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6484

Report on Geophysical Work and Linecutting
Conducted on Nabob Claim and
The New Buck - Nabob Group

Omineca Mining Division

Lat. 54° 18' Long. 126° 37'

Nabob Claim	438 (10)
New Buck Claim	316 (6)
Lorne Claim	318 (6)

On behalf of

Mid Mountain Mining Ltd. (FMC 153746)
506 - 540 Burrard Street,
Vancouver, B.C.

H.S. Eisler (FMC 153747)
506 - 540 Burrard Street,
Vancouver, B.C.

G. Creech (FMC147058)
55 Albert Street
Kamloops, B.C.

L. Hansen (FMC 112478)
Ahousat, B.C.

by

Andrew E. Nevin, P. Eng.

With detailed supplemental report by
Mauro G. Berretta, Geophysicist

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT

NO. _____

Work performed in the period
September 23 - October 11, 1977

Date of report October 31, 1977

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With detailed supplemental report by
Mauro G. Berretta, Geophysicist

Work performed in the period
September 23 - October 11, 1977

Date of report October 31, 1977

SUMMARY

An induced polarization survey of 19 line-km on the Nabob, New Buck and Lorne Claims, has outlined an anomalous zone 600 metres by 730 metres. PFE's are above 10 and as high as 22, and are interpreted as deriving from disseminated or massive pyrite.

The commercial significance of this anomaly is that it coincides with a large soil geochemistry anomaly (previously reported) and is immediately adjacent known pyrite - sphalerite-silver-gold mineralization.

We have recommended extensive further work to our client.

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1.0 INTRODUCTION

1.1 Terms of Reference

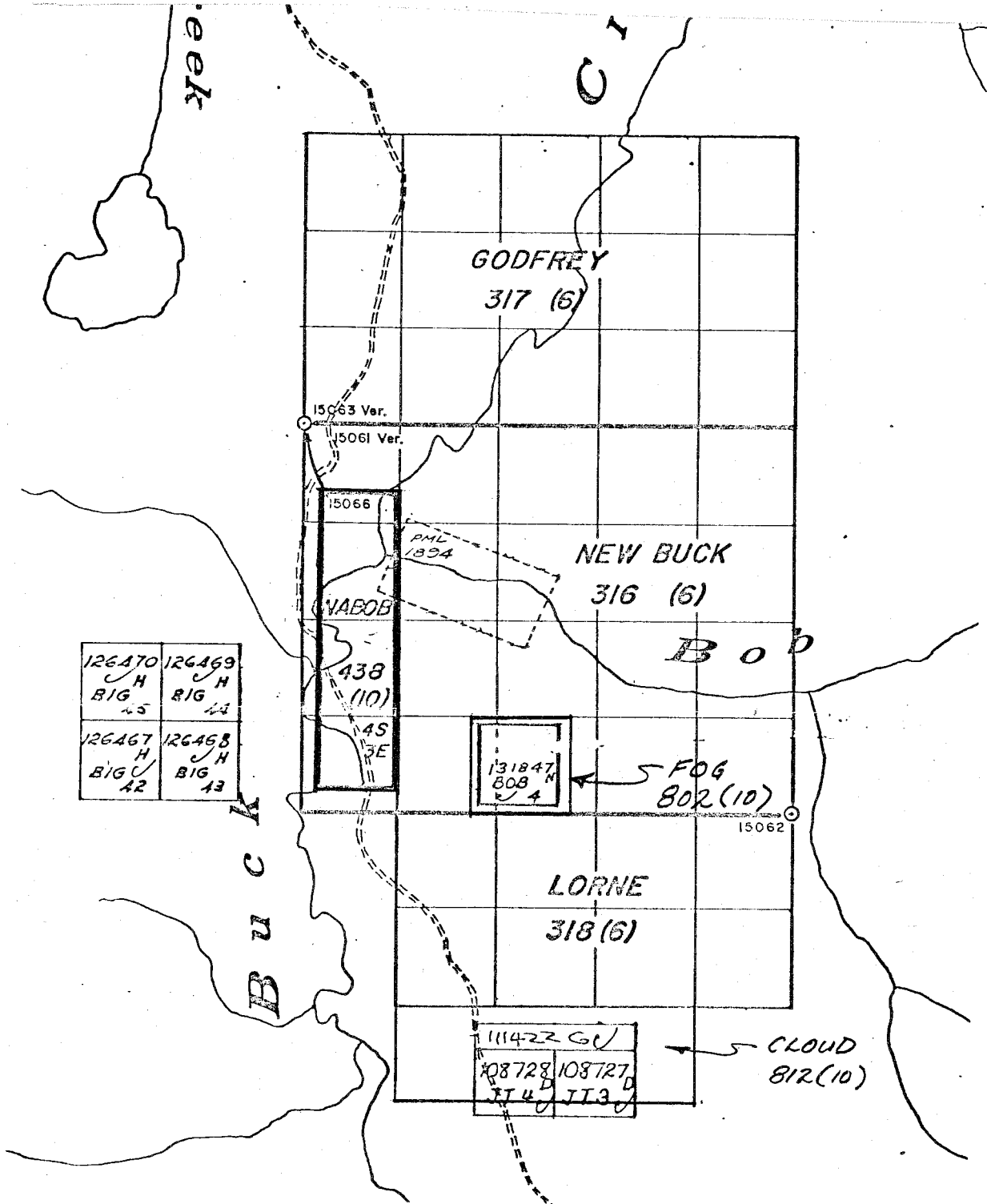
Nevin Sadlier-Brown Goodbrand Ltd. has been continuously retained to conduct work on a property known informally as "Bob Creek Property" by Harold S. Eisler, and his successor as claimholder, Mid Mountain Mining Ltd., of which Mr. Eisler is a director.

Reports of prior work by our firm are listed below:

- (1) Report on Bob Creek Massive Sulfide Prospect, Omineca B.C., February 11, 1977, by Andrew E. Nevin, P. Eng., 11 pages, 3 drawings, 1 table; reproduced in Statement of Material Facts, B.C. Supt. Brokers/VSE, Mid Mountain Mining Ltd., Filed October 3, 1977.
- (2) Addendum to Report on Bob Creek Massive Sulfide Prospect, July 14, 1977, by Andrew E. Nevin, P. Eng., 5 pages, 5 drawings; reproduced in above Statement of Material Facts, October 3, 1977.
- (3) Report on Geological and Geochemical Work Conducted on the New Buck - Godfrey Group and the Lorne Claim, Omineca M.D., B.C., June 15, 1977, and by J.T. Crandall, P. Eng., and Andrew E. Nevin, P. Eng., 11 pages, 6 drawings, 11 pages in Appendices A-D; submitted to B.C. Ministry of Mines and Petroleum Resources as Assessment Work Report.

The reader of this report is referred to the above for information on the regional geology, history, and recent work on the property.

In summary, the above reports state that the Bob Creek prospect consists of pyrite - sphalerite - gold - silver mineralization (mineralogy of the gold and silver is not known) present in limited exposures of Mesozoic rhyolite and rhyolite breccias. A large co-incident soil anomaly of copper, zinc, silver, and lead is located in an area of poor outcrop immediately southwest of the exposed mineralization.



Drawing 1 - Location Map reproduced from Ministry of Mines Claim Map 93L/7E, showing relative position of claims.

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1.2 Legal Status of Claims

Work described in this report is to be applied to only some of the claims making up the property. For reference purposes the entire property is listed, and is shown on the map, Drawing 1 of this report:

<u>CLAIM</u>	<u>RECORD NO.</u>	<u>COMMENTS</u>
Godfrey	317 (6)	15 units
New Buck	316 (6)	20 units but has internal fractions
Nabob	438 (10)	12 units, covers an internal fraction within New Buck of about 3 units
Fog	802 (11)	1 unit, covers another fraction within New Buck
Lorne	318 (6)	8 units
Cloud	812 (11)	3 units

We understand that approval has been received from the Superintendent of Brokers and the Vancouver Stock Exchange to transfer the Godfrey, New Buck, Nabob and Lorne claims from the original owners, Messrs. Eisler, Hansen and Creech, to Mid Mountains Mining Ltd., and we further understand that this transfer is in progress.

The Fog and Cloud Claims were staked in September and October 1977 by Mr. Dick Moraal of our company as agent for Mr. Eisler. These claims will be transferred as well.

1.3 Application of Work

Work described in this report has been recorded in three instruments:

- (1) Form B (Section 51) Affidavit on Application to Record Work, by Dick Moraal as agent for H.S. Eisler, Smithers, October 3, 1977 in the amount of \$1200.00 for geophysical work applied to Nabob Claim.
- (2) Form I, Notice to Group, by Andrew E. Nevin as agent for Eisler, Hansen, Creech, and Mid Mountain, according to their interest, Vancouver, October 31, 1977, covering Nabob, New Buck, and Lorne claims, as New Buck - Nabob Group.
- (3) Form 3 (Section 51) Affidavit on Application to Record Work, by Andrew E. Nevin as agent for Eisler, Hansen, Creech, and Mid Mountain, according to their interest, Vancouver, October 31, 1977, in the amount of \$8000.00 plus a credit of \$2200.00 toward additional years.

This report is submitted in support both of the above Affidavits.

1.4 Location and Access

The property is located 6 miles due south of Houston, B.C., and is centred on Lat. $54^{\circ} 18'$ and Long. $126^{\circ} 37'$ on NTS Map Sheet 93L/7E (Dwg. 1). Access is from Houston via an all weather gravel road.

2.0 Work Performed

The Supplemental Report by Mauro G. Berretta, included as Appendix B, provides details of the geophysical work done, instrumentation, and conclusions.

Mr. Dirk Moraal, of Nevin Sadlier-Brown Goodbrand Ltd., performed line-cutting and field supervisory work. Approximately 11.8 line miles or 19 line-kilometres were cut and flagged by Moraal.

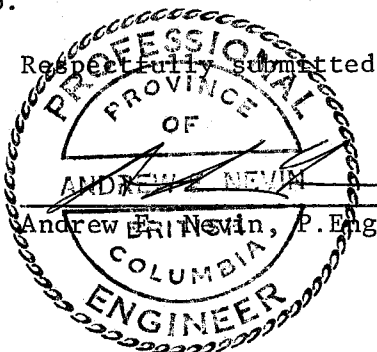
3.0 Claim and Grid Locations

Two maps are provided with this report: A location map, Drawing 1, a photocopy of a current Ministry of Mines Claim Map 93L/7E, and a geologic map, Drawing 2, which has been reproduced from our report of June 15, 1977. The purpose of the latter is to "tie" the IP results to the geology, and to show the location of claim posts and grid reference points.

Mr. Berretta's Supplemental Report contains four drawings, one generalized location map (reproduced from an earlier report by our firm), and one IP map, one Resistivity Map, and one Pseudosection through the main part of the anomaly.

The grid coordinates on Berretta's maps are the same as those on the Geologic Map.

Respectfully submitted



Andrew E. Nevin, P. Eng.

October 31, 1977

APPENDIX A: DECLARATION OF WORK DONE

I, Andrew E. Nevin, P.Eng., of Vancouver, B.C. hereby declare that:

1. The field work described in this report was performed by Dirk Moraal, Technical Assistant, September 23 - October 11, 1977; and Maura G. Berretta, Geophysicist, and crew of five employed by Berretta as scheduled in the Supplemental Report of Appendix B, September 28 - October 7, 1977; and planning, supervision and analysis of data by Andrew E. Nevin, P.Eng., September 28 - October 31, 1977; and, work applied to the Nabob Claim by Affidavit recorded October 3 was conducted during the period September 23 - 30, 1977; and work applied to the New Buck-Nabob group was conducted during the period September 23 - October 11, 1977 on the New Buck and Lorne Claims and during the period October 2-11, 1977 on the Nabob Claim; and
2. The true cost of this work consisted of fees charged by Nevin Sadlier-Brown Goodbrand Ltd. and disbursements at cost plus 10 percent scheduled as follows:

FEES

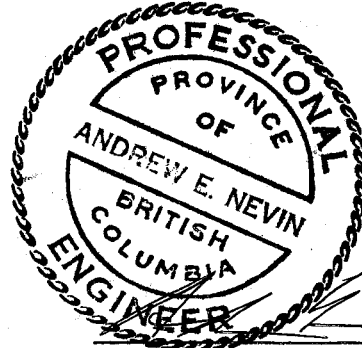
Dirk Moraal, Tech. Asst., 14 days @ \$123.20	\$ 1,724.80
less time spent staking and recording	(369.60)
A.E. Nevin, P.Eng., 1.9 days @ \$300.00	<u>570.00</u>
	\$ 1,925.20

Disbursements

N. V. Cukor, Drafting	\$ 184.00
Deakin Equipment, Field Supplies	196.39
Tilden, Truck Rental	486.23
M.G. Berretta, IP Survey	7,092.00
B.C. Tel	20.14
Western Reproducers, Field Maps	15.40
Field expenses, gas, hotel, meals	<u>634.80</u>
	\$ 8,628.96
Burden at 10%	<u>862.90</u>
	Total \$11,417.06

3. The allocation of this work is as follows:

a) Nabob Claim, 12 units, Affidavit recorded by Dirk Moraal, in Smithers, October 3, 1977, M.R. No. 93742E	\$ 1,200.00
b) New Buck-Nabob group	
New Buck Claim (\$600 prior credit) this work	3,400.00
Lorne Claims (\$200 prior credit) this week	1,400.00
Nabob Claim, this work	2,400.00
c) New Buck Claim Future Credit	3,000.00
d) Not applicable surplus	
	<u>17.06</u>
	\$11,417.06



Andrew E. Nevin, P.Eng.

October 31, 1977

APPENDIX B: SUPPLEMENTAL

REPORT ON GEOPHYSICAL

WORK

by

Mauro G. Berretta, Geophysicist

including figures 2-4

in pocket

MAURO G. BERRETTA

TELEPHONE (604) 462-7705

GEOPHYSICIST

26935 - 100TH AVENUE
WHONNOCK, B.C.

CANADA

SUMMARY

An induced polarization survey on the Bob Creek Property, Houston, B.C., has outlined an anomalous zone about 2000' by 2400' within an acid volcanic rock unit. Response amplitudes indicate the presence of pyrite and possibly chalcopyrite and galena in unknown relative proportions, of up to 5% if disseminated, and substantially higher if massive. Due to the possibility of pyrite halos or envelopes in close association with copper, zinc, lead and silver minerals, it is recommended that this zone be tested with several drill holes in order to determine its economic importance.

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1. INTRODUCTION

During the period from September 28 to October 7, 1977, an induced polarization survey was carried out, at the request of Nevin, Sadlier-Brown, Goodbrand Ltd., on the Bob Creek Property, Houston, B.C., of Mid Mountain Mining Ltd.

Claims

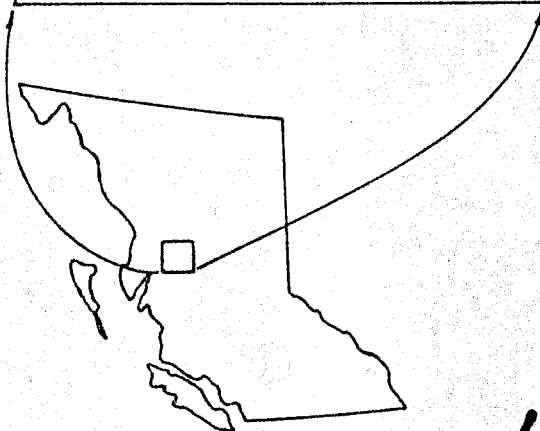
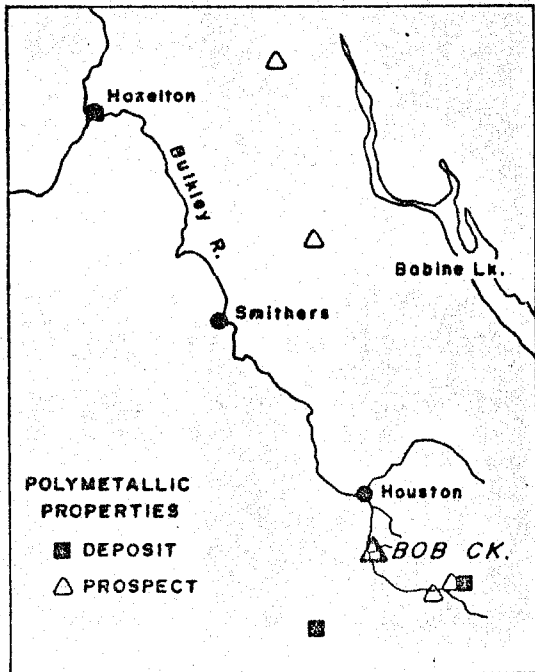
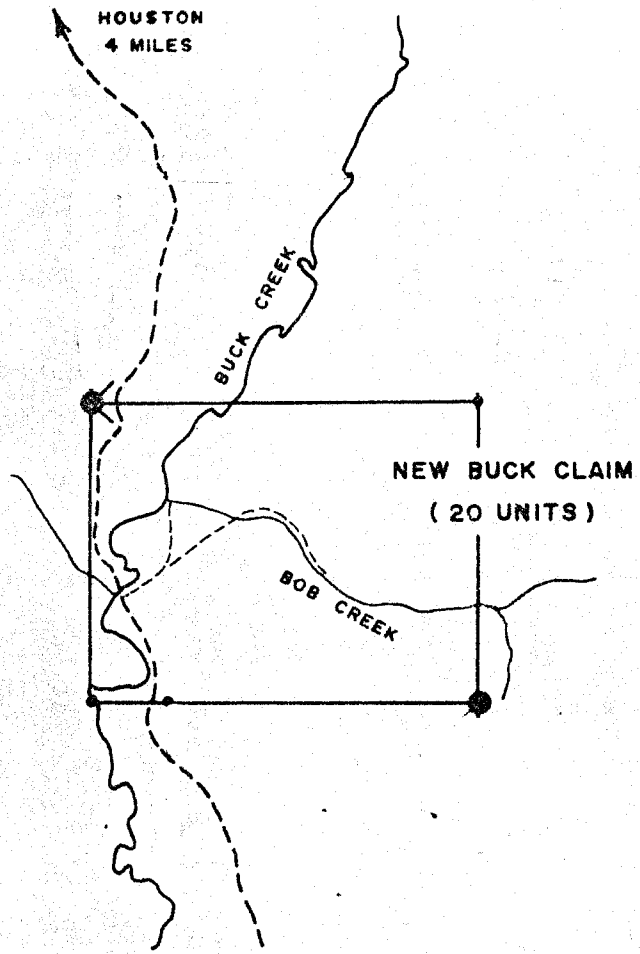
NEW BUCK	- 20 units	Record No. 316(6)
NABOB	- 12 "	" " 438(8)
FOG	- 1 "	Staked Sept. 26/77 and recorded Oct. 3/77 by D. Moraal as agent for H.S.Eisler

The property is located approximately 6 miles south of Houston, B.C., and is accessible via the Buck Creek road.

Crew

Mauro G. Berretta, M.Sc., Geophysicist/interpreter
 Charles Locke, Junior Geophysicist/Party Chief
 Alan Watson, Geophysical Operator
 Patricia Macy, Field Assistant
 Pierre LeBlanc, Field Assistant
 Ed Brabander, Field Assistant

The instrumentation used consisted of a Sabre Mk 2 450 watt frequency domain system. A dipole-dipole array was employed with $a=300'$, $n=2$, frequency span of 0.3-10 Hz, and a 300' station interval for basic coverage. Detail measurements were also made at 150' intervals using $a=300'$, $n=2$; $a=300'$, $n=1$; and $a=150'$, $n=1$. A total of 223 stations were surveyed.



**MID MOUNTAIN MINING
Ltd**
BOB CREEK PROSPECT
LOCATION MAP

6484

Dwg. 1

July 5, 1976

NEVIN SADLIER-BROWN GOODBRAND LTD.
CONSULTING GEOLOGISTS · VANCOUVER, B. C.

2. GEOLOGY

The property is underlain by Mesozoic acid volcanics, mainly composed of rhyolite, which have been intruded by a small gabbro plug near the central part of the survey area. These are overlain in part, by younger andesites and basalts. Due to extensive overburden, the extent of this cover is not known. Scattered outcrops and trench exposures have detected the presence of metallic mineralization within the rhyolites, consisting primarily of pyrite, and also some sphalerite, chalcopyrite, galena, silver and gold. Also, the acid volcanic rocks display kaolin and sericite alteration.

3. INDUCED POLARIZATION RESULTS AND INTERPRETATION

The survey parameters used for basic coverage give an effective depth of penetration of about 300'. Detail readings were made at depths of about 150' and 75'.

Resistivity

The resistivity data, shown in Figure 2, displays a range from about 50 ohm-m. to about 700 ohm-m. This is a very narrow range and hence it is difficult to extrapolate geological structure. The average level of these values suggests a somewhat widespread degree of rock fracturing, porosity and alteration, as well as the presence of possibly

conductive overburden. The main feature is a north-east trending belt of higher resistivities (400-600 ohm-m) in the central part of the survey area. A series of gabbro outcrops near the core of this zone indicate that, at least in part, these rocks may be the cause of the high. Andesite cover, probably thin, may also contribute to this resistivity high. Rhyolites appear to exhibit resistivities in the 100 to 200 ohm-m range, except southwest of the Bob Creek gorge, where higher values are noted. At the north end of the survey area, on line 20E, a resistivity high is probably due to basalts. The resistivity low in the west-central part of the property may be an overburden effect. It should be emphasized that the above interpretation is at best tentative, since the observed resistivity variations could be caused by changes in overburden conductivity and depth.

Percent Frequency Effect

The pfe data is shown in Figure 3. Background responses of 3-5% are observed in several, small scattered zones and are probably due to barren gabbro and basalt rocks. Elsewhere, background is in the range of 5-10%. This is indicative of widespread disseminated pyrite and/or alteration within acid volcanics, and possibly also within overlying andesites. A large anomalous area is found on lines 20E to 40E from 4N to about 28N. Within this zone are two strong anomalies. One, anomaly A, is located from 20E to 30E, from 20N to 24N. The second, anomaly B, occurs on lines 25E to 40E from 8N to 28N. Line 30E was detailed in an attempt to obtain depth

information on both of these features. The results are shown in Figure 4. Both anomalies display good depth extent, with maximum response at about 300'. Depth to top is in the order of 100'. At 9N and 20N they appear to be within 50' of surface. Dip is tentatively estimated to be northerly. Corresponding resistivities are in the range of 100-400 ohm-m. A resistivity increase is noted near surface, and this is thought to be due to either a thin andesite cover (50-75') from 12N to 22N, or to decreasing fracturing and/or mineralization within acid volcanics near surface. Anomaly amplitudes of about 20%, are indicative of sulphide minerals such as pyrite, chalcopyrite and possibly galena, in unknown relative proportions, of up to 5% by volume if disseminated, and substantially higher if massive. Sections of these zones that tend to be associated with lower resistivities, are more likely to be due to more massive mineralization.

Two other responses, one at 24N,00E and the other at 12S from 10E to 20E, are viewed as interesting and worthy of more i.p. before any interpretation can be made.

4. RECOMMENDATIONS

It is recommended that anomalies A and B be tested with several drill holes in order to determine their economic importance. The possible association of pyrite halos or envelopes with zinc, copper, lead and silver sulphides places

great importance on zones of lower pfe response that are adjacent to anomalies A and B, such as at 7N, 11N and 19N, on line 30E.

Exact drill sites should be selected in light of all geophysical, geological and geochemical data. Additional i.p. detail, on lines 20E, 25E and 35E, would be extremely valuable in spotting holes.

5. AUTHORIZATION

Authorization is given to submit or distribute all or part of this report, provided the meaning and intent are not altered by partial reproduction.

Respectfully submitted,



Mauro G. Berretta, M.Sc.,

Geophysicist

October, 1977
Whonnock, B.C.

MAURO G. BERRETTA

TELEPHONE (604) 462-7705

GEOPHYSICIST

26935 - 100TH AVENUE
WHONNOCK, B.C.

CANADA

I, Mauro G. Berretta, do hereby certify that I have the following qualifications.

ACADEMIC

- 1964- B.Sc. (Physics) - University of Windsor
- 1965- M.Sc. (Physics) - University of Windsor
- 1967-69- Ph.D. Studies (Geophysics) - U.B.C.

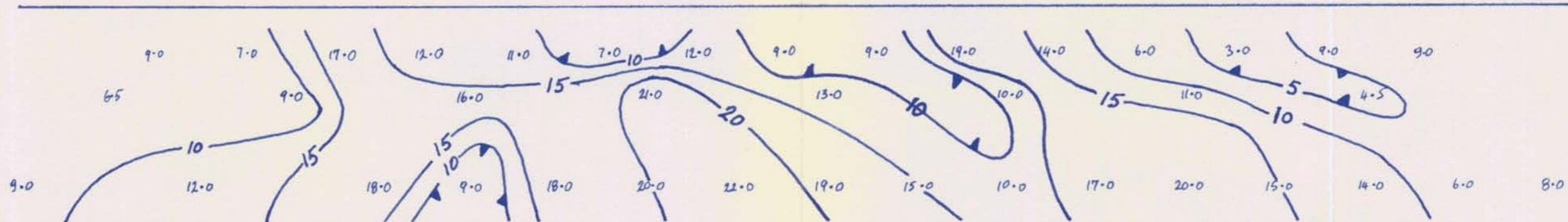
PROFESSIONAL AND RELATED EXPERIENCE

- 1963-64- oceanography and marine geophysics research with Great Lakes Institute, University of Toronto
- 1968-69- lecturer in exploration geophysics (GP400,GP402) with Dept. of Geophysics, U.B.C.
- 1970-present- instructor in mining and petroleum geophysics with British Columbia Institute of Technology
- 1968-present- geophysical exploration as an employee, consultant, joint-venture partner with numerous mining and oil companies in B.C., Yukon, and U.S.A.
 - experience in all phases of geophysics, (i.p., mag, e.m., seismic, gravity), with special concentration on i.p. and e.m. methods (in excess of 1000 survey miles)
- 1974-75- President, British Columbia Geophysical Society

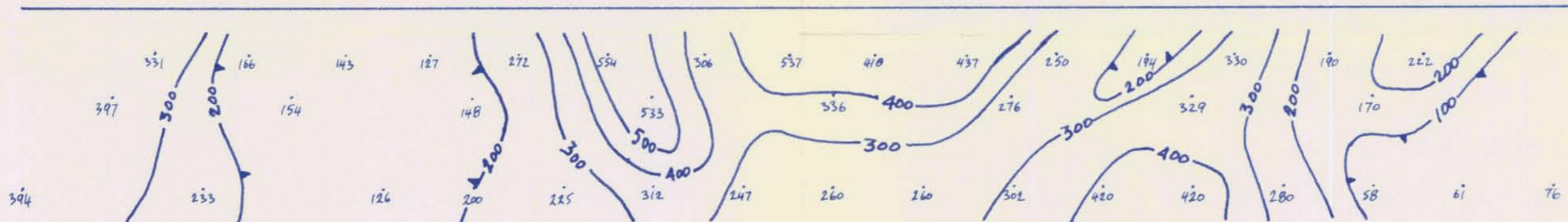


4N | 6N | 8N | 10N | 12N | 14N | 16N | 18N | 20N | 22N | 24N | 26N | 28N | 30N

PFE %



RESISTIVITY ΩM

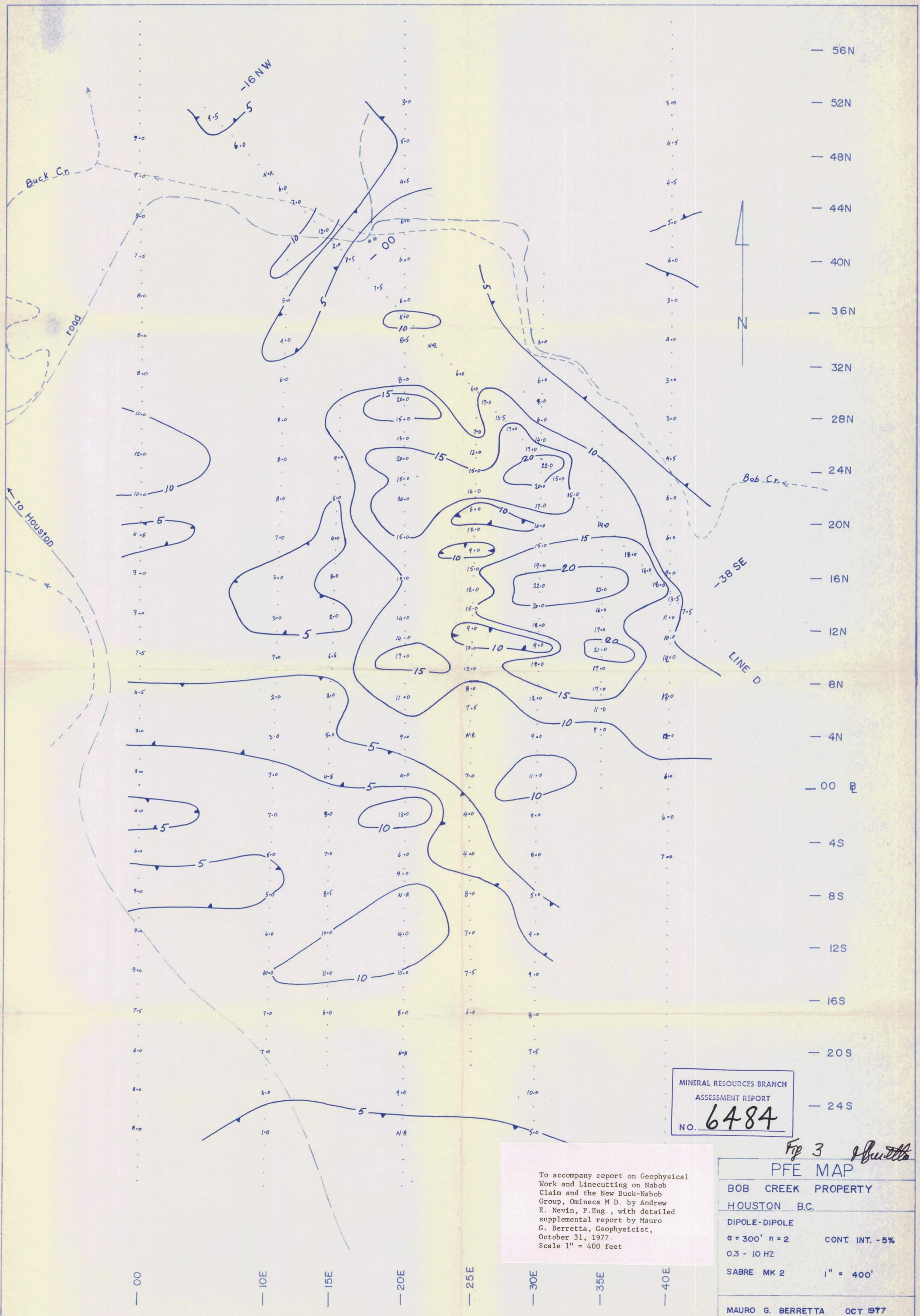


MINERAL RESOURCES BRANCH
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To accompany report on Geophysical Work and Linecutting on Nabob Claim and the New Buck-Nabob Group, Omineca M D. by Andrew E. Nevin, P.Eng., with detailed supplemental report by Mauro G. Berretta, Geophysicist, October 31, 1977.
Scale 1" = 400 feet

Fig 4 *Al Berretta*

I.P. DETAIL - L30E	
BOB CREEK PROPERTY HOUSTON, B.C.	
DIPOLE-DIPOLE	0.3-10HZ
a = 300' n = 2	450 W
a = 300' n = 1	SABRE MK 2
a = 150' n = 1	1" = 200'
MAURO G. BERRETTA OCT. 1977	

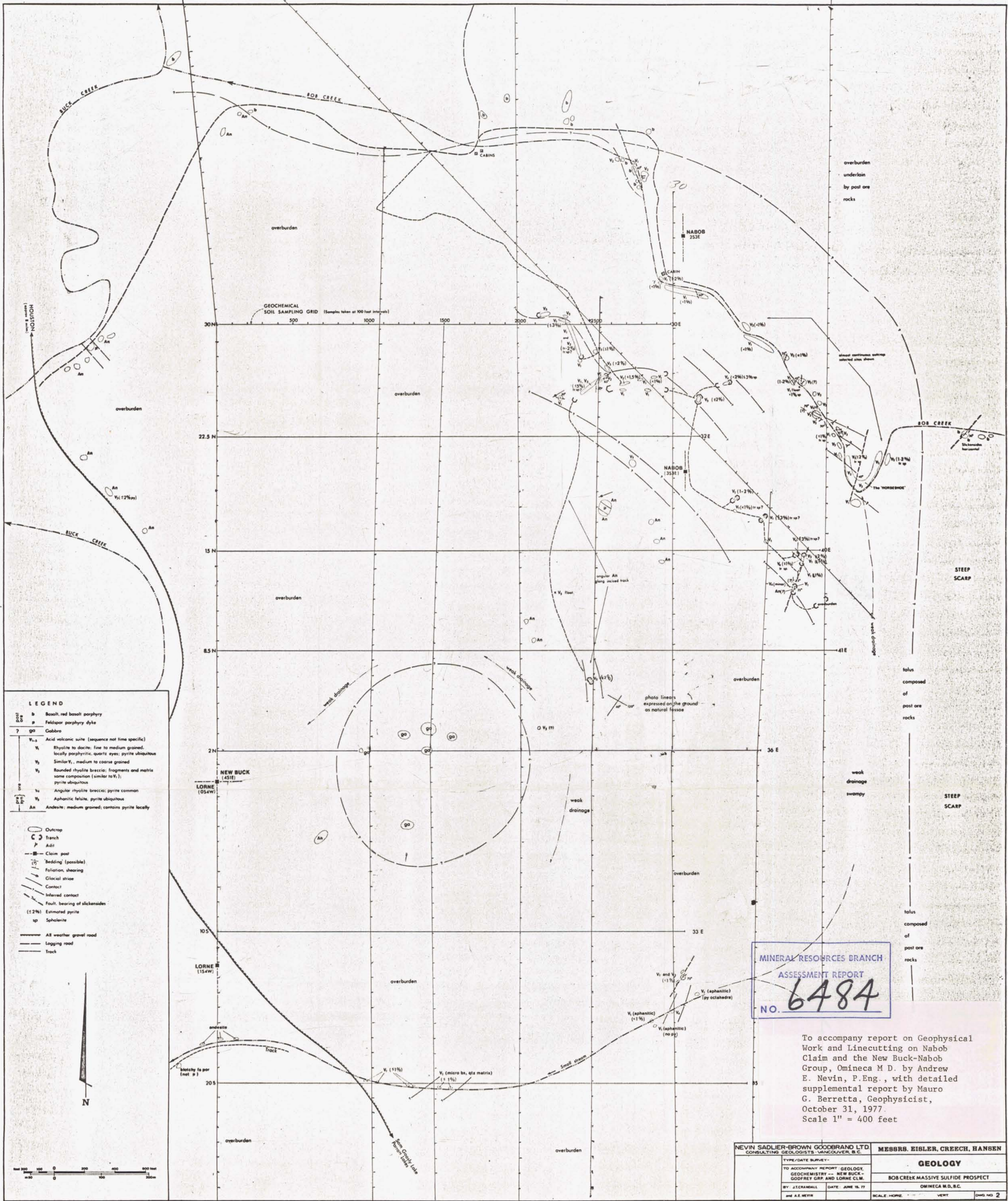


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Fig 3 Berretta

PFE MAP	
BOB CREEK PROPERTY	
HOUSTON B.C.	
DIPOLE-DIPOLE	
$a = 300'$ $n = 2$	CONT. INT. -5%
0.3 - 10 HZ	
SABRE MK 2	1" = 400'
MAURO G. BERRETTA OCT 1977	

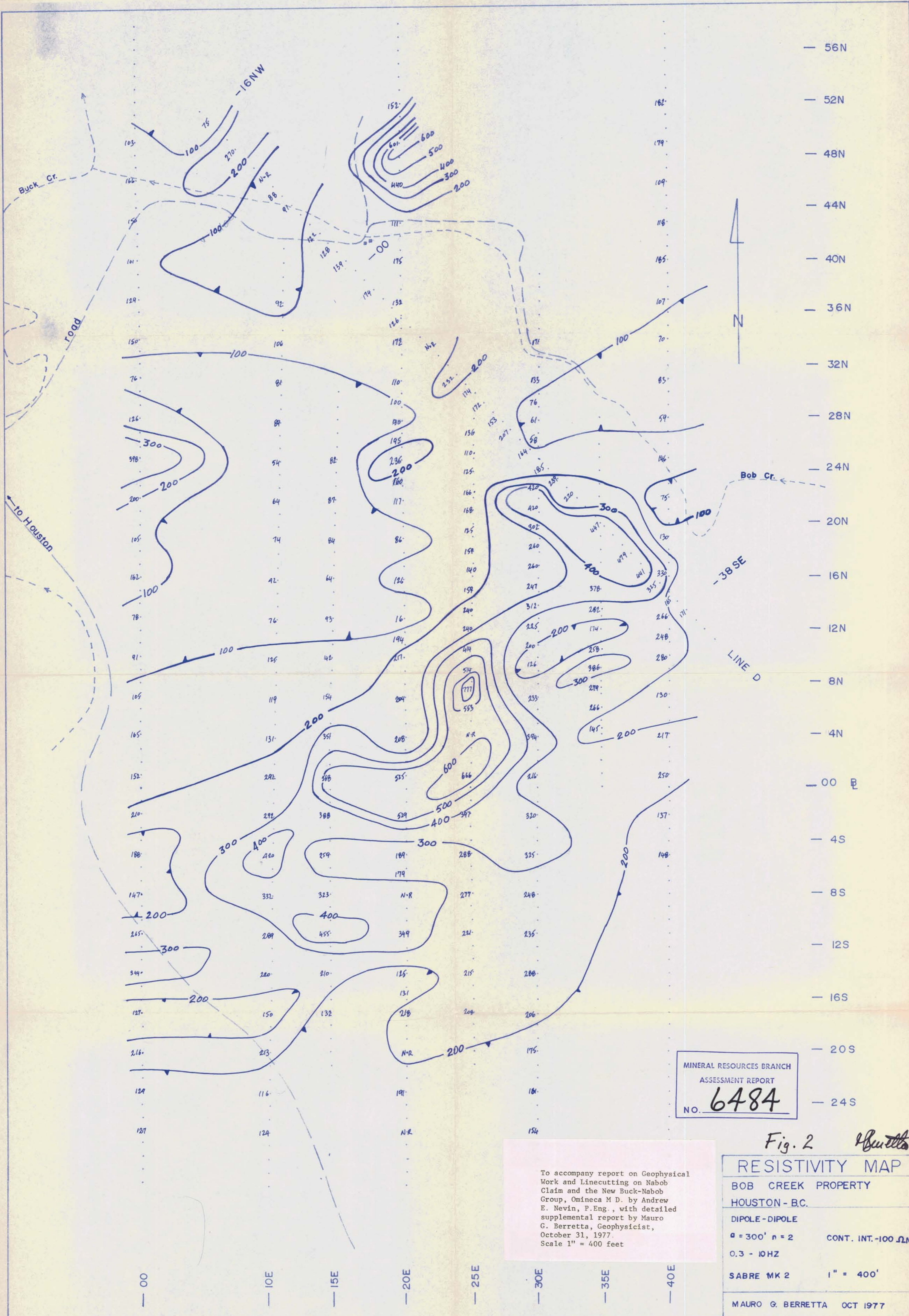


- LEGEND**
- Rock**
 - soil**
 - ore**
 - Other**
- b Basalt, red basalt porphyry
 - p Feldspar porphyry dyke
 - go Gabbro
 - V₁₋₃ Acid volcanic suite (sequence not time specific)
 - V₁ Rhyolite to dacite; fine to medium grained, locally porphyritic, quartz eyes; pyrite ubiquitous
 - V₂ Similar V₁, medium to coarse grained
 - V₃ Rounded rhyolite breccia; fragments and matrix same composition (similar to V₁); pyrite ubiquitous
 - V₄ Angular rhyolite breccia; pyrite common
 - V₅ Aphanitic felsite, pyrite ubiquitous
 - An Andesite; medium grained; contains pyrite locally
- Outcrop
 - ⊖ Trench
 - ⊕ Adit
 - Claim post
 - - - Bedding (possible)
 - ⊥ Faultation, shearing
 - ⊥ Clacial striae
 - ⊥ Contact
 - ⊥ Inferred contact
 - ⊥ Fault, bearing of slickensides
 - (%) Estimated pyrite
 - sp Sphalerite
 - All weather gravel road
 - Logging road
 - Track

MINERAL RESOURCES BRANCH
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NO. 6484

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Scale 1" = 400 feet

NEVIN SADLER-BROWN GOODBRAND LTD. CONSULTING GEOLOGISTS - VANCOUVER, B.C.		MESSRS. EISLER, CREECH, HANSEN	
TYPE/DATE SURVEY: TO ACCOMPANY REPORT GEOLOGY, GEOCHEMISTRY -- NEW BUCK - GODFREY GRP AND LORNE CLM.		GEOLOGY	
BY J.C. RANDALL DATE: JUNE 18, 77		BOB CREEK MASSIVE SULFIDE PROSPECT	
AND A.E. NEVIN		OMINECA M.D., B.C.	
SCALE: HORIZ.	VERT.	DRAWING NO. 2	



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Fig. 2 *Berretta*

RESISTIVITY MAP	
BOB CREEK PROPERTY	
HOUSTON - BC.	
DIPOLE - DIPOLE	
a = 300' n = 2	CONT. INT. - 100 ΩM
0.3 - 10 HZ	
SABRE MK 2	1" = 400'
MAURO G. BERRETTA OCT 1977	