

494

Department of	
Mines and Petroleum Resources	
ASSESSMENT REPORT	
NO. 494	MAP

GEOLOGICAL AND GEOCHEMICAL REPORT

ON

MAPPING AND SOIL SAMPLING

Claims Bob 1 to Bob 12 inclusive and Phil 4

WESTERN SURF INLET MINES LIMITED

Located 8 miles S.E. of Squamish, B.C.; $49^{\circ} 123^{\circ}$ N.E.

June 10th - July 16th, 1962 inclusive

Herbert Parlment, P. Eng. (B.C.)

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2. Plan and Profile showing location of samples, soil sampling and electromagnetic results, Western Surf Inlet Mines Limited, Scale 1 inch = 100 feet.

REPORT

- 3 *Plan showing geology, surface cuts & D.D.H. 1 inch = 100 feet*

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INTRODUCTION

This report describes the geological mapping carried out during the summer of 1962 on thirteen mining claims (Bob 1 to Bob 12 and Phil 4 with corresponding record numbers 9136 to 9147 inclusive and 9157) and soil sampling done on claims Bob 2 and Bob 4 to check an electromagnetic anomaly from a geophysical survey by J. P. Sheridan, P. Eng. The work was done by the writer who was ably assisted by William Timmins in the months of June and July, 1962.

GEOLOGICAL MAPPING PROCEDURE

The mapping was done by traversing lines which were cut previously by the men on the geophysical survey. Topographical features and outcrops were tied in by pace and compass survey. As most of the outcrops occur in this area along creek beds, traverses were run along the creeks. The results

of the survey were incorporated on a map to the scale of 1 inch = 400 feet with estimated elevations shown by contours.

HISTORY

A considerable amount of prospecting was done in the area from 1926 until the present time. Diamond drilling was done by previous owners and optionees on the McVicar Group of claims to the south during 1928, 1936, 1950, 1953, 1954 and 1955. Two flat holes numbered 8-1 and 8-2 were drilled in the vicinity of Slide Creek to depths of 200 and 213 feet respectively during the summer of 1953. These intersected chlorite - sericite schist to approximately 70 feet, the remainder of the two holes being in tuff. The exact location of the holes is not noted in the original logs.

A tunnel, now caved, was driven south from Camp Creek on Claim Bob 1 for a distance of 21 feet. A width of 3 feet assaying 1.35% copper was reported from the adit.

During previous operations a base camp was built near Camp Creek near the center of the boundary between claims Bob 1 and Bob 2. Two of the buildings are still standing and will house eight or nine men.

Descriptions of previous work done are given in Annual Reports of the British Columbia Minister of Mines:

W. M. Brewer, 1925

E. A. Clothier, 1928, 1929, 1930

E. T. O'Grady, 1937, Part F.

Detailed reports were written on the property while work was in progress by Dr. Victor Holmage of Vancouver. In addition to the above, the Britannia Beach Map Area is described in detail by Dr. H. F. James in Memoir 158, Canada Department of Mines.

PROPERTY, LOCATION AND ACCESS

The Western Surf Inlet Mines property is comprised of 9 Crown Grant claims, 3 Crown Grant fractions and 25 unsurveyed mining claims located along the west side of Goat or Raffuse Creek which flows into the Mamquam River, 6 miles east of the Port of Squamish at the head of Howe Sound about 40 miles north of Vancouver. The Crown Grant claims and fractions, known as the McVicar Group, have an area of 478.96 acres and the unsurveyed claims an area of approximately 1,290 acres. They are about 7 miles northeast of the nearest workings of the Britannia Mine.

The 13 claims on which mapping was done adjoin the McVicar Group on the north. Access is by a logging road from Squamish, a distance of 6 miles and thence by a trail 5 miles in length. The trail is a narrow cut along the east side of the mountain a short distance west of Goat Creek, built originally for transportation by pack horses.

TOPOGRAPHY

The claims are all located on the west side of Goat Creek. The creek valley is very deep with steep walls. Elevations range from 1,500 feet above sea level near the south end and the western boundary. Up to elevations of about 3,500 feet the surface is covered by dense forest of giant cedar, hemlock and fir. Above this the trees are smaller and more widely spaced.

A few scattered rock exposures occur at the higher elevations. There are very few rock outcrops below elevations of 3,000 feet except along streams or cliffs.

The area of the property is drained by numerous creeks flowing easterly into Faffuse Creek.

GENERAL GEOLOGY

The rocks of the Coast Range Mountains are mainly batholithic rocks; granite, granodiorite and quartz-diorite, which extend for over 1,000 miles north of Vancouver and about a hundred miles east from the coast. The batholithic rocks are overlain in many places by large roof pendants of older volcanic and sedimentary rocks in which the mineral deposits of the region are found.

The volcanic rocks of the McVicar Group are probably an extension of those of the Britannia zone and consist mainly of greenstone and agglomerate. On the McVicar they are intruded by lamprophyre dykes and cherty felsite dykes but the dacite and latite sills of the Britannia are absent and slates are rare.

A large lenticular body of coarse agglomerate found on the Phil 4 and Noonday claims is similar to the agglomerate of the Upper Goat Mountain formation of the Britannia Area, described by H. T. James in Memoir 158, Canada Department of Mines.

Several outcrops of medium and coarse grained quartz-diorite were found along Center Creek north of the wide zone

of agglomerate on the upper part of Rock Creek. These are probably stocks from the batholith below.

Most of the greenstone in the area has been sheared to a chlorite - sericite schist having a mottled appearance. In places where the shearing has been more intense a quartz - sericite schist remains which usually carries a considerable amount of pyrite, often with varying amounts of copper, zinc and lead sulphides across narrow widths.

STRUCTURE

The shearing and strike of formations on the group vary from north to north 25° west and dip from 45° to 75° west. A pronounced change in the dip and strike of shearing in an outcrop on the north side of Kid Creek suggests the presence of an east - west fault along the creek.

An outcrop of massive basic lava and massive rhyolite along Raffuse Creek about 300 feet east of the geophysical and geochemical anomaly on claim Bob 2 probably represents the east edge of the wide shear zone which crosses the area.

SOIL SAMPLING

Soil samples were taken on lines 60E and 63E over known electromagnetic anomalies on claims Bob 2 and Bob 4

to test the feasibility of using soil sampling techniques.

Thirty-four samples were taken every 10 feet in most cases and every 20 feet in other cases, since it was found that in some places the depth of humus was too great to penetrate with the soil sampling auger. After reviewing the results it was decided to take twelve more samples on line 60E to try to establish if a true anomaly existed as opposed to erratic highs. In taking the twelve extra samples a pattern was established, two samples ten feet apart with fifty feet between each group of two, which was intended to give maximum coverage without losing any detail. The samples were taken at 3.5 feet to 4 feet depth.

The samples tend to indicate a definite soil anomaly over the conductor with ratio 0.45 and that it is not just an erratic high. Since the soil anomaly is pronounced over the electromagnetic anomaly with $r = 0.45$ while it is negligible over the adjacent electromagnetic anomaly with ratio $r = .30$ it agrees with the electromagnetic results and indicates that the former anomaly is a better conductor than the latter.

Results can be expected to be lower than in other areas due to the steep terrain, slopes up to 45° and heavy

precipitation which tend to cause a greater dilution in the soils. The soil sampling done appears to be of assistance in evaluating the conductors.

RECOMMENDATIONS

It is recommended that two holes be drilled under the Electromagnetic - Geochemical anomaly near line 60E. Overburden should be shallow as outcrops occur on both sides of Raffuse Creek in this area. Further drilling will be dependent on results from the two holes.

Respectfully submitted,

SCOPE MINING AND EXPLORATION
CONSULTANTS LIMITED

Herbert Parliament

Herbert Parliament, B.Sc., P. Eng.
(B.C.)

February 8, 1963.
Toronto, Ontario

TIME SPENT ON WORK

A. Geological Mapping

H. Parliment, geologist;

June 12 - 28 inclusive and
July 1 - 16, 1962 inclusive - 33 days

W. Timmins, assistant;

June 18 - 28 inclusive and
July 1 - 16 inclusive - 27 days

Total - 60 (9 hr. man days)

B. Soil Sampling

H. Parliment, geologist;

June 10, 11, 29 and 30, 1962 - 4 days

W. Timmins, assistant;

June 29 and 30, 1962 - 2 days

Total - 6 (9 hr. man days)

C. Report and Maps

H. Parliment, geologist;

February 1 and 4 to 8, 1962
inclusive - 6 days

S. Stilwell, typing - 1 day

Total - 7 (8 hr. man days)

Total Time - 73 man days.

Soil Samples taken over anomalies on Lines 60E and 63E.
McVicar Property, Western Surf Inlet Mines Limited.

<u>Sample No.</u>	<u>Dist. from Base Line A</u>	<u>Line</u>	<u>Description</u>	<u>Topography</u>
1	1300E	60E	Sandy clay	Side hill, 30° slope
2	1310E		"	" 30° "
3	1320E		"	" 25° "
4	1330E		"	" 25° "
5	1340E		"	" 25° "
6	1350E		"	" 20° "
7	1360E		"	" 20° "
8	1370E		"	" 20° "
9	1380E		"	" 20° "
10	1390E		"	" 10° "
11	1400E		Grey clay	Bottom of mountain, flat.
12	1040E	60E	Sandy clay	Side hill, 40° slope
13	1030E		"	" 40° "
14	1020E		"	" 40° "
15	1010E		"	" 40° "
16	1000E		"	" 40° "
17	990E		"	" 40° "
18	980E		"	" 45° "
19	970E		"	" 45° "
20	960E		"	" 45° "
21	1170E	63E	Sandy clay	Side hill, 40° slope
22	1160E		"	" 35° "
23	1190E		"	" 35° "
24	1200E		Grey clay	" 35° "
25	1215E		Sandy clay	" 30° "
26	1230E		"	" 30° "
27	1250E		"	" 25° "
28	1270E		Grey clay	" 25° "
29	1280E		Sandy clay	" 25° "
30	1290E		"	" 20° "
31	1300E		"	" 20° "
32	1310E		Grey clay	" 15° "
33	1320E		Sandy clay	" 15° "
34	1340E		Grey clay	" , west side of small brook.

(Humus deep, samples taken at 3.5' to 4' depth, dense forest.)

Soil Samples taken over anomalies on Lines 60S (cont'd)

<u>Sample No.</u>	<u>Dist. from Base Line A</u>	<u>Line</u>	<u>Description</u>	<u>Topography</u>
A-1	1240'E	60S	Brown sand	Side hill, 30° slope
A-2	1230'E		"	" 30° "
A-3	1180'E		Grey clay	" 20° "
A-4	1170'E		Brown sand	" 30° "
A-5	1110'E		Grey clay	" 40° "
A-6	1100'E		Brown sand	" 40° "
A-7	910'E		"	" 45° "
A-8	900'E		"	" 45° "
A-9	850'E		"	" 40° "
A-10	840'E		"	" 40° "
A-11	790'E		"	" 45° "
A-12	780'E		"	" 45° "

X-RAY ASSAY LABORATORIES LIMITED

28 EGLINTON AVENUE WEST - TORONTO, ONTARIO - HUDSON 5-8907

Certificate of Analysis

NO. 1321

TO. Scope Mining & Exploration Consultants Limited,
372 Bay Street Suite 2200,
TORONTO, Ontario.

RECEIVED June 19, 1962

INVOICE NO. 4991

SAMPLE(S) OF soils

SUBMITTED TO US SHOW RESULTS AS FOLLOWS:

Sample	Cu ppm	Zn ppm	Sample	Cu ppm	Zn ppm
1	10	140	18	30	420
2	x	110	19	120	450
3	10	110	20	10	330
4	x	120	21	30	300
5	20	170	22	10	230
6	x	130	23	x	130
7	x	70	24	30	280
8	40	150	25	20	270
9	x	100	26	x	190
10	10	110	27	x	200
11	10	170	28	40	400
12	40	380	29	10	200
13	20	160	30	10	220
14	60	600	31	x	220
15	10	400	32	x	210
16	40	270	33	x	140
17	10	270	34	30	290

x - less than 10 ppm

X-RAY ASSAY LABORATORIES LIMITED

DATE June 20, 1962

CERTIFIED BY *S. J. Brooker* MANAGER

X-RAY ASSAY LABORATORIES LIMITED

28 EGLINTON AVENUE WEST - TORONTO, ONTARIO - HUDSON 5-8907

Certificate of Analysis

NO. 1389

TO. Scope Mining & Exploration Consultants Ltd.,
372 Bay Street Suite 2200,
TORONTO, Ontario.

RECEIVED July 9, 1962

INVOICE NO. 5049

SAMPLE(S) OF soils

SUBMITTED TO US SHOW RESULTS AS FOLLOWS:

Sample No.	Cu ppm	Zn ppm
A-1	x	70
- 2	x	100
- 3	x	200
- 4	x	200
- 5	x	350
- 6	x	100
- 7	x	140
- 8	x	70
- 9	20	250
- 10	x	170
- 11	x	130
- 12	50	170

x - less than 10 ppm

X-RAY ASSAY LABORATORIES LIMITED

DATE July 11, 1962

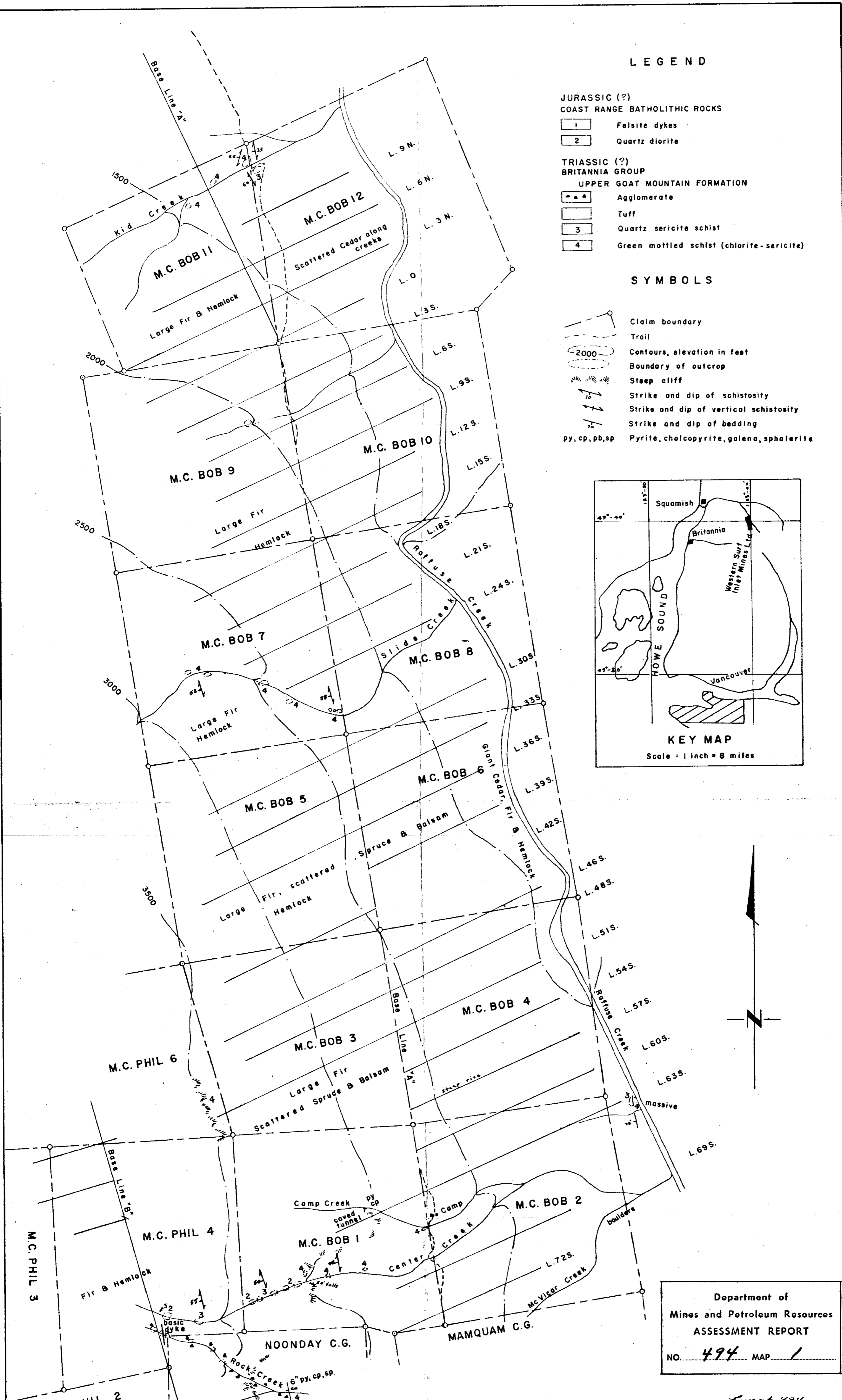
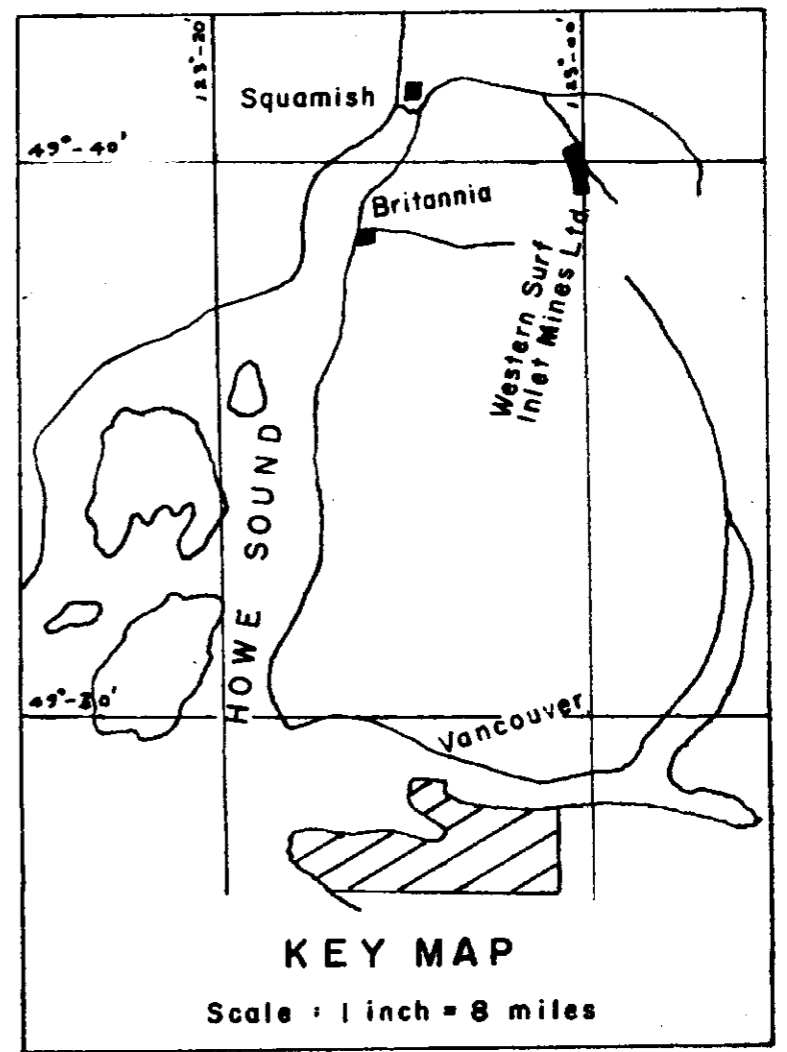
CERTIFIED BY MANAGER

LEGEND

- JURASSIC (?)
COAST RANGE BATHOLITHIC ROCKS
- 1 Felsite dykes
 - 2 Quartz diorite
- TRIASSIC (?)
BRITANNIA GROUP
UPPER GOAT MOUNTAIN FORMATION
- 3 Agglomerate
 - Tuff
 - 3 Quartz sericite schist
 - 4 Green mottled schist (chlorite-sericite)

SYMBOLS

- Claim boundary
- Trail
- Contours, elevation in feet
- Boundary of outcrop
- Steep cliff
- Strike and dip of schistosity
- Strike and dip of vertical schistosity
- Strike and dip of bedding
- py, cp, pb, sp Pyrite, chalcocopyrite, galena, sphalerite



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 494 MAP 1

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WESTERN SURF INLET MINES LIMITED

8 MILES S.E. OF SQUAMISH, B.C., 49° 123' N.E.

GEOLOGICAL PLAN

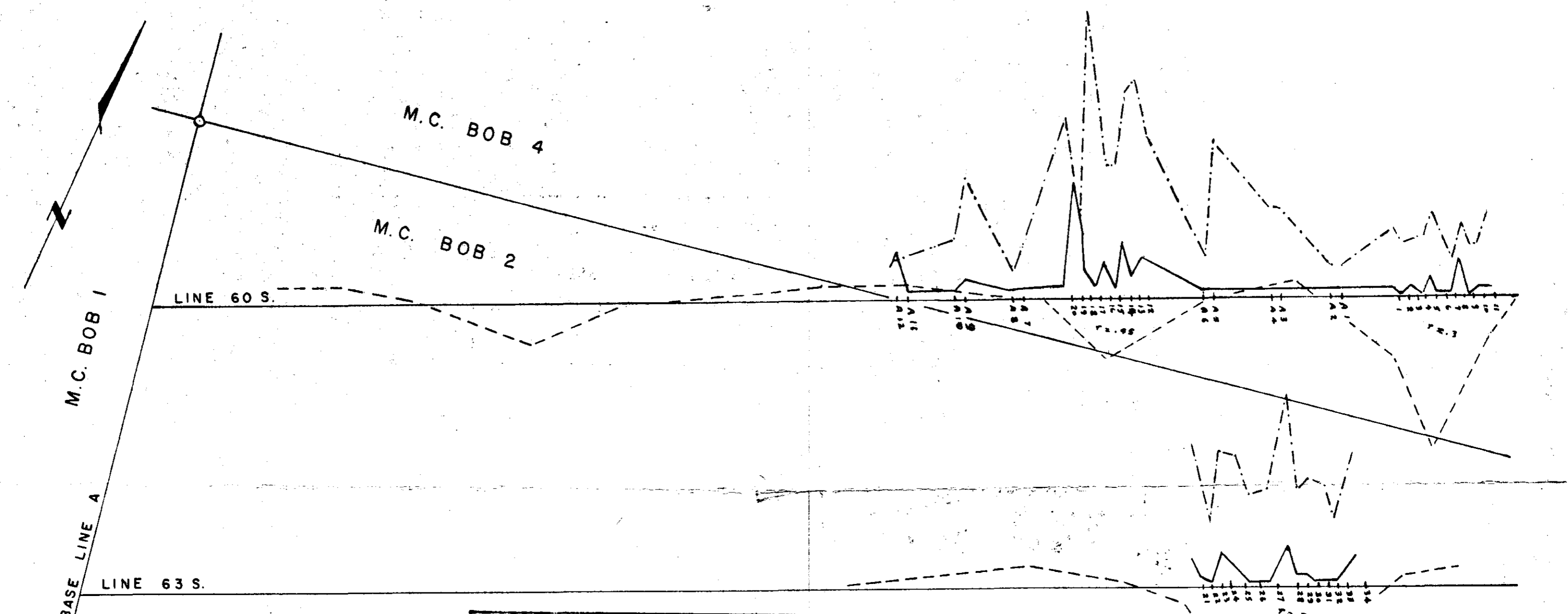
OF 13 MINING CLAIMS
BOBI-BOB12 & PHIL 4
SITUATED NORTH OF McVICAR CROWN GRANT GROUP
Scale: 1 inch = 400 feet

H. Parliment, P. Eng., F.G.A.C.

FEBRUARY, 1963 SCOPE MINING & EXPLORATION CONSULTANTS LTD.

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(M1)



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 Mines and Petroleum Resources
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LEGEND

E.M. RESULTS phase response 800 cps
 phase response 2400 cps
 COPPER 1 INCH = 100 P.P.M.
 ZINC 1 INCH = 200 P.P.M.

A. Parliament, P. Eng., F. & A. C.

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WESTERN SURF INLET MINES LIMITED

PLAN & PROFILE

Report 494

SHOWING

LOCATION OF SOIL SAMPLES, SOIL SAMPLING AND E.M. RESULTS

FEBRUARY, 1963

SCALE : 1 INCH = 100 FEET



LEGEND

- | | | |
|--|--|---|
| | Lamprophyre dykes | } JURASSIC(?)
CONGLOMERATE
SERICITIC
UPPER MAMQUAM
FORMATION
ROCKS |
| | Felsite dyke | |
| | Quartz diorite | |
| | Agglomerate | |
| | Tuff | |
| | Quartz sericite schist | |
| | Silicified zones | |
| | Green mottled schist (chlorite-sericite) | |

SYMBOLS

- | | |
|--|---|
| | Diamond drill hole with copper assays $\frac{\% \text{Cu}}{\text{width in feet}}$ |
| | Claim boundary |
| | Contours, height in feet |
| | Trail |
| | Surface cut, trench |
| | Boundary of outcrop |
| | Contact geological formation |
| | Steep cliff |
| | Strike and dip of schistosity |
| | Strike and dip of vertical schistosity |
| | Pyrite, high, low |
| | Chalcopyrite, galena, sphalerite |

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Mines and Petroleum Resources
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WESTERN SURF INLET MINES LTD.
NORTH PART MCVICAR GROUP
PLAN *Report 494*
SHOWING
GEOLOGY
SURFACE CUTS & DIAMOND DRILL HOLES
SCALE: 1 INCH = 100 FEET
AUGUST, 1962 *A. Palmer & P. E. SCOPE CONSULTANTS*