REPORT

on Geochemical Surveys and Trenching on the
Minou Claims

Covering: Claims : Minou 1 - 28

Located: 10 miles south of Prince George,
Cariboo Mining District

Latitude 53° 46' N - Longitude 122° 46' W

from August 25 to August 30, 1970

for

R. A. Savidge and K. E. Kania

by

J. G. Simpson Ph.D., P.Eng.

A Report on Geochemical Surveys

on the Minou Claims

Cariboo Mining District

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March 11, 1971

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INTRODUCTION:

Geochemical surveys and trenching were carried out on the Minou 1 to 28 mineral claims, Cariboo Mining District, from August 25 to August 30, 1970.

LOCATION AND ACCESS:

The Minou claims are located approximately 10 miles south of Prince George at latitude 53°46' N and longitude 122°46' W. Access is by foot along a cat trail extending approximately one mile from a nearby logging road or by helicopter from Prince George.

PHYSIOGRAPHY:

The claims are situated in rolling plateau country at an elevation of approximately 2,500 feet. The area is well timbered with pine, aspen and fir. Dense black spruce is found in creeks and poorly drained areas. Drainage is mainly to the east directly into the Fraser River. However, the western-most portion of the property drains westerly into the Fraser River via the Chilako and Nechako Rivers.

CLAIMS:

The property consists of twenty eight full sized mineral claims owned by R. A. Savidge and K. E. Kania:

Name	Record Number
Minou 1-28 incl.	58408G/58435G incl.

GEOLOGICAL SETTING:

There is no natural outcrop on the property, thus the actual geologic environment is not known. The general area is presumably underlain by sedimentary and volcanic rocks of Mesozoic age and the claims themselves are underlain, at least in part, by an intrusive complex of intermediate to mafic composition as exposed in the trenches.

PREVIOUS WORK:

The Minou group constitutes a restaking of the old WED group of claims over which a combined airborne magnetic and electromagnetic survey was flown in 1959. Although a magnetic anomaly was indicated just north of the claims, no known ground follow up was made. The ground was restaked in March, 1969 as a result of encouraging soil sample assays in molybdenum and, to a lesser extent, copper and the discovery of intrusive material in shallow hand-dug trenches sunk by the present owners. Ground magnetic and electromagnetic surveys carried out by the present owners showed encouraging conductors within the claim boundaries. The trenching and geochemical soil sampling described herein was undertaken to test the known geophysical anomalies and better define any geochemical anomaly.

GEOCHEMICAL SURVEY:

Methods and Procedure:

Soil samples were collected at 400 foot intervals on east-north-easterly lines spaced at 1,000 feet. Samples were collected with a mattock from the B horizon wherever practical, however some samples were taken from the A when the B was too deep.

Ten silt samples were collected in Kraft paper bags and partially dried at room temperature. The samples were shipped to the North Vancouver laboratory of Barringer Research for analysis.

At the laboratory drying of the samples was completed in an air oven at 70°C. The samples were then sieved to 80 mesh in nylon screens. Two 0.2 gram samples were taken from the minus 80 mesh fraction for analysis.

For total copper, determined on all soils, the sample was digested in perchloric acid and diluted to 10 mls., the resultant being analyzed using an atomic absorption spectrometer. For partial copper, determined on all silts, the sample is treated with 0.5N HCl and the resultant analyzed by atomic absorption. Total molybdenum was determined for soils by fusion with sodium bisulphate, the resultant read colourmetrically using zinc dithyol as a reagent. For partial molybdenum, determined in silts, the sample was fused with sodium bisulphate and subjected to an HCl leach, the resultant being read colourmetrically.

The analyses were performed by Miss Yvonne Hazeldene, Senior Analyst for Barringer Research Limited.

A limited number of total mercury assays were carried out on selected profile samples to determine the mobility of this element with respect to copper through the ubiquitous clay layers in the overburden.

RESULTS:

Considering the small number of samples, statistical treatment of the results was not attempted nor was the data contoured. The copper content of the B horizon is uniformly low; the highest sample is 60 ppm with most samples in the range 20±5 ppm. The molybdenum content of all the samples was reported as 2 ppm, that is just within the determination limits of the methods used.

Profile sampling in trenches cut over areas of geophysical interest shows that this featureless geochemical pattern is caused by an impermeable clay layer in the overburden. As is shown on plate two, the highly weathered bedrock debris

at the base of the clay layer is significantly higher in copper than the B horizon of the soil. The highly broken debris between the clay layer and less fractured bedrock is in some cases higher in copper than the underlying bedrock indicating enrichment from percolating ground waters below the clay layer. Samples on selected profiles were assayed for mercury in the hope that this metal would show a better correspondence from B horizon to sub-outcrops. The results are inconclusive, but indicate that mercury may have a better facility for movement through the clay horizon than copper.

The silt sampling results are all low and discouraging. It is obvious that the streams do not penetrate the clay layer or receive meteoric water from the area of the trenches.

CONCLUSIONS AND RECOMMENDATIONS:

Although the previous molybdenum anomalies could not be substantiated, the geochemical work on the Minou claims has revealed interesting concentrations of copper in the bedrock.

The presence of intrusive material of generally basic aspect might explain the previous geophysical responses. The clay layer intersected in all trench sections will nullify normal B horizon soil sampling and future work should be carried out using a power auger upslope from the trenched area. Samples should be taken on a profile basis and due consideration given to the use of mercury analysis as a pathfinder.

APPENDIX i

TIME AND COST DISTRIBUTION

Name	Occupation	Dates	Days	Rate	Total
J.G. Simpson P.Eng.	Project Supervisor	27 August	1	$ 150	$ 150.00
T. O. Wright	Geologist	27-29 August	3	75	$ 225.00
R. Savidge	Field Assistant	26-30 August	5	30	$ 150.00
K. Kania	Field Assistant	26-30 August	4	30	$ 120.00

Living expenses and camp costs : 13 man days @ $15 per day	$ 195.00
Barringer Research sample preparation and analyses:	
Sample Preparation - 226 samples @ 0.20 per sample	45.20
216 Total Mo analyses at $2.50 per sample	$ 540.00
216 Total Cu analyses at $1.00 per sample	$ 216.00
10 Partial Mo analyses at $1.50 per sample	$ 15.00
10 Partial Cu analyses at $1.00 per sample	$ 10.00
11 Total Hg analyses at $2.00 per sample	$ 22.00
Caterpillar D7 - 32 hours @ $30 per hour. Contractor John A. Cook Ltd., Stoner, B.C.	$ 960.00
Okanagan Helicopter - access 1/2 hour @ $150 per hour	$ 75.00
Drafting and report preparation	$ 150.00
TOTAL	$2,873.20

APPENDIX ii

CERTIFICATE

I, John Glenn Simpson, of 720 Anderson Crescent, West Vancouver, British Columbia, do certify that

1. I graduated from King's College, London University with a B.Sc. (Hons) Geology in 1958, and was awarded a Ph.D. (External) from London University in 1969.

2. I am a Fellow of the Geological Association of Canada and a registered Professional Engineer in the Province of British Columbia and have practiced my profession in Africa, Europe and Canada for the past 12 years.

3. I have no direct or indirect interest in the property herein described as the Minou Claims.

4. The work described herein was carried out by T. Wright B.Sc. under my direction and supervision.

Dated at Vancouver

This 11th day of March, 1971

J.G.Simpson, B.Sc., Ph.D., P.Eng.