

2828

GEOCHEMICAL REPORT

SAL CLAIMS

LOCATION: Approximately 16 miles north
of Hazelton, B. C.

Latitude 55° 30' N,
Longitude 127° 35' W

93 M / 5 E

REPORT BY: P. E. Hirst, P. Eng.

CLAIM OWNER: P. E. Hirst [Sal 1-20]
Brettland Mines Ltd. [Sal 21-32]

DATE OF WORK: May 25 - August 1, 1970

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 2828 MAP.....

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MAPS IN FOLDER

<u>Plate No.</u>	<u>Title</u>	<u>Scale</u>
1 #1	PROPERTY LOCATION MAP	1:50,000
2 #2	MOLYBDENUM - COPPER GEOCHEMISTRY	1" = 400 feet
3 #3	LEAD - ZINC GEOCHEMISTRY	1" = 400 feet

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SUMMARY:

The Sal claims cover a small aeromagnetic anomaly that is coincident with a small porphyry and granodiorite plug intruded into predominantly siltstone facies of the Upper Jurassic Bowser Group. Preliminary soil sampling has defined several areas of generally coincident molybdenum and copper anomalies and fairly widespread low order zinc anomalies. Further work is required to determine the significance of these anomalies.

INTRODUCTION:

During the 1970 field season Brettland Mines Limited conducted a geochemical soil and stream sediment survey over a portion of the Sal claims. A series of picket lines were established for purposes of the soil sampling and prospecting. No systematic geological mapping has yet been done, and only limited prospecting has been completed to date. An additional 12 claims [Sal 21-32] were staked towards the end of the 1970 field programme.

This report describes the details and results of the 1970 field work which was done under the direction of P. E. Hirst, P. Eng., with field supervision by Mr. G. Brett and Mr. F. Brett of Brettland Mines Ltd.

PROPERTY:

The property consists of 32 located Sal claims. Sal 1-20 claims are owned by P.E. Hirst and were staked on February 10, 1970. The Sal 21-32 claims are owned by Brettland Mines Ltd., and were staked on July 28, 1970.

LOCATION AND ACCESS:

The property is situated on the east bank of the Skeena River approximately 16 miles north of Hazelton in the vicinity of Sediesh Creek in the Omineca Mining Division. Specific coordinates are latitude $55^{\circ} 30' N$, longitude $127^{\circ} 35' W$.

The claims are thickly forested with coniferous cover and some small shrubby undergrowth. A portion of the property in the vicinity of the lake has recently been logged. Elevations range between 1,800 feet and 4,000 feet above sea level.

Easy access to the property is provided by a fair gravel road along the east side of the Skeena River from Hazelton to Kisgegas from which two short logging roads extend to the property.

GEOLOGY:

The claim area is believed to be mainly underlain by fine clastic sediments, principally siltstones, of the (Upper Triassic) Bowser Group. A small plug of granodioritic composition and related porphyritic phases intrudes these sediments in the area east of the lake and extends uphill to at least as far as the Sal 16 and 18 claims. Quartz veins, some carrying chalcopyrite and molybdenite, have been found in a number of places in the intrusive plug and in the adjacent hornfelsed sediments. Limited prospecting has indicated other intrusive varieties including diorite and a more mafic rich granodiorite in other areas. Considerable pyrite has been observed in scattered localities of siltstone outcrop.

The Sal intrusive plug may be a satellite of a group of larger plutons in the Mount Thomlinson range to the east. A government aeromagnetic map [No. 5255G] shows a prominent aeromagnetic anomaly in the vicinity of the intrusive and geochemical anomalies.

Much of the claim group is covered by extensive glacial till and gravel deposits, but no systematic geological mapping has yet been done.

DETAILS OF THE GEOCHEMICAL SURVEY:

Chain and compass picket lines were established at approximately 800 foot intervals to cover part of the property, and more closely spaced lines were established in two small areas on Sal 16 and 18 claims.

Soil samples were collected from the podzolic "B" horizon along these lines at various 100 foot or 200 foot intervals wherever it was possible to reach this horizon with a 2' hand auger. A few of the samples are organic, but in general it was not possible to collect mineral soil samples in a number of areas due to thick humus or swamp cover.

A limited number of stream sediment samples were collected of the finest material available [silt-sized fraction] from the active channel of a stream draining out of the lake and in two other areas.

All samples were placed in standard-sized heavy duty kraft envelopes and field dried prior to shipment to a commercial laboratory [Chemex Labs Ltd., North Vancouver, B.C.] for analysis.

METHOD OF GEOCHEMICAL ANALYSIS:

Samples as received at the laboratory were screened to minus 80 mesh size and a one gram sample was then digested in hot acid [HClO_4 and HNO_3] from which standard acid solutions were prepared.

Separate aliquots of sample solution were analysed for molybdenum, copper, lead, and zinc by atomic absorption spectrophotometry using a Varian Techtron A-A-5R spectrophotometer. This unit consists of three major components, a hollow cathode lamp [separate lamps for each element] a burner-atomizer, and a monochromator. The test solution is aspirated directly into the burner atomizer, and the respective transmittancy is read directly on a scale expansion unit on the monochromator. The respective metal contents are calculated by comparing the transmittancy with standard curves. A further check on the accuracy is provided by running standard samples periodically.

RESULTS OF THE GEOCHEMICAL SURVEY:

Soil and stream sediment results are plotted on the accompanying geochemical maps. Molybdenum and copper results are plotted on plate 2, and lead and zinc results are plotted on plate 3.

Color codes identify the samples and areas containing above background and anomalous values of molybdenum, copper, lead, and zinc. Ranges of values are presented in a semi-logarithmic form. Locally, some of the molybdenum values have been contoured in two small areas, but elsewhere, insufficient density of sampling precludes any attempt at contouring.

CONCLUSIONS:

The geochemical survey has indicated moderate to strongly anomalous concentrations of molybdenum and generally coincident anomalous copper concentrations in several widespread areas of the claims. Additionally, there are many scattered low order zinc anomalies that appear to show peripheral relationships to the molybdenum and copper anomalies and which may constitute a halo zone. Lead values show less variance.

The significance of these results remains to be assessed by further work, although corroboration of the existence of molybdenum and copper mineralization has been established through limited prospecting. Possible geological similarities may exist with the known molybdenite mineralization at the Laura porphyry plug, some few miles northwest of the Sal claims.

Respectfully submitted,

P. E. Hirst

P. E. Hirst, P. Eng.

December 2, 1970

APPENDIX "A"STATEMENT OF COSTS OF THE GEOCHEMICAL SURVEY

Salaries [as per Appendix "B"]	\$ 840.00
Geochemical Analysis:	
188 samples for Cu,Pb,Zn,Mo at \$3.20/sample	601.60
67 samples for Cu-Mo at \$2.20/sample	147.40
Groceries - 44 man days at \$5.00	220.00
Transportation	120.00
Supplies and equipment	75.00
Report preparation, drafting, and typing	350.00
Overhead @ 0.5 [Salaries and Groceries]	503.00
	<hr/>
Total	\$2,857.00
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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]
22 day of January A.D. 1971.]

P. B. Hirst

APPENDIX "B"EVIDENCE OF EXPENDITURE INCURRED

<u>Name</u>	<u>Category</u>	<u>Rate</u>	<u>Days Worked</u>	<u>Period</u>	<u>Total Wage</u>
K. Simpson	Sampler	\$400/month	20	May 25 - Aug. 1	\$ 320.00
S. Gore	Sampler	\$400/month	20	May 25 - Aug. 1	320.00
G. Brett	Field Supervisor	\$ 50/day	2	May 25 - May 27	100.00
F. Brett	Field Supervisor	\$ 50/day	2	Ju1.25 - Ju1. 28	100.00
Total					<u><u>\$840.00</u></u>

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]
22 day of January A.D. 1971.]

P. S. Hunt

P.E. Hirt
202, 1970

PLATE I

PROPERTY LOCATION MAP

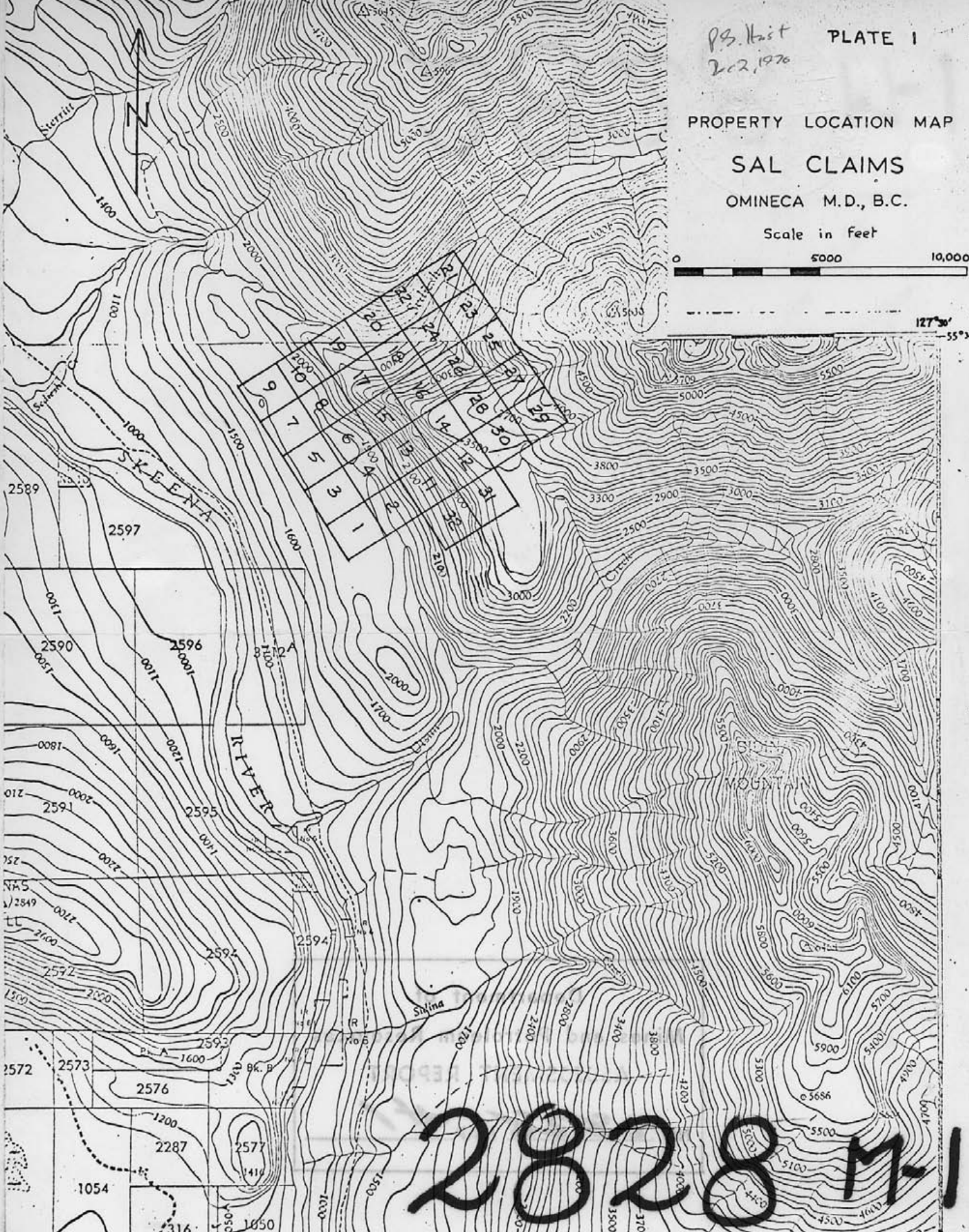
SAL CLAIMS

OMINECA M.D., B.C.

Scale in feet

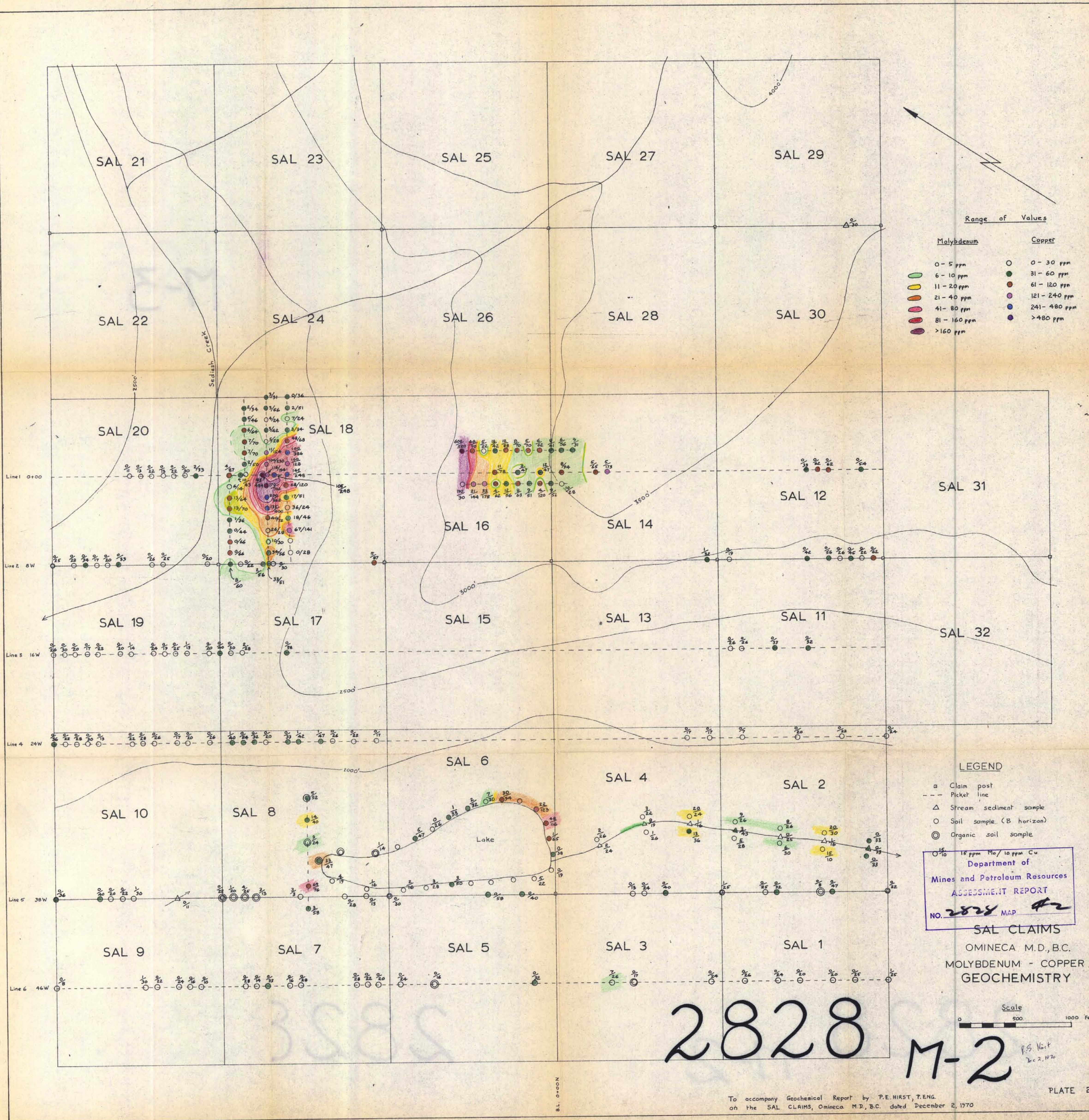


127°30'
55°30'



2828 M-1

To accompany Geotechnical Report by P.E. Hirt, P. Eng.
on the SAL claims, Omineca m.d., B.C. dated December 2, 1970



Range of Values

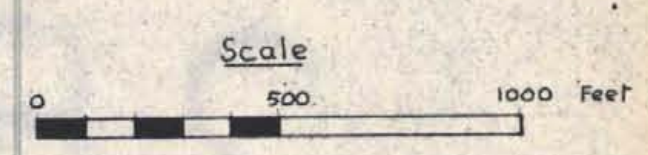
Molybdenum		Copper	
0 - 5 ppm	○	0 - 30 ppm	○
6 - 10 ppm	●	31 - 60 ppm	●
11 - 20 ppm	●	61 - 120 ppm	●
21 - 40 ppm	●	121 - 240 ppm	●
41 - 80 ppm	●	241 - 480 ppm	●
81 - 160 ppm	●	> 480 ppm	●
> 160 ppm	●		

LEGEND

- Claim post
- - - Picket line
- △ Stream sediment sample
- Soil sample (B horizon)
- ⊙ Organic soil sample

15 ppm Mo / 10 ppm Cu
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SAL CLAIMS
 OMINECA M.D., B.C.
 MOLYBDENUM - COPPER
 GEOCHEMISTRY

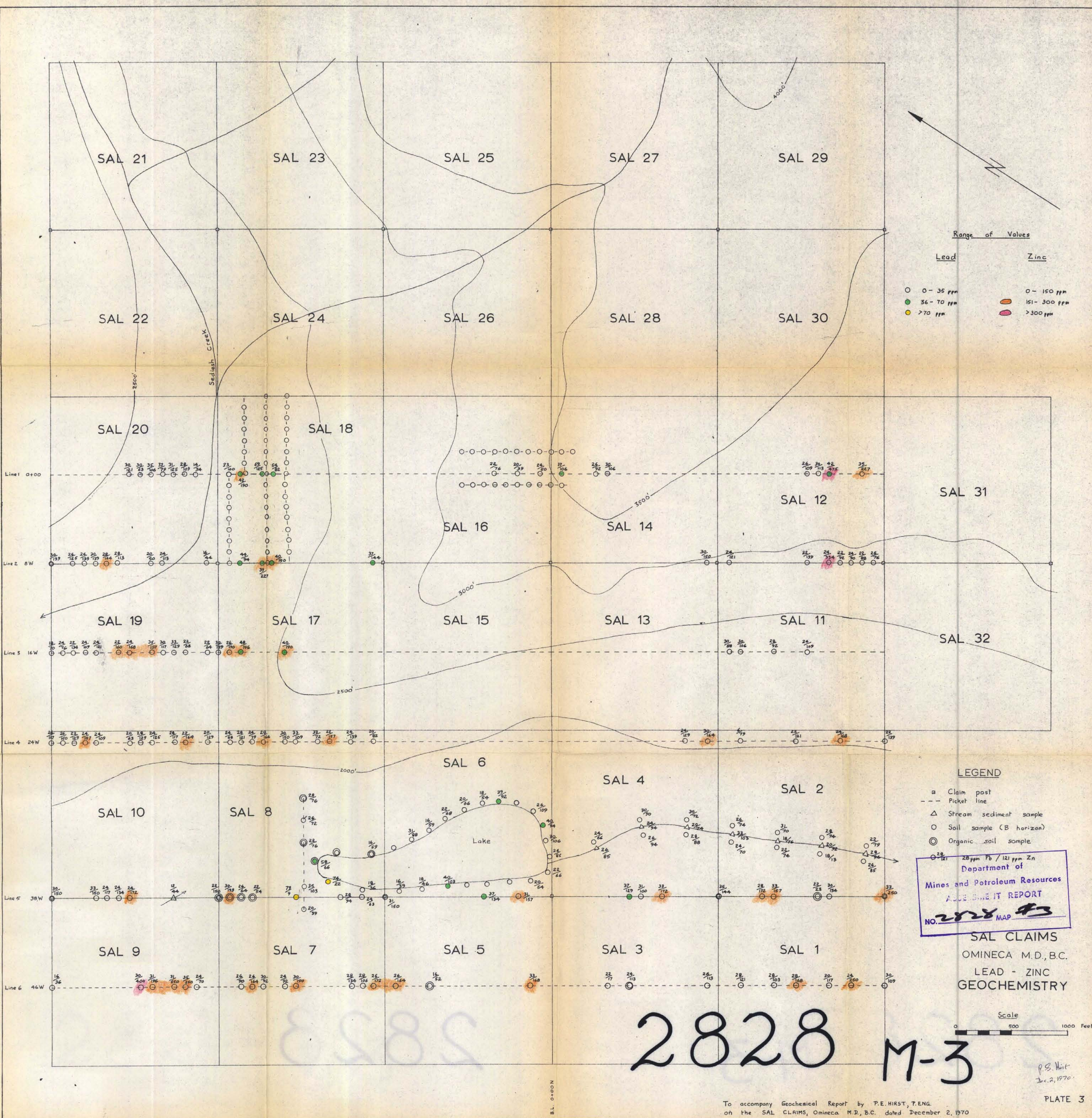


2828

M-2

P.S. Hirst
 Dec 2, 1970

To accompany Geochemical Report by P.E. HIRST, T.ENG.
 on the SAL CLAIMS, Omineca M.D., B.C. dated December 2, 1970



Range of Values

Lead	Zinc
○ 0 - 35 ppm	○ 0 - 150 ppm
● 36 - 70 ppm	● 151 - 300 ppm
● > 70 ppm	● > 300 ppm

LEGEND

- Claim post
- - - Picket line
- △ Stream sediment sample
- Soil sample (CB horizon)
- ⊙ Organic soil sample

28 ppm Pb / 121 ppm Zn
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 Mines and Petroleum Resources
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 NO. 2828 MAP 43

SAL CLAIMS
 OMINECA M.D., B.C.
 LEAD - ZINC
 GEOCHEMISTRY

2828 M-3

Scale
 0 500 1000 Feet

To accompany Geochemical Report by P.E. HIRST, P. ENG.
 on the SAL CLAIMS, Omineca M.D., B.C. dated December 2, 1970

P.S. Hirst
 Dec. 2, 1970

PLATE 3