

87-273-15874

Geophysical Report

on the

BAY GROUP

Located at Coordinates: 55 deg. 35 min. N, 125 deg. 55 min. W

Omineca Mining Division, B.C.

by: Gordon Maxwell

FILMED

NORANDA EXPLORATION COMPANY, LIMITED  
(NO PERSONAL LIABILITY)

**GEOLOGICAL BRANCH**  
N.T.S. 93 N/13 **ASSESSMENT REPORT**

June, 1987

15,874

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SUMMARY:

The Bay Group of claims are situated approximately 12 kilometers north/northeast of the village of Takla Landing in central B.C. The property is underlain by volcanic stratigraphy of the Sitlika Assemblage which is Upper Triassic-Lower Jurassic in age.

In September of 1984, 2.85 kilometers of SE-88 and Magnetometer surveys were run over the Bay claim to test an airborne EM anomaly under the supervision of R. Swire and G. Maxwell.

During June of 198<sup>6</sup>~~5~~, 3.35 kilometers of SE88 and Mag survey were conducted to the north of the existing grid. A single 250 meter long moderately conductive anomaly was outlined with a coincident mag high and low.

INTRODUCTION:

The Bay Group of claims were staked by Noranda personnel to cover airborne EM anomalies detected in June 1985. The ground was acquired to cover previously outlined anomalous soil geochemical results encountered by Shell Canada Resources in 1980. The geophysical work described within was performed by Norex crews in September of 1985 and June of 1986.

LOCATION AND ACCESS:

The property is situated in a subalpine area approximately 12 kilometers north/northeast of the village of Takla Landing. Access to the area is via helicopter or the property can be reached on foot from a logging road which is 4 kilometers from the center of the claim.

CLAIM STATISTICS:

<u>Claim Name</u>	<u># Units</u>	<u>Record #</u>	<u>Record Date</u>
BAY 1	9	7028	May 16/85
RDD	20	7356	Oct 9/85
KEVIN	20	7555	Apr 11/86

REGIONAL GEOLOGY:

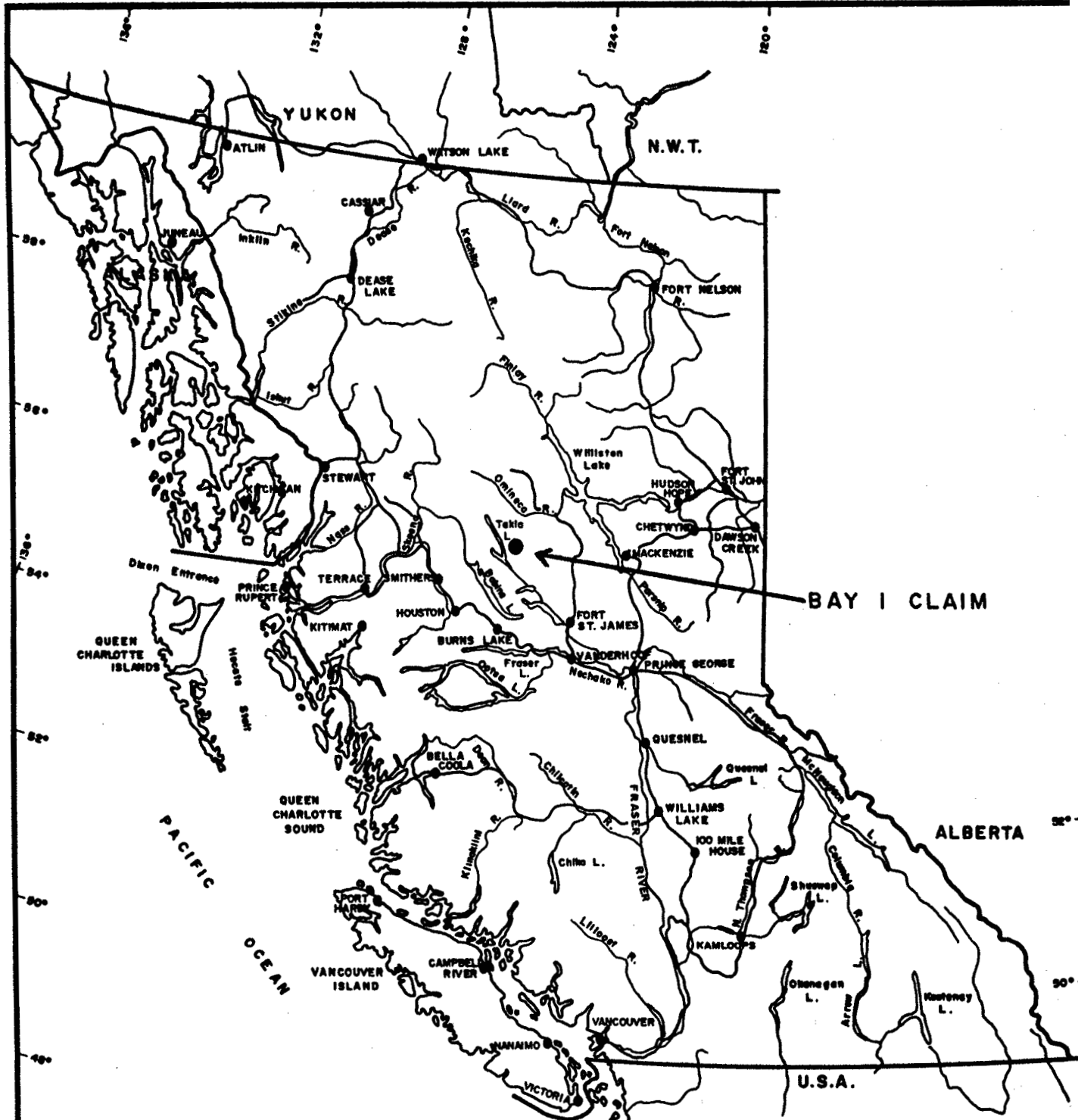
The area is underlain by Upper Triassic to Lower Jurassic volcanic and sedimentary rocks of the Sitlika Assemblage which have been regionally metamorphosed to greenschist facies (Paterson, 1974). This assemblage is composed mainly of well foliated andesitic to rhyolitic pyroclastics and flows with lesser amounts of greywacke, siltstone and phyllite. The Sitlika volcanics are characterized by local development of sericite, quartz-sericite and chlorite schists. The Takla Fault separates the Sitlika rocks from the Tertiary Sustat Group to the west. The Permian Cache Creek rocks to the east are separated from the Sitlika by the Vital Fault and a serpentinite melange. The Cache Creek Group is bounded to the east by the Pinchi Fault and the Jurassic Hogem Batholith (Figure 3).

PREVIOUS WORK:

1977: McIntyre Mines Ltd. -- helicopter-borne EM and Mag survey over Takla area. Geologic mapping, soil geochemistry, linecutting and vertical loop EM and Mag surveys.

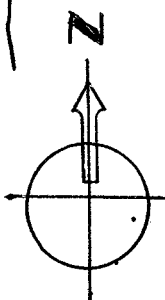
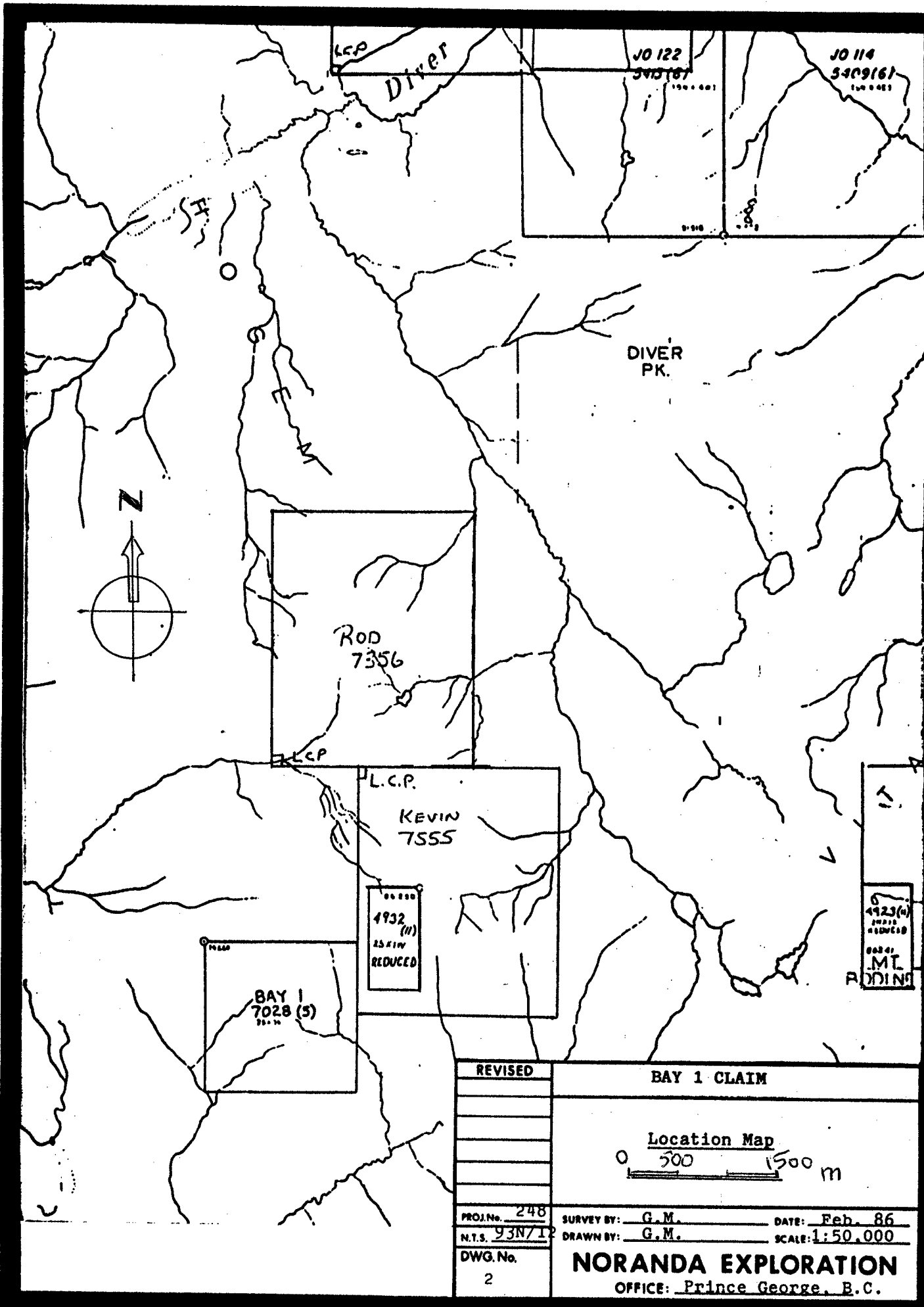
1978: Shell Canada Resources Ltd. -- geologic mapping and soil geochemistry on SKYE 9 claim.

1982: Chris Graf -- stake Sitlika 11 claim.



REVISED	BAY 1 CLAIM	
	Location Map	
PROJ. No. 248	SURVEY BY: G.M.	DATE: Feb 86
N.T.S. 93N/12	DRAWN BY: S.K.B.	SCALE: 1:8,000,000
DWG. No. 1	<b>NORANDA EXPLORATION</b>	
	OFFICE: PRINCE GEORGE, B.C.	

VANICAL 111827



L.C.P.  
Diver

JO 122

5413167

1984-85

JO 114

5409161

1984-85

DIVER  
PK.

ROD  
7356

L.C.P.

KEVIN  
7555

4932 (11)

25 KM  
REDUCED

BAY 1  
7028 (5)

4923 (11)  
2000  
REDUCED  
DRAWN BY  
M.L.  
RODING

REVISED

BAY 1 CLAIM

Location Map

0 500 1500 m

PROJ. No. 248

SURVEY BY: G.M.

DATE: Feb. 86

N.T.S. 93N/12

DRAWN BY: G.M.

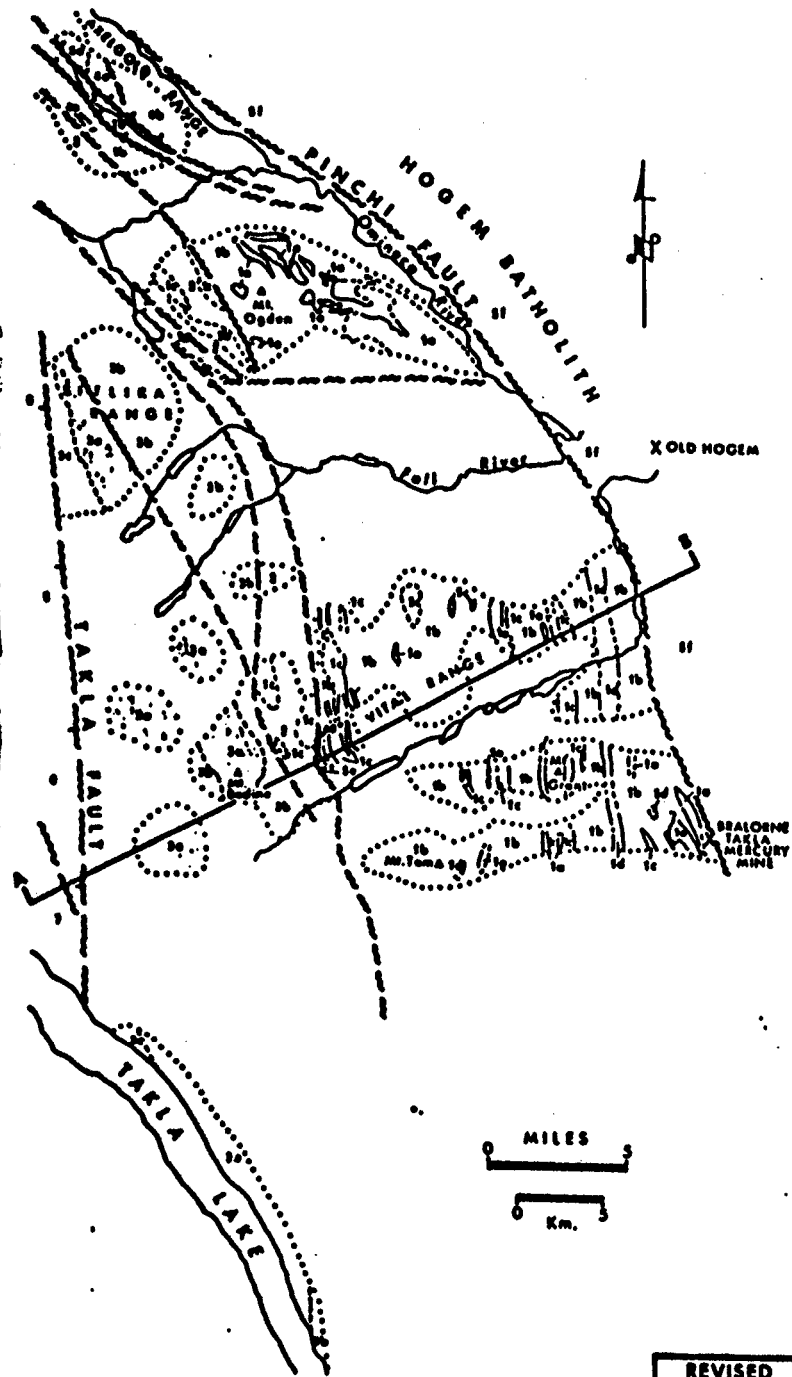
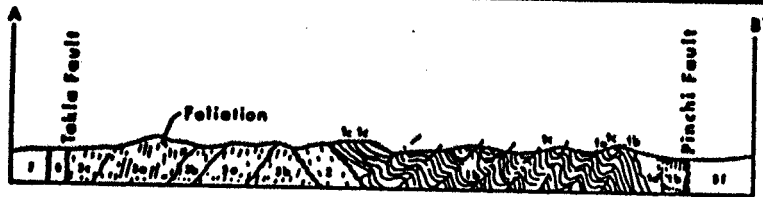
SCALE: 1:50,000

DWG. No.

2

**NORANDA EXPLORATION**

OFFICE: Prince George, B.C.



**LEGEND**

**UPPER CRETACEOUS and PALEOCENE**

**SUSUT GROUP**

1 conglomerate, shale, graywacke

**JURASSIC**

**HAZELTON GROUP**

2 tuff, volcanic breccia

**UPPER TRIASSIC and JURASSIC**

**TAKLA GROUP (?)**

3 (4a) chert pebble conglomerate;  
(4b) graywacke, argillite

**UPPER TRIASSIC (?), JURASSIC (?)**

**SITLIKA ASSEMBLAGE**

4 (3a) tuff, volcanic breccia, rhyolite, feldspar porphyry  
(3b) graywacke, siltstone  
(3c) black phyllite or argillite

**UPPER PALEOZOIC**

**CACHE CREEK GROUP**

5 (1a) limestone; (1b) chert & phyllite;  
(1c) greenstone; (1d) graywacke, laminated siltstone

**INTRUSIVES**

**MESOZOIC or TERTIARY**

6 (5a) syenite; (5b) granite; (5c) biotite, hornblende feldspar porphyry; (5d) biotite, granodiorite; (5e) felsite

**JURASSIC (Mainly ?)**

7 granodiorite (Hogem Batholith)

**PERMO-TRIASSIC**

8 serpentinite, hornblende

**FAULT** (defined, approximate, inferred).....

**THRUST or high angle REVERSE FAULT**.....

**CONTACT** (defined, approximate).....

**LIMIT of MAPPING**.....

REVISED	<b>BAY 1 CLAIM</b>	
	<u>Regional Geology</u>	
PROJ. No. 248	SURVEY BY: G. M.	DATE: Feb. 66
N.T.S. 93N/12	DRAWN BY: G. M.	SCALE: 1:500,000
DWG. No. 23	<b>NORANDA EXPLORATION</b>	
	OFFICE: Prince George, B.C.	

1984: Chris Graf - geologic mapping.

1985: Noranda Exploration - Airborne EM & Mag Survey,  
ground HLEM and Mag Survey

## GEOPHYSICS:

### INSTRUMENTATION

SE-88 EM System The SE-88 unit differs from the normal HLEM systems such as the MaxMin II above in that it measures without regard to phase, the ratio of signal amplitude between two frequencies which are transmitted and received simultaneously. A low frequency of 112 Hz is used as a reference frequency. The signal difference is integrated or averaged over a period of time in order to improve the signal to noise ratio.

The survey parameters employed on the follow-up programme are as follows:

Coil separation	: 100 meters
Frequencies	: 3037, 1012, 337 Hz
Reference frequency	: 112 Hz
Integration period	: 16 or 8 seconds
Reading interval	: 25 meters
Measurement	: ratio of amplitude between reference and signal frequencies (%).

MP-3 Magnetometer System Magnetometers manufactured by Scintrex Ltd. of Concord, Ontario were employed for these surveys. The MP-3 Total Field Magnetometer System consists of one or more field units and a base station. Diurnal and day to day variations are automatically corrected at the end of the survey by the built in microprocessor giving the data a usable accuracy of 1 gamma.

### DISCUSSION OF RESULTS

Ten lines of magnetometer and SE-88 GENIE HLEM were completed on the BAY grid. This grid was established on the basis of a low conductivity (4 - 3 Siemen) airborne EM (EM-33) target that was associated with a small amplitude magnetic anomaly. The depth to source based on the airborne EM data was interpreted to be 16 meters.

Ground geophysical work was carried out during 1985 and 1986 and the EM system identified a 250 meter long EM anomaly. The data indicates a wide, near surface source of very limited depth extent at L.10100N/9825E and extending north to L.10300N/9912.5E where the EM response has an interpreted conductivity of less than 3 Siemens. The expression on L.10200N indicates the conductivity to be 18 Siemens with a depth to current axis of 20 meters.



The magnetometer survey shows a magnetic 'high' over the extremities of the target and a distinct low is recorded over the central portion of the target anomaly. The magnetic anomaly may be only coincident with the conductor and not necessarily sourced by the EM conductor.

#### CONCLUSIONS:

Five further lines were added to the grid to the north of the previous work. The new survey outlined a moderately conductive target with a strike length of approximately 250 meters. Both a magnetic high and a low were recorded on adjacent lines coincident with the EM anomaly.

#### RECOMMENDATIONS:

This conductor, which lies in favourable felsic volcanic stratigraphy warrants drill testing to determine its source.

#### REFERENCES:

- Crosly, R.D. Airborne Geophysical Surveys, Ruth Mineral Claims, TAKLA LAKE Area, B.C., Assessment Report for McIntyre Mines Limited, 1977.
- Francoer, D. Geological, Geophysical and Geochemical Report on TAKLA Project for McIntyre Mines Limited, 1977.
- MacLeod, W.A. Report on Geological and Geochemical Surveys SKYE 1, 3 through 17 Mineral Claims, Assessment Report for Shell Canada Resources Limited, 1979.
- Maxwell, G.J. Geophysical Report on the Bay 1 Claim, Omineca Mining Division, B. C. Assessment Report for Noranda Exploration Company, Limited, 1986.
- Monger, J.W.H. Lower Mesozoic Rocks in McConnell Creek Map Area, (94E), British Columbia. Geological Survey of Canada, Paper 76-1A.
- Paterson, I.A. Geology of Cache Creek Group and Mesozoic Rocks at the Northern end of the Stuart Lake Belt, Central B.C., Geol. Survey of Canada, Paper 74-1, Part B, 1974.

APPENDIX I  
STATEMENT OF COSTS

PROJECT: TAKLA-NAK - BAY GROUP

REPORT TYPE: Geophysical

a) **WAGES:**

HLEM Survey - 2 mandays @ \$150.00/day	\$ 300.00
Mag Survey - 1 manday @ \$150.00/day	150.00
Linecutting - 1 manday @ \$100.00/day	100.00

b) **FOOD & ACCOMODATIONS:**

4 mandays @ \$50.00/day	\$ 200.00
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c) **TRANSPORTATION:** (206 Helicopter)

1.3 hours @ \$500.00/hour	\$ 650.00
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d) **COST OF PREPARATION OF REPORT:**

Author	\$ 150.00
Drafting	\$ 100.00
Typing	\$ 50.00

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TOTAL: \$ 1,700.00

COST BREAKDOWN

a) HLEM Survey

Dave Finlay - June 11, 1986	\$ 150.00
Tony Lippert - June 11, 1986	\$ 150.00
Food and Accommodations	\$ 100.00
Transportation	\$ 350.00
Report Preparation	\$ 200.00

b) Mag Survey

G. Maxwell - June 11, 1986	\$ 150.00
Food and Accommodations	\$ 50.00
Transportation	\$ 150.00
Report Preparation	\$ 100.00

c) Linecutting

B. Gagnon - June 11, 1986	\$ 100.00
Food and Accommodations	\$ 50.00
Transportation	\$ 150.00

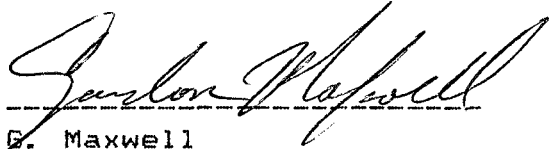
Total \$1,700.00

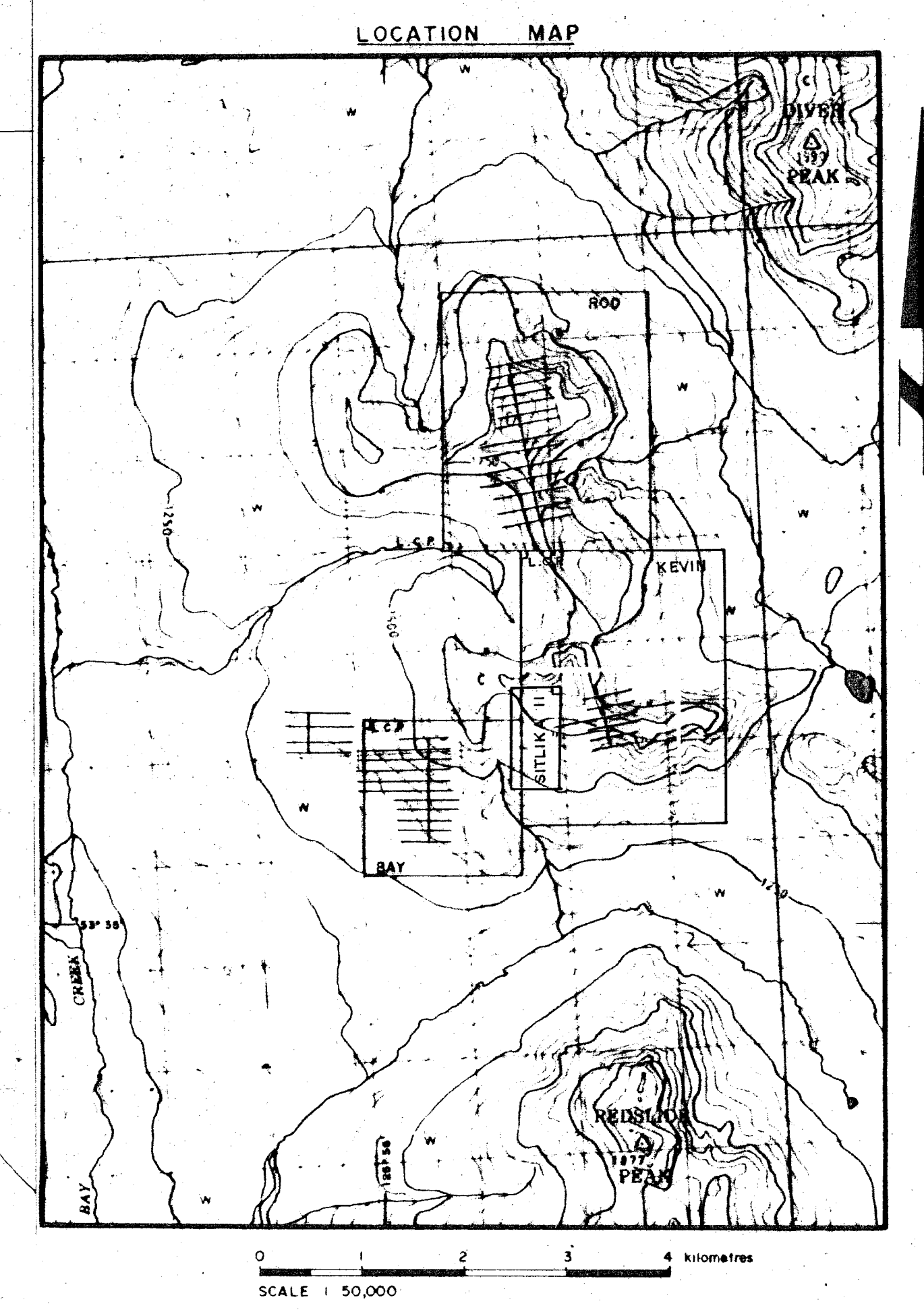
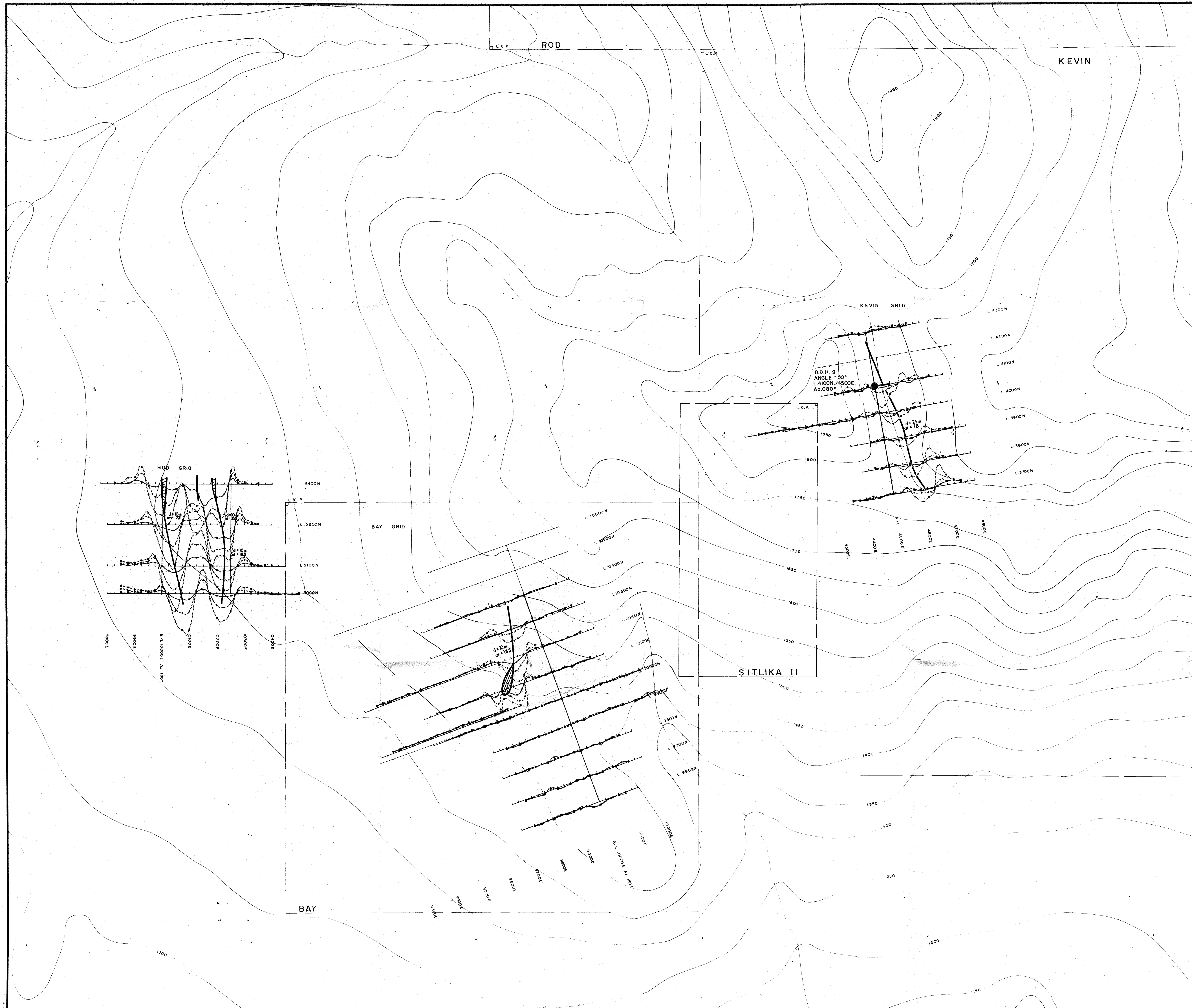
APPENDIX II

STATEMENT OF QUALIFICATIONS

I, Gordon Maxwell of Prince George, Province of British Columbia, do hereby certify that:

1. I am a Geologist residing at 5905 Rideau Street, Prince George, British Columbia.
2. I am a graduate of the University of Manitoba with an Hons. B. Sc. (geology).
3. I am a member in good standing of the Canadian Institute of Mining and the Prospector's and Developer's Association.
4. I presently hold the position of Project Geologist with Noranda Exploration Company, Limited and have been in their employ since 1980.

  
G. Maxwell



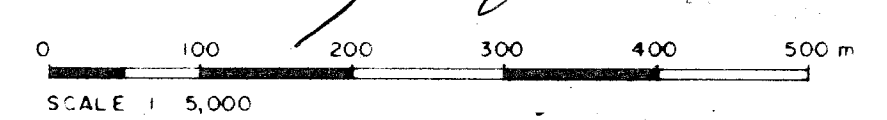
**LEGEND**

- Instrument : SE-88 GENI
  - Coil Spacing : 100m
  - Ref. Frequency : 112 Hz
  - Vertical Scale : 1 cm = 20E
  - Conductor Axis : ———
  - 337 Hz : ———
  - 1812 Hz : - - - -
  - 3837 Hz : - - - -
- 1986 D.D.H. LOCATION

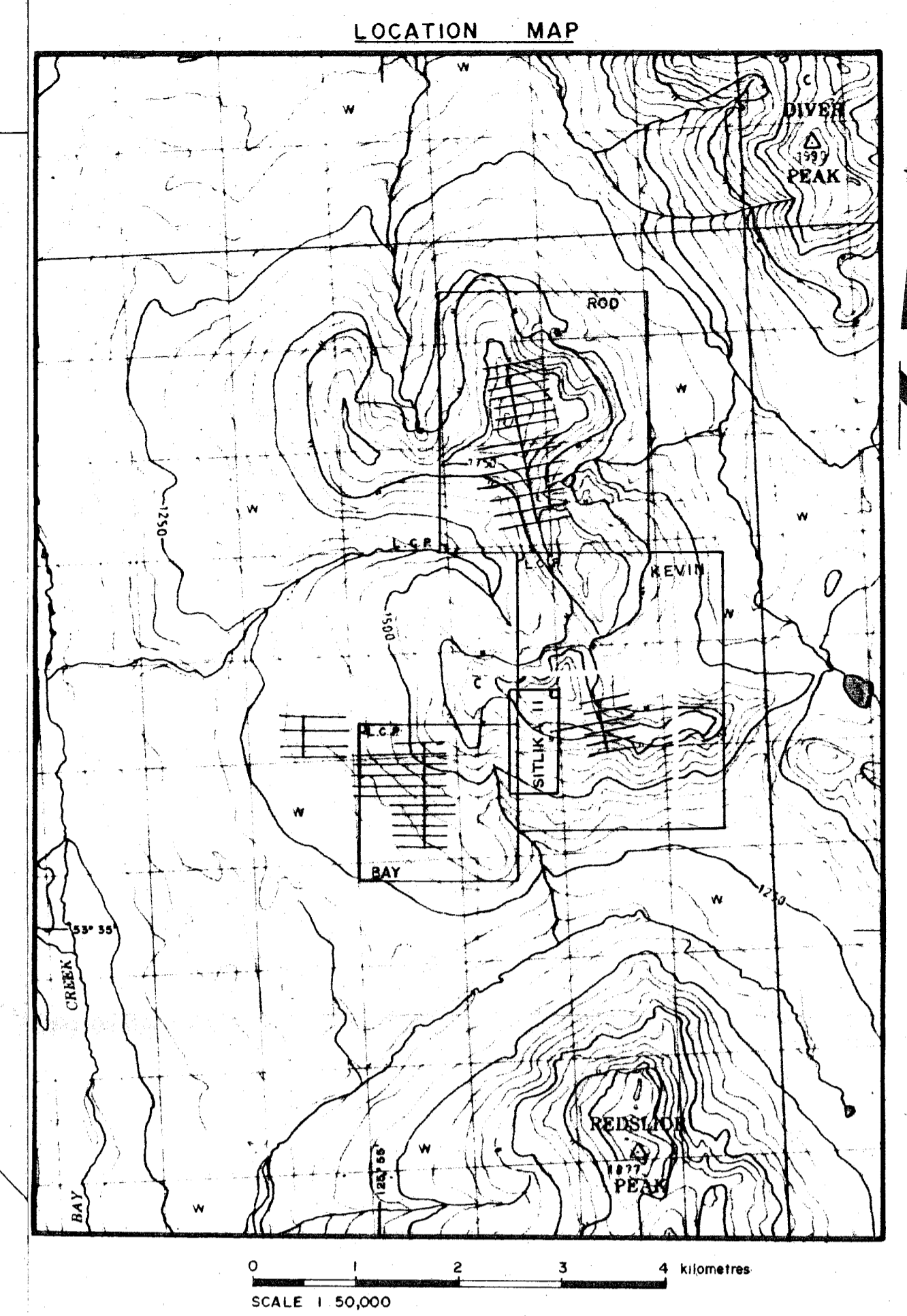
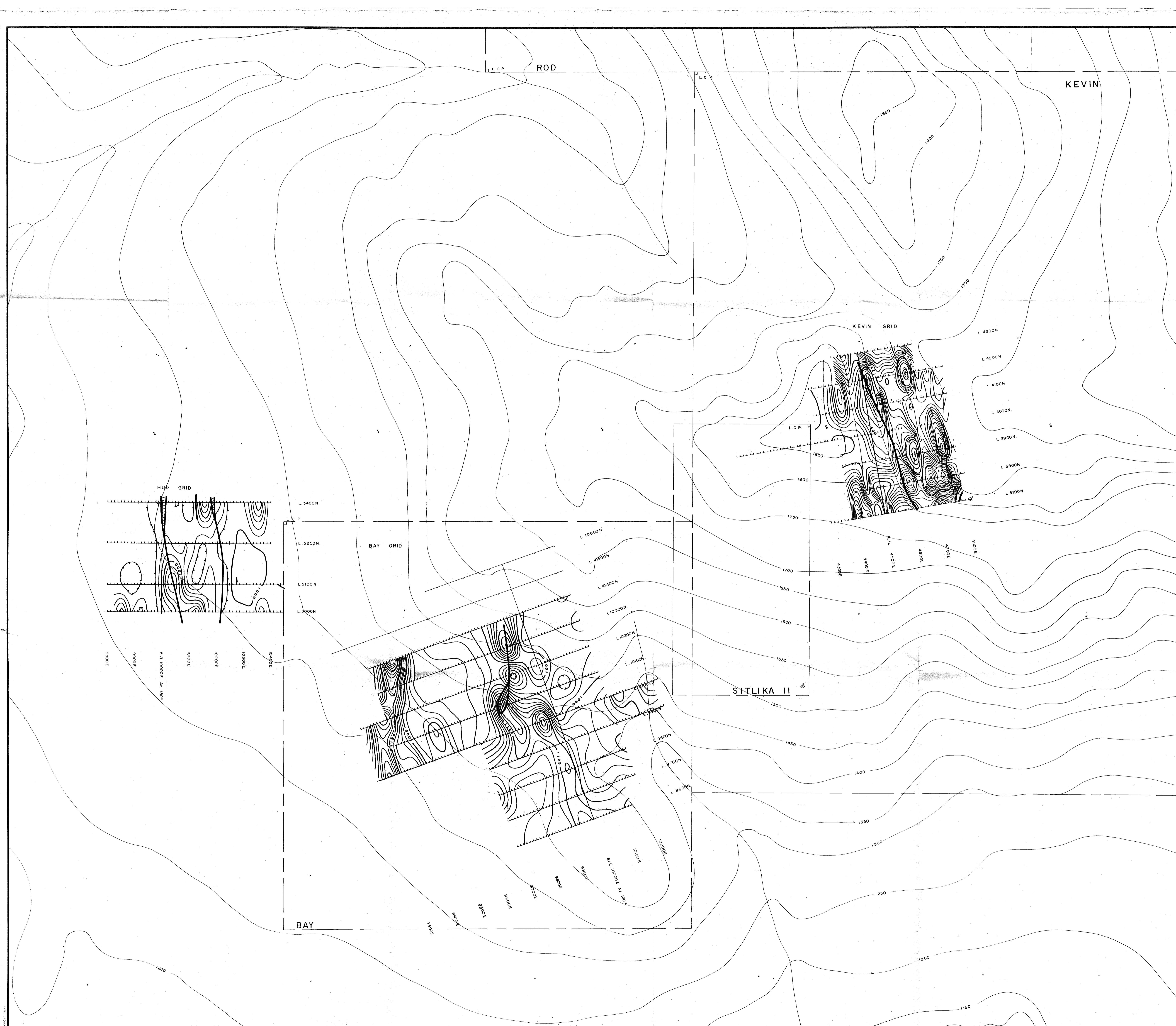
**GEOLOGICAL BRANCH ASSESSMENT REPORT**

**15,874**

*J. H. Powell*



REVISED	TAKLA NAK	
G.M. MAR., 1986	BAY & KEVIN CLAIM	
G.M. JULY, 1986	SE-88 SURVEY	
G.M. FEB., 1987		
PROJ. No. 5-68	SURVEY BY: R.S./B.G./S.H.	DATE: AUG., 1986
N.T.S. 93 N/12	DRAWN BY: S.K.B.	SCALE: 1:5,000
DWG. No.	<b>NORANDA EXPLORATION</b>	
MAP I	OFFICE: PRINCE GEORGE, B.C.	



**LEGEND**

- HUD GRID**  
 Instrument : HP-3  
 Datum : 57288.8 nT  
 Contour Interval : 50 nT  
 ( 2 passes through a 9 pt. Manning Filter. )  
 Conductor Rate : 1
- BAY GRID**  
 Instrument : HP-3  
 Datum : 57288.8 nT  
 Contour Interval : 100 nT  
 ( 2 passes through a 9 pt. Manning Filter. )  
 Conductor Rate : 1
- KEVIN GRID**  
 Instrument : HP-3  
 Field : TOTAL  
 Datum : 57288.8 nT  
 Contour Interval : 50 nT  
 ( 4 passes through a 9 pt. Manning Filter. )  
 ( 8 passes through a 3 pt. Manning Filter. )  
 Conductor Rate : 1

**GEOLOGICAL BRANCH ASSESSMENT REPORT**

**15,874**

*S. K. B.*

SCALE : 1 : 5,000

REVISED	TAKLA NAK	
G.M. MAR., 1986	BAY & KEVIN CLAIM	
G.M. AUG., 1986	MAGNETOMETER SURVEY	
G.M. FEB., 1987		
PROJ. No. S-58	SURVEY BY: S.H., K.L.	DATE: AUG., 1988
N.T.S. 32 N/12	DRAWN BY: S.K.B.	SCALE: 1:5000
OWG. No.	<b>NORANDA EXPLORATION</b>	
MAP 2	OFFICE: PRINCE GEORGE, B.C.	