MAR 19930002: SWEETGRASS

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SWEET GRASS PROJECT

BEAR CREEK PROPERTY

FIRST PHASE EXPLORATION

MILK RIVER AREA

SOUTHEASTERN ALBERTA

Permit No. 6890100010

N.T.S. 72 E/03

Latitude 49 deg. 00' 30" N   Longitude 111 deg. 11' 00"W

for

CONSOLIDATED PINE CHANNEL GOLD CORP.

910-470 Granville Street

Vancouver, British Columbia

V6C 1V5

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CONS. PINE CHANNEL GOLD CORP.

September 1, 1993

Vancouver, B.C.

SWEET GRASS PROJECT

BEAR CREEK PROPERTY

FIRST PHASE EXPLORATION

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6890100010

Consolidated Pine Channel Gold Corp.

SWEETGRASS PROPERTY EXPENDITURES
(To November 9, 1993)

Research:	[redacted] 5 days at $900.00 per day	$	4,500.00		
	[redacted] 10 days at $400.00 per day		4,000.00	$	8,500.00
Field Expenses:	[redacted] 14 days at $400.00 per day	$	5,600.00		
	Truck Rental 14 days at $130.00 per day		1,820.00		
	Fuel: 14 days at $30.00 per day		420.00		
	Food and Lodgings: 12 days at $120.00 per day		1,440.00		9,280.00
Travel: Airfares:	[redacted]				1,800.00
Assays:					3,500.00
Petrographic Work:	Vancouver Petrology Ltd. and Report by [redacted]				4,000.00
Report:	[redacted]				7,000.00
Project Management:	[redacted]				5,000.00
	Sub-total				39,080.00
Overhead:					3,908.00
	TOTAL			$	42,988.00

SUMMARY

International diamond mining corporations have been recently expanding their search for diamonds to the interior cratons of western Canada. This has resulted in kimberlite and lamproite pipes being discovered in Saskatchewan, Alberta, British Columbia and the Northwest Territories. Since about mid-1992, the entire southern part of Alberta and most of the western half of Alberta has been staked for diamonds. While many geochemical and geophysical anomalies have been reported in various locations of Alberta, the Milk River area appears to be the only permit area that encompasses confirmed diatremes and lamporite dykes. The area is enhanced by its southern location, ready access and relatively thin overburden cover, all of which reduce exploration costs and maximize the potential rate of development.

Consolidated Pine Channel Gold Corp. has aquired two blocks of ground totaling 2750 hectares in the heart of this area of numerous confirmed diatremes, of which some have resently been found to be diamondiferous.

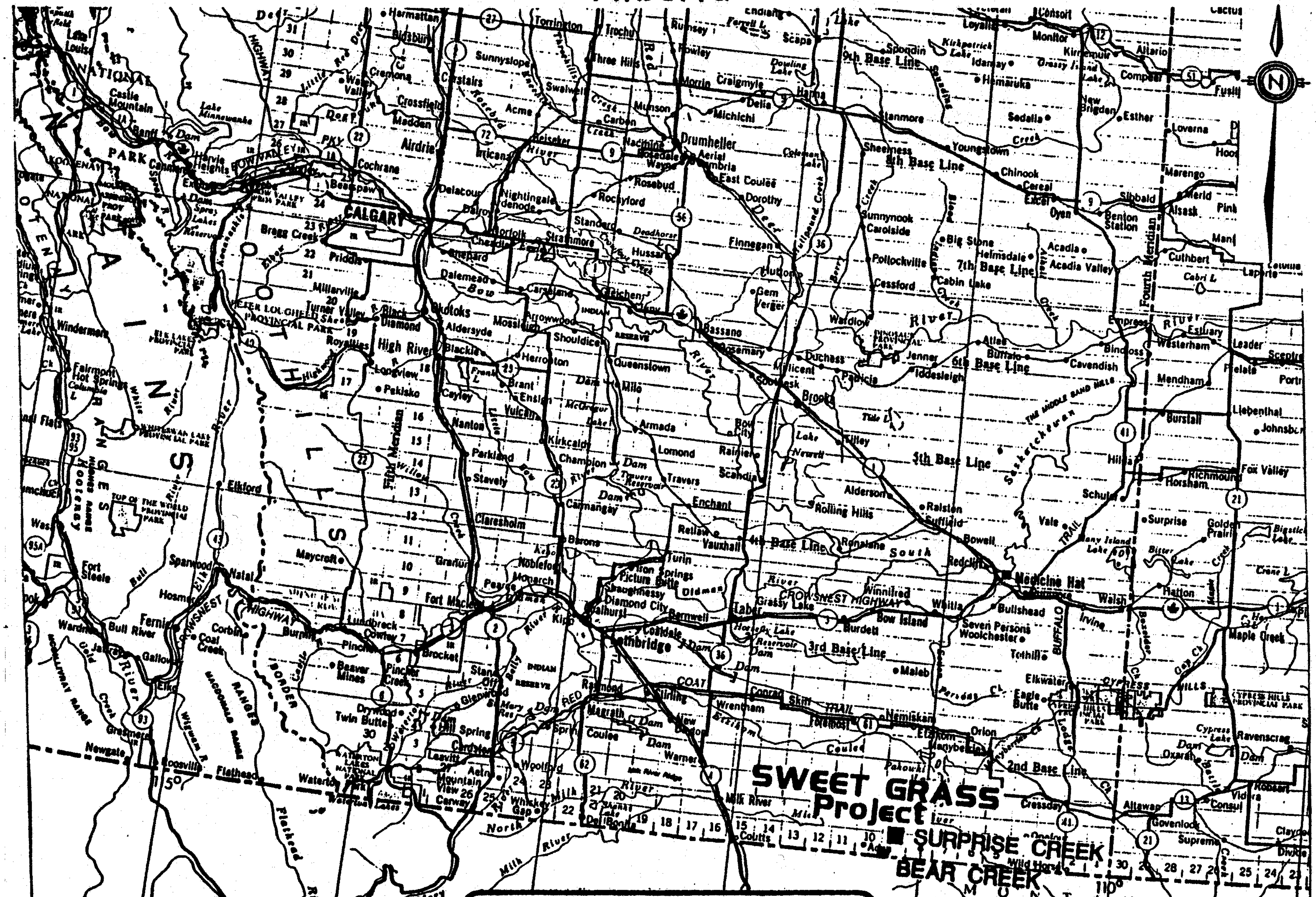
Recent research by a diamond exploration company holding the surrounding ground, has indicated that the Surprise Creek block of ground which Consolidated Pine Channel Gold Corp. has optioned from Hemlo Gold Mines Inc. (a subsidarary of Noranda Mines Comp. Ltd.), lies within the heart of a major volcanic intrusive structure of intersecting faults piercing the Phanerozoic sedimentary rocks of the Western Canadian Sedimentary Basin. These faults are believed to be the main conduits for the intrusion of a major cluster of lamporitic - kimberlitic diatremes and dykes in the Milk River - Sweet Grass Hills area. At least five different intrusive events have been identified in the area, some being non-magnetic and at least one late stage diatreme emplacement event being very magnetic, like the well known Black Butte kimberlite - lamproite pipe, nine kilometers to the southeast of the Surprise Creek permit block (Figure 4).

The Bear Creek claim block ajacent to the Canada - U.S. border has at least two of these intersecting faults entering the property

from the north. One structure contains an obvious outcropping lamproite dyke which outcrops sporatically in small ravines or "coulees" for at least one kilometer. At least three separate magnetic "bull's eye" anomalies on this property are thought to be kimberlite - lamproite diatremes related to the two north-south trending fault structures (Figure 2).

Many diamond exploration experts feel that the Milk River - Sweetgrass Hills area straddling the Canada - U.S. border is the premier diamond exploration area in the entire province of Alberta in terms of overall diamond potential.

Alberta



CONSOLIDATED PINE CHANNEL GOLD CORP.

Scale 1:2 000 000 or 1 centimetre represents 20 kilometres

INTRODUCTION

Due to the continuing political unrest in South Africa and Russia, the major international natural diamond mining companies have increased their exploration activities in regions which in the past have received very minor attention. The discovery of diamondiferous kimberlite diatremes in the Prince Albert area of Saskatchewan in 1988, initiated an exploration frenzy to explore the Interior Platform of Western Canada. This Interior Platform, consisting of a sedimentary-capped Archean basement complex or craton, represents an ideal geological setting for the occurrence of diamond-bearing pipe deposits.

This diamond exploration drive has led, not only to discoveries in Central Saskatchewan but also the Lac de Gras area of the Northwest Territories, and even in B.C. But the news in late 1991, of Dia-Met's major diamond discovery in Lac de Gras has generated a major staking rush in not only that area, but in other parts of the Northwest Territories, Alberta (40-50% of Alberta's land area has been staked for diamond exploration), North-central and Southern Saskatchewan, the Kirkland Lake area of Ontario, and the Le Tac area of Quebec where at least four kimberlite pipes have been found.

Until recently, it was presumed that primary diamond deposits were restricted, without exception, to diatremes and associated dykes composed of kimberlite. In 1980 an extremely rich diamond pipe was discovered in Australia, known as the Argyle Diamond Discovery, in the Halls Creek Province, in the southern end of the Halls Creek mobile zone, just east of the Kimberly Plateau Arcean Craton. These pipes were recognized as being olivine lamproites, not kimberlite diatremes, and the diamond content increased as the olivine content increased. This led to a re-examination of previously ignored lamproite pipes throughout the world. Therefore it has been established that either kimberlites or lamproites may

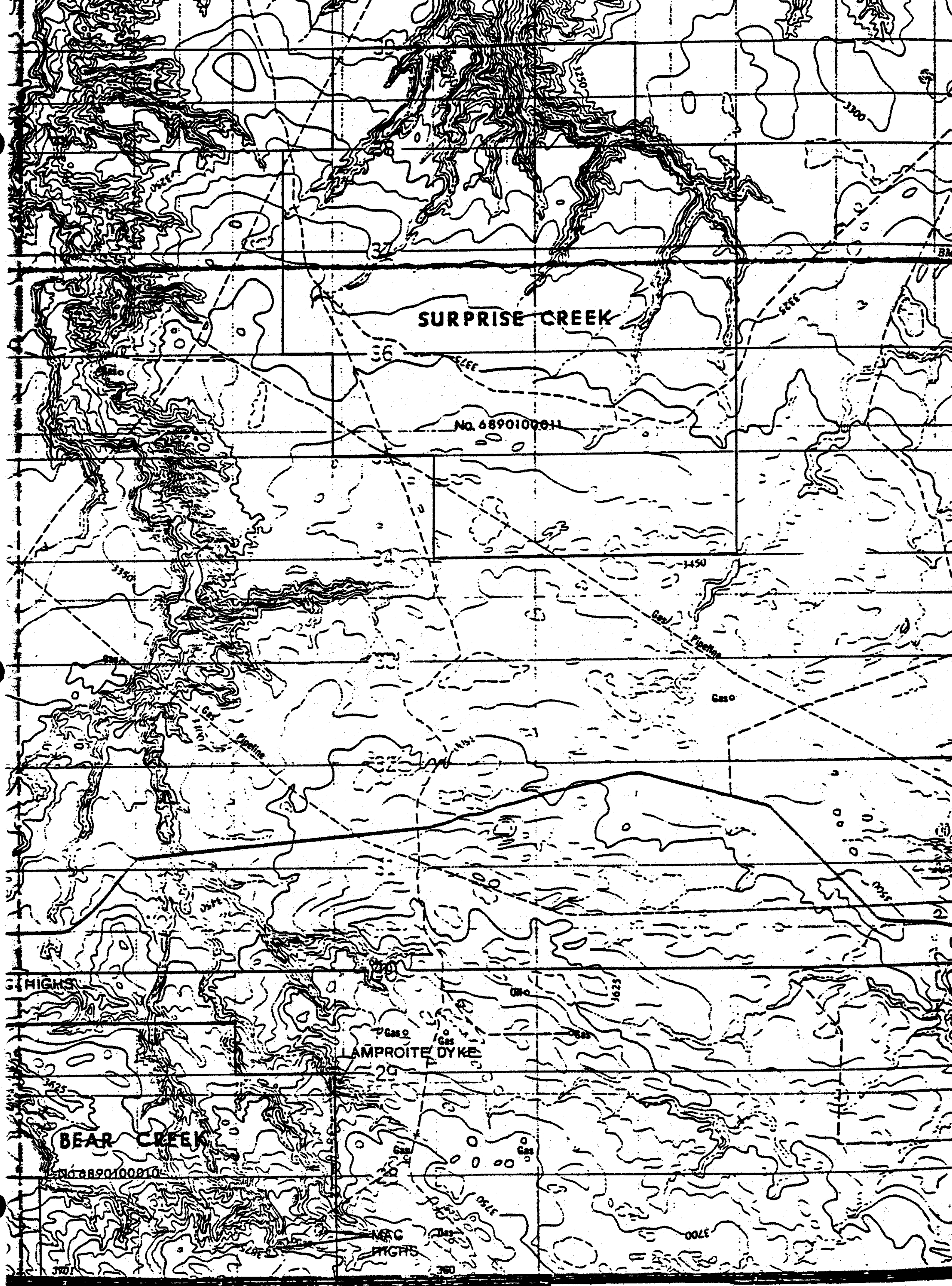

SURPRISE CREEK
No. 6890100011
Gas Pipeline
Gas
Oil
LAMPROITE DYKE
MAG HIGHS
BEAR CREEK
No 6890100010
3250
3300
3325
3350
3450
3625
3700
3750
BM
36
34
33
32
30
29
85
86
87
10'88
89
R9
90
92
93

FIG. 2

be diamondiferous.

The two mineral exploration blocks being worked by Consolidated Pine Channel Gold Corp. were originally explored for gold in October, 1990, by Noranda Exploration Company Ltd. A total of 1,037 soil and 29 rock samples were analyzed for gold and 30 other elememts, along the coulee's lower slopes. Also a 200 metre line spaced magnetic survey was also carried out by Noranda Exploration. This report covers a limited follow-up soil and rock sampling program immediately down the glacial ice direction from two separate magnetic "bull's eye" anomalies and sampling of the partially exposed lamproite dyke at three separate locations along it's one kilometer length (Figure 2).

LOCATION AND ACCESS

The mineral exploration permit area is located about 120 kms. southeast of Lethbridge, and 60 kms. east of Coutts, Alberta, near the Canada - U.S. border. It can be reached by Highways No. 4 and No. 500 to about 10 kms. east of the hamlet of Aden (Figure 1).

CLAIM STATUS

The exploration permit covers two blocks; Surprise Creek just south of the Milk River and Bear Creek up against the Canada - U.S. border to the south (Figure 3). The following is a township and range description of the permit area:

Bear Creek

W4M-R9-T1 SEC 5; SEC 6 L1-3, L4E, L5E, L6-11, L12E&NW, L13-16;
SEC 7S L9S, L10S, L11S, L12S; SEC 8 L1-5, L6W, L11SW, L12S;
W4M-R10-T1 SEC 1 L9N, L10N, L15, L16; SEC 12SE L9S, L10S.
Surface lease permits held by Bill Johnson (ph. 403-344-2195) and Vern Calder (Figure 3).

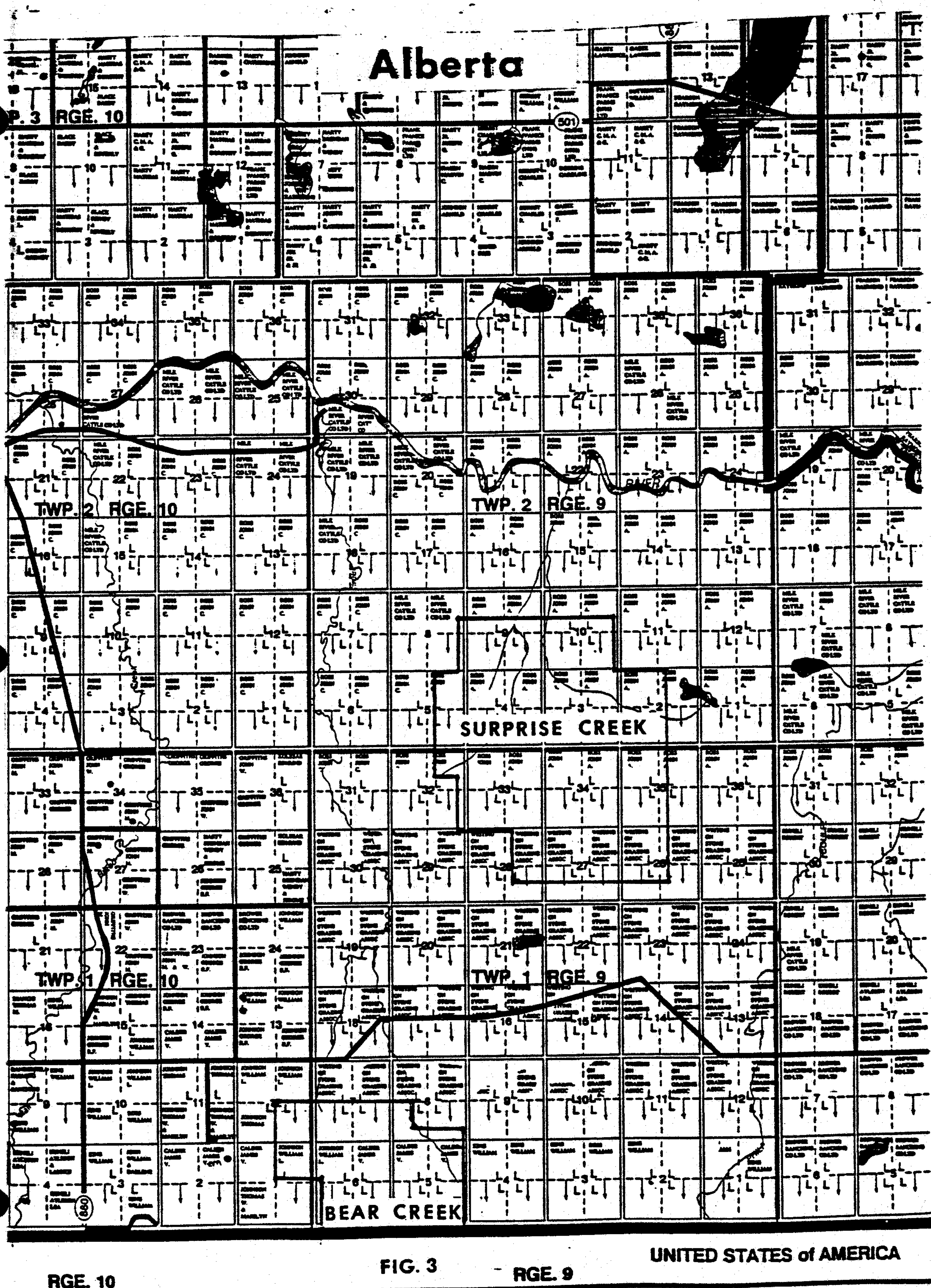

Alberta
P. 3 RGE. 10
501
TWP. 2 RGE. 10
TWP. 2 RGE. 9
RIVER
SURPRISE CREEK
TWP. 1 RGE. 10
TWP. 1 RGE. 9
880
BEAR CREEK
UNITED STATES of AMERICA
RGE. 10
RGE. 9

FIG. 3

Surprise Creek

W4M-R9-T2 SEC 2 L3W, L4W, L5W, L6W, L11W, L12; SEC 3; SEC 4; SEC 5 L1E, L2E, L7E, L8E, L9E, L10E; SEC 9 L1-4; SEC 10 L2-4;
W4M-R9-T1 SEC 26 L5W, L6W, L11W, L12W, L13W, L14W; SEC 27 L5-8N; SEC 28 L10N,L13N-16N; SEC 32 L9E, L10E, L15E, L16E; SEC 33; SEC 34; SEC 35 L3W-L6W, L11W-14W.
Surface lease permits held by John Ross and the Writing on Stone Grazing Association.

TOPOGRAPHY, CLIMATE AND LAND USE

The topography of the area is generally flat, with gentle sloping rises. This table-land is cut by occasional coulees and river valleys with rather steep banks. Black Butte protrudes some 40 meters (130 ft.) above the surrounding plain, to an elevation of 1,090 meters (3577 ft.) above sea level and can be seen as a conspicuous knob from a distance of several miles. To the southwest the land gradually rises towards the Sweetgrass Hills, located in Montana, some 20 kms. to the southwest (15 kms. south of the Bear Creek property).

The area generally receives less than 25 cm. of annual precipitation. The winters are dry and can be relatively cold but chinooks are common warm air phenomenon. Ice may remain on the local lakes until as late as early May, or may be clear by mid-march. The local occurrence of prickly pear cactus and rattle snakes are indications of the aridity of the region.

The main economic livelihoods in the area include cattle ranching, wheat farming, oil and natural gas production. Wheat farming is conducted on the flat lands while cattle ranching is relegated to more hilly areas (or where the soils are too rocky for farming).

EXPLORATION HISTORY

During his exploration trek in 1883, George M. Dawson reported the occurrence of a "small mass of dark mica-trap" on the bank of the Milk River in the southeastern section of what is now Alberta. As early as the 1890's, others noted the occurrences of dark, igneous outcrops on a prominent knoll some thirteen kilometers further south, termed "Black Butte".

In 1979, John DeLatre, a geologist with extensive diamond-related experience, investigated the occurrences and assessed them as being lamproitic in nature. Mr. DeLatre secured an exploration permit to the Black Butte JD-1 deposit shortly thereafter.

Although a subsidiary of DeBeers and other major companies had been quietly securing and investigating kimberlite deposits in western Canada since the late 1980's, the general public remained unenthusiastic regarding the major diamond potential of the Phanerozoic Basin. However, Dia-Met's discovery of diamonds at Lac de Gras, NWT, the subsequent news release and the dramatic rise in the price of Dia-Met's shares changed the public's attitude towards the potential for the occurrence of diamond-bearing pipes in Canada.

In October 1990, Noranda Exploration Company Ltd., undertook a program of geological mapping, prospecting, soil and rock sampling, petrographic studies and 125 line kms. of magnetic survey at 200 meter line spacing, looking for potential gold occurances. A 30 element ICP analysis was done on 1,037 soil samples and 29 rock samples, of which 458 soil samples and 12 rock samples were taken on the Bear Creek grid. When the heavy mineral fractions were separated, numerous garnets, chrome-diopside, and ilmemite grains were noted, which are good indicators for kimberlitic and lamproitic rocks.

GEOLOGY OF BEAR CREEK - BLACK BUTTE AREA

Drill-cuttings of many widely scattered oil well drill holes in southeastern Alberta indicate that the basement complex is composed of Archean gneiss (2.5 to 2.7 billion years old).

Most of the Bear Creek and Surprise Creek claim blocks have surface outcroppings of 90% Foremost Formation rocks (Figure 4). The Foremost formation is composed of greenish-gray shales, dark carbonaceous shale, greyish-green siltstone, grey to pale brown sandstone, ironstone and non-marine coal seams. In the coulee valleys on the western edge of the Bear Creek permit block the underlying Pakowki Formation is also exposed, as well as in coulees within the northern third of the Surprise Creek permit block to the north of the Bear Creek permit block. The Pakowki Formation was formed in a marine environment and is composed of dark grey shale and sandy shale, grey sandstone, a thin chert pebble conglomerate near the base of the formation, as well as a chert pebble bed (Figure 4).

The Colorado School of Mines research studies indicate that a very low geothermal gradient (indicative of a very thick mantle) exists in an area encompassing northern Wyoming and central Montana. Central Montana shows a temperature of 500 degrees celsius or lower at a depth of 50 kms. This geothermal gradient value extends into western Saskatchewan and eastern Alberta and appears that the keel of the craton (less than 300 degrees celsius at 50 kms. depth) occurs immediately east of the Sweet Grass Hills and extends northward, at least into the Bear Creek - Black Butte area. The area is therefore quite favorable for the emplacement of diamond-bearing pipes.

The Sweet Grass Hills outcrop some 10 kms. to the southwest of the Bear Creek property. This short east-west trending range of low volcanic mountains with elevations up to 1,050 meters (3,500 ft.)

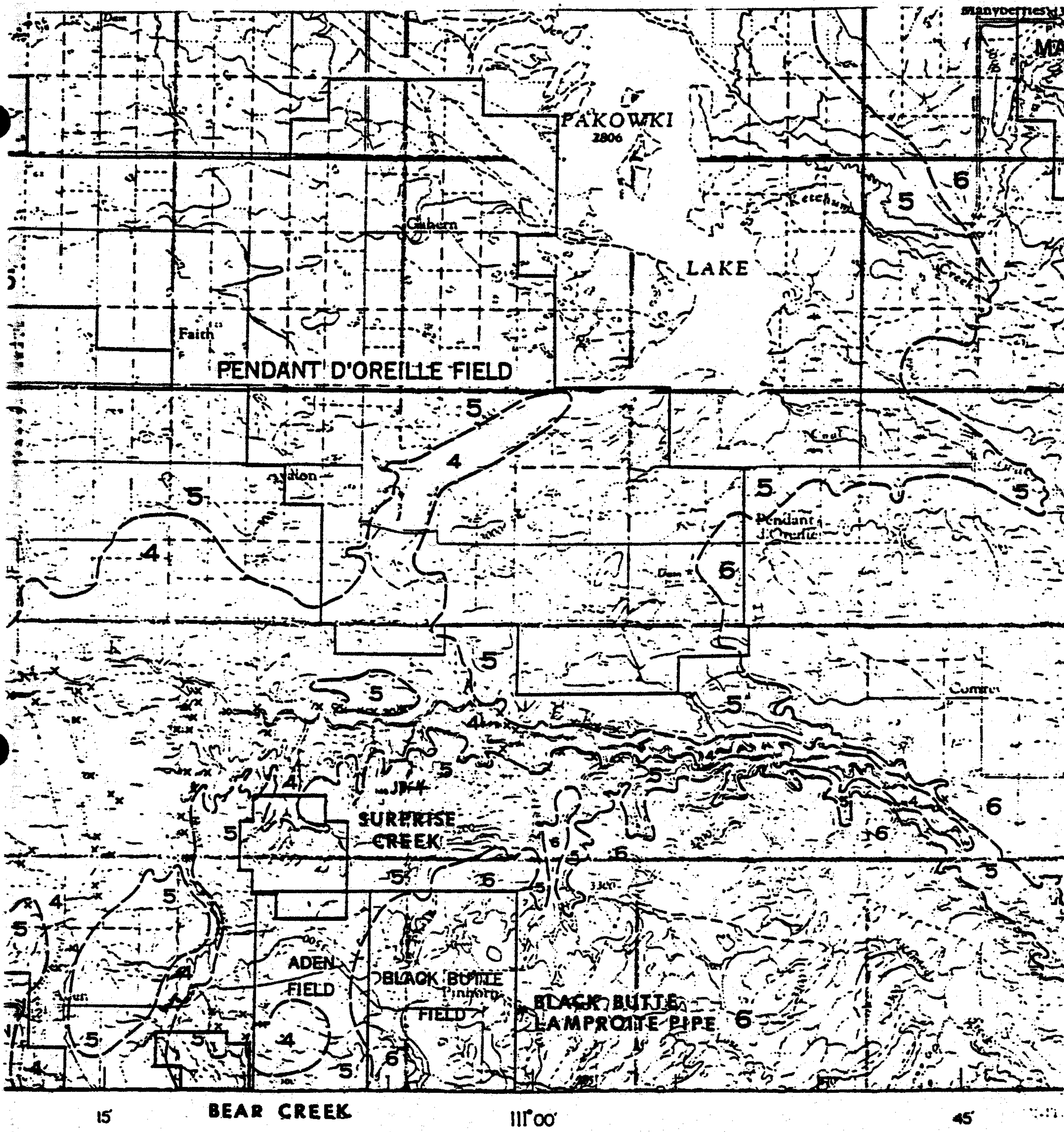


FIG. 4

MAP 22-1967

GEOLOGY

FOREMOST

WEST OF FOURTH MERIDIAN

ALBERTA

Scale 1:253,440

1 inch to 4 miles

Miles 4 0 4 8 12 Miles

Kilometres 6 0 6 12 18 Kilometres

LEGEND

CENOZOIC

TERTIARY

OLIGOCENE

12 CYPRESS HILLS FORMATION: conglomerate (non-marine)

PALEOCENE

11 RAVENSCRAG FORMATION: soft, grey- and buff-weathering, grey and light brown, fine-grained sandstone; soft, grey- and buff-weathering, argillaceous sandstone and siltstone; soft, grey- and buff-weathering, brownish grey clays and shales; lignitic coal seams; bentonite layers; ironstone (non-marine)

MESOZOIC

CRETACEOUS

UPPER CRETACEOUS

10 FRENCHMAN FORMATION: massive, fine- to coarse-grained crossbedded, buff- to reddish-brown-weathering, grey and light brown sandstone; green and grey shale, silty shale and siltstone (non-marine)

9 WHITEMUD AND BATTLE FORMATIONS: white-weathering, green and grey, argillaceous sandstone; green and grey clay and silty clay (Whitemud Formation); overlain by mauve-weathering, dark grey to purplish grey, bentonitic, rubbly shale; light-grey weathering tuff (Battle Formation)(non-marine)

8 EASTEND FORMATION: grey- to buff-weathering, grey and pale brown, fine- to medium-grained, clayey, in part cross-bedded, sandstone; green, grey and dark grey shale; grey silty shale and siltstone; black, carbonaceous shale; coal seams (marine and non-marine)

7 BEARPAW FORMATION: dark grey and brownish grey, rubbly and flaky shale; silty shale; light buff-weathering, grey, argillaceous sandstone; ironstone concretionary bands; bentonitic layers (marine)

6 OLDMAN FORMATION: massive, crossbedded, medium- to coarse-grained, light-grey weathering sandstone; grey, clayey siltstone; grey and light grey weathering, green and grey shale; dark grey and brown, carbonaceous shale; ironstone concretionary beds (non-marine)

5 FOREMOST FORMATION: green and grey shale; dark carbonaceous shale; grey and green siltstone; grey and pale brown sandstone; ironstone; coal seams (non-marine)

4 PAKOWKI FORMATION: dark grey shale and sandy shale; grey sandstone; thin chert pebble conglomerate at base; chert pebble bed at base (marine)

3 MILK RIVER FORMATION (Upper Member): soft, grey-weathering, grey, argillaceous sandstone; lenses of massive, light-buff weathering, grey sandstone; soft, grey shale and silty shale; dark grey, carbonaceous shale; ironstone (non-marine)

2 MILK RIVER FORMATION (Lower Member): massive, light-grey- to white-weathering, grey, soft and hard, sandstone; ironstone concretions; grey and light grey shale and sandy shale (marine)

1 ALBERTA GROUP: dark grey, friable and fissile shale and sandy shale; brown-weathering, grey sandstone (marine)

Geological boundary (approximate)........................

Rock outcrop...×

Oil and gas fields...

Thrust fault (position approximate)....................

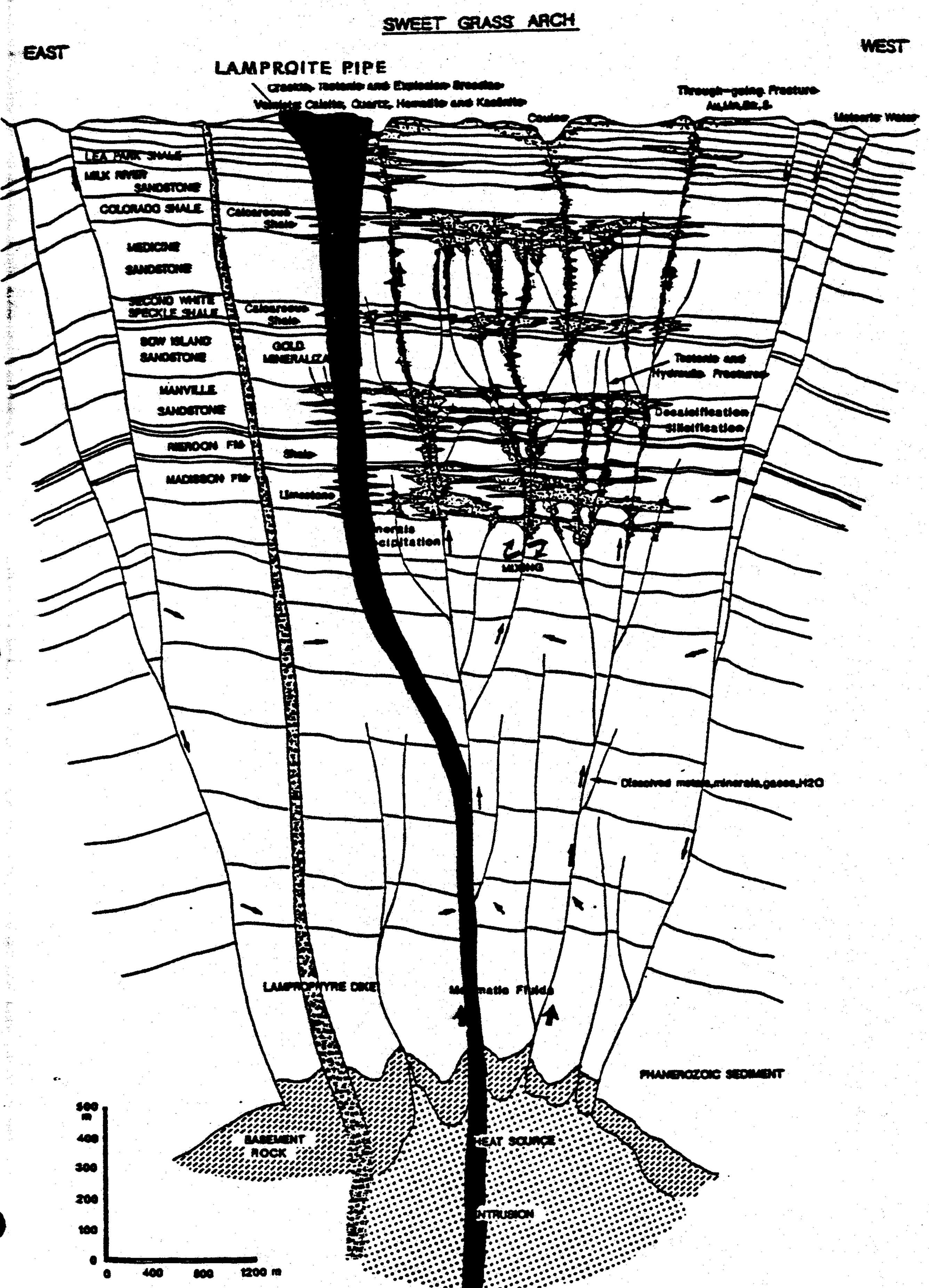

SWEET GRASS ARCH
EAST
WEST
LAMPROITE PIPE
Through-going Fracture
Coulee
Meteoric Water
LEA PARK SHALE
MILK RIVER SANDSTONE
COLORADO SHALE
Calcareous Shale
MEDICINE SANDSTONE
SECOND WHITE SPECKLE SHALE
Calcareous Shale
BOW ISLAND SANDSTONE
MANVILLE SANDSTONE
RIERDON FM
MADISSON FM
Shale
Limestone
Tectonic and Hydraulic Fractures
Decalcification Silicification
Mixing
Dissolved metals,minerals,gases,H2O
LAMPROPHYRE DIKE
PHANEROZOIC SEDIMENT
BASEMENT ROCK
HEAT SOURCE
INTRUSION
500 m
400
300
200
100
0
0
400
800
1200 m

Figure:5

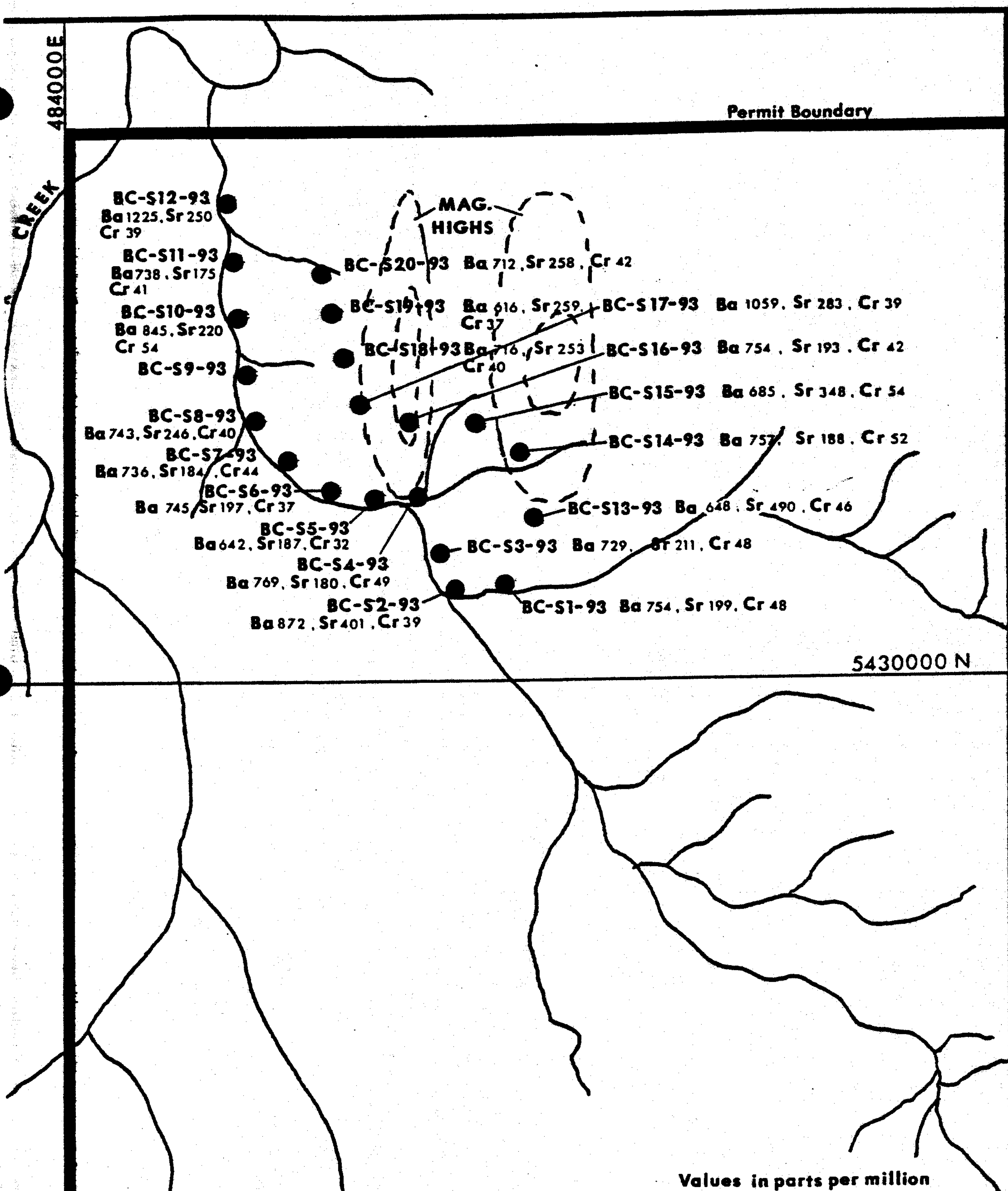
above the surrounding flat-lands, is the result of a massive intrusion believed to be of late to mid Eocene age (47 to 52 million years ago) intruding through a zone of crustal weakness. The core of the range includes a syenite stockwork and other products of deep-seated intrusive activity.

The lamproite pipes and dykes in the Bear Creek - Black Butte area as well as those to the south of the Sweet Grass intrusives are most likely to have been emplaced contemporaneously with the syenite stock works forming the Sweet Grass Hills or very soon afterwards.

DISCUSSION OF RESULTS

Previous analysis of soil samples taken by Noranda Exploration indicated that in the coulees down glacial ice direction from the "bull's eye" magnetic highs, and the known lamproite dyke on the Bear Creek property (Figure 2), increased amounts of barium, strontium, and chromium exist. I.C.P. analysis of the lamproite dyke by Noranda Exploration indicated about 1600 ppm barium, 400 ppm strontium, and about 800 ppm chromium, as the most anomalous elements present. The anomalous chromium may indicate that some chromite crystals from the lamproite are present in the soils immediately down the glacial ice direction from the magnetic anomaly. Samples taken by Noranda Exploration 100 meters down the glacial ice direction from the magnetic anomaly in the south-east corner of the Bear Creek permit block indicated between 290 and 440 ppm barium, and up to 205 ppm strontium (background values of 170 ppm barium and 45 ppm strontium).

A total digestion 35 element ICP analysis was done on 27 soil samples (one sample BC-S9-93 lost in transit) and three lamproite samples, for Consolidated Pine Channel Gold Corp. The lamproite's barium content ranged from 3735 to 2841 ppm (averaging 3335 ppm), from the north end of the dyke to the south end, over it's one



CONSOLIDATED PINE CHANNEL GOLD CORP.

SOIL SAMPLING

N.W. BEAR CREEK PERMIT

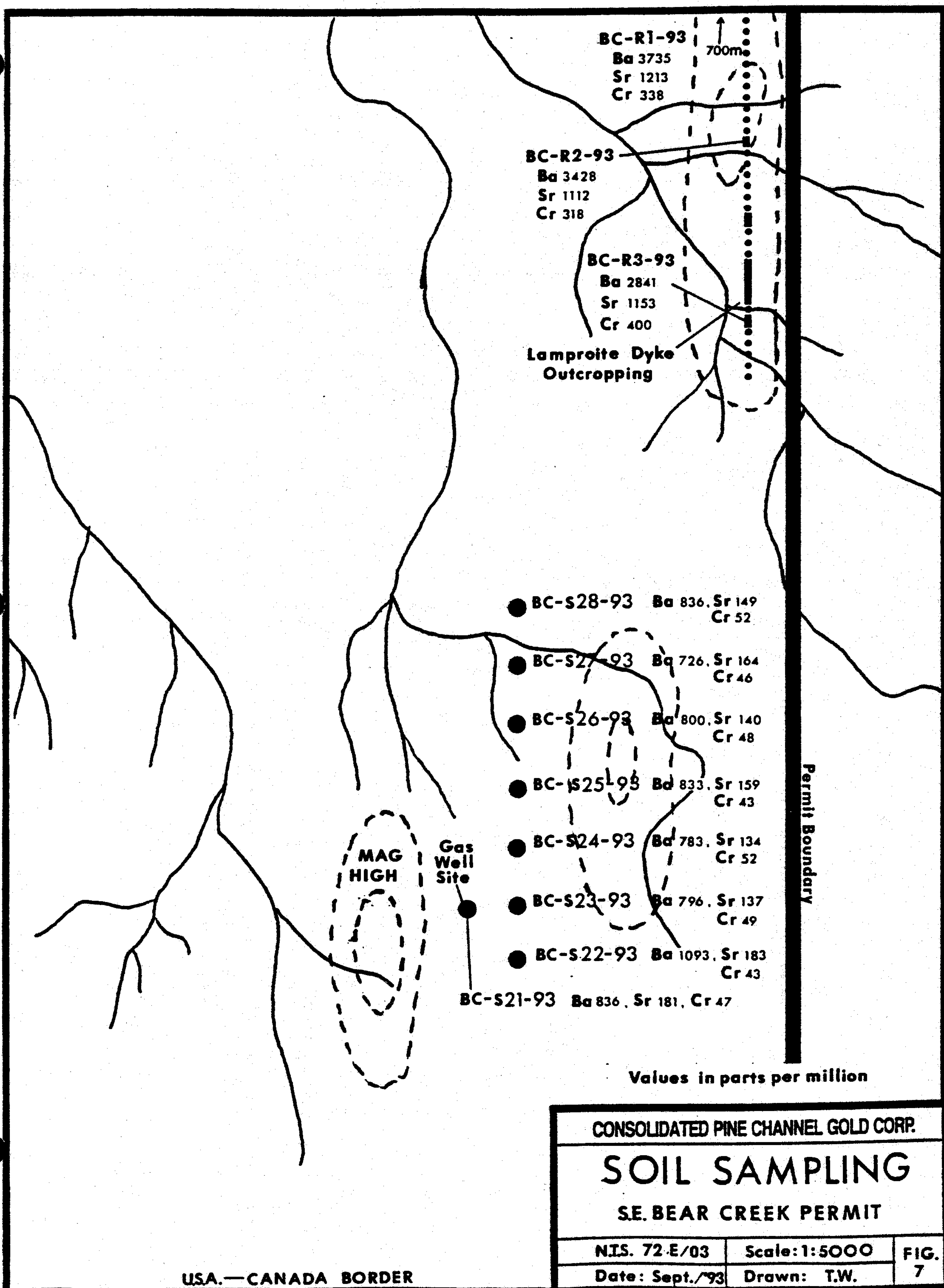
N.T.S. 72 E/03	Scale: 1:5000	FIG. 6
Date: Sept./'93	Drawn: T.W.	

kilometer length. The strontium content ranged from 1112 to 1213 ppm (averaging 1159 ppm), and the chromium content from 318 to 400 ppm (averaging 352 ppm).

A petrographic study of this dyke material suggests that it is a minette intrusion, or possibly a sanidine phlogopite lamproite (see Apendix). "The sample is composed of phenocrysts of mica, olivine and clinopyroxene set in a groundmass of mica, clinopyroxene, spinel and probable. Such a mineral assemblage can occur in both phlogopite lamproites and minettes."

The soil sampling, down the glacial ice direction from the double magnetic anomalies, in the northwest corner of the Bear Creek permit, indicated anomalous barium, strontium and chromium values (Figure 6). The barium content ranged from 616 to 1225 ppm and averaged 776 ppm. This average value is about 600 ppm above the barium background of 170 ppm indicated by Noranda's 1990 soil survey. The strontium content ranged from 175 to 401 ppm and averaged 248.5 ppm. This average value is about 200 ppm above the strontium background of 45 ppm indicated by Noranda's survey. The chromium content ranged from 32 to 54 ppm and averaged 43.3 ppm. This average value is 15 ppm above the background value indicated by Noranda's survey. The highest chromium values were in the immediate vicinity (within 50 meters) of the highest magnetic reading. Values are quite variable over the surveyed area, possibly due to the glacial tills being mixed on the steep slopes of the coulee with the soils originating from the strongly weathered Cretaceous rocks of the Foremost Formation which outcrop on these steep coulee slopes.

The eight soil samples taken about 100 meters west of one of the magnetic "bull's eye" anomalies in the southeast corner of the Bear Creek permit, also had anomalous barium values, ranging from 726 to 1093 ppm and, moderately anomalous strontium ranging from 133 to 183 ppm. Chromium is also anomalous ranging from 43 to 52 ppm. The highest barium value was located 70 meters southeast of a



BC-R1-93
Ba 3735
Sr 1213
Cr 338
700m
BC-R2-93
Ba 3428
Sr 1112
Cr 318
BC-R3-93
Ba 2841
Sr 1153
Cr 400
Lamproite Dyke
Outcropping
Permit Boundary
BC-S28-93 Ba 836, Sr 149 Cr 52
BC-S27-93 Ba 726, Sr 164 Cr 46
BC-S26-93 Ba 800, Sr 140 Cr 48
BC-S25-93 Ba 833, Sr 159 Cr 43
BC-S24-93 Ba 783, Sr 134 Cr 52
BC-S23-93 Ba 796, Sr 137 Cr 49
BC-S22-93 Ba 1093, Sr 183 Cr 43
BC-S21-93 Ba 836, Sr 181, Cr 47
MAG HIGH
Gas Well Site
Values in parts per million
U.S.A.—CANADA BORDER
CONSOLIDATED PINE CHANNEL GOLD CORP.
SOIL SAMPLING
S.E. BEAR CREEK PERMIT
N.T.S. 72 E/03
Scale: 1:5000
Date: Sept./'93
Drawn: T.W.
FIG. 7

natural gas well head directly down the glacial ice direction from the magnetic "bull's eye" centre (Figure 7). This sample site (BC-S22-93) also contained the highest amount of strontium. Cromium values are moderately anomalous with one of the best values of 52 ppm, down glacial direction from the center of the magnetic "bull's eye" (BC-S24-93). Noranda's results indicated an average chromium background value of 22 ppm in a coulee on the northern edge of the eastern magnetic high.

A total of four soil samples from the northwest corner of the Bear Creek permit had microprobe analysis done on the heavy mineral grains. These samples are clustered immediately down the glacial ice direction from the magnetic "bull's eye" anomalies (Figure 6). Sample BC-S7-93 had 26 grains analysed, of which two were G-5 class pyrope garnets and one G-4 class. Sample BC-S8-93 had 41 grains analysed, and no pyrope garnets were identified. Sample BC-S16-93 had 35 grains analysed, of which one G-4 and one G-5 class pyrope garnet were identified. Sample BC-S17-93 had 35 grains analysed, of which two G-5 class pyrope garnets and one chromite grain were identified.

CONCLUSIONS AND RECOMENDATIONS

In conclusion, the additional soil samples taken immediately down the glacial ice direction from the magnetic highs, have indicated very anomalous amounts of lamprolitic indicator elements, which have been verified to exist in quite anomalous amounts within the lamporitic dyke on the Bear Creek property (Figure 7). Also the existance of G-4 and G-5 class pyrope garnets as well as chromite and ilmenite grains near the magnetic "bull's eye" anomalies is further evidence that the anomalies are lamproite diatremes.

Recent research into the geophisical magnetic airborne data by a diamond exploration company in the Milk River - Sweet Grass Hills area, has indicated that the Surprise Creek permit lies within the heart of a major volcanic intrusive structure of intersecting faults or dykes piercing the Phanerozoic sedimentary rocks of the area. These faults are believed to be the main conduits for the intrusion of a large cluster of lamproitic - kimberlitic diatremes and dykes some 50 million years ago. The regional magnetic pattern indicates that these structures radiate from a central core area which runs east-west through the Surprise Creek permit block. It is thought that only a small fraction of the intruded diatremes and dykes are magnetite bearing, and that many non-magnetic intrusions lay just under the thin till cover. The Bear Creek permit block contains at least two of these radiating lamproite - kimberlite bearing structures. At least five intrusive rock types of varying chemistry have been identified in diatremes and dykes in the Milk River - Sweet Grass Hills area. The dyke outcroping on the Bear Creek property has been identified as a minette or a sanidine phlogopite lamproite, but diatremes subcropping nearby may well be lamproitic or even kimberlitic in nature. Diamonds have been reported in diatremes in the Milk River - Sweet Grass area, therefore it is quite feasible that diamondiferous diaremes may exist on the two properties optioned by Consolidated Pine Channel Gold Corp.

It is therefore recomended that detailed ground magnetic surveys should be executed on the magnetic highs, which are showing anomalous indicator elements in the thin soil cover on the Bear Creek property. These magnetic highs should be diamond drilled, each with one vertical shallow drill hole. The Surprise Creek property should be prospected in detail for any ultramafic intusive outcroppings, and a soil augering survey sould be carried out over the suspected east-west orientated central core structure within the central area of the property. This augering survey should intersect shallow subcropping diatremes which should be slightly more resistive to errosion than the surrounding Phanerozoic sedimentary rocks.

PROPOSED SECOND PHASE PROGRAM BUGET

<u>Bear Creek Property</u>

8 kms. ground magnetics on 25 meter grid $150/km.	$1,200
180 meters diamond drilling (three 60m holes) $120/meter	$21,600
Assaying of drill core $500/sample X 15 samples	$7,500

<u>Surprise Creek Property</u>

400 auger test holes, 200 meter spaced, covering 8 sq. kms.

4 holes/hour X 8 hrs./day = 32 holes/day = 13 days

Crew of two: 13 days X $400/day	$5,200
Total Mobilization / demobilization	$8,000
Geologist's Report	$3,000
TOTAL COST, PHASE 2	$46,500

[redacted]

Thomas M. Williams, BSc.
Sr. Geologist
CONS. PINE CHANNEL GOLD CORP.

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APPENDIX 1: PETROGRAPHIC REPORT SSP-93-34/3

SCOTT-SMITH PETROLOGY

BRIEF PETROGRAPHY OF A SAMPLE FROM ALBERTA

Report SSP-93-34/3

CONFIDENTIAL

B.H. Scott Smith
Scott Smith Petrology
2555 Edgemont Boulevard
North Vancouver
B.C., V7R 2M9
CANADA

2nd September 1993

.0 INTRODUCTION

n a telephone conversattion with Mr. D. Hoffman of Consolidated Pine Channel old Corporation. it was agreed that one sample would be submitted to Scott mith Petrology. It was also agreed, because of the time constraints of both arties, that a brief petrographic examination would be undertaken and a one age report issued. The main purpose of the examination would be to determine, f possible, whether the sample is a lamproite or not. A single sample, with no ample number, was received in late August 1993. In a telephone conversation ith Mr. T. Williams of Consolidated Pine Channel Gold Corporation on 30th ugust 1993, it was noted that the sample derives from a dyke which is pproximately 1km long and 2-3m wide. The dyke is located in south east lberta. Apparently the dyke contains xenolithic material including up to 10cm ragments of granitic basement. The country rock is apparently Upper Cretaceous hales, mudrocks and limestone. According to Bram Janse the dyke occurs in the icinity of some known potassic or alkaline rocks which are considered to be an xtension of the well known alkalic province in Montana. The nearest part of hat province being the Sweetgrass Hills. This author is not familiar with the ocks occurring in this province in Canada and has not researched them. A ackage was forwarded to Scott Smith Petrology from Vancouver Petrographics hich contained several pieces of sample with one of the cut surfaces having een polished. Two thin sections were also included.

.0 BRIEF PETROGRAPHY

acroscopic examination

he sample is a pale brown rock which contains abundant coarse brown mica. The ica occurs as plates up to 5mm in size, occasionally coarser, which can often e seen to have euhedral shapes. The mica may show some poor alignment. Another henocryst phase occurs as rusty orange coloured grains up to 5mm in size. They re often euhedral and are probably olivine. They occur as glommeroporphyritic ggregates.

icroscopic examination

his sample is a strongly porphyritic rock. Phenocrysts of mica are dominant. hey occur (in this thin section) as rectangular to lath-like euhedral to ubhedral grains. The mica is pleochroic from pale to very pale slightly orangy rown. A very thin outer rim or overgrowth is a chestnut brown colour. No bvious polysynthetic twinning is present. Some different colours in cross icols appear to be associated with the cleavages. The other phenocryst phase ppears to be completely altered olivine. Olivine is less abundant than the ica. No macrocrysts are apparent. Other somewhat smaller (up to 2mm) are uhedral grains of fresh clinopyroxene. They often have well developed leavage, occur as aggregates, show some zonal undulose extinction, is ometimes twinned and the occasional grain has an altered or reacted core. The roundmass of this rock is fine grained (mostly <0.2mm). It is composed of fine aths of mica which are pleochroic from pale brown to chestnut brown. Small rains of clinopyroxene are in similar abundance. They occur as laths and more quant grains. Numerous extremely fine grained often euhedral spinels occur hroughout the groundmass. These groundmass mineral are poikilitically enclosed y a mosaic of intergrown grains of a colourless low birefringent mineral. The mineral cannot be identified in the main groundmass but is likely to be sanidine. The groundmass was not examined in detail for other accessory minerals, which might be expected in such rocks, but amphibole, priderite, perovskite etc. were not apparent. Coarser grained pool-like areas are dominated by a similar mineral which tends to occur as lath-like to rectangular grains somewhat supported the suggestion that it may be sanidine. Some simple twinning is present. Other minerals such as carbonate and minor amounts of a green pleochroic mineral also occur in these patches.

Discussion

This rock is an igneous rock with a strong porphyritic texture. The texture suggests that the rock is hypabyssal-facies which is consistent with it being derived from a dyke.

The sample is composed of phenocrysts of mica, olivine and clinopyroxene set in a groundmass of mica, clinopyroxene, spinel and probable sanidine. Such a mineral assemblage can occur in both phlogopite lamproites and minettes. The presence of spinel would, however, be very unusual for lamproites. These two rock types are notoriously difficult to distinguish petrographically. Also very few lamproite dykes are known worldwide so the author has not examined many such samples. The possibility of the rock being a sanidine phlogopite lamproite cannot be completely excluded. However, many of the features observed in this rock very strongly suggest that this rock is a minette. These features include the colour, zoning and nature of the mica, the zonation of the clinopyroxene, the presence of spinel and to a lesser extent the mode of occurrence of the olivine. They are all features which do not typically occur in lamproites and are characteristic of minettes. The absence of typical lamproitic minerals in a potential phlogopite lamproite is also extremely notable. This brief petrographic examination suggests that this sample is minette and not a lamproite. Whatever its classification, mantle-derived (indicator) minerals including diamond are probably rare and, more likely, absent in this rock.

The suggestion that this sample is minette is supported by its apparent association with an extension to the Montana alkalic province where minettes occurring as dykes of similar dimensions are common. If this dyke cuts upper Cretaceous rocks it must be young in age supporting a possible association with the Montana province.

3.0 CONCLUSIONS

The brief petrographic examination of this sample suggests that this sample is a minette. The possibility of this dyke sample being a sanidine phlogopite lamproite is considered very unlikely, but this possibility cannot be totally precluded based on this investigation.

4.0 Further Work

No further work is recommended on this sample. However, if further confirmation of the sample being a minette is required the following suggestions may be considered.

1) A petrographic examination of a suite of related samples with more background information.

2) Determining the age of this sample.

3) Determining the compositions of the primary rock forming minerals in this, or related, samples. Of interest would be
   - the composition and most importantly the zonation of both generations of mica
   - the compositon and zoning of the clinopyroxene
   - confirmation of the nature of the spinel
   - confirmation that the interstitial mineral is sanidine.

.0 NOTE

his report presents the best professional opinion of the author based on the nformation available at the time and within the time constraints of the roject. There may be other information not available to the author which may hange this opinion.

APPENDIX 2: ANALYSIS CERTIFICATES AND MICROPROBE ANALYSIS

GEOCHEMICAL ANALYSIS CERTIFICATE

Diamond Quest Laboratories Inc. PROJECT PINE CHANNEL File # 93-2207 Page 1

1531 Pender St. West, Vancouver BC V6G 2T1

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Sn ppm	Y ppm	Nb ppm	Be ppm	Sc ppm	SAMPLE -80# gm	TOTAL gm
BC-S1-93	2	21	10	74	<.3	30	9	874	2.86	<4	<10	<4	6	199	<.4	<4	<4	76	3.10	.079	20	48	1.39	754	.28	6.45	.94	1.60	2	61	<2	14	4	1	10	79.24	298
BC-S2-93	<2	21	5	62	<.3	28	8	730	3.05	<4	<10	<4	7	401	.5	<4	<4	65	7.15	.071	24	39	1.34	872	.23	5.53	.83	1.42	3	65	<2	16	<2	1	9	43.23	272
BC-S3-93	<2	32	12	67	<.3	35	9	613	3.22	<4	<10	<4	8	211	.5	<4	<4	83	3.12	.079	23	48	1.50	729	.26	6.67	.70	1.75	<2	73	<2	16	3	1	11	43.89	271
BC-S4-93	<2	24	12	83	<.3	31	10	503	2.91	6	<10	<4	6	180	<.4	<4	<4	79	2.31	.079	22	49	1.27	769	.26	6.48	.83	1.73	3	67	<2	15	2	1	10	35.53	266
BC-S5-93	<2	12	11	54	<.3	19	7	512	2.16	<4	<10	<4	7	187	<.4	<4	<4	51	4.77	.074	21	32	2.07	642	.20	5.44	.86	1.51	2	57	<2	13	3	1	7	93.95	350
BC-S6-93	<2	19	11	66	<.3	23	7	424	2.32	<4	<10	<4	7	197	.5	<4	<4	83	3.11	.069	22	37	1.29	748	.23	5.55	.82	1.55	<2	65	<2	14	3	1	8	70.30	232
BC-S10-93	<2	41	15	92	<.3	35	11	983	3.03	7	<10	<4	7	220	.7	<4	<4	91	1.72	.074	24	54	.74	845	.31	6.82	.83	1.69	4	62	<2	18	3	1	12	28.72	301
BC-S11-93	<2	20	10	70	<.3	26	9	431	2.66	<4	<10	<4	8	175	<.4	<4	<4	72	2.08	.070	22	41	1.21	738	.25	6.09	.92	1.62	<2	69	<2	15	2	1	9	41.95	309
BC-S12-93	<2	19	10	64	<.3	24	9	616	2.75	11	<10	<4	6	250	<.4	6	<4	64	4.43	.069	25	39	1.40	1225	.23	5.54	.79	1.51	4	66	<2	16	3	2	9	30.77	346
BC-S13-93	<2	28	9	68	<.3	38	13	1091	4.34	5	<10	<4	6	490	.8	<4	<4	75	7.29	.061	19	45	1.22	648	.24	5.89	.65	1.24	3	58	<2	17	<2	1	11	49.44	312
BC-S14-93	<2	28	11	64	<.3	29	6	309	2.72	<4	<10	<4	8	188	.8	<4	<4	84	2.91	.068	22	52	1.22	757	.28	6.57	.74	1.61	3	71	<2	16	2	1	11	39.15	313
BC-S15-93	<2	32	14	90	.3	36	15	524	2.99	4	<10	<4	7	348	.4	<4	<4	89	4.08	.056	21	54	1.19	685	.27	6.60	.67	1.48	2	66	<2	16	<2	1	12	25.42	298
BC-S18-93	<2	20	12	70	<.3	24	7	297	2.42	8	<10	<4	8	253	.5	<4	<4	67	4.76	.070	24	40	1.48	716	.22	5.67	.71	1.59	4	76	<2	16	2	1	9	47.71	308
BC-S19-93	<2	19	12	64	.3	21	7	315	2.10	<4	<10	<4	8	259	.5	<4	<4	60	5.60	.072	22	37	1.56	616	.21	5.42	.65	1.56	2	86	<2	14	3	1	8	63.82	300
BC-S20-93	<2	20	10	67	<.3	25	8	358	2.48	<4	<10	<4	8	258	.4	<4	<4	71	5.16	.062	23	42	1.23	712	.23	5.61	.64	1.52	<2	70	<2	15	2	1	9	63.74	302
BC-S21-93	<2	20	11	72	<.3	26	6	418	2.57	<4	<10	<4	8	181	.5	<4	<4	75	3.10	.065	23	47	1.06	836	.23	5.90	.78	1.68	3	72	3	14	2	1	9	90.13	355
BC-S22-93	<2	18	14	74	<.3	25	8	445	2.41	<4	10	<4	8	183	.4	<4	<4	71	1.46	.053	22	43	.74	1093	.23	5.75	1.02	1.74	3	76	<2	14	2	1	9	59.71	350
BC-S23-93	<2	17	12	77	<.3	24	9	485	2.73	<4	10	<4	10	137	<.4	<4	<4	82	.69	.057	25	49	.62	795	.24	6.16	.74	1.82	<2	80	<2	15	2	1	10	60.19	368
RE BC-S23-93	<2	18	12	75	<.3	24	9	480	2.64	7	18	<4	9	133	.4	<4	<4	80	.66	.057	27	48	.61	773	.23	5.97	.72	1.74	3	76	<2	15	<2	2	10	-	-
BC-S24-93	<2	20	11	68	.3	32	9	412	2.92	5	14	<4	10	134	<.4	<4	5	86	.85	.052	28	52	.73	783	.24	8.15	.69	1.71	2	77	<2	15	2	2	10	80.83	370
BC-S25-93	<2	16	9	75	<.3	18	7	387	2.36	<4	12	<4	10	159	<.4	<4	<4	70	.65	.066	26	43	.54	833	.24	5.70	.86	1.62	2	74	<2	13	<2	1	9	90.15	308
BC-S26-93	<2	20	10	72	<.3	25	8	469	2.77	5	<10	<4	9	140	.4	<4	<4	79	.88	.059	24	48	.66	800	.24	6.13	.79	1.60	2	72	<2	15	2	2	10	67.64	329
BC-S27-93	<2	20	11	74	<.3	25	8	516	2.79	4	<10	<4	7	164	<.4	5	6	77	.63	.071	24	46	.82	725	.24	6.07	.77	1.59	3	68	<2	14	<2	2	10	37.59	292
BC-S28-93	<2	19	13	73	<.3	28	9	459	2.89	<4	10	<4	9	149	<.4	<4	<4	86	.73	.048	28	52	.67	836	.25	6.40	.78	1.79	<2	79	<2	15	2	2	11	62.76	362
STANDARD CT	18	50	30	128	6.2	68	31	1093	4.50	28	14	<4	42	241	18.3	15	19	112	1.21	.116	42	105	1.22	948	.29	7.23	1.67	1.96	16	59	14	11	4	1	14	-	-

ICP - .250 GRAM SAMPLE IS DIGESTED WITH 10ML HCLO4-HNO3-HCL-HF AT 200 DEG. C TO FUMING AND IS DILUTED TO 10 ML WITH DILUTED AQUA REGIA. THIS LEACH IS PARTIAL FOR MAGNETITE, CHROMITE, BARITE, OXIDES OF AL, ZR & MN AND MASSIVE SULFIDE SAMPLES. AS, CR, SB, AU SUBJECT TO LOSS BY VOLATILIZATION DURING HCLO4 FUMING.

- SAMPLE TYPE: P1 SOIL P2 ROCK PULP   Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: AUG 30 1993 **DATE REPORT MAILED:** Sept 2/93. **SIGNED BY** [redacted] D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Sn ppm	Y ppm	Nb ppm	Be ppm	Sc ppm	SAMPLE gm
BC-S7-93	<2	22	8	70	<.3	27	8	419	2.36	<4	<10	<4	8	184	<.4	<4	4	67	2.94	.068	22	44	1.28	736	.24	5.55	.80	1.53	<2	61	<2	14	4	1	9	233
BC-S8-93	<2	22	9	68	<.3	26	9	505	2.32	<4	<10	<4	8	246	<.4	<4	<4	63	4.36	.068	24	40	1.42	743	.23	5.37	.82	1.53	2	61	<2	15	4	1	9	174
BC-S16-93	<2	22	8	74	<.3	28	8	412	2.40	<4	<10	<4	7	193	<.4	<4	4	71	3.26	.066	24	42	1.23	754	.24	5.71	.73	1.58	2	65	<2	14	3	1	10	164
BC-S17-93	<2	22	10	75	<.3	29	8	295	2.47	<4	<10	<4	8	283	<.4	<4	7	64	3.07	.059	25	39	1.22	1015	.25	6.11	.74	1.31	<2	80	<2	15	4	1	10	148
RE BC-S17-93	<2	21	11	72	<.3	29	8	298	2.41	4	<10	<4	9	281	<.4	<4	<4	62	3.04	.059	26	38	1.21	1059	.25	5.96	.71	1.28	2	79	<2	15	2	1	10	-
STANDARD CT	18	54	35	133	5.9	71	32	1118	4.54	29	16	4	42	253	17.5	20	18	113	1.26	.119	42	102	1.29	959	.30	7.24	1.66	1.98	16	60	16	12	7	2	14	-

ICP - .250 GRAM SAMPLE IS DIGESTED WITH 10ML HCLO4-HNO3-HCL-HF AT 200 DEG. C TO FUMING AND IS DILUTED TO 10 ML WITH DILUTED AQUA REGIA. THIS LEACH IS PARTIAL FOR MAGNETITE, CHROMITE, BARITE, OXIDES OF AL, ZR & MN AND MASSIVE SULFIDE SAMPLES. AS, CR, SB, AU SUBJECT TO LOSS BY VOLATILIZATION DURING HCLO4 FUMING.

- SAMPLE TYPE: P1 ROCK P2 SOIL P3 PULP <u>Samples beginning 'RE' are duplicate samples.</u>

DATE RECEIVED: AUG 23 1993 **DATE REPORT MAILED:** Aug 27/93. **SIGNED BY** [redacted] D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

ACME ANALYTICAL

Diamond Quest Laboratories Inc. PROJECT PINE CHANNEL FILE # 93-2207

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Sn ppm	Y ppm	Nb ppm	Be ppm	Sc ppm
BC-R1-93	<2	75	51	165	.7	143	36	1130	5.32	<4	<10	<4	5	1213	1.0	<4	<4	118	8.44	.423	25	338	5.77	3735	.47	5.06	.90	5.50	2	130	<2	12	3	3	31
BC-R2-93	<2	105	86	163	.6	136	35	955	5.16	4	10	<4	4	1112	.9	5	<4	117	8.58	.447	26	318	5.46	3428	.44	4.90	.85	5.27	<2	125	8	12	5	3	30
BC-R3-93	<2	55	29	119	.9	128	33	944	4.56	<4	<10	<4	4	1091	.9	<4	<4	97	10.07	.392	21	395	6.63	2706	.34	3.82	.74	4.16	<2	96	<2	11	2	2	40
RE BC-R3-93	<2	55	31	120	.8	134	36	996	4.81	<4	<10	<4	5	1153	.8	<4	<4	103	10.22	.409	23	400	6.88	2841	.36	4.01	.77	4.36	<2	101	<2	12	3	2	40
STANDARD CT	16	52	31	122	6.1	63	29	1071	4.28	30	17	4	39	232	17.3	19	14	104	1.16	.110	40	94	1.16	906	.28	6.77	1.57	1.88	16	56	14	11	6	<1	15

Sample type: ROCK PULP. Samples beginning 'RE' are duplicate samples.

ALBERTA SAMPLES

Sample number

Analysis of sample un 2 DQ-s-16-1 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
96	39.81	5.78	1.29	21.60	35.76	.00	104.24

Analysis of sample un 3 DQ-s-16-2 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
99	38.45	4.82	1.77	19.33	32.60	.05	97.03
100	38.47	5.14	1.99	20.46	34.07	.00	100.13
AVER	38.46	4.98	1.88	19.90	33.34	.02	98.58

Analysis of sample un 4 DQ-s16-3 lt. or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
103	39.58	8.27	2.42	21.77	29.38	.04	101.45
104	40.20	8.09	2.36	22.39	34.55	.02	107.61
AVER	39.89	8.18	2.39	22.08	31.96	.03	104.53

Analysis of sample un 5 DQ-s16-4 dk.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
107	39.29	5.85	3.58	22.25	33.88	.06	104.90
108	37.34	5.76	3.84	21.52	31.65	.06	100.16
AVER	38.31	5.81	3.71	21.88	32.77	.06	102.53

Analysis of sample un 6 dqs16-5 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
111	39.40	3.27	6.04	19.13	35.18	.04	103.05

Analysis of sample un 7 dq16-6 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
114	38.50	4.48	2.82	20.37	36.11	.00	102.28

Analysis of sample un 8 dqs16-7 lt.or alamandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
117	37.29	3.46	7.29	19.83	25.68	.05	93.61

Analysis of sample un 9 dqs16-8 lt.or almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
120	37.80	1.31	4.63	18.92	32.86	.00	95.52

Analysis of sample un 10 dqs16-9 lt.or. pyr-almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
123	40.62	7.75	9.96	20.04	24.77	.06	103.20

Analysis of sample un 11 dqs16-10 med.or. unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
126	36.87	.07	1.87	18.54	24.66	.00	82.01

Analysis of sample un 12 dqs16-11 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
129	38.22	3.24	5.90	21.55	33.65	.04	102.61

Analysis of sample un 13 dqs16-12 lt.or. almandine

132	37.84	2.90	2.95	22.05	33.06	.01	98.82

Analysis of sample un 14 dqs16-13 lt.or. unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
135	28.25	1.88	.01	53.76	13.06	.00	96.97

Analysis of sample un 15 dqs16-14 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
138	38.88	3.92	3.06	21.86	35.14	.11	102.96

Analysis of sample un 16 dqs16-15 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
141	38.74	1.28	8.95	20.15	35.04	.00	104.16

Analysis of sample un 17 dqs16-16 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
144	38.30	2.91	.99	21.13	38.13	.00	101.46

Analysis of sample un 18 dqs16-117 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
147	37.87	4.23	4.31	20.22	34.90	.03	101.57

Analysis of sample un 19 dqs16-18 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
150	37.72	1.66	1.13	21.44	43.58	.00	105.54

Analysis of sample un 20 dqs16-19 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
153	38.04	3.48	2.47	21.01	37.18	.01	102.20

Analysis of sample un 21 dqs16-20 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
156	27.48	1.71	.00	53.48	14.57	.02	97.26

Analysis of sample un 22 dqs16-21 lt.or. pyr-almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
159	39.82	8.74	1.00	20.81	30.09	.12	100.58

Analysis of sample un 23 dqs16-22 lt.or.almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
162	38.64	2.63	6.20	20.58	31.29	.04	99.37

Analysis of sample un 24 dqs16-23 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
165	39.92	6.51	5.58	18.99	28.54	.18	99.72

Analysis of sample un 25 dqs16-24 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
168	39.99	5.54	1.93	19.94	32.58	.01	99.99

Analysis of sample un 26 dqs16-25 lt.or. pyropic almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
171	40.40	8.64	2.84	20.71	30.96	.07	103.62

Analysis of sample un 27 dqs16-26 med.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
174	36.98	2.39	7.01	19.21	32.96	.07	98.63

Analysis of sample un 28 dqs16-27 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
177	38.72	3.86	6.25	18.73	31.67	.00	99.24

Analysis of sample un 29 dqs16-28 blk. FeOx

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
180	.03	.00	.00	.11	88.98	.00	89.12

Analysis of sample un 30 dqs16-29 blk. FeOx

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
183	.00	.42	.23	1.16	84.32	.00	86.12

Analysis of sample un 31 dqs16-30 blk. FeOx

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
186	.00	.00	.00	.00	88.47	.00	88.47

Analysis of sample un 32 dqs16-31 blk. chromite

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
189	38.58	.11	21.85	21.17	12.56	.05	94.31

Analysis of sample un 33 dqs16-32 lt.grn. unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
192	39.15	.00	23.43	24.80	9.56	.06	97.00

Analysis of sample un 34 dqs16-33 lt.grn unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
195	54.74	15.72	22.53	.91	5.63	.10	99.64

Analysis of sample un 35 dqs16-34 dk.brn. unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
198	34.78	4.41	.91	33.43	9.84	.00	83.37

Analysis of sample un 36 dqs16-35 lt.yel.grn. unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
201	54.55	16.82	23.43	.86	3.76	.21	99.63

Analysis of sample un 37 dqs8-1 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
204	38.97	2.26	6.65	20.72	31.03	.01	99.63

Analysis of sample un 38 dqs8-2 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
207	37.87	5.73	1.71	20.93	33.01	.01	99.26

Analysis of sample un 39 dqs8-3 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
210	39.34	4.65	.86	20.23	37.14	.00	102.23

Analysis of sample un 40 dqs8-4 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
213	37.71	3.78	4.76	19.80	32.48	.01	98.54

Analysis of sample un 41 dqs8-5 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
216	38.35	3.25	1.59	19.65	36.21	.01	99.06

Analysis of sample un 42 dqs8-6 med.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM

219	38.15	.62	7.10	19.67	36.69	.00	102.23

Analysis of sample un 43 dqs8-7 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
222	36.67	1.92	3.66	18.96	38.94	.00	100.15

Analysis of sample un 44 dqs8-8 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
225	38.78	2.73	1.25	19.99	40.54	.01	103.29

Analysis of sample un 45 dqs8-9 med.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
228	38.48	3.70	2.67	18.96	35.59	.06	99.46

Analysis of sample un 46 dqs8-10 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
231	37.64	8.31	1.67	21.44	32.03	.02	101.12

Analysis of sample un 47 dqs8-11 lt.or. grossular

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
234	39.39	.07	32.21	16.67	10.33	.01	98.68

Analysis of sample un 48 dqs8-12 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
237	38.48	5.55	6.10	22.46	29.10	.02	101.72

Analysis of sample un 49 dqs8-13 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
240	38.67	5.90	7.00	20.71	27.82	.05	100.16

Analysis of sample un 50 dqs8-14 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
243	37.38	5.97	3.86	20.70	32.24	.00	100.15

Analysis of sample un 51 dqs8-15 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
246	39.13	1.77	7.90	19.27	32.40	.04	100.51

Analysis of sample un 52 dqs8-16 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
249	35.93	2.85	2.35	19.94	37.94	.02	99.03

Analysis of sample un 53 dqs8-17 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
252	37.11	2.92	1.27	20.56	34.44	.04	96.34

Analysis of sample un 54 dqs8-18 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
255	37.28	2.17	2.04	20.03	34.88	.00	96.40

Analysis of sample un 55 pyrope std

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
258	44.81	20.36	5.08	22.76	9.03	.12	102.17

Analysis of sample un 56 dqs8-19 med.or. unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
261	28.11	1.74	.02	55.87	13.39	.09	99.21

Analysis of sample un 57 dqs8-20 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
264	37.89	3.86	2.08	21.87	34.47	.00	100.17

Analysis of sample un 58 dqs8-21 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
267	38.45	2.81	3.59	20.38	34.95	.02	100.20

Analysis of sample un 59 dqs8-22 med.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
270	37.64	1.75	6.77	17.93	21.88	.04	86.01

Analysis of sample un 60 dqs8-23 lt.or almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
273	38.08	5.15	2.14	21.25	35.04	.01	101.66

Analysis of sample un 61 dqs8-24 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
276	25.87	2.11	.00	53.16	14.58	.03	95.76

Analysis of sample un 62 dqs8-25 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
279	37.60	4.14	2.66	21.49	34.22	.01	100.12

Analysis of sample un 64 dqs8-26 med.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
285	36.86	2.13	.27	20.51	29.28	.01	89.05

Analysis of sample un 65 dqs8-27 med. or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
288	37.43	1.66	7.19	21.01	33.10	.02	100.40

Analysis of sample un 66 dqs8-28 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
291	36.95	4.26	2.59	20.10	35.32	.03	99.24

Analysis of sample un 67 dqs8-29 dk.brn. unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
294	42.18	8.64	11.59	11.00	18.35	.00	91.76

Analysis of sample un 68 dqs8-30 dk.brn unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
297	39.10	8.36	10.82	12.75	19.12	.05	90.20

Analysis of sample un 69 dqs8-31 dk.brn. unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
300	35.60	6.24	.74	32.40	6.36	.00	81.34

Analysis of sample un 70 dqs8-32 blk. FeOx

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
303	.28	.00	.01	.11	82.86	.00	83.27

Analysis of sample un 71 dqs8-33 blk. FeOx

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
306	.00	.00	.02	.00	88.38	.00	88.40

Analysis of sample un 72 dqs8-34 blk. FeOx or ilmenite

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
309	.00	.50	.01	.20	57.29	.00	58.00

Analysis of sample un 73 dqs8-35 dk.brn unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
312	41.59	8.12	10.20	11.55	24.86	.03	96.36

Analysis of sample un 74 dqs8-36 dk.gra. unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
315	.05	.33	.02	.53	27.23	.00	28.16

Analysis of sample un 75 dqs8-37 blk. FeOx

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
318	.02	.05	.00	.15	85.42	.00	85.63

Analysis of sample un 76 dqs8-38 dk.grn. trnslu. unk

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
321	35.33	7.54	1.03	31.33	6.42	.00	81.65

Analysis of sample un 77 dqs8-39 blk. FeOx

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
324	1.05	.05	.01	.17	83.93	.00	85.20

Analysis of sample un 78 dqs8-40 blk. FeOx

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
327	1.95	.38	.12	.08	74.79	.00	77.31

Analysis of sample un 79 dqs8-41 blk. FeOx

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
330	1.94	.56	.16	3.04	65.58	.00	71.27

Analysis of sample un 80 dqs17-1 dk.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
333	36.51	2.49	5.55	21.25	30.28	.00	96.09

Analysis of sample un 81 dqs17-2 or.stained quartz

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
336	99.08	.00	.02	.00	.54	.01	99.65

Analysis of sample un 82 dqs17-3 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
339	39.74	5.47	4.38	20.91	29.27	.00	99.76

Analysis of sample un 83 dqs17-4 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
342	38.90	3.63	4.02	20.90	34.20	.00	101.65

Analysis of sample un 84 dqs17-5 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
345	37.70	1.72	4.73	20.32	34.45	.03	98.95

Analysis of sample un 85 dqs17-6 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
348	36.41	3.46	3.24	21.37	36.58	.00	101.07

Analysis of sample un 86 dqs17-7 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
351	38.68	3.14	8.87	21.06	29.52	.00	101.26

Analysis of sample un 87 dqs17-8 med.or. pyrop-almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
354	36.79	6.55	5.50	18.62	27.42	.03	94.90

Analysis of sample un 88 dqs17-9 lt.or. unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
357	52.93	27.87	.42	3.57	14.53	.16	99.49

Analysis of sample un 89 dqs17-10 lt.or. andradite?

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
360	38.33	5.93	9.51	20.50	25.36	.07	99.70

Analysis of sample un 90 dqs17-11 lt.or. unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
363	36.82	.34	3.18	16.38	17.49	.05	74.26

Analysis of sample un 91 dqs17-12 lt. or. unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
366	1.25	.12	.83	.06	.26	.39	2.92

Analysis of sample un 92 dqs17-13 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
369	38.11	3.44	3.01	22.39	28.24	.05	95.24

Analysis of sample un 93 dqs17-14 chromite in almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
372	.00	11.09	.00	12.05	43.97	31.14	98.25

Analysis of sample un 94 dqs17-15 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
375	37.00	1.26	8.44	21.77	28.68	.00	97.16

Analysis of sample un 95 dqs17-16 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
378	34.59	3.26	5.40	21.61	34.09	.00	98.95

Analysis of sample un 96 dqs17-17 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
381	36.42	2.71	5.62	20.74	34.18	.12	99.79

Analysis of sample un 97 dqs17-18 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
384	37.76	4.31	2.26	20.21	35.95	.00	100.49

Analysis of sample un 98 dqs17-19 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
387	37.69	1.30	11.33	20.69	29.10	.26	100.38

Analysis of sample un 99 dqs17-20 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
390	38.06	5.48	3.02	21.83	32.80	.07	101.25

Analysis of sample un 100 dqs17-21 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
393	37.86	3.72	8.18	20.85	31.34	.02	101.97

Analysis of sample un 101 dqs17-22 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM

Analysis of sample un 101 dqs17-22 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
396	38.06	2.70	5.86	19.29	31.23	.04	97.18

Analysis of sample un 102 dqs17-23 lt.or. unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
399	36.14	.23	.44	19.16	29.49	.08	85.54

Analysis of sample un 103 dqs17-24 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
402	39.58	5.77	4.60	21.68	30.31	.01	101.94

Analysis of sample un 104 dqs17-25 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
405	37.24	2.66	1.17	20.22	37.49	.04	98.82

Analysis of sample un 105 dqs17-26 med.or. unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
408	19.78	1.72	3.91	10.19	14.08	.04	49.70

Analysis of sample un 106 dqs17-27 lt.or. pyrop-almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
411	37.44	6.53	7.25	20.67	27.54	.17	99.59

Analysis of sample un 107 dqs17-28 brn. unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
414	.00	.41	.04	.04	29.62	.00	30.12

Analysis of sample un 108 dqs17-29 lt.grn. pyroxene?

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
417	54.53	16.02	22.58	1.86	2.68	1.14	98.82

Analysis of sample un 109 dqs17-30 lt.or. unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
420	27.23	1.27	.00	54.11	15.55	.09	98.25

Analysis of sample un 110 dqs17-31 blk. unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
423	44.27	10.46	11.26	10.31	17.27	.04	93.60

Analysis of sample un 111 dqs17-32 dk.grn. unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
426	44.10	9.64	10.94	10.73	17.30	.04	92.75

Analysis of sample un 112 dqs17-33 blk. FeOx

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
429	.00	.00	.00	.46	83.69	.00	84.15

Analysis of sample un 113 dqs17-34 olive unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
432	37.36	.02	23.96	22.72	14.50	.00	98.55

Analysis of sample un 114 dqs17-35 blk. FeOx (ilmenite?)

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
435	.00	.05	.00	.00	48.32	.00	48.37

Analysis of sample un 115 dqs7-1 med.or. unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
438	27.70	2.21	.00	53.25	13.99	.05	97.20

Analysis of sample un 116 dqs7-2 med.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
441	36.11	2.51	5.04	21.16	31.68	.03	96.53

Analysis of sample un 117 dqs7-4 med.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
444	37.78	4.07	8.07	20.21	31.07	.20	101.40

Analysis of sample un 118 dqs7-5 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
447	37.43	2.36	1.07	19.60	38.34	.00	98.81

Analysis of sample un 119 dqs7-5 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
450	38.95	1.21	7.43	19.35	33.82	.00	100.77

Analysis of sample un 120 dqs7-6 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
453	36.58	6.58	3.62	21.29	31.74	.06	99.87

Analysis of sample un 121 dqs7-7 lt.or. unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
456	28.64	1.72	.00	53.22	13.43	.08	97.09

Analysis of sample un 122 dqs7-8 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
459	39.21	5.97	6.61	21.27	27.60	.08	100.75

Analysis of sample un 123 dqs7-9 med.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
462	37.22	1.84	7.12	20.23	35.23	.00	101.64

Analysis of sample un 124 dqs7-10 lt.or. pyrop-almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
465	39.05	6.44	3.71	20.87	30.35	.14	100.55

Analysis of sample un 125 dqs7-11 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
468	36.11	.57	.33	20.64	33.91	.00	91.57

Analysis of sample un 126 dqs7-12 lt.pnk.or. quartz?!

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
471	97.98	.03	.06	.08	.73	.07	98.95

Analysis of sample un 127 dqs7-13 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
474	36.69	3.19	1.93	21.08	37.48	.01	100.37

Analysis of sample un 128 dqs7-14 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
477	39.06	2.15	6.85	20.92	32.89	.00	101.88

Analysis of sample un 129 dqs7-15 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
480	38.07	2.61	1.53	21.72	37.17	.00	101.09

Analysis of sample un 130 dqs7-16 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
483	36.74	.95	12.19	21.01	28.78	.00	99.66

Analysis of sample un 131 dqs7-17 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
486	37.46	2.00	7.01	20.31	32.55	.03	99.35

Analysis of sample un 132 dqs7-18 med.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
489	37.13	.73	7.35	20.34	36.08	.00	101.63

Analysis of sample un 133 dqs7-19 lt.or. pyrop-almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
492	40.44	8.32	6.39	20.54	23.81	.00	99.50

Analysis of sample un 134 dqs7-20 lt.or. pyrop-almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
495	37.65	7.33	1.39	21.61	31.75	.01	99.73

Analysis of sample un 135 dqs7-21 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
498	37.67	3.81	6.17	19.83	29.87	.02	97.87

Analysis of sample un 136 dqs7 22 med.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
501	37.69	1.94	3.17	20.53	35.12	.02	98.46

Analysis of sample un 137 dqs7-23 lt.or. almandine

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
504	37.42	3.90	1.28	22.35	41.52	.03	106.51

Analysis of sample un 138 dqs7-24 blk. unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
507	34.95	5.34	.55	31.17	9.03	.00	81.04

Analysis of sample un 139 dqs7-25 dk.grn. unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
510	33.36	4.13	.92	33.01	9.14	.03	80.58

Analysis of sample un 140 dqs7-26 blk. unknown

	SiO2	MgO	CaO	Al2O3	FeO	Cr2O3	SUM
513	34.60	4.04	.21	32.25	9.02	.04	80.17

FROM: C.F. MINERAL RESEARCH LIMITED
263 LAKE AVENUE
KELOWNA, BRITISH COLUMBIA
CANADA V1Y 5W6

To: Boris E. Manchur:

Enclosed please find the results of the two diatreme hosted purplish garnets and the ilmenite. The results indicate that the ilmenite is definitely a (kimberlite) picroilminite and one of the garnets classify as a G-5, by the Dawson & Stephens classification. About seven G-5 pyrope garnets have been found worldwide as inclusions in diamonds and I don't know of a case where a G-5 has been found in a geologic setting other than kimberlite or lamproite, however it is possible G-5's will be found in other geologic enviornments but as your two garnets exhibit typical diatreme hosting morphology, it is thought that the two garnets originated from a (kimberlitic?) diatreme.

Sincerely:
Chuck Fipke

July 31,1990.