87-125-15595

3/85

GEOLOGICAL AND DIAMOND DRILLING REPORT
ON THE VAULT 1-5 CLAIMS
OSOYOOS MINING DIVISION
N.T.S. 82E-5E

LATITUDE: 49°22.1'N, LONGITUDE: 119°36.2'W
OWNED BY MURRAY MORRISON
OPERATED BY CANADIAN NICKEL COMPANY LTD.

Drs. Wim Groeneweg
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Canadian Nickel Company Limited
Vancouver, B.C.

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Consulting Geologist
Pritchard, B.C.

February 1987

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FIGURES

1.0 INTRODUCTION

This report covers work done on the Vault 1-5 claim group during the periods May 26-31, June 4-20 and 23-26, and August 4-28, 1986.

1.1 Location, Access, Physiography

N.T.S. sheet: 82E-5E. Latitude: 49°22'N, Longitude: 119°37'W.

The Vault property is located 3 km northwest of Okanagan Falls in the Osoyoos Mining Division of British Columbia (see figure 1). Provincial Highway 97 and White Lake Road, both paved, cross the claim block (see figure 2) and give excellent access. Old logging roads exist in the centre part of the property.

The topography consists of rounded hills, some with cliff edges, and shallow basins. Elevations range from 360 m at Skaha Lake to 800 m at the south end of the property. Vegetation cover varies from yellow pine and Douglas fir to sage brush, grass and prickly-pear cactus.

1.2 Property Definition

The Vault property consists of five mineral claims totalling 49 units (see figure 2). They are:

CLAIM NAME	UNITS	RECORD NO.	DATE STAKED	EXPIRY DATE
Vault 1	8	1513	March 8, 1982	March 22, 1988
Vault 2	12	1531	May 23, 1982	May 25, 1988
Vault 3	4	1532	May 23, 1982	May 25, 1988
Vault 4	18	1533	May 22, 1982	May 25, 1988
Vault 5	7	1534	May 22, 1982	May 25, 1988

The claims are owned by Murray Morrison. On November 6, 1984, Mr. Morrison optioned the property to Seven Mile High Resources Inc. On May 1, 1986, Canadian Nickel Company Limited entered into an option agreement with Seven Mile High Resources and Mr. Morrison. Canadian Nickel Company is the current operator.

The Vault 2 claim overlies the previously staked Bela claim (record no. 1522, 1 unit).

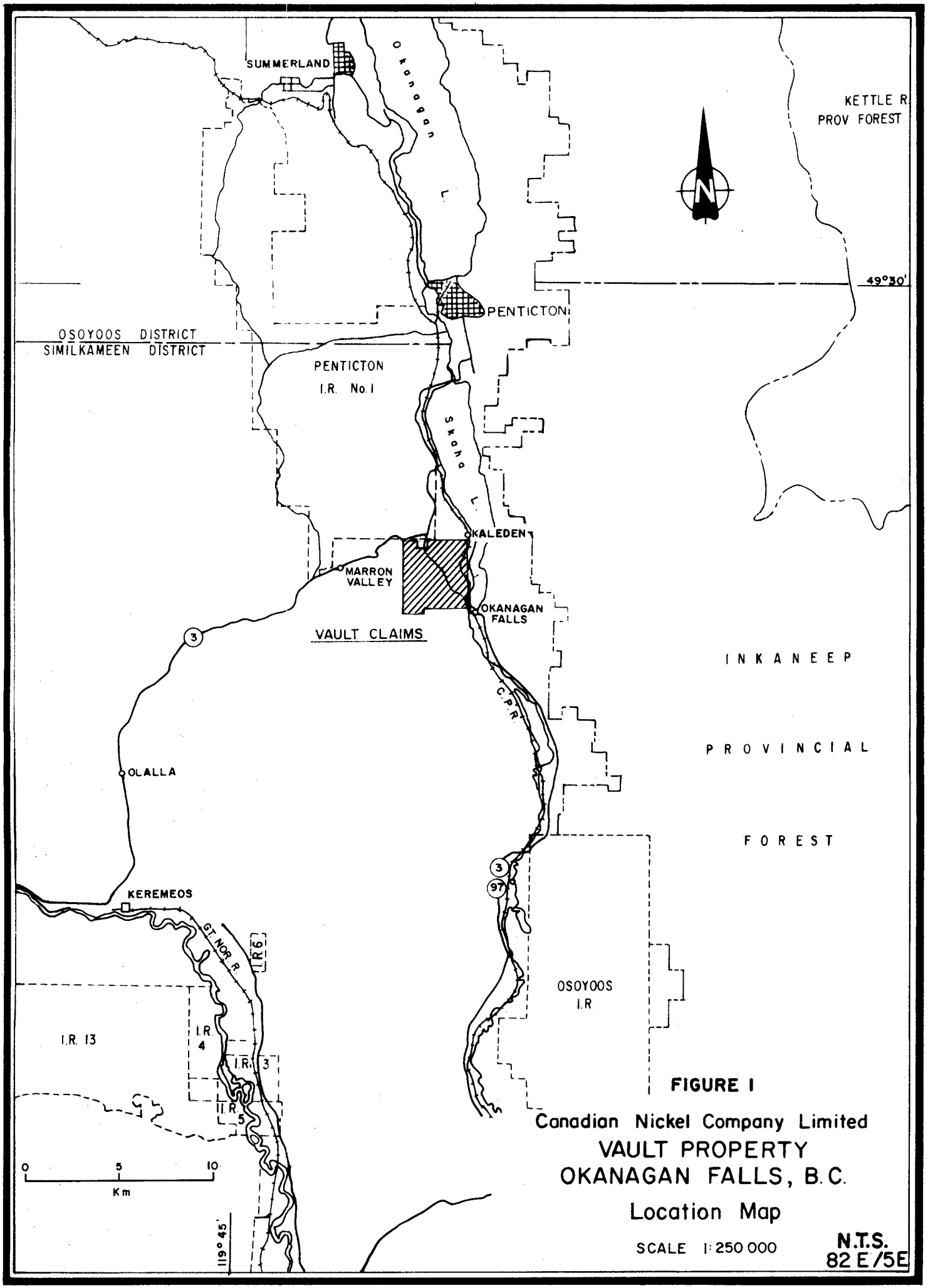


FIGURE 1

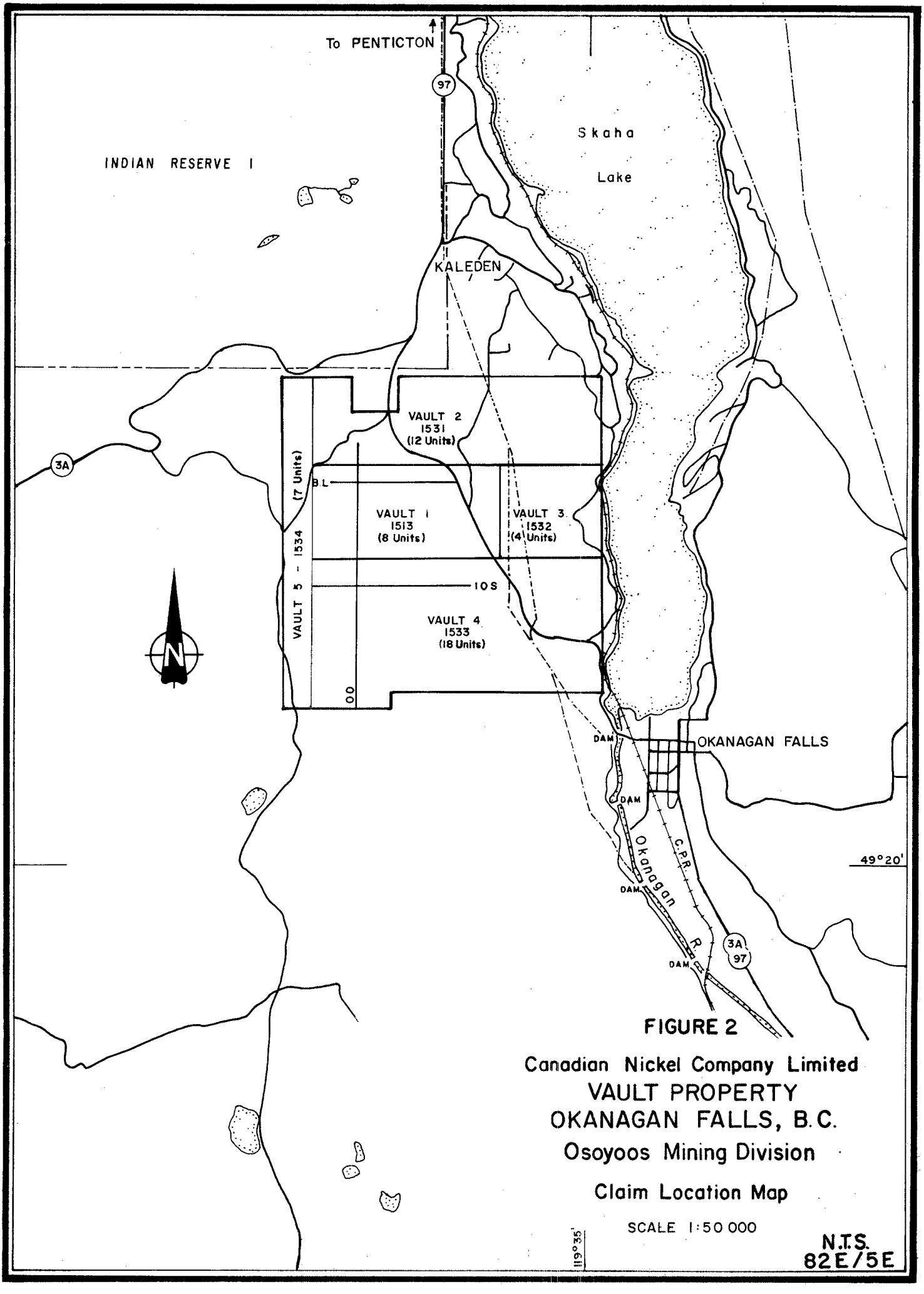
Canadian Nickel Company Limited

VAULT PROPERTY
OKANAGAN FALLS, B.C.

Location Map

SCALE 1:250 000

N.T.S.
82 E/5E


To PENTICTON
97
Skaha
Lake
INDIAN RESERVE I
KALEDEN
VAULT 2
1531
(12 Units)
3A
(7 Units)
B.L
VAULT 1
1513
(8 Units)
VAULT 3
1532
(4 Units)
VAULT 5 - 1534
10S
VAULT 4
1533
(18 Units)
00
N
DAM
OKANAGAN FALLS
DAM
Okanagan R.
C.P.R.
49°20'
DAM
3A
97
DAM
119°35'
FIGURE 2
Canadian Nickel Company Limited
VAULT PROPERTY
OKANAGAN FALLS, B.C.
Osoyoos Mining Division
Claim Location Map
SCALE 1:50 000
N.T.S.
82E/5E

1.3 History of the property

The Vault 1 claim was staked in March, 1982, to cover a gossanous area of silicified breccias that carried anomalous values in gold and silver. Riocanex Inc. optioned the property in May, 1982, and staked the Vault 2-5 claims. During 1982, Riocanex carried out geological and geochemical surveys on parts of the Vault 1 and Vault 2 claims, and drilled four percussion holes totalling 295 m to test the silicified zone. This was followed up in 1983 by four NQWL diamond boreholes totalling 632 m. The location of these holes are indicated on figure 3 as PDH 1 to PDH 4 and 83-1 to 83-4. Mineralization was found to occur in the silicified, quartz-veined and clay-altered Lower Marama Formation. The mineralization consists of pyrite in amounts up to 10%, and low values in gold and silver. The best intersections were in hole 83-2: 2.3 ppm Au and 13.8 ppm Ag from 78 to 80 m and in hole 83-4: 2.6 ppm Au and 6.5 ppm Ag from 66 to 68 m.

Dome Exploration (Canada) Limited optioned the claims in late 1983. In early 1984, Dome conducted 3 line km of IP and mag surveys over the same zone and drilled seven BQWL diamond boreholes totalling 558 m. These holes are indicated on figure 3 as 138-1 to 138-7.

The results were similar to those of Riocanex. The best intersection was in hole 138-5: 2.5 ppm Au and 7 ppm Ag from 47 to 48 m.

During 1985, Seven Mile High Resources Inc. carried out geological and geochemical surveys on the Vault 4 claim and mag and VLF-EM surveys on the Vault 1 and Vault 4 claims. They also drilled eight percussion drill holes totalling 491 m. These holes are indicated on figure 3 as PDH 85-1 to PDH 85-7. None of the holes reached the favourable lower part of the Lower Marama Formation, and no gold or silver values were encountered.

1.4 1986 Exploration Program

Canadian Nickel Company Limited carried out topographic and geological surveys with a two man crew during the periods May 26-31, June 4-20 and June 23-26. The surveys covered parts of the Vault 1, Vault 2 and Vault 4 claims. The mapping was carried out on a scale of 1:4,000 and used lines cut in 1985 by Seven Mile High. The area covered is 1500 m x 2700 m or 4.05 km^2.

During the period August 4-28, two NQWL diamond boreholes were drilled under contract by Beaupre Diamond Drilling Ltd. for a total of 779 m. The core is stored on the Vault 1 claim.

2.0 REGIONAL GEOLOGY

The Vault property is located in the north-central part of the White Lake Basin. The Geology of the White Lake Basin is described by B.N. Church (1973) as an up to 4,000 m thick sequence of Early Tertiary (Eocene) sediments and volcanics. He recognized five main stratigraphic sub divisions, three of which are present on the Vault. The sequence has been preserved by downfaulting, possibly as a half graben, with the greatest downward movement near the Okanagan Valley. The sequence is cut by many northerly trending step-faults. The beds generally dip easterly, except where local folding changes dips to northeasterly or southeasterly directions.

3.0 TOPOGRAPHIC SURVEY

The topographic contours on figure 3 were composed from altimeter readings along the grid lines at 50 m spacing.

4.0 GEOLOGICAL SURVEY

The Vault property is underlain by volcanic flows, pyroclastics, and minor sedimentary rocks of Eocene age (see figure 3). The geological environment of this area is considered to be that of Tertiary volcanism resulting in subcircular stratavolcanoes with were modified by cauldron subsidence and resurgence.

4.1 Stratigraphy

The Eocene rocks are divided into three Formations; the older Marron Formation (unit 1) which is unconformably overlain by the Marama Formation (units 2 + 3) and the youngest, overlying White Lake Formation (unit 4).

The Marron Formation (unit 1) is made up of extensive flows of porphyritic trachyte consisting of up to 70% groundmass of fine k-spar laths and up to 30% large tabular phenocrysts of k-spar to 3 mm in size. Minor constituents of the trachyte are quartz, hematite, dolomite, sericite and clay resulting from alteration and silicification. The top of the trachyte appears to be weathered and is considered to

be an erosional surface.

The Marama Formation is divided into two units, unit 2 consisting of predominantly trachytic pyroclastics with minor sediments and trachyte flows lying unconformably on unit 1 and overlain by unit 3, a very fine grained, slightly porphyritic flow.

Unit 2 with a thickness of up to 200 m, represents a series of explosive tuffaceous events with local sedimentation and thin flows. Rapid facies changes prevent positive correlation of horizons between drill holes but generally the basal part of the unit is a coarse pyroclastic breccia up to 30 m thick. Above the coarse breccia is tuffaceous material that grades upwards into a fine grained tuff. This sequence is repeated several times as a result of renewed explosive activity. The tuffs contain fragments of the underlying porphyritic trachyte and are themselves compositionally a trachyte.

Unit 3 is a very fine grained impermeable flow up to at least 300 m thick. This unit was called a rhyodacite by previous companies but thin sections indicate that the composition is predominantly plagioclase with 15% k-spar, 5% augite and no quartz. This unit presently covers approximately half of the property and originally probably formed an effective caprock over the whole property.

The White Lake Formation (unit 4) is made up of lahars, volcanic flows and tuffs and sedimentary rocks from mudstones to conglomerates. This unit is only found in the northeast portion of the property and is though to represent moat in-filling that followed caldera collapse.

4.2 Structure

Although the relative ages of the various structural events are uncertain, they are probably all related to Tertiary volcanism. There is an east plunging syncline centered at approximately 4 south on the grid and a gentle E-W trending anticline centered at about 16 south. As a result of the folding and the present level of erosion, all the rock units in the area are exposed on the surface. Field observation and photo interpretation have located several NE, N and NW trending fault zones in which the east side has consistently been down dropped - this is consistent with typical caldera collapse models where step faulting occurs around the edge of the caldera.

4.3 Mineralization

The bulk of the alteration and mineralization occurs within unit 2, the most permeable unit on the property. Intense, widespread silicification occurs along the north limb of the syncline near the baseline. This area forms a prominent slightly gossanous ridge, is the most "showy" outcrop on the property, and therefore has been the focus of most of the work by previous operators. Scattered areas of altered and silicified unit 2 also occur along the south limb of the syncline and locally on the south limb of the anticline.

Sporadic but locally intense silicification and moderate alteration occurs within the porphyritic trachyte (unit 1) mainly on the north limb of the syncline. These zones are subvertical, generally east-west trending and discontinuous on surface. Some samples from this area collected by previous operators contained values greater than 3 g/t gold. Similar zones in unit 1 intersected by drilling (as 1 to 3 cm thick veinlets) also were generally very anomalous in gold.

Mineralization encountered by previous surface sampling and drilling has been anomalous but well below economic grades. The present interpretation of the geology generally agrees with that of Harold M. Jones, (Oct 15, 1985 Consultant Report) except that the recently recognized fault zones make the area even more attractive. The present interpretation indicates that the silicification exposed on the limbs of the syncline is part of the high level, low temperature silica found in the upper part of an epithermal system. This silica typically contains only low precious metal values. The base of unit 2 is generally the most silicified and contains the highest values because it is the most permeable horizon and therefore is the most favourable area for hosting highgrade mineralization under the proper temperature and pressure conditions. The potential of the property lies where the favourable unit 2 was lower in the epithermal system during the mineralizing events.

4.4 Conclusions

The Vault property has all the necessary features for hosting a significant epithermal gold deposit similar to the Cannon Mine at Wenatchee Washington. Previous work was directed at testing the near surface, altered and silicified zones that probably represent the low temperature silica typically found near the top of an epithermal system - these areas typically contain low gold and silver values. The potential with-

in the Vault property lies where favourable, permeable host rocks (unit 2) existed deeper in the epithermal system - near the zone of boiling - and were capped by impermeable flows (unit 3). The present interpretation of the geology indicates a large area where these favourable conditions may have existed - these areas are not exposed on the surface and have not been tested by previous drilling. The potentially favourable area can be divided into two parts, although theoretically economic mineralization could be continuous from one to the other. Area one is the trough of the syncline where unit 2 is approximately 200 meters below where previous drilling tested the silicified limbs of the syncline. Depending on the relative ages of the syncline and the mineralization, this could be an area where the most favourable host rock was 200 meters lower in the epithermal system - possibly near the zone of boiling. Area two is near the northeast corner of the property that is covered by the White Lake Formation (unit 4). In this area there are at least three subparallel step faults with the east side being down dropped in each case. This faulting not only places the favourable horizon, unit 2, deeper in the system but provides an ample plumbing system for mineralizing fluids.

5.0 DIAMOND DRILLING

Two NQWL diamond boreholes were drilled for a total of 779 m. The locations are shown on figure 3 and a summary is given in the following table:

HOLE NUMBER	GRID COORDINATES	DIP	LENGTH	COLLAR ELEVATION
38897	560S/200E	-90°	322 m	557 m
38898	150S/880E	-90°	457 m	475 m

The first hole (BH 38897) was drilled in the centre of the syncline, 50 m east of the major NE trending fault zone (see figures 3 to 5). The hole intersected the tuff-breccia (unit 2) from 93.9 m to 293.8 m, however, the rocks were not silicified and the results of analysis were negative.

The second hole (BH 38898) was drilled about 50 m east of the NW trending fault in the NE part of the grid area (see figures 3 and 6). It intersected a thick cap rock and cut silicified tuff-breccia from 324.6 m to 438.8 m. The top part of the tuff-breccia shows an anomalous arsenic halo overlying an anomalous gold-silver zone from 356.8 m to 438.2 m. The best intersections in hole 38898 were:

Depth in m	Width	Au in g/t	Ag in g/t
358.15 - 358.55	0.40 m	2.1	5.8
368.80 - 371.10	2.30 m	1.8	2.8
373.10 - 374.80	1.70 m	7.4	5.0
384.20 - 385.70	1.50 m	6.7	3.8

The best gold value was 9.9 g/t over 1.05 m from 373.10 - 374.15 m. This value comes from a quartz fragment tuff breccia similar to some of the ore at the Delamar gold mine. Many quartz veins and veinlets are cutting the silicified sequence as well.

6.0 RECOMMENDATIONS

Although the values and intersections found in hole 38898 are not economic at the depth encountered, it was proven that the tuff-breccia is a favourable host unit for gold mineralization. It is recommended to carry out additional diamond drilling in the area of BH 38898 to test both the tuff-breccia north and south of BH 38898, both east and west of the fault, and also to test the fault zone itself for high grade vein deposits. The potential area of mineralization is still large and higher grade concentrations in and near the fault zone are quite probable.

7.0 REFERENCES

Church, B.N. (1973) - Geology of the White Lake Basin. BCDMPR Bulletin 61.

Jones, H.M. (1985) - A Report on the Vault Group of Mineral Claims, Okanagan Falls Area, Osoyoos Mining Division, B.C. Report for Seven Mile High Resources Inc.

McClintock, J. (1982) - Geological, Geochemical and Drilling Report on the Vault Option by Riocanex Inc. Ass. Report 10968.

McClintock, J. (1983) - Vault Option - Drilling 1983. Private Report, Riocanex Inc.

Oddy, R.W. (1984) - Diamond Drill Program on the Vault 1-5 Mineral Claims, Okanagan Falls, B.C. Report for Dome Exploration (Canada) Limited. Ass. Report 12487.

8.0 STATEMENT OF EXPENDITURES

Salaries (Field)				
W. Groeneweg	May 26-31, June 4-10, June 16-17, June 24-26, Aug. 4-5, Aug. 14-16.	23 days @ $280	$ 6 440	
E. Hunter	June 9-20, June 23-26, Aug. 4-28.	41 days @ $215	$ 8 815	$15 255
Salaries (Adm., Report Writing, Drafting)				
W. Groeneweg (Adm., Report)		5 days @ $280	$ 1 400	
R. Johnson (Drafting)		2 days @ $217	$ 434	$ 1 834
Personnel Expenses				
Accommodation, Sun Oka Motor Inn			$ 1 426	
Meals		64 days @ $22	$ 1 408	$ 2 834
Transportation				
Truck Rental - 41 days @ 15			$ 615	
Gasoline and Services			$ 481	$ 1 096
Analytical (by Chemex Labs Ltd.)				
85 core samples (Au, 30-ICP) @ $19.20				$ 1 632
Diamond Drilling (by Beaupre Diamond Drilling Ltd.)				
779 m, NQWL				$48 694
Supplies, Freight, Airphotos				$ 391
Thin Section Descriptions (by Vancouver Petrographics Ltd.)				$ 988
			TOTAL:	$72 724

9.0 AUTHOR'S QUALIFICATIONS

I, Wim Groeneweg, of the City of Richmond, Province of British Columbia, do hereby certify that:

1. I am Senior Staff Geologist with Canadian Nickel Company Limited with offices at 512-808 Nelson Street, Vancouver, B.C. V6Z 2H2.

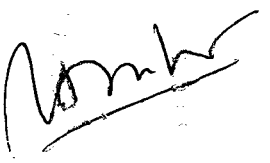
2. I am a graduate of the University of Leiden, The Netherlands, with a doctorandus degree (Master of Science equivalent) in geology (1966).

3. I have practised my profession as geologist since 1966.

4. I am a Fellow of the Geological Association of Canada, a member of the Society of Economic Geologists and a member of the Canadian Institute of Mining and Metallurgy.

5. I have partaken in and supervised the work described in this report on behalf of Canadian Nickel Company Limited.

Dated at Vancouver, British Columbia this sixth day of February, 1987



W. Groeneweg

Hunter & Hunter Consulting Ltd.

R.R. 1, Pritchard, B.C. V0E 2P0
577 3786

STATEMENT OF QUALIFICATIONS

I, Edward Norman Hunter, reside at R.R.#1, Martin Road, Pritchard, British Columbia.

I graduated from the University of British Columbia in 1970 with a Bachelor of Science Degree in Geology.

I have worked as a Geologist continuously since 1970.

I am presently employed by Hunter And Hunter Consulting Ltd. as a Geological Consultant.

I carried out geological mapping and core logging on the Vault property near Okanogan Falls, B.C. during the 1986 field season.

Ed Hunter

Ed Hunter

Feb. 4, 1987

APPENDIX A

BOREHOLE LOGS

ASSAYS CHK'D.....
DATE.....

BOREHOLE	PROPERTY	PROP#	LEVEL	DEPTH METRES	AZIMUTH DEG MIN	DIP DEG MIN	CO-ORD SYSTEM	LATITUDE METRES	DEPARTURE METRES	ELEVATION METRES	STARTED MO DY YR	COMPLETED MO DY YR
38897-0	VAULT		SURF	321.60		-90 00		S 560.	E 200.	537.	08 05 86	08 14 86

INCLINATION AND AZIMUTH TESTS

DEPTH METRES	AZIMUTH DEG MIN	DIP DEG MIN	DEPTH METRES	AZIMUTH DEG MIN	DIP DEG MIN	DEPTH METRES	AZIMUTH DEG MIN	DIP DEG MIN	DEPTH METRES	AZIMUTH DEG MIN	DIP DEG MIN
47.0		-90 00	91.0		-90 00	137.0		-88 00	183.0		-88 00
228.0		-88 00	276.0		-88 00	321.0		-88 00			

LOGGED BY ED HUNTER NTS # 82E/5E COUNTRY IS CANADA PROV/STATE IS BC GRD BRNG IS SHT# ANOM#

ASSAY FOR * AU

COMMENTS

DRILLED NQ BY BEAUPRE DIAMOND DRILLING LTD (RAINBOW)
HOLE IS LOCATED 760 METERS EAST AND 260 METERS NORTH OF THE SW CORNER OF VAULT 1 CLAIM

DEPTH METRES	LENGTH METRES	SAMPLE	MIN	ROCK	DESCRIPTION	ANG DEG	ELEMENT AU	ELEMENT PPB AG	ELEMENT PPM AS	ELEMENT PPM BA	ELEMENT PPM CU	ELEMENT PPM NI	ELEMENT PPM ZN	ELEMENT PPM
0.0	0.0				COLLAR									
2.40	2.40			OB	OVERBURDEN AND WEATHERED BEDROCK,NO CORE RECOVERY.CASING TO 6 FEET									
6.40	4.00			MVVW BSLT	PRPH,UNIT 3,PINK AND GREEN,FINE PLAGIOCLASE PHENOCRYSTS,MODERATE CHLORITE ALTERATION,MODERATELY MAGNETIC,PARTIALLY OXIDIZED MAGNETITE BLEBS,MODERATELY TO HIGHLY FRACTURED WITH CARBONATE COMMONLY ON FRACTURES.80 PCNT RECOVERY									
6.75	0.35			MVVW BSLT	PRPH,INTENSE CHLORITE-CARBONATE ALTERATION,GREEN,POROUS,ONLY SLIGHT RESEMBLANCE TO THE ORIGIONAL ROCK									
13.00	6.25			MVVW BSLT	PRPH AS AT 6.4 HIGHLY FRACTURED AND BROKEN,MODERATE CHLORITE ALTERATION PINKISH WHITE CARBONATE COMMON ON FRACTURES.80 PCNT RECOVERY									
16.00	3.00			MVVW BSLT	PRPH AS AT 6.4 PINK AND GREEN ONLY WEAK CHLORITE ALTERATION,WEAKLY FRACTURED WITH ABUNDANT CARBONATE ON FRACTURES.MOST FRACTURES ARE 45 TO 65 DEGREES TO CORE AXIS BUT ONE BANDED CARBONATE COATED FRACTURE IS SUBPARALLEL TO THE CORE AXIS,WEAK TO MODERATELY MAGNETIC.95 PCNT RECOVERY									
23.90	7.90			MVVW BSLT	PRPH AS ABOVE MODERATELY TO HIGHLY FRACTURED.WEAK TO MODERATELY ALTERED, IRON OXIDE STAINING COMMON ON FRACTURES WITH CARBONATE.BECOMES LESS BROKEN NEAR BOTTOM OF INTERVAL BUT LOCALLY BRECCIATED WITH CARBONATE CEMENT. 90 TO 95 PCNT RECOVERY									

DEPTH METRES	LENGTH METRES	SAMPLE	MIN	ROCK	DESCRIPTION	ANG DEG	ELEMENT AU PPB	ELEMENT AG PPM	ELEMENT AS PPM	ELEMENT BA PPM	ELEMENT CU PPM	ELEMENT NI PPM	ELEMENT ZN PPM
24.20	0.30		MVVW	FLT	GOUGE,SOFT CLAY WITH CHUNKS OF CARBONATE CEMENTED BASALT PRPH								
41.90	17.70		MVVW	BSLT	PRPH,LIGHT GREEN,MODERATE CHLORITE ALTERATION,ABUNDANT CARBONATE ON FRACTURES,MODERATELY FRACTURED.HEMATITE STAINING COMMON WITHIN THE CARBONATE AND ON OTHER FRACTURES PROBABLY DERIVED FROM THE MAGNETITE.LOCALLY SLIGHTLY BRECCIATED WITH BOTH WHITE AND PINK CARBONATE CEMENT.LOCALLY DISTINCT FOLIATION AT 60 DEGREES TO CORE AXIS.DEGREE FO ALTERATION BECOMES QUITE VARIABLE NEAR THE BOTTOM OF THE INTERVAL APPARENTLY CONTROLLED BY FRACTURING AT ABOUT 65 DEGREES.85 TO 90 PCNT RECOVERY								
54.25	12.35		MVVW	BSLT	PRPH AS ABOVE BUT HIGHLY FRACTURED AND BROKEN.POSSIBLE MINOR FAULT GOUGE AT 46.3.50 PCNT CORE LOSS FROM 46.3 TO 49.1								
93.88	39.63		MVVW	BSLT	PRPH AS ABOVE MODERATELY FRACTURED,GREENISH TINT FROM MODERATE CHLORITE ALTERATION POSSIBLY SOME SERICITE ON FRACTURES WITH THE CARBONATE.FOLIATION AT 60 DEGREES TO CORE AXIS.MINOR MILKY QUARTZ IN WITH THE CARBONATE ON SOME FRACTURES AND LIMONITE COMMON ON FRACTURES ALONG WITH MINOR DENDRITIC MANGANESE.GENERALLY A DECREASE IN ALTERATION WITH DEPTH BUT AN INCREASE IN OXIDATION CAUSED BY GROUND WATER CIRCULATION.A VERY PRONOUNCED CHILLED LOWER CONTACT ABOUT 1 METER THICK.PY COMMON ON FRACTURES WITH QUARTZ WITHIN THE CHILLED ZONE.95 PCNT RECOVERY								
95.55	1.67		MVVW	MDST	BLACK CARBONACEOUS,SOFT ONLY PARTIALLY INDURATED.90 PCNT RECOVERY								
96.77	1.22		MVVW	TUFF	FRAGMENTS AVERAGE 1 MM APPARENT BEDDINT AT 15 DEGREES.1 % DISSEMINATED PY NO ALTERATION OR SILICIFICATION								
103.00	6.23		MVVW	TUFF	DARK GRAY SLIGHTLY CARBONACEOUS ? INTERBEDDED WITH GRADATIONAL BEDDING FROM VERY FINE GRAINED MUDDY TUFF TO A COARSE SANDY TUFF WITH 1 MM FRAGMENTS.APPARENT SLUMPING AND CRSOOBEDDING FEATURES.BEDDING VARIES FROM 30 TO 60 DEGREES.1 % PY CONCENTRATED IN THE FINE CARBONACEOUS LAYERS,PROBABLY SYNGENETIC.98 % RECOVERY.NO ALTERATION OR SILICIFICATION								
113.05	10.05		MVVW	TUFF	BRECCIA FRAGMENTS UP TO 2 CM BUT AVERAGING 2 TO 5 MM OCCASSIONALLY GRADES INTO SANDY TUFF.BEDDING AT 45 DEGREES.VERY CLEAN LOOKING,NO ALTERATION								

DEPTH METRES	LENGTH METRES	SAMPLE	MIN	ROCK	DESCRIPTION	ANG DEG	ELEMENT AU PPB	ELEMENT AG PPM	ELEMENT AS PPM	ELEMENT BA PPM	ELEMENT CU PPM	ELEMENT NI PPM	ELEMENT ZN PPM
					OR SILICIFICATION.1 % DISSEMINATED PY.99 % RECOVERY								
118.25	5.20		MVVW	TUFF	INTERBEDDED TUFF BRECCIA AS ABOVE AND SANDY TO SILTY TUFF.ABOUT 10 REPETITIONS GRADING UPWARDS FROM COARSE TO FINE.BEDDING AT 45 DEGREES.STILL VERY CLEAN NO ALTERATION OF SILICIFICATION NO VEINING OR CARBONATE ON FRACTURES.99 % RECOVERY								
130.90	12.65		MVW	TUFF	DARK GRAY TO BLACK,GRADES FROM FINE GRAINED MUDDY TUFF TO SANDY TUFF.THINLY BEDDED TO FINELY LAMINATED WITH BEDS FROM 1 MM TO 5 CM THICK AVERAGING LESS THAN 1 CM THICK.NUMEROUS FINE VERTICAL FRACTURES WITH 1 CM DISPLACEMENT ALONG THEM.SYNGENETIC PY LOCALLY AS PODS AND DISRUPTED PYRITIC BANDS UP TO 3 MM THICK.TOTAL PY CONTENT LOCALLY UP TO 5 %.MINOR CARBONATE ON HAIRLINE FRACTURES.UNALTERED AND NOT SILICIFIED.99 % RECOVERY.BEDDING VARIES FROM 35 TO 60 DEGREES								
132.90	2.00		MVVW	MDST	BLACK CARBONACEOUS AT AT 95.55.SOFT BUT FORMS SOLID CORE 99 % RECOVERY								
134.45	1.55		MVW	TUFF	? SILTY TUFF ? INTERMIXED WITH MUDSTONE,PROBABLE TURBIDITE LIKE SEQUENCE AS THE BEDS ARE ALL DISCONTINUOUS AND JUMBLED UP.QUARTZ-CARBONATE SEGREGATIONS FORM IRRATIC LENSES.SYNGENETIC PY LOCALLY UP TO SEVERAL PERCENT NO ALTERATION OR SILICIFICATION								
139.00	4.55		MVVW	TUFF	SILTY TO SANDY WITH A FEW THIN MUDDY BANDS.BEDDING FROM 50 TO 75 DEGREES UNALTERED,UNSILICIFIED.99 % RECOVERY								
139.13	0.13		MVVW	FLT	GOUGE,CLAY,APPEARS TO BE COMPOSED OF A SANDY TUFF.ROUGHLY 90 DEGREES TO CORE AXIS								
142.30	3.17		MVVW	TUFF	AS AT 130.9 INTERBEDDED SANDY TUFF AND MUDDY TUFF OR MUDSTONE.SLUMPING AND OTHER SOFT SEDIMENT DEFORMATION FEATURES.SAMLL LENSES OF FINE GRAINED GRAY-GREEN TALCY MATERIAL.NOT ALTERED OR SILICIFIED.98 % RECOVERY								
148.00	5.70		MVVW	LPTF	COARSE SANDY TUFF,FRAGMENTS FROM 1 MM TO 1 CM WITH OCCASSIONAL FRAGMENT UP TO 2 CM.VERY CLEAN,SOME TALCY CLASTS NEAR TOP OF INTERVAL AS NOTE IN ABOVE INTERVAL.NO VEINING OR EVIDENCE OF ALTERATION OR SILICIFICATION.99 % RECOVERY								
165.00	17.00		MVVW	TUFF	AS AT 118.25,RAPID GRADING FROM TUFF BRECCIA TO SANDY TUFF,SILTY TUFF AND BLACK MUDDY TUFF WITH SOME FINE GRAINED SOFT GRAY BEDS OF CLAYSTONE OR								

DEPTH METRES	LENGTH METRES	SAMPLE	MIN	ROCK	DESCRIPTION	ANG DEG	ELEMENT AU PPB	ELEMENT AG PPM	ELEMENT AS PPM	ELEMENT BA PPM	ELEMENT CU PPM	ELEMENT NI PPM	ELEMENT ZN PPM
					VERY FINE GRAINED TUFF,BEDDING VARIES FROM 55 TO 70 DEGREES.PY LOCALLY UP TO SEVERAL PERCENT ALMOST CERTAINLY SYNGENETIC.BELOW 150.0 MOST SEQUENCES GRADE FROM SANDY TO MUDDY TUFF WITH ONLY OCCASSIONAL COARSE BEDS WITH FRAGMENTS OVER 5 MM.A FEW CARBONATE COATED FRACTURES BELOW 157.0.OCCASSIONAL FRAGMENT OF TRACHYTE PORPHYRY,UNIT 1,UP TO SEVERAL CENTIMETERS,99 % RECOVERY,NO ALTERATION								
167.70	2.70		MVVW	TUFF	AS ABOVE BUT CONTAINS LARGE BLOCKS OF TRACHYTE PROPHYRY UP TO 30 CM ACROSS.99 % RECOVERY								
174.80	7.10		MVVW	TUFF	AS AT 165.0,FINE CARBONATE COATED FRACTURES BECOMING MORE ABUNDANT WITH DEPTH,BEDDING AT 60 DEGREES.NUMEROUS SUBVERTICAL FRACTURES WITH UP TO 1 CM OFFSET OF BEDS	60							
176.36	1.56		MVVW	TUFF	GRAY VERY DISTINCTIVE FROM ALL OF THE ABOVE TUFFS.UP TO THIS POINT ALL OF THE TUFFS HAVE BE SUBAQUEOUS,WATER LAIN BEDDED TUFFS.THIS UNIT IS MASSIVE,WITH NO FEATURES IN COMMON WITH A WATERLAIN TUFF THEREFORE IS PROBABLY SUBARIAL.FRAGMENTS UP TO 5 MM WITH OCCASSIOL ONE OVER 1 CM 99 % RECOVERY								
178.06	1.70	FX022565	MVW	TUFF	AS ABOVE BUT WITH NUMEROUS PY-CALCITE BANDS AT 60 DEGREES UP TO 1 CM WIDE AS WELL AS 1 % DISSEMINATED PY,99 % RECOVERY		0.000	0.200	150.000	50.000	12.000	34.000	76.000
187.75	9.69		MVVW	TUFF	AS AT 174.80,FRAGMENTS GENERALLY ARE LARGER AND MORE CHLORITIC WITH DEPTH.VERTUALLY UNFRACTURED WITH NO ALTERATION OR SILICIFICATION,99 % RECOVERY								
190.80	3.05	FX022572	MVVW	TUFF	AS ABOVE BUT BECOMING NOTABLE ALTERED.GRADUALLY BECOMING MORE BLEACHED WITH INCREASING CLAY ALTERATION WITH DEPTH		0.000	0.200	30.000	40.000	16.000	50.000	86.000
191.40	0.60	FX022566	MVW	FLT	ZONE AS ABOVE BUT CRUSHED,WITH BANDS OF CARBONATE UP TO 3 CM WISE AT 65 TO 80 DEGREES TO THE CORE AXIS WIDE UP TO 50 % PY BLEBS OVER 3 CM.TOTAL PY CONTENT AVERAGES ABOUT 8 TO 10 %.90 % RECOVERY		0.000	0.200	370.000	20.000	27.000	109.000	62.000
193.50	2.10	FX022567	MVW	TUFF	BRECCIA WITH FRAGMENTS OF OTHER TUFF UP TO 15 CM ACROSS.UP TO 10 % PY IN BRECCIA MATRIX.MANY FRAGMENTS CONTAIN DISSEMINATED PY. WEAK CLAY ALTERATION NOT NOTICABLY SILICIFIED.99 % RECOVERY		0.000	0.400	160.000	40.000	18.000	99.000	86.000
195.90	2.40	FX022568	MVW	TUFF	WHITE SILICEOUS MEDIUM GRAINED LITHIC TUFF.VERY HARD,DISTINCTIVE,POSSIBL		5.000	0.600	50.000	40.000	9.000	18.000	82.000

DEPTH METRES	LENGTH METRES	SAMPLE	MIN	ROCK	DESCRIPTION	ANG DEG	ELEMENT AU PPB	ELEMENT AG PPM	ELEMENT AS PPM	ELEMENT BA PPM	ELEMENT CU PPM	ELEMENT NI PPM	ELEMENT ZN PPM
					Y SUBARIAL ? CONTACTS AT 30 DEGREES 1 TO 2 % PY AS BANDS AND WHISPS AT 4 5 DEGREES.FAULT ZONE FROM 196.0 TO 1 96.25 99% RECOVERY								
201.17	5.27		MVW	TUFF	BRECCIA,FRAGMENTS ARE PREDOMINANTLY OF WELDED TUFF.WEAK CLAY ALTERATION 1 TO 2 PY IN BRECCIA MATRIC 99 % REC OVERY								
204.50	3.33		MVVW	TUFF	BRECCIA,POLYMICTIC FRAGMENTS UP TO 3 CM,NO FRAGMENTS OF WELDED TUFF,SLIG HTLY CRUSHED NEAR UPPER CONTACT,1 % PY,WEAK CLAY ALTERATION,NO SILICIFIC ATION,95 % RECOVERY								
210.90	6.40		MVVW	TUFF	SANDY TO SILTY,GREEN TINT PROBABLY D UE TO HIGH MAFIC CONTENT.BEDDING 45 TO 60 DEGREES.CARBONATE COMMON ON FI NE FRACTURES,2 CM OF BANDED CARBONAT E ON LOWER CONTACT.NO SIGNIFICANT AL TERATION OF SILICIFICATION								
226.35	15.45		MVVW	TRCT	FLOW,GREEN AMYGDALOIDAL WITH CALCITE AND CHLORITE IN VESICULES.PROBABLY UNIT 2B ON THE GEOLOGY MAP.ABUNDANT HAIRLINE FRACTURES COATED WITH CARBO NATE.NOT NOTICABLY ALTERED.THIN BED OR POSSIBLY A BOULDER OF SILICEOUS P YRITIC FINE GRAINED TUFF ? FROM 215. 6 TO 215.9(FX022573) CENTER OF TH E FLOW IS DENSER,DARKER GREEN AND LE SS VESICULAR THAN THE TOP AND BOTTOM LOCAL PY INTERSTITIALLY AND ON FRAC TURES FROM 223.5 TO 225.0,95% RECOV ERY								
229.80	3.45		MVVW	TUFF	SANDY WITH MINOR MUDDY BANDS AND SEV ERAL THIN COARSE BEDS WITH FRAGMENTS UP TO SEVERAL CM.A COUPLE CHUNKS OF TRACHYTE PORPHYRY UP TO 20 CM,PROBA BLY FRAGMENTS OF UNIT 1,BEDDING LO D EGREES,99% RECOVERY,NO SIGNIFICANT ALTERATION	60							
232.00	2.20	FX022569	MVW	AGLM	VOLCANIC BOMBS UP TO 35 CM,MAINLY TR ACHYTE PORPHYRY COMPOSITION,CALCITE AND PY ABUNDANT IN THE MATRIX BETWEE N THE BOMBS,UP TO 5 % PY,99 % RECOVE RY		15.000	0.200	170.000	50.000	19.000	35.000	80.000
234.00	2.00	FX022570	MVW	AGLM	AS ABOVE,LOCALLY UP TO 10 % PY,99 % RECOVERY		60.000	0.200	360.000	50.000	27.000	40.000	86.000
236.80	2.80	FX022571	MVW	AGLM	AS ABOVE,UP TO 5 % PY,99% RECOVERY		35.000	0.400	150.000	70.000	26.000	38.000	92.000
240.00	3.20		MVVW	LPTF	FRAGMENTS RANGE FROM 1 MM TO 1 CM WI TH MOST OF THEM AROUND 2 TO 4 MM.CLE AN LOOKING,MODERATELY CALCAREOUS MAT RIX BUT NO SIGNIFICANT ALTERATION OR SILICIFICATION.99% RECOVERY								
241.00	1.00		MVVW	TUFF	SANDY WITH MUDDY BANDS,SEVERAL COARS E FRAGMENTS UP TO 1 CM,BROWN COLOURE D,BEDDING AT 50 DEGREES 99 % RECOVER	50							

DEPTH METRES	LENGTH METRES	SAMPLE	MIN	ROCK	DESCRIPTION	ANG DEG	ELEMENT AU PPB	ELEMENT AG PPM	ELEMENT AS PPM	ELEMENT BA PPM	ELEMENT CU PPM	ELEMENT NI PPM	ELEMENT ZN PPM
243.25	2.25		MVVW	ASH	Y GRAY TO WHITE VERY FINE GRAINED,SOFT NO APPARENT ALTERATION,99 % RECOVER Y								
249.40	6.15		MVW	TUFF	SANDY WITH BLACK PYRITIC MUDSTONE BE DS.A 3 CM COAL ? SEAM AT 144.2.BEDDI NG AT 55 DEGREES.LOCALLY ABUNDANT HA IRLINE FRACTURES FILLED WITH CARDONA TE	55							
253.10	3.70		MVVW	TUFF	COARSE SAND FRAGMENTS FROM 1 MM TO 5 MM BUT MOSTLY ABOUT 2 MM.WEAK TO MO DERATE CLAY ALTERATION NEAR THE TOP OF THE INTERVAL.MODERATELY SILICIFIE D THE BOTTOM 0.5 METERS OF THE INTER VAL.NO VEING,99 % RECOVERY								
256.90	3.80		MVVW	TUFF	WELDED,PINKISH TINT,PROBABLY SUBARIA L,ABUNDANT CARBONATE IN SMALL LENSES AND CROSS CUTTING FRACTURES.BEDDING AT 50 DEGREES 99 % RECOVERY	50							
259.40	2.30		MVVW	TUFF	SANDY GRAY-GREEN,FRAGMENTS MOSTLY 1 TO 2 MM.CARBONATE COMMON ON FRACTURE S AT 60 DEGREES TO CORE AXIS.WELL IN DURATED,POSSIBLY WEAKLY SILICIFIED								
286.50	27.10		MVVW	LPTF	FRAGMENTS FROM 1 MM TO 2 CM WITH OCC ASSIONAL FRAGMENT UP TO 3 OR 4 CM,GR AY GREEN,DISS MAGNETITE,VERY HARD PR OBABLY DUE TO WEAK SILICIFICATION.CA RBONATE COMMON IN MATRIX,99 % RCVR,F RAGMENTS GRADUALLY INCREASE IN SIZE WITH DEPTH.A COUPLE 20 CM BLOCKS OF UNIT 1,TRACHYTE PORPHYRY AT 274.5								
289.00	2.50	FX022574	MVVW	LPTF	AS ABOVE BUT FRAGMENT SMALLER,FROM 1 TO 5 MM,VERY INDURATED POSSIBLY VERY WEAKLY SILICIFIED,NO SIGNIFICANT AL TERATION,99 % RECOVERY		0.000	0.400	30.000	70.000	16.000	17.000	78.000
291.00	2.00	FX022575	MVVW	LPTF	AS ABOVE BUT FINE GRAINED FRAGMENTS FROM 1 MM TO 3 MM		0.000	0.200	40.000	110.000	14.000	15.000	80.000
292.90	1.90	FX022576	MVVW	LPTF	AS ABOVE,POSSIBLY VERY SLIGHTLY BLEA CHED,A FEW CARBONATE FILLED FRACTURE S,BEDDING AT 55 DEGREES,99 % RECOVER Y	55	0.000	0.200	50.000	70.000	12.000	15.000	62.000
293.80	0.90	FX022577	MVVW	TUFF	DARK GREEN FRAGMENTS MOSTLY LESS THA N 1 MM,ABUNDANT CARBONATE ON FRACTUR ES,MINOR DISSENINATED PY,99 % RECOVE RY NO APPARENT ALTERATION OR SILICIF ICATION,LOWER CONTACT SHARP AT 40 DE GREES	40	0.000	0.200	30.000	80.000	63.000	155.000	92.000
296.00	2.20	FX022578	MVVW	TRCT	PORPHYRY,UNIT 1,FELDSPAR PHENOCRYSIS UP TO 5 MM LONG.TOP 45 CM OF THIS I NTERVAL CONTAINS POLYMICTIC FRAGMENT S UP TO 3 CM BUT THE MATRIX IS A TRA CHYTE PORPHYRY.APPEARS TO BE A FLOW THAT WAS BRECCIATED DURING DEPOSITIO N AS THERE ARE DISTINCT LARGE FRAGME NTS OF THE SAME COMPOSITION AS THE S		0.000	0.200	30.000	50.000	26.000	51.000	86.000

DEPTH METRES	LENGTH METRES	SAMPLE	MIN	ROCK	DESCRIPTION	ANG DEG	ELEMENT AU PPB	ELEMENT AG PPM	ELEMENT AS PPM	ELEMENT BA PPM	ELEMENT CU PPM	ELEMENT NI PPM	ELEMENT ZN PPM
					URROUNDING MATERIAL.NUMEROUS FINE CARBONATE FILLED FRACTURES,99 % RECOVERY NO SIGNIFICANT ALTERATION OR SILICIFICATION								
298.00	2.00	FX022579	MVVW	TRCT	PORPHYRY AS ABOVE,99 % RECOVERY		0.000	0.200	20.000	70.000	26.000	47.000	94.000
300.00	2.00	FX022580	MVVW	TRCT	PORPHYRY AS ABOVE BUT WITH SEVERAL THIN QUARTZ STRINGERS UP TO 3 MM WIDE AT 35 TO 55 DEGREES,99% RECOVERY		0.000	0.400	20.000	70.000	22.000	42.000	96.000
311.90	11.90		MVVW	TRCT	PORPHYRY AS ABOVE,NO QTZ STRINGERS,NUMEROUS FINE CARBONATE FILLED FRACTURES,99 % RECOVERY								
319.80	7.90		MVVW	TUFF	SANDY DARK GREEN WITH BLOCKS OF TRACHYTE PORPHYRY AND POSSIBLY TRCT PORPHYRY FLOW FROM 313.4 TO 315.4.CHLORITE COMMON ON FRACTURES.99 % RECOVERY								
321.60	1.80		MVVW	TRCT	PORPHYRY AS AT 296.0 99% RECOVERY FOOT OF HOLE								

NOTE SYMBOLS USED ARE :
* AFTER ASSAY VALUE INDICATES VALUE FOR LOST CORE WAS CALCULATED FROM ADJACENT SAMPLES

SUMMARY OF MINERALIZATION AND ROCK TYPES

FROM METRES	TO METRES	LENGTH METRES	MNZN	ROCK
0.0	0.0	0.0		
0.0	2.40	2.40		OB
2.40	23.90	21.50	MVVW	BSLT
23.90	24.20	0.30	MVVW	FLT
24.20	93.88	69.68	MVVW	BSLT
93.88	95.55	1.67	MVVW	MDST
95.55	118.25	22.70	MVVW	TUFF
118.25	130.90	12.65	MVW	TUFF
130.90	132.90	2.00	MVVW	MDST
132.90	134.45	1.55	MVW	TUFF
134.45	139.00	4.55	MVVW	TUFF
139.00	139.13	0.13	MVVW	FLT
139.13	142.30	3.17	MVVW	TUFF
142.30	148.00	5.70	MVVW	LPTF
148.00	176.36	28.36	MVVW	TUFF
176.36	178.06	1.70	MVW	TUFF
178.06	190.80	12.74	MVVW	TUFF
190.80	191.40	0.60	MVW	FLT
191.40	201.17	9.77	MVW	TUFF
201.17	210.90	9.73	MVVW	TUFF
210.90	226.35	15.45	MVVW	TRCT
226.35	229.80	3.45	MVVW	TUFF
229.80	236.80	7.00	MVW	AGLM
236.80	240.00	3.20	MVVW	LPTF
240.00	241.00	1.00	MVVW	TUFF
241.00	243.25	2.25	MVVW	ASH
243.25	249.40	6.15	MVW	TUFF
249.40	259.40	10.00	MVVW	TUFF
259.40	292.90	33.50	MVVW	LPTF
292.90	293.80	0.90	MVVW	TUFF
293.80	311.90	18.10	MVVW	TRCT
311.90	319.80	7.90	MVVW	TUFF
319.80	321.60	1.80	MVVW	TRCT

ASSAYS CHK'D.....
DATE.....

BOREHOLE	PROPERTY	PROP#	LEVEL	DEPTH METRES	AZIMUTH DEG MIN	DIP DEG MIN	CO-ORD SYSTEM	LATITUDE METRES	DEPARTURE METRES	ELEVATION METRES	STARTED MO DY YR	COMPLETED MO DY YR
38898-0	VAULT		SURF	457.00		-90 00	S	150.	E 880.	475.	08 15 86	08 26 86

INCLINATION AND AZIMUTH TESTS

DEPTH METRES	AZIMUTH DEG MIN	DIP DEG MIN	DEPTH METRES	AZIMUTH DEG MIN	DIP DEG MIN	DEPTH METRES	AZIMUTH DEG MIN	DIP DEG MIN	DEPTH METRES	AZIMUTH DEG MIN	DIP DEG MIN
47.0		-90 00	91.0		-89 00	137.0		-89 00	183.0		-88 00
228.0		-89 00	276.0		-89 00	321.0		-89 00	366.0		-89 00
411.0		-89 00									

LOGGED BY ED HUNTER NTS # 82E/SE COUNTRY IS CANADA PROV/STATE IS BC GRD BRNG IS SHT# ANOM#

ASSAY FOR * AU AL SB AS BA BE BI CD CA CR CU FE GA LA PB MG MN MO NI P

ASSAY FOR * K AG NA SR TL TI W U V ZN

COMMENTS

DRILLED NQ BY BEAUPRE DIAMOND DRILLING LTD/RAINBOW DRILLING
ALL MATERIAL REMOVED

DEPTH METRES	LENGTH METRES	SAMPLE	MIN	ROCK	DESCRIPTION	ANG DEG	ELEMENT AU PPB	ELEMENT AG PPM	ELEMENT AS PPM	ELEMENT BA PPM	ELEMENT CU PPM	ELEMENT NI PPM	ELEMENT ZN PPM
0.0	0.0				COLLAR								
13.00	13.00			OB	OVERBURDEN AND WEATHERED BEDROCK,NO CORE RECOVERY.CASING TO 42 FT -12.8 METERS								
23.20	10.20		MVVW	WHT	LAKE FORMATION,REPETITION OF TUFFACEOUS SEDIMENTS GRADING FROM GRITS TO FINE BLACK CARBONACEOUS MUDSTONE.VERY SIMILAR TO THE UNIT 2 SEQUENCE BUT DEFFINATELY OVER LAYS THE UNIT 3 BSLT PORPHYRY.BEDDING AT 45 DEGREES,SYNGENETIC PY COMMON IN THE MUDSTONE,CARBONATE COMMON ON FRACTURES AND AS LENSES.NO ALTERATION OR SILICIFICATION,98 % RECOVERY	45							
52.27	29.07		MVVW	BSLT	PORPHYRY,UNIT 3,PINKISH-GREEN NEAR THE TOP BECOMING PURPLE-GREEN WITH DEPTH.AUTOBRECCIATED DOWN TO ABOUT 40.0 WITH GRAY CARBONATE BRECCIA CEMENT,CARBONATE COMMON ON FRACTURES,LOCALLY MODERATELY FRACTURED,98 % RECOVERY								
52.70	0.43		MVVW	FLT	GOUGE,INDISTINCT CONTACTS BUT APPEARS TO BE CLOSE TO 90 DEGREES TO CORE AXIS ALTHOUGH THERE ARE FRACTURES SUBPARALLEL TO CORE AXIS IN ADJACENT WALLROCK,99 % RECOVERY								
324.60	271.90		MVVW	BSLT	PORPHYRY,TEXTURAL VARIATIONS SUGGEST NUMEROUS FLOWS IN RAPID SUCCESSION WITHOUT INTERFLOW SEDIMENTATION OR WEATHERING.LOCAL AUTOBRECCIATION AND								

DEPTH METRES	LENGTH METRES	SAMPLE	MIN	ROCK	DESCRIPTION	ANG DEG	ELEMENT AU PPB	ELEMENT AG PPM	ELEMENT AS PPM	ELEMENT BA PPM	ELEMENT CU PPM	ELEMENT NI PPM	ELEMENT ZN PPM
					MINOR TECTONIC BRECCIATION WITH CARB ONATE CEMENT.MODERATELY FRACTURED WI TH CARBONATE COMMON ON FRACTURES,LOC ALLY FOLIATED AT 45 TO 65 DEGREES TO CORE AXIS,MAIN FRACTURING AT ABOUT 45 DEGREES BUT VARIES FROM 30 TO 80 DEGREES.CORE BECOMES GRADUALLY HARDE R,DENSER AND LESS FRACTURED STARTING AROUND 175.0 AND ACCOMPANYING THE C ARBONATE ON FRACTURES IS A SOFT WHIT E FLAKEY MINERAL-POSSIBLY ALUNITE ? OVER 95 % CORE RECOVERY.THE BOTTOM 3 METERS IS A CHILLED ZONE WITH VERY FINE GRAINED WHITE TO GRAY APPEARANC E AND STARTS PICKING UP CARBON ON TH E FRACTURES FROM THE UNDERLYING CARB ONACEOUS MUDSTONE.LOWER CONTACT WAVY AT 40 DEGREES TO CORE AXIS								
326.00	1.40	FX022581	MVW	MDST	BLACK,CARBONACEOUS,WITH THIN SANDSTO NE BEDS,LOCALLY TALCY,BEDDING AT 60 DEGREES,PY LOCALLY UP TO 10 % PROBAB LY SYNGENETIC,SOFT,MODERATLY BROKEN A FEW VERY THIN QTZ STRINGERS,NOT SI LICIFIED 95 % RECOVERY	60	0.000	0.200	390.000	220.000	24.000	52.000	292.000
328.60	2.60	FX022582	MVW	MDST	BLACK MODERATELY TO HIGHLY SILICEOUS AND OR SILICIFIED.TWO OR MORE STAGE S OF QUARTZ VEINING,BLUE QUARTZ FILL ED CAVITIES ARE CUT BY THIN WHITE QU ARTZ STRINGERS THAT CONTAIN MINOR FL UORITE.FINE GRAINED PY LOCALLY UP TO 10 % AS FRACTURE FILLING AND IRRATI C LENSES,LOCALLY BRECCIATED,90 % REC OVERY		15.000	0.200	300.000	100.000	17.000	20.000	60.000
330.20	1.60	FX022583	MVW	FLT	GOUGE,CHEWED UP MUDSTONE,1-2 % PY,MI NOR QUARTZ STRINGERS,50 % RECOVERY		0.000	0.200	480.000	50.000	22.000	39.000	338.000
331.30	1.10	FX022584	MVW	MDST	VERY HIGHLY SILICIFIED WITH NUMEROUS VUGGY QUARTZ LINED CAVITIES AND DIS RUPTED QTZ STRINGERS,LOCALLY BRECCIA TED WITH PY CEMENT,TWO DIFFERENT COL OURED PYRITE POSSIBLY TWO AGES,PY LO CALLY UP TO 10 %,98 % RECOVERY		15.000	0.200	280.000	30.000	8.000	12.000	28.000
333.00	1.70	FX022585	MVW	MDST	AS ABOVE BUT MORE BRECCIATED AND FEW ER VUGGY CAVITIES,MODERATELY BROKEN 95 % RECOVERY		5.000	0.200	310.000	30.000	9.000	13.000	20.000
335.00	2.00	FX022586	MVW	MDST	AS ABOVE COMMONLY BRECCIATED,LOCALLY HAS BRECCIATED QUARTZ THAN CONTAINS PY CLASTS IN THE FRAGMENTS,95 % REC OVERY		5.000	0.200	440.000	30.000	10.000	28.000	130.000
336.60	1.60	FX022587	MVW	FLT	ZONE,BRECCIATED MUDSTONE AND GOUGE W ITH 20 CM SECTIONS OF UNBRECCIATED S ILICIFIED MUDSTONE,90 % RECOVERY		15.000	0.200	810.000	170.000	7.000	54.000	512.000
338.60	2.00	FX022588	MVVW	TUFF	SANDY GREY WATERLAIN,BEDDING AT 30 D EGREES TO CORE AXIS,FRAGMENTS 1 MM T O 2 MM WITH OCCASSIONAL CLAST TO 1 C M,NOT SILICIFIED POSSIBLY WEAK CLAY	30	10.000	0.200	230.000	410.000	8.000	13.000	114.000

DEPTH METRES	LENGTH METRES	SAMPLE	MIN	ROCK	DESCRIPTION	ANG DEG	ELEMENT AU PPB	ELEMENT AG PPM	ELEMENT AS PPM	ELEMENT BA PPM	ELEMENT CU PPM	ELEMENT NI PPM	ELEMENT ZN PPM
					ALTERATION,98 % RECOVERY								
340.60	2.00	FX022589	MVVW	TUFF	SANDY AS ABOVE,SLIGHTLY SILICIFIED,9 9 % RECOVERY		40.000	0.200	250.000	190.000	9.000	13.000	220.000
342.60	2.00	FX022590	MVVW	TUFF	SANDY AS ABOVE,SLIGHTLY SILICIFIED,B RECCIATED NEAR LOWER CONTACT,ONLY 20 % RECOVERY FROM 342.0 TO 342.6		30.000	0.200	140.000	180.000	12.000	11.000	60.000
345.00	2.40	FX022591	MVW	LPTF	ROUNDED CLASTS UP TO 7 CM,MODERATE C LAY LATERATION,IRRATIC SILICIFICATIO N,LOCALLY HIGHLY SILICIFIED WITH BLU E-GRAY SILICA FLOODING AND MINOR BLA CK SILICA CUT BY WHITE QTZ STRINGERS AND LOCAL STOCKWORK,PYRITE DISSEMIN ATED AND ON FRACTURE AS WELL AS IN A LL STAGES OF SILICA FROM 2 TO 5 %,95 % RECOVERY		25.000	0.200	400.000	210.000	17.000	11.000	124.000
347.00	2.00	FX022592	MVW	LPTF	AS ABOVE BUT MODERATELY TO HIGHLY SI LICIFIED,MODERATE CLAY ALTERATION,MA NY CLASTS HAVE A DISTINCT GREEN-TOUR QUOISE COLOUR.PY UP TO 10 % MAINLY I N SILICA FLOODING BETWEEN THE CLASTS .THERE IS TWO COLOURS OF PY POSSIBLY TWO AGES OF MINERALIZATION.NO WHITE QUARTZ VEINING,99 % RECOVERY		65.000	0.200	250.000	130.000	15.000	12.000	72.000
349.00	2.00	FX022593	MVW	LPTF	AS ABOVE,A FEW CARBONATE STRINGERS,9 9 % RECOVERY		25.000	0.200	160.000	490.000	15.000	13.000	58.000
351.00	2.00	FX022594	MVW	LPTF	AS ABOVE,MODERATELY SILICIFIED,OCCAS SIONAL THIN WHITE QTZ STRINGER,99 % RECOVERY		25.000	0.200	280.000	300.000	14.000	10.000	64.000
353.00	2.00	FX022595	MVW	LPTF	AS ABOVE 99 % RECOVERY		35.000	0.200	240.000	340.000	14.000	8.000	64.000
355.00	2.00	FX022596	MVW	LPTF	AS ABOVE,THIN MUDSTONE BED,STRONG CL AY LATERATION,PY LOCALLY UP TO 10 % 98 % RECOVERY		20.000	0.200	250.000	860.000	12.000	8.000	50.000
356.75	1.75	FX022597	MVW	LPTF	AS ABOVE 99 % RECOVERY		10.000	0.400	110.000	250.000	9.000	18.000	72.000
358.15	1.40	FX022598	MVVW	LPTF	REDDISH-BROWN STAINED FRAGMENTS,STRO NG CLAY ALTERATION,SLIGHTLY SILICIFI ED,99 % RECOVERY		115.000	5.800	250.000	250.000	8.000	9.000	12.000
358.55	0.40	FX022599	MVW	BX	RHYOLITE,HIGHLY SILICIFIED WITH BLAC K QTZ AND PY CEMENT,PY UP TO 3 %,99 % RECOVERY,GRAPHITE ON FRACTURES		2055.00	5.800	230.000	330.000	7.000	8.000	10.000
360.00	1.45	FX022600	MVW	TUFF	OR FLOW,VERY STRANGE TEXTURE,FINE RH YOLITIC GROUND MASS WITH CLASTS OR A MYGDULES UP TO 1 CM OF A CREAMY WHIT E SOFT MINERAL THAT DOESNT EFFERVESC E 2 TO 3 % PY ON FRACTURES,98 % RECO VERY,MODERATE CLAY ALTERATION		375.000	2.600	90.000	350.000	12.000	10.000	10.000
361.40	1.40	FX080498	MVW	TUFF	AS ABOVE,MODERATE TO STRONG CLAY ALT ERATION,MODERATELY SILICIFIED,99 % R ECOVERY		160.000	1.200	20.000	120.000	2.000	2.000	8.000
362.30	0.90	FX080499	MVW	TUFF	AS ABOVE BUT HIGHLY SILICIFIED,1-2 % PY,99 % RECOVERY		30.000	0.200	0.000	540.000	2.000	3.000	12.000
364.30	2.00	FX080500	MVW	TUFF	OR RHYOLITIC FLOW AS ABOVE BUT WITHO UT THE STRANGE CREAMY CLASTS,1-2 % P Y,98 % RECOVERY		375.000	0.400	10.000	410.000	2.000	2.000	4.000
366.30	2.00	FX029255	MVW	TUFF	SANDY,STRONG CLAY ALTERATION,MODERAT ELY SILICIFIED,NUMEROUS THIN BLUE-GR		195.000	1.000	20.000	700.000	4.000	3.000	4.000

DEPTH METRES	LENGTH METRES	SAMPLE	MIN	ROCK	DESCRIPTION	ANG DEG	ELEMENT AU PPB	ELEMENT AG PPM	ELEMENT AS PPM	ELEMENT BA PPM	ELEMENT CU PPM	ELEMENT NI PPM	ELEMENT ZN PPM
					AY QTZ STRINGERS,1 TO 3 % PY MAINLY ON FRACTURES WITH GRAPHITE,95 % RECOVERY							
368.80	2.30	FX029256	MVW	TUFF	SANDY AS ABOVE,98 % RECOVERY		100.000	0.200	10.000	640.000	6.000	2.000	10.000
371.10	2.30	FX029257	MVW	TUFF	SANDY AS ABOVE BUT HAS BANDED BRECCIATED MILKY QTZ VEIN 2 CM WIDE RUNNING SUBPARALLEL TO CORE AXIS,2 TO 3 % PY WITH GRAPHITE ON FRACTURES AND IN BRECCIA CEMENT.YELLOW REACTION HALOES AROUND SOME FRAGMENTS,98 % RECOVERY		1850.00	2.800	190.000	300.000	6.000	3.000	12.000
373.10	2.00	FX029258	MVW	TUFF	SANDY AS AT 366.3,MODERATE CLAY ALTERATION,MODERATELY SILICIFIED,1 TO 2 % PY ON FRACTURES WITH GRAPHITE,SOLID CORE,99 % RECOVERY		105.000	0.200	10.000	1980.00	2.000	3.000	4.000
374.15	1.05	FX029259	MVW	BX	BRECCIATED SANDY TUFF PICKING UP QTZ FRAGMENTS WITH DEPTH BECOMING MAINLY QTZ FRAGMENTS NEAR THE LOWER CONTACT.MANY OF THE QTZ FRAGMENTS HAVE AN INTERNAL BOXWORK PATTERN SIMILAR TO THAT FOUND AT THE DELAMAR MINE,UP TO 5 % PY WITH GRAPHITE IN BRECCIA CEMENT,DISSEMINATED PY IN QTZ FRAGMENTS,99 % RECOVERY		9875.00	6.800	130.000	230.000	54.000	6.000	94.000
374.80	0.65	FX029260	MVVW	QTZ	VEIN,MILKY WHITE,CONTACTS IRREGULAR MINOR PY SOME INTERNAL HEALED BRECCIATION,98 % RECOVERY		3335.00	2.200	0.000	630.000	5.000	6.000	16.000
375.40	0.60	FX029261	MVW	TUFF	SANDY,STRONG CLAY ALTERATION,WEAK TO MODERATE SILICIFICATION,PY-GRAPHITE VEINS UP TO 1 CM WIDE AT 30 DEGREES 98 % RECOVERY		445.000	4.600	70.000	230.000	4.000	4.000	10.000
377.50	2.10	FX029262	MVVW	TUFF	SANDY AS ABOVE,1 % PY,99 % RECOVERY		35.000	0.200	0.000	210.000	1.000	3.000	2.000
379.50	2.00	FX029263	MVVW	LPTF	STRONG CLAY ALTERATION,WEAK TO MODERATELY SILICIFIED.GRAY NEAR UPPER CONTACT BUT BECOMING RED-BROWN STAINED WITH DEPTH,1 % DISSEMINATED PY,OCCASSIONAL QTZ STRINGER,FOLIATION AT 60 DEGREES,95 % RECOVERY	60	105.000	0.400	10.000	320.000	3.000	4.000	2.000
381.30	2.00	FX029264	MVVW	LPTF	RED-BROWN,STRONG CLAY ALTERATION,MODERATELY SILICIFIED,NUMEROUS QTZ STRINGER INCLUDING A 1 CM WAVY STRINGER SUBPARALLEL TO CORE AXIS.TUFF FRAGMENTS GENERALLY 5 MM TO 1 CM BUT OCCASIONLY UP TO 10 CM,99 % RECOVERY		960.000	0.600	20.000	950.000	4.000	4.000	8.000
384.20	2.70	FX029265	MVVW	LPTF	AS ABOVE,BECOMING GRAY COLOURED NEAR LOWER CONTACT,99 % RECOVERY		205.000	0.800	30.000	90.000	27.000	9.000	2.000
385.70	1.50	FX029266	MVVW	TUFF	SANDY STRONG CLAY ALTERATION,MODERATELY SILICIFIED,LOCALLY ABUNDANT WHITE QTZ STRINGERS,1 % PY,98 % RECOVERY		6720.00	3.800	20.000	1000.00	11.000	7.000	4.000
386.30	0.60	FX029267	MVW	TUFF	SILTY TO MUDDY VERY SILICEOUS WITH STRONG QTZ STOCKWORK WITH MULTIPLE STAGES OF QTZ,1-2 % PY WITH THE QTZ,BEDDING AT 80 DEGREES 99 % RECOVERY	80	385.000	0.800	30.000	2270.00	20.000	14.000	6.000
387.50	1.20	FX029268	MVVW	ASH	FINE GRAINED GRAY WITH NUMEROUS HAIR LINE QTZ STRINGERS,MODERATELY SILICI		65.000	0.400	30.000	980.000	17.000	9.000	6.000

DEPTH METRES	LENGTH METRES	SAMPLE	MIN	ROCK	DESCRIPTION	ANG DEG	ELEMENT AU PPB	ELEMENT AG PPM	ELEMENT AS PPM	ELEMENT BA PPM	ELEMENT CU PPM	ELEMENT NI PPM	ELEMENT ZN PPM
					FIED								
388.80	1.30	FX029269	MVVW	TUFF	SANDY WITH MUDDY AND SILTY BEDS NEAR THE TOP THAT CONTAIN BROKEN UP QTZ VEINS,HIGHLY ALTERED,MODERATELY SILICIFIED		305.000	2.000	30.000	280.000	24.000	13.000	52.000
391.00	2.20	FX029270	MVVW	LPTF	AS AT 381.5 STRONG CLAY ALTERATION,MODERATE TO STRONG SILICIFICATION,1 % PY,99 % RECOVERY		30.000	1.000	10.000	70.000	2.000	4.000	4.000
393.00	2.00	FX029271	MVVW	LPTF	AS ABOVE BUT ALTERATION DECREASING WITH DEPTH,99 % RECOVERY		50.000	2.000	20.000	20.000	2.000	5.000	14.000
396.00	3.00	FX029272	MVVW	LPTF	AS ABOVE MODERATE TO STRONG CLAY ALTERATION,MODERATELY SILICIFIED,NO VEINING,99 % RECOVERY		65.000	0.200	40.000	10.000	2.000	7.000	14.000
398.60	2.60	FX029273	MVVW	LPTF	GRAY,SOFT,MODERATELY ALTERED,WEAKLY TO UNSILICIFIED,99 % RECOVERY		5.000	0.200	30.000	110.000	39.000	42.000	80.000
400.90	2.30	FX029274	MVVW	TUFF	FINE SANDY,SOFT,MODERATELY ALTERED,NOT SILICIFIED,BEDDING AT 40 DEGREES	40	0.000	0.200	0.000	40.000	69.000	3.000	24.000
403.45	2.55	FX029275	MVVW	LPTF	AS AT 398.6,UNSILICIFIED,MODERATELY TO HIGHLY ALTERED,99 % RECOVERY		10.000	0.200	20.000	230.000	28.000	51.000	128.000
405.20	1.75	FX029276	MVVW	TUFF	FINE SANDY WITH SILTY AND MUDDY LAYERS,BEDDING AT 55,NUMEROUS WHITE TO BLUE-GRAY QTZ STRINGERS CROSSCUTTING BEDDING,MANY HAVE DISTINCT CENTERLINE AND 1 % DISSEMINATED PY	55	510.000	1.600	50.000	990.000	28.000	53.000	152.000
407.00	1.80	FX029277	MVW	LPTF	MAINLY SANDY BUT SOME FRAGMENTS UP TO 3 CM,MILKY QTZ VEINS UP TO 4 CM AT LOW ANGLE TO CORE AXIS WITH SAME BOXWORK TEXTURE SEEN HIGHER UP THE HOLE,1-2 % PY,99 % RECOVERY		275.000	1.000	20.000	1180.00	13.000	56.000	86.000
408.60	1.60	FX029278	MVW	TUFF	SANDY WITH ABUNDANT QTZ VEINING AND LOCALLY MULTISTAGE BRECCIATION OF THE QTZ,99 % RECOVERY		175.000	1.200	20.000	390.000	16.000	55.000	78.000
410.55	1.95	FX029279	MVW	VOLC	FLOW,GRAY-GREEN,FINELY AMYGDALOIDAL MODERATELY ALTERED,MODERATELY TO HIGHLY SILICIFIED,BRECCIATED NEAR UPPER CONTACT WITH SOME QTZ FRAGMENTS,BLUE-GRAY QTZ IN CAVITIES AND GRAY AND WHITE QTZ VEINING.PROBABLY IS UNIT 2B ON THE GEOLOGY MAP.99 % RECOVERY		175.000	1.600	50.000	130.000	28.000	163.000	72.000
412.50	1.95	FX029280	MVVW	VOLC	FLOW AS ABOVE,APPEARS TO BE REPEATED FLOWS JUDGING FROM LOCALIZATION OF VESICULES,MINOR PY,NUMEROUS THIN QTZ STRINGERS,WEAK TO MODERATELY SILICIFIED,WEAKLY ALTERED,99 % RECOVERY		40.000	1.200	90.000	290.000	40.000	146.000	234.000
414.90	2.40	FX029281	MVVW	VOLC	FLOW AS ABOVE,99 % RECOVERY		60.000	0.400	90.000	80.000	38.000	120.000	288.000
417.00	2.10	FX029282	MVVW	TUFF	SANDY WITH BEDS OF MUDDY TUFF TO LAPILLI TUFF,BEDDING AT 60 DEGREES,MODERATE CLAY ALTERATION,NOT SILICIFIED, OCCASSIONAL THIN QTZ STRINGER,99 % RECOVERY	60	105.000	0.800	60.000	530.000	31.000	131.000	114.000
419.00	2.00	FX029283	MVVW	LPTF	WEAKLY ALTERED,MODERATELY SILICIFIED NUMEROUS THIN CARBONATE STRINGERS,99 % RECOVERY		125.000	1.200	40.000	110.000	26.000	84.000	70.000
421.00	2.00	FX029284	MVVW	LPTF	AS ABOVE 99 % RECOVERY		580.000	0.600	50.000	90.000	26.000	93.000	74.000
423.00	2.00	FX029285	MVVW	LPTF	AS ABOVE 99 % RECOVERY,INCREASE IN C		30.000	0.400	30.000	70.000	18.000	35.000	70.000

DEPTH METRES	LENGTH METRES	SAMPLE	MIN	ROCK	DESCRIPTION	ANG DEG	ELEMENT AU PPB	ELEMENT AG PPM	ELEMENT AS PPM	ELEMENT BA PPM	ELEMENT CU PPM	ELEMENT NI PPM	ELEMENT ZN PPM
					ARBONACEOUS FRAGMENTS,UP TO 5 %								
425.20	2.20	FX029286	MVVW	LPTF	AS ABOVE 99 % RECOVERY		30.000	0.400	20.000	80.000	17.000	23.000	78.000
426.20	1.00	FX029287	MVVW	LPTF	AS ABOVE BUT STRONG CLAY ALTERATION AND BECOMING MORE SILICIFIED WITH DE PTH,NUMEROUS WHITE QTZ VEINS UP TO 1 CM WIDE,1 % PY,99 % RECOVERY		30.000	0.200	20.000	220.000	12.000	21.000	80.000
428.30	2.10	FX029288	MVW	TUFF	BRECCIA,SUBANGULAR TO SUBROUNDED POL YMICTIC VOLCANIC FRAGMENTS UP TO 3 C M,MOSTLY BETWEEN 5 MM AND 2 CM,2 % D ISSEMINATED PY,HIGHLY SILICIFIED,LOC ALLY UP TO 10 % BANDED GRAY TO WHITE QTZ STOCKWORK,99 % RECOVERY		310.000	0.200	20.000	130.000	14.000	21.000	48.000
429.90	1.60	FX029289	MVW	LPTF	MODERATE CLAY ALTERATION,WEAKLY SILI CIFIED,FRAGMENTS UP TO 5 MM,AVERAGIN G 2 TO 3 MM,STRONG FOLIATION AT 60 P OSSIBLY SHEARING,99 % RECOVERY	60	5.000	0.200	10.000	150.000	13.000	22.000	60.000
431.00	1.10	FX029290	MVW	TUFF	BRECCIA AS AT 428.3,DISTINCT GREEN C OLOURATION PROBABLY CAUSED BY CHLORI TE ALTERATION,WEAKLY SILICIFIED,PART IALLY SHEARED AND CRUSHED,2-3 % DISS EMINATED PY,MODERATE CLAY AND CHLORI TE ALTERATION 99 % RECOVERY		30.000	0.200	10.000	380.000	14.000	24.000	64.000
432.00	1.00	FX029291	MVW	TUFF	BRECCIA AS ABOVE BUT MODERATELY TO H IGHLY SILICIFIED,A 2 CM QTZ WITH A D ARK GRAY CENTER CAUSED BY FINE SULPH IDES,99 % RECOVERY		140.000	0.200	20.000	180.000	15.000	22.000	6.000
433.00	1.00	FX029292	MVW	TUFF	BRECCIA AS ABOVE,HIGHLY SILICIFIED,L OCAL STOCKWORK OF WHITE QTZ VEINS WI TH CENTER LINES CUT BY A FEW VERY TH IN GREENISH QTZ VEINS,2 TO 3 % PY MO STLY IN FRAGMENTS AND FINE BRECCIA C EMENT,99 % RECOVERY		200.000	0.200	30.000	80.000	18.000	20.000	48.000
434.00	1.00	FX029293	MVW	TUFF	BRECCIA AS ABOVE,FRAGMENTS BECOMING LARGER,AVERAGING 2 TO 3 CM 99 % RECO VERY		65.000	0.200	20.000	80.000	16.000	22.000	46.000
435.00	1.00	FX029294	MVW	TUFF	BRECCIA AS ABOVE,GROUNDMASS HAS GRAD UALLY CHANGED FROM GREEN TO RED-BROW N,FRAGMENTS ARE MOSTLY FINE GRAINED GREEN VOLCANICS WITH VARIABLE TEXTUR ES,3 TO 4 % DISSEMINATED PY,CHLORITE ON FRACTURES,99 % RECOVERY		210.000	0.200	40.000	90.000	17.000	14.000	52.000
436.00	1.00	FX029295	MVW	TUFF	BRECCIA AS ABOVE,VERY HIGHLY SILICIF IED AND QTZ FLOODED,GRAY QTZ VEINLET S CUT BY SLIGHTLY BANDED WHITE QTZ V EINS UP TO 2 CM WHICH LOCALLY IS BRE CCIATED WITH A CHLORITE-PY CEMENT.TH E MAIN VEINING CUTS THE CORE AT 30 D EGREES OR LESS,2-3 % PY LOCALLY UP T O 5 % IN CHLORITE,99 % RECOVERY		365.000	0.800	170.000	40.000	7.000	8.000	32.000
437.00	1.00	FX029296	MVW	TUFF	BRECCIA AS AT 435.0 VERY HIGHLY SILI CIFIED,99 % RECOVERY		430.000	0.200	80.000	80.000	8.000	9.000	52.000
438.20	1.20	FX029297	MVW	TUFF	BRECCIA AS ABOVE 2-3 % PY,99 % RECOV ERY		315.000	0.200	50.000	90.000	11.000	19.000	52.000
438.75	0.55	FX029298	MVVW	LPTF	STRONG CLAY ALTERATION,WEAKLY SILICI FIED,BEDDED OR FOLIATED AT 60,WAVY U	60	50.000	0.200	20.000	150.000	29.000	36.000	44.000

DEPTH METRES	LENGTH METRES	SAMPLE	MIN	ROCK	DESCRIPTION	ANG DEG	ELEMENT AU PPB	ELEMENT AG PPM	ELEMENT AS PPM	ELEMENT BA PPM	ELEMENT CU PPM	ELEMENT NI PPM	ELEMENT ZN PPM
					PPER CONTACT,VERY SHARP,STRAIGHT LOWER CONTACT AT 50 DEGREES,MINOR PY,99 % RECOVERY								
440.00	1.25	FX029299	MVW	TRCT	PORPHYRY,FINE GRAINED PURPLE-BROWN MATRIX WITH UP TO 30 % FELDSPAR PHENOCRYSTS AVERAGING 2 TO 4 MM LONG.BOTH WELL FORMED PHENOCRYSTS AND SUBROUNDED PHENOCRYSTS,CARBONATE ON FRACTURES,NO QTZ VEINING,VERY HARD POSSIBLY SILICIFIED BUT APPEARS UNALTERED.NUMBER 1 UNIT ON GEOLOGY MAP MARRON FORMATION,99 % RECOVERY		25.000	0.200	10.000	120.000	15.000	8.000	60.000
442.00	2.00	FX029300	MVVW	TRCT	PORPHYRY AS ABOVE,99 % RECOVERY		25.000	0.200	10.000	180.000	17.000	5.000	54.000
457.00	15.00		MVVW	TRCT	PORPHYRY AS ABOVE,99 % RECOVERY FOOT OF HOLE ALL MATERIAL REMOVED								

NOTE SYMBOLS USED ARE :
* AFTER ASSAY VALUE INDICATES VALUE FOR LOST CORE WAS CALCULATED FROM ADJACENT SAMPLES

SUMMARY OF MINERALIZATION AND ROCK TYPES

FROM METRES	TO METRES	LENGTH METRES	MNZN	ROCK
0.0	0.0	0.0		
0.0	13.00	13.00		OB
13.00	23.20	10.20	MVVW	WHT
23.20	52.27	29.07	MVVW	BSLT
52.27	52.70	0.43	MVVW	FLT
52.70	324.60	271.90	MVVW	BSLT
324.60	328.60	4.00	MVW	MDST
328.60	330.20	1.60	MVW	FLT
330.20	335.00	4.80	MVW	MDST
335.00	336.60	1.60	MVW	FLT
336.60	342.60	6.00	MVVW	TUFF
342.60	356.75	14.15	MVW	LPTF
356.75	358.15	1.40	MVVW	LPTF
358.15	358.55	0.40	MVW	BX
358.55	373.10	14.55	MVW	TUFF
373.10	374.15	1.05	MVW	BX
374.15	374.80	0.65	MVVW	QTZ
374.80	375.40	0.60	MVW	TUFF
375.40	377.50	2.10	MVVW	TUFF
377.50	384.20	6.70	MVVW	LPTF
384.20	385.70	1.50	MVVW	TUFF
385.70	386.30	0.60	MVW	TUFF
386.30	387.50	1.20	MVVW	ASH
387.50	388.80	1.30	MVVW	TUFF
388.80	398.60	9.80	MVVW	LPTF
398.60	400.90	2.30	MVVW	TUFF
400.90	403.45	2.55	MVVW	LPTF
403.45	405.20	1.75	MVVW	TUFF
405.20	407.00	1.80	MVW	LPTF
407.00	408.60	1.60	MVW	TUFF
408.60	410.55	1.95	MVW	VOLC
410.55	414.90	4.35	MVVW	VOLC
414.90	417.00	2.10	MVVW	TUFF
417.00	426.20	9.20	MVVW	LPTF
426.20	428.30	2.10	MVW	TUFF
428.30	429.90	1.60	MVW	LPTF
429.90	438.20	8.30	MVW	TUFF
438.20	438.75	0.55	MVVW	LPTF
438.75	440.00	1.25	MVW	TRCT
440.00	457.00	17.00	MVVW	TRCT

APPENDIX B

ANALYTICAL RESULTS

Chemex Labs Ltd.

Analytical Chemists • Geochemists • Registered Assayers

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CERTIFICATE OF ANALYSIS

TO : CANADIAN NICKEL CO. LIMITED
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512 - 808 NELSON ST.
VANCOUVER, B.C.
V6Z 2H2

CERT. # : A8616704-001-A
INVOICE # : I8616704
DATE : 25-AUG-86
P.O. # : C-88481
60809-14010

Sample description	Prep code	Au ppb					
FX 22565	207	<5	--	--	--	--	--
FX 22566	207	<5	--	--	--	--	--
FX 22567	207	<5	--	--	--	--	--
FX 22568	207	5	--	--	--	--	--
FX 22569	207	15	--	--	--	--	--
FX 22570	207	60	--	--	--	--	--
FX 22571	207	35	--	--	--	--	--
FX 22572	207	<5	--	--	--	--	--
FX 22573	207	<5	--	--	--	--	--
FX 22574	207	<5	--	--	--	--	--
FX 22575	207	<5	--	--	--	--	--
FX 22576	207	<5	--	--	--	--	--
FX 22577	207	<5	--	--	--	--	--
FX 22578	207	<5	--	--	--	--	--
FX 22579	207	<5	--	--	--	--	--
FX 22580	207	<5	--	--	--	--	--

Vault Property, B.C.
82 E - 5E
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Certified by Hart Bichler

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V6Z 2H2

CERT. # : A8616705-001-A
INVOICE # : I8616705
DATE : 1-SEP-86
P.O. # : C-88481
60809-14010

Semi quantitative multi element ICP analysis

Nitric-Aqua-Regia digestion of 0.5 gm of material followed by ICP analysis. Since this digestion is incomplete for many minerals, values reported for Al, Sb, Ba, Be, Ca, Cr, Ga, La, Mg, K, Na, Sr, Tl, Ti, W and V can only be considered as semi-quantitative.

COMMENTS :

Sample description	Al %	Ag ppm	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm		
FX 22565	1.92	0.2	150	50	<0.5	<2	1.87	<0.5	6	39	12	4.46	20	0.66	70	0.59	641	<1	0.10	34	880	28	<10	106	<0.01	<10	<10	18	<10	76	—	—
FX 22566	0.66	0.2	370	20	<0.5	<2	10.41	<0.5	11	51	27	9.07	30	0.18	<10	0.44	1131	28	0.03	109	720	26	10	137	<0.01	<10	<10	9	<10	62	—	—
FX 22567	1.31	0.4	160	40	<0.5	<2	1.15	<0.5	15	85	18	5.50	20	0.24	60	0.35	652	26	0.10	99	1200	40	<10	68	0.01	<10	<10	36	<10	86	—	—
FX 22568	0.80	0.6	50	40	<0.5	<2	2.83	<0.5	4	29	9	2.68	20	0.18	70	0.29	755	<1	0.12	18	830	28	<10	66	<0.01	<10	<10	16	<10	82	—	—
FX 22569	1.57	0.2	170	50	<0.5	<2	2.65	<0.5	15	104	19	4.22	20	0.12	70	1.16	633	3	0.09	35	1370	26	<10	56	0.24	<10	<10	88	<10	80	—	—
FX 22570	2.24	0.2	360	50	<0.5	<2	1.27	<0.5	19	126	27	6.27	30	0.17	90	1.37	406	9	0.10	40	2160	28	<10	81	0.10	<10	<10	114	<10	86	—	—
FX 22571	2.51	0.4	150	70	<0.5	<2	1.85	<0.5	19	151	26	5.31	30	0.26	90	1.87	548	2	0.10	38	2270	26	<10	83	0.02	<10	<10	105	<10	92	—	—
FX 22572	1.85	0.2	30	40	0.5	<2	3.88	<0.5	9	59	16	2.91	30	0.53	50	0.69	1254	<1	0.07	50	1150	30	<10	94	<0.01	<10	<10	20	<10	86	—	—
FX 22573	1.05	0.4	170	10	<0.5	<2	2.65	<0.5	8	24	16	4.59	10	0.03	10	1.28	460	6	0.08	27	1540	14	<10	76	0.02	<10	<10	20	<10	24	—	—
FX 22574	2.93	0.4	30	70	<0.5	<2	2.49	<0.5	12	53	16	3.72	20	0.22	50	1.07	718	<1	0.20	17	1400	24	<10	226	0.33	<10	<10	90	<10	78	—	—
FX 22575	3.39	0.2	40	110	<0.5	<2	2.10	<0.5	11	41	14	3.64	20	0.38	60	1.19	723	<1	0.45	15	1290	24	<10	257	0.25	<10	<10	67	<10	80	—	—
FX 22576	2.92	0.2	50	70	<0.5	<2	2.45	<0.5	9	39	12	3.13	20	0.16	40	0.83	861	3	0.24	15	1100	22	<10	230	0.25	<10	<10	60	<10	62	—	—
FX 22577	4.25	0.2	30	80	<0.5	<2	2.91	<0.5	30	140	63	4.60	20	0.73	60	1.51	1367	7	0.11	155	1720	28	<10	224	0.43	<10	<10	80	<10	92	—	—
FX 22578	3.06	0.2	30	50	<0.5	<2	2.53	<0.5	17	115	26	3.98	30	0.09	80	1.64	946	<1	0.10	51	1500	32	<10	182	0.41	<10	<10	97	<10	86	—	—
FX 22579	2.78	0.2	20	70	<0.5	<2	2.32	<0.5	18	112	26	4.26	30	0.13	100	1.75	799	<1	0.10	47	1220	58	<10	214	0.40	10	<10	109	<10	94	—	—
FX 22580	2.71	0.4	20	70	<0.5	<2	2.29	<0.5	17	109	22	4.12	30	0.14	90	1.71	759	<1	0.10	42	1260	38	<10	296	0.39	<10	<10	105	<10	96	—	—

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CERTIFICATE OF ANALYSIS

TO : CANADIAN NICKEL CO. LIMITED
P.O. BOX 12134
512 - 808 NELSON ST.
VANCOUVER, B.C.
V6Z 2H2

CERT. # : A8617400-001-A
INVOICE # : I8617400
DATE : 12-SEP-86
P.O. # : C-88481
60809-14010

Sample description	Prep code	Au ppb					
FX022581	207	<5	--	--	--	--	--
FX022582	207	15	--	--	--	--	--
FX022583	207	<5	--	--	--	--	--
FX022584	207	15	--	--	--	--	--
FX022585	207	5	--	--	--	--	--
FX022586	207	5	--	--	--	--	--
FX022587	207	15	--	--	--	--	--
FX022588	207	10	--	--	--	--	--
FX022589	207	40	--	--	--	--	--
FX022590	207	30	--	--	--	--	--
FX022591	207	25	--	--	--	--	--
FX022592	207	65	--	--	--	--	--
FX022593	207	25	--	--	--	--	--
FX022594	207	25	--	--	--	--	--
FX022595	207	35	--	--	--	--	--
FX022596	207	20	--	--	--	--	--
FX022597	207	10	--	--	--	--	--
FX022598	207	115	--	--	--	--	--
FX022599	207	2055	--	--	--	--	--
FX022600	207	375	--	--	--	--	--
FX029255	207	195	--	--	--	--	--
FX029256	207	100	--	--	--	--	--
FX029257	207	1850	--	--	--	--	--
FX029258	207	105	--	--	--	--	--
FX029259	207	9875	--	--	--	--	--
FX029260	207	3335	--	--	--	--	--
FX029261	207	445	--	--	--	--	--
FX029262	207	35	--	--	--	--	--
FX029263	207	105	--	--	--	--	--
FX029264	207	960	--	--	--	--	--
FX029265	207	205	--	--	--	--	--
FX029266	207	6720	--	--	--	--	--
FX029267	207	385	--	--	--	--	--
FX029268	207	65	--	--	--	--	--
FX029269	207	305	--	--	--	--	--
FX029270	207	30	--	--	--	--	--
FX029271	207	55	--	--	--	--	--
FX029272	207	65	--	--	--	--	--
FX029273	207	5	--	--	--	--	--
FX029274	207	<5	--	--	--	--	--

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VANCOUVER, B.C.
V6Z 2H2

CERT. # : A8617400-002-A
INVOICE # : I8617400
DATE : 12-SEP-86
P.O. # : C-88481
60809-14010

Sample description	Prep code	Au ppb					
FX029275	207	10	--	--	--	--	--
FX029276	207	510	--	--	--	--	--
FX029277	207	275	--	--	--	--	--
FX029278	207	175	--	--	--	--	--
FX029279	207	175	--	--	--	--	--
FX029280	207	40	--	--	--	--	--
FX029281	207	60	--	--	--	--	--
FX029282	207	105	--	--	--	--	--
FX029283	207	125	--	--	--	--	--
FX029284	207	580	--	--	--	--	--
FX029285	207	50	--	--	--	--	--
FX029286	207	30	--	--	--	--	--
FX029287	207	30	--	--	--	--	--
FX029288	207	310	--	--	--	--	--
FX029289	207	5	--	--	--	--	--
FX029290	207	30	--	--	--	--	--
FX029291	207	140	--	--	--	--	--
FX029292	207	200	--	--	--	--	--
FX029293	207	65	--	--	--	--	--
FX029294	207	210	--	--	--	--	--
FX029295	207	365	--	--	--	--	--
FX029296	207	430	--	--	--	--	--
FX029297	207	315	--	--	--	--	--
FX029298	207	50	--	--	--	--	--
FX029299	207	25	--	--	--	--	--
FX029300	207	25	--	--	--	--	--
FX080498	207	160	--	--	--	--	--
FX080499	207	30	--	--	--	--	--
FX080500	207	365	--	--	--	--	--

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V6Z 2H2

CERT. # : A8617401-001-A
INVOICE # : I8617401
DATE : 12-SEP-86
P.O. # : C-28481
60809-14010

Semi quantitative multi element ICP analysis

Nitric-Aqua-Regia digestion of 0.5 gm of material followed by ICP analysis. Since this digestion is incomplete for many minerals, values reported for Al, Sb, Ba, Be, Ca, Cr, Ga, La, Mg, K, Na, Sr, Tl, Ti, W and V can only be considered as semi-quantitative.

COMMENTS :

Sample description	Al %	Ag ppm	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm		
FX022581	1.73	0.2	390	220	1.0	<2	1.10	<0.5	17	20	24	3.52	10	0.72	40	0.28	137	25	0.12	52	1250	40	20	401	<0.01	<10	<10	13	<10	292	—	—
FX022582	0.79	0.2	300	100	<0.5	<2	0.29	<0.5	6	5	17	1.28	<10	0.21	<10	0.06	53	17	0.07	20	100	20	<10	316	<0.01	<10	<10	3	<10	60	—	—
FX022583	1.19	0.2	480	50	<0.5	<2	0.15	<0.5	12	9	22	2.67	<10	0.24	<10	0.06	34	12	0.08	39	120	32	20	414	<0.01	<10	<10	8	<10	338	—	—
FX022584	0.10	0.2	280	30	<0.5	<2	0.02	<0.5	2	17	8	2.87	<10	0.01	<10	0.01	185	38	0.01	12	10	4	20	33	<0.01	<10	<10	<1	<10	28	—	—
FX022585	0.12	0.2	310	30	<0.5	<2	0.15	<0.5	2	18	9	2.38	<10	0.01	<10	<0.01	153	19	0.02	13	30	20	20	77	<0.01	<10	<10	<1	<10	20	—	—
FX022586	0.49	0.2	440	30	<0.5	<2	0.07	<0.5	11	14	10	2.59	<10	0.15	<10	0.02	136	46	0.05	28	20	12	20	111	<0.01	<10	<10	2	<10	130	—	—
FX022587	0.46	0.2	810	170	<0.5	<2	0.07	<0.5	27	11	7	3.75	<10	0.16	<10	0.02	103	153	0.05	54	30	20	30	137	<0.01	<10	<10	1	<10	512	—	—
FX022588	0.64	0.2	230	410	<0.5	<2	0.28	<0.5	5	11	8	2.38	<10	0.22	40	0.26	159	32	0.08	13	200	28	<10	206	<0.01	<10	<10	5	<10	114	—	—
FX022589	0.63	0.2	250	190	<0.5	<2	0.30	<0.5	4	14	9	3.88	<10	0.25	40	0.40	261	58	0.06	13	190	34	10	173	<0.01	<10	<10	6	<10	220	—	—
FX022590	0.80	0.2	140	180	<0.5	<2	0.31	<0.5	5	14	12	3.15	10	0.32	50	0.39	232	40	0.07	11	190	32	<10	182	<0.01	<10	<10	10	<10	60	—	—
FX022591	1.31	0.2	400	210	<0.5	<2	1.09	<0.5	14	31	17	3.93	20	0.51	80	0.61	290	49	0.08	11	1460	32	10	367	<0.01	10	<10	39	<10	124	—	—
FX022592	1.27	0.2	250	130	<0.5	<2	0.72	<0.5	14	31	15	3.92	10	0.55	70	0.48	248	17	0.06	12	1600	26	10	196	<0.01	<10	<10	47	<10	72	—	—
FX022593	1.32	0.2	160	490	<0.5	2	1.42	<0.5	13	37	15	4.05	20	0.55	70	0.76	321	16	0.05	13	1410	26	10	224	<0.01	10	<10	42	<10	58	—	—
FX022594	1.14	0.2	280	300	<0.5	<2	1.14	<0.5	11	27	14	3.44	10	0.48	60	0.61	253	29	0.05	10	1150	24	10	232	<0.01	<10	<10	42	<10	64	—	—
FX022595	1.01	0.2	240	340	<0.5	<2	1.44	<0.5	11	21	14	3.39	10	0.43	50	0.70	282	56	0.05	8	830	26	10	222	<0.01	<10	<10	34	<10	64	—	—
FX022596	1.02	0.2	250	860	<0.5	<2	0.46	<0.5	11	19	12	4.32	10	0.34	60	0.44	280	10	0.06	8	1090	20	<10	237	<0.01	<10	<10	29	<10	50	—	—
FX022597	0.90	0.4	110	250	<0.5	<2	0.33	<0.5	5	27	9	3.13	10	0.59	90	0.24	113	35	0.06	13	270	28	<10	162	<0.01	10	<10	36	<10	72	—	—
FX022598	0.57	5.8	250	250	<0.5	<2	0.05	<0.5	2	14	8	2.67	<10	0.31	30	0.04	50	317	0.03	9	80	22	<10	72	<0.01	<10	<10	31	<10	12	—	—
FX022599	0.57	5.8	230	330	<0.5	<2	0.05	<0.5	2	13	7	2.55	<10	0.31	20	0.04	50	304	0.03	8	70	22	<10	71	<0.01	<10	<10	31	<10	10	—	—
FX022600	0.61	2.6	90	350	<0.5	<2	0.10	<0.5	14	13	12	1.03	<10	0.35	30	0.04	46	140	0.04	10	190	19	<10	95	<0.01	<10	<10	19	<10	10	—	—
FX029255	0.40	1.0	20	700	<0.5	<2	0.06	<0.5	1	7	4	1.15	<10	0.23	30	0.02	34	25	0.05	3	110	24	<10	109	<0.01	<10	<10	4	<10	4	—	—
FX029256	0.49	0.2	10	640	0.5	<2	0.07	<0.5	<1	6	6	0.67	<10	0.26	20	0.02	33	16	0.04	2	120	22	<10	109	<0.01	<10	<10	3	<10	10	—	—
FX029257	0.61	2.3	190	300	<0.5	<2	0.74	<0.5	1	12	6	3.50	<10	0.22	10	0.06	104	64	0.02	5	2850	14	<10	147	<0.01	<10	<10	17	<10	12	—	—
FX029258	0.49	0.2	10	1980	<0.5	<2	0.14	<0.5	<1	7	2	2.25	<10	0.23	20	0.09	112	8	0.03	3	300	8	<10	153	<0.01	<10	<10	9	<10	4	—	—
FX029259	0.75	6.3	130	220	<0.5	<2	0.76	<0.5	1	13	54	5.63	10	0.19	10	0.24	390	326	0.02	6	2490	48	10	344	<0.01	<10	<10	111	<10	94	—	—
FX029260	0.12	2.2	<10	630	<0.5	<2	0.18	<0.5	<1	12	5	2.15	<10	0.03	<10	0.10	171	22	0.01	6	270	6	<10	224	<0.01	<10	<10	19	<10	16	—	—
FX029261	0.27	4.6	70	230	<0.5	<2	0.12	<0.5	<1	9	4	1.95	<10	0.23	70	0.04	73	127	0.03	4	420	22	<10	133	<0.01	<10	<10	9	<10	10	—	—
FX029262	0.37	0.2	<10	210	0.5	<2	0.05	<0.5	<1	8	1	0.63	<10	0.24	70	0.03	42	13	0.03	3	130	18	<10	81	<0.01	<10	<10	2	<10	2	—	—
FX029263	0.52	0.4	10	320	0.5	<2	0.09	<0.5	1	11	3	1.00	<10	0.41	50	0.04	56	36	0.04	4	220	16	<10	116	<0.01	<10	<10	6	<10	2	—	—
FX029264	0.49	0.6	20	950	<0.5	<2	0.18	<0.5	<1	17	4	2.14	<10	0.38	60	0.14	125	23	0.04	4	330	18	<10	151	<0.01	<10	<10	26	<10	8	—	—
FX029265	0.44	0.8	30	90	<0.5	<2	0.11	<0.5	4	15	27	1.41	<10	0.29	50	0.07	82	37	0.04	9	220	16	<10	107	<0.01	<10	<10	11	<10	2	—	—
FX029266	0.53	3.8	20	1000	0.5	<2	0.14	<0.5	6	11	11	1.02	<10	0.28	40	0.08	75	56	0.04	7	240	14	<10	150	<0.01	<10	<10	14	<10	4	—	—
FX029267	0.52	0.8	30	2270	<0.5	<2	0.20	<0.5	15	17	20	1.43	<10	0.25	20	0.12	112	50	0.02	14	290	14	<10	150	<0.01	<10	<10	29	<10	6	—	—
FX029268	0.51	0.4	30	980	<0.5	<2	0.10	<0.5	4	25	17	1.17	<10	0.25	20	0.07	73	58	0.03	9	220	10	<10	112	<0.01	<10	<10	24	<10	6	—	—
FX029269	0.53	2.0	20	280	<0.5	<2	0.08	<0.5	6	12	24	1.23	<10	0.21	40	0.08	73	103	0.02	13	110	20	<10	107	<0.01	<10	<10	15	<10	52	—	—
FX029270	0.46	1.0	10	70	<0.5	<2	0.05	<0.5	<1	7	2	0.80	<10	0.25	30	0.02	41	128	0.04	4	40	20	<10	85	<0.01	<10	<10	4	<10	4	—	—
FX029271	0.55	2.0	20	20	<0.5	<2	0.07	<0.5	<1	6	2	1.52	<10	0.21	<10	0.06	48	239	0.06	5	30	20	<10	130	<0.01	<10	<10	4	<10	14	—	—
FX029272	0.54	0.2	40	10	<0.5	<2	0.09	<0.5	1	10	2	1.55	<10	0.20	<10	0.08	59	94	0.06	7	30	24	<10	135	<0.01	<10	<10	8	<10	14	—	—
FX029273	2.64	0.2	30	110	0.5	<2	0.28	<0.5	28	39	39	2.68	10	1.06	30	0.30	97	2	0.14	42	390	14	<10	319	<0.01	<10	<10	50	<10	80	—	—
FX029274	1.13	0.2	<10	40	0.5	<2	0.15	<0.5	2	31	69	0.28	<10	0.45	<10	0.05	13	<1	0.07	3	490	8	<10	406	<0.01	<10	<10	19	<10	24	—	—

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CERT. # : A8617401-002-A
INVOICE # : I8617401
DATE : 12-SEP-86
P.O. # : C-88481
60809-14010

Semi quantitative multi element ICP analysis

Nitric-Aqua-Regia digestion of 0.5 gm of material followed by ICP analysis. Since this digestion is incomplete for many minerals, values reported for Al, Sb, Ba, Be, Ca, Cr, Ga, La, Mg, K, Na, Sr, Tl, Ti, W and V can only be considered as semi-quantitative.

COMMENTS :

Sample description	Al %	Ag ppm	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm		
FX029275	1.43	0.2	20	230	0.5	<2	0.48	<0.5	24	31	28	4.08	10	0.61	80	0.61	228	5	0.12	51	650	22	<10	283	<0.01	<10	<10	32	<10	128	—	—
FX029276	0.66	1.6	50	990	<0.5	<2	0.21	<0.5	21	37	28	2.74	<10	0.33	30	0.32	155	9	0.05	53	350	26	<10	141	<0.01	<10	<10	31	<10	152	—	—
FX029277	0.55	1.0	20	1180	<0.5	<2	0.50	<0.5	16	32	13	2.68	<10	0.29	30	0.40	200	3	0.03	56	650	10	<10	101	<0.01	<10	<10	31	<10	86	—	—
FX029278	0.46	1.2	20	390	<0.5	<2	0.28	<0.5	13	26	16	1.88	<10	0.23	10	0.31	151	3	0.02	55	210	10	<10	62	<0.01	<10	<10	24	<10	78	—	—
FX029279	0.82	1.6	50	130	<0.5	<2	0.22	<0.5	27	94	28	1.96	<10	0.22	20	0.21	150	3	0.02	163	570	14	<10	62	<0.01	<10	<10	29	<10	72	—	—
FX029280	0.94	1.2	90	290	<0.5	<2	0.34	<0.5	29	171	40	2.16	<10	0.51	30	0.34	177	2	0.03	146	370	16	<10	75	<0.01	<10	<10	38	<10	234	—	—
FX029281	1.02	0.4	90	80	<0.5	<2	1.28	<0.5	21	184	38	2.13	10	0.51	40	0.25	196	<1	0.03	120	1200	14	<10	121	<0.01	<10	<10	43	<10	288	—	—
FX029282	1.65	0.8	60	530	0.5	<2	0.55	<0.5	27	85	31	3.17	10	0.67	60	0.53	269	10	0.04	131	1400	20	<10	107	<0.01	<10	<10	52	<10	114	—	—
FX029283	1.49	1.2	40	110	<0.5	<2	0.93	<0.5	20	85	26	2.98	10	0.55	60	0.51	370	4	0.03	84	1590	18	<10	103	<0.01	<10	<10	54	<10	70	—	—
FX029284	1.91	0.6	50	90	<0.5	<2	0.55	<0.5	18	105	26	3.56	10	0.45	40	0.75	623	3	0.03	93	1520	20	<10	73	<0.01	<10	<10	65	<10	74	—	—
FX029285	1.28	0.4	30	70	<0.5	<2	1.15	<0.5	14	53	18	3.30	10	0.38	60	0.88	717	<1	0.03	35	1420	20	<10	121	<0.01	<10	<10	52	<10	70	—	—
FX029286	1.78	0.4	20	80	<0.5	<2	0.62	<0.5	16	41	17	3.17	10	0.43	70	0.93	556	<1	0.04	23	1570	22	<10	94	<0.01	<10	<10	48	<10	78	—	—
FX029287	1.59	0.2	20	220	1.0	<2	1.60	<0.5	16	35	12	5.15	10	0.70	60	1.44	875	<1	0.07	21	1960	18	<10	206	<0.01	<10	<10	57	<10	80	—	—
FX029288	1.77	0.2	20	130	<0.5	<2	0.86	<0.5	12	55	14	3.26	10	0.68	50	0.84	516	<1	0.05	21	1710	16	<10	127	<0.01	<10	<10	59	<10	48	—	—
FX029289	2.35	0.2	10	150	1.5	<2	2.66	<0.5	12	47	13	3.27	20	1.00	50	1.65	771	<1	0.09	22	1650	20	<10	225	<0.01	<10	<10	41	<10	60	—	—
FX029290	2.16	0.2	10	380	1.0	<2	1.36	<0.5	14	53	14	3.78	10	0.75	70	1.32	480	<1	0.07	24	1910	28	<10	201	<0.01	<10	<10	39	<10	64	—	—
FX029291	2.19	0.2	20	180	0.5	<2	0.67	<0.5	11	63	15	2.99	10	0.67	50	1.21	429	<1	0.05	22	1580	18	<10	127	<0.01	<10	<10	62	<10	60	—	—
FX029292	1.87	0.2	30	80	<0.5	<2	0.68	<0.5	9	60	18	2.87	10	0.54	40	1.08	380	<1	0.03	20	1360	14	<10	79	<0.01	<10	<10	59	<10	48	—	—
FX029293	1.59	0.2	20	80	<0.5	<2	0.67	<0.5	11	62	16	2.95	10	0.37	40	1.11	392	<1	0.02	22	1410	14	<10	74	<0.01	<10	<10	48	<10	46	—	—
FX029294	1.84	0.2	40	90	<0.5	<2	0.74	<0.5	9	31	17	3.92	10	0.34	50	1.26	434	2	0.02	14	1130	16	<10	79	<0.01	<10	<10	76	<10	52	—	—
FX029295	1.59	0.8	170	40	<0.5	<2	0.76	<0.5	3	16	7	5.44	10	0.14	30	1.02	399	165	0.01	8	1150	14	<10	72	<0.01	<10	<10	89	<10	32	—	—
FX029296	2.25	0.2	80	80	<0.5	<2	0.93	<0.5	7	17	8	5.88	20	0.24	40	1.52	626	13	0.03	9	2000	12	<10	114	<0.01	<10	<10	131	<10	52	—	—
FX029297	1.74	0.2	50	90	<0.5	<2	1.24	<0.5	9	25	11	6.00	20	0.32	50	1.47	727	2	0.03	19	1780	16	<10	165	<0.01	<10	<10	74	<10	52	—	—
FX029298	1.22	0.2	20	150	1.5	<2	2.76	<0.5	10	49	29	2.54	10	0.53	50	1.18	583	<1	0.06	36	1410	16	<10	324	<0.01	<10	<10	42	<10	44	—	—
FX029299	1.34	0.2	10	120	<0.5	<2	1.81	<0.5	6	17	15	2.22	20	0.53	130	0.55	391	<1	0.11	8	1370	24	<10	193	0.04	<10	<10	35	<10	60	—	—
FX029300	1.29	0.2	10	180	<0.5	<2	1.92	<0.5	6	17	17	2.60	20	0.60	140	0.44	437	<1	0.14	5	1440	20	<10	202	0.10	<10	<10	40	<10	54	—	—
FX029498	0.66	1.2	20	120	<0.5	<2	0.10	<0.5	<1	12	2	0.75	<10	0.36	40	0.04	39	76	0.04	2	160	20	<10	95	<0.01	<10	<10	13	<10	8	—	—
FX029499	0.45	0.2	<10	540	<0.5	<2	0.27	<0.5	<1	10	2	0.74	<10	0.25	20	0.10	63	28	0.04	3	50	12	<10	99	<0.01	<10	<10	7	<10	12	—	—
FX029500	0.70	0.4	10	410	0.5	<2	0.06	<0.5	<1	7	2	0.54	<10	0.36	40	0.03	30	14	0.05	2	70	22	<10	100	<0.01	<10	<10	6	<10	4	—	—

Certified by .....

V03 rev 11 6

APPENDIX C

THIN SECTION DESCRIPTIONS

Vancouver Petrographics Ltd.

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Report for: W. Groeneweg,
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V6Z 2H2.

May 26, 1986

Samples: WG-86-1 to 6 inclusive. Vault Property, B.C.

Summary:

The samples are a suite of volcanic flows and tuffs ranging in composition from basalt to trachyandesite. Alteration has been moderate to intense in all of them. The dominant alteration is by K-spar and this is associated with dolomite and quartz (in veinlets) and with a montmorillonite clay. Fe-Ti oxides are also part of the alteration assemblage.

WG-86-1 and 6 are similar porphyritic basalts (plagioclase and augite phenocrysts). Moderate pervasive K-spar alteration of both groundmass and phenocrysts has occured. Lesser tremolite occurs in WG-86-6; clay occurs in WG-86-1.

WG-86-3 is a porphyritic trachyandesite consisting of plagioclase, augite and biotite phenocrysts in a K-spar, augite, biotite groundmass. Clay alteration has affected the mafics in the groundmass and the biotite phenocrysts.

WG-86-5 appears to have been a porphyritic andesite with large plagioclase phenocrysts in a fine plagioclase groundmass. Intense K-spar alteration has pervasively transformed most of the plagioclase. This is associated with network of quartz and dolomite veinelts and stringers.

WG-86-4 is a fine felsic tuff. K-spar may have been primary or secondary. There is a network of dolomite veinlets.

WG-86-2 is a lithic tuff consisting of fragments of latite (all K-spar) packed closley together and cemented by dolomite, montmorillonite and some quartz. Many of the fragments have been completely replaced by one of these minerals.

A. L. Littlejohn Vault Property, B.C.

A. L. Littlejohn, M.Sc.

WG-86-1: ALTERED (K-SPAR DOMINANT) PORPHYRITIC BASALT.

This sample is a fine grained volcanic rock consisting of a groundmass of fine felted plagioclase along with plagioclase and augite phenocrysts. Moderately intense, pervasive K-spar alteration has occured and is associated with a fine micaceous, greenish clay (probably a montmorillonite - nontronite ?). Minerals are:

plagioclase groundmass	60%
K-spar	15
plagioclase phenocrysts	10
augite phenocrysts	5
montmorillonite	5
Fe-Ti oxides	5
tremolite	minor
sericite	trace

The groundmass consists of a felted mass of thin plagioclase laths about 0.1mm in length mixed with a small proportion of shapeless interstitial grains. Plagioclase phenocrysts form euhedral laths 0.5 to 1.5mm in size which sometimes occur in small aggregates. Augite phenocryst form squat prismatic grains which are also 0.5 to 1.5m in size.

Pervasive, incipient K-spar alteration has resulted in cloudiness of the groundmass plagioclase. This is also due to the presence of extremely fine, submicroscopic Fe-Ti oxides. Much of this material has coalesced into sphenoidal to acicular aggregates mostly less about 0.4mm in size but sometimes up to 1.5mm in length. These aggregates are often intimately mixed with other minerals (mainly montmorillonite). The phenocrysts sometimes have a narrow fringe of fine Fe-Ti oxides. Within the groundmass there are scattered, tabular patches up to 1.0mm in size which consist of an aggregate of very fine montmorillonite flakes; some appear to be completely altered plagioclase but perhaps amphibole or mica was present also (??). Small patches occur within the larger plagioclase and augite phenocrysts and may form a fine patchy network.

Both the plagioclase and augite phenocrysts have been moderately altered. In those plagioclase phenocrysts which have no clay alteration there is a fine diffuse network of K-spar, sometimes accompanied by sericite. Diffuse patches of clay and K-spar occur in the augites and these are sometimes associated with very fine feathery tremolite. This may form a fine fringe around the augite.

Location: 5E/875 S

Field Name: Unit 3, rhyodacite

WG-86-2: ALTERED (DOLOMITE, CLAY DOMINANT) LITHIC TUFF.

This sample consists of a compact aggregate of subrounded to subangular felsic (K-spar) vocanic fragments cemented by a greenish-brown clay (probabaly a member of the montmorillonite group) associated with dolomitic carbonate. The carbonate has replaced many of the fragments and is associated with some quartz. There is a fine, somewhat indistinct layering evident. Minerals are:

K-spar	40%	(all fragments)
dolomite	25	(15% in fragments)
montmorillonite	25	(10% in fragments)
quartz	10	(5% in fragments)
Fe-Ti oxides	minor	

Fragments are subrounded to subangular and 0.1 to 0.5mm in size; they are packed closely together. They consist dominantly of K-spar which forms a variety of textural types ranging from shapeless to lath-like, often radiating or spherultic structures are present. Grains are mostly less than 0.1mm in size. Most of the feldspathic fragments are speckled with extremely fine Fe-Ti oxides.

The matrix of the tuff is composed of a mixture of very fine dolomite, montmorillonite and quartz and these form an interconnected patchy network around the feldspathic fragments. In places where the fragments are packed very closely together the clay tends to form an intergranular film. Where there is more interstitial material, this tends to be dolomite. Quartz tends to occur in indistinct patches. All three minerals may be closely intergrown with one another. Occasional clusters and aggregates of Fe-Ti oxides are present between the fragments.

The matrix minerals have also replaced many of the feldspathic fragments. Alteration tends to be complete and is usually monomineralic, with dolomite being the dominant replacement. However there are some fragments in which two of the minerals form a zoned structure, replacing the fragment.

Location: 450 E / 950 S

Field Name: sandstone derived from andesitic material
Unit 2c

WG-86-3: ALTERED (CLAY DOMINANT) PORPHYRITIC TRACHYANDESITE.

This sample is a porphyritic volcanic rock consisting mainly of augite and plagioclase phenocryst in a fine K-spar dominant groundmass. The K-spar appears to be primary and was intergrown with fine augite and biotite. These have been mostly altered to an extremely fine, greenish-brown, micaceous clay (probabaly a member of the montmorillonite group). Minerals are:

K-spar groundmass	56%	
montmorillonite	15	
augite phenocrysts	10	
plagioclase phenocrysts	5	
Fe-Ti oxides	5	
augite groundmass	4	
biotite groundmass	4	
biotite phenocrysts	1	(highly altered)
dolomite	minor	
apatite	minor	

Augite phenocrysts form idiomorphic to subidiomorphic prismatic grains 0.5 to 1.0mm in size. Plagioclase form euhedral to rounded, subhedral laths of about the same size. Both the plagioclase and augite phenocrysts tend to occur in interlocking aggregates of several grains (but not together). In places there are large (up to 2.5mm) biotite flakes intergrown with the pyroxene aggregates o roccuring amongst small augite aggregates. These are highly altered in patches of the clay along with dolomite is many cases. The plagioclase and augite phenocrysts are more or less unaltered apart from minor incipient clay alteration along cleavages, fractures and at the edges of the grains and aggregates. Rounded apatite grains up to 0.2mm in size are intergrown with and included in the plagioclase phenocrysts.

The groundmass of the rock consisted of angular to shapeless K-spar grains about 0.2mm in size intergrown with small interstitial grains of augite and biotite. Extremely fine Fe-Ti oxides, often in ragged aggregates up to 0.1mm in size are disseminated throughout. The mafics have been highly altered to extremely fine montmorillonite with very fine, diffuse remnant patches of the mafics remaining. Moderate incipient alteration has affected the K-spar. Extremely fine dolomite occurs in the groundmass as scattered specks or in a thin zone around the augite phenocrysts.

Location: BL 105 / 1125 E

Field Name: Unit 26, andesite

WG-86-4: ALTERED (DOLOMITE) FELSIC TUFF.

This sample is a very fine grained, indurated tuffaceous volcanic rock consisting dominantly of an intimate mixture of very fine feldspars. Both plagioclase and K-spar occur in about equal amounts. Scattered within this are small amounts of K-spar (sanidine) grains (fragments, phenocrysts ?) along with minor lithic fragments. There is an interconnected network of thin dolomite veinlets spaced one or two millimeters apart; the majority of these are subparallel. They may have been associated with feldspathization but there is no clear indication if the K-spar in the body of the tuff is secondary or primary; probabaly it has been redistributed during induration. Minerals are:

K-spar	40%
plagioclase	40
dolomite	12
sanidine	5
Fe-Ti oxides	3
lithic fragments	minor
sericite	trace
apatite	trace
quartz	trace
augite	trace

The bulk of the rock consists of a compact intergrowth of subrounded to shapeless interlocking feldspar grains 0.005 to 0.05mm in size. Grain margins are rather diffuse. Within this are vague perltic structures outlined by extremely fine sericite.

Scatteed crystal fragments occur within the felsic matrix. These are dominated by tabular, sometime broken, sanidine crystals 0.1 to 0.2mm in size. A few small augite and quartz grains are present. Fine apatite also occurs but these may be primary. Lithic fragments are mainly K-spar; they are up to 0.3mm in size and consist of an aggregate of very cloudy, shapeless grains about 0.05mm in size. They are in part being absorbed by the matrix.

Dolomite forms fine grains occuring in a network of veinlets and stringers 0.1 to 0.5mm in width; small patches occur at intersections. Extremely fine Fe-Ti oxide grains are mixed with the carbonate in many of the veinlets, particularly at the edges where the dolomite is extremely fine grained. Fine discontinuous stringers of Fe-Ti oxide are present and small diffuse aggregates occur throughout. Rare quartz grains are intergrown with the dolomite.

Location: Borehole 83-4 at 30 m

Field Name: Tuff, vfg. light grey. Unit 2a

WG-86-5: ALTERED (K-SPAR, QUARTZ DOMINANT) ANDESITE.

This sample was a fine grained andesitic volcanic rock, apparently originally consisting mainly of a mass of fine plagioclase laths along with a few large plagioclase phenocrysts. Very intense pervasive alteration has occured, transforming the plagioclase to K-spar. The phenocrysts can be seen to be altering in large diffuse patches; the groundmass was less obviously original plagioclase but the dominant lath-like shape and twinning have been retained and it is extremely cloudy. The pervasive K-spar alteration is accompanied by a closely spaced, somewhat patchy interconnected network of quartz veinlets. Dolomitic carbonate is also present. Minerals are:

K-spar	63%	(after plagioclase)
plagioclase	2	(remnants in altered phenocrysts)
quartz	20	
dolomite	8	
Fe-Ti oxides	5	
sericite	2	
opaque (sulphide ??)	trace	

The original rock apparently consisted of a mass of thin plagioclase laths about 0.1mm in length. There is a vague flow orientation in places. Scattered within this there are a few rounded to subhedral phenocrysts 1 to 3mm in size. The phenocrysts can be seen to be highly altered with fine K-spar and there are only a few small remnant patches of the plagioclase within the diffuse outline of the original grain. All the plagioclase groundmass is altered pseudomorphically to K-spar and is rather cloudy with incipient Fe-Ti oxides. Very fine sericite occurs in a thin network around and within the groundmass plagioclase laths in places, and sometimes in the phenocrysts.

Silicification accompanied the feldspathization. The quartz occurs in a closely spaced, interconnected network of veinlets mostly 0.1 to 0.3mm in width, grading into small patches. The quartz forms shapeless to rounded interlocking grains 0.05 to 0.1mm in size. Slivers and small patches of the andesite are caught up in the quartz veinlets and patches. Small angular K-spar grains (primary ?) are intergrown with the quartz in places. There is usually a intergranular network of very fine sericite around the quartz grains.

Dolomite forms shapeless to subrhombic grains 0.005 to 0.1mm in size. These occur intergrown with the quartz or in fine discontinuous stringers and diffuse ragged patches up to 1mm in size within the andesitic part of the rock. Fine Fe-Ti oxides are sometimes mixed with the carbonate stringers and occasionally there is a subcubic opaque grains associated with the patches.

Location: Borehole 83-4 at 66.5 m

Field Name: Porphyritic andesite, unit 1

WG-86-6: ALTERED (K-SPAR DOMINANT) PORPHYRITIC BASALT.

This sample is a fine grained volcanic rock containing small scattered phenocrysts of plagioclase and augite in a fine felted groundmass of plagioclase. It has been pervasively altered with K-spar, tremolite and dolomite. Minerals are:

plagioclase groundmass	60%
K-spar	20
tremolite	5
plagioclase phenocrysts	5
augite phenocrysts	5
Fe-Ti oxides	3
dolomite	2

The groundmass consists of a felted mass of thin plagioclase laths 0.1 to 0.2mm in length mixed with moderate proportion of shapeless interstitial grains. Plagioclase phenocrysts form euhedral laths about 1mm in size; augite phenocrysts form squat idiomorphic grains also about 1mm in size.

Alteration has been pervasive and moderately intense. The groundmass plagioclase is cloudy with incipient, submicroscopic K-spar; extremely fine feathery tremolite grains have also developed. Extremely fine Fe-Ti oxides occur disseminated throughout the groundmass and have coalesced into sphenoidal aggregates 0.1 to 0.3mm in size, with occasional ones about 1mm in size. These aggregates are often intimately mixed with other minerals (tremolite, K-spar, carbonate, clay ?). Fine ragged grains and small aggregates of dolomite up to 0.2mm in size are scattered throughout the groundmass, sometimes in diffuse patches with tremolite.

The plagioclase phenocrysts have also been altered by incipient K-spar. This forms in a fine patchy network within the phenocryst and may also be associated with tremolite and dolomite; carbonate may also occur as fine flecks. In some phenocrysts only the dolomite or tremolite occurs. The augite phenocrysts have been mostly altered by incipient tremolite mineralization, grading into a fine patchy network, and less so by K-spar or dolomite. There is sometimes a fringe of fine tremolite around the augite.

Location : 300 E / 700 S

Field Name : porphyritic dacite, unit 3

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Suite 512 - 808 Nelson Street,
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V6H 2H2.

June 11, 1986

Samples: WG-86-7 to 14 inclusive.

Summary:

The samples are a suite of trachytic flows (porphyritic), tuffs and breccias. Moderate to intense alteration has occured in all of them. Alteration minerals are quartz (dominant), montmorillonite, hematite and dolomite. The dolomite appears to be a later stage of alteration. Quartz and montmorillonite often occur in vesicles and a network of veinlets.

WG-86-9 and 10 are fine tuffs consisting of small trachyte and K-spar fragments (derived from porphyrytic trachytes) crowded in a fine felsic matrix which has been silicified (with hematite stain and some clays).

WG-86-7, 8 and 13 are porphyritic trachytes consisting of a mass of fine K-spar laths with K-spar phenocrysts scattered within it; WG-86-14 is a similar trachyte to these but is not porphyritic. They have all been silicified with the development of vesicles and this is associated with clay in #7 and #14. Minor clay occurs in the other two samples but the quartz is mainly associated with hematite in #8; strong dolomite alteration occurs in #13 and #14.

WG-86-11 and 12 are trachytic breccias consisting of trachytic rock fragments of slightly variable textural types, some of them porphyritic. The matrix is highly siliceous (similar to the tuffs) and may have been felsic or glassy when extruded. Quartz and clay alteraion is dominant in both; #11 is also hematitic and contains some dolomite.

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A. L. Littlejohn, M.Sc.

WG-86-7: SILICIFIED (WITH CLAY) TRACHYTE (PORPHYRITIC ?).

This sample is a fine grained volcanic rock consisting largely of a mas sof fine feathery K-spar laths. Silicification has resulted in the development of subrounded to shapeless vesicles filled with quartz; som eof these are over 5mm in size. There are also many which have a tabular outline and these could have been K-spar phenocrysts which have been replaced by the quartz. Cryptocrystalline clay is intimately intergrown with the K-spar and also associated with the quartz. Minerals are:

K-spar	60%	(moderate incipient clay)
quartz	28	
clay	8	(montmorillonite, minor sericite ?))
calcite	4	
dolomite	minor	
opaque (pyrite)	minor	
Fe-Ti oxides	minor	

K-spar forms a mass of feathery interlocking laths 0.1 to 0.5mm in length along with smaller shapeless interstitial grains. Extremely fine, crypto-crystalline clay occurs as an intergranular film and is also developing incipiently within it, sometimes grading into diffuse patches. Extremely fine Fe-Ti oxides are disseminated throughout.

Quartz occurs in embayed, shapeless vesicles of variable size, but mostly from 0.5 to 2.0mm in size. There are also many aggregates of this size which have an idiomorphic tabular outline, suggesting replacement of feldspar. The quartz forms subrounded to irregularly shaped interlocking grains 0.1 to 0.5mm in size. In the larger shapeless patches the quartz forms idiomorphic grains up to 1mm in size and the core of these are filled with coarse calcite. In places patches of pyrite have also developed. In the smaller quartz patches there is often very fine flakey montmorillonite (mixed with some sericite ?) intergrown with the quartz, sometimes in small patches. The quartz may take on a reddish tinge (relict from feldspar ?). Some zoned vesicles occur with coarse quartz at the core, a broad to thin zone of clay around this and a rind of fine quartz. Some tabular patches of this clay are also present (unsilicified but altered feldspar ??).

There are small ragged, diffuse patches and indistinct stringers of a very fine carbonate, tinged with red, occuring in the mass of K-spar grains. This may be dolomite, rather than calcite.

Location : BH 83-3 at 154.5 m

Field Name : basalt?

WG-86-8: SILICIFIED (WITH HEMATITE) PORPHYRITIC TRACHYTE.

This sample is a volcanic rock originally consisting of a felted mass of fine feldspar laths with larger, broad tabular phenocrysts of K-spar. Intense silicification has occured in a fairly coarse interconnected patchwork and in small vesicles. This is accompanied by hematization of the feldspar. Minerals are:

K-spar groundmass	47%
K-spar phenocrysts	8
quartz	40
hematite	4
clay	1
sericite	minor
apatite	minor
opaque (pyrite ?)	trace

K-spar phenocrysts form broad tabular grains 1 to 3mm in size. These are scattered in a groundmass consisting of a mass of thin to broad, tabular K-spar grains 0.1 to 0.2mm in length. Fine grains of apatite are included in the K-spar phenocrysts; tabular grains about 0.4mm in size occur in the groundmass. Fine grains of apatite are included in the K-spar phenocrysts; tabular grains about 0.4mm in size occur in the groundmass.

Hematization has occured, imparting a reddish stain to the feldspar; ragged grains of hematite about 0.005mm in size are disseminated throughout the groundmass and in the phenocrysts. Some phenocrysts are quite highly hematitic. There are also a few small patches and discontinuous stringers of hematite. As well as the very fine hematite, there are a few cubic opaque grains (pyrite ?) scattered about the rock.

Quartz forms subrounded to shapeless interlocking grains mostly 0.1 to 0.5mm in size occuring in an interconnected patchwork with embayed patches two or three millimeters in size developing. In some of the larger ones there are coarser more idiomorphic grains. There are a few tabular aggregates containing apatite; these may be replaced K-spar phenocrysts. As well, rounded quartz-filled vesicles up to 0.5mm in size occur. Within the core of these there is sometimes a very fine cryptocrystalline clay. Sericite flakes are sometimes intergrown with the quartz in the larger patches and small diffuse aggregates may occur at the contact with the feldspar. These sometimes develop around hematitic stringers and patches within the feldspathic parts of the rock; some K-spar phenocrysts have a very thin zone of sericite around them.

Location: 100 W - 300 N

Field Name: silicified andesite

WG-86-9: TRACHYTE TUFF (ALTERED WITH QUARTZ, HEMATITE).

This sample is a very fine grained volcaniclastic rock consisting of small trachyte and K-spar fragments crowded within an extremely fine grained feldspathic matrix which has been pervasively and extremely finely silicified (with clay); intense hematite staining is present, both in the fragments and the matrix. The fragments are so highly altered that distinction between rock and mineral fragments (K-spar phenocrysts) is not always possible. Minerals are:

trachyte/K-spar fragments	45%	(K-spar dominant)
quartz fragments	1	
quartz/plagioclase (?) matrix	25	
sericite	15	
montmorillonite	12	
Fe-Ti oxides	2	
opaque (pyrite)	minor	

Rock and mineral fragments are subrounded, sometimes tabular or have small embayments (larger rock fragments). They vary in size from 0.1 to 0.8mm. Most have been so highly hematised that they are almost opaque in thin section so that distinction between types is not always possible. However, mineral grains in some of the larger ones can be discernerd. In these very fine, sometimes feathery, K-spar forms a felted mass with or without a flow texture. There are also a few in which the feldspar forms more rounded grains. Most of the fragments are appear to be subrounded to tabular K-spar grains which are probabaly small phenocrysts derived from the trachytes. There are also a few rounded quartz fragments.

The matrix apparently consisted of extremely fine cryptocrystalline plagioclase (from which sericite has been derived) and pervasive silicification and hematisation has resulted in the development of a mass of dark reddish-stained quartz grains with grain size less than 0.005mm. Throughout this there are fine sericite flakes intimately intergrown with these grains. There is a fine diffuse foliation evident. As well as the red/brown stain there are extremely fine Fe-Ti oxides disseminated throughout.

Montmorillonite has developed during the alteration. This forms thin feathery and flakey grains occuring in splayed aggregates which replace the rock and mineral fragments. Within the matrix subrounded to shapeless, embayed patches up to 0.5mm and vein-like patches one or two millimeters in length occur. There are also vein-like clusters of ragged subcubic opaque grains (pyrite) about 0.1mm in size.

Location: BH 83-3 at 169 m

Field Name: dacite tuff

WG-86-10: TRACHYTE TUFF (MODERATELY ALTERED WITH QUARTZ).

This sample is a volcaniclastic rock consisting largely of K-spar fragments which have been derived from a porphyritic trachyte. These are crowded within a plagioclase (?) - clay matrix which has been moderately silicified. Minerals are:

K-spar fragments	45%	
trachyte fragments	10	
quartz	15	
plagioclase	10	
montmorillonite	15	
opaque	minor	(inlcudes Fe-Ti oxides)
apatite	trace	
sericite	trace	
carbonate (dolomite)	trace	

Much of the rock consists of tabular K-spar grains 0.2 to 0.8mm in size. Some are broken. These have been derived from porphyritic trachyte consisting of a groundmass of felted mass of thin K-spar laths less than 0.1mm in size within which the phenocrysts are scattered. Fragments are 1 to 2mm in size. Some fragments are crowded with phenocrysts, particularly the larger ones. There is some variation in the grain size of the groundmass material with some extremely fine small fragments in which the feldspar is intimately intergrown with clay; some show a pronounced flow texture. Most appear to have been derived from the same rock type.

The tuff matrix consists of an intimate intergrowth of very fine feldpar (plagioclase ?), quartz and montmorillonite giving it a very cloudy appearance and making distinction between quartz and feldspar difficult. It may have been glassy. Grain size is less than 0.01mm except for quartz (approximately teo thirs of the estimated quartz) occuring in shapeless embayed patches 0.3 to 1.0mm in size within the finer grained material without sharp contacts for the most part. This quartz forms shapeless to subhedral interlocking grains 0.1 to 0.2mm in size. Small acicular apatite grains may be intergrown and included within it. There are a few thin discontinuous veinlets of quartz. As well as the extremely fine (cryptocrystalline) clay intergrown with the matrix feldspar there are a few small subrounded patches consisting of a mass of pale greenish montmorillonite flakes about 0.05mm in size.

Extremely fine Fe-Ti oxides are disseminated throughout the matrix and fragmental material. These may coalesce in to small diffuse aggregates. Subcubic opaque grains less than 0.1mm in size are also scattered about the rock. A few fragments are crowded with opaque material. Carbonate (probably dolomite - has a brownish stain) forms veru fine grains occuring in small diffuse patches scattered in the fragments and matrix material. It is sometimes asociated with sericite.

Location : BH 83-2 at 32.5 m
Field Name: tuff

WG-86-11: TRACHYTIC BRECCIA ALTERED WITH QUARTZ AND HEMATITE.

This sample is a fragmental volcanic rock consisting of large to small, rounded or shapeless fragments of various trachytes. There are also large quartzitic fragments which have been hematised. Both types may be over 10mm in size. The matrix consists of extremely fine quartz, stained with hematite. Quartz veinlets and patches without hematite also occur. The quartz-hematite fragments are probabaly pieces of silicified trachyte which have then been hematised during quartz flooding of the breccia. Later dolomite alteration has occured. Minerals are:

trachyte fragments	30%
quartz-hematite fragments	18
K-spar fragments (with sericite)	2
quartz	30
hematite	10
clay (montmorillonite/sericite	5
dolomite	5

Trachyte fragments usually consist of a mass of feathery interlcoking K-spar laths 0.0 to 0.3mm in length. There may be a flow alignment to these. There are a few in which the K-spar is more shapeless and is slightly coarser. Some contain K-spar phenocrysts up to 1mm in size and there are scattered K-spar fragments which are probabaly derived from these. Many are being replaced by streaks of sericite. Extremely fine incipient clay is intimately intergrown with the K-spar. Quartzitic fragments consist of an aggregate of subrounded to subhedral grains 0.1 to 0.3mm in size; around these there is a fine, interconnected patchy network of hematite which is replacing in the edges of the quartz grains in some fragments. There is a fine layering in one and veinlets of fine clay have developed along this.

The matrix of the breccia consists of a mass of subrounded quartz grains (with plagioclase ??) less than 0.05mm in size and which are intimately intergrown with sericite and montmorillonite (?). The matrix is highly stained with hematite. Within this very fine matrix, thin sinuous veins and shapeless patches (vesicles) of clear quartz have developed, in part forming a network. This quartz forms subrounded to subhedral grains 0.1 ro 0.5mm in size. Montmorillonite is sometimes intergrown with this and may be concentrated in the core zone. Fine ragged grains of hematite are dissminated throughout th erock, both within the matrix and the fragments. These coalesce into small diffuse patches and streaks.

Dolomite forms very fine grains (stained red with hematite) which occur in shapeless patches superimposed upon the rock and tending to be concentrated in the trachytic fragments although some is intergrown with quartz in the veinlets and patches.

Location: BH 83-2 at 35.5 m

Field Name: silicified volcanic breccia

WG-86-12: SILICIFIED (WITH CLAY) TRACHYTE BRECCIA.

This sample is a highly altered volcanic flow breccia consisting of subrounded to subangular fragments of trachyte within a patchy network of quartz and clay (montmorillonite). Fragments are somewhat variable in texture (although of the same general type) and there may have been more than one variety of trachyte in the original rock but this may simply be a result primary inhomogeniety. The trachytes consist mainly of very fine K-spar along with scattered phenocrysts. The fine feldspars are intimately intergrown with the extremely fine clay. Minerals are:

trachyte fragments	55% (50% K-spar; 50% montmorillonite)
quartz	25
montmorillonite	20
opaque	minor (includes extremely fine Fe-Ti oxides)
carbonate (dolomite)	trace

Fragments subrounded to subangular in shape and 0.5 to 1.5mm in size, averaging about 1mm. Most consist of a more or less equigranular mass of thin K-spar laths up to 1mm in size; grain size from fragment to fragment is somewhat variable and there are some that very fine grained and others in which the grain size is up to 2mm. Several have tabular phenocrysts up to 0.5mm in size scattered within some; some are crowded with small phenocrysts. The feldspar in these fragments is intimately intergrown with extremely fine clay; some of the smaller, very fine grained ones may consist largely of clay. The clay may have been derived from glassy feldspathic material in the original rock. There are also a small patches of fine flakey montmorillonite within a few of them.

Intense silicification has occured in a closely spaced, patchy, interconnected network around the fragments and may form slight embayments within them. The quartz forms subrounded to shapeless intrerlocking grains about 0.1mm in size. The network around the fragments grades in to a few shapeless patches up to 1mm in size sandwiched between fragments. Quartz may be slightly coarser in these and many of them have a core of pale green, flakey montmorillonite grains about 0.05mm in length. In places this clay occurs in the core of the quartz network or may be intergrown with the quartz. Within the patches of quartz and montmorillonite there are sometimes thin zones of a much finer, isotropic clay between the quartz and montmorillonite.

Extremely fine Fe-Ti oxides are disseminated throughout, sometimes coalescing into fine diffuse patches. Cubic opaque grains about 0.05mm in size are also scattered about th erock within the fragments and the quartz network. Some fragments may be crowded with opaques. Very fine carbonate (probabaly dolomite - has a brownish stain) is scattered about the rock in small shapeles patches and in thin discontinuous stringers along the quartz network.

Location: BH 83-1 at 65 m

Field Name: tuff

WG-86-13: SILICIFIED, DOLOMITISED PORPHYRITIC TRACHYTE.

This sample is a porphyritic volcanic rock consisting of a felted mass of fine K-spar grains containing scattered K-spar phenocrysts. Embayed or rounded vesicles of quartz have developed throughout and dolomite has replaced some of these and also occurs in diffuse patches within the feldspar. Minerals are:

K-spar groundmass	55%
K-spar phenocrysts	5
quartz	20
dolomite	17
clay	2
opaque	1 (pyrite ? and Fe-Ti oxides)
sericite	trace
apatite	trace

K-spar forms thin to broad tabular grains less than 1mm in size occuring in a felted mass with a vague flow alignment in places. Phenocrysts are tabular and range in size from 0.5 to 2.0mm. Some contain fine apatite inclusions and there are tabular apatite grains about 0.3mm in size scattered in the groundmass; some apatite is included in quartz (replacement of feldspar ?). There has been mild incipient hematite staining and very fine ragged Fe-Ti oxide grains are scattered throughout. A few cubic opaque grains (pyrite ??) up to 0.2mm in size are scattered about the rock. Extremly fine cryptocrystalline clay is disseminated between the groundmass feldspars.

Silicification has resulted in the development of rounded to embayed vesicles, grading into shapeless, or sometimes vein-like patches one or two millimeters in size. The quartz forms subrounded to irregularly shaped interlocking grains 0.1 to 0.5mm in size. There is often a very thin rind of much finer quartz. The core of some of the smaller, rounded vesicles are filled with an extremely fine cryptocrystalline clay.

Dolomite forms extremly fine ragged grains grading into subrhombic grains up to 0.05mm in size. These occur in a partly interconnected, ragged patchwork within the feldspar and replacing the quartz; patches are less than 1mm in size. The coarser quartz in some of the vesicles and quartz patches has been completely or partly replaced by dolomite. Fine sericite sometimes develops around the edges of the dolomitic patches.

Location: BH 83-1 at 68.8 m

Field Name: tuff

WG-86-14: SILICIFIED (WITH CLAY) AND DOLOMITISED TRACHYTE.

This sample is a fine grained vesicular volcanic rock originally consisting of a felted mass of fine K-spar grains crowded with shapeles, embayed vesicles 0.5 to 1.5mm in size. The vesicles are filled with quartz and montmorillonite and these also occur in veinlets. Pervasive carbonate alteration has affected the feldspar. Minerals are:

K-spar	35%	
quartz	35	
dolomite	16	
montmorillonite	10	
opaque	4	(mainly pyrite, some Fe-Ti oxides)

K-spar forms a felted mass of thin to broad tabular grains 0.1 to 0.2mm in length. In places there is a vague flow alignment. Scattered within this there are a few broad euhedral phenocrysts up to 1.5mm in size. The feldspar is stained red with incipient hematite (as a result of dolomite introduction) and small diffuse patches of Fe=ti oxides have developed within it.

The rock is highly vesicular. They are often zoned with a colloform texture. The core consists of shapeless interlocking quartz grains 0.2 to 0.5mm in size. Around this there is a thin zone of very fine montmorillonite and there is a rind of very fine quartz at the margin. Some of the smaller ones are filled mostly with the clay without the coarser quarz in the core, or the quartz and clay may occur in a patchy intergrowth. Veins are 1 to 2mm in width and consist of material similar to the core quartz grading to finer quartz at the margin; small amounts of montmorillonite are intergrown with it.

Dolomite forms very fine grains occuring in a partly interconnected patchwork within the mass of feldspars. Patches are shapeless, have diffuse margins and up to 1mm in size. A few of the vesicles are being replaced by the dolomite. It is stained a dark red with incipient hematite (perhaps it is ankerite ?). Cubic opaque grains (pyrite) 0.1 to 0.2mm in size are scattered throughout the mass of feldspars.

Location: BH 83-1 at 84 m

Field Name: tuff

Vancouver Petrographics Ltd.

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Report for: W. Groeneweg,
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P.O. Box 12134 Nelson Square,
Suite 512 - 808 Nelson Street,
Vancouver, B.C.,
V6Z 2H8.

June 16, 1986

Samples: WG-86-15, WG-86-16, WG-86-17.

Summary:

WG-86-15 is a porphyritic andesite, the groundmass of which has been pervasively altered to K-spar with some quartz. Plagioclase phenocrysts have been altered to dolomite; hornblende (?) phenocrysts have been altered to montmorillonite.

WG-86-16 and 17 are volcanic breccias, of trachy-andesite bulk composition which have been strongly altered by limonitic dolomite. #16 contains small K-spar fragments and lesser volcanic rock fragments scattered in a fine plagioclase matrix. #17 contains K-spar and plagioclase fragments and a variety of large and small volcanic rock fragments crowded in a fine grained plagioclase matrix. The volcanic rock fragments are trachytic in composition but may well have been andesites which were strongly altered by K-spar before or during the dolomitic alteration.

A. L. Littlejohn

A. L. Littlejohn, M.Sc.

VAULT Property, B.C.

WG-86-15: ALTERED (K-SPAR, DOLOMITE, QUARTZ, CLAY) PORPHYRITIC ANDESITE.

This sample is a fine to medium grained, inequigranular volcanic rock originally consisting of small plagioclase and hornblende (?) phenocrysts scattered in a fine plagioclase groundmass. Intense pervasive alteration has altered the groundmass plagioclase to K-spar and some quartz; the plagioclase phenocrysts have been replaced by carbonate and the hornblende phenocrysts have been replaced by montmorillonite. Minerals are:

plagioclase groundmass	50%	(strongly altered to K-spar)
plagioclase phenocrysts	26	(90% altered to dolomite)
hornblende groundmass	10	(100% altered to clay)
hornblende phenocrysts	8	(100% altered to clay)
quartz	6	
montmorillonite	minor	(veinlets and disseminations)
dolomite	minor	(veinlets and disseminations)
Fe-Ti oxide	minor	
apatite	trace	

The original groundmass consisted of a mass of thin plagioclase laths less than 0.1mm in length along with fine shapeless grains between them. Small amphibole grains were intergrown with the plagioclase. Strong pervasive K-spar alteration has resulted in the feldspar becoming a cloudy mass of diffuse K-spar while retaining the original plagioclase outlines. Within this there are small lacey patches where fine quartz has developed in a network around the feldsapr grains. The small, idiomorphic amphibole grains have altered to a greenish coloured clay with moderate relief and birefringence (montmorillonite). Extremely fine Fe-Ti oxides are disseminated throughout the groundmass and small specks of dolomite and the clay also occur. Very thin, sinuous veinlets of these minerals cut through the groundmass.

Plagioclase phenocrysts are euhedral and vary in size from 0.5 to 1.5mm. Idiomorphic amphibole phenocrysts up to 1mm in size also occur. Both the plagioclase and amphibole phenocrysts often occur in small clusters and aggregates of two or three. The amphiboles have been completely altered to a mass of montmorillonite which forms very fine flakes, sometimes with a colloform texture. The plagioclase phenocrysts have almost all been altered to dolomite. In places there is a thin zone of montmorillonite around the dolomitic plagioclase. Small apatite grains up to 0.3mm in size are also scattered about the groundmass. They are rather dirty as a result of the alteration.

Location: BL 1900 E

Field Name: silicified porph. volcanic

WG-86-16: ALTERED (LIMONITIC DOLOMITE, K-SPAR) TRACHY-ANDESITE BRECCIA.

This sample is a volcanic breccia consisting of small K-spar fragments and larger porphyritic (plagioclase) trachyte fragments scattered in a fine felsic (plagioclase) matrix. Strong dolomite alteration has affected the rock; this is highly limonitic (perhaps originally ankerite ?). Bulk composition is:

plagioclase matrix	35%	(incipient hematite)
K-spar fragments	25	(some altered plagioclase ?)
volcanic rock fragments	15	(mainly trachytic)
dolomite/limonite	22	
sericite	3	
chlorite	trace	
apatite	trace	

The matrix of the breccia consists of a mass of subrounded to shapeless interlocking grains about 0.05mm in size. Scattered more or less evenely throughout this are subangular K-spar fragments 0.3 to 1.0mm in size. There are also a few plagioclase fragments which appear to be feldspathised. The matrix is "dirty" with incipient hematite.

Volcanic rock fragments are mostly 0.5 to 3.0mm in size and are subrounded. There is one dominant type which consists of a felted mass of very thin feathery K-spar grains less than 0.1mm in length. These may have been plagioclase which has been altered to K-spar (?). Within these are scattered subhedral plagioclase phenocrysts up to 1mm in size. A few of the rock fragments consist of fine subrounded K-spar grains. Small apatite grains, derived from the volcanic rocks are scattered about the matrix.

Dolomite forms very fine grains occuring in ragged rounded patches 0.1 to 1.0mm in size which have been superimposed upon the rock, occuring in both the rock fragments and the matrix. Many of the K-spar/plagioclase fragments have been completely replaced. The dolomite is intimately mixed with limonite and some patches appear to be dominantly limonite. Sometimes there is fine chlorite intergrown with the limonite and dolomite. Diffuse streaks and patches of sericite have developed throughout the matrix and in mineral fragments. Some of these have been completely replaced by sericite and limonite, rather than dolomite.

Location: 125 E / 2075 S

Field Name: dolomite - Fe hydroxide altered lapilli tuff

WG-86-17: ALTERED (LIMONITIC DOLOMITE, K-SPAR) TRACHY-ANDESITE BRECCIA.

This sample is a volcanic breccia consisting of large and small volcanic rock fragments (trachytes and andesites), along with plagioclase and K-spar fragments (derived from porphyritic volcanics) which are crowded in a very fine grained felsic matrix. Pervasive dolomite alteration has occured, affecting the matrix and fragments, and this is intimately associated with intense limonite stain (perhaps the carbonate was ankerite ?). K-spar alteration has also occured, affecting the matrix to some extent but is mainly evident in the rock fragments so that it is not clear which fragments were originally andesite (all plagioclase) or trachyte (all K-spar). Bulk composition is:

volcanic rock fragments	45%	(mainly trachytic)
plagioclase fragments	15	
K-spar fragments	15	
dolomite/limonite	15	
felsic matrix	10	(mainly plagioclase)
K-spar (veinlets)	minor	
apatite	trace	
sericite	trace	

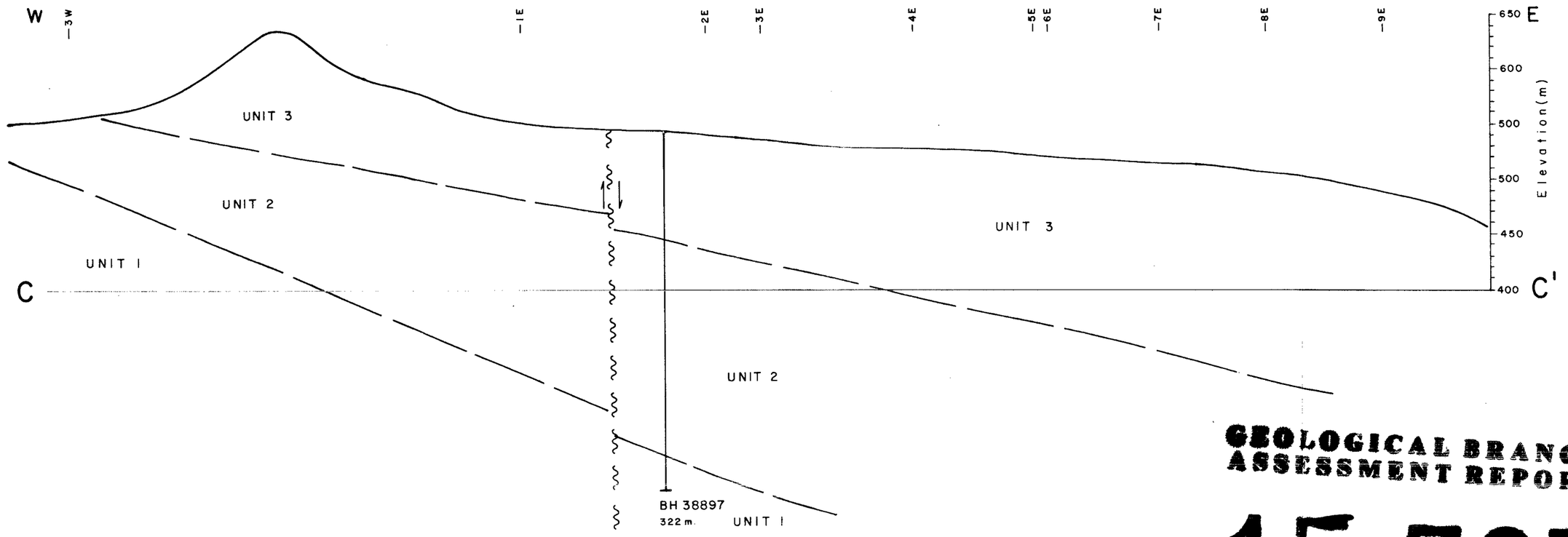
Volcanic rock fragments are subrouded and vary in size from 0.5 to 5.0mm. Several textural varieties are present; many of these are porphyritic (both plagioclase and K-spar in different fragments). The dominant type consists of a felted mass of feldspar laths about 0.1mm in size with scattered plagioclase phencrysts. Some small fragments consist of extremely fine feldspars (originally basalt ?). There are several which consist of an aggregate of more shapeless grains with scattered K-spar phenocrysts. A few fragments are crowded with plagioclase phenocrysts. Fine quartz may be intergrown, in small patches, with the groundmass feldspar. Regardless of the texture and original composition all the groundmass feldspar is cloudy and stained dull red with limonitic material.

The felsic matrix (dominantly plagioclase) between the volcanic rock fragments appears to be dominantly plagioclase grains less than 0.02mm in size; it is also stained reddish. This material is crowded with euhedral and broken angular pieces of plagioclase and K-spar which have been derived from the volcanic rock fragments. These are 0.3 to 1.5mm in size. A few apatite grains are present amongst these and they also occur in some of the rock fragments.

Pervasive dolomite alteration has resulted in the formation of a patchy network of dolomite around the mineral and rock fragments. This material may overalap into the fragments, but more commonly the phenocrysts are completely replaced while leaving the groundmass relatively unaffected. Many of the mineral fragments are also pseudomorphically replaced by dolomite. In those that are partially replaced there may be fine sericite as well. Fine discontinuous veinlets of K-spar occur, cutting through the fragments.

Location : 160 E / 2080 S

Field Name : volcanic breccia

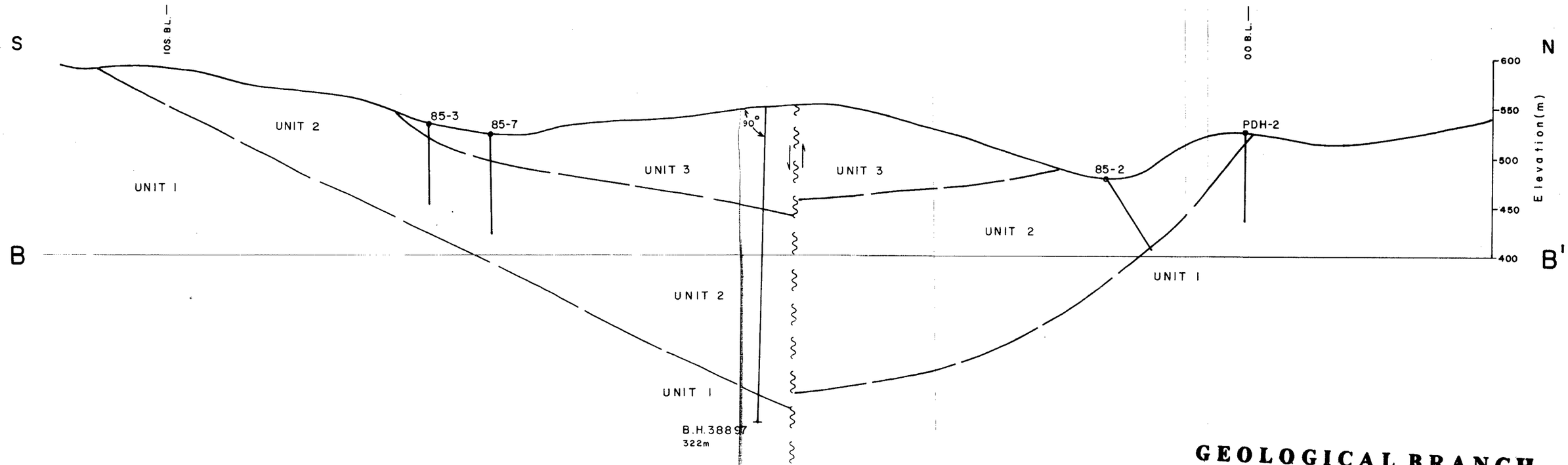


MIDDLE EOCENE TO UPPER EOCENE

4	WHITE LAKE FORMATION –AGGLOMERATE, CONGLOMERATE, TUFF
3	UPPER MARAMA FORMATION – VERY FINE GRAINED VOLCANIC FLOW
2	LOWER MARAMA FORMATION – PREDOMINANTLY TRACHYTE TUFFS, MINOR SEDIMENTS
2b	– TRACHYTE FLOW
1	MARRON FORMATION – PORPHYRITIC TRACHYTE FLOW.

0 100 200m

Canadian Nickel Company Limited		Copper Cliff, Ontario POM 1NO	
CROSS SECTION C-C'		SHEET	FIGURE 4
Project: VAULT PROPERTY		Area: Okanagan Falls, Osoyoos M.D., B.C.	
Supervisor: Wim. Groeneweg	Instrument:	Survey date: August/1986	
Compiled by: E. Hunter	Drawn by: C.B. Satchelle	Date drawn: Feb. 1987	Revised:
Scale: 1:4000	File:	N.T.S. 82 E – 5E	



MIDDLE EOCENE TO UPPER EOCENE

4	WHITE LAKE FORMATION – AGGLOMERATE, CONGLOMERATE, TUFF
3	UPPER MARAMA FORMATION – VERY FINE GRAINED VOLCANIC FLOW
2	LOWER MARAMA FORMATION – PREDOMINANTLY TRACHYTE TUFFS, MINOR SEDIMENTS
2b	– TRACHYTE FLOW
1	MARRON FORMATION – PORPHYRITIC TRACHYTE FLOW

GEOLOGICAL BRANCH ASSESSMENT REPORT

15,595

Canadian Nickel Company Limited Copper Cliff, Ontario POM 1NO

CROSS SECTION B-B'

SHEET

FIGURE 5

Project: VAULT PROPERTY

Area: Okanagan Falls, Osoyoos M.D., B.C.

Supervisor: Wim. Groeneweg

Instrument:

Survey date: August / 1986

Compiled by: E. Hunter

Drawn by: C.B. Satchelle

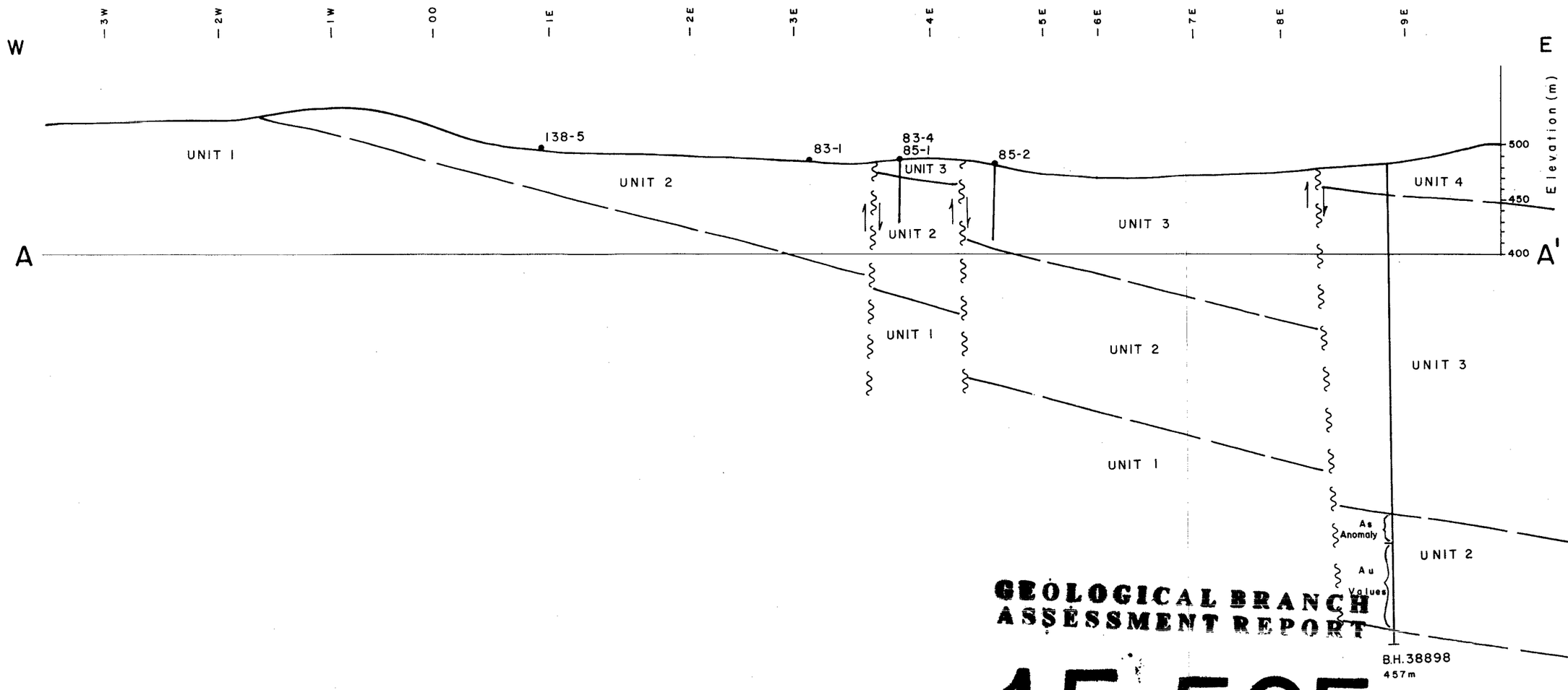
Date drawn: Feb. 1987

Revised:

Scale: 1:4000

File:

N.T.S. 82E–5E



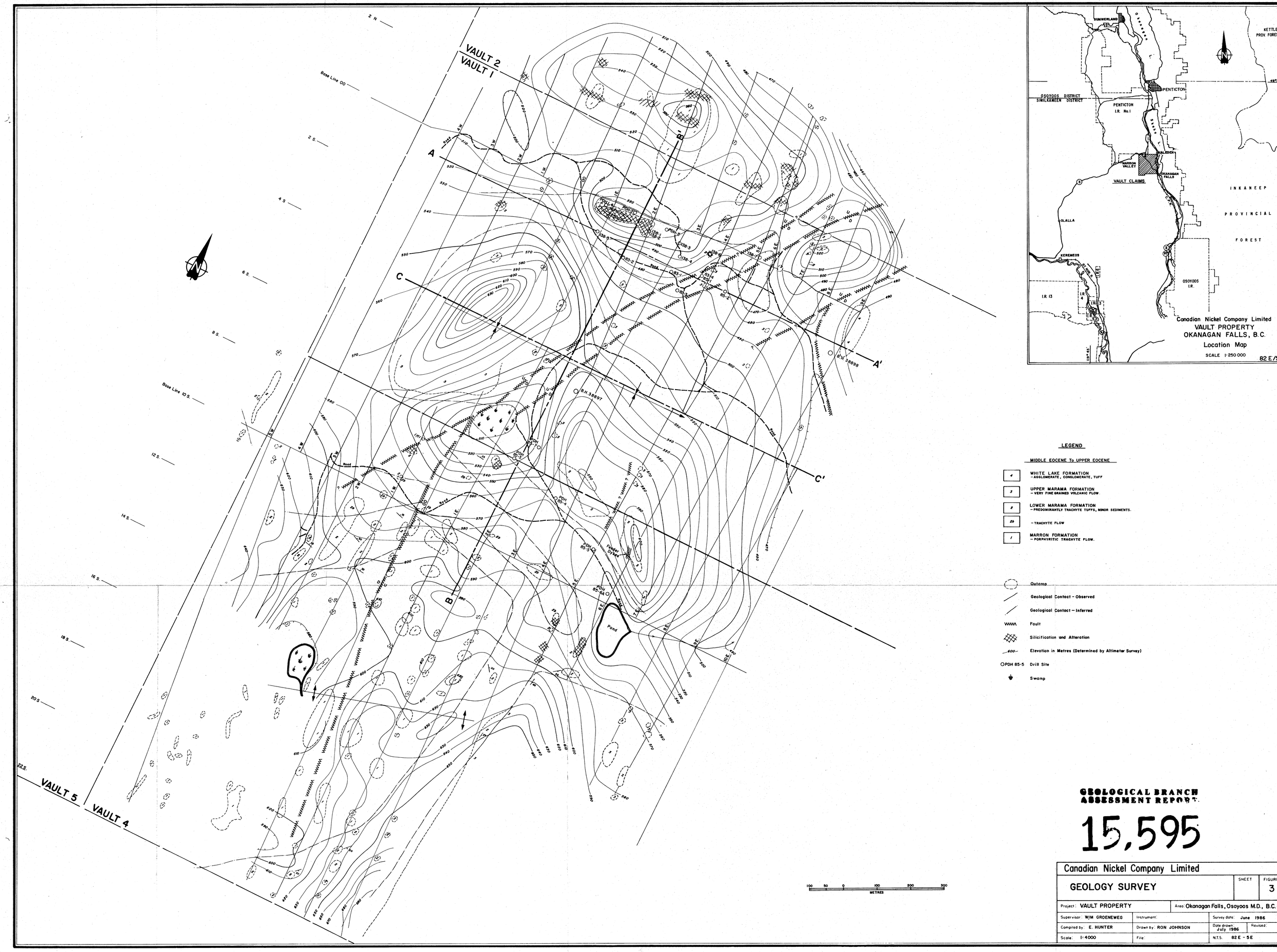
MIDDLE EOCENE TO UPPER EOCENE

4	WHITE LAKE FORMATION –AGGLOMERATE, CONGLOMERATE, TUFF
3	UPPER MARAMA FORMATION – VERY FINE GRAINED VOLCANIC FLOW
2	LOWER MARAMA FORMATION – PREDOMINANTLY TRACHYTE TUFFS, MINOR SEDIMENTS
2b	– TRACHYTE FLOW
1	MARRON FORMATION – PORPHYRITIC TRACHYTE FLOW

0 100 200m

Canadian Nickel Company Limited Copper Cliff, Ontario POM 1NO

CROSS SECTION A-A'		SHEET	FIGURE 6
Project: VAULT PROPERTY		Area: Okanagan Falls, Osoyoos M.D., B.C.	
Supervisor: Wim. Groeneweg	Instrument:	Survey date: August/1986	
Compiled by: E. Hunter	Drawn by: C.B. Satchelle	Date drawn: Feb. 1987	Revised:
Scale: 1:4000	File:	N.T.S. 82E-5E	



Canadian Nickel Company Limited
VAULT PROPERTY
OKANAGAN FALLS, B.C.
Location Map
SCALE 1:250 000
82 E/5E

LEGEND

MIDDLE EOCENE To UPPER EOCENE

- 4 — WHITE LAKE FORMATION — AGGLOMERATE, CONGLOMERATE, TUFF
- 3 — UPPER MARAMA FORMATION — VERY FINE GRAINED VOLCANIC FLOW
- 2 — LOWER MARAMA FORMATION — PREDOMINANTLY TRACHYTE TUFFS, MINOR SEDIMENTS.
- 2b — TRACHYTE FLOW
- 1 — MARRON FORMATION — PORPHYRITIC TRACHYTE FLOW.

- Outcrop
- Geological Contact – Observed
- Geological Contact – Inferred
- Fault
- Silicification and Alteration
- 600 — Elevation in Metres (Determined by Altimeter Survey)
- POH 85-5 — Drill Site
- Swamp

GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,595

Canadian Nickel Company Limited			
GEOLOGY SURVEY		SHEET	FIGURE 3
Project: VAULT PROPERTY		Area: Okanagan Falls, Osoyoos M.D., B.C.	
Supervisor: WM GROENEWEG	Instrument:	Survey date: June 1986	
Compiled by: E. HUNTER	Drawn by: RON JOHNSON	Date drawn: July 1986	Revised:
Scale: 1:4000	File:	N.T.S. 82E - 5E	