

391

Geophysical Report
Atlas Claims - Marguerite Area
Cariboo M.D. B.C.

TABLE OF CONTENTS

Introduction.....	Page	1
Location of Claims.....		1
Topography.....		2
Geology.....		2
Mineralization.....		3
Geophysics.....		4
Results of the Survey.....		5
Equipment Used.....		5

Appendix "A" : Statement of qualifications of Kolbjorn Loevang, Geophysical operator.

Appendix "B" : Statement of costs of survey.

Appendix "C" : Brochure Describing ABEM.

Maps in Pocket:

- (1) An interpretation of the results of the ground electromagnetic survey, rotary field method, in the Marguerite area, Cariboo Mining Division on Atlas Claims. Scale 1" - 200'.
- (2) Location Map. Scale 1" - 1/2 Mile.

Department of	
Mines and Petroleum Resources	
ASSESSMENT REPORT	
NO. <u>391</u>	MAP

J. S. Heath, P. Eng.
Dec 22, 1961

Geophysical Report
Atlas Claims - Marguerite Area
Cariboo M.D. B.C.

Introduction:

The Atlas Claims covered by the subject survey were staked by K. Loevang, January 11th, 1961, and transferred to Carl Erickson by Bill of Sale recorded December, 1961.

The claims cover an area embracing a discovery made by Axel Berglund in 1954. Almost complete lack of outcrop make it necessary to use geophysics to follow up float evidence.

The survey was made by K. Loevang assisted by Axel Berglund. Abem (E.M. Gun) equipment was used.

Location:

The Claims are located at an elevation of 3,000 feet, 4 miles North-East of Marguerite Station of P. G. E. Railway, and three miles North-Westerly from the North end of Guisson Lake. The area drains North and West to the Fraser River.

Latitude $52^{\circ} 32' N.$ Longitude $122^{\circ} 22' W.$

J. H. Scott

Geophysical Report
Atlas Claims - Marguerite Area
Cariboo M.D. B.C.

Topography:

The claims occupy part of a flat low-lying area extending North-Westerly from Cuisson Lake and including several small lakes and large hay meadows. The area lies on the west flank of Granite Mountain and along the east side of a plateau formed of Tertiary Basalts. The average elevation is 3,000 feet. Outcrops are not known in the claim area, but are numerous on the flank of the mountain, particularly in stream beds. Overburden in the claim area may be locally deep, but is not believed to be generally excessive.

Geology:

Granite Mountain which lies five miles to the south east is the centre of a granitic area extending approximately 14 miles north and south and having a maximum known width of 8 miles. The rocks surrounding the granitic mass are thought to be Palaeozoic Rocks of the Cache Creek group. Members of the group close to or enclosed in the intrusive are Chloritic Schists, Phyllites and Sheared Limestone. More distant from the centre of Granitization, gently dipping Argillites, Slates, Dolomite and Limestone have been seen.

Forming a steep scarp east of the Fraser River and capping the plateau as far east as Cuisson Lake, is a flat-lying basaltic flow of Tertiary age. This flow extends from the south end of McLeese Lake for some 25 miles north.

Between the Basalt and the west flank of Granite Mountain is a relatively flat area including Cuisson Lake and a number of small lakes and hay meadows. This area lacks outcrop but is presumably underlain by Cache Creek rocks or by extensions of the Granitic mass.

J. A. Scott

Geophysical Report
Atlas Claims - Marguerite Area
Cariboo M.D. B.C.

Mineralization:

The discovery made by Axel Berglund on Axel Claims No. 7 & 8, took the form of a large angular block, at first thought to be Bedrock, but later proved to be Float. It is altered with Chlorite and Epidote and mineralized with Pyrite and Chalcopyrite. The seams of sulfides are heavy enough to indicate that a mass or vein of similar material might show conductivity if surveyed with electromagnetic equipment. No Magnetite can be seen. Smaller blocks of similar material have been found over a treeless area 15 - 20 acres in extent. No outcrop is known on the claims. Glacial ice movement is indicated as from south to north.

The showing at Major Mines Ltd. is within the Granitic mass two miles southeasterly. It is developed by 100 ft. of Adit and over this length averages approximately 2% Copper. Pyrite and Chalcopyrite in Chloritic and Sericitic Schists appears to form a zone or bed some 30 - 50 feet thick of limited extent, and striking N-W and dipping S-W 45° . Deeper holes confirmed an apparent bedding in the Granitic mass with Copper of higher grade in certain horizons.

At Iron Mountain showing 6 miles to the south east, Copper is concentrated in a seam of Magnetite 2 feet thick and disseminated in sheared limestone and Phyllite in minor amounts. These sediments take the form of a pendant, striking N-W and dipping 45° S-W.

J. A. Scott

Geophysical Report
Atlas Claims - Marguerite Area
Cariboo M.D. B.C.

Geophysics:

During 1958, an Aeromagnetic Survey was done over a large area including the Berglund discovery. The magnetic map showed the edge of the Tertiary Basalt west of the Atlas Claims. The pattern in the Elat area showed little magnetic contrast but a general northerly trend.

Geochemistry done by another exploration company is reported to have indicated copper anomalous soil in the general area covered by the present Atlas Claims.

Lack of Magnetite in float and low magnetic contrast in the airborne work make the use of ground magnetometer unattractive. Self-potential (spontaneous polarization) would possibly be diagnostic on the float area but could not be extended to the lake-covered area.

Electromagnetic equipment built by Abem and operated by K. Loevang was used. A total of 21,500 feet of line were surveyed. The survey was extended onto the ice in view of positive results. Readings and interpretations are plotted on the accompanying map. The plan shows the real and imaginary component at each station plus an interpretation of the structure underlying the survey.

A central base line N. 40° W. coincides with the location line of the claims. Lines normal to this base line at 800 and 400 foot intervals were surveyed at 100 foot station spacing. Coil separation of 200 feet and frequency of 440 cycle were used. Readings were corrected for elevation differences.

J. Scott

Geophysical Report
Atlas Claims - Marguerite Area
Cariboo M.D. B.C.

Results of the Survey:

The featureless and even nature of the readings on the three north lines spaced at 800 feet may be due to the absence of significant conductors or to overburden too deep for the capabilities of the equipment. Similarly, the last line to the south flattens out.

Two medium strength conductors are indicated in the lake-covered area and extending onto axis No.s 15 and 16. Two weak conductors are suggested extending north through the area of float.

The evidence of ice movement south to north taken with the somewhat stronger conductors indicated under the lake suggest a float source somewhere in the lake basin. The conductors indicated are thought to be of such strength as to indicate material similar to that occurring as float.

Equipment Used:

Electromagnetic Gun developed by Abem.
AB Elektrisk Malmletning of
Stockholm Sweden.

J. S. Scott, P. Eng.
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Geophysical Report
Atlas Claims - Marguerite Area
Cariboo M.D. B.C.

APPENDIX A

Statement of cost of survey on the Atlas Claims

21,500 feet of electromagnetic surveying on Atlas mineral claims Nos. 3-8 inclusive.

Date of survey January 12-19, 1961 Incl.

Line-cutting	10 man/days @ \$20.00/day	\$ 200.00
Surveyor	8 man/days @ \$35.00/day	\$ 280.00
Helper	8 man/days @ \$20.00/day	\$ 160.00
Maintenance		\$ 80.00
Equipment Rental		
Vehicle - Land Rover	8 days @ \$15.00 per day	\$ 120.00
ABEM rental	8 days @ \$20.00/day	\$ 160.00
		<hr/>
	Total cost.....	<u>\$1,000.00</u>

Certified correct.

J. S. Scott
.....

AND 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, by virtue of the "Canada Evidence Act"

Declared before me at the City
of Vancouver in the
Province of British Columbia, this 4th
day of January, 1962.

J. S. Scott

Shirley Jeannotte
Sub-Mining Recorder

Geophysical Report
Atlas Claims - Marguerite Area
Cariboo M.D. B.C.

APPENDIX B

Qualifications

Statement of qualifications of Kolbjorn Loevang, Abem operator, on the Atlas Group.

Two years training Sharpes, Askania magnetometers 1956 - 1957.

4 years experience operating Abem equipment, magnetometer under supervision Hans Lundberg and Associates.

J. S. Scott

52° 32'

4125 S

MEADOW

4875 S

Quissen Creek

5675 S

ATLAS 3
ATLAS 5

ATLAS 4
ATLAS 6

6475 S

7275 S

Pit (Cu float)

Pit (Cu float)

8075 S

8475 S

8875 S

9275 S

ATLAS 7
AXIS 15

ATLAS 8
AXIS 16

9675 S

10075 S

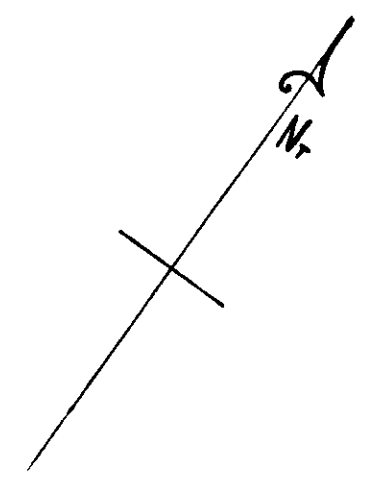
MUD (Shallow) LAKE

JG 14

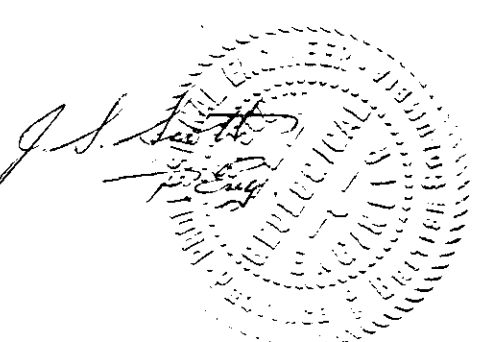
52° 31'

122° 20'

122° 19'



Road (Prop)



Department of
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ASSESSMENT REPORT
NO. 391 MAP 1

LEGEND

- 0-10% Diameter Line Points
 - ◐ 10-15% Along Strike of Anomaly
 - ◑ 15-20%
 - 20+%
 - EDGE OF SWAMP
- Scale 1" = 200'

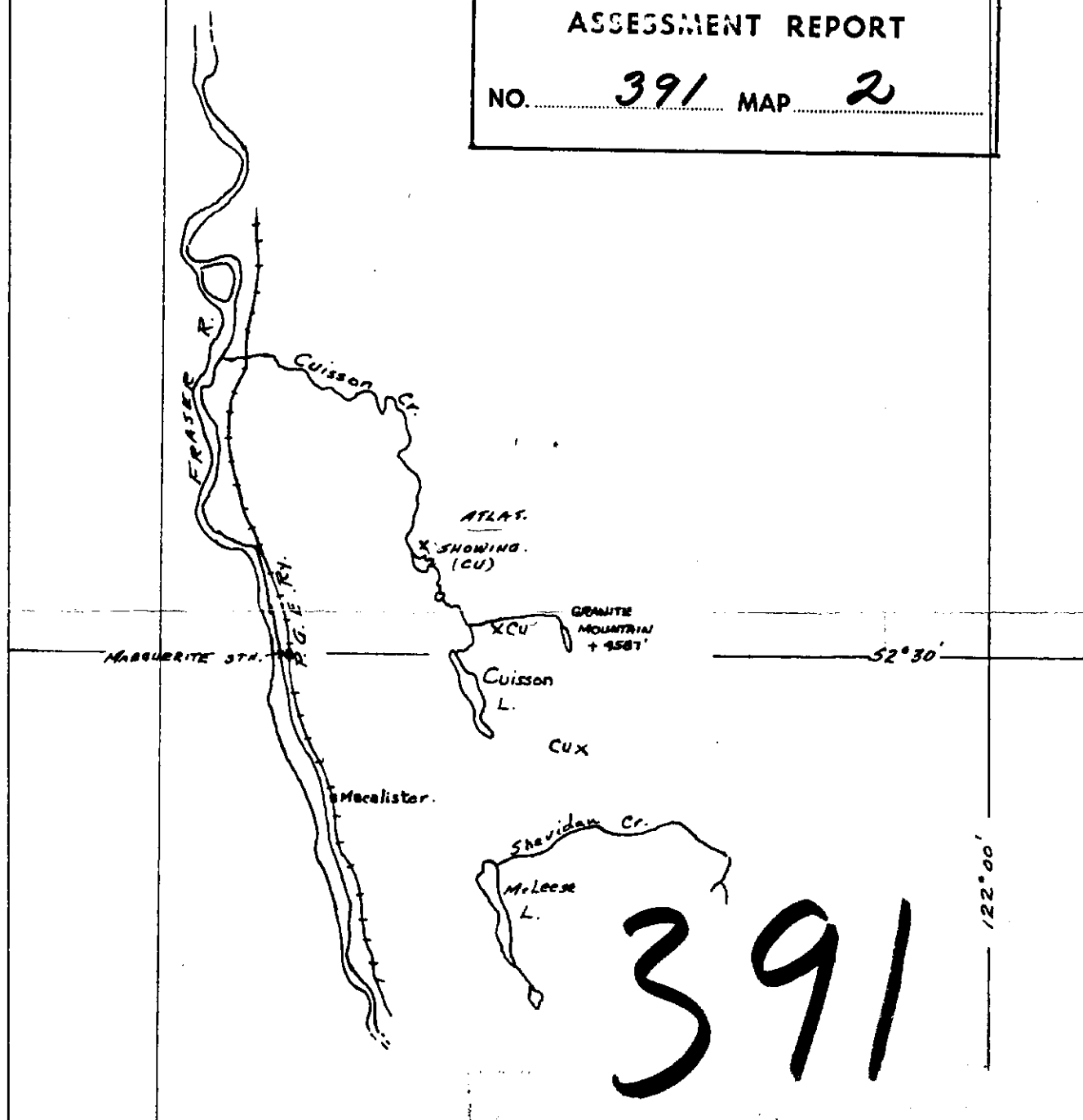
SURVEYED:	K.L.
MAPPED:	K.L.
CHECKED:	R.L.G.
DATE:	15/2/61
RECHECKED:	23/10/61

MAP SHOWING
AN INTERPRETATION
OF THE
RESULTS OF THE GROUND ELECTRO-MAGNETIC SURVEY
ROTARY FIELD METHOD
IN THE
MARGUERITE AREA
CARIBOO MINING DIVISION, B.C.
ON
THE ATLAS CLAIMS

391

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Department of
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ASSESSMENT REPORT
 NO. 391 MAP 2



391

J.S. Scott 2/11/61
P.E.G.

LOCATION MAP
 ATLAS GROUP
 CARIBOU MTS.
 B.C.
 1" = 4 mi.