McIntyre-Porcupine Mines Ltd.
(Glenlyon Option)

ANNE GROUP MINERAL CLAIMS

105-L-10, 62° 40' N., 134° 45' W.
Whitehorse M.D., Yukon Territory

GEOCHEMICAL SOIL SURVEY

AND

GROUND GEOPHYSICAL SURVEY

Progress Report on Work carried out between
July 2nd, 1968 and July 31st, 1968

by

P.H. Sevensma, Ph.D., P. Eng.

July 31, 1968.

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ILLUSTRATIONS

McIntyre-Porcupine Mines Ltd. (Glenlyon Option)

ANNE GROUP

Report on Geochemical and Geophysical Surveys
carried out between July 2, 1968 and July 31, 1968.

1. INTRODUCTION

Previous work on this claim group - see report by P.H. Sevensma, P. Eng., dated August 7, 1967 - had failed to provide ground confirmation of a conductive zone indicated on a plot of the airborne survey conducted by Lockwood Survey Corporation during April and May of 1966. Further study of these data, and other airborne survey information, by Dr. G. Wahl, P. Eng., and exploration personnel of McIntyre-Porcupine Mines Ltd. suggested that further efforts to locate this conductor were warranted.

The firm of P.H. Sevensma Consultants Ltd. was engaged to carry out this work. It was further recommended that soil samples be taken at regular intervals along the survey lines to corroborate the results of the EM survey in the event that a near surface conductor was located.

2. PROPERTY & ACCESS

This group is comprised of six mineral claims described as follows:

Mineral Claim	Grant Nos.	Date of Record
ANNE 2	Y-9916	August 8, 1966
ANNE 4	Y-9918	" "
ANNE 6	Y-9920	" "
ANNE 8	Y-9922	" "
ANNE 10	Y-9924	" "
ANNE 12	Y-9926	" "

A certificate of work entitlying Glenlyon Mines Ltd. (N.P.L.) to retain possession of these claims until August 8, 1968, was duly issued for performance of work prior to the first anniversary date.

It will be noted that the position of the claims in relation to the topographic features shown on figure 1 has been revised to agree with a chain and compass survey tying the number 1 post of M.C. ANNE 12 in with a point on the south bank of the Pelly River. Mineral claims held by other interests in the same area have not been accurately located in relation to the ANNE group but are believed to adjoin the west boundary along the southern half of the group.

A tote trail suitable only for tracked vehicles or trail motorcycles connects this group of claims with a landing strip and road network on the main claim groups located about one mile to the south. Access from the main camp by river boat is a possibility which may require consideration during intermediate development stages. The main claim group has been provided with a landing strip suitable for DC-3 aircraft and float equipped aircraft can land at various points along the river and on the Detour Lakes. The flight distance from Whitehorse is 138 miles.

3. REGIONAL GEOLOGY

Memoir 352, Geology of Glenlyon Map-Area, Yukon Territory by R.B. Campbell provides much stratigraphic and structural data of value in the study of the "Anvil range group" within this map area.

A more detailed study of the lithology of the rocks in this belt is however, available from the studies made in the Tay River Map Area adjoining to the east. Here the geological setting of the Faro, Vangorda and Swim Lake base metal deposits has been examined in the light of knowledge gained through the extensive development work in and adjacent to the mineral discoveries in that area. A report on work in this area by D.J. Templeman-Kluit during the 1967 field season published in G.S.C. paper 68-1 provided much additional information on the lithology of the host unit. The phyllites

and tuffaceous greenstone which occur near the known ore bodies are believed to be of Cambrian age. The metamorphic grade of the host rocks appears to vary from low to moderate but a "bleaching" of phyllites in proximity to the sulphide deposits is a pronounced local alteration affect which may prove a valuable guide to similar deposits.

4. GEOPHYSICAL SURVEY

(a) Equipment: A "Ronka" EM 16 electromagnetic detector was employed. This instrument utilizes homogeneous horizontal primary electromagnetic fields in the 15 to 25 kc range. In phase and quadrature components of the resultant vertical field are measured by null detection. VLF transmitters located at various points in the western part of the northern hemisphere are available for selection by plug-in-units, any two of which may be used concurrently by means of a selector switch.

(b) Methods: The position of a conductor detected by airborne methods was located on aerial photograph A-12340-21. As the long axis of this conductor trends in a N-W, S-E direction, two geophysical survey lines were extended across the conductor in a Northeasterly direction.

These lines were nearly coincident with the direction of primary field generated by a VLF transmitter operating on a frequency of 18.6 k/cs from near Seattle, Washington.

Profiles based on the results of this survey are shown on the attached maps.

(c) Interpretation: The profiles developed from this survey are incomplete rendering a complete objective interpretation of these data impossible. It is strongly suggested however, that if this survey had been extended in a Southwesterly direction, the sharp inflection noted on line 4+00E between 0+00 and 1+00 North would have resulted in a crossover at or near 0+50 South.

For purposes of illustration only a hypothetical profile based on extrapolation infers the presence of a North-west trending conductor to the South of the claim boundary. See figure 2.

5. GEOCHEMICAL SURVEY

(a) Sampling method: Shallow pits were excavated with mattock to depth of from 12" to 18" at intervals of 200' along the line of traverse. Mineral soil varying from silt to fine sand from below the zone of oxidation was selected as sample material. Sample A-1 is an exception to this in that a deeper soil profile was encountered and this sample is believed to represent the "B" zone. The sampled area is covered by a few tens of feet of fluvial sand, silt and gravel over which a fine layer of volcanic ash and a variable depth of moss and organic material has accumulated. Shaded areas in which the accumulation of ash and moss is unusually thick may remain frozen until very late in the season if not permanently. No samples were taken where this situation was encountered, as time and the tools at hand were not adequate.

(b) Analytical methods: All samples were submitted without further preparation to the "CORANEX PROJECT" laboratory in North Vancouver, B.C. for lead, zinc and copper analysis by atomic absorbtion after hot HNO_3, HCl extraction.

(c) Results and Interpretation: The results of these analyses are shown on figures 3 to 5 inclusive. Lead and zinc show only background values. Copper values in excess of 50 p.p.m. are regarded as somewhat above background in this general area. Data is insufficient for any detailed analysis but is evident that the higher values noted are more likely attributable to ground water dispersion of this relatively mobile element than to any accumulation from an underlying sub-outcrop.

6. SUMMARY AND CONCLUSIONS

While the geophysical survey failed to define any conductors, it is

strongly suggested that the area just South of the grid should be examined and any conductivity indicated by this further work should be traced along strike to determine its lateral extent.

The inferred depth of the transported overburden and general lack of encouragement in the soil sampling conducted in this area to date render this technique of little value in the further evaluation of any aspect of the claim group.

7. RECOMMENDATIONS:

The position of any adjoining claims having precedent by virtue of prior location should be determined prior to the conduct of a more extensive survey as suggested above. Open ground adjoining the area of inferred interests should be acquired by staking. Geophysical work employing the method used in this study should be extended to fully delineate any conductors located. Evaluation of any conductor defined by a survey of this type should be carried out in the light of experience gained elsewhere in this belt. The relatively uniform topographic surface and the probable lack of sufficient susceptability contrast to define the zone magnetically, combined with the inferred overburden depth, suggest that a gravity survey could be employed to test an electromagnetic anomaly in this area.

Estimated Budget

Stage 1.	Boundary Survey and Claim Staking	$ 750.00
	Reconnaissance EM Survey	250.00
	Supervision and pro-rated Portion of Field Expenses	500.00
		$1,500.00
Stage 2.	(based on favorable results of above work) Gravimetric Survey and Line Cutting as required.	$3,500.00

Stage 3. Diamond Drilling

Three, 250 foot drillholes would likely be required to provide an adequate test of a coincident gravity and EM anomaly in this overburden covered area. An overburden drill of the type used in the Keno Hill area could be employed to advantage at sustantially lower cost than diamond drilling. A tentative estimate of costs based on the alternatives available suggests a budget of $10,000. for this stage of the work.

It is recommended that the sum of $15,000. be allocated to the further testing of this airborne anomaly with the provision that work may be terminated at the end of any stage yielding negative results.

Respectfully submitted,

P.H. Sevensma, Ph.D., P.Eng.

July 31, 1968.

APPENDIX A

List of Personnel employed in the Surveys described herein:

Geophysical and Geochemical Surveys:	P.H. Sevensma Consultants Ltd., 715-850 West Hastings Street, Vancouver 1, B.C.
	P. Engineer: P.H. Sevensma
	Project Supervisor: H.S. Aikins
	Geophysical Operator: B.C. Fulcher
	Soil Sampling: K. Landry
Analytical Work:	Coranex Project, 1521 Pemberton Avenue, North Vancouver, B.C.
Transportation:	Great Northern Airways Ltd., Box 2870, Whitehorse, Y.T.

APPENDIX B

Statement of Costs Incurred:

P.H. Sevensma Consultants Ltd.

Re: Applicable Portion of July Invoices

Services,	P.H. Sevensma	1 day	$150.00
	H.S. Aikins	2 days	160.00
	B.C. Fulcher	2 days	100.00
	K. Landry	2 days	80.00
			$490.00
Disbursements; Applicable Portion of Whitehorse-Vancouver Air fare.			84.00
			$574.00
"Subsistance and Accommodation"			
Pro-rata Portion of Field Costs, 5 days @$10.00			$ 50.00
Whitehorse Base Costs, 1 day @$15.00			15.00
			$ 65.00
Great Northern Airways Ltd. Field Transportation (One return trip in Cessna 180 aircraft)			$152.00
*Costs Claimed as Representation Work			$791.00

*A number of minor cost items have been omitted from this summary as no convenient method of separating them from other phases of the programs which were conducted concurrently exists.

IN THE MATTER OF MCINTYRE-PORCUPINE MINES LTD. AND AN OPTION AGREEMENT WITH GLENLYON MINES LTD. COVERING CERTAIN MINERAL CLAIMS LOCATED IN THE YUKON TERRITORY AND IN THE MATTER OF THE PERFORMANCE OF GEOPHYSICAL AND GEOCHEMICAL STUDIES ON THE "ANNE GROUP" BEING PART OF THE SAID CLAIMS

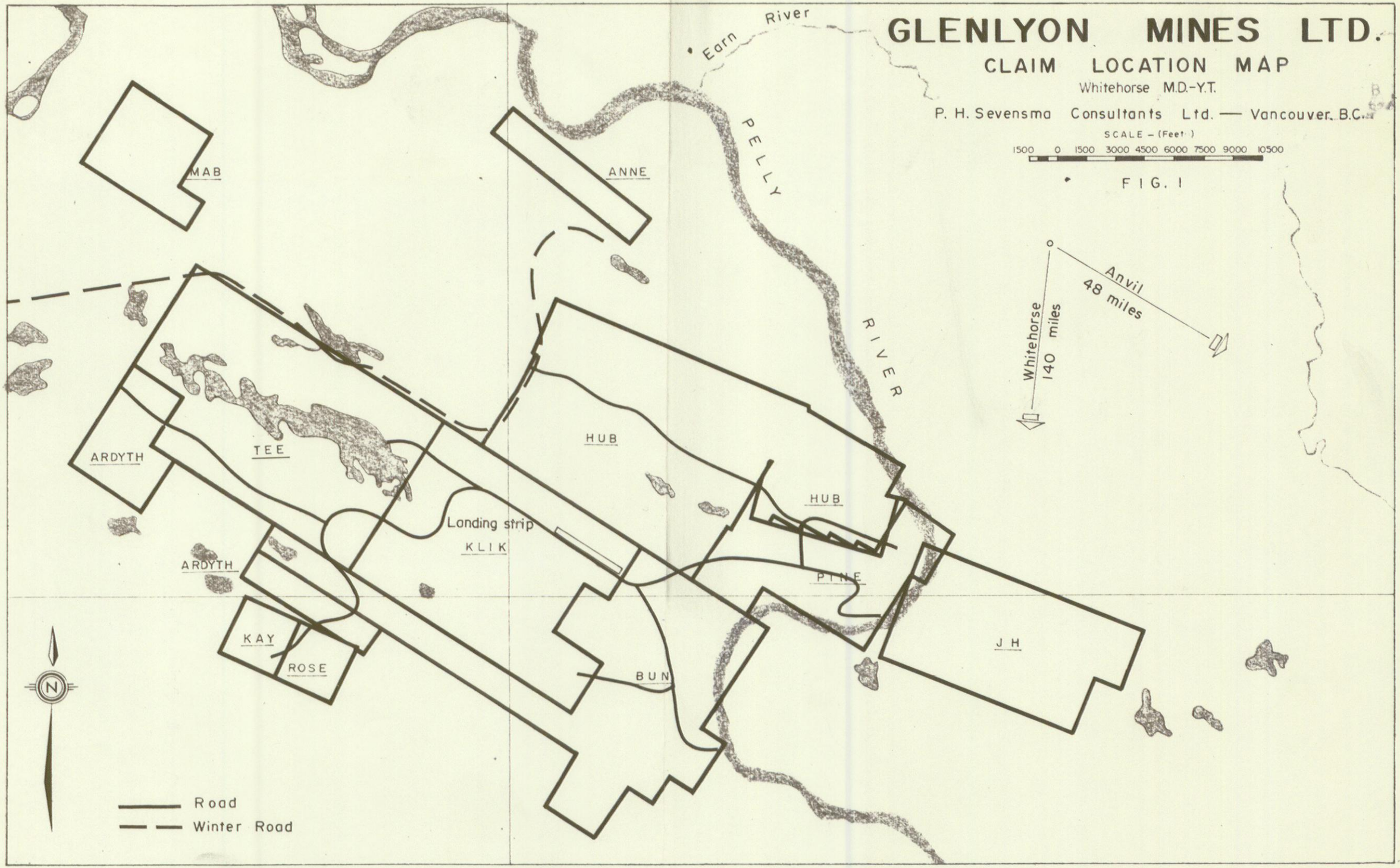
AFFIDAVIT

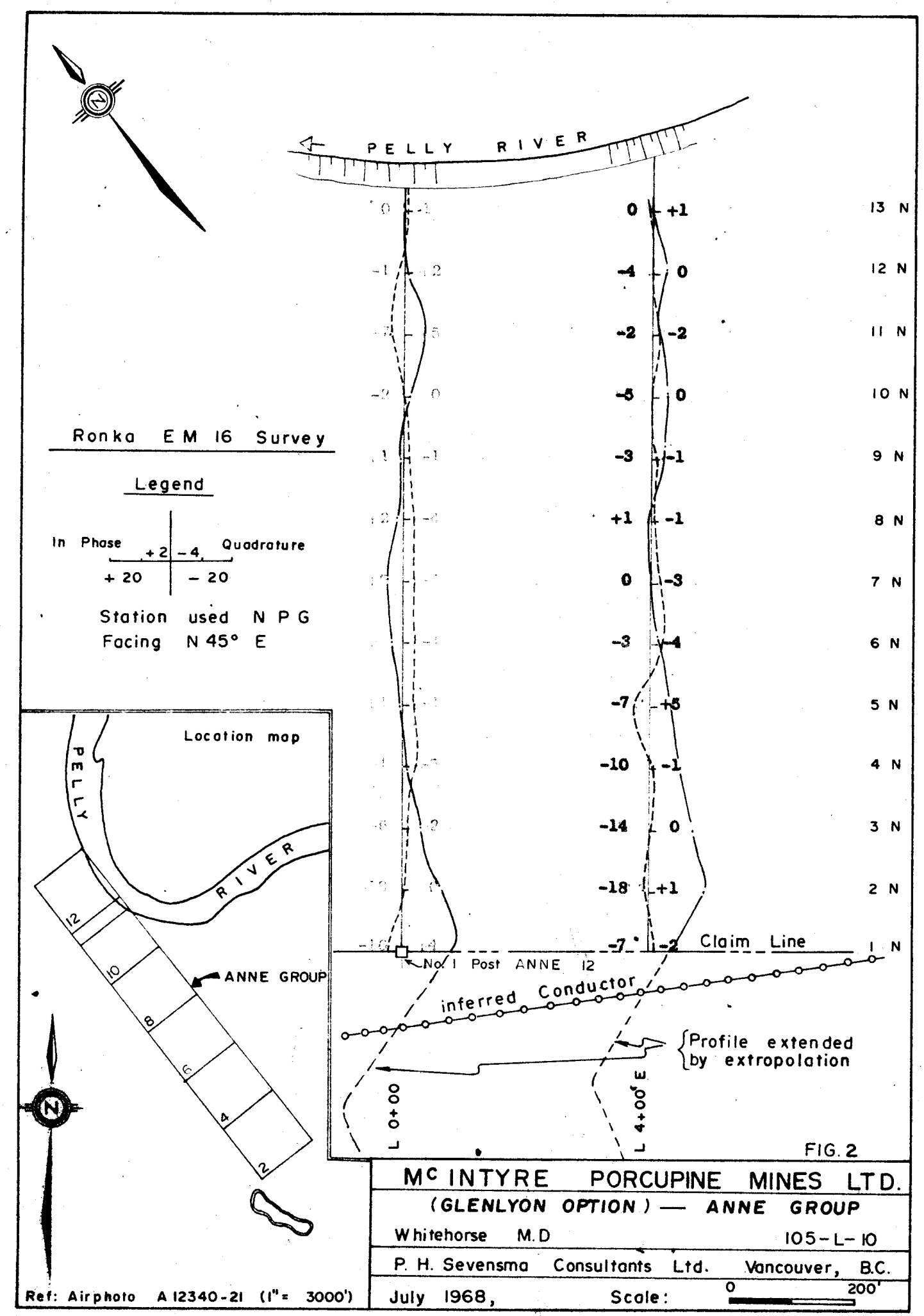
I, PETER SEVENSMA, of 715-850 West Hastings Street, Vancouver, Province of British Columbia, HEREBY MAKE OATH AND SAY AS FOLLOWS:-

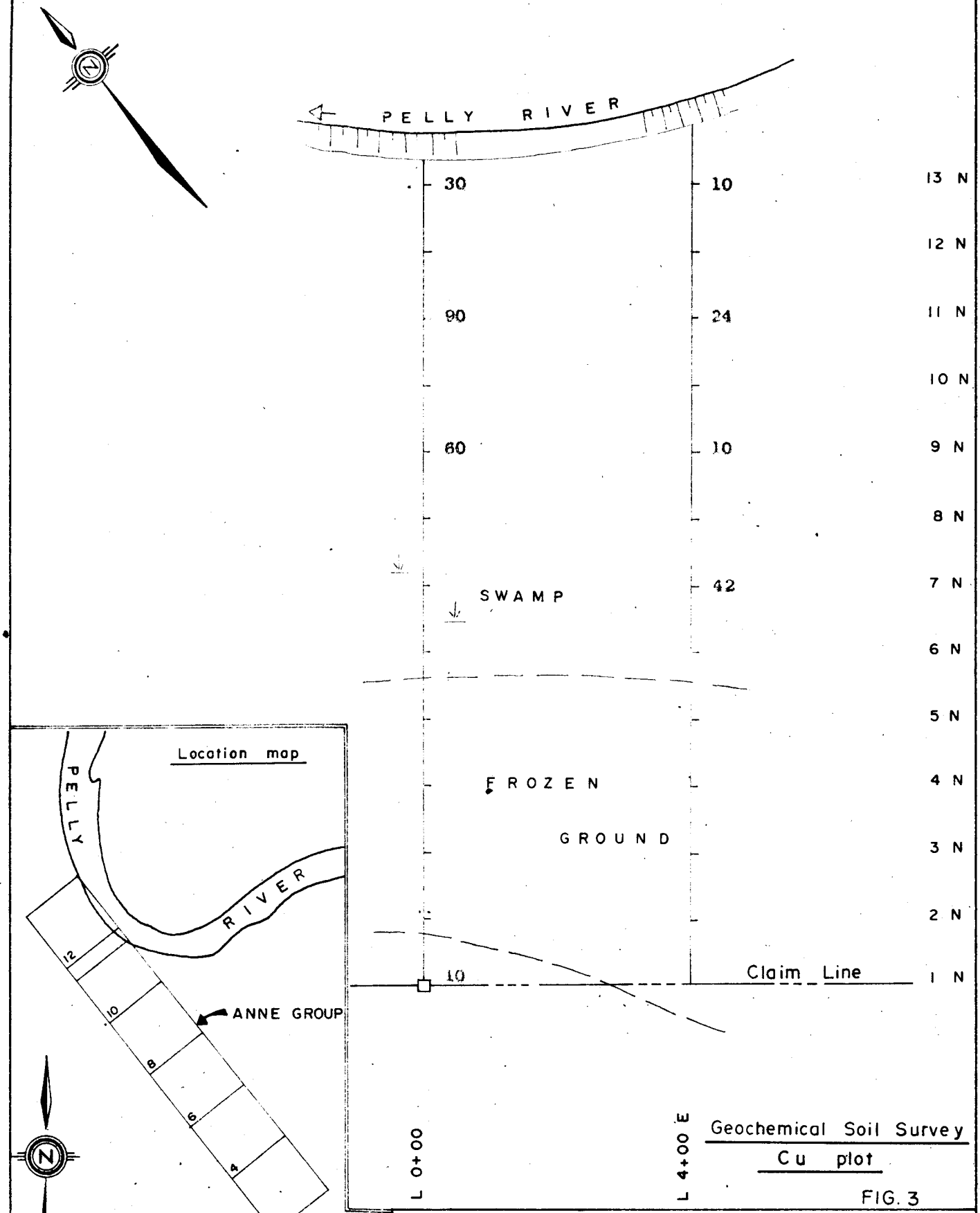
That attached hereto to this my Affidavit, marked Appendix A and Appendix B respectively, is a list of firms and individuals engaged in work for the above, as well as a cost breakdown of 1968 work which I certify to be accurate to the best of my knowledge and belief.

SWORN before me at the)
of)
in the Yukon)
Territory, this 3rd day)
of Aug., A.D. 1968.)
)
)
)
)

A Commissioner for taking
Affidavits in and for the
Yukon Territory


GLENLYON MINES LTD.
CLAIM LOCATION MAP
Whitehorse M.D.-Y.T.
P. H. Sevensma Consultants Ltd. — Vancouver, B.C.
SCALE – (Feet)
1500 0 1500 3000 4500 6000 7500 9000 10500
FIG. 1
Earn River
PELLY
RIVER
MAB
ANNE
ARDYTH
TEE
HUB
HUB
Landing strip
KLIK
ARDYTH
PINE
KAY
ROSE
BUN
J H
Anvil
48 miles
Whitehorse
140 miles
N
Road
Winter Road


PELLY RIVER
Ronka EM 16 Survey
Legend
In Phase
Quadrature
+2 -4
+ 20 - 20
Station used N P G
Facing N 45° E
Location map
PELLY RIVER
12
10
8
6
4
2
ANNE GROUP
0 +1
-4 0
-2 -2
-5 0
-3 -1
+1 -1
0 -3
-3 -4
-7 +5
-10 -1
-14 0
-18 +1
-7 -2
13 N
12 N
11 N
10 N
9 N
8 N
7 N
6 N
5 N
4 N
3 N
2 N
1 N
Claim Line
No. 1 Post ANNE 12
inferred Conductor
Profile extended by extropolation
L 0+00
L 4+00E
FIG. 2
Mc INTYRE PORCUPINE MINES LTD.
(GLENLYON OPTION) — ANNE GROUP
Whitehorse M.D
105-L-10
P. H. Sevensma Consultants Ltd. Vancouver, B.C.
July 1968,
Scale:
0 200'
Ref: Airphoto A 12340-21 (1"= 3000')



Geochemical Soil Survey

Cu plot

FIG. 3

Mc INTYRE PORCUPINE MINES LTD.

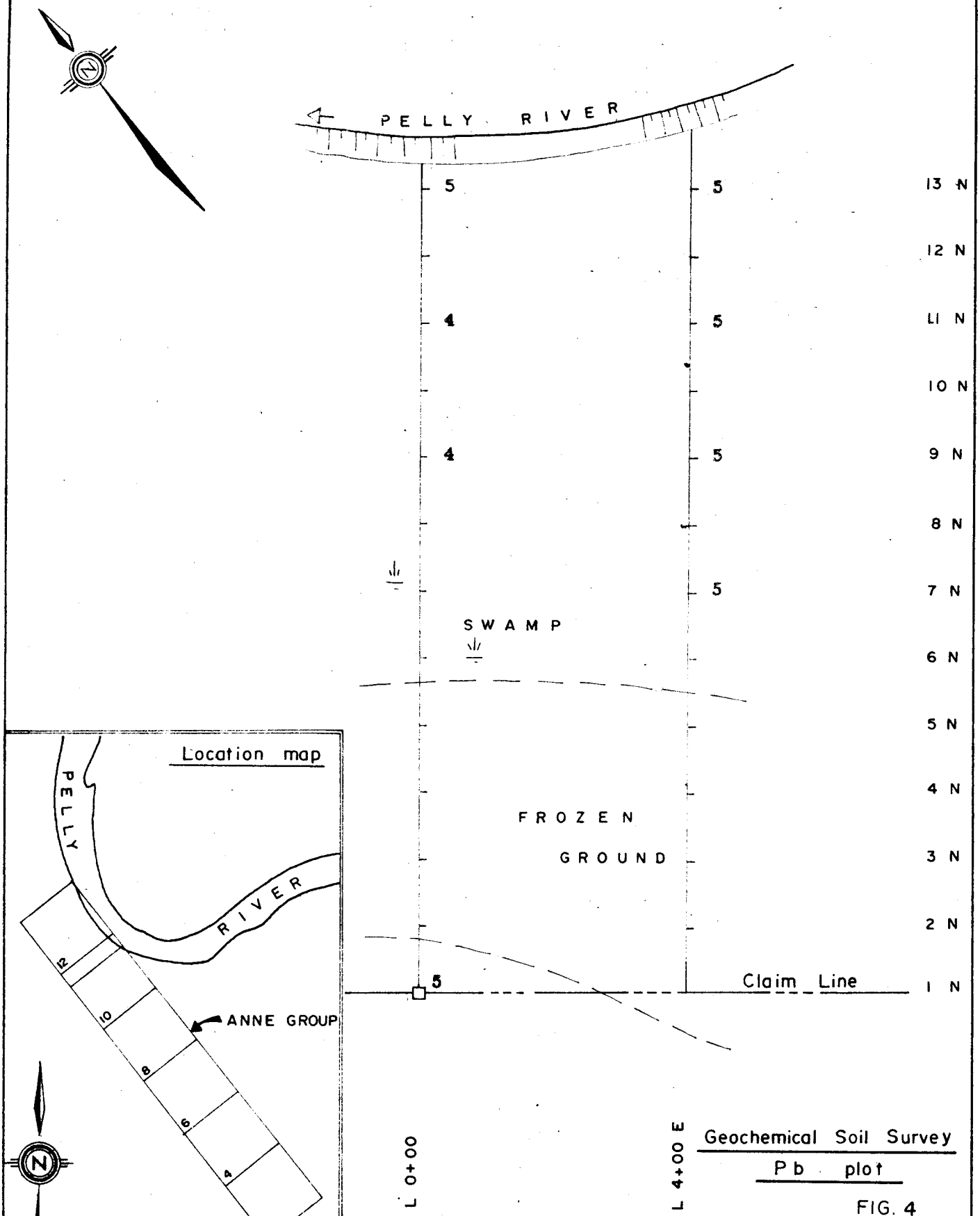
(GLENLYON OPTION) — ANNE GROUP

Whitehorse M.D 105-L-10

P. H. Sevensma Consultants Ltd. Vancouver, B.C.

July 1968, Scale: 0 200'

Ref: Airphoto A 12340-21 (1" = 3000')



Geochemical Soil Survey

Pb plot

FIG. 4

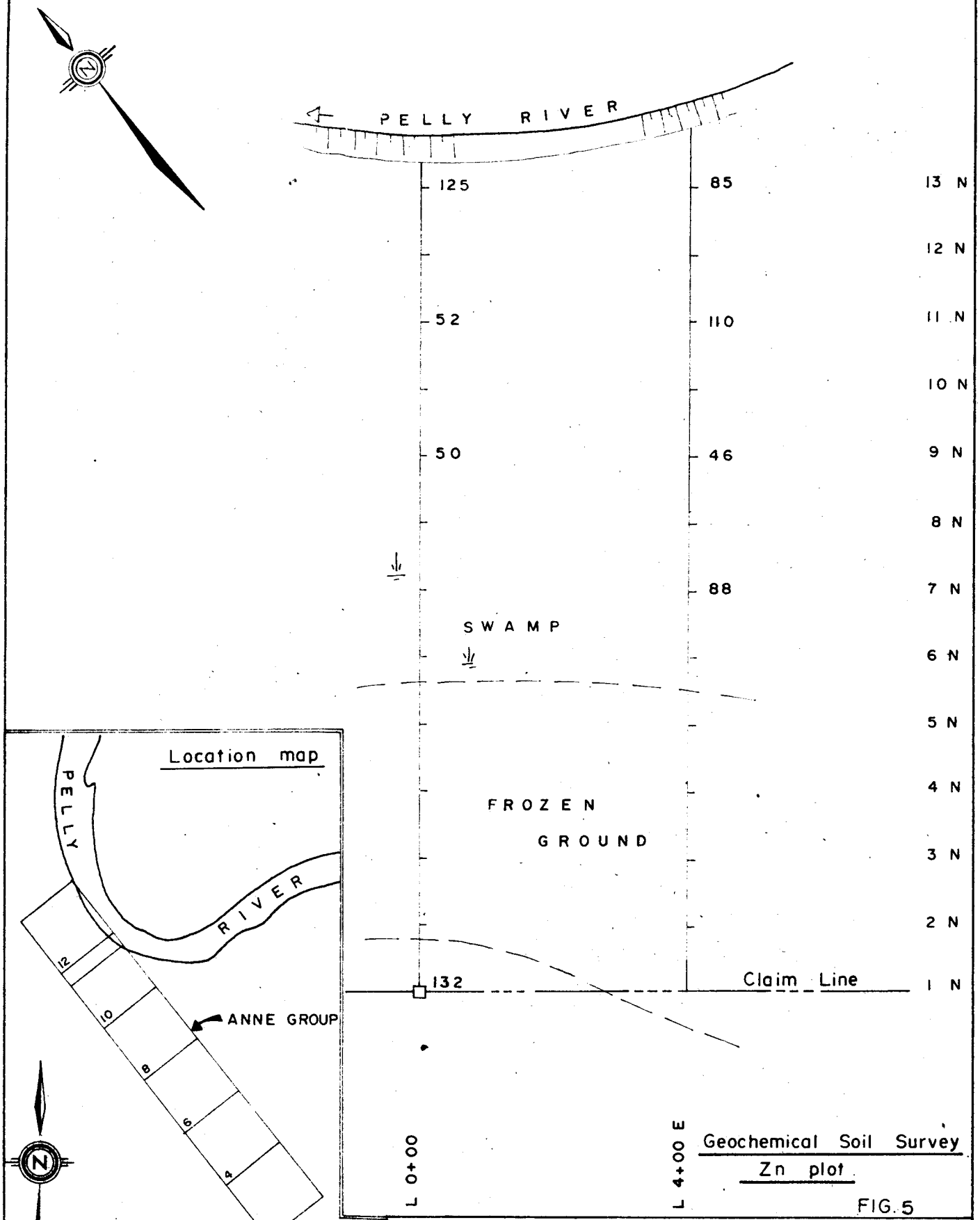
MC INTYRE PORCUPINE MINES LTD.

(GLENLYON OPTION) — ANNE GROUP

Whitehorse M.D 105-L-10

P. H. Sevensma Consultants Ltd. Vancouver, B.C.

July 1968, Scale: 0 200'



Geochemical Soil Survey

Zn plot

FIG. 5

MC INTYRE PORCUPINE MINES LTD.

(GLENLYON OPTION) — ANNE GROUP

Whitehorse M.D 105-L-10

P. H. Sevensma Consultants Ltd. Vancouver, B.C.

July 1968, Scale: 0 200'