87-518-16195
6/88

ASSESSMENT REPORT

JACK PROPERTY

GOLDEN MINING DIVISION

BRITISH COLUMBIA

51° 54'N 117° ~~08'W~~ 07'24"

82N/14E

FILMED

PREPARED BY GEOLOGISTS

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for

Owner/Operator: DIA MET MINERALS LTD.
1675 Powick Road
Kelowna, B.C.

AUGUST, 1987

C O N T E N T S

SUMMARY

The Jack Property is a diamond prospect currently being explored by Island Star Resource Corp., Dia Met Minerals Ltd. and Chevron Minerals Ltd. under a joint venture agreement. The property is located 60 kilometres north of Golden, British Columbia in the Rocky Mountains. Road access comes to within 3 kilometres of the property.

The claims cover at least one kimberlitic - lamproitic diatreme, the Jack pipe, which contains several diamond indicator minerals. Compositional analysis of the indicator minerals indicates that they formed in an environment of high pressures and temperatures similar to those necessary for the formation of diamonds. One macrodiamond of gem quality was recovered from a 29.5 kg bulk sample collected from the exposed kimberlitic sandy marl. This discovery is extremely fortuitous as this marl consists of diatreme material diluted approximately 1:5.

In 1986, the joint venture implemented a diamond drilling program during which two holes totalling 771 metres (2529 feet) of large 2½ H size drilling were completed. A special ball mill was built to crush the core. Once logged, the core is split, crushed, concentrated and analyzed in the laboratory for diamond and indicator mineral content. The core, drilled in 1986 is currently being processed. Several diamond indicator minerals have been identified in the core suggesting that the potential for discovering diamonds, in the Jack Pipe, is excellent.

INTRODUCTION

This report discusses the property, geology and diamond exploration potential of the Jack Property. The Jack Property is a diamond prospect, currently being explored under a joint venture agreement between Island Star Resource Corp. ("Island Star"), Dia Met Minerals Ltd. ("Dia Met") and Chevron Minerals Limited ("Chevron").

Exploration has been carried out by C. Fipke of Kelowna, British Columbia representing Dia Met . Under the Joint Venture Agreement Dia Met is currently the operator. Results of these programs have been reviewed and are summarized in this report.

LOCATION AND ACCESS

The Jack Property is situated in the Golden Mining Division, approximately 60 kilometres north-northwest of Golden, British Columbia (Fig. 1). The property covers 30.25 square kilometres (3025 hectares) southeast of Lens Mountain, centered at latitude 51 54' N and longitude 117 08' W.

Road access from Golden is provided by logging roads to within 3 kilometres of the property. Helicopter access is also available from Golden.

The nearest railway is the CP Railway which parellels Trans Canada Highway 1 and has a siding at Golden. This railway leads to the nearest port at Vancouver, British Columbia, a distance of 800 kilometres.

PHYSIOGRAPHY

The Jack Property is situated on a ridge extending southeasterly from Lens Mountain in the Rocky Mountains. Elevations range from 2957 metres (9700 feet) on the Jack I claim to 945 metres (3100 feet) at the south edge of the Frank 1 claim. The topography is extremely rugged and hazardous; portions of the property require climbing experience to gain access.

The mean annual precipitation is 150 to 250 centimetres. Mean daily temperatures range from -15C to -20C in January, and are less than 14C in summer months.

The Jack Property lies within the Southern Interior Climatic Region. Treeline is at approximately 6500 feet, below which the area is covered by moderate to dense forest. Spruce, fir, pine, larch, cedar and cottonwood trees all grow in this region. Logging is currently being conducted within 3 kilometres of the property. Glaciers and perennial snow cover both sides of the main ridge on the Jack I claim.

Several creeks drain the property in a south to southeasterly direction from La Clytte Mountain. These creeks drain into Icefall Brook which flows southwesterly into the Valenciennes River (Fig. 2). Sufficient timber and water resources are available for exploration and development purposes.

CLAIM INFORMATION

The Jack Property is comprised of eight modified grid claims totalling 100 units. The original Jack I claim was staked in September of 1980. The current claims were staked in June of 1983. Claim data is given in the following table.

CLAIM NAME	UNITS	RECORD NUMBER	EXPIRY DATE
Jack I	20	1077	June 2, 1994
Stew I	20	1119	June 20, 1993
Steve I	1	1120	June 20, 1994
Hugo X	15	1116	June 20, 1993
Marlene V	6	1114	June 20, 1993
Chuck 1	12	1115	June 20, 1993
Frank 1	20	1118	June 20, 1993
John 1	6	1117	June 20, 1995

Dia Met is the registered owner of all claims. A joint venture agreement between Island Star, Dia Met and Chevron states that Island Star may earn a 50% interest in the property by providing $500,000.00 for exploration and development by July 31, 1987. A total of $150,000.00 was provided by October 15, 1986 leaving $350,000.00 to be provided. Chevron may earn a 25% interest in the property by providing $250,000.00 by December 31, 1987.

HISTORY OF DIAMOND EXPLORATION IN BRITISH COLUMBIA

In 1914 C. Camsell reported the discovery of a diamond in ultramafic rocks of the Tulameen District. This encouraged exploration for diamonds in British Columbia. Camsell's diamond was subsequently identified as spinel by S.E.M. (Scanning Electron Microscope) analysis by Arvid Lacis at U.B.C. (Northcote, 1983).

The discovery of diamondiferous kimberlitic breccia pipes in both the Northwest Territories (Mountain diatreme) and Colorado (Sloan Pipe) stimulated diamond exploration in Western Canada. Cominco began actively exploring the B.C. - Alberta Cordillera for diamonds around 1976. Other companies who concurrently or subsequently became active in diamond exploration were Falconbridge, Superior Oil, Serem, Dupont, Anaconda, Exxon, Amax, De Beers, Petragem and C.F. Mineral Research Ltd. ("C.F.M.").

C.F.M. carried out geological reconnaissance mapping, heavy media stream sediment sampling and rock geochemical sampling in the Rocky Mountains over several years. This work led to the discovery of the Jack Pipe.

Bulk sampling and processing of outcrop exposures of kimberlitic sandy marl proved that the Jack Pipe is diamondiferous. An excellent (gem) quality octahedral macrodiamond weighing 37,320 x 10 -8 carats was produced from a 29.50 kg (65 lb.) sample. In addition to the diamond, important indicator minerals which form under similar pressure and temperature conditions as diamonds were discovered. Seven bulk samples from the upper breccia portion of the diatreme yielded 33 pyrope garntes, 48 ilmenites and 15 chromites of compositions consistent with diamondiferous kimberlite pipes.

Dia Met was formed in 1983 to carry out exploration of the Jack Property, at which time C.F.M. sold the claims to Dia Met.

In 1986 a joint venture agreement was signed between Island Star, Dia Met and Chevron to carry out further exploration. Diamond drilling was carried out by Dia Met, the operator, in the fall of 1986. A total of 771 metres (2529 feet) were drilled in two holes from the same site. A vertical hole was drilled to 319 metres (1046 feet); the second hole was collared at -70 degrees towards 310 degrees and drilled to a depth of 452 metres (1483 feet). A special ball mill was constructed to crush the drill core so that individual minerals could be separated and identified. To date a high porportion of diamond paragenetic minerals have been identified in the crushed drill core. Specifically, grade eleven ("G-11") pyrope garnets occur in all samples processed to date. G-11 garnets are prevalent as inclusions in diamonds in several Russian and some South African mines (published compositions from the Udachnaya diamond mine U.S.S.R.). The inclusion of the G-11 garnets in diamonds determines the formation as being of diamond paragenesis. In addition, some chromites also of diamond paragenesis have been found with one sapphire.

GEOLOGICAL ENVIRONMENT OF DIAMOND DEPOSITS

Diamonds form at very high pressures and temperatures, 50 to 70 Kbar and 900 to 1400 C. These conditions exist from 150 to over 200 km in depth in the subcontinental lithosphere. Another equally important factor is oxygen fugacity which determines the form carbon exists in, such as elemental carbon or a carbon gash species (CO, CO 2, CH 4). In a depleted lithosphere of harzburgite and dunite (150 - 200 km thick) the oxidation state is lowered by the extraction of volatiles (H2) and (CO2). This depletion occurs where basaltic and komatitic volcanism and crustal extraction occur from a fertile garnet lherzolite asthenosphere. The probability of diamond nucleation and subsequent dissolution and reaction is affected by the contrasts in reduction - oxidation conditions between the lithosphere and the asthenosphere (Haggerty, 1986).

Partial (H2O and CO2) volatile pressures found in deep seated fractures where diamonds form, provide an explosive mechanism that quickly transports the diamonds to the surface of the earth's crust. This happens when the partial pressure of the volatiles exceeds the confining pressure of the partial melt. This rapid travel allows diamonds, which are unstable under certain chemical - physical conditions, to escape corrosion and reaction. The explosive mechanism increases in intensity upwards thereby mixing the diamondiferous mantle material with an increasing amount of wall rock from an ever widening fracture (pipe). Surface collapse of the cauldera causes mixing of surficial materials with vent materials. Where the vent or caldera is under water stratified sedimentary infilling may occur. (Fig. 3).

Kimberlites, lamproites and related ultramafic rocks are the most common diamondiferous rock types. "Kimberlites are recognized as volatile - rich ultramafic magmas whose evolution and emplacement can be described in terms of standard differentiation, intrusion and extrusion processes" (Mitchell, 1987).

According to Northcote (1983) kimberlites have a high silica content (approximately 33 wt.%) compared to other ultramafic suites, iron content is average, alumina and titanium contents are high. Alkali and volatile content is high; H_2O is often greater than 7.5 wt.% and CO_2 is high, 3 wt.% and variable. P_2O_5 content is 0.5 to 1.0 wt.% which is similar to a granite.

These rocks are inequigranular porphyries and breccias dominated by olivine, phlogopite and perovskite. Carbonization and serpentinization characterize both fragments and groundmass. Reaction relationships between early crystals and kimberlite melt are prominant. Mantle derived xenocrysts and phenocrysts as silicates and/or oxides such as pyrope garnet, chrome diopside, picroilmenite, chromite and spinels also occur in these rocks. Although diamond is the most important mineral in the diatremes, the chrome rich minerals (listed above) are much more abundant and make excellent pathfinders.

EXPLORATION PARAMETERS

In the Cordillera heavy mineral concentrate sampling in streams is very effective in identifying concentrations of oxide - silicate diamond indicator minerals because of their high specific gravity, durability in glacio - fluvial regimes and distinctive surface textures and colours (Dummett, et al. 1986). These minerals also have compositions unique to diamondiferous occurrences.

Pipes and diatremes may be recognizable from the air because of the contrast with the rocks they are intruding. Landsat imagery, aerial photographs and reconnaissance mapping are useful exploration tools. Total field magnetics and gravity survey can be useful in delineating ultramafic diatremes. The intrusion of mafic iqueous rock into sedimentary rock should produce a magnetic and a gravity anomaly because of the difference in magnetic susceptibility and density of the rock types. However, when a mafic diatreme intrudes volcanic rocks the gravity and magnetic signatures may not vary enough to distinguish between the two.

Determining whether or not a kimberlitic - lamproitic pipe is diamondiferous is arduous and costly. A rich diamond ore contains one carat per ton (0.2 gm/ton) or one part diamond per 4.5 million parts of waste rock (0.00000022 percent). An average diamond ore contains 0.25 carat per ton or one part per 20 million parts waste rock (0.00000005 percent) (Northcote, 1983).

GEOLOGY

REGIONAL TECTONICS

According to Price (1979), seismic data indicates crustal thickness below the diatreme belt to be the thickest in British Columbia, 50 to 55 km to the Mohorovicic discontinuity. This thickness facilitates diamond formation requiring very high pressures and temperatures occurring below 150 - 220 km depths.

The greatly thickened mass of Rocky Mountain stratigraphy thrust up over the cratonic basement in Late Jurassic to Tertiary time is suggested to have caused basement subsidence and large scale fracturing along pre-existing northeast and northwest basement structures. Several of the Cordilleran diatremes appear to be spatially related to these structures (Fipke, Northcote, 1983).

PROPERTY GEOLOGY

According to Geologist Hugo Dummett as presently defined the Jack Diatreme has approximate surface dimensions of 1200 m by 300 m and has an area of about 57 Ha. Northcote (1983) describes the exposed portion as an eroded top of a semi-stratified subaqueous collapse breccia assumed to be overlying the less diluted main pipe.

The outcropping units are predominately crater infill facies, sandy marls, diatreme dykes and younger tuffs. These rocks contain abundant detritus principally pyrope, chrome diopside, picroilmenite and chromite. In addition, one very small colorless octahedral diamond has been recovered from the marl.

Thin sections of the rock unit yielding the macrodiamond and several diamond indicator minerals (chrome rich pyrope, ilmenite, chromite) have been described by both Dummett and Northcote. The rock is a crudely layered sandy marl sediment comprised of rounded quartz clasts, rounded to subrounded xenoliths of marl, cherty to sandy marl, siltstone, argillite, lithic and exotic, deep mantle source fragments in a calcareous and/or sericitic matrix. A second sample is described by Dummett as "a tuff or fragmental rock with high perlitic dacite glass fragment content and less abundant fragments of marly sediment or microgranular limestone with a scattering of basic andesitic fragments. The glass has been epizonally altered to sericite". The whole rock and thin section analyses indicate the diatreme is lamproitic as opposed to kimberlitic in composition. Two well known lamproites, prolific in diamonds, are the Prairie Creek Pipe in Arkansas and the Argille Pipe in Australia.

The diatreme is probably exposed at a very high level and only one central outcrop of diatreme facies rock has been identified in units that normally occupy the crater facie. The diatreme has been emplaced into a terrain that is very strongly faulted and folded. The host rocks are predominately Middle Ordovician Skoki formation - thin bedded marine carbonate sediments. These units are part of the east-dipping limb of a major NW-SE striking anticline in the upper plate of a thick sedimentary package that is overthrust along the NW trending Mons Creek Fault on an Upper Devonian reefal carbonate sequence.

At present the core logging indicates that the crater lake argillite sequence known to contain piketic (lamproitic) tuff beds was formed in the collapse caldera subsequent to the initial phase 1 breccia diatreme emplacement. The sandy marl unit which conformably overlies the argillite and contains minor fragments of phase 1 and argillite is thought to have developed by erosion and breccia collapse of the crater edges. This event was succeeded by the emplacement of the phase 2 green diatreme breccia characterized by abundant fragments of argillite and phase 1. Phase 2 is thought to have been subsequently intruded by a third phase grey breccia diatreme characterized by only minor breccia fragments of phase 1 and of argillite.

Both drill holes intersected a crater infill phase near the top which is underlain by crater lake sediments. Below the sediments three distinct phases of diatreme breccia were recognized; these were underlain by a second phase of crater lake sediments. Both drill holes were stopped in the second zone of sediments (Fig. 4). These units have been described by H. Dummett and J. Freeze as:

CRATER INFILL PHASE

Pale to medium grey, angular to subrounded, sedimentary and tuffaceous clasts occur in a tuff matrix with fine grained quartz eyes. Beds grade from coarse to fine grained in size. Depositional breccia zones occur occasionally. The sediments vary from being clast supported to matrix supported. Dolomite veinlets crosscut the stratigraphy. The crater infill phase conformably grades into the crater lake sediments.

CRATER LAKE SEDIMENTS

Interbedded mudstone, siltstone and sandstone comprises this sedimentary unit. Soft sediment deformation and worm burrows are evident in the sediment along with pyrite nodules and blebs. The first phase of crater lake sediments is predominantly calcareous; the second phase is generally non-calcareous. Quartz veinlets and quartz filled breccia zones crosscut the stratigraphy in places. A few conformable green volcanic tuff beds have been identified interbedded with the argillaceous crater lake phase.

DIATREME FACIES BRECCIA

Three distinct diatreme phases have been recognized and are described below:

PHASE I:

Is a green aphanitic volcanic rock with minor local whitish prophyroblasts. Outcrops of this phase have not been identified at surface or intersected in drilling. However, phase I occurs as abundant breccia fragments in phase II and to a lesser degree in phase III. Occasional clasts of phase I have also been observed in the crater infill sandy marl phase.

PHASE II:

The top phase consists of 94% very fine grained angular green to brown altered tuff fragments ranging from 5" to less than 1/10" in size. Angular, grey argillite clasts 3" to less than 1/10" in size make up 5% of the clasts. The rest of the clasts are exotic wallrocks less than 1/2" in size. A faint fabric layering is evident in the diatreme which has a matrix to clast ratio of 1:20 to 1:10. The predominant colour of this phase is green although some red-brown oxidized zones are also present.

PHASE III:

This phase is predominantly grey to green-grey in colour and is comprised of 80-90% serpentinized grey-green and green-brown tuffaceous volcanic clasts. The other clasts are grey argillite and 1% silicifed fragments. Average clast size is 1/2"; clasts decrease in size towards the base. The matrix to clast ratio is 20 to 30:1 and there is no layering apparent except a indistinct layering adjacent the basal contact with argillite.

FIELD AND LABORATORY METHODOLOGY

The 771 m of H core drilling was completed in two holes, one a 452 m angle hole inclined at 70^{o} and another 318.7 m verticle hole by Connors Drilling. The drilling (Fig. 4) was completed with the support of Okanagan Helicopters Bell 212, Bell 206 and Astar type helicopters from a camp constructed at 8900' at the tope of the Jack Diatreme. The 771 m of core was transported to the C.F.Mineral Research lab at Kelowna, B.C. Geologist Terry Robertson of Winfield, B.C. relogged the sedimentary crater infill phases intersected. Geologist Hugo Dummett logged the diatreme phases (Appendix 6 & 7).

Upon arrival at C.F. Mineral Research the core was split in half. Half of the split core was prepared in samples of 60 to 80 kg. (Table 1). The samples were then crushed and pulverized to -5mm. They were then ball milled to ±0.5mm on a newly developed ball mill designed to prevent overgrinding (to approximately 0.5mm). After ball milling the -5mm fraction was washed, wet sieved and settled with a dispersing agent. After settling 5 minutes in a shallow tank the clay sized material was decanted from heavier -5mm milled rock and any +0.5mm rock from the ball mill process was dried, TBE and MI heavy liquid concentrated such that the +5mm and -5mm +0.5 micron fractions of -2.9 and +3.27 S.G. fractions were recovered. The resultant heaviest S.G. fractions went through 5 electromagnetic separations so that heavy magnetic ilmenite, pyrope-chrome diopside and non-magnetic diamond concentrates were made. The indicator minerals ilmenite, pyrope-chrome diopside fractions were binocular microscope examined and any possible kimberlitic ilmenites, chromites and pyropes were removed. Pyropes from drill hole 86-2 446' - 494' were polished and scanning electron microscope micro-chemically analysed by Geologist Rosemary Capell.

Some slices of the core were removed for thin section study and sent to petrographer Sid Williams for analyses. Pure phases of the core were hand picked or sawed from the core in such a way as to remove contaminants. The purest phases obtainable were submitted along with standard samples of Sloan Kimberlites as well as Prairie and Twin Nobs 2 lamproite from the U.S.A., to an X-ray laboratory in Ontario for whole rock analysis.

CONCLUSIONS

The exposed portion of the Jack Diatreme is an eroded top of a semi-stratified subaqueous collapse breccia overlying a less diluted main pipe.

Bulk sampling of the collapse breccia produced an excellent quality macrodiamond as well as several pyrope garnets, picro-ilmenites and chromite which have a diamond paragenesis.

Analysis of drill core from the main pipe shows a mineral assemblage unique to diamond bearing pipes. Diamond paragenetic G-11 garnets, picroilmenites and chromites occur in a fragmental rock comprising serpentine, phlogopite and perovskite.

The large size of the diatreme is considered a favourable component in assessing the potential for diamond content when comparing the Jack Pipe to well known diamond producing pipes.

The additional thickening of the earth's crust in the Canadian Cordillera, where the Jack Diatreme is located, is also a favourable condition for diamond genesis.

The discovery of the macrodiamond, the diamond paragenetic mineral assemblage, the large size of the Jack Pipe and the increased thickness of the crust underlying the diatreme all indicate an excellent potential for discovering an economic concentration of diamonds in the Jack Diatreme.

The shape, size, precise location and diamond content of the less diluted pipe below the collapse breccia must be determined. Exploration techniques are limited to crushing of bulk samples and drill core followed by mineral separation techniques because of the dilution of mantle material in diamondiferous pipes and the nature of diamonds and indicator minerals.

RECOMMENDATIONS

Based on the favourable results from exploration to date on the Jack Property the following program is recommended:

1. Geological mapping over the entire property.

2. Bulk sampling and processing of any outcropping collapse breccia or other diatreme related fragmental.

3. Diamond drilling of 2700 feet of H core. Vertical holes should be drilled to depths of 2000 feet (610 metres) or more. Core recovery should be as good as possible. Synthetic diamonds should be used in drill bits to avoid contamination of the core.

4. The drill core should be photographed and logged in detail prior to bulk sample processing. Representative samples of various lithologies should be saved.

5. Core of the main breccia pipe should be sampled in 5 foot (1.5 metre) interfals (approx. 30 kg). These samples should be crushed and separated by mineral type. Quantity and type of indicator minerals and quantity, habit and weight of diamonds recovered should be recorded with depths and lithologic descriptions.

RESULTS

The drill logs of Geologist Terry Robertson and Hugo Dummett are given as Appendices 5 and 6. The weights of the samples processed for microdiamonds and diamond indicators are given in Table 1. The thin section description of Sid Williams are listed in Appendix 2. The whole rock analysis by X-ray labs are given as Appendix 4. The whole analytical results are also plotted on K_2O - SiO_2, Na_2O - SiO_2, CaO - SiO_2, Al_2O_3 - SiO_2, K_2O - Al_2O_3, Nb - Zr diagrams in Figures 6 through 11. The scanning electron microscope results of pyropes extracted from core sample DDH 86-2 (136.0m - 150.6m) are given in Appendix 3.

DIA MET MINERALS

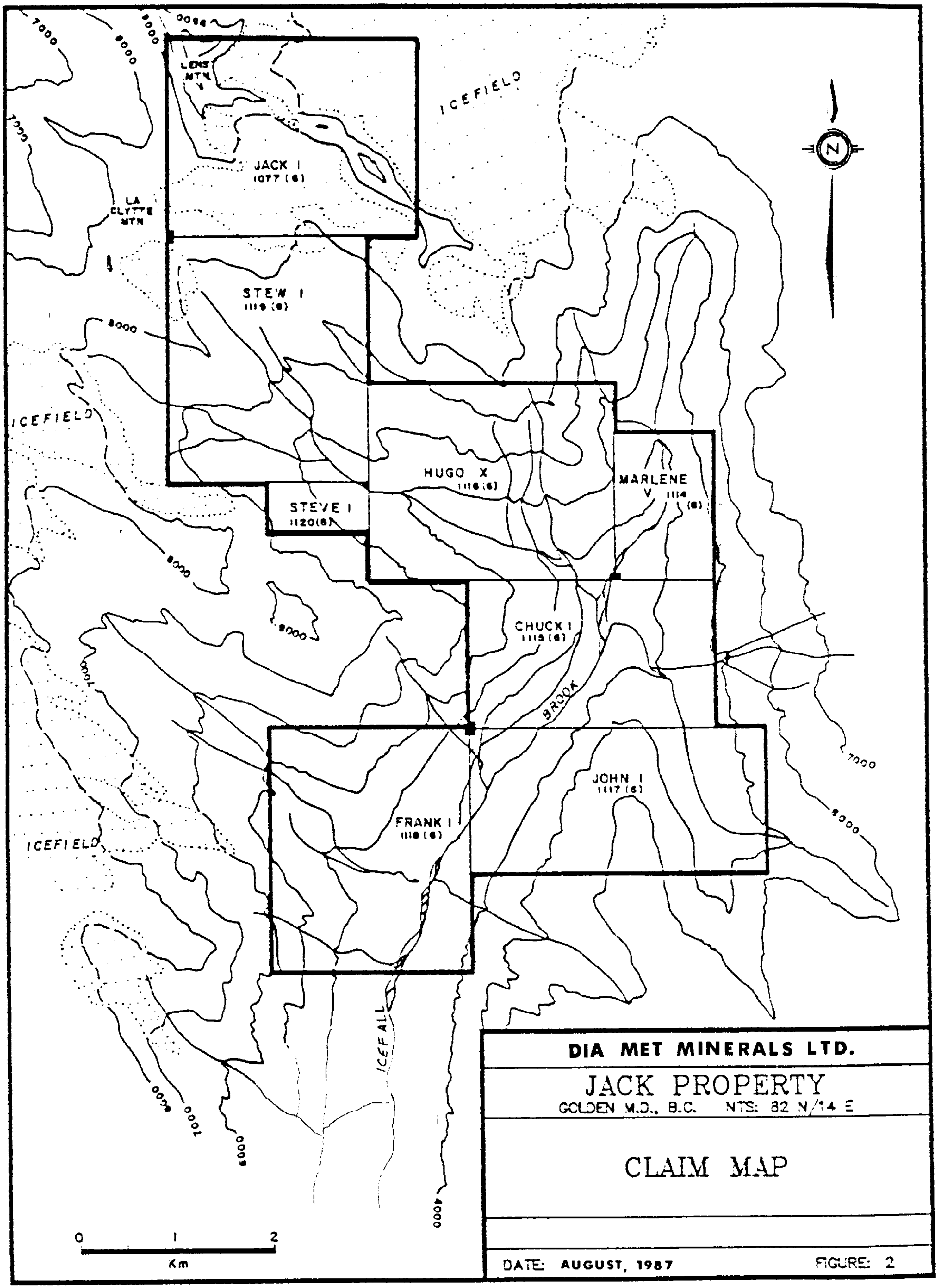
JACK PROPERTY

GOLDEN M.D., B.C. NTS: 82 N/14 E

LOCATION MAP

DATE: AUGUST 1987 FIGURE: 1

RNR



DIA MET MINERALS LTD.

JACK PROPERTY

GOLDEN M.D., B.C. NTS: 82 N/14 E

CLAIM MAP

DATE: AUGUST, 1987

FIGURE: 2

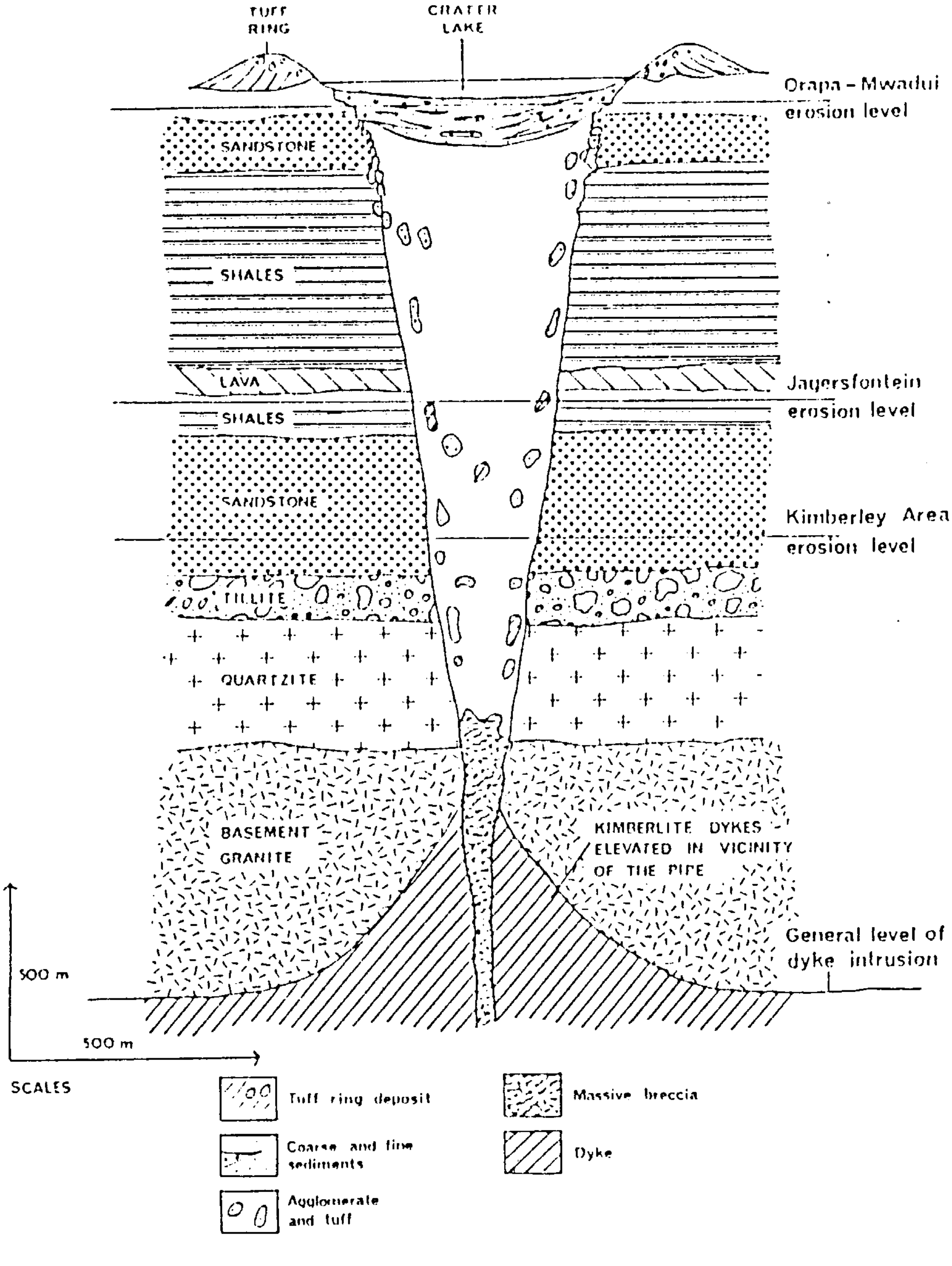
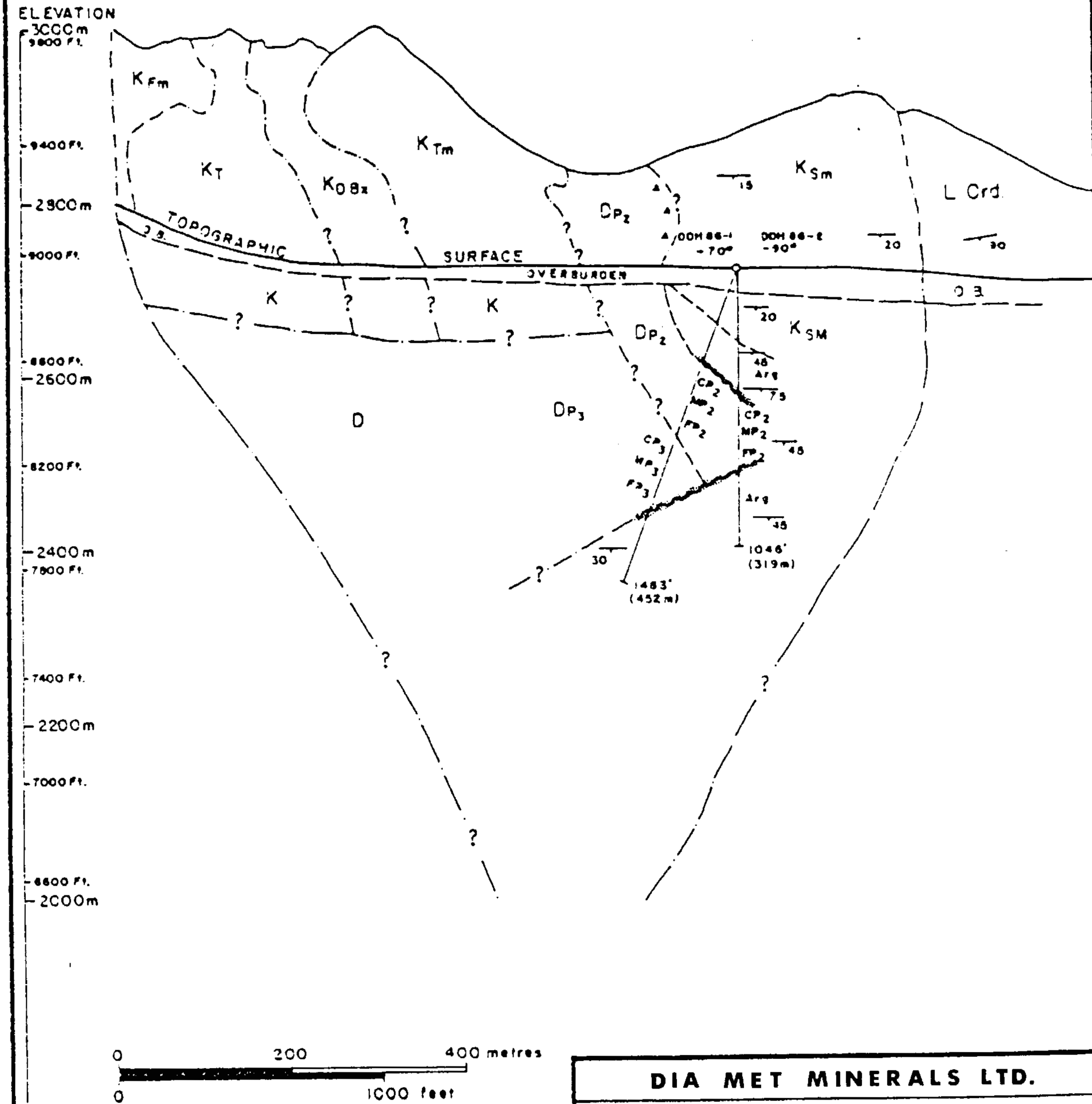


Figure 3

Generalized model of a kimberlite diatreme and its sub-diatreme dykes. (Based on models of Dawson 1967a; Hawthorne 1975).

LEGEND

O.B.	Glacial Ice, Snow and Overburden
	Faulting
	White alteration bleaching and silicification
D	Kimberlitic diatreme facies breccias with varying amounts of coarse (C), medium (M) and fine (F) to medium serpentine, tuff and argillite fragments and rounded autoliths (P1) fine green serpentine phase, (P2) green mostly foliated breccia with abundant P1 fragments, (P3) grey massive breccia with mostly minor P1 fragments.
K	Kimberlitic Crator Infill Phases - sandy marl (SM), tuff and marl (TM), dyke (D), tuff (T), fine - massive phase (FM)
Arg.	Dark grey to black argillite with locally abundant disturbed beds of whitish siltstone. Locally contains nodules of pyrite and thin beds of greenish tuffaceous sediments. As no similar statigraphy has been identified in the area the argillite unit may be derived from a crator lake.
L.Ord.	Lower to Middle Ordovician - Skoki Formation light grey to pale brownish grey dolomite mottled with finely crystalline limestone.



DIA MET MINERALS LTD.

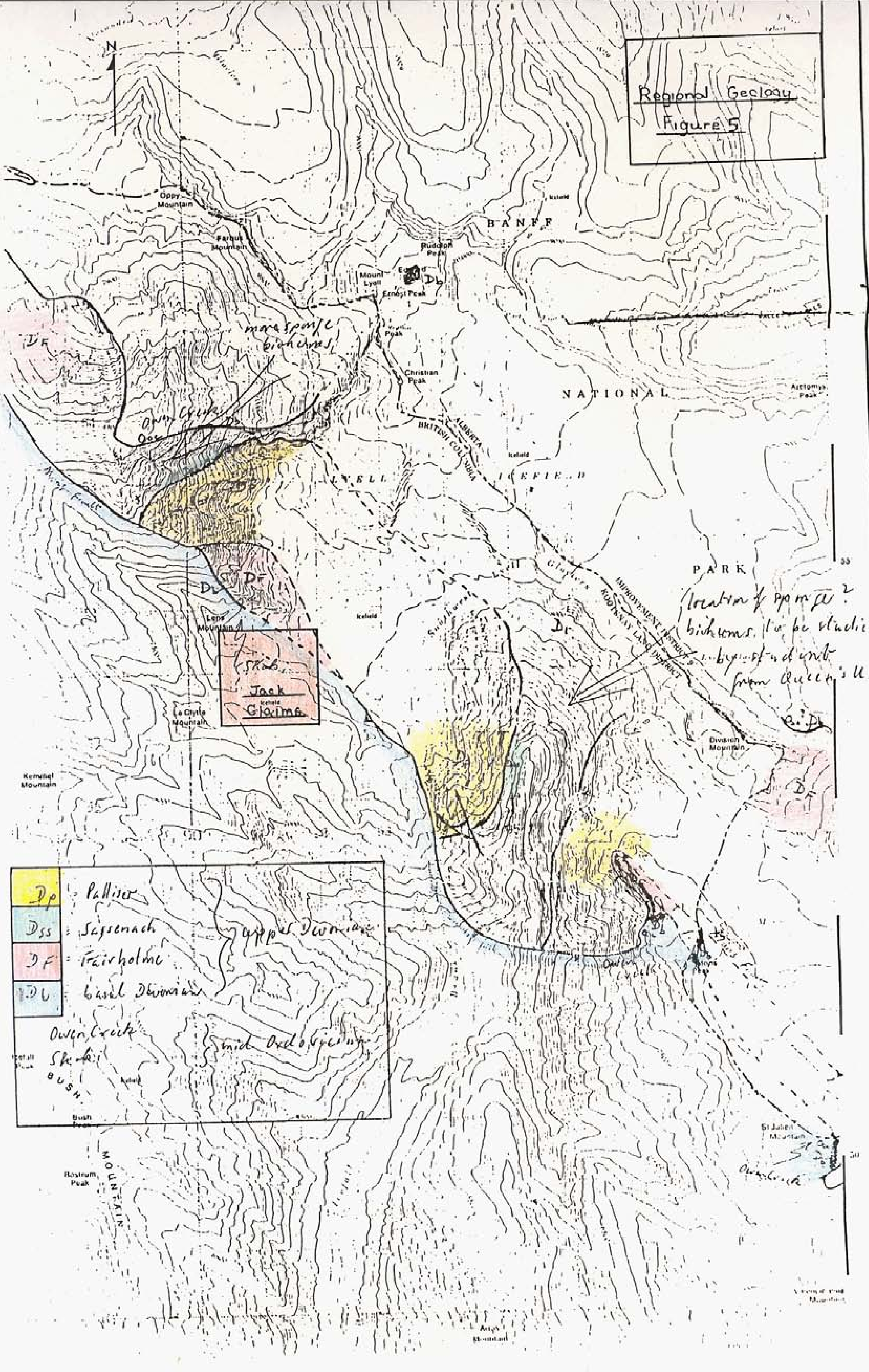
JACK PROPERTY

GOLDEN M.D., B.C. NTS: 82 N/14 E

JACK PIPE CROSS SECTION

(LOOKING NORTHEAST 040°)

DATE: **AUGUST, 1987** FIGURE: **4**


Regional Geology
Figure 5
N
Oppy Mountain
Farbus Mountain
BANFF
NATIONAL
PARK
Rudolph Peak
Mount Lyell
Ernest Peak
Christian Peak
Arctomys Peak
ALBERTA
BRITISH COLUMBIA
LYELL ICEFIELD
IMPROVEMENT DISTRICT 9
KOOTENAY LAND DISTRICT
more sponge bioherms
Oppy Creek
DF
Db
Dp
Lens Mountain
La Clytte Mountain
Kemmel Mountain
Division Mountain
St Julien Mountain
Rostrum Peak
BUSH
MOUNTAIN
Shale
Jack
Claims
location of sponge? bioherms to be studied
Dp : Palliser
Dss : Sassenach
DF : Fairholme
Db : basal Devonian
Upper Devonian
Owen Creek Shale
mid Ordovician
Owen Creek

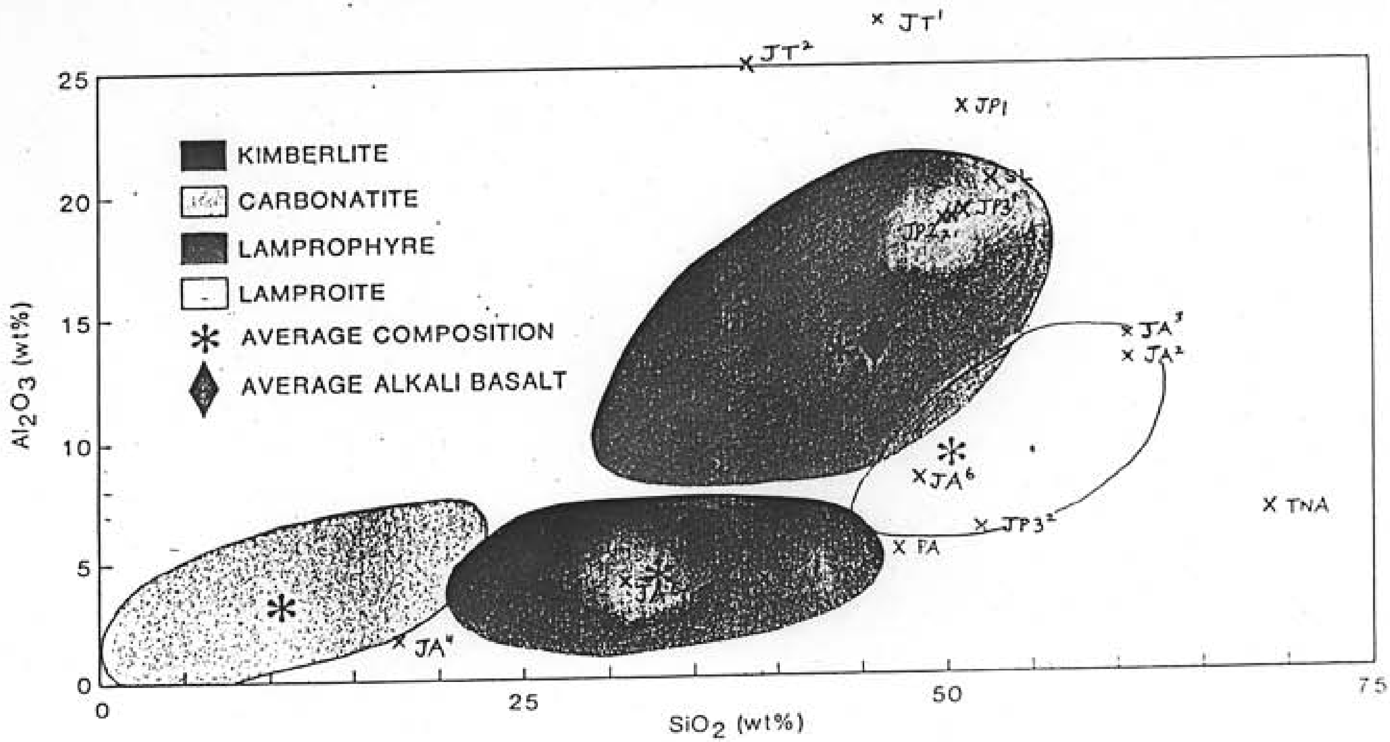


FIGURE 6

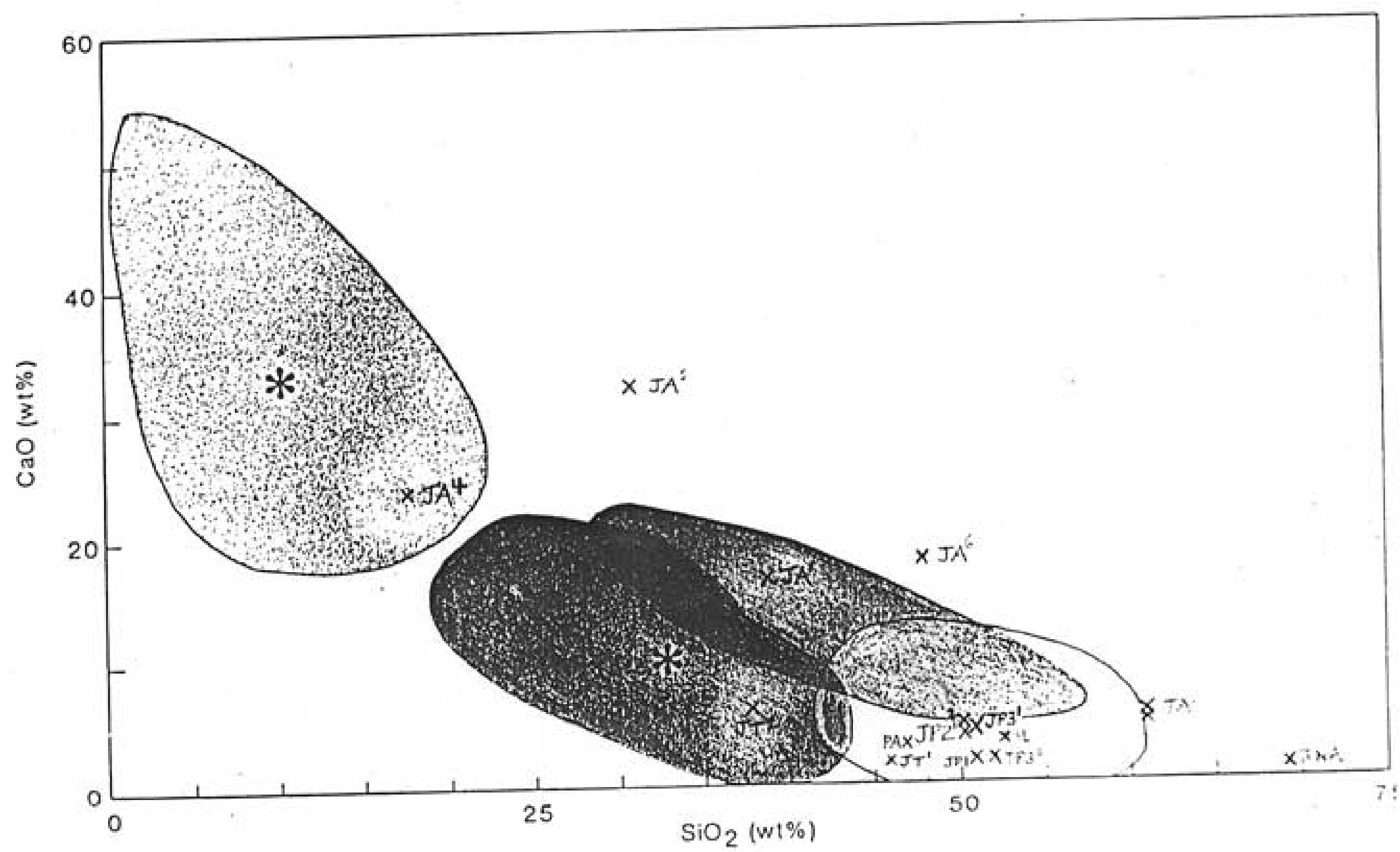


FIGURE 7

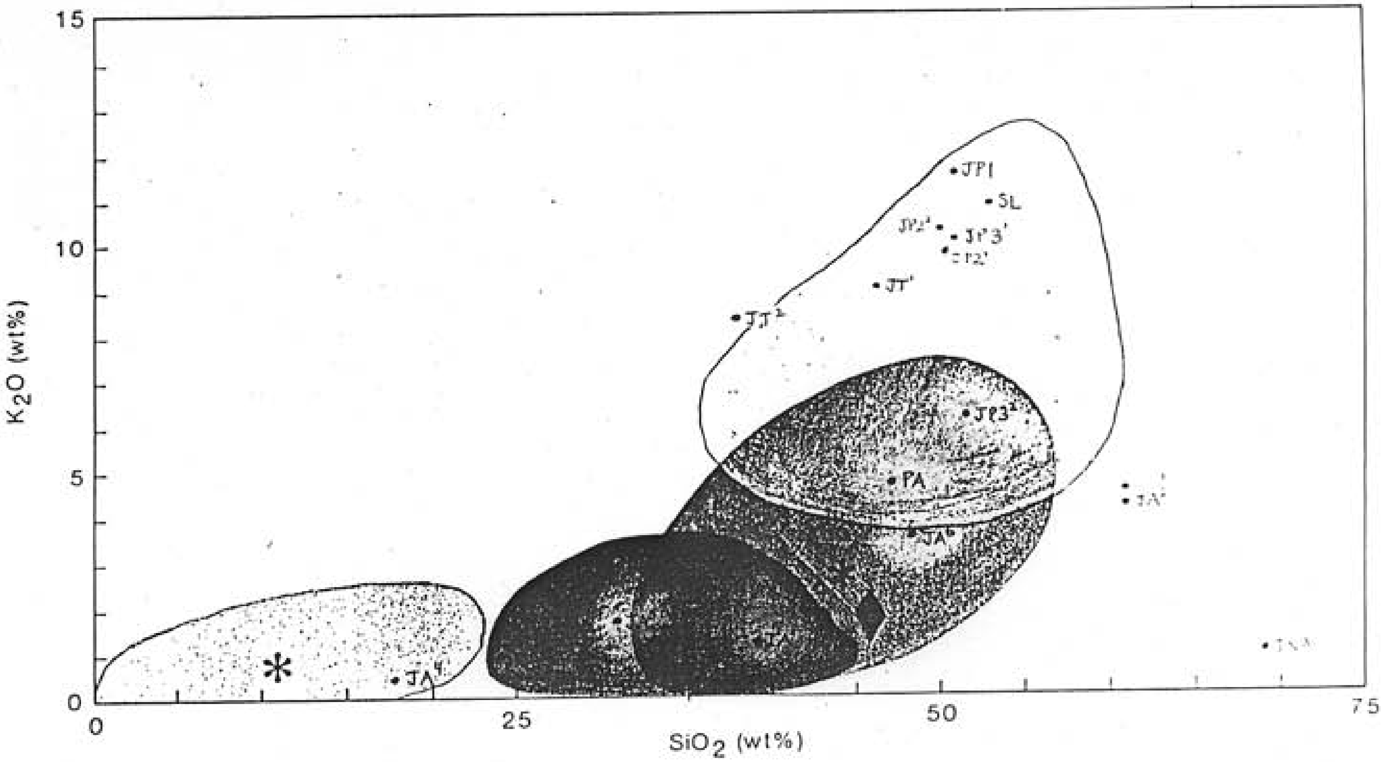


FIGURE 8

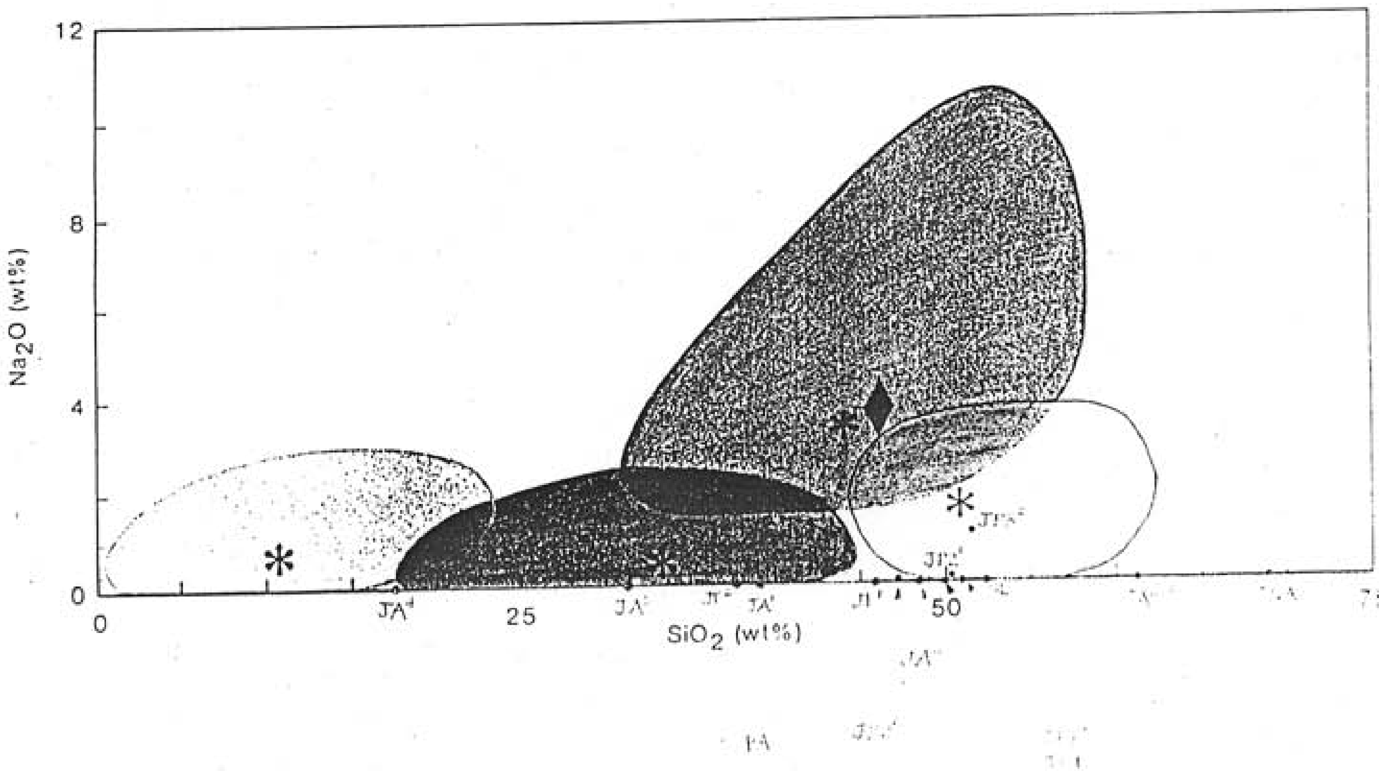


FIGURE 9

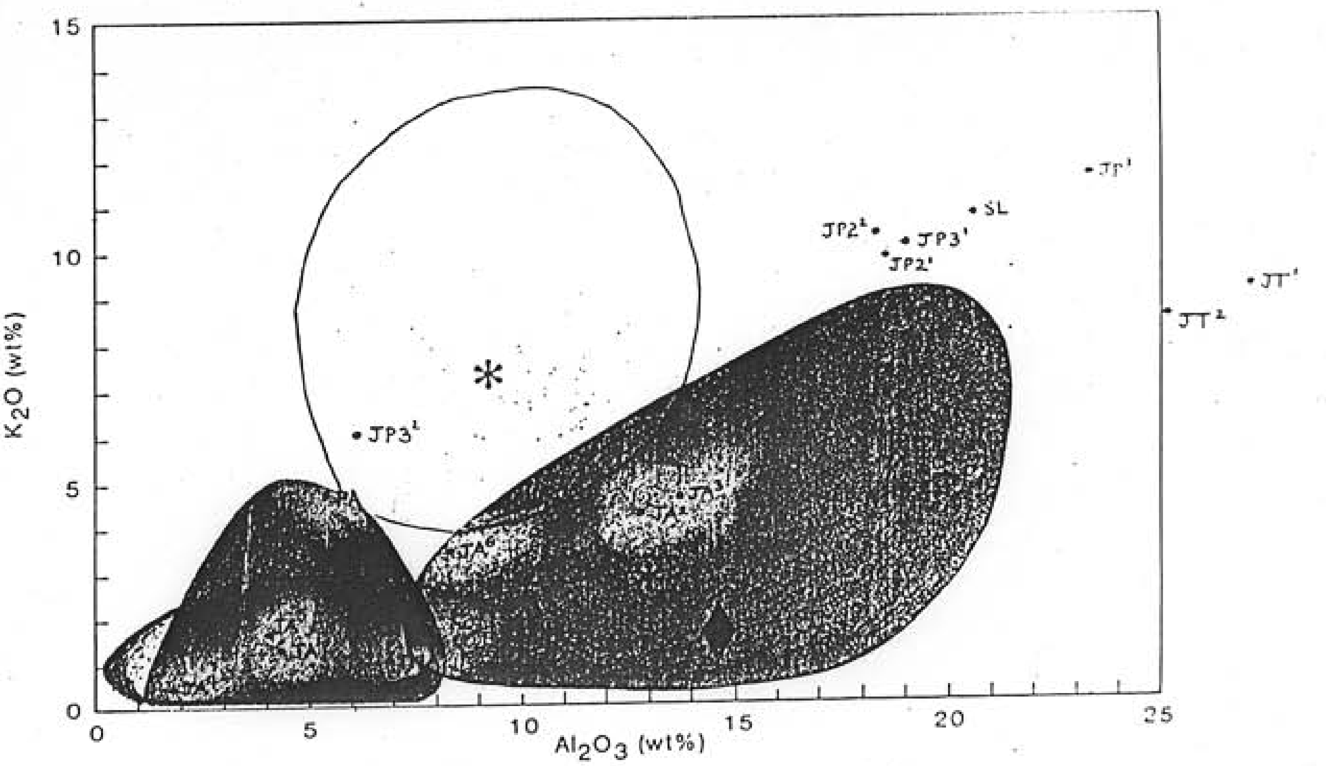
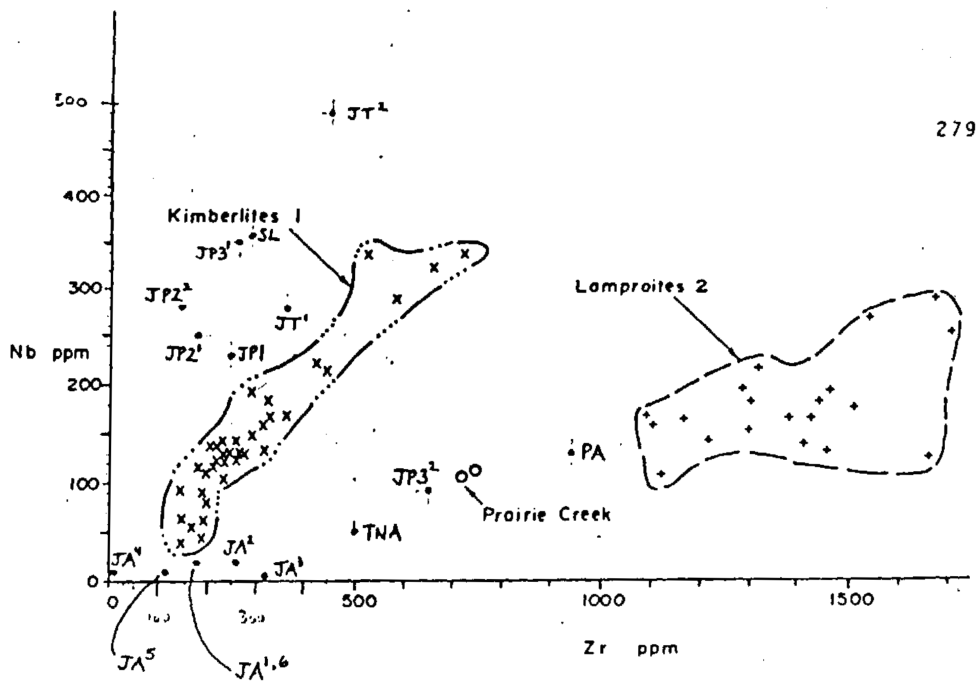
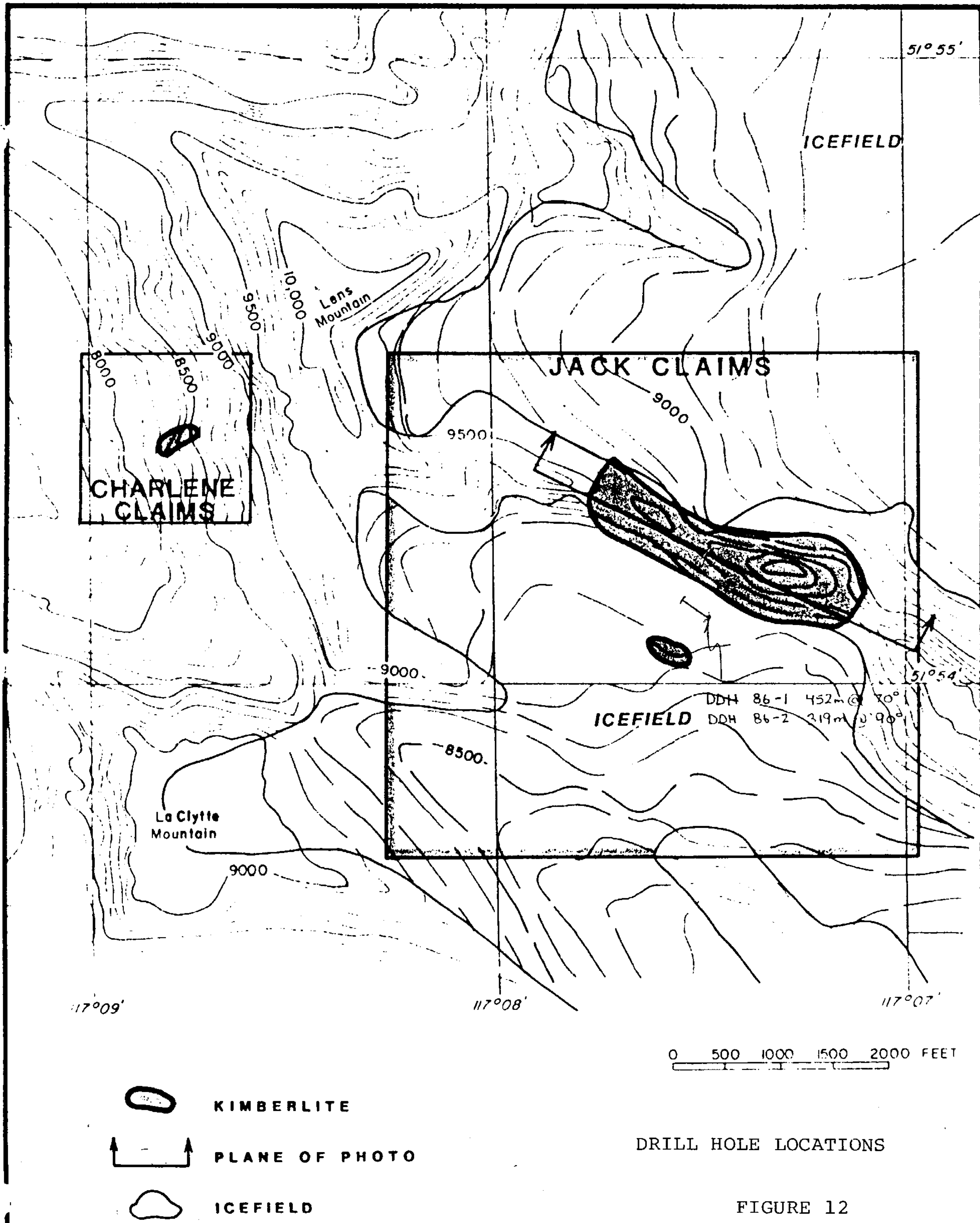

15
10
5
0
K2O (wt%)
0
5
10
15
20
25
Al2O3 (wt%)
JP3²
JP2²
JP3¹
JP2¹
SL
JT¹
JT²
*

FIGURE 10



Nb versus Zr ppm plot for the "hypabyssal" rocks from Prairie Creek together with compositional fields for some kimberlites and lamproites.
Legend: Field 1 = kimberlites: data from the De Beers, Dutoitspan, Wessleton, Finsch, Koffiefontein and Bultfontein kimberlites in South Africa (Clement, in preparation). Field 2 = lamproites: unpublished data from several of the well known lamproites from West Kimberley, Western Australia (A.J. Erlank et al., unpubl.).

FIGURE 11



DRILL HOLE LOCATIONS

FIGURE 12

JACK & CHARLENE KIMBERLITES

TABLE 1

DRILL CORE MICRODIAMOND SAMPLES

DDH 1-87

SAMPLE No.	DEPTH (m)	WEIGHT (kg)
1	117.4 - 136.0	75.3
2	136.0 - 150.6	63.8
3	150.6 - 153.4	12.3
4	153.4 - 171.0	79.1
5	171.0 - 186.3	70.2
6	186.3 - 202.4	69.8
7	202.4 - 217.1	61.7
8	217.1 - 230.5	59.8
9	230.5 - 245.7	63.0
10	245.7 - 261.3	68.9
11	261.3 - 273.2	56.4
12	273.2 - 283.8	49.9

DDH 2-87

1	162.6 - 180.2	67.9
2	180.2 - 197.0	66.8

TABLE 2

PYROPE COMPOSITIONS AND CLASSIFICATION

(Dawson & Stevens 1975)

	MgO	CaO	Cr_2O_3	FeO	Pyrope Classification
	19.06	5.90	5.00	8.02	G9
	17.90	7.28	8.67	7.63	G11
	18.07	7.14	8.08	7.44	G11
	17.21	8.10	10.48	7.34	G11
	17.45	7.50	8.77	7.87	G11
	18.03	6.96	8.44	7.70	G11
	17.21	6.81	4.55	9.84	G9?
	18.29	6.95	10.62	7.19	G11
Av.	17.83	7.32	9.18	7.53	

APPENDIX "1"

STATEMENT OF EXPENDITURES

Project preparation	$ 5,000.00
Geologist: 25 days @ $350/day	8,750.00
Field Assistant: 25 days @ $150/day	3,750.00
Climbers: 10 days @ $300/day	3,000.00
Drilling: Coring 2700 feet @ $65/ft. Supplies, etc.	 175,500.00 10,000.00
Food & Accommodation 110 mandays @ $70/day	7,700.00
Mineral Processing and Analysis	50,000.00
Transportation: Snowmobile Four Wheel Drive Helicopter: - 56 hrs @ $500/hr. - 32 hrs @ $1100/hr.	 3,600.00 1,000.00 63,200.00
Radio Communication	1,000.00
Supplies	2,500.00
Report Writing, Drafting, Reproduction	5,000.00
Administration	10,000.00
TOTAL	$350,000.00

Please apply any excess expenditures granted
to $9,000.00 to PAC account of Chevron Minerals,
to $150,000.00 to PAC account of Island Star Resources and
the balance excess expenditures to the PAC account of
Dia Met Minerals Ltd.

APPENDIX "2"

STATEMENT OF QUALIFICATIONS

C. Fipke is a BSc Honors Geology graduate of the University of British Columbia. Between 1970 and 1977, C. Fipke worked as a geologist involved to a large extent in heavy mineral exploration and research for Kennecott Copper in New Guinea, Samedan Oil in Australia, Johannesburg Consolidated Investments in Southern Africa and Cominco Ltd. in Brazil and British Columbia. C. Fipke and L.M. Fipke organized C.F. Mineral Research Ltd. in 1977. Currently the C. F. Mineral Research heavy mineral laboratory, which employs 25 to 35 people, is involved in heavy mineral exploration and processing on behalf of many international companies.

Joanne C. Freeze is a consulting geologist and principle in Stillwater Enterprises Ltd. She is a graduate of the University of Western Ontario, B.A. (1978) and the University of British Columbia, BSc. (1981). She is a Fellow of the Geological Association of Canada and has practiced her profession continuously since graduation.

Chris Suggitt is currently employed with C.F.Mineral Research Ltd. He is a graduate of the University of British Columbia, BSc. (1986).

APPENDIX "3"

THIN SECTION DESCRIPTIONS

APPENDIX "3"

JC-86-531

The rock is an argillite, originally a clayey sediment that was evidently frequently disturbed during deposition. As a result, clayey domains are really fragments cemented by irregular seams in which angular quartz clasts are the chief detritus. Other clasts (chiefly in the matrix) include plagioclase and micas.

The rock has been strongly altered in the epizone. A fine scaly paste of sericite has replaced all former clays and feldspar clasts. Coarser sericite has developed from mica debris *in situ*. Quartz has been passive during the process. Subtle slip planes occasionally follow the bedding and sericite growth is more advanced in them than elsewhere. These structures also host strings of oxidized sulfide grains (pyrrhotite ?).

JC-86-2-615

The rock is a breccia of uncertain origin. The majority of fragments comprising it are chilled or vitric dacite dotted with tiny phenocrysts. These fragments are usually somewhat rounded and are closely packed with no interstitial debris. They are interspersed with a wide variety of other fragments, mostly basic volcanics. Some of these are normal andesites, others resemble pikeites or madeirites seen elsewhere in the suite.

Epizonal alteration has been intense, blurring textures in the rock fragments. More basic rocks are generally altered to quartz-sericite, and more acid fragments to sericite and dolomite. Strings of dolomite crystalloblasts also follow films of foliated sericite which wind along fragment boundaries.

JC-86-676.5

The rock is believed to have been a tuff, likely of pikeitic composition. Original constituents seem to have been glass and mica (likely phlogopite) plus lesser amounts of glass, olivine, and feldspar. The clasts lie with long axes parallel in a finely bedded fabric, but reworking has not occurred. Subsequent epizonal alteration of the rock was intense.

The mica has simply changed to more hydrous sericite *in situ*, and a finer grained paste of sericite replaces all other minerals and glass alike. Titanium is abundant; leucoxene comprises about 10% of the rock. It occurs as small cloudy spicules on grain boundaries and derives from glass or mafites rather than from perofskite. Thin, sharply bounded veinlets of calcite and barite cut the fabric.

J.S. Dike

The rock is a madeirite, composed originally of mafites and somewhat lesser amounts of plagioclase. All mafites occur as euehdral phenocrysts, and pyroxene is the most abundant of them. Amphibole occurs with less frequency, and small biotite books are only sparingly dispersed. Olivine occurs infrequently but as larger phenocrysts than the other mafites. Plagioclase is present as phenocrysts and as matrix laths that are fairly well aligned to flowage. Accessory minerals are perofskite and apatite.

The rock has been intensely altered in the epizone; only apatite and biotite have survived; perovskite is now cloudy leucoxene. All other minerals are altered to various fine grained mixtures of calcite and sericite. The mafites are distinctively colored by dust-like leucoxene and iron oxides, and the pyroxene and amphibole are believed to have been titanian varieties.

<u>APPENDIX "4"</u>

SCANNING ELECTRON MICROSCOPE

ANALYSIS OF PYROPE GARNETS

AUTOMATIC EDAX ANALYSIS: SET-UP PARAMETERS

DATE:08-MAY-87 TIME:15:00:24

DDH J86-1

LIST OF LOCATIONS:

LOC. NR.:	X-COORD.	Y-COORD	LABEL:
1	3615	1367	1
2	3309	1340	2
3	3058	1228	3
4	2768	1045	4
5	2395	1066	5
6	2381	1243	6
7	2407	1404	7
8	2529	1537	8
9	2785	1707	9
10	2891	1962	10
11	3230	1872	11
12	2636	2311	12
13	2440	2102	13
14	2098	1948	14
15	2099	1487	15

LIST OF ELEMENTS TO BE ANALYSED:

ELEM(Z)	LINE NR.	PB FACT	OX RATIO
12 MG	1	.75	1
13 AL	1	.91	1.5
14 SI	1	1	2
20 CA	1	.828	1
24 CR	1	.9	1.5
25 MN	1	.895	1
26 FE	1	.885	1

LIST OF B.G. SAMPLE POINTS (KEV)

1	0.640
2	0.860
3	0.960
4	1.040
5	2.000
6	2.920
7	4.300
8	4.900
9	6.080
10	8.320
11	9.920
12	11.200
13	11.920
14	13.280
15	14.360
16	15.760
17	16.800
18	18.360

ANALYSIS CONDITIONS:

ACCEL. VOLTAGE (KV) = 18.4
SPECIMEN TILT(DEGR) = 40
X-RAY TAKE-OFF(DEGR)= 42.59
OXIDE NORMALIZATION REQUIRED
Z.A.F. CORRECTION REQUIRED

INSTRUMENTAL PARAMETERS:

BE WINDOW IN MICRON= 7.5
DETECTOR RESOLUTION= 156.84 EV FWHM @ MNKA
ADC GAIN ADJUSTMENT=-202
ADC ZERO ADJUSTMENT=-620
ANALYSER PRESET = 200 LIVE SECS
ELECTRON BEAM INT. = 1 REL. UNITS

AUTOMATIC EDAX ANALYSIS DATE:08-MAY-87

DDH J86-1

1 Q= 1
X= 3615 Y= 1367 15:09:05

ELEM(Z)	INTEN	K-RATIO	WT%	OX%
12 MG	0	0.00000	0.00	0.00
13 AL	0	0.00000	0.00	0.00
14 SI	39440	0.44784	44.71	95.64
20 CA	328	0.00589	0.59	0.83
24 CR	10	0.00027	0.03	0.04
25 MN	81	0.00259	0.28	0.36
26 FE	636	0.02333	2.43	3.13
8 O	0	0.52008	51.96	

2 Q= 1
X= 3309 Y= 1340 15:14:53

ELEM(Z)	INTEN	K-RATIO	WT%	OX%
12 MG	41145	0.11488	11.49	19.06
13 AL	50017	0.10461	11.32	21.39
14 SI	102596	0.18008	18.92	40.47
20 CA	18558	0.05149	4.21	5.90
24 CR	9519	0.04021	3.42	5.00
25 MN	322	0.00159	0.14	0.18
26 FE	12853	0.07289	6.23	8.02
8 O	1	0.43425	44.27	

3

X= 3058 Y= 1228 Q= 1 15:20:31

ELEM(Z)	INTEN	K-RATIO	WT%	OX%
12 MG	33921	0.10417	10.79	17.90
13 AL	39766	0.09147	10.05	18.99
14 SI	91200	0.17606	18.47	39.51
20 CA	20734	0.06327	5.20	7.28
24 CR	14878	0.06913	5.94	8.67
25 MN	33	0.00018	0.02	0.02
26 FE	10968	0.06842	5.93	7.63
8 O	1	0.42730	43.60	

4

X= 2768 Y= 1045 Q= 1 15:26:02

ELEM(Z)	INTEN	K-RATIO	WT%	OX%
12 MG	32567	0.10598	10.90	18.07
13 AL	38593	0.09407	10.30	19.46
14 SI	86698	0.17735	18.60	39.80
20 CA	19197	0.06207	5.10	7.14
24 CR	13096	0.06448	5.53	8.08
25 MN	17	0.00010	0.01	0.01
26 FE	10105	0.06679	5.78	7.44
8 O	1	0.42916	43.78	

5

X= 2395 Y= 1066 Q= 1 15:31:30

ELEM(Z)	INTEN	K-RATIO	WT%	OX%
12 MG	29234	0.09816	10.38	17.21
13 AL	33138	0.08334	9.24	17.46
14 SI	83159	0.17553	18.38	39.32
20 CA	21047	0.07022	5.79	8.10
24 CR	16323	0.08293	7.17	10.48
25 MN	120	0.00071	0.06	0.08
26 FE	9561	0.06521	5.70	7.34
8 O	1	0.42389	43.27	

6

X= 2381 Y= 1243 Q= 1 15:37:39

ELEM(Z)	INTEN	K-RATIO	WT%	OX%
12 MG	0	0.00000	0.00	0.00
13 AL	0	0.00000	0.00	0.00
14 SI	31114	0.45470	45.41	97.15
20 CA	241	0.00557	0.57	0.79
24 CR	257	0.00904	0.95	1.40
25 MN	0	0.00000	0.00	0.00
26 FE	104	0.00491	0.52	0.66
8 O	0	0.52578	52.55	

Quartz

7

X= 2407 Y= 1404 Q= 1 15:43:50

ELEM(Z)	INTEN	K-RATIO	WT%	OX%
12 MG	0	0.00000	0.00	0.00
13 AL	0	0.00000	0.00	0.00
14 SI	30883	0.44396	44.31	94.78
20 CA	322	0.00732	0.74	1.03
24 CR	31	0.00107	0.11	0.16
25 MN	190	0.00769	0.82	1.05
26 FE	478	0.02220	2.31	2.97
8 O	0	0.51776	51.72	

8

X= 2529 Y= 1537 Q= 1 15:50:06

ELEM(Z)	INTEN	K-RATIO	WT%	OX%
12 MG	0	0.00000	0.00	0.00
13 AL	0	0.00000	0.00	0.00
14 SI	33378	0.45758	45.72	97.80
20 CA	304	0.00659	0.67	0.94
24 CR	94	0.00310	0.33	0.48
25 MN	0	0.00000	0.00	0.00
26 FE	130	0.00576	0.61	0.78
8 O	0	0.52697	52.68	

9
X= 2785 Y= 1707 Q= 1
15:55:43

ELEM(Z)	INTEN	K-RATIO	WT%	OX%
12 MG	32736	0.10096	10.52	17.45
3 AL	39617	0.09152	10.05	19.00
.4 SI	90344	0.17515	18.38	39.32
20 CA	21257	0.06514	5.36	7.50
24 CR	14961	0.06981	6.00	8.77
25 MN	163	0.00089	0.08	0.10
26 FE	11253	0.07049	6.12	7.87
8 O	1	0.42605	43.49	

10
X= 2891 Y= 1962 Q= 1
16:01:25

ELEM(Z)	INTEN	K-RATIO	WT%	OX%
12 MG	36011	0.10523	10.87	18.03
13 AL	41982	0.09189	10.09	19.06
14 SI	96570	0.17740	18.60	39.78
20 CA	20838	0.06051	4.97	6.96
24 CR	15239	0.06738	5.78	8.44
25 MN	47	0.00024	0.02	0.03
26 FE	11650	0.06915	5.99	7.70
8 O	1	0.42821	43.69	

11
: 3230 Y= 1872 Q= 1
16:07:04

ELEM(Z)	INTEN	K-RATIO	WT%	OX%
12 MG	34104	0.10138	10.38	17.21
13 AL	47939	0.10674	11.52	21.77
14 SI	93629	0.17496	18.44	39.44
20 CA	20111	0.05940	4.87	6.81
24 CR	8137	0.03660	3.11	4.55
25 MN	654	0.00344	0.30	0.39
26 FE	14791	0.08931	7.65	9.84
8 O	1	0.42817	43.74	

12
X= 2636 Y= 2311 Q= 1
16:13:30

ELEM(Z)	INTEN	K-RATIO	WT%	OX%
12 MG	0	0.00000	0.00	0.00
13 AL	0	0.00000	0.00	0.00
14 SI	41334	0.43010	42.92	91.82
20 CA	610	0.01003	1.00	1.40
24 CR	117	0.00293	0.30	0.44
25 MN	35	0.00102	0.11	0.14
26 FE	1394	0.04687	4.82	6.20
8 O	0	0.50904	50.85	

13
X= 2440 Y= 2102 Q= 1
16:19:02

ELEM(Z)	INTEN	K-RATIO	WT%	OX%
12 MG	34041	0.10567	11.03	18.29
13 AL	36401	0.08463	9.39	17.75
14 SI	89610	0.17486	18.32	39.20
20 CA	19598	0.06045	4.97	6.95
24 CR	18003	0.08455	7.26	10.62
25 MN	0	0.00000	0.00	0.00
26 FE	10192	0.06426	5.59	7.19
8 O	1	0.42558	43.43	

14
X= 2098 Y= 1948 Q= 1
16:24:25

ELEM(Z)	INTEN	K-RATIO	WT%	OX%
12 MG	32274	0.10425	11.05	18.33
13 AL	108905	0.26348	28.26	53.40
14 SI	3161	0.00642	0.86	1.83
20 CA	546	0.00175	0.14	0.20
24 CR	21545	0.10529	8.69	12.70
25 MN	0	0.00000	0.00	0.00
26 FE	18865	0.12377	10.52	13.54
8 O	1	0.39504	40.47	

15
X= 2099 Y= 1487 Q= 1
16:29:47

ELEM(Z)	INTEN	K-RATIO	WT%	OX%	AVERAGE
12 MG	35050	0.12264	11.99	19.88	7.294
13 AL	43127	0.11303	12.12	22.90	8.157
14 SI	82947	0.18244	19.19	41.06	26.083
20 CA	12765	0.04438	3.63	5.07	3.187
24 CR	4968	0.02630	2.23	3.25	3.790
25 MN	261	0.00162	0.14	0.18	0.131
26 FE	9866	0.07012	5.95	7.66	5.077
8 O	1	0.43949	44.76		46.282

APPENDIX "5A" & "5B"

WHOLE ROCK ANALYSIS

APPENDIX "5A"

CERTIFICATE OF ANALYSIS

TO: CHEVRON CANADA RESOURCES LIMITED
ATTN: EARL DODSON
1900-1055 WEST HASTINGS ST.
VANCOUVER, B.C.
V6E 2E9

CUSTOMER NO. 561

DATE SUBMITTED
19-MAR-87

REPORT 31787

REF. FILE 27252-T3

1 SPLIT CORE P.O. 4896

WAS ANALYSED AS FOLLOWS:

	METHOD	DETECTION LIMIT
H2O+ %	WET	0.100
CO2 %	WET	0.010
WRMAJ %	WR	0.010
S %	XRF	0.010
FEO %	WET	0.100
NI PPM	DCP	1.000
WRMIN PPM	WR	10.000

X-RAY ASSAY LABORATORIES LIMITED

CERTIFIED BY ....

DATE 23-APR-87

23-APR-87 REPORT 31787 REF.FILE 27252-T3 PAGE 1 OF 1

SAMPLE	H2O+ %	CO2 %	S %	FEO %	NI PPM
DDH1-316'	3.2	9.25	0.44	0.9	290

X-RAY ASSAY LABORATORIES 23-APR-87 REPORT 31787 REFERENCE FILE 27252 PAGE 1

SAMPLE	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
DDH1-316' JT²	37.8	25.1	6.15	5.73	<0.01	8.43	2.45	0.03	0.93	0.19	<0.01	12.5	99.6

X-RAY ASSAY LABORATORIES 23-APR-87 REPORT 31787 REFERENCE FILE 27252 PAGE 2

SAMPLE	RB	SR	Y	ZR	NB	BA
DDH1-316' JT²	200	170	20	440	490	220

APPENDIX "5B"

CERTIFICATE OF ANALYSIS

TO: CHEVRON CANADA RESOURCES LIMITED
ATTN: EARL DODSON
1900-1055 WEST HASTINGS ST.
VANCOUVER, B.C.
V6E 2E9

CUSTOMER NO. 561

DATE SUBMITTED
16-MAR-87

REPORT 31848

REF. FILE 27198-A4

15 ROCKS

WERE ANALYSED AS FOLLOWS:

	METHOD	DETECTION LIMIT
H2O+ %	WET	0.100
CO2 %	WET	0.010
WRMAJ %	WR	0.010
S %	XRF	0.010
FEO %	WET	0.100
NI PPM	DCP	1.000
WRMIN PPM	WR	10.000

DATE 28-APR-87

X-RAY ASSAY LABORATORIES LIMITED
CERTIFIED BY ....

per Manager

SAMPLE	H2O+ %	CO2 %	S %	FEO %	NI PPM
DDH1-300'	0.6	24.9	0.18	1.6	11
DDH1-302'	1.3	7.60	0.26	0.7	20
DDH1-756'P3	1.4	7.20	0.18	0.8	11
DDH1-766'	3.3	0.10	0.26	0.5	15
DDH1-1048.5'	1.8	6.10	0.80	0.7	15
DDH1-1054'	0.4	37.0	NIL	1.9	8
DDH1-1199'	0.8	27.2	0.02	0.9	9
DDH1-1203.5'	1.2	15.6	0.22	1.3	16
DDH-1-86-410-420'P1	1.5	3.37	NIL	0.7	6
DDH-1-86-410 420'P2	1.7	7.24	NIL	1.2	5
DDH-86-1-668.75'-P1	6.4	0.04	NIL	0.2	530
DDH-86-1-668.75'-P2	1.6	7.95	NIL	1.3	10
DDH-86-1-806.5'-P1	5.9	0.27	0.02	0.7	700
DDH-86-1-806.5'-P2	4.2	0.12	0.04	1.1	640
DDH-86-1-806.5'-P3	1.8	5.54	NIL	0.8	12

X-RAY ASSAY LABORATORIES 28-APR-87 REPORT 31848 REFERENCE FILE 27198 PAGE 1

SAMPLE	SI02	AL203	CAO	MGO	NA20	K20	FE203	MNO	TI02	P205	CR203	LOI	SUM
DDH1-300′	39.1	4.33	16.6	11.0	<0.01	1.28	2.28	0.08	0.18	0.31	<0.01	24.9	100.2
DDH1-302′	61.3	12.8	5.62	4.57	<0.01	4.19	1.27	0.03	0.53	0.40	<0.01	9.62	100.4
DDH1-756′P3	50.9	19.0	4.85	3.50	<0.01	10.1	1.76	0.03	0.49	0.09	<0.01	8.54	99.5
DDH1-766′	46.0	27.1	1.54	1.84	<0.01	9.05	2.12	<0.01	4.71	1.08	0.01	5.08	99.2
DDH1-1048.5′	61.3	13.7	4.58	3.67	<0.01	4.54	2.10	0.03	0.60	0.43	0.01	8.08	99.1
DDH1-1054′	17.6	1.79	24.2	16.3	<0.01	0.42	2.47	0.16	0.10	0.24	<0.01	37.1	100.4
DDH1-1199′	31.3	4.05	32.2	1.96	<0.01	1.67	1.37	0.16	0.17	0.16	<0.01	27.3	100.4
DDH1-1203.5′	48.1	8.27	18.0	2.64	<0.01	3.53	2.08	0.10	0.34	0.21	<0.01	16.5	99.9
DDH-1-86-410-420′P1	50.9	23.3	2.19	2.26	<0.01	11.6	2.63	0.01	0.37	0.08	0.01	6.39	99.9
DDH-1-86-410 420′P2	50.3	18.6	4.65	3.47	0.08	9.81	2.74	0.03	0.35	0.07	<0.01	9.23	99.6
DDH-86-1-668.75′-P1	68.8	6.88	0.99	6.87	<0.01	1.04	6.11	0.29	1.36	0.35	0.09	6.93	100.0
DDH-86-1-668.75′-P2	49.9	18.4	4.97	3.67	<0.01	10.3	2.63	0.05	0.45	0.08	<0.01	9.70	100.4
DDH-86-1-806.5′-P1	47.1	5.27	3.28	17.5	0.04	4.74	8.06	0.11	2.68	2.11	0.10	8.39	99.8
DDH-86-1-806.5′-P2	52.4	20.4	3.56	3.18	<0.01	10.8	1.43	0.03	0.54	0.10	<0.01	7.77	100.5
DDH-86-1-806.5′-P3	51.7	6.05	1.94	15.3	1.10	6.09	6.44	0.17	2.12	1.16	0.08	6.54	99.4

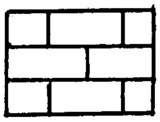
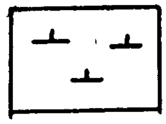
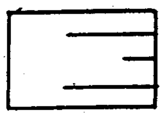
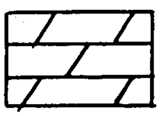
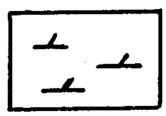
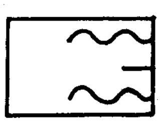
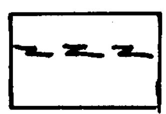
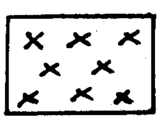
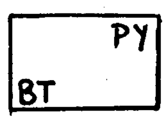
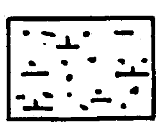
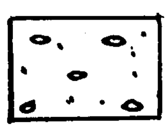
	SAMPLE		RB	SR	Y	ZR	NB	BA
	DDH1-300′	JA[1]	40	280	20	180	20	40
	DDH1-302′	JA[2]	110	170	10	260	20	200
	DDH1-756′P3	JP3[1]	160	420	30	260	350	680
	DDH1-766′	JT[1]	200	690	50	360	280	4230
	DDH1-1048.5′	JA[3]	100	170	20	320	<10	230
	DDH1-1054′	JA[4]	20	400	10	10	10	30
	DDH1-1199′	JA[5]	30	350	10	120	10	140
	DDH1-1203.5′	JA[6]	80	240	30	180	20	220
	DDH-1-86-410-420′P1	JP1	240	160	30	240	230	660
	DDH-1-86-410 420′P2	JP2[1]	190	320	10	180	250	910
MJ1	DDH-86-1-668.75′-P1	TNA	70	200	40	500	50	1670
	DDH-86-1-668.75′-P2	JP2[2]	190	500	30	140	280	760
Pna	DDH-86-1-806.5′-P1	PA	220	970	40	940	130	1260
Slgm1	DDH-86-1-806.5′-P2	SL	200	410	40	280	360	840
	DDH-86-1-806.5′-P3	JP3[2]	170	520	30	650	90	4290

APPENDIX "6"

DRILL LOG DDH 86-1

1 Foot = 0.3048 metres

Litholog Symbol Key

	LIMESTONE		CALCAREOUS
	ARGILLITE OR SHALE		ARGILLACEOUS
	DOLOMITE		DOLOMITIC
	ALTERED ARGILLITE (TUFFACEOUS OR METASED.)		FAULT ZONE
	DIATREME (Igneous)		PYRITIC BIOTURBATED
	SANDY MARL		BRECCIA/CONGLOMERATE

Hole No .... Sheet ....

DIA MET – DIAMOND DRILL SAMPLING RECORD

Property .... Length .... Lat .... Hor. Comp .... Vert. Comp ....

District .... Bearing .... Dep .... Elch at .... Total Recovery % ....

Commenced .... Dip .... Elev .... True Dip .... Logged by ....

Completed .... Objective .... Location ....

FEET		Length (m)	Shorts (m)	Rec'y %	Sample No.	Analysis: CARATS MICRO D	Analysis: % GEM	Analysis: CARATS MACRO D	Analysis: % GEM	Structure angle C.A.	Rock Type	Carat: Diamond	Rock Constituents: Black Mica	Rock Constituents: Carbonate	Rock Constituents: Serpentine	Rock Constituents: Olivine	Rock Inclusions: Round Autoliths	Rock Inclusions: Peridotite	Rock Inclusions: Ultramafic	Rock Inclusions: Country Rock	Mineral Inclusions: Ilmenite	Mineral Inclusions: Chromite	Mineral Inclusions: Cr Diopside	Mineral Inclusions: Garnet – (Pyrope) Brown	Mineral Inclusions: Garnet – (Pyrope) Mauve	Mineral Inclusions:	Mineral Inclusions: Pyrite	Fracturing: Intensity per meter
0'																											
100'																											
125'																											
									fault	41°																	
									bedding	53°																	
150'																											
									bedding	55°																	
175'									bedding	55°																	
									bedding	56°																	
200'									bedding	50°																	
									bedding	54°																	
225'									bedding	46°																	
250																											

D.D.H. 86-1 T. W. ROBERTSON

Page.........continued

Scale 25':1"

N.B. This hole was drilled 70° from horizontal at an azimuth of 310°

Geological Descriptions			General			
ROCK TYPES: eg 4m-9m micaceous kimberlite DIORITE PORPHYRY; grey weathered, 25% phlogopite, 5% carbonate, 70% serpentine matrix	DESCRIPTION OF INCLUSION, MINERALIZATION AND ALTERATION	STRUCTURE: pre- or post-mineral faults, < to core axis of slickensides, bedding etc.	REMARKS	Rock Strength weak mod. strong	METERS	Specific Gravity
0'-101' OVERBURDEN — No CORE						
101'-119' NO CORE						
119'-125'-6" DOLOMITE: gy-dk gy very argillaceous	microxlline highly fractured & infilled	with wh-crm c xl qtz & dolomite	Massive			
125'-6"-136' BRECCIA: gy w/ dk gy irreg. argill.	bedding laminae rnd. med-c. qtz	{ fault zone 129-131'-6" w/ m. Fe stain				
grains & num. s.ang-	s.rnd chert frag in sl calc-calc matrix	{ fault angle is 41° CA				
much Fe staining &	increased calcareous matrix below 131'-6"	2" qtz vein @ 129'				
136'-219'-3" SANDY MARL, dolomitic grey with						
much s.rnd-rnd coarse qtz		fracture 15° CA w/ s. Fe stain @ 149'				
grains & some angular-sub ang.						
chert fragments						
		large chert nodule @ 177'				
		faulted & brecciated zone @ 179' 6" wide				
		with fractures & Fe stn				
		Fe stn fracture @ 182'-6" 25° CA.				
		½" fault zone @ 190' 40° CA large chert				
		nodule @ 192' - Fe stn fracture @ 194'				
		near // CA				
		- multible fracture zone w/ Fe stn at				
		207-214' generally 30-40° CA				
219-3"-219-9" - CONTACT ZONE - gradation from	sandy marl to argillite	- 1" wh dolomite str at 220-1" w/small				
219-9"-376 ARGILLITE: gy-dk gy sl. calc or		py nodule & stylolite inclusions				
dolomitic good shaly cleavage, wavy with	{ mottled patches appear to	} - 1" py nodule @ 222-3"				
lt gy mottled patches (GRAPHITIC appearance)	{ be more argillaceous dolo.					

DIA MET – DIAMOND DRILL SAMPLING RECORD

Hole No .... Sheet ....

Property	Length	Lat	Hor Comp	Vert Comp ....
District	Bearing	Dep	Elev of	Total Recovery % ....
Commenced	Dip	Elev	True Dip	Logged by ....
Completed	Objective		Location	

FEET	Length (m)	Shorts (m)	Rec'y %	Sample No.	Analysis: Carats Micro D	% Gem	Carats Macro D	% Gem / Structure	Angle C.A.	Rock Type
250'										
								bedding	50°	
275'								bedding	42°	
								bedding	45°	
300'										
								bedding	58°	
								bedding	72°	
								bedding	55°	
325'										
								bedding	47°	
350'										
								bedding	45°	
375'										
								bedding	45°	
400'										

Carat	Rock Constituents				Rock Inclusions				Mineral Inclusions							Fracturing
Diamond	Black Mica	Carbonate	Serpentine	Olivine	Round Autoliths	Peridotite	Ultramafic	Country Rock	Ilmenite	Chromite	Cr Diopside	Garnet (Pyrope) Brown	Garnet (Pyrope) Mauve	—	Pyrite	Intensity per meter

D.D.H. 86-1 T. W. ROBERTSON Page continued

Scale 25':1"

Geological Descriptions			General			
ROCK TYPES: eg 4m-9m micaceous kimberlite DIORITE PORPHYRY: grey weathered, 25% phlogopite, 5% carbonate, 70% serpentine matrix	DESCRIPTION OF INCLUSION, MINERALIZATION AND ALTERATION	STRUCTURE: pre- or post-mineral faults, < to core axis of slickensides, bedding etc.	REMARKS	Rock Strength weak mod. strong	METERS	Specific Gravity
		258-259' much broken rock ? fault ?				
		265-267' broken rock & fault zone. ½" thick 26° CA				
	267' ½" qtzite bed immediately below fault zone					
279-299: less carbonate patches in the argillite						
	290-300' scattered small pyrite blebs					
299-302': increased carbonate patches	½" pyrite nodule @ 300'					
302-313: reduced carbonate content						
	312-313: wh dolomite infilling worm burrows – small pyrite nodules					
314-3"-316-6" TUFF? green gy v. sl. calc sl vary w/s scattered dolomitic blebs rip up clasts at top	→ high mica/chlorite content in TUFF?					
316-6"-376 ARGILLITE: interlaminated & interbedded massive dk gy sl. calc argillite & lt. gy, more calcareous dolomitic argillite, turbated in part with a few ? worm burrows – becoming more massive towards the base		lateral fracture/fault with slickensides at 340' very irregular but near // CA.				
	– more very fine pyrite scattered throughout					
– faint bedding –	– generally non-calcareous below 365'					
376-384: ALTERED ARGILLITE: greenish argillite faintly bedded	– more finely disseminated pyrite towards the base	– marked "contact zone" @ 376-377				
384 – DIATREME: green breccia facies						

D.D.H. 86-1 Page .... continued

Geological Descriptions			General			
ROCK TYPES eg. 4m-9m micaceous kimberlite DIORITE PORPHYRY; grey weathered, 25% phlogopite, 5% carbonate, 70% serpentine matrix	DESCRIPTION OF INCLUSION, MINERALIZATION AND ALTERATION	STRUCTURE: pre- or post-mineral faults, < to core axis of slickensides, bedding etc.	REMARKS	Rock Strength weak mod. strong	METERS	Specific Gravity
368' – 384'6" DARK GREY TO BLACK ARGILLITE WITH ± 0.5% TO ±1.0% PYRITE AS FINE-GRAINED DISSEMINATED GRAINS OR GRAIN AGGREGATES STRUNG OUT PARALLEL TO WEAK FOLIATION / BEDDING	376' – 384'6" GREEN "CHLORITIC" ALTERATION OF ARGILLITE ADJACENT TO CONTACT WITH DIATREME BRECCIA.	WEAK "PHYLLITIC" FABRIC DIPS 47° C.A. CORE PARTS ∥ TO A FABRIC WHICH DIPS ± 57° C.A THIS MAY BE BEDDING				
384'6" — 424'0" GREEN DIATREME FACIES BRECCIA LAYERING / BEDDING FABRIC WELL-DEFINED; AVERAGE CLAST SIZE IS ± 3/4"	MATRIX : CLAST RATIO IS ABOUT 1:20 CLASTS RANGE IN SIZE FROM 5" TO < 1/10"). CLASTS ARE 80% ANGULAR GREEN, V-F-GR'D, ALTERED ?KIMBERLITIC TUFF; ± 5% ANGULAR, GREY TO DARK GREY ARGILLITE; ±5% ANGULAR GREY ARGILLITE. ALTERATION IS PREDOMINANTLY A GREEN ? SERPENTINIZATION WHICH IS V-F-GR	BRECCIA FRAGMENTS DEFINE A FABRIC WHICH DIPS 57° TO C.A (395'), 62° TO C.A (416'): THIS FABRIC IS ∥ TO DIRECTION OF PARTING U/W CONTACT IS ~~?~~ MARKED BY BROKEN CORE INCLUDING 1" CLAY GOUGE ZONE. (? FAULT). AT 393' HIGHLY IRREGULAR + 2" WIDE WHITE QTZ — LIGHT PINK FELSPAR VEIN ZONE, WHICH DIPS SUB-PARALLEL TO CORE AND INCLUDES FRAGS OF WALL ROCK. AT 401, ± 2" QTZ-FELSP VEIN, SUB ∥ TO C.A AT 420' 1/4" QTZ-FELSP VEIN, DIPS 20° TO C A AT 422' IRREG 1/4" QTZ-FSP V " "				
424'0" — 436' GREEN DIATREME FACIES BRECCIA LAYERING STILL WELL-DEFINED; AVERAGE CLAST SIZE IS ±1/2".	MATRIX : CLAST RATIO IS ABOUT 1:20 CLASTS ARE ±80% GREEN ? SERPENTINIZED / CLAY ALTERED ?KIMBERLITIC TUFF (ANGULAR, 3" TO <1/10"); ±10% GREY, ~~BLK~~ ARGILLITE (ANGULAR, 5" TO <1/10"); ± 10% OTHER FRAGS E.G. GREEN ?ALTERED ARGILLITE,	LAYERING FABRIC DUE TO FRAGMENT ELONGATION IS 60° TO C.A. (441') AND 52° TO C.A (484'). AT 425' : 1/4" QTZ-FSP V. 26° TO C.A. 441' : 1/10"-1/4" GREEN QTZ-FEL V; 10° TO C.A 444' : 1/4" QTZ-FELS V: 22° TO C.A. 448' : ±1/10" " " "; 23° TO C.A.				
448'6" — 451'3" FAULT ZONE: YELLOW-BROWN GOUGE OF COARSE (~5") AND FINE (<1/10") FRAGS OF DIATREME BRECCIA IN CLAY GOUGE ATTITUDE OF FAULT APPEARS TO BE ≈ NORMAL TO CORE AXIS.						

Hole No .... Sheet ....

DIA MET – DIAMOND DRILL SAMPLING RECORD

Property .... Length .... Lat .... Hor Comp .... Vert. Comp ....

District .... Bearing .... Dep .... Etch at .... Total Recovery % ....

Commenced .... Dip .... Elev .... True Dip .... Logged by ....

Completed .... Objective .... Location ....

Depth	Meters		Length (m)	Shorts (m)	Rec'y %	Sample No.	Analysis: Carats Micro D	Analysis: % Gem	Analysis: Carats Macro D	Analysis: % Gem		Rock Type
450'												
	456'	466'	10'	9'6"								
460'												
	466	476	10'	9'9"								
470'												
	476	486	10'	9'10"								
480'												
	486'	496										
490'												
	496	506										
500'												
	506'	516	10'	10'	100							
510'												
	516	526	10'	10'	100							
520'												

Carat: Diamond	Rock Constituents: Black Mica	Rock Constituents: Carbonate	Rock Constituents: Serpentine	Rock Constituents: Olivine	Rock Inclusions: Round Autoliths	Rock Inclusions: Peridotite	Rock Inclusions: Ultramafic	Rock Inclusions: Country Rock	Mineral Inclusions: Ilmenite	Mineral Inclusions: Chromite	Mineral Inclusions: Cr Diopside	Mineral Inclusions: Garnet – (Pyrope) Brown	Mineral Inclusions: Garnet – (Pyrope) Mauve	Mineral Inclusions: —	Mineral Inclusions: Pyrite	Fracturing: Intensity per meter

D.D.H. ....

Page........continued

Geological Descriptions			General			
ROCK TYPES eg 4m-9m micaceous kimberlite DIORITE PORPHYRY; grey weathered, 25% phlogopite, 5% carbonate, 70% serpentine matrix	DESCRIPTION OF INCLUSION, MINERALIZATION AND ALTERATION	STRUCTURE: pre- or post-mineral faults, < to core axis of slickensides, bedding etc.	REMARKS	Rock Strength weak mod. strong	METERS	Specific Gravity
461' — 712' GREEN DIATREME FACIES BRECCIA.	MATRIX CLAST RATIO IS ±1:20' CLASTS	LAYERING / FABRIC 60° @ 524'				
FABRIC / LAYERING NOT DISTINCT; AVERAGE	ARE ±95% V-F-GR, ANGULAR	56° @ 571'				
CLAST SIZE <½". IN PARTICULAR THIS	GREEN TO BROWN ALTERED VOLCANIC	62° @ 614 ∴ V. WEAKLY SHOWN				
PHASE OF BRECCIA CONTAINS <5% OF	(? KIMBERLITIC) TUFF FRAGMENTS (5" TO	FROM 614 TO 712 LAYERING IS DIFFICULT				
WALLROCK / EXOTIC CLASTS	<1/10"), ±5% GREY, INDURATED AND	TO MEASURE				
	ANGULAR ARGILLITE CLASTS (3" TO <1/10").					

Hole No .... Sheet ....

DIA MET – DIAMOND DRILL SAMPLING RECORD

Property	Length	Lat	Hor Comp .... Vert Comp ....
District	Bearing	Dep	Etch at .... Total Recovery % ....
Commenced	Dip	Elev	True Dip .... Logged by ....
Completed	Objective		Location ....

Depth	Feet (from)	Feet (to)	Length (m)	Shorts (m)	Rec'y %	Sample No.	Analysis: Carats Micro D	% Gem	Carats Macro D	% Gem		Rock Type	Carat: Diamond	Rock Constituents: Black Mica	Carbonate	Serpentine	Olivine	Rock Inclusions: Round Autoliths	Peridotite	Ultramafic	Country Rock	Mineral Inclusions: Ilmenite	Chromite	Cr Diopside	Garnet (Pyrope) Brown	Garnet (Pyrope) Mauve		Pyrite	Fracturing: Intensity per meter
590																													
	596	606	10'	10'	100																								
600'																													
	606	616	10'	9'9"																									
610'																													
	616	626	10'	10'	100																								
620'																													
	626	636	10'	9'4"																									
630																													
	636	646	10'	9'3"																									
640'																													
	646	656	10'	9'10"																									
650'																													
	656	666	10'	9'10"																									
660																													

DIA MET – DIAMOND DRILL SAMPLING RECORD

Hole No .... Sheet ....

Property	Length	Lat	Hor Comp	Vert Comp ....
District	Bearing	Dep	Etch at	Total Recovery % ....
Commenced	Dip	Elev	True Dip	Logged by ....
Completed	Objective		Location	

Depth	FEET From	FEET To	Length (m)	Sharts (m)	Rec'y %	Sample No.	Analysis: CARATS MICRO D	% GEM	CARATS MACRO D	% GEM		Rock Type
666'												
	666	676	10'	9'2"								
670'												
	676	686	10'	9'9"								
680'												
	686	696	10'	10'	100							
690'												
	696	706	10'	9'8"								
700'												
	706	716	10'	9'8"								
710'												
	716	726	10'	9'4"								
720'												
	726	736	10	9'10"								
730'												

Carat: Diamond	ROCK CONSTITUENTS: Black Mica	Carbonate	Serpentine	Olivine	ROCK INCLUSIONS: Round Autoliths	Peridotite	Ultramafic	Country Rock	MINERAL INCLUSIONS: Ilmenite	Chromite	Cr Diopside	Garnet – (Pyrope) Brown	Mauve	—	Pyrite	Fracturing: Intensity per meter

D.D.H. ....   Page .... continued

Geological Descriptions			General			
ROCK TYPES eg 4m-9m micaceous kimberlite DIORITE PORPHYRY; grey weathered, 25% phlogopite, 5% carbonate, 70% serpentine matrix	DESCRIPTION OF INCLUSION, MINERALIZATION AND ALTERATION	STRUCTURE: pre- or post-mineral faults, < to core axis of slickensides, bedding etc.	REMARKS	Rock Strength weak mod. strong	METERS	Specific Gravity
	599'2" – 605' GREEN-BROWN V-F-GR ? TUFF FRAGMENT CUT BY SIX QTZ-FSP VEINLETS, 1/10" – 1/4", DIPPING ±25° TO CORE AXIS					
	622'8" – 628' BROWN-RED OXIDATION ZONE IN GREEN DIATREME BRECCIA					

Hole No .... Sheet ....

DIA MET – DIAMOND DRILL SAMPLING RECORD

Property .... Length .... Lat .... Hor Comp .... Vert Comp ....
District .... Bearing .... Dep .... Etch at .... Total Recovery % ....
Commenced .... Dip .... Elev .... True Dip .... Logged by ....
Completed .... Objective .... Location ....

Depth	Feet (from)	Feet (to)	Length (m)	Shorts (m)	Rec'y %	Sample No	Analysis: Carats Micro D	% Gem	Carats Macro D	% Gem		Rock Type
730'												
	736	746	10'	9'7"								
740'												
	746	756										
750'												
	756	766										
760'												
	766	776	10'	10'								
770'												
	776	786	10'	9'10"								
780'												
	786	795.5	9'6"	9'0"								
790'												
	795.5	805.75	10'3"	10'3"								
800'												

Carat: Diamond	Rock Constituents: Black Mica	Carbonate	Serpentine	Olivine	Rock Inclusions: Round Autoliths	Peridotite	Ultramafic	Country Rock	Mineral Inclusions: Ilmenite	Chromite	Cr Diopside	Garnet – (Pyrope): Brown	Mauve	—	Pyrite	Fracturing: Intensity per meter

D.D.H. ....

Page.........continued

Geological Descriptions			General			
ROCK TYPES eg 4m-9m micaceous kimberlite DIORITE PORPHYRY; grey weathered, 25% phlogopite, 5% carbonate, 70% serpentine matrix	DESCRIPTION OF INCLUSION, MINERALIZATION AND ALTERATION	STRUCTURE: pre- or post-mineral faults, < to core axis of slickensides, bedding etc.	REMARKS	Rock Strength weak mod. strong	METERS	Specific Gravity
712' — ±756' GREY DIATREME FACIES BRECCIA	CLAST:MATRIX RATIO IS 7.5:1 CLASTS	716'-721' ZONE OF STOCKWORK OF QTZ-FSP				
LAYERING INDISTINCT CLASTS ARE LARGE AND	ARE ±80% GREY-GREEN V-F-GR ? TUFF,	VEINLETS DIPPING AVERAGE OF 64° TO C.AXIS				
ANGULAR AT UPPER CONTACT (AVGE + 1") BECOMING	± 20% GREY ARGILLITE (INDURATED),	SOME VEINS IRREGULAR				
SMALLER TO ±756" (AVGE ±1/2"), ± 1% GREY SILICIFIED						
FRAGMENTS.						
	726'-730'5" ZONE OF GREY, F-GR	H/W CONTACT DIPS 24° TO C. AXIS.				
	SILICA REPLACING BRECCIA. SILICIFICATION	F/W CONTACT DIPS 60° TO C. AXIS.				
	PRESERVES RELICT TEXTURE OF THE					
	BRECCIA.					

Hole No .... Sheet ....

DIA MET – DIAMOND DRILL SAMPLING RECORD

Property .... Length .... Lat .... Hor Comp .... Vert Comp ....

District .... Bearing .... Dep .... Etch at .... Total Recovery % ....

Commenced .... Dip .... Elev .... True Dip .... Logged by ....

Completed .... Objective .... Location ....

	FEET		Length (m)	Shorts (m)	Rec'y %	Sample No	Analysis: Carats Micro D	Analysis: % Gem	Analysis: Carats Macro D	Analysis: % Gem		Rock Type	Carat: Diamond	Rock Constituents: Black Mica	Rock Constituents: Carbonate	Rock Constituents: Serpentine	Rock Constituents: Olivine	Rock Inclusions: Round Autoliths	Rock Inclusions: Peridotite	Rock Inclusions: Ultramafic	Rock Inclusions: Country Rock	Mineral Inclusions: Ilmenite	Mineral Inclusions: Chromite	Mineral Inclusions: Cr Diopside	Mineral Inclusions: Garnet (Pyrope) Brown	Mineral Inclusions: Garnet (Pyrope) Mauve	——	Pyrite	Fracturing: Intensity per meter
900																													
	805.75	816	10'	10'2"																									
810'																													
	816	826	10'	9'10"																									
820'																													
	826	836	10'	9'9"																									
830'																													
	836	846	10'	9'5"																									
840'																													
	846	856	10'	9'9"																									
850'																													
	856	866	10'	9'10"																									
860'																													
	866	876	10'	10'																									
870'																													

Hole No .... Sheet ....

DIA MET – DIAMOND DRILL SAMPLING RECORD

Property .... Length .... Lat .... Hor Comp .... Vert Comp ....
District .... Bearing .... Dep .... Etch at .... Total Recovery % ....
Commenced .... Dip .... Elev .... True Dip .... Logged by ....
Completed .... Objective .... Location ....

	FEET		Length (m)	Shorts (m)	Rec'y %	Sample No.	Analysis: CARATS MICRO D	% GEM	CARATS MACRO D	% GEM		Rock Type	Coral: Diamond	Rock Constituents: Black Mica	Carbonate	Serpentine	Olivine	Rock Inclusions: Round Autoliths	Peridotite	Ultramafic	Country Rock	Mineral Inclusions: Ilmenite	Chromite	Cr Diopside	Garnet (Pyrope): Brown	Mauve	—	Pyrite	Fracturing: Intensity per meter
870'																													
	876	886	10'	9'9"																									
880'																													
	886 –	896	10'	9'9"																									
890'																													
	896	906	10'	9'2"																									
900'																													
	906	916	10	9'3"																									
910'																													
	916	926	10'	9'9"																									
920'																													
	926	931	10'	5'6"																									
930'	931	938.5	7'6"	7'6"	100																								
	938.5	946	7'6"	7'6"	100																								
940'																													

D.D.H. ....

Page........continued

Geological Descriptions			General			
ROCK TYPES eg. 4m-9m micaceous kimberlite DIORITE PORPHYRY; grey weathered, 25% phlogopite, 5% carbonate, 70% serpentine matrix	DESCRIPTION OF INCLUSION, MINERALIZATION AND ALTERATION	STRUCTURE: pre- or post-mineral faults, < to core axis of slickensides, bedding etc.	REMARKS	Rock Strength weak mod. strong	METERS	Specific Gravity
756' - 806' GREY DIATREME FACIES BRECCIA.	MATRIX : CLAST RATIO IS ?30:1. CLASTS					
LAYERING NOT EVIDENT AVERAGE CLAST	ARE ±90% ? SERPENTINIZED GREY-GREEN					
SIZE ±½"	AND GREEN-BROWN TUFFACEOUS VOLCANICS.					
	765'-766'6" — LARGE, LIGHT-GREY					
	FRAGMENT OF KIMBERLITIC TUFF.					
	[illegible]					
	[illegible] 776.5'	787' — 1" COMPOSITE QTZ-FSP VEIN DIPS 13°				
		TO C. AXIS.				
	[illegible] 795.5'.					
	[illegible]					

O.D.H. ....

Page.........continued

Geological Descriptions			General			
ROCK TYPES eg. 4m-9m micaceous kimberlite DIORITE PORPHYRY; grey weathered, 25% phlogopite, 5% carbonate, 70% serpentine matrix	DESCRIPTION OF INCLUSION, MINERALIZATION AND ALTERATION	STRUCTURE: pre- or post-mineral faults, < to core axis of slickensides, bedding etc.	REMARKS	Rock Strength weak mod. strong	METERS	Specific Gravity
806' - 931' GREY TO GREEN-GREY DIATREME FACIES BRECCIA. LAYERING INDISTINCT. AVERAGE CLAST SIZE < 1/2"	CLAST TO MATRIX RATIO: > 20:1 CLASTS ARE ± 95% GREEN AND GREY GREEN ALTERED (SERPENTINIZED ± CLAY) VOLCANICS MINOR GREY ARGILLITE FRAGS. 329' [illegible] 310' [illegible] RED OXIDATION FROM 912' - 931'	MANY IRREG QTZ-FSP VEINLETS FROM 800' TO 931'. VEINS TYPICALLY 1/10" - 1" WIDE. DIPPING FROM 20° TO 60° TO CORE AXIS.				
931' — GREYISH BLACK MOTTLED ARGILLITE. ~~[illegible]~~ BROKE	931' - 998' - GREEN ALTERATION ZONE IN ARGILLITE. [illegible] 949' - 956' RED OXIDATION ZONE IN ARGILLITE.		CORE BROKEN 929' - 932'			

Hole No .... Sheet ....

DIA MET – DIAMOND DRILL SAMPLING RECORD

Property	Length	Lat	Hor Comp ....
District	Bearing	Dep	Etch at ....
Commenced	Dip	Elev.	True Dip ....
Completed	Objective		Location ....

Vert. Comp ....
Total Recovery % ....
Logged by ....

Meters		Length (m)	Shorts (m)	Rec'y %	Sample No.	Analysis: Carats Micro D	% Gem	Carats Macro D	% Gem	Structure Angle C.A.	Rock Type	Carat: Diamond	Rock Constituents: Black Mica	Carbonate	Serpentine	Olivine	Rock Inclusions: Round Autoliths	Peridotite	Ultramafic	Country Rock	Mineral Inclusions: Ilmenite	Chromite	Cr Diopside	Garnet – (Pyrope): Brown	Mauve	———	Pyrite	Fracturing: Intensity per meter
925'																												
									bedding	69°																		
950'									bedding	65°																		
									bedding	57°																		
975'																												
									bedding	60°																		
1000'																												
									bedding	60°	Py																	
1025'																												
1050																												
1075																												

D.D.H. 86-1 T.W. ROBERTSON

Page .... continued

Scale 25':1"

Geological Descriptions			General			
ROCK TYPES: eg. 4m-9m micaceous kimberlite DIORITE PORPHYRY; grey weathered, 25% phlogopite, 5% carbonate, 70% serpentine matrix	DESCRIPTION OF INCLUSION, MINERALIZATION AND ALTERATION	STRUCTURE: pre- or post-mineral faults, < to core axis of slickensides, bedding etc.	REMARKS	Rock Strength weak mod. strong	METERS	Specific Gravity
↑ DIATREME ↑						
931-949' ALTERED ARGILLITE: Green non-calcareous waxy	"chloritic" with widely disseminated pyrite					
949-956' ALTERED ARGILLITE: Red oxidization zone very sl. calcareous in part	- serpentinized in part (green mafic mineral foliations)					
956-962' ALTERED ARGILLITE: Green with irregular red clasts	non calc					
962-968' ALTERED ARGILLITE: Green grey with wavy laminations & a few reddish clasts						
968-995 ARGILLITE: dark grey-black dense sl. calc with lt. gy more calc irregular laminae - becoming more regularly laminated towards the base w/ 1 or 2 red clasts						
995-1007 ALTERED ARGILLITE: interbdd irreg. lam. red & gn; w/ s. broken rock	- chloritic & waxy in part					
1007-1017 ARGILLITE & ALT. ARGILLITE: irreg. varved dk gy & lt olive gn as above	- 6" irreg wh dol & qtz band at 1010'-6"					
1017-1019 ALTERED ARGILLITE: lt gn-pink	- oxidized in part					
1019-1023 ALT. ARGILLITE: bright gn-mauve	- highly altered & mineralized much pyrite 1020-1022					
1023-1027 AS ABOVE: grading to lt. olive gn	- 1" irreg. dolomite vug @ 1023					
1027-1045'-6" ARGILLITE: dk gy irreg. varved w/ lighter col. dolomitic varves	- sl. dolomitic - 1" reddish alt argillite section at 1045-5"					
1045-6" - 1050' LOST CORE						
1050-1051 ARGILLITE: as above						
1051-1060'-6" ARGILLITE: lt gn gy - gy irreg. varved sl. altered?	- non calc w/ 1½" wh-crm coarse xl dolomite @ 1060-6"					
1060-6" - 1083' ARGILLITE & DOLOMITE: interbdd gy, micro-fine xl, very argil, calc dolomite & argillite a.a.	- scattered finely disseminated pyrite					

Hole No .... Sheet ....

DIA MET – DIAMOND DRILL SAMPLING RECORD

Property	Length	Lat	Hor Comp ....
District	Bearing	Dep	Etch at ....
Commenced	Dip	Elev	True Dip ....
Completed	Objective		Location ....

Vert Comp ....
Total Recovery % ....
Logged by ....

Meters		Length (m)	Shards (m)	Rec'y %	Sample No.	Analysis: Carats Micro D	% Gem	Carats Macro D	% Gem	Structure Angle C.A	Rock Type	Carat: Diamond	Rock Constituents: Black Mica	Carbonate	Serpentine	Olivine	Rock Inclusions: Round Autoliths	Peridotite	Ultramafic	Country Rock	Mineral Inclusions: Ilmenite	Chromite	Cr Diopside	Garnet – (Pyrope): Brown	Mauve		Pyrite	Fracturing: Intensity per meter
1075'																												
										bedding 70°																		
1100'																												
1125'																												
										bedding 67°																		
1150'																												
1175'																												
1200'																												
										bedding 70°																		
											BT																	
1225'										bedding 60°																		

D.D.H. 86-1 T.W. ROBERTSON

Page .... continued

Scale 25':1"

Geological Descriptions			General			
ROCK TYPES: eg. 4m-9m micaceous kimberlite DIORITE PORPHYRY: grey weathered, 25% phlogopite, 5% carbonate, 70% serpentine matrix	DESCRIPTION OF INCLUSION, MINERALIZATION AND ALTERATION	STRUCTURE: pre- or post-mineral faults, < to core axis of slickensides, bedding etc.	REMARKS	Rock Strength weak mod. strong	METERS	Specific Gravity
a.a. – becoming more argillitic towards the	1083					
1083-1105 ARGILLITE: grey-dk gy finely varved or interlaminated	– with increasing lime content with depth					
1105- ARGILLITE & LIMESTONE: dk gy to black calcareous argillite & light grey to grey argillaceous fine xlline limestone – massive interlaminations of each lithology	– a few scattered wh calcite stringers 1/2"–1" thick generally along bedding planes					
1217-1221 General lithology as above with	massive calcite & qtz fracture filling	much turbation/bioturbation in part w/ qtz & calcite infilling ?worm burrows				

Hole No .... Sheet ....

DIA MET – DIAMOND DRILL SAMPLING RECORD

Property .... Length ....
District .... Bearing ....
Commenced .... Dip ....
Completed .... Objective ....
Lat .... Dep .... Elev ....
Hor Comp .... Vert Comp ....
Etch at .... Total Recovery % ....
True Dip .... Logged by ....
Location ....

Meters		Length (m)	Shorts (m)	Rec'y %	Sample No.	Analysis: Carats Micro D	% Gem	Carats Macro D	% Gem	Structure	Angle to C.A.	Rock Type
1225'												BT
										bedding	70°	BT
1250'												
1275'										bedding	70°	
1300'										bedding	55°	
1325'												
										bedding	66°	
1350'										bedding	60°	
1375												

Carat: Diamond	Rock Constituents: Black Mica	Carbonate	Serpentine	Olivine	Rock Inclusions: Round Autoliths	Peridotite	Ultramafic	Country Rock	Mineral Inclusions: Ilmenite	Chromite	Cr Diopside	Garnet – (Pyrope): Brown	Mauve	—	Pyrite	Fracturing: Intensity per meter

O.D.H. 86-1 T.W. ROBERTSON

Page .... continued

Scale 25':1"

Geological Descriptions			General			
ROCK TYPES eg. DIORITE PORPHYRY; grey weathered, 4m-9m micaceous kimberlite 25% phlogopite, 5% carbonate, 70% serpentine matrix	DESCRIPTION OF INCLUSION, MINERALIZATION AND ALTERATION	STRUCTURE: pre- or post-mineral faults, <to core axis of slickensides, bedding etc.	REMARKS	Rock Strength weak mod. strong	METERS	Specific Gravity
1228 - 1228'-6" general lithology as above but	bioturbated and infilled a.a.					
1241-1242 - bioturbated & white mineral	infilling ? worm burrows					
1242-1243 - DITTO						
	1279 pyrite blebs					
1285 & 1287 bioturbated zones with	irregular 1/2"-2" qtz & calcite veins &	numerous fracture & ? worm burrow infillings				
	1292-1292-6" qtz w/ some calcite band					
1292-6" 1298 AS ABOVE but a marked	decrease in lime content 2"-	4" qtz & calcite veins ~1295 - 1297				
1298 - increased lime content again						
1342 - increased shale content & decreased limey	material — becoming only	sl calc.				
	1358'-6" to 1365 several scattered irregular qtz & calcite veins					
	1361' 2" bed of gn waxy shale (altered	argillite ?)				
	with 1/4" vein of qtz & calcite					

DIA MET – DIAMOND DRILL SAMPLING RECORD

Hole No .... Sheet ....

Property	Length	Lat	Hor Comp	Vert Comp ....
District	Bearing	Dep	Etch at	Total Recovery % ....
Commenced	Dip	Elev	True Dip	Logged by ....
Completed	Objective		Location	

METERS		Length (M)	Shorts (M)	Rec'y %	Sample No.	Analysis: CARATS MICRO D	% GEM	CARATS MACRO D	% GEM	Structure Angle C.A	Rock Type	Carat: Diamond	Rock Constituents: Black Mica	Carbonate	Serpentine	Olivine	Rock Inclusions: Round Autoliths	Peridotite	Ultramafic	Country Rock	Mineral Inclusions: Ilmenite	Chromite	Cr Diopside	Garnet – (Pyrope): Brown	Mauve	——	Pyrite	Fracturing: Intensity per meter
1375'																												
1400'																												
										55°																		
1425'																												
										51°																		
1450'										48°																		
										70°																		
1475'																												
											1483 TD																	

D.D.H. 86-1 T.W. ROBERTSON Page.........continued

Scale 25':1"

Geological Descriptions			General			
ROCK TYPES eg 4m-9m micaceous kimberlite DIORITE PORPHYRY; grey weathered, 25% phlogopite, 5% carbonate, 70% serpentine matrix	DESCRIPTION OF INCLUSION, MINERALIZATION AND ALTERATION	STRUCTURE: pre- or post-mineral faults, <to core axis of slickensides, bedding etc.	REMARKS	Rock Strength weak mod. strong	METERS	Specific Gravity
1382-1391 ARGILLITE & DOLOMITE: interbedded argillite aa and lt gy f-m xlline argillaceous calcareous dolomite						
1391-1412 ARGILLITE: dk gy-blk	- scattered fine pyrite	- massive, with a few thin qtz & dolomite veins				
1412-1475 ARGILLITE & DOLOMITE: laminated & interbedded dk gy-blk argillite & gy fine xlline argillaceous calc dolomite	- widely scattered veins, fracture fillings & burrow? infillings of qtz & dolomite	- highly irregular laminations, varves & lenses of alternating lithologies				
	1452-1455 - massive qtz with dolomite fracture filling vein 1/4-1/2" wide ~// to C.A	1455-6" ?bedding plane fault 48° CA slickensides on shaly surface				
	1466-1474 num qtz veins ~// CA	- highly disturbed area - possible unconformity marked change in bedding orientation below 1474				
1474-1483 ARGILLITE/LIMESTONE: dk gy very calcareous argillite alternating to v. argillaceous lighter grey limestone	1/2" pyrite nodule @ 1480'					

APPENDIX "7"

DRILL LOG DDH 86-2

1 Foot = 0.3048 metres

Hole No .... Sheet ....

DIA MET – DIAMOND DRILL SAMPLING RECORD

Property	Length	Lat	Hor Comp ....
District	Bearing	Dep	Etch at ....
Commenced	Dip	Elev	True Dip ....
Completed	Objective		Location ....

Vert Comp ....
Total Recovery % ....
Logged by ....

Meters		Length (m)	Shorts (m)	Rec'y %	Sample No.	Analysis: Carats Micro D	% Gem	Carats Macro D	% Gem	Structure	Angle C.A.	Rock Type
0												
125'												
										bedding	65°	
150										bedding	55°	
										bedding	52°	
175'												
200												
										bedding	50°	
225												
										bedding	50°	
250										bedding	43°	

Carat: Diamond	Rock Constituents: Black Mica	Carbonate	Serpentine	Olivine	Rock Inclusions: Round Autoliths	Peridotite	Ultramafic	Country Rock	Mineral Inclusions: Ilmenite	Chromite	Cr Diopside	Garnet (Pyrope): Brown	Mauve		Pyrite	Fracturing: Intensity per meter

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SCALE 1":25'

Page .... continued

NB. This is a vertical hole

Geological Descriptions			General			
ROCK TYPES eg 4m-9m micaceous kimberlite DIORITE PORPHYRY; grey weathered, 25% phlogopite, 5% carbonate, 70% serpentine matrix	DESCRIPTION OF INCLUSION, MINERALIZATION AND ALTERATION	STRUCTURE: pre- or post-mineral faults, < to core axis of slickensides, bedding etc.	REMARKS	Rock Strength weak mod. strong	METERS	Specific Gravity
0-128' OVERBURDEN: NO CORE						
128' → SANDY MARL: grey with dark grey irregular shaly laminations fine-med grained sub-rounded qtz grains and some sub-ang. to sub-rnd chert & other rock fragments in a sl. calc dolomitic matrix	- scattered fine pyrite					
	- 140'-3" Dolomite & Qtz vein 2.2" wide 55° c/a					
	- 2nd vein 10° c/a @ 140'-9"					
	- 143'-8" to 144'-9" argillite inclusion clasts					
	- Fe stain on fault sfc's at 161'	- 2 narrow faults 20° c/a at 161'-161'-2" 50° c/a at 164'-10"				
	- 184'-6" to 186'-9" crm-pink & wh Dolomite & qtz veining 10° c/a.					
	- increased calcareous matrix below 198'					
	- becoming only sl. calcareous					

Hole No .... Sheet ....

DIA MET – DIAMOND DRILL SAMPLING RECORD

Property .... Length .... Lat .... Hor Comp .... Vert Comp ....
District .... Bearing .... Dep .... Etch at .... Total Recovery % ....
Commenced .... Dip .... Elev .... True Dip .... Logged by ....
Completed .... Objective .... Location ....

Depth	Meters		Length (m)	Shorts (m)	Rec'y %	Sample No	Analysis: Carats Micro D	% Gem	Carats Macro D	% Gem	Structure Angle C/A	Rock Type	Carat: Diamond	Rock Constituents: Black Mica	Carbonate	Serpentine	Olivine	Rock Inclusions: Round Autoliths	Peridotite	Ultramafic	Country Rock	Mineral Inclusions: Ilmenite	Chromite	Cr Diopside	Garnet – (Pyrope): Brown	Mauve		Pyrite	Fracturing: Intensity per meter
250'																													
										bedding	50°																		
275'																													
											Py																		
300'										bedding	50°																		
325'																													
										bedding	43°																		
350'																													
375'																													
										bedding	59°																		
400'																													

D.D.H. 86-2 T.W ROBERTSON

Page ... continued

SCALE 1":25'

Geological Descriptions: ROCK TYPES eg 4m-9m micaceous kimberlite DIORITE PORPHYRY; grey weathered, 25% phlogopite, 5% carbonate, 70% serpentine matrix	DESCRIPTION OF INCLUSION, MINERALIZATION AND ALTERATION	STRUCTURE: pre- or post-mineral faults, < to core axis of slickensides, bedding etc.	General: REMARKS	Rock Strength weak mod. strong	METERS	Specific Gravity
250'9" - 253'-2" TRANSITION ZONE: darker more argillaceous sandy marl grading to argillite with irregular bedding						
253'-2" → ARGILLITE: grey - dk. grey irregularly bedded with light grey to grey micro- v.f. xlline argillaceous dolomite laminae & lenses	- ? very slightly calcareous - widely scattered pyrite - several pyrite nodules from 280'-284' - widely scattered rock fragments and other clasts throughout	- fault gouge @ 253'-2" 60° C/A				
	1" wide wh dolomite vein at 372'	Fe stained fractures @ 365' ~05° C/A about 50° C/A				

DIA MET - DIAMOND DRILL SAMPLING RECORD

Hole No .... Sheet ....

Property	Length	Lat	Hor. Comp	Vert. Comp ....
District	Bearing	Dep	Etch at	Total Recovery % ....
Commenced	Dip	Elev.	True Dip	Logged by ....
Completed	Objective		Location	

Meters		Length (m)	Shorts (m)	Rec'y %	Sample No	Analysis: Carats Micro D	% Gem	Carats Macro D	% Gem	Structure	Angle C/A	Rock Type
400'												
										bedding	57°	
425'												
										bedding	45°	
										bedding	50°	
450'												
										bedding	46°	
475'												
										bedding	50°	
										bedding	38°	
500'												
										bedding	42°	
										bedding	45°	
525'												

Carat: Diamond	Rock Constituents: Black Mica	Carbonate	Serpentine	Olivine	Rock Inclusions: Round Autoliths	Peridotite	Ultramafic	Country Rock	Mineral Inclusions: Ilmenite	Chromite	Cr Diopside	Garnet + (Pyrope): Brown	Mauve	—	Pyrite	Fracturing: Intensity per meter

D.D.H. 86-2 T.W. ROBERTSON Page .... continued

SCALE 1":25'

Geological Descriptions			General			
ROCK TYPES eg 4m-9m micaceous kimberlite DIORITE PORPHYRY; grey weathered, 25% phlogopite, 5% carbonate, 70% serpentine matrix	DESCRIPTION OF INCLUSION, MINERALIZATION AND ALTERATION	STRUCTURE pre- or post-mineral faults, ∠ to core axis of slickensides, bedding etc.	REMARKS	Rock Strength weak mod. strong	METERS	Specific Gravity
405'-3" to 405'-9" ALTERED ARGILLITE: Green, waxy "chloritic", rust colored in part (? possible tuff bed)						
405'-9" → ARGILLITE: dk gy, dolomitic as above						
- becoming more argillaceous, dark grey to black, much less calc & dolo. material	-large 1" x 2" pyrite nodule @ 444'					
457'-3" to 457-7" ALTERED ARGILLITE: light gn-gy (possible tuff bed aa)						
484'-9" → ALTERED ARGILLITE: pale green "chloritic" with some dark grey foliation and much finely disseminated pyrite - faint bedding	- a few irregular qtz & gypsum veins at 488'-4"	- Top contact with overlying argillite is irregular and gradational - disturbed & turbated bedding at top with some dark foliation at 20° C/A				
- green grey color		- dark mineral foliation near // C/A				
	528'-6"-530 very fractured and	oxidized rock				
533'3" → DIATREME						

Hole No 86-2 Sheet

DIA MET - DIAMOND DRILL SAMPLING RECORD

Property
Length
Lat
Hor Comp
Vert Comp
District
Bearing
Dep
Etch at
Total Recovery %
Commenced
Dip
Elev
True Dip
Logged by
Completed
Objective
Location

	FEET FROM	FEET TO	Length (m)	Shorts (m)	Rec'y %	Sample No.	Analysis: CARATS MICRO D	% GEM	CARATS MACRO D	% GEM		Rock Type
530'	530'	541.5'	10'	8'7"								
												△
540'	541	544	8'	9'8"								△ △ △
550'	544	556	7'	6'								△ △ △
	556	566	10'	9'8"								△ △
560'												△ △
	566	576	10'	10								△ △ △
570'												
	576	586	10'	10'								△ △
580'												
	586	596	10'	10'								
590'												
	596	606	10'	10'3"								
600'												

Carat: Diamond	ROCK CONSTITUENTS: Black Mica	Carbonate	Serpentine	Olivine	ROCK INCLUSIONS: Round Autoliths	Peridotite	Ultramafic	Country Rock	MINERAL INCLUSIONS: Ilmenite	Chromite	Cr Diopside	Garnet - (Pyrope): Brown	Mauve		Pyrite	Fracturing: Intensity per meter

D.D.H. 96-2

Page .... continued

Geological Descriptions			General			
ROCK TYPES eg 4m-9m micaceous kimberlite DIORITE PORPHYRY; grey weathered, 25% phlogopite, 5% carbonate, 70% serpentine matrix	DESCRIPTION OF INCLUSION, MINERALIZATION AND ALTERATION	STRUCTURE: pre- or post-mineral faults, < to core axis of slickensides, bedding etc.	REMARKS	Rock Strength weak mod. strong	METERS	Specific Gravity
530 – 533'3" PALE GREEN, CHLORITIC MARL (% KIMBERLITE	NO INCLUSIONS	WEAK ? FABRIC/FOLIATION ∥ CORE AXIS CONTACT WITH	Petrographic sample 531'			
COMPONENT UNKNOWN)		UNDERLYING BRECCIA DIPS 42° TO C.A.				
533'3" — 748'3" DIATREME FACIES		534'8" – 544'8": 12" FAULT ZONE: GOUGE IS				
BRECCIA – ?KIMBERLITIC COMPONENT.		GREENISH CLAY MIXED WITH SHEARED BRECCIA				
530' – 577'2" GREEN DIATREME FACIES BRECCIA	MATRIX: CLAST RATIO IS ABOUT 1:20. CLASTS	FRAGMENTS H/W OF FAULT DIPS 28° TO C.A.				
(LAYERING/BEDDING WELL DEFINED AVERAGE CLAST	ARE ±90% GREEN, V.F-GR ? KIMBERLITIC	BRECCIA CLASTS DEFINE A CRUDE FABRIC				
SIZE ± 3/4")	TUFF (STRONGLY SERPENTINIZED); ±5% BLACK	(?BEDDING) 60° TO C.A. WITH LONG AXIS OF THE				
	ARGILLITE AND ±5% GREY ARGILLITE ~~ARE~~	CLASTS ∥ TO THIS FABRIC. SOME LARGER				
	CLASTS ARE ANGULAR TO SUBANGULAR <1/10"	CLASTS SHOW NO PREFERRED ORIENTATION				
	TO 3" (AVGE 0.75") IN DIAM.					
	562'4": 14" CLAST OF GREY ARGILLITE WITH					
	IRREG. CALCITE VEINS (white)					
577'2" – ±634' GREEN DIATREME FACIES	MATRIX CLAST RATIO IS ABOUT 1:10. CLASTS	LAYERING/BEDDING DUE TO FRAGMENT ORIENTATION	PETROGRAPHIC			
BRECCIA (LAYERING/BEDDING NOT AS WELL-DEFINED	ARE: ±90% GREEN, SERPENTINIZED ?KIM-	NOT AS WELL DEFINED AS ABOVE, BUT IS AT	SAMPLE AT			
AS ABOVE, AVERAGE CLAST SIZE ± 1/2")	BERLITIC TUFF* ±9% GREY ARGILLITE ±1%	48° TO C.A.				
	BLACK ARGILLITE OCCASIONAL LARGE (±3")	573': 1/8"–1/4" IRREG. WHT QTZ VEIN ±5°				
	FRAGMENTS OF GREY ARGILLITE (LIKELY	586': 1/2" GREY QTZ V @ 16°				
	CALCAREOUS) AND ?KIMBERLITIC TUFF.	587'4" – 588'3": 5 X QTZ VEINS, @23°; 1/4", 1/2", IRREG; 1/4 IRREG; 1/8", 1/8"				
		596' - 2X QTZ VEINS @ 90°; 1/2" IRREG, 1/8" IRREG.				
		603'2" - 2 IRREG QTZ VEINS @ 40°				
	* COULD BE LAMPROITIC (SEE WILLIAMS'	607' - QTZ VEIN, 1" @ 20°. [QTZ VEIN				
	PETROGRAPHIC REPORT).	616' - QTZ VEIN 1/4" @ 30° CONTAIN WHT				
		617' - 2 BX'D QTZ VEINS 1/8"-1" @ 17° MINERAL WHICH				
		621' - QTZ VEIN, 1/4" @ 34°. IS PROBABLY				
		625' - QTZ VEIN, 1/8" @ 10° FELSPAR]				

D.D.H. 86-2 Page........continued

Geological Descriptions			General			
ROCK TYPES: eg 4m-9m micaceous kimberlite DIORITE PORPHYRY; grey weathered, 25% phlogopite, 5% carbonate, 70% serpentine matrix	DESCRIPTION OF INCLUSION, MINERALIZATION AND ALTERATION	STRUCTURE: pre- or post-mineral faults, < to core axis of slickensides, bedding etc.	REMARKS	Rock Strength weak mod. strong	METERS	Specific Gravity
			PETROGRAPHIC			
			SAMPLE AT			
			615'			
634' - 745'10" GREEN DIATREME FACIES BRECCIA.	CLAST TO MATRIX RATIO IS ~~5:1~~ 5:1 TO 4:1;	LAYERING / BEDDING AT 55° TO C.A (646'), 51° AT				
(AVERAGE CLAST SIZE ±1/4")	CLASTS ARE 90% GREEN, SERPENTINIZED,	693'. LAYERING IS V. CRUDE.				
	? KIMBERLITIC TUFF AND ± ~~10%~~ 5-10% GREY ARGILLITE.					
	CLASTS ARE ANGULAR TO SUBANGULAR,					
	<1/10" TO 2" IN DIAM. (AVGE ± 1/4").					
676': 15" F-GR GREY TUFFISITIC DIKE / FRAGMENT						
SMALL (1/10" LONG) FLATTENED LAPILLI			PETROGRAPHIC			
IN BASAL 3"			SAMPLE, AT 676.5'			

D.D.H. 86-2

Page........continued

Geological Descriptions			General			
ROCK TYPES: eg 4m-9m micaceous kimberlite DIORITE PORPHYRY; grey weathered, 25% phlogopite, 5% carbonate, 70% serpentine matrix	DESCRIPTION OF INCLUSION, MINERALIZATION AND ALTERATION	STRUCTURE: pre- or post-mineral faults, < to core axis of slickensides, bedding etc.	REMARKS	Rock Strength weak mod. strong	METERS	Specific Gravity
677'8"-5" F-GR GREY TUFFISITIC DIKE/FRAG. WITH ANGULAR BLACK AND GREY ARGILLITE CLASTS (<1/4" to 1" DIAM). ~~DIKE~~ IS CUT BY WHITE, SUBVERTICAL QTZ VEIN UP TO 1" WIDE THIS VEIN TAPERS AT BOTH ENDS INTO VEINLET <1/10" THICK		DIKE DIPS 34° TO C.A				
726'-744'9": NUMEROUS NARROW (<1/8") WHITE QTZ VEINS CUT BRECCIA AT ABOUT 60° I.E PARALLEL TO THE LAYERING IN THE BRECCIA QTZ VEINS CONTAIN WHITE MIN. WHICH IS PROBABLY FELSPAR						

D.D.H. 86-2

Page .... continued

Geological Descriptions			General			
ROCK TYPES: eg 4m-9m micaceous kimberlite DIORITE PORPHYRY; grey weathered, 25% phlogopite, 5% carbonate, 70% serpentine matrix	DESCRIPTION OF INCLUSION, MINERALIZATION AND ALTERATION	STRUCTURE: pre- or post-mineral faults, < to core axis of slickensides, bedding etc.	REMARKS	Rock Strength weak mod. strong	METERS	Specific Gravity
744'9" – 748'3" RED OXIDIZED ZONE IN BRECCIA						
LOWER CONTACT OF GREEN DIATREME BRECCIA						
AT 748'3"						
748'3" : 5" FAULT ZONE DIPPING 37° TO						
C.A.						
748'3" – 762'3" REDDISH AND GREENISH OXIDE/						
ALTERATION ZONE IN FOOTWALL GREY						
GRAPHITIC ARGILLITE (?).						
762'3" — GREY PHYLLITIC, GRAPHITIC		FOLIATION DIPS 40° TO C.A				
ARGILLITE : DISTINCTLY CALCAREOUS						
BY 806'						

DIA MET – DIAMOND DRILL SAMPLING RECORD

Hole No .... Sheet ....

Property	Length	Lat	Hor Comp	Vert. Comp ....
District	Bearing	Dep	Etch at	Total Recovery % ....
Commenced	Dip	Elev	True Dip	Logged by ....
Completed	Objective		Location	

Depth	Meters		Length (m)	Shorts (m)	Rec'y %	Sample No.	Analysis: Carats Micro D	% Gem	Carats Macro D	% Gem	Structure	Angle C/A	Rock Type
725'													
750'											bedding	45°	
											bedding	52°	
775'													
800'											bedding	51°	
825'											bedding	51°	
850'											bedding	48°	
											bedding	50°	
											bedding	47°	
875'													

Carat	Rock Constituents				Rock Inclusions				Mineral Inclusions							Fracturing
Diamond	Black Mica	Carbonate	Serpentine	Olivine	Round Autoliths	Peridotite	Ultramafic	Country Rock	Ilmenite	Chromite	Cr Diopside	Garnet – (Pyrope) Brown	Garnet – (Pyrope) Mauve		Pyrite	Intensity per meter

D.D.H. 86-2 T.W. ROBERTSON Page .... continued

SCALE 1":25'

Geological Descriptions			General			
ROCK TYPES eg 4m-9m micaceous kimberlite DIORITE PORPHYRY; grey weathered, 25% phlogopite, 5% carbonate, 70% serpentine matrix	DESCRIPTION OF INCLUSION, MINERALIZATION AND ALTERATION	STRUCTURE: pre- or post-mineral faults, <to core axis of slickensides, bedding etc.	REMARKS	Rock Strength weak mod. strong	METERS	Specific Gravity
DIATREME						
green diatreme breccia						
748'-3" - 760' ALTERED ARGILLITE: red & green	- reddish or maroon material is hard dense micro-fine xlline	- 3" fault zone (breccia & loose rock) at 757'-6"				
- grading to lt gy-gy sl altered argillite towards the base	white greenish parts are waxy "chloritic" non calc with faint bedding	- 1" qtz & calcite vuggy vein at 759-759'-6" 18° C/A				
760 → ARGILLITE: gy to dk gy, slightly calcareous "graphitic" appearance						
- increasing calcareous material below 775'						
- distintly calcareous below 795'						
851-854 ARGILLITE OR LIMESTONE: lt gy calc argillite or argillaceous limestone	? altered in part	836-837 depositional breccia composed largely of greenish rip-up clasts of ?tuff/argillite				
854'-861'-6" ARGILLITE dark gy; with clasts of green & maroon argillite	- scattered pyrite blebs					
861'-6"-864' ALTERED ARGILLITE: light grey-green to light maroon						
864'-882' ARGILLITE: maroon, calc shaly ? altered	- 1' interbed of green altered shale @ 873-874	- Faintly bedded with a few green shaly blebs or clasts				

Hole No ...... Sheet ......

DIA MET - DIAMOND DRILL SAMPLING RECORD

Property .... Length .... Lat .... Hor Comp .... Vert Comp ....

District .... Bearing .... Dep .... Etch at .... Total Recovery % ....

Commenced .... Dip .... Elev .... True Dip .... Logged by ....

Completed .... Objective .... Location ....

Meters		Length (m)	Shorts (m)	Rec'y %	Sample No.	Analysis: Carats Micro D	% Gem	Carats Macro D	% Gem	Structure	Angle C/A	Rock Type	Carat: Diamond	Rock Constituents: Black Mica	Carbonate	Serpentine	Olivine	Rock Inclusions: Round Autoliths	Peridotite	Ultramafic	Country Rock	Mineral Inclusions: Ilmenite	Chromite	Cr Diopside	Garnet - (Pyrope): Brown	Mauve		Pyrite	Fracturing: Intensity per meter
875																													
										bedding	55°																		
900																													
										bedding	50°																		
925																													
										bedding	45°																		
950																													
										bedding	45°																		
975																													
										bedding	54°																		
1000																													
										bedding	62°																		
1025																													

D.D.H. .... Page .... continued

Geological Descriptions			General			
ROCK TYPES eg 4m-9m micaceous kimberlite DIORITE PORPHYRY; grey weathered, 25% phlogopite, 5% carbonate, 70% serpentine matrix	DESCRIPTION OF INCLUSION, MINERALIZATION AND ALTERATION	STRUCTURE: pre- or post-mineral faults, < to core axis of slickensides, bedding etc.	REMARKS	Rock Strength weak mod. strong	METERS	Specific Gravity
882-898 ALTERED ARGILLITE: light green mottled mauve - faintly bedded calcareous as above						
898-926 INTERBEDDED dark argillite as above and altered green/maroon argillite	- decreased calcareous content below 900'					
	-6" vuggy wh-crm qtz and calcareous dolomite vein @ 922'					
926-947 ALTERED ARGILLITE: mottled green & maroon	- 12" vein as above @ 926 - much pyroclastic qtz material in top 6 feet of interval	- some interbeds of massive green & maroon altered argillite				
947-973 ARGILLITE: as above but only moderately calcareous	- increasing calcareous content below 956'					
973-977 as above but more shaly	- scattered pyrite blebs					
977 - ARGILLITE: dark grey calc with irregular light grey limey laminae & lenses	- strongly calcareous & limey below 977'					

Hole No .... Sheet ....

DIA MET – DIAMOND DRILL SAMPLING RECORD

Property	Length	Lat	Hor Comp ....
District	Bearing	Dep	Etch at ....
Commenced	Dip	Elev	True Dip ....
Completed	Objective		Location ....
			Vert Comp ....
			Total Recovery % ....
			Logged by ....

	Meters	Meters	Length (m)	Shorts (m)	Rec'y %	Sample No.	Analysis: Carats Micro D	% Gem	Carats Macro D	% Gem	Structure	Angle C/A	Rock Type
1025'													
										bedding	72°	
													BT
1050'										bedding	37°	
													1052 TD

Carat: Diamond	Rock Constituents: Black Mica	Carbonate	Serpentine	Olivine	Rock Inclusions: Round Autoliths	Peridotite	Ultramafic	Country Rock	Mineral Inclusions: Ilmenite	Chromite	Cr Diopside	Garnet (Pyrope): Brown	Mauve	—	Pyrite	Fracturing: Intensity per meter

D.D.H. ....   Page.........continued

Geological Descriptions			General			
ROCK TYPES eg 4m-9m micaceous kimberlite DIORITE PORPHYRY; grey weathered, 25% phlogopite, 5% carbonate, 70% serpentine matrix	DESCRIPTION OF INCLUSION, MINERALIZATION AND ALTERATION	STRUCTURE: pre- or post-mineral faults, <to core axis of slickensides, bedding etc.	REMARKS	Rock Strength weak mod. strong	METERS	Specific Gravity
	1039'-9"-1042'-6" – highly disturbed bedding w/ much calcite & lesser					
	qtz veinlets and several large veins several inches wide					
	–dissemmated pyrite & patches of pyrite blebs					
1042'-6"-1045'-9" LOST CORE	–evidence of micro faulting & sedimentary deformation					
1045'-9" → ARGILLITE with LIMESTONE	calcite infilling of structures & ?worm burrows?					
as above						