

2734

A GEOCHEMICAL REPORT ON CODE & FEN CLAIMS

Property: Code & Fen Claims
Location: 21 miles S.W. of Houston, B.C.
54°10'N, 126°50'W
Mining Division: Omineca 934/20
Province: British Columbia
Report by: R. Macrae, P.Eng., and
W. Willmott, B.Sc.
Claim Owners: Anaconda American Brass Limited
& Julian Mining Co. Ltd.
Date of Work: Aug. 26 - Oct. 13, 1970
Date of Report: November 18, 1970

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 2734 MAP

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INTRODUCTION

The Code-Fen property consists of 198 claims, of which 168 have been consolidated into six groups (see claim map, Plate I). During 1970 a systematic program of geochemical soil sampling was carried out over the northern part of the property, along a grid-line system cut for that purpose. A number of reconnaissance soil and stream-sediment samples were also collected over the southern half of the claim block. The 169 mineral claims over which the survey was done are outlined in red on the claim map (Plate I).

The line cutting was commenced on August 26, 1970, and completed on October 12, 1970. The sampling was carried out almost simultaneously, starting on September 1 and finishing on October 13. The field work was under the general supervision of W. F. Willmott (geologist) and R. Macrae (P. Eng.).

LOCATION AND ACCESSIBILITY

The Code and Fen claims are located at the headwaters of Fenton Creek, approximately 21 miles southwest of the town of Houston in the Omineca Mining District, B. C. (see Fig. I). Access to the property is provided by two old logging roads leading off the Morice River road. During 1970 one of these was extended over 4.5 miles to provide access to the central part of the property.

PURPOSE OF THE GEOCHEMICAL SURVEY

During earlier reconnaissance sampling, soil and stream sediment samples were found to contain moderately anomalous amounts of silver, zinc and lead over several parts of the property. The aim of the systematic grid sampling was to define more precisely the anomalous zones, and to delineate possible target areas. The reconnaissance sampling over the southern half of the property was carried out to gain further information before undertaking more detailed work in that area.

TOPOGRAPHY AND VEGETATION

The property is situated in thickly forested, rolling mountainous country, which falls gradually northwards towards the Morice River valley. Wet, semi-swamp areas are common on many hillsides as well as in flatter areas. Outcrops of bedrock are common only on several prominent hills in the north and northeast, but it is probable that bedrock lies at only shallow depth over much of the more rugged southern part of the property. Reasonably well developed soil profiles with a brownish "B" horizon are present over most of the northern part of the claim block, although in wet and swampy areas generally only a thick organic rich "A" horizon was encountered. Where bedrock is close to the surface, there is little soil development apart from a thin organic rich "A" horizon containing angular fragments of bedrock.

GENERAL GEOLOGY OF THE AREA

The claim block is underlain by a sequence of intermediate and acid volcanic rocks, which on the G.S.C. House of Commons 1"=4 miles geological sheet are correlated with the Jurassic Hazelton Group. Three units have been recognized on the property; a lower sequence of purple to grey trachyandesite or andesite, a sequence of rhyolitic lavas and tuffs, and an upper sequence of grey trachyandesite or andesite. The volcanic rocks appear to dip gently to the southeast,

but in the eastern part of the property they have been disrupted by faulting. Thick glacial overburden is present over the northeast part of the claim block.

ESTABLISHMENT OF GRID SYSTEM AND METHOD OF SAMPLING

The systematic soil sampling was carried out along north-south grid lines cut at 800 foot intervals, as shown on the enclosed maps (Plates I, II). A base line cut on a bearing of approximately 5° south of east across the southern end of the grid was also partly sampled. Two lines of an earlier grid system bearing 45° east of north in the northern part of the property were also sampled. Along each line samples were taken at 100 foot intervals at stations marked by pickets and flagging. Samples were also collected at 100' intervals along that part of the access road which lies south of the base line.

The reconnaissance stream-sediments and soil samples (see Plate III) collected over the southern part of the property were located from aerial photographs; sample sites were marked by identified flagging. A total of approximately 2040 samples was collected over the property.

Each soil sample was taken from a pit or hole which was dug with a shovel or grubhoe to depths varying between 5 and 19 inches, depending on the soil development, to obtain the "B" horizon. In swampy areas and other places where the "A" horizon was sampled, separate symbols for swamp, seep or "A" horizon samples have been used on the geochemical maps (Plates II, III).

ANALYTICAL METHODS

Samples were processed in the Anaconda American Brass Geochemical Laboratories at Britannia Beach.

After drying the samples at 95°C they were screened by an 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. One gram weight of the samples was digested with HNO_3 and HCCO_4 mixture for five hours and after dilution to standard volume, the sample solutions were analysed by atomic absorption spectrophotometers. Copper, zinc, lead, silver, iron and manganese were analysed using the C_2H_2 -air flame combination. The molybdenum determination was carried out by C_2H_2 - N_2O gas mixture directly on the same sample solutions.

RESULTS OF THE GEOCHEMICAL SURVEY

The results of the grid soil-sampling program are plotted on the enclosed $1"=400'$ scale geochemical map (Plate II); those of the reconnaissance samples collected over the southern half of the property are shown on the $1"=1000'$ geochemical map (Plate III).

Zinc and Lead: The results for zinc and lead appear broadly related, with values above 600 ppm and 60 ppm respectively considered anomalous. In organic-rich swamp and seep samples the threshold values are higher at about 1000 ppm and 80 ppm. The results show a rather diffuse band of anomalous samples extending in an east-west direction across the northwestern part of the property. Although many of these correspond to "A" horizon samples, anomalous values were also found in "B" horizon samples taken from the same sites.

Silver: Values for silver are broadly related to those of zinc and lead, and anomalous values (considered to be above 1.7 ppm for "B" horizon samples) occur within the band of high zinc and lead values mentioned above. However, individual results are more erratic and high silver values do not necessarily correspond with high zinc and lead results. Elsewhere high silver values are restricted to organic-rich swamp and seep samples.

Molybdenum and Copper: Very low values for both molybdenum and copper were found across the entire property and no zones considered anomalous were located. One or two individual high values are not considered significant.


Iron: The distribution of iron values does not form any clear pattern. Results somewhat above average (above 30,000 ppm) are associated with the zone of anomalous Zn, Pb and Ag values referred to above, but other equally high values occur elsewhere in areas which give only background values for the other metals.

Manganese: Values above 800 ppm are considered significant for "B" horizon samples, but no reliable threshold has been determined for organic "A" horizon samples, whose results are much higher. The only anomalous area of any size broadly corresponds with the zone of anomalous Zn, Pb and Ag results.

The rather weak and diffuse nature of the zone of anomalous values outlined by the survey and the thick glacial overburden in the north of the property makes further geophysical and geochemical surveys necessary before any target areas can be defined. The reconnaissance samples taken over the southern half of the property give disappointing results and delineated no further anomalous areas.

W. F. Willmott.

W. Willmott, B. Sc.


R. Macrae, P. Eng.

APPENDIX I

STATEMENT OF FIELD LABOUR COSTS OF SOIL SAMPLING AND LINE CUTTING

Soil Sampling

<u>Name</u>	<u>Rate</u>	<u>Days</u>	<u>Date</u>	<u>Wage & Fringe (11%)</u>
G. Westgeest	\$475/mo.	1	Sept. 2/70	\$ 20.25
G. Birtwhistle	450/mo.	22	Sept. 1-22/70	422.58
B. Clarke	450/mo.	7	Sept. 1-7/70	134.47
F. Skelton	550/mo/	18	Sept.11-Oct.1/70	422.47
T. Thomas	450/mo.	16	Sept.10-Oct.10/70	307.19
E. Hogg	25/day	1	Oct. 13/70	27.75
R. Roisum	25/day	3	Sept.23-Oct.13/70	83.25
D. Southwick	25/day	3	Sept.10-Oct.13/70	83.25
S. Wade	25/day	4	Sept. 1-Oct.13/70	111.00
B. Eastman	20/day	5	Oct. 5-10/70	111.00
R. Riley	450/mo.	3	Sept. 23-25/70	57.44
K. Mathers	475/mo.	3	Sept. 27-29/70	60.64
M. Bartley	450/mo.	3	Sept. 27-29/70	57.44
P. French	525/mo	3	Sept. 23-25/70	67.02
Total Labour				\$1,965.75

Line Cutting

<u>Name</u>	<u>Rate</u>	<u>Days</u>	<u>Date</u>	<u>Wage & Fringe (11%)</u>
E. Hope	525/mo.	5	Aug. 26-30/70	112.07
E. Hogg	25/day	35	Aug. 26-Oct.11/70	971.25
G. McLaren	500/mo.	5	Aug. 26-30/70	106.56
M. Karolyi	20/day	3	Aug. 26-28/70	66.66
M. Kennedy	25/day	37	Aug. 26-Oct.3/70	1,026.75
R. Roisum	25/day	35	Sept. 1-Oct.11/70	971.25
S. Wade	25/day	34	Sept.-Oct.12/70	943.50
D. Southwick	25/day	29	Sept.10-Oct.12/70	804.75
R. Riley	450/mo.	3	Sept.24-26/70	57.44
K. Mathers	475/mo.	4	Sept.23/26/70	80.67
M. Bartley	450/mo.	4	Sept.23-26/70	76.42
Total Labour				\$5,217.32

Note: Salaries based on six day week

Declared before me at the City
of Vancouver, in the Order of Council
Province of British Columbia, this 19
day of November 1970, A.D.

John L. L. L.
Commissioner for taking Affidavits within British Columbia
A Notary Public in and for the Province of British Columbia

SUB-MINING RECORDER

APPENDIX II

STATEMENT OF TOTAL COSTS OF LINE CUTTING, SAMPLING
AND ANALYSIS OF SAMPLES, MAPS AND REPORTField Costs - Sampling

Salaries from Appendix I (sampling)	\$1,965.75	
Maintenance - 92 man days x \$9.66	888.72	
Vehicle Cost (Gas-oil-rental)	744.00	
Communications - (R-Tel)	80.00	
Supervision - 9 man days x \$38.85	349.65	
Total		\$4,028.12

Analysis costs - 7 elements/sample - \$2.50/sample

2,042 samples x \$2.50/sample	5,105.00
Total - Field costs & analysis	9,133.12
(The cost/sample	<u>4.47</u>)

Field Costs - Line cutting, mapping - 189,000 ft.

Salaries - Appendix I -Line cutting	\$5,217.32	
Maintenance - 194 man days x \$9.66	1,874.04	
Vehicle Costs (gas-oil-rental)	1,116.00	
Communications (R-tel)	120.00	
Supervision - 16 man days x 38.85	621.60	
Total		8,948.96
(The cost/line mile		<u>250.00</u>)

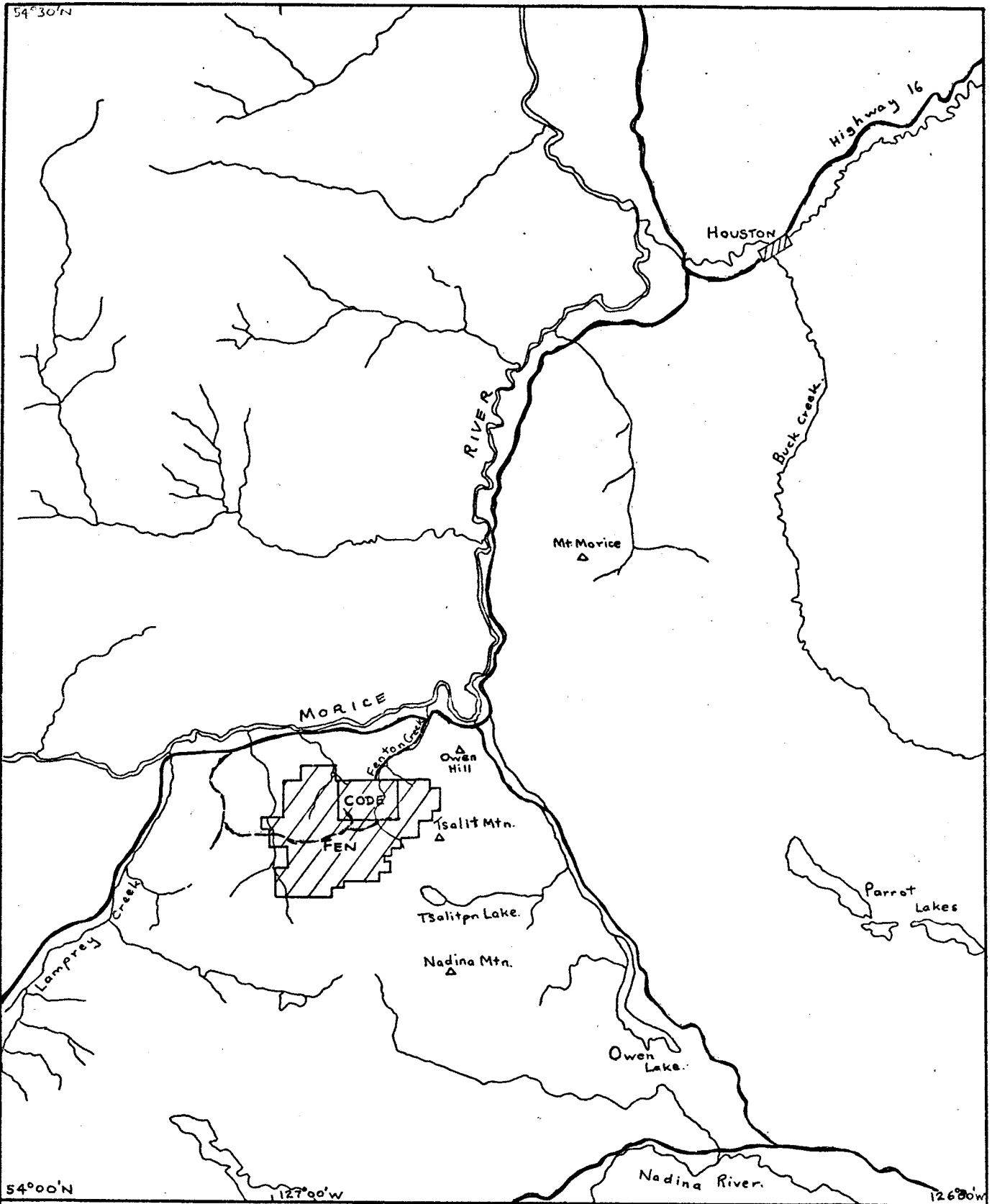
Report Preparation Cost

Report writing & maps - 10 man days x 33.30	\$ 333.00	
Accounting 4 man days x 33.30	133.20	
Typing 1 man day x 27.75	27.75	
Total		<u>493.95</u>

These costs (sampling & analysis, line cutting and report preparation) are distributed over 166 mineral claims where the work was done as follows:

Claim Groups	No. Claims	Sampling & Analysis	Line Cutting	Report	Total
70-1	29	53 samples \$372.00	1500 ft. \$ 71.00	\$ 4.25	\$ 447.25
70-2	32	161 " 721.00	12700 " 602.00	35.50	1,358.50
70-3	30	537 " 2402.00	54000 " 2555.00	137.00	5,094.00
70-4	30	396 " 1771.00	31000 " 1467.00	81.25	3,319.25
70-5	23	394 " 1762.00	40200 " 1904.00	113.50	3,779.50
Declared before me at the	22 City	471 " 2105.00	49600 " 2350.00	122.50	4,577.50

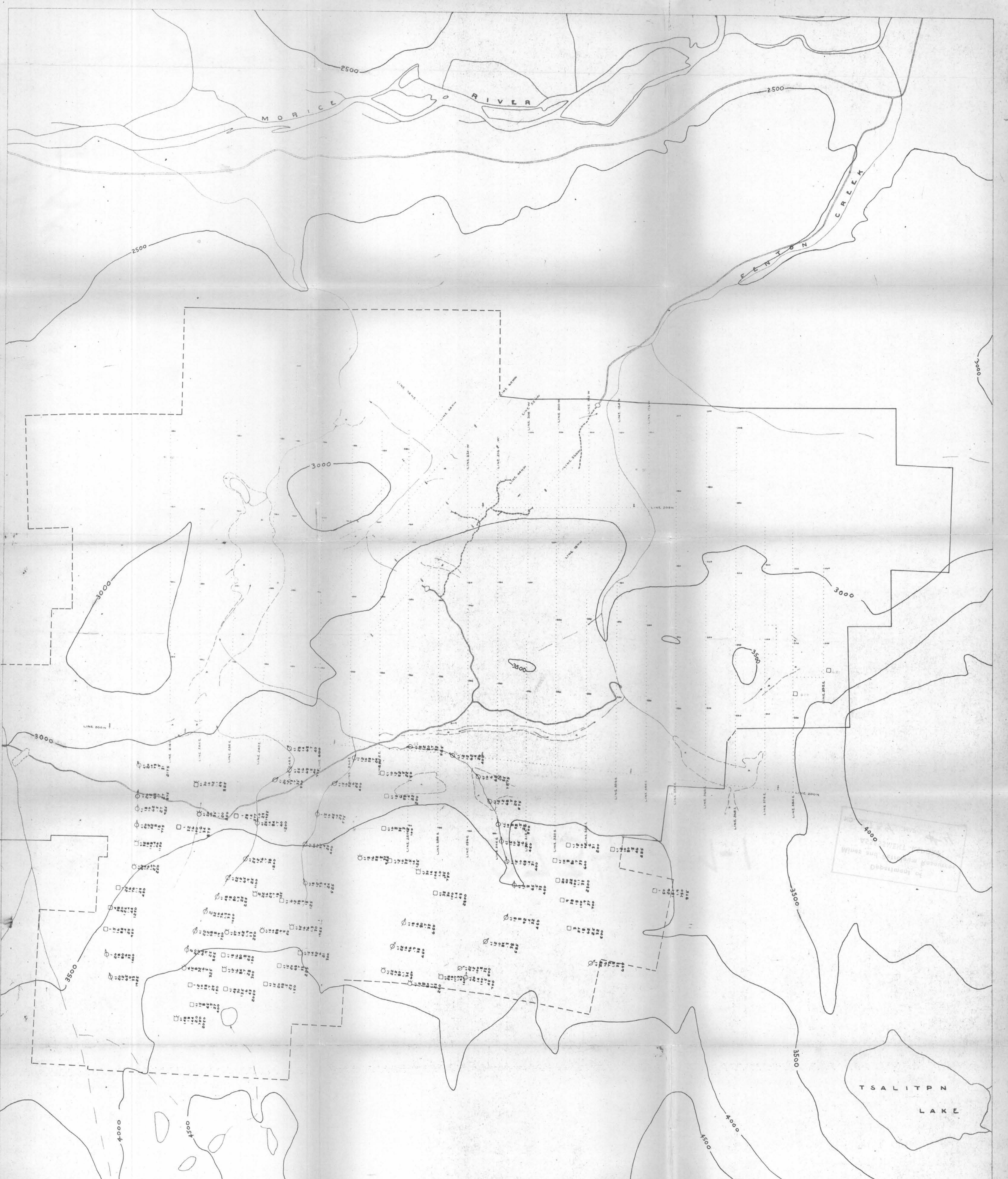
of *Abnoco*, in the *Province of British Columbia*, this *19* day of *November 1970*, A.D.



CODE AND FEN CLAIMS
 OMINECA M.D., B.C.
 LOCATION MAP
 SCALE 1 INCH = 4 MILES.

NOV. 1970.

Fig. 1



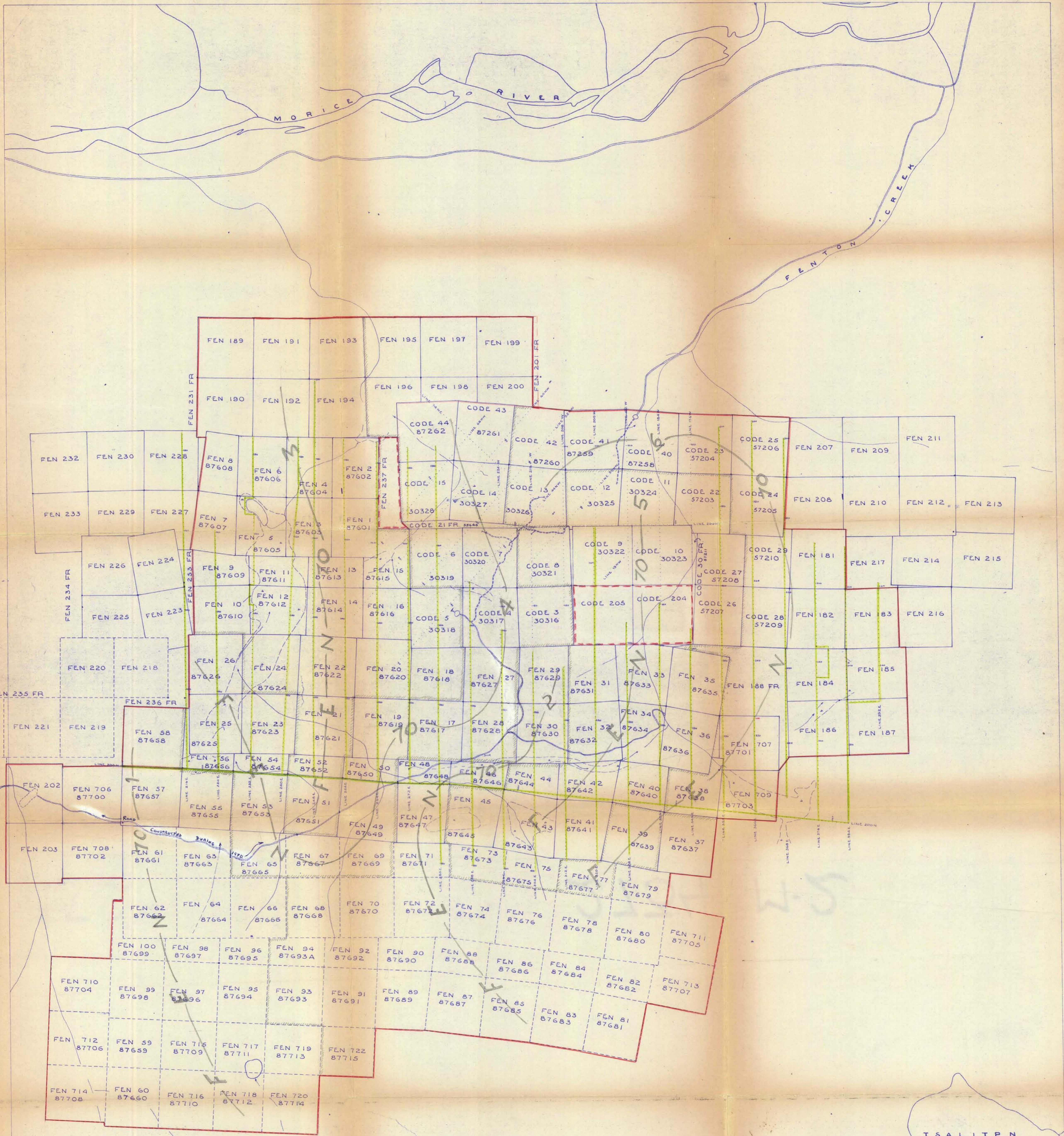
ASSAY RESULTS ARE SHOWN IN PARTS PER MILLION WITH THE METALS IN THE FOLLOWING SEQUENCE:
 MOLYBDENUM
 COPPER
 LEAD
 ZINC
 SILVER
 IRON (IN 1000S OF P.P.M.)
 MANGANESE

STREAM SEDIMENT ○ SOIL □ SWAMP ◇ SEEP ⊠

2734 M-1

ANACONDA AMERICAN BRASS LTD. WESTERN EXPLORATION DIVISION
 CODE - FEN
 OMINICA M.D., B.C.
 SCALE: 1" = 1000'
 GEOCHEMISTRY
 DATA BY: B.E.
 1970
 ASSAY RESULTS

Robertson



T S A L I T P N
L A K E

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2734 MAP #2

CLAIM NAMES AND RECORD NUMBERS ARE SHOWN.

- Road
- Bulldozer Trail
- Bulldozer Trench
- Grid Lines cut 1970
- Outline of Claims on which Assessment Credit Requested [NOT INCLUDING CODE 204, 205, FEN 237 FR]
- Outline of Claim Groups

ANACONDA AMERICAN BRASS LTD. WESTERN EXPLORATION DIVISION

CODE - FEN
OMINECA M.D., B.C.

2734 M-2

SCALE: 1" = 1000'
MINERAL CLAIMS
PLATE I



ASSAY RESULTS ARE SHOWN IN PARTS PER MILLION WITH THE METALS
 IN THE FOLLOWING SEQUENCE: MOLYBDENUM
 COPPER
 LEAD
 ZINC
 SILVER
 IRON (IN THOUS. OF P.P.M.)
 MANGANESE

ANACONDA AMERICAN BRASS LTD. WESTERN EXPLORATION DIVISION
 CODE-FEN
 OMINCA M.D., B.C.
 SCALE: 1"=400'

2734
GEOCHEMISTRY
 DATA BY W.W. 1970
ASSAY RESULTS
 PLATE II

○ STREAM SEDIMENTS
 ● ROCK SAMPLES
 ○ SOIL SAMPLES
 ● SWAMP SAMPLES
 ○ SLP SAMPLES

IN 8 INSTANCES A 'B' SAMPLE WAS TAKEN BENEATH. THESE ARE SHOWN BELOW THE 'A' RESULTS WITH A LINE BETWEEN.

2735
M-3
Richard Lane