

92E
680640

GEOLOGY REPORT
on the
SF 1-20 CLAIM GROUP
Harrison Lake area
New Westminster M. D.
British Columbia

Latitude: 49°25'N
Longitude: 121°53'W
NTS 92H-5W

for

SWIM LAKE MINES LTD. (N.P.L.)

by

G. C. Gutrath, B.Sc., P.Eng., Geologist
ATLED EXPLORATION MANAGEMENT LTD.

010058

TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION.....	1
SUMMARY.....	1
CONCLUSION.....	1
RECOMMENDATIONS.....	2
ESTIMATED COSTS.....	3
CLAIMS.....	4
HISTORY.....	4
GEOGRAPHY.....	5
Location.....	5
Access.....	5
Topography.....	5
Climate Flora & Fauna.....	5
Water.....	5
GEOLOGY.....	6
Regional Geology.....	6
Local Geology.....	6
GEOCHEMICAL SURVEY.....	7
Zinc-North Grid.....	7
Copper - North Grid.....	8
Zinc-South Grid.....	8
Copper - South Grid.....	9
ENGINEER'S CERTIFICATE.....	10
SELECTED REFERENCES.....	11

INTRODUCTION

This report is based upon information gathered from various government and private reports and past personal experience in the region. The writer has not examined the claim group.

This report is written at the request of Swim Lake Mines Ltd.
(N.P.L.)

SUMMARY

Geochemical soil sampling has located seven areas with anomalous zinc, copper and cadmium values. Geological mapping has determined that three of the anomalies occur where the rocks are strongly altered to quartz-sericite-pyrite. The geologic environment appears to be favourable for the occurrence of volcanogenic massive sulfide deposits.

CONCLUSION

The presence of basic to acid pyroclastic rocks, post pyroclastic waterlain tuffs and strong alteration zoning indicates that the geologic environment is favourable for the occurrence of volcanogenic massive sulfide deposits on the SF claim group. This environment is similar to

that to the south near the known deposits on the Chehalis River.

The coincident zinc, copper and cadmium anomalies support this conclusion although no significant mineral occurrences have yet been located. Geochemical results indicate that any deposit will have predominant zinc with minor copper.

The anomalies meriting further investigation are B, C, D and G. Additional investigation is warranted on A, E and F although they are less promising.

RECOMMENDATIONS

The following program is recommended in the area of the zinc anomalies:

1. Conduct further detailed geologic mapping and prospecting in the area of zinc anomalies A-G. If favourable rocks or showings are found in the areas of Anomaly G, expand the North Grid to the south and east and stake additional claims, if necessary.
2. Conduct fill-in geochemical sampling so that zinc-anomalous areas are covered by a sampling grid with stations 100 feet apart on lines 200 feet apart.
3. Conduct an electromagnetic (EM) test survey in the area of the zinc anomalies using shootback-type equipment to determine if conductive zones are present. It should be noted that the conductivity of any massive sulfide bodies present will be dependent on the presence of pyrite or base metals other than sphalerite as the latter is usually non-conductive. The survey should be expanded if positive results are encountered.

4. Conduct bulldozer trenching in the area of any shallow conductors found by the EM survey to determine the nature of mineralization present.

Drilling would be indicated if the recommended work program is successful in finding significant mineral showings and defining drilling targets.

ESTIMATED COSTS

Personnel

Geologist and prospector
-to complete geological program.....\$ 2,000.00

Food and Camp Costs..... 1,000.00

Geochemical Survey

- fill in lines..... 1,000.00

Geophysical Survey

EM Survey 10 miles @ \$500.00/mile..... 5,000.00

Contingencies and Management..... 1,000.00

\$ 10,000.00

=====

CLAIMS

The SF 1-20 claims are located in the New Westminster Mining Division, B. C.

<u>Claim</u>	<u>Record Number</u>	<u>Expiry Date</u>
SF 1-14	28219-28232	December 4, 1975
SF 15-16	28982-28983	December 3, 1975
SF 17-20	28200-29203	May 22, 1976

HISTORY

The SF 1-14 claims were staked in 1972, SF 15-16 in 1973 and SF 17-20 in 1974.

Previous work has consisted mainly of geological mapping, line cutting and geochemical soil sampling. No exploration work is known of before 1972.

Geochemical soil sampling in 1972 and 1973 located a zone with anomalous zinc values and six areas within the zone have strongly anomalous zinc values.

GEOGRAPHY

Location

The SF 1-20 mineral claims are located approximately 10 miles northwest of Harrison Hot Springs, B.C. in the New Westminster Mining Division. The property is 2 miles west of Harrison Lake.

Co-ordinates are latitude 49°25'North and Longitude 121°53'West.

Access

Access to the SF claim group is via 22 miles of gravel road which leaves B. C. Highway 7 near Harrison Mills. The road goes north beyond Cartmell Creek to join the Weldwood south haul road. This road is followed 2 1/2 miles west to the claim group.

Topography

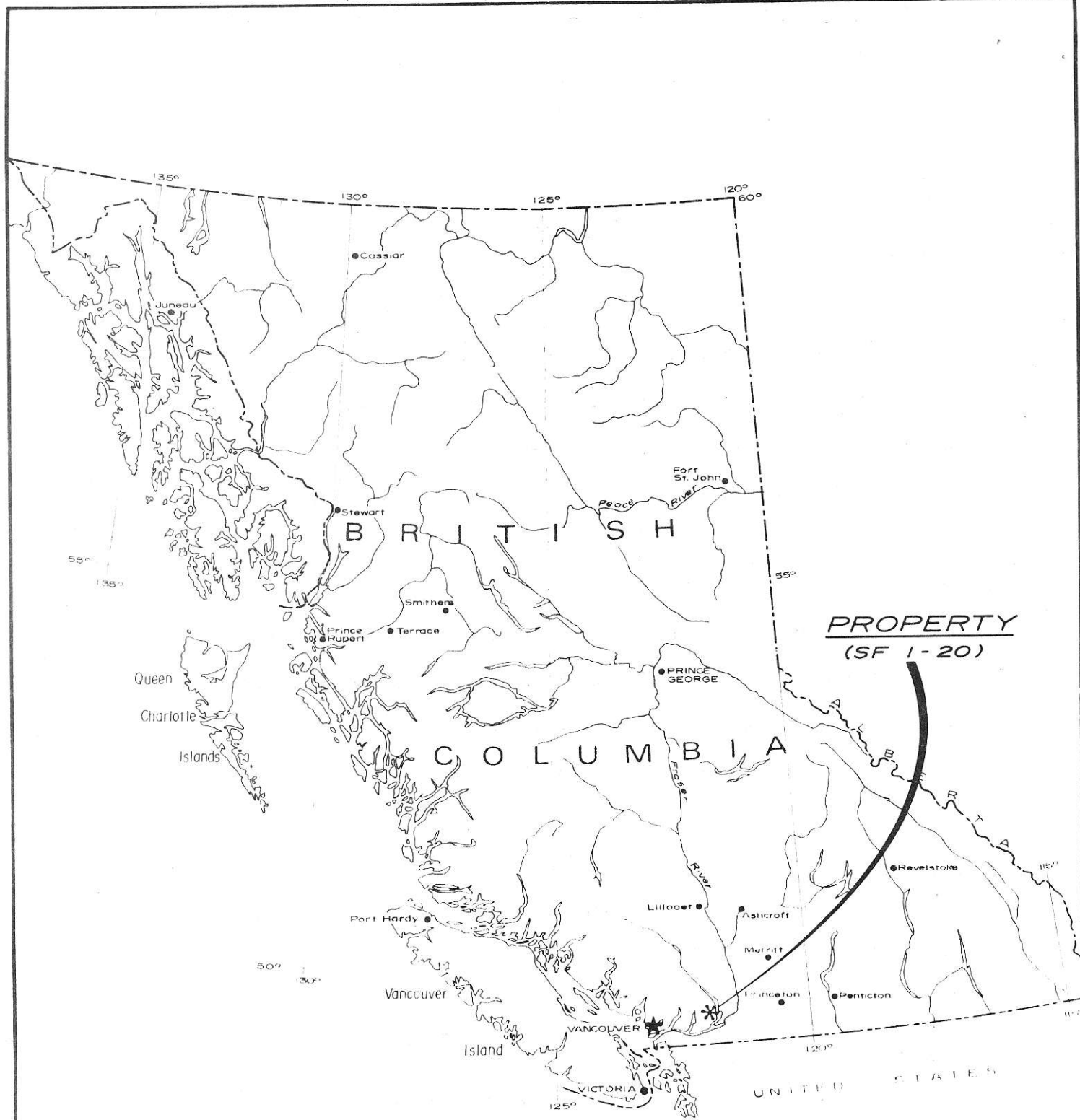
The terrain is moderately rugged and relief is less than 1,000 feet.

Climate Flora & Fauna

The climate is typical of southern B. C. The claim group is forested by second growth timber, and is dense enough in some areas to make access difficult.

Water

Drainage is into Harrison Lake and Cartmell Creek crosses the claim group.



PROPERTY
(SF 1-20)

FIG. 1
SWIM LAKE MINES LTD.
SF GROUP
LOCATION MAP
 CARTMELL CR. - HARRISON LAKE
 NEW WESTMINSTER M.D., B.C.

SCALE
 1" = 136 MILES
 MAY, 1975

GEOLOGY

Regional Geology

The area southwest of Harrison Lake is underlain by volcanic and volcanic epiclastic rocks of the Harrison Lake Formation of probable middle Jurassic age.

The Harrison Lake Formation is part of an eugeoclinal assemblage which was deposited between Middle Devonian and Middle Cretaceous time. This deposition was ended in early to mid-late Cretaceous time by widespread orogenic activity accompanying the intrusion of plutonic rocks of the Southern Coast crystalline complex.

Local Geology

The SF claim group is underlain by andesites, basalt to acid pyroclastics, tuff and conglomerate and a diorite intrusive. Bedding indicates the rocks strike generally easterly and dip to the south from 20° to 45°.

Two fracture sets occur and fractures are often stained by limonite but seldom appear to have contained sulfides.

A minor occurrence of disseminated sulfides was found on claim SF 6.

Rocks on the SF claims have been hydrothermally altered in certain areas. Alteration ranges from unaltered to intense quartz-sericite-pyrite with strong silicification. There is no systematic alteration zoning pattern typical of the porphyry copper deposits.

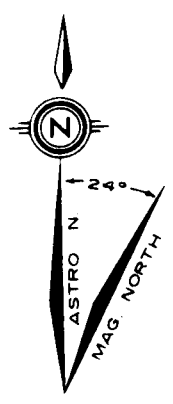
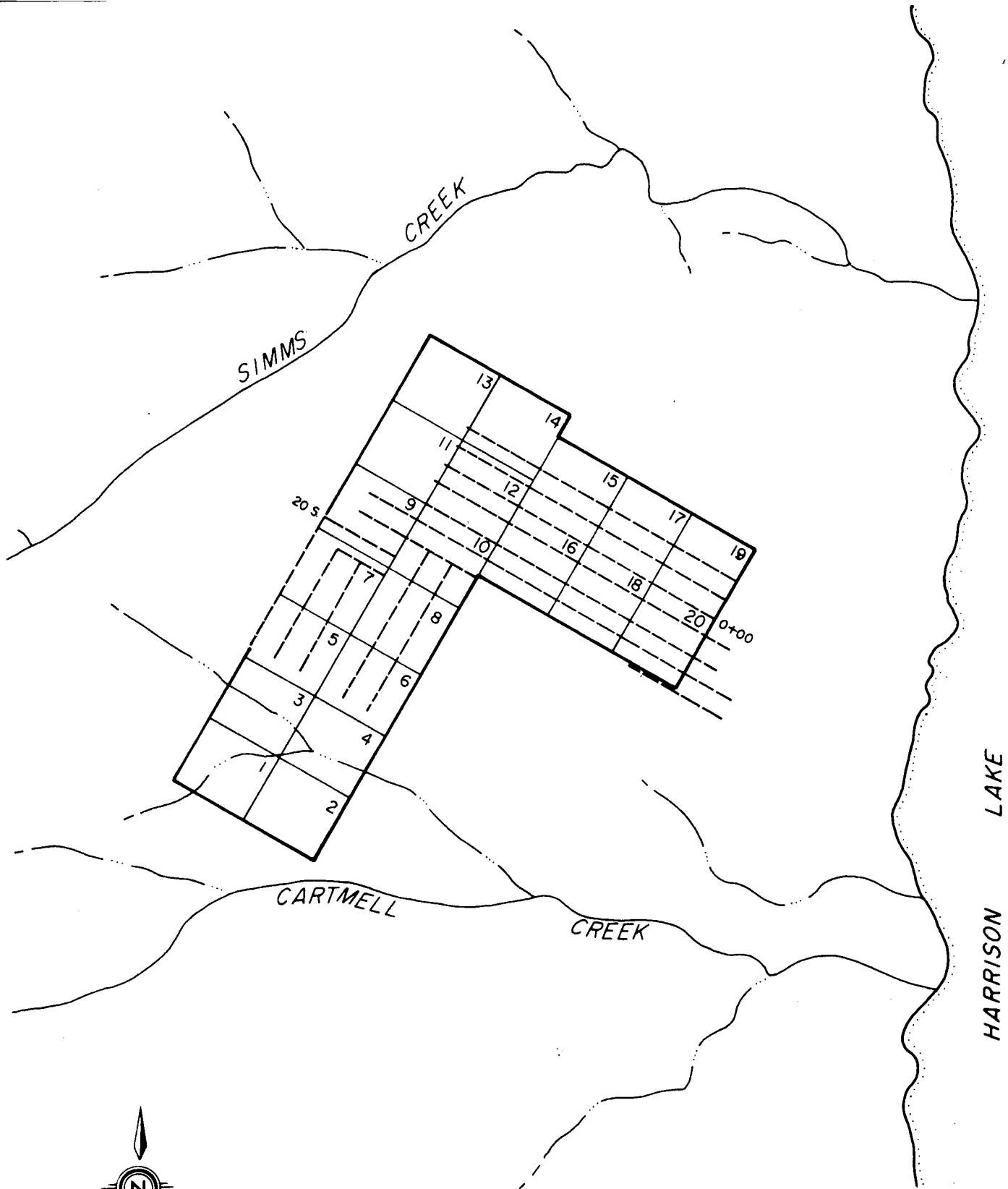


FIG. 2
 SWIM LAKE MINES LTD.
 SF GROUP
CLAIM AND GRID MAP

CARTMELL CR. - HARRISON LAKE
 NEW WESTMINSTER M.D., B.C.



MAY, 1975

GEOCHEMICAL SURVEY

Geochemical surveys were conducted in 1972-1973 and 1974. Samples were analysed for zinc and copper and some for silver, lead and cadmium.

The background and anomalous values, in parts per million, for the analysed elements were established as follows:

<u>Metal</u>	<u>Background</u>	<u>Threshold</u>	<u>Anomalous</u>	<u>Strongly Anomalous</u>
Zinc	65	135-184	165-244	245
Copper	17	35-54	55-69	70
Cadmium	0.2		0.5	2
Silver	0.5		0.5	

Zinc-North Grid

The results of the three surveys indicate three large areas of anomalous zinc. Within these three areas are six strongly anomalous areas, all of which are at least partially coincident with copper anomalies and contain anomalous cadmium. The anomalous areas are:

<u>Anomaly</u>	<u>Grid Location</u>	<u>Size</u>	<u>Zinc</u>	<u>Peak Values</u> <u>Copper</u>	<u>Cadmium</u>
A	0+00 / 7W	900'x60'	800	86	0.8
B	0+00 / 2E	450'x200'	1280	64	0.8
C	0+00 / 6E	700'x400'	854	70	0.7
D	4S / 15E	500'x400'	1760	94	0.6
E	0+00 / 30E	1000'x400'	1260	528	2.0
F	8S / 43E	2200'x400' 1200'x500'	3470	620	28.0

Anomalous zones apart from E and F are underlain by altered, locally pyritized, volcanic and pyroclastic rocks. Anomalies E and F, however, are within unaltered rocks. The high cadmium content of a portion of anomaly F may be very significant.

Copper-North Grid

The copper anomalies are smaller and more restricted in area than the corresponding zinc anomalies. Further investigation should be concentrated on the zinc anomalous areas with coincident anomalous copper content.

Zinc-South Grid

The 1974 sampling on the south grid located three strongly anomalous zinc zones with associated copper and cadmium values.

The anomalous zones are as follows:

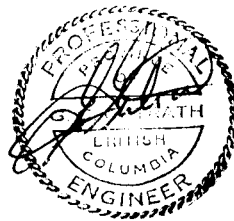
<u>Anomaly</u>	<u>Grid Location</u>	<u>Size</u>	<u>P E A K V A L U E S</u>		
			<u>ppm Zn</u>	<u>ppm Cu</u>	<u>ppm Cd</u>
G	20 S / 7 W	1400x200	1840	332	6.8
H	5 W / 26S	600x100	1080	68	1.5
I	5 W / 40S	900x100	1080	56	0.2

Anomaly G is the most attractive of the three anomalies and merits further investigation.

Copper-South Grid

The survey located four copper anomalous zones one of which is coincident with zinc anomaly G which makes it the most favourable target for future exploration.

Respectfully Submitted,

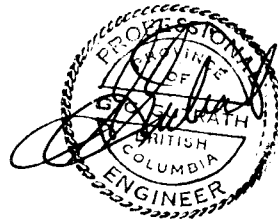


G. C. Gutrath, B.Sc., P.Eng., Geologist
ATLED EXPLORATION MANAGEMENT LTD.

ENGINEER'S CERTIFICATE

I, GORDON C. GUTRATH, of 3636 Lakedale Avenue, in the Municipality of Burnaby, in the Province of British Columbia, DO HEREBY CERTIFY:-

1. That I am a consulting geologist with a business address of 420 - 475 Howe Street, Vancouver, B. C. V6C 2B3.
2. That I am a graduate of the University of British Columbia where I obtained my B.Sc., in geological science in 1960.
3. That I am a Registered Professional Engineer in the Geological Section of the Association of Professional Engineers in the Province of British Columbia.
4. That I have practised my profession as a geologist for the past fifteen years, and
5. That I have no interest in the property with which this report is concerned, nor do I expect to receive any such interest. I have no interest in the securities of Swim Lake Mines Ltd. (N.P.L.).



Gordon C. Gutrath, B.Sc., P.Eng.

DATED at the city of Vancouver, Province of British Columbia, this 15th day of May, 1975.

SELECTED REFERENCES

- Fitzgerald, M.J.
1974.....Report on Geology and Geo-
chemistry of the SF 1-20 claims.

SWIM LAKE MINES LTD.

FINANCIAL STATEMENTS

YEAR ENDED FEBRUARY 28, 1975

Auditors' Report

Balance Sheet

Statement of Deficit

Statement of Deferred Exploration,
Development and Administration
Expenditures

Statement of Changes in Financial
Position

Notes to Financial Statements