

Property File

082 FSW 189

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REPORT OF
PRELIMINARY EXAMINATION
OF THE
PORTO RICO MINE
YMIR, B. C.

To
Frank Eichelberger, Trustee.

By
Charles C. Starr,
Oct. 31, 1930.

INTRODUCTION: On account of snow, caving and water in the tunnels no complete examination could be made; about three hours were actually spent on the property.

LOCATION: The Porto Rico Mine is in the Nelson Mining Division, at the head of Barrett Creek which flows into the Salmon River at Porto Rico, B. C., which is four miles north of Ymir.

PROPERTY: There are five claims in the group. Mr. E. C. Wragge of Nelson is agent for the owners.

TOPOGRAPHY: The workings are on the N-W wall of a glacial cirque at elevations between 5000 and 6000 feet, in rugged topography.

TIMBER: Good mining timber is rather scarce, as it has been mostly burned off in recent years.

WATER: Water is scarce at the elevation of the workings, but plentiful in Barret Creek at a thousand feet lower elevation.

TRANSPORTATION: The mine is 21 miles from Nelson and seven from Porto Rico, a flag station on the Nelson Branch of the Great Northern Railway. The road from Porto Rico to the mine is in impassible condition at present but could be repaired. It climbs 3000 feet in seven miles.

HISTORY: The mine was worked by an English company in the late '90s, at which time it was equipped with a small mill, with amalgamation plates and concentrating tables.

Government records (probably incomplete) show a production of \$117,681 from 6026 tons of ore, - a recovered value of about \$19.50 per ton, gold. The mine has been idle for nearly 30 years; the mill and camp buildings were

There was no opportunity to obtain an independent idea of the geology except from what could be seen in No. 3 tunnel. The vein, which consists of pure white quartz, with occasional specks of pyrite, extends from the portal of the tunnel to within forty feet of the face, and has been continuously stoped for a length of 450 feet above the tunnel. It is accompanied by a narrow finegrained dike, usually on the hanging-wall. Beyond the dike and the footwall rock is the porphyrite. The vein width was not measured but the quartz does not appear to average more than eighteen inches in width, and the dike perhaps two feet. It is reliably reported that in places the dike carries some gold. Near the face the vein is lost by faulting, or shearing.

The stopes vary from four to eight feet in width, and it would appear that in some parts the ore was stripped, the waste being removed first. Only one sample was taken, which consisted of chips from the vein over a length of 400 feet underneath the stopes. It assayed Gold 0.06 Oz., Silver $\frac{7}{8}$ Oz. The vein walls, while without gouge, are free from the rock which is strong and stands well. Locally, the vein in No. 4 tunnel is not thought to be the one which has been worked above; it is said to be low grade.

THE SPOTTED HORSE CLAIM: Some four thousand feet diagonally down the mountain on the course of the vein outcrop, a small vein has been opened by a cut and a short tunnel. The vein is from one to twelve inches

burned several years ago.

EQUIPMENT: None

DEVELOPMENT: There are four adit tunnels on the vein and numerous cuts, as follows:-

No. 1 Tunnel		250 feet long.
No 2 Tunnel	90 feet lower and	380 " "
No. 3 Tunnel	87 " " "	600 " "
No. 4 Tunnel	85 " " "	300 " "

No. 1 and No. 2 tunnels were not visited on account of lack of time; No. 4 was full of water behind a small cave and was inaccessible. There has been more or less continuous stoping from No. 3 tunnel level to the surface.

GEOLOGY: (Mostly according to Drysdale in "Geology of the Ymir District). The country rock is an augite-feldspar porphyrite (Triassic?) which is a sill striking north and south and dipping steeply westward. The east end of the sill is near No. 4 tunnel. The vein is a fissure filled with quartz which strikes N 49° E and dips 45° west. The quartz contains a little scattered pyrite.

The vein is in contact with a narrow, cherty, fine grained lamprophyre dike about two feet wide, - the dike is generally on the hanging wall side of the vein. The width of the vein is from two to eight feet with an average of three feet.

At 40 feet from the face of No. 3 tunnel the vein has been lost in a fine grained schist, which is probably a sheared porphyrite, but should be beyond the shearing.

No 4 tunnel is driven 300 feet on the foot side of a curving quartz vein with a lamprophyre dike for the hanging wall and a porphyrite footwall.

in width and accompanied by a lamprophyre dike, both lying in porphyrite. The vein dips 75° east and strikes $N 80^{\circ} E$.

Small values in gold have been reported from it. It is of no particular interest, and is undoubtedly not a continuation of the Porto Rico vein.

CONCLUSION: There is little doubt as to the grade of ore that has been produced from the Porto Rico mine, and it is probable that more of the same, or slightly lower, grade remains below the No. 3 tunnel, and perhaps also to the northward along the strike. Mr. Drysdale states "It is advisable to explore more in depth and laterally, and to study the surface geology".

Even assuming a considerable probable tonnage of ore of a grade similar to that formerly produced, it is my opinion that the mine cannot be profitably operated on account of the narrowness of the vein and the rather unfavorable surface conditions. Certainly it is too small to interest any large company.

Respectfully submitted,

Chas. C. Starr