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Property File
092L 149

REPORT ON THE
ZEBALLOS DOME PROPERTY
ZEBALLOS, B. C.

To
The Secretary,
Reno Gold Mines Ltd.
Vancouver, B. C.

By
Charles C. Starr,
Yorkshire Building,
Vancouver, B. C.

November 29, 1938.

ZEBALLOS DOME PROPERTY

LOCATION: The property includes four groups of claims situated on the Southeast Fork of the Zeballos River, (sometimes called the Nomash River), in the Zeballos District of Vancouver Island, B. C.

The various groups lie respectively about one mile, two miles, three miles, and five miles up the Southeast Fork from its junction with the main Zeballos River. The group with which this report is chiefly concerned is two miles (airline) above the Forks of the river and approximately ten miles by road and trail from the town of Zeballos. The claims extend from the Southeast Fork northeasterly up the mountain side.

ACCESSIBILITY: Zeballos has tri-monthly freight and passenger service by C. P. R. boats from Victoria, and tri-weekly airplanes from Vancouver.

From Zeballos the property is reached by truck road for four miles, thence along the Central Zeballos pack-horse trail for two miles, then about three miles of mostly unimproved trail, which is passable for pack horses, to the river crossing which is dry except during times of high water. From the river there is a rough trail three quarters of a mile long to the camp; this could be made into a horse trail without great expense.

PROPERTY: There are four groups of claims, - the Zebella Belle Nos. 3 to 18, inclusive; The Zebella Belle Nos. 19 to 24; the Evergreen Nos. 1 to 3; and the Royal Flush Nos. 1 to 4. They are owned by the Zeballos Dome Mining Syndicate of Victoria, B. C.

The Zebella Belle Nos. 3 to 18 group was the only one visited during this examination, since no veins are known on the other groups which, however, have scarcely been prospected at all.

GENERAL CONDITIONS: The claims are heavily timbered, chiefly with hemlock, fir, and cedar.

There are several creeks crossing the property with ample water for domestic use, and probably also for milling purposes. In the Southeast Fork of the Zeballos River there is always a large flow, although for a short distance above the trail crossing the river-bed is usually dry, the water flowing through sink-holes in the limestone.

On the claims the slopes are gentle near the river (elevation about 350 feet) but gradually steepen as height is attained, and in the vicinity of the "Main" vein are about 30 degrees. The side creeks crossing the property have cut out steep, narrow gorges. Travel is slow and tedious, but there are few cliffs.

Elevations, by aneroid, are -

Camp	1450 feet
Crosscut tunnel	1665 "
Cut on the "Main" vein above X-cut tunnel	1775 "
25-foot drift tunnel on "Main" vein	1725 "
"Fissure" vein at main creek	2275 "
Upper cut on "Fissure" vein	2450 "

There is a heavy rainfall in the district but snow is said to seldom accumulate to a depth of more than two to four feet, except at the higher altitudes. It generally comes late and melts early.

There is no equipment on the property except a cabin of suitable size to accommodate three or four men.

GEOLOGY: Roughly, the northeastern half of the group is underlain by the Karmutsen volcanics, and the southwestern half by the Quatsino Limestones, both belonging to the Vancouver Group of the Upper Triassic period. (See Memoir 204, Geological Survey of Canada, by M. F. Bancroft).

The limestones are generally in massive beds of white or gray color and have a general strike of north-northwest, and a steep dip westward. They are conformably underlain by the Karmutsen volcanics, consisting chiefly of andesitic and basaltic flows, but with some tuffs and breccias.

The claims lie on the east flank of a tight syncline the axis of which is near the contact of the granodiorite batholith a mile or more to the southwest.

The volcanics are frequently cut by gray to greenish porphyry dikes.

DEVELOPMENT: Development consists of approximately 70 feet of tunneling, at three points, and five small open-cuts. Of these, one drift tunnel (caved) and two open cuts are on the "Main" vein, and one crosscut tunnel, 37 feet long, has been started to cut the "Main" vein at 110 feet depth; an additional 135 feet of crosscut is required to cut the vein. Two small open-cuts have been dug on the "Fissure" vein; one on a mineralized dike contact; and one on the limestone contact.

"MAIN" VEIN: This vein is situated on the Nos. 7 and 8 claims about six hundred feet above camp, has been traced from the right to the left fork of the creek (see map), a distance of about 500 feet and is indicated by float for some distance further, beyond the left fork. It is a quartz vein lying between walls of fine grained, green volcanics, from one to one and a half feet in width, and is accompanied by one and a half to two feet of gouge

on the hanging-wall side. It strikes about N 10° W and dips 65° east. The quartz is white, rather coarsely crystalline, and is in places much crushed. It generally shows little metallic mineral, but occasionally contains grains of rather coarse pyrite.

The hanging-wall is sharply defined, and the foot-wall less well defined, with frequent pockets and stringers of replacement quartz extending irregularly into the foot-wall rock.

The caved tunnel on this vein, driven south from the right hand creek, cannot be entered. The dump shows white crystalline quartz, with only rarely a few specks of pyrite. There are numerous irregular quartz pockets and stringers in the footwall side of the cut leading to the tunnel. The vein is supposed to be nearly barren at this point, and no samples were taken.

On the hillside a little over a hundred feet north of the caved tunnel there is a small cut showing a foot and a half of white, finely crushed quartz, and two feet of gouge on the hanging-wall. No metallic mineralization was noted, and no samples were taken. From this cut northward occasional spots of white quartz are visible through the moss.

At about 400 feet north of the caved tunnel there is an open-cut on the vein showing one foot of massive quartz with some rather coarse pyrite. The usual gouge lies on the hanging-wall and there is some penetration of quartz into the foot-wall rock. Two sample cuts were made across the vein, over a width of one foot, which assayed 0.13 Oz. gold. A few of the best looking pieces from the dump assayed 0.18 Oz. gold.

About 400 feet north of this open-cut, and across the creek, there are numerous quartz stringers and lenses which entirely resemble those in the foot-wall of the vein, although the vein itself has not been exposed there. A sample of the best mineralized pieces from several of these lenses assayed 0.05 Oz. gold.

"FISSURE" VEIN: What is known as the "Fissure" vein outcrops in volcanic rocks along the bottom of a small branch creek near the east corner of the No. 8 claim. At the main creek it shows as a quartz and calcite seam barely an inch wide, but it widens up the hill to the northeast until at the open-cuts it is one half to one foot wide. It has not been traced south of the main creek, nor more than a few feet beyond the upper open-cut; it is exposed for about 250 feet. The vein strikes N 40° E and dips from 60° to 80° southeast.

At some 60 feet northeast of the main creek the vein is faulted about fifteen feet to the right and

to the northeast of the fault there are three irregular stringers from one to four inches wide which appear to join higher up. At the lower of the two cuts the vein is tight and irregular and four to six inches wide; at the upper cut it varies from four to twelve inches wide. In general the vein has no gouge along either wall, though it is not frozen to the walls. A broad, weak shear follows the vein and often there are stringers of limited extent parallel to the vein proper.

The vein filling is crystalline quartz with a little calcite, and with some pyrite and a few small specks of chalcopyrite, - the former also sometimes impregnates an inch or two of the wall rock.

Two samples taken across the vein at the upper cut, where mineralization is strongest, show little more than traces of gold in the assays, and picked specimens are little better.

OTHER VEINS: At 125 feet west of the "Main" vein an open cut and 8 foot tunnel have been driven on a coarse grained feldspar-porphry dike about seven feet thick. Along both walls, and especially on the west wall, there has been some mineralization of quartz and pyrite up to two inches wide, but usually not more than a small fraction of an inch. These strike $N 23^{\circ} W$ and dip vertically.

In the crosscut tunnel on the left fork of the creek there is a similar fracture which sometimes swells out to two inches width; a picked piece of this is said by the owners to have assayed \$19. This stringer is striking toward the "Main" vein and should intersect it somewhere under the ridge between the two forks of the creek. No samples were taken.

Near the south corner of the No. 7 claim there is strong mineralization along the Limestone-Volcanics contact which has been exposed at one point only by a couple of shots. Here, there is a vein-like band about a foot wide of pyrite and a little quartz from which pockets of pyrite project irregularly into the limestone. There is a strong development of garnet, epidote, etc. A sample of the pyrite over one and a half feet assayed 0.01 Oz. gold.

SUMMARY: The "Main" vein is a strong vein with, for Zeballos, an exceptional width of quartz and gouge. It has been traced for a considerable distance and should be persistent laterally and in depth. The surface values are poor and the quartz is different from that in the producing mines of the district, so far as observed. The vein is situated at a distance of upwards of a mile from any known outcrops of granodiorite, and from any producing mine, and lies in the Karmutsen volcanic rocks. So far as I am aware no commercial ore has yet been developed in the

Karmutsen rocks nor in the north-northwest striking veins, though there is no evident geological reason why they should not contain ore.

Under the observed conditions, the chances for developing commercial ore at depth on this vein seem rather remote and the expense scarcely justified.

The "Fissure" vein has a strike more typical of the producing mines of the district and the character of its quartz is somewhat more typical of them, though still different. The vein, however, has no gouge with it and at many places has a ragged irregular appearance suggesting poor continuity, and the values so far known are negligible. The vein probably warrants some open cut work and tracing laterally under the soil in hope that an ore-shoot may be picked up, but more extensive work does not seem justified.

The stringers in the 7-foot tunnel and in the crosscut tunnel are small and unattractive and scarcely justify any farther work.

The limestone contact vein, and replacement mineralization in the limestone adjoining, have some possibilities but do not seem likely to make an orebody; no orebodies have yet been developed in the camp under similar conditions.

The producing mines are apt to have the best values associated with comb-quartz, pyrite, zinc blende, and galena, all of which except pyrite are lacking in the Zebella Belle veins.

CONCLUSION: The known veins on the Zebella Belle Nos. 3 to 18 do not appear to be particularly promising, largely from lack of any important values, but also to a lesser extent from lack of similarity in geological conditions to the producing mines of the district.

Only a small part of the group has been carefully prospected and there are probably other veins to be found and which should be searched for. The other groups of claims are said to be entirely unprospected and some of them at least should be moderately favorable ground. The discovery of new veins might better be left to the owners and, under the conditions as outlined above, I would advise against your Company taking over the claims.

Respectfully submitted,

W. C. Starr

1" = 300'

N

#9

402 --- 0.05 *chips*

404 --- 1.5 --- 0.01 *chips*

400 --- 1.0 --- 0.13

401 --- 0.18 *Specimen*

#10

#8

398 --- 0.6 --- 0.005 *Top*
397 --- 1.0 --- 0.005 *Bottom*
399 --- 0.102 *Specimen*

403 --- 0.03 *Specimen*

LS

Camp

90°

63

75

c

d

e

f

