

264

STATEMENT OF EXPENDITURES FOR GEOCHEMICAL SURVEY OF
MAC Nos 1 and 3 MINING CLAIMS
23rd to 27th MARCH 1959

Geologist, Dr. A. C. Skerl, P. Eng. :		\$
	5 days at \$35.00	175.
Assistant, Bob Bowen :		
	3 days at \$10.00	30.
		<hr/>
	Total	\$205.

A. C. Skerl

DR. A. C. SKERL
A.R.S.M., PH.D., P. ENG.
CONSULTING MINING GEOLOGIST

1758 WESTERN PARKWAY
VANCOUVER 8, B.C.

G E O C H E M I C A L R E P O R T
M A C N o s . 1 & 3 M I N I N G C L A I M S
B O U L D E R C R E E K P R O P E R T Y
1 0 M I L E S S . E . O F P E M B E R T O N
Q U A D . 5 0 ° 1 2 2 ° E .

B Y D R . A . C . S K E R L , P . E N G .
2 3 r d . t o 2 7 t h . M A R C H 1 9 5 9

TABLE OF CONTENTS

	PA
INTRODUCTION	1
SITUATION	1
TOPOGRAPHY	1
COMMUNICATIONS	1
POWER AND TIMBER	2
GENERAL GEOLOGY	2
GEOLOGY OF MAC Nos 1 & 3 CLAIMS	2
METHOD OF GEOCHEMICAL SURVEY	3
RESULTS	5
CONCLUSION	6
RECOMMENDATIONS	6
#1 SECTION ALONG UPPER CUT	after 6
#2 GEOCHEMICAL MAP OF MAC Nos 1 & 3 CLAIMS at b	

I N T R O D U C T I O N

The field work upon which this report is based was conducted from the 23rd to the 27 th March 1959 to comply with the terms of the 'Mineral Act' of B. C. so that it might be allowed as assessment work on the Mac Nos. 1 and 3 mining claims which are part of a group of ten claims known as the Boulder Creek Property.

Abase map was constructed from Brunton compass - chain traverse lines with stations at most 100 feet apart. Elevations were also taken so that the contours could be drawn.

S I T U A T I O N

The claims are located astride Boulder Creek about one mile above its mouth on Lillooet Lake and ten miles southeast of Pemberton which is 95 miles north of Vancouver by the Pacific Great Eastern Railway.

T O P O G R A P H Y

Within the claims the elevation ranges from 1300 to 2300 feet above sea level whilst the lake is at 700 feet.

The canyons of Boulder Creek and its tributary Schist Creek are very precipitous making field work there difficult.

C O M M U N I C A T I O N S

The property is reached from Pemberton by 8 miles of gravel road to the head of the Lake and then by boat for three miles to the west shore near the mouth of Boulder Creek from where one of two trails can now be taken for about $1\frac{1}{2}$ miles into the claims.

POWER AND TIMBER

A fair amount of power could be developed on Boulder Creek but since the new B. C. Electric power line from Bridge River to the Fraser Valley passes within one mile down the east side of Lillooet Lake ample power at a reasonable rate would be available.

To avoid an under-water or long overhead span of transmission line a route would be followed from the head of the Lake on the west side for four miles.

There is ample timber of all sizes available within the claims. A few years ago some timber was logged off for about a thousand feet adjacent to the Lake shore in this area.

GENERAL GEOLOGY

C. E. Cairnes gave a good description of the geology of the Pemberton area in a Summary Report for the Geological Survey of Canada in 1924.

Briefly there is a four to eight miles wide roof pendant of a partly metamorphosed and sheared sedimentary-volcanic series of Upper Triassic age that stretches at least 20 miles to the northwest from about the south end of the Boulder Creek Property.

GEOLOGY OF THE MAC Nos 1 & 3 CLAIMS

A geological report has recently been completed on these claims. A bedded siliceous tuff that strikes east and dips from 20° to 45° S is apparently overlain by a fragmental volcanic rock and underlain by andesitic lavas.

Numerous northwest striking dykes invade all of the rocks.

Widespread pyrite mineralization occurs in epidotized siliceo tuff and chalcopyrite has been found with it in two places.

A means was needed to prospect for further copper bearing sec and so geochemistry was selected.

METHOD OF GEOCHEMICAL SURVEY

The Rubeanic Acid Field Test as described by H. V. Warren and R. E. Delavault in the January 1959 issue of the Western Miner was used in this survey.

The materials were prepared as follows :

1. Reagent Paper

1 gm of rubeanic acid was dissolved in 100 ml reagent grade acetone and then used to wet strips of filter paper that were then dried and cut up into pieces 1" by $\frac{1}{4}$ ".

2. Extracting Solution

One pound of sodium acetate (hydrated) together with 1 quart o acetone , both reagent grade, were made up to 1 gallon with copper free water.

3. A quantity of 2 inch squares of glazed onion skin paper were prepared.

4. Apparatus.

The following were obtained :

a 50 ml pyrex beaker, a 12 mm test tube with rubber stopper, a $\frac{1}{4}$ teaspoon measure, a plastic bottle for the extracting solution, 9 cm filter papers and 1" squares of filter paper.

PROCEDURE

To make a test a piece of reagent paper with an identification number on it was placed on a 1" square of filter paper in the bottom of the beaker. A carefully folded filter paper with a sharp tip was placed in the beaker so that the tip just touched the reagent paper. Next some soil was placed on the onion skin paper where small stones and roots could be sorted out before taking a level $\frac{1}{4}$ teaspoonful that was placed in the test tube. From 1 to 2 ml of extracting solution sufficient to make a thick slurry was then added the tube closed with the stopper wrapped in onion skin paper to prevent contamination and then shaken for 15 to 20 seconds. The mixture was then poured neatly into the filter paper funnel whereupon a stain would develop on the reagent paper whose intensity and size would depend on the amount of copper present.

The various spots obtained were classified by letters as follows with the approximate equivalent in micrograms of copper per gm as suggested by Warren and Delavault :

F	very large black stain	1.0
E	large black stain	0.5
D	distinct black stain	0.2
C	distinct dark grey stain	0.1
B(1)	distinct grey stain	0.05
A(2)	stain just apparent	0.02
N	nil	nil

The soil samples were taken at marked stations, not more than 100 feet apart, on various traverses through the two claims by removing the surface material and sampling the soil immediately beneath. In many cases there was mainly scree rock underneath and considerable searching was necessary to find sufficient soil. About 180 samples were collected in this way and tested as described above. The results are plotted both by letter and a colour scheme on the accompanying map (scale 1" to 200').

The test papers and soil samples have been retained for future reference.

R E S U L T S

It was found that the A and N categories were the normal background for the general area while B can only be regarded as significant in areas of higher values.

The map shows that a high copper content was present in the soil of three areas, in two of which there are known occurrences of copper mineralization.

1. The first area is around the common Initial posts of Mac Nos 1 and 2 claims for a distance up to 500 feet. It coincides with an area where highly pyritic siliceous tuffs have been mapped and some chalcopyrite has been found. The high value at the north end of the bridge is believed to be derived from the seepage down the steep slide of mineralized rock from the outcrops above.

2. The second area includes the original discovery at the southwest corner of Mac No 1 claim where considerable chalcopyrite is present.

Some special soil samples were taken in the upper cut where a one to three feet layer of glacial clay overlies the red soil derived

from the highly pyritic banded siliceous tuffs. The fresh sulphur was also channel sampled and assayed. The results are depicted in the accompanying section where it is seen that a 9 feet thickness of layered pyritic rock assaying 0.20% Cu gave a very pronounced soil test but the glacial soil at 3 feet above gave only the normal feeble background reaction.

3. A third new area was found in the southeast corner of Mac No 3 claim where several high values were recorded and where pyritic rock had already been mapped.

The large areas of glacial and scree materials in the eastern half of Mac No 3 claim and on the south side of Boulder Creek are essentially devoid of significant copper reactions although they may be covering mineralized ground.

C O N C L U S I O N

The results of the geochemical survey show that the method employed is amply sensitive for soil derived directly from the underlying rock but its effectiveness in the glacially covered areas is doubtful. However for ore grades of say better than 2% Cu in the drift there might be a definite reaction in the overlying glacial drift.

R E C O M M E N D A T I O N S

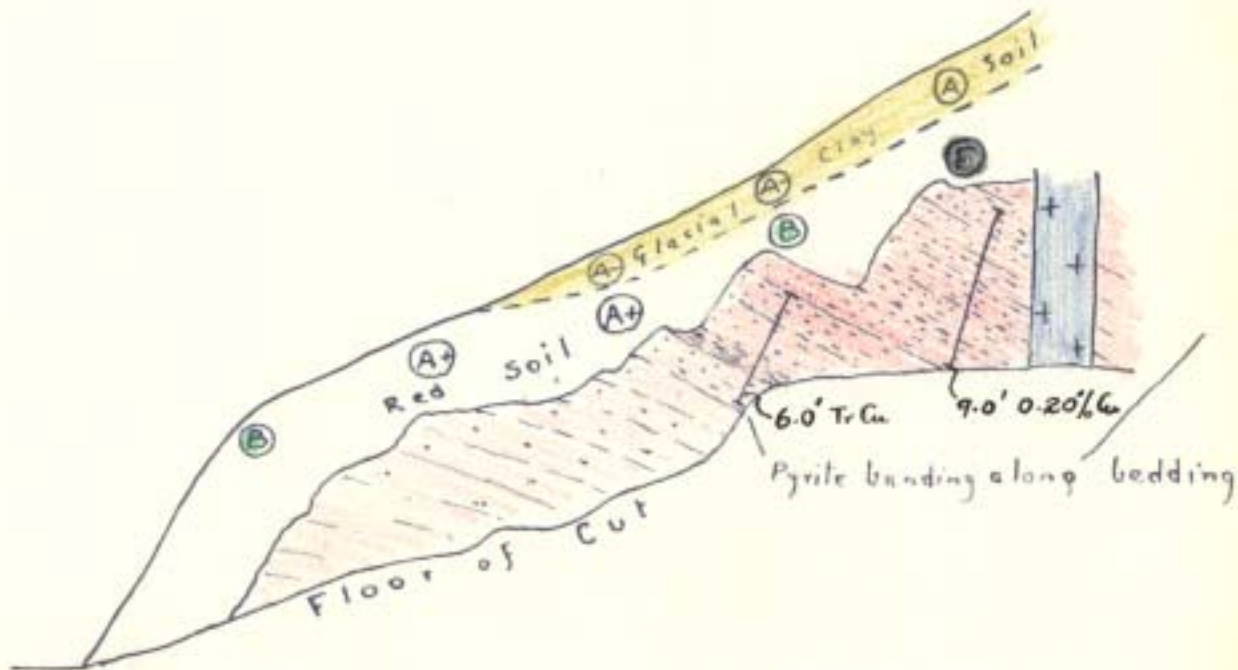
1. Investigate the new area in the southeast corner of Mac No 1 claim by means of open-cuts.
2. Conduct a self-potential survey in the claims to discover the extent of the sulphide mineralization, particularly in the drift covered areas.

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 264 MAP #1

N.

S.



Section along Upper Cut near S. W. corner of Map No 1 M. C.
to show comparison between tubeanic acid tests in thin
glacial cover and underlying red soil derived from mineral-
ized rock. Scale 1" to 10'.

April 9th 1959

A. C. Skerl
A. C. Skerl

3. Extend the geochemical and geophysical surveys into the other claims of the group.

A. C. Skerl
Dr. A. C. Skerl, P. Eng.

9th April 1959

