

4338

92H/15W

GEOPHYSICAL REPORT
of the
GROUND MAGNETOMETER SURVEY
on the
LOC MINERAL CLAIMS
SELISH MOUNTAIN AREA, B. C.
NICOLA MINING DIVISION

Latitude: 49°49'N
Longitude: 120°48'W
N.T.S. 92H/15

on behalf of

BELCARRA EXPLORATIONS LTD. (N.P.L.)

Claim Name
LOC 1 - 4 incl.

Record Number
~~50736 - 50739 incl.~~
33239 - 33242

Expiry Date
January 5, 1974

By:

Department of Mines and Petroleum Resources	
ASSESSMENT REPORT	
NO. 4338	MAP

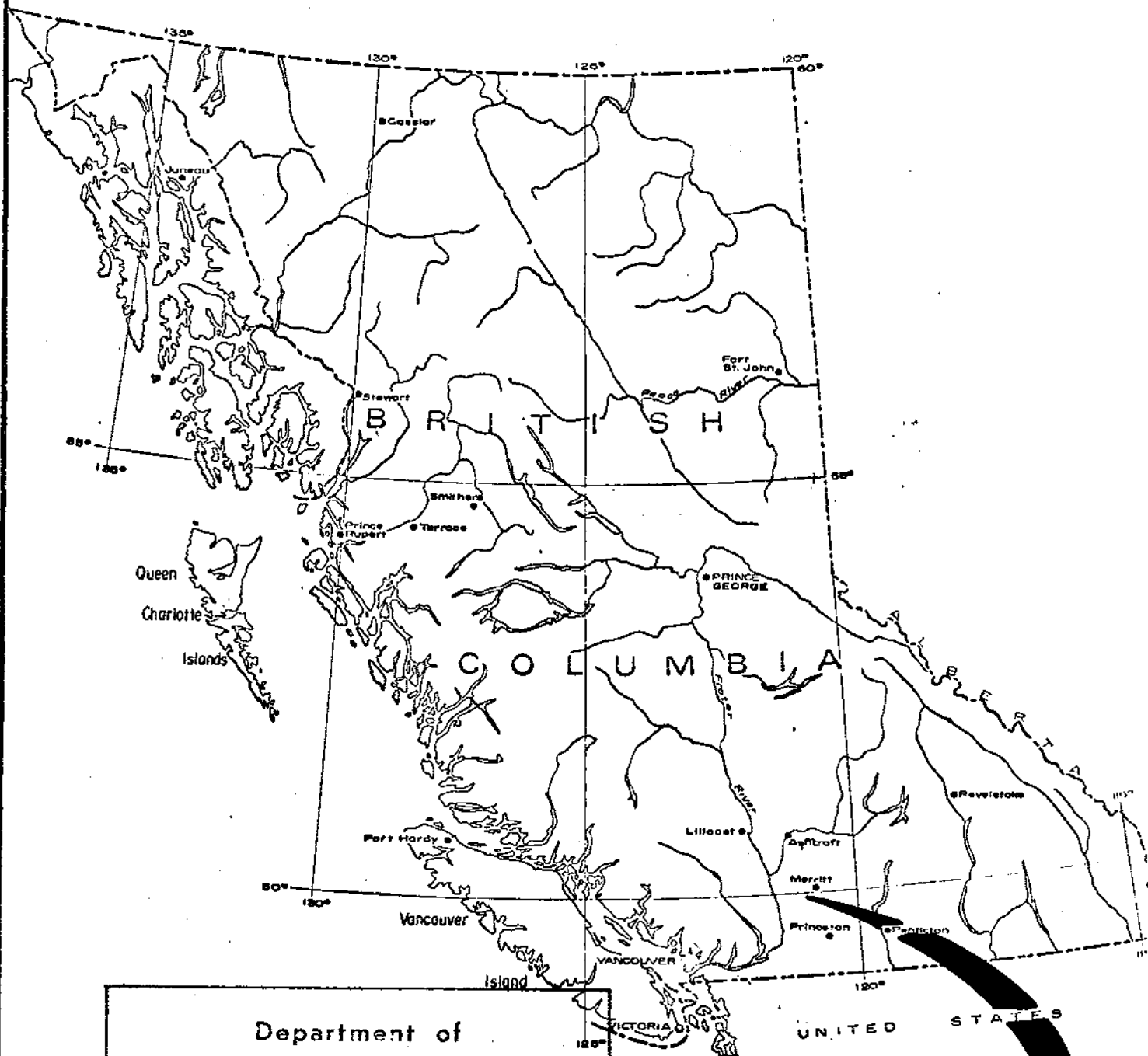
P. P. NIELSEN, B.Sc., GEOPHYSICIST
G. C. GUTRATH, B.Sc., P.Eng., GEOLOGIST

ATLED EXPLORATION MANAGEMENT LTD.

May, 1973

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Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. **4338** MAP #1

UNITED STATES
LOC GROUP

BELCARRA EXPLORATIONS LTD.

LOCATION MAP

INTRODUCTION

During the period from Jan 1 to Jan 5, 1973 a grid was installed and from January 9 to January 11, 1973 a ground magnetometer survey program was conducted on the LOC claims near Selish Mountain 12 miles southwest of Merrit, B. C.

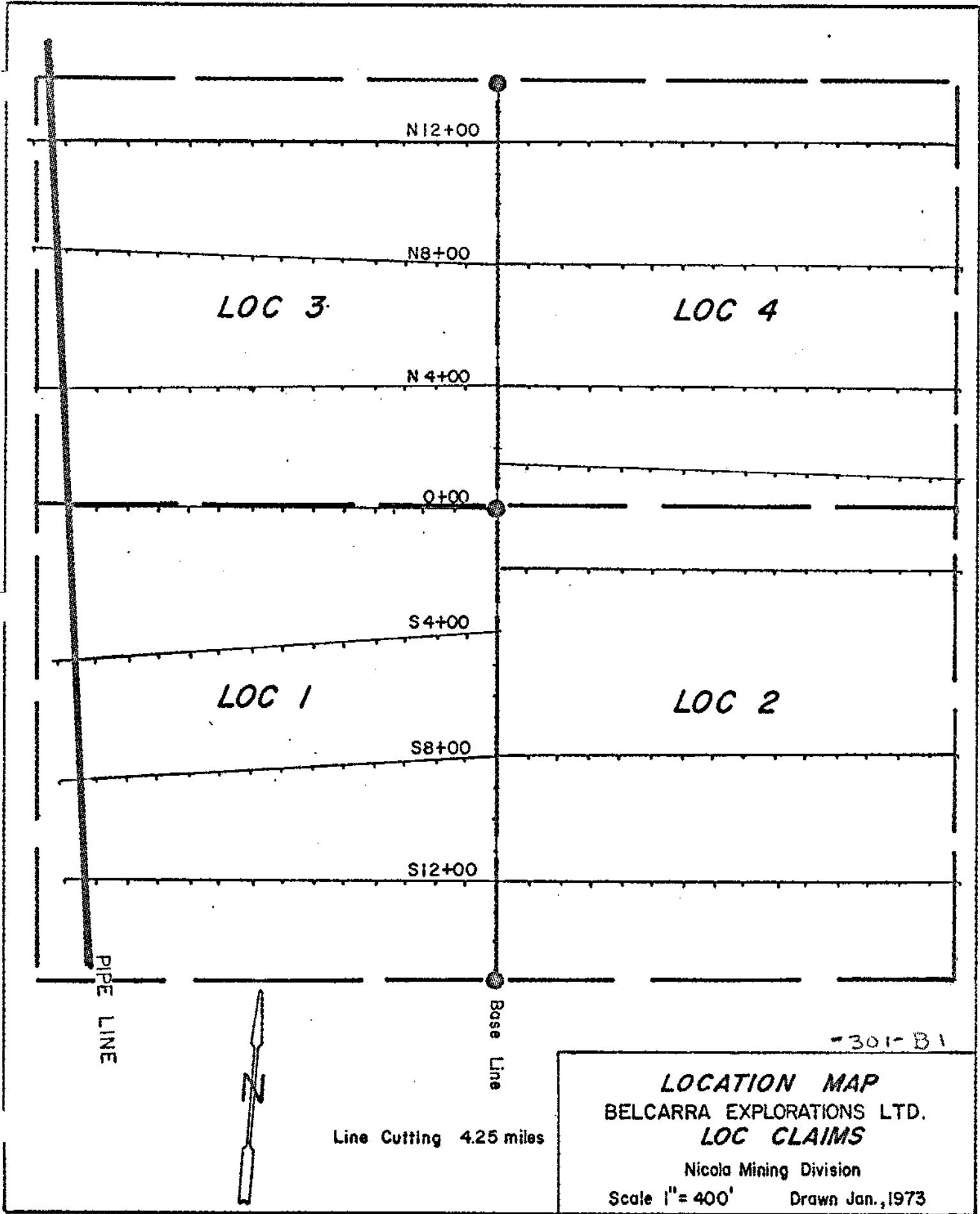
The work was executed by Atled Exploration Management on behalf of Belcarra Explorations Ltd. (N.P.L.) under adverse winter conditions.

The purpose of the survey was to assist in the geological mapping of the property in the search for rock-types and/or structures favourable for the deposition of copper-molybdenum mineralization.

A total of 4.25 line-miles of survey was carried out over an equivalent amount of grid-lines.

LOCATION AND ACCESS

The claims are located about 12 miles southwest of Merrit, B. C. along the Coldwater River gravelled road to a point east of the Paul's basin Indian Reserve #2. A short hike of about 1/4 mile east of the road places one on the property. The LOC #4 claim is crossed by Salem Creek



LOC 3

LOC 4

LOC 1

LOC 2

N12+00

N8+00

N4+00

0+00

S4+00

S8+00

S12+00

PIPE LINE

Base Line



Line Cutting 4.25 miles

301-B1

LOCATION MAP
 BELCARRA EXPLORATIONS LTD.
LOC CLAIMS
 Nicola Mining Division
 Scale 1" = 400' Drawn Jan., 1973

which drains westerly from Sellish Mountain. Access during the survey was by snowshoes.

TOPOGRAPHY AND GROUND CONDITIONS

Elevations vary from about 2,550 feet on the west to 3,300 feet A.S.L. at the southeast corner of the claim groups.

Vegetation consists of small spruce and pine stands over most of the grid and some underbrush was encountered along Salem Creek.

Snow depth was approximately one foot and temperatures were -20°F.

GEOLOGY

(after G.S.C. Map 888A "Princeton"
by H.M.A.Rice, 1944)

The property is mapped as being underlain by the Upper triassic Nicola Group volcanics, mainly andesites, intercalated argillites, limestones, tuffs and minor chlorite and sericite schists.

To the south and west, younger coast range rocks mainly granite and granodiorite are mapped intruding these rocks suggesting that the Nicola sequence could be limited in thickness on or near the claims.

The Princeton and Nicola map areas are known to be excellent areas for the deposition of copper and molybdenum bodies of economical importance

and include producers such as Craigmont Mines, north of Merrit and the Similkamean Mine at Copper Mountain as well as excellent prospects including the Adonis property on Summers Creek and others in the Aspen Grove area 12 miles to the east.

LINECUTTING

A total of 4.25 line miles of grid was installed using a "topofil" chain, flagging and blazing.

A baseline 2,800 feet long was installed on a true north bearing through the center of the claim group and seven cross-lines 2,800 feet long and spaced 400 feet apart were then installed. Stations were flagged and marked at an interval of 100 feet.

CLAIMS

The grid and magnetometer survey covered the complete group of four claims described below:

<u>Claim Name</u>	<u>Record Number</u>	<u>Expiry Date</u>
LOC 1 - 4 incl.	50736 - 50739 incl.	January 5, 1974

THE GROUND MAGNETOMETER SURVEY

A. Comment

A total of 4.25 line miles (including the baseline) was magnetically surveyed over lines spaced 400 feet apart using a station interval of 100 feet.

B. Method

The instrument used was a vertical force fluxgate magnetometer which is hand held and levelled using a bubble-level on the face of the instrument.

The magnetometer was held by the aid of a harness to maintain constant height above ground and constant distance from the operator. Readings were taken facing one direction using the most sensitive scale possible.

Loop times of less than 1 hour were encountered, resulting in good control of the diurnal corrections. A nearby base-station was read at the beginning and end of each day for the day-to-day correlation and to monitor any possible magnetic storms. Additional control was obtained from the baseline readings.

C. Instrumentation

A Scintrex MF-1 Model Fluxgate magnetometer was used. This unit measures the vertical force variations of the earth's magnetic field, displayed in gammas, on a meter having five ranges for a total of $\pm 100,000$ gammas. The MF-1 is very light, is fully portable, has excellent temperature

stability, has negligible orientation error and is of rugged construction.

D. Data Compilation and Presentation

The readings and time of readings were recorded in a metal-free field book and transferred to a planimetric map for contouring after the necessary diurnal and day-to-day corrections were made.

The scale of the values-contour map is 1" = 200 feet. A 250 gamma contour interval has been used. Areas of relative high magnetic susceptibility (i.e. above 1,500 gammas) are stippled and lows less than 500 gammas are "ticked".

E. Discussion of Results

The values - contour map indicates a range of relative magnetic susceptibility from 350 gammas at Line 0; Stn. 2E to 2,250 gammas at Line 4S Stn. 4E for a total magnetic relief of 1,900 gammas.

Generally the contour map exhibits a north-south elongated texture thought to be primarily due to the regional strike of the volcanic rocks mapped by the G.S.C.

No geological contacts are seen in the magnetic data although three faults are postulated.

A moderate dipolar anomaly centered at Line 0, Stn. 2+50E striking NNE is the most interesting feature of the survey results. It lies along a strong fault and could be caused by magnetite or pyrrhotite mineralization of further interest.

This fault is intersected by two subtle lineaments thought to be cross-faults and expressed by magnetic contour flexures striking ENE crossing the main interpreted fault to the north and south of the above mentioned dipolar anomaly.

The only other feature of interest is the 1,500 gamma contour on the LOC 1 claim which is open to the south. As data is incomplete no interpretation is presently given although it does not appear to be at all similar to the dipolar anomaly to the north.

CONCLUSIONS AND RECOMMENDATIONS

The magnetometer survey has delineated a north striking fault which could contain zones of copper bearing magnetite or pyrrhotite which require further investigation.

It is recommended that further claims be acquired to the south of the property along the projected fault strike.

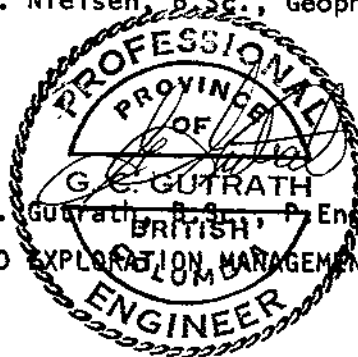
Geochemical soil sampling for copper should be carried out on these new claims as well as over the present grid east of the baseline and the magnetometer survey should be extended to the south to close off the existing partial anomaly.

Trenching and/or drilling would be contingent upon the results of this work.

Respectfully submitted,



P. P. Nielsen, B.Sc., Geophysicist



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

STATEMENT OF AUTHOR'S QUALIFICATIONS

I DO HEREBY STATE THAT:

1. I am the author of this report.
2. I have been actively and responsibly involved in mining exploration using airborne, ground and computer applied geophysics in Western Canada and the United States for the past nine years.
3. I graduated with a B.Sc., degree in Geophysics from the University of British Columbia in 1969.
4. I am presently Manager, Geophysical Division, Atled Exploration Management Ltd., at #420 - 475 Howe Street, Vancouver, B. C.
5. I am a member of the Society of Exploration Geophysicists, the Canadian Institute of Mining and Metallurgy and the B. C. Geophysical Society.

Signed

P. P. Nielsen

P. P. Nielsen

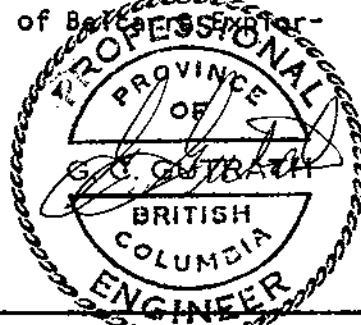
Date

May 15 / 73

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 1, B. C.
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 twelve 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 Bay Exploration 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, 1973.

PERSONNEL

P. P. Nielsen - Supervisor and Geophysicist

J. P. Henry - Magnetometer Operator and Linecutter

COSTS

1. Grid Installation (Linecutting)

4.25 line miles @ \$117.69/line mile..... \$ 500.20

Includes:

(a) Linecutter - 5 days @ \$55/day	\$ 275.00
(b) Food and accommodation	51.40
(c) Transportation (Local)	141.80
(d) Materials	32.00
	<hr/>
	\$ 500.20
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2. Magnetometer Survey

4.25 line miles @ \$173.16/mile..... \$ 735.92

Includes:

(a) Magnetometer Operator - 3 days @ \$55/day	\$ 165.00
(b) Food and accommodation	30.84
(c) Transportation (Local)	85.08
(d) Magnetometer Rental 3 days @ \$10/day	30.00
(e) Mob-Demob.	125.00
(f) Report	300.00
	<hr/>
	\$ 735.92
	<hr/> <hr/>

TOTAL COST OF PROGRAM

\$ 1,236.12

APPENDICES

DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA.
To Wit:

In the Matter of COSTS INCURRED IN EXECUTING A GROUND
MAGNETOMETER SURVEY ON THE LOC #1 - 4 CLAIMS, COLD-
WATER RIVER - SALEM CREEK AREA, NICOLA M.D.

I, PHILIP P. NIELSEN

of 420 - 475 HOWE STREET, VANCOUVER, B. C.

in the Province of British Columbia, do solemnly declare that the following costs apply:

MAGNETOMETER SURVEY (January 9, 1973)

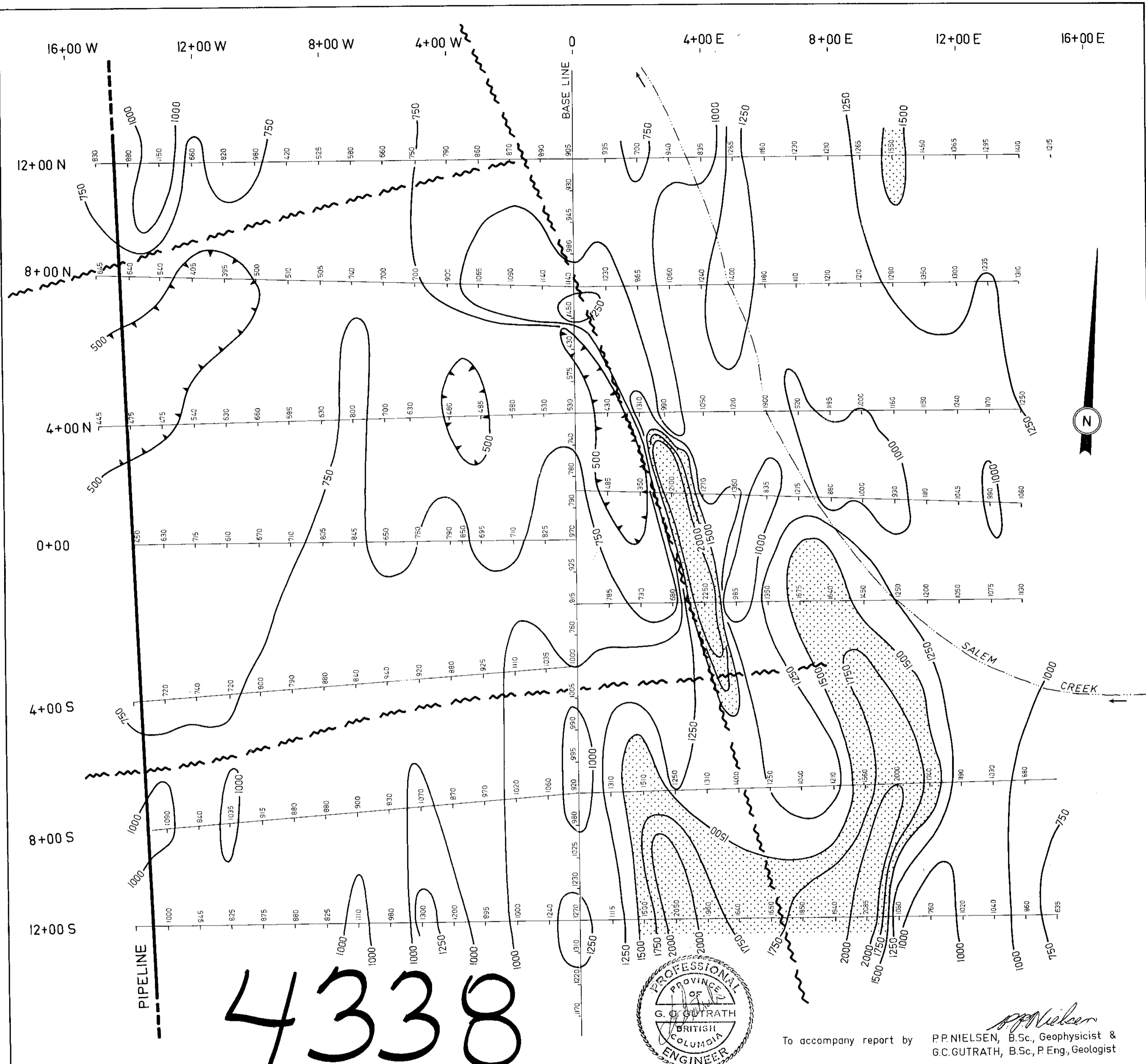
(a)	Magnetometer Operator and Instrument Rental 3 days @ \$65/day.....	\$ 195.00
(b)	Food and Accommodation.....	30.84
(c)	Transportation.....	210.08
(d)	Report.....	300.00
		<u>\$ 735.92</u>

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City
of Vancouver, in the
Province of British Columbia, this 22nd
day of May 1973, A.D.

P.P. Nielsen


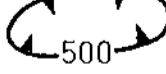

[Signature]
A Commissioner for taking Affidavits for British Columbia or
A Notary Public in and for the Province of British Columbia. R.



4338

M-3

LEGEND

-  MAG. "HIGH"
-  MAG. "LOW"
-  INTERPRETED FAULT

CONTOUR INTERVAL = 250 GAMMAS

INSTRUMENT USED:
SHARPE MF-1
FLUXGATE MAGNETOMETER



To accompany report by P.P. NIELSEN, B.Sc., Geophysicist & G.C. GUTRATH, B.Sc., P. Eng., Geologist

BELCARRA EXPLORATIONS LTD. (N.P.L.)

LOC CLAIMS
SELISH MTN. AREA, B.C.

**GROUND MAGNETOMETER SURVEY
VALUES & CONTOUR MAP**

NICOLA M.D.

NTS. 92 H/15

ATLED EXPLORATION MANAGEMENT LTD.
VANCOUVER B.C.

DATE: MAY 1973

DRAWN BY: NCL

