

4251

REPORT ON THE GEOCHEMICAL, MAGNETOMER,
AND GEOLOGICAL SURVEYS ON THE TI, MON,
MO, BUD CLAIMS OF ACHERON MINES LTD.
(NPL), NAHWITTI LAKE, NANAIMO MINING
DIVISION, B. C. 92L/12W

TI 2,4,6,8,29-34,48-53;

MO 1-4;

MON 1-4;

BUD 1

Situated 2.5 miles west of Nahwitti Lake,
Northern Vancouver Island, Nanaimo Mining
Division, B. C.

50° 43' N; 127° 55' W

Submitted by: D.P. Taylor, Geologist
Endorsed by: R.H.D. Philp, P. Eng.
Owner: Acheron Mines Ltd. (NPL)
Work conducted by: Agilis Exploration
Services Ltd.

REPORT ON THE GEOCHEMICAL,
MAGNETOMETER, AND GEOLOGICAL SURVEYS
ON THE TI, MON, MO, BUD CLAIMS
OF ACHERON MINES LTD. (NPL),
NAHWITTI LAKE, NANAIMO MINING DIVISION, B.C.

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4251

January 30, 1973

Vancouver, B. C.

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MAPS

Property Location Map	1" = 2 miles
Geochemical Survey (Zinc) and Claim Map	1" = 100'
Geochemical Survey (Lead) Map	1" = 100'
Magnetometer Survey Map	1" = 100'
Geological Survey Map	1" = 400'

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INTRODUCTION

Acheron Mines Ltd. (NPL) holds 25 contiguous mineral claims, the TI, MON, MO and BUD claims, 2.5 miles west of Nahwitti Lake, northern Vancouver Island.

Previous geological, geochemical and magnetometer surveying has been conducted on the claims since 1968.

In the early summer of 1972 a crew of Agilis Exploration Services Ltd. personnel extended the geochemical survey to the west and detail sampled anomalies found in earlier surveys. A magnetometer survey was conducted over sections of the old and new grid and geological mapping was extended westward.

LOCATION AND ACCESS

The claims are located 2.5 miles west of Nahwitti Lake, north of the Holberg road and south of the Nahwitti River. The area is 18 miles west of Port Hardy. The centre of the property is located:

50°43'N; 127°55'W.

Access to the claims is via the Port Hardy-Holberg road and approximately 1 mile on foot from that road.

PHYSIOGRAPHY

The property occupies an incised upland with moderate relief at about 2000' above sea level.

The property is covered with alternate areas of heavy timber and open cedar swamp. Underbrush is generally heavy in all areas.

Precipitation in this area is heavy throughout the year with varying amounts of snow in the winter.

PROPERTY

The property consists of 25 contiguous mineral claims recorded in the Nanaimo Mining Division, B. C.

<u>Claim Number</u>	<u>Record Number</u>
TI 2,4,6,8	22335,7,9,41
TI 29-34	23083-88
TI 48-53	23818-23
MO 1-4	30649-52
MON 1-4	30645-48
BUD 1	25146

All claims are owned by Acheron Mines Ltd. (NPL).

REGIONAL GEOLOGY

According to the mapping of Dr. J. E. Muller of the B. C. Department of Mines, the mapped area lies on the northern limb of a northwesterly trending syncline which occupies the central section of northern Vancouver Island.

Besides minor sediments of Lower Cretaceous age, the area is underlain by Upper Triassic to Jurassic Vancouver Group volcanics and sediments intruded by late Jurassic to Tertiary quartz-diorite and andesite sills and dykes.

The Vancouver Group is divided by Muller as follows:

Vancouver Group (Upper Triassic and Jurassic)

Bonanza Sub-group: andesitic flows and breccia, felsite tuff, greywacke, shale, argillaceous and calcareous shales, argillaceous limestone.

Quatsino Formation: limestone.

Karmustsen Formation: massive and amygdaloidal volcanic flows, breccia, pillow lava, tuff of andesitic and basaltic composition, thin limestone beds.

Extensive block faulting has made the structural geology complex and lack of geological exposure makes the tracing of rock units difficult and conclusions drawn tentative.

PROPERTY GEOLOGY

The property geology for the eastern part of the claim group was mapped in 1969-70 by F. Holcapek, geologist of Agilis Exploration Services Ltd. The western half of the property was mapped by D.P. Taylor of the same company during the summer of 1972. Reconnaissance geology on the western half of the group has been adjusted by detail mapping.

Outcrop on the property is very limited and is found mainly in creeks.

VANCOUVER SERIES

Karmutsen Formation volcanics have been mapped in the north-eastern area of the claim group as andesites, amygdaloidal in part, and basaltic flows. A wide section of Quatsino Formation limestone traverses the central part of the property and is found as remnants in the central and northeastern parts of the property. The limestone has an apparent northwesterly strike, paralleling regional trends, but its wide lateral distribution is indicative of either very shallow dips and/or considerable faulting and displacement.

What are believed to be altered Bonanza tuffs and argillaceous shales and tuffs underlie the south central and south westerly part of the claims. These rocks are generally highly or

completely silicified and carry pervasive disseminated pyrite up to 5%. It is thought that the extensive alteration of these rocks has been caused by intrusives underlying them at shallow depth.

INTRUSIVES

Intrusives are widely dispersed on the property. A large body of quartz diorite lies northeast of the property, straddling the Nahwitti River, and granites of the Red Dog property of West Coast Mining are known to exist 1 mile west of the property and probably extend continuously to the property's north boundary.

Quartz diorite outcrops have been mapped in creek beds within limestone areas on claims TI 31-33 and on TI 29. Extensive intrusive float was found on MON 4 and massive dioritic to granitic outcrops are mapped on claims TI 52-53 and along the northwest boundary of the claims.

Actinolite and/or epidote skarn has been found in float, and one occurrence found in place, in the area of 8N, 38W.

It is believed that intrusives underlie all rock types on the central and western part of the property at relatively shallow depth.

Faulting on the property is generally obscured, however, a strong northwesterly trending fault has been located across

the centre of the property. Other faults almost certainly exist but are not yet located on the ground.

MINERALIZATION

Mineralized outcrop has been located on line 8N from stations 37 to 41W and on line 14N at 41W. Mineralized float was found at 4N, 20W. The mineralization consists of sphalerite sometimes with minor galena and chalcopyrite in actinolite and/or epidote skarn. One grab sample from the surface in this material ran 3.5% zinc.

Pyrite rich quartz-diorite float has earlier been assayed producing 0.1% copper.

MAGNETOMETER SURVEY

A magnetometer survey was conducted over the grid established between stations 30W and 45W. Lines 1 to 5N were surveyed to station 60W.

INSTRUMENT AND CONTROL

A sharpe Model MF-1 fluxgate magnetometer was used for the survey. This instrument is hand held, self orienting, and requires only course levelling, for ± 10 gamma readings on the scale used during the survey.

A base station was established at station ON, 30W and the 30W and 45W tie-lines were used for control.

FIELD PROCEDURE AND CORRECTIONS

The lines established were surveyed and tied into the carefully controlled tie-lines. The base station was checked 4 times per day and the instrument was re-zeroed at each departure. Diurnal drift adjustments were made according to base station checks to a maximum of 230 gammas. Drift corrections were made assuming linear drift.

RESULTS

Values obtained are generally between 2500 and 3500 gammas; high and low values in the survey are 5580 and 210 gammas.

Only one area is notable in the survey. High and low anomalies are located in the area of lines 6 to 9N from stations 36W to 42W. This area is known to be underlain by epidote-actinolite skarn bearing sphalerite and traces of chalcopyrite.

CONCLUSIONS

A mineralized skarn area is in an area of mixed high and low magnetic values. The remainder of the survey fails to distinguish any dominant structures or trends relatable to geological or geochemical data.

GEOCHEMICAL SURVEY

A detailed geochemical survey was conducted over claims MO 1-4 and parts of MON 4 and TI 29. The areas has been sampled on a reconnaissance basis in 1970. The pre-established grid was used with new lines being put in to bring the grid spacing to 100 x 200 feet.

SAMPLING PROCEDURE

Samples were taken at every station using mattocks. Many samples could not be obtained due to excessive organic material (up to 3 feet thick) in flat lying and often swampy areas. Samples were taken from 6 to 10 inches below the humus horizon.

ANALYSIS

All samples were shipped to Core Laboratories-Canada Ltd., 325 Howe Street, Vancouver, B. C. for analysis. A minus 80 mesh fraction was taken from each sample and subject to hot acid digestion. Quantitative analysis for ppm zinc and lead content was performed by atomic absorbtion methods.

RESULTS

A total of 628 samples were analysed for lead and zinc content from this survey.

Zinc values range from 2 to \ 2000 ppm. Background is found to be just over 105 ppm. Low anomalous level has been set at

200 ppm. The top very high anomalous 2.5% of the population is > 750 ppm.

Lead values range from 3 to > 1000 ppm. Background is 30 ppm and the low anomalous level is 45 ppm. The very high anomalous top 2.5% of the population are the samples > 100 ppm.

INTERPRETATION

Two extensive anomalies have developed for zinc in the survey. The anomalies each contain very highly anomalous samples associated with anomalous to low anomalous haloes.

The largest zinc anomaly is on lines 6 to 11N from stations 37 to 48W and consists of 26 contiguous anomalous values. Mineralization has been located in place on this anomaly in epidote-actinolite skarn. Nine anomalous lead values, 5 of them very high, lie within this zinc anomaly. The area is also the location of the most complex magnetometer results found in the area.

A smaller but equally intense zinc anomaly is located on lines 16 to 22N from stations 35 to 39W. This anomaly comprises 13 samples, seven of them very high. No high lead values are coincidental with this anomaly though moderate to low lead values flank it to the northwest, southwest and southeast.

Two spot high values are found on lines 13 and 14N at station 37W, with one low anomalous value.

A spot high is also at station 29N, 42W with a low anomalous value to the north and to the south. A vague anomaly has developed on lines 14 to 18N in the area of stations 48 to 51W.

Other anomalous zinc values are dispersed and discontinuous.

Apart from the lead anomalies thus far mentioned there are two anomalies (the biggest and strongest) toward the east. A large lead anomaly lies on lines 0 to 3N from stations 11 to 21W. This anomaly comprises 16 samples (5 of them very high). The second anomaly is centered around the highest lead value obtained in the survey, > 1000 ppm at station 2N, 27W.

CONCLUSIONS

The claim area is underlain by Vancouver Group volcanics and sediments including the Quatsino Limestone. Extensive intrusive activity is evidenced to the north and west of and within the claim group.

Coincident lead and zinc geochemical and magnetometer anomalies are found within the area of lines 6 to 11N from station 37W to 48W.

A zinc anomaly has been defined from line 16N to 22N from stations 35W to 39W.

Two lead geochemical anomalies have been defined on the southeast extension of the grid.

It is impossible at the present state of knowledge to determine the probable depth extent of indicated mineralization although surficial indications are extensive.

RECOMMENDATIONS

The anomalies defined during these surveys demand further investigation to define more clearly their lateral and vertical components.

Within the next two years a road is to be built by Connors Logging of Port Hardy within 1000 feet of the anomalous area.

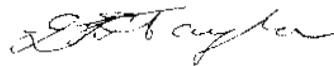
Due to the complex skarn environment of the mineralization geophysical exploration is not recommended.

Exploratory drilling with small diameter core drills is recommended in the area of coincidental anomalies mentioned.

In conjunction with the recommended drilling further exploratory drilling should be conducted on the zinc anomaly on lines 16 to 22N and on the lead anomalies on the southeast extension of the grid.

Should the area be logged prior to drilling bulldozer trenching should be performed prior to drilling.

Respectfully submitted by:



D.P. Taylor, Geologist

Endorsed by:

R.H.D. Philp, P. Eng.

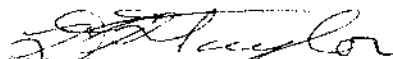
January 4, 1973

Vancouver, B. C.

CERTIFICATE

I, David Pelham Taylor, of Vancouver, British Columbia, do hereby certify that:

1. I am an exploration geologist residing at 2097 West 6th Avenue, Vancouver, B. C.
2. I am a graduate of the Royal School of Mines, London University (M.Sc., Mineral Exploration, 1971).
3. I have practiced as an exploration geologist in B. C. for five years.
4. Information contained in this report is based on work performed by myself or under my supervision during the period July 20 to August 15, 1972.


D. P. Taylor, M.Sc. D.I.C.

January 30, 1973

Vancouver, B. C.

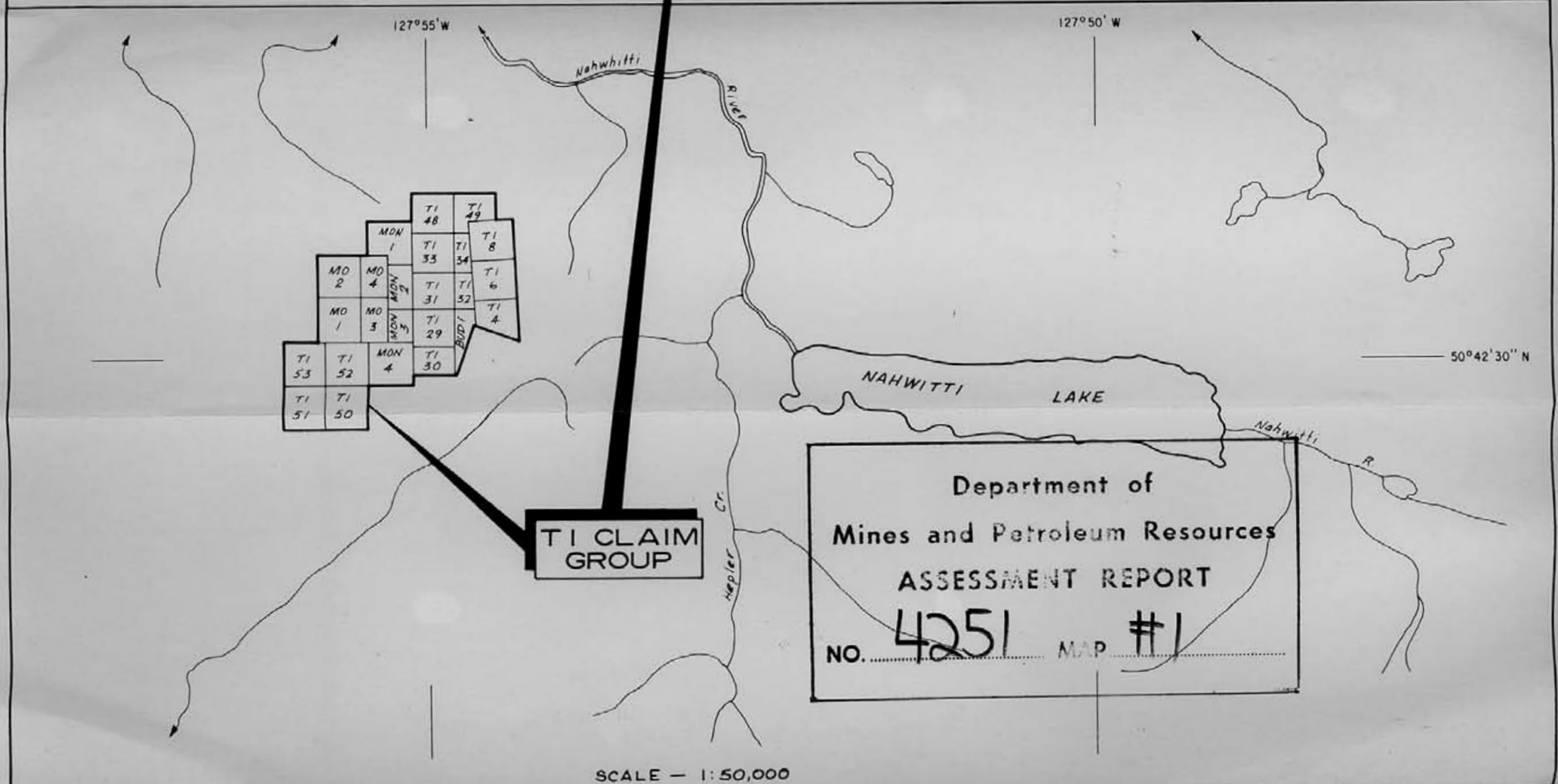


BRITISH COLUMBIA

ACHERON MINES LTD. (NPL)
TI CLAIM GROUP
NANAIMO MINING DIVISION

PROPERTY LOCATION MAP

SCALE IN MILES
 50 100 150 200



			TI 48	TI 49
		MON 1	TI 35	TI 34
	MO 2	MO 4	TI 31	TI 32
	MO 1	MO 3	TI 29	TI 28
TI 53	TI 52	MON 4	TI 30	TI 27
TI 51	TI 50			

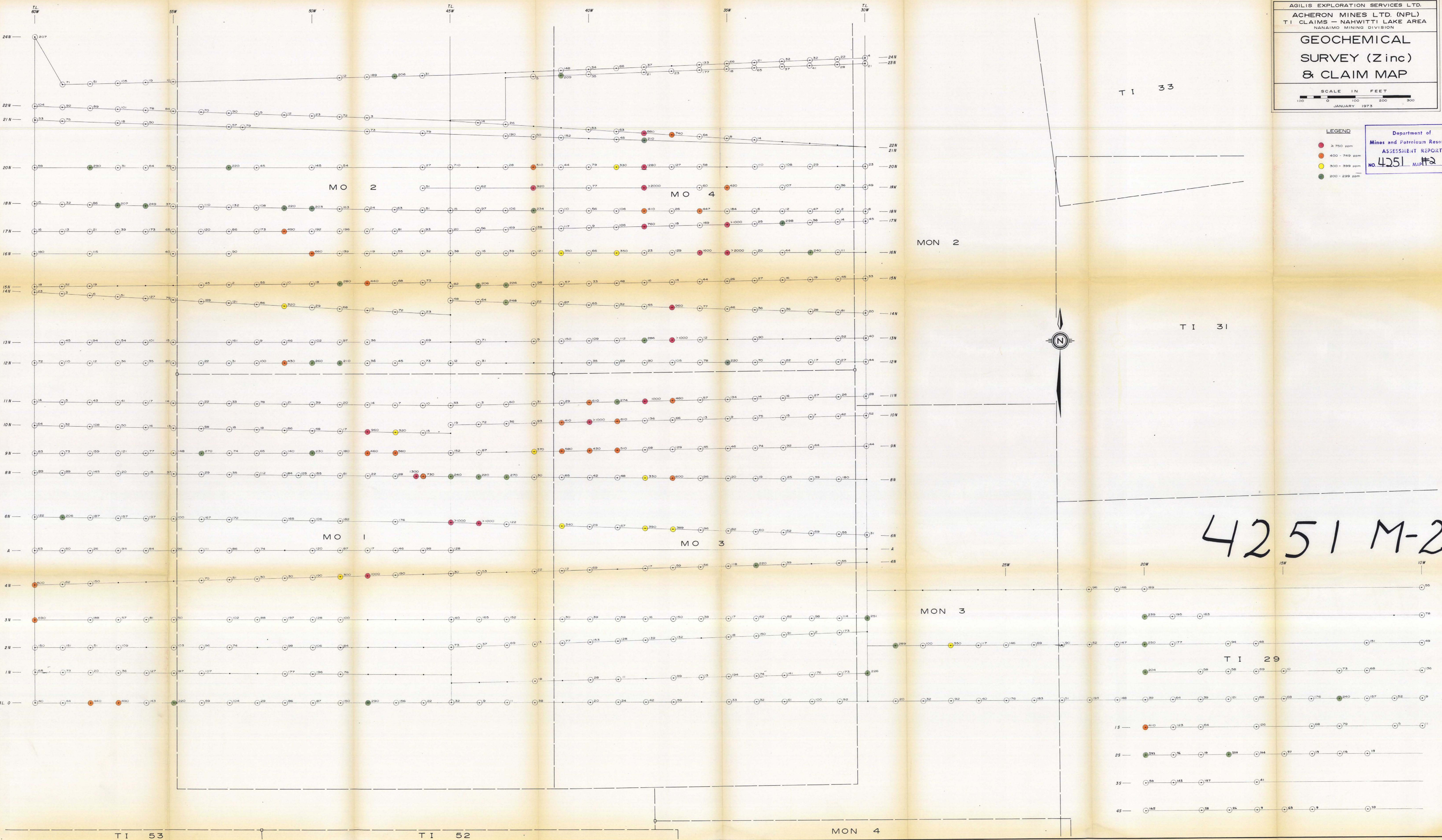
TI CLAIM GROUP

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SCALE - 1:50,000

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- LEGEND
- ≥ 750 ppm
 - 400 - 749 ppm
 - 300 - 399 ppm
 - 200 - 299 ppm



T I 33

T I 31

4251 M-2

T I 29

T I 53

T I 52

MON 4

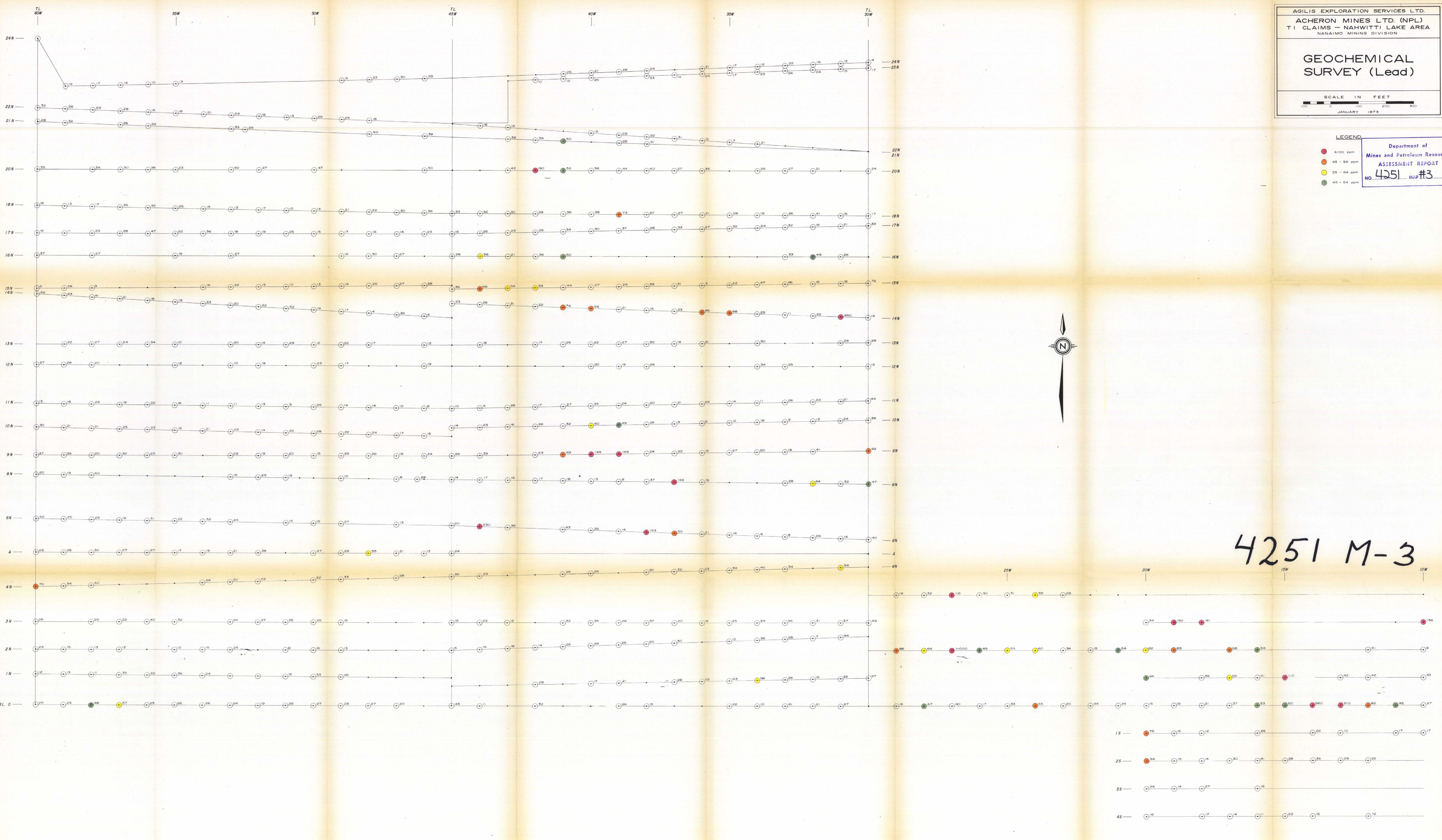
MON 2

MON 3

LEGEND

- 100 ppm
- 65 - 99 ppm
- 55 - 64 ppm
- 45 - 54 ppm

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AGILIS EXPLORATION SERVICES LTD.
 ACHERON MINES LTD. (NPL)
 T1 CLAIMS - NAHWITTI LAKE AREA
 NANAIMO MINING DIVISION

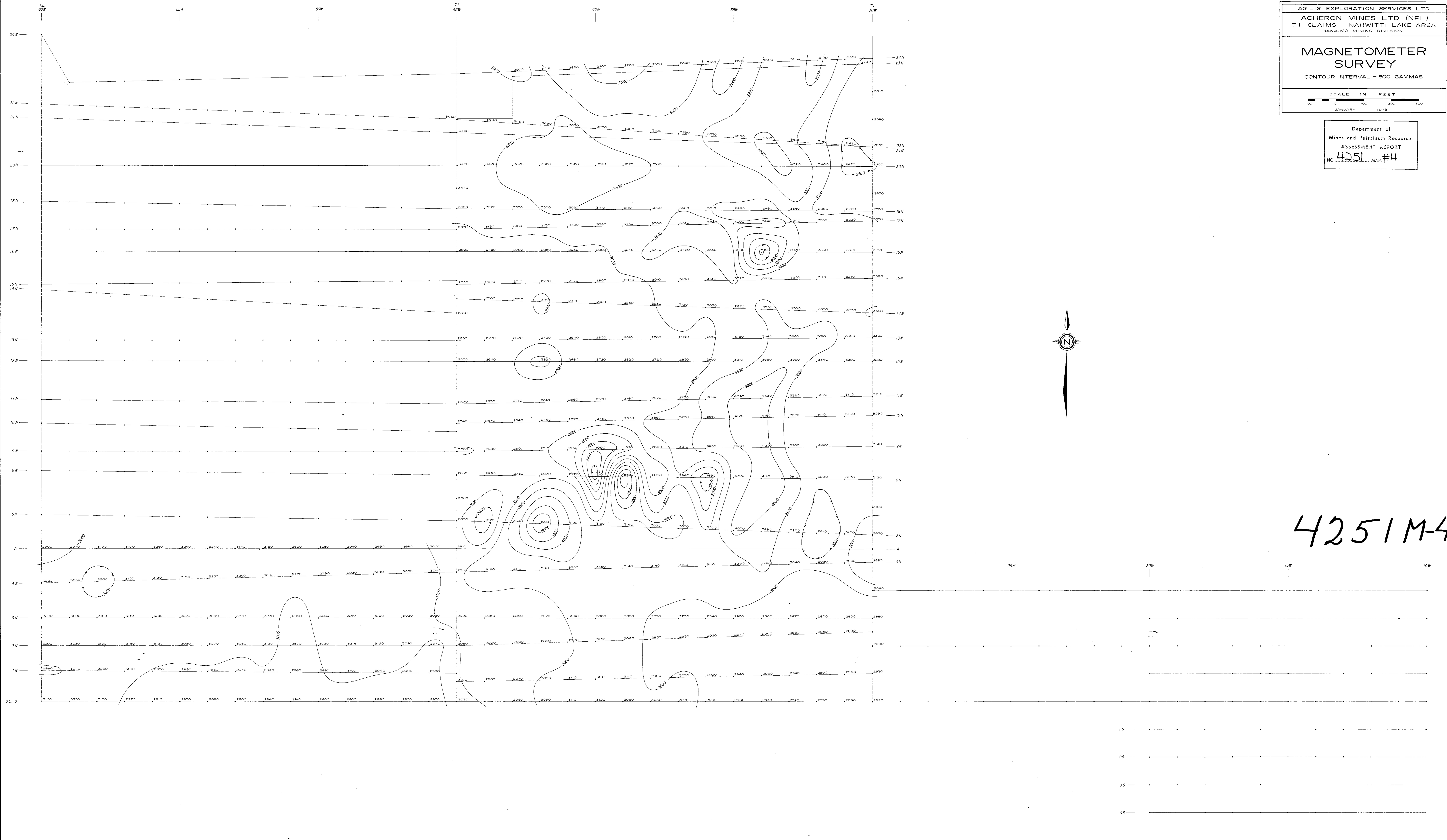
MAGNETOMETER SURVEY

CONTOUR INTERVAL - 500 GAMMAS

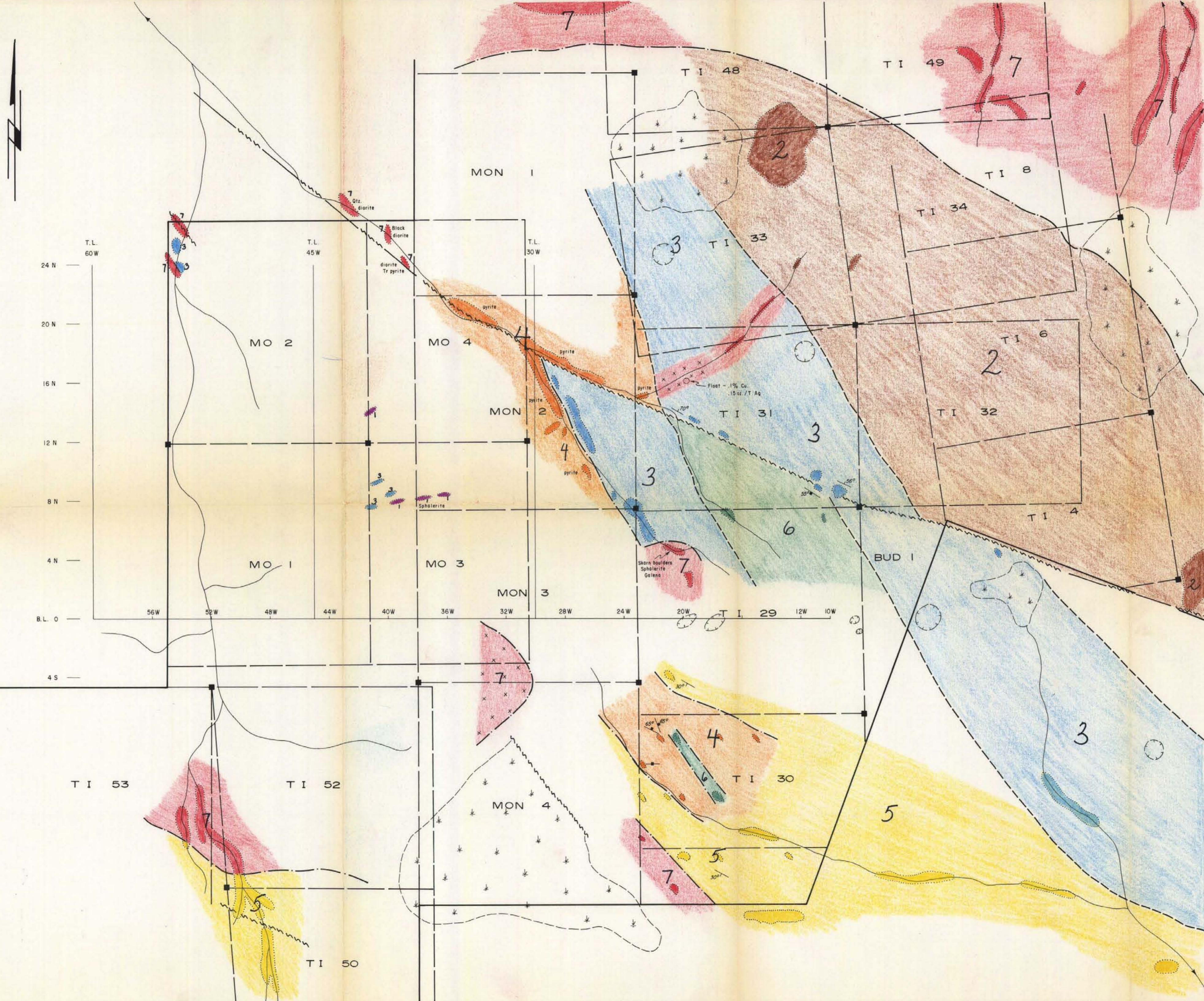
SCALE IN FEET
 100 0 100 200 300

JANUARY 1973

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4251M-4



LEGEND

GEOLOGY

JURASSIC and/or TERTIARY (?)

- 7 Quartz diorite, coarse grained
- 6 Andesitic sills (?) and dykes

VANCOUVER GROUP
UPPER TRIASSIC and (?) JURASSIC
BONANZA SUB GROUP

- 5 Banded argillaceous shales, tuffs, strongly silicified
- 4 Argillaceous tuffs, completely silicified, abundant pyrite, rhyolitic appearance

UPPER TRIASSIC
QUATSINO FORMATION

- 3 Dark grayish massive limestone

KARMUTSEN FORMATION

- 2 Andesites, amygdaloidal in part, basaltic flows
- 1 Actinolite and epidote skarn

SYMBOLS

- Creek
- Swamp
- Sinkhole, solution cavity
- Boundary of outcrop
- Fault (defined)
- Fault (inferred)
- Geological contact (inferred)
- " " (inferred from surface expression)
- Strike and dip, jointing
- Claim post
- Claim boundary
- Homogeneous float material

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NOTE: Taken from a report dated August, 1970. Additional information obtained from 1972 field survey.

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TI CLAIM GROUP - NAHWITTI LAKE AREA
NANAIMO MINING DIVISION, B.C.

SURFACE PLAN and GEOLOGY

