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REPORT  
OF  
PRELIMINARY EXAMINATION  
OF THE  
ORE HILL and SUMMIT GROUPS  
SALMO, B. C.

By  
Charles C. Starr,  
June 24, 1930.

**INTRODUCTION:** The Ore Hill and Summit Groups adjoin, the same geological conditions obtain, and they should be operated as one property. They are therefore covered in a single report although they are at present under separate ownership. The following report covers a one day inspection of the property, and includes some assays, taken by other engineers, which are believed to be dependable. The sketch map herewith is not entirely accurate but will serve for preliminary purposes.

**SITUATION:** The property is situated about two miles south of Sheep Creek (Nelson Mining Division) at a point ten miles east of Salmo, a station on a branch of the Great Northern Railway. The mine is connected with the Sheep Creek road by a trail only.

**PROPERTY:** There are some twenty claims and fractions in the two groups. The Summit Group is controlled by J. B. O'Brian, 8 Colborne St., Toronto; the Ore Hill belongs to an estate of which Brown & Dawson, Nelson, B. C., are administrators.

**GENERAL CONDITIONS:** There is a fair amount of timber on the ground. Water is sufficient for domestic use and for a small concentrator. The topography is fairly smooth and has sufficient relief to afford fair tunnel <sup>tes.</sup>sights. The present tunnels are all on the vein, but for deeper development crosscut tunnels or shafts will be necessary. The elevation of the lower workings is approximately 5200 feet. Transportation conditions are only fair. Equipment consists

of a very small obsolete mill on the Ore Hill property and several log houses in a poor state of repair, part of which are on each property.

**HISTORY:** Both groups are comparatively old locations and little has been done on them in the past ten years.

There have been two very small mills on the Ore Hill (the first burned) which treated high grade gold ores by amalgamation and concentration. The production of the property is not known but is probably small.

The Summit group has been worked at various times on company account, and by leasers, and numerous small lots of ore shipped to the smelter which assayed from 2 $\frac{1}{2}$  to 14 Oz. gold per ton, and probably averaged about five ounces, with low silver, lead, and zinc.

**DEVELOPMENT:** The Ore Hill has been developed by several short tunnels, most of which are now inaccessible on account of caving at the portals. No maps are available.

The Summit has been developed by three main tunnels, aggregating about a thousand feet in length, and by several short tunnels, numerous small open cuts and several large ones. Only one of the longer tunnels, the lowest, is now accessible.

**GEOLOGY:** The rocks belong to the Lone Star formation of the Summit series (Cambrian) and consist of phyllites, silicious schists, and banded limestones. These sediments strike nearly north and south, and dip about 70° east. There are fairly numerous, irregular, lamprophyre dikes.

**VEINS:** On the Ore Hill several small east-west vertically dipping veins have been developed, which cut the formation nearly at right angles. They follow persistent small fractures and consist of massive quartz which is usually frozen to one wall; in width the quartz varies from an inch to a maximum of three feet. With the quartz there is generally some pyrite and occasionally galena and sphalerite; the latter minerals are most apt to occur where the vein crosses limestone beds. The values are chiefly in gold. These veins are fairly typical of the gold-quartz veins of the district, but are too small to receive any serious consideration.

The so-called "contact zone" of the Summit group, described below, passes through the Ore Hill ground for some distance but has been little developed. The Ore Hill veins lie to the east of this contact, while those of the Summit lie to the west.

On the Summit ground several similar veins to those on the Ore Hill have been developed. They differ slightly in that they cut the formation at medium angles and contain a very considerable amount of galena, sphalerite, and some pyrite with gold and some silver. While important from a leasers standpoint, they are too small for company operations. The "contact zone" has, however, been considered to hold possibilities for making a large mine. This contact, so called, is not a sedimentary-igneous contact but a conformable series of alternating limestones, schists, and quartzites, along certain beds of which mineralization occurs.

Near the south boundary of the Ore Hill property ore has been taken from several large open cuts. One of these cuts is at the junction of a cross vein with a limestone bed; in the other cuts the presence of a cross vein has not been proven. The ore consists of an intimate mixture of galena, sphalerite, and pyrite with gold and silver. It occurs with, and near, quartz stringers over a width of perhaps ten feet, but, while it is not well exposed, seems to be erratic and bumpy along the strike. The host rock is probably an impure limestone. The cuts extend over a length of about two hundred feet; otherwise this particular bed has not been uncovered on the property.

**VALUES:** No samples were taken during this examination.

A separate sheet herewith gives a few assays taken by other engineers, and presumed to be of reasonable accuracy.

Sorted ore that has been shipped has averaged about \$100 per ton, the values being mostly in gold.

**CONCLUSION:** The fissure veins of the properties are too small and the values too erratic to be worth considering.

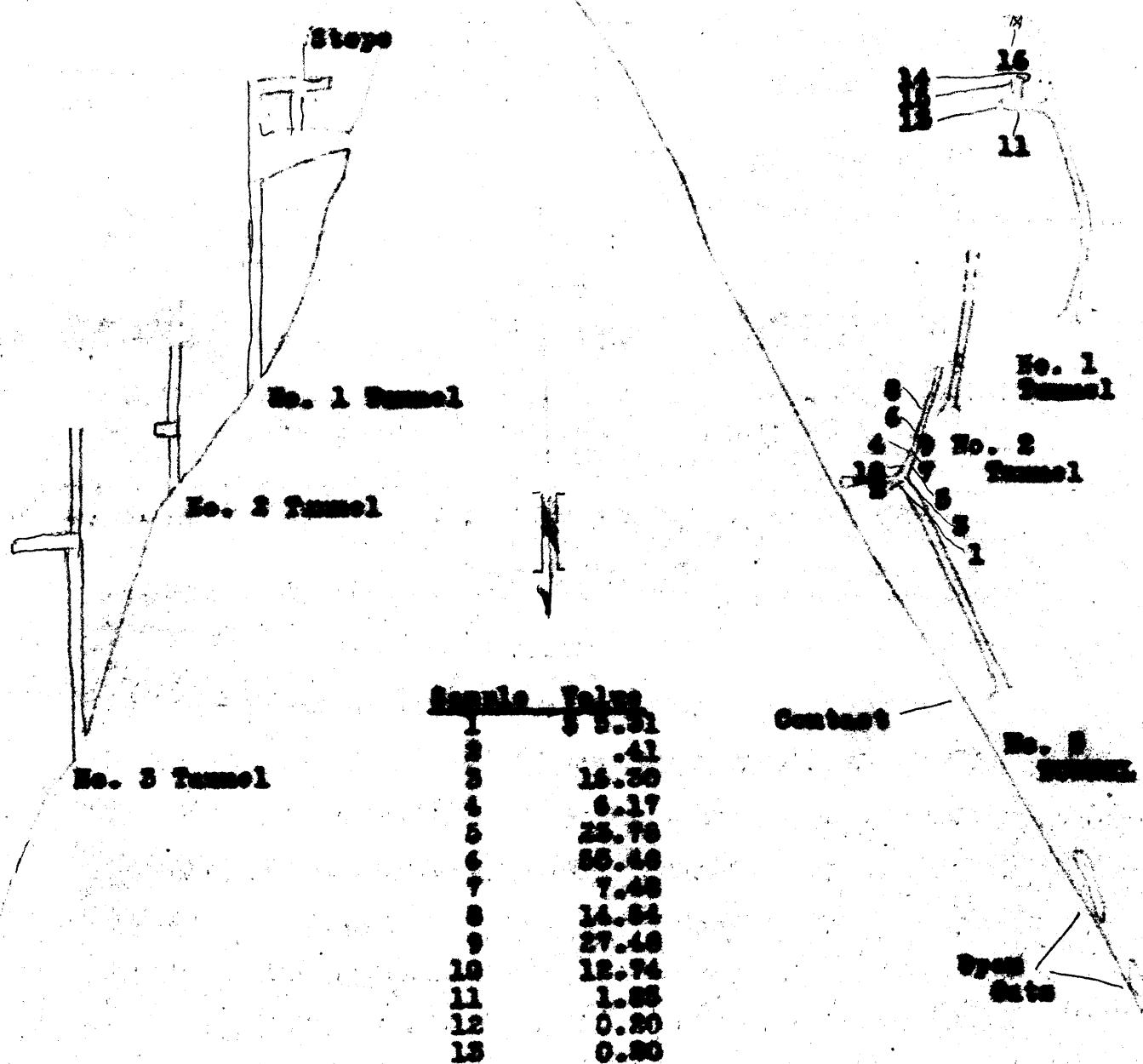
The replacement mineralization along certain beds of impure limestone has not been sufficiently opened up to allow definite conclusions to be drawn. It appears however, that ore of fair size sometimes occurs at the intersection of cross-veins with favorable beds, and that it may continue some little distance along these beds; it has not yet been proven that it does so, as the only development on the bed is by two open cuts some hundred and fifty feet apart.

It would seem that there is a reasonable possibility that there may be found to be lenses of fair milling ore in the favorable bed where it is intersected by the fissure veins, of which there are known to be six or eight in a distance of about two thousand feet. Yet there is so little definite indication of this on the property at present that the taking of a bond, and developing it, is hardly justified from an economic point of view.

Respectfully submitted,

*Chas. C. Starr*

17 18  
19 12 Ft. Shaft



Vertical E - E SECTION

Station	Value
1	5.51
2	.41
3	15.30
4	6.17
5	25.78
6	55.48
7	7.48
8	14.84
9	27.48
10	12.74
11	1.88
12	0.80
13	0.80
14	110.98
15	21.64
16	9.09
17	5.18
18	1.76
19	57.
20	15.75

PLAN

**SUMMIT MINE WORKINGS**

Map is approximate only.

inches  
0 1

centimetres  
0 1 2

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

NOTES ON THE  
SUMMIT GROUP OF CLAIMS.

From various sources, by C. C. Starr.

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From Report by                      Mr. Grasey's conclusion is in part  
Mr. H. H. Grasey:                      as follows:

"The future possibilities are extremely good. The fissure veins are small but very high grade. The future of the property depends mostly, however, on the development of the contact zone, which may be expected to be favorable."

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From Report by                      Mr. Tomlinson's conclusion is  
Mr. William Tomlinson:                      essentially as follows:

"Any property having so many favorable conditions as the Summit should be further developed."

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From Report by                      Mr. Plate concludes as follows:  
Mr. H. H. Plate:

"I have sufficient confidence in the Summit mine to advise its purchase providing it can be acquired at a reasonable figure."

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Samples taken by O. C. Thompson  
for Porcupine Goldfields Co. in 1926.

	<u>Feet</u>	<u>Oz. Au.</u>	<u>Oz. Ag.</u>	<u>% Pb.</u>	<u>% Zn.</u>
In 12' shaft on Summit	4.0	Tr	0.8	1.8	2.2
In #2 Tunnel near portal	2.5	1.10	2.3	0	0
In #2 " floor at "	7	.35	4.8	6.8	5.0
In winze on Summit-Ore Hill line, on 60' ore	2.5	.80	2.3	1.6	6.1
In open cut at S. end O.H. group, on contact	2.5	.68	4.5	5.0	9.2
In open cut at S. end O. H., on contact	<u>6.0</u>	.52	3.1	9.0	0.5

NOTE: The above samples were probably taken at the better appearing points. C. C. S.