4634

PICKANDS MATHER & CO.

EXPLORATION REPORT

HOOP CLAIMS
(92P - 1W)

Field work by: George Dodd, Geologist

Supervision by: H. J. Wahl, P. Eng.

August 15, 1973

EXPLORATION REPORT

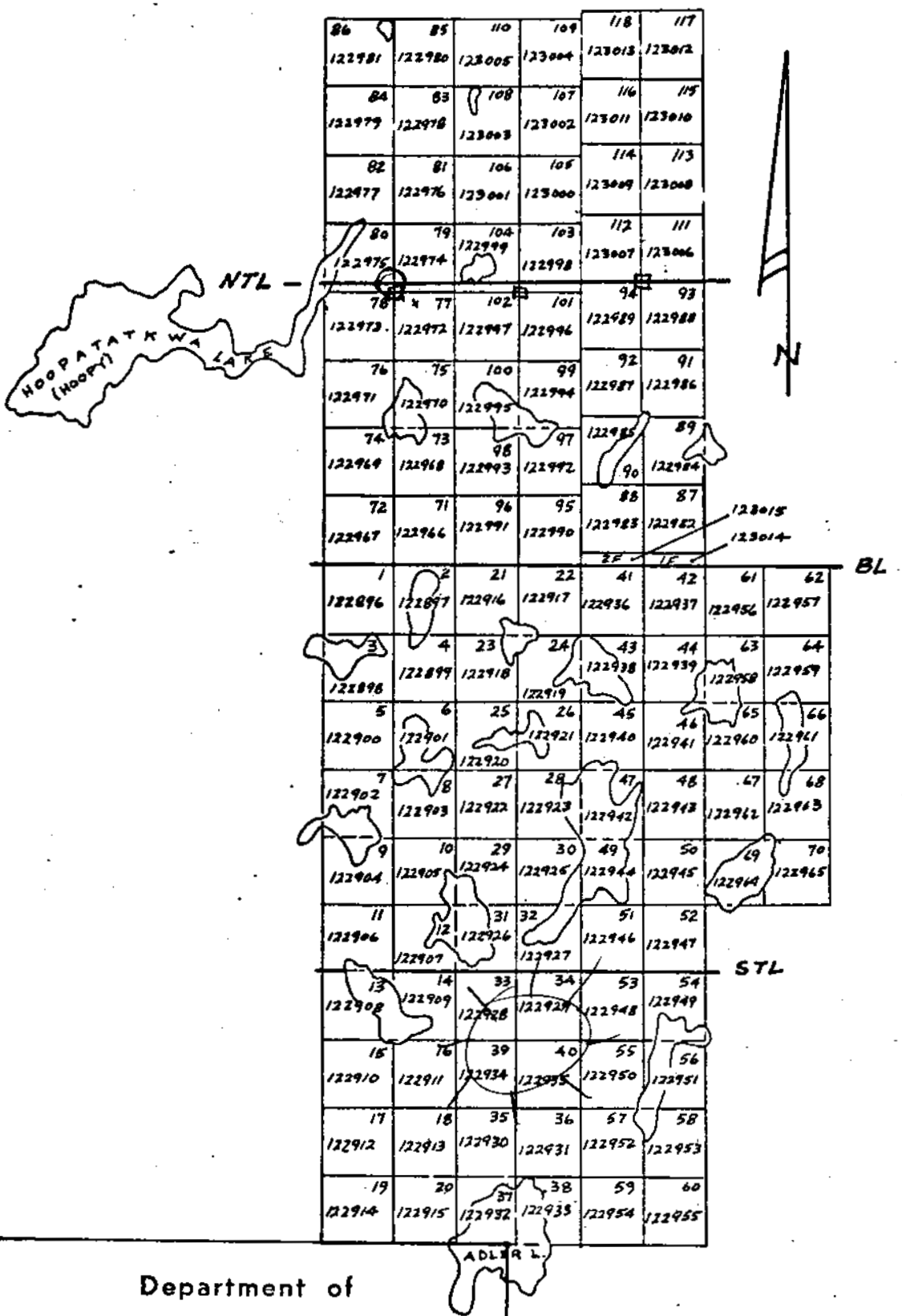
HOOP CLAIMS (92P-1W)

INDEX

Index (Continued)

MAPS

#1 Claim map
#2 Test Pit map
#3 Geology map (1)
#4 " " (2)
#5 " " (3)
#6 Geochemical Map Cu-Ag (1)
#7 " " " (2)
#8 " " " (3)
#9 " " Mo (1)
#10 " " " (2)
#11 " " " (3)
#12 Ground Magnetic Survey (1)
#13 " " " (2)
#14 " " " (3)



Department of

Mines and Petroleum Resources

ASSESSMENT REPORT

NO. 4634 MAP #1

SCALE 1000 0 1000 2000 3000 4000 5000 6000 7000 FT.

1/2 mile to 1 inch

PICKANDS MATHER & CO. VANCOUVER B.C.

MIDDLE BELT PROJECT

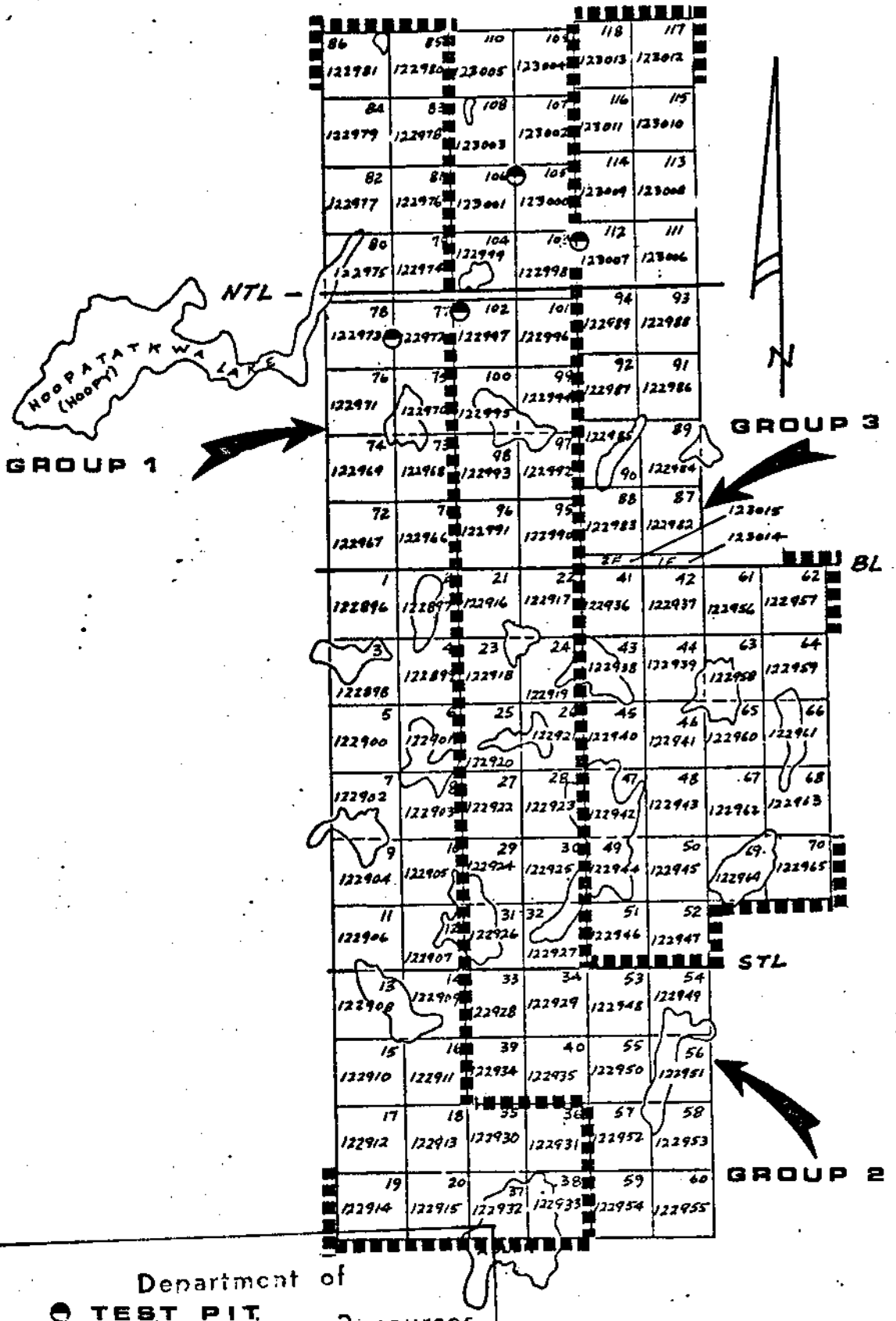
HOOP CLAIMS

(RECORD NUMBERS)

SCALE 1" = 1/2 MI. | REVISIONS

DATE: AUG. 1973

NO.



Department of Mines and Petroleum Resources

● TEST PIT

ASSESSMENT REPORT

NO. 4634 MAP #2

SCALE 1000 0 1000 2000 3000 4000 5000 6000 7000 FT.

1/2 mile to 1 inch

PICKANDS MATHER & CO.
VANCOUVER B.C.

MIDDLE BELT PROJECT

HOOP CLAIMS

(RECORD NUMBERS)

SCALE 1" = 1/2 MI. | REVISIONS

DATE Aug. 1973 | 15 OCT. '73

NO.

PICKANDS MATHER & CO.

EXPLORATION REPORT

PROPERTY:	Hoop Claims (92P-1W)
PERIOD:	April 12, 1973 to May 22, 1973
DATE:	August 15, 1973
FIELD WORK BY:	George Dodd, Geologist
SUPERVISION BY:	H. J. Wahl, P. Eng.

SUMMARY

The objective of the 1973 program on the Hoop Claims was to examine and more positively delineate geochemical anomalies detected during the 1972 field season.

Line cutting totaled 379,319 (71.84 miles) feet on the property. A magnetometer survey at 100 foot stations was carried out on 65 miles of line. The magnetometer survey was useful in a general sense to define more basic intrusive phases under drift-covered areas. Soil sampling amounted to 992 samples @ 100 foot intervals. Geological mapping was completed on 100,600 lineal feet. In the early stages, work was hindered by two to three feet of snow cover, which persisted until early May.

Geological mapping near 1972 soil anomalies located a trace of malachite in the Thuya intrusive rocks. Molybdenite was seen in the float on the shore of Dagger Lake. Minor traces of pyrite were observed in the intrusive Thuya rocks adjacent to Dagger Lake.

The extensive glacial drift covering the bedrock makes mapping difficult. However, the absence of any alteration in the Thuya rocks, where observed, is discouraging. Generally, soil geochem anomalies were not near exposed rock. There may be some areas for significant mineralization under drift covered areas. This is open to speculation, and certainly was not indicated by the bedrock which has been mapped, although these exposures are widely scattered.

An IP survey is recommended to determine if bedrock conductivity is associated with coincident soil-magnetic anomalies in the northern sector of the property.

The IP survey would involve a minimum of 5 and a maximum of 12 line miles at 200-foot electrode separations. If conductive responses are

obtained, sufficient 100-foot separations should be used to more precisely locate conductors.

Contingent upon the results of this survey, a test drilling program could be recommended.

INTRODUCTION

History

The 1972 geochemical sediment sampling program revealed a copper anomaly in the vicinity of Hoopatatkwa Lake. Subsequent ground follow-up in this area confirmed the anomaly. To the south, in the area of Dagger Lake, molybdenum anomalies were detected by the sediment survey. These too were confirmed by soil samples taken along claim lines. In 1972, three detail soil lines were sampled at 100 foot intervals adjacent to previous reconnaissance lines. Reconnaissance lines were also sampled in the area surrounding Hoopatatkwa Lake, but these failed to pick up any further anomalous areas.

Ownership

Owner: Pickands Mather & Co.
Suite 216 - 475 Howe Street
Vancouver 1, B. C.

Property Description

118 full-sized claims being the Hoop Nos. 1 through 118 inclusive; Record Nos. 122896 through 123013 inclusive.

2 fractional claims being the Hoop Nos. 1 and 2 Fractions; Record Nos. 123014 and 123015 respectively.

Date staked: October 4-9, 1972

Date recorded: October 16, 1972

Date assessment work due: October 16, 1973

Location

Perimeter of property: 120°27' - 120°24' W.
51°12.5' - 51°09' N.

N.T.S. Number: 92P-1W

Country: Canada

Location (Continued)

Mining Division:	Kamloops
Province:	British Columbia
Distance to Kamloops:	Approximately 30 air miles
Access:	Restricted to helicopter or possibly float plane from Kamloops. Private logging roads exist on the eastern extremities of the property but are not yet close enough to provide effective vehicular access.

Topography

The elevations vary from 4,700 to 5,000 feet. The property is covered by a chain of interconnected lakes and swamps. The lake levels are quite stable with no pronounced beaches.

The overburden is estimated at 50 feet, as measured in a road cut in the north east corner of the property. No bedrock was observed in the 25 foot deep road cut.

The overburden observed in the road cut was glacial drift with intrusive and volcanic float. The crests of hills commonly were thinly covered or completely bare of overburden. North of the NTL, the overburden was estimated to be deeper than to the south. No outcrop was observed in a creek bank in the north east section of the property.

From the baseline to the south, outcrop was normally found on the crests of hills. The glacial material may not be thick in this area but is distributed in such a manner as to obscure most of the bedrock. The vegetation in the area of the Hoop Claims consists exclusively of evergreen trees. Pine predominates.

Previous Exploration

The 1972 program consisted of reconnaissance soil lines at 1,400 foot intervals in the area near Hoopatatkwa Lake. These lines were sampled at 200 foot stations.

Three detailed soil lines were sampled at 100 foot intervals to delineate anomalous areas detected by the initial reconnaissance lines in the northern sector of the claims. Surface blasting was also carried out at four locations of high soil values. The claim lines extending to the south were sampled geochemically at 200 foot intervals, after staking procedures were completed.

EXPLORATION

Project Initiation

On April 12-13, camp establishment was undertaken by George Dodd, Abe Wall and Arnold Pollmer.

April 14-15, Mr. Herb Wahl and the crew of four line cutters - Honorius Brunette, John Kelly, Charles Marshall and Gordon Huston - worked to establish the base camp.

Line cutting began on April 16, 1973.

Snow from 1-2 feet deep covered the property until May 9, 1973. Snowshoes were used extensively. Conditions deteriorated in the latter part of April, with the snow becoming very wet and heavy.

Occasional snow flurries were experienced during the entire survey.

The extremities of the grid were 2-5 miles from the base camp on Dagger Lake. To expedite the line cutting and survey work, a Bell 47G3B1 helicopter, belonging to Highland Helicopters, was used from April 25 until May 1, 1973.

Picket Grid

A grid of picket lines was established over the entire claim group, with N-S lines at 800-foot intervals. The grid was controlled by north (NTL) and south (STL) tie lines as shown on the accompanying maps.

Geological Mapping

A total of 100,600 line feet were mapped. Outcrops found on the lines were tied into the nearest station. Rock samples were marked according to line and station. The lines were spaced at 800-foot intervals; therefore, some exposures in between the lines were not mapped. Geological mapping of scarps exposed around the shore lines of some small lakes was also done while the ground was snow covered. The extensive glacial cover in the area make mapping very difficult, as lithological contacts are most likely gradational.

The geological mapping failed to discover any pervasive alteration in the Thuya intrusive. Mineral occurrences of interest were limited to a trace of malachite stain at station 22E NTL.

Traces of pyrite were seen in the intrusive near Dagger Lake. Molybdenite was observed in a fractured, hybrid contact rock with quartz veining (float on the shore of Dagger Lake). Generally, the Thuya intrusive rocks were fresh and unaltered.

Geophysical Work

Magnetometer Survey: A ground, vertical intensity, magnetometer survey was performed at 100-foot stations over 65 miles of the grid. The instrument was an M700 McPhar fluxgate model (Sr. #70102).

The magnetometer was zeroed in at a base station using the latitude adjustment. The survey was then conducted relative to this fixed station. The magnetometer was checked daily for any deviation, positive or negative, from the original base station reading. The diurnal variation was a maximum of 80 gammas from the morning check to the evening check.

The magnetometer was useful in delineating the contacts between the Tertiary volcanics and the Thuya intrusive rocks. The magnetic survey also showed a north-easterly trending area of higher values coincident with 1972 soil anomalies in the northern sector of the property.

Geochemical Work.

Soil samples were taken with a standard Army entrenching tool, or a grub hoe, at 100-foot intervals over 18.78 miles of line for a total of 992 samples. Samples were placed in kraft paper soil sample bags and labeled according to line and station. The elevation at each sample point was taken for the majority of the soil samples. The samples were strung on plastic coated wire and hung inside a tent to dry.

The assaying was done by: Fraser Laboratories Ltd.
1175 West 15th Street
North Vancouver, B. C.

The samples were assayed for copper, molybdenum and silver.

The soil samples were classified according to the following system:

N - Stony soil - drift with no soil profile development

S - Sand

L - Loam, rich organic-silty soil found in low-lying areas

M - Decomposed moss from swamps and boggy ground

A_o - Organic litter - non-decomposed to partly decomposed organic matter

A_1 - Decomposed organic matter - may contain some mineral soil

A_2 - Leached sandy grey horizon

B_1 - Accumulation horizon. Consists of mineral soil, usually reddish-brown to orange in color due to the high content of iron

Geochemical Work (Continued)

B_2 - Yellow-brown mineral soil; contains much less iron than B_1 horizon

C - Parent material: bedrocks, glacial overburden or residual deposits.

There were:

Number	Class	% Total
141	A horizon samples	14.21
814	B horizon samples	82.05
2	C horizon samples	0.20
11	S horizon samples	1.10
5	L horizon samples	0.50
14	M horizon samples	1.41
5	N horizon samples	0.50
992		99.97/100.00

GEOLOGY

GENERAL GEOLOGY

Regional Setting:

The Hoop Claims are situated within the Thuya batholith. This batholith is at least 40 miles long (east-west) and 25 miles wide (north-south). The southern part of the claim group is covered by Tertiary volcanic deposits, which proved not to be as extensive as mapped by the G.S.C.

According to the G.S.C., the bulk of the rocks of the Thuya batholith are hornblende - biotite granodiorite and quartz diorite.

The G.S.C. also states that the Thuya batholith "appears to be shattered by thousands of closely spaced joints, fractures and/or faults".

Rock Types:

Tertiary:

Weathered surface: rock weathers a rusty red; amygdules are filled with brown-stained quartz.

Rock Types (Continued)

The outcrops are from 100 to 500 feet in diameter. They are flows of black, magnetic, fine-grained basalt. Skoatl Point, an apparent remnant volcanic neck, exhibits columnar jointing.

Triassic or Jurassic:

Outcrops of Thuya batholith are generally from 50-100 feet in diameter. The batholithic rocks were found from the south shore of Dagger Lake northward. To the eastern part of the property, outcrops can be described:

Weathered surface: from the exterior red to yellow to grey on the interior.

Fresh surface: speckled grey, medium grained biotite granodiorite.

An aplite dike was observed at station 110E on the baseline. The rock was heterogeneous with some granite dike phases. Refer to Geotec Report GD-17-R.

The granodiorite has the appearance of a monzonite. It is only through staining of the feldspars in the laboratory that a positive identification can be made. Refer to Geotec Reports GD-27-R, GD-33-R, GD-34-R and GD-38-R.

To the western and northwestern part of the property, basic rocks were observed:

Weathered surface: on line 48E, station 39S, a medium grained rusty red weathered rock. At other locations, the rock weathered grey.

Fresh surface: a grey medium to fine-grained biotite-hornblende diorite. Refer to Geotec Reports GD-15-R, GD-16-R, GD-20-R and GD-21-R.

To the northeastern part of the property, more basic rocks were observed:

Weathered surface: yellow-brown; texture varied from fine to coarse grained.

Fresh surface: black fine to coarse-grained hornblende gabbro. In some specimens, feldspar laths were evident. The gabbro may be in the form of a dike because chilled margins were observed. At station 85N on line 56E, a gradation from fine, to medium, to coarse-grained gabbro was seen.

Pennsylvanian or Permian:

In the northern part of the property, rocks of the Cache Creek Group were observed.

Rock Types (Continued)

Weathered surface: yellow-brown weathered surface, banded texture.

Fresh surface: black fine-grained quartz mica schist with a banded texture.

At station 122S on line 0 East, there is a coarse-grained hornblende gabbro intrusive into a low grade gneiss of the Cache Creek Group. The gabbro weathers a rusty brown and has a fleck of sulphide which may possibly be chalcopyrite.

The Cache Creek rocks were in contact with the Thuya batholith. There is evidence of metasomatism along the contact zone. The rocks show a banded texture which may be remnant bedding.

Metamorphism and Alteration:

The rocks of the Cache Creek Group have been contact metasomatized by the Thuya intrusive. Color banding appears the dominant texture of the original sediment. The rock has been infused with silica and secondary minerals such as biotite have been developed. Several samples showed intrusive injection with a sub-lit-par-lit texture.

No pervasive alteration was seen in the Cache Creek rocks.

Structural Geology:

Jointing seen in the Thuya batholith most often had a 170° strike and variable dips.

A foliation in the Cache Creek rocks had various orientations. It would be difficult to infer any broad structure from the information obtained.

MINERALIZATION

Mineralogy

Malachite was observed in a small fracture in the diorite at station 20E on the north tie line.

Two hundred feet further east, malachite stain was also observed on felsite float.

To the south on line 0 East, station 122S, a coarse-grained hornblende gabbro carried a fleck of sulphide, possibly chalcopyrite.

Small flecks of molybdenite were seen in float on the shore of Dagger Lake. In both cases, the rock showed random intrusive fingers of granodiorite.

Mineralogy (Continued)

Pyrite was seen in traces in the intrusive near Dagger Lake. The pyrite was observed in fractures. Only a trace of pyrite was observed in any outcrop.

GEOPHYSICAL INTERPRETATION

The magnetometer survey was useful in determining the approximate contacts between the Thuya intrusive rocks and Tertiary volcanics. The volcanic rocks were characterized by a strong positive zone, then a negative low. The magnetics were also somewhat higher over the basic rocks such as gabbros. This was especially evident in the northeastern sector of the grid.

There was a northeasterly trending area of high values coincident with 1972 soil anomalies in the northern sector of the property which may be indicative of basic dikes, shear zones, veins or possibly some combination of the three. The magnetics varied over the Thuya intrusive rocks. However, this variation was not sufficiently sharp to distinguish the various phases of the intrusive.

GEOCHEMICAL INTERPRETATION

The soil profile on the Hoop Claims, as observed in a road cut in the northeastern part of the property consisted of:

A horizon	-	organic litter
	-	partially decomposed organics
A_2 horizon	-	leached sandy grey horizon
B_1 horizon	-	reddish-brown mineral soil
B_2 horizon	-	yellow-brown mineral soil
C horizon	-	glacial overburden

There has been soil development in the area, and the majority of the soil samples were taken in the B horizon.

Results of the 1973 soil geochemical program have confirmed previous work and have identified three or more areas of anomalous metal in soils. These are:

1. Northern Sector: Copper soil anomalies, supported by anomalous levels of Mo and Ag, show a pattern of linear anomalies with a general ENE trend. This area measures some 8,000 x 8,000 feet lying on both sides of the NTL. Data have been contoured, where practicable, at levels of 0-50, 50-100 and >100 ppm Cu. While most of the anomalous zones are based upon one or two samples for width expression, they exhibit lengths of 1/4 or 1/2 mile.

Geochemical Interpretation (Continued)

Additional geophysical work and/or drilling is required to determine whether this pattern represents linear mineralized zones or is due to thickening and thinning of drift over a more pervasively mineralized area.

2. Central Sector: Due to snow cover, only limited soil sampling could be performed in this area. It was possible to collect sufficient samples to roughly identify a molybdenum anomalous area some 4,000' long x 2,000' wide, bounded by a 5 ppm Mo cut-off, lying just north of Dagger Lake. Copper values are not consistently anomalous within this area, which is considered to reflect erratic MoS_2 mineralization in bedrock. Outcrops within the anomaly are few, but well distributed and show only fresh granite.

   More detailed sampling and trenching is required to fully assess the significance of this anomaly.

3. Southern Sector: Moderately anomalous values for copper of up to 382 ppm were detected just north of Coture Lake in an area of no outcrop. More detailed sampling is required to define this area.

4. Other Areas: A number of other Cu/Mo anomalous results are evident, but as the geochemical program was hindered by snow from its full completion, there is no sound basis for evaluation.

   In view of the magnitude of the claim area and the demands of other field projects scheduled for 1973, it will be necessary to establish bedrock conductivity for the areas of defined anomalies before any additional geochemical work can be recommended at this time.

CONCLUSIONS

Geological mapping of the Thuya batholithic rocks covered by the Hoop Claims revealed that it is a multiphase intrusive body.

A speckled medium grained biotite granodiorite was found in the eastern part of the property as far south as the south tie line. This rock type was unaltered and generally very fresh in appearance.

An aplite dike was observed at station 110E on the baseline.

To the western and northwestern part of the property, more basic rocks were observed. A grey medium to fine grained biotite-hornblende diorite was the typical rock type. Traces of pyrite were observed in outcrops of this rock near Dagger Lake. Generally, this rock was again unaltered and fresh looking.

To the northeastern part of the property, a black fine to coarse grained hornblende gabbro was observed. The magnetomer survey revealed

Conclusions (Continued)

somewhat higher readings in this area. The trend of the magnetic readings in this area was northeasterly. Soil geochemistry done in 1972 also had a northeasterly trend here.

Cache Creek rocks outcrop in the northern part of the property. A banded grey fine grained quartz mica schist is the rock type. There is evidence of metasomatism along the contact with the Thuya batholith. It is difficult to be definitive as to the nature of these rocks. They could be an embayment into the batholith or possibly large zenoliths carried along with the intrusion of the Thuya rocks.

The 1972 soil anomalies of up to 500 ppm copper in the soils are most probably due to mineralization associated with a contact effect along the easterly edge of the batholith. Only small traces of malachite have been found in the largely unaltered Thuya rocks. It is, therefore, unlikely that there could be any significant large low-grade prophry-type ore body in the area, or at least one possessing the normal characteristics usually associated with the development of this type of mineralization.

It is conceivable that some vein or fracture zone-type mineralization, possibly following the bedding in the Cache Creek rocks, could occur in the area of coincident cu-anomalous soils and higher magnetics located in the northern sector of the property.

The Thuya batholith appears to be a passive intrusive differentiated into quite basic phases to the northern part of the property. Cache Creek rocks show the effects of metasomatism in this area.

POSSIBILITIES

It is conceivable that there could possibly be a bedded-type sedimentary copper deposit in the northern part of the claim group if the anomalous soil results overlie an embayment of Cache Creek sediments. The northeasterly trend to both the magnetics and the soil geochemistry may extend even further. Weak moly-copper anomalies also were detected in this general direction by the sediment sampling program.

The absence of any outcrop in this area could indicate recessive weathering of the less resistant Cache Creek rocks.

However, no mineralization has been found in the located exposures of Cache Creek rocks to lend tangible support to this hypothesis.

RECOMMENDATIONS

An IP survey should be carried out to determine if bedrock conductivity is associated with coincident soil-magnetic anomalies in the northern half of the property.

Recommendations (Continued)

Contingent upon this, a limited drill program could be instituted. Should these results be favorable, then more detailed soil geochemistry and IP survey would be warranted in the southern property area to more precisely define soil anomalies indicated by sampling to date.

At present, this activity would not receive high priority. The IP survey would give a more definitive picture of the economic potential, or lack of it, in the area.

Submitted by: _____
George Dodd, Geologist

Approved by: _____
H. J. Wahl, Regional Geologist, P. Eng., British Columbia 8990

ATTACHMENTS

(1) Map, 1" = 400 ft., Hoop Claims, Geology (in 3 parts)

(2) Map, 1" = 400 ft., Hoop Claims, Geochemistry (in 3 parts)

(3) Map, 1" = 400 ft., Hoop Claims, Magnetometer Survey (in 3 parts)

(4) Map, 1" = 1/2 mile, Hoop Claims, Location Sketch

(5) Petrographic Report, Analysis of the sections relevant to Hoop Claims (Xerox copies)

REFERENCES

(1) GSC Memoir 363, Geology of Bonaparte Lake Map Area, British Columbia, by R. B. Campbell and H. W. Tipper, 1971.

(2) Petrographic Report for Pickands Mather & Co., by Geotec Consultants Ltd., November 16, 1972.

STATEMENT OF QUALIFICATIONS

GEORGE J. DODD

I, George J. Dodd, am a graduate of the University of British Columbia, having received a Bachelor of Science Degree in Geological Science in June, 1971.

Prior to my graduation, I was employed by Orequest Exploration Syndicate of Vancouver (1969) performing soil sampling, claim staking and line cutting. In 1970, I was a summer employee of the Geological Survey of Canada, engaged in a geological mapping project in the N.W.T.

Upon graduation, I was employed variously by Newconex Canadian Exploration Ltd., The Geological Survey of Canada and latterly by Orequest Exploration Syndicate. My duties during these employments covered various types of technical surveys related to mineral exploration.

For the past two summers (1972/73), I have been employed as Exploration Geologist for Pickands Mather & Co., participating in and supervising various company exploration projects related to a regional exploration program in central British Columbia.

I am fully conversant with the technical procedures related to the surveys being reported herein.

Date: Aug 16, 1973

G Dodd

George J. Dodd

Certified true and correct:

H. J. Wahl, P. Eng.
British Columbia 8990

TELEPHONE: 980-1115

FRASER LABORATORIES LIMITED
1175 W. 15th STREET, NORTH VANCOUVER, B.C.

August 17, 1973.

Mr. H. J. Wahl
Pickands Mather & Co.
Ste. 216 - 475 Howe Street
Vancouver 1, B. C.

Re: Analytical Method for Soils and Sediments

Dear Mr. Wahl:

The following is the analytical method used for your geochemical soils and lake sediments program in 1973. The large sample weight enables a good detection of lower range silver and molybdenum values.

Method:

- The samples were dried at approximately 120° F and 10 to 20 grams of minus 80 mesh was sieved.

- A 1.0 gram sample of minus 80 mesh was digested for 3 hours on a hotplate with a mixture of 2 mls nitric acid and 4 mls perchloric acid.

- The samples were diluted to 25 mls with demineralized water, and the concentration determined against matrix standards with a Techtron AA5 atomic absorption spectrophotometer.

Yours very truly,

FRASER LABORATORIES LTD.

R. M. Samuels

R. M. Samuels

Registered Assayer, Province of B. C.

APPENDIX

STAFF AND LABOR STATISTICS

The names and addresses of personnel employed on the project are:

George Dodd (geologist) $850/month

Apt. 206, 6821 Arcola Street, Burnaby, B.C.

Arnold Pollmer (geologist) $850/month

c/o Eagle Creek, B.C.

Abraham Wall (senior field assistant) $850/month

Apt. 4, 1550 Comox Street, Vancouver, B.C.

Yvon Gendron (camp cook) $850/month

P.O. Box 171, Val D'Or, Quebec

Charles Marshall (line cutter) piecework rates

110 Pollock Street, Kirkland Lake, Ontario

Gordon Huston (line cutter) piecework rates

79 Taylor Avenue, Kirkland Lake, Ontario

Honorius Brunette (line cutter) piecework rates

4 McCamus Avenue, Kirkland Lake, Ontario

John Kelly (line cutter) piecework rates

16 McCamus Avenue, Kirkland Lake, Ontario

The time distribution of labor on the various phases of the project is as follows:

SOIL SAMPLING

Total Days	Personnel	Dates
5 days	Charles Marshall	May 17-21, 1973
3 days	Gordon Huston	May 18, 20, 21, 1973
2 days	Honorius Brunette	May 20-21, 1973
2 days	John Kelly	May 18-10, 1973
8 days	George Dodd	April 29; May 1, 4-5 11-12, 14-15, 1973
20 total man days		

Staff and Labor Statistics (Continued)

MAGNETOMETER WORK

Total Days	Personnel	Dates
2 days	John Kelly	May 20-21, 1973
1 day	George Dodd	April 30, 1973
27 days	Abe Wall	April 18, 20-26, 28-30; May 1-5, 7, 11-17, 19-20, 1973
30 total man days		

GEOLOGICAL MAPPING

15 days	George Dodd	April 18-19, 22-24, 26, 28, 30; May 2, 4, 11-12, 16-17, 19, 1973
15 total man days		

CAMP ESTABLISHMENT AND DEMOBILIZATION

3 days	Arnold Pollmer	April 12-14, 1973
3 days	Herbert Wahl	April 14-16, 1973
8 days	Abe Wahl	April 12-16, 27; May 9-10, 1973
8 days	George Dodd	April 12-16, 27; May 9-10, 1973
6 days	Charles Marshall	April 14-15, 27; May 9-10, 22, 1973
6 days	Gordon Huston	April 14, 15, 27; May 9-10, 22, 1973
7 days	Honorius Brunette	April 14-15, 27; May 2, 9-10, 22, 1973
6 days	John Kelly	April 14-15, 27; May 9-10, 22, 1973
47 total man days		

Staff and Labor Statistics (Continued)

SUPERVISION AND OFFICE WORK

Total Days	Personnel	Dates
20 days	George Dodd	April 17, 20, 21, 25; May 3, 6, 7, 8, 13, 18, 20, 21, 23-26, 28-31, 1973
20 total man days		

The remaining time for the company line cutters is attributable to establishment of the basic survey grid which covers the entire claim group.

ACCOUNTING

Attached to this report is the accounting statement listing all direct field costs relevant to exploration work on the Hoop Claims for the period covered by this report.

PICKANDS MATHER & CO.
Detail of Exploration Expense
Non ferrous Project - British Columbia
Hoop Claims - Field Costs
January 1 to July 31, 1973
(Canadian Funds)

Field costs:		
Labor:		
Geologist and assistants	$6,110.20	
Line cutters	8,879.03	
Cooks	1,522.21	$16,511.44
Equipment		681.00
Supplies		1,559.67
Contracts:		
Air service	7,006.04	
Assaying	967.40	
Equipment rental and insurance	199.47	8,172.91
Other		135.60
		$27,060.62

The above statement of field costs for the Hoop Claims presents fairly expenditures for the Seven months ended July 31, 1973, subject to year-end audit adjustments, in accordance with generally accepted accounting principles.

PICKANDS MATHER & CO.

G. Bruce Cronin
Manager of Accounting

Declared before me at the City of Vancouver, in the Province of British Columbia, this 16th day of October 1973, A.D.

R. J. Wade

Joan Turner Sub-mining Recorder

GD 15-R A fine grained, dark grey, slightly porphyritic diorite. Minor iron oxide stain on fracture faces.

Mineralogy:

plagioclase [andesine] [albite]	- 62%
hornblende	- 15
biotite	- 15
quartz	- 5
pyroxene pseudomorphs	- 2
sphene, apatite	- 1
magnetite	- tr.

Textures:

A fine grained, slightly porphyritic hypidiomorphic-granular mosaic comprised of various-sized euhedral to anhedral plagioclase, hornblende and biotite crystals. A few large pyroxene crystals are pseudomorphically replaced by hornblende. Plagioclase crystal boundaries are commonly marked by micro granular albite rims. Hornblende crystals are often ragged and partially replaced by bladed biotite. The coarser grained hornblende crystals are unevenly distributed throughout the mosaic. Minor myrmekitic texture in plagioclase crystals.

Alteration:

Mild, albite and silica replacement of plagioclase constituents. Strong evidence for pyroxene, hornblende, biotite, deuteric alteration.

Discussion:

Mild deuteric alteration of a fine grained diorite.

GD 16-R A medium to coarse grained buff grey diorite. Specimen characterized by uniform sized, evenly distributed, 'blocky' mafic constituents.

Mineralogy:

quartz	- 3%
orthoclase	- 10
plagioclase [andesine] [albite]	- 58
hornblende	- 10
biotite	- 10
epidote	- 3
sericite	- 4
carbonate	- tr.
magnetite	- 2
sphene	- tr.

Textures:

A medium grained, hypidiomorphic-granular mosaic comprised of various-sized interlocking twinned plagioclase crystals and ragged, corroded amphibole [mainly hornblende] - biotite crystal aggregates as well as pseudomorphic hornblende crystals. Orthoclase and minor quartz interstitially related to the major mineral constituents. Some of the mafic constituents contain 'felted' recrystallized biotite. Opaque blebs of magnetite are concentrated in and around mafic aggregates.

Alteration:

Mild sericite-albite replacement of plagioclase. Hornblende to biotite deuteric alteration.

Discussion:

Magnetite probably derived as a by-product of pyroxene-hornblende-biotite deuteric alteration.

GD 17-R-1 A fine grained, buff-colored granite. Specimen characterized by a salt and pepper texture, round equigranular, fine grained quartz grains and a large rectangular-shaped biotite 'clot'. Very minor fine grained pyrite.

Mineralogy:

quartz	- 20%
orthoclase, microcline	- 15
plagioclase [albite]	- 59
biotite	- 4
chlorite	- 1
magnetite	- 1
pyrite	- tr.

Textures:

A fine grained, hypidiomorphic granular, interlocking mosaic comprised of subhedral and anhedral tabular-shaped plagioclase, microcline and orthoclase crystals interstitially connected by rounded and wedge-shaped quartz grains. The quartz grains exhibit moderate strain features. Minor bladed biotite is sparsely distributed throughout the section. Some orthoclase crystals are poikilitic.

Alteration:

Minor albite alteration of plagioclase.

Discussion:

Rock specimen possibly represents a residual magmatic quartzo-feldspathic dyke phase [?].

GD 17-2-R A medium grained, buff-grey quartz diorite. Mild iron oxide stain on fracture faces.

Mineralogy:

quartz	- 8%
microcline	- 2
plagioclase [andesine]	- 71
hornblende	- 8
biotite	- 7
sericite	- 3
sphene	- 1

Textures:

A medium grained, hypidiomorphic-granular mosaic comprised of subhedral and anhedral rectangular shaped plagioclase crystals interlocked with subhedral and anhedral, tabular and bladed crystals of hornblende and biotite. Subrounded to angular quartz is interstitially related to the other rock constituents. Plagioclase crystals are generally zoned and twinned. Hornblende and biotite frequently occur intermixed [i.e.] biotite partially replacing hornblende in a ragged, corroded aggregate. Myrmekitic textures often exhibited along feldspar crystal boundaries.

Alteration:

Very mild sericite-albite alteration. Minor silica replacement of feldspar as evidenced by myrmekitic textures. Noticeable hornblende to biotite deuteric alteration.

Discussion:

Unaltered quartz diorite.

GD 20-r A fine to medium grained, light grey porphyritic, altered quartz diorite. Specimen characterized by a marked foliation.

Mineralogy:

quartz	-	15%
plagioclase [andesine]	-	65
hornblende	-	6
biotite	-	5
sericite	-	4
epidote	-	3
sphene	-	1
clay	-	1

Textures:

Fine to medium grained sub porphyritic textured mosaic comprised of various-sized tabular and rectangular shaped, corroded plagioclase crystals along with fine grained subhedral and anhedral prisms and blades of hornblende and biotite separated by a fine grained silica matrix. Plagioclase crystals are often flecked by sericite and clay minerals.

Alteration:

Mild silicification [?]. Minor sericite-clay alteration of plagioclase. Hornblende-biotite deuteric alteration.

Discussion:

Possible quartz diorite porphyry dyke or partial silicification of a dioritic rock mass. Foliation suggests a silica alteration of a fine grained diorite.

GD-27-R A medium grained, buff colored granodiorite. Specimen characterized by two distinct sizes of mafic minerals.

Mineralogy:

quartz	- 10%
plagioclase [andesine]	- 72
hornblende	- 5
biotite	- 5
epidote	- tr.
sericite	- 3
clay	- 3
sphene	- 2

Textures:

A medium grained, hypidiomorphic-granular mosaic comprised of subhedral to anhedral, tabular and rectangular-shaped plagioclase crystals interstitially related with subrounded quartz crystals. Orthoclase occurs as seams and closed interstitial wedge-shaped grains interstitially connecting quartz and plagioclase. Plagioclase crystals are frequently zoned and twinned.

Alteration:

Very weak sericite-clay alteration of plagioclase. Hornblende-biotite deuteric alteration.

Discussion:

Unaltered granodiorite

GD-33-R A medium to coarse grained, greenish grey granodiorite. Specimen characterized by various-sized, blocky, mafic crystals and subrounded open interstitial quartz. Trace of iron stain on fracture faces.

Mineralogy:

quartz	- 12%
plagioclase [andesine]	- 62
orthoclase	- 10
hornblende	- 4
biotite	- 5
chlorite	- 2
sericite	- 3
epidote	- tr.
sphene	- 2

Textures:

Coarse grained, hypidiomorphic-granular mosaic comprised of various-sized subhedral to anhedral zoned plagioclase crystals and ragged euhedral and subhedral prisms and tabular plates of hornblende and biotite interstitially connected by subrounded quartz and orthoclase crystals. Large biotite plates are frequently poikilitic. Quartz grains are clear, fracture free and strained.

Alteration:

Very weak sericite replacement of plagioclase.

Discussion:

Unaltered granodiorite.

GD-34-R A medium-grained, buff-colored slightly bleached granodiorite. Very similar to GD-33-R. Mafic minerals less blocky in this case.

Mineralogy:

quartz	- 11%
orthoclase	- 8
plagioclase [andesine]	- 68
hornblende	- 3
biotite	- 5
chlorite	- 1
sericite	- 3
epidote	- tr.
sphene	- 1

Textures:

Medium grained, hypidiomorphic-granular mosaic. Equivalent to GD-33-R. Slight increase in flecked sericite.

Alteration:

Weak sericite replacement of plagioclase. Minor chloritization of biotite. Standard hornblende-biotite deuteric alteration.

Discussion:

Finer grained equivalent to GD-33-R although slight increase in sericite alteration in this case.

GD-35-R

A fine to medium grained, buff colored granodiorite. A finer grained equivalent to GD-33-R. Buff color attributed to mild iron stain.

Mineralogy:

quartz	- 10%
orthoclase	- 8
plagioclase [andesine]	- 63
biotite	- 6
hornblende	- 2
chlorite	- 2
sericite	- 3
epidote	- 1
clay	- 3
sphene	- 2

Textures:

A fine to medium grained hypidiomorphic granular mosaic characterized by various-sized, subhedral and anhedral zoned plagioclase crystals along with ragged prisms and plates of hornblende and biotite interstitially related to fine grained subrounded quartz and orthoclase crystals. A few biotite grains poikilitically enclose quartz grains. Some of the quartz grains occur as recrystallized aggregates.

Alteration:

Minor sericite replacement of plagioclase. Mild silicification [?].

Discussion:

Fine grained variety of GD-33-R.

Claim Boundary

HOOPY LAKE

Claim Boundary

Claim Boundary

120+00N

112+00 N

104+00N

96+00 N

88+00N

80+00N

72+00 N

64+00 N

N.T.L.

56+00N

48+00N

40+00N

32+00N

24+00N

16+00N

8+00 N

0+00

8+00E

16+00E

24+00E

32+00E

40+00E

48+00E

56+00E

64+00E

72+00E

80+00E

88+00E

1

2

3

LEGEND

LAKE

SWAMP

1 GRANITE

2 GRANODIORITE

3 DIORITE

4 GABBRO

5 BASALT

6 MICA SCHIST

TO ACCOMPANY EXPLORATION REPORT ON THE HOOP CLAIMS, KAMLOOPS M.D. BY HJ WAHL, PERIOD 12 APRIL-22 MAY, 1973

15 October 1973
H.J. Wahl

PICKANDS MATHER & CO.
VANCOUVER B.C.

MIDDLE BELT PROJECT
HOOP CLAIM GROUP
GEOLOGY

SCALE :	REVISIONS
DATE : MAY 1973	
NO.	

SCALE 400 0 400 800 FT.
400 feet to 1 inch

Claim Boundary

Claim Boundary

Claim Boundary

SIAM LAKE

DAGGER LAKE

8+00S

16+00S

24+00S

32+00S

40+00S

48+00S

56+00S

64+00S

72+00S

80+00S

88+00S

0+00E 8+00E 16+00E 24+00E 32+00E 40+00E 48+00E 56+00E 64+00E 72+00E 80+00E 88+00 96+00E 104+00E 112+00E

1
2
3

LEGEND

LAKE

SWAMP

1 GRANITE
2 GRANODIORITE
3 DIORITE
4 GABBRO
5 BASALT
6 MICA SCHIST

TO ACCOMPANY EXPLORATION REPORT ON THE HOOP CLAIMS, KAMLOOPS M.D. BY HJ WAHL, PERIOD 12 APRIL-22 MAY, 1973

15 October 1973
H J Wahl

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VANCOUVER B.C.

MIDDLE BELT PROJECT
HOOP CLAIMS
GEOLOGY

SCALE : 1" = 400'	REVISIONS
DATE : MAY 1973	
NO.	

SCALE 400 0 400 800 FT.
400 feet to 1 inch

4634
M4

0+00E 8+00E 16+00E 24+00E 32+00E 40+00E 48+00E 56+00E 64+00E 72+00E 80+00E 88+00E

STL

88+00S 96+00S 104+00S 112+00S 120+00S 128+00S 136+00S 144+00S 150+00S

N

LLOYD L.

SKOATL POINT

COUTURE L.

ADLER L.

Claim Boundary

Claim Boundary

Claim Boundary

SCALE 400 0 400 800 FT.

400 feet to 1 inch

1
2
3

LEGEND

LAKE

SWAMP

1 GRANITE
2 GRANODIORITE
3 DIORITE
4 GABBRO
5 BASALT
6 MICA SCHIST

TO ACCOMPANY EXPLORATION REPORT ON THE HOOP CLAIMS, KAMLOOPS M.D. BY HJ WAHL, PERIOD 12 APRIL-22 MAY, 1973

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Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4634 MAP #5

PICKANDS MATHER & CO.
VANCOUVER B.C.

MIDDLE BELT PROJECT
HOOP CLAIMS
GEOLOGY

SCALE : 1" = 400'	REVISIONS
DATE : MAY 1973	
NO.	

4634-M5

N

120+00N

112+00 N

104+00N

96+00 N

88+00N

80+00N

72+00 N

64+00 N

N.T.L.

56+00 N

48+00 N

40+00N

32+00N

24+00N

16+00N

8+00 N

HOOPY LAKE

CLAIM BOUNDARY

0+00

8+00E 16+00E 24+00E 32+00E 40+00E 48+00E 56+00E 64+00E 72+00E 80+00E 88+00E

1
2
3

4634-M6

Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4634 REPORT #6

LEGEND

LAKE

SWAMP

Cu / Ag Survey line and station
Metals as shown in p.p.m.

TO ACCOMPANY EXPLORATION REPORT
ON THE HOOP CLAIMS, KAMLOOPS M.D.
BY HJ WAHL, PERIOD 12 APRIL-22 MAY, 1973

15 October 1973
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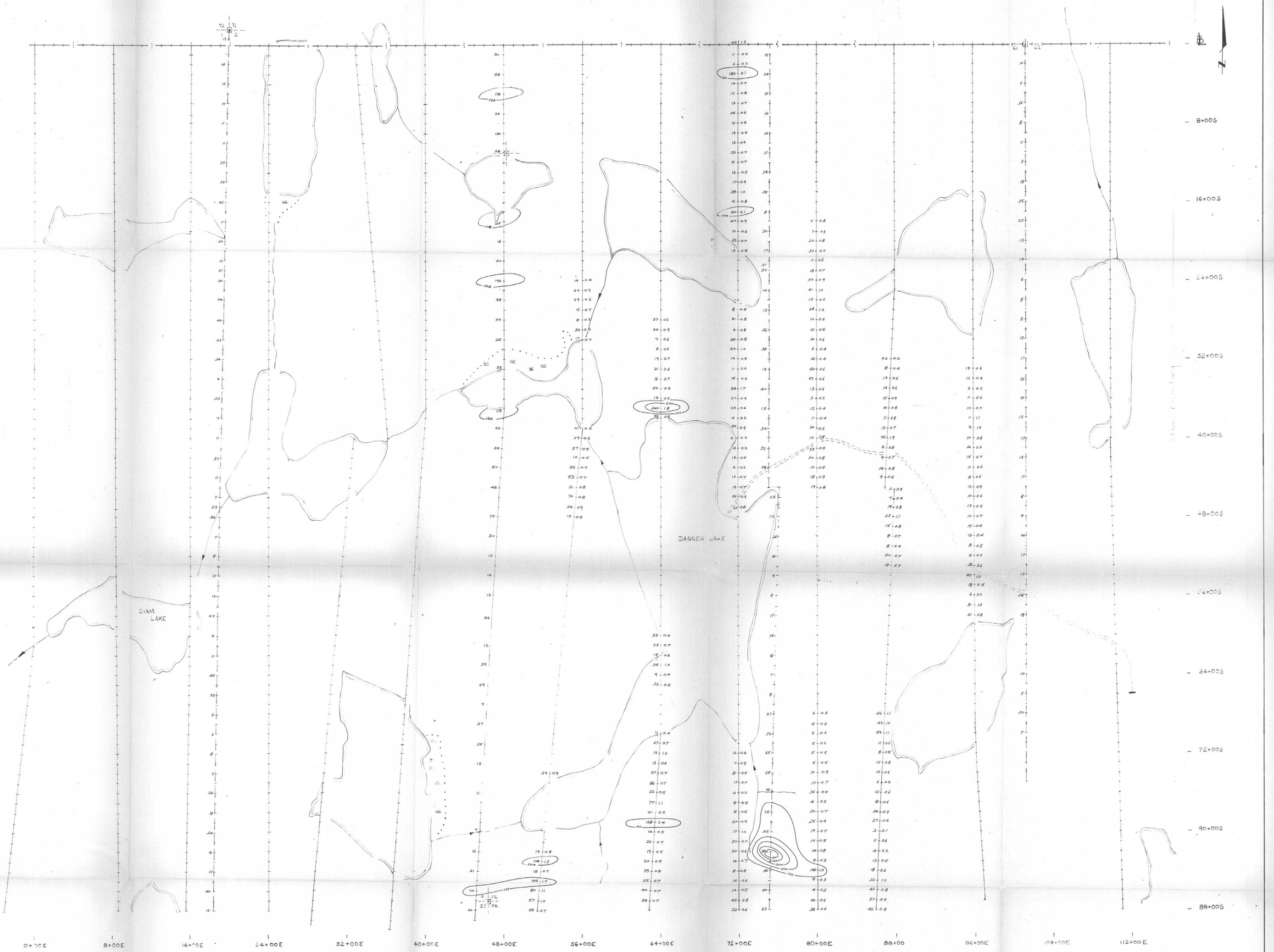
VANCOUVER B.C.

MIDDLE BELT PROJECT
HOOP CLAIM GROUP
CU - AG GEOCHEM

SCALE :
DATE : MAY 1973
NO.
REVISIONS

SCALE 400 0 400 800 FT.
400 feet to 1 inch



1
2
3

LEGEND

LAKE

SWAMP

Cu / Ag — Survey line and station metals as shown in p.p.m.

Contour interval 100 p.p.m.

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Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4634 MAP #7

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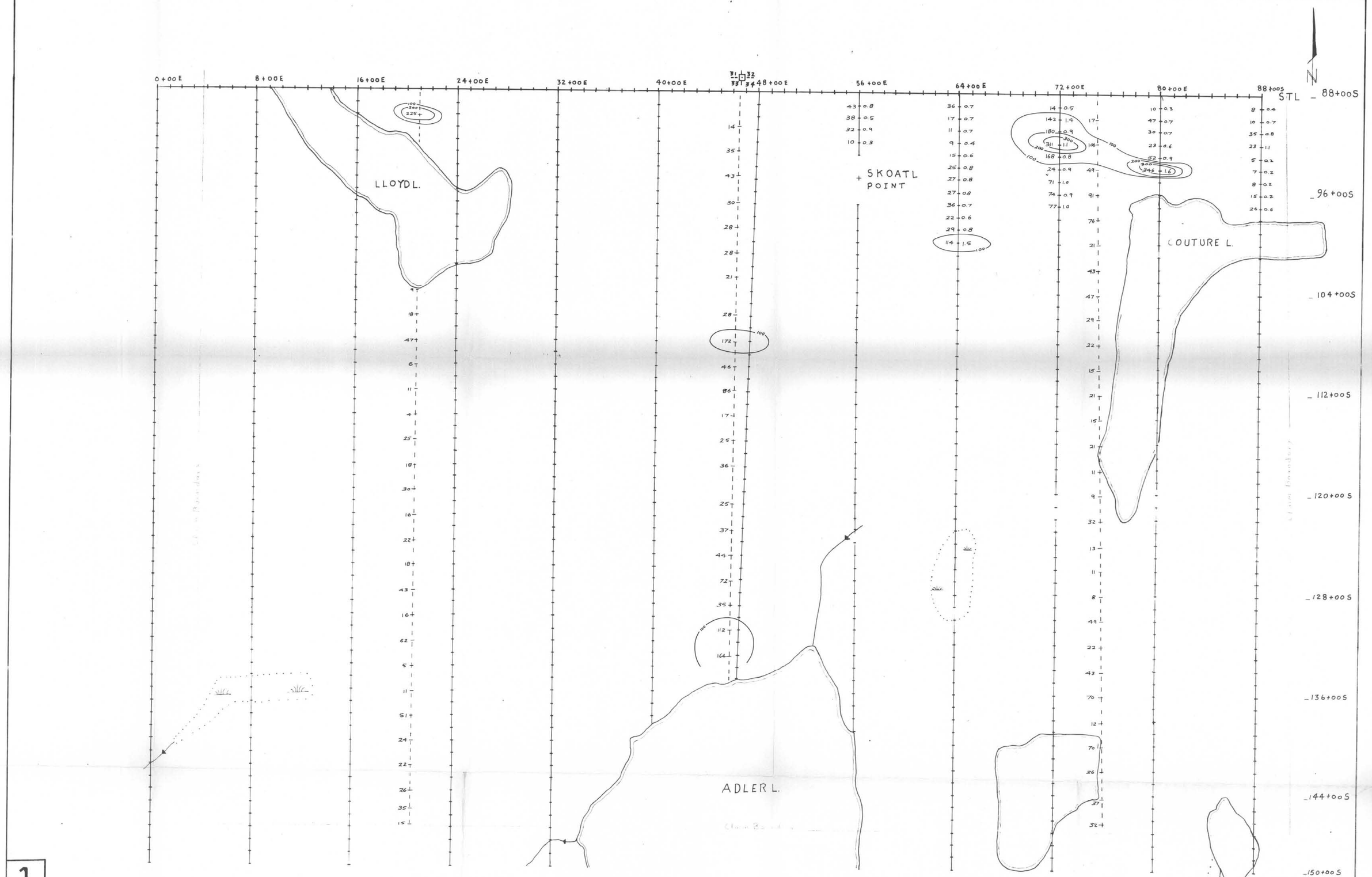
VANCOUVER B.C.

MIDDLE BELT PROJECT
HOOP CLAIM GROUP
CU - AG GEOCHEM

SCALE :	REVISIONS
DATE : MAY 1973	
NO.	

SCALE 400 0 400 800 FT.
400 feet to 1 inch

4634-MT



1
2
3

LEGEND

LAKE

SWAMP

Cu / Ag Survey line and station metals as shown p.p.m.

Contour interval 100 p.p.m.

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Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4634 MAP #8

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MIDDLE BELT PROJECT
HOOP CLAIM GROUP
CU - AG GEOCHEM

SCALE :
DATE : MAY 1973
NO.

REVISIONS

SCALE 400 0 400 800 FT.
400 feet to 1 inch.

4634 - M8

N

120+00N

112+00 N

104+00N

96+00 N

88+00N

80+00N

72+00 N

64+00 N

N.T.L.

56+00 N

48+00 N

40+00N

32+00N

24+00N

16+00N

8+00 N

0+00

HOOPY LAKE

CLAIM BOUNDARY

8+00E 16+00E 24+00E 32+00E 40+00E 48+00E 56+00E 64+00E 72+00E 80+00E 88+00E

1
2
3

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4634 MAP #9

LEGEND

LAKE

SWAMP

Mo. Survey line and station
Metal as shown in p.p.m.

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ON THE HOOP CLAIMS, KAMLOOPS M.D.
BY HJ WAHL, PERIOD 12 APRIL-22 MAY, 1973

15 October 1973
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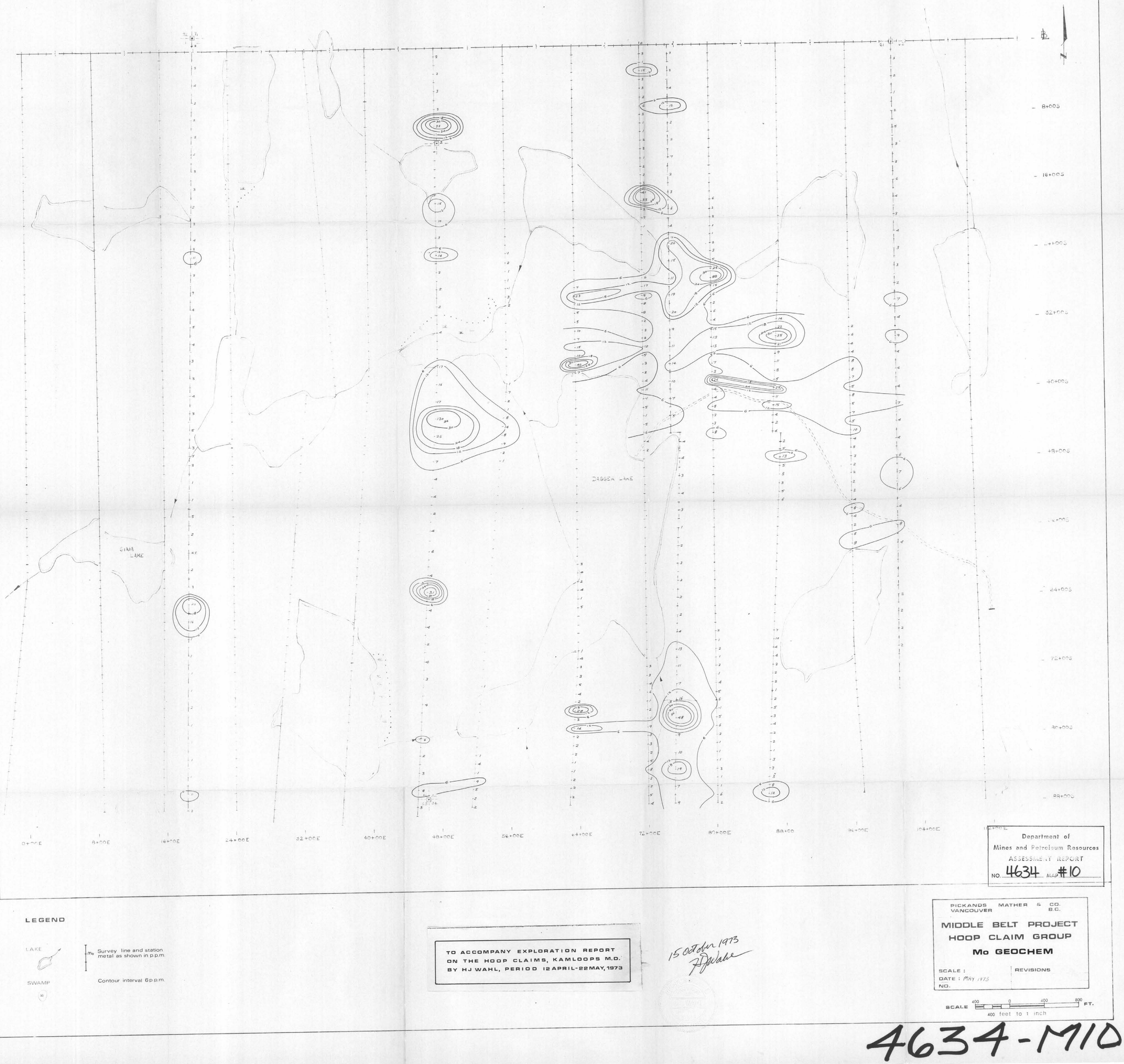
MIDDLE BELT PROJECT
HOOP CLAIM GROUP
MO GEOCHEM

SCALE :	REVISIONS
DATE : MAY 1973	
NO.	

SCALE 400 0 400 800 FT.
400 feet to 1 inch

4634 - M9



1
2
3

LEGEND

LAKE

SWAMP

Mo Survey line and station metal as shown in p.p.m.

Contour interval 6p.p.m.

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15 October 1973

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4634 MAP #10

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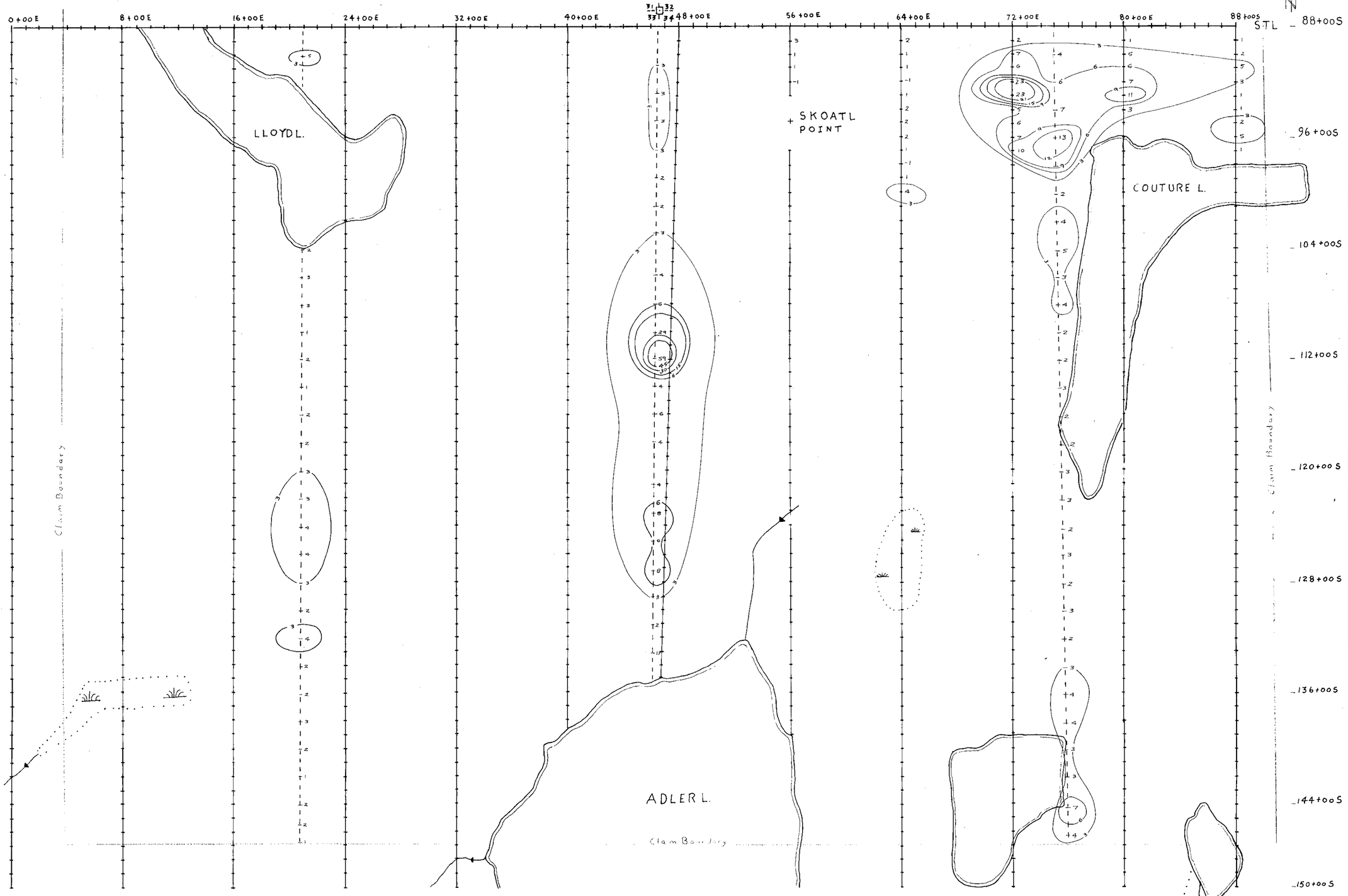
MIDDLE BELT PROJECT
HOOP CLAIM GROUP
Mo GEOCHEM

SCALE :
DATE : MAY 1973
NO.

REVISIONS

SCALE 400 0 400 800 FT.
400 feet to 1 inch

4634-M10



1
2
3

LEGEND

LAKE

SWAMP

Mo Survey line and station metal as shown in p.p.m.

Contour interval 3p.p.m.

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VANCOUVER B.C.

MIDDLE BELT PROJECT
HOOP CLAIM GROUP
Mo GEOCHEM

SCALE :	REVISIONS
DATE : MAY 1973	
NO.	

SCALE 400 0 400 800 FT.
400 feet to 1 inch

4634-M11

N

Claim Boundary

HOOPY LAKE

Claim Boundary

120+00N
112+00 N
104+00N
96+00 N
88+00N
80+00N
72+00 N
64+00 N
N.T.L.
56+00 N
48+00N
40+00N
32+00 N
24+00N
16+00N
8+00 N
0+00

8+00E
16+00E
24+00E
32+00E
40+00E
48+00E
56+00E
64+00E
72+00E
80+00E
88+00E

1
2
3

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
No. 4634 MAP #12

LEGEND

LAKE

SWAMP

MAGNETIC CONTOURS
GAMMAS
500
100

CLAIM POST

ROAD

TO ACCOMPANY EXPLORATION REPORT
ON THE HOOP CLAIMS, KAMLOOPS M.D.
BY HJ WAHL, PERIOD 12 APRIL-22 MAY, 1973

15 October 1973
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MIDDLE BELT PROJECT
HOOP CLAIM GROUP
GROUND MAGNETIC SURVEY

SCALE :	REVISIONS
DATE : MAY 1973	
NO.	

SCALE 400 0 400 800 FT.
400 feet to 1 inch

4634-M12

DAGGER LAKE

SIAM LAKE

0+00E | 8+00E | 16+00E | 24+00E | 32+00E | 40+00E | 48+00E | 56+00E | 64+00E | 72+00E | 80+00E | 88+00 | 96+00E | 104+00E | 112+00E

8+00S | 16+00S | 24+00S | 32+00S | 40+00S | 48+00S | 56+00S | 64+00S | 72+00S | 80+00S | 88+00S

1
2
3

LEGEND

LAKE

SWAMP

MAGNETIC CONTOURS
GAMMAS

CLAIM POST

ROAD

TO ACCOMPANY EXPLORATION REPORT
ON THE HOOP CLAIMS, KAMLOOPS M.D.
BY HJ WAHL, PERIOD 12 APRIL-22 MAY, 1973

15 October 1973
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Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4634 MAP #13

PICKANDS MATHER & CO.
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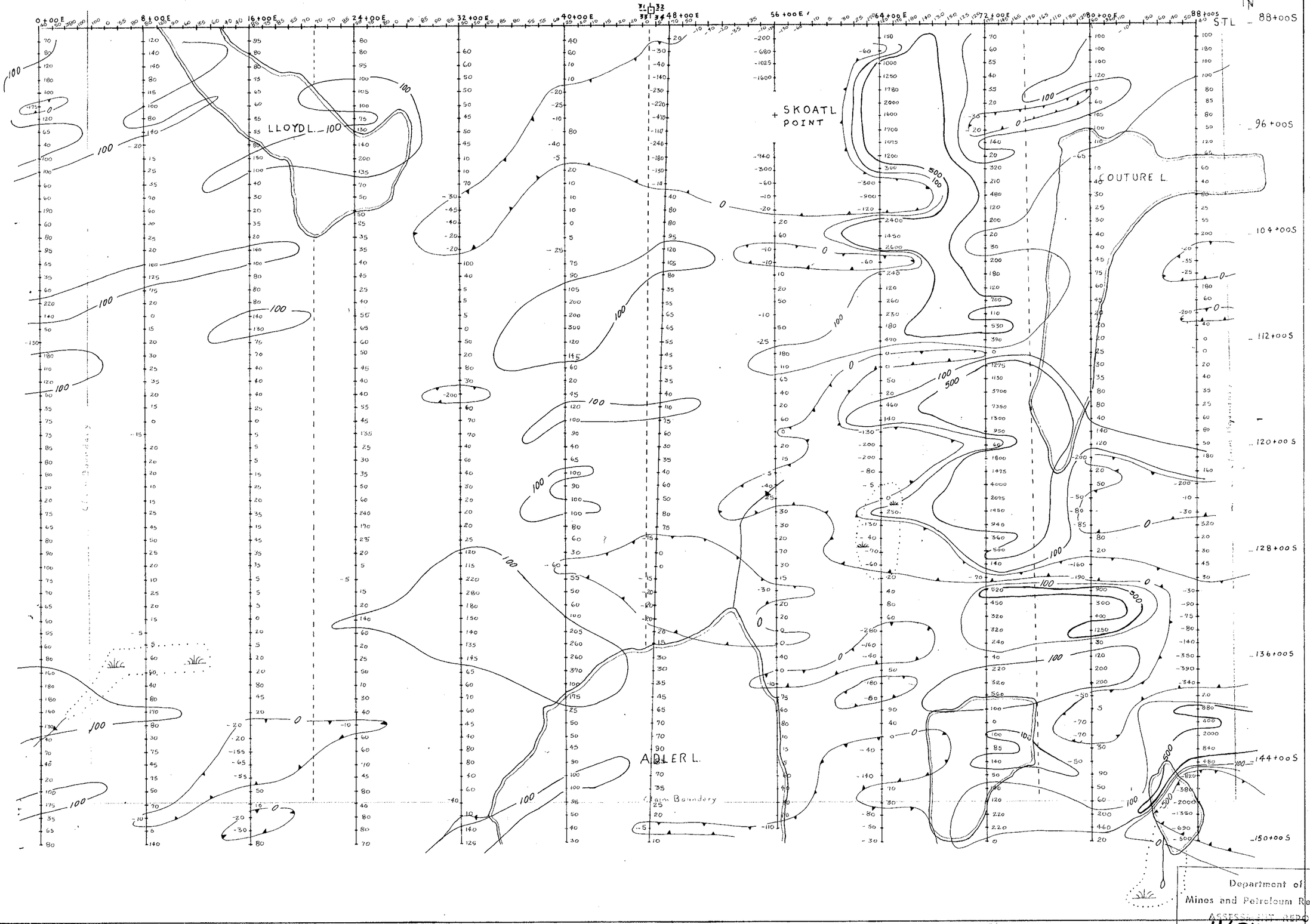
MIDDLE BELT PROJECT
HOOP CLAIM GROUP
GROUND MAGNETIC SURVEY

SCALE :	REVISIONS
DATE : MAY 1973	
NO.	

SCALE 400 0 400 800 FT.
400 feet to 1 inch

4634-M13



1
2
3

LEGEND

LAKE

SWAMP

MAGNETIC CONTOURS
GAMMAS

CLAIM POST

TO ACCOMPANY EXPLORATION REPORT
ON THE HOOP CLAIMS, KAMLOOPS M.D.
BY HJ WAHL, PERIOD 12 APRIL-22 MAY, 1973

15 October 1973
HJ Wahl

Department of
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ASSESSMENT REPORT
4634 MAP #14

PICKANDS MATHER VANCOUVER ISO. CO. B.C.

MIDDLE BELT PROJECT
HOOP CLAIM GROUP
GROUND MAGNETIC SURVEY

SCALE :	REVISIONS
DATE : MAY 1973	
NO.	

SCALE 400 0 400 800 FT.
400 feet to 1 inch

4634-M14