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CANADIAN NICKEL COMPANY LIMITED

94D/2W

Report On

GEOLOGICAL AND GEOCHEMICAL SURVEYS

CONDUCTED ON THE BEAR CLAIMS - GROUP C

1974

Omineca Mining Division

Lat. 126°52'N; Long. 56°07'W

Department of Mines and Technical Resources ASSESSMENT REPORT NO. 5269 <small>Map</small>

E. N. Hunter
October, 1974

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BEAR CLAIMS - GROUP C

SUMMARY

During the summer of 1974 the Canadian Nickel Company conducted a program of geological mapping and rock sampling within Group C of the Bear Claims. Five volcanic facies and one intrusive facies were delineated. Rock chip sampling revealed three areas of anomalous copper mineralization.

The work was done from a camp on the Bear property, using a Jet Ranger 206-B helicopter for transportation.

LOCATION

The property is located in a remote mountainous region within the Omineca Mining Division. It is situated 90 miles north of Smithers B.C. in the N.T.S. quadrant 94D-2W approximately at a latitude of 125°52'N, longitude 56°07'W. The Bear Claims are situated near the west edge of Bear Lake.

ACCESS

Float equipped aircraft can land on Bear Lake and wheeled aircraft up to a DC-3 in size can land on an airstrip 2 miles north of Bear Lake. The B.C. Railway is now completed up to the airstrip. A Jet Ranger 206-B helicopter was used for transportation to the Bear property, some 7 miles south-west of the airstrip.

EXPENDITURES

The geological and geochemical work applied for credit covers 15 claims within Group C of the Bear Claims. The work was conducted on Bear Claims 55, 57, 77-80, 84, 94, 102-108. Total expenditures equals \$3,504.81 or 17 claim year credits.

GEOLOGY

The sequence of volcanic units north and west of the intrusive plug located within the Bear claims, was mapped on 1,000' to the inch scale using a photo enlargement as a base.

The following five volcanic facies and one intrusive facies were delineated. The volcanics are Triassic-Jurassic Takla volcanics (C.S. Lord, 1946).

1. Agglomerate

Purple-green in colour the fragments vary from 1" to 1' in diameter and represent a wide range of volcanic types from rhyolite to andesite and agglomerate. It is fault bounded on three sides and so its' relationship to the other volcanic units is not clear.

2. Andesite

The andesite is generally grass-green but varies from grey-green to purple-green. It varies from very fine grained to medium grained and occasionally contains small dark fragments.

3. Purple Andesite Porphyry

This unit appears to be underlying the andesite unit. The contact is irregular and poorly exposed but seems to be striking north-east and dipping about 40° to the south-east. Plagioclase phenocrysts 1/8" to 1/4" occur in a fine grained purple matrix.

4. Banded Tuff and Rhyolite (?)

To the north of and topographically higher than the purple andesite porphyry is a fine grained white to purple, cherty unit. This unit is usually finely banded and highly folded. A fault defines the contact between the tuff and the purple andesite porphyry so their relationship to each other is not known.

5. Hornblende Porphyry

The hornblende porphyry is a fine to medium grained, dark green unit of andesitic composition. It is found only on the west side of the Driftwood River and is underlying the andesite unit with the contact striking north-northwest and dipping about 45° east.

6. Granodiorite Porphyry Dykes

There are three intrusive dykes 20 to 30 feet wide and vertically dipping. Two of the dykes strike 100° and the other strikes 40° . All are considered to be directly related to the main intrusive plug because of their similarity in composition and their close spacial relationship.

STRUCTURE

The entire area of volcanics is highly faulted making correlation between units difficult. The lithologies mapped on the west side of the Driftwood River do not correspond to those on the east side. Because of about 1,000' of talus on each side of the river it is not known why the two sides don't correlate but a fault coinciding with the river is suspected.

The majority of the faulting is vertical and striking between 10° and 50° . Offsets of 1,000' or more appear to be common and where information is available they are right-hand faults.

ALTERATION

Epidote alteration is the only evident alteration in the volcanics and it is generally restricted to the andesite and agglomerate units. A moderate amount of epidote occurs along fractures and in pods on the east side of the Driftwood River. On the west side of the river the alteration is more intense, especially along the fault zones. There are small areas where the andesite is very highly epidotized.

The epidote alteration is considered to be part of the alteration sequence related to the intrusive plug as is found at many well known porphyry copper properties.

ROCK GEOCHEMICAL SURVEY

A total of 191 rock chip samples were taken in the volcanics. These samples of about 1 pound in size were analyzed for Cu, Mo, Zn. The photo enlargement (1" = 1,000') was used as a location map in the field.

The samples consisted of compositing a number of rock chips at each station taken from outcrop. These were then submitted to the Bondar-Clegg and Co. Ltd., laboratory in Vancouver for analysis.

After pulverizing the chips to minus 100 mesh treatment consisted of attacking the sample first with concentrated nitric acid, followed by the addition of concentrated hydrochloric acid and digestion for 3 hours. The solutions were then bulked to 20% acid concentration homogenized, settled and analyzed by atomic absorption.

Geochemical Results

Values over 100 PPM copper and over 4 PPM molybdenum were considered to be anomalous.

Only scattered anomalous molybdenum values were received and therefore there is no area of interesting molybdenum mineralization.

There are three areas of anomalous copper values as well as many other scattered anomalous values. One of these areas occurs on the east side of the Driftwood River where bornite and chalcopyrite were observed. The anomalous area is only about 500' x 1,000' and closed off on three sides by background copper values. Values range from 220 PPM Cu to 1500 PPM.

On the west side of the Driftwood River there is an area approximately 1,000' x 2,000' in which most of the samples are anomalous in copper. Values are generally from 100 PPM to 500 PPM with two samples running 5500 PPM and 7750 PPM.

Two thousand feet north of the above anomaly is an area 500' x 1500' of anomalous copper. Values range from 184 PPM Cu to 980 PPM Cu with one sample over 1% Cu.

Results received from 1973 sampling in these areas are plotted with the 1974 results to help outline the anomalies.

CONCLUSIONS AND RECOMMENDATIONS

The rock geochemical survey outlined three areas of anomalous copper mineralization. These areas are large enough that they warrant further work. It is recommended that a small (about 3,000 line feet) I.P. survey be conducted on each anomaly and further I.P. done if the initial results prove to be of interest.

E. N. Hunter/sn
October 10, 1974
Attachment



E. N. Hunter

EXPENDITURES FOR GEOLOGICAL PROGRAMON BEAR CLAIMS GROUP C

Helicopter	Dominion-Pegasus Jet Ranger 206-B Support & ferry trips - includes fuel 9.7 hrs @ 235.00	2,279.50	2,279.50
Geological Salaries	Geologist - Hunter 7 days @ 67.00 Assistant - D. Shaw or T. Brennan 7 days @ 33.00	469.00 231.00	700.00
Assays	Bondar-Clegg & Co. Ltd. Vancouver 159 analyses @ 2.55 (Cu, Mo, Zn) Freight by bus 164 lbs.	405.40 20.15	425.55
Air Photo Enlargements	Pacific Survey Corporation - Van. May 28 - enlargements, prints, etc. July 12 - 2 prints	46.55 53.26	99.81
Total Cost			3,504.81

Assessment Credits = 17 Claim Years



QUALIFICATIONS

I, Edward N. Hunter, received a B.Sc. (Geology) from the University of British Columbia in April 1970. I have been actively engaged in mineral exploration with the International Nickel Company since graduating.

May, 1970 to May, 1971 was spent on geological mapping and diamond drilling projects in the Precambrian Shield of northern Manitoba.

Two years, 1971 and 1972 were spent prospecting, geological mapping and rock geochemical sampling in northwestern British Columbia.

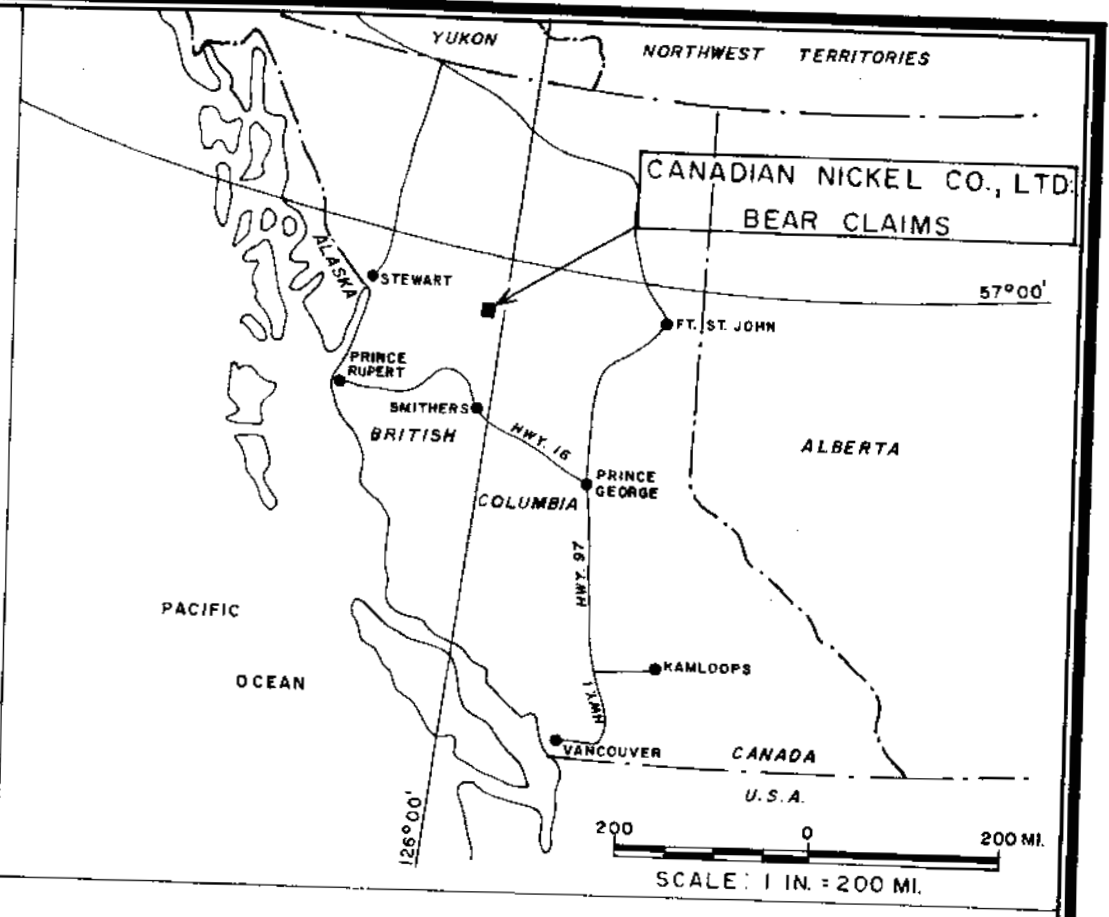
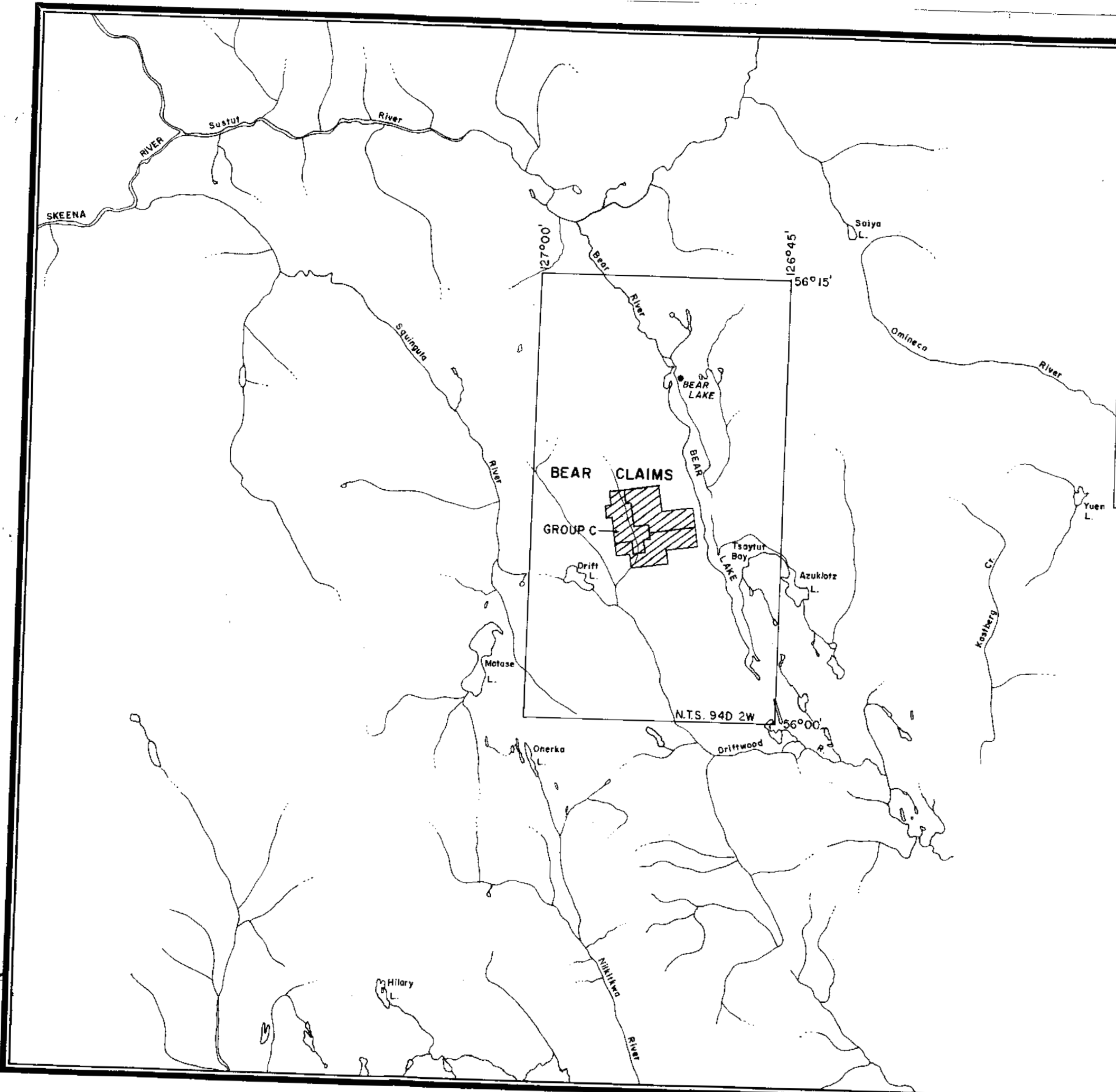
Two years, 1973 and 1974 were spent doing detailed geological mapping and rock geochemical sampling on the Bear claims in northwestern British Columbia.

October 10, 1974

Edward N. Hunter

Canadian Nickel Co. Ltd.,
Copper Cliff, Ontario
POM 1N0

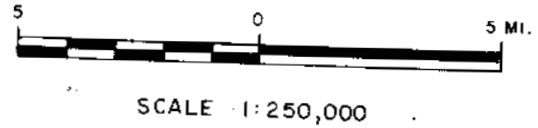
Ed Hunter



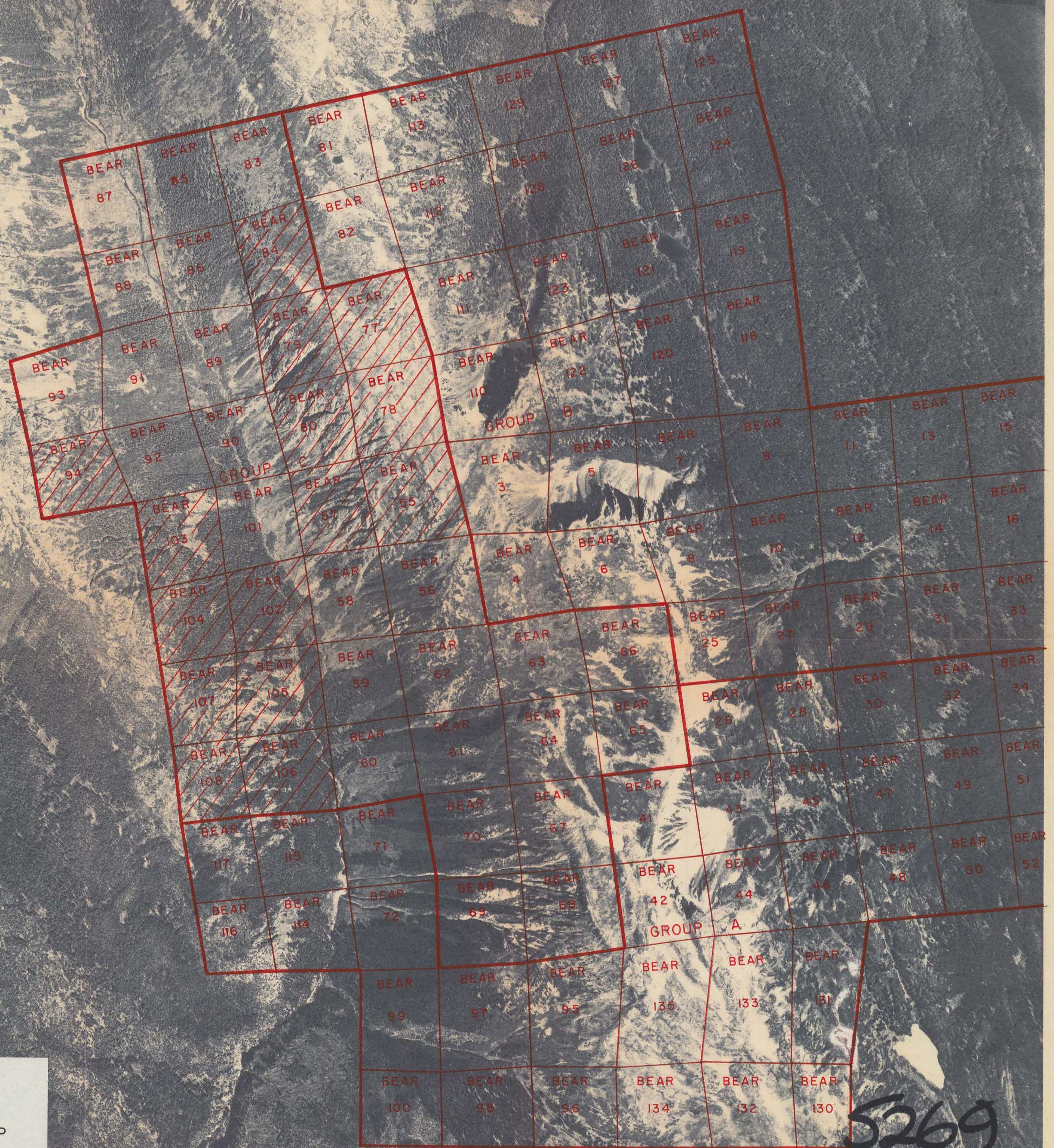
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Canadian Nickel Co. Ltd.
 LOCATION MAP
 BEAR CLAIMS - GROUPS A, B, and C
 OMINECA MINING DIVISION
 BRITISH COLUMBIA

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MAP 1



2593 8) 65-401, 6" 1:500 1212 16 AUG 67

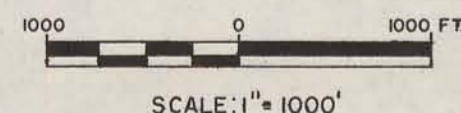


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MAP 2


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 Canadian Nickel Co. Ltd.

TOPOGRAPHICAL AND CLAIM MAP

BEAR CLAIMS - GROUPS A, B, and C
 OMINECA MINING DIVISION
 BRITISH COLUMBIA



To accompany report by E.N. Hunter Oct. 1974

 Claims worked in 1974



GEOLOGICAL LEGEND

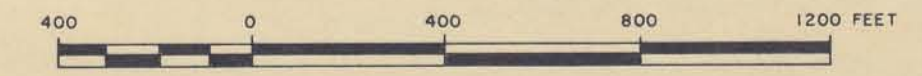
1	Quartz monzonite porphyry
2	Syenodiorite
4	Syenite and granodiorite porphyry dykes
7	Tuff or rhyolite
8	Andesite
10	Agglomerate
11	Purple andesite porphyry
12	Hornblende porphyry

○ Cu/Mo Sample location and assay in ppm
 x 1973 Sample location

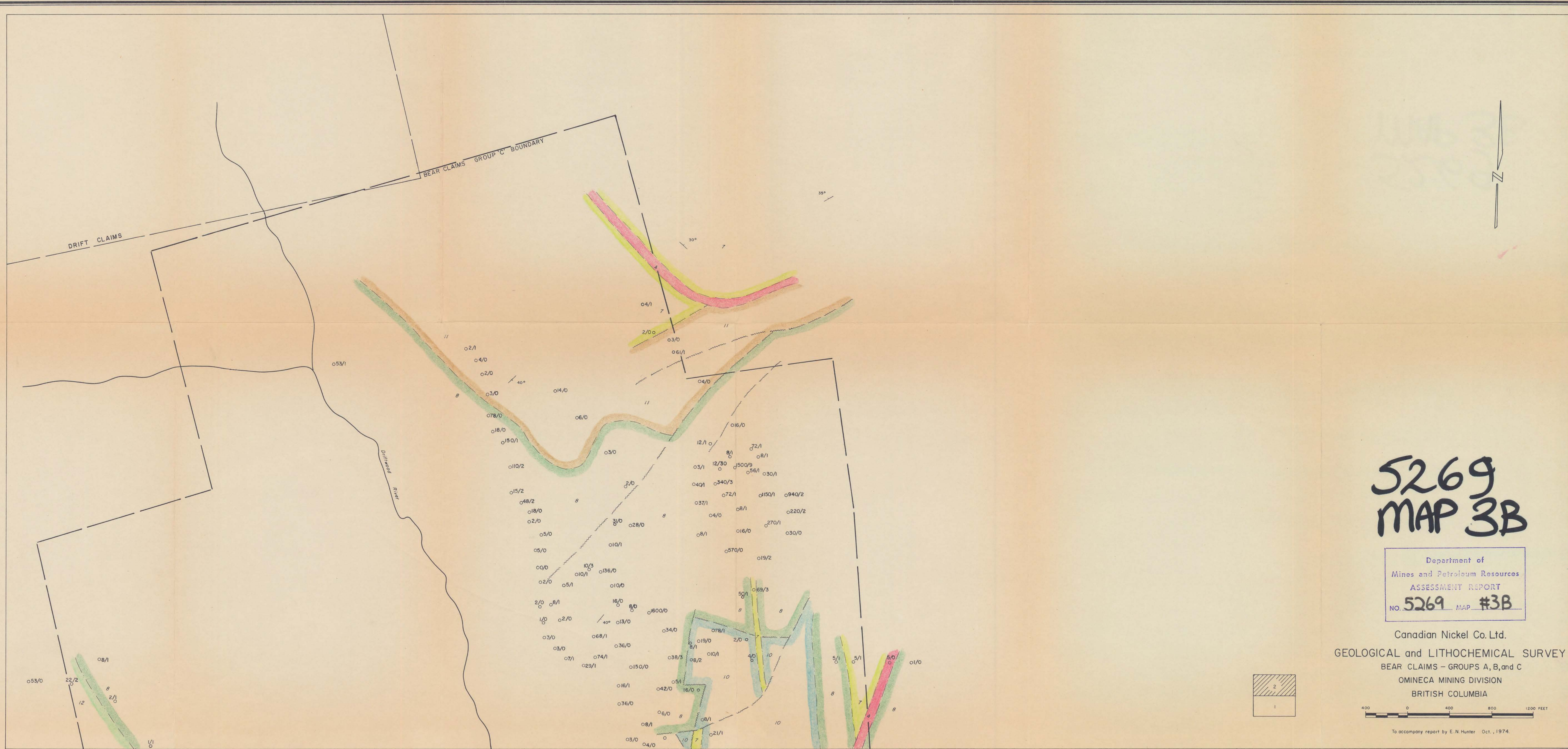
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MAP 3A**

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Canadian Nickel Co. Ltd.
 GEOLOGICAL and LITHOCHEMICAL SURVEY
 BEAR CLAIMS - GROUPS A, B, and C
 OMINECA MINING DIVISION
 BRITISH COLUMBIA



To accompany report by E. N. Hunter Oct., 1974.



5269 MAP 3B

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Canadian Nickel Co. Ltd.
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BEAR CLAIMS - GROUPS A, B, and C
OMINECA MINING DIVISION
BRITISH COLUMBIA

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