

1972

INDUCED POLARIZATION AND RESISTIVITY SURVEY

OF THE

RANCHER, PEPSI & OUT MINERAL CLAIMS

50° 120° SE

B.O. BRYNELSEN, P.ENG.

J.T. WALKER

NORANDA EXPLORATION COMPANY, LIMITED

NICOLA MINING DIVISION

JUNE 5, 1969 TO JUNE 28, 1969

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Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 1972 MAP

Induced Polarization and Resistivity Survey
of the
Rancher, Pepsi and Out Mineral Claims
of
Noranda Exploration Company, Limited

INTRODUCTION:

During the period June 5, 1969 to June 28, 1969 an induced polarization and resistivity survey was carried out on the following Rancher, Pepsi and Out Mineral Claims:

	<u>Record Number</u>
Rancher 1 - 6	37388 - 37393 inclusive
Pepsi 14	39339
Pepsi 16	39341
Pepsi 18	39343
Pepsi 20	39345
Pepsi 22 - 35	39347 - 37360 inclusive
Pepsi 37	39362
Pepsi 39 - 41	39364 - 39366
Out 1 and 2	37591 and 37592
Out 13 - 18	37603 - 37608 inclusive
Out 27 and 29	37617 and 37619

The Rancher claims are held under option from J. Lauder.

The claims are located approximately 17 miles due east of Merritt, British Columbia situated on the western slope of Mount Hamilton. Access to the claims is via the Pennask Lake Road from highway No. 5 one mile north of Quilchena. At a point approximately seven miles along the Pennask Lake Road, a dry weather dirt road branches eastward and passes through the claim group approximately three miles to the east. SEE FIGURE 1.

The claims are located in gentle rolling range land. The eastern claims are wooded and the topography steepens toward Mount Hamilton. Elevation ranges between 3500 and 4500 feet.



NORANDA EXPLORATION COMPANY, LIMITED

LOCATION MAP

B. Brynelsen

RANCHER, PEPSI & OUT M.C.'s

Nicola M.D.
J. J. Walker
92 1/1 W

1" = 2 Miles

Fig. 1

The I.P. Survey was carried out by Noranda Exploration Company, Limited personnel under the direction of B.O. Brynelsen, P. Eng. with field supervision by J.T. Walker.

GENERAL GEOLOGY:

Geology in the claim area consists mainly of Upper Triassic Nicola Group Volcanics. Intrusives were noted of unknown age. Local fault breccias occur within the volcanics. Mineralization consists mainly of pyrite.

GRID PREPARATION:

One north-south base line was prepared on this property and marked as 100E Base Line. Twelve initial grid lines, perpendicular to the base line were chained, picketed and flagged. The grid lines were spaced at 800-foot intervals. As the I.P. survey progressed additional lines were added as required. Grid preparation was carried out by Smith and Hamilton Contractors commencing work April 9, 1969.

INDUCED POLARIZATION METHOD:

The Induced Polarization and Resistivity Survey was carried out utilizing Variable Frequency I.P. equipment owned by Noranda Exploration Company, Limited and operated by Noranda personnel.

The theory of Variable Frequency Induced Polarization is fully described in the literature and will not be described in this report.

In the field procedure, current is applied to the ground at two points (C_1 & C_2), and voltages are measured at two other points (P_1 & P_2). Throughout this survey measurements were made along prepared grid lines using a dipole-dipole electrode configuration ($C_2 C_1 P_1 P_2$) with a dipole separation of 200 feet. A constant separation of 200 feet was also maintained between the near current and voltage electrodes (C_1 & P_1).

A four man crew, one man stationed at each electrode was used to carry out the survey. Electrodes and survey equipment were transported station to station along the survey lines with measurements made at 200 foot intervals.

The following data are recorded at each station:

- Grid location of the current electrodes C_1 & C_2
- Grid location of the potential electrodes P_1 & P_2

In addition the following electrical measurements are made and recorded as follows:

- (1) Transmitter current on, Frequency - 10 Hz (current recorded in milliamperes).
- (2) Receiver measures developed voltage (recorded in millivolts).
- (3) Transmitted current frequency changed to 0.3 Hz (current maintained constant as recorded above).
- (4) Receiver measures percent change in voltage caused solely by change in frequency (recorded as Percent Frequency Effect).

Note on Reading Number 4:

By definition, Percent Frequency Effect equals the percent change in apparent resistivity caused by a change in frequency of the transmitted current. Apparent resistivity is proportional to voltage and current. Provided the current is constant at each frequency, the percent voltage change equals percent apparent resistivity change and this voltage change may be read directly as Percent Frequency Effect.

From the above Current & Voltage measurements, the apparent resistivity at each station is calculated.

Presentation of Results:

The results of the induced polarization and resistivity survey are shown on plan maps at a scale of 1 inch equals 400 feet. Claim outlines are indicated.

The measured Frequency Effect in percent and the calculated apparent resistivity are plotted at mid-point between the position of electrodes C_1 and P_1 .

Frequency Effect results are plotted and contoured on Dwg. No. 1 and apparent resistivity results are plotted and contoured on Dwg. No. 2.

Discussion of Results:

Results of the survey as indicated on the Percent Frequency Effect Contour Map (Drawing No. 1) show four, well defined anomalous zones.

ZONE A - strongly anomalous F.E. greater than 20%

ZONE B - strongly anomalous F.E. greater than 15%

ZONE C - weakly anomalous F.E. greater than 5%

ZONE D - weakly anomalous F.E. greater than 5%

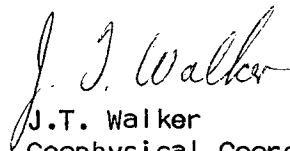
RECOMMENDATIONS AND CONCLUSIONS:

There are four significant anomalies indicated from the results of the induced polarization survey. Although the two anomalies on the northern portion of the grid are weak, all indicated zones warrant further investigation by trenching or drilling.

Respectfully submitted,



B.O. Brynelsen, P.Eng.



J.T. Walker
Geophysical Coordinator

September 9, 1969

MINING RECORDER
 RECEIVED
 AUG 19 1969
 M.F. # 322686 0.172-23
 VANCOUVER, B.C.

DOMINION OF CANADA:
 PROVINCE OF BRITISH COLUMBIA.

To Wit:

In the Matter of a statement of exploration expenses on 39 contiguous Mineral Claims in the Nicola Mining Division having Record Numbers 37388-37393, 37591-37592, 37603-37608, 37617-37620, 39339, 39341, 39343, 39345, 39347-39360, 39362, 39364, 39366.

I, W.W. Young (F.M.C. 78570 issued May 2, 1969 at Vancouver), agent for Noranda Exploration Company, Limited (No Personal Liability) (F.M.C. 78440 issued May 2, 1969 at Vancouver).

both of 1050 Davle Street, Vancouver 5

in the Province of British Columbia, do solemnly declare that the cost of a Geophysical Survey from April 9 to June 28, 1969 was:

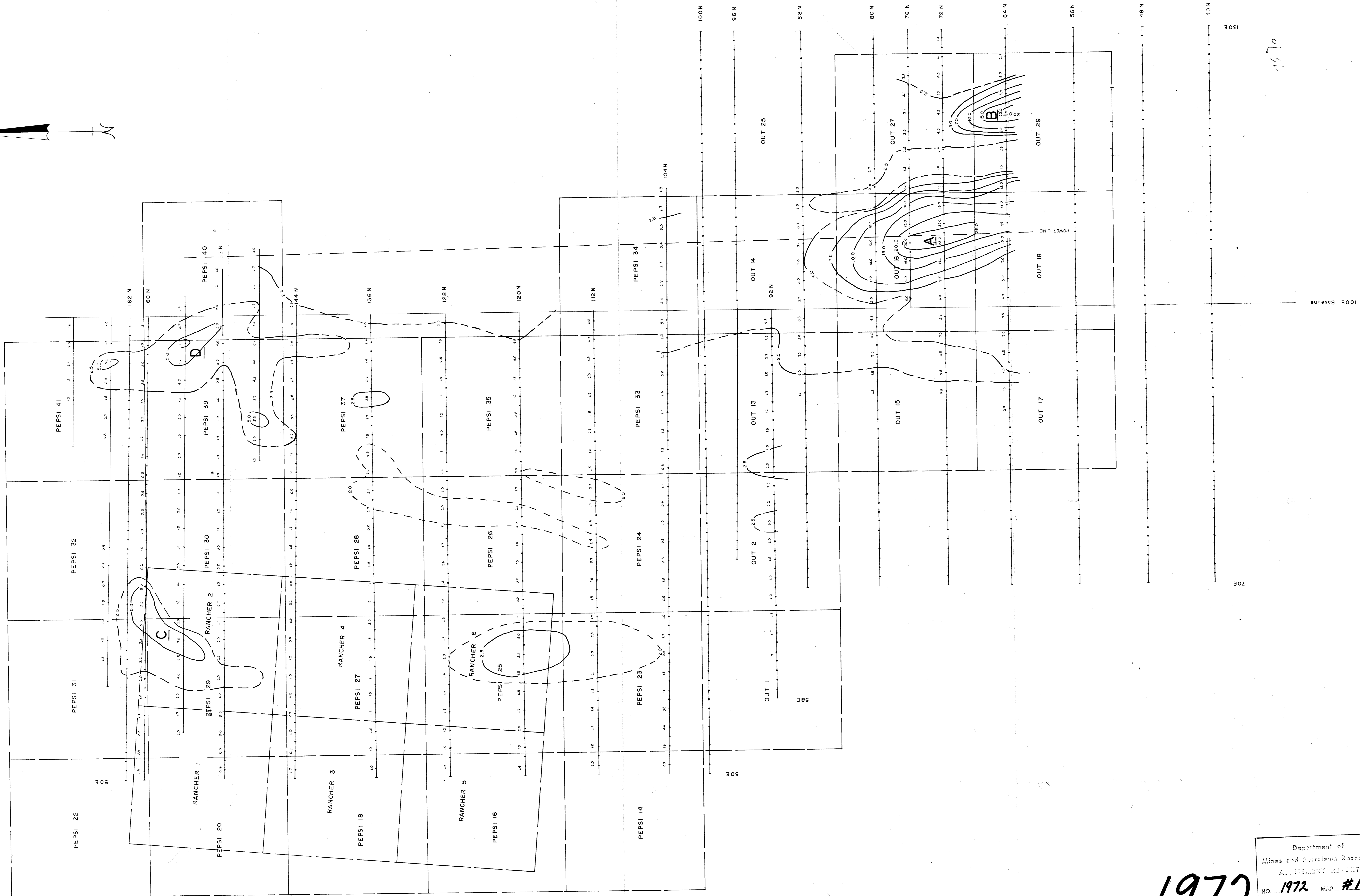
A. <u>LINE PREPARATION:</u>			
By Smith and Hamilton Contractors			
12.08 line miles @ \$80/line mile		\$	966.40
B. <u>GEOPHYSICAL SURVEY:</u>			
1. <u>Salaries</u> (Including WCB, UIC, Holiday Pay & Cda. Pension)			
From: June 5 - 28, 1969			
Employees: L. Reinertson, G. Sauder, M. Bonneau & E. Lance			
Cost Per Man Day:	\$20.32		
Number of Man Days:	75		
Cost:	75 x 20.32	1,524.00	
2. <u>Field Costs</u> (Including all costs related to survey)			
Cost Per Man Day:	\$10.00		
Number of Man Days:	75		
Cost:	75 x 10.00	<u>750.00</u>	2,274.00
C. <u>CONSULTING FEES</u> (B.O. Brynelsen)			
1 day @ \$100/day			100.00
D. <u>DRAFTING & REPORT PREPARATION</u>			
5 days @ \$25/day			<u>125.00</u>
		\$	<u>3,465.40</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 19
 day of August 1969, A.D.

W.W. Young

Jean Turner
 A Commissioner for taking Affidavits within British Columbia or
 A Notary Public in and for the Province of British Columbia. **MINING RECORDER**



To Accompany Geophysical Report by B.O Brynalsen, P.Eng. and J.T. Walker on the Rancher, Pepsi and Out M.C.'s Nicola Mining Division, B.C. Dated - Sept. 9, 1969.

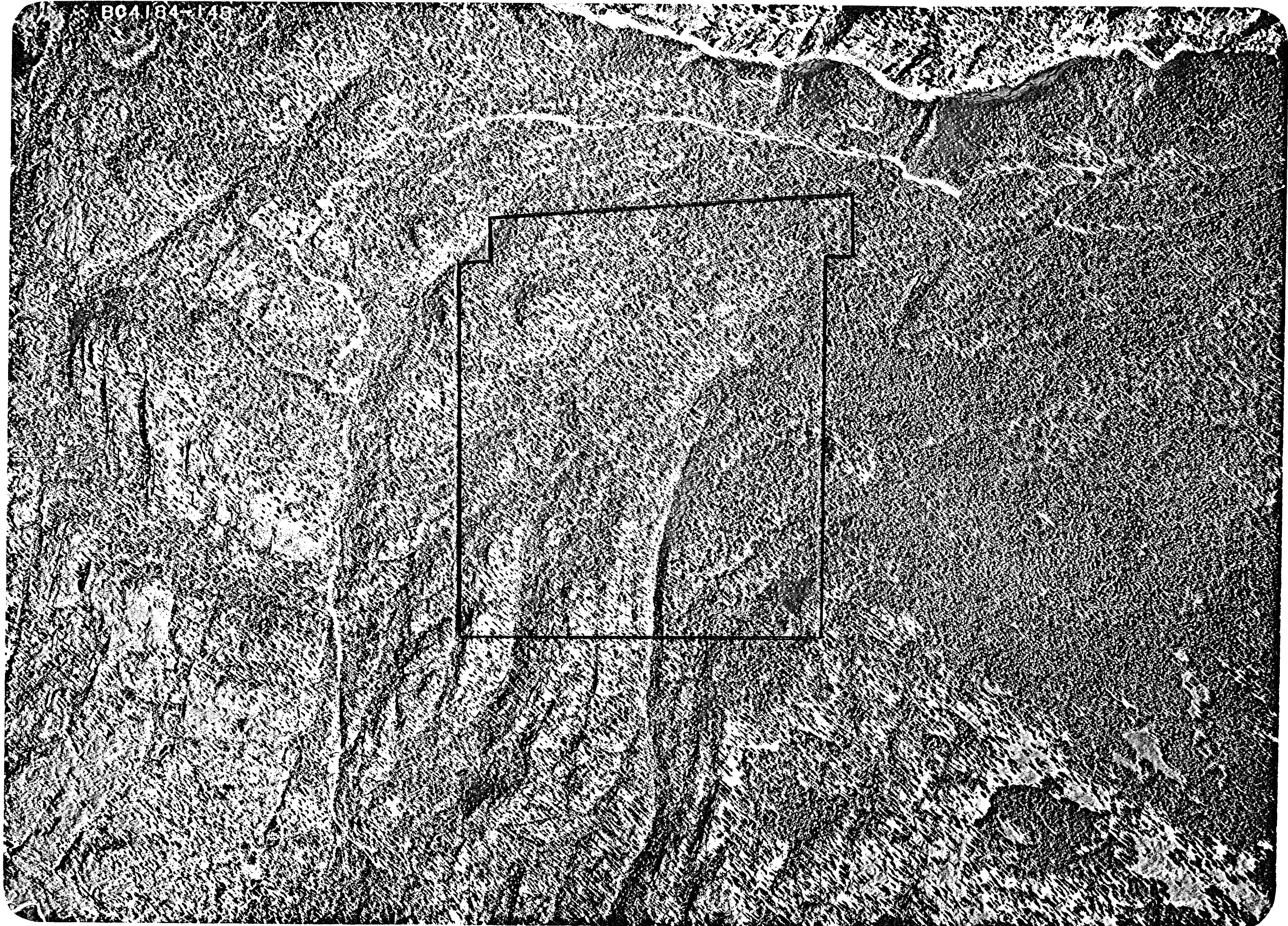
J. T. Walker
B. Brynalsen

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1972 MAP #1

1972

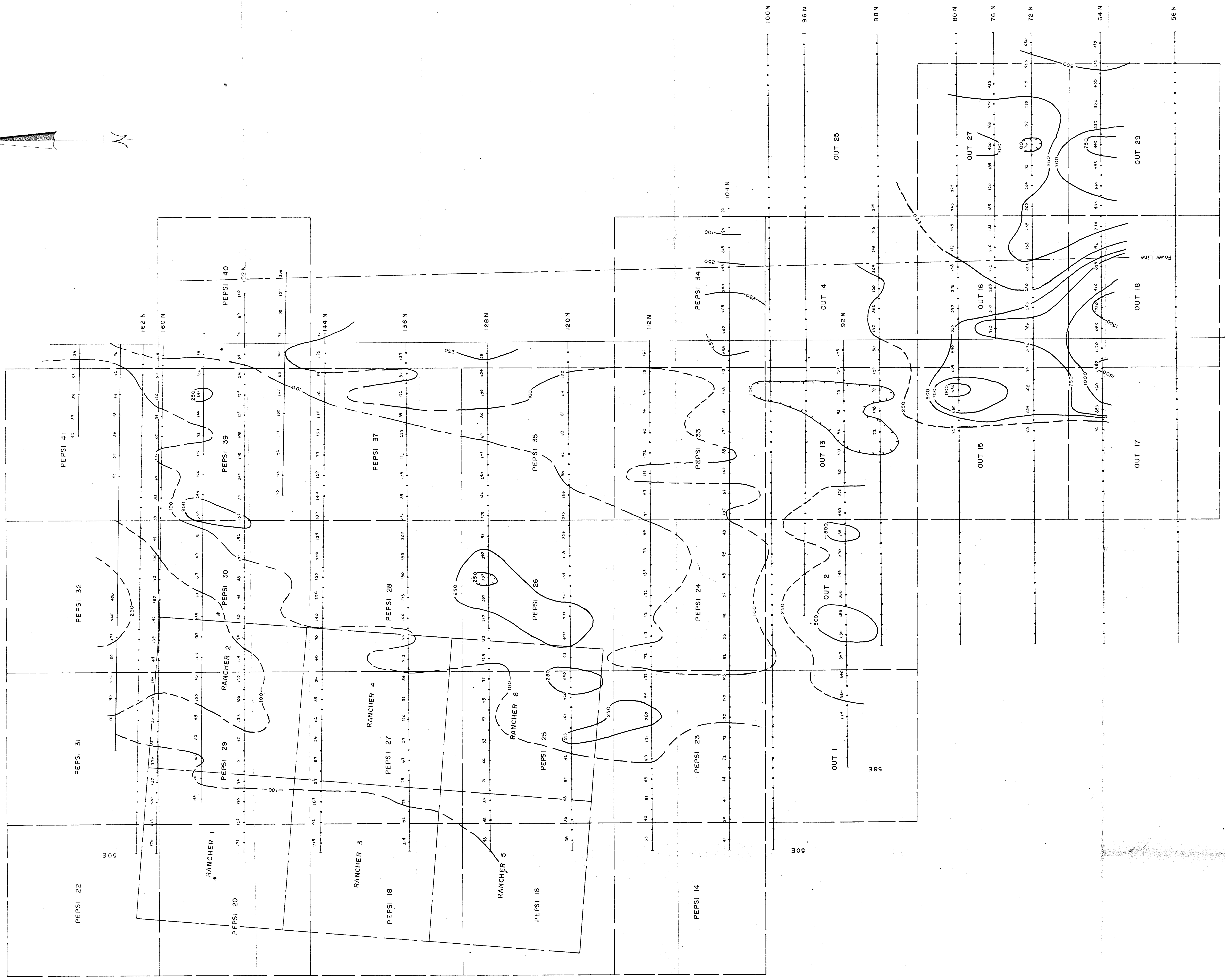
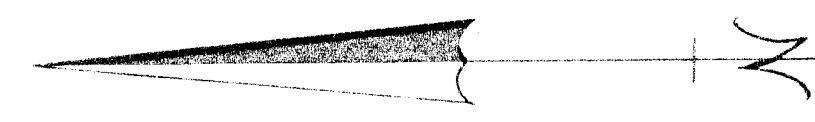
REVISED	MT. HAMILTON	
	F.E. %	
	X = 200' N = 1	
	DIPOLE - DIPOLE FREQUENCIES - 0.3 & 10 Hz	
PROJECT:		
PROJ. NO. 1028	SURVEYED BY: L.C.R., G.B.S.	DATE: JUNE 1969
N.T.S. 92/1/W	DRAWN BY: C.P.	SCALE: 1" = 400'
DWG. NO. 1	NORANDA EXPLORATION CO. LTD.	
	OFFICE: VANCOUVER	

BC4184-145



ACTION EXPL. LTD. Job. 1069
OKANAGAN FALLS AREA, B.C.
Fig. 3. (APPROX. CLAIM OUTLINES)
GEO-X SURVEYS LTD.

1972



To Accompany Geophysical Report by B.O. Brynlesen, P. Eng. and J.T. Walker on the Rancher, Pepsi and Out M.C.'s. Nicola Mining Division, B.C. Dated - Sept. 9, 1969.

J.T. Walker
B. Brynlesen

1972

Department of
Mines and Petroleum Resources
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NO. 1972 M.P. #2

REVISED	MT. HAMILTON	
	RESISTIVITY $\frac{\rho a}{2\pi}$ (IN OHM-FT)	
	X = 200' N = 1	
	DIPOLE - DIPOLE	
PROJECT:		
PROJ. NO. 1028	SURVEYED BY: L.C.R., G.B.S.	DATE: JUNE, 1969
N.T.S. 92/11W	DRAWN BY: C.P.	SCALE: 1" = 400'
DWG. NO. 2	NORANDA EXPLORATION CO. LTD.	
	OFFICE: VANCOUVER	

130E

70E

100E Baseline