

6264

GEOLOGICAL REPORT

ON THE

NICOLA No. 1 CLAIM.

NICOLA MINING DIVISION,

LAT. 50 13' LONG. 121 37'

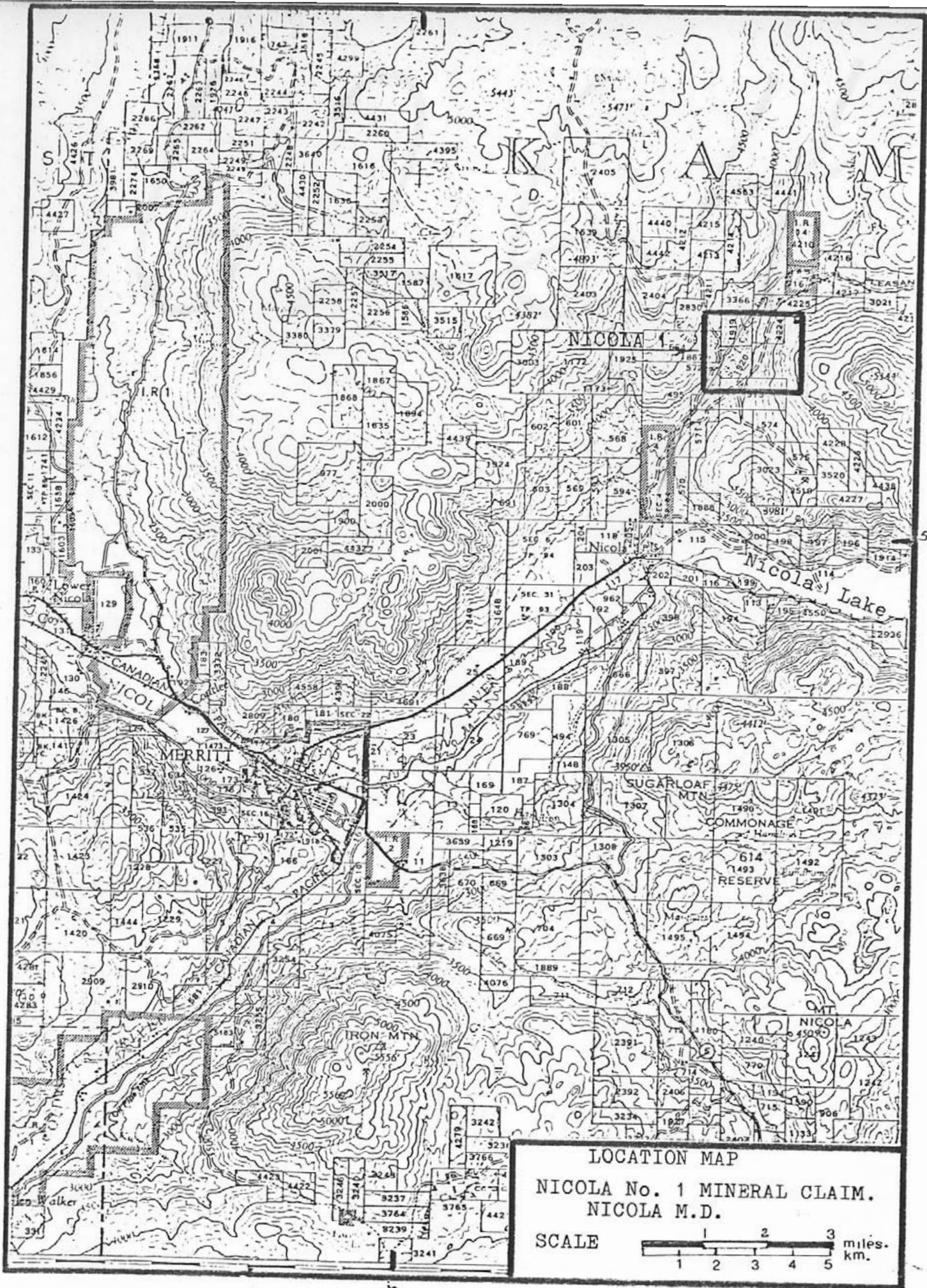
N.T.S. 921/2E

By

T.E.Lisle, P.Eng.

May 2, 1977.

MINERAL RESOURCES BRANCH ASSESSMENT REPORT NO. _____
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12175

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Maps:

- 1 Location Map.
2. Regional Geology.
- M-1* 3. Geology of the Nicola Claim (In Folder)

SUMMARY AND CONCLUSIONS:

Low grade copper mineralization in quartz veins occurs in foliated and highly altered (chlorite-epidote) granodiorite, and to a lesser extent in the adjoining Nicola volcanic rocks on the Nicola No. 1 claim.

The veining and mineralization most commonly occur in areas previously veined by aplite and grey fine grained dikes ?; and also where breccias are weakly developed near the adjoining quartz monzonite contact.

The tenor of mineralization is low, but might be comparable to that found in propylitic zones in some of the porphyry copper deposits of the Cordillera.

Large sections of the favourable granodiorite-volcanic contact area, particularly on the lower slopes towards Clapperton Creek, are obscured by surficial deposits. In so far as important amounts of copper mineralization are locally apparent within this area, further testing will be required. The most practical approach to further testing would include some percussion drilling.

RECOMMENDATIONS:

The percussion drilling program proposed in the earlier Quintana Report should be carried out at the locations indicated on Figure 3. Some further geological reconnaissance might also be considered for the peripheral areas of the quartz monzonite intrusion.

INTRODUCTION:

At the request of Mr. M. Wolfhard, Quintana Minerals Corporation, the author with an assistant spent ten days on the Nicola No. 1 claim conducting geological investigations.

The reason or purpose of this work was twofold:

- (a) To outline in greater detail the geology of a section of the claim on which some drilling had been proposed and
- (b) To present the results of these investigations in report form for assessment purposes.

The results of this work are summarized herewith and on the accompanying maps.

ABBREVIATED HISTORY AND BACKGROUND:

Early work in the vicinity of the Nicola No. 1 claim was directed at quartz veins carrying values in gold and copper. The location of the main veins are noted on Fig. 3. and are north and south of the Nicola claim. During the 1960's , continuing efforts were made on adjoining ground to the east and south in the search for large low grade ' porphyry type ' copper molybdenum deposits.

In 1976, Quintana geologists recognized the copper porphyry possibilities in the Nicola claim area and staked the ground. Subsequent examinations resulted in a proposal to conduct a 9 hole, 1000 meter percussion drilling which, because of other commitments, was not carried out.

CLAIMS:

The Nicola No. 1 claim is in the Nicola Mining Division and recorded in the name of C.J. Robertson. It is comprised of 20 units staked 4 south and 5 west from a legal corner post. It was staked on April 27, 1976, and recorded on May 20, 1976. The claim partly overlaps the previously staked MAR claims at its eastern boundary.

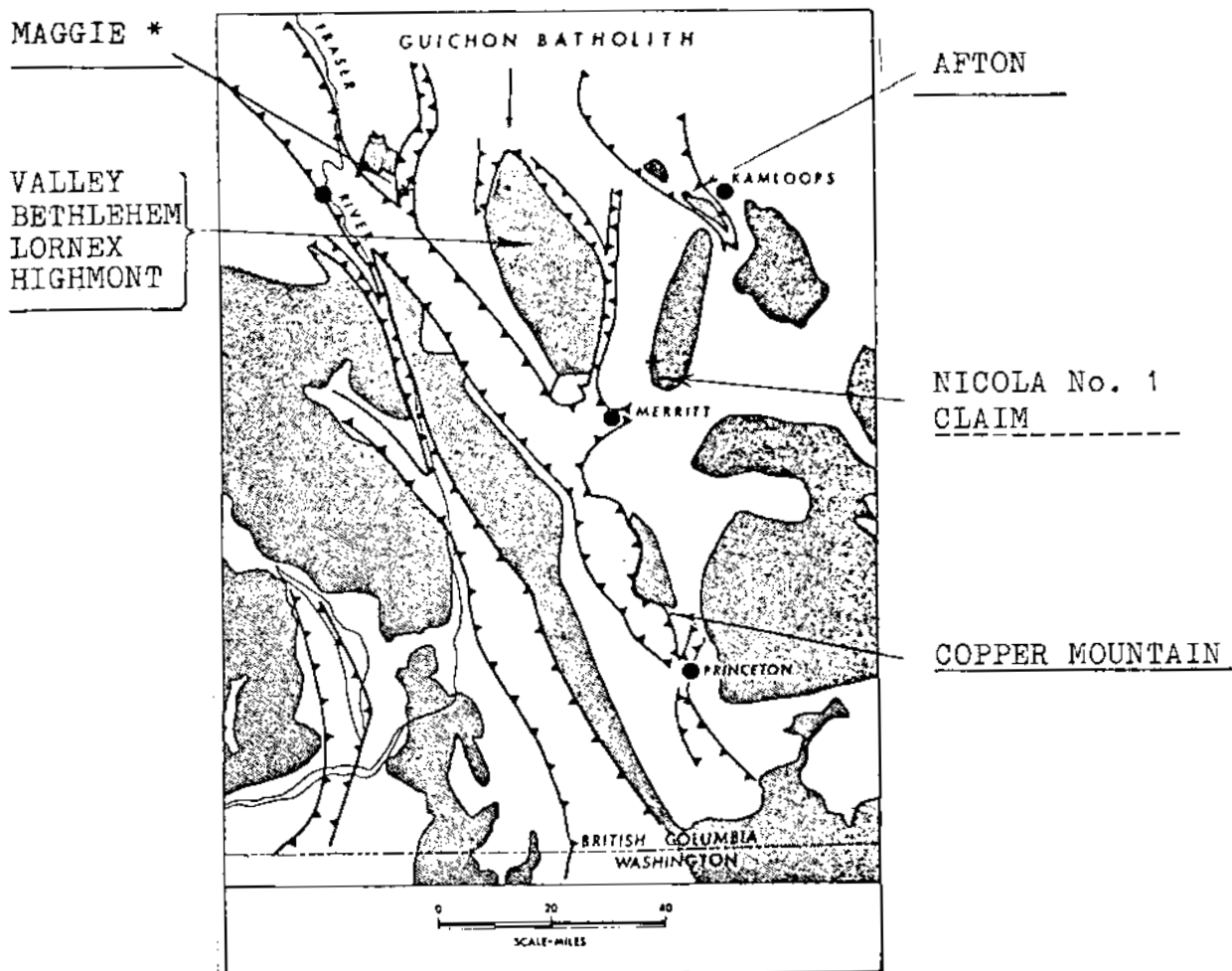
The claims cover parts of a number of surface land lots including 4224, 1919, 1920, 572, 573, 1887, and 4211. The ownership or rights to these lots was not researched. The K.E. Ranch is situated on the westerly valley slope, and an occupied house is located on the easterly slope.

LOCATION, TOPOGRAPHY AND ACCESS.

The Nicola No. 1 claim is situated on the Interior Plateau about 15 Km. northeast of Merritt and 5 Km. north of the west end of Nicola Lake. Lat. 50 13'. Long. 121 37' N.T.S. 92I/2E. Relief is moderate with elevations ranging from 760 to 1220 meters, and the area is thinly forested with pine and fir.

Clapperton Creek Valley is largely filled with surficial deposits of glacial, lacustrine and fluvial origin. These deposits cover large areas on the lower valley slopes and are locally estimated to be in excess of 60 meters thick.

Access is by a good system of secondary and logging roads from the settlement of Nicola at the west end of Nicola Lake.



After W.J. McMillan, Geology and Genesis of the Highland Valley
 Ore Deposits and the Guichon Creek Batholith.
 Paper 11, Porphyry Deposits of the Canadian
 Cordillera. C.I.M. Special Volume 15, 1976

* Tertiary Deposit

WORK PROGRAM:

The geology was mapped on traverses within and outside the claims and results plotted on a base map (Scale 1 inch approximately 400 feet.) prepared from an enlargement of B.C. aerial photograph 7102-228. Although some distortion is apparent, efforts have been made to correlate surface geology to claim boundaries. All traverses were by pace and compass

REGIONAL GEOLOGY:

The Nicola 1 claim is situated within a narrow north and northwesterly belt dominated by Upper Triassic Volcanic rocks and a number of related plutons. Many of the porphyry copper deposits of the intermontane belt of the southern Canadian Cordillera are associated with these intrusions, approximately 200 million years old, and the location of some of the more important ones are indicated on figure 2.

The claim is in a narrow batholith trending slightly east of north, and measuring some 13 by 48 Km. It is dated Cretaceous to early Tertiary (80 to 30) M.Y. but may contain border elements of Paleozoic age. The Maggie porphyry deposit (see figure 2) is the closest major deposit of the same age.

The claim covers in part, two phases of the batholith near the southwest contact. It also covers westerly bounding volcanic and sedimentary rocks of the Nicola Group.

GEOLOGY OF THE NICOLA No. 1 CLAIM.

The Nicola Group, comprised mainly of volcanic with minor sedimentary rocks, is exposed in trenches near the southeast claim corner and at widely scattered points on both sides of the valley. The exposures include green and purplish - green andesites, volcaniclastics and minor limestone. The contact with intrusive rocks was not noted.

The Nicola Group is succeeded on the northeast by strongly foliated granodiorite, a medium grained rock comprised of feldspar, quartz and from 15 to 20% hornblende and biotite.

The granodiorite is intruded by a tongue ? or dike? of leucocratic quartz monzonite trending roughly northwest across the northeast section of the claim. It is comprised of feldspar, from 30 to 40% quartz mainly as irregular 3-6 mm. crystals, and 3 to 4% altered biotite. Near its margins this unit is fine grained and often foliated. Elsewhere it is coarser grained and commonly massive. This unit appears unmineralized although much of the copper mineralization in the immediate area is spatially related.

A strong fault is indicated striking northwest roughly parallel to the southerly quartz monzonite contact. Other faulting is also indicated to the southeast of the claim, and in Clapperton Creek west of I.R. No. 5. This latter structure brings quartz monzonite in low angle fault contact with granodiorite on the east indicating probable north-south dislocation.

Grey, fine grained weakly porphyritic dikes ? or dike fragments to a few meters in width, are scattered in the granodiorite wedged between the quartz monzonite and Nicola volcanics. This material resembles in part the fine grained border phase of the quartz monzonite, pointing to the possibility of a shallow dipping contact.

Within this area , intrusive breccias are weakly and also erratically developed. They are comprised of relatively small fragments , to about 3 inches , of quartz, quartz monzonite, and granodiorite cemented in a matrix of green fine grained intrusive ? . They locally contain traces of chalcopyrite, hematite and magnetite.

In most instances, copper mineralization is directly related to quartz veining and occurs as chalcopyrite, malachite, minor bornite, usually associated with minor pyrite. The veins occur in foliated granodiorite and many occur in areas previously veined by quartz rich aplites. They commonly follow the foliation and related fracturing which is usually aligned within 15 degrees of north-south, but also cross it at various angles. They range to 2/3 of a meter in thickness and are locally concentrated to more than 4 per meter.

In the exposed mineralized area, the granodiorite is green due to the widespread chlorite-epidote alteration. The adjacent volcanic rocks are pervasively chloritized, but quartz veining and related mineralization are weaker.

The overall tenor of copper mineralization is low and perhaps significantly, no pyrite concentrations as might be found around porphyry deposits were noted.

The trend of the altered and mineralized granodiorite is northwest. A large section of the granodiorite and adjacent volcanic rocks is obscured by surface deposits. The covered area between the southeast claim boundary and Clapperton Creek is in excess of 365 by 1350 meters. Some important copper mineralization is evident within this trend in outcrops near the main road , and the area should be further investigated.

GEOCHEMISTRY:

A number of rock chip samples were collected from the claim area and analyzed for Copper, Molybdenum and Gold. The results are plotted on the geology map (Figure 3). In some instances the material sampled was doubtful as to bedrock, and is so noted on the map.

May 2, 1977.



T.E. LISLE.

P.Eng.

REFERENCES.

- 1, Porphyry Deposits in the Canadian Cordillera,
C.I.M.M. 1976
- 2, Preliminary Report on the Nicola Project, 92I/2E
by M.R. Wolfhard, Feb. 1977.
- 3, Geophysical Paper 5209G Merritt B.C.
- 4, G.S.C. Map 886A, 1961.
- 5, Miscellaneous claim maps.

Appendix 1

Geochemistry.



VANGEOCHEM LAB LTD.
 1521 PEMBERTON AVE.,
 NORTH VANCOUVER, B.C.,
 CANADA V7P 2S3

TELEPHONE: 988-2172
 AREA CODE: 604

• Specialising in Trace Elements Analyses •

Certificate of Geochemical Analyses

-IN ACCOUNT WITH-

Mr. T.E. Lisle
 145 W Rockland Rd.
 N. Vancouver, 987-0821
 Attention:

Report No: **77 01 007** Page **1** of **1**
 Samples Arrived: **April 25, 1977.**
 Report Completed: **April 26, 1977.**
 For Project:
 Analyst: **E.T.**

Invoice#4131 Job#77025

Sample Marking	No ppm	Cu ppm	Au ppb	
77 R 1	2	930	10	The location of this sample is believed to be the same as one previously sampled on the road, (1200 P.P.M.) Cu. (Note paper with location was lost. T.E.L?)
2	2	182	20	
3	5	43	nd	
4	1	12	10	
5	3	56	nd	
6	1	20	nd	
7	3	1230	20	
8	3	102	10	
9	3	170	nd	
10	1	7	nd	
11	4	15	nd	
12	1	30	nd	

MASTER PRINTING LTD.

REMARKS:

Signed:

% Mo x 1.6683 = % MoS₂ 1 Troy oz./ton = 34.28 ppm 1 ppm = 0.0001% nd = none detected ppm = parts per million
 All values are believed to be correct to the best knowledge of the analyst based on the method and instruments used

APPENDIX 2

Statement of Costs for Assessment Purposes.

Field Work:

T.E.Lisle, P.Eng. April 12-21 incl.	
Office " 22,27 to 29	
1/2 Mo. at \$2400.00/ mo.	\$1200.00
R.Thomas, Prospector and assistant	
April 12 to 21. Ten at \$40.00	400 00
Truck Rental, 10 days at \$17.50	175.00
Gasoline.	44.25
Food and Lodging as per invoices	242.62
Geochemistry,	78.00
Drafting and Typing	50.00
Reproduction, Maps and Reports (Approximate)	30.00
Total	\$2219.87

J. E. Lisle

70577 93101

AMOUNT

THOMAS E LISLE

08 79

Account of Dealer Assigned to GULF OIL CANADA LIMITED



DAY NO. YR.

LIMITED

210477 5110379

PRODUCT			QTY.	PRICE	AMOUNT
PREMIUM	REGULAR	FUTURA	28	935	8125
MOTOR OIL					
AUTHORIZATION				TAX	
LICENCE NO.	6477 BR	BC	PROV.	TOTAL	825

Cardholder will pay to the issuer of the credit card presented herewith, the amount shown above in accordance with the issuer's agreement with the cardholder.

X *T. E. Lisle*
CUSTOMER'S SIGNATURE

CUSTOMER'S COPY



RETAIN FOR STATEMENT VERIFICATION

70577 93101

AMOUNT

THOMAS E LISLE

08 79

Account of Dealer Assigned to GULF OIL CANADA LIMITED



DAY NO. YR.

LIMITED

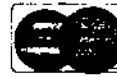
140477 5310393

PRODUCT			QTY.	PRICE	AMOUNT
PREMIUM	REGULAR	FUTURA			10.00
MOTOR OIL					
AUTHORIZATION				TAX	
LICENCE NO.	6477 BR	BC	PROV.	TOTAL	10.00

Cardholder will pay to the issuer of the credit card presented herewith, the amount shown above in accordance with the issuer's agreement with the cardholder.

X *T. E. Lisle*
CUSTOMER'S SIGNATURE

CUSTOMER'S COPY



RETAIN FOR STATEMENT VERIFICATION

70577 93101

AMOUNT

THOMAS E LISLE

08 79

Account of Dealer Assigned to GULF OIL CANADA LIMITED



DAY NO. YR.

LIMITED

180477 5110365

PRODUCT			QTY.	PRICE	AMOUNT
PREMIUM	REGULAR	FUTURA	11.586		10.00
MOTOR OIL					
AUTHORIZATION				TAX	
LICENCE NO.	64-77-BR	BC	PROV.	TOTAL	10.00

Cardholder will pay to the issuer of the credit card presented herewith, the amount shown above in accordance with the issuer's agreement with the cardholder.

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70577 93101

AMOUNT

THOMAS E LISLE

08 79

Account of Dealer Assigned to GULF OIL CANADA LIMITED



DAY NO. YR.

LIMITED

120477 5157544

PRODUCT			QTY.	PRICE	AMOUNT
PREMIUM	REGULAR	FUTURA	18.9		16.00
MOTOR OIL					
AUTHORIZATION				TAX	
LICENCE NO.	6477 BR	BC	PROV.	TOTAL	16.00

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CUSTOMER'S SIGNATURE

CUSTOMER'S COPY



RETAIN FOR STATEMENT VERIFICATION

OVERWAITEA FOODS

A DIVISION OF NEONEX CONSUMER GROUP

HEAD OFFICE: P.O. BOX 7200, VANCOUVER, B.C. V6B 4E4

M. T. Lisle April 18 1977

OVERWAITEA FOODS

A DIVISION OF NEONEX CONSUMER GROUP

HEAD OFFICE: P.O. BOX 7200, VANCOUVER, B.C. V6B 4E4

M. April 13 1977

<p><i>Purchases 54/59</i></p>			
<p><i># 2</i></p>			
<p><i>54.59</i></p>			
<p><i>paid</i></p>			

		9.56	
<p><i># 1</i></p>			
<p><i>April 15</i></p>			
<p><i>1977</i></p>			

gross	74	72

191580

1300

VERSATILE INDUSTRIES LTD.

1501 READESTON AVENUE VANCOUVER, B.C. CANADA

IN ACCOUNT WITH

Mr. T.E. Lisle
145 W. Rockland Rd.
N. Vancouver, B.C.

ORDER NO. 4131

DATE April 26, 1977.

TERMS NET 21 DAYS

77 01 007

Job#77025

12 rock samples for preparation @\$1.25	\$15.00
12 rock samples trace analysis for Mo & Cu @\$1.75	\$21.00
12 rock samples trace analysis for Au @\$3.50	\$42.00

Total: \$78.00

VERSATILE INDUSTRIES LTD.

ROOM 31 - 448 SEYMOUR STREET
VANCOUVER 2, B.C.

04 8708
R.H. SERAPHIM
T. LISLE
40. 316-470 GRANVILLE ST.

DATE		YOUR ORDER NO.		OUR ORDER NO.		SALESMAN			
FED. LIC. NO.		PROV. LIC. NO.		SHIPPED VIA		TERMS			
QTY. ORDERED	QTY. SHIPPED	DESCRIPTION				PRICE	PER	AMOUNT	
			SIZE	SQ. FT.					
1	1	BLACKLINE	6	6	-	12		-	72
1	5	SEPIA	7	35	-	12		4	10
		MYLAR							82
									58
									540
									38
									578

MAY 2 PAID

12% FED. TAX

SUB TOTAL

7% PROV. TAX

TOTAL

INVOICE

1	SEPIA	7	7	100	700
	MYLAR				
					84
					784
					56
					840

12% FED. TAX

SUB TOTAL

7% PROV. TAX

TOTAL

INVOICE

UNITED RAYORE GAS LTD.
 211 - 543 GRANVILLE STREET
 VANCOUVER, B.C. V6C 1X8

TELEPHONE (604) 684-1571

April 22, 1977

Mr. Tom E Sisle
 316 - 470 GRANVILLE ST
 Vancouver BC

Re Rental of GMC 4x4 TRUCK

Dear Tom

Rental charge from April ¹² 5/77
 to April 21/77 inclusive @ 17³⁰ per
 day equals 10 days

Total Rental charge ~~\$ 275⁰⁰~~ \$ 175⁰⁰

Hand bill
 77-77B2

United Rayore Gas
 211-543 Granville Street
 Vancouver B.C.

GUEST REGISTRATION		
REGARDLESS OF CHARGE INSTRUCTIONS, THE UNDERSIGNED GUEST ACKNOWLEDGES THE BELOW AS A PERSONAL INDEBTEDNESS.		
NAME <u>TE WISLE</u>		
PLEASE PRINT		
COMPANY <u>145 W ROCKLAND RD.</u>		
ADDRESS <u>NORTH VANCOUVER.</u>		
CITY <u>B.C.</u>		
CREDIT CARD # _____		
SIGNATURE <u>TE Wisle</u>		
RATE \$ <u>14⁰⁰</u>	ROOM NO. <u>2</u>	NO. IN PARTY <u>2</u>
DATE IN <u>April 12/77</u>	DATE OUT <u>April 21/77</u>	CLERK INITIAL
MAKE OF CAR <u>CHEV</u>	CAR LICENCE NO. <u>64-77 84</u>	PROV - STATE <u>B.C.</u>
PAYMENT RECEIVED BY <u>Ravincher</u>		
NOTICE TO GUESTS THIS PROPERTY IS PRIVATELY OWNED AND MANAGEMENT RESERVES THE RIGHT TO REFUSE SERVICE TO ANYONE, AND WILL NOT BE RESPONSIBLE FOR ACCIDENTS, OR INJURY TO GUESTS OR FOR LOSS OF MONEY, JEWELRY OR VALUABLES OF ANY KIND. 11:00 A.M. IS CHECKING OUT TIME. GUESTS STAYING OVER PLEASE NOTIFY OFFICE. THE MANAGEMENT RESERVES THE RIGHT TO ASSIGN AND REASSIGN THE GUEST TO SUCH ACCOMMODATION AS THE MANAGEMENT SEES FIT. WE OPERATE UNDER THE INNKEEPER'S ACT		

Willow Motel

P.O. Box 173 - Merritt, B.C.

INVOICE THIS IS THE ONLY ITEMIZED ACCOUNT RENDERED	DAYS OCCUPIED	
	SUNDAY	
	MONDAY	
	TUESDAY	<u>Apr 12/77</u>
	WEDNESDAY	<u>Apr 21/77 14⁰⁰</u>
	THURSDAY	
	FRIDAY	
	SATURDAY	
TOTALS	126 ⁰⁰	
5% TAX	6 ³⁰	
AMOUNT		
RECEIVED ON ACCOUNT	132 ³⁰	
TOTAL	132 ³⁰	

THANK YOU FOR YOUR PATRONAGE.

I. R. #5

Location 7
1a
1b?

FEACOCK
SHOWING
cp, bn, qtz vein

LCP
NICOLA I
08812

volcaniclastics
1b

QUARTZ
MONZONITE
AREA OF
ABUNDANT
EXPOSURES

GRANODIORITE

ANDESITE

L572

Ranch Bldg.

House

hb andesite
limestone and
volcaniclastics
1b,c

LEGEND

- Quartz Monzonite
- Granodiorite
- Nicola Group (a) Andesite-Basalt
(b) Volcaniclastics
(c) Limestone
- Faults; Defined, Assumed.
- Contact; "
- Foliation
- Quartz veins
- Prominent fractures
- Rock outcrop
- Float
- Cl. Chlorite, Ep. Epidote
- Py. Pyrite Mag. Magnetite
- Cu. Chalcopyrite and/or Malachite

- LEGEND
- 1961 Diamond Drilling
 - Proposed percussion drill sites
 - Trench
 - 2/20/8
Mg, Cu, Au, Ag, Pb

6264
M-1

1/2 miles to small zone of quartz veins in altered granodiorite gneiss - one drill hole assayed 0.21% Cu, 0.04% Mo. (Zone limited by barren exposures)

Map revisions & Geology by
T.E. Lisle, April, 1977. To accompany
May 2, 1977 geological report

TURLIGHT VEIN
cp-bn-qtz
(some early production)
in granodiorite gneiss

QUINTANA MINERALS CORPORATION
NICOLA PROJECT
GEOLOGY AND
PROPOSED DRILLING

SCALE
0 200 400 800 1200 FT.
0 100 200 300 MTS.

Drawn by: K.M.L.
Date: Dec. 8/76
Revised: Feb, 1977

N.T.S. MAP AREA
92-1-2

DWG. NO. NIC-3

