

93L/2E

A GEOPHYSICAL REPORT

ON THE

H.D.P. CLAIMS

OMINECA MINING DIVISION

AT

54° 05' N AND 126° 40' W

2 MILES EAST OF OWEN LAKE

AND

22 MILES SOUTH OF HOUSTON, B. C.

FOR

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

BY

R. W. WOOLVERTON, P. ENG.

BETWEEN

MAY 29th AND JUNE 8, 1972

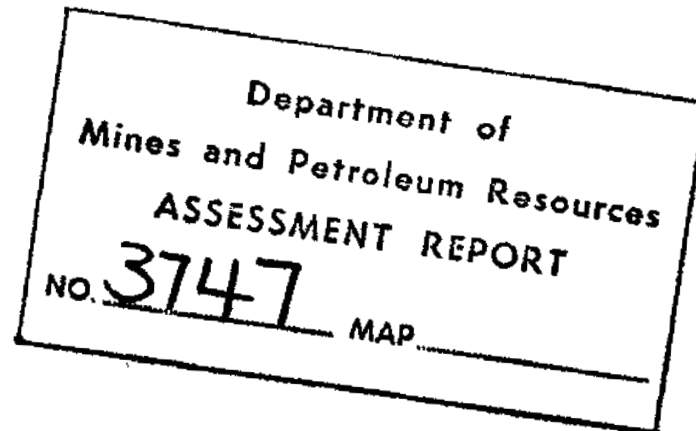
JULY, 1972

3747

SMITHERS, B. C.

TABLE OF CONTENTS

	PAGE
INTRODUCTION	
LOCATION	1
1972 PROGRAM	1
GEOPHYSICS	
INDUCED POLARIZATION SURVEY	
EQUIPMENT AND SURVEY	3
RESULTS	3
CONCLUSIONS AND RECOMMENDATIONS	5



LIST OF ILLUSTRATIONS

		PAGE
(a)	IN TEXT	
	#1 PROPERTY LOCATION MAP	1A
	#2 GRID CLAIM MAP	1B
(b)	IN POCKET	
	#3 I. P. SURVEY - CONTOUR PLAN	

APPENDICES

- I INDUCED POLARIZATION SPECIFICATIONS
- II DECLARATION OF EXPENDITURES

INTRODUCTION

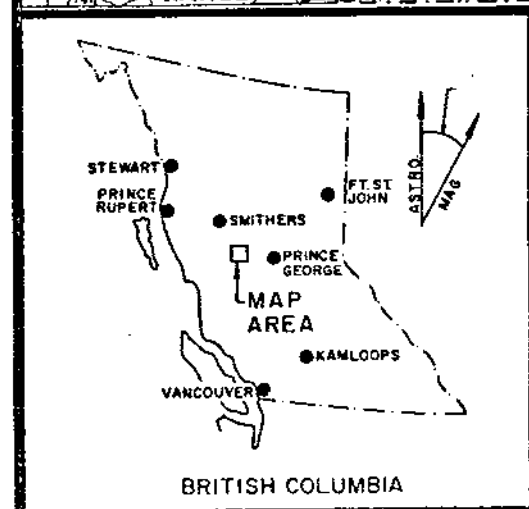
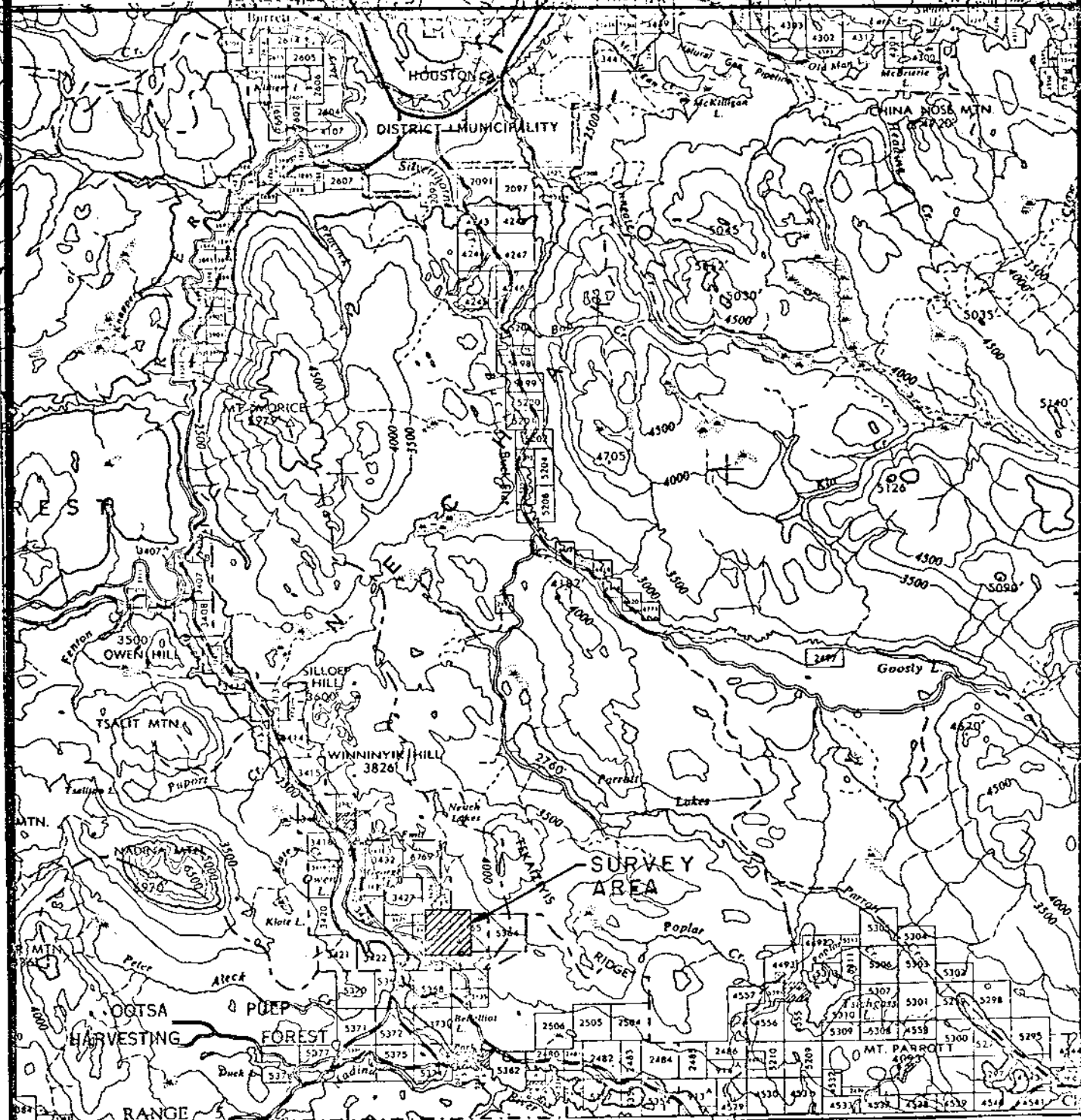
LOCATION

The H.D.P. Group of 27 full sized mineral claims is about 3 miles southeast of the Bradina Mine near Owen Lake in the Omineca Mining Division of B. C. It can be reached by a good gravel road south from Houston for about 21 miles where an easterly trending private road branches from the main road about 1 mile past the Bradina Mine. This private road crosses part of the claim group.

Elevations on the claim group range from 3,000 to 3,500 ft. Local exposures of sedimentary rocks were reported by the I. P. crew near the south boundary of the survey area. Although there are areas of open grassland within the claim boundary, most of the survey area is covered by spruce, jackpine and alder.

1972 PROGRAM

Evergreen Explorations Ltd. was requested by the owners of the H.D.P. claims to test the claim group for the presence of Bradina-type mineralization and other sulphide concentrations of possible economic significance. Overburden was reportedly extensive and probably quite thick. An I. P. survey using a Wenner array with a 200 ft. dipole spread was completed over a small part of the group in 1971 by Tri-Con Exploration Surveys Ltd. Two weakly chargeable zones within or adjacent to areas of higher apparent resistivity were outlined by this survey.



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LOCATION MAP

H.D.P. CLAIMS

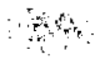
OMINECA M.D.

BRITISH COLUMBIA



MAY, 1972

PLATE No. VER-505-72-1

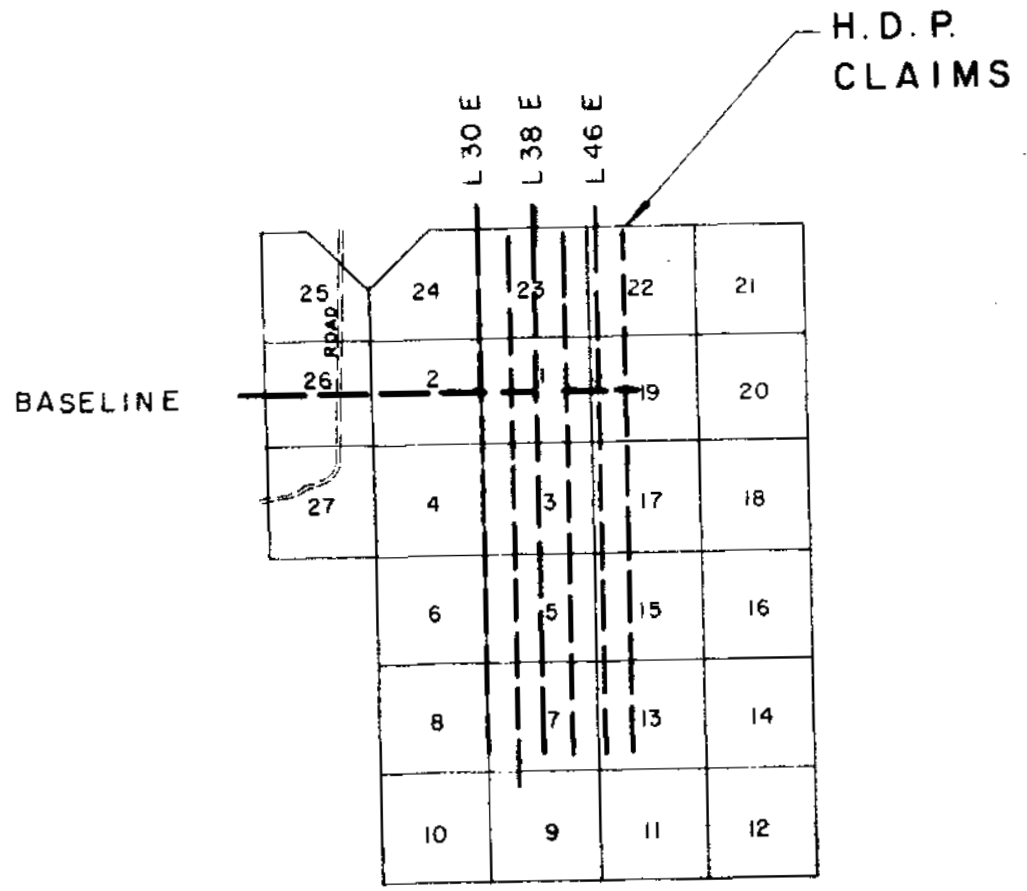


Department of

Mines and Petroleum Resources

ASSESSMENT REPORT

NO. 3747 MAI # 1



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 ASSESSMENT REPORT
 NO. 3747 MAP #2



KEY MAP
 BRITISH COLUMBIA



CONQUEST EXPLORATIONS LTD. (N.P.L.)
 GRID LOCATION
 AND
 CLAIMS MAP

H.D.P. CLAIMS

OMINECA M.D. BRITISH COLUMBIA



PREPARED BY
 VERBATILE DRAFTING LTD.

At Bradina, quartz-carbonate veins and altered wall rocks are mineralized with pyrite, chalcopyrite, sphalerite, and galena. (Minister of Mines Report 1965, Page 83). Although the individual veins in and immediately adjacent mineralized zones are only 5 to 10 ft. wide, the vein swarm is hundreds of feet wide and contains over a dozen individual veins.

Because of the reported thick cover, it was decided that an EM survey would be ineffective. An I. P. survey would outline wide zones of sulphides (such as a porphyry copper deposit), but not narrow ones like the Bradina veins. In order to pick up a 25 ft. wide mineralized zone, a 50 ft. I. P. array would be required; however, the penetration of a 50 ft. array is only about 50 ft. Thus, it is impossible to outline narrow mineralized zones under deep cover; however, since the Bradina environment is a vein swarm within wide shear structures, it was felt that such vein swarms would be indicated by resistivity lows. Thus, a "resistivity survey" was conducted using I. P. equipment employing a Wenner array at a 400 ft. dipole spacing giving upwards of 400 ft. penetration.

The east/west baseline was extended from 28 E to 50 E and approximately 9 miles of I. P. surveying completed on north/south reconnaissance lines. The field work was done by an experienced Evergreen Explorations Ltd. crew under the writer's supervision.

APPENDIX I

INDUCED POLARIZATION SPECIFICATIONS

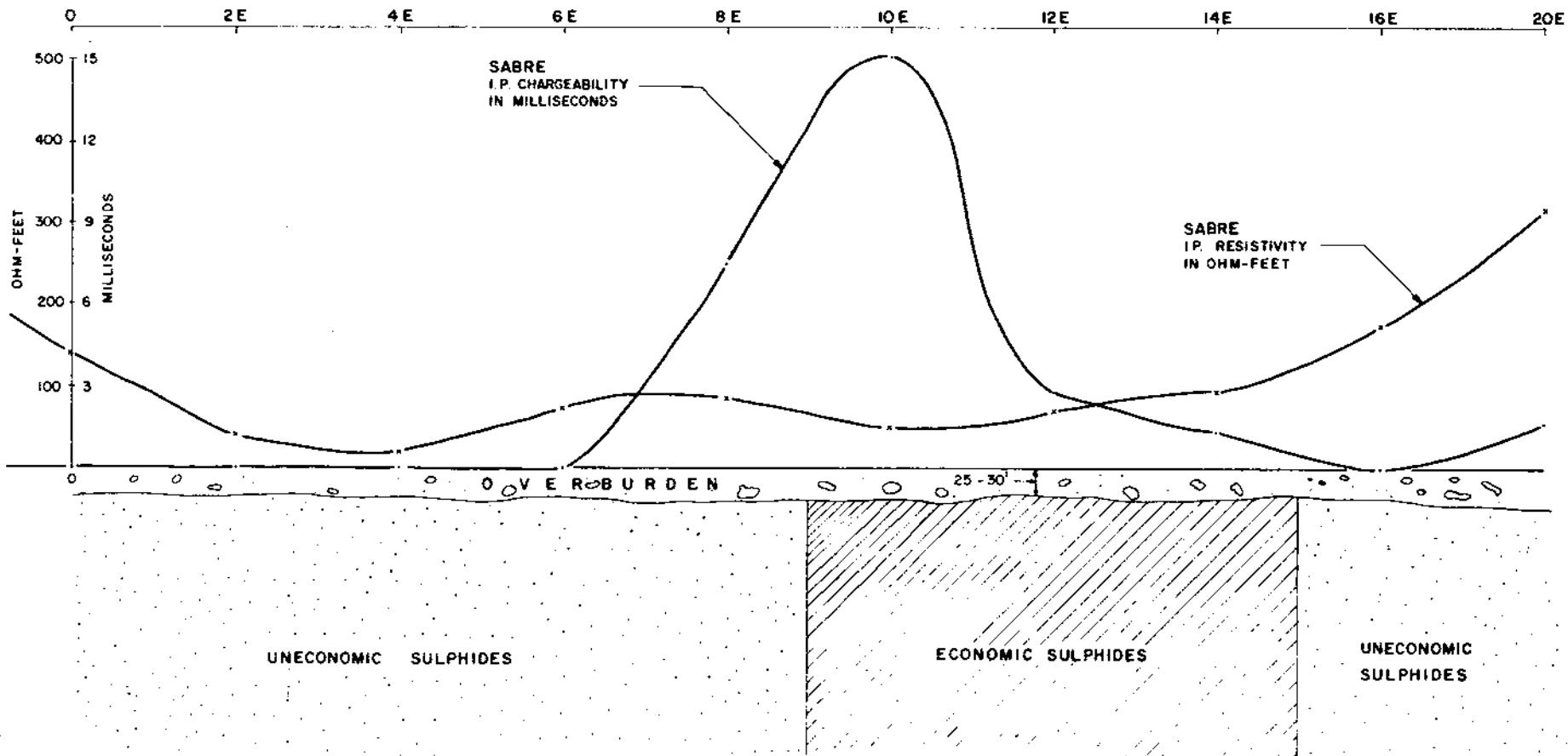
INDUCED POLARIZATION:

The Sabre Portable Pulse Type instrument is a 500 watt unit capable of 3 or 4 hundred foot penetration as shown on the accompanying profiles. Very little reduction in anomaly intensity was noted over the northern limb of Noranda's Newman ore body, where it is covered by 100 feet of glacial till.

Because of its light weight, the "Sabre" is ideal for reconnaissance work. Using a 400 foot Wenner array, Radem (V.L.F./E.M.), and Magnetometer readings can be taken, soil samples collected, and the charginability and resistivity determined by a 4 man crew simultaneously in open bush without pre-existing lines. Cut lines are necessary only in areas of high magnetic intensity where it is impossible to maintain a straight line by compass.

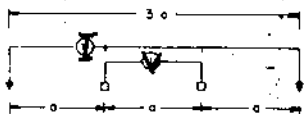


The "SABRE" at NEWMAN



INSTRUMENT


SABRE - PORTABLE PULSE TYPE
500 WATTS $a = 400'$ WENNER ARRAY



NOTE:

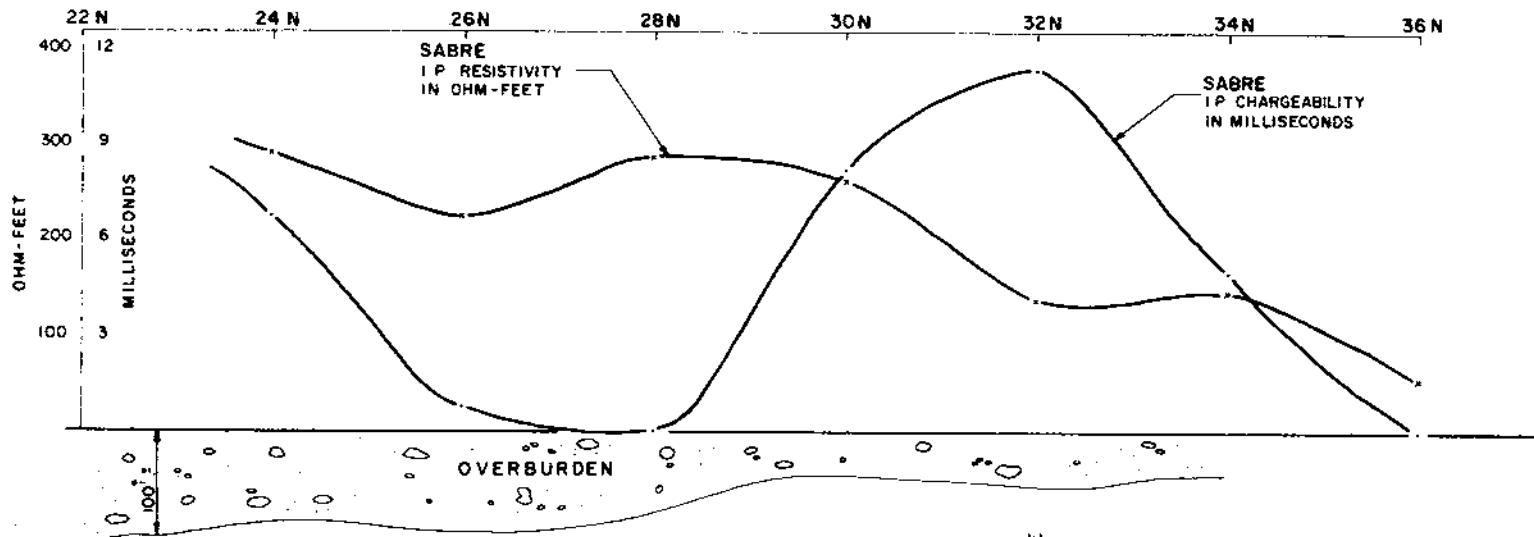
GEOLOGICAL DATA COURTESY OF
NORANDA EXPLORATION Co LTD.

LINE 20 N
NEWMAN PROPERTY
AT
BABINE LAKE, B.C.

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NO. 3747 MAP _____



DISSEMINATED
MAGNETITE
WITH OCCASIONAL
PYRITE



DISSEMINATED PYRITE
— SOME STRINGERS —

INSTRUMENT:

SABRE - PORTABLE PULSE TYPE
500 WATTS ϕ = 400' WENNER ARRAY



NOTE:

GEOLOGICAL DATA COURTESY OF
NORANDA EXPLORATION Co. LTD

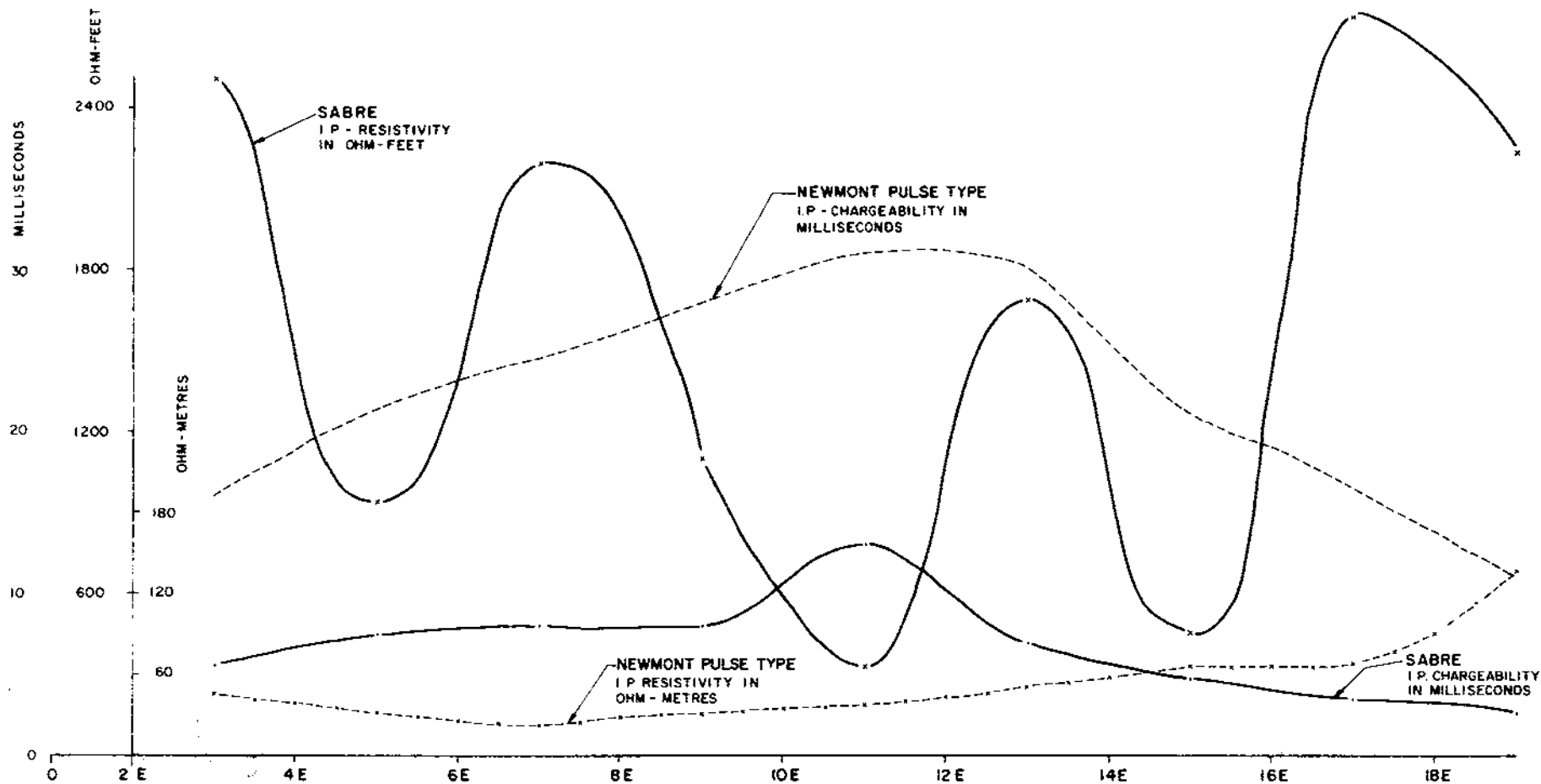
LINE 25 E
NEWMAN PROPERTY
AT
BABINE LAKE, B.C.



Evergreen Explorations Ltd.

Department of
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NO. 3747 MAP.....



INSTRUMENTS:

SABRE - PORTABLE PULSE TYPE
500 WATTS $\rho = 200'$ WENNER ARRAY

NEWMONT - PULSE TYPE
7500 WATTS $n=1, \rho = 200'$ POLE-DIPOLE

NOTE

SURVEY PERMISSION COURTESY OF
CYPRUS EXPLORATION CORPORATION LTD.

LINE 16 N
BIG ONION PROSPECT
AT
SMITHERS, B.C.

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ASSESSMENT REPORT

NO. 3747 MAP

GEOPHYSICS

INDUCED POLARIZATION SURVEY

EQUIPMENT AND SURVEY

A 400 ft. Wenner array was employed during the survey using a Sabre 500 watt pulse-type I. P. unit. This unit is manufactured by Sabre Electronic Instruments Ltd., Burnaby, B. C., and is powered by a 12 volt aircraft storage battery. Steel rods 4 ft. long by $\frac{1}{2}$ in. diameter were used as current electrodes. The potential electrodes were porous pots filled with a supersaturated copper sulphate solution. Several readings were taken at each station to ensure accuracy. Communication between the operator and electrode men was by walkie-talkie. Experience has shown that this I. P. unit is capable of penetration equal to the spread when using a Wenner array. At Newman (see Appendix I), Noranda's Bell Copper development on Babine Lake, a good response was obtained through 100 ft. of cover (measured by several drill holes along the profile) on Line 25 E using a 400 ft. Wenner array. The chargeabilities recorded in the same area with a 200 ft. spread were still anomalous, but only about half as strong as those recorded by the 400 ft. array.

RESULTS

A map showing chargeabilities and apparent resistivities recorded during the survey of the H.D.P. claims is included in a pocket at the back of this report.

Only one chargeability value over 0 was recorded during the survey and this was on Line 34 E at 46 S; therefore, the possibility of porphyry copper mineralization on the H.D.P. claims can be ruled out.

A study of the apparent resistivity pattern reveals a north-east trending resistivity low about 500 to 600 ft. wide which balloons into a partly sub-circular feature in the northeast corner of the survey area. This feature could be caused by either a low resistivity environment in the bedrock, or a thickening in the overburden so that the cover is in excess of 400 ft. deep.

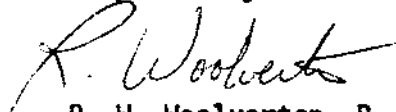
CONCLUSIONS AND RECOMMENDATIONS

If a surface examination of the northeast trending resistivity low suggests that it is, in fact, a bedrock feature, further work is required to determine the source of this resistivity feature.

If it appears that the cover could be less than 50 ft. over the resistivity low, a 50 ft. dipole-dipole frequency survey would probably pick up any mineralized veins present within the resistivity low.

If the cover is in excess of 50 ft., it would be difficult to geophysically locate mineralized veins similar to those at Bradina. Notably, however, the Bradina environment has a strong coincident mercury halo (see Minister of Mines Report 1965, Page 109). Depending on the type of overburden present, a vein swarm within the resistivity low might be detected by analyses of soil samples for mercury content.

Respectfully submitted,



R. W. Woolverton, P. Eng.

APPENDIX II

DECLARATION OF EXPENDITURES



Evergreen Explorations Ltd.

CONTRACT EXPLORATION

• R. WOOLVERTON
GEOLOGIST, P.ENG.

• R. C. O'BRIEN
FIELD SUPERVISOR

• JOHN C. OSWALD & CO., C.A.'s
ACCOUNTANTS:

635 - 789 W. PENDER ST.
VANCOUVER 1, B.C., CANADA

• 5424 HALIFAX ST., BURNABY 2, B.C., CANADA, PHONE - 299-6998

• P.O. BOX 604, SMITHERS, B.C., CANADA PHONE - 847-3523

July 24, 1972.

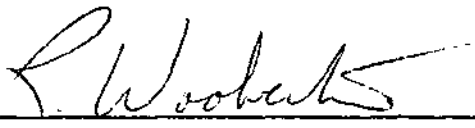
Conquest Explorations Ltd. (N.P.L.),
P. O. Box 352,
Smithers, B. C.

INVOICE NUMBER 1

TO: Surveying approximately 9 line miles with Induced
Polarization Equipment, cutting 2,200 feet of
baseline, and submitting a report on the above
survey.....\$2,700.00

DECLARATION OF PROJECT CHARGES

The undersigned considers the preceding invoices applicable
as assessment work.



R. W. WOOLVERTON, P. ENG.

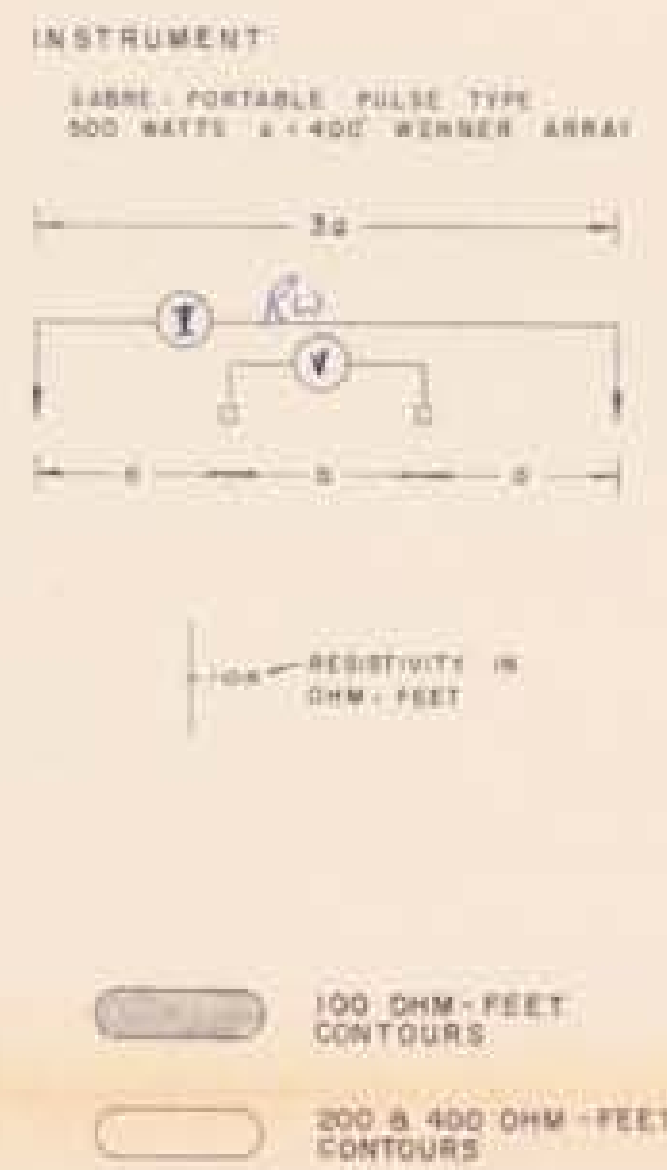
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M-3

LEGEND



TO ACCOMPANY A REPORT BY R. WOOLVERTON, P. ENG.
 ON THE H.D.P. CLAIMS DATES 24 July 1977
 R. Woolberton

CONQUEST EXPLORATIONS LTD. (N.P.L.)
 H.D.P. CLAIMS
 INDUCED POLARIZATION SURVEY
 CONTOUR PLAN
 OMINECA M.D., B.C.



SURVEY BY EVERGREEN EXPLORATIONS LTD
 MAY, 1972

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 NO. 3747 MAP #3