim groups, scattered over the immediate area of interest, had been acquired but only a few of the groups remained in good standing. The entire claim map set was purchased and was eventually digitized to illustrate claims held versus claims abandoned, on a planimetric base relatable to the UTM co-ordinate system as well as the aeromagnetic data. In anticipation of a summer work program it was recommended that a base camp be established within the exploration area at a central location with reasonable accessibility. Missisa Lake was chosen and the camp was established.

During the summer and fall of 1992 the project was field activated. Initial planning and investigations in early 1992, had revealed that the claims in the area were held by Monopros Ltd. (Brummer, 1992), now called De Beers Canada Exploration Inc. Monopros had performed and recorded work on the claims which indicated that kimberlites were present in the first area of interest. This kimberlite swarm, known as the Attawapiskat Swarm, became the focal point for much of the early work done by the joint venture. The early interpretation of the regional magnetic data set suggested that several other kimberlites could be present within and around the Attawapiskat Swarm area. It was immediately decided to essentially surround the known kimberlite properties by staking out a large claim block. A total of 259 claims covering 59,981.92 hectares was staked in nine separate claim groups (Novak, 1993a). Eight blocks were selected for the test helicopter-borne magnetic geophysical (Heli-mag) surveying which followed (Eby, 1992; Downie, 1992). Most of the coverage was over the general Attawapiskat Swarm area, however a test area was flown at Missisa Lake and data was also collected on the flight path to and from the camp. This resulted in a thorough understanding of the geophysical and geological setting of the swarm. A magnetic model of the typical kimberlite signature, for the Attawapiskat Swarm, was developed and then applied to the follow-up regional program.

By late 1992 the joint venture obtained sufficient financing to begin a regional fixed-wing aeromagnetic survey using custom specifications as derived from the earlier developed model. Part of this budget included an allocation of funds for initial diamond drill testing. The regional aeromagnetic survey and initial diamond drill program were completed by early May, 1993. The aeromagnetic survey provided an overall data base at 400 m line spacing over the area selected as most likely to contain another kimberlite swarm similar to the Attawapiskat Swarm. The 400 m line spacing had been chosen as the minimum density required to partially render a 400 m diameter diatreme body. The initial drill program, under the direction of Neil Novak, consisted of two holes which failed to intersect kimberlite, but provided information about the depth of the Paleozoic sedimentary cover in an area northwest of the Attawapiskat Swarm (Novak, 1993a). As part of the diamond drilling field program, a short geochemical test survey was completed, which resulted in the discovery of an accumulation of kimberlite rock along the shore of the Attawapiskat River by Chris Gleeson, of C. F. Gleeson and Associates Ltd. in the company of Wayne Hilliard of Ashton Mining Limited's North American exploration arm (Gleeson, 1993). The rock had previously been accumulated by Monopros field personnel by gathering boulders found nearby along the shore of the Attawapiskat River. Sixty kilograms of this material was sent to the Ashton Mining Laboratory in Perth, Australia for various diamond survivability tests. Ashton recovered one micro-diamond from this sample (Novak, 1993a).

The aeromagnetic data base was analysed by K. Jones, chief geophysicist for Ashton Mining Limited and D. MacFadyen. By mid-July, Ashton completed their due diligence investigations and entered into an agreement with KWG and Spider. The agreement gave Ashton the option to provide financing for the evaluation of any property on which KWG/Spider had identified kimberlite and forwarded to Ashton Mining of Canada Inc. a minimum 100 kilograms of kimberlite in the form of drill core. Ashton could perform tests and make a decision on whether to continue an evaluation, at their sole expense, to the point of a bankable feasibility report for the encountered kimberlite body. Ashton has since withdrawn from this agreement as described above.

9.2 Spider # 1 - Work Program 1993-1994

The late 1993 and early 1994 field program was designed to evaluate and enhance the results of the earlier work programs and to eventually pursue individual airborne magnetically rendered anomalies that stood up to close geophysical, geological and geomorphological scrutiny (Hogg, 1993, 1994a; Piazza, 1993a and 1993b). The original magnetic survey was reviewed and over 400 points of investigative priority (PIP's) were targeted, documented, and prioritized (Hogg, 1994c). These were reduced to 44 individual PIP's which were surveyed with 100 m-spaced flight line density, detailed heli-mag surveys to provide information for further analysis, prior to drill testing. The heli-mag portion of the field program started in late January and was completed by early March 1994 (Hogg, 1994b and 1994c) with the selection of specific anomalies for diamond drill testing.

In early February, 1994 a drill crew was mobilized, and diamond drilling commenced under the field direction of the Derek McBride, with drill sites being determined as the heli-mag data was acquired and interpreted (McBride, 1994a). The accuracy of the real time Global Positioning System using one mobile station is, at best, ±30 m and is insufficient for spotting drill holes. Therefore. prior to the drill test, a quick ground magnetic survey (normally two perpendicular profiles) was completed over the selected target area, to accurately locate the drill collar on the anomaly. By the end of the drill program eighteen holes were completed, totalling some 2,110.6 metres of drilling (Appendix IV) on 13 targets. Five of the eighteen holes entered kimberlite or kimberlite-like rock (MacFadyen # 1 and # 2 and Kyle # 1). A summary report on the drilling (McBride, 1994a) was prepared and the results are described in the section on mineralization below.

9.3 Spider # 1 - Work Program 1994-1995

During the summer of 1994, a fixed-wing aeromagnetic gradiometer survey was flown to provide coverage surrounding the Kyle # 1 discovery as well as to expand the regional survey (Hogg, 1994d). The original fixed-wing coverage was extended 20 km westward and 35 km eastward and northward to cover the Winisk Fault Zone. Some infilling of the previously surveyed area was completed to provide 200 m line spacing. A total of 49 500 line kilometres were surveyed (McBride, 1994c). The survey recommended 40 areas for follow-up heli-mag surveys.

In late August, field operations continued with heli-mag surveys and diamond drilling of selected targets. A total of 49 new features were surveyed by heli-mag as well as an east-west survey over the previously found Kyle # 1 kimberlite. These surveys were flown at a 100-metre line spacing with the sensor 30 m above ground. The peak of the anomalies defined by the heli-mag survey were located on the ground by ground magnetic surveys, usually comprising two perpendicular lines with readings at 25 m intervals (McBride, 1994c).

The diamond drilling component of this program comprised seven holes drilled into four magnetic anomalies (Appendix IV). Two holes were lost in the Paleozoic sequence and two intersected magnetic granitic gneiss. The magnetic anomaly was not explained by the non-magnetic gneiss for three of the targets (McBride, 1994c).

The results of the Fall 1994 heli-mag program resulted in the initial selection of six priority targets and two other targets based on their proximity to the Kyle # 1 kimberlite (Hogg, 1994). As the winter program progressed, additional targets were selected based on the results of the drilling. From mid-January to late February, an extensive heli-mag survey was flown covering 50 separate blocks, many of which contained more than one anomaly. Most of the area flown lies to the north of the Attawapiskat River. All lie in the northwest part of the area.

Between mid-January and April 26, 1995, 22 holes were drilled on 16 anomalies (Appendix IV). Of the 22 holes, two intersected new bodies of kimberlite (Kyle # 2 and Kyle # 3), and three were drilled to find and evaluate a massive sulphide body. The results of these discoveries are outlined above (Section 8.7) (McBride, 1995, Thomas, 1995a, and 1995b). Ashton also completed three holes into the Kyle # 1 body as part of their initial evaluation.

9.4 Spider # 1 - Work Program Fall 1995

The Fall 1995 program concentrated on the base metal aspects of the Spider # 1 Project and on outlining and acquiring more sample of the Kyle # 3 pipe (Appendix IV).

The area of anomaly B25 was selected for base metal work based on the presence of chalcopyrite recorded in the logs of holes DR 95-11, DR 95-12 and DR 95-13 as outlined by McBride (1994d). A quick test was designed. As the aircraft returned from completing an airborne magnetic survey in the Spider # 3 area, it flew seven 5 km long lines of multi-frequency electromagnetic survey over the selected area. A weak anomaly was identified on all lines. This anomaly was located on the ground by a ground based Max-Min II survey and drill holes were spotted. Two holes were drilled into the target. The first hole (DR 95-44) was abandoned because the core barrel broke off down the hole; the second hole (DR 95-45) intersected a sequence of pyritiferous graphitic beds with traces of pyrrhotite interbedded with clastic sediments and volcanic tuffs (Thomas, 1995c). Mineralized sections of the core were shipped to Spider Resources Inc., Scarborough office, for splitting and geochemical analysis.

The second part of the program, defining the Kyle # 3 pipe and obtaining more sample, was accomplished by drilling three holes: DR 95-41, DR 95-42 and DR 95-43. The results of this drilling are outlined above (Section 8.4) and in Thomas (1995b).

9.5 Spider # 3 - Work Program Fall 1995

With the success of the Spider # 1 Project at finding kimberlites and because two of these kimberlites (Kyle # 2 and # 3) lie at the western extremity of the Spider # 1 area, the Spider # 3 Project was initiated to test the ground to the west of the Spider # 1 Project.

The project commenced with a high resolution fixed-wing magnetic survey (Figure 4), by High-Sense Geophysics Limited, flown between May 31 and July 16, 1995.

A total of 51,192 line kilometres were flown at a nominal line spacing of 400 m (Hogg, 1995).

The field program concentrated on staking claims and ground proofing enough of the air-borne anomalies (Hogg, 1995) to provide two or three drill targets for initial drilling. The staking, as outlined above, covered 30 anomalies (Figure 4). Twelve of these were initially chosen for ground magnetic surveys, but because of the very wet conditions at some sites, more sites were added. The ground magnetic surveys succeeded in locating and outlining the anomalies, however the quality of data was, in some cases, not as desirable as possible, because of the abundant small ponds and very soft swamps.

After a lengthy drill move, one hole, DR 95-46, was completed into a variably magnetic gneiss (Thomas, 1995d). The second hole (DR 95-47) was abandoned after intersecting 76.15 m of overburden and 48 m of gneiss, when the core barrel was lost down the hole. Bad weather and the freeze-up of Spider Lake terminated the drilling program and did not permit redrilling of the hole. The magnetic target was not encountered.

9.6 Spider # 1 - Work Program Winter 1996

The Winter 1996 field program comprised three components: fill-in airborne fixed-wing magnetometer surveys, detailed heli-mag surveys of selected sites, and diamond drilling of the Kyle # 1 kimberlite (Thomas, 1996a).

The fixed-wing magnetometer survey was flown in February and covered two areas. The first area was designed to fill in the hole in the most northern part of the previous coverage. The area flown lies to the north of 53° 00'N (the Attawapiskat River), between Longitudes 84° 05'W and 85° 05'W. This coverage was at 400 m flight line spacing. The second area that was flown lies to the west of 85° 45'W and was designed to enhance the database by providing 200 m line spaced data in an area of numerous interesting anomalies.

The heli-mag survey of the Spider # 1 area comprised one 17.5 km² area of multiple anomalies called New Area "Z", located in the general vicinity of the Kyle # 2 and Kyle # 3 kimberlites. A total of 187 line kilometres were flown at an average of 100 m spacing. The survey was completed on February 28, 1996.

The diamond drilling component of the program was designed to define the extent of the Kyle # 1 body and to obtain a 10 tonne sample of kimberlite in order to define the distribution of lithologies and diamonds within the pipe and to evaluate the diamond content of the pipe based on more statistically valid data. The first two holes were drilled from south to north and from west to east across the body to determine its extent in these axes. Based on the results of these first holes, eight vertical holes were drilled on 50 m centres to an approximate depth of 500 m. Two drills were employed in this work, one using BQ (36.5 mm core) sized equipment, the other using NQ (47.6 mm core) equipment. A total of 5216.8 m of drilling was completed through 718.9 m of overburden, 860.8 m of Paleozoic rocks, 674.9 m of gneiss, 2675.1 m of kimberlite and 287.1 m of breccia. The kimberlite core was sampled at the Spider Lake camp and was shipped directly to two laboratories for diamond analysis. Core from holes DR96-48 to DR96-54 inclusive were shipped to Lakefield Research Limited, Lakefield, Ontario for analysis by total dissolution. Holes DR96-55 to DR96-58 were shipped to Mineral Indicateur Almaz Inc., Rouyn-Noranda, Quebec for analysis by auto-attrition and heavy mineral separation. The results are discussed in Section 8.2.5 of this report.

9.7 Spider # 3 - Work Program Winter 1996

The Spider # 3 Winter Program comprised heli-mag surveys, ground magnetometer surveys and diamond drilling (Thomas, 1996b).

The heli-mag survey covered 37 areas which included 48 anomalies. The survey was completed between February 8 and February 29, 1996. A total of approximately 2635 line-kilometres of survey were flown at a 100 metre line spacing. PIP markers were set out at selected anomalies and located by differential GPS.

Ground magnetic surveys, comprising 25 m readings on 50 or 100 m spaced lines, were completed over selected anomalies. The purpose of these surveys was to locate the peak of the anomaly on the ground and to detail the overall shape of the anomaly in order to ensure that the anomaly was not a function of the machine contouring of the heli-mag data. A total of 19 surveys were completed in February and March.

The winter program finished with one diamond drill hole into anomaly D16a. The 130 m long inclined hole intersected 23.5 m of overburden overlying 106.5 m of magnetic gneiss. Minor sulphide mineralization was encountered and the core was sent to the Spider Resources Inc., Scarborough office, for further analysis.

9.8 Spider # 1 - Work Program Summer 1996

The summer 1996 program involved ground geophysics and diamond drilling three new geophysical anomalies. One BQ sized hole was drilled into each of anomalies E28, D33, and E11. A total of 933.5 m was drilled (Appendix IV). The hole into E28 was vertical and did not intersect any magnetic rocks. It is possible that the magnetic target is thin and that the hole went down beside the magnetic body. DR96-61, into anomaly D33, intersected 362.8 m of kimberlite (Kyle # 4) beneath 95.4 m of overburden and Paleozoic rocks. The hole ended in a felsic intrusive wall rock or large xenolith. DR96-62, an inclined hole into anomaly E11, intersected 103.5 m of kimberlite or lamproite (Ron Sage, Ontario Geological Survey, pers. comm.) (Kyle # 5). The results of the drilling and the diamond analyses of these holes were discussed above (Section 8.5 and 8.6).

9.9 Spider # 3 - Work Program Summer 1996

The summer 1996 program involved a stream sediment sampling program with limited bedrock mapping and ground geophysical surveys (Thomas, 1997b). Prior to the commencement of field work, an air photo interpretation of the Spider # 3 area was completed by P. Piazza with a view to outlining the areas underlain by glacial drift (till and glaciofluvial deposits), marine clays, muskeg and bedrock. In the field, all of the streams in the Spider # 3 area were flown by helicopter to select sampling points. Several streams outside the area, but that drained the Spider # 3, area were also sampled, particularly in areas where good sampling materials were scarce. Any bedrock mapping information that was gathered during sampling was plotted on a 1:250 000 basemap and compiled. At the end of the project, key outcrops were revisited and mapped in more detail. Samples were cached at central locations in the field and picked up by fixed-wing aircraft from Nakina as they cached helicopter fuel in the field. The samples were then shipped from Nakina to Consorminex Inc. of Gatineau, Que. by Manitoulin Transport. A heavy mineral concentrate was prepared from the bulk stream samples by Consorminex Inc. The concentrates were examined beneath a binocular microscope and the kimberlite indicator minerals were picked from the sample. Some of these have since been analysed by scanning electron microprobe for confirmation. The geochemical samples were shipped to Activation Laboratories Ltd. in Ancaster, Ontario for analysis on the <63 : fraction. Au, As, Ba, Br, Ce, Co, Cr, Cs, Eu, Fe, Hf, Hg, Ir, La, Lu, Na, Nd, Rb, Sb, Sc, Se, Sm, Sn, Ta, Th, Tb, U, W, and Yb were analysed by INAA and Ag, Al, Be, Bi, Ca, Cd, Cu, K, Mg, Mn, Mo, Ni, P, Pb, Sr, Ti, V, Y, and Zn were analysed by total digestion - ICP. The granule fraction was retained by R. Thomas for clast lithology analysis.

The results of this program have been compiled and interpreted by Dr. C. F. Gleeson of C. F. Gleeson and Associates, Ltd. (Gleeson and Thomas, 1997). Of the total 625 samples that were taken, 249 contained at least one kimberlite indicator mineral. The greatest concentration of samples with indicator minerals lies along the Winiskis Channel and the adjacent Shamattawa River and tributaries to the Ekwan River. In general, most of the samples containing indicator minerals are concentrated in the north central part of the Spider # 3 area, to the south of the Winisk Fault Zone, in the vicinity of the Kenyon Structure (Thurston, *et al*., 1979).

The geochemical analysis of the samples also outlined several gold anomalies were also outlined by the sampling program. Many of these are located in the north central part of the area, along the Ekwan, Winisk and Shamattawa Rivers, Winiskis Channel, and their tributaries. Eight gold grains were recovered during heavy mineral concentrating from seven of the samples associated with these anomalies. Several other, one point, gold anomalies occur in other parts of the Spider # 3 area (Gleeson and Thomas, 1997).

9.10 Winter 1997 Program

The Winter 1997 program involved staking, ground magnetic surveys and diamond drilling (Thomas, 1997c). Prior to the commencement of the geophysical and drilling programs, 12 claims were staked on 9 anomalies, including additional claims on the Kyle # 5 kimberlite body in order to completely cover the anomaly and the adjacent terrain. A total of 32 airborne and heli-mag anomalies were covered by ground magnetic surveys. This work was completed in order to locate the anomalies on the ground and also to provide additional data for geophysical interpretation. In addition, ground magnetic surveys on the Kyle # 4 and # 5 kimberlites were extended to completely cover the bodies.

The drilling component of the program involved the completion of eight diamond drill holes totaling 1954 m (Appendix IV). One hole was drilled into each of the Kyle # 4 and Kyle # 5 bodies to obtain additional sample material for diamond analysis and to better define the bodies. Six holes were drilled into new targets; one intersected micaceous peridotite, a potentially diamond bearing rock, and one intersected iron formation similar to that presently being developed as the Musselwhite Project by Placer Dome Inc. The results of the analysis of this core are not yet available.

9.11 Winter 2000 Program

The winter 2000 program commenced an evaluation of the Kyle # 3 kimberlite. A temporary camp was mobilized from Nakina to a location within several hundred metres of the Kyle # 3 body; this camp has since been demobilized. The program was designed to define the shape of the kimberlite throughout its 700-metre strike length and to test the diamond content to a depth of 200 metres vertically. A total of seven drill holes, totalling 1,599 metres were drilled. Jim Burns (P. Eng.) logged the core and sampled the kimberlite in the field.

The program defined the eastern extent of the kimberlite body where the dyke was determined to be 3 m thick. The diamond analysis revealed that the Kyle # 3 body was formed by multiple intrusions of kimberlite, some of which appear to be barren of diamonds whereas other phases contain abundant diamonds. In total 1037 diamonds <0.425 mm in one dimension and 44 diamonds >0.425 mm in one dimension weighing a total of 0.2284 carats were obtained from 1440.81 kg of kimberlite.

9.12 Winter 2001 Program

A winter 2001 drilling program, estimated to cost $750,000, has recently been completed. Drilling commenced on the 29th of January and was completed by mid March from a temporary camp located within 200 m of the Kyle # 3 kimberlite. This drilling program was designed to define and sample the western end of the Kyle # 3 kimberlite. Nine holes were diamond drilled and were logged in the field by Jim Burns.

The program extended the size of the Kyle # 3 kimberlite another 150 m to the west where it was observed over 2.85 m and 5.50 m intersections at depths of 165.0 and 190.0 m respectively. The Kyle # 3 kimberlite is now known to be a 600 m long, near vertically dipping dike with an average width of approximately 25 metres. A blow exists near the centre that increases the width in this area to about 125 metres. The body was formed by multiple intrusions, some of which contain numerous microdiamonds. The diamond analysis of the 600 kg of kimberlite sampled during the 2001 program recovered 431 diamonds <0.425 mm in one dimension and 46 diamonds >0.425 mm in one dimension weighing a total of 0.1146 carats.

9.13 De Beers Canada Exploration Joint Venture program for 2001-2002.

The following is based on four quarterly reports from De Beers Canada exploration Inc. to KWG/Spider Resources Inc. dated for the periods ending 31 September, 2001, 31 December, 2001, 31st March, 2002 and 30th June, 2002. They all are signed by Donald R. Boucher, Divisional Manager-East, De Beers Canada Exploration Inc. The author has not seen the final report of De Beers although it has been received by Spider/KWG.

Following the acquisition of all of the Spider/KWG data, De Beers analyzed the data and selected 17 high priority targets. Fugro Airborne Surveys out of Mississauga, Ontario, were contracted to fly helicopter magnetic and electromagnetic surveys over the 17 magnetic targets as well as an additional 6 anomalies based on the results of the previous stream sediment survey. The geophysical surveys were flown N-S at a flight lines spacing of 50m and a nominal altitude of 20m above ground over blocks that were generally 1.5 x 1.5 km in size.

A mobile metal ion (MMI) geochemical survey program was completed to provide additional information on four geophysical targets as well as two of the targets identified by the previous stream sediment sampling program. An extendible hand auger and shovel were used to penetrate the organic cover to reach the sediment below the peat moss cover of up to 4m thick. A total of 39 samples, were collected over the six targets and sent to XRAL Laboratories for processing and analysis.

A small sediment sampling program was carried out during the Summer 2001 campaign. The program was designed to re-sample a few selected anomalous sample sites from the previous stream sediment survey. In addition, sediment samples were collected in proximity to geophysical targets, and from river-cut sections for documenting and comparison of till stratigraphy. A total of 29 sediment (till and fluvial) samples were collected and sent to the De Beers Sudbury sample treatment plant for processing. The heavy minerals were sent for analysis to the De Beers Canada laboratory in Toronto, Ontario. Preliminary results do not reveal any new significant discoveries.

In the spring of 2002, Heath & Sherwood Drilling (1986) Inc. from Kirkland Lake, Ontario was contracted to test the magnetic anomalies with a reverse circulation type drill. Drill holes were designed to test targets 13 targets selected from the previous and the current geophysical anomalies. In addition, Abitibi Geophysiques from Val D'or, QC, was contracted to complete the ground magnetic traverses over 8 anomalies in the northern part of the project area. None of the holes intersected kimberlite however one hole, SP3-02-007 intersected massive sulphides. Samples from the two 3-metre intervals were sent to Bondar Clegg for analysis and were found to contain 1.1% Cu and 1.27% Cu from depths of 26-29 m and 29-32 m respectively. The analysis of the material in the bottom of another hole revealed that it contained 2 914 ppm Zn. The follow-up work on this occurrence has become the focus of the McFaulds Lake Project and is described in a separate report.

9.14 Fall 2003 Program.

The ground geophysical data acquired by Ashton in 1995 over the MacFadyen kimberlite pipes was re-examined and re-interpreted using proprietary filtering techniques in July 2001 (Scott Hogg and Associates Ltd., 2001). A deep seated feature that could be interpreted to be the main feeder structure was outlined. However, the data set was limited in coverage and a decision was made to resurvey the entire property at 50 m line spacing. The line cutting and field surveying was completed by Hussey Geophysics Inc. of Timmins in August 2003 and the results were interpreted by Steve Munro (2003).

9.15 Spring 2004 Program.

Based on the interpretation of the new geophysical data, five targets were selected for drilling in April 2004. A light-weight hydraulic drill using BTT rods was mobilized by Heath and Sherwood Drilling from Kirkland Lake to a camp recent vacated by Pele Mountain Resources Inc. Of the five targets drilled, three were found to be diamondiferous kimberlites. The fourth target remains unexplained as the hole was abandoned because of drilling conditions in the hole. However, the hole had reached beyond the location of the anomaly as predicted by the geophysics. The fifth target was the deep feeder target and was attempted by two holes. The first was abandoned in poor drilling conditions and the second attempt was suspended in part because of spring break-up. The drill is presently still located on this hole which is scheduled to be resumed this summer.

10 DRILLING

The Spider # 1 and # 3 Projects are still in the exploration phase and an economic study and ore delineation drilling have not been completed. The only drilling to date has been exploration drilling to confirm the presence of kimberlite and, if present, to obtain sufficient sample to determine if the body warrants economic assessment.

11 SAMPLING METHOD AND APPROACH

In all programs, the core has been logged in the field and, after R. Thomas started logging holes in 1995, a 15 cm representative section of core was retained from every 3 m section of the hole. These reference samples were delivered to Spider Resources Inc., in Toronto. If kimberlite was not encountered, the core was stored at the camp in Spider Lake or donated to the Ontario Geological Survey for further study. The non-kimberlite sections of core from the 2000 and 2001 programs were stored at the camp near the Kyle # 3 kimberlite. The non-kimberlite sections of core from the 2004 program are stored on the rod rack at hole SPQ-04-05. If sulphide or other mineralized horizons were discovered, the relevant sections were shipped to the Toronto office of Spider Resources Inc. for splitting and further analysis, and the remaining, non-mineralized sections of core were left at the camp.

For holes that contained kimberlite, a 15 cm sample of core was collected every 3 m down the hole and stored as a reference sample. In some of the early holes, additional material was collected for petrographic, geochemical and other studies. All reference samples are stored in Toronto. The remaining kimberlite was marked for sampling in 6 m long sections and the complete core was analysed for diamonds mainly by caustic dissolution although the samples from four holes that were drilled during the 1996 campaign on Kyle # 1 were sent to Mineral Indicateur Almaz Inc. in Rouyn and analysed by auto-attrition and gravity separation on a Wilfy table. Prior to 1995, the complete hole was shipped to Toronto for further study and for sampling. In this case the boxes were sealed and shipped as described below. For the 1995 programs, only the kimberlite sections of core were shipped to Toronto in sealed core boxes. From 1996 on, the samples were taken in the field. For the 1996 and 1997, the samples were placed into doubled Polywoven Rice bags and sealed with zap straps. Sample numbers were written on the outside of the inner bag and on a piece of flagging placed in each bag. For the 2000 and 2001 drilling campaigns, the samples were collected into 6-gallon plastic pails and sealed. For the 2004 program, the samples were collected in Polywoven Rice bags and sealed with a security seal and a zap strap.

During the stream sediment sampling program, samples were collected every two kilometres along all streams where possible. A total of 625 samples were collected over an area of 13 000 km^2. Sufficient gravel and/or sand was screened through a 10-mesh (2 mm aperture) sieve in the field. Approximately 15 kg of material was collected in “Dry Rite” bags and double bagged with a Polywoven Rice bag. Separate representative samples of the 2-5.6 mm fraction were retained for lithological analysis. A separate paper geochemical envelope of finer material was collected for geochemical analysis. The 15 kg sample was sent to Consorminex Inc., of Gatineau, Quebec for heavy mineral concentration and identification. The geochemical samples were sent to Activation Laboratories Ltd, Ancaster, Ontario, for geochemical analysis. The coarse material is in storage with R. Thomas, in Carp, Ontario.

12 SAMPLE PREPARATION AND SECURITY

No sample preparation or quality control measures were implemented for the kimberlite samples. Because of the scarcity of diamonds within the kimberlite and the small size of the samples, the complete core section, except the representative sample, was submitted for analysis.

The camp at Spider Lake was being supplied by daily, chartered fixed-wing flights from Nakina. Fuel and food were brought into the camp and garbage and samples were shipped out on these flights. In Nakina, the samples were stored in a locked warehouse until there was a sufficient volume or weight to warrant shipping further. Generally two shipments were made, one in the middle and one at the end of the season. Prior to 1996, a truck, rented in Toronto and driven by an employee of Spider Resources Inc., was sent to pick up the core boxes and deliver them either to the Spider Resources Inc. office in Toronto or to Lakefield Research. After 1996, the samples were shipped via Manitoulin Transport directly from Nakina to Toronto or Lakefield. The smaller size of the

2000 and 2001 programs, did not require the daily flights and therefore the samples were stored in camp until personnel were leaving. At this point, the samples were sent in the company of the personnel to Nakina and stored in the locked warehouse until picked up by Manitoulin Transport. In 2001, some samples went out of the field via Pickle Lake in the company of Neil Novak, who shipped them via Manitoulin Transport to Lakefield. Another batch of these samples left the field via Hearst and Timmins in the company of Jim Burns who then shipped them to Lakefield. The first batch of samples from the 2004 campaign were shipped out of the camp on the daily flight and were stored in a locked warehouse until they were picked up by Neil Novak who delivered them to Thunder Bay Diamond Services in Thunder Bay. The second batch of samples was sent from Nakina to Thunder Bay Diamond Services by bonded courier.

The stream sediment samples were assembled into caches in the field and picked up daily by the fixed-wing aircraft as it delivered the helicopter fuel to the cache. The samples were stored in a locked warehouse in Nakina until shipped via Manitoulin Transport to the Consorminex Inc., in Gatineau. The geochemical samples were taken in camp and dried before packing into cardboard boxes and shipping to Activation Laboratory Ltd. in Ancaster, Ontario. The coarse samples were brought to Carp in the company of R. Thomas.

The Spider # 1 and # 2 program to date has primarily been one of exploration as opposed to defining resources. As such, analyses of samples have been used to determine whether additional work is warranted and not to determine how much the resource is worth. The sampling methods used are fairly standard in the industry and were adequate for these purposes. Because diamond concentrations are low and “nugget-like”, nothing would be accomplished by splitting the core and only analysing half as would be done in base metal or gold exploration. Check samples and blanks were not appropriate because the core was sent directly to the laboratory without preprocessing.

The stream sediment sampling program would have benefited from the use of standards and blanks, however, at the outset of the project, it was decided that any anomalous samples would be verified by resampling before detailed work was initiated. The program was a regional survey and by its very nature, all anomalies would require some additional sampling to verify and define them prior to detailed work. All sample sites were flagged in the field with the sample number written on the flag so that the same site could be relocated if required. The program by De Beers Canada Exploration Inc. has done this by the collection of additional samples within the areas of the anomalies.

Sample security was good. There was no other people living or working within the field area or even running mineral exploration programs out of Nakina prior to 1996 at which time De Beers commenced their sampling of the Victor Pipe. As a result, there was no possible way that samples that were left in caches were disturbed. Samples in Nakina were stored in locked warehouses owned by the airline companies and as such were only accessible to their employees. Transportation between the warehouse and laboratory was by a bonded, reputable trucking company or Spider Resources Inc. personnel.

13 DATA CORROBORATION

Prior to 1999, the author was privy to all of the information in this report. He had copies of all laboratory analytical results and in some cases received these results directly from the laboratory. Much of the core was logged by the author during this period and he has been shown either the core from some holes or the representative samples of the core from other holes prior to his involvement in the project. He has discussed the project with Neil Novak, Derek McBride, Christopher F. Gleeson, Scott Hogg, Steve Munro and Don MacFadyen at various times since his initial involvement with the project. He has seen the drill logs for the 2000 and 2001 programs and has seen the summary of the diamond results. He has not seen the original laboratory results of the diamond analysis but, since ore grade calculations have not been made for this body, the data has only been used in summary form herein.

14 ADJACENT PROPERTIES

Several claims have recently been staked adjacent to the KWG/Spider Joint Venture claims, however, the assessment work has not yet been filed for most of these claims. De Beers Exploration Canada Ltd. has filed work on their claims, originally staked in 1988 showing that they have discovered 18 kimberlites, 16 of which are diamondiferous, the largest of which is the Victor pipe (http://www.debeerscanada.com). The specifics of the evaluation work done on the Victor and other pipes has not been made available to the public, however their web page does describe the geology and the work to date in general terms. The Victor kimberlite comprises two or three pipes that coalesce at the surface producing a surface area of approximately 16 ha. Both crater and hypabyssal facies kimberlite are present in the pipe resulting in a very complex geology. The diamond grade is very variable but the quality and size of the diamonds appears to be very high. Recently, De Beers announced that they have received approval to proceed with the development of a mine at the Victor Pipe which they hope to start in 2005.

On February 8, 2001, Navigator Exploration Corp. and Canabrava Diamond Corp. announced that they had discovered the AT-56 pipe, another kimberlite in the Attawapiskat Swarm. Details of this kimberlite have not yet been made public, however, it is located "within four kilometers of four kimberlite pipes currently being evaluated by De Beers, including the diamondiferous Victor kimberlite" (Navigator Exploration Corp. web page: http://www.navigatorexploration.com/). The AT-56 kimberlite is located 10 km southeast of the KWG/Spider claims (Figure __).

The Arctic Star- Metalex Joint Venture has been conducting an overburden sampling program immediately west of the Victor Pipe (Figure ___). They have announced that they have found "five indicator trains containing numerous G10 garnets, chrome diopsides, group one eclogite garnets and olivines with compositions equivalent to those that form with diamond", "green kimberlitic clay", "gem-quality macrodiamonds in till samples"(Arctic Star press release, April 1, 2004), and most recently, kimberlite (Arctic Star press release, April 28, 2004).

15 MINERAL PROCESSING AND METALLURGICAL TESTING

No mineral processing or metallurgical testing has been done to date.

16 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

No mineral resource or mineral reserve estimates have been made because of the preliminary nature of the exploration.

17 OTHER RELEVANT DATA AND INFORMATION

It should be noted that KWG, Spider and De Beers have had a good relationship with the local First Nations of Attawapiskat, Webequie and Martin River. Personnel have been hired from these places during most programs and their work has been generally good. Where possible problems have been identified by the First Nations, their concerns have been alleviated either through community meetings and information sessions.

18 INTERPRETATION AND CONCLUSIONS

The Spider # 1 project area has undergone an initial examination for its, diamond potential. A tightly controlled aeromagnetic survey, both fixed-wing and helicopter magnetics, has successfully been used to locate drillable kimberlite targets in an area of variably thick glacial overburden and substantial Paleozoic sedimentary cover. The initial discovery of the MacFadyen # 1 and # 2 kimberlites amongst the previously identified Attawapiskat Swarm, proved to be an assurance that De Beers Canada Exploration Inc. had not identified all of the kimberlites in this swarm. The area surrounding the Attawapiskat Swarm has not been fully evaluated and there remains several targets worthy of drilling.

The discovery of the five Kyle-type kimberlites beneath the Paleozoic sediments is a very important and strategic discovery. These particular bodies are only identifiable in the Spider # 1 area by their magnetic signature. There is no potential indicator mineral assemblage in the overburden associated with these bodies, as the bodies are hidden beneath the Paleozoic cover rocks. Thus they are not a candidates for geochemical or indicator mineral tracing techniques. Additional magnetically rendered kimberlite targets are apparent in the immediate areas of the Kyle-type pipes and warrant further investigation.

The Paleozoic cover is not present in most of the Spider # 3 area. Kimberlites in this area may be found using a combination of geochemical and geophysical techniques. The presence of indicator minerals in the heavy mineral concentrates of stream sediment samples obtained near geophysical targets improves the probability of discovering more kimberlites in the near future. Moreover, some "whitish" garnets, similar to the altered garnets present in the Kyle # 1 kimberlite, were recovered from the stream sediment samples. This implies that at least some of these kimberlites will be of the Kyle-type. The clustering of the samples that contain the kimberlite indicator minerals implies that kimberlite pipe swarms must be nearby. Some of these targets were sought by De Beers as part of the Spider # 3 Joint Venture, however, there are still many targets in the area that require testing.

The economics of each of the tested kimberlites, at this point, is inconclusive as insufficient sample has been procured to render a statistically valid test of the diamond content of the pipes. The results to date for the Kyle # 1 pipe indicate that this pipe is very rich in total diamond content and that is has the potential to contain large diamonds. However, a much larger sample will be required to prove this. Testing of the Kyle # 3 pipe is still in its preliminary stages because of the small size of the sample. Kyle # 3 is similar to Kyle # 1 in many respects, but the diamonds have not yet been studied to know if it has the same potential to contain large diamonds. Within both of these pipes there are certain horizons that are particularly enriched in diamonds. These may prove to be economic in the future and therefore are worthy of further exploration. Also similar bands of enrichment may be present in other Kyle-type kimberlites.

The Attawapiskat pipes are diamondiferous and the proposed Victor mine by De Beers indicates that some of them are economic. More drilling to define the size and shape of all of these kimberlites and to recover a larger sample and many more diamonds would have to be completed before a statement could be made as to the economic value of these kimberlite bodies. It should be noted that some economic pipes that contain large diamonds commonly do not contain an abundance of smaller diamonds and the Victor pipe is supposedly one of these.

The geophysical survey and interpretation (Scott Hogg and Associates Ltd., 2001) has shown that the MacFadyen kimberlites are connected by a broad, elongated magnetic feature. This feature is presently being drilled to determine if the feature is a feeder dyke to the kimberlites. This hole should be completed and, if positive results are obtained, then further drilling would be warranted. At the same time, additional drilling of the known MacFadyen pipes should be completed to define the size of the pipes and obtain additional sample.

The discovery of a mid Paleozoic kimberlite is very significant and requires immediate follow-up if it is confirmed by radiometric dating. In the past, many targets were tested by drilling only to the top of the Paleozoic cover. If kimberlite was not found, the anomaly was explained as either being a basement feature or an overburden feature. The potential of finding kimberlites deeper within the Paleozoic cover implies that many of these previously tested, but unexplained targets, should be re-evaluated and retested. Thirteen of the seventy holes listed in Appendix __ are annotated as anomaly “not explained”. All of these targets should be re-evaluated. There are also some magnetic features shown on the recent survey of the MacFadyen property that should be tested as well.

19 RECOMMENDATIONS

The following recommendations for the next phases of evaluation of the MacFadyen property would require a budget of $1,000,000 to be completed. The details of the recommendations and budgets are as follows.

19.1 Phase 1 Exploration drilling.

At present the drill is located on hole SPQ-04-06 and the hole has been drilled to a depth of 127.8 m. This hole requires completing to test the deep magnetic feature as interpreted from the geophysics at a predicted depth of 325 m. In addition, there are at least two other magnetic targets that should be tested, particularly if the radiometric date shows that mid-Paleozoic kimberlites exist in the area.

In addition, the preliminary results from the Good Friday kimberlite are encouraging and further drill should be undertaken to define the size and shape of this body and to obtain a larger sample for diamond analysis. Four 300-metre long holes on two perpendicular sections are recommended. Similarly, previous testing of the MacFadyen #1 pipe has been minimal but positive. A similar series of four 400-metre long holes on two perpendicular sections should be completed to evaluate this kimberlite as well. Note that these kimberlites are within 100 m of each others and could be developed together.

The above proposal consists of 2100 metres of drilling in 11 holes and it is estimated that it would take approximately two months to complete.

Drilling				
	Mob/demob personnel			$ 5,200
	Helicopter			$ 60,525
	Drilling			
		Mob/demob		$ 20,000
		Coring		$ 55,870
Accommodation				$ 17,050
Sample analysis				$ 70,000
Reporting				$ 5,000
Project management (10%)				$ 25,685
Contingency (5%)				$ 12,231
Taxes (7%)			$ 19,777	
	TOTAL			$302,307

19.2 Follow-up drilling.

The second phase of the program would follow-up any encouraging results obtained in the first phase. The main focus of the program would be to continue testing the deep feeder structure if warranted, however, depending on the results of the first phase, further testing of the other targets and known kimberlites might be warranted.

Drilling				
	Mob/demob personnel			$ 5,200
	Helicopter			$ 60,525
	Drilling			
		Mob/demob		$ 20,000
		Coring		$ 55,870
Accommodation				$ 17,050
Sample analysis				$ 70,000
Reporting				$ 5,000
Project management (10%)				$ 25,685
Contingency (5%)				$ 12,231
Taxes (7%)			$ 19,777	
	TOTAL			$302,307

This report is respectfully submitted on this 8th day of August, 2002 by the undersigned.

Roger D. Thomas, MSc., P.Eng., P.Geol.

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APPENDIX I

Certificates and Letters of Authorization

K W G

Resources Inc.

630, boulevard René-Lévesque ouest
Bureau 2855
Montréal (Québec)
Canada H3B 1S6
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June 14th, 2002

Mr. Roger D. Thomas
R.D. Thomas and Associates
1373 Corkery Road
Ottawa
Ontario
K0A 1L0

Dear Sir:

KWG Resources Inc. is preparing a listing application on TSX Venture Exchange and is required to file technical reports by qualified persons on its properties.

We hereby ask you to prepare a technical report on the jointly-owned Spider # 1 and # 3 diamond properties in the James Bay Lowlands. The report must satisfy the requirements of National Instrument 43-101.We also authorize you to review and use any confidential or public documents and information, concerning the previously executed exploration programs, that may be of use in preparing this report.

As mentioned, the report will be filed with the listing application on TSX Venture Exchange but may also be used to satisfy other regulatory requirements or for financings.

Yours truly,

KWG RESOURCES INC.
Per:

Luce L. Saint-Pierre
Corporate Secretary

APPENDIX II

Claims data

A. Client List for KWG Resources Inc., Spider Resources Inc. and De Beers Canada Exploration Inc.

B. Claim maps showing the locations of the claims

APPENDIX III

Field programs and the resulting reports

APPENDIX IV

Summary of drill holes

APPENDIX V

Rates and assumptions used to calculate the proposed budgets.