

83-#142-#11 128

GEOCHEMICAL AND GEOPHYSICAL REPORT  
ON THE BLUFF 5 CLAIM GROUP  
KAMLOOPS MINING DIVISION  
FOR PREUSSAG CANADA LIMITED

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

11,125

part 1 of 2

NTS 82M/5W  
51° 19' N; 119° 56' W

F. Daley  
Vancouver, B.C.  
February 1983

*[Handwritten mark]*

## TABLE OF CONTENTS

	<u>PAGE</u>
INTRODUCTION	
a. Location.....	1
b. Access.....	1
c. History.....	1
d. Present Program.....	2

### RESULTS AND INTERPRETATION

a. Geology.....	2
b. Geophysical Surveys.....	2
c. Geochemical Surveys.....	3
d. Summary.....	5

### LIST OF TABLES

TABLE 1	Rock Geochem Assays.....	4
TABLE 2	Soil Geochem Survey.....	5

### LIST OF FIGURES

FIGURE 1	Location, Bluff 5 Claim Group.....	6
FIGURE 2	Geology, Bluff 5 Claim Group.....	In Pocket
FIGURE 3	Max-Min Survey, 444 Hz Frequency.....	In Pocket
FIGURE 4	Max-Min Survey, 1777 Hz Frequency.....	In Pocket
FIGURE 5	Soil Geochemistry Survey.....	In Pocket

### LIST OF APPENDICES

APPENDIX I	Itemized Cost Statement
APPENDIX II	Author's Qualifications
APPENDIX III	Qualifications, E. Pezzot

## INTRODUCTION

### a. Location

The Bluff 5 claim group, comprised of the Bluff 5, Bluff 6 and Lost mineral claims, is located 88km northeast of Kamloops, B.C. in the Kamloops Mining Division. The claim group is within NTS 82M/5W, centered approximately at 51°19'N latitude and 119°56'W longitude. The claims are 4km west of North Barriere Lake, between Slate Creek and Mack Creek. See Figure 1.

The claim group is on a moderate, east facing slope with elevations ranging from 650m at the North Barriere River to 1400m at the western edge of the property. All parts of the claim group are accessible by foot. Some stands of douglas fir and cedar have been commercially logged on the property. Hemlock, birch, spruce and pine are also present.

Temperate climatic conditions prevail with moderate to heavy snowfall between December and March and seasonal rainfall throughout the remainder of the year. Field work can run from mid May to November.

### b. Access

The claims are accessible by 2-wheel drive vehicle following Highway 5, 63km north of Kamloops to the town of Barriere and then 25km northeast of Barriere along paved and gravel roads to North Barriere Lake. Several major logging roads, including the North Barriere River road and the Birk Creek road cut through the claims.

### c. History

The Bluff 5 claim group totals 34 units between the Lost, Bluff 5 and Bluff 6 claims. The Lost claim was staked by D. Rabbitt in 1980 to cover the 'Enargite' showing, a Pb-Zn vein occurrence in metasediments of the Eagle Bay Formation. By an August 1982 agreement, Preussag Canada Limited acquired an option on the Lost claim. The Bluff 5 and Bluff 6 claims were staked in July and August 1982 and are owned 100% by Preussag.

Preussag Canada Limited was the operator for the 1982 program.

d. Present Program

The purpose of the 1982 program was to evaluate volcanogenic massive sulphide potential along a favourable volcanic-sedimentary contact underlying the claim group. The program consisted of prospecting 2.5km of new logging roads, collecting 17 soil samples, 12 rock samples, establishing 6 line km of grid and conducting 5.5 line km of Max-Min II EM survey.

RESULTS AND INTERPRETATION

a. Geology (see Figure 2)

The majority of the property is underlain by sediments of the Mississippian Eagle Bay Formation. Black, variably graphitic and pyritic argillite predominates, with minor interbedded siltstone and sandstone. Regionally the argillite has a northwest strike and shallow 10-30°, southwest dip. Locally, this varies to an east-west strike with moderate south dips. Bedding indicates tops are to the southwest.

Underlying the argillite to the north and northeast is a thick section of buff to yellow weathering pyritic quartz eye sericite schists, also of the Eagle Bay Formation. These are interpreted as originally being rhyolite and dacite tuffs. There are indications of an erosional hiatus along the contact between the metavolcanics and sediments.

Volcanogenic massive sulphides may be associated with the volcanic-sedimentary contact. Several massive pyrite boulders, with low base metal content, were found for 2km along the strike of the contact.

b. Geophysical Surveys

In August 1982 Glen E. White Geophysical Consulting and Services Limited conducted 5.5 line km of Max-Min II electromagnetic surveys on the Bluff 5 claim group. E. Trent Pezzot, geophysicist, supervised the program.

The survey consisted of approximately 5.5 line kilometers with readings taken at 25 meter station intervals. The equipment was used in the maximum coupling mode with a transmitter-receiver separation of 150 meters. Both the 444 hz and 1777 hz frequencies were monitored and recorded. The survey lines were secant chained and the station to station slope values made available to the geophysical survey crew to insure accurate tilt level control across the grids. All field data was corrected for the appropriate coil spacing variations before being presented on the accompanying maps, Figures 3 and 4.

Conductor #1 occurs on line 32+00N near station 134+00W. Type curve comparison indicates the causative feature to be of poor conductivity, dipping  $45^{\circ}$  to  $60^{\circ}$  to grid west, approaching to within 45 meters of the surface and being approximately 150 meters wide. The high amplitude, positive in-phase component values observed on the west ends of lines 38+00N through 30+00N likely indicate the presence of a more resistive geological unit in this area. Conductor #1 could be the reflection of a conductivity increase along the contact.

Conductor #2 extends from line 34+00N to 30+00N and is considered closed at both ends. The causative feature is a zone approximately 125 meters wide which dips some  $30^{\circ}$  to grid west and comes to within 50 meters of the surface on line 34+00N.

Conductor #3 is very weak and extends from line 36+00N to 42+00N and is considered open to the north. Conductor #3 may be a fault displaced continuation of Conductor #2 however it appears to be deeper and of poorer conductivity. The zone broadens to the north and the edges become quite indistinct.

c. Geochemical Survey (See Fig. 5)

Prospecting along new logging roads and along the favourable volcanic-sedimentary contact located several massive pyrite boulders in float. These ranged from 'fist' sized to approximately  $.5m^3$ . No economic sulphides were visible. The boulders varied from fine grained 'earthy', well oxidized pyrite to medium grained, 'cubic' and unoxidized. Twelve rock samples were collected and assayed for Cu, Pb, Zn, Ag and Au. All base and precious metal values were low. The best assay was 1.9% Cu and .5 oz/t Ag from a boulder south of Mack Creek on the Mack Creek road (sample 88751 on Figure 2).

Results are tabulated below:

TABLE I

	<u>Cu</u> <u>%</u>	<u>Pb</u> <u>%</u>	<u>Zn</u> <u>%</u>	<u>Ag</u> <u>Fa</u> <u>oz/t</u>	<u>Au</u> <u>Fa</u> <u>oz/t</u>
88751	1.86	0.11	0.06	0.50	-
88761	1.50	0.13	0.07	0.50	-
88786	0.18	0.03	0.05	0.08	0.003
88787	0.15	0.20	0.08	0.84	0.010
88788	0.36	0.04	0.03	0.18	0.003
88789	0.21	0.07	0.01	0.28	0.003
88790	0.23	0.05	0.02	0.14	0.003
88791	0.21	0.06	0.04	0.18	0.003
88792	0.78	0.10	0.04	0.60	0.010
88793	0.21	0.06	0.03	0.18	0.005
88794	0.35	0.43	0.42	0.56	0.010
88795	0.16	0.03	0.04	0.10	0.005

As a follow-up to the prospecting, 19 soil samples were collected along the favourable contact. Stations corresponded to these on the geophysical grid. Samples of the B soil horizon were collected at 50m intervals, along lines 32 - 38N. They were stored in standard Kraft brown paper sample envelopes and analyzed by Chemex Labs in Vancouver for Cu, Pb, Zn and Ag.

Results are listed below. No soil geochem anomalies were delineated as all samples were within background levels.

15

TABLE II

	<u>Cu</u> <u>ppm</u>	<u>Pb</u> <u>ppm</u>	<u>Zn</u> <u>ppm</u>	<u>Ag</u> <u>ppm</u>
L32N 128+50W	9	8	171	0.4
L32N 129+00W	21	8	160	0.1
L34N 126+00W	34	12	102	0.6
L34N 126+50W	17	9	106	0.2
L34N 127+00W	12	8	127	0.8
L34N 127+50W	17	13	84	0.6
L34N 128+00W	1	4	65	0.6
L34N 128+50W	6	5	67	0.4
L34N 129+00W	8	10	129	0.2
L36N 127+00W	26	5	81	0.1
L36N 128+00W	22	11	101	0.2
L36N 128+50W	28	7	91	0.1
L36N 129+00W	34	12	92	0.1
L36N 129+50W	28	20	97	0.3
L36N 130+00W	36	13	112	0.2
L38N 130+00W	14	9	101	0.7

d. Summary

A limited geochemical and geophysical program on the claims did not locate significant massive sulphide mineralization. The source of several massive pyrite boulders along the favourable acid volcanic-sedimentary contact remains unexplained.

FD

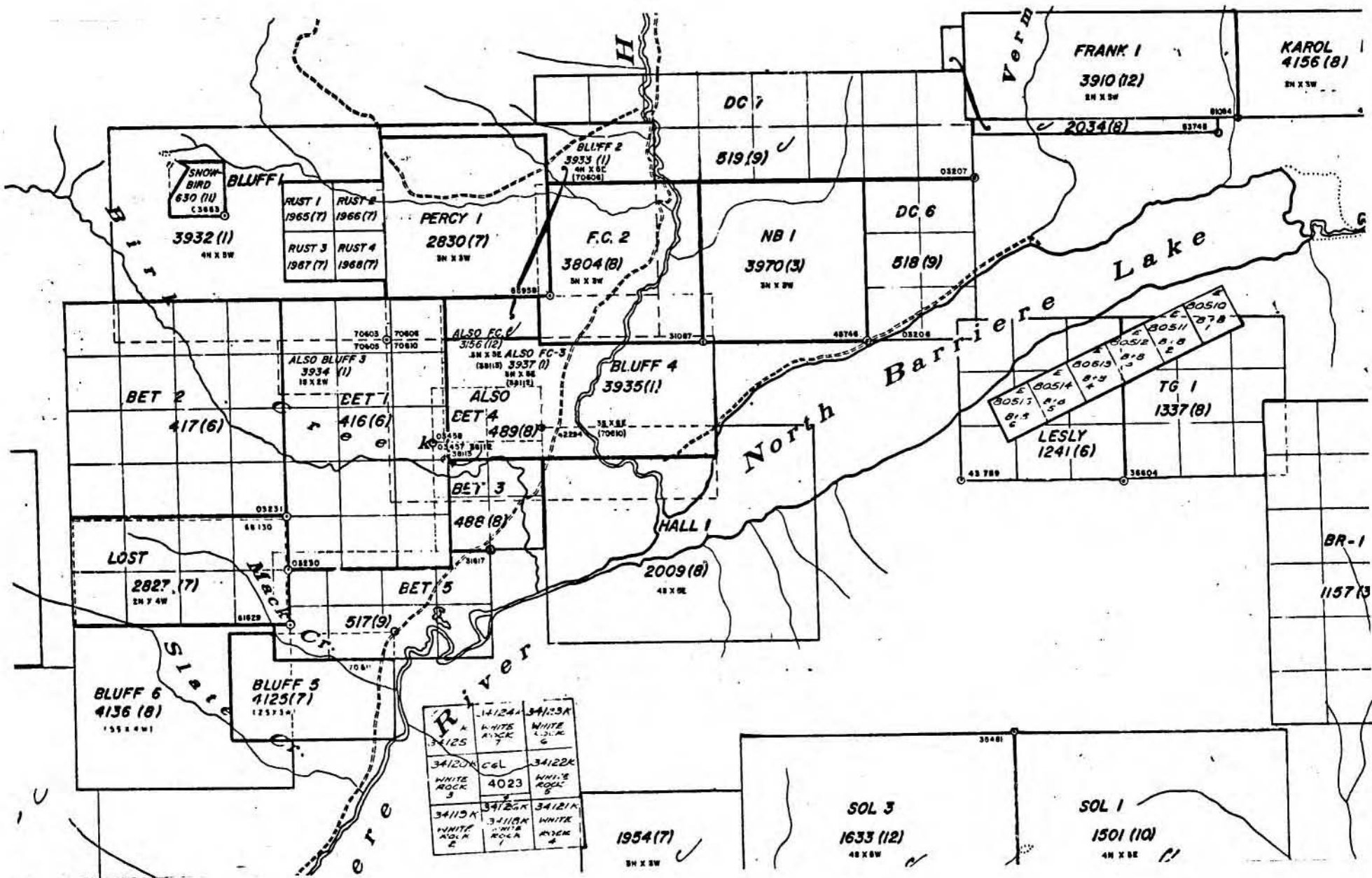


FIG. 1 Location of the Bluff 5, Bluff 6 and Lost Mineral Claims

NTS 82M/5W  
Scale 1:50,000



APPENDIX I

ITEMIZED COST STATEMENT

1. Wages		
F. Daley	14 days August 1-October 20/82 @ \$250/day	\$3,500.00
K. Baldry	14 days August 1-October 20/82 @ \$125/day	1,750.00
2. Food		
Groceries	} \$15/day/person for 14 days	420.00
Meals		
3. Accommodation		
Monte Carlo Motel, Barriere		
\$180/wk for 2 weeks		360.00
4. Transportation		
Gas		84.00
Lease 1050km @ .10/km		105.00
5. Linecutting		
Hi-Tec Management, Vancouver		
6 line km @ \$404/line km		2,425.00
6. Max-Min II EM Survey		
G. White Geophysical Consulting Ltd., Vancouver		
5.5 line km @ \$386/km		2,125.00
7. Assaying		
Chemex Labs, Vancouver		
12 rock samples (Cu, Pb, Zn, Ag, Au) \$28.75/sample		345.00
17 soil samples (Cu, Pb, Zn, Ag) \$4.75/sample		81.00
8. Report Preparation		
F. Daley 2 days @ \$250/day		500.00
Drafting		250.00
		<hr/>
	TOTAL	\$11,945.00

FD

APPENDIX II

AUTHOR'S QUALIFICATIONS

I, Fred S. Daley, hereby declare that;

- i. I obtained a B.Sc. degree in Geological Sciences from the University of British Columbia in 1975,
- ii. I have been continuously employed in mineral exploration since that time,
- iii. I have been employed as an Exploration Geologist with Preussag Canada Limited since January 1981,
- iv. I supervised and personally participated in the surveys described in this report,
- v. I am a member of the C.I.M.M. and the Cordilleran Section of the G.A.C.

STATEMENT OF QUALIFICATIONS

NAME: PEZZOT, E. Trent

PROFESSION: Geophysicist - Geologist

EDUCATION: University of British Columbia -  
B.Sc. - Honors Geophysics and Geology

PROFESSIONAL ASSOCIATIONS: Society of Exploration Geophysicists

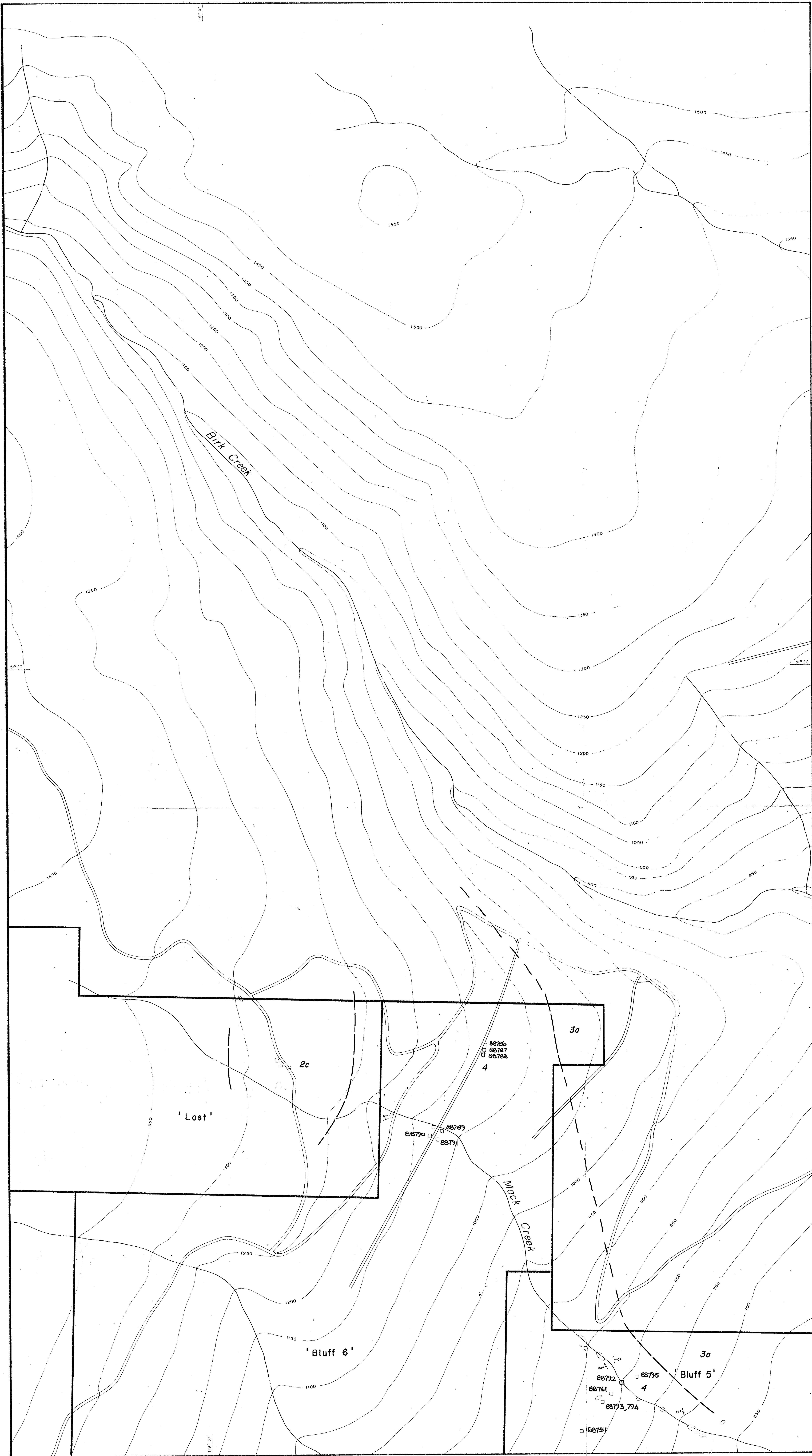
EXPERIENCE: Three years undergraduate work in geology - Geological Survey of Canada, consultants.

Three years Petroleum Geophysicist, Senior Grade, Amoco Canada Petroleum Co. Ltd.

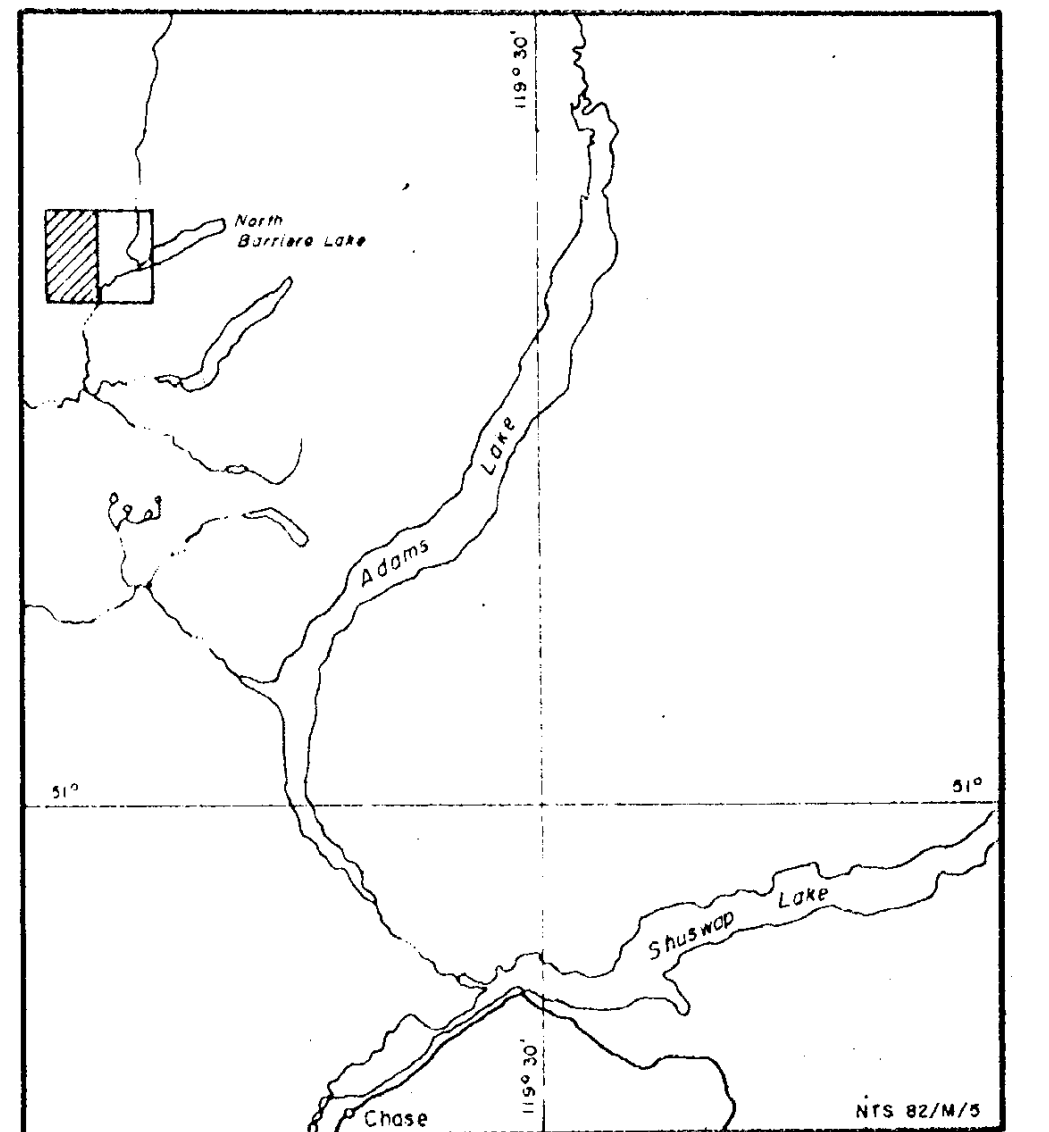
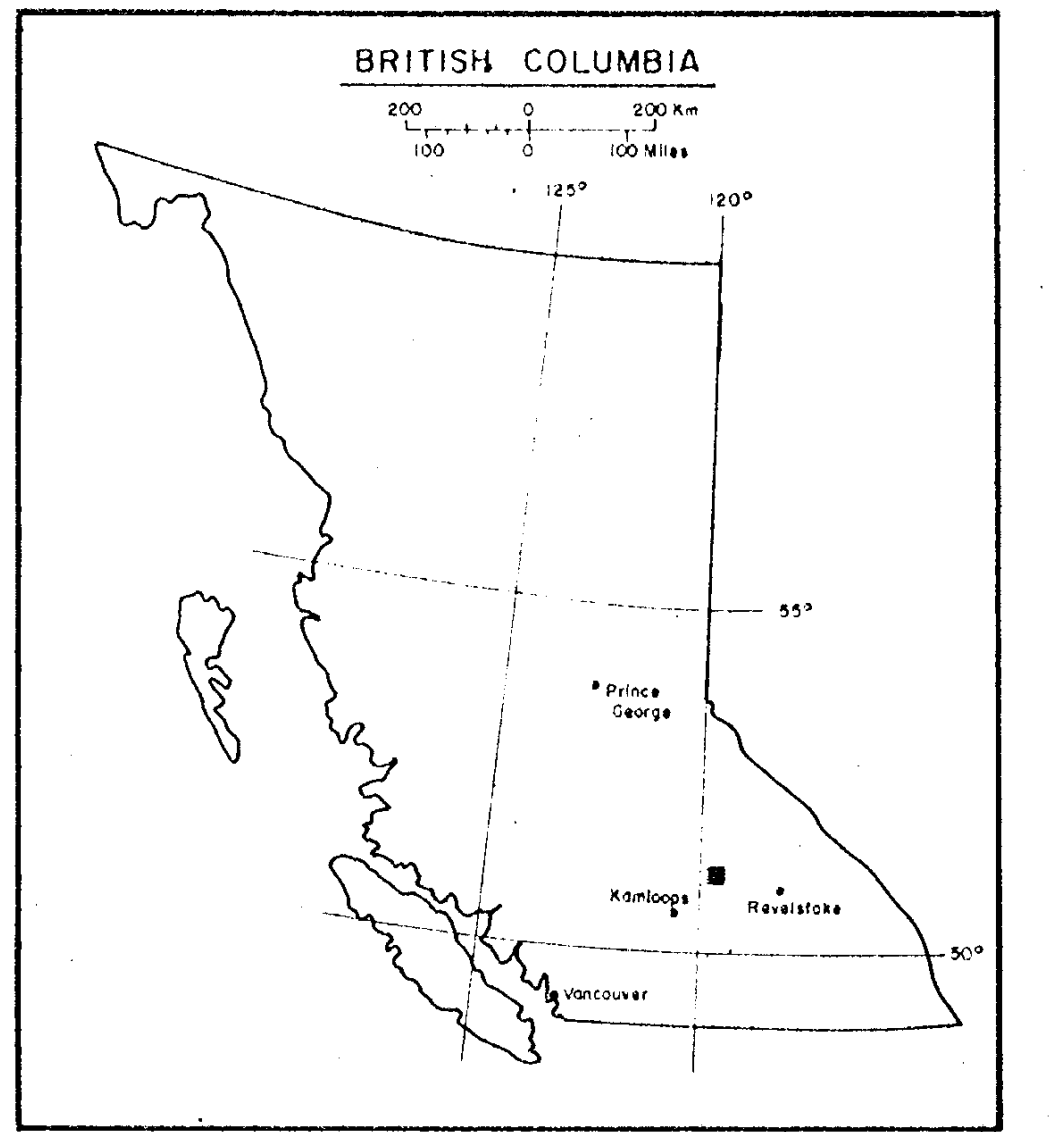
Two years consulting geophysicist, Consulting geologist - B.C., Alberta, Saskatchewan, N.W.T., Yukon, western U.S.A.

Three years geophysicist with Glen E. White Geophysical Consulting & Services Ltd.

10



Contour Intervals of 50 metres



INDEX MAP

LEGEND

- 4 Argillite; block, varies from argillite to phyllite. Variably graphitic, pyrite from 0-2% as medium to coarse cubic disseminations. Locally cut by white quartz veins.
- DEVONIAN-MISSISS. Eagle Bay Form. 3a Rhyolite > Dacite; buff to yellow weathering pyritic quartz eye sericite schist (rhyolite) to silver grey and brown weathering sericite schist (dacite)
- 2c quartz porphyry dacite
- Outcrop
- ∧ Fallation
- Massive sulphide float (pyrite +/- pyrrothite)

Part 1 of 2

GEOLOGICAL BRANCH ASSESSMENT REPORT

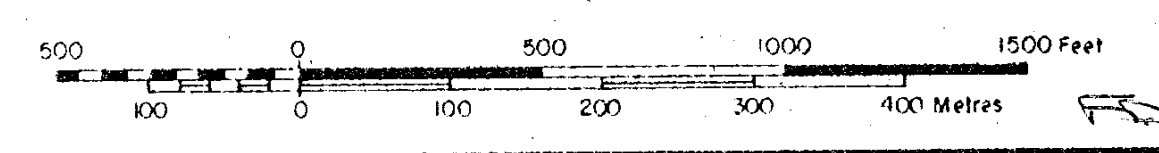
11,125

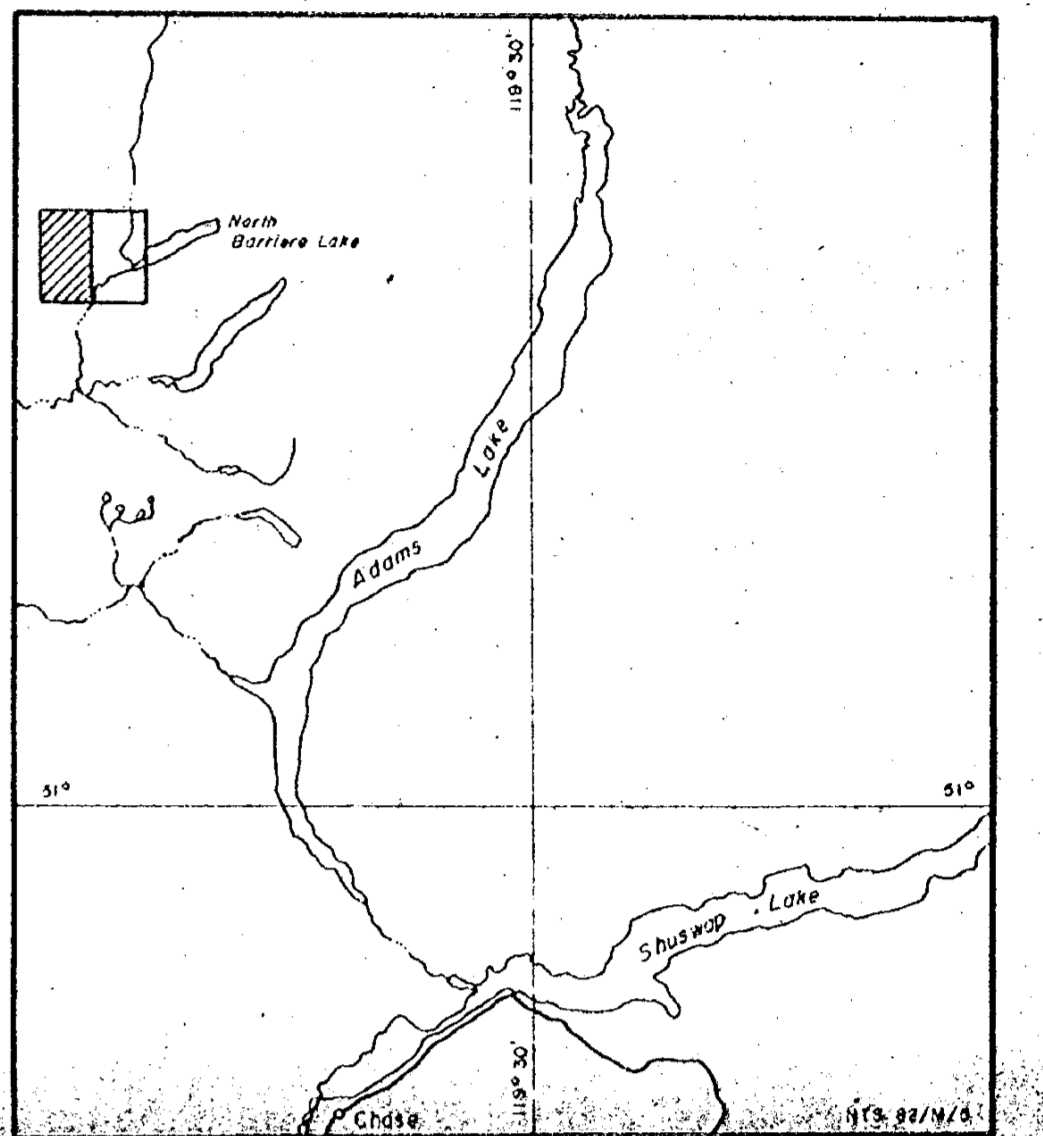
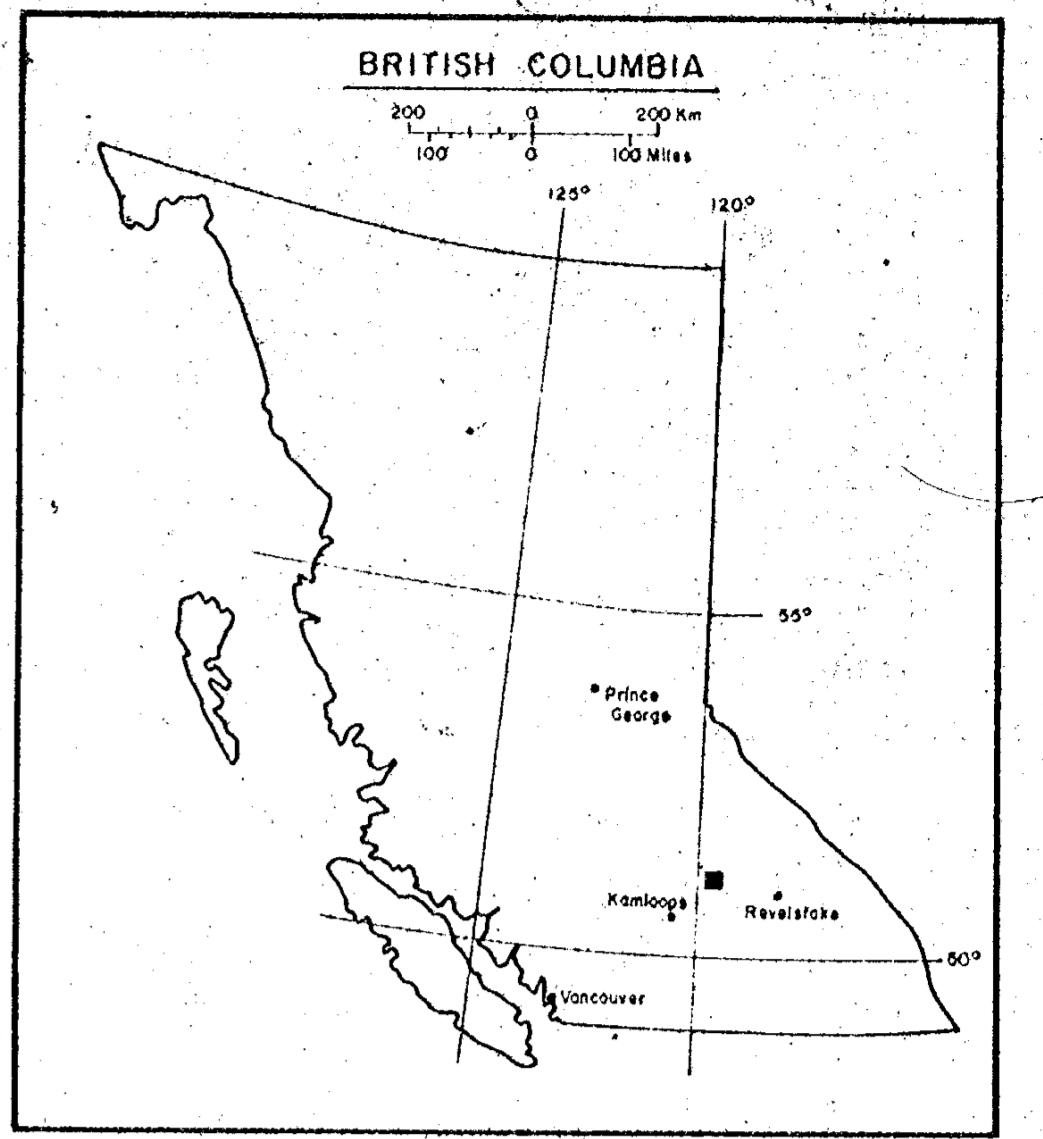
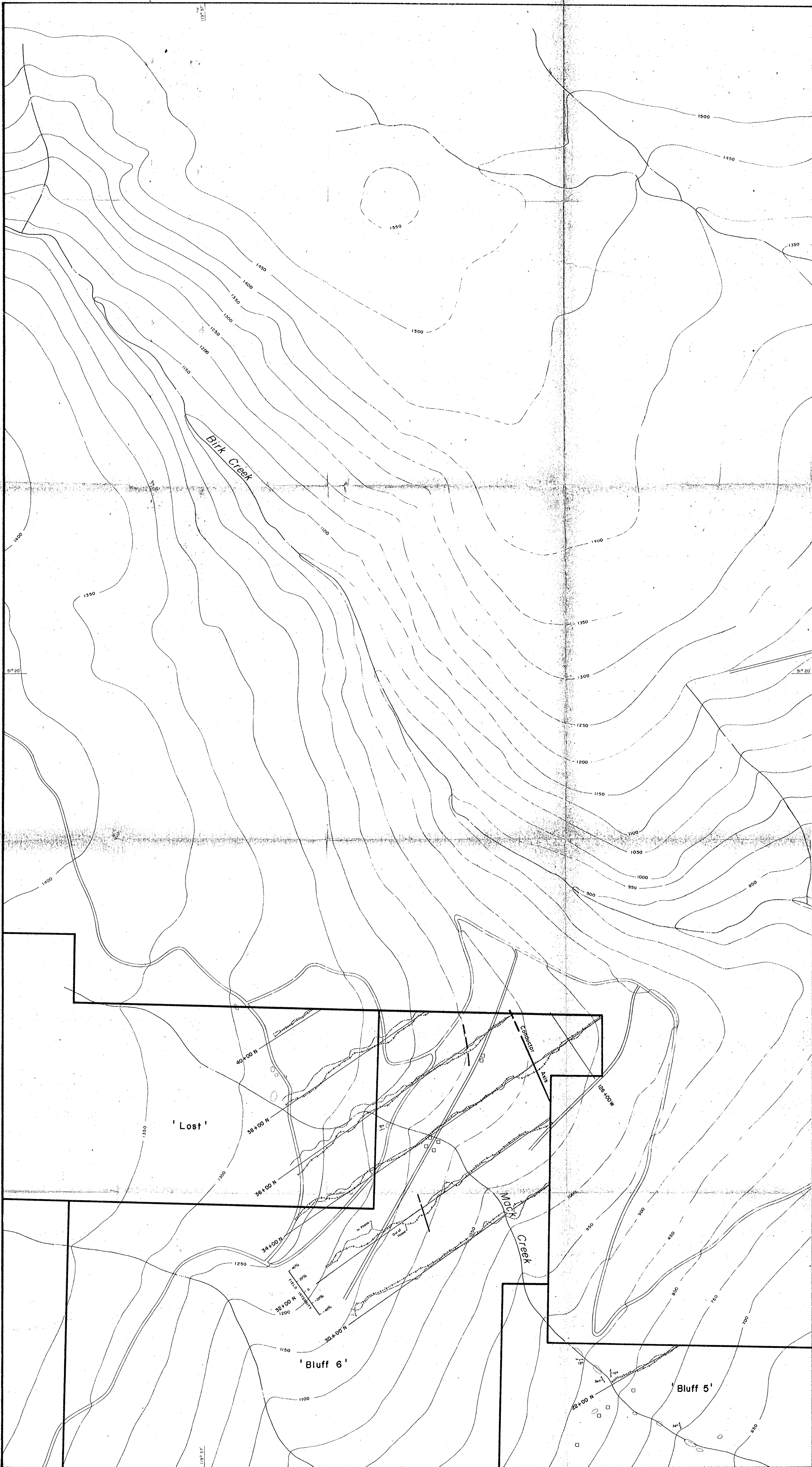
PREUSSAG

BARRIERE PROJECT-B.C.

Geology

FIG 2





**LEGEND**

- Outcrop
- Massive sulphide float (pyrite +/- pyrrhotite)
- ~ Foliation

*part 1 of 2*

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

**11,125**

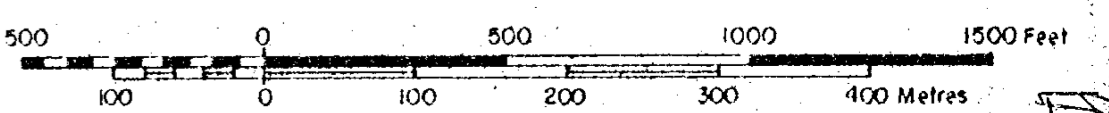
**PREUSSAG**

BARRIERE PROJECT - BC

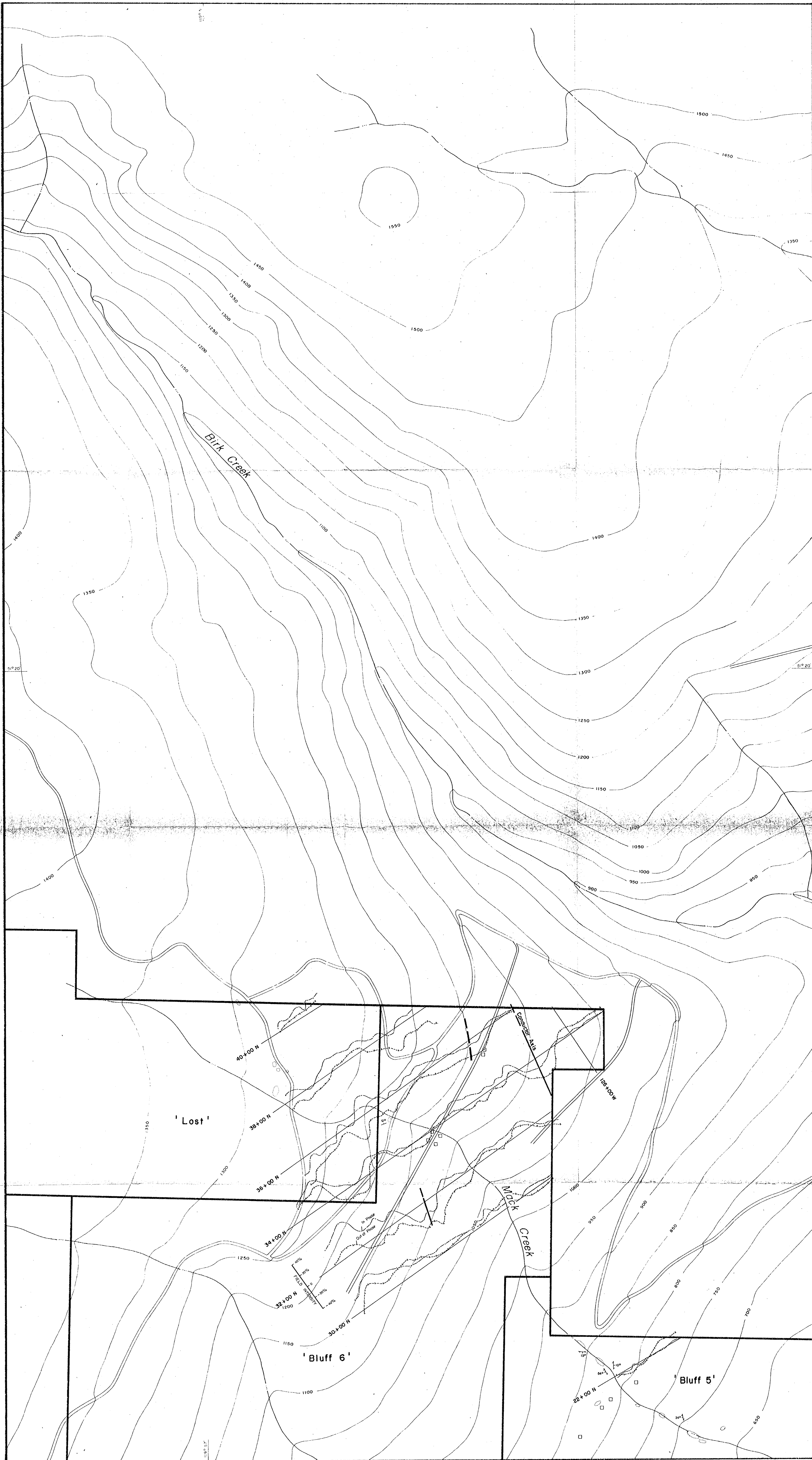
Max Min II Survey

Separation - 150m Frequency - 444 Hz

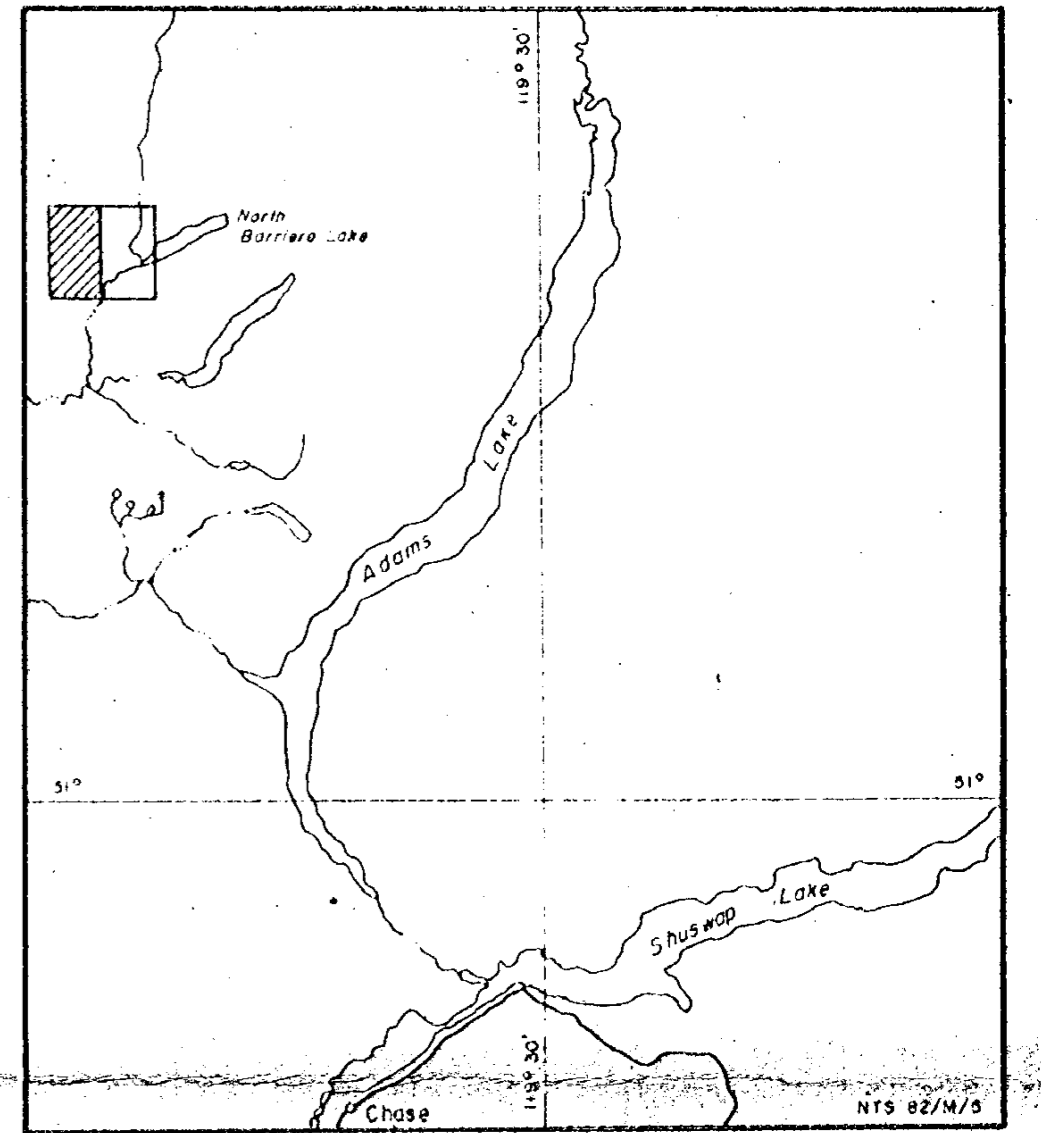
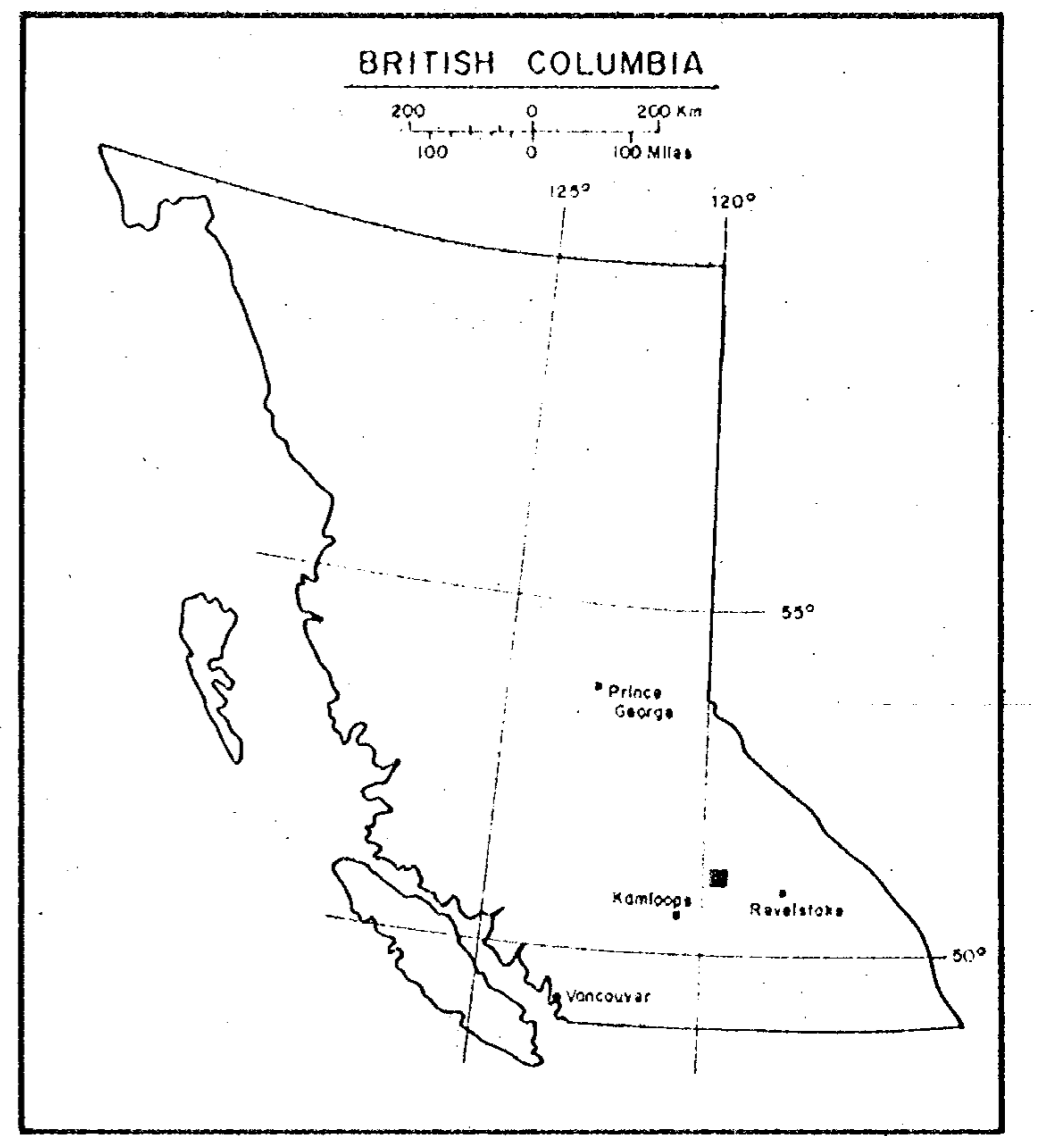
FIG 3



Contour Intervals of 50 metres



Contour intervals of 50 metres



**LEGEND**

- Outcrop
- Massive sulphide float (pyrite +/- pyrrhotite)
- ~ Foliation

part 1 of 2

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

11,125

PREUSSAG

BARRIERE PROJECT - BC

Max Min II Survey

Separation - 150m Frequency - 1777Hz

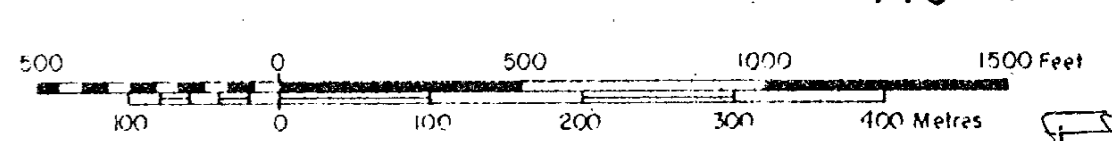
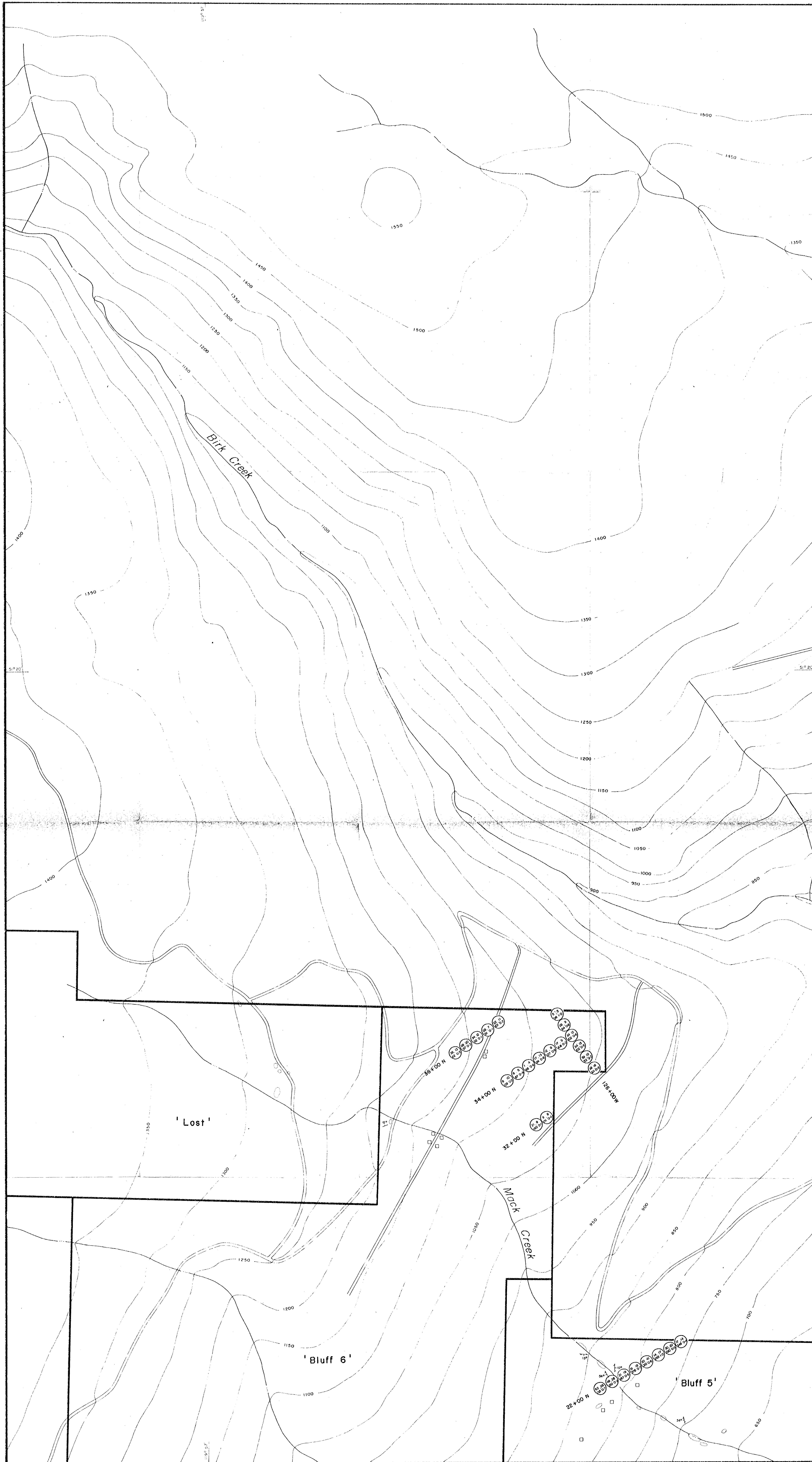
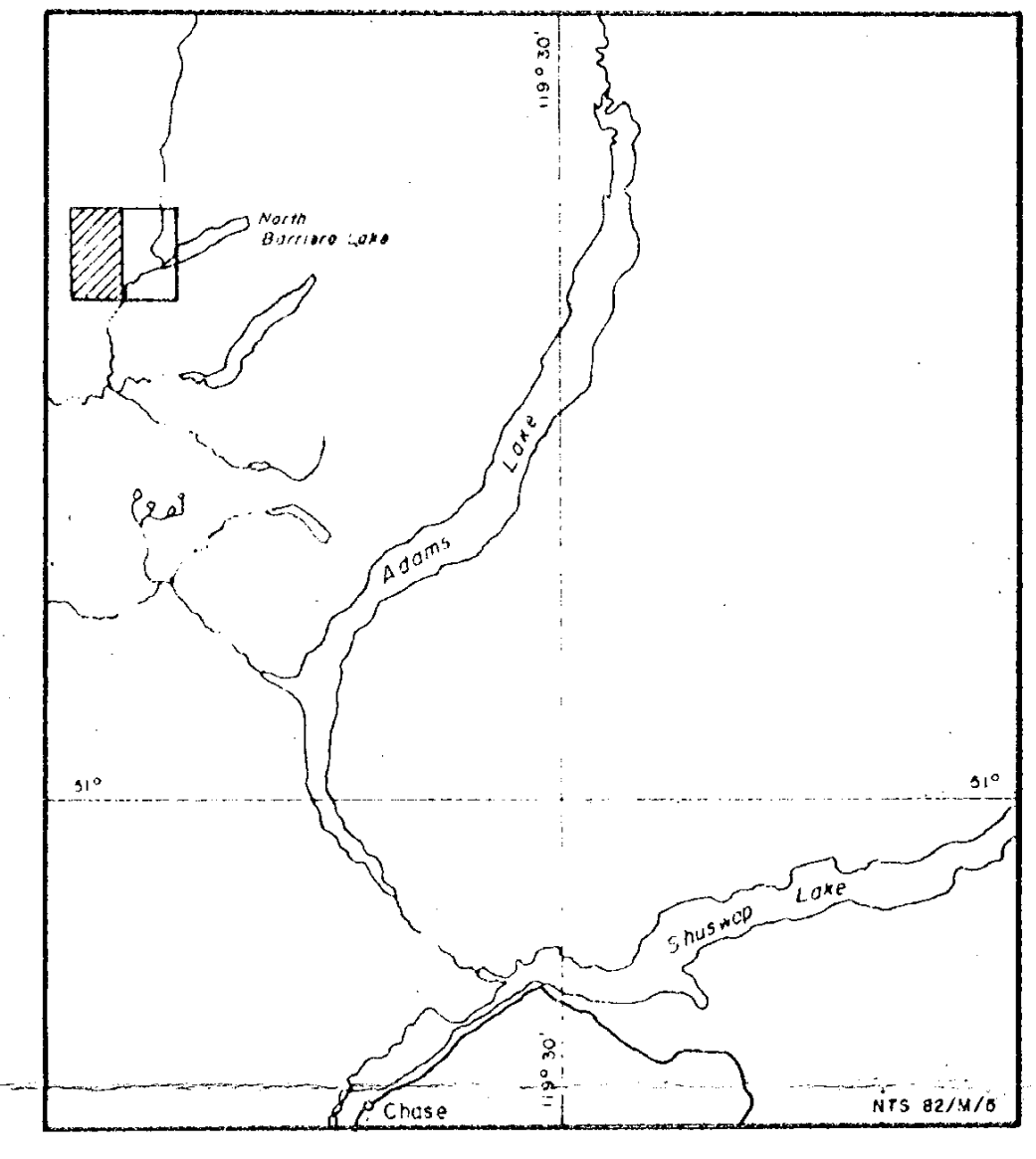
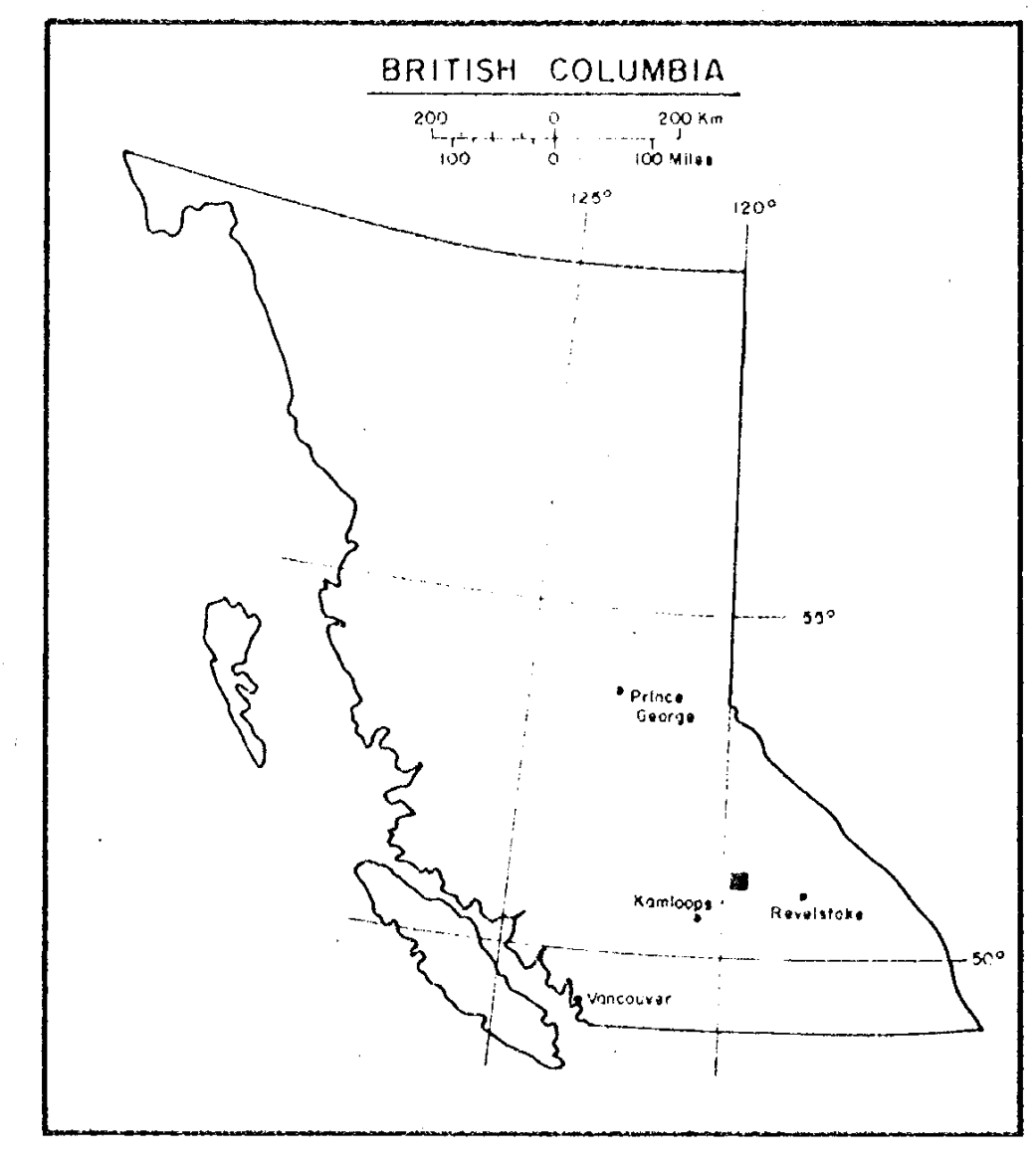


FIG 4



Contour Intervals of 50 metres



**LEGEND**

- Outcrop
- Massive sulphide float (pyrite +/- pyrrhotite)
- - - Foliation
- ⊙ Geochemical soil sample values in ppm

Part 1 of 2

GEOLOGICAL BRANCH  
 ASSESSMENT REPORT

11,125

PREUSSAG

BARRIERE PROJECT - BC.

Geochemical Soil Survey

FIG 5

