

GLENLYON MINES LTD.

ANNE GROUP

105-L-10, 62°40'N., 134°45'W.

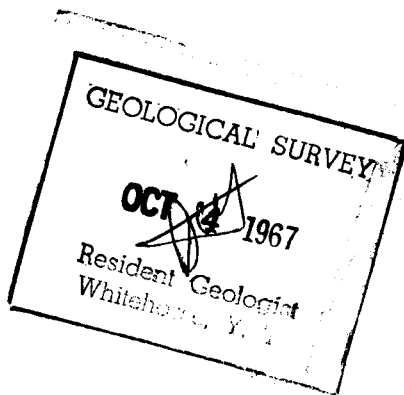
Whitehorse Mining District, Y.T.

GEOPHYSICAL REPORT

WORK PROGRAM: July 21 - 28, 1967

by

P.H. SEVENSMA, Ph.D., P. Eng.



This report has been examined by  
the Geological Evaluation Unit.  
Approved as to technical worth by:

*P. H. Sevensma*  
RESIDENT GEOLOGIST

Approved as to cost in the amount  
of: \$ *676.25*

*P. E. Verban*  
RESIDENT MINING ENGINEER

Accepted as representation work  
under Section 53(4) Yukon Quartz  
Mining Act.

*[Signature]*  
COMMISSIONER OF YUKON

TABLE OF CONTENTS

	<u>Page</u>
1. INTRODUCTION . . . . .	1
2. CLAIM STATUS . . . . .	1
3. TOPOGRAPHY AND ACCESS . . . . .	2
4. REGIONAL GEOLOGY . . . . .	2
5. GEOPHYSICAL SURVEY . . . . .	2
6. RECOMMENDATIONS . . . . .	4
APPENDIX A      Names of personnel employed	
APPENDIX B      Statement of costs incurred	

ILLUSTRATIONS

Figure 1      Location Map and EM Profiles, 1" = 500'

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1. INTRODUCTION

A reconnaissance electromagnetic survey employing a Ronka EM 16 survey instrument was conducted on the Anne Group of mineral claims. This work was done on behalf of Glenlyon Mines Ltd. by P.H. Sevensma Consultants Ltd, under the supervision of P.H. Sevensma, P. Eng.

The objective of this survey was to confirm the presence of a conductive zone indicated by an airborne electromagnetic survey.

2. CLAIM STATUS

The twelve claims comprizing this group are located near the Pelly River in the Detour Lakes area. The claims are shown on claim map 105-L-10 at approximately 62°40' North and 134°45' West. This is within the Whitehorse Mining District. A transcript of the relevent records on file with the company gives the following information:-

<u>Mineral Claim</u>	<u>Grant No.</u>	<u>Record Date</u>	<u>Transfer Record No.</u>	<u>Date of Transfer</u>
Anne 1 & 2	Y9915,Y9916	Aug. 8,1966	7135	Sept. 16,1966
Anne 3-6	Y9917-Y9920	Aug. 8,1966	7128	Sept. 16,1966
Anne 7-12	Y9921-Y9926	Aug. 8,1966	7127	Sept. 16,1966

All claims were shown to be held in good standing by Glenlyon Mines Ltd. (N.P.L.).

The claim posts were examined and found to be located approximately as shown on the attached plan. It is understood, however, that a portion of the ground indicated as being included in the south half of this group was previously staked by other interests.

### 3. TOPOGRAPHY AND ACCESS

The claims are located south of the present channel of the Pelly River and lie astride an oxbow bend which defined a previous channel. Several small sloughs occupy the low lying areas and much of the ground is marsh. A bench located at the southeast end of the property represents the maranic surface as the underlying surficial deposits are of fluvio-glacial origin.

A tote trail constructed by other interests crosses the south side of the property and continues to the river. This tote trail connects with the extensive road network in the Detour Lake area but is not of a standard suitable for all-weather use by wheeled vehicles.

No rock outcrops are known but a small drumlinoid ridge on the north side of the most westerly slough appeared from a distance to have a bedrock exposure on the south side. It was not possible to gain access to the ridge due to the depth of water in partially surrounding sloughs.

### 4. REGIONAL GEOLOGY

This area is covered by the Geological Survey publication; Map 25-1960, Glenlyon; on a scale of 1 inch to 4 miles. Bedrock exposures along the bank of the Pelly River infer that the area covered by the Anne Group of mineral claims is underlain by G.S.C. Unit 19, a succession of basic flows intercalated with clastic sediments and limestones of Mississippian age or later. This lithologic unit appears to be the equivalent of G.S.C. Unit 7 shown on the Tay River map sheet adjoining Glenlyon on the east. The presently known sulphide deposits in this general area are all confined to this later unit.

### 5. 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 location line on the Anne Group is oriented on a bearing of N40°W which is believed to cut the regional strike at an angle of from 15 to 20 degrees.

This line is also nearly coincident with the direction of the primary field generated by the transmitter identified as NPM operating on a frequency of 23.4 kc/s. One other transmitter, NPG, on a frequency of 18.6 kc/s with a field orientation of approximately N75°E was available intermittently.

Previous surveys employing this method on claim groups overlying nearby sections of this lithologic unit indicate that a substantial in-phase vector is recorded adjacent to any conductive mass.

It is, however, recognized that a steeply dipping sheet conductor parallel to the primary magnetic field may not provide a strong measurable response due to the poor coupling and hence a weak secondary (induced) field.

Based on the foregoing considerations and the nature of the terrain - devoid of prominent landmarks - it was decided to run a preliminary survey along the claim location line using both stations. One cross line at the east edge of the claim group extending 200 feet south and 800 feet north from the No. 1 posts of Anne 1 and Anne 2 mineral claims was surveyed using station NPG. Readings were taken every 100 feet along both lines.

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

(c) Interpretation

A zone of weak conductivity is suggested along the western 1300 feet of Anne claims 1 and 2. The low in-phase - quadrature ratio over most of this zone suggests that a relationship exists between this response and the positive response noted on the cross line to the north. Correlation of these data places the zone of conductivity to the north of the location line.

The cross-over 300' west of the No. 1 posts of Anne 5 and 6 is attributed to conductivity associated with the adjacent swamp.

The strong in-phase response noted between 800 and 1200 feet west of No. 1 posts for claims 7 and 8 shows a high in-phase quadrature ratio which suggests a zone of high conductivity adjacent to but not crossing the location line.

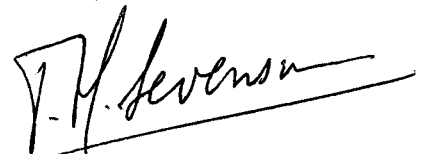
Additional work of a more detailed nature in areas selected on the basis of this survey will be required to assess the nature and extent of the indicated conductors.

6. RECOMMENDATIONS

The boundaries of all adjacent claims with prior rights should be determined by a chain and compass survey prior to any detailed undertaking on this ground. A geological examination of any outcrop located during this survey should be conducted.

Conductivity associated with geochemically anomalous zones on several nearby claim groups is at present being explored by more detailed methods and it is suggested that further work on this group be deferred pending an assessment of the results of this other work.

Respectfully submitted,



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

PHS/1z

August 7, 1967

APPENDIX A

Names of personnel employed in this survey:

Geophysical Survey:

P.H. Sevensma Consultants Ltd.  
715-850 West Hastings Street,  
Vancouver, B.C.

Consultant: P.H. Sevensma, P. Eng.

Operator: H.E. Aikins

Subsistence & Lodging:

Glenlyon Mines Ltd.,  
P.O. Box 3012, Whitehorse, Y.T.

Field Assistant: J. Boily  
(employee of company)

Transportation:

Great Northern Airways Ltd.,  
P.O. Box 2870, Whitehorse, Y.T.

APPENDIX B

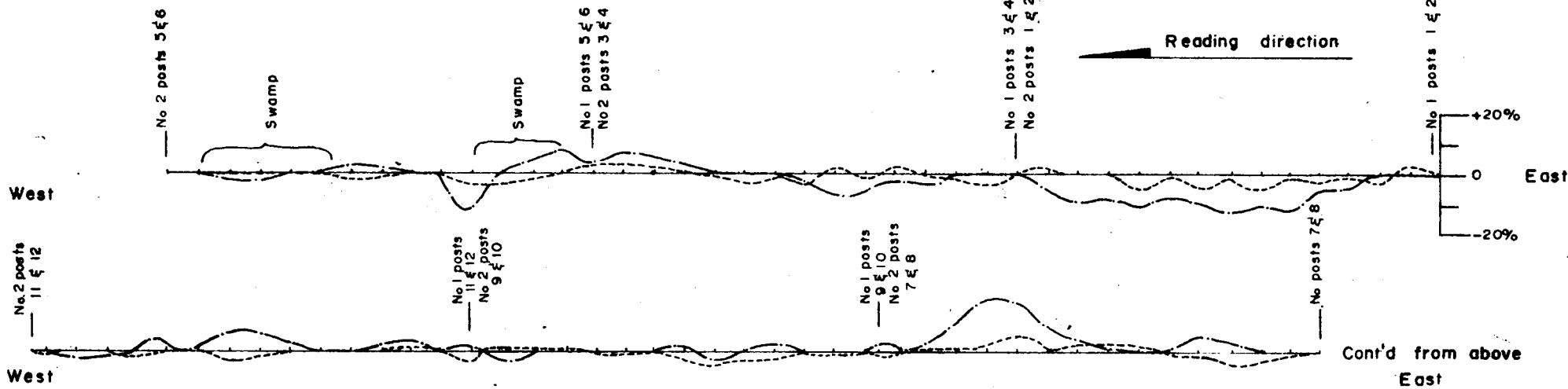
Statement of costs incurred:

P.H. Sevensma Consultants Ltd.	
Re: July invoice, applicable portion	\$ 308.25
August invoice	155.00
Glenlyon Mines Ltd.	
Re: attached voucher	61.00
Great Northern Airways Ltd.	
Re: attached voucher	<u>152.00</u>
Total	\$ <u>676.25</u>

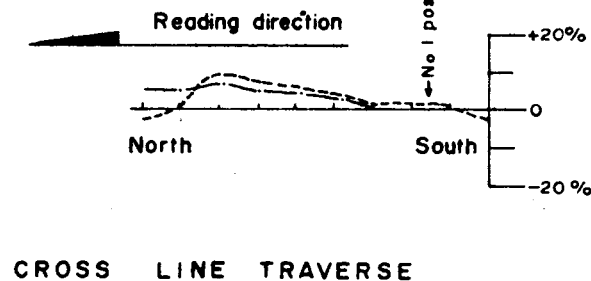
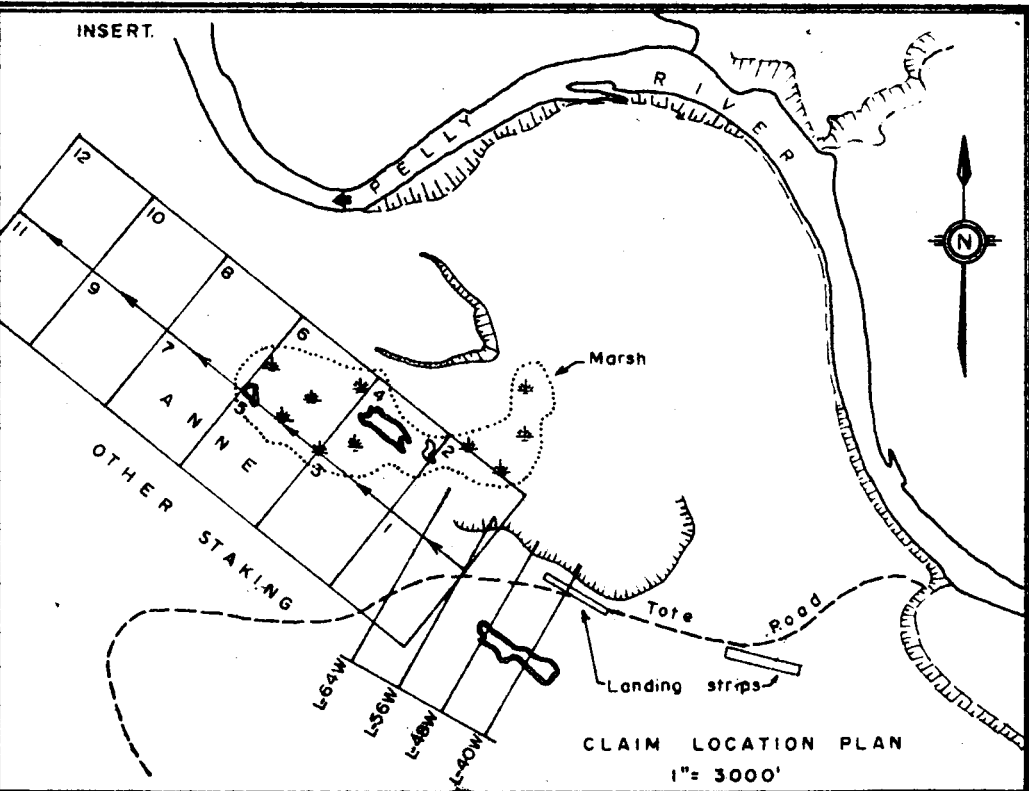
Please note: The July invoice did not show the breakdown  
but this should be as follows:

Senior Technician, field work 2 days	
Senior Technician, office work 2 days	
4 days @ \$55.00	\$ 220.00
Expenses	20.75
Air fare, applicable portion	37.50
Instrument rental, 3 days @ \$10.00/day	<u>30.00</u>
	\$ 308.25





LOCATION LINE TRAVERSE



CROSS LINE TRAVERSE

*P. H. Sevensma*

GLENLYON MINES LTD.	
ANNE GROUP	
Whitehorse M.D. RONKA EM-16 SURVEY	
P. H. Sevensma Consultants Ltd. - Vancouver B.C.	
August 1967	105-L-10
SCALE 500'	

FIG.