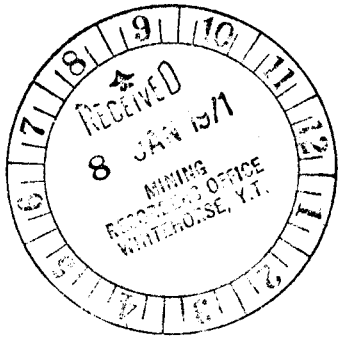
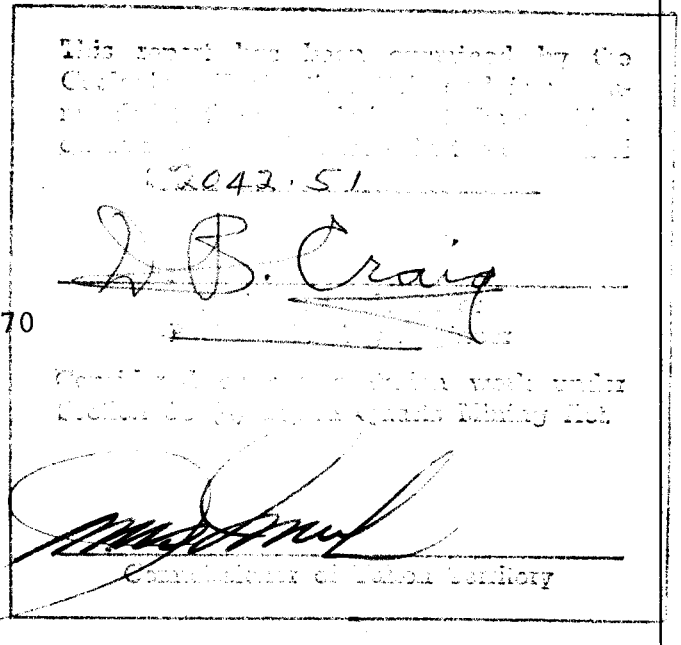


Reconnaissance Geology
GB Claims
Whitehorse Mining District, Y.T.

ALRAE ENGINEERING LTD.



September 23, 1970

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INTRODUCTION

A geological reconnaissance and geochemical sampling investigation on the GB claims property was carried out during the period of August 5 to 13, 1970. The project involved geological reconnaissance and mapping, geochemical soil and stream-silt sampling and tagging of the claims. The property was reached by truck from Whitehorse to the Revenue Creek airstrip on Big Creek, and by helicopter from there to the claim area. The project involved two men for a total of 20 man-days, including six man-days of preparation and travel.

LOCATION AND DESCRIPTION

The GB claims are located in the Dawson Range of central Yukon, about 150 miles northwest of Whitehorse, and 31 miles west of Minto. The 96 claims of the group occupy a rectangular area approximately three and one-half by two and one-quarter miles in size, lying on the slopes on the northern side of Hayes Creek valley, a relatively wide, mature valley which at this point trends northwest. The property extends from the crest of the ridge separating Hayes Creek and Wolverene Creek to the lower slopes of Hayes Creek valley. It is drained by six small streams, all of which flow into Hayes Creek. The streams have steep gradients and occupy steep-sided valleys in their lower portions at the southwest side of the property. Nearer their headwaters they occupy more gently rounded, bowl-like and poorly drained depressions.

The property is wooded, except for the ridge crest, and a dense growth of mosses and bushes occupy most of the unwooded and sparsely wooded areas. The maximum relief is approximately 2,000 feet, varying from 2,500 feet in the lower stream valleys to about 4,500 feet at the ridge crest. Lightly covered float rock is abundant but, except for the ridge crest, there are few outcrops.

The property is accessible by helicopter from Casino airstrip, Minto, or from a private airstrip at Revenue Creek, the latter two of which are served by road. All three locations are about 30 air miles from the property. A private, presently unusable, 2,500 foot airstrip is located on Hayes Creek about one mile from the property.

HISTORY AND LITERATURE

A non-exhaustive list of publications and maps on the area includes Bostock's description and geologic map (H.S. Bostock, 1936, "Carmacks District, Yukon," Canada Department of Mines Memoir 189); an aeromagnetic map (Mount Pitt, map 3298G, sheet 115-1/12, aeromagnetic series); and the Carmacks sheet, 1:250,000 series topographical map.

No investigation of previous work in the area was made. Remnant flagging, however, indicates that the property was investigated by geochemical stream and soil sampling, probably in 1969. No evidence of previous staking was found. A large area of active claims abut the property on the southwest and southeast sides where intensive soil sampling and probably drilling was conducted in 1970. Other drilling, trenching, and geochemical sampling projects were conducted in 1970 for many miles along the Big Creek-Hayes Creek valleys.

CLAIM TAGGING

All claim posts were located and all were tagged with the exception of the number two posts of claims 86 and 88. The tags for these were lost.

MAPPING

A 1" = 1,000' map of the property, showing general topography, claim and geochemical sample locations, and geology accompanies this report. The map is based on the 1:250,000 series topographical

map covering the area with additions and modifications from information obtained by ground traverses. Control is largely based on claim post locations and on identifiable features such as stream junctions.

The claims were approximately 1,000 feet farther to the northeast than shown on the claim location map. Their location, in reference to topography and stream location, is shown on the map. Some stream locations, notably the one designated 'Stream A', were changed to conform to field observations.

Data for the geological mapping was obtained from field observation of the few outcrops and from float. Contact locations are based on float.

GEOLOGY

General

The GB claims lie in the Dawson Range of the Yukon Plateau district, a rolling upland surface of isolated, rounded peaks and lower hills cut by stream valleys. Altitudes vary from about 6,000 feet for the higher peaks to about 2,000 feet in the lower stream valleys.

The basal rocks are metamorphosed sediments of Precambrian or early Cambrian age, primarily quartzites, schists, and gneisses, composing the Yukon Group. These are overlain in some areas by a series of limestones and clastics, and later volcanics of Mesozoic age. These rocks have been intruded by a series of acidic to intermediate intrusives, many of batholitic proportions, probably contemporaneous with the Cretaceous Coast Range Intrusives.

In the early to middle Tertiary, the erosion surface formed on these rocks was covered by the Carmacks volcanics, clastics and

intermediate to basic extrusives and tuffs, accompanied in some areas by small intrusives. The Carmacks volcanics have been folded, faulted and partly removed by erosion. They are covered in some areas by late Tertiary and Pleistocene extrusives. Portions of the area were glaciated in the Pleistocene but there is no evidence of glaciation in the GB claim area.

GB Claim Area

Three major rock types occur in the GB property, a generally pale pink granitic intrusive, apparently related to the late Mesozoic intrusives, metasediments of the Yukon Group, and, overlying these, andesite of the Carmacks volcanics.

Granitic Rock

The granitic rock is white to coloured, medium to coarse grained, and contains minor biotite and amphibole phenocrysts. In most places it is massive, occurring as large blocks of float. Float along the northeast margins of the granitic float area sometimes has a sheared, semi-gneissic texture, however. Along the stream flowing off the center of the southwest side of the property (Stream D) large pieces of bull quartz containing drusy cavities are common. No quartz veining or sulphide mineralization was observed. There are only two small areas in which definite outcrops of the granitic rock occur and no contacts were observed.

Yukon Group Metasediments

Small outcrops of quartzite occur along the three northwesternmost creeks (Creeks A, D, and G) and the creekbeds of all four main creeks (A, D, G, and F) contain quartzite and mica schist float. In outcrop the quartzite is a medium grained, light tan rock which weathers to thin, friable sheets. Quartzite occurring as float in Stream F is often a dense, semischistose rock containing mylonitic layers. No contact relationships were observed and no sulphide

mineralization was present. These rocks apparently underlie the property in a relatively narrow, probably discontinuous, band at medium elevations between the granitic rocks and the volcanics overlying both.

Carmacks Volcanics

The higher portions of the property are underlain by a dark to medium grey, generally dense, andesite containing stumpy to slightly elongate pyroxene and/or amphibole phenocrysts. The rock shows no evidence of extensive alteration or deformation. In the northern corner of the property, however, one outcrop contains secondary quartz which occurs as deformed vug fillings up to one-half inch long. The rock weathers to dark grey to black, sometimes with a purplish bloom. In some areas along the upper slopes of the ridge, along the northeast border of the property, vesicular float was found; the rock was mostly dense and non-vesicular, however. No widespread quartz veining or sulphide mineralization was found.

In the northeast-central portion of the property a small outcrop of porphyritic grey felsite occurs. This is evidently a steeply dipping, east-west striking tabular intrusive associated with the volcanics.

Outcrops of the volcanics are common along the ridge crest and in the upper portions of the stream valleys. No lower outcrop were found although andesitic float occurs far down the slopes and in the stream valleys.

Structure

Little can be inferred of the structure from the surficial geology except in the most general terms. The property evidently occupies an area in which a relatively massive acidic intrusive contacts the Yukon Group metasediments, both groups being partially

covered by later, relatively undeformed, intermediate volcanics. Based on Bostock's map, which shows a granite occupying an extensive area to the southwest and outcropping in scattered areas to the southeast, the granitic rocks probably occur at relatively shallow depths under most of the southwestern half of the property. The andesite is probably relatively thin, occurring as a cap up to several hundred feet thick over the granitic and metasedimentary rocks.

GEOCHEMICAL SAMPLING

Stream silt samples were taken at 400 foot intervals along the four major streams originating on the property and on two minor streams flowing into one of these. Soil samples were taken at 750 foot intervals along the claim lines, at each claim post location and half way between them. All sample points were flagged and labeled.

Samples were analyzed by atomic absorption spectrophotometry after drying, seiving, and digestion by hot perchloric acid. Each sample was tested for copper and molybdenum content.

As may be seen on the accompanying map sheet, both stream sediment and soil samples are uniformly low in copper and molybdenum content. Many samples contain less than one part per million molybdenum, although a small area in the north-central portion of the property contains up to 4 ppm Mo in soil samples. These are in an area underlain by acid intrusives.

CONCLUSIONS

No evidence of mineralization or alterations favourable for mineralization were found in the geological reconnaissance. The heavy soil and vegetation cover could, however, easily mask mineralization over the lower portions of the property. In these areas the geochemical sampling procedures have a probably greater likelihood of indicating mineralization. Soil samples, however, indicate no

anomalous area within the claims. Therefore, there appears to be little to warrant further investigation of the GB claims.

Respectfully submitted:

"J. VEITCH"

J. Veitch.

Endorsed by Rae & Jury Eng

Mr. W. Coulter
4th Floor - 550 Burrard Street
Vancouver, B. C.

70-312

August 31, 1970

Re: G. B. Claims

Travel, Soil Sampling, Claim Tagging

Personnel:

J. Veitch - Geologist - August 7-17/70-11 Days-	$ 425.70	
W. Olsson - Assistant - August 7-17/70-11 Days-	266.20	691.90
R. G. Jury - Crew Organization ----------	40.00	40.00
		731.90

Disbursements:

Edgewater Hotel - Meals - W. Olsson & J. Veitch-	15.20	
Photostats ----------	3.45	18.65

Rentals:

Camp & Field Equipment - 11 Days ----------	75.00	
Brunton Compass - 11 Days @ 40¢ per Day -	4.40	
Altimeter - 11 Days @ 20¢ per Day -	2.20	
Ford Pick-Up Truck - 11 Days @ $ 15.00/Day -	165.00	246.60
		$ 997.15

To be paid by Chalenton

Mr. W. Coulter — 70 - 324

4th Floor - 550 Burrard Street

Vancouver, B. C. — September 30, 1970

RE: G. B. CLAIMS REPORT PREPARATION

PERSONNEL:

J.D. Veitch - Sept. 10, 1970 - 1 day	$ 40.00	
W.J. Olsson - Sept. 8, 1970 - 1 day	25.00	$ 65.00
R.G. Jury - Report Completion - G.B. Claims		100.00
		$ 165.00

DISBURSEMENTS:

Trans North Turbo Air - Helicopter Charter - Aug. 7 & 13, 1970	$ 324.71	
Kelly Douglas & Co. Ltd. - Groceries	76.17	
Standard Oil Co. of B.C. - Gasoline	7.35	
Altair Drafting Services Ltd. - Maps & Drafting	48.88	
Expenses - J.D. Veitch - Gasoline & Meals	52.67	$ 509.78
Overhead on Disbursements		50.98
		$ 725.76

Balance Owing August 31, 1970	$ 997.15
Invoice 70 - 324 - September, 1970	725.76
Balance Owing September 30,1970	$ 1,722.91

TELEX: 04-50604

TELEPHONE: 980-1115

FRASER LABORATORIES LIMITED

1175 15th STREET, NORTH VANCOUVER, B.C.

DATE: September 8, 1970

Mr. W. Coulter
301 - 550 Burrard Street
Vancouver 1, B. C.

INVOICE No.: 70-135

For Services Rendered - Re: Lab Report No. 135

188 Determinations for Copper & Molybdenum @ $ 1.70	$ 319.60

W. J. C.
O.K. for payment
re geochem. - stream sediment
on H.B. claims
Dawson Range Yukon
Property under investigation

Declination = 31° East

STREAM A
STREAM B
STREAM C
STREAM D
STREAM E
STREAM F
STREAM G
A-1
B-1
C-1
D-1
E-1
F-1
G-1
CAMPSITE
MINTO 30 Miles
HAYES CREEK 1 Miles
W 60
W 30
E 0
E 30
E 60
E 90
N 120
N 90
N 60
N 30
N 0
3500
4000
3000

LEGEND

GEOLOGY

4	SURFICIAL COVER Humus, Alluvium	RECENT
3	CARMACKS VOLCANICS Andesite	TERTIARY
2	ACIDIC INTRUSIVES Light-Coloured Granitics	MESOZOIC
1	YUKON GROUP Quartzite, Schists	PRECAMBRIAN / EARLY PALEOZOIC

SYMBOLS

- STREAM SAMPLE POINTS
- o SOIL SAMPLE POINTS
- CLAIM POSTS

NOTE:

16/1 Indicates P.P.M. Cu / P.P.M. Mo

<1 MEANS LESS THAN ONE

CONTOURS IN FEET ABOVE SEA LEVEL

2000' 1000' 0 1000' 2000'

SCALE 1" = 1000'

by Geologist S. Veitch

endorsed by Rae S. Jury
P. Eng. B.C.

ALRAE ENGINEERING LTD.

CONSULTING ENGINEERS & GEOLOGISTS. VANCOUVER, CANADA

G.B. CLAIMS

DAWSON RANGE, WHITEHORSE DISTRICT, YUKON

RECONNAISSANCE GEOLOGY

SCALE : 1" = 1000'	DESIGNED :
DATE : SEPT. 23 / 70	DRAWN : Altair
REVISED :	CHECKED :
	MAP No 311-1