CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

GEOLOGY AND GEOCHEMISTRY OF THE ONI CLAIM GROUP

Claims:

Oni 1-113

Y63026-Y63457

N.T.S. No. 115-G-15

Lat. 61° 53'
Long. 138° 39'

By:

J.T. Neelands, B.Sc. (Carleton University)
C.F. Gleeson, Ph.D. (McGill University)

Duration:
July 19, 1972 to August 16, 1972

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PLANS ACCOMPANYING REPORT

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SUMMARY

Geological, soil and rock geochemical surveys were carried out over the Oni claim group during the summer of 1972.

The claims are underlain by alaskite granite to the south and basalt in the north. The intervening areas are underlain by quartzite cut by numerous dykes of rhyolitic composition. A buried intrusion of possible granodiorite or quartz monzonite composition is indicated by a circular northeast trending aeromagnetic high.

Topographic lineaments suggest that early north-west trending faults have been cut by later northeast faults and fractures.

No economic quantities of Cu-Mo mineralization were observed in the surface rocks of the property. Minor molybdenite was found along fractures and quartz stringers in a small intrusive of quartz monzonite in the central parts of the claims.

Two principal geochemical soil anomalies containing Cu, Zn and Mo trend northeast through the south, centre and eastern portions of the claims. These anomalies appear relative to pyritiferous and pyrrhotiferous quartzites and rhyolites along northeast fracture zones.

No further work is recommended at this time, however the claims underlain by the geochemical anomalies should be retained with the viewpoint of possibly evaluating at some future date the potential of the property at depth.

LOCATION MAP

ONI CLAIM GROUP

Figure 1

July/71

INTRODUCTION

The Oni (1-113) claims were staked as a result of a reconnaissance geochemical program completed during the summer of 1971.

Staking was completed by Harman Management Ltd. of Whitehorse during September 22 to 23, 1971 and recorded on October 18 to 20, 1971.

This report will describe the geology of the claim area and the results obtained from a geochemical soil survey completed by Canadian Occidental Petroluem Ltd., Minerals division, the holder of the claims. This work was done to determine the cause of the copper and molybdenum stream sediment anomalies detected in the area.

LOCATION AND ACCESS

The claim group is recorded on claim map 115-G-15 in the Whitehorse Mining District. The property is located about one hundred and forty miles northwest of Whitehorse. It can be reached by driving the Alaska Highway from Whitehorse to Burwash Landing on Kluane Lake and by flying 43 miles by helicopter from Burwash to the property.

As of April 13, 1972, the only other claim group in the area was the Max claims which adjoin the Oni group to the east.

PHYSIOGRAPHY AND VEGETATION

The claim group is located in the Nisling Range which is a subdivision of the Yukon Plateau. The property is dominated by a backward L-shaped ridge which at its base trends east-west. The property is drained by Onion Creek which flows north-west. The ridges are steeply-sloped to the west. The difference in elevation from the lowest point on the stream (approximately 3800 feet) to the highest point on the north ridge (approximately 6200) is 2400 feet. (Figure 3a)

About 70 percent of the claim group is below tree line (approximately 4000 feet) where spruce and poplar are found predominantly on south facing slopes. Above and below tree line dwarf birch is plentiful and around the streams it is mixed with alders. Except for moss and grass, vegetation is scarce above 4500 feet.

The V-shaped valleys and castellated outcrops on the property have not been glaciated and though the area hasn't been altered by glaciation it has been covered by volcanic ash from an explosion crater in the St. Elias Range. The eruption apparently occurred about 1400 years ago.

WORK COMPLETED

a) Staking and Line Cutting

The claims were staked by Harman Management Company Ltd. of Whitehorse and the data pertaining to the location of the claim posts, tags and tag numbers are recorded in Appendix I Claim numbers are located on the enclosed geology maps. (Figures 7a and 7b)

The claim area was covered by a picket line grid with lines spaced 800 feet apart and picketed every 100 feet. This work was completed under contract by Harman Management Co. Ltd. between July 19 to August 3, 1972. Approximately 68 miles of line were cut and average production per man was 0.6 mile per day. Additional information is recorded in the Appendix.

b) Geology and Geochemistry

Geology of the area was mapped during the period July 19 to August 16, 1972, by Mr. J.T. Neelands and the soil sampling for the geochemical survey was completed by Mr. R.R. Cook. The field programme was carried out under the supervision of Dr. C.F. Gleeson.

c) Names and Addresses of Personnel

Canadian Occidental Petroleum Ltd., Minerals Division

C.F. Gleeson	764 Belfast Road, Ottawa, Ontario	Consultant
J.T. Neelands	161 Eglinton Ave. E., #801, Toronto 12, Ont.	Geologist
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J.D. McInnis	1898 Fifth Ave. Prince George, B.C.	Foreman
Louie Carlick	Ross River, Y.T.	Line Cutter
Darrell Beattie	Whitehorse, Y.T.	" "
Jim Atkinson	Ross River, Y. T.	" "

Jim Etzel	Ross River, Y.T.	Line Cutter
Harry Atkinson	" " "	" "
Charlie O-lie	" " "	" "
Peter Magnusson	Whitehorse, Y.T.	Cook

GENERAL GEOLOGY

Introduction

The property is underlain mainly by banded quartzite of the Yukon Complex. To the southeast Nisling granite occurs along the edge of the property as felsenmeer. Volcanic dykes intrude the Yukon Complex and their abundance increases to the north. The cocurrence of felsic dykes predominates except in the northwest corner. The basaltic dykes are probably older than the Nisling granite since they are intruded by the felsic dykes which are either intruded at the same time as the granite or later. The following table of formations is suggested:

Table of Formations

Recent

Colluvium and alluvial deposits in valleys; volcanic ash in soils

Mesozoic to Tertiary

Volcanics
Rhyolite, feldspar porphyry, feldspar-quartz porphyry, pyrrhotiferrous rhyolite
Porphyritic basalt, basalt and gabbro, zeolite beds, breccia

Nisling Granite
Biotite granite

Late Mesozoic Early Tertiary

Quartz monzonite porphyry

Palaeozoic

Yukon Complex
Banded quartzite, banded quartzite and interbedded marble, micaceous quartzite, pyritiferrous quartzite, graphitic quartzite.

Yukon Complex

Banded quartzites contain alternating bands or laminae of grey quartz and dark micaceous material. The thickness of the bands vary from less than 1/8" up to 3 feet. Banded quartzite is the most abundant rock. However, rodded quartzite and boudins also occur.

Micaceous quartzite is banded quartzite that originally contained more argillaceous material and has undergone metamorphism to produce sericite and biotite partings.

Marble occurs as bands up to 6 inches wide and it is interbedded with the quartzite.

Graphitic quartzite was found only as float. It is a black phyllitic rock which has formed from carbonaceous rich beds in the original sediments.

Pyritiferous quartzite is a dark massive micaceous rock. Biotite is the major mica and flakes, up to 2 mm wide, occur in some specimens. The rock weathers to a chocolate brown. Up to 5% disseminated pyrite and less than 1% pyrrhotite occur in some specimens. Geochemical analyses of the pyritiferous quartzite shows that generally it contains above normal amounts of Cu, Zn and Mo (Appendix III).

The general strike of the quartzites is east. In most cases the attitude of the quartzites parallels the ridges.

Quartz Monzonite Porphyry

The quartz monzonite weathers medium brown. It is a medium to coarse-grained rock and is greyish green on a fresh surface. Large crystals of remelted quartz measuring up to 10 mm produce a porphyritic texture. Green and white feldspar laths occur which measure up to 3 mm. Biotite flakes less than 2 mm in size occur as euhedral crystals and make up less than 5% of the rock. Molybdenite specks occur in the quartz monzonite along line 80N, 5E.

Nisling Range Alaskite

The alaskite occurs on the south-east edge of the property. The rock occurs as large blocks of felsenmeer and lacks jointing. The weathered surface is light brown and because of its porous nature rocks with unaltered surface are difficult to obtain. The rock is medium-grained and contains about 30 percent smoky quartz and less than 5 percent biotite.

Basalt and Mafic Dykes

Fine-grained breccia occurs in the north-west corner of the property. The rock has a purple matrix in which a mixture of lithic and predominantly vitric fragments occur. The rock fragments that could be identified are basalt, jasper and rhyolite. Shards and tear-shaped fragments of glass occur. The feldspar crystals that are present are altered. The outcrops are badly weathered, clay minerals occur as a secondary mineralsin both fragments and matrix. Layers of basalt containing zeolites occur in the northwest portion of the claims. The largest zeolite found was three quarters of an inch across.

Porphyritic basalt is present predominantly in the northwest part of the property. The basalt weathers a dark brown, thus distinguishing it from the quartzites and rhyolites.

White feldspar phenocrysts less than 3 mm long compose approximately 30 percent of the rock, and crystals of pyroxene make up approximately 10 percent of the basalt.

Basaltic dykes occur throughout the property. Two hundred and fifty feet south of L64N, 9E a gabbro dyke occurs. It has chilled margins and looks very much like the basalt. In places the dyke has a diabasic texture but generally the texture is basaltic.

Rhyolite and Felsic Dykes

Porphyry dykes of felsic composition are the most abundant intrusive on the property. Quartz-feldspar porphyry, a light grey rock that weathers light brown, contains remelted quartz crystals that measure less than 3 mm in diameter and stubby white feldspar crystals that measure less than 4 mm. The matrix is more aplitic than aphanitic.

Biotite and hornblende phenocrysts also occur. The abundance of feldspar, quartz, and mafic phenocrysts is approximately 15, 10 and 5 percent respectively. In places no quartz is found and the rock becomes a feldspar porphyry.

One dyke that trends north along the east flank of the main ridge is purple. It has the same texture and composition as the grey quartz-feldspar porphyry. It also contains rounded "bombs" of basalt which also occurs in places in the grey rhyolite dykes. What appears to be a rhyolite flow was seen in one outcrop along line 80. The strike is 140T and it dips 5 degrees south.

Here and there cherty rhyolite containing 1 to 5% disseminated pyrrhotite occurs. Geochemically this rock unit is generally higher than normal in Cu, Zn and Mo.

ROCK GEOCHEMISTRY

To help relate the soil geochemical results to the geology, rock chip samples were taken and analyzed for Cu, Zn and Mo. These results were used also to determine averages for the major rock types. In addition two composite samples of the quartzites were taken over the property and analyzed for Cu, Zn and Mo. The averages of the various rock types are listed in Table 1 and information on the individual samples are shown in Appendix III. The rock geochemical results are presented on the geological maps (Figures 7A and 7B).

The lowest and highest copper values were obtained from the Nisling granite and pyritiferous quartzite respectively. The lowest and highest zinc values were obtained from quartz and basalt respectively. The volcanics are higher in zinc than the granitic intrusives and even higher than the quartzites. The highest molybdenum values were obtained from the pyritiferous quartzites.

Table 1

Average Metal Content of Rock Units

Rock Type	No. of Samples	Geochemical Results (ppm) Copper Range	Copper Average	Zinc Range	Zinc Average	Molybdenum Range	Molybdenum Average
Rhyolite	11	4-25	10	12-216	76	1-4	2
Pyrrhotiferous rhyolite	6	4-67	23	32-195	106	1-3	2
Felsic porphyritic dykes	28	2-33	12	28-135	73	ND-4	2
Basalt	10	17-45	21	53-136	126	2-4	3
Nisling granite	6	2-10	4	52-88	58	1	1
Pyritiferous quartzite	11	46-126	45	20-136	46	1-16	4
Quartz	6	10-43	18	7-20	40	1	1
Quartz monzonite porphyry	2	5-21	13	56-62	59	1-2	2
Quartzite	69	4-115	19	5-580	60	ND-8	1.5
Composite quartzite			31		24		2
" "			27		52		3

From these results (Table 1) it is obvious that the pyritiferrous quartzites are a source of copper and molybdenum and the basalts are contributing zinc to the soils.

The geochemistry of the individual rock samples (Appendix III) confirms this. In addition,phases of the rhyolite dykes, especially those that are pyrrhotiferous, are abnormal in Cu, Zn and Mo and they are the cause of some of the soil anomalies.

GEOPHYSICS

(Government Aeromagnetometer Survey)

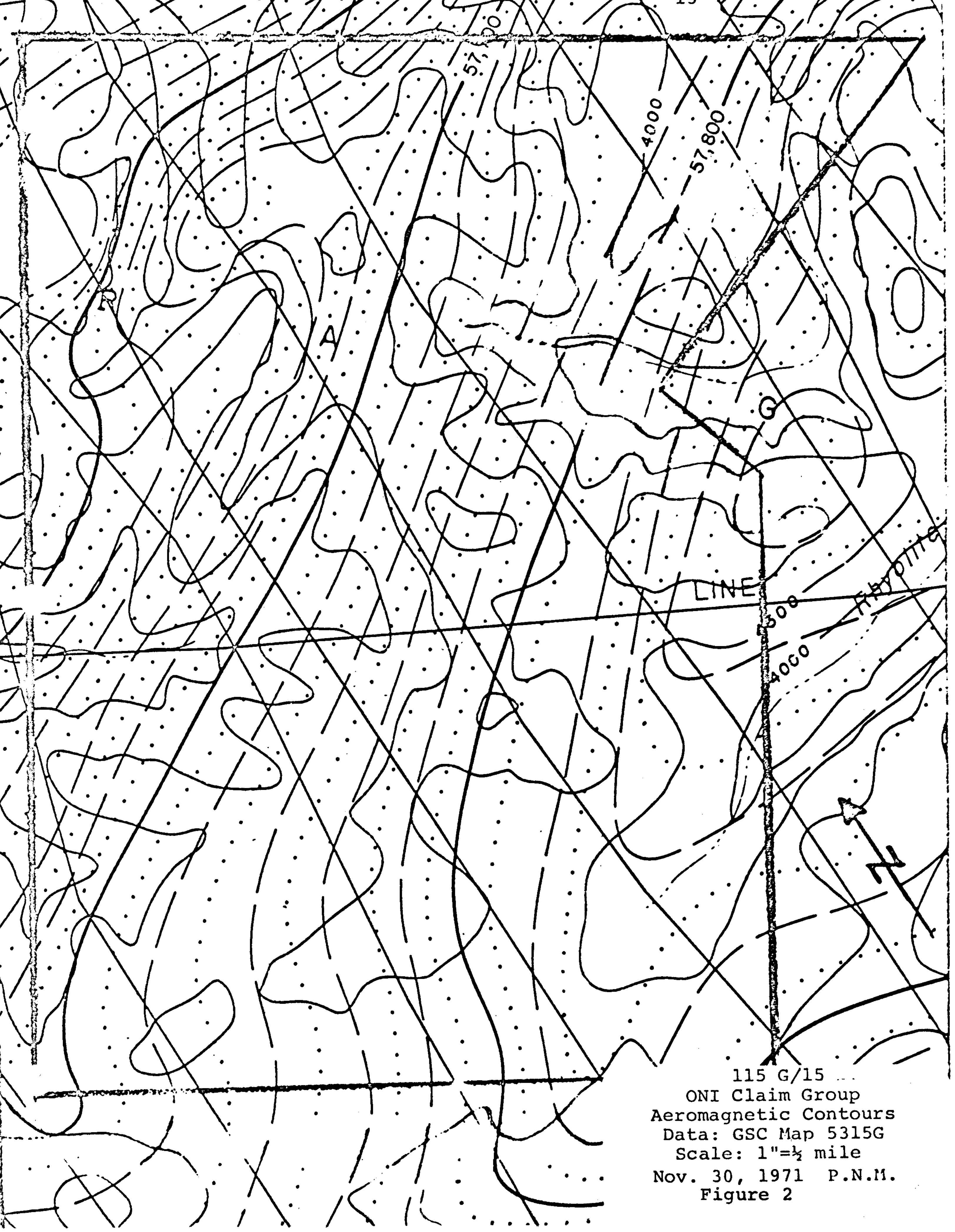
The regional trend of the aeromagnetics is northwest but on the property the trend is northeast* (Figure 2). The east edge of the property borders on a northeast trending magnetic high** (Figure 3) which extends to the south and west of the granite found in the southeast corner of the property. This pluton could conceivably underlay most of the banded quartzites on the Oni property. The aeromagnetic anomaly is caused probably by a granodiorite stock which outcrops east of the Oni claims (Figure 3A).

STRUCTURAL GEOLOGY

The 1:50,000 topographic maps (Figure 3A) of the area shows that the claim group is crossed by streams which form a rectangular pattern. This configuration probably represents zones of faulting, fracturing and geological contacts. The compilation in Figure 3A is presented to show these topographic lineaments. The northwest set appear to terminate abruptly against a northeast trending one along part of Onion Creek. This suggests that northwest tectonic movements are earlier than the northeast ones. Other minor and northerly trending lineaments may represent tension fractures associated with the two major fault directions.

*G.S.C.Aeromagnetic Map 5315G (1967)

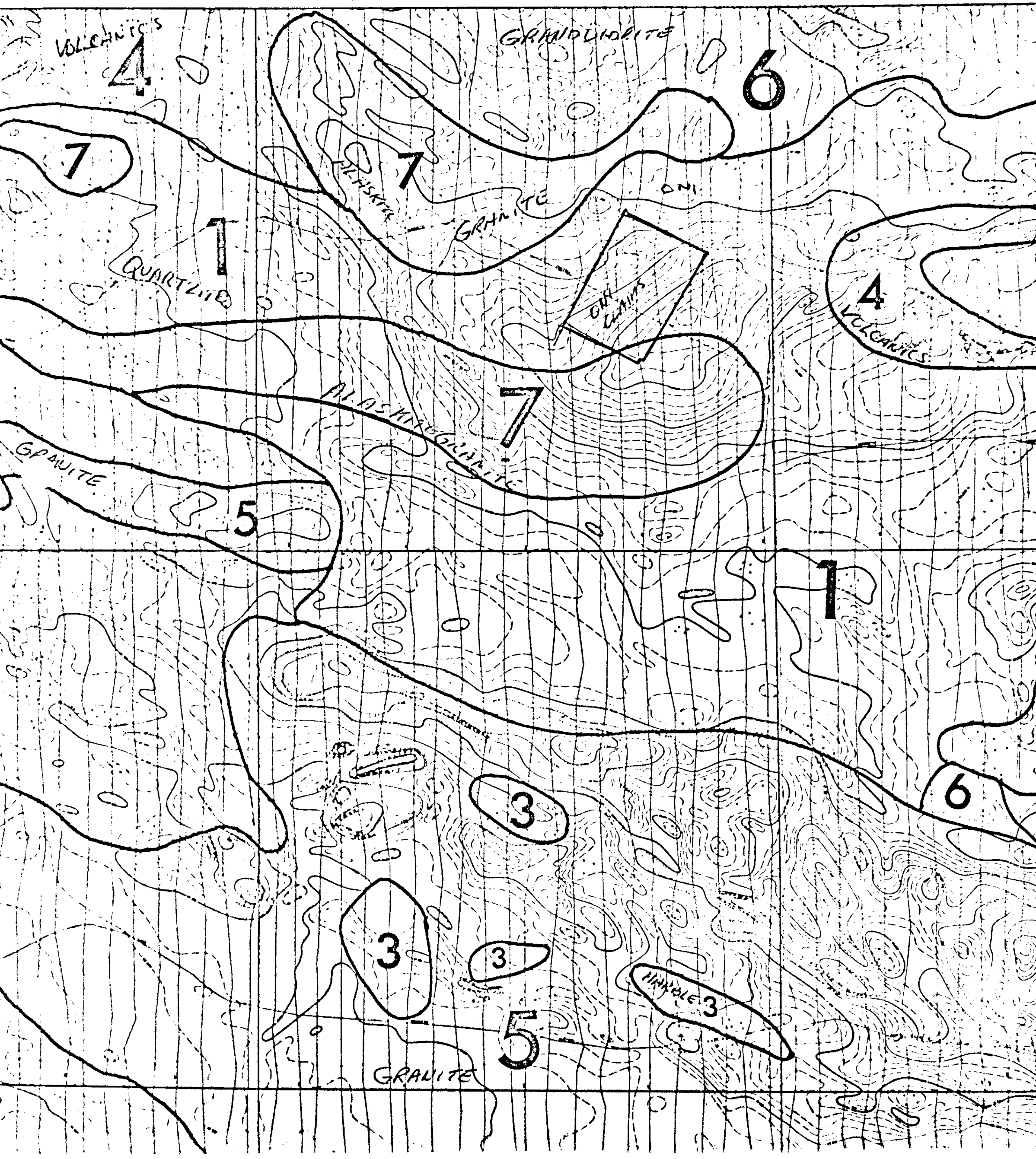
**Muller, J.E. (1967) Kluane Lake Map Area, Y.T. G.S.C.Mem.340



115 G/15
ONI Claim Group
Aeromagnetic Contours
Data: GSC Map 5315G
Scale: 1"=½ mile
Nov. 30, 1971 P.N.M.
Figure 2

Figure 3 - Compilation of Regional Geology and Aeromagnetics - 115G/15

Scale: 1 inch:4 miles



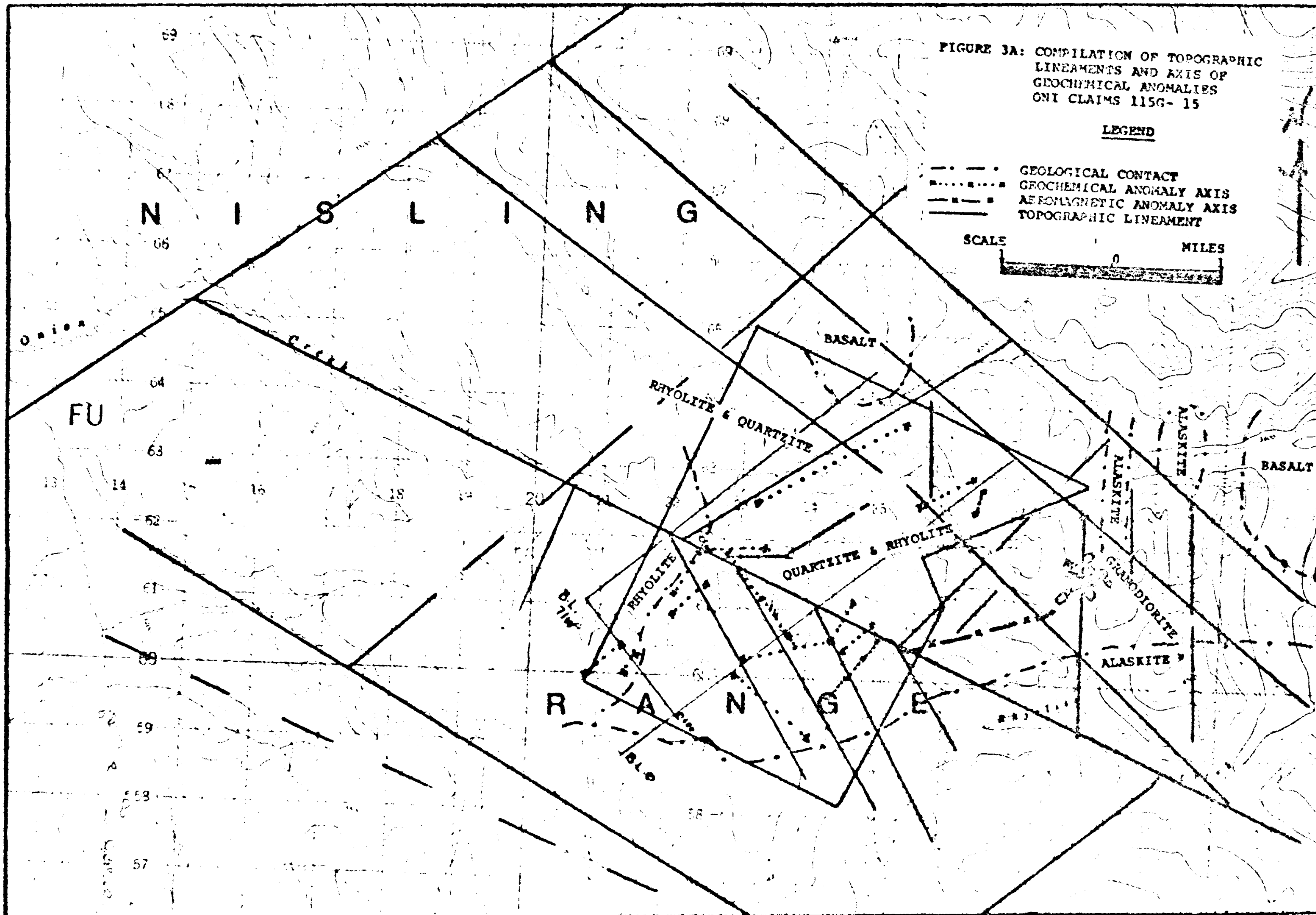


FIGURE 3A: COMPILATION OF TOPOGRAPHIC LINEAMENTS AND AXIS OF GEOCHEMICAL ANOMALIES ONI CLAIMS 115G- 15
LEGEND
GEOLOGICAL CONTACT
GEOCHEMICAL ANOMALY AXIS
AEROMAGNETIC ANOMALY AXIS
TOPOGRAPHIC LINEAMENT
SCALE
0
MILES
N I S L I N G
FU
R A N G E
BASALT
RHYOLITE & QUARTZITE
QUARTZITE & RHYOLITE
RHYOLITE
ALASKITE
GRANODIORITE
BASALT

Slicken surfaces were seen in quartzites 400 feet west of base line 0 at 36 north and 200 feet south of L80N,1-E. Their strikes were approximately 170T and at the first locality an east dipping breccia zone 6 inches wide strikes across the quartzites at 020T and dips east. The quartzites here trend east and dip 50° south. A strong structural lineament (150T) occurs along the northeast ridge almost parallel to L176N. This may represent either a fault or a contact between feldspar porphyry and the quartzites.

The trends of the porphyritic dykes are between 080T and 090T and between 020T and 340T.

ECONOMIC GEOLOGY

No economically significant mineralization occurs on the property. Ubiquitous pyrite and minor ($<1\%$) chalcopyrite occurs in pyritiferous quartzite. The chalcopyrite wss found in two samples on L32S,25W, and 200 feet south of L124N at 46+00 West. Traces of molybdenite was found in two samples of feldspar porphyry near L8N,14E.

The presence of pyrite and minor chalcopyrite in addition to the geochemically high Cu-Mo values found in the pyritiferous quartzites suggests that these elements have been introduced to these rocks in subeconomic amounts. A possible source would be the intrusive stock which is indicated by the northeast trending aeromagnetic anomaly. Whether economic amounts of Cu-Mo are present at depth must remain within the realm of speculation until further work is completed.

ONI GROUP: N.T.S. REF. NO. 115-G-15
Copper, Zinc and Molybdenum soil profiles relating to geological cross-section
Location: Line 80 North, looking northeast.

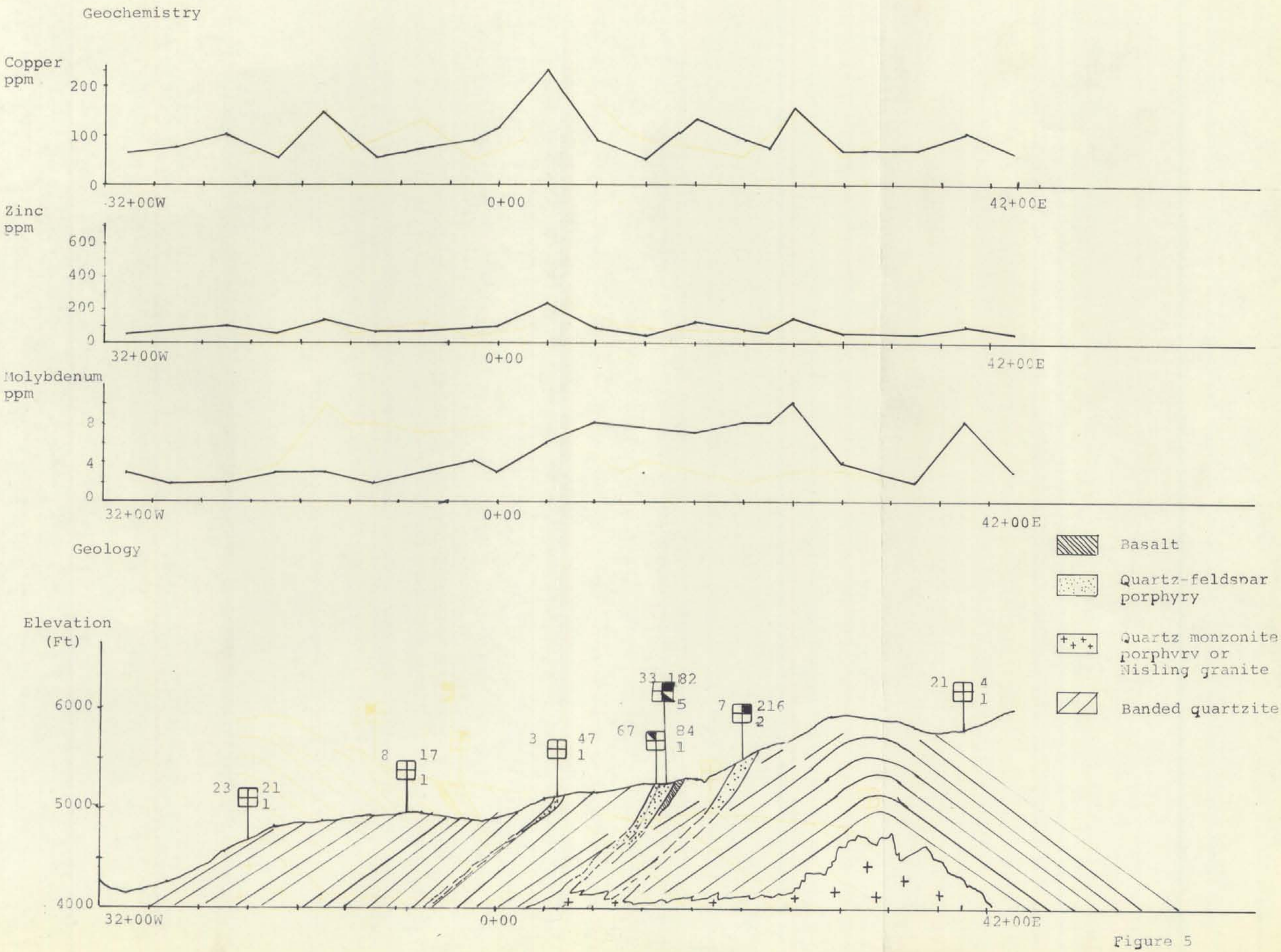


Figure 5

GEOLOGICAL SUMMARY

The Oni claim group is underlain mainly by banded quartzites which strike east-west. Small outcrops of granite occur in the southeast corner of the claim group and quartz monzonite porphyry is present along the north border of the south half sheet. The quartz monzonite porphyry contains molybdenite and the granite is barren of mineralization. Felsic porphyritic dykes generally trend north. Porphyritic basalt and tuffaceous breccia occur in the northwest corner of the claims. The northeast aeromagnetic trend may be due to underlying quartz monzonite and/or granodiorite. However, molybdenum mineralization is associated with this intrusion on the adjoining property to the east.

No economically significant mineralization was found on the Oni claims.

GEOCHEMISTRY

Description of the Property and Soil Horizons

The property is situated in an unglaciated region which is characterized by "V"-shaped valleys and castellated outcrops. The ridges are sharp so that a great percentage of the soil samples were taken from the flanks of the mountains where the soil development is immature. Volcanic ash from the St. Elias Range covers the area and is thickest in the valleys.

A typical soil profile taken from a slope consists of 4 inches of moss and grass, 2 inches of ash, 2 inches of dark brown soil and rock chips, and talus. Sampling of the B horizon is easiest on the ridges where it is exposed and most difficult in the valleys where it occurs at depths of one and a half feet. Profile 1 (Table 2) was dug in the valley north of line 88. The profile illustrates the need to sample the B horizon as values of 69, 293 and 22 ppm for copper, zinc and molybdenum respectively were obtained. The lowest values were obtained from the ash.

Table 2

Distribution of Metals in Soil Horizons

Test Pit 1: Location: 200' north of L88 at 24 east.

Sample No.	Horizon	Thickness	Description	Geochemical Results (ppm) Cu	Zn	Mo
4995	A_o'	5"	Black-rootlets in decomposed organic material	110	24	1
4996	Ash	6"-8"	light grey to light brown ash, sandy, black specks	7	8	2
4997	B'	1"-2"	light brown - B horizon of ash	20	23	ND
4998	A_o	1"-2"	organic, reddish brown color, more decomposed, rootlets are smaller, old A_o	40	14	1
4999	B		grey clay, rootlets, small rock chips of sericite schist	69	293	22

Sampling Procedure (Soils and Rocks)

Approximately 1,700 samples were taken at a spacing of 200 feet by 800 feet (Figures 6A, 6B - Geochemical Maps). In general an attempt was made to sample the B horizon wherever possible. Rock chip samples were taken in lieu of soils where no soil could be obtained. Their locations and metal content are plotted on the Geology Maps (Figures 7A and 7B).

Laboratory Procedures

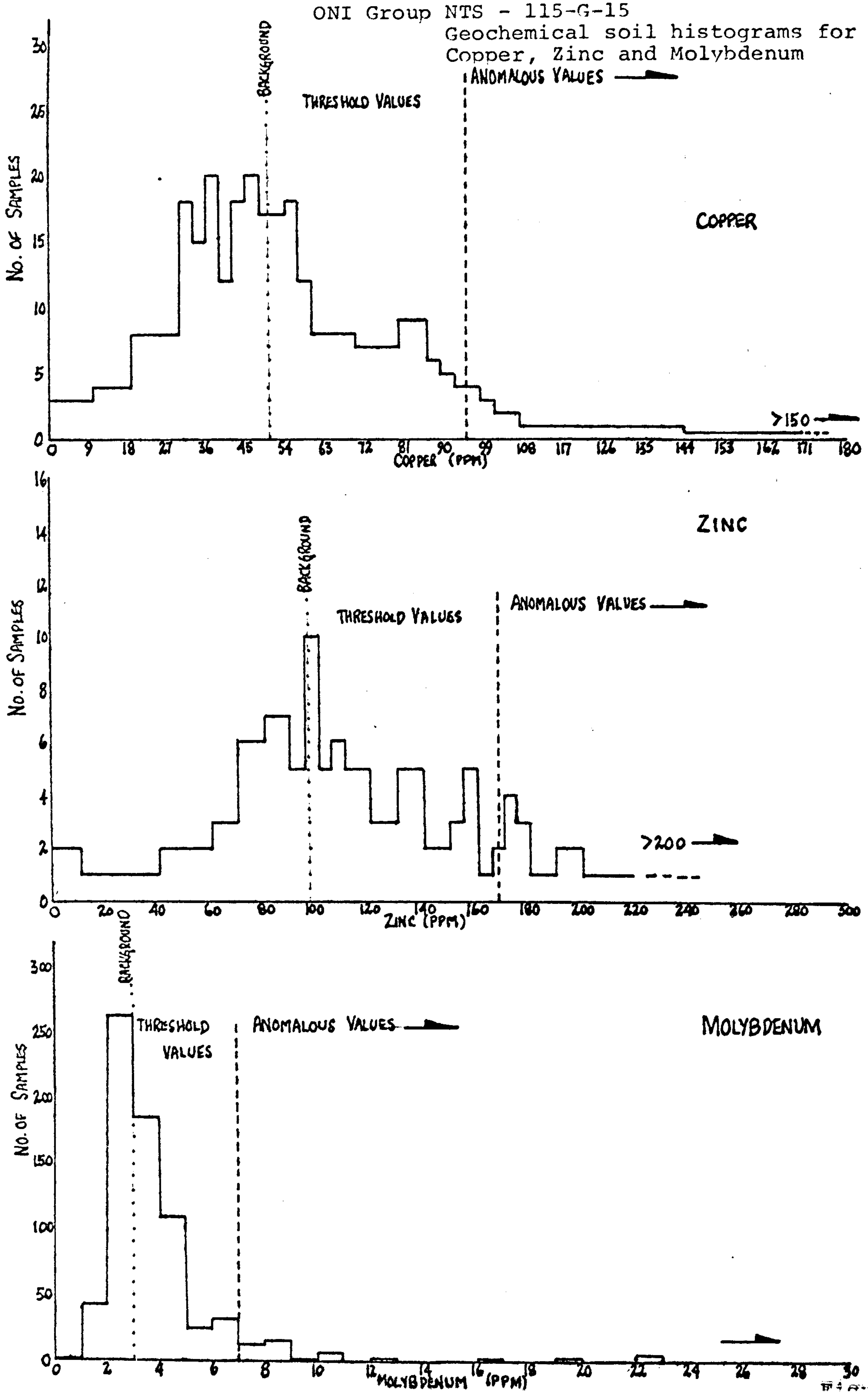
The samples were sent to Bondar-Clegg Limited in Whitehorse where every second one was analyzed for copper, zinc and molybdenum. Atomic absorption spectrometry after extraction with a hot solution of HCl-HNO_3 was employed to make the determinations.

Statistics

Cumulative percentage frequency graphs and histograms were drawn for each element. Those values that fall within the 50 percentage range of the non-anomalous population have been called the background and those that occur above the 97.5 percentage value are considered anomalous. Figure 4 illustrates the geochemical soil histograms for copper, zinc and molybdenum. The background and anomalous values are given below:

	Background (ppm)	Anomalous Values (ppm)	Range of Values (ppm)
Cu	50	95	7 - 281
Zn	98	170	5 - 1500
Mo	3	7	ND - 19

ONI Group NTS - 115-G-15
Geochemical soil histograms for
Copper, Zinc and Molybdenum



The copper and zinc anomalous values are abnormally high for a property of this size.

Heavy Mineral Samples

Six heavy mineral samples were collected and analyzed for copper, zinc, molybdenum, lead and silver. The two samples containing the highest values are in the stream that drains the most interesting area which lies between lines 56 and 88 north. Their locations are plotted on the enclosed geochemical maps. The locations and the geochemical results for each sample are recorded in Table 3.

The high values in the heavy mineral samples indicated that the dispersion trains outlined by the original stream sediment anomalies are in part mechanical. Hence the source of these anomalies must suboutcrop in the region outlined by the soil geochemical anomalies.

Table 3

Heavy Minerals

Sample No.	Location	Geochemical Results (ppm)				
		Cu	Pb	Zn	Mo	Ag
4880	400 feet south of line 96N at 62W	150	38	246	8	1.4
4881	200 feet south of line 48N at 30+00W	136	62	460	7	1.6
4882	264N,23+00W	176	44	470	9	1.6
4883	400'S of L24 at 73+00W	72	53	208	4	1.2
4884	400 feet south of line 96N at 26+00W	46	22	104	3	0.9
4885	200'N of line 88N at 19+00 west	304	107	800	26	2.8

Geochemical Results

Copper, Zinc and Molybdenum Anomalies

The general trend of the copper anomalies is northeast. Contours for 50, 100 and 200 ppm illustrate this trend on the compilation maps (Figures 8A and 8B). Elongated areas enclosed by the 100 ppm contour parallel base line 70 west. At the south end of the property there is an east-west trend. In the east-central portion of the property one large anomalous area trends east-northeast. The copper anomalies generally form lineaments which are thought to be related to a northeast trending fracture system in the quartzites and rhyolite (Figure 3A).

For zinc the general trend is similar to that of copper. However in the northeast part of the claims the trend as outlined by the 170 ppm contour is more to the east. In the southern part the trend of some of the areas is northeast but two relatively large areas trend east-west. The largest area crosses the top part of the south map and is bisected by line 64 north. Another area that trends southeast is present along the east portions of lines 32N and 40N. This elongated and lobate character of the anomalies parallel to the direction of the topographic lineaments (Figure 3A) suggests that the distribution of zinc is structurally controlled.

Contours of 4 and 7 ppm were drawn for molybdenum. Only the 4 ppm contour outlines definite trends. One large continuous area outlined by the 4 ppm contour trends northeast from L32 south 26+00 west to L64N where it makes a 90-

degree turn to the southeast and continues to the east boundary of the property. Two anomalous areas containing 5 and 6 anomalous samples occur within the 4 ppm contours. The 5 sample anomaly has values of 46, 16, 10, 7 and 10 ppm and is located between lines 24 and 32 south at approximately 40 west. The 6 sample anomaly has values of 10, 8, 8, 8, 8 and 7 ppm and is located between lines 72 and 80 north at approximately 16 east. Other molybdenum anomalies are scattered over the property but are mainly one sample anomalies with no values greater than 8 ppm.

There is a general northeast trend of the copper, zinc and molybdenum anomalies. The second major geochemical trend appears to be to the southeast; Cu, Zn and Mo contours on the west part of L64N and the zinc anomaly on the east side of lines 32N and 48N are prime examples. These trends and their relation to the topographic lineaments is well illustrated in Figure 3A.

Anomaly 1

Anomaly 1 occurs along the main ridge between lines 32 and 108 north. It includes an elongated, irregular-shaped copper anomaly that trends northeast, east and southeast, and the 8 sample molybdenum anomaly. The five highest copper values are 165, 160, 154, 152 and 148 ppm; the five higehst molybdenum values are 10, 8 8, 8, and 8 ppm and the five highest zinc values are 675, 565, 540, 500 and 470 ppm. The anomaly is irregularly shaped but covers an area of approximately 10 claims. The area is mainly underlain by banded and micaceous quartzite and is intruded by pyrrhoti-ferrous rhyolite, and quartz-feldspar porphyry. About 200 feet north of L80N 14E traces of molybdenite were found in a quartz vein in a small outcrop of quartz monzonite porphyry. This type of mineralization in part explains the molybdenum anomaly. Grab samples (4471 and 4920) of pyritiferous quartzite along the anomalous slopes ran 83 and 115 ppm copper, and 490 and 97 ppm zinc respectively which suggests that the pyritiferous quartzite is the cause of the copper and zinc anomaly. Figure 5 is a cross section along line 80N showing the relationships between the rock geochemistry, the soil geochemistry and geology.

The anomalous area on L80N lies between base line O and 28+00 east and the line crosses over banded quartzite, rhyolite and minor basaltic dykes. An intrusion is inferred for the source of the rhyolite dykes and as a possible cause for the aeromagnetic anomaly to the northeast of the property. Several rock chip samples that were taken along the line show increases in copper-zinc and molybdenum in some of the rhyolite dykes. However the section lies along a northwest topographic lineament and the high metal values in the soils are probably related to a series of intersecting NE and NW fractures which break up the rocks here. The source of the metal is postulated to be a buried intrusion (granodiorite?), the presence of which is reflected by a northeast trending aeromagnetic anomaly just off of the east boundary of the property (Figure 3A).

Anomaly 2

Anomaly 2 occurs in the southwest end of the property and surrounds a north trending ridge. The anomaly trends northeast and encompasses an area of approximately 6 claims. The five highest copper values are 225, 204, 194, 140 and 118 ppm. The five highest zinc values are 2400, 1160, 980, 730 and 583 ppm and the five highest molybdenum values are 46, 16, 10, 8 and 7 ppm. One rock chip of pyritiferous quartzite found on line 32 south and 22 west analyzed 22 ppm molybdenum and another (#4470) on L16S, 42W analyzed 210 ppm Cu and 6 ppm Mo. The feldspar porphyry dykes also contain minor amounts of molybdenum (i.e. 2, 3 and 4 ppm) and are also a source for molybdenum. The high values of molybdenum may also be related to the contact zone of the alaskite granite which occurs to the south. The rocks in this area (rhyolite and quartzite) have been fractured in a northeasterly direction and mineralized with subeconomic quantitites of Cu, Zn and Mo. Whether better grade material is present at depth can be determined only by doing additional work.

Geochemical Summary

Soil sampling on the property outlined 2 major anomalous areas. The trend of the anomalies which is generally northeast, parallels the aeromagnetic trend. No values were obtained in the soils or the rocks that would indicate a zone containing economic quantities of Cu, Zn and Mo at surface. However the anomalies suggest that above normal amounts of these metals have been introduced to the rocks.

It is hypothetized that the

source of metal is a buried northeast trending intrusion; metal bearing solutions from this stock have permeated the fractured overlying rocks and introduced geochemically anomalous but subeconomic amounts of Cu, Zn and Mo. Whether metal values increase at depth will have to await future work.

RECOMMENDATIONS

Although the geological and geochemical surveys did not outline any economically significant concentrations of metal at surface, it is suggested that the claims underlying anomalies 1 and 2 be retained while claims west of BL 70W should be dropped. Sufficient metal was found in the surface rocks and soils to explain the anomalous stream sediment anomalies. However whether metal values increase with depth or not must remain speculative until exploration at depth is carried out. The Cu, Zn and Mo appear to be concentrated along NE-NW fracture zones in the quartzites and rhyolites and the source could be a buried stock of granodiorite. Future work would involve probably deep penetration I.P and drilling to evaluate the economic potential at depth.

Submitted by:

J. T. Neelands, B.Sc.

C.F. Gleeson, Ph.D., P.Eng.

REGISTERED PROFESSIONAL ENGINEER
C. F. GLEESON
PROVINCE OF ONTARIO

Toronto

September 30, 1972

APPENDIX I

Claim Post Information

Ref.No. on Map	Post No.	Claim No.	Tag No.	Staker	Date	Location
A	1	1	Y63026	R.Fysh	Sept.22/71	50'S of L32N
	1	2	Y63027	"	"	62+00E
B	1	3	Y63028	"	"	100'N of L24
	1	4	Y63029	"	"	at 46+00E
	2	1	Y63026	"	"	"
	2	2	Y63027	"	"	"
C	1	5	Y63030	"	"	300'N of L16N at
	1	6	Y63031	"	"	37+00E
	2	3	Y63028	"	"	"
	2	4	Y63029	"	"	"
D	1	7	Y63032	"	"	400'N of L8N at
	1	8	Y63033	"	"	23+00E
	2	5	Y63030	"	"	"
	2	6	Y63031	"	"	"
E	1	9	Y63034	G.W.G.Watson	"	200'S of 8N at
	1	10	Y73035	"	"	13+00E
	2	7	Y63032	R.Fysh	"	"
	2	8	Y63033	"	"	"
F	1	11	Y63036	G.W.G.Watson	"	BL at 0+00
	1	12	Y63037	"	"	"
	2	9	Y63034	"	"	"
	2	10	Y63035	"	"	"
G	1	13	Y63038	"	"	200'N of L8S at
	1	14	Y63039	"	"	11+00W
	2	11	Y63036	"	"	"
	2	12	Y63037	"	"	"
H	1	15	Y63040	"	"	400'N of L16S at
	1	16	Y63041	"	"	23+00W
	2	13	Y63038	"	"	"
	2	14	Y63039	"	"	"
I	1	17	Y63042	L.M.Knot	"	L16S at 36+00W
	1	18	Y63043	"	"	"
	2	15	Y63040	G.W.B.Watson	"	"
	2	16	Y63041	"	"	"
J	2	18	Y63042	L.M.Knot	"	L24S at 46+00W
	2	18	Y63043	"	"	"
K	1	37	Y63062	J.Buffington	"	200'N of L56N at
	1	38	Y63063	"	"	49+00E
L	1	39	Y63064	"	"	L48N,34+00E
	1	40	Y63065	"	"	"
	2	37	Y63062	"	"	"
	2	38	Y63063	"	"	"
M	1	41	Y63066	A.Coulombe	"	200N of L40 at
	1	42	Y63067	"	"	23+00E
	2	39	Y63064	J.Buffington	"	"
	2	40	Y63065	"	"	"
N	1	43	Y63068	A.Coulombe	Sept.23/71	200'N of L32N at
	1	44	Y63069	"	"	10+00E

N	2	41	Y63067	A.Coulombe	Sept23/71	200'N of L32N at
	2	42	Y63066	"	"	10+00E
O	1	45	Y63070	"	"	200'W of BL 1 at
	1	46	Y63071	"	"	28+00N
	2	43	Y63068	"	"	"
	2	44	Y63069	"	"	"
P	1	47	Y63072	S.Johnson	"	400'S of L24N at
	1	48	Y63073	"	"	17+00W
	2	45	Y63070	A.Coulombe	"	"
	2	46	Y63071	"	"	"
Q	1	49	Y63074	S.Johnson	"	300'S of L16N at
	1	50	Y63075	"	"	30+00W
	2	47	Y63071	"	"	"
	2	48	Y63073	"		
R	1	51	Y63076	"	"	300'N of LO at
	1	52	Y63077	"	"	40+00W
	2	49	Y63074	"	"	"
	2	50	Y63075	"	"	"
S	1	53	Y63078	"	"	500'S of LO at
	1	54	Y63079	"	"	54W
	2	51	Y63076	"	"	"
	2	52	Y63077	"	"	"
T	2	53	Y63078	"	"	500'N of L8S at
	2	54	Y63079	"	"	66+00
U	1	19	Y63044	L.M.Knott	"	L80,33+50E
	1	20	Y63045	"	"	"
Y	1	21	Y63046	"	"	400'N of L72N at
	1	22	Yy3047	"	"	26+00E
	2	19	Y63044	"	"	"
	2	20	Y63045	"	"	"
W	1	23	Y63048	"	"	25'S of L72 at
	1	24	Y63049	"	"	16+00E
	2	21	Y63046	"	"	"
	2	22	Y63047	"	"	"
X	1	25	Y63050	V.M.Kearney	"	L64N,8+00E
	1	26	Y63051	"	"	"
	2	23	Y63948	L.M.Knott	"	"
	2	24	Y63049	"	"	"
Y	1	27	Y63052	V.M.Kearney	"	500'S of L64N
	1	28	Y63053	"	"	at <1+00W
	2	25	Y63050	"	"	"
	2	26	Y63051	"	"	"
Z	1	29	Y63054	"	"	200'N of 48N at
	1	30	Y63055	"	"	22+00W
	2	27	Y63052	"	"	"
	2	28	Y63053	"	"	"
AA	1	29	Y63056	"	"	200'N of L40N at
	1	30	Y63057	"	"	42+00W
	2	27	Y63054	"	"	"
	2	28	Y63055	"	"	"
AB	1	31	Y63058	"	"	300'N of L32N at
	1	32	Y63059	J.Buffington	"	50+00W
	2	29	Y63056	"	"	"
	2	30	Y63057	"	"	"
AC	1	33	Y63060	"	"	300'S of L32N
	1	34	Y63061	"	"	at 64+00W

AC	2	31	Y63058	J.Buffington	Sept.23/71	300'S of L32N at
	2	32	Y63059	"	"	64+00W
AD	2	33	Y63060	"	"	500'S of L24N at
	2	34	Y63061	"	"	80+00W
AE	1	55	Y63080	S.Johnson	"	L104N,20+50E
	1	56	Y63081	"	"	"
AF	1	57	Y63082	G.John	"	200'N of L96N at
	1	58	Y63083	"	"	9E
	2	55	Y63080	S.Johnson	"	"
	2	56	Y63081	"	"	"
AG	1	59	Y63084	G.John	"	400'E of OBL at
	1	60	Y63085	"	"	94+00N
	2	57	Y63082	"	"	"
	2	58	Y63083	"	"	"
AH	1	61	Y63086	"	"	50'S of 88N at
	1	62	Y63087	"	"	15+00W, crosses
	2	59	Y63084	"	"	88N at 12+50W
	2	60	Y63085	"	"	"
AI	1	63	Y63088	"	"	L80N at 26+00W
	1	64	Y63089	"	"	"
	2	61	Y63086	"	"	"
	2	62	Y63087	"	"	"
AJ	1	65	Y63090	"	"	400'W of L72N at
	1	66	Y63091	"	"	40+00W
	2	63	Y63088	"	"	"
	2	64	Y63089	"	"	"
AK	1	67	Y63092	W.Ward	"	on hillside, line
	1	68	Y63093	"	"	crosses 72N at
	2	65	Y63090	G.John	"	40+00W
	2	66	Y63091	"	"	"
AL	1	69	Y63094	W.Ward	"	100'N of L64N
	1	70	Y63095	"	"	at 60+00E
	2	67	Y63092	"	"	"
	2	68	Y63093	"	"	"
AM	1	71	Y63096	"	"	56N at 75+00W
	1	72	Y63097	"	"	line crosses
	2	69	Y63094	"	"	70W BL at 58+80N
	2	70	Y63095	"	"	"
AN	2	71	Y63096	"	Sept22/71	400'N of L48N at
	2	72	Y63097	"	"	84+00W
AO	1	73	Y63098	W.Benslin	"	300'SW of L144N at
	1	74	Y63099	"	"	30W
AP	1	75	Y63100	E.James	"	500'E of OE BL
	1	76	Y73101	"	"	at 123N
	2	73	Y63098	"	"	"
	2	74	Y63099	"	"	"
AQ	1	77	Y63102	"	"	400'E of 112N
	1	78	Y63103	"	"	23+00W
	2	76	Y63100	"	"	"
	2	77	Y63101	"	"	"
AR	1	79	Y63104	"	"	400'N of L104N at
	1	80	Y63105	"	"	30+00W
	2	77	Y63102	"	"	"
	2	78	Y63103	"	"	"

AS	1	81	Y63498	L.McCowan	Sept22/71	300'W of 104N
	1	82	Y63499	"	"	36+00W
	2	79	Y63104	E.James	"	"
	2	80	Y63105	"	"	"
AT	1	83	Y63500	L.McCowan	"	100'S of 96N
	1	84	Y63501	"	"	57+00E
	2	81	Y63498	"	"	"
	2	82	Y63499	"	"	"
AU	1	85	Y63502	"	"	500'E of 72N at
	1	86	Y63503	"	"	87+00W
	2	83	Y63500	"	"	"
	2	84	Y63501	"	"	"
AV	1	87	Y63504	"	"	1000'W of 70W BL
	1	88	Y63505	"	"	at 87+00N
	2	85	Y63502	"	"	600'E of 80N at
	2	86	Y63503	"	"	86+00W
AW	1	88	Y63433	"	"	800'W of 80N at
	1	89	Y63434	"	"	87+00W
	2	86	Y63504	"	"	"
	2	87	Y63505	"	"	"
AX	2	88	Y63433	"	"	200'W of 72N at
	2	89	Y63434	"	"	101+00W
AY	1	113	Y63457	no name	"	OEBL, at 140N
AZ	2	113	Y63457	visible	"	144N,10+00E
BA	1	109	Y63453	L.Johnson	"	152N at 6+50W
	1	110	Y63454	"	"	"
	1	91	Y63435	W.Benslin	"	"
	1	92	Y63436	"	"	"
BB	1	111	Y63455	L.Johnson	"	100'S of 160N at
	1	112	Y63456	"	"	4+00E, crosses
	2	109	Y63453	"	"	160W at 6+50E
	2	110	Y63454	"	"	"
BC	2	111	Y63455	"	"	on ridge, no name
	2	112	Y63456	"	"	visible
BD	1	93	Y63437	W.Benslin	"	200'N of L144N at
	1	94	Y63438	"	"	18+00W
	2	91	Y63435	"	"	"
	2	92	Y63436	"	"	"
BE	1	95	Y63439	W.Beaslin	Sept.23/71	300'SW of L144N
	1	96	Y63440	"	"	at 30+00W
	2	93	Y63437	"	"	"
	2	94	Y63438	"	"	"
BF	1	97	Y63441	L.Enoch	"	300'S of line
	1	98	Y63442	"	"	136N
	2	95	Y63439	W.Beaslin	"	"
	2	96	Y63440	"	"	"
BG	1	99	Y63443	L.Enoch	"	400'W of L128N at
	1	100	Y63444	"	"	47+00W
	2	97	Y63441	"	"	"
	2	98	Y63442	"	"	"
BH	1	101	Y63445	"	"	500'E of 120N at
	1	102	Y63446	"	"	66+00W
	2	99	Y63443	"	"	"
	2	100	Y63444	"	"	"

BI	1	103	Y63447	L.Enoch	Sept.23/71	400'W of L70W
	1	104	Y63448	"	"	BL at 119N
	2	101	Y63445	"	"	"
	2	102	Y63446	"	"	"
BJ	1	105	Y63449	L.Johnson	"	500'W of 112N
	1	106	Y63450	"	"	at 84+00W
	2	103	Y63447	L.Enoch	"	"
	2	104	Y63448	"	"	"
BK	1	107	Y63451	L.Johnson	Sept.22/71	200'W of L104N
	1	108	Y63452	"	"	at 103W
	2	105	Y63449	"	"	"
	2	106	Y63450	"	"	"
BL	2	107	Y63451	"	"	
	2	108	Y63452	"	"	

APPENDIX II

Line Cutting Information

1)	Number of man days required to cut line was:	16 days
2)	Footage cut as cross lines:	322,800
3)	Footage cut as base lines:	39,200
4)	Total footage cut (cross lines + base lines)	362,000 = 68 miles
5)	Average progress per man per day	0.6 mile/day

6) 90% above timber line (approximately 4000 feet)
10% below timber line which is semi-wooded -
a mixture of poplar, spruce and tag alders

APPENDIX III

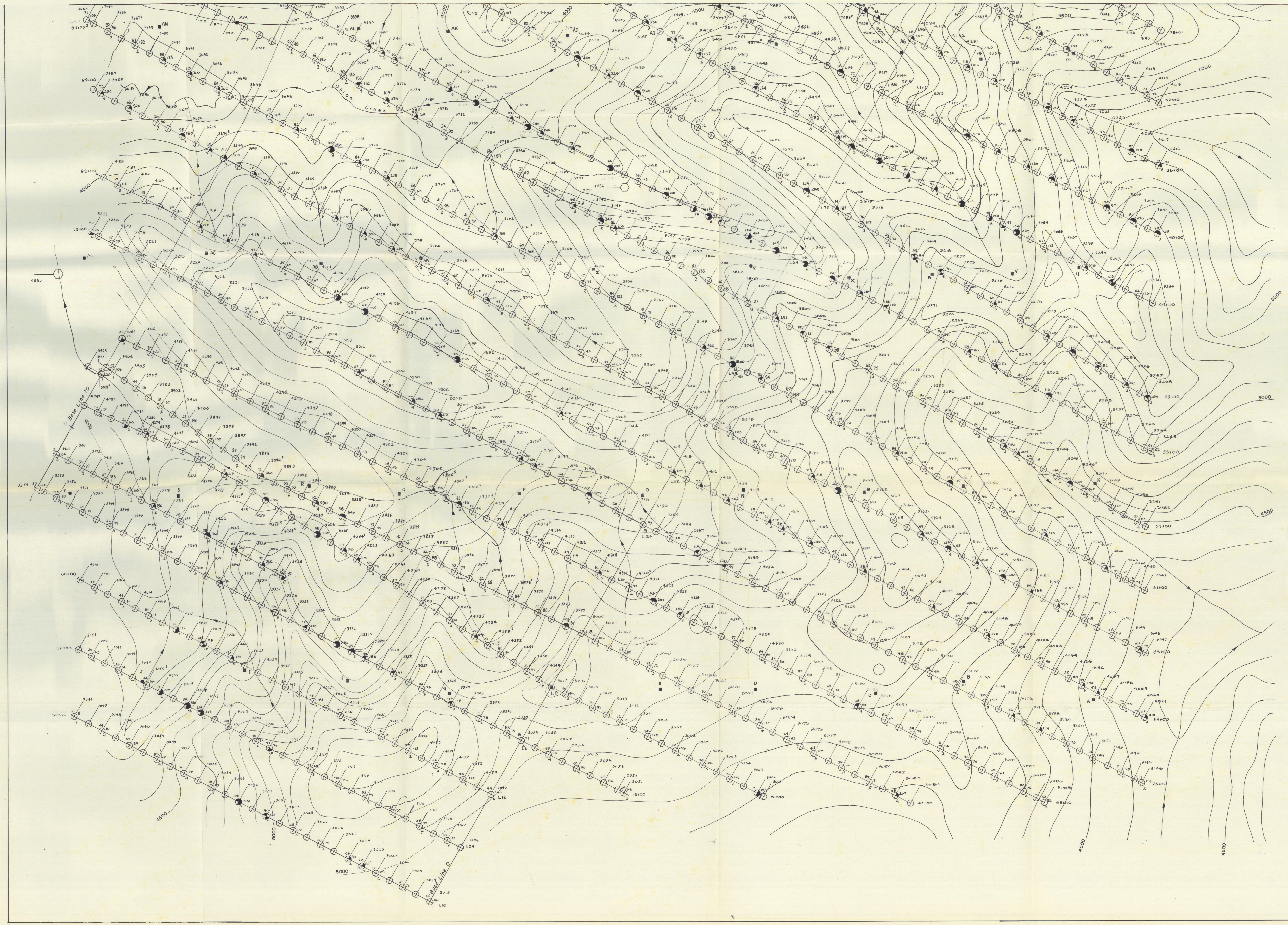
Geochemical Analyses of Rock Samples

Sample No.	Location	Rock Type & Description	Cu	Zn	Mo
			Geochem Results (ppm)		
5000	LO,24E	Leuco-granite	4	88	1
4141	LO,16E	grey feldspar rhyolite porphyry	5	48	1
4142	LO,0	basalt	44	53	4
4143	"	quartz	6	4	1
4144	"	grey feldspar rhyolite porphyry	12	88	2
4145	L32S,23W	"	13	40	4
4146	"	pyritiferous quartzite	52	22	16
4147	L80N,20E	rhyolite	7	216	2
4148	L96N,30E	porphyritic basalt	45	136	3
4149	L32S, in creek	shear zone in rhyolite	13	200	1
4150	LO,34W	rhyolite (po)	18	195	1
4151	L96N,20W	Quartz monzonite porphyry	21	62	2
4152	LO,56W	Quartz feldspar porphyry	13	28	3
4050	L32N,49E	biotite aplite	3	90	1
4201	L112N,15E	purple quartz feldspar porphyry	4	61	1
4153	L152N,10E	por·basalt, gabbro	23	103	2
4155	L104N,50W	quartz feldspar porphyry	2	83	2
4157	L144N,20W	basalt pillow	21	80	2
4156	L144N,20W	purple porphyry	4	68	1
4158	L144N,28W	quartz biotite sericite schist	46	62	2
4455	L32N,32W	skarn(?)	5	138	1
4456	"	aplite	6	56	1
4457	"	specular hematite pyrite quartzite	90	136	1
4458	"	Lime silicate (skarn) quartzite	34	102	4
4459	20' above L32N, 45W	quartzite (py)	55	28	2
4460		Aplite	38	107	2
4994	L32S,23W	rhyolite	9	23	4
4993	" ,25W	quartzite	99	41	22
4992	" ,44W1	rhyolite	7	69	4
4989	L16N,26E	rhyolite porphyry	4	96	2
4990	L8N,BLO	quartzite	24	44	1
4991	L8S,15E	leucogranite	2	52	1
4988	L40N,56E		10	72	1
4987	L40N,50E	"	4	68	1
4986	L24N,12W	quartzite	28	125	2
4985	" ,46W	grey rhyolite	8	28	2

4984	L24N,70W	rhyolite porphyry	6	65	ND
4980	L80N,38E	quartzite	21	4	1
4881	L88N,22E	rhyolite(pyrite)	31	51	2
4982	L72N,18E	quartzite	26	13	1
4983	L56N,46E	quartzite	23	32	1
4981	L72N,31E	quartzite (schist)	4	26	1
4897	L8S,7W	quartzite	28	12	1
4898	L8S,20W	quartzite	11	40	2
4899	",35W	rhyolite	10	12	4
4900	",67W	rhyolite(felsite)	4	40	2
4906	L80N,47W	mic.quartzite (schist)	30	60	1
4908	L88N,34W	quartz feldspar porphyry(felsite)	4	80	2
4913	L80N,7W	quartzite	8	17	1
4907	L88N,45W	mic.quartzite	30	33	4
4914	L80N,20W	quartzite	23	21	1
4903	L40N,22W,	mic.quartzite	36	46	2
4901	L40N,2E	quartzite (py.)	126	20	4
4902	L40N,3W	quartzite	102	40	8
4904	L64N,10W	"	18	16	1
4905	L64N,8E	rhyolite	25	73	2
4909	L160N,46W	grey andesite (py)	36	140	3
4910	L160N,BL1	quartzite	21	15	1
4911	L160N,58W	quartz feld.porphyry (purple matrix)	9	47	1
4916	L160N,40W	quartzite (py)	38	86	13
4919	L184N,2E	mic.quartzite	32	35	2
4920	L72N,12E	quartzite (py)	115	97	3
4921	L72N,16W	quartzite	30	35	1
4922	L72N,46W	"	16	20	1
4925	L112N,38W	mic.quartzite	25	75	2
4923	L48N,12E	mic.quartzite	35	50	3
4924	L56N,30W	grey rhyolite with k feld.pheno.	22	135	3
4926	L56N,16W	grey rhyolite-quartz (feld.pheno)dacite	10	92	2
4927	L56N,6E	quartzite	12	13	1
4928	L112N,2E	"	44	66	1
4929	L120N,44W	schist (quartzite)	53	62	1
4930	L8N,4W	quartzite	10	20	1
4931	L8N,40W	grey rhyolite-feldspar pheno.	7	42	3
4932	L4S, 40W	"	5	123	1
4933	L128N,16W	Mic. quartzite	49	48	1
4934	L128N,6W	dacite	10	84	1
4935	L136N,15W	rhyolite-quartz pheno.predominately, some k-feld.pheno. grey-white matrix	4	55	1
4956	L136N,30W	mic.quartzite	44	58	2
4937	L144N,42W	mic.quartzite	39	137	1
3200	L24N,20W	quartzite	28	17	1
3270	L64N,20E	"	47	25	1
3271	L64N,18E	"	15	5	1
3338	L8S,38W	"	11	38	4
3470	L80N,60W	"	42	24	1

3500	L-8N,22W	quartzite	15	10	1
3425	L64N,8W	"	42	44	1
3561	L152N,42W	"	75	165	4
3546	L152N,72W	"	4	235	1
3602	L192N,4E	"	10	64	1
3657	L112N,48W	"	22	10	1
3677	L40N,78W	felsite (k-feldspar pheno)	6	50	2
3728	L64N,90W	rhyolite	10	122	1
3741	L48N,10E	quartzite	28	40	1
3767	L48N,43W	rhyolite,feld.pheno.	15	74	1
3784	L56N,42W	quartzite	26	10	ND
3812	L56N,14E	"	50	10	1
3819	L112N,12W	"	30	15	1
3838	L120N,18W	"	11	48	1
3861	L128N,44W	"	30	16	1
3863	L128N,40W	"	48	72	1
3957	L136N,32W	Mic.quartzite	20	106	2
3972	L144N,4-W	Mic. "	30	580	2
3974	L144N,38W	" "	55	230	2
4462	L40N,48W	basalt	17	98	2
4463	"	quartzite	12	8	1
4464	"	feld.porphyry	33	62	2
3-18	L24S,24W	feld.porphyry	2	90	1
3119	L24S,26W	quartzite (ser.sch.)	36	29	3
4018	L16S,44W	quartzite	24	30	2
4020	L16S,40W	feld.porphyry	4	95	2
4023	L16S,34W	feld.porphyry	10	93	3
4024	L16S,32W	" "	9	63	2
4031	L16S,18W	" "	14	86	1
4050	L32N,49E	leucogranite	3	90	1
4073	L48N,42E	"	2	73	1
4091	L48N,22E	pyrite quartzite	76	97	8
4130	L32N,24E	quartzite	10	8	1
4189	L32N,82W	rhyolite	4	40	2
4190	L32N,84W	"	4	72	1
4247	L96N,24W	quartzite	30	52	ND
4333	L104N,6E	quartz rich quartzite	22	135	1
4268	LO,40W	quartz-feld.porph	9	33	2
4269	LO,42W	rhyolite-limonite stain	4	12	3
4272	LO,48W	pyrite rhyolite	12	32	2
4295	L16N,48W	quartzite	50	90	4
4313	L16N,12W	quartz-feld.porph.	6	57	1
4159	100'S of L56N 17E	quartz	32	7	1
4160	BLO,98N	"	10	12	1
4161	100'S of L64N at 11E	gabbro	45	120	2
4162	300'S of L72N at 10E	spherulitic rhyolite	24	21	1
4163	central ridge	quartzite (composite sample)	31	24	2

4164	on Ridge 400'N of L48N at 15E	Quartzite gossan	24	9	1
4165	200'S of L56N at 8E	rhyolite (pyrr.)	38	75	1
4166	200'S of L88N at 22E on ridge	Quartz	10	9	1
4443	ridge #6	quartzite composite	27	52	3
444	L88N,33W	altered porphyry	4	20	1
4445	L88N,33W	quartz feldspar porphyry	6	64	2
4446	L88N,42W	foliated (bio)rhyolite	3	42	1
4447	L88N,42W	quartz vein	12	20	1
4-48	L168N,70W	breccia	4	48	1
4449	L160N,58W	quartz feldspar porphyry	4	82	1
4450	L168N,68W	por.(feld)basalt and zeolite	24	83	2
4451	400'S of L104N 41W	quartz monzonite porphyry	5	56	1
4465	L32S,24W	py,po,cu,quartzite	59	42	7
4466	L32S,26W	samples of py, po, rhyolite and quartzite	44	470	4
4467	L104N,20E	quartz veins	43	13	1
4468	L64N,20E	dark argillaceous quartzite	56	12	1
4469	L80N,13E	sheared rhyolite	67	84	1
4470	L16S,42W	py. & po. quartzite	210	109	6
4167	L88N,200'E	banded quartzite	25	8	1
4168	100'N of L80N at 13E	dark green feld. porphyry, moly along fractures	33	182	5
4169	L8S,48W	basalt	19	348	4
4170	L24S,38W	quartzite (py) and dacite with Mn stain	18	76	2
4471	200'N of L72N at 36E	dark biotite quartzite (composite)	83	490	2
4472	L64N,2E	quartz rich py. quartzite	55	38	2
4473	L64N,2E	banded quartzite, ferro moly stain?	29	6	1
4474	L64N,2E	"	9	4	1
4967	200'S of L104N 50W	basalt (py)	16	165	4
4968	200'S of L104N 50W	porphyry (py)	5	144	3
4969	600'N of L04N 49W	basalt	6	110	2
4970	200'S of L128N 48W	quartzite	67	74	1
4971	30N of L144N, 47W	"	59	74	7
4972	L36N,26W	"	26	41	1
4973	250'N of L128N at 28W	"	66	15	1
4974	L120N,34W	micaceous quartzite	16	64	1
4975	L80N, 5E	rhyolite	3	47	1

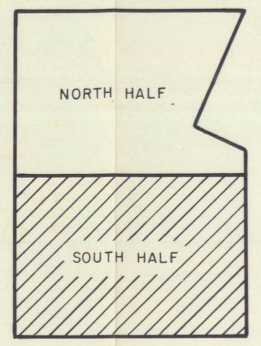


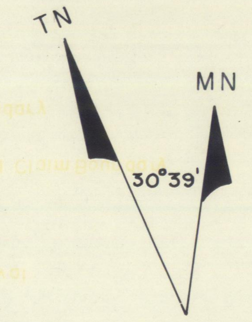
SYMBOLS

Stream	
Contour Interval	100 feet
Picket Line	L 120
Claim Post and Claim Boundary	A
Property Boundary	
Test Pit	
Soil sample	Cu Zn Mo Sample No.

	Background	Anomalous
Cu	50	95
Zn	98	170
Mo	3	7

KEY TO SHEETS





Canadian Occidental Petroleum Ltd.

Minerals Division

NTS REF. 115-G-15

KIYERA LAKE YUKON TERRITORY

ONI CLAIM GROUP-SOUTH HALF

Geochemistry

SCALE 400 0 400 800 1200 FEET

Duration - July 19 to Aug.16, 1972

By ------ J.T. Neelands

SYMBOLS

Stream	
Contour Interval	100 feet
Picket Line	L120
Claim Post and Claim Boundary	A
Property Boundary	
Soil sample	Cu Zn Mo Sample No.

	Background	Anomalous
Cu	50	95
Zn	98	170
Mo	3	7

True North
Magnetic
30°39'

Canadian Occidental Petroleum Ltd.

Minerals Division

NTS REF. 115-G-15

KIYERA LAKE YUKON TERRITORY
ONI CLAIM GROUP NORTH HALF
Geochemistry

400 0 400 800 1200
SCALE IN FEET

Duration - July 19 to Aug. 16, 1972

By J.T. Neelands

LEGEND

RECENT

6	Colluvium & glacial till

TERTIARY TO MESOZOIC

5	Rhyolite
5a	Quartz-feldspar porphyry
5b	Feldspar porphyry
5c	Pyrrhotiferous rhyolite
4	Porphyritic basalt
4a	Basalt
4b	Zeolite beds
4c	Breccia
3	Nisling granite

MESOZOIC

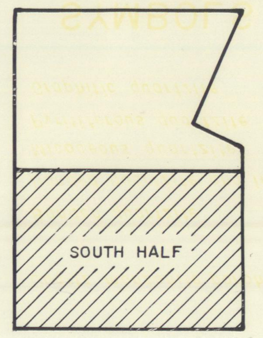
2	Quartz monzonite porphyry
1	Banded quartzite
1a	Banded quartzite and interbedded marble
1b	Micaceous quartzite
1c	Pyritiferous quartzite
1d	Graphitic quartzite

SYMBOLS

- Stream
- Contour - (interval 500')
- Picket line
- Claim Post and Claim boundary
- Property boundary
- Outcrop
- Talus
- Geological contact, assumed
- Fault, assumed
- Jointing, strike and dip - vertical, inclined
- Schistosity, strike and dip
- Mineralization (Cpy, MoS_2, Py)
- Sample No. Cu Zn Mo — Rock chip sample
- Sample No. Cu Zn Mo — Composite sample

	Background	Anomalous
Cu	50	90
Zn	90	150
Mo	3	7

KEY TO SHEETS



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MINERALS DIVISION

N.T.S. REF. 115-G-15
KIYERA LAKE - YUKON TERRITORY

ONI CLAIM GROUP - SOUTH HALF
GEOLOGY
AND ROCK GEOCHEMISTRY

SCALE 400 0 400 800 1200 FEET

DURATION - July 19 to Aug. 16, 1972

By ------- J. T. Neelands

T.N.
M.N.
30°39'
LEGEND
RECENT
6 Colluvium and glacial till
TERTIARY TO MESOZOIC
5 Rhyolite
5a Quartz-feldspar porphyry
5b Feldspar porphyry
5c Pyrrhotiferous rhyolite
4 Porphyritic basalt
4a Basalt
4b Zeolite beds
4c Breccia
3 Nisling granite
MESOZOIC
2 Quartz monzonite porphyry
1 Banded quartzite
1a Banded quartzite and interbedded marble
1b Micaceous quartzite
1c Pyritiferous quartzite
1d Graphitic quartzite
SYMBOLS
Stream
1000
Contours (500' interval)
L120N
Picket line
A
Claim post and claim boundary
Property boundary
Outcrop
Talus
Geological contact, assumed
Fault, assumed
Jointing, strike and dip - vertical, inclined
30
Schistosity, strike and dip
X
Mineralization (Cpy, MoS2, Py)
Sample No. Cu Zn Mo
Rock chip sample
Sample No. Cu Zn Mo
Composite sample
Background Anomalous
Cu 50 90
Zn 90 150
Mo 3 7
NORTH HALF
CANADIAN OCCIDENTAL PETROLEUM LTD
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KIYERA LAKE - YUKON TERRITORY
ONI CLAIM GROUP - NORTH HALF
GEOLOGY
AND ROCK GEOCHEMISTRY
SCALE 400 0 400 800 1200 FEET
DURATION - July 19 to Aug. 16, 1972
By - - - - - - - J.T. Neelands

LEGEND

5	*Quartz-feldspar porphyry, Rhyolite*
4	*Basalt, Breccia*
3	*Nisling granite*
2	*Quartz monzonite porphyry*
1	*Quartzite*

SYMBOLS

Stream
Contour
Picket line
Claim post and claim boundary
Property boundary
Outcrop
Geological contact, assumed
Fault, assumed
Mineralization
Abrev's – Py, Pyrite
Cpy, Chalcopyrite
Mo, Molybdenum

GEOCHEMICAL CONTOURS

Copper
Zinc
Molybdenum

KEY TO SHEETS

NORTH HALF
SOUTH HALF

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ONI CLAIM GROUP - SOUTH HALF

COMPILATION

GEOLOGY & GEOCHEMISTRY

400 0 400 800 1200
SCALE IN FEET

DURATION – July 19 to Aug. 16, 1972

By – J. T. Neelands


T.N.
M.N.
30°39'
LEGEND
5 Quartz-feldspar porphyry, Rhyolite
4 Basalt, Breccia
3 Nisling granite
2 Quartz monzonite porphyry
1 Quartzite
SYMBOLS
Stream
4500
Contour
L 120
Picket line
A
Claim post and claim boundary
Property boundary
Outcrop
Geological contact, assumed
Fault, assumed
X Mineralization
Abrev's -- Py, Pyrite
Cpy, Chalcopyrite
Mo, Molybdenum
GEOCHEMICAL CONTOURS
Copper
Zinc
Molybdenum
KEY TO SHEETS
NORTH HALF
SOUTH HALF
CANADIAN OCCIDENTAL PETROLEUM LTD
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ONI CLAIM GROUP - NORTH HALF
COMPILATION
GEOLOGY & GEOCHEMISTRY
400 0 400 800 1200
SCALE IN FEET
DURATION - July 19 to Aug.16, 1972
By - J.T. Neelands