

449

KERR-ADDISON GOLD MINES LIMITED

ELECTRICAL, GEOCHEMICAL & MAGNETIC SURVEY

OF

CHALCOCITE	1 - 14	MINERAL CLAIMS
MALACHITE	1 - 18	

OWNER: Skaena Silver Mines,
744 W. Hastings St.,
Vancouver 1, B. C.

Located about 6 miles N.E. of Aspen Grove, B.C.

NICOLA H.D.

50°N - 120°30'W

By

W. H. SIROLA, P.Eng.

December, 1962.

IN WITNESS WHEREOF I HAVE SIGNED:

This will verify that I, Angus MacDonald of 2090 West 44th Avenue, Vancouver, have a Bachelor of Arts degree in Biology and Chemistry (1952) and a Bachelor of Arts degree in Geology (1957).

During 1957 and 1958 I carried out geological, geochemical and magnetic surveys for Forwest Mining Limited of Suite 305 - 1075 Melville Street, under the supervision of William H. Cizols, P. Eng.

In the spring of 1961 geochemical and geophysical work was carried out in the Merritt area for Kerr-Addison Gold Mines Ltd.

ANGUS MACDONALD

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INTRODUCTION

Kerr-Addison Gold Mines Limited, with Head Offices at 44 King Street, West, Toronto, Ontario, optioned a block of 32 claims from Skeena Silver Mines of 744 West Hastings Street, Vancouver, B. C.

The claim group is located in the Nicole Mining Division on Tommy Creek, which flows westward out of Tommy Lake. The centre of the claim group would be approximately one mile southwest of the south end of Tommy Lake. Tommy Lake is located ten miles northeast of the village of Aspen Grove on the Princeton-Merritt highway. The property is accessible by four-wheel drive vehicle.

Skeena Silver Mines had completed 4,000' of diamond drilling and a limited amount of bulldozer trenching on a series of copper-magnetite skarn zones during the summer and early fall of 1962.

Kerr-Addison began investigation of the claims on October 15th and finished on October 20th. During this period, 25 miles of line were cut and geophysical, geochemical and magnetic surveys were performed.

The following report covers work on the entire 32-claim block but is intended to cover assessment work only on the following claim groups:-

<u>GROUP "A"</u>	-	Malachite 12-16, inclusive Malachite 18
<u>GROUP "B"</u>	-	Malachite 7 and 9
<u>GROUP "C"</u>	-	Chalcocite 7, 8, 13 and 14

SCHEDULE OF CLAIMS COVERED BY THE REPORT

<u>CLAIM:</u>	<u>TAG NO:</u>	<u>STARTING DATE:</u>	<u>RECORDING DATE:</u>	<u>RECORD NO:</u>	<u>LICENSE NO:</u>
Chalcoite # 1	401494	Sept. 26/61	Oct. 3/61	15268	15643
2	95	"	"	69	"
3	401497	April 24/62	May 8/62	17111	"
4	98	"	"	12	"
5	450859	May 10/62	May 24/62	17335	"
6	60	"	"	36	"
7	401499	"	"	37	"
8	500	"	"	38	"
9	450861	"	"	39	"
10	62	"	"	40	"
11	63	"	"	41	"
12	64	"	"	42	"
13	65	"	"	43	"
14	66	"	"	44	"
Malachite # 1	401490	Sept. 20/61	Oct. 3/61	15270	15643
2	91	"	"	71	"
3	92	"	"	72	"
4	93	"	"	73	"
5	403084	Nov. 5/61	Nov. 9/61	15449	"
6	85	"	"	50	"
7	86	"	"	51	"
8	87	"	"	52	"
9	88	"	"	53	"
10	89	"	"	54	"
11	90	Nov. 6/61	"	55	"
12	91	"	"	56	"
13	92	"	"	57	"
14	93	"	"	58	"
15	94	"	"	59	"
16	95	"	"	60	"
17	457350	June 30/62	July 16/62	18573	"
18	51	"	"	74	"

DOMINION OF CANADA:
 PROVINCE OF BRITISH COLUMBIA.
 To Wit:

In the Matter of

ELECTRICAL, GEOCHEMICAL & MAGNETIC
 SURVEY OF THE:

CHALCOCITE 1 - 14) MINERAL CLAIMS
 MALACHITE 1 - 18)

NICOLA MINING DIVISION

I, **WILLIAM N. SIGOLA**

of **319 - 409 Granville Street, Vancouver 2, B. C.**

in the Province of British Columbia, do solemnly declare that

the following is a true and accurate statement of costs involved in the above Survey.

COST STATEMENT

<u>NAME:</u>	<u>JOB:</u>	<u>DAYS:</u>	<u>RATE:</u>	<u>TOTAL:</u>
Krause, Harry	Line Cutter	32	\$16. per day	\$ 512.00
Glend, Peter	Line Cutter	28	\$16. per day	448.00
Faulkner, Don	Geophysical Asst.	34	\$16. per day	544.00
MacDonald, Angus	Geologist	44	\$20. per day	880.00
Sigola, W. N.	Supervision	8	\$30. per day	240.00
				<u>\$ 2,624.00</u>

SUMMARY OF TOTAL COSTS FOR 32 CLAIM GROUP

Wages and Salaries	\$ 2,624.00
Camp Operating	1,020.00
Motor Vehicle Operation	100.00
	<u>\$ 3,744.00</u>

APPORTIONMENT OF TOTAL COSTS TO THE VARIOUS CLAIM GROUPS INVOLVED:

<u>GROUP "A":</u> Malachite 12-16, incl. and Malachite 18	
6/32 x \$3,744.00	\$ 702.00
<u>GROUP "B":</u> Malachite 7 and 9	
2/32 x \$3,744.00	234.00
<u>GROUP "C":</u> Chalcocite 7, 8, 13 and 14	
4/32 x \$3,744.00	467.00
	<u>\$ 1,403.00</u>

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the **VANCOUVER, B.C.**

of **10** 1962, in the
 Province of British Columbia, this
 day of **December, 1962** A.D.

*A Commissioner for taking Affidavits within British Columbia or
 A Notary Public in and for the Province of British Columbia.*

GEOLOGY

The claims are largely underlain by dark green augite-andesite of the Nicole Series. Locally, the augite is sufficiently coarse to justify the term porphyritic augite-andesite. Epidote alteration is common-place and metasomatism by pink potash feldspar occurs locally. North/South trending skarn zones have developed in liney horizons in the centre of the claim group and these have been mineralized with chalcopyrite and magnetite. In the vicinity of the skarn zones, narrow, rusty North/South shear zones may be seen in the trenches. No attitudes were found in the andesites.

Two outcrops of quartz diorite were found. One occurs on the boundary of Chalcosite 11 and 12, north of Tacey Creek. The other occurs in the northeast part of Malachite 17. The diorite is medium grained with 30% mafics, 60% calcic feldspar and 10% quartz. No alteration was seen.

Coarse black argillite of the Nicole Series occurs on Malachite 7 and 9. The disposition of this rock type suggests a North/South trend in that vicinity. A little pyrite was seen in the argillites.

LINE CUTTING

A North/South base line 0,500' long was cut through the centre of the claim group. East/West lines were then run on 400' centres to cover the full width of the claims. Chainage pickets were placed at 100' centres on these lines. A total of 25 miles of line was cut and chained.

SELF-POTENTIAL SURVEY

The equipment used for this consists of a null-balance transistorized Potentiometer equipped with porous electrodes. The electrodes are connected through a commutator-equipped reel which holds 2,000' of No. 8 AWG wire.

Readings were taken at 100' intervals on lines 400' apart. When working in very dry soil, it sometimes became necessary to wet the ground at the point of observation. All readings were adjusted daily for any potential differences occurring between the electrodes themselves.

GEOCHEMICAL SURVEY

Soil samples were collected at 200' intervals on lines 400' apart. In general, the slightly limonitic "B" layer was absent and samples were collected a uniform 6" below the surface. The collective samples were then analysed at the Base Camp using Warren and Delavault's* Rubeanic Acid Field Test.

Basically, the above method is a semi-quantitative indicator of that copper content in soils which is extractable by cold acetic acid. Any copper in the soils shows up as a blue dot on litmus paper which has been previously treated with Rubeanic acid.

* Rubeanic Acid Field Test
by Harry V. Warren & Robert G. Delavault
Western Miner and Oil Review - January, 1959.

MAGNETIC SURVEY

Since the known skarn zones on the property were strongly magnetic (up to 23,000 gauss), the Arvale magnetometer was deemed to be sufficiently sensitive for all work except the delineation of rock contacts - for this purpose, an Oskania magnetometer with a sensitivity of 2.42 gauss was used. This work was of a reconnaissance nature and only the Arvale results accompany this report.

The Arvale instrument is a small, hand-held, torsion wire, null balance type which measures variations in the vertical field to the nearest 100 gauss. It has a maximum range of 60,000 gauss.

INTERPRETATION OF SELF-POTENTIAL RESULTS

In order to calibrate the equipment, a line was run across the principal mineralized zone which is a skarn lens 100' long, 23' wide and having a known depth of 350'. The skarn is mineralized with chalcopyrite and magnetite in varying amounts. The best drill intersection gave 1.62% Cu across 20'. This section contained 50% or more of magnetite. The potentiometer showed a drop of -182 millivolts across this zone and the equipment was therefore deemed suitable in the search for mineralized zones which might not be highly magnetic.

A few, weak, (less than 100 mv's) non-persistent anomalies were found at 1200N, 3200E; 600S, 5800W; but these were not considered indicative of commercial mineralization.

A number of positive anomalies located at 1200N, 1000W; 600N, 1600W; 460N, 2800E and 400S, 3300E are unexplained. These have been attributed by some writers to fault zones but, because of overburden, we found no corroborating evidence. We know of no case where a positive anomaly, unaccompanied by a corresponding negative, was indicative of mineralization.

INTERPRETATION OF GEOCHEMICAL RESULTS

In the absence of a "B" horizon in the soils, it is possible that our samples were collected from a leached zone in which the extractable copper content is negligible. Had weather conditions permitted/

Interpretation of Geochemical Results (Cont'd):

it would have been desirable to collect samples from various depths in the bulldozer cuts. Much of the near-surface mantle is a gray, sandy silt of glacial origin which is entirely free of any of the limonitic material which characterizes the "B" horizon. This points up the need for a certain degree of experimentization before any geochemical procedure is decided upon.

CONCLUSIONS

None of the exploration techniques used produced any anomalies which we would consider drilling targets or which, in our opinion, were worthy of further investigation by any means.

As mentioned under "Interpretation of Geochemical Results", it is possible that by collecting soil samples from some different horizon, a more conclusive geochemical pattern may have ensued. However, in the absence of corroborating electrical or magnetic evidence, we did not consider an alternative pursuit justified.

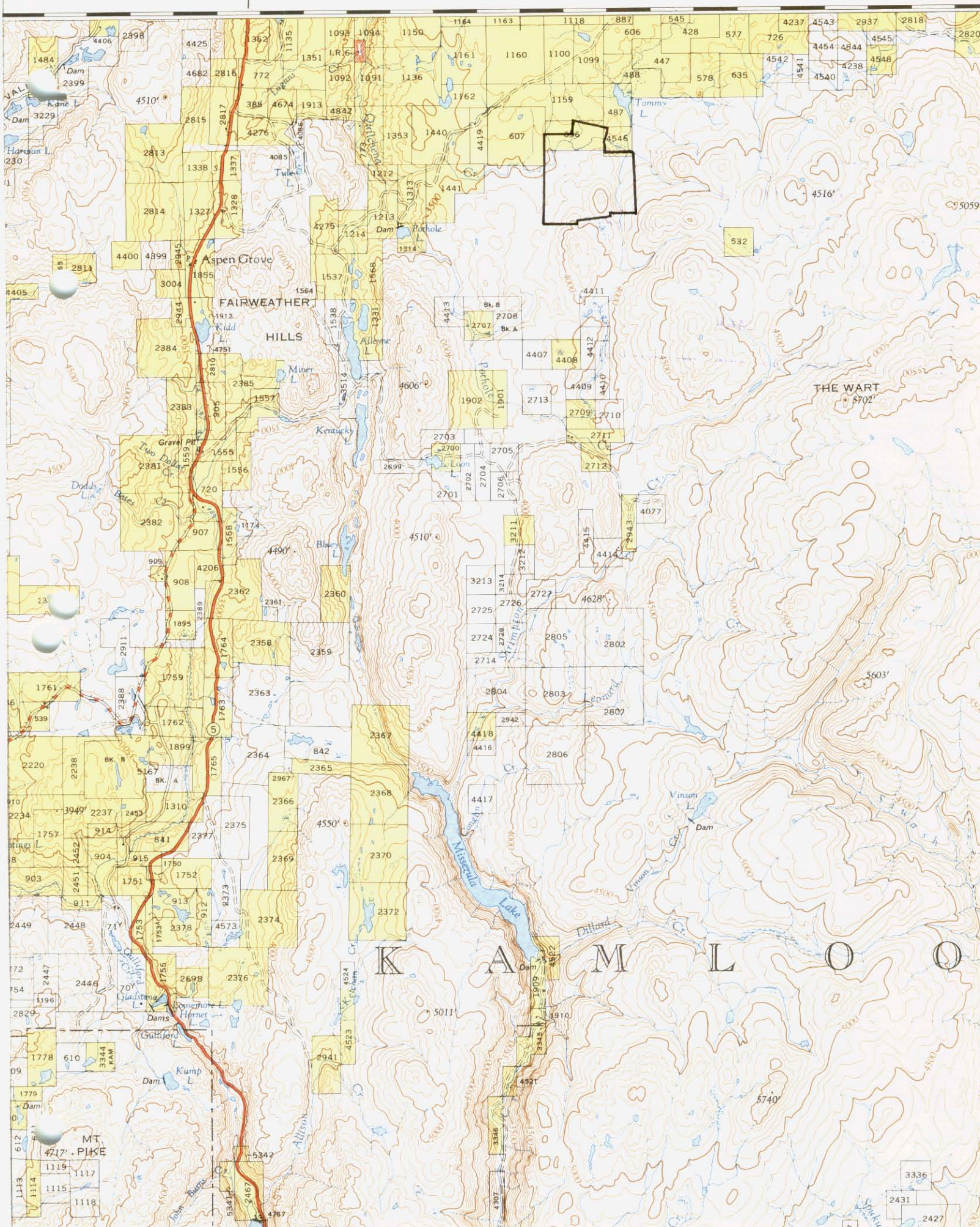
December, 1962.

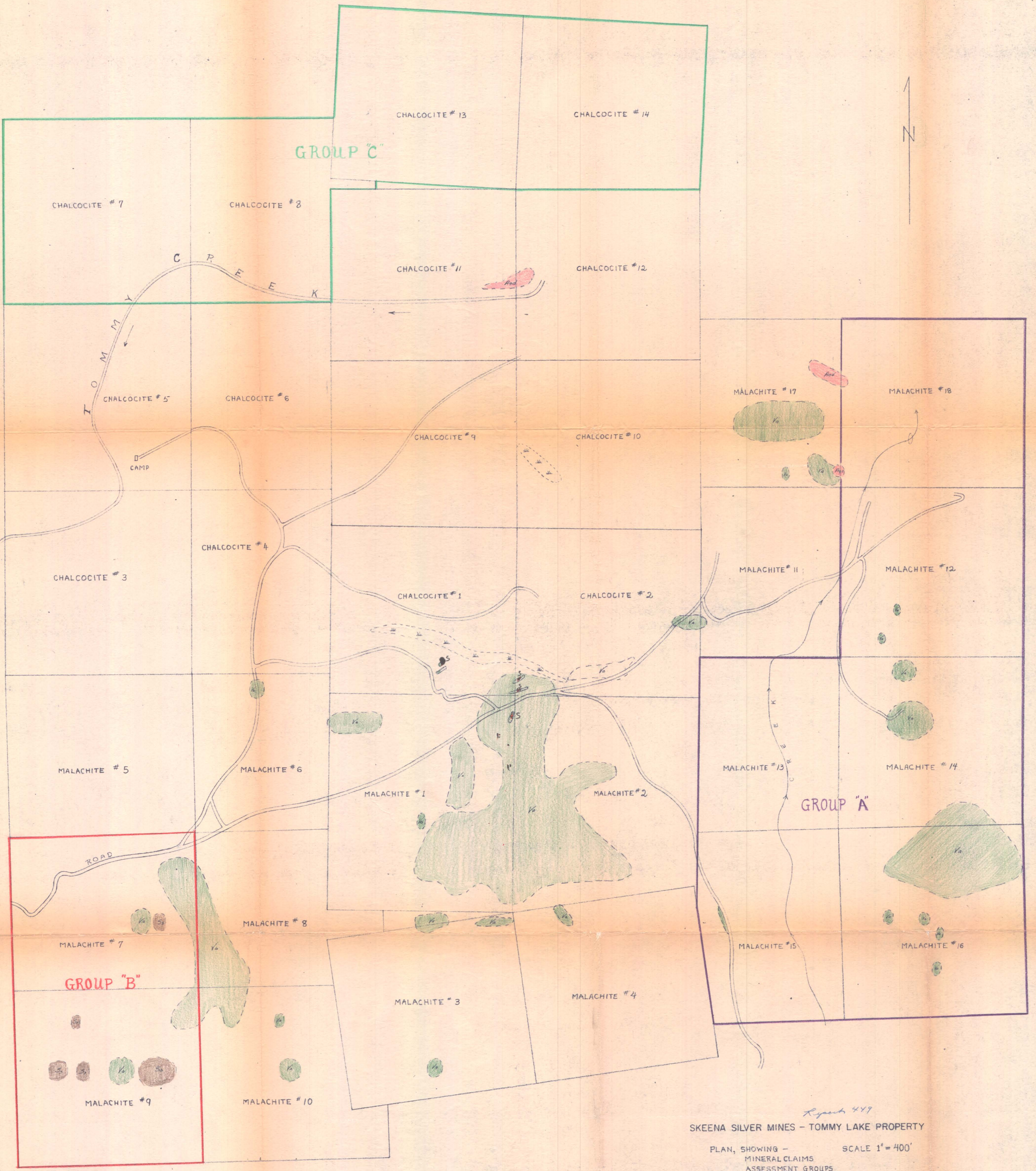

William N. Sirola, P.Eng.

SCHEDULE OF ACCOMPANYING MAPS

1. Key Map Scale 1"=2 miles
2. Claim Boundary and Geology Scale 1"=400'
3. Self-Potential Survey Scale 1"=400'
4. Magnetometer Survey Scale 1"=400'
5. Geochemical Survey Scale 1"=400'

<p>Department of Mines and Petroleum Resources ASSESSMENT REPORT</p> <p>NO. <u>449</u> MAP.....</p>





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 SKEENA SILVER MINES - TOMMY LAKE PROPERTY

PLAN, SHOWING - SCALE 1" = 400'

MINERAL CLAIMS
 ASSESSMENT GROUPS

ROADS
 OPEN CUTS

GEOLOGY

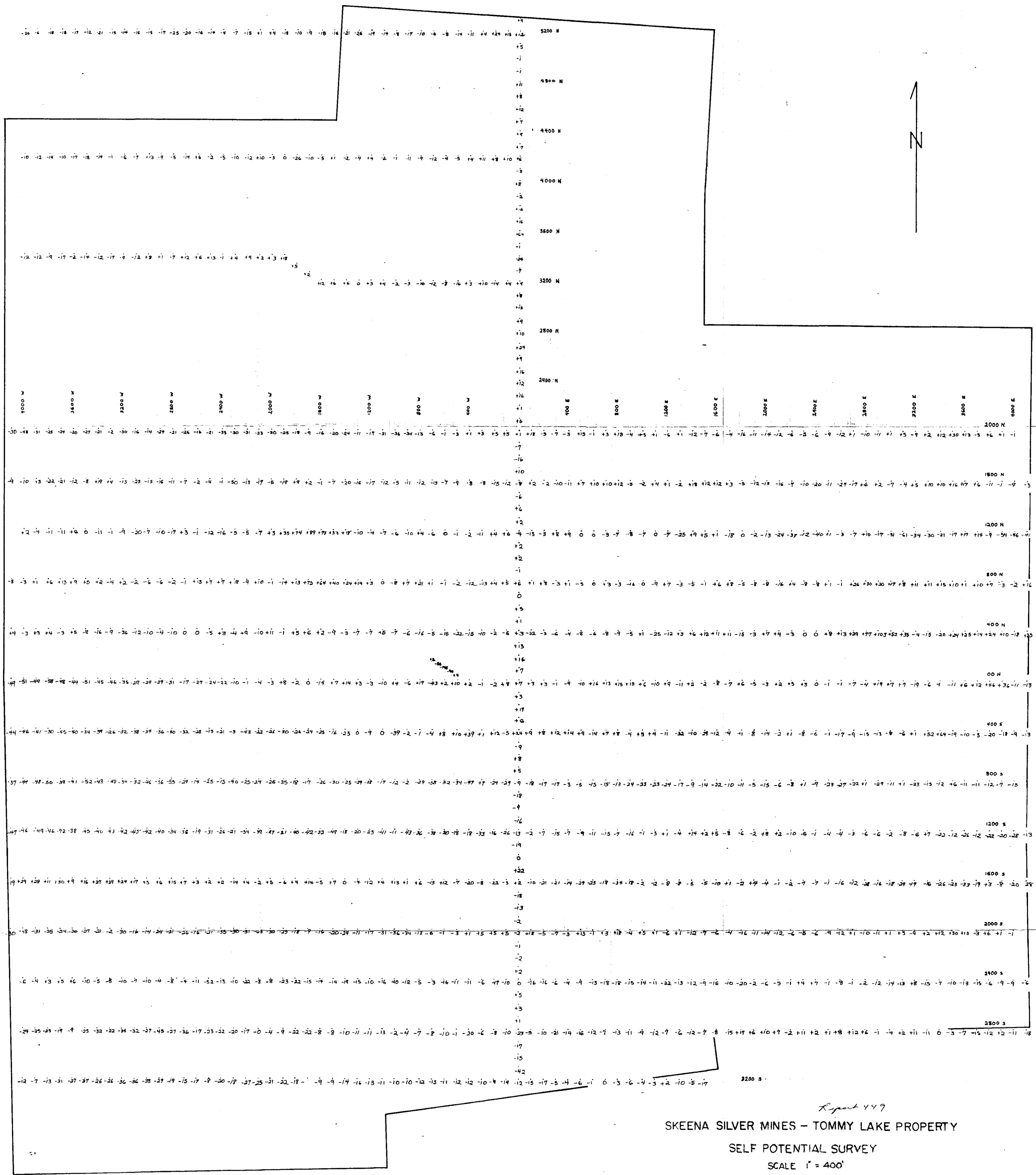
- ANDESITE
- ARGILLITE
- QUARTZ DIORITE
- SHARN
- COPPER MINERALIZATION

NOV. 62. AMD

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Mr. Chiswick
 Nov. 1962



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 SELF POTENTIAL SURVEY

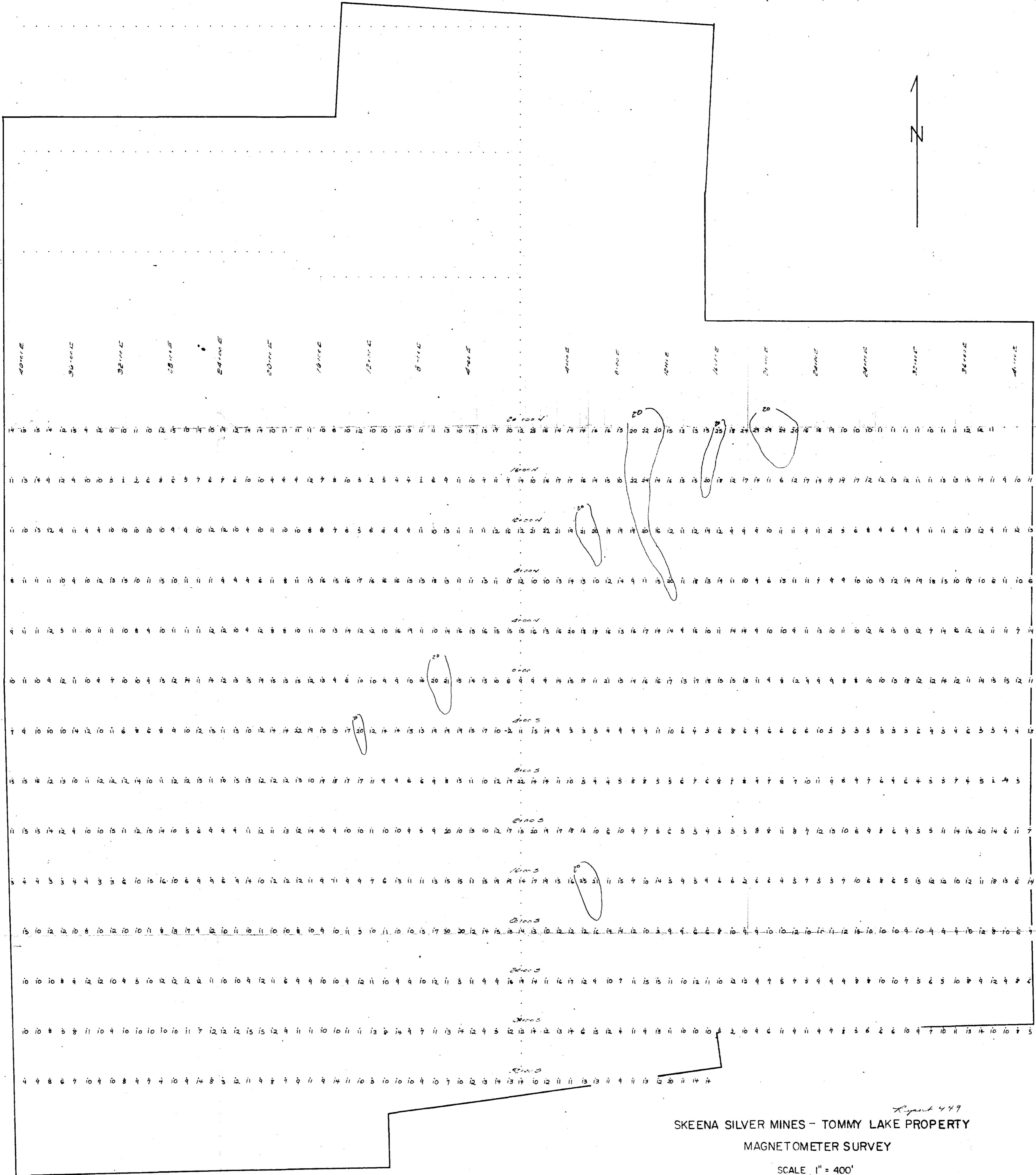
SCALE 1" = 400'

FIGURES DENOTE MILLIVOLTS

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Nov. 1968



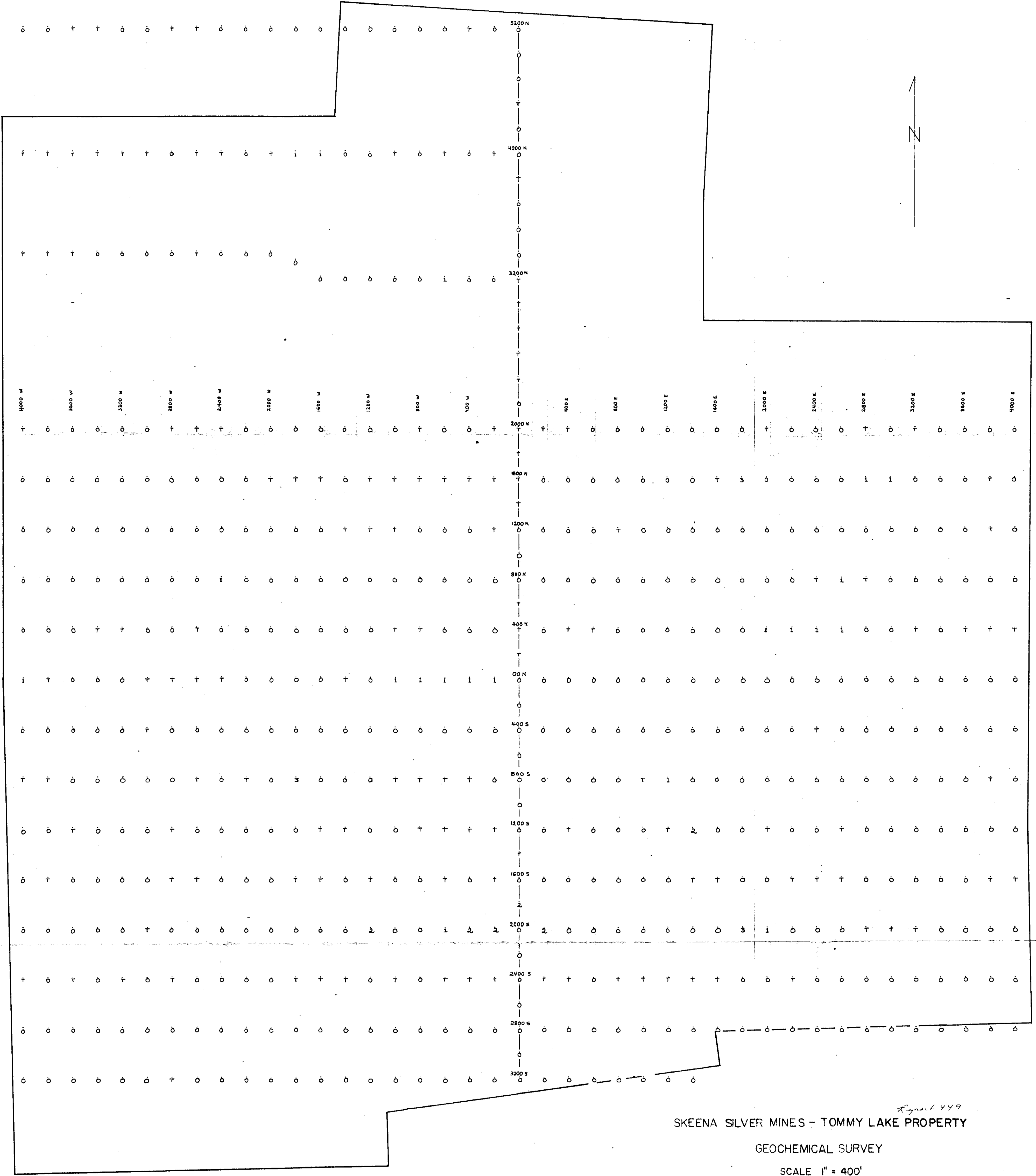
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 MAGNETOMETER SURVEY

SCALE: 1" = 400'

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SKEENA SILVER MINES - TOMMY LAKE PROPERTY

GEOCHEMICAL SURVEY

SCALE 1" = 400'

METHOD: RUBEANIC ACID
 LEGEND: ○ - NOT DETECTED
 ⊕ - TRACE
 1, 2, ETC DENOTES PERM. ACETIC ACID SOLUBLE COPPER

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 Mines and Petroleum Resources
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Tom Silva
 Nov. 1978