

PROBABLY referring to
The Tunnels & workings
on Quatsino King #676 and

THETA RIVER GOLD PROPERTY, QUATSINO SOUND ON ALEXANDER #679
V.I.

The property was visited May 25th to 29th, 1940, inclusive.

PROPERTY AND TITLE: The property consists of seven claims and one fraction held by location rights. Please refer to sketch plan of claims. Present title to the property is held by a syndicate of which Mr. Ed. Tipping of Port Alice, V.I. is the agent.

LOCATION AND ACCESSIBILITY: The property is located on the West side of the South-west Arm, Quatsino Sound, Vancouver Island. The claims extend from tidewater westwardly. Access to the property is from Port Alice about two miles by gas boat to Thorburn Bay, thence about three quarters of a mile by pack horse trail to the camp and workings. The trail is in good shape, although the grade is steep. The camp and lower showings are about 1000 feet above sea level.

TOPOGRAPHY, POWER, TIMBER, AND GENERAL: The area is much less rugged than the exposed West Coast, although slopes are steep, bluffs, cliffs and canyons are relatively scarce. The timber is not excessively heavy but is everywhere present. THETA RIVER, one half mile to the North of the camp and showings, is reported to offer plentiful hydro power for a large operation. CAMP BUILDINGS consist of one log cabin to accommodate four men and a large blacksmith shop at 13' adit.

REGION L GEOLOGY: Please refer to attached sketch. Geology of the area consists of several formations whose relationships are not quite clear. The general picture indicates a fault contact between sedimentary formations (mainly conglomerate) and complex intrusives. The latter consists either of acidic and basic phases of the same intrusive mass or else an acidic intrusion cut by a later diorite stock. The acidic intrusive (locally called "felsite") predominates along the full contact. Along this major fault contact noticeable subsidiary faulting has occurred in the adjoining conglomerates, while considerable brecciation has resulted in the "felsite". The fault contact (and zone of brecciation) mark the limits of the ore body, which strikes about N 25 W, with an indeterminate dip. Several andesitic dykes cut all formations and ore bodies. After formation of the ore body apparent post-mineral faulting offset the quartz a few feet in several places.

ORE DEPOSITS AND WORKINGS: Please refer to plan of all surface showings (1" to 40') and plan of underground workings (1" to 10'). The ore deposit is best exposed in two places along its strike. The northern exposure is opened up by upwards of 300 feet of underground work while the southern exposure is simply an uncovered outcrop forming a prominent "hump" on the hillside. The only noticeable development work on the southern exposure is a cross trench about 30 feet long, which has been blasted out to a depth or so across the deposit.

THE SOUTHERN EXPOSURE consists of a quartz outcrop uncovered by the creek at frequent intervals for a length of approximately 200' or more. In several places the quartz mass appears to dip approximately 55 to the East. The present course of the creek is approximately along the hanging wall of the deposit. The width of the quartz mass as indicated in the cross trench is about 40 feet. The quartz consists of a "smoky colored" massive and cherty variety containing a very fine-grained dissemination of chalcopyrites and pyrites. The sulphides appear nearly everywhere present in the un-oxidized chips but my impression was that they were more concentrated along the hanging wall zone. Oxidation and leaching in the footwall zone of the Southern exposure was evident in the cross trench where practically only "honey-comb" quartz remains. The material leached is not believed to have been sulphides but largely small included fragments of the footwall rock, not completely digested" in the replacement of the brecciated host rock.

CONTINUITY OF THE SOUTHERN OUTCROP can be traced without great difficulty Northwesterly. Southwardly, however, this is more difficult and in fact continuity in this direction may be complicated by the presence of an almost flat, narrow andesitic dike (see plan of surface showings). Overbirden has not been removed beyond the point where the dike cuts the quartz quartz and the creek bottom is not exposed beyond this point. Incidentally, however, similar dikes cut the ore body in the Northern exposure and here no complications to the orebody

resulted. In fact, in the northern workings, the heaviest sulphide appeared to occur on both sides of similar dike intersections.

THE SOUTHERN EXPOSURE was sampled as shown with the results indicated. All samples were chipped and were taken more from a qualitative point of view than that of trying to determine grade. As it seemed difficult to arbitrarily divide the samples into narrower or more selective widths, this was not attempted. My samples on this outcrop covered the full width (or length) of the quartz exposed along the particular section chipped. Experience with this deposit would very probably teach one to select narrower zones that would run appreciably higher in grade than my results. Past experiments along this line are reported to have yielded very interesting results.

About 30 years ago the GRANBY COMPANY put down two diamond drill holes on the Southern outcrop. Results of the work are not known. Judging from the present ruins of the old "set-up" and angle of the holes one of the holes should have crossed the deposit. The second hole (a vertical one) was aimed exceedingly close to the edge of the deposit and may have missed it altogether.

THE NORTHERN EXPOSURE IS SITUATED APPROXIMATELY 500 feet North of the southern exposure and 300 feet lower in elevation. No outcrops are visible between the two exposures, although float is in places abundantly mixed with the blanketing overburden. The northern exposure is poorly uncovered at the surface, there being just one trench exposing a cross section of quartz about 14 feet wide. The bulk of the information concerning this exposure comes from the underground workings. As these workings were completed some 20 or 30 years ago, fresh exposures are scarce and the present picture is consequently incomplete. However, in the northern exposure the structure is plainly more complicated than elsewhere. Underground workings indicate pre- and post-mineral faulting, the latter with displacements in the order of 15 feet (where measurable). A narrow post-mineral dike (andesitic) cuts the deposit in this section.

GENERALLY the picture in these workings indicates an ore body from 10 to 20 feet wide, of approximately vertical dip, broken into about 3 blocks each about 50 feet long. These blocks have been individually shifted out of alignment a few feet until now the only recognizable manner of determining the attitude of an ore block is by ascertaining the attitude of the conglomerate wall. Even this guide is locally useless as occasionally it is difficult or impossible to differentiate between the conglomerate wall rock and the breccia host rock.

THE WORKINGS are mainly in the conglomerate formation or along the narrow shear between the conglomerate and ore body. In the latter case short crosscuts have been run out to test the width of the ore (see plan of underground workings). The short crosscuts reveal the cross-sectional structure of the deposit quite well. In general terms it is as follows: THE fault contact between the acidic intrusive (local name "felsite") and the much larger conglomerate dip about vertically in the workings. The contact consists of a conglomerate intrusive-fragment and gouge breccia about 4 feet wide, along which there has been limited silicification and mineralization. No alteration is visible in the conglomerate formation (but in the intrusive formation) considerable brecciation and hydrothermal alteration have (has) taken place with subsequent silicification of varying degrees. Replacement of the brecciated intrusive appears to have been most complete near the conglomerate contact (and line of movement). At distances from this contact varying from 5 to 30 feet the breccia fragments (of the intrusives) grow larger until brecciation gradually merges into irregular fracture zones in the intrusive. Where this last occurs the intrusive is less altered; in fact it resembled a relatively fresh, dark colored diorite. In this section (termed the footwall zone as a dip to the East is assumed) the quartz is present as a mass of intersecting veins filling fractures running in all directions. These "footwall veins" are up to 12 inches in width and may assay as high as 1 Oz. or more in gold per ton in places. The best exposure of this type of vein occurs where sample #1439 was cut. Between this stringer zone in the "footwall" and total quartz replacement against the conglomerate wall there are varying degrees of silicification, one common phase being composed of small angular fragments of quartz in fine-grained oxidized carbonate matrix.

THE QUARTZ BODIES IN THE NORTHERN EXPOSURE were sampled where indicated with the results shown. All samples were chip channels across the total width of apparent silicification. Selected sections across narrower widths run better according to the sampling experiences of others.

SUMMARY

On the basis of present exposures a large body of quartz occurs on the property. Two exposures about 500 feet apart indicate probable continuity for this distance at least. Present widths indicated vary from 10 to 40 feet. A new lower open cut 500 feet North of the workings in brecciated intrusive reveals small quartz fragments that are well mineralized and which reveal gold on panning.

There is, therefore, a possible length of 1000 feet of suitable vein structure. There is an exposure between the northern and southern showings. The deposit strikes east the hillside which rises rapidly. It therefore lends itself well to development by drifting and diamond drilling.

CONCLUSIONS: A large body of quartz ore is indicated which appears to average around \$3.00 per ton. A couple of sections of ten-foot widths and upwards approach nearly 0.20 ozs. (\$7.00) grade.

This grade and such physical advantages as accessibility, possible limited "Glory-hole mining" and reportedly convenient hydro power make the property a fair prospect warranting further preliminary work by a company interested in the development of a large tonnage low-grade property.

#35 gold

SIGNED: "FRANC ^{JOURBIN} JOURBIN".

<u>ASSAYS:</u>	<u>NO.</u>	<u>OZS. GOLD:</u>	<u>VALUE:</u>
P.1421		2.76	\$96.60
P.1422		0.20	7.00
P.1423		0.04	1.40
P.1424		0.01	0.35
P.1425		0.07	2.45
P.1426		0.08	2.80
P.1427		0.08	2.80
P.1428		0.01	0.35
P.1429		0.01	0.35
P.1430		0.05	1.75
P.1431		0.10	3.50
P.1432		0.19	6.65
P.1433		0.13	4.55
P.1434		0.09	3.15
P.1435		0.005	0.18
P.1436		0.01	0.35 (+0.01) (35¢)
P.1437		0.09	3.15
P.1438		0.10	3.50
P.1439		0.17	5.95

NINETEEN ASSAYS

BY

PIONEER GOLD MINES LTD.

INCIDENTAL ASSAYS:

		<u>OZS. GOLD</u>	<u>VALUE</u>
Bralorne Mines Ltd.	August 29th. 1940	3.29	\$115.15
(ROSE QUARTZ)	" " "	0.19	6.65
E.L. TIPPING	AUGUST 15th. 1940	4.21	147.35
(NO. 1 from vein in Bear Creek)			
W.C. PATERSON	JUNE 18th. 1941	1.24	47.74