

6304

Report on Geological and Geochemical
Work Conducted on the New Buck -
Godfrey Group and the Lorne Claim,

Omineca Mining Division

Lat. $54^{\circ} 18'$ Long. $126^{\circ} 37'$

New Buck Claim	316 (6)
Godfrey Claim	317 (6)
Lorne Claim	318 (6)

On behalf of

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

G. Creech (FMC 147058)
55 Albert Street
Kamloops, B.C.

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Ahousat, B.C.

By

John T. Crandall, P.Eng.
Andrew E. Nevin, P.Eng.

June 15, 1977

MINERAL RESOURCES BRANCH

ASSESSMENT REPORT

NO. _____

SUMMARY AND RECOMMENDATIONS

Gold, zinc, silver and copper values and widespread pyritization in Mesozoic acid volcanics and breccia indicate that the Bob Creek property is an important massive sulfide prospect.

The property is made up of the New Buck-Godfrey group and Lorne claim, a total of 43 units, located six miles south of Houston, B.C., and a short distance north of the Bradina Mine and Sam Goosly deposit.

Geologic mapping and a soil geochemical survey were conducted on the prospect in May, 1977.

Mineralized rhyolite and rhyolite breccia overlie a sequence of andesitic flows. The volcanic pile is presently tilted to the north-east in the vicinity of Bob Creek and is fault-bounded to the east by post-ore basic volcanics. Coincident zinc, copper, silver and lead (in order of magnitude) soil anomalies are present from several hundred to three thousand feet southwest of the mineralized exposure.

The lithology, structure and mineralization at Bob Creek strongly support the possibility of one or more massive sulfide lenses along strike or down dip within the volcanic pile.

We are recommending to our client that ground E-M and follow up drilling be conducted to search for such a lens.

TABLE OF CONTENTS

	<u>Page</u>
<u>SUMMARY AND RECOMMENDATIONS</u>	
1.0 <u>INTRODUCTION</u>	1
1.1 Terms of Reference	
1.2 Legal Status	
1.3 Location and Access	
1.4 Work Done	
1.5 Allocation of Work for Assessment	
1.6 Exploration History	
1.7 Background	
2.0 <u>GEOLOGY</u>	4
2.1 Regional Setting	
2.2 Lithology	
2.3 Structure	
2.4 Mineralization	
3.0 <u>GEOCHEMISTRY</u>	8
3.1 Sampling Procedure	
3.2 Analytical Procedure	
3.3 Interpretation of Results	
4.0 <u>CONCLUSIONS</u>	9
4.1 Specific Conclusions	
4.2 Our Concept	
4.3 Further Comments	
<u>Maps and Geochemical Plots</u>	
<i>Maps</i> # 1 Location Map (1:50,000) Dwg. 1	Follows page 1
# 2 Geology (1:2400) 2	In pocket
# 2 Copper (PPM) (1:2400) 3	" "
# 3 Lead (PPM) " 4	" "
# 4 Zinc (PPM) " 5	" "
# 5 Silver (PPM) " 6	" "
<u>Appendices</u>	
Appendix A : Tabulation of Analyses	
Appendix B : Annotated References	
Appendix C : Declaration of Work Done	
Appendix D : Statement of Qualification	

1.0 INTRODUCTION

1.1 Terms of Reference

Nevin Sadlier-Brown Goodbrand Ltd. was retained by H.S. Eisler to conduct geological and geochemical investigations on the New Buck, Godfrey, and Lorne claims. This work has been applied to fulfill the assessment requirements for these claims.

1.2 Legal Status

The New Buck claim (316 (6)) is owned by G. Creech (50%) of Kamloops, B.C. and L. Hansen (50%) of Ahousat, B.C. The Godfrey (317 (6)) and Lorne (318 (6)) claims are owned by Harold S. Eisler of Vancouver, B.C., who also holds an option on the New Buck. The first anniversary of the recording of these claims is June 7, 1977. The Notice to Group the New Buck and Godfrey claims was filed June 7, 1977. Affidavits on Application to Record Work for the New Buck-Godfrey group and the Lorne claim were filed June 7, 1977.

Shareholders of Mid Mountain Mining Ltd. are being asked to approve a transfer of the property from Mr. Eisler, the Secretary and a Director of the company, on June 27, 1977. Such transfer would also be subject to approval of regulatory authorities.

1.3 Location and Access

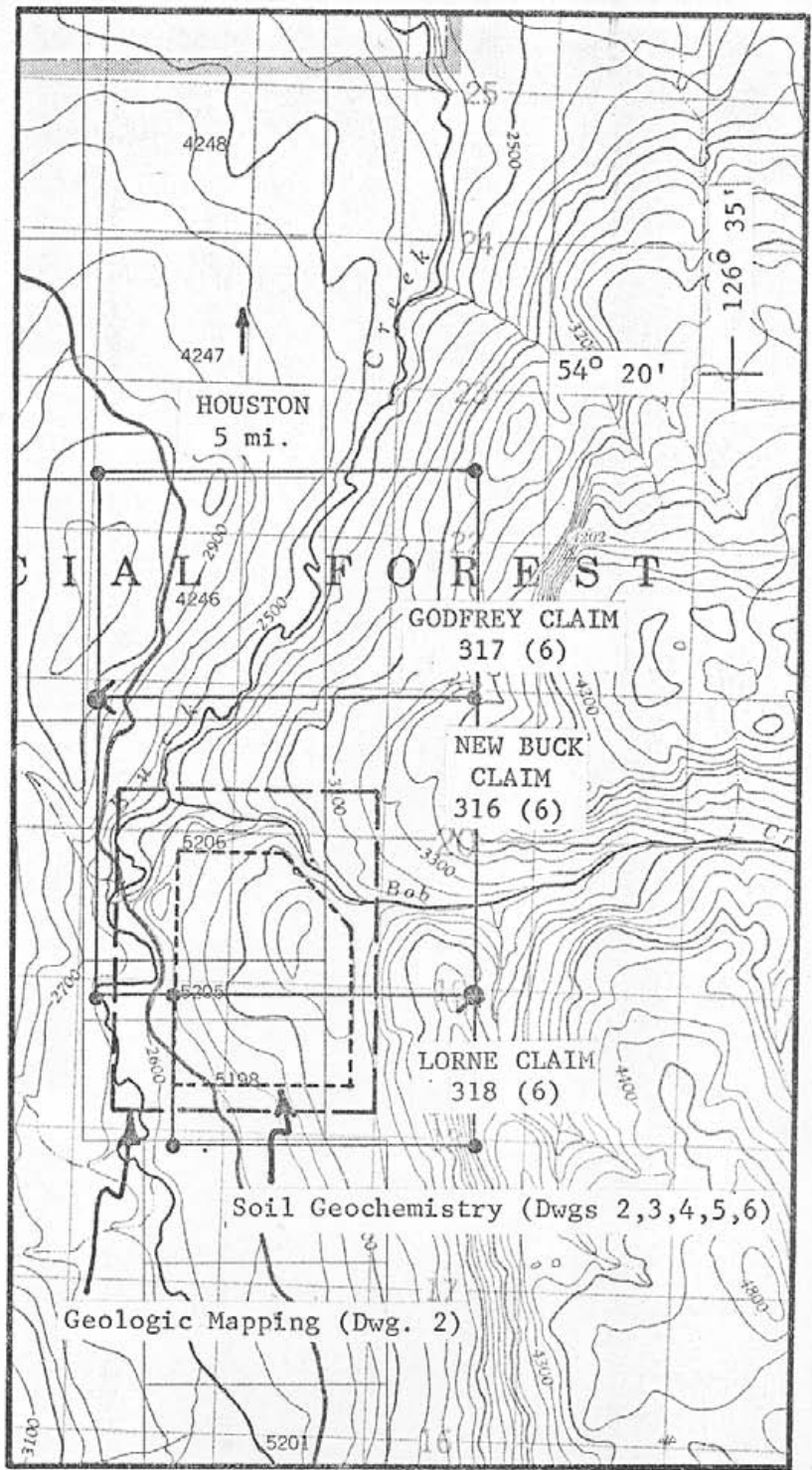
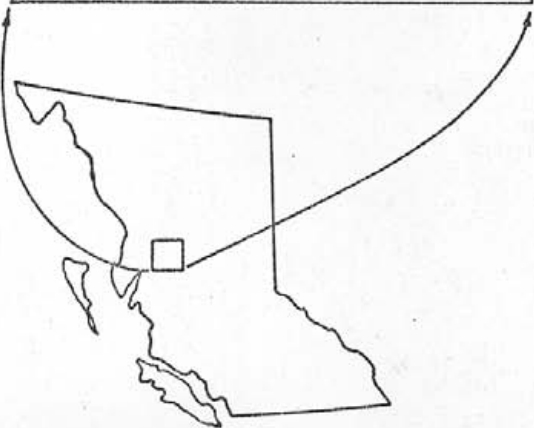
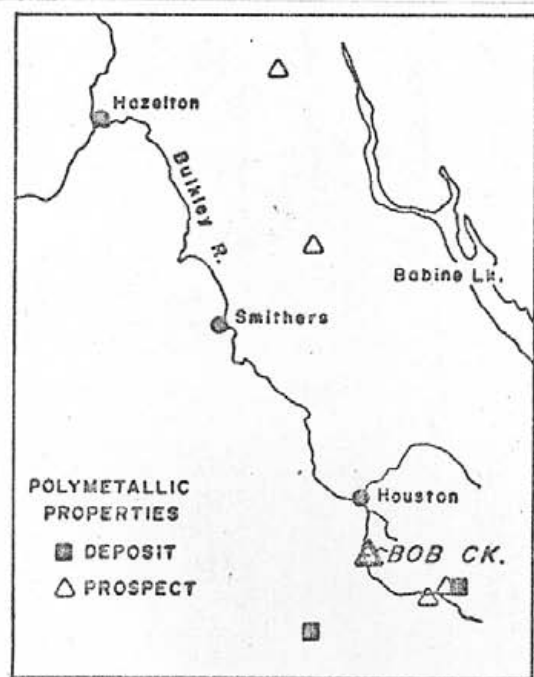
The property is located 6 miles due south of Houston, B.C., and is centred on Lat. $54^{\circ} 18'$ and Long. $126^{\circ} 37'$ on NTS Map Sheet 93L/7E (Dwg. 1). Access is from Houston via an all weather gravel road.

1.4 Work Done

Field work was conducted from May 21 to May 25, 1977.

Geologic mapping was concentrated in the southern portion of the New Buck claim where the Bob Creek gorge and old bulldozer trenches have maximized rock exposure and on the Lorne claim to the south where a creek has developed limited rock exposure. Field lithologies and structures were examined and a geologic model developed to facilitate further exploration.

Roy Londry of Vancouver collected 250 soil samples at 100 foot intervals along seven east-west lines spaced from 650 to 1000 feet



SCALE 1:50,000

LOCATION MAP

BOB CREEK MASSIVE SULFIDE PROSPECT

6304

(198 - 300 metres) apart in the southern portion of the New Buck claim and the Lorne claim. Samples were analyzed for Cu, Pb, Zn, and Ag. Results have been plotted and contoured.

1.5 Allocation of Work for Assessment

The value of the work done, both geological and geochemical has been divided proportionally between the New Buck-Godfrey group of 35 units and the Lorne claim of 8 units. Affidavits regarding assessment work were filed June 7, 1977 in Vancouver to the value of \$1,020.00 for the Lorne claim and \$4,100.00 for the New Buck-Godfrey group.

1.6 Exploration History

The gold-zinc mineralization in the Bob Creek gorge has been known since 1914. It has been extensively prospected and has been considered the source of placer gold at the mouth of Bob Creek. The property was variously known as the Horseshoe, the Bob or Buck, or the Goldbrick.

In 1936 one George Smith mined and jigged 85 tons of ore from an adit in the gorge. Smith produced 12 tons of gravity concentrate from ore calculated to average 0.1 oz/ton gold, 1 oz./ton silver, and 1.1% zinc.

Smith and other early workers drove several short adits, which are visible, but not safe to enter at present.

Premier Gold Mining Company sampled the outcrops and adits, and drilled 783 feet in 3 diamond drill holes in 1945.

The property was subject to examinations by several companies in the 1950's. In 1961 Denison Mines drilled 8 diamond drill holes in the gorge totalling 504 feet. Core recovery was generally poor and reconstruction of assays based on sludge samples suggests that results were too low grade to be of continued interest.

The property was optioned by Minwealth Explorations Ltd. in the late 60's. They retained Lockwood Survey Corporation to fly airborne magnetics and EM surveys, and they conducted some surface geochemical sampling and may have drilled at least one short

diamond drill hole.

ASARCO optioned the property and drilled 7 holes totalling 2101 feet in 1968. These were also confined to the gossan exposed in the gorge.

In 1974 Hudson Bay Oil and Gas, under the direction of Andy Schmidt, P.Eng., obtained rights and conducted widely spaced soil geochemical sampling, and geological mapping of a preliminary nature.

1.7 Background

The old "Bob Creek property" was a gold target for several decades. The intense, but rather shallow, oxidation in the Bob Creek gorge has apparently released and concentrated free gold, which in turn has been eroded and concentrated downstream enough to catch and hold the imagination of various placer lease holders and hard rock miners. Later the gorge attracted interest for its possible porphyry copper potential.

The gorge has been drilled systematically -- and it appears to us, wisely under the circumstances -- at least three times: by Premier, Denison, and ASARCO. A total of 3388 feet have been fanned out to the left, centre and right from the bottom of the gorge. As previous records (some of which are public, some not) show, there are submarginal gold, zinc, silver and copper values underlying the gorge, but no distinct "ore".

The claim holder for decades was the late George Smith, who resided in the bush near the property. Lorne "Bus" Hansen, a hard rock miner with experience in several old B.C. camps entered a partnership with Smith more than a decade ago, which continued upon Smith's death with his son, Godfrey "Gerry" Creech.

Mr. Charles Maddin, a close associate of Harold S. Eisler (our client) and the late J.E.R. Wood, has been intrigued by the Bob Creek property for more than 20 years, and has felt that it has been under-explored. Each time the property was available, Mr. Maddin was otherwise occupied; and each time he was able to option it, it was already under option.

The property came up again in 1976, whereupon Mr. Maddin advised Mr. Eisler, who instructed us to examine it. In the meantime, geologic theory and practical experience on volcanogenic, polymetallic, massive sulfide deposits had evolved in Japan, been honed in Ontario and Quebec, and spread to British Columbia. In due course we examined the property, advised Mr. Eisler, and assisted in his acquisition of a rationalized block of claims.

2.0 GEOLOGY

2.1 Regional Setting

The volcanic rocks of interest on the New Buck-Godfrey group and the Lorne claim are included in unit 'i' of Church's (1972) Study of the Houston-Burns Lake-Francois Lake area. Unit 'i' is of Early to Middle Mesozoic age and comprises largely volcanic rocks varying widely in composition, apparently reflecting repeated eruptive cycles of a calc-alkaline assemblage. Individual units are separated by marked unconformities, in fact, gaps in the record are the rule. Sediments are scarce. Previous workers in the area have assigned these rocks to the Jurassic portion of the Hazelton Group.

Later assemblages consist of Upper Cretaceous continental lavas, pyroclastics and equivalent intrusions, and Tertiary volcanics and acid intrusions.

As the initial extent and angles of repose of the lavas and pyroclastics were highly variable a coherent reconstruction of the deposition and structural history is difficult. Church reports the Tertiary and Upper Cretaceous beds are usually gently dipping while the older Mesozoic assemblage is more variable in attitude, generally displaying steep dips. He recognized important tectonic events ushering in the Cretaceous. This, we feel, reflects a shift from a marine eugeosynclinal, island arc environment to one of continental uplands.

Recent tilting of fault blocks has exposed Mesozoic rocks at the base of these blocks.

The area hosts numerous polymetallic (Au, Ag, Cu, Pb, Zn) showings and deposits, notably the Sam Goosly deposit and the

Bradina Mine, commonly associated with the Mesozoic volcanics.

2.2 Lithology

The principal mineralized outcrop on the property is exposed in a 2000 foot long gorge in Bob Creek (Dwg. 2). It consists of light coloured volcanics (units V₁, V₂) and rounded volcanic breccia (unit V₃). Their composition approximates that of a rhyolite predominantly, and that of a dacite at times. * To the west and south of the gorge numerous bulldozer trenches and few natural outcrops reveal additional mineralized V₁, V₂, and V₃ including unit V₄, an angular rhyolite breccia. A pyritized felsic volcanic (unit V₅) is intercalated with these rhyolite units as well as with intermediate volcanics of andesitic composition further to the west (unit An). To the south, a small creek draining westwards through the centre of the Lorne claim has exposed several small outcrops of pyritized rhyolite and minor rounded and angular rhyolite breccia (V₁, V₃, V₄).

A small gabbroic stock (unit ga) has intruded the andesites and straddles the New Buck-Lorne claim boundary. There are minor feldspar porphyry dykes (unit p) within the andesites as well. The rhyolites are overlain to the east and north by post-ore Tertiary andesites and basalts (unit b). Glacial overburden is extensive over the claims.

The rhyolite has been divided into two units, V₁ and V₂, a textural field classification. The former is a fine to medium grained rock, the latter medium to coarse grained. Both locally display porphyritic and quartz eye texture. Disseminations of pyrite from trace to a few percent is characteristic. The rounded rhyolite breccia is made up of fragments of a composition similar to V₁, sized from a few millimeters to a few decimeters in diameter and fully enclosed in a matrix of similar composition. The fragments are not strongly welded to the matrix and can be plucked from the outcrop. The areal extent and thickness of these flows cannot have been great. Pyrite is ubiquitous and locally there are traces of sphalerite.

* Some descriptions in Sections 2.2 and 2.4 are stated rather more positively than hand-lens observations are normally stated. Field work was supplemented by preliminary petrography (thin sections). No assessment credit is claimed for the petrography, however, and detailed thin section reports are not included in this report.

The northerly exposure of angular rhyolite breccia displays the most spectacular sphalerite. Mineralization occurs with pyrite in a coarse crystalline mode in voids between the breccia fragments. The fragments are aphanitic to very fine grained in texture and vary from less than a centimeter to two or three decimeters in size. The breccia is incompletely cemented with a siliceous matrix. A small exposure of the breccia near the head of the small stream to the south contained no fresh mineralization but was extensively limonite stained. In close proximity a similar rock, included in V₁, while not brecciated, contained numerous pyrite octahedra.

Unit V₅ is an aphanitic-to-fine-grained blue-grey volcanic displaying a fresh aspect and breaking with a sharp conchoidal surface. It is quite siliceous with pervasive disseminated pyrite. The unit appears to be intercalated with both the rhyolites and andesites.

The andesites are light to dark green, medium grained, compositionally uniform, and contain sporadic, light disseminations of pyrite.

Oxidation is well advanced in the rocks in the gorge and in the rhyolites exposed in the trenches. The pyrite and sphalerite have leached, producing a gossan assemblage of hematite, hydrozincite, jarosite and turgite with subordinate amounts of bornite-stained pyrite and gypsum flakes in fractures.

Kaolinization and especially sericitization is extensive in the rhyolites and breccias. Ferromagnesian minerals have been locally chloritized.

2.3 Structure

Several attitudes were measured which may represent tops and bottoms of flows, notably at V₃ - V_{1,2} contacts. Taken together with the distribution of the rocks in outcrop these suggest that the volcanic pile is tilted moderately to steeply to the north and east, and that it now outcrops in arcuate fashion, convex to the east.

Initial dips of the rhyolites and breccia units could have

been quite steep, as much as 35°. Subsequent tectonic events have certainly further distorted the original setting, making it impossible to reconstruct without extensive subsurface work.

The picture is complicated further by faults and shear zones of uncertain displacements. A north-northeasterly-trending fault can be traced at three locations near the eastern margin of the Mesozoic exposure. Dips on the fault surface range from 35° to 75° easterly, and two exposures have slickensides plunging steeply to the northeast. Sense of movement is inferred to have uplifted the mineralized volcanics (western block) resulting in the stripping away of post-ore volcanic cover over the heart of the property. A thin remnant of post-ore rocks is evident to the north of Bob Creek.

The exact nature of the contact between the mineralized rocks and the thick post-ore volcanic pile to the east is not known. It may be a fault sympathetic to that described above, or an unconformity, or a combination of both.

2.4 Mineralization

The principal metallic minerals in order of volume are pyrite, sphalerite, chalcopyrite, galena, silver in unknown form, and gold, both as free gold and in a sulfide matrix, presumably pyrite. The sulfides occur in small lenses, as fine fillings in thin fractures and as coarse aggregates of disseminated grains within the matrix of the rhyolites and rhyolite breccias.

Pyrite is ubiquitous within the acid volcanics, occurring most commonly as disseminations, and also with quartz in small veins, coatings on fracture surfaces, and filling or lining voids in the angular breccias. Sphalerite is most spectacular in the voids in the angular breccia. Elsewhere it accompanies quartz-pyrite veinlets and occurs as gouge and smear on shear surfaces.

The distribution of the mineralization is shown qualitatively on the geologic map, Drawing 2.

Sampling is hampered by the degree of oxidation and leaching and by the mode of occurrence of the sulfides. Previous work indicates that even conscientious channel sampling yielded results which correlated poorly with values obtained in subsequent diamond drill holes.

3.0 GEOCHEMISTRY

3.1 Sampling Procedure

Soil samples were collected from the B horizon, a mineral soil, at 100' (30.5 m) intervals along the east-west lines spaced from 650 to 1000' (198 - 300 m) apart (Dwg. 2). Depths from which the samples were taken varied from a few decimeters to less than a meter. Total number collected was 250.

3.2 Analytical Procedure

The samples were analyzed by Chemex Laboratories of North Vancouver, B.C. Analytical and reporting practice is as follows:

1. Geochemical samples are dried at 80°C for a period of 12 to 24 hours. The dried sample is sieved to -80 mesh fraction through a nylon and stainless steel sieve.
2. A 1.00 gram portion of the sample is weighed into a calibrated test tube. The sample is digested using hot 70% HClO₄ and concentrated HNO₃. Digestion time is 2 hours.
3. Sample volume is adjusted to 25 mls. using demineralized water. Sample solutions are homogenized and allowed to settle before being analyzed by atomic absorption procedures.
4. Detection limits using Techtron A.A. 5 atomic absorption unit:

Copper	- 1 ppm
Zinc	- 1 ppm
*Silver	- 0.2 ppm
*Lead	- 2 ppm
5. *Ag and Pb are corrected for background absorption.
6. Elements present in concentrations below the detection limits are reported as one half the detection limit, i.e. Ag - 0.1 ppm.

3.3 Interpretation of Results

Local relief of the area sampled ranges from 2700 feet along the west to a maximum height of about 3200 feet above sea level in the east. A podzolic soil is developed on a glacial overburden covering the area to varying depths and thinning out on topographic highs. Glacial striae measurements indicate a direction of ice movement of between 240° and 250° .

Frequency distributions of Cu, Pb, Zn, and Ag are markedly skewed towards the lower limit of detection. Zinc shows the most dramatic response with values ranging from 64 to greater than 4000 ppm. Threshold is taken at 600 ppm. Copper values vary from 11 to 197 ppm with a threshold indicated at 60 ppm. Silver ranges from 0.1 to 7.0 ppm with a threshold of about 1.5 ppm. Lead response varies from 4 to 400 ppm with a threshold of 40 ppm.

Grid orientation is shown in Drawing 2. Results are plotted and contoured on Drawings 3,4,5,6.

The distribution of values has a north-south fabric with a southwesterly skew. Copper and zinc anomalous values are more widespread than silver and lead which have produced a central narrow anomalous zone and several isolated single sample highs.

The sampling has confirmed anomalous expression of Zn, Cu, Ag, and Pb in soils to the southwest of the mineralized rhyolites. The anomalies have probably been displaced due to a combination of glacial smear and to a lesser extent, hydromorphic movement. Single sample anomalies are rather common, possibly reflecting detrital sulfide erratics. It should not be taken for granted, however, that the anomalous metal concentrations in soil originated solely from the mineralized rocks exposed in the gorge and in trenches immediately to the southwest. Future work should not discount a hitherto undiscovered source.

4.0 CONCLUSIONS

4.1 Specific Conclusions

The New Buck-Godfrey group and the Lorne claim are underlain by a sequence of intermediate and acid volcanics of Mesozoic

(Jurassic ?) age. Pyritization is pervasive in the acid phase, a suite of rhyolite, rounded rhyolite breccia and angular rhyolite breccia. Sphalerite concentrations up to 3% are found in voids in the angular breccia and are present in lesser, sporadic amounts elsewhere in the rhyolite sequence. Other values present in the acid phase are gold, copper and silver.

Field evidence and interpretation indicates that the volcanic pile is dipping to the northeast in the vicinity of Bob Creek and that it is fault-bounded on the east by Cretaceous to Tertiary basic volcanics.

Coincident zinc, copper, silver, and lead soil geochemical anomalies are present from several hundred to three thousand feet southwest of the mineralized outcrops. Part of this distribution might be explained by downslope and down-ice dispersion. Zinc exhibits the strongest concentrations and largest areal extent.

4.2 Our Concept

We agree with our client that the property is underexplored. The mineralized gorge is important, not as a gossan over unoxidized "ore", but as a clear indication of a strongly metallized volcanic pile, which may contain one or more dense pyritic and gold-zinc-silver-copper lenses along strike or down-dip from the gorge, or along any one of a number of flow units or boundaries.

Throughout this report we have touched on facts which might be called upon to support testing this working hypothesis. They range from extensive overburden (away from the gorge) to the temporal and petrologic correlation with the Sam Goosly ores. We will not argue the case here; our client intends to continue exploration to a logical conclusion.

4.3 Further Comments

It is not catholic to editorialize in reports on assessment work, however, we have two reasons for our comments.

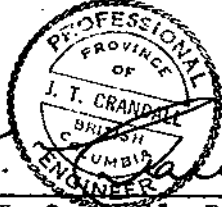
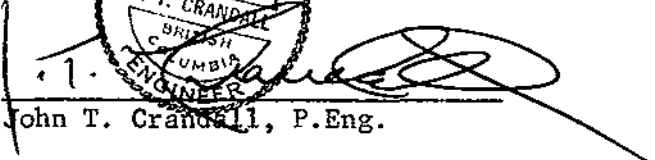
Firstly we wish to comment on why, in a property which has been mapped, remapped, drilled and redrilled, we have begun again with a geologic map. Geology is subjective, and we found

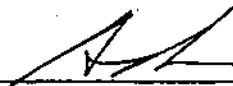

that earlier maps (made by gold-vein seekers or later porphyry experts) were useful, but not definitive.

Secondly, our comments here and in Section 1.7 are to establish in the public record, should anyone be interested, that if the New Buck and adjacent claims ever make a mine, certain credits are due: Smith, Hansen and Creech for their tenacity in keeping up a nucleus of claims and spending their own money periodically; previous optioners for spending on exploration, acquiring new data, and courteously making certain data available to us; Maddin, Eisler and colleagues for their long memories, empathy with prospectors, and overall professionalism in exploration; the geologists who develop new ideas and educate all of us to their use; and Mid Mountain Mining Ltd. for funding continued work, should the transfer to that company be approved.

Respectfully submitted,

NEVIN SADLIER-BROWN GOODBRAND LTD.



John T. Crandall, P.Eng.


Andrew E. Nevin


June 15, 1977

APPENDIX A

TABULATION OF ANALYSES



CHEMEX LABS LTD.

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 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: 985-0648
 AREA CODE: 604
 TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 39604
 INVOICE NO. 20172
 RECEIVED May 30/77
 ANALYSED June 1/77

TO: Nevin Sadlier-Brown Goodbrand Ltd.
 5th flr. 134 Abbott St.
 Vancouver, B.C.

ATTN: J. Krandall P.O. 21568

SAMPLE NO. :	PPM Copper	PPM Lead	PPM Zinc	PPM Silver
0 E/W 2N	37	14	154	0.1
1 E	58	18	365	0.8
2	93	14	340	1.2
3	93	10	260	1.0
4	33	14	275	0.4
5	21	16	320	0.4
6	73	6	1120	1.6
7	29	12	795	0.6
8	26	22	450	0.4
9	117	110	1180	1.2
10	75	400	490	6.8
11	60	56	455	0.6
12	67	20	505	0.6
13	73	6	160	0.8
14	120	18	495	1.4
15	115	36	1340	1.2
16	58	78	670	1.6
17	92	42	600	2.6
18	197	44	790	6.0
19	145	14	2480	3.2
20	46	46	610	1.6
21	62	60	1200	1.6
22	75	26	1360	1.8
23	71	18	1440	0.8
24	84	18	1780	1.2
25	75	16	2720	0.8
26	82	52	1000	0.8
27	72	16	750	0.6
28	79	34	920	2.4
29	36	34	600	0.8
30	49	26	860	0.8
31	47	34	850	1.0
32	53	32	1260	1.0
33	43	38	1120	0.8
34	32	38	600	0.6
35	47	30	480	1.0
36 E 2N	35	64	705	1.0
0 E/W 8.5 N	29	16	105	0.4
1 E	13	8	158	0.2
2 E 8.5N	16	6	123	0.2
STD.	102	88	195	7.6



MEMBER
 CANADIAN TESTING
 ASSOCIATION

CERTIFIED BY: *Hayfield*



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
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 TELEX: 043-52697

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CERTIFICATE OF ANALYSIS

TO: Nevin Sadlier- Brown Goodbrand Ltd.
 5th flr. 134 Abbott St.
 Vancouver, B.C.

CERTIFICATE NO. 39605

INVOICE NO. 20172

RECEIVED May 30/77

ATTN: J. Krandall

P.O. #21568

ANALYSED

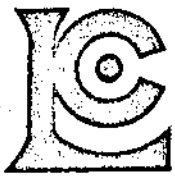
June 1/77

SAMPLE NO. :	PPM Copper	PPM Lead	PPM Zinc	PPM Silver
3E 8.5 N	32	12	130	0.2
4	15	8	90	0.1
5	11	8	130	0.1
6	21	12	215	0.2
7	13	14	148	0.2
8	16	12	130	0.1
9	16	8	182	0.1
10	41	6	100	1.2
11	27	28	355	0.4
12	23	16	315	0.2
13	32	26	570	0.8
14	49	40	725	1.6
15	35	50	470	0.6
16	17	22	270	0.4
17	28	36	390	1.0
18	26	24	370	0.4
19	76	26	400	1.6
20	32	24	245	0.4
21	152	32	410	1.6
22	38	38	430	0.4
23	164	26	855	1.8
24	133	54	770	3.4
25	80	52	1520	1.4
26	23	72	760	0.4
27	142	20	2600	0.4
28	46	40	410	0.8
29	31	34	480	0.4
30	120	66	1000	0.6
33	33	36	1200	0.4
34	23	18	200	0.1
35	16	12	570	0.4
36	18	12	300	0.2
37	51	16	445	1.4
38	22	16	895	0.6
39	20	24	1000	0.8
40	45	26	390	1.4
41 E 8.5N	48	12	240	0.8
2 E 10 S	37	12	132	0.4
3	20	12	230	0.2
4 E 10 S	43	14	385	0.6
STD.	98	84	195	8.0



MEMBER
 CANADIAN TESTING
 ASSOCIATION

CERTIFIED BY: *Hartfield*



CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 39606

TO: Nevin Sadlier-Brown Goodbrand Ltd.
 5th flr. 134 Abbott St.
 Vancouver, B.C.

INVOICE NO. 20172

RECEIVED May 30/77

ATTN: J. Krandall P.O. #21568

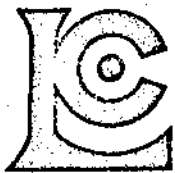
ANALYSED June 1/77

SAMPLE NO. :	PPM Copper	PPM Lead	PPM Zinc	PPM Silver
5E 10S	38	16	295	0.4
6	46	32	325	0.6
7	77	28	455	1.4
8	55	20	360	1.2
9	53	22	330	1.0
10	46	22	620	1.2
11	57	20	580	0.8
12	69	20	550	1.0
13	55	20	420	0.6
14	35	18	290	0.4
15	20	14	196	0.2
16	54	20	310	1.2
17	32	12	380	1.0
18	42	18	265	0.6
19	20	12	155	0.2
20	25	10	136	0.2
21	36	10	172	0.4
22	93	14	210	0.6
23	46	10	265	0.8
24	41	14	320	0.6
25	33	14	255	0.4
26	82	22	315	0.6
27	77	32	585	1.4
28	29	32	450	0.4
29	32	38	460	0.4
30	41	30	670	0.8
31	30	32	690	0.6
32	40	36	840	2.0
33E 10S	25	48	785	0.6
0 E/W 15N	78	12	295	1.4
1 E	25	14	106	0.8
2	17	8	86	0.1
3	18	8	98	0.2
4	30	10	156	0.2
5	12	10	124	0.1
6	66	14	240	0.6
7	14	6	78	0.1
8	41	10	196	0.4
9	16	8	120	0.2
10E 15N	61	14	480	0.4
STD,	102	88	200	8.0



MEMBER
 CANADIAN TESTING
 ASSOCIATION

CERTIFIED BY: *Hat Bull*



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
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 CANADA V7J 2C1
 TELEPHONE: 985-0648
 AREA CODE: 604
 TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 39607

TO: Nevin Sadlier-Brown Goodbrand Ltd.
 5th flr. 134 Abbott St.
 Vancouver, B.C.

INVOICE NO. 20172

RECEIVED May 30/77

ATTN: J. Krandall P.O. 21568

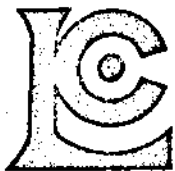
ANALYSED June 1/77

SAMPLE NO. :	PPM Copper	PPM Lead	PPM Zinc	PPM Silver
11E 15N	17	8	140	0.1
12	23	8	290	0.2
13	23	8	136	0.1
14	72	18	690	1.8
15	88	24	315	1.0
16	19	10	210	0.1
17	17	6	215	0.1
18	65	38	365	1.2
19	122	48	1080	2.6
20	108	46	1160	2.4
21	94	36	925	2.2
22	45	42	1080	0.6
23	42	36	1500	0.4
24	47	52	1740	0.2
25	32	60	1580	0.2
26	22	24	520	0.6
27	78	34	1720	1.2
28	37	24	1440	0.4
29	95	22	3640	0.8
30	29	14	860	0.4
31	31	14	525	0.4
32	85	16	870	2.6
33	35	32	830	0.2
34	67	84	3480	1.2
35	77	24	>4000	1.0
36	66	34	>4000	1.0
37	110	24	2920	0.6
38	66	174	2280	1.2
39	45	22	1400	0.8
40E 15N	26	6	165	0.2
0 E/W 20S	36	14	210	0.8
1 E	21	24	390	0.6
2	41	28	595	1.8
3	32	34	575	0.8
4	110	28	735	2.0
5	27	16	570	0.4
6	23	22	705	0.4
7	35	14	510	0.4
8E 20S	52	70	530	0.6
STD.	100	84	198	7.4



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 TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 39607

TO: Nevin Sadlier-Brown Goodbrand Ltd.
 5th flr. 134 Abbott St.
 Vancouver, B.C.

INVOICE NO. 20172

RECEIVED May 30/77

ATTN: J. Krandall P.O. 21568

ANALYSED June 1/77

SAMPLE NO. :	PPM Copper	PPM Lead	PPM Zinc	PPM Silver
11E 15N	17	8	140	0.1
12	23	8	290	0.2
13	23	8	136	0.1
14	72	18	690	1.8
15	88	24	315	1.0
16	19	10	210	0.1
17	17	6	215	0.1
18	65	38	365	1.2
19	122	48	1080	2.6
20	108	46	1160	2.4
21	94	36	925	2.2
22	45	42	1080	0.6
23	42	36	1500	0.4
24	47	52	1740	0.2
25	32	60	1580	0.2
26	22	24	520	0.6
27	78	34	1720	1.2
28	37	24	1440	0.4
29	95	22	3640	0.8
30	29	14	860	0.4
31	31	14	525	0.4
32	85	16	870	2.6
33	35	32	830	0.2
34	67	84	3480	1.2
35	77	24	>4000	1.0
36	66	34	>4000	1.0
37	110	24	2920	0.6
38	66	174	2280	1.2
39	45	22	1400	0.8
40E 15N	26	6	165	0.2
0 E/W 20S	36	14	210	0.8
1 E	21	24	390	0.6
2	41	28	595	1.8
3	32	34	575	0.8
4	110	28	735	2.0
5	27	16	570	0.4
6	23	22	705	0.4
7	35	14	510	0.4
8E 20S	52	70	530	0.6
STD.	100	84	198	7.4



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 AREA CODE: 604
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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 39608

TO: Nevin Sadlier-Brown Goodbrand Ltd.
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 Vancouver, B.C.

INVOICE NO. 20172

RECEIVED May 30/77

ATTN: J. Krandall P.O. 21568

ANALYSED June 1/77

SAMPLE NO. :	PPM Copper	PPM Lead	PPM Zinc	PPM Silver
9E 20S	54	84	430	1.2
10	77	166	750	1.0
11	56	76	400	1.2
12	47	84	445	1.0
13	27	14	245	0.2
14	26	20	144	0.2
15	47	22	390	1.0
16	31	24	465	0.8
17	21	14	375	0.8
18	23	32	280	0.4
19'	15	6	160	0.2
20	21	6	160	0.2
21	28	46	320	0.2
22	53	44	360	0.8
23	150	32	620	2.4
24	55	54	320	0.6
25	30	26	700	0.6
26	73	46	465	1.4
27	72	32	560	1.0
28	80	28	540	1.2
29	24	30	215	0.2
30	185	36	470	2.2
31	34	24	320	0.4
32	21	14	260	0.2
33	20	14	265	0.2
34	73	18	410	1.4
35E 20S	32	26	285	0.4
0 E/W 22.5N	22	4	190	0.1
1 E	21	8	260	0.2
2	30	8	74	0.1
3	18	8	64	0.1
4	19	4	68	0.1
5	18	4	102	0.2
6	50	16	180	1.2
7	13	8	80	0.2
8	29	12	140	0.6
9	17	4	64	1.0
10	28	12	144	0.4
11	18	12	92	1.0
12E 22.5N	11	18	168	0.4
STD.	101	84	198	7.4



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CERTIFIED BY: *Harold Bille*



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 AREA CODE: 604
 TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 39609

TO: Nevin Sadlier-Brown Goodbrand Ltd.,
 5th flr. 134 Abbott St.,
 Vancouver, B.C.
 V6B 2K4
 ATTN: J. Krandall

INVOICE NO. 20172

RECEIVED May 30, 1977

ANALYSED June 1, 1977

SAMPLE NO. :	ppm Cu	ppm Pb	ppm Zn	ppm Ag
13E 22-5N	12	6	104	0.1
14	17	14	132	0.1
15	15	16	260	0.4
16	14	34	245	0.2
17	18	10	255	0.2
18	19	22	270	0.6
19	21	18	122	0.1
20	20	20	285	0.2
21	130	30	1060	6.4
22	43	28	440	1.0
23	76	36	620	1.8
24	37	26	970	0.4
25	32	16	450	0.2
26	40	36	1100	0.4
27	39	50	800	1.0
28	33	74	710	1.4
29	65	44	540	3.0
30	20	46	1000	0.4
31	91	46	990	2.2
32E 22-5N	15	46	470	0.2
OE/W 30N	26	6	260	0.4
1E	31	6	198	0.2
2	91	8	260	1.2
3	13	6	112	0.2
4	14	6	98	0.2
5	22	8	90	0.4
6	26	6	240	0.4
7	19	6	120	0.2
8	35	8	114	0.4
9	17	4	96	0.2
10	17	4	80	0.1
11	15	4	132	0.4
12	13	4	84	0.2
13	30	10	134	0.4
14	40	6	110	0.2
15	36	10	118	0.6
16	35	10	132	0.2
17	18	8	114	0.1
18	24	6	220	0.4
19E 30N	34	10	190	0.1
Std.	99	84	198	8.0



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 TELEPHONE: 985-0648
 AREA CODE: 604
 TELEX: 043-62597

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CERTIFICATE OF ANALYSIS

TO: Nevin Sadlier-Brown Goodbrand Ltd.
 5th flr. 134 Abbott St.
 Vancouver, B.C.

CERTIFICATE NO. 39610

INVOICE NO. 20172

RECEIVED May 30/77

ATTN: J. Krandall

P.O. 21568

ANALYSED June 1/77

SAMPLE NO. :	PPM Copper	PPM Lead	PPM Zinc	PPM Silver
20E 30N	52	10	310	0.2
21	24	14	830	0.8
22	33	40	650	1.6
23	29	395	640	7.0
24	130	28	>4000	3.8
25	36	6	120	0.1
26	29	6	102	0.1
27	43	10	1320	0.4
28	34	8	126	1.4
29	24	6	96	0.2
30E 30N	21	6	90	0.2



MEMBER
 CANADIAN TESTING
 ASSOCIATION

CERTIFIED BY: *Hart Bill*

APPENDIX B - ANNOTATED REFERENCES

Church, B.N.

1972: Geology of the Buck Creek Area; Minister of Mines Annual Report; G.E.M.; pp 353-363. (Most recent regional geological appraisal of the area between Houston, Burns Lake, and Francois Lake)

Nevin, Andrew E.

Feb 7, 1977: Report on Bob Creek Massive Sulfide Prospect; Rept. to Mid Mountain Mining Ltd. (Summary of history and available data, Bob Creek Prospect)

APPENDIX CDECLARATION OF WORK DONE

I, J.T. Crandall, P.Eng., of Vancouver, B.C. hereby declare that:

1. The field work described in this report was performed by J.T. Crandall and Roy Londry between 21 May, 1977 and 25 May, 1977.
2. Nevin Sadlier-Brown Goodbrand Ltd., Consulting Geologists charged fees for professional services and billed disbursements on the client's behalf as follows:

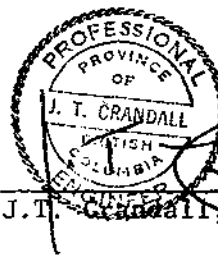
Geologist, J.T. Crandall, 11.5 days @ \$160	\$1,840
Sampler, R. Londry, 7 days @ \$106	742
Secretary-Typist, 1 day @ 100	100
Vehicle, 2-wd., return Van-Houston, 8 days @ \$15, 1307 miles @ 15c	316
Camp Rental	140
Supplies (gasoline, groceries etc)	450
Chemical Analyses (250 @ \$3.33)	832
Report Preparation (drafting, printing, photocopy etc)	520
Burden @ 10% of disbursements	180
	\$5,120

3. The allocation of value of work done between the New Buck-Godfrey group and the Lorne claim is as follows:

New Buck-Godfrey	:	\$4,100 (including \$600 credit)
Lorne claim	:	\$1,020 (including \$200 credit)

Signed: _____

J.T. Crandall, P.Eng.



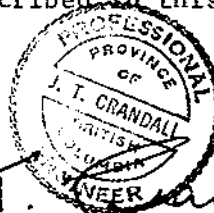
June 15, 1977

APPENDIX D

STATEMENT OF QUALIFICATIONS

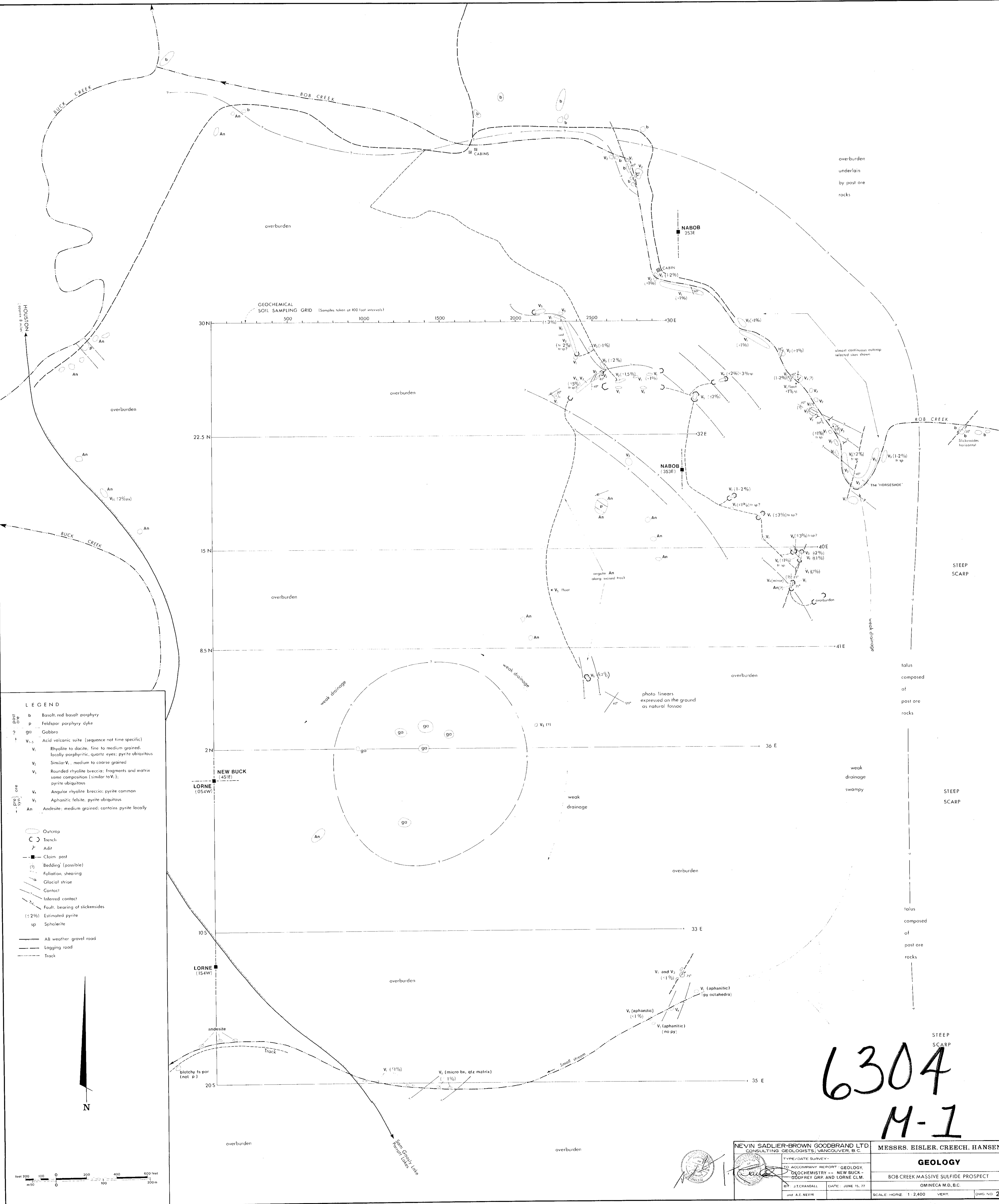
I, John T. Crandall, hereby state that:

1. I am a geologist with the firm of Nevin Sadlier-Brown Goodbrand Ltd. of #503 - 134 Abbott Street, Vancouver, B.C.
2. I am a graduate of the University of Toronto, Ontario (B.Sc., 1970, Geological Engineering).
3. I am a Professional Engineer registered in the Province of British Columbia.
4. I have been engaged as a geologist in mineral exploration since 1970 and have been employed by Nevin Sadlier-Brown Goodbrand Ltd. since 1974.
5. I conducted the geological work and supervised the geochemical survey described in this report.



John T. Crandall, P.Eng.

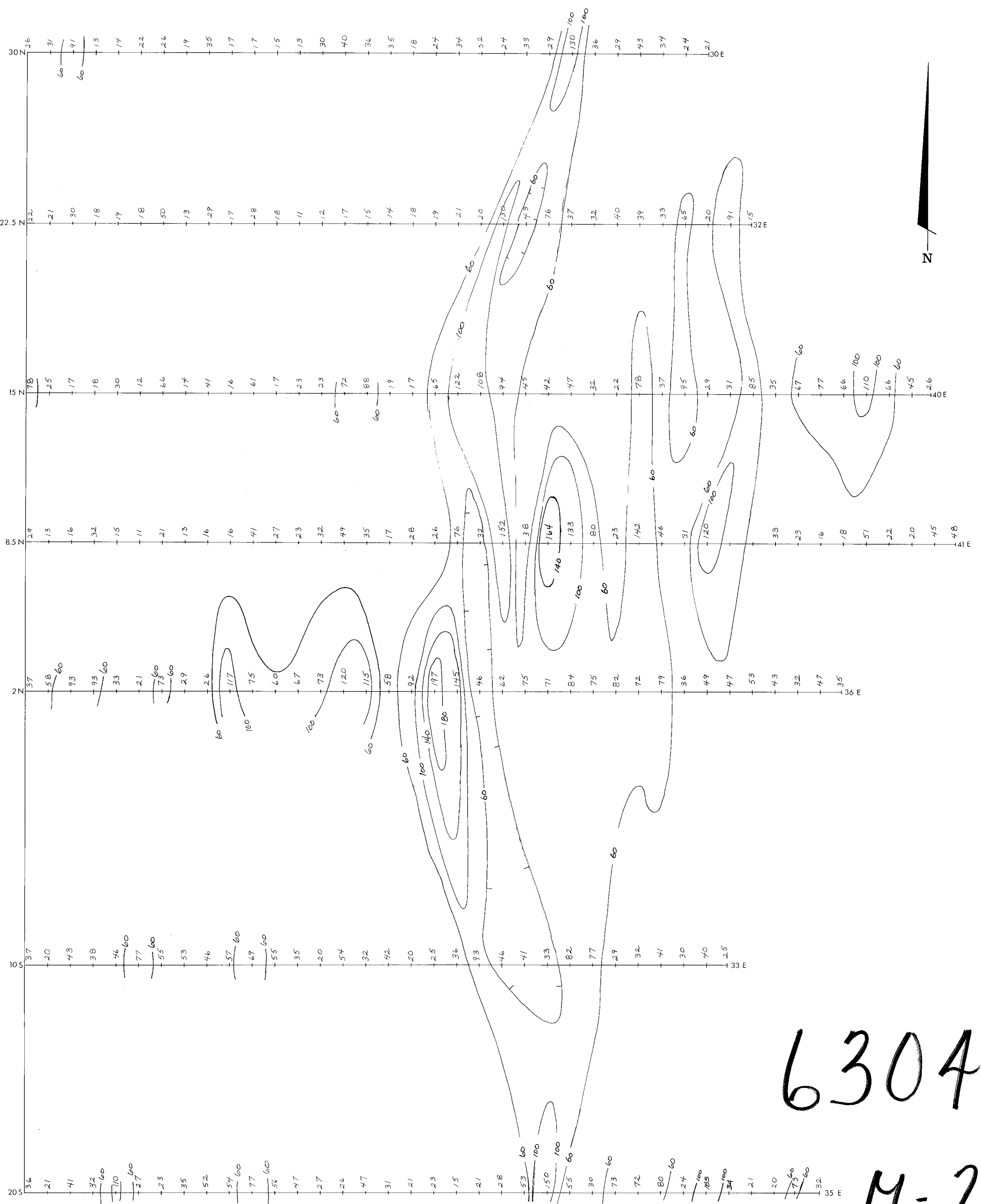
June 15, 1977



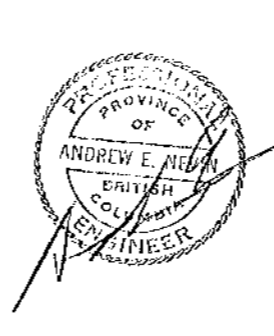
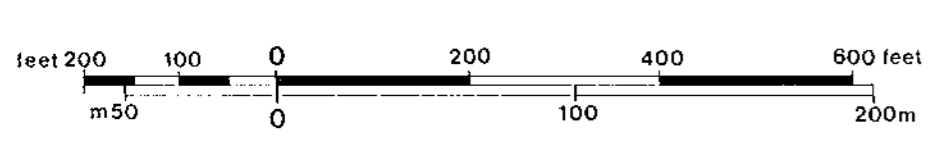
- LEGEND**
- b Basalt, red basalt porphyry
 - p Feldspar porphyry dyke
 - ga Gabbro
 - V₁₋₅ Acid volcanic suite (sequence not time specific)
 - V₁ Rhyolite to dacite, fine to medium grained, locally porphyritic, quartz eyes; pyrite ubiquitous
 - V₂ Similar V₁, medium to coarse grained
 - V₃ Rounded rhyolite 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
- Other Symbols:**
- Outcrop
 - ⊖ Trench
 - ⊗ Adit
 - Claim post
 - () Bedding (possible)
 - [] Foliation, shearing
 - Glacial striae
 - Contact
 - - - Inferred contact
 - - - Fault; bearing of slickensides
 - (± 2%) Estimated pyrite
 - sp Sphalerite
 - All weather gravel road
 - Logging road
 - Track

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M-1

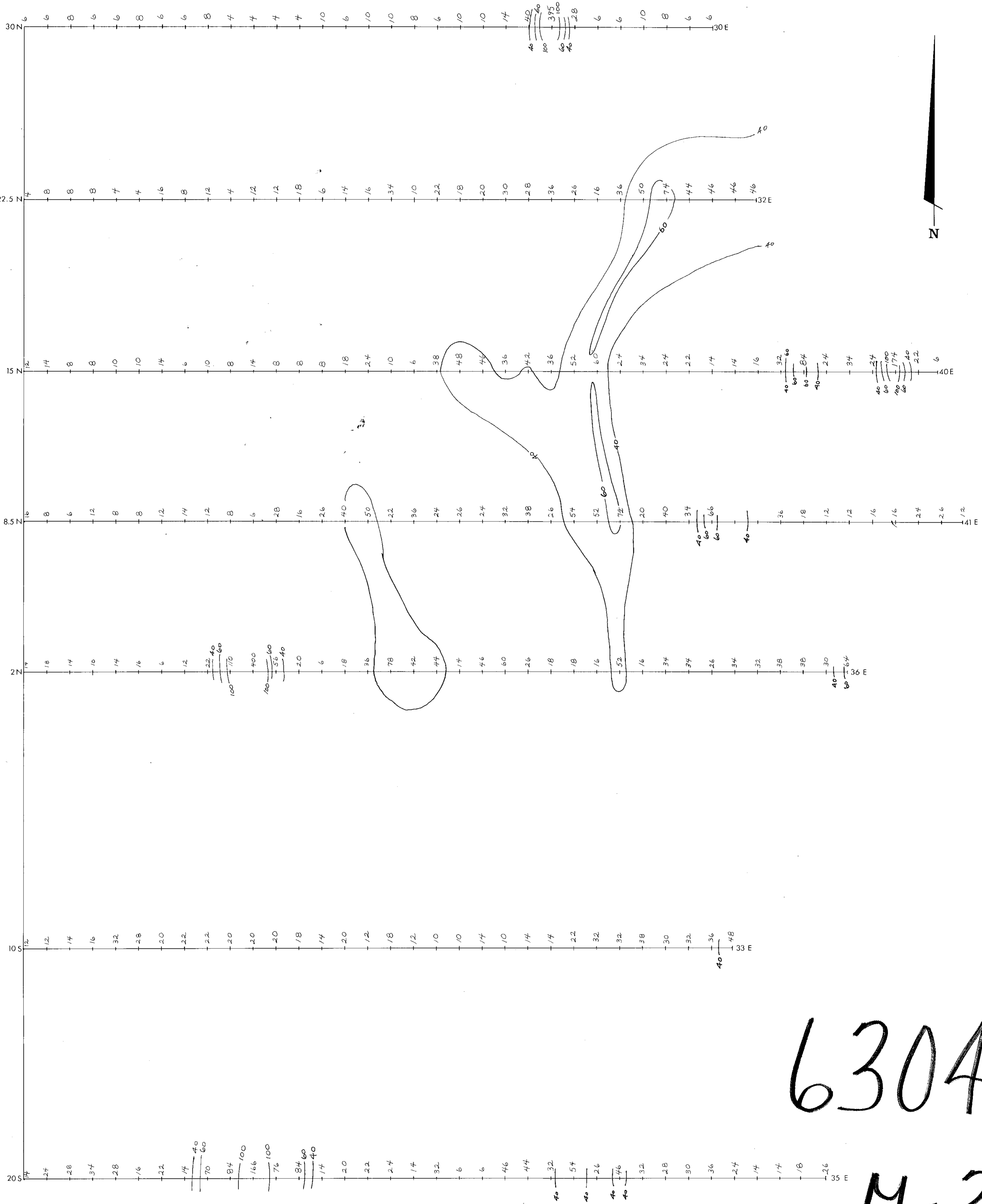
NEVIN SADLER-BROWN GOODBRAND LTD CONSULTING GEOLOGISTS, VANCOUVER, B.C.		MESSRS. EISLER, CREECH, HANSEN	
GEOLOGY			
BOB CREEK MASSIVE SULFIDE PROSPECT			
OMINECA M.D.B.C.			
BY: J. CHANDALL	DATE: JUNE 15, 77	SCALE: HORIZ. 1:2,400	VERT. _____
AND A.E. NEVIN		DWS. NO. 2	



6304
M-2

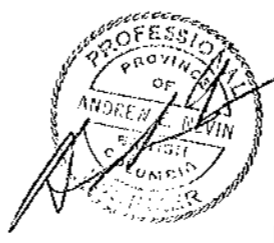


NEVIN SADLER-BROWN GOODBRAND LTD. CONSULTING GEOLOGISTS - VANCOUVER, B.C.		MESSRS. EISLER, CREECH, HANSEN	
TYPE/DATE SURVEY - ACCOMPANY REPORT - GEOLOGY, GEOCHEMISTRY -- NEW BUCK - GODFREY GRP. AND LORNE CLM.		SOIL GEOCHEMISTRY COPPER (P.P.M.)	
BY - J.T. CRANDALL		BOB CREEK MASSIVE SULFIDE PROSPECT	
DATE - JUNE 15, 1977		OMINECA M.D., B.C.	
and A.E. NEVIN		SCALE: HORIZ.	VERT.
		DWG NO. 3	

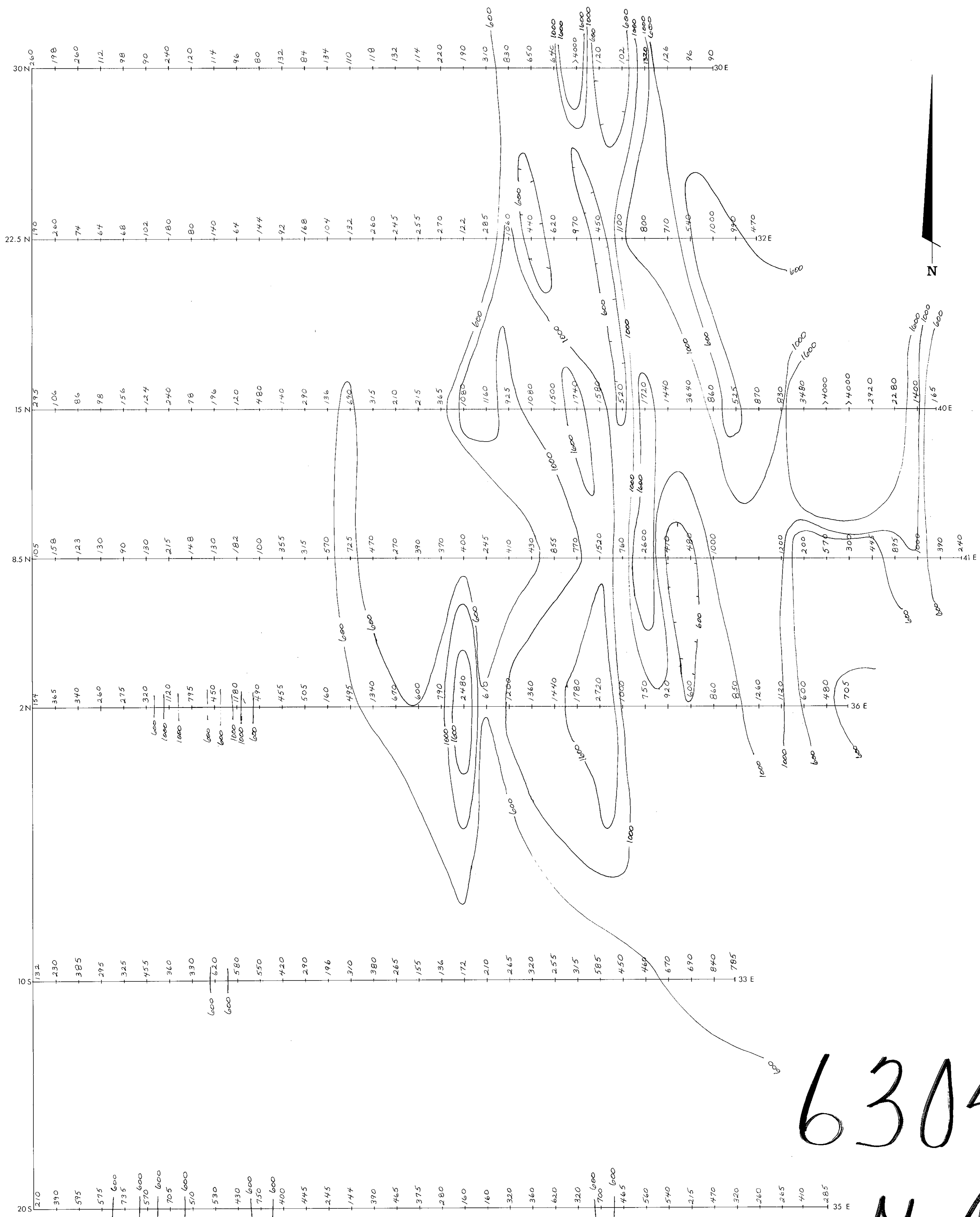


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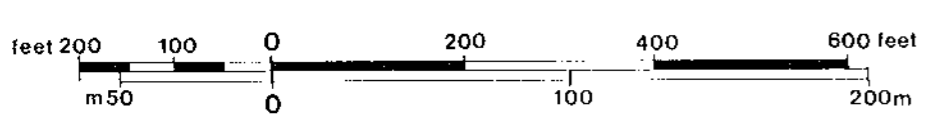
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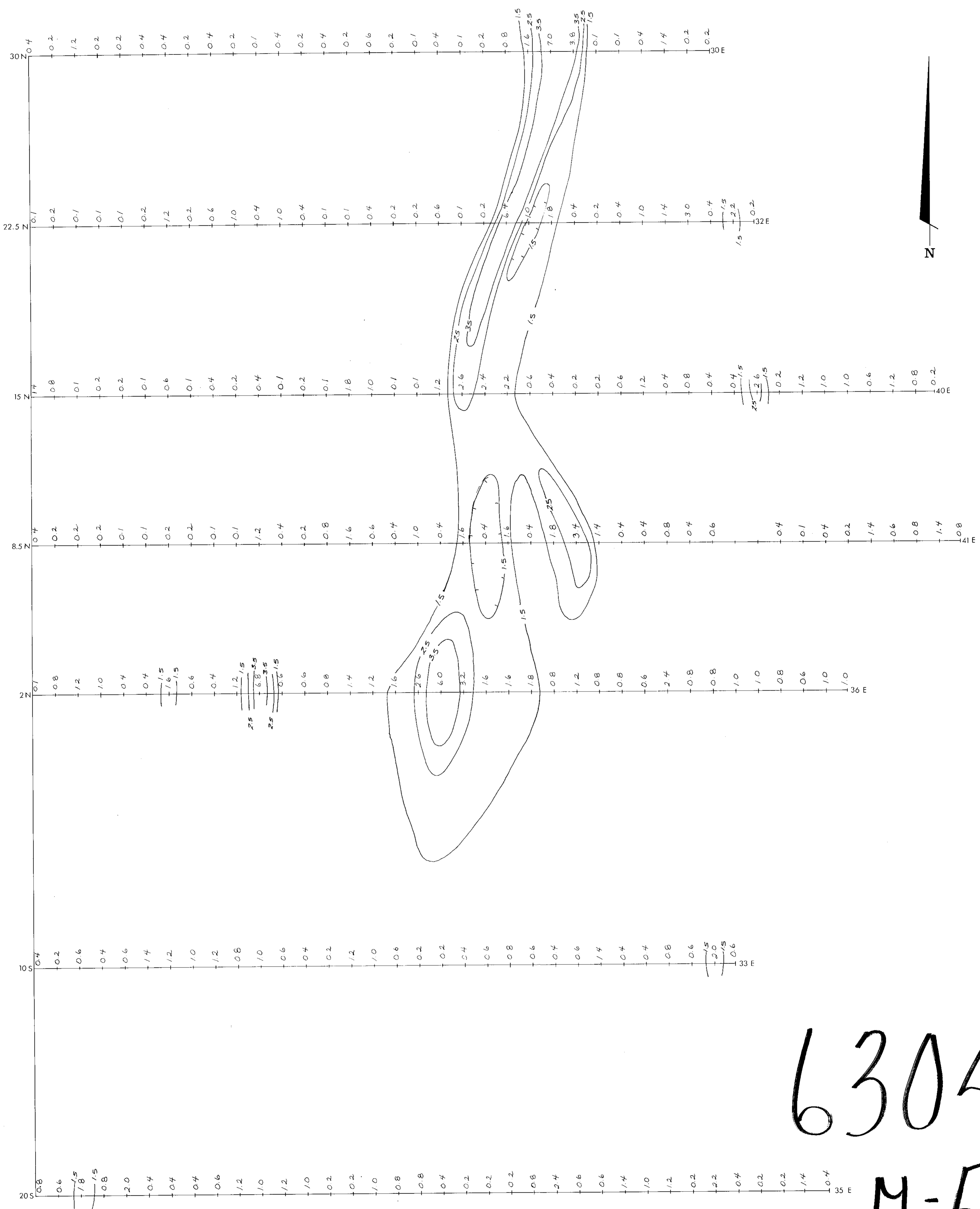
NEVIN SADLIER-BROWN GOODBRAND LTD. CONSULTING GEOLOGISTS VANCOUVER, B.C.		MESSRS. EISLER, CREECH, HANSEN	
TYPE/DATE SURVEY -		SOIL GEOCHEMISTRY LEAD (P.P.M.)	
TO ACCOMPANY REPORT GEOLOGY, GEOCHEMISTRY -- NEW BUCK - GODFREY GRP. AND LORNE CLM.		BOB CREEK MASSIVE SULFIDE PROSPECT	
BY J. RANDALL	DATE JUNE 15, 1977	OMINECA M.D. B.C.	
DRG. A.E. NEVIN		SCALE HORIZ	VERT
			DWG NO. 4



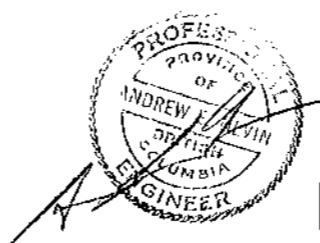
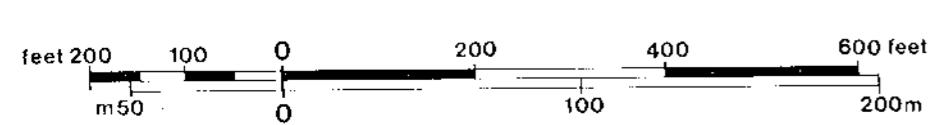
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TO ACCOMPANY REPORT: GEOLOGY, GEOCHEMISTRY -- NEW BUCK, GODFREY GRP. AND LORNE CLM.		BOB CREEK MASSIVE SULFIDE PROSPECT	
BY: J.T. CRANDALL	DATE: JUNE 15, 1977	OMINECA M.D., B.C.	
and A.E. NEVIN		SCALE: HORIZ.	VERT.
			DWG NO. 5



6304
M-5



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TYPE / DATE SURVEY - ACCOMPANY REPORT - GEOLOGY, GEOCHEMISTRY -- NEW BUCK - GODFREY GRP. AND LORNE CLM.		SOIL GEOCHEMISTRY SILVER (PPM.)	
BY J.F. CRANDALL DATE: JUNE 15, 1977		BOB CREEK MASSIVE SULFIDE PROSPECT	
ONE A.E. NEVIN		OMINECA M.D., B.C.	
SCALE: HORIZ		VERT	
		DWG NO. 6	