

Geological Report

on the

Fossil Group

Four claims- Nos 1-4

Owner - I. Shulman
540 W. Hastings St
Vancouver, B.C.

Location - Latitude 54 - 55
Longitude 128 - 16 N.E.

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Report by W.E. Selnes, P.Eng.,
Dated Sept. 3, 1962

103I/16E

54°, 128°, N.E.

00466

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Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 466 MAP

GEOLOGICAL REPORT

ON THE

FOSSIL GROUP

DORREEN, B.C.

by

WALTER E. SELNES, P.ENG

September 3, 1962

Preliminary Report
SKI-MI and FOSSIL GROUPS
Dorreen, B.C.

INTRODUCTION:

The writer, accompanied by J. Collier of Terrace, B.C. examined the property August 13-17 (inclusive) 1962. Nine claims, the Ski-Mi group of five claims owned by A. Collier and O. Hansen of Dorreen, B.C. and the Fossil group of four claims owned by J. Collier of Terrace, B.C. are located on the Omineca Mining Division about 12 miles by trail from Dorreen B.C.

HISTORY

The property was originally staked 30 to 35 years ago and considerable work was done by the original owners one outcrop 500 feet in length on a cliff above the timber line. When the last of the original owners H. MacDonald died the claims were purchased but were allowed to lapse by the purchaser who did no work on the property.

About 5 years ago the present owners staked nine claims. Removal of overburden about 700 feet north west of the original work revealed one, perhaps two veins over a length of 500 feet. Three trenches and a shallow pit 35 feet in length revealed pyrrhotite, spalerite, galena and minor amounts of chalcopyrite and pyrite.

LOCATION:

The property is located in the Omineca Mining Division about 12 miles north east of Dorreen, B.C. or about 50 miles from Terrace, B.C. It lies at an elevation of over 5,000 feet in area a short distance south west of Seven Sisters Mountains. Access to the claims is by a trail skirting the ridges along Collier and Oliver Creeks.

TOPOGRAPHY AND CLIMATE

The trail follows a gentle slope of about 10° to the cabin on the bottom claim at an elevation of perhaps slightly over 4,000 feet. A mile of steeper trail leads to the two showings at an elevation of over 5,000 feet. These showings for purposes of easy reference have been called the MacDonald and Collier veins.

The first four to five miles of the trail leads through typical dry country vegetation of scrub pine, poplar and willows. At one point the trail crosses a talus slope of shale, conglomerates etc. for a distance of about $\frac{1}{2}$ mile.

The vegetation changes to a forest area containing trees 12" to 36" in diameter and up to 100 feet in height. This continues for about 6 to 7 miles to near the cabin where the trees are becoming smaller. It is virgin forest consisting of balsam, spruce and hemlock. The timber line is about 4,500 feet and the showings lie in a glacial cirque covered with talus and glacial moraine, with some country rock exposed at intervals. The mountain ridge towering above lies roughly parallel to the veins and consists of steep cliffs attaining a height of about 6,500 feet.

The claims lie in a belt of fairly heavy precipitation with an average snowfall of 12 to 15 feet and frequent summer rains. The claims are relatively free from snow only about two months a year; it was necessary to shovel snow 2 to 3 feet deep out of the trenches and pit on the Collier vein at the time of the visit to examine the showings.

GEOLOGY

The Ski-Mi group lies in a sedimentary belt of rocks believed to be of Lower Cretaceous age and described as the Skeena formation. It consists of flat lying beds of volcanics, conglomerate, sandstone, quartzite and argillites. The formations are principally flat lying on the claims but there is evidence of folding on the high cliffs above.

Exposed at intervals on ridges a few hundred feet east of the veins is what appears to be a rhyolitic type of dyke. Due to the excessive talus a definite contact was obtained only at one place, where it cuts the conglomerate. In general it appears in contact with the volcanics. From the strike of the exposures it is believed that the vein fractures are related to the same period of movement as the deposit of the intrusive.

The mineralization consists of massive pyrrhotite, sphalerite and galena with minor amounts of chalcopyrite and pyrite. It lies in fracture zones 10 to 15 feet in width with the mineralization occurring principally in the volcanics.

MacDONALD VEIN:

Two main zones of mineralization occur. The MacDonald vein is continuous along the cliffs for a length of 450 feet. It has been opened by several cross trenches 15 to 20 feet in length and one cross cut 12' in length. The mineralization consisting chiefly of massive sphalerite and pyrrhotite with some galena occurs along the foot wall side of the zone dipping 70° to 75° east and has widths of 15" to 3 feet. The difference

in elevation of the top trench at the north end of the vein and of the lowest trench at the south end is about 100 feet. The vein appears to be cut off at the south end by a fracture running N 10° E; the north end continues into the talus. The mountain side below the vein is covered with talus which extends into a glaciated gully filled with rock debris.

Dip needle readings taken along the vein varied from a few degrees to 14 degrees. All were minus readings; examination of individual specimens of mineral revealed that some possessed polarity.

COLLIER VEIN:

The collier vein lies in a comparatively flat portion of the glacial cirque about 700 feet north west of the MacDonald vein. Almost the entire area near the vein is covered with broken rock, water or snow with only a few outcrops of volcanics. Three trenches about 20 feet in length and one pit 35 feet in length have uncovered parts of the zone extending for a length of 500 feet. The vein as exposed in the pit and trenches has a strike of about 50° N.W. and a dip of 70° to 75° west. Mineralization occurs across widths of about 12 feet with the fracture zone being a few feet wider. There is a predominance of galena on the hanging wall side of the pit and #1 trench and sphalerite on the foot wall side. In #2 and #3 trenches 2 to 3 feet of massive sphalerite and pyrrhotite were the principal minerals, but minor amounts of galena and chalcopyrite were found.

The strike of the vein in #3 trench was N 10° E, with a dip of 50° north so only diamond drilling will reveal whether the exposures in the pit and trenches are one continuous vein or whether they constitute parts of different veins. Float along the strike of the exposure in #2 trench support the belief that it is not the same vein as the one in #1 trench and the pit.

Overlying the vein in #3 trench are volcanics covered with talus and higher up the mountain side by glacial moraine.

In the pit mineralization occurs across a width of about 7 feet and is exposed for a length of 30 feet. The pit lies at an elevation of about 50 feet above the top trench on MacDonald vein, but 60' lower than #3 trench. The difference in elevation of the showing in #3 trench of the Collier vein and the lowest trench of the MacDonald vein is about 200 feet.

SAMPLING:

Three samples were taken on the MacDonald vein and six on the Collier vein. A tabulation of the results is as follows:

TABLE 1 - SAMPLE RESULTS

<u>Sample Number</u>	<u>Location</u>	<u>Ag</u>	<u>Cu</u>	<u>Pb</u>	<u>Zn</u>	
25538	MacDonald Vein 2' width - along 30' of cliffs T1 - T2	6.10 oz.	0.15%	5.95	9.87	
45	MacDonald Vein 2' - above X-C	6.20	0.37	5.80	15.50	
44	MacDonald Vein 3' - T4	2.65	Tr	0.60	2.67	
	AVERAGE	4.65 oz.	0.15%	3.61%	8.22%	\$26.46
25537	Collier Vein 4' - #3 Trench	3.80	1.40	Tr	22.95	
39	Collier Vein North Wall 3' - #2 Trench	2.40	0.25	0.12	19.20	
40	Collier Vein South Wall 3' - #2 Trench	1.00	0.25	0.18	4.97	
41	Collier Vein 12' - #1 Trench	10.20	0.13	10.80	7.20	
42	Collier Vein 6' - Middle of Pit	2.10	Tr	1.85	2.75	
43	Collier Vein 7' - Southend of Pit	2.15	Tr	1.00	12.13	
	AVERAGE	5.00 oz.	0.25%	4.24%	10.06%	\$31.40
	Norandre	6.96%		5.00%	10.06%	

ECONOMIC CONSIDERATIONS:

- (1) The predominant mineral on the property is sphalerite, constituting about one half the value, the other half being represented by silver and galena. Copper values are too low to be of economic importance.
- (2) The average value of the samples is \$25.00 to \$30.00 per ton.
- (3) MacDonald vein being continuous should yield 10,000 tons per 100 feet of depth.
- (4) Collier vein, if it is continuous from the pit to #3 trench will yield about 30,000 tons per 100 feet of depth.
- (5) There is a distinct possibility that #2 trench represents a different vein from that in #1 trench and the pit.
- (6) The Ski-Hi group being situated above the timber line with high snow fall and a very short snow free period presents higher operational costs than if situated in a more favorable area.
- (7) A truck road suitable for operation of a mine would cost in the neighborhood of \$75,000 or more.

SUMMARY & CONCLUSIONS:

Mineralization extends over a belt 1500 feet in length and 400 feet in width. The upper portion near the Collier view has had little work done on it but this has exposed some good values and the continuity can be proved only by diamond drilling, as clearing overburden by hand is too slow and costly.

It appears that three veins are indicated by work already done. Further work might uncover more mineralization, as only when the vein is near the surface of the talus can its presence be detected by the gossan and iron stained rocks which are an indicator of the mineralization in this area.

The nature of the rocks is such that there is a good possibility that the vein fractures extend to some depth. Difference in elevation of #3 Trench, Collier vein and the lowest trench on the MacDonald vein is 200 feet.

The property warrants a diamond drilling program but it is considered that the preparation of a pack trail or preferably a jeep road should be completed so that supplies and equipment could be moved in about Mid July to complete diamond drilling before weather conditions become too severe.

Diamond drill holes in the nature of 300 to 500 feet in length are suggested to obtain worth while information. These holes would have to be cased through the overburden which may be a few feet or several feet in thickness.

Sept 3, 1962

W.G. Schae



FOSSIL NO 2

SKI-HI and FOSSIL GROUPS
DORREEN, B.C.

Glacial Moraine

Talus

N (mag.)

Mountain Ridge - 6500'

Talus & Moraine

Quartzites

Rhyolites

FOSSIL NO 1

SKI-HI NO 5

FOSSIL No 3

Talus consists of volcanics,
 quartzites, argillites & rhyolites,
 conglomerates

50° T#3

COLLIER VEINS

T#2

T#1

Pit

73°

Talus

Talus

Ridge - Volcanics & Conglomerate

MACDONALD VEIN

T1

Talus

T2

X.C.

74°

T3

T4

T5

Scale 1" = 200'

N.E.S.
 Aug 23/62.

SHEET NO. OF

JOB NO.

SUBJECT

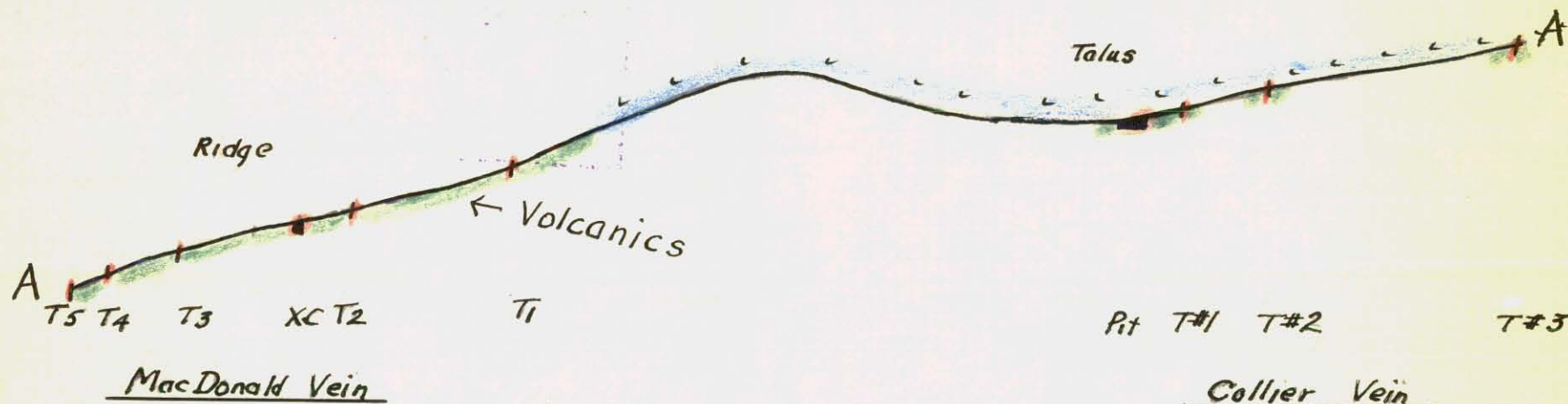
DATE

DATE

BY

CHKD. BY

SKI-HI and Fossil Groups DORREEN, B.C.



Cross-section AA

showing difference in elevation

Scale - Vertical - 1" = 100'
longitudinal - 1" = 200'



H.E.S. 2/62
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