

83-#834 #12374
12/84

REPORT ON THE GEOPHYSICAL EM-VLF SURVEY
OF THE COPPERHILL PROPERTY
HOUSTON, B.C.

N.T.S. 93L/10
LAT. 54°33' LONG. 126°44'
OMINECA M.D.

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

OWNERS

Ventec Resources Inc.
Frederick C. Drumheller
Darlene M. Pohlman
Arthur J. Magill
Frank Warman
Wei Thomas Deng

12,374

OPERATOR

RAMM VENTURE CORPORATION
#711-543 Granville St.,
Vancouver, B.C.
V6C 1X8
(Tel: 685-2031)

CONSULTANT

IGNA ENGINEERING & CONSULTING LTD.,
4258 West 10th Avenue,
Vancouver, B.C.
V6R 2H4
(Tel: 224-5464)

<u>CLAIM NAME</u>	<u>RECORD No.</u>	<u>TYPE</u>	<u>ANNIVERSARY</u>
LAKEVIEW	L.6284	C.G.	
MAYFLOWER	L.6471	"	
COPPER CROWN	L.6472	"	
EUREKA	L.6473	"	
RUBY	L.6474	"	
GRANDVIEW	L.6475	"	
CARIBOO	L.6476	"	
LOWER	L.6477	"	
MAISIE	L.7254	"	
GROUSE MNT.	2561	20 unit	March 7, 1980
ART	4522	18	January 8, 1982
ART #2	4523	4	"
NIGEL #1	5071	12	March 31, 1983
TOM #1	5722	8	August 25, 1983
TOM #2	5723	4	"

AUTHOR: I. Borovic, P.Eng., Geologist
FIELDWORK: 1 Nov. --22 Dec. 1983
REPORT DATE: 22 December 1983

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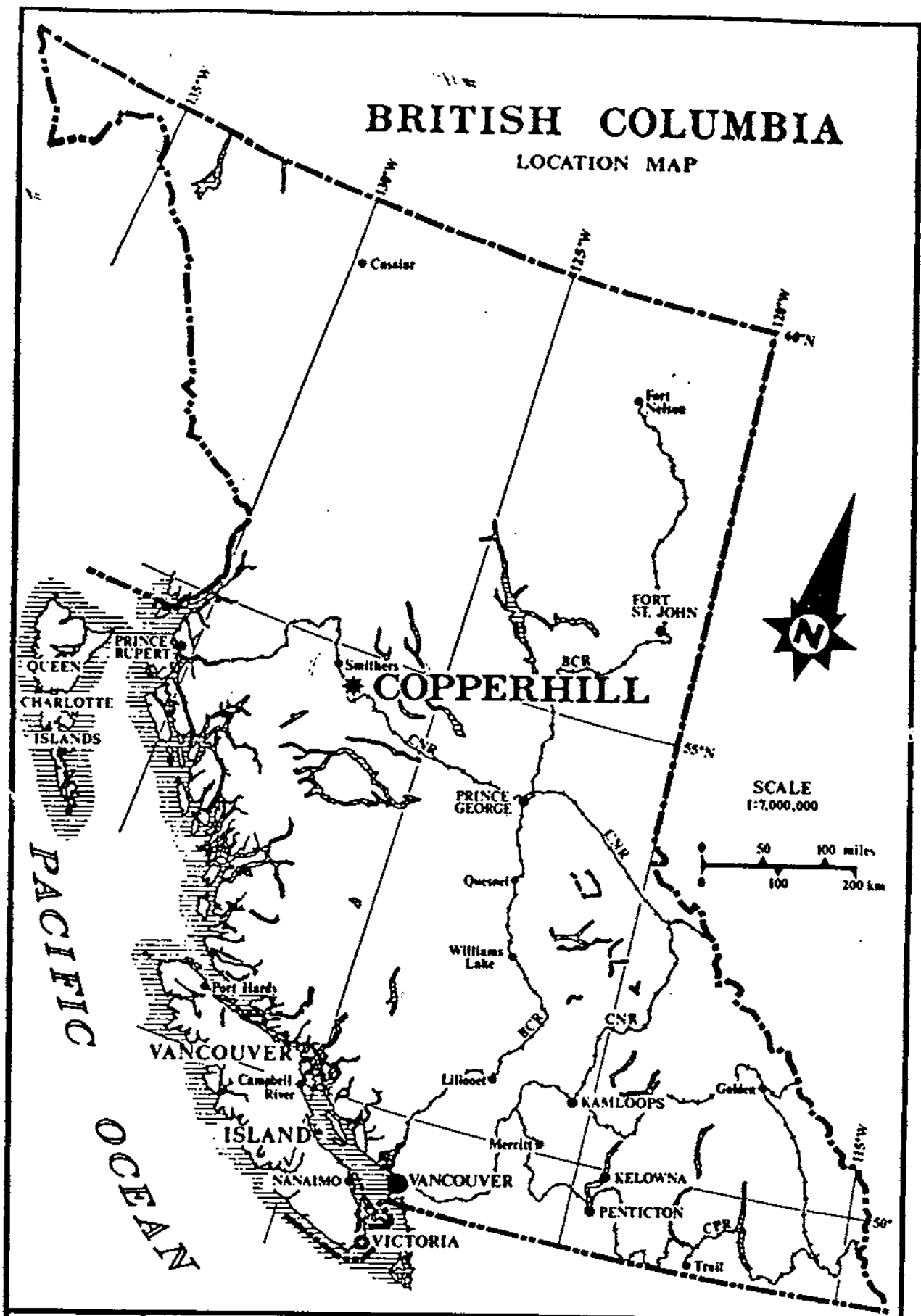
MAPS IN POCKET

VLF-ELECTROMAGNETIC SURVEY

- PLAN 1
- PLAN 2
- PLAN 3

BRITISH COLUMBIA

LOCATION MAP



IGNA
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RAMM VENTURE CORPORATION
COPPERHILL PROPERTY

DATE
FIG. No. 1

SUMMARY AND CONCLUSIONS

The Copperhill property is located north of Houston, B. C., about 6 km off Highway #16. It occupies the top and slopes of Grouse Mountain.

The property's mineral potential has been known since the early days of 1914. The property was explored by a number of individuals and companies since then. In 1979, Ramm Venture Corporation acquired the property from Copper Ridge Mines Ltd. In succeeding years, the area surrounding the original Crown Grants was also acquired.

Since Ramm has taken over the property, extensive research and work has been done to evaluate its economic potential.

This evaluation confirmed what previous explorers had found: that there is proven 360,000t of copper, zinc, and silver mineralization in the so-called Ruby Zone averaging 0.38% Cu, 4.23% Zn, and 0.88 oz/t Ag. Further exploration indicated additional tonnages of open pittable ores thus showing greater potential of the whole area.

On the basis of these very encouraging facts, a reconnaissance and detailed geophysical EM-VLF survey was recommended and subsequently conducted during the 1980 season. Geological mapping on 1:5000 scale map and a review of pertinent data was also carried out.

The Ruby Zone northern extension showing distinct conductors was diamond drilled in June and July of 1981. Diamond drilling has indicated 720,000 metric tonnes of copper-zinc-silver mineralization with an aggregate value ranging from \$9.64 to \$16.30 per tonne at today's prices (Dec. 15/83). The drilling has also shown that EM-VLF anomalies are caused by concentrated sulphide mineralization. This fact is particularly significant since the existence of many more such anomalies was further indicated by the 1980 reconnaissance EM-VLF survey.

In late November of 1983 a detail EM-VLF survey over the area located to the north of Copper Mine Lake and in continuo to the Ruby Zone extension was done. About 10 km/lines was surveyed by using two Ronka EM-16 instruments. Two VLF stations Hawaii (23.4) and Seattle (24.8) were used. Tilt direction for Hawaii was 140° and for Seattle was 058°.

Five strong conductors with length of 750 to 800 m are shown on the Plan No. 1. The conductors join the known showings and are still open and will be extended in the western and eastern directions.

The economic potential of the Copperhill property has been greatly enhanced by the results of the exploration program to date. Total proven, probable and possible reserves now exceed 1,000,000 metric tons with a value ranging from \$12.50 to \$50.00 per ton.

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RECOMMENDATIONS

It is evident that a detailed EM-VLF survey and geological mapping on a scale of 1:1000 will be necessary to further evaluate the mineral potential of the Copperhill property. Therefore the following exploration program for the 1984 season is recommended:

1. Geophysical EM-VLF detailed survey over the whole Copperhill property.
2. Detail geological mapping on scale 1:1000 (1802 hectares)
3. Trenching
4. Diamond drilling

The program is to run in two consecutive phases, as follows:

- Phase I - EM-VLF detailed survey (500 km lines)
- detail geological mapping
 - computing geophysical and geological data
 - data evaluation
 - report and recommendation

- Phase II - trenching of EM conductors close to surface
- diamond drilling of EM indicated targets
 - survey
 - assaying
 - computing geological data
 - data evaluation
 - report and recommendation

11 =

ESTIMATED BUDGET, 1984

Phase I

Field Work

Line cutting (500 km lines) @ \$100/km line	\$ 50,000
EM-VLF survey (500 km lines) @ \$400/km line	\$200,000
Room & Board (300 man/days) @ \$80/man day	\$ 24,000
Transportation (4 x 4, Air)	\$ 12,000
Supervision, Geology (90 days)	\$ 27,000

Office Work

Evaluation, Report (20 days)	\$ 6,000
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TOTAL PHASE I: \$319,000

ADMIN. & CONTING.(20%): \$ 63,800

\$482,800

PHASE II

Field Work

Diamond drilling (3,000 m @ \$100/m)	\$300,000
Geology, Supervision (3 months)	\$ 27,000
Survey	\$ 15,000
Room & Board (600 man days @ \$80 per man day)	\$ 48,000
Transportation (4 x 4, Air)	\$ 8,000

Office Work

Assaying (500 samples @ \$20/sample)	\$ 10,000
Data Evaluation, Report	\$ 15,000

TOTAL PHASE II: \$423,000

ADMIN. & CONTING.(20%): \$ 84,600

\$507,600

TOTAL ESTIMATED BUDGET

PHASE I \$482,800

PHASE II \$507,600

\$990,400

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PROPERTY

Location: Lat. 54°33'N Long 126°44' (N.T.S. 93L/10)
Omineca M. D. Six road km northeast of Highway
#16, 20 km north of Houston, B. C.

Claims:	<u>Record No.</u>	<u>Type of Claim</u>	<u>Anniversary</u>
Eureka	6473	Crown Granted	July 2
Copper Crown	6472	" "	"
Cariboo	6476	" "	"
Mayflower	6471	" "	"
Ruby	6474	" "	"
Maisie	7254	" "	"
Grandview	6475	" "	"
Lakeview	6284	" "	"
Lower	6477	" "	"
Nigel 1	5071	12 units	
Art	4522	18 "	
Art 2	4523	4 "	
Grouse Mtn	2561	20 "	
Tom 1		8 "	
Tom 2		4 "	

Owner Operator: Ramm Venture Corporation
711 - 543 Granville Street
Vancouver, B. C. V6C 1X8

Access: From Highway 16 at a point 20 km north of Houston
a six km long 4 x 4 tote road leads northeast to
the property.

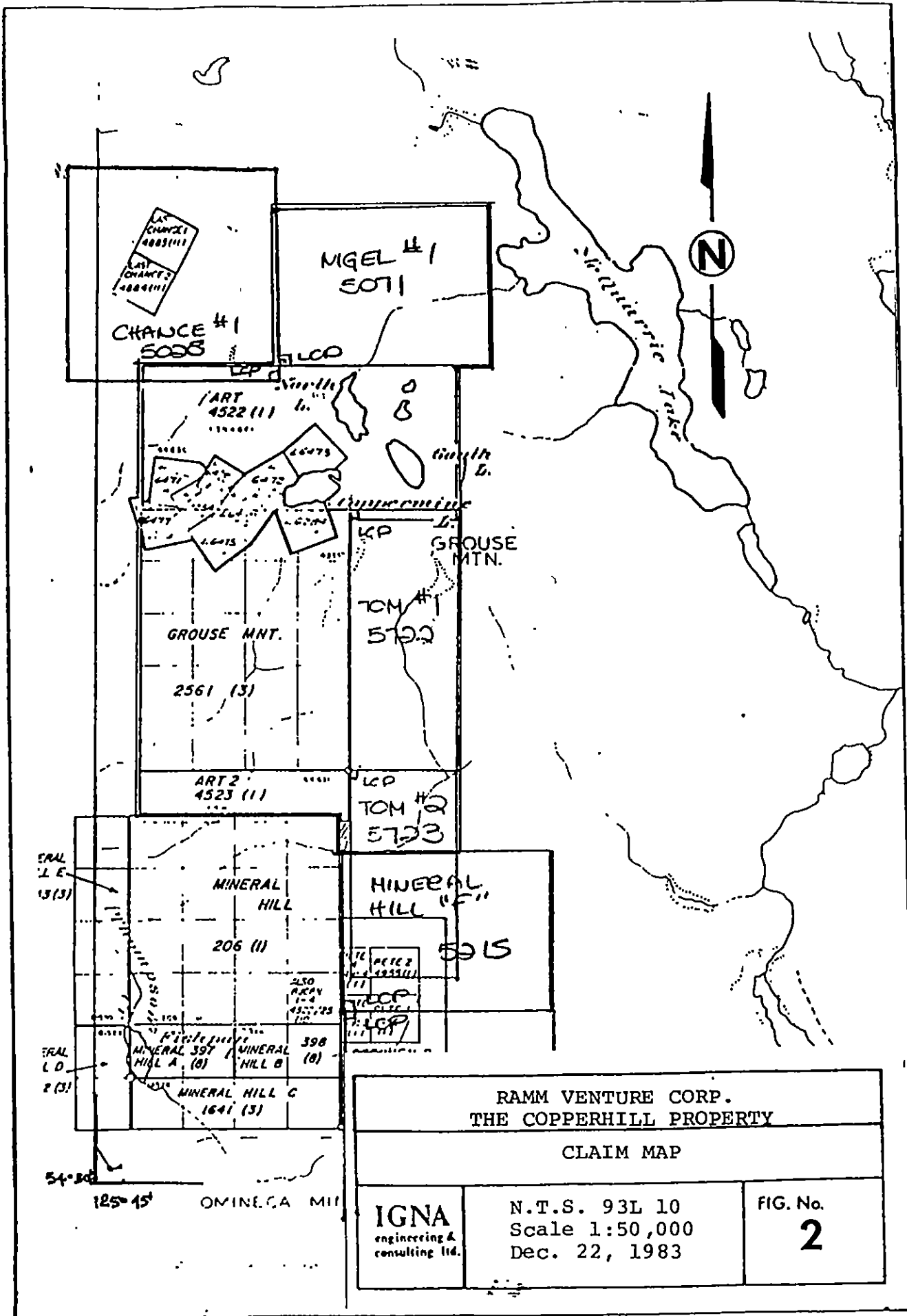
GEOLOGY

General Geology (Tipper, H. W. & Richards, T. A., 1976)

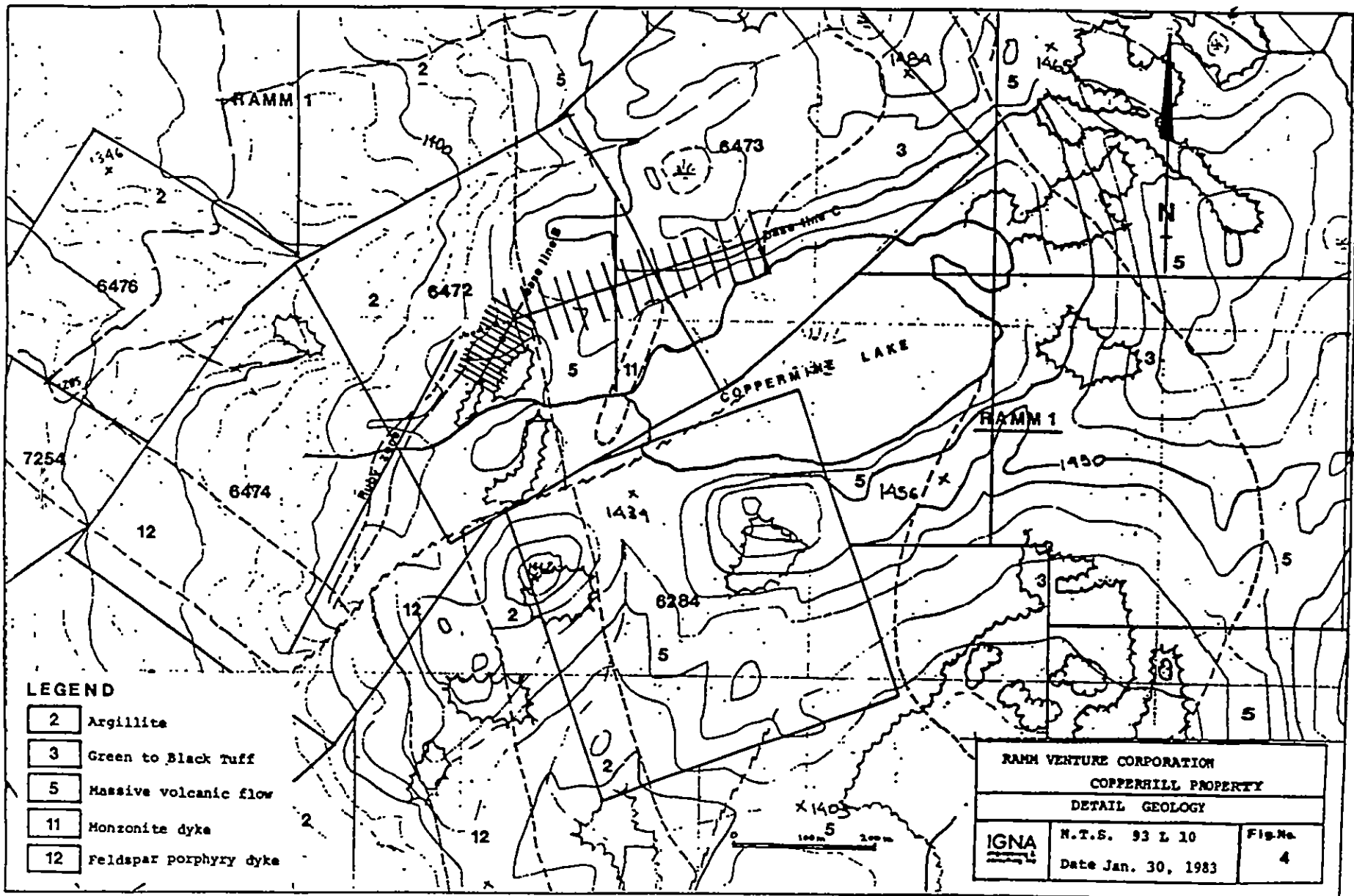
The Grouse Mountain area is underlain by the rocks of the Babine Shelf facies, Telkwa Formation, Hazelton Group, ranging in age from Sinemurian to Callovian (Middle Lower Jurassic to Upper Middle Jurassic). Predominantly subaqueous and subaerial pyroclastic rocks are intercalated with marine sediments and intravolcanic nonmarine sediments. As exposures are poor, stratigraphic relations are conjectural.

Property Geology (I. Borovic, 1980, 1981) (Fig. 4)

Copper-zinc-silver showings are located around three lakes at the top of Grouse Mountain and occur as breccia fillings in a light-green fossiliferous tuff sequence. These rocks include fine-grained crystal tuffs, lapilli tuffs or conglomerates and coarser tuff breccias. Some horizons are fossiliferous, containing bryozoa and ammonites of Lower Jurassic age. The rocks are striking E-NE and gently dipping W-SW. They overlie



<p>RAMM VENTURE CORP. THE COPPERHILL PROPERTY</p>		
<p>CLAIM MAP</p>		
<p>IGNA engineering & consulting ltd.</p>	<p>N.T.S. 93L 10 Scale 1:50,000 Dec. 22, 1983</p>	<p>FIG. No. 2</p>



red tuffs and breccias which occur on the north end of Grouse Mountain. The green tuffs in turn are overlain by massive andesite to the south.

The volcanic rocks are intruded by dykes and small stocks of monzonite porphyry. The dykes are generally 10 to 60 m wide and strike east-northeasterly with moderate dips to the north-west and south-west. There are three different intrusive varieties. The most prominent is a bladed feldspar porphyry (Fig. 4, #12) with phenocrysts of plagioclase (oligoclasandesine) of 3 cm in length, oriented in subparallel fashion. A fine-grained porphyritic variety (Fig. 4, #11) contains randomly oriented 5 - 10 mm euhedral phenocrysts. The third variety consists of dykes and small stocks of an equigranular variety. Some fine-grained monzonite was also noted.

Structure

The sediments dip to the south and southwest at about 15°. Fracture cleavage is well developed. There are many small faults with minor displacement, but a major fault runs through the No. 2 level for about 500 feet and could have a major displacement role.

Mineralization

Mineralization consists of fine to coarse-grained sphalerite and chalcopryrite as breccias fillings in a number of east-northeast trending zones subparallel to the strata of the green fossiliferous mainly coarse tuff sequence. There is also massive fracture-filling sulphide mineralization.

The mineralized zones are known from north to south as the Rainstorm-Hidden Treasure Zone, the Ruby-Copper Crown Zone, and the Schorn and Lakeview Zones. Only the Rainstorm-Hidden Treasure Zone is outside the Crown-grant area.

Mineralogically, all zones are similar. Some banding was noted in the maddive sulphide ore from the Ruby Zone.

The monzonite porphyry dykes are of post mineral age, with a definite crosscutting relationship being observed at the Ruby and Schorn Zones and in the DD cores drilled on the Coppermine north area "C".

HISTORY OF EXPLORATION AND WORK DONE

- 1914 Louis Schorn and Samuel Bush found chalcopyrite and sphalerite on Grouse Mountain. The Cassiar Crown Copper Company obtained a lease and bond on the property and started to explore. A shaft exposed chalcopyrite on the Copper Crown Claim. A sphalerite showing on the Lakeview Claim was explored by an adit.
- 1915 A trenching revealed numerous mineralized veins.
- 1915-1927 About 1,150 m of developed work was done on the Copper Crown, Ruby, Eureka, and Lakeview Showings.
- 1951 Copper Ridge Silver Mines Ltd. conducted an extensive diamond drilling program, drilling 4,600 m on the surface and underground. In addition, some 1,130 m of underground work was done on the Ruby Zone. The program successfully outlined a mineralized body of some 360,000 tons on the Ruby Zone.
- 1951-1979 Information is scarce. Most of the work during this period consisted of evaluations by various engineers (I. Borovic, 1979).
- 1980 Basic mineral exploration work consisting of detail geological mapping, reconnaissance, and detail EM-VLF Survey (Borovic, I., 1981) was done. Results of the detail EM-VLF Survey in area "C" were good.
- 1981 Fourteen holes were drilled with a total of 1,282.1 m of NQ core recovered (Borovic, I., 1981). Six holes which were drilled on the northern extension of the Ruby Zone indicated 720,000 metric tons of copper, silver, and zinc mineralization with an average value of \$10/ton at \$ 0.80/lb Copper, \$ 0.80/lb Zinc, and \$10/oz Silver (calculations done in September, 1981). Today's price of silver is \$16.60/oz; Copper, \$ 0.86/lb; and Zinc, \$ 0.45/lb (January 18, 1983).

GEOPHYSICAL SURVEY (1983)

The VLF-EM detail survey was done over 10 km line grid. The survey instrument was Ronka EM-16 VLF -Electromagnetometer. Two VLF stations were used : Hawaii (23.4 Khz) and Seattle (24.8 Khz). Tilt direction for Hawaii was 140° and for Seattle 0.58°.

Grid lines were run by chain and compass and flagged every 20 meters. Cross-overs of VLF station Hawaii were marked by red cross flagging wherever they occurred.

RESULTS (Fig. 5 Plan 1, 2 & 3)

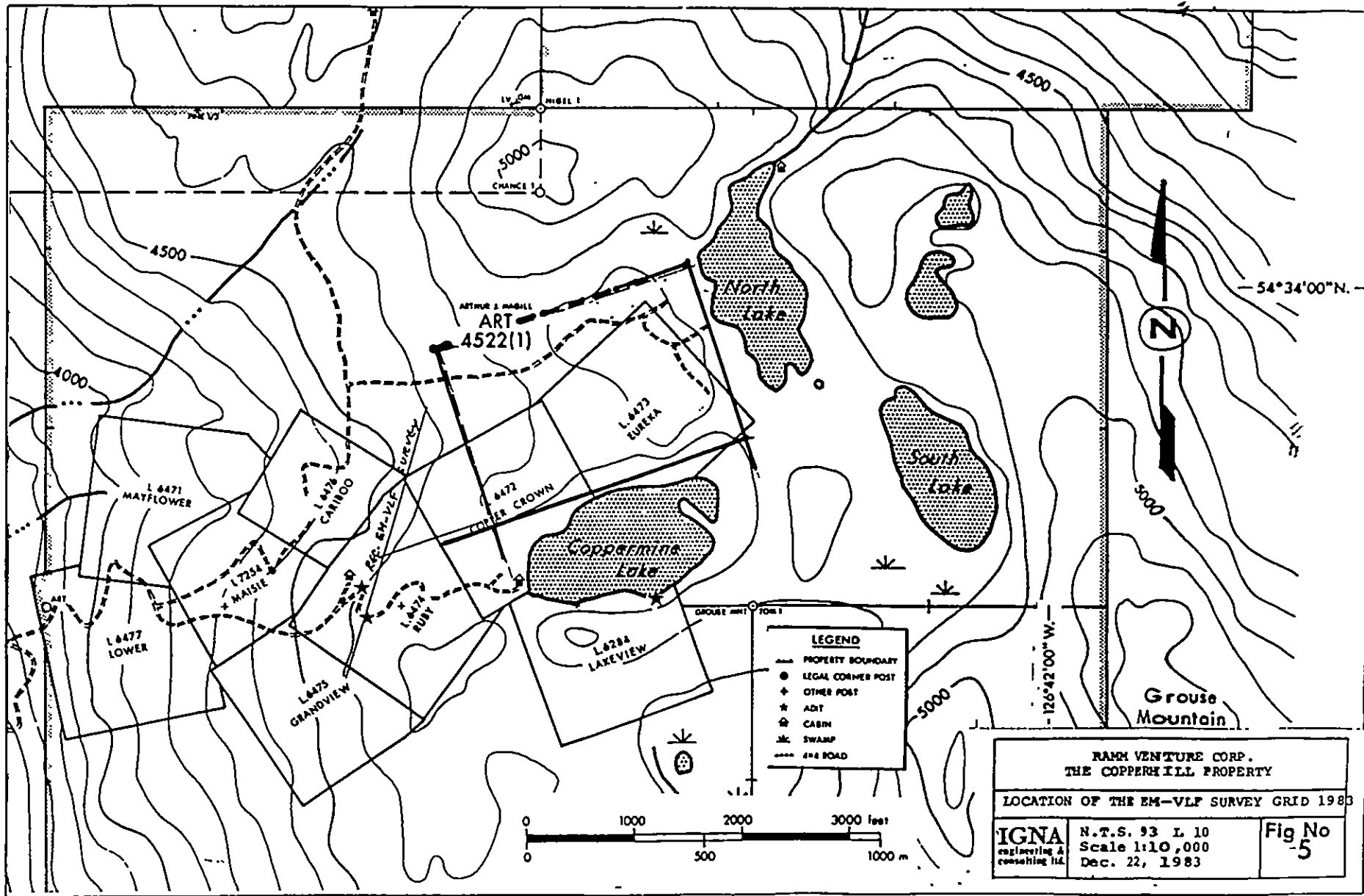
The profiled plan #1 is showing results of survey based upon readings from VLF station 23.4 which has by far better tilt direction than VLF station 24.8. There are five strong conductors related to the known mineral showings and continuation of the Ruby North-Extension Zone.

No. 1 conductor, shown on North of the plan is a strong conduction zone which represent mineralized fault or vein structure. This conductor is close to surface. The total length of the conductor is over 750 meters and is open both to the west and east. This conductor is faulted off between lines 0 and 0+50 E. Depth to the conductors are indicated on the plan #1. The No. 1 conductor dips steeply to the north as indicated by the profiles.

No. 2 conductor on the south end of the grid runs similar to conductor No. 1. This conductor seems to swing into the line 3+50 west and occurs again at line 5 E. This conductor dips steeply to the south.

No. 3 conductor very likely is the extension of conductor from 1980 survey. Also is extended to 750 m and is open to the east. The No. 4 conductor splinters off between lines 2+50 E and 3+50 E striking in NE direction to join up with conductor No. 1 at line 5+50 E. Conductor No. 3 dips to the south.

All the conductors are from 750-800 m long and still open on both ends - easterly and westerly.



RAMM VENTURE CORP.
 THE COPPERHILL PROPERTY

LOCATION OF THE EM-VLF SURVEY GRID 1983

IGNA engineering & consulting ltd.	N.T.S. 93 L 10 Scale 1:10,000 Dec. 22, 1983	Fig No 5
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STATEMENT OF EXPENSES

The following is a breakdown of expenses incurred in carrying out the work in the area of Ramm Venture Corporation's Copperhill property:

PERSONNEL

Geological Engineer, Supervizor,
two Geophysisists, EM-16 Operators

FIELD WORK

Geophysical survey 13 days @ \$400.00/day	\$ 5,200.00
Supervision, 5 days @ \$250.00/day	\$ 1,250.00
Room & Board (3 man crew, 35 days).....	\$ 719.19

TRANSPORTATION

Air, Truck (4 x 4), Skidoo (rentals, accessories).. \$ 1,905.59

MATERIALS \$ 47.66

TOTAL FIELD WORK: \$ 9,122.44

OFFICE WORK

Report, Map Preparations & Interpretation \$ 675,00

TOTAL OFFICE WORK: \$ 675.00

TOTAL EXPENSES: \$ 9,797.44

C E R T I F I C A T E

I, I. Borovic with business address in Vancouver, B. C. do hereby certify that:

1. I am a consulting Geological Engineer for Ramm Venture Corporation of Vancouver, B. C.
2. I have personally supervized the geophysical survey on the Copperhill property.
3. The expenditures claimed for the performance of the work are correct.

Respectfully submitted



I. Borovic, P. Eng.
Geologist

Dec. 22, 1983

BIBLIOGRAPHY

Assessment Report No. 726

Borovic, I. (1979): Report on Grouse Mtn. Coppermine Lake Zinc, Silver, Copper property for Ramm Venture Corporation (August, 1979)

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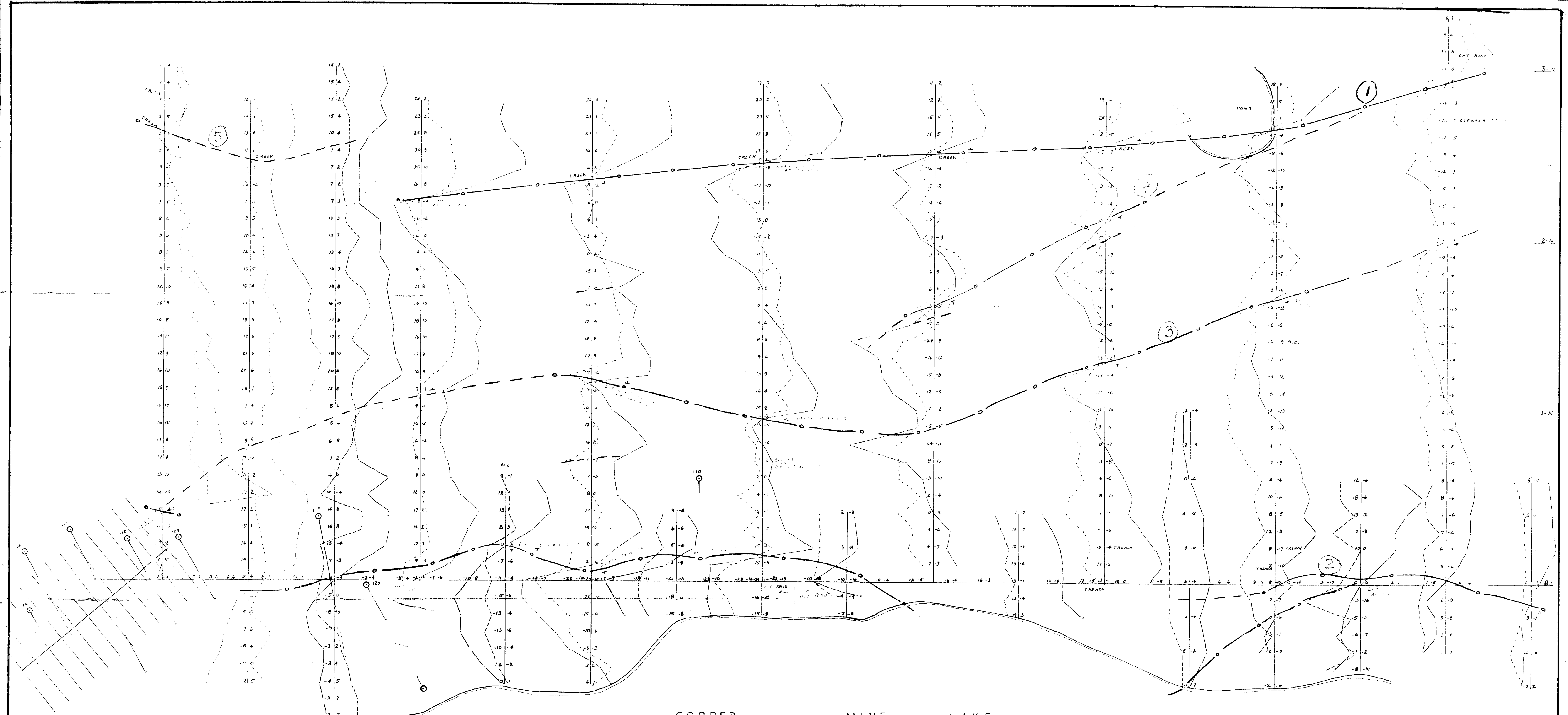
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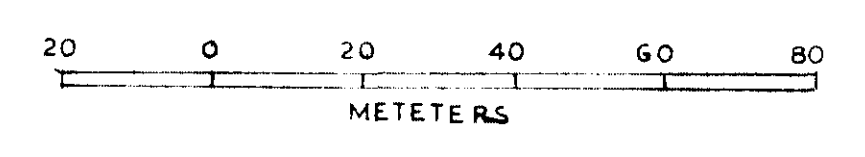
COPPER MINE LAKE

L-12 L-10 L-11 L-12 L-13 L-14 L-15 L-16 L-17

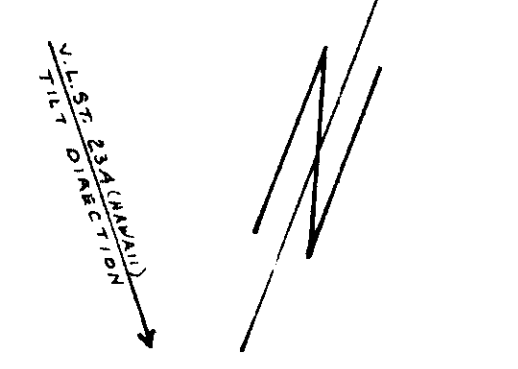
GEOLOGICAL BRANCH
ASSESSMENT REPORT

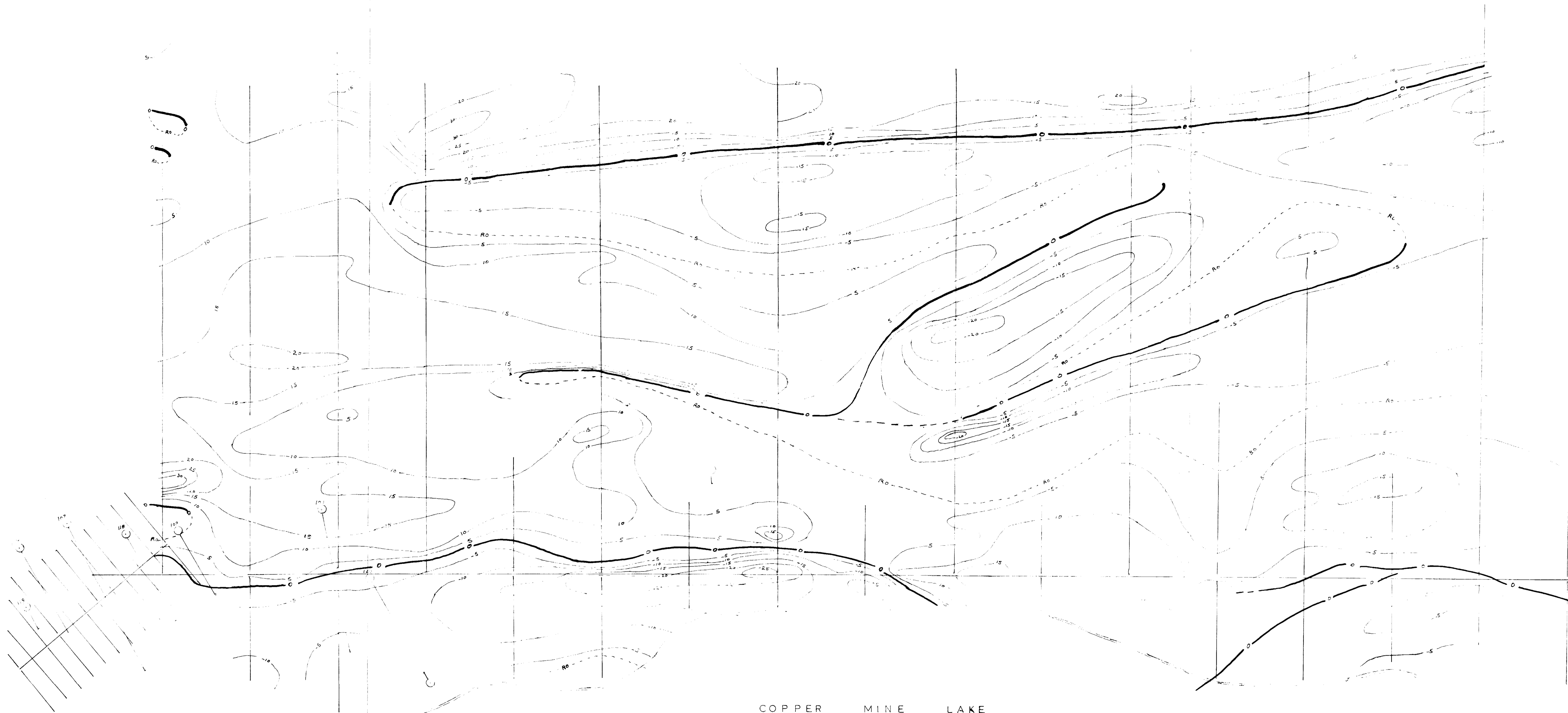
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PLAN No.1



IGNA ENGINEERING & CONSULTING LTD.
ELECTROMAGNETIC SURVEY
INST. RONKA-EM.16 SERIAL No.2 V.L.F. ST. 23.4-TILT 140°
INPHASE PROFILE ———
QUADRATURE PROFILE - - - - -
CROSS-OVER (CONDUCTOR) —○—
SECONDARY CONDUCTOR - - - - -
SCALE: 1:1000
DATE: NOVEMBER 1983
S. PRESUNKA





COPPER MINE LAKE

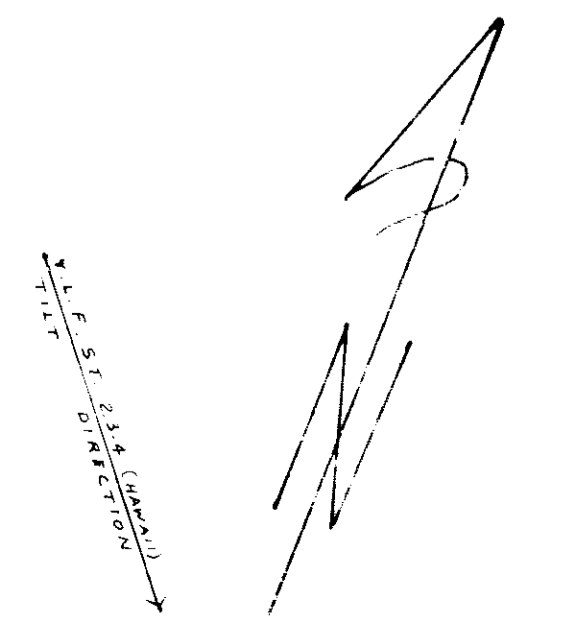
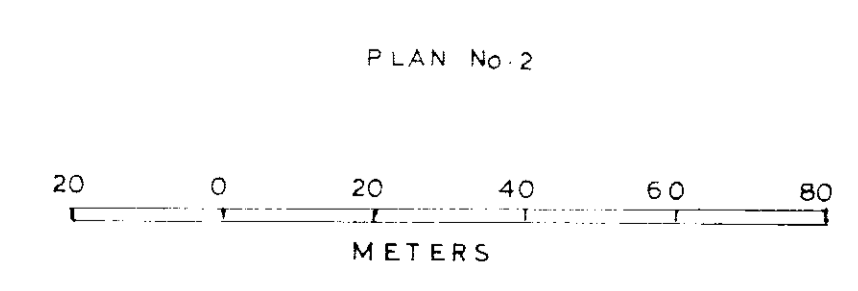
L-1W L-2W L-3W L-4W L-5W L-6W L-7W
 L-1E L-2E L-3E L-4E L-5E L-6E L-7E

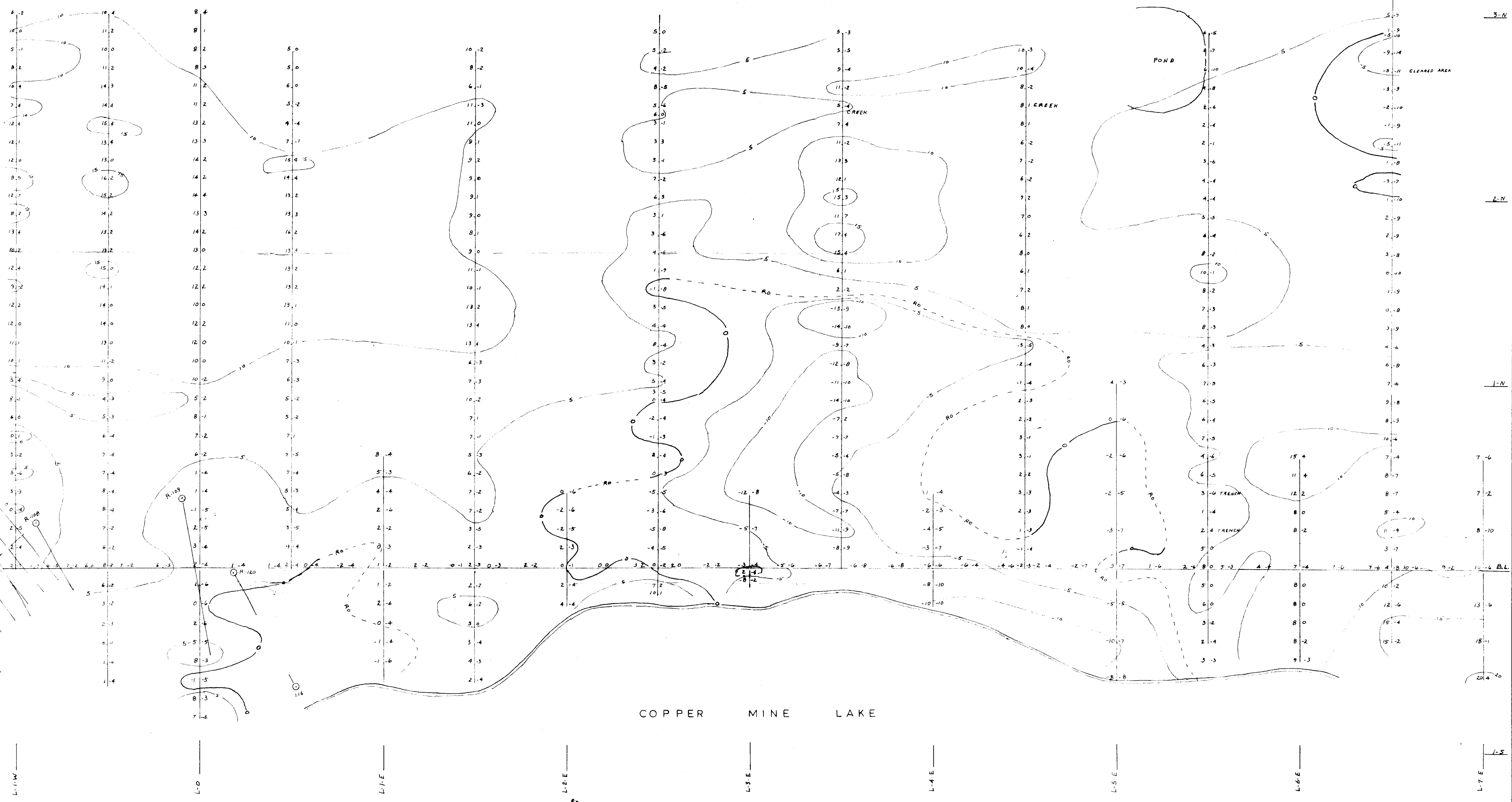
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IGNA ENGINEERING CONSULTING LTD.
 ELECTROMAGNETIC SURVEY
 INST. ROKKA-EM-16 SERIAL NO. 2. V.L.F. ST. 23.4-TILT 140°
 INPHASE CONTOURS ——— S ———
 CONDUCTORS ——— O ———
 REVERSE CROSS-OVER ——— RO ———
 SCALE: 1:1000
 DATE: NOVEMBER 1983

S. PRESUNKA





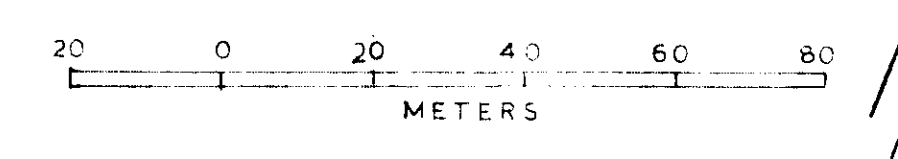
COPPER MINE LAKE

GEOLOGICAL BRANCH
ASSESSMENT REPORT

12,374

IGNA ENGINEERING & CONSULTING IND.
ELECTROMAGNETIC SURVEY
INST. RONKA-EM-16 SERIAL No. 2 VLF ST. 24-B TILT 05.8°
IN PHASE CONTOURS ——— S ——— S ———
CONDUCTORS ——— O ——— O ———
REVERSE CROSS-OVER - - - - - R0 - - - - -
SCALE: 1:8000
DATE: NOVEMBER 1983

PLAN No. 3



S. PRESUNKA