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	GE	OCHEMICAL REPORT
	THE	EMPRESS CLAIM GROUP
		(Report No.2)
Location	:	On Shinish Creek, 6 miles S.E. of Osprey Lake, 120 - 49 N.E.
Report by	:	Roderick Macrae, P.Eng.
Claim Owner	:	Anaconda American Brass Limited
Work Done for	:	Anaconda American Brass Limited
Dates of Work	:	May 29, 1969 to July 31, 1969.

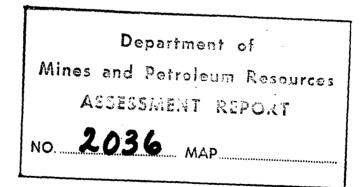


2036

GEOCHEMICAL REPORT

THE EMPRESS CLAIM GROUP

(Report No.2)





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Title: (on cover)

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## APPENDIX "A"

# STATEMENT OF COSTS OF LINE CUTTING AND SOIL SAMPLING

## Line Cutting Costs

<u>Name</u>	<u>B 00.</u>	Category	Rate/ Day	Dates	s Worked	Wages	Time Expended Days
Galloway,	G.	Linecutter	\$15.00	May 29	9-July 31	\$ 79.40	10
Gavel,	L.	11	16.92	11	**	256.00	15
Oliver,	М.	17	14.25	11	**	260.00	19
Twomey,	C.	**	19.38	11	**	115.50	6
Carlson,	N.	17	15.14	11	11	169.00	11
Gabanek,	J.	11	16.00	11	11	39.20	2.5
Culver,	D.	11	17.00	11	11	77.40	4.5
French,	Ρ.	71	17.81	11	**	35.62	2
Smith,	Ρ.	11	21.80	11	11	22.90	1
Westgeest,	G.	11	18.00	11	TT	36.00	2
Hastings,	F.	17	19.80	11	11	19.80	l
	* •		2).00			\$1,110.82	74

## Soil Sampling Costs

Galloway,	G.	Sampler	\$15.00	June	26-July	31	\$ 115.44	7
Gavel,	L.	ĩ	16.92	11	11		58.79	3.5
Oliver,	M.	11	14.25	11	11		49.38	3.5
Twomey,	C.	11	19.38	11	11		184.13	9•5
Carlson,	L.	11	15.14	11	11		112.89	7.5
Gabanek,	J.	11	16.00	11	11		48.00	3
Culver,	D.	11	17.00	n	11		8.50	l
French,	Ρ.	**	17.81	11	11		17.81	l
Dubberley,	D.	11	18.86	11	**		18.86	1
							\$ 613.80	37

## APPENDIX "B"

STATEMENT OF COSTS OF THE SOIL SAMPLE SURVEY

## Line Cutting

Labour		\$ 1,110.82	
Maintenance in	field, 77 men @ \$8.00	616.00	
	in field, 35 days @ \$20.00	700.00	\$ 2,426.82

### Soil Sampling

Labour Maintenance in field, 37 men @ \$8.00 Transportation in field, 12 days @ \$20.00	\$ 613.80 266.00 _240.00	1,119.80
Analyses of 950 samples @ \$2.50/sample		2,375.00
Supervision, line cutting and sampling		750.00
Mapping, engineering, drafting, typing		265.00

Total \$ 6,936.62

## APPENDIX "C"

## INDEX TO LINE CUTTING AND SOIL SAMPLING

## FOR THE PERIOD 15 MAY - 31 JULY, 1969

## For

## GEOCHEMICAL REPORT - EMPRESS CLAIM GROUP

## REPORT NO.2

<u>Line</u>	Cut & Sampled	Length	No. of Samples
88 N	198 E – EBL	10,200 ft.	102
92 N	198 E – EBL	10,200	102
172 N	100 E - CBL	10,500	103
180 N	198 E - 282 E	8,400	83
188 N	198 E - 282 E	8,400	83
196 N	CBL+10 - 282 E	7,800	74
204 N	198 E - 282 E	8,400	85
220 N	198 E - 310 E	11,000	113
244 N	100 E - 198 E	10,400	100
248 N	100 E - 198 E	10,400	100

95,700 ft. 945

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#### ANACONDA AMERICAN BRASS LIMITED

## GEOCHEMICAL SURVEY OF THE EMPRESS CLAIM GROUP

### Introduction

The Empress Claim Group was staked in June, August, and October of 1968 as a contiguous block of claims and fractional claims. In September and October, 1968, approximately 2500 soil samples were taken on a grid-type soil sample survey. Sampling was concentrated in the north-west block of the claim group and in the north-east block, since in both of these areas discoveries of molybdenite mineralization in place had been made.

A study of the results of the 1968 work indicated that additional sampling should be done, which work is the basis of this report. The 1968 work was summarized in a report and map dated June 20th, 1969, and submitted for assessment requirement. The title of that report is, "Geochemical Report - The Empress Claim Group."

#### Description

The Empress Claim Group is made up of the following claims: Empress 1 to 54, 642 to 655, 2617 to 2676, 4562 to 4569, 5656 to 5666, 8315, and Empress 55 Fr., 56 Fr., 57 Fr., and 58 Fr.

They occupy an area on the north side of Shinish Creek from the head of Empress Creek east to the divide separating Shinish Creek from the creek draining north-east into Trout Creek and an adjoining area occupying the valley of Shinish Creek and the ground south of Shinish Creek near its head. The location is approximately 6 miles south-east of Osprey Lake. Seven of the 152 claims are recorded in the Osoyoos Mining Division, the balance of the group's 145 claims are recorded in the Similkameen Mining Division.

Ground cover is interior jack-pine with small patches of spruce around drainage systems. There is one large size swamp area in the vicinity of Empress Creek and several small (less than 500 feet in diameter) swampy areas on the south side of the head of Shinish Creek.

Bedrock cover is generally complete over the claims; there are small rock bluffs exposed on the north side of Shinish Creek and at rare intervals outcrops up to 20 feet by 20 feet occur. Bedrock is estimated to be shallow except adjacent to and on the north side of Shinish Creek. Here there are indications of concentrations of glacial till in the form of small moraines.

#### Geology

Granodiorite and monzonite are the two predominant rock types. Molybdenite is the only sulphide other than pyrite observed on the claims. Pyrite occurrence is variable but does not exceed 2%<sup>7</sup> where observed. Work done in 1969 indicates that weathering and/or chemical alteration is extensive in the granodiorite. It is known to occur for 20 feet in depth and may be considerably deeper.

### Reason for the Survey

The program of grid soil sampling in 1968 resulted in two anomalous molybdenum areas on the claims; more extensive and more detailed sampling was recommended following study of the 1968 results.

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### Details of the Survey

An east-west base line was established along the projection of the centre line of staking of Empress 1 to 10; a northsouth base line was established along a line connecting the final posts of Empress 31/32, 23/24, 49/50, and the initial posts of 642/643, 2617/2618, and 2631/2632. At intervals of 800 feet north and south of the east-west base line, surveyed lines chained and picketed at 100 foot intervals were cut out, using Brunton compass and survey chain methods. Some 18.15 miles of lines were surveyed in this manner. Stations at picketed points were identified with the standard north-south, east-west grid numbering system. The survey is tied to an existing B. C. Forest Service base line at the west end of the group of claims.

Early in September an orientation survey was conducted in an area where bedrock cover occurs up to 3.5 feet. Within the surveyed area the bedrock is overlain by 4 to 16 inches of C-soil horizon, in turn overlain by a widespread sandy clay till of 4 to 20 inches thickness. Locally the weathered bedrock is overlain by a residual  $B_2$  -soil horizon or a  $B_1$ -soil horizon developed from glacial till. The geochemical tests indicated the  $B_1$ -soil horizon could be successfully used in delineating molybdenum concentrations in areas where overburden thickness is not greater than 6 feet. The  $B_1$ -soil horizon was sampled when available, and a long handled shovel was used to dig the hole to the sample horizon.

#### Methods of Determining Metal Content

Laboratory analyses of the samples were made by Mr. Ben Singh, graduate chemist, in Anaconda's geochemical laboratory. Samples taken in the field were packed in marked manila soil sample envelopes at

- 3 -

the sample site. Preliminary drying in air was done before shipping to the laboratory. Drying of the samples was completed in electric ovens at the laboratory, followed by screening to 80 mesh. Molybdenum was determined by the classic calorimetric thiocyanate method; all other metals were determined by standard atomic adsorption techniques.

#### Results of the Survey

950 samples were recovered from selected areas around and within the sample-line locations reported in the June 20th report referred to above. Five determinations were made; molybdenum, copper, lead, zinc and silver.

The values quoted in parts per million were plotted on an overlay of the claim map on a scale of 400 feet = 1 inch.

The survey extended the western molybdenum anomaly northeastward. The survey continued to report copper was in the soil, although recognizable copper minerals have not been seen.

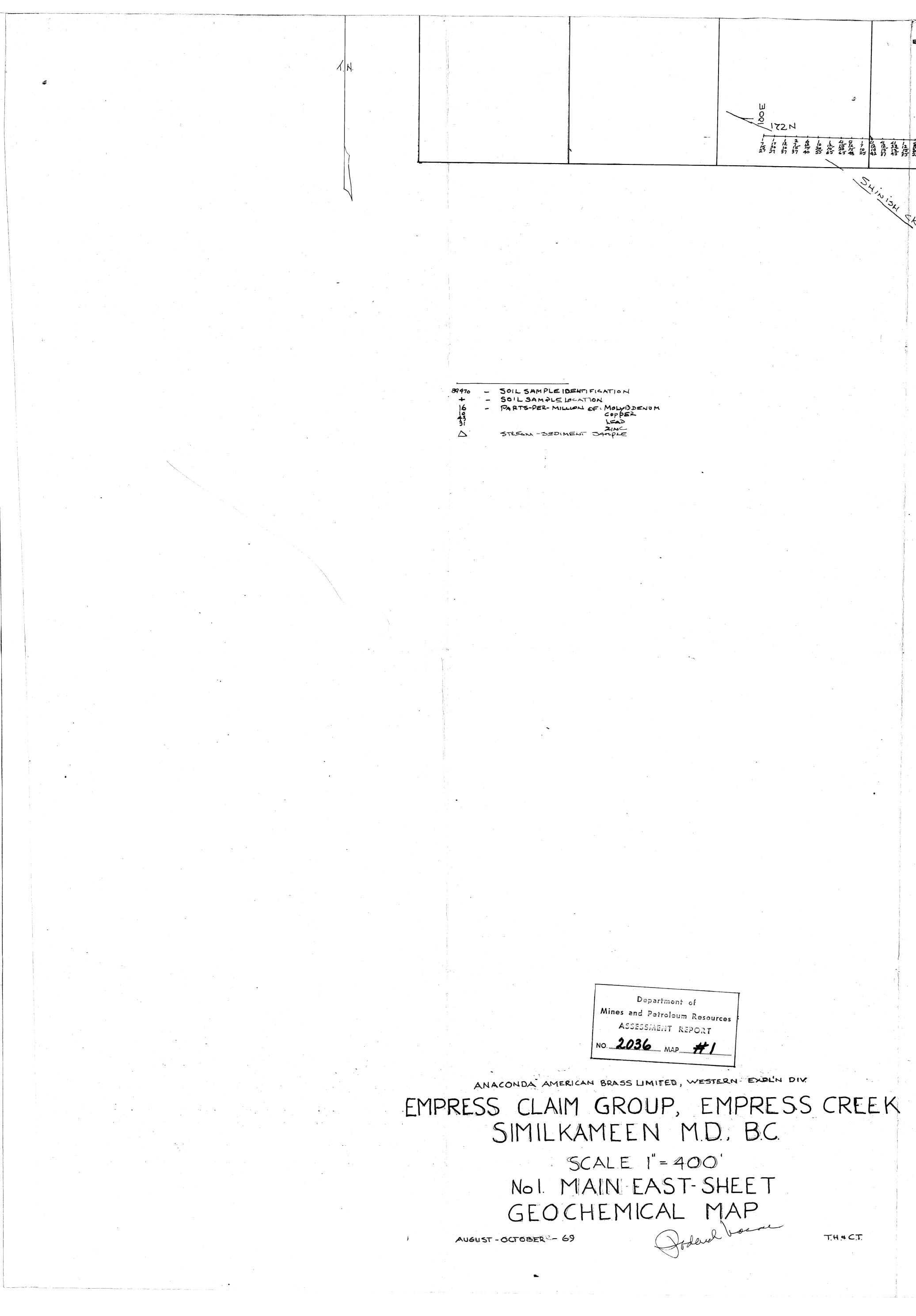
The survey gave additional target areas for stripping and more detailed examination. More study of the results of both gridgeochemical surveys is warranted and some deep soil sampling at selected locations has been recommended following a study of the results of trenching and stripping exposed bedrock.

Respectfully submitted,

Roderick Macrae, R.

September 26, 1969.

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