



066104



GEOLOGICAL REPORT

ON

MARY MINERAL CLAIMS

NORTHWEST OF WHITEHORSE  
YUKON TERRITORY

ON BEHALF OF

ALICE LAKE MINES LIMITED,

BY

L.J. SIEGA B.Sc. P.

JANUARY 15, 1973

DATES: AUGUST 27 - 29, 1972  
OCTOBER 19 - 23, 1972

LOCATION: 188 miles N.W. of Whitehorse, along the  
Alaska Highway to Mile 1104, thence 6  
miles S.W. along Burwash Creek.

LATITUDE 61° 17'

LONGITUDE 140° 19'

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of \$ 4643

*J.B. Craig*  
Resident Geologist or  
Resident Mining Engineer

Considered as representation work under Section 53 (4) Yukon Quartz Mining Act.

*[Signature]*  
Commissioner of Yukon Territory

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C E R T I F I C A T E

I, Levy J. Siega, of 17633-96th Avenue, Surrey, British Columbia do hereby certify that:

1. I am a graduate of Washington State University with a B.Sc. Degree in Geology (1963).
2. I am a registered Professional Geologist, in good standing with the Association of Professional Engineers of Alberta.
3. The following report is based upon personal observations of the subject property and from pertinent published and unpublished reports.
4. I do not own any interests in the Company nor do I expect to receive any interests in the Company as a result of this report.
5. I have been working as a Geological Consultant for the past two years.

January 15, 1973



L.J. Siega  
P. Geol.

## INTRODUCTION

The Mary property, 188 miles N.W. of Whitehorse was visited during the periods, August 27 - 29, 1972 and October 19 - 23, 1972. The purpose of this examination was to review and assess earlier exploration completed on the property by Hudson Bay Mining, sometime in the early 1950's and the old drill targets of Alice Lake Mines Limited in 1967. The nearest significant mineralization in the area is 8 miles to the north-west. Hudson Bay Mining on January 1, 1956 reported 728,000 tons of 2.05% nickel, 1.42% copper, 0.073% cobalt, 0.005 oz. of gold, 0.038 oz. of platinum and 0.027 oz. of palladium a ton. Hudson Bay Mining are presently in production with a mill located 12 miles distant from the Mary Group. (See Ref. #1).

Additionally, part of the Mary group is staked across the gold placer leases of Mr. Besner. The writer has reviewed and discussed his profitable operation (10 years) on behalf of the Company.

## PROPERTY, LOCATION AND ACCESS

The Mary property consists of twenty-four (24) re-staked and recorded mineral quartz claims (21-9-72) about 188 miles N.W. of Whitehorse at the foot of the Kluane Range. Access to the property, preferably by four wheel drive, starts at Mile 1104 off the Alaska Highway, thence 6 miles west on a private placer mining road along the rocky banks of Burwash Creek. (See Fig. 1)

The claims area lies at an average elevation of 4500 feet and centers around the confluence of the Burwash and

Tetamagouche. Otherwise, the surrounding area is lightly treed gently rolling slopes with few visible outcrops.

#### EXPLORATION HISTORY

The nickel-copper mineralization on the north bank of Burwash Creek, approximately 600 feet west of the mouth of the Tetamagouche, is said to have been discovered in the early 1950's. Since then, the following work has been done.

1. Three short diamond drill holes were drilled at the time of the discovery. The writer is unable to locate any results at this time. (1950's).
2. In July of 1967, Eagle Geophysics completed an electromagnetic and magnetometer survey over approximately one-third of the Glen Group. (Now the Mary group, see Ref. #3).
3. The results of these geophysical surveys has outlined various rock types and located three major and twelve moderate to weak electromagnetic anomalies. The dimensions of the major electromagnetic conductors are as follows:
  - (a) ANOMALY "A" - volcanic-sedimentary contact 3200 feet long and an apparent width of 60 feet.
  - (b) ANOMALY "B" - volcanic sedimentary contact approx. 2400 feet long and 65 feet wide.
  - (c) ANOMALY "C" - within the sediments between the intrusives, positively 800 feet long with a moderate to weak response some 1600 feet across the creek.
4. The Anomaly "A" centres around the original showing, the area was mapped and two diamond drill holes totalling 717 feet was completed. (See Ref. #4).

Only traces of sulphides and copper-nickel were reported. The Glen claims were dropped and most recently re-staked and recorded as the Mary Group.

EXPLORATION HISTORY - Con't.

5. In October of 1972 a limited copper-nickel soils program (3 claims) was completed.

The copper-nickel anomalies cover an area approximately 900 feet wide, 1000 feet long and open to the northwest. This area includes the Anomaly "C". (See Fig. #3, and #4.)

GEOLOGY

The property is underlain by the Cache Creek Group of sediments and greenstones which are intruded by buff colored porphyritic latite and tabular bodies of dark green to black basic and ultrabasic rocks. The general trend of the sediments and greenstones is N60°W and dipping between 50° and 60° to the S.W. In general the attitudes and trends of the intrusives are similar to the adjoining Cache Creek Group.

In the immediate area of interest, .5 miles north of the mouth of Tetamagouche Creek, a wide slightly limy gossan trending N57°W and dipping between 30°-50° S.W. is exposed in the canyon walls (300 feet) of Tetamagouche Creek. Here, gabbros and peridotites intrude the sedimentary-volcanic sequence and it is probable that these magmas were the carriers of the copper-nickel sulphides.

The gossan is in contact with barren grey-green medium to fine grained chlorite schist to the south and dark green to black medium to fine grained peridotite to the north, a width of approximately 1000 feet or more generally the north and south boundaries of the Mary 13. (See Fig. #3). The gossan section includes cherty limestone, quartzite, chert, graded clean quartz pebble conglomerate and a few bands of argillites all weathered

GEOLOGY - Con't.

to a red-yellowish brown.

Approximately 400 feet of the northern part of the gossan is heavy in pyrite (2%+), with appreciable amounts of pyrrhotite, chalcopyrite, pentlandite (Ni) and a single showing of cobalt bloom. The finely disseminated sulphide mineralization increases toward the sedimentary intrusive contact on the north and to a lesser degree extends into the intrusive for a distance of some 300 feet. This statement is more evident in the soils contour maps. (See Fig. #3 and #4).

Five grab samples across the gossan and one of the intrusives were taken and assayed. The results are as follows:

	<u>Cu%</u>	<u>Ni%</u>	<u>Ag/oz/ton</u>	<u>Au</u>
1. Gossan, south contact	.01	.01	.02	.001
2. 300' N of contact	.58	.01	.20	.004
3. 600' N of contact	.47	.13	.06	.002
4. 1000' N of contact	.48	.01	.14	
5. Peridotite N of contact	.04	.13	.02	

All the samples assayed are across the strike at the bottom of the canyon. The limited soils program, above the canyon indicates the anomalous area to be at least 1400 feet long.

SUMMARY AND RECOMMENDED EXPLORATION

The geophysical and geochemical data have confirmed a mineralized area 1000 feet wide, 1600 feet long and open to the N.W. Within this sedimentary-volcanic sequence, numerous scattered individual stringers of copper with lesser amounts of nickel, silver and gold are known to occur.

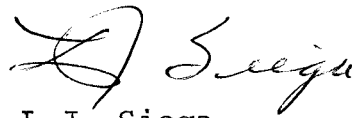
Additional exploration of this favourable area is recommended. The indicated method of further exploration include:

1. Additional mapping and sampling.
2. Dozer trenching on the northern contact of the mineralized zone.
3. Exploratory percussion drilling across a section of 1000 feet.

COST ESTIMATES OF THE PROGRAM

1.	Geological mapping and sampling	\$ 2,250.00
2.	Dozer trenching	2,400.00
3.	Percussion drilling (approx. 2000 feet)	12,000.00
4.	Engineering, supervision, reports and assays	1,500.00
5.	Camp, transportation and supplies	2,000.00
6.	Contingencies	3,850.00
	Total Cost	<u>\$ 24,000.00</u>

Cost estimates of the above program do not include any expenses of the management or overhead of the Company.



L.J. Siega,  
P. Geol.

TABLE OF REFERENCES

1. G.S.C. Memoir 340 - Kluane Lake Map Area. pp 110-111
2. Map 1177A - Kluane Lake, Yukon Territory
3. Report by Eagle Geophysics - P.E. Walcott, P.Eng.  
November 1967
4. Report December 9, 1967 by Lee Morrison, P.Eng.
5. Figure 1            Location Map
6. Figure 2            Geological Plan
7. Figure 3            Geochemical soils plan (copper)
8. Figure 4            Geochemical soils plan (nickel)

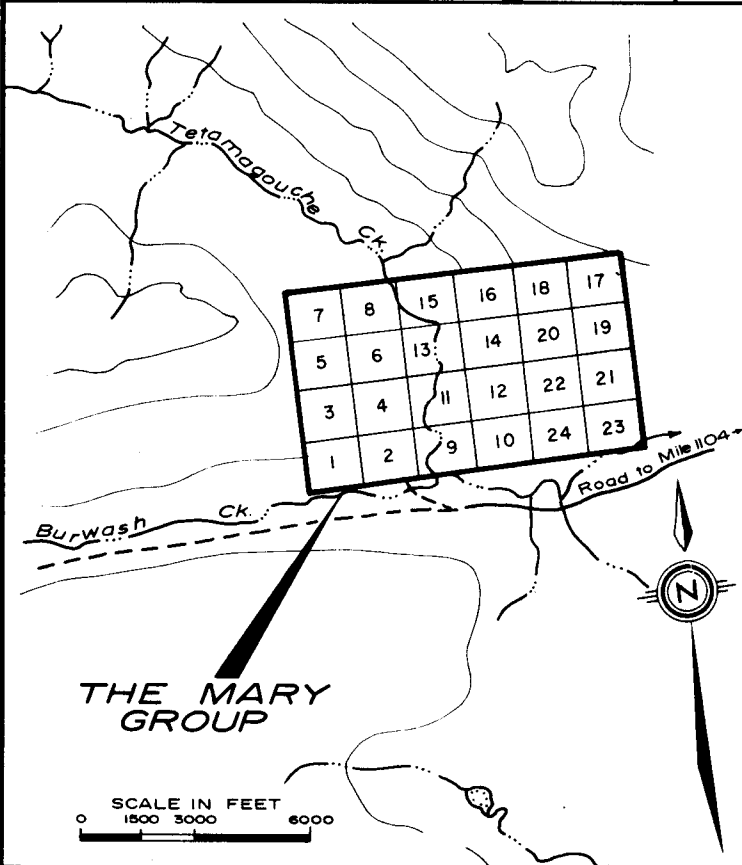
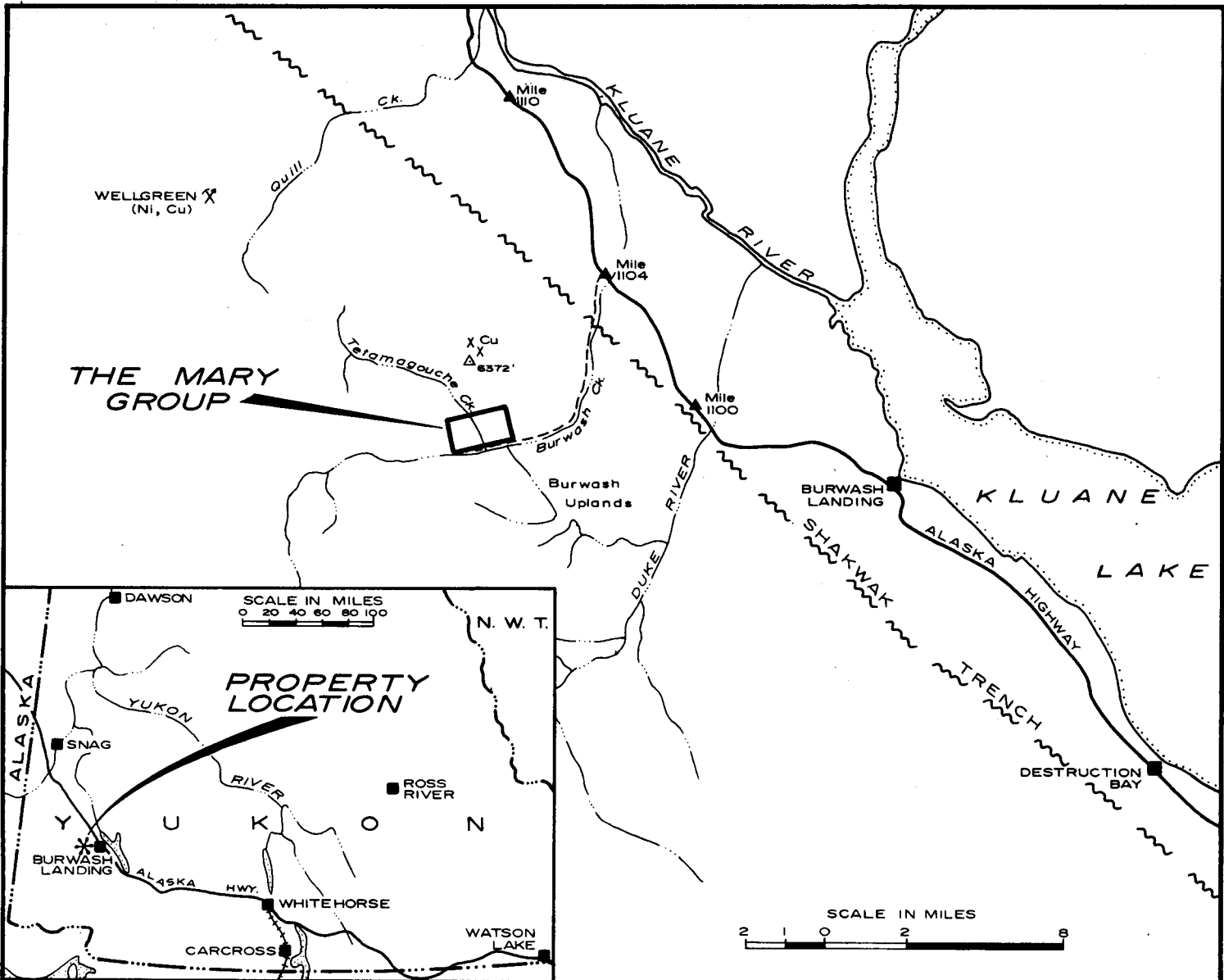


FIG. 1  
ALICE LAKE MINES LTD. (N. P. L.)

# LOCATION MAP

## BURWASH CREEK PROPERTY

YUKON TERRITORY

SCALE  
(AS SHOWN)

To accompany report by L. J. Siega, P. Geol., Oct. 12/72

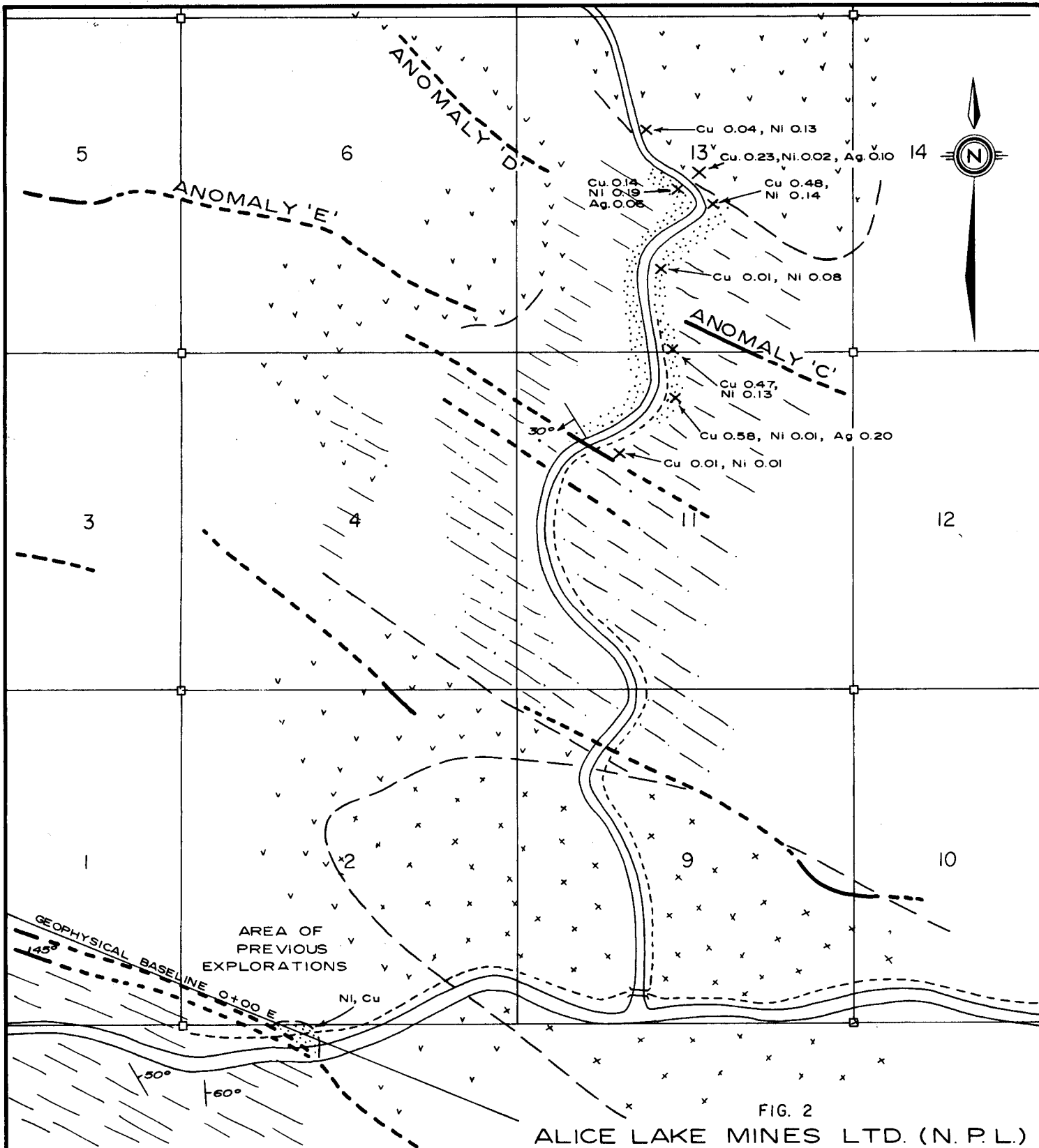


FIG. 2  
ALICE LAKE MINES LTD. (N. P. L.)

**GEOLOGICAL PLAN**  
ELECTROMAGNETICALLY SURVEYED PORTION  
OF THE  
**MARY GROUP**  
**BURWASH CREEK PROPERTY**  
YUKON TERRITORY

SCALE

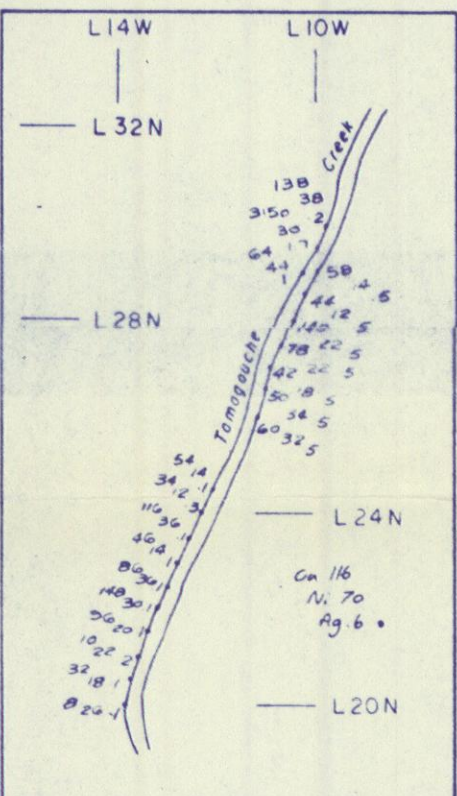
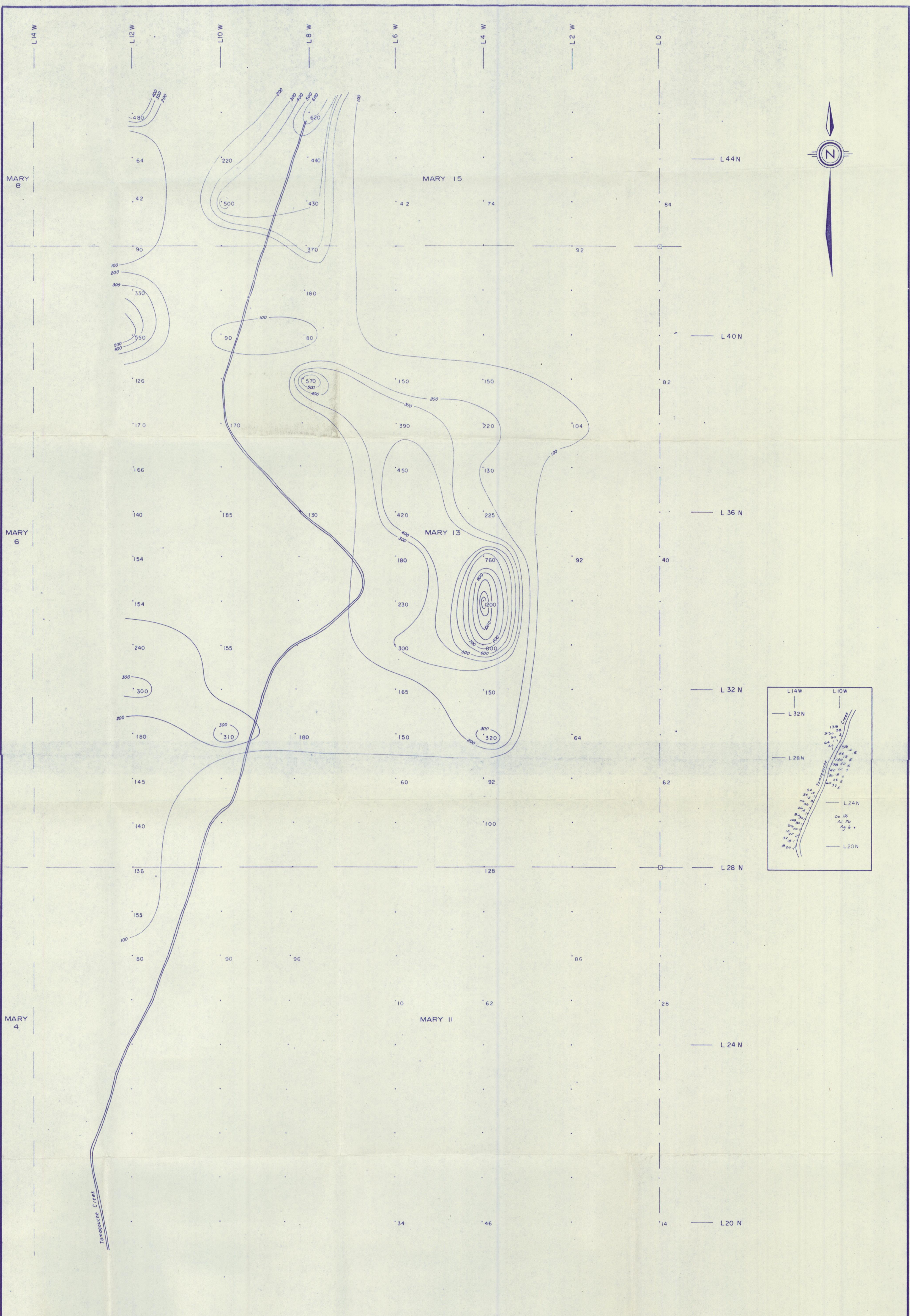


- PORPHYRITIC LATITE—Buff to creamy coloured, massive
- BASIC & ULTRABASIC INTRUSIONS—Peridotite, gabbro
- UPPER CACHE CREEK SEDIMENTS—In part interbedded and graded (1"-1') quartzite, limestone, chert, quartz pebble conglomerate & argillite weathering to red'h brn.
- LOWER CACHE CREEK—Greenstone, grey-green schistose
- GEOLOGICAL CONTACT (observed ———, inferred - - - -)
- N.B. Contacts in heavy drift areas inferred from magnetic profiles & from float distribution
- ABUNDANT DISSEMINATED SULPHIDES (Pyrite, pyrrhotite) Py, Po
- E. M. ANOMALY: Moderate Conductor ——— weak to moderate Conductor - - - -

Note: Geology by L. J. Siega

To accompany report by L. J. Siega, P. Geol., Oct. 12, 1972





**LEGEND**

- Claim post
  - Claim line
  - ~ Creek
  - \* 310 Nickel result in ppm
- NOTE: Contour interval 100 p.p.m.

FIGURE 4  
**NICKEL**  
 ALICE LAKE MINES LTD. (N. PL.)  
**GEOCHEMICAL MAP**  
 MARY GROUP  
 BURWASH CREEK PROPERTY  
 YUKON TERRITORY

SCALE  
 FEET 100 50 0 50 100 500 FEET  
 To accompany report by I. J. Siewka, P. Geol., October 12, 1972