

6015

DRILLING REPORT

on the

Ingenika Range Property

NIK MINERAL CLAIMS

NIK #1 of 12 units (Record #139(9))

NIK #2 of 18 units (Record #140(9))

Omineca Mining Division

(NTS 94D9)

Located 6.67 km N 30° E Johanson Lake

Owned and Operated by

BP Minerals Limited

NIK

94D/9E

MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
NO. 6015

C.D.S. Bates:  
C.D.S. Bates  
October 12, 1976

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*map* DIAMOND DRILL LOCATION MAP

DIAMOND DRILL CORE LOGS

S U M M A R Y

NIK Claims  
Diamond Drilling

- Diamond drill hole ND #1 499 feet (153 m)  
506N/41.5 m grid W of 497E/-65°/grid east
- Diamond drill hole ND #2 502.5 feet (154 m)  
38 m grid N 506N/20 m grid W of 498.5E/-65°/grid east
- Diamond drill hole ND #3 508 feet (156 m)  
12 m grid S 506N/7 m grid E of 493.5E/-65°/grid west
- Diamond drill hole ND #4 499.5 feet (153 m)  
7.75 m grid N 506N/4 m grid W of 495 E/-65°/grid west
- Diamond drill hole ND #5A 144 feet (44 m)  
6 m grid N 506N/4.65 m grid E of 500.5E/-65°/grid west

Elevations of ND #1 to ND #4 in the interval 1830-1840 metres  
Elevation of ND #5A at the 1880 metre contour

Diamond drill core stored on the property

Total costs applied \$27,189.00

Claim credit apportionment:

6 years to NIK #1 of 12 units

6 years to NIK #2 of 18 units

SA 2,1,4,3

STATEMENT OF COSTS

Ingenika Range Property  
NIK Claims (NIK #1/NIK #2)

SUMMARY

i) Direct drilling costs	\$23,994
ii) Helicopter support costs	<u>3,195</u>
	<u>\$27,189</u>

i) Direct drilling costs\*

Wright Drilling Company Limited  
Kamloops, B.C. (drilling contract and itemized  
account attached)  
Boyles BBS1 BQ core / BW casing

ND #1	0-28 - 28' @ \$11.34/ft	casing	\$ 317
	28-499' - 471' @ \$11.34/ft	coring	<u>5,341</u>
			(\$5,658)
ND #2	0-16' - 16' @ \$11.34/ft	casing	\$ 181
	16'-502.5-487' @ \$11.34/ft	coring	<u>5,517</u>
			(\$5,698)
ND #3	0-6 - 6' @ \$11.34/ft	casing	\$ 68
	6'-508'-502' @ \$11.34/ft	coring	<u>5,692</u>
			(\$5,760)
ND #4	0-16' - 16' @ \$11.34/ft	casing	\$ 181
	16'-499.5'-483.5' @ \$11.34/ft	coring	<u>5,483</u>
			(\$5,664)
ND #5A	0-25 - 25' @ \$11.34	casing	
	25' - 50' - 25' @ \$12.09	casing	(\$1,214**)
	50' - 144' @ field cost	casing	
	(hole abandoned in overburden)		
	Total direct drilling costs		<u>\$23,994</u>

\* At the time the affidavit was submitted no indirect drilling costs were known - these are now shown on the contractors invoice but have not been included in the assessment amount.

\*\* The figure of \$1,214 was the amount used during the preparation of costs at the time that the affidavit was submitted. In actual fact the real amount that was billed totals \$1,810 in direct costs.

ii) Helicopter support costs

<u>Date</u>	<u>Hours</u>	<u>Running Total</u>
Aug 21	4.2	4.2
22	5.9 mobilization to ND #1	10.1
23	5.2	15.3
24	1.6	16.9
25	1.0	17.9
26	1.1	19.0
27	0.3	19.3
28	3.6 (DM) ND #1 to #2	22.9
29	NF	22.9
30	0.5	23.4
31	0.2	23.6
Sept 1	1.4	25.0
2	2.6 (DM) ND #2-3	27.6
3	0.3	27.9
4	0.7	28.6
5	NF	28.6
6	1.6 (DM) ND #3-4	30.2
7	NF	30.2
8	NF	30.2
9	NF	30.2
10	1.5	31.7
11	3.8 (DM) ND #4-5A	35.5

NF = No Flying  
DM = Drill Move

Total hours August 21 to September 11 = 35.5 hours

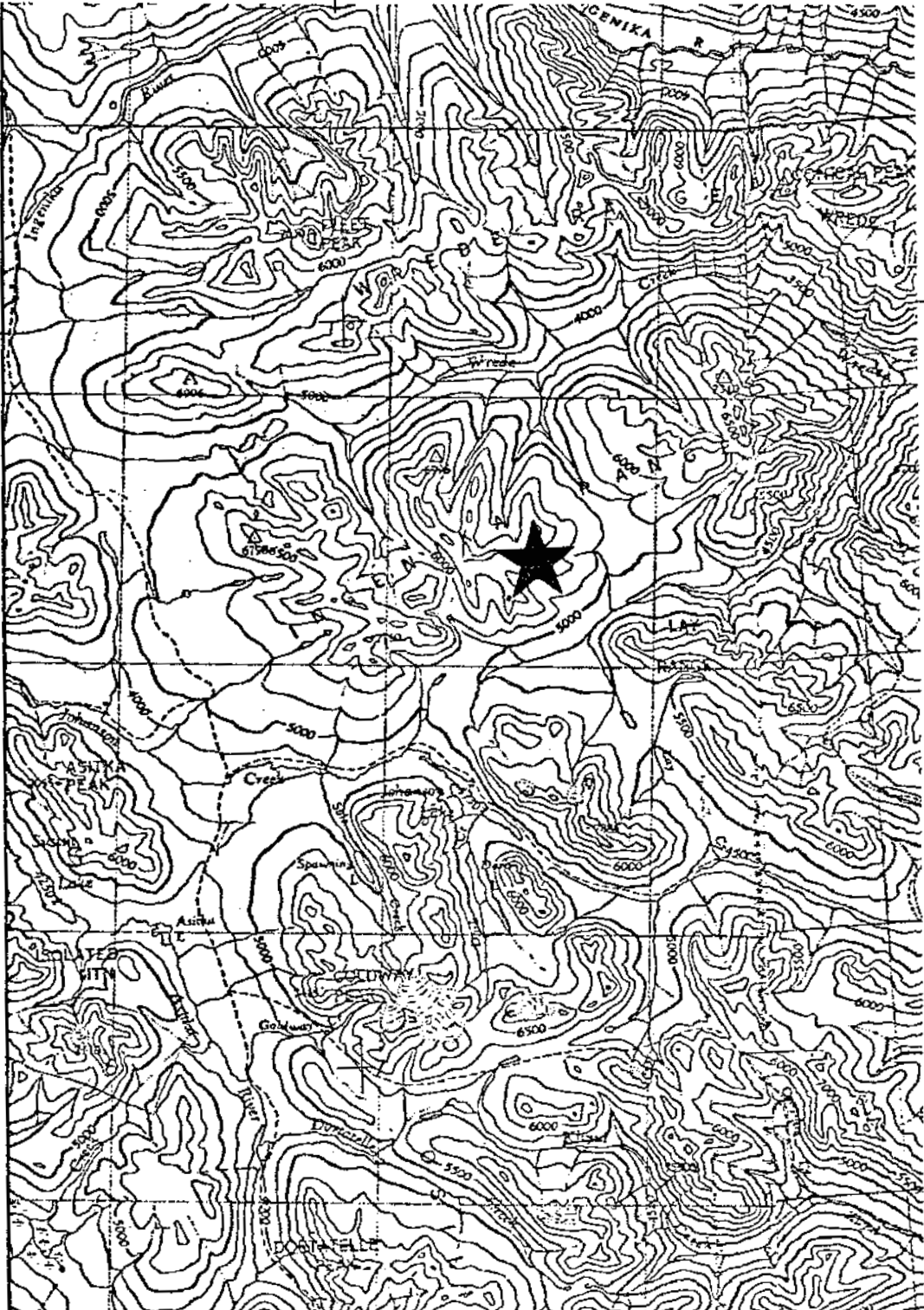
Bell 47 - contract rate \$160/hour  
- fuel cost 20/hour

Total cost per hour \$180 x 35.5 = \$6,390

50% applied towards assessment = \$3,195

126°15'

56°45'



Location Map

Ingenika Range Property

NIK Claims

Scale 1" = 4 miles

# INVOICE

**WRIGHT DRILLING LTD.**  
 1510 - WINDWARD PLACE  
 KAMLOOPS, B.C.  
 V2E 1A6

**INVOICE NO. 101**

**SOLD TO**

**SHIPPED TO**

B.P. MINERALS LTD.  
 1199 - WEST PENDER ST.  
 VANCOUVER, B.C. V6E 2R1

DATE	ORDER NO.	SALESMAN	TERMS	SHIPPED VIA	PPD.	COLL.
			15 DAYS			
QUANTITY	DESCRIPTION				PRICE	AMOUNT
	DIAMOND DRILLING AUG 16-31					\$15,330.65
B.P. Minerals Limited <b>RECEIVED</b> SEP 17 1976 Vancouver, B.C.						
TOTAL						\$15,330.65

BREAKDOWN

Inv # 101

AUG 16 - 31, 1976

RE-SETTING CAMP & THAWING DRILL RODS

36 MAN HOURS @ \$15.00

\$540.00

MOVING TO NEW SITE

136 MAN HOURS @ \$15.00

\$2040.00

DRILLING HOLE #1

CASING 0 - 28' - 28' @ \$11.34

317.52

CORING 28' - 499' - 471' @ 11.34

5341.14

TESTING HOLE #1

1 MACHINE HOUR @ \$35.00

35.00

MOVING TO HOLE #2

40 MAN HOURS @ \$15.00

600.00

DRILLING HOLE #2

CASING 0 - 16' - 16' @ \$11.34

181.44

CORING 16' - 431' - 415' @ 11.34

4706.10

BP Minerals Limited  
**RECEIVED**  
SEP 17 1976  
Vancouver, B.C.

EQUIPMENT LOST IN HOLE # 2

1 B.Q. CORE BARREL COMPLETE (10 FT) \$516.00

3 10' B.Q. DRILL RODS @ \$41.00 123.00

1 B.Q. REAMING SHELL 298.00

1 B.Q. 100 SERIES DIAMOND BIT 192.50

\$1,129.50

B.C. SALES TAX @ 7%

79.07

\$1,208.57

MUD COST AUG 16-31

16 MAN HOURS @ \$15.00 240.00

9 BAGS QUIK-GEL @ \$5.50 49.50

4 BAGS QUIK-TRAIL @ 6.65 53.20

PLUS 7% TAX ON \$102.70 7.19

PLUS 10% OF \$109.89 10.99

360.88

\$15,330.65



# INVOICE

**WRIGHT DRILLING LTD.**  
 1510 - WINDWARD PLACE  
 KAMLOOPS, B.C.  
 V2E 1A6

**INVOICE NO. 104**

**SOLD TO**

**SHIPPED TO**

B. P. MINERALS  
 1199 - WEST PENDER ST.  
 VANCOUVER, B.C.  
 V6E 2R1

DATE	ORDER NO.	SALESMAN	TERMS	SHIPPED VIA	PPD.	COLL.
24/9/76			15 DAYS			
DESCRIPTION					PRICE	AMOUNT
DIAMOND DRILLING SEPT 1-22, 1976						\$ 26,309.43
B.P. Minerals Limited <b>RECEIVED</b> SEP 23 1976 Vancouver, B.C.						
<b>TOTAL</b>						\$ 26,309.43



FORM NO. PK103R-3  
 AVAILABLE FROM BUSINESS ENVELOPE MANUFACTURERS OF CANADA, LTD., 3015 KENNEDY ROAD, UNIT NO. 8, AGINCOURT, ONTARIO M1V 1E7

LOT # 576949

PRINTED IN U. S. A.

BREAKDOWN

INV #104 SEPT 1-22, 1976

DRILLING HOLE #2

CORING 431'-503' - 72' @ \$11.34

\$816.48

MOVING FROM HOLE #2 TO HOLE #3

36 MAN HRS @ \$15.00

\$540.00

DRILLING HOLE #3

CASING 0'-6' - 6' @ 11.34 = \$68.04

CORING 6' - 508' - 502' @ 11.34 = \$5692.68

\$5760.72

MOVING FROM HOLE #3 TO HOLE #4

42 MAN HRS @ \$15.00

630.00

DRILLING HOLE #4

CASING 0 - 16' - 16' @ 11.34 = \$181.44

CORING 16' - 499' - 483' @ 11.34 = \$5477.22

\$5658.66

MOVING FROM HOLE #4 TO HOLE #5

52 MAN HRS @ \$15.00

\$780.00

DRILLING HOLE #5

CASING 0 - 25' - 25' @ 11.34 - \$283.50

25' - 50' - 25' @ 12.09 - \$302.25

50' + OVER

35' DRILL HRS @ \$35.00 - \$1225.00

1 BQ BIT 50SERIES - \$359.25

1 BQ CORE BARREL - 171.90

1 BW CASING SHOE - 148.50

\$679.65

PLUS 1% TAX

47.58

\$727.23

PLUS 10%

72.72

799.95

\$1214 applied

BP Minerals Limited

RECEIVED

SEP 25 1976

Vancouver, B.C.

\$2610.70

MOVING FROM HOLE #5 TO HOLE #6

58 MAN HRS @ \$15.00

\$870.00

DRILLING HOLE #6

CASING 0 - 16' - 16' @ \$11.34 - \$181.44

CORING 16' - 378' - 362' @ 11.34 - \$4105.08

\$4286.52

NOT APPLIED

COST FOR CEMENT

9 MACHINE HRS @ \$35.00 \$315.00

1 BAG CEMENT 19.00

\$333.00

REAMING COST

15 DRILL HOURS @ \$35.00

\$525.00

HOLE STABILIZATION COST

16 MAN HRS @ \$15.00 \$240.00

13 BAGS QUIK GEL @ \$5.50 71.50

16 BAGS QUIK TROL @ 6.65 106.40

B.C. 55 TAX @ 1% OF \$177.90 12.45

\$430.35

COST FOR PACKING FUEL

4 MAN HRS @ \$15.00

\$60.00

ACID TESTING

3 DRILL HOURS @ \$35.00

\$105.00

MOVING TO USLIKA LAKE

4 DRILL HOURS @ \$35.00 - \$140.00

96 MAN HRS @ \$15.00 - \$1440.00

TRUCK COST

1 TON - 90 MI. @ \$1.45 - 130.50

3/4 TON 90 MI @ 1.00 - 90.00

1800.50

COST FOR HAULING MUD EQUIPMENT

1 TRIP KAMLOOPS - JOHANSEN LK RTN - 1300 MI.

1 TRIP KAM - PR. GEO. RTN 650 MI.

1950 MI @ .25'

\$487.50

DEMOBILIZATION

USLIRA - KAMLOOPS

\$600.00

\$26,309.43

STATEMENT OF QUALIFICATIONS

C.D.S. Bates - BA (Oxon), MA (Oxon), MSc, DIC.

- 1968 BA Oxford University  
(Honours Degree Geology)
- 1970 MSc Royal School of Mines, Imperial College,  
London University  
(Mineral Exploration)
- 1970 DIC Royal School of Mines, Imperial College,  
London University  
(Mineral Exploration)
- 1975 MA Oxford University

BETWEEN:

BP MINERALS LIMITED

a body corporate duly incorporated under the laws of the Province of British Columbia, and having its head office at VANCOUVER

(hereinafter called the Company)

AND:

WRIGHT DRILLING LTD., a body corporate duly incorporated under the laws of the Province of British Columbia and having its Registered Office at Suite 305 - 186 Victoria Street, Kamloops, British Columbia

(hereinafter called the Contractor)

WHEREAS:

A. The Company has requested the Contractor to complete a minimum 4500 feet of drilling and related services as hereinafter set forth on the property of the Company in the Omineca Mining Division

B. The Contractor has agreed to do the said Diamond drilling and to perform the related services requested upon the terms, conditions and provisos hereinafter contained:

NOW THEREFORE THIS Agreement witnesseth that in consideration of the payment of the amounts stipulated herein and mutual promises and covenants herein contained, it is understood and agreed by and between the parties as follows:

1. SCHEDULE OF RATES - CORING

The Company hereby employs the Contractor to drill a series of bore holes on the said property using a BQ core barrel producing a core of approximately 1.432. The Company agrees to pay the Contractor on a footage basis for all drilling according to the following schedule of rates:

<u>Coring</u>	<u>From</u>	<u>To</u>	<u>Price/foot</u>
	0'	500'	\$11.34
	500'	1000'	\$12.09
<u>Overburden</u>			
	0'	25'	\$11.34✓
	25'	50'	\$12.09
	50 plus		Field Cost

2. TRANSPORTATION AND MOVES

A. It is agreed that the moving of drill and camp equipment, supplies and personnel to the transport discharge point and return from the transport loading point, shall be the Company's account at a lump sum of Twenty - four hundred dollars with seventy-five percent (75%) payable upon completion of the move in and the remaining twenty-five (25%) payable upon completion of the minimum footage.

B. In the event access to the drilling area cannot be realized with the Contractor's truck, moving from the truck discharge point to the drilling area will be for the Company's account at the specified labour rate.

C. The Contractor agrees to erect a suitable camp for the purpose of providing room and board for personnel associated with the drilling operation. Erection and dismantling of the camp will be for the Company's account at the specified labour rate.

D. It is agreed that moves between drill sites shall be at the agreed labour rate. Moving time shall be from the time of completion of pulling to set - up time at the next drill site. No machine rental charge will be made unless the rig is used to move itself. Moving between properties will be carry out on a field cost basis.

3. WATER SUPPLY

If the source of water supply is at a greater distance than two thousand (2000) feet from the drilling site, or over three hundred (300) feet vertical lift, the Contractor will be paid the extra cost of supplying water to the drill site in addition to the other contract charges.

4. MUD AND ADDITIVES:

If ever required to help penetrate the overburden and or aid in core recovery, would be supplied at cost on the job site plus ten percent. Time spent mixing mud and stabilizing the hole would be charged on a field cost basis.

5. REAMING CASING AND CEMENTING:

If ever necessary to help prevent cave-ins, would be performed on a field cost basis.

6. DIRECTIONAL AND CONTROLLED DRILLING

It is mutually agreed that directional drilling to change the direction of a bore hole and controlled drilling to maintain the angle of a bore hole shall not be part of this agreement.

7. SECURITY

The Contractor will not give out any information regarding drill results or access to any person other than to the Company's representative.

8. BOARD AND LODGING

The Contractor agrees to provide board and lodging for its own men at its own expense, and to provide meals to a limited number of the Company's representatives at the rate of N/A per meal.

The Company agrees on fly-in jobs that all transportation and expediting costs be charged to the Company's account.

9. CORE BOXES

It is mutually agreed, that if requested, core boxes would be supplied on the job site at cost, plus ten percent (10%).

10. STANDBY

It is agreed that standby, dip testing, delay time or other time which the Contractor's crews are performing services for the Company, not otherwise covered herein, shall be performed at a field cost basis.

11. HELICOPTER PROJECTS

The Company agrees that on helicopter jobs they will supply all fuels and transportation cost from truck discharge point to drill sites at no cost to the Contractor.

The Contractor agrees to case and drill on the sites and at angles and azimuths selected by the Company representative and to follow the instructions of the said representative relating to place and time of drilling.

13. CAVES

In the event that cavities or loose and caving materials are encountered of a nature as to prevent the successful completion of any hole, the Contractor does not, under such conditions, guarantee to drill to a predetermined depth and, in the event that it becomes necessary to abandon the hole, the Company agrees to pay for such uncompleted holes at the rate herein specified for all footage completed.

In the event it becomes necessary to resort to cementing, reaming of casing or mud circulation in bedrock, the Company agrees to reimburse the Contractor at field cost.

Wherever pipe or casing is lost or left in a hole on the instruction of the Company's engineer, the Company agrees to pay the Contractor for such pipe or casing at cost, f.o.b. drill site.

14. TRACTOR

If required, the Contractor will supply at the Company's cost a tractor for the construction and maintenance of access roads, drill site preparation and cleanup and the moving of the diamond drill.

15. FIELD COST

It is agreed that the hourly rate shall be interpreted here and hereinafter to be Thirty-five (35.00) per hour, per drill outfit. It is also agreed that the Contractor shall include in the hourly rate the cost of supplying a regular two man drill crew, supervision and maintenance as required, drilling machinery and associated equipment, fuels, and board and lodging for the drill crew.

In the event labour over and above the regular two man crew and supervision are required, the Contractor agrees to supply such additional labour at the rate of Fifteen (15.00) per man per hour.

It is further agreed and understood that when the Contractor is working at the field cost rate, the cost of pipe or casing lost or left in the hole, diamond articles and materials and supplies consumed in the work shall be for the Company's account at cost, plus 10%

16. PAYMENT

The Company agrees to pay the Contractor, in Canadian funds the above prices. Payment to be made within 15 days of the date of the account rendered. Invoices shall be submitted twice monthly.

17. COMPENSATION AND INSURANCE

The Contractor agrees that the men employed by him in the performance of this Contract shall be fully covered under Worker's Compensation laws according to the Province of British Columbia and will keep such men covered and will pay the assessment required and will protect the Company from any action arising therefrom, excluding however, claims arising out of any negligent act or omission of the Company, its servants or agents.

The Contractor shall, at his own cost, maintain Liability and Property damage insurance in the amount of five hundred thousand (500,000.00) dollars.

The Contractor carries an all perils insurance policy limited to \$20,000.00 per drilling outfit at his own cost. The Company agrees that additional insurance cost incurred for flying or barging of equipment will be to their account.



Company will provide at its own expense, all rights of way, both ingress and egress, and the peaceable possession of all real property that may be required in connection with said work including real property upon which all necessary temporary buildings and other facilities may be erected, or placed, and will save the Contractor harmless from any and all damages, claims, demands, costs or charges of whatsoever kind or character incident to the occupation and use of said real property.

Upon completion of such work by the Contractor, the Contractor shall have the right to remove, within a reasonable length of time, all temporary buildings and other fixtures, trade fixtures, machinery, equipment, appliances and facilities furnished by and placed upon such real property by Contractor.

19. LIENS

The Contractor shall be responsible for and will pay promptly all costs and charges, incurred by itself for labour, machinery, tools and supplies used in completing the work hereunder so that no lien or other such charge relative to the Contractor, may be registered against the Company or the property.

20. FORCE MAJEURE

Neither party to the agreement shall be liable for any loss or damage caused by reason of strikes, acts of God, action of the elements, or any other causes beyond its control.

21. LAWS APPLICABLE

This agreement shall be interpreted and any dispute arising hereunder shall be determined in accordance with the laws of the Province of British Columbia.

22. ASSIGNMENTS

This agreement shall be binding upon and shall inure to the benefit of the parties hereto, their respective successors and assignees, provided, however, that the same shall not be assignable by either party until the consent in writing of the other shall have first been had and obtained thereto.

IN WITNESS THEREOF, this agreement has been executed by the parties hereto the day and the year first herein written.



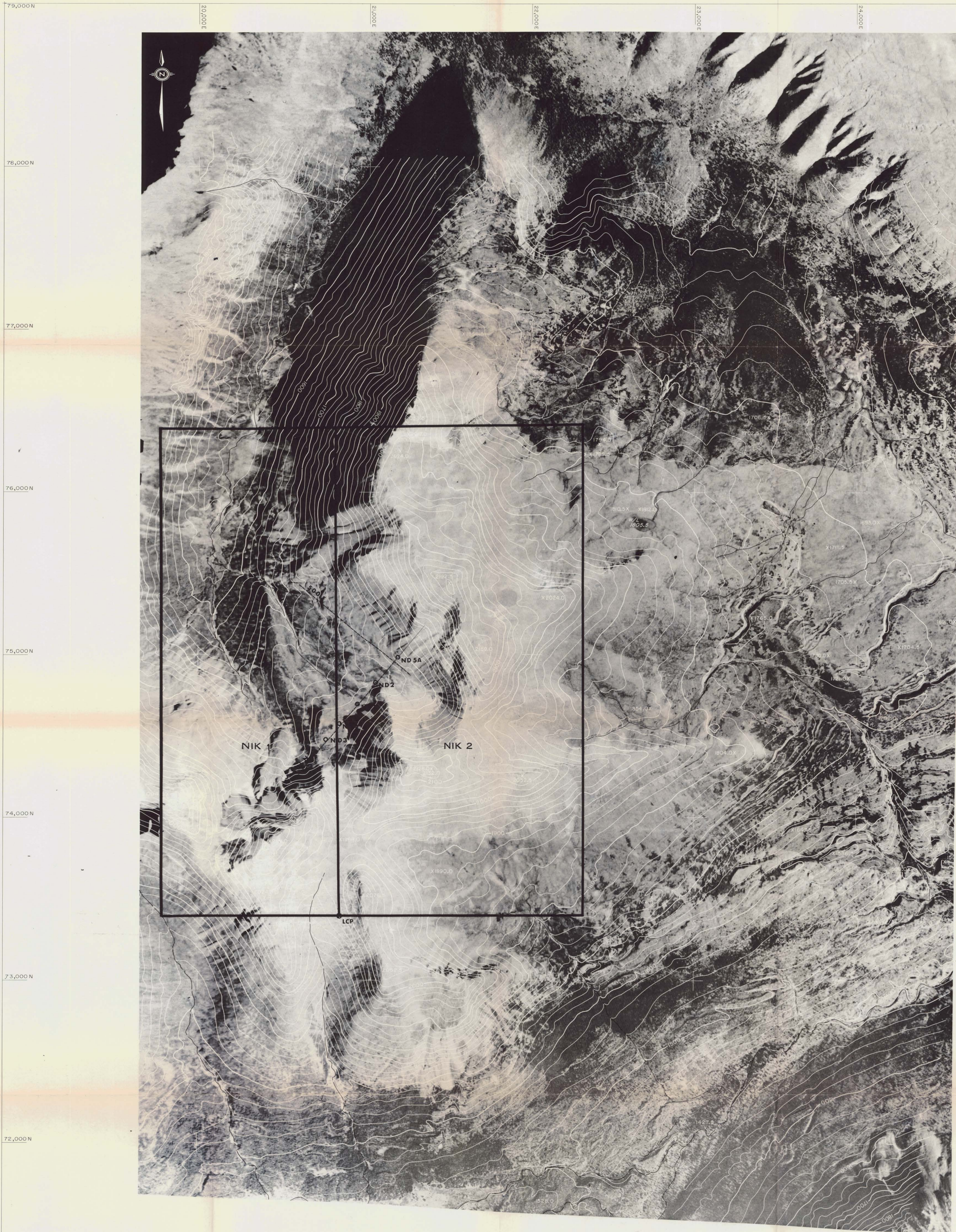
By [Signature] PRESIDENT

By [Signature] DIRECTOR

BP MINERALS LIMITED

By [Signature]

WRIGHT DRILLING LTD.



71,000 N

72,000 N

73,000 N

74,000 N

75,000 N

76,000 N

77,000 N

78,000 N

79,000 N

20,000 E

21,000 E

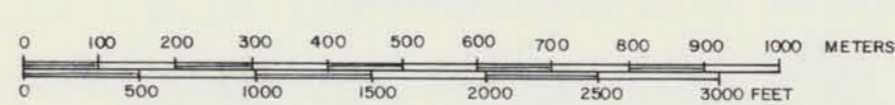
22,000 E

23,000 E

24,000 E

○ DIAMOND DRILL LOCATIONS

SCALE



6015

MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
NO. **6015**  
MAP NO. **1**

BP MINERALS LIMITED	
INGENIKA RANGE PROPERTY	
PRELIMINARY RECONNAISSANCE TYPE MAPPING	
Scale	1 : 10000
Contour Interval	20 metres
Date	MAY 1976
Job No.	06260-0
Sheet No.	1-1
McElhanney Surveying & Engineering Ltd. 1200 West Pender Street, Vancouver B.C. Canada	

DRILL LOG

SHEET NO.

LOCATION <i>NIK</i>		CO-ORDINATES		NORTH		EAST		ELEVATION		1 of 5		
				506N + 7.75m		495E - 4m						
DATE STARTED	DATE COMPLETED	SURVEYS		Top of Casing	-65°	Grid West	Acid Etch	-68°	499'6"	HOLE SIZE	TOTAL DEPTH	HOLE NO. <i>ND</i>
										<i>BQ</i>	499'6"	D.O.H. 76-4

Interval	Length	%	LITH	ALT	MIN	F	Y/F	F/F	log
19-19	0	-	Overburden	—	—				
19-30	9'	82	First 7' is chlorit <sup>2</sup> , sheared (40-50°), some intrusive (?) All peridotite - fg, black, magnetic	Strong chlorit <sup>2</sup> and gouge in shear zone. Wk serpent <sup>2</sup> gen.	1-2% diss py in chlorit <sup>2</sup> intrusive at ~28'	40-50"	0	7	
30-40	10	100	Same rock	Calcite and serpentine fr-fill mod pervasive.	—	30° 70°	1/2	5/6	
40-50	10	100	Same rock	Wk serpent <sup>2</sup> on fract.	—	65° 30°	4/1	5	
50-60	10	100	Same rock - at 58'6" is 2" wide hybrid intrusive (?) (non magnetic) zone at 55°, sharp contacts.	Same	—	25° 55°	0	4	
60-70	10	100	Same rock - minor shearing sub// c.a. (irreg)	Same	—	60° 15°	0	6	
70-80	9'6"	95	Same rock - small shear zone sub// c.a. at 79'6".	Same	—	65° 30°	0	5	
80-90	9	90	Same rock - small gouge zone (irreg) at 83'.	Med calcite and serpentine veining in fract zones	—	70° 15°	1	6	
90-100	9	90	Same rock	Wk serpent <sup>2</sup> on fract	—	50° 60°	4/1	5	
100-110	10	100	Same rock	Same..	—	35° 65°	1	3-4	
110-120	10	100	Same rock	Same	—	30° 70°	4/1	4-5	

# DRILL LOG

SHEET NO. 2 OF 5

HOLE SIZE: BGR

HOLE: ND  
76.4

Interval	Length	%	LITH	ALT	MIN	F	V/F	F/A	log
120-130	9'6"	95	Same rock - fg, black, magnetic peridotite. 35° gouge zone 2" wide at 121'.	wk serpent <sup>2</sup> . Locally pervasive calcite fr. fill in fract zones	—	30 60	3	5 7	—
130-140	9	90	Same rock - 15-30° gouge zone ~ 6" wide at 130'6". 6" wide 0-15° gouge at 137'6".	Some alt <sup>n</sup> - calcite less prominent	—	40° 95°	1	5	—
140-150	9'6"	95	Same rock	Some	—	0-10° 65	1	5 6	—
150-160	9'9"	98	Same rock	Some	—	0° 25°	1	5	—
160-170	10'	100	Same rock	wk serpent <sup>2</sup> - strong calcite fr-fill locally.	—	40°	2	4 5	—
170-180	9'9"	98	Same rock	wk serpent <sup>2</sup> on fract.	—	55 10	1	5	—
180-190	9'	90	Same rock - wk shearing along 10-20° fract.	Some	—	25 90	0	5	—
190-200	9'6"	95	Same rock - 6" gouge zones at 190'6" (10-20°) and 194'6" (10-20°)	Some	—	25 50	0	5 6	—
200-210	9'	90	Same rock - sub// shearing and fracturing prominent	wk-mod serpent <sup>2</sup>	—	0-5° 35°	0	6	—
210-220	10'	100	Same rock to 216' - 1" wide zone of cg gabbro. Sharp lower contact, upper contact sharply gradational with chlorit <sup>2</sup> perid.	Mod to strong blot <sup>2</sup> and some albit <sup>2</sup> (no epidote or chlorite). wk-mod serpent <sup>2</sup>	—	0-5° 35°	0	8	—
220-230	10'	100	All peridotite. Small 6" gouge zone at 220' and 3" zone at 227'6"	wk serpent <sup>2</sup>	—	40° 55	0	4	—

# DRILL log

SHEET NO: 3 of 5

HOLE SIZE : BQ HOLE No: ND 76-4

Interval	Length	%	LITH	ALT	MIN	FE	VA	VA	log
230-240	9'8"	97	Peridotite to 234' - sharp ~ 50° contact with eq gabbro. Lower contact back into peridotite at 236'8" is sharply gradational (with chlorit <sup>2</sup> peridotite. This gabbro(?) may be feldspathized peridotite and magnetic chlorit <sup>2</sup> peridotite cherts are contained in this section of gabbro)	Chlorit <sup>2</sup> in peridotite to gabbro, gen wk serpent <sup>2</sup> Mod-st chlorit <sup>2</sup> of gabbro		25 50	0	4	?
240-250	10'	100	Rock is peridotite - at 243'4" is 8" zone of albit <sup>2</sup> and chlorit <sup>2</sup> (pseudo-gabbro as in previous section). 6" gouge zone at 241'6" sub// ea.	Wk serpent <sup>2</sup> mod chlorit <sup>2</sup> in albit <sup>2</sup> zone		20 30	1	4-5	~
250-260	10'	100	All peridotite	Numerous 60° calcite fr-fill, wk serpent <sup>2</sup>		60 25	3-4	6-7	
260-270	10'	100	Same rock	Wk serpent <sup>2</sup> , calcite less prominent		35 70	2	5-6	
270-280	10'	100	Same rock	Same		35 60	1	5-6	
280-290	10'	100	Same rock	Same		35 65	1	4	
290-300	9'6"	95	Same rock - 10-30° fracturing is prominent	Weak serpent <sup>2</sup> on fract		10-30	1	5-6	
300-310	10'	100	Same rock	Same		10-30 60	0	5	
310-320	9'6"	95	Same rock	Some - minor serpent <sup>2</sup> envelopes.	Some eq magnetite in a serpent <sup>2</sup> envelope at 316'6"	10-15	1	3-4	
320-330	9'	90	Same rock - serpentized envelopes more prominent	Wk serpent <sup>2</sup> and calcite veining - strongly serpent <sup>2</sup> envelopes at 321' (2" wide) and 326' (15" wide)	Minor eq with magnetite in serpentine envelope at 321'	45 25	2-3	6	
330-340	10'	100	Same rock - 10-15° gouge zone - 8" wide at 335'	Thin serpentine veining and minor serpentized envelopes.		10-60	1-2	5-6	

# DRILL LOG

SHEET NO: 4 of 5

HOLE SIZE: BQ HOLE NO: 76-4

Interval	Length	To	LITH	ALT	MIN	F	Y	F/A	log
340-350	10'	100	Same rock - fg, black, magnetic peridotite. 4" gouge zone at 347'6"	wk-med serpent <sup>z</sup> in veins and irreg envelopes	---	15-20 40	1	5-6	mm
350-360	10'	100	Same rock - 1" gouge at 350' at 360'	Same alt <sup>n</sup>	---	70 45	1	4	
360-370	10'	100	Same rock - 1" gouge ~70° at 367'	Same alt <sup>n</sup>	---	20 65	1	4	
370-380	10'	100	Same rock - 6" zone of albite flooding at 376'	Same alt <sup>n</sup> ; calcite fr fill locally prominent	---	20 50	2	3-4	
380-390	10'	100	Same rock - strong calcite fr-fill from 380-383'. From 386-389 <del>fract</del> shearing along irreg fract sub// ca. is prominent.	Same wk-med serpent <sup>z</sup>	---	0° 50°	2-4	5	SS
390-400	9'	90	Same rock - shear gouge prominent especially at from 396-400+ (0-5° irreg)	Same	---	65	1-2	4-6	SS
400-410	9'6"	95	Same rock - shearing very prominent. Gouge zones at 401'6", 405' sub// ca., irregular.	Same	---	30 45	0	6-7	SS
410-420	6'6"	65	Same rock - sheared, only ~2' of core recovered from 411-417'. Shears sub// ca.	Same.	---	30	0	5-7	SS
420-430	6'	60	Contact at 420' between sheared perid (0-20°) and fine-mg biotite diorite; contact is sharp but indistinct, diorite has 1" botized margin. Diorite is well-fract with calcite fr-fill and local biotite-fr-fill. 1" wide shear gouge zone at 427' ~30°. From 420-425' only 2'6" core recovered.	Diorite is extremely biot <sup>z</sup> at contact (rest of biotite may be sec also), local pervasive sericite, contact alteration	1-3% Cp, mainly on microfract near contact (~3%), fg dissem elsewhere (<1%). ~1% fg diss euhedral py	25-30 0° irreg	3	9	+ + SS
430-440	10'	100	Lower contact with chlorit <sup>z</sup> perid at 433'8" is gradational over 2". Near contact diorite is equig with interstitial sec(?) biotite (Type II). Diorite again at 438'6", gradational contact with chlorit <sup>z</sup> perid; diss fg cp ~1%, >7 Py	Biotization (see biotite?) and albitization continue in diorite. wk-med chlorit <sup>z</sup> in peridotite.	At lower contact only trace cp, ~.5-1% diss fg Py with biotite.	35-70	1-2	8	+ +
440-450	7'	70	2" of extreme gouge at 440' and 441'. Diorite continues to 441, shear contact with peridotite (~10°)	strong albite in diorite. Some albite(?) veining in perid from 445'6"-448'	1-2% microfract and diss Cp, <.5% Py in diorite.	70 40	1-2	8	+ +

# DRILL LOG

SHEET No: 5 of 5

HOLE SIZE: BQ    HOLE: ND

Interval	Length	%	LITH	ALT	MIN	F	V/L	F/L	Inj
450-460	8'	80	All fg, black, mod-st magnetic peridotite. Zone of broken core starts at 458'.	Wk serpentinization on fract.	—	30	0	7	
460-470	7'3"	73	Broken core continues to ~468'. Peridotite grades <del>near</del> from ~463'-468' to a "hybrid" light grey rock with irregular areas and bands of black magnetic peridotite. Hybrid may be strongly altered peridotite.	Hybrid zone may be strong alteration or intrusive assimilation of peridotite.	1% fg diss Py	50	0	7	
470-480	10'	100	"Hybrid" rock continues, black bands common	Some pervasive silicification?	Gen 1-2% diss Py. At 479'4" - 480' is ~5-7% fg py in strongly fr rock.	50 30	—	4	
480-490	9'6"	95	Light grey "hybrid" rock continues to 483'9" - sharp ~50° contact with banded porphyry: a 10% euhedral phenos of fld in fg. bct-rich matrix. 3" gouge at 486'9".	Strong perv silic' adj to contact. Strong alteration of porphyry. From 486'6" to 490'.	1-2% fg diss Py in hybrid. 1-4% mg diss Py, euhedral, in porphyry	45	—	6	
490-496'	8'	84	Banded porphyry goes to 491' - sharp contact ~45° with "hybrid" ~6" margin in hybrid silicified and pyritized. Black thin mod' magnetic veins prominent in hybrid. (5/inch locally)	Local sericite in narrow envelopes in hybrid, some albite veining	2% diss fg Py in hybrid	40 60	1-	10	6
			END						

JRS

DRILL LOG

SHEET NO.

LOCATION		CO-ORDINATES		NORTH		EAST		ELEVATION		1 of 5	
NIK				506 N - 40 ft		493.5 E + 20 ft.					
DATE STARTED	DATE COMPLETED	SURVEYS		Top of casing	-65°	grid west	Acid Etch	508' - 69°	HOLE SIZE	TOTAL DEPTH	HOLE NO. NA
									BQ	508	D.O.M. 76-3

Interval	Length	Rec.	LITH	ALT	MIN	F	Y/F	F/F	Log
0-0	0	0	Overburden	—	—				
9-20	11	100	Relatively solid, unfractured core. Rock is all fg, black, strongly magnetic peridotite.	Wk serpent <sup>2</sup> along fractures and veins.	—	65°	1	5	
20-30	10	100	Same rock	Same	—	65°	<1	4-5	
30-40	10	100	Same rock to 39'6" - contact with diorite is sharp but fractured. 4" zone of irreg clay gouge at 33'. Fracturing and chlorit <sup>2</sup> increased adj to contact.	Same. Moderate clay gouge along some fract.	—	30°	<1	6	
40-50	9	90	All diorite - rock is better fractured. Diorite is equg, mg, biotite bearing. Fg biotite ~ 5-10%; larger poikilitic mafics(?) also present. Rock is very porous, wsggy.	Wk to mod pervasive Kool. Wk dissem epidote and chlorit <sup>2</sup> .	2% Fg diss py	30°	0	8	
50-60	4	40	Some diorite - 7' of core lost (fell out of tube) from 49-56'. Veins and envelopes of qtz (and feld?) prominent - possible albit <sup>2</sup> .	Silicif is mod as veins and envelopes. Wk dissem epid.	2-3% diss py, minor py in qtz veins.	25°	2	6-7	
60-70	10	100	Some diorite to 66'8" - clay gouge contact with peridotite. Biotization in diorite adj to contact - zone ~ 1' wide.	Moderate albitization(?) pervasive. Wk diss epidote. Some sericite adj to fractures	1-2% Fg diss Py.	70°	1	5	
70-80	10	100	All peridotite - very fine magnetite veins pervasive.	Wk - mod serpent <sup>2</sup> along fractures and veins	—	20°	1	5	
80-90	10	100	Same rock	Minor albit(?) veing. Wk serpent <sup>2</sup>	—	20°	1	5-6	
90-100	10	100	Same rock - small 20° shear zone at 97'	Same.	—	10°	1	5	

QSB



NIK

DRILL LOG

Sheet No 2 of 5

Hole size: BQ

Hole: ND  
76-3

Interval	Length	%	LITH	ALT	MIN	F	%	F/F	Log
100-110	10	100	All peridotite - fg, strong, mag, black. Minor shearing along 10-15° fract at 103'	wk serpent <sup>2</sup>	—	10° <small>(10-15°) 30-40</small>	0	5	
110-120	10	100	Same rock - minor shearing along 10° fract at 117'	Same	—	65 45	0	4	
120-130	10	100	Same rock - small 1 1/4" zone of diorite at 123', peridotite is sheared and chlorit <sup>2</sup> at contacts (sharp contacts ~40°)	Same. Diorite is kaol <sup>2</sup> and vuggy.	—	15 45	0	4-5	
130-140	9	90	Same rock to 136'6" - sharp irregular contact, peridotite (chlorit <sup>2</sup> ) gabbro (eg). Gabbro grades into and out of porphyritic brown subvolcanic(?) to 138', then rock is all <del>sub</del> brown subvolcanic.	wk serpent <sup>2</sup> , mod chlorit <sup>2</sup> adj to contact. Mod disc chlor in subvole.	—	40- 50°	1	3-4	<u>140</u>
140-150	9 3/4"	93	Same brown porphyry to 149' - sharp contact with peridotite. Porphyry contains ~20% vfg to med gr subrounded phenocrysts set in 3 vfg brown (biotit <sup>2</sup> ?) matrix; non-magnetic. Less biotitized rock looks intrusive.	wk to mod local perv epidote and chloritic. Biotization(?)	—	50°	0	5	
150-160	10'	100	All peridotite - fg, black, magnetic.	wk serpent <sup>2</sup> on fract.	—	60 30	4	5	
160-170	10	100	Same rock	Same	—	70- 50	4	4	
170-180	10	100	Same rock	Same	—	60 30	0	4-5	
180-190	10	100	Same rock - at 188'6" is 5" wide zone of eg gabbro. Sharp biotitized contacts (irregular). Gabbro is wk epidot <sup>2</sup> and mafics completely biotitized.	Same	—	20° 30°	0	4	
190-200	10	100	All peridotite.	Same	—	30 50	0	3	

# DRILL LOG

Sheet No 3 of 5

Hole Size: BQ

Hole: ND  
76-3

Interval	Length	%	LITH	ALT	MIN	F	V/F	F/F	Log
200-210	10	100	Peridotite - Fg, black, strongly magnetic. At 202'6" is 18" section of kaolinized, bleached peridotite.	wk serpent <sup>2</sup> on Fract	—	25 60	<1	5	
210-220	10	100	Same rock - solid, unfract core.	Same	—	90 50	<1	2-3	
220-230	10	100	Same rock - unfract.	Same	—	60 20	<1	3	
230-240	10	100	Same rock	med $\frac{1}{4}$ " serpent <sup>2</sup> envelopes at 40-60°.	—	45 85	1	3-4	
240-250	10	100	Same rock	1-6" wide serpent <sup>2</sup> envelope at ~40°.	—	35-40	1	4	
250-260	10	100	Same rock	3-6" wide serpent <sup>2</sup> envelopes 40-60°	At 256'8" is serpent <sup>2</sup> envelope with moly on fractures (3" zone)	35 70	1	4-5	
260-270	10	100	Same rock	wk serpent <sup>2</sup>	—	65° 50	<1	3	
270-280	10	100	Same rock	Same	—	40° 70	<1	4-5	
280-290	10	100	Same rock - serpent <sup>2</sup> increased locally	wk - med serpent <sup>2</sup>	—	35 60	1	4	
290-300	10	100	Same rock - serpent <sup>2</sup> increased locally	wk - med serpent <sup>2</sup>	—	15" itrag 60	1	5	

# DRILL LOG

Sheet No: 4 of 5

Hole Size: BQ Hole: ND  
76-3

Interval	Length	%	LITH	ALT	MIN	F	V/F	F/F	log
300-310	10	100	Same rock - black lg magnetic peridotite. <del>with brownish black with some orange red clay fract</del>	mod serpent <sup>2</sup> along fract	—	35 85	1	5	
310-320	10	100	Same rock - <del>same</del> sub// fract. contains minor gouge, rock is broken from 317' and on.	wk serpent <sup>2</sup> .	—	20° 40° 40	0	5	
320-330	10	100	Same rock - same sub// fract	Same	—	30 55	0	6	
330-340	10	100	Same rock - very well-broken from 330'6" - 336' with mod - strong clay gouge.	Same.	—	55 0° 100%	1	6-7	
340-350	10	100	Same rock - relatively unbroken core.	Same	—	30° 60	4	6	
350-360	10	100	Same rock	Mod to strong serpent <sup>2</sup> begins at ~ 359'	—	15 35	1	4-5	
360-370	10	100	Same rock	Locally strong serpent <sup>2</sup>	—	25 80	0	4	
370-380	10	100	Same rock	wk serpent <sup>2</sup>	—	15 30	1	4-5	
380-390	10	100	Same rock - minor gouge sub// to ca. at 385'	Same	—	45- 55	2	5	
390-400	10	100	Same rock.	Same	—	20 55	0	4	

# DRILL LOG

Sheet No: 5 of 5

Hole Size: BQ

Hole: ND  
76-3

Interval	Length	%	LITH	ALT	MIN	F	V/F	F/F <sub>100</sub>
400-410	10	100	Same rock - fg, block, magnetic peridotite.	Serpent <sup>2</sup> mod - strong in irreg envelopes, minor calcite Fr. Fill	—	75 50	2	4/5
410-420	10	100	Same rock.	Wk serpent <sup>2</sup>	—	75 50	0	2-3
420-430	10	100	Same rock	wk - mod serpent <sup>2</sup> on fract	—	40	1	4
430-440	10	100	Same rock	Wk serpent <sup>2</sup> along Fract	—	45	1	3
440-450	10	100	Same rock	Same	—	irreg 0" 20	0	4
450-460	10	100	Same rock	Same	—	50 70	0	4
460-470	10	100	Same rock	Same	—	20 60	0	3
470-480	10	100	Same rock	Same	—	70 25	0	4
480-490	10	100	Same rock	Same	—	50 25	0	3
490-500	10	100	Same rock	Same	—	60 25	0	4
500-503	3	100	Same rock	Same	—	55	0	3 0.5

END

DRILL LOG

LOCATION		CO-ORDINATES		NORTH		EAST		ELEVATION		HOLE NO.			
NK				38m grid N of 506 N		20m grid W of 498.5E				1. of 10			
DATE STARTED	DATE COMPLETED	SURVEYS		-65°	Top of casing	Grid East	502'6"	Acid Etch	-68°	HOLE SIZE	TOTAL DEPTH	HOLE NO. ND	
										BQ	502'6"	D.D.H. 76-2	
DEPTH		CORE		LITHOLOGY				ALTERATION		MINERALIZATION		STRUCTURE	
From	To	Length	% Rec									F	V/F
18	20	2	100	Overburden to 18'. From 18-20' is 2' of broken and partially ground core. Rock is med gr, equig, hb-bearing diorite. Hb is fine to mg, comprises ~ 20%.				wk-mod chlorit <sup>2</sup> of hb, mod perv diss epidote (deuteric alt <sup>n</sup> )		2-3% diss limonite on fractures.		-	0
20	30	7'	70	Same hb-diorite. Lath-like to acicular hornblende.				Hb relatively fresh, epid mod pervasive as fine "vug" fillings.		1-2% fg py diss with epid and as Fr. fill.		10°	0
30	40	10	100	Same rock.				4 small silica-scorite envelopes at 50-70°. Hb unalt. Mod perv epidote, diss and on fract.		2% fg py diss and fr-fill. Some m-ug py in silica-scorite envelopes		50°	4
40	50	10	100	Same rock. Quartz veins (2 subll veins at 45°) carry eg pyrite. Diss epid still mod prevalent.				Epidote on fractures and weak, weak feldspar flooding, trace of sec kspir at 41'. Mod chlorit <sup>2</sup>		2% fg diss and fr-fill py. eg py in 2 qtz veins.		40°	4
50	60	9'3"	93	Generally same rock - at 55' sharp 30° contact with more mafic, finer-grained diorite; goes to 58' then sharp contact back into med gr leucocratic diorite (same rock types). Rock is still "uggy".				Wk chlorit <sup>2</sup> , wk to mod diss epidote. Minor calcite and qtz veining. Wk to mod albite(?)		1-2% fg py, minor py in qtz veins.		50°	4

Box 1

Box 2

1/8

2-3

4-5

4-5

4-5

DRILL LOG

SHEET NO.

LOCATION		CO-ORDINATES		NORTH		EAST		ELEVATION		HOLE NO. ND	
										2 of 10	
DATE STARTED		DATE COMPLETED		SURVEYS		HOLE SIZE		TOTAL DEPTH		D.O.H. 76-2	
						BQ					
DEPTH		CORE		LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE				
From	To	Length	% Rec				F	V/F	F/F	Log	
60	70	8'	80	Same rock - equig. mg hb-diorite, wk magnetic. Two feet of ground core (lost) from 60-62'. Fracturing increased.	Generally wk to med propylitic alt <sup>n</sup> ; chlor-epid common on fract and diss. Minor qtz veining and alt <sup>n</sup> .	1-2% py as fg dissom or fr-fill assoc with epidote, trace spy.	20°	<1	7		
70	80	10'	100	Same rock to 79' - sharp contact with finer grained sometimes subporphyritic diorite with 5% eg hornblende and 5-10% fg interstitial hb.	Same alt <sup>n</sup> . Some vuggy irreg infillings of epid and py.	1-2% fg dissom py. Cp noted on one chlorit <sup>?</sup> envelope with py near contact with fg subporphyry.	50°	<1	5-6		
80	90	10'	100	Fg subporphyry continues - large mafics (Hh) contain inclusions of qtz or feldspar (euhedral grains) Silicification prominent.	Wk dissom k-spar. Wk diss epid and chlorit. From 86' and on get strong silica flooding, rock becomes fg grey.	1-2% fg py in silicic rock, increases to 3% diss and qtz-vein py in silic zone.	70°	<1	6		
90	100	10'	100	Same rock - fg subporph with eg and fg mafics. (FLF) Minor qtz veining at 40°, indistinct contacts with silic rock.	Strong silic continues to 92', from here get patchy silicif/ qtz veining, wk to med k-spar. wk-med chlor-epidote	2-3% diss and fr-fill py, best py in silic zone. Some red-brown earthy mineral (hematite) on fract and in qtz vein	45°	<1	6		
100	110	9'6"	95	Same rock - continues to 109'6", contact is gradual over 1 foot. Back into mg hb-bearing, equig diorite at 110'	Med perv silic, minor qtz veining. Mod chlor-epid near contact.	1-2% fg diss py.	80°	<1	5-6		

Box 3

Box 4

DRILL LOG

SHEET NO.

LOCATION		CO-ORDINATES		NORTH		EAST		ELEVATION		3 of 10	
DATE STARTED		DATE COMPLETED		SURVEYS		HOLE SIZE		TOTAL DEPTH		HOLE NO./D.D.H. 76-2	
DEPTH		CORE		LITHOLOGY	ALTERATION	MINERALIZATION		STRUCTURE		GRAPHIC	
From	To	Length	% Rec					F	V/S	F/P	Log
Box 5	110	120	10'	100	Rock is mg, eq, hbl, chlorite, hb ~ 15%.	mod epidote alt <sup>n</sup> , chlor-epid wk to mod on fract. wk diss k-spar.	< 1% diss py. Most py is fr-fill ~ 2%.		10° 40°	< 1	4-5
	120	130	7'6"	75	Same rock. From 122-127 (~2 feet core loss here) rock is qtz-veined and has epidotized fractures and silica envelopes - some massive py in these envelopes. Rest of section is only wkly alt and mineralized	Silicified and epidot <sup>2</sup> zone from 122-127. Quartz veins ~ 45%.	Py predom on fract fill, ~ 3%.		50°	1	6
	130	140	8'	80	Same rock.	wk local silicif <sup>t</sup> . Mod epidot <sup>2</sup> .	1-2% Py on fract.		25° 40°	0	4
	140	150	8'3"	83	Same rock	Mod epid <sup>2</sup> , minor qtz veining	2-3% py on fr.		0-5° 50°	4	5
Box 6	150	160	9'6"	95	Same rock - increase in fracturing, decrease in py.	Mod epid <sup>2</sup> , minor qtz veining	1% py on fr.		0-5° 15°	< 1	8

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DRILL LOG

SHEET NO.

LOCATION		CO-ORDINATES		NORTH		EAST		ELEVATION		HOLE NO. / Δ	
										4 of 10	
DATE STARTED		DATE COMPLETED		SURVEYS		HOLE SIZE		TOTAL DEPTH		HOLE NO. / Δ	
						3 1/2				D.D.H. 76-2	
DEPTH		CORE		LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE				
From	To	Length	% Rec				F	V/FI	F/FI	Log	
Box 7	160	170	5	50	Same rock - mg equig hb-diorite. Poor recovery - loss of 5', mud had to be used at 168. Rock is very vuggy.	Strong chloritization, mod infilling with qtz	Some cg py and mag in qtz-veined section 3" wide at 161' generally < 2% py.	irreg	1	6	
	170	180	10	100	Same rock - still strongly chlorit <sup>2</sup> and vuggy. Broken core from 170 - 172' 6"; strongly chlorit & fracturing subll to c.a.	Strong chlorit <sup>2</sup> , silic <sup>+</sup> calcite fr-filling prominent from 175-178'. Mod epidote alt <sup>n</sup>	1-2% diss and fr-fill py	irreg subll	1	2	6
Box 8	180	190	10	100	Same rock	Only local mod silic <sup>+</sup> . Mod epidot <sup>2</sup> .	2% Py on fract and irreg veins.	60° 25"	1	4	5
	190	200	10'	100	Contact at 192' 8" with non magnetic black to green, chlorite-rich rock (ultramafic?); upper contact is sharp, lower contact at 194 1/2' is gradational over 2" with some Hb-diorite. At 196' 6" is sharp gradational contact with cg gabbro	Gabbro is strongly epidot <sup>2</sup> and chlorit <sup>2</sup> . Ultramafic (?) is strongly chlorit <sup>2</sup> . Diorite is wk-mod epid <sup>2</sup> .	2% py on fract in diorite.	25°	1	5	6
	200	210	8'	80	Contact at ~ 200' 6", gabbro/peridotite(?). Contact appears gradational and epidotized over ~ 6". Peridotite is strongly magnetic: 6" gauge zone (~ 20-46°) at 202' 10". Loss of 1' of core at 207' 6". From 203' 6" - 204' 6" peridotite looks "contaminated" with intrusive(?).	Wk to mod serpent <sup>2</sup>	1% diss Po (or Py) in peridotite	30° 10°	2	1	5

98B



DRILL LOG

SHEET NO.

LOCATION		CO-ORDINATES		NORTH		EAST		ELEVATION		5 of 10	
DATE STARTED		DATE COMPLETED		SURVEYS		HOLE SIZE		TOTAL DEPTH		HOLE NO. <i>NA</i> D.D.H. 76-2	
DEPTH		CORE		LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE				
From	To	Length	% Rec				F	V/F1	F/F1	Log	
Box 9	210	220	9'	90	All peridotite - Fg, dk grey to black, strongly magnetic. Thin magnetite veins prominent at 219'.	Mod serpent <sup>2</sup> , calcite Fract-fill prominent.	1% diss and Fr Fill py.	20'	70'	1	5
	220	230	9'6"	95	Same rock - has mottled appearance and strong pervasive thin magnetite veining. Relatively solid, poorly fractured core. 6" gouge zone (150°) at 227'6". Peridotite appears to be "contaminated" with Fg intrusive.	Wk-med serpent <sup>2</sup> , some chlorit <sup>2</sup> .	1% dissim py in "contaminated" zones.	80'	50'	1	2-3
Box 10	230	240	10'	100	Diorite and "contaminated" peridotite gradational through this section. Diorite is mg, equig, Hh-bearing. 6" gouge zone at 232'6". Diorite becomes only rock type at 240'	Wk-med chlorit <sup>2</sup>	2% diss and Fr-Fill py.	40'	40'	1	4-6
	240	250	8'9"	87	Diorite goes to 249', contact with peridotite is sharp but indistinct	Mod to strong chlorit <sup>2</sup> local med ksp <sup>er</sup> and epidote.	Only trace py.	50'	50'	0	6
Box 11	250	260	9'6"	95	All peridotite - shearing at 251' at 30°	Wk serpent <sup>2</sup>	—	30'	50'		5-6

DRILL LOG

SHEET NO.

LOCATION		CO-ORDINATES		NORTH	EAST	ELEVATION		HOLE NO.		
DATE STARTED		DATE COMPLETED		SURVEYS		HOLE SIZE	TOTAL DEPTH	D.D.H.		
DEPTH		CORE		LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE			
From	To	Length	%Rec				F	V/FI	F/PI	Log
260	270	9'	90	Peridotite to 267 1/2', contact with Hb-diorite. Contact is sharp ~ 65°. Gouge zone ~ 5" wide at 263'7" (30-40°)	Calcite veining mod prominent in perid. wk chlorit <sup>2</sup> /epid <sup>2</sup> in diorite	1% fg py diss in diorite.	30°	65°	1/2	5
270	280	10	100	Mg, equig, Hb-diorite. From 271-272' is zone of irreg ultramafic inclusions(?) in diorite, indistinct contacts.	Mod diss epidote, minor k-spar. (pot. ly)	1-2% diss <del>py</del> and fr-fill py.	30°	60°	0	5
280	290	10'	100	Diorite continues, mafics comprise up to 40%, contains assimilated inclusions of peridotite.	Mod to strong perv epidot <sup>2</sup> /chlorit <sup>2</sup> . Moderate feldspathization	1-2% py primarily on fractures.	30°	60°	<1	5
290	300	9'6"	95	Diorite has sharp irreg contact with gabbro at 290'6". At ~ 293'6" is indistinct contact between gabbro and pyrit <sup>2</sup> , contaminated peridotite. From 297'6" - 298'6" is irreg intrusion by diorite, sharp irreg contacts.	Strong epidot <sup>2</sup> in gabbro, mod k-spar alt <sup>n</sup> in diorite. Peridotite is chlorit <sup>2</sup> mod to strongly.	3-4% diss py in gabbro, 2-3% diss and fr-fill py in peridotite adj to contact.	10°	40°	4	5
300	310	9	90	Predom peridotite contaminated by small zones of gabbro and diorite. Sharp irreg contacts.	Moderate white feld(?) veining in peridotite. Mod chlorit <sup>2</sup> .	1% diss py in perid. 3% diss py in gabbro	65°	35°	1/2	6

Box 12

Box 13

6 of 10  
ND  
76-2

BQ

958

DRILL LOG

SHEET NO.

LOCATION		CO-ORDINATES		NORTH		EAST		ELEVATION		7 of 10	
DATE STARTED		DATE COMPLETED		SURVEYS		HOLE SIZE		TOTAL DEPTH		HOLE NO. ND D.O.H. 76-2	
DEPTH		CORE		LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE				
From	To	Length	% Rec				F	V/F1	F/F1	Log	
Box 14	310	320	8'6"	85	Predom contaminated peridotite (magnetic), minor irreg zones of gabbro (313') and fine gr diorite/gabbro. Chlorit <sup>2</sup> and feldspathized peridotite.	Contamination of perid may be <del>weak</del> feldspathization, moderately perv. Mod epid <sup>2</sup> of gabbro and diorite	1% py dissem in peridotite.	40°	0	5	
	320	330	9'6"	75	Same rock - becomes all peridotite.	wk chlorit <sup>2</sup>	Trace diss Po	10° 30°	<1	5	
	330	340	9'6"	95	All peridotite = minor calcite veining	wk chlorit <sup>2</sup> , serpent <sup>2</sup> Some sericite(?) envelopes with Py.	1-2% dissem Py.	30° 40°	1	4	
	340	350	10'	100	Same rock, minor irreg diorite intrusion.	Some.	Some	35° 65°		5 6	
	350	360	9'	90	Same rock - small zone of diorite from 352'6" - 355'	wk epid <sup>2</sup> /chlorit <sup>2</sup> of diorite.	—	30° 60°	<1	6 7	
Box 15											

QBB

DRILL LOG

SHEET NO.

LOCATION		CO-ORDINATES		NORTH	EAST	ELEVATION		HOLE NO.		
								B-OF 10		
DATE STARTED	DATE COMPLETED	SURVEYS			HOLE SIZE	TOTAL DEPTH	HOLE NO.			
					BQ		D.D.H. 16-2			
DEPTH		CORE		LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE			
From	To	Length	% Rec				F	V/F1	F/F1	Log
360	370	10	100	Peridotite to 368' - sharply gradational contact with Fe <sub>2</sub> Mg <sub>2</sub> -rich gabbro/diorite	Mod serpt <sup>t</sup> and calcite veining in perid. wk epid, mod chlor in diorite/gabbro	2-3% diss py in perid near contact. 3-4% diss and fr fill py in diorite/gabbro	40	1-3-		
							60	2	4	
370	380	10	100	Fe-mg diorite	Mod chlor/epid, local perv silic at 373'	2% fr fill py	20	0	5-6	
							70			
380	390	10	100	Same rock	wk-mod perv epid.	Massive mag in one irreg vein with py 1-2% py on fr	50	0	5	
390	400	10	100	Same rock	Generally wk chlor/epid	1-2% py on fr	50	0	4-5	
							20			
400	410	8'6"	85	Same rock - vuggy infillings common. Some massive py with calcite ± cp. Best section of cp seen.	Strong chlor/epid, local perv silic	Diss cp + py in silic or chlor zones, py + cp in calcite veins. Total py ~4%, cp = 2%.	20	1	4-5	

Box 16

Box 17

DRILL LOG

SHEET NO.

LOCATION		CO-ORDINATES		NORTH	EAST	ELEVATION		HOLE NO.			
DATE STARTED		DATE COMPLETED		SURVEYS		HOLE SIZE	TOTAL DEPTH	HOLE NO. <i>ND</i>			
DEPTH		CORE		LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE				
From	To	Length	% Rec				F	V/FI	F/FI		
9 of 10											
							BQ	C.O. #16-2			
Box 18	410	420	10	100	Same rock - Fine to med gr hb-diorite. Small inclusion(?) of peridotite at 415-416' and zones of hybrid rock. Best min <sup>2</sup> occurs from 410-415 in strongly contaminated diorite.	Strong chlor/epid	Dissem and fr-fill ep (cp >> py) up to 4% in hybrid zones (min <sup>2</sup> occurs dissem in peridotite inclusions also) Total py ~ 2%, cp ~ 2-3%.	70°	0	7	
	Box 19	420	430	8'6"	85	Same rock to ~ 429'6" contact with peridotite, contact indistinct	Same alt <sup>n</sup> .	Py dissem and on fr ~ 1%. Cp dissem in hybrid zones, total cpy ~ .5%.	10°	0	6
		430	440	10	100	Peridotite to 435' - gradational contact over 2" with diorite	Mod - strong diss serpent <sup>2</sup> of peridotite. Mod epidot <sup>2</sup> in diorite	2% fg dissem py, cp in 1 calcite vein and on one fract with epidote (gen < .5% cp) in diorite.	30°	0	6-7
	Box 20	440	450	9'6"	95	Same diorite but containing partially assimilated inclusions of peridotite (chloritized), small section of gabbro(?) from 444-445'6", non-epidot <sup>2</sup> , sharp contacts with epidot <sup>2</sup> diorite. Diorite is mod magnetic - may be fg gabbro.	<del>Mod</del> Mod epidot <sup>2</sup> , minor qty weining. k-spar	Cp in one thin k-spar vein. 1% diss + fr-fill py.	10°	4	5-6
		450	460	10	100	Same rock - peridotite from 450'6" - 453'. Sharp upper contact, gradational lower contact	Mod - strong epidot <sup>2</sup> chlorit <sup>2</sup> .	~ 1% diss + fr-fill py.	60°	0	5-6

DRILL LOG

SHEET NO.

LOCATION		CO-ORDINATES		NORTH		EAST		ELEVATION		HOLE NO. 10 of 10	
DATE STARTED		DATE COMPLETED		SURVEYS		HOLE SIZE		TOTAL DEPTH		HOLE NO. 10 D.D.H. 7-2	
DEPTH		CORE		LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE				
From	To	Length	% Rec				F	V/FI	F/FI	Log	
460	470	10'	100	Some rock, fg epidotized gabbro to 463'10" - sharply gradational (45°) contact with fine to med grain, light pink to light green diorite with fine grained mag. zone. If hematite like it is gabbro.	Strong epidote-perv in gabbro, also minor epidote replacing. wk epidote fract, wk chlorit <sup>2</sup> and wk silicif <sup>2</sup> in diorite, also wk diorite.	2% py present on fr in gabbro, 4.5% sp here. 3% silic and 10% py in diorite, mostly fr. cp	20°	4	6		
470	480	9'	70	Some fine to med gr Hb-diorite with pinkish Hb.	Mod - st silicif <sup>2</sup> , pervasive and in envelopes wk chlorit <sup>2</sup> .	2-4% disc and fr fill py	20°	1	7		
480	490	8'6"	85	Some rock to 482'4", sharp - 10° contact with fg strong epidot <sup>2</sup> gabbro. Gabbro appears to grade into and out of magnetic porphyry.	Strong perv silicif <sup>2</sup> in diorite.	3-4% py, present on fract or veins in silic diorite. 2-3% py on fract with epidote in gabbro.	20°	1	8-9		
490	502'	10'4"	83	Some fg gabbro/diorite, non-magnetic; small irreg zones of magnetic pyroxene, chlorit <sup>2</sup> .	Strong pervasive epidot <sup>2</sup> .	2-3% py on fract.	25°	1	6-7		
				END							

Box 21

Box 22

Box 23

LOCATION		CO-ORDINATES		NORTH		EAST		ELEVATION		HOLE NO. NO					
NKK				506 N		41.5M grid W of 497 E				1 of 10					
DATE STARTED		DATE COMPLETED		SURVEYS		HOLE SIZE		TOTAL DEPTH		HOLE NO. NO					
				-65° Top of casing Grad East		499' Acid chck -71°		BQ 499		D.D.H. 76-1					
DEPTH		CORE		LITHOLOGY				ALTERATION		MINERALIZATION		STRUCTURE		Graph	
From	To	Length	%Rec									F	V/FI	F/FI	Log
0'	29'			Overburden - no core											
29'	40'	8'	73%	Fine-grained, white to black, strongly magnetic peridotite. Mud sheared along 50 and 75° fractures. White alteration (brucite?) is pervasive at top, decreases at end (deuterie?). Minor ground core. Rock becomes relatively solid at ~38'.				Serpentinization is mod to strongly dissem and in veins. Minor calcite fract. fillings, minor chlor on shears		Dissem pyrrhotite up to 5% in solid core. Fg py dissem and on fractures in sheared zone, generally 1-2%		50° 35° 75°	4/	5- 6	~ ~ ~
40'	50'	9'	95	Contact with intrusive at 41'4". Sharply gradational contact at 55° includes 1/2" wide biotized zone in intrusive with dissem py and cpy; cpy also on fr here. Perid is mod-strongly fractured with calcite and/or py fr. fill adj to contact. Intrusive is Fg hb diorite, equigranular, mod magnetic where alt <sup>n</sup> is weak. Minor rounded xenoliths near contact. Hb up to 40%.				Mod serpent <sup>2</sup> of perid. Wk local dissem epid, wk to mod local biot <sup>2</sup> , minor chlor-upid on shear/fracture. Wk to mod feldspar (albite?) vein/envelopes.		Minor py on fract in perid adj to contact. 3-7% Fg py in fr and dissem in diorite. Most abundant where mafics are biot <sup>2</sup> or epid <sup>2</sup> . Py on one dry fr cuts barren albite? vein		20° 30° 70°	4/	4 5	+ +
50'	60'	10'	100	Same rock - Fg hb diorite, equigranular, mafics up to 40%. Biotization and albit <sup>2</sup> do not occur where epidote is prominent. Rock appears more porous (micro-vugs) where albit <sup>2</sup> occurs. Albite vein/envelopes are wk to mod common. Minor gabbro-like inclusions occur, sharp epid <sup>2</sup> contacts.				Epidot <sup>2</sup> occurs in small irreg knots, and mod pervasively dissem locally. Biot <sup>2</sup> and albit are mod perv locally. chlorit <sup>2</sup> of mafics is wk to mod.		Py continues as fr-fill and Fg dissem 3-7%. Trace cpy with Py.		50° 30°	4/	4	+ +
60'	70'	10'	100	Rock becomes subporphyritic at ~61' (gradational). At 61'8" is sharp contact with albit <sup>2</sup> gabbro (cg), contact is irreg, ~30-40°. Lower contact at 64' with porphyritic diorite is sharp at ~35°. At 65 1/2' is irreg, gradational (dyked) contact with perid, ~40°(?). Gabbro is flooded with albite at 62'. Porph diorite contains ~20% hb ± biotite. Perid is strongly mag, Fg. block. Shearing subll to c.d. at 70'.				Gabbro has envelope of albite and epidote flooding. Porphyry is wk biot <sup>2</sup> and albit. Perid is wk to mod serpent <sup>2</sup> pervasively adj to contact		2% diss py in gabbro 2-3% diss and fr fill py in porphyry. 0-3% diss po in perid.		30° 65°	4/	3- 4	+ +
70'	80'	10'	100	Peridotite - black, mod-st magnetic.				Wk to mod serpent <sup>2</sup> , minor serp veins		Dissem po 1-3% locally		30°	4/	3- 4	~ ~

Box 1

Box 2

LOCATION		CO-ORDINATES		NORTH	EAST	ELEVATION		HOLE NO. ND		
DATE STARTED	DATE COMPLETED	SURVEYS				HOLE SIZE	TOTAL DEPTH	D.D.H. 76-1		
DEPTH		CORE		LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE			Graph Log
From	To	Length	% Rec				F	V/F	F/F	
80'	90'	10'	100	Peridotite to 84 1/2', sharp 45° contact with gabbro. Contact grades from leucodiorite to fg diorite/gabbro to eq gabbro. Shearing on 20-30° fracture. Lower contact with peridotite at 89' is ~30° irreg but relatively sharp, eq gabbro/perid. At ~88' is 6" wide dyke(?) of diorite with 40° sharp contacts, cuts gabbro.	Perid mod serp <sup>2</sup> ad; to contacts. Epid mod perv in gabbro. Minor calcite fill in perid.	3% med - eq py dissem in gabbro. 2-3% diss po in perid.	20-30'	4	4	
90'	100'	9'8"	97	Mottled peridotite to 93' (pale green mottles in black matrix). Contact with gabbro ~40° is sharp. Lower contact with perid at 90' is sheared. From 95' - 96 1/2' is zone of hybrid <sup>2</sup> diorite or qtz diorite with pervasive small knots of epid and py. Upper contact with gabbro is sharp 20°, lower contact is gradational.	Gabbro is mod to strongly sheared (lots of clayey material). Epid perv in hybrid dyke(?); mod calcite veining also.	1-3% med gr py dissem in gabbro. 5-7% py dissem with epid in hybrid dyke(?)	20-30'	8/18	4	
100'	110'	10'	100	Fg peridotite, st magnetic.	Calcite veining mod prominent wk serpent <sup>2</sup>	2-3% diss po. At 109' got some heavy py in irreg fractures.	60-40'	1-2	4-5	
110'	120'	10'	100	Fg peridotite - minor small (2-3") zones of white alteration may be small gabbro dykes. (116'6", 117'6"); relatively sharp contacts.	Mod serpent <sup>2</sup>	3% po dissem and some on fine fract.	65-15'	1	5	
120'	130'	10'	100	Peridotite - minor shearing at 122'6" (30°) and 129'6" (20°).	Wk serpent <sup>2</sup>	3% dissem Po.	40-50'	0	3	

Box 3

Box 4



DRILL LOG

SHEET NO.

LOCATION		CO-ORDINATES		NORTH	EAST	ELEVATION		3 of 10	
DATE STARTED	DATE COMPLETED	SURVEYS				HOLE SIZE	TOTAL DEPTH	HOLE NO. <sup>ND</sup> D.D. 76-1	
DEPTH		CORE		LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE		
From	To	Length	% Rec				F	V/FI	F/FI
130	140	10'	100	At ~ 131'6" is sharp but skewed contact perid/gabbro. Lower contact at 133'6". From 132'6" to 133'6" is well kaol <sup>2</sup> (skewed) mod gr biot diorite at 30° to gabbro - may be edge phase of gabbro.	Mod-st serpent <sup>2</sup> in perid, esp on shears. Gabbro is weakly epidot <sup>2</sup> , mod. strong kaol <sup>2</sup> (skewed)	Diss and fr fill py in gabbro (3-4%). 1-2% diss Po in peridotite.	30°	4	
140	150	10'	100	Peridotite predom. From 140'6" - 141'6" is gabbro dyke, sharp irreg ~ 30° contact. From 146' to 147'6" is subporphyritic diorite dyke; sharp ~ 60° contacts with perid.	Wk - mod epid <sup>2</sup> and chlorit <sup>2</sup> of gabbro, mod biot <sup>2</sup> and wk sericit <sup>2</sup> of diorite porphyry. Mod-st perv serp <sup>2</sup> of perid.	1% dissim py in gabbro. 1-3% diss and fr fill py in porph.	60°	4	
150	160	10'	100	Serpent <sup>2</sup> peridotite to 155'6". Contact with diorite/gabbro zone here at ~ 30°, sharp. Intrusive is predom subporph diorite with up to 30% mod fine (biotite); some zones of gabbro with sharp ~ 50° contacts from 156'4" to 157'6".	Perid well serp <sup>2</sup> and calcite prominent as fr. fillings. Gabbro weakly chlor/epid. Diorite mod sericit <sup>2</sup> , chlor on fractures.	1-2% diss py in gabbro. Tr diss py in diorite.	15°	4	
160	170	10'	100	Some subporphyritic dioritic dyke rock. Feld phenos are more rounded than euhedral	Wk to mod chlorit <sup>2</sup> , wk sericit <sup>2</sup> , minor wk pink alt <sup>n</sup> (kspars?). Epid ± chlorite mod common on fractures	Tr diss hematite and magnetite  No sulphides	40°	4	
170	180	10'	100	Some subporph diorite becomes evident. Quartz <del>veining</del> veining ~ 1/ft	Wk-mod chlorit <sup>2</sup> , wk kspars alt <sup>n</sup> . Chlor ± epid minor on fract.	Only trace diss Fg py. Trace dissim mag.	60°	3	

Port 6  
 Port 7

DRILL LOG

SHEET NO.

LOCATION		CO-ORDINATES		NORTH	EAST	ELEVATION		HOLE NO. ND				
								4 of 10				
DATE STARTED		DATE COMPLETED		SURVEYS		HOLE SIZE	TOTAL DEPTH	HOLE NO. ND				
						BQ		D.D.H. 76-1				
DEPTH		CORE		LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE			GRAPHIC Log		
From	To	Length	% Rec				F	V/FI	F/FI		Log	
Box 8	180	190	10'	100	Same rock - subporph, biot-bearing diorite; biotite up to 30%. Minor qtz veining (45°)	Wk chlorit <sup>z</sup> , wk k-spar alt <sup>n</sup> . chlor <sup>±</sup> epid mod common of fractures	No sulphides WEAKLY MAGNETIC	40-50	20	4	2	
	190	200	10'	100	Same subporphyry.	Same alt <sup>n</sup> . At 182'6" is 4" wide zone of k-spar flooding, sharp contacts.	No sulphides. WEAKLY MAGNETIC	40-50		4	2-3	
	200	210	10'	100	At 201'4" is sharp 15° contact subporphyry / cg gabbro. At 205' is indistinct contact with diorite porphyry with 15-20% subhedral phenos in a fg grey-black matrix. At 210 is sharp ~60° contact with peridotite	Minor shear gouge in gabbro, weak epidot <sup>z</sup> . Minor chlor and epid on fract in porphyry with fg gm.	2-3% dissemin and minor fr. fill py in gabbro. 1-2% diss py in porphyry with fg gm.	10-15 40-50		0	5	
Box 9	210	220	10'	100	Peridotite - vfg black, mod-st magnetic. Graphitic-looking black material on shears, joints	Wk serpent <sup>z</sup> , some calcite veining ab; to porphyry contact	Tr dissemin Po.	65-65		4	2-3	
	220	230	10'	100	Some fg peridotite.	Wk serpent <sup>z</sup>	Tr diss po.	75-50		0	3	

DRILL LOG

SHEET NO.

LOCATION		CO-ORDINATES		NORTH		EAST		ELEVATION		5.0F 10	
DATE STARTED	DATE COMPLETED	SURVEYS						HOLE SIZE	TOTAL DEPTH	HOLE NO. NA D.D.H. 76-1	
DEPTH		CORE		LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE				
From	To	Length	% Rec				F	V/FI	F/FI	Log	
Box 10		230	240	10'	100	Same rock - fg, black, magnetic peridotite.	Generally wk serpent <sup>2</sup> . Shearing along 0-5° Fr prominent	—	95° irreg 30°	0	3
Box 11		240	250	14'	73	Same rock, gouge zones at 246", 247', 249' - shear is subll to c.o.	Shearing prominent, no serpent <sup>2</sup> assoc with it.	—	60° 50°	< 1	3-5
Box 11		250	260	9'8"	97	Sheared peridotite to 251 1/2" - contact with contaminated diorite. Contact is sharp ~ 30°. Perid is serpent <sup>2</sup> and sheared, minor py at contact. Diorite is contaminated throughout, has purplish andradite mafics, albite (?) flooding, vfg at contacts. Strong calcite infilling of microf in diorite. Diorite is eqiv to subperph, biotite-bearing. Diorite is much better fract than perid.	Mod serp <sup>2</sup> and shearing in perid at contact. Dense calcite fr-filling in diorite (4 1/2 inch). Albite flooding pervasive in diorite, minor chlorit <sup>2</sup> . Minor quartz-calcite-sericite envelopes.	Minor py in perid adj to contact. Dissem and fract-fill pyrite in diorite ~ 4%.	70° 10°	sec at	3
Box 11		260	270	9'6"	95	Diorite goes to 263 1/2', sharp shear contact (35°) with peridotite. Perid is locally sheared subll to c.o.	Albite and calcite flooding and veining mod perv in diorite. Minor serpent <sup>2</sup> at contact	Py predom in vein/fr fillings, minor fg dias, total ~ 3-4%.	35° 60°	1-2	4
Box 12		270	280	10'	100	Peridotite - fg black, magnetic	Minor serp <sup>2</sup> on shears.	1-2% diss Po	30° 50°	0	5

2288

DRILL LOG

SHEET NO.

LOCATION		CO-ORDINATES		NORTH		EAST		ELEVATION		SHEET NO.	
										6 of 10	
DATE STARTED		DATE COMPLETED		SURVEYS		HOLE SIZE		TOTAL DEPTH		HOLE NO. ND	
						3R				D.O.H. 76-1	
DEPTH		CORE		LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE				
From	To	Length	% Rec				F	V/FI	F/FI	Log	
280	290	8'8"	87	Peridotite to 289 1/2', sharp 30° contact with eg. gabbro. Gouge zone in perid from 284'4" to 286', ~ 30°.	Mod chlorit <sup>2</sup> , wk epid <sup>2</sup> in gabbro.	3% diss, and fr-fill py in gabbro	30°	0	4-7		
290	300	10'	100	Sharp 30° contact at 292', gabbro/peridotite. <del>Serpent</del> <sup>chlorit<sup>2</sup></sup> is mod-st perv 6" into peridotite.	Mod chlorit <sup>2</sup> , wk epid <sup>2</sup> in gabbro. Perid generally unalt.	1% diss Po in perid. 3% diss and fr-fill py in gabbro	70° 30°	0	2-3		
300	310	10'	100	All peridotite except dyke from 309'4" - 310'. Sharp 40° contacts. Dyke is equig mg diorite, hb is biot <sup>2</sup> esp ad, to contacts.	Perid unalt. except minor shearing. Mod biot <sup>2</sup> , wk diss epid, minor albit <sup>2</sup> in diorite.	minor mag veining in perid. 1-2% fg diss py, trace epy (5%?) assoc with epidote in biot <sup>2</sup> areas.	40° 50°	0	4-5		
310	320	8'	80	All peridotite. 6" wide gouge zone at 317'6", ~ 40-50°.	Minor calcite veining. Serpentine veining at 30° and irreg mod pervasive.	1-2% diss Po locally, some go eg Po in serpentine veins	50° 15°	1	3-5		
320	330	7'6"	75	Peridotite - 1/4" wide biot <sup>2</sup> diorite dyke at 329'8", sharp 20° contacts	Serpent <sup>2</sup> increased, mod to strong locally	Cg pyrrhotite occurs locally in irreg vein-like occurrences, 1-2%.	20° 30°	0	4		

Box B

Box 14

DRILL LOG

SHEET NO.

LOCATION		CO-ORDINATES		NORTH		EAST		ELEVATION		7 OF 10		
DATE STARTED		DATE COMPLETED		SURVEYS		HOLE SIZE		TOTAL DEPTH		HOLE NO. ND D.D.H. 76-1		
DEPTH		CORE		LITHOLOGY		ALTERATION		MINERALIZATION		STRUCTURE		
From	To	Length	%Rec							F	V/FI	
330	340	9'6"	95	Peridotite - wk to med shearing subll to c.a.		Mod - strong serp <sup>2</sup> locally		1-2% disse and fr-fill pyroxenite		0-10° irreg	0	3-5
340	350	5'4"	53	Peridotite - loss of 4 feet from 344-348', very brittle core.		Shear gouge med prominent		—		0-20° irreg	0	5+ (shear fract)
350	360	9'6"	95	Sharp 25° contact perid/diorite at 350'4", sharp fractured contact at 357', back into peridotite. Diorite is eqv to subporph, biotite-bearing. Contains serpent <sup>2</sup> inclusions of peridotite. Lower contact is slightly sheared irregularly subll to c.a.		Wk to med chlorit <sup>2</sup> , wk alb <sup>2</sup> .		2% disse and fr-fill py in diorite		40°	0	3-4
360	370	5'8"	57	At 361' sharply gradational 60° contact perid/biotite-bearing porphyritic diorite. Goes to 363', sharply gradational 45° contact (biotized) with serpent <sup>2</sup> peridotite. Dyke is wk alt and barren. 3 foot loss from 364 1/2 - 367 1/2' (gouge)		Minor calcite veining in peridotite, serpentine veining adj to contacts. Wk sordit <sup>2</sup> in porphy.		—		45° 30°	1/1	4
370	380	6'6"	65	All peridotite. 2 foot loss 374 1/2 - 376 1/2' (gouge 60°?). 6" gouge zone (10°) at 372'.		Wk serpent <sup>2</sup> , minor calcite fr-fill.		—		10° 60° irreg	0	4-6

Box 15

Box 16

GRAPHIC Log

DRILL LOG

SHEET NO.

LOCATION		CO-ORDINATES		NORTH		EAST		ELEVATION		8 of 10	
DATE STARTED		DATE COMPLETED		SURVEYS		HOLE SIZE		TOTAL DEPTH		HOLE NO. N/D D.D.H. 76-1	
DEPTH		CORE		LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE				
From	To	Length	%Rec				F	V/F1	F/F1	Log	
380	390	9'9"	98	All peridotite except small diorite dyke from 380-380'8", sharp but irreg contacts	Wk to med epid <sup>2</sup> and chlorit <sup>2</sup> in dyke. Wk serpent <sup>2</sup> in perid.	Minor pyrite or po at contacts with dyke. 2% diss py in dyke.	45-50°	0	4-5		
390	400	8'8"	87	Contact at 392', relatively sharp 20° contact peridotite/diorite. Lower contact at 397'2" is <del>gabbro</del> sharp at ~40°, 3" wide serpent <sup>2</sup> , calcite-veined contact zone in peridotite. Diorite is subporph, hornblende-bearing; sericite alt <sup>n</sup> prominent.	Moderate serpentine, calcite veining in perid adj to contacts. Strong sericit <sup>2</sup> in diorite adj to contacts, wk diss epid, med chlorit <sup>2</sup> , wk to med irreg sericite envelopes	2% dissem and fr-fill py in diorite.	40-50°	1	3-4		
400	410	10'	100	Predom peridotite, but some zones of gabbro? At 401' is sharp contact 60° with 6" zone of wkly epidot <sup>2</sup> albite(?) veining/flooding - this may be gabbro dyke but mafics look like peridotite inclusions. Minor calcite veining here. At 404' is 9" wide zone with sharp 40° contacts of wkly epid <sup>2</sup> feldspar and calcite flooding(?) - 4% diss py and minor cpy.	Mod to strong serpent <sup>2</sup> adj to feldspathized zones, also med chlorit <sup>2</sup> and calcite veining.	In feldspathized zone at 404' is 4% diss py and minor cpy. Pyrrhotite is prominent 3-4% as diss and fr-fill in chlorit zones.	40-50°	1	4-5		
410	420	8'9"	88	All peridotite - fg, black, magnetic. At 416'6" is 16" wide mod sheared (20°) zone.	Wk serpent <sup>2</sup> .		35-20°	0	5		
420	430	10'	100	Contact at 420' with 2' wide contaminated subporph diorite, relatively sharp 40° contacts. Contact with main diorite dyke at 425'3", sharp 50° contact is sheared slightly. Main dyke is porphyritic, biotite-bearing (secondary?) diorite.	Small dyke is biot <sup>2</sup> and wkly epidot <sup>2</sup> . Mod serpent <sup>2</sup> adj to contacts, also calcite fr-fill. Albit <sup>2</sup> in dykes adj to contacts. Wk sericit <sup>2</sup> in main dyke, wk diss epid.	3% diss py in smaller dyke, prominent in epidot <sup>2</sup> sections. 3% py predom as fr-fill in main dyke.	40-50°	1	6		

Box 17

Box 18

88

DRILL LOG

SHEET NO.

LOCATION		CO-ORDINATES		NORTH		EAST		ELEVATION		9. of 10	
DATE STARTED		DATE COMPLETED		SURVEYS		HOLE SIZE		TOTAL DEPTH		HOLE NO. ND D.D. 876-1	
DEPTH		CORE		LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE				
From	To	Length	% Rec				F	V/F	F/F	Log	
Box 19	430	440	9' 8"	97	Diorite porphyry continues to 439', sharp 50° contact with peridotite. Minor chlorit <sup>2</sup> inclusions of peridotite in dyke.	wk to mod sericit <sup>2</sup> in diorite, wk to mod chlorit <sup>2</sup> of biotite, wk diss. epidote.	2% dissem py in diorite.	30°	0	4-5	
	440	450	8' 4"	83	Peridotite to 449' 6", sharp but obscure contact with gabbro. Shear zones in peridotite at 441 1/2' (4" wide, orientation unclear) and 447' (6" wide at ~30°). Narrow irreg lg dioritic zones in gabbro.	Calcite veins mod prominent in peridotite, some albite(?) envelopes adj to shears. Mod prv epid in gabbro	3-4% dissem py in sheared albite <sup>2</sup> zones in peridotite. 5-6% dissem py in gabbro	30°	1	4-5	
	450	460	10'	100	Gg gabbro goes to 457' 6", sharp 70° contact with peridotite. Gabbro is non-magnetic. Narrow irreg zones of lg diorite interstitial to large mafics.	wk to mod epid <sup>2</sup> in gabbro, minor calcite veining. wk chlorit <sup>2</sup> of gabbro. Minor qtz veining	3-5% diss py in gabbro. Minor Po in perid near contact.	40°	1	2-3	□ □ □
	460	470	10'	100	All peridotite.	Mod pervasive serpent <sup>2</sup>	—	45°	1	2-3	
	470	480	10'	100	All peridotite - strongly magnetic	wk serpent <sup>2</sup> .	—	55°	0	3	

Box 19

Box 20

002

DRILL LOG

SHEET NO.

10 of 10

LOCATION		CO-ORDINATES		NORTH	EAST	ELEVATION		HOLE NO. <sup>NIS</sup>		
DATE STARTED	DATE COMPLETED	SURVEYS		Acid etch	499'	-71°	HOLE SIZE	TOTAL DEPTH	D.D.H. 76-1	
							BQ	499		
DEPTH		CORE		LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE GRAPHIC			
From	To	Length	% Rec				F	V/F	F/F	Log
480	490	8'6"	85	<p>Predom. peridotite. Diorite dyke from 480'6" - 482'. Diorite is subporphyritic with 20% interstitial biotite. Diorite contains inclusions of epidot<sup>2</sup> gabbro, sharp contacts sub// c.a. 3" wide gabbro zone in peridotite <del>at</del> at 484' <del>sharp</del>, sharp 60° contacts with chlorit peridotite. Small sheared, intrusive (diorite) zone at 490', bi-traced.</p>	<p>wk epidot<sup>2</sup> of gabbro. chlorit<sup>2</sup> of perid adj to contacts</p>	<p>1% vfg dissemin Py in diorite and gabbro. Diss P/Py in sheared perid and porph at 490'.</p>	20'	30'	3-4	
490	499	9'6"	95	<p>Sheared (40-50°), serpentized peridotite to 494'8", contact with gabbro/diorite sharp at ~15° (irreg). Gabbro/diorite contact is sub// to core axis. Diorite is biot<sup>2</sup> hb-bearing; equig. contact with gabbro is irregular but sharp.</p>	<p>Peridotite is well-fr and veined with serpt<sup>t</sup> and magnetite. wk. mod diss epid, mod biot<sup>2</sup> of hb in diorite, gabbro. weakly epidotized.</p>	<p>1-2% vfg diss Py and cpy in diorite (Py &gt;&gt; cpy).</p>	30'	40'	3-4	
END										

Box 71

20' 30' 3-4



DRILL LOG

SHEET NO.

LOCATION		CO-ORDINATES		NORTH		EAST		ELEVATION		SHEET NO.	
NIK				506N + 210 6m		500.5E + 210 4.6m				1 of 1	
DATE STARTED		DATE COMPLETED		SURVEYS		HOLE SIZE		TOTAL DEPTH		HOLE NO.	
				Top of casing -65° grid west		BQ		144'		D.D.H. ND 76-5A	
DEPTH		CORE		LITHOLOGY		ALTERATION		MINERALIZATION		STRUCTURE	
From	To	Length	% Rec							F	V/F
0	144'	-	-	All overburden, blocky talus, no bedrock. Hole abandoned due to shortage of casing.		—		—		857	
				END							