Report on Victoria Basin
Omineca District
P.J. Higgins claims

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REPORT OF EXAMINATION

<u>of</u>

VICTORIA BASIN GROUP

BABINE RANGE

Near Smithers, B.C.

Vancouver B.C. Sept. 12th-1928 Alfred J. Gaul. E.M. Registered Professional Engineer. British Columbia.

Report of Examination. Victoria Basin Group.M. C.

Near Smithers. B.C.

- Location. The property examined consists of a group of mxx six mineral claims located approximately 22 miles N.E. of the town of Smithers, B.C. a station on the Canadian National Railway, 220 miles East of Prince Rupert, B.C. in mineral survey district No.2 British Columbia.
- Access. The property is reached by means of an automobile road for a distance of fourteen miles- thence by either (a) five miles of sleigh road and three miles of good pack trail, or (b) by following the old "McCabe" trail eight miles via the "Little Joe" group which adjoins Victoria Basin on the South.

An alternative route is to be had by following the "Cronin" winter road from Smithers or Telkwa, a distance of 28 miles, and turning west along the Valley of either Little Joe or Higgins Creek. The promised early development of the Cronin property (Babine Bonanza Group) will ensure the immediate employment of the exceptionally good grade to be had on the Cronin Road, connection with which will entail only about $2\frac{1}{2}$ miles of road construction along either **Existing** Little Joe or Higgins Creek.

Claims. The group under discussion is comprised of the following mineral claims, viz:-

Claims . (contd)

Victoria, Nellie C., Texas, Dumphy, Galena Farm and Silverton.

Provincial Mineral Act, with the necessary assessment work done for the ensuing year. The ground has been well located inasmuch as Crown Grant Survey will show all claims to be very close to the prescribed size of 50 acres approximately. Subsequent to examination of the property several extra claims have been located to which reference is made below.

Title. The claims stand in the names of P.J.Higgins and associates and are at present unalienated.

Area. The area covered by the original group of six claims is slightly less than 300 acres.

Topography. The ground consists of a maximum series of glacial cirques or amphitheatres; bounded north and south by ridges that have resisted glacial and river action. The ground slopes moderately steep from an altitude of 4500° at the Cabin to 6300° at the South-west corner of the Galena Farm claim, and 6000° at the South end of the Nellie C. claim which point is on the divide between the Victoria and Little Joe basinsthe Victoria claim slopes southward with the South end of the Claim approximately 5000° above sea level. These altitudes are approximate and are given more for the purpose of enabling the reader to visualize the ground and thus get a better conception of the general conditions.

The Western boundry of the ground borders on the glacier and snowfield that exist on Mount Hyland in which glaciers a number of small creeks have their beginning and which join together and cross the property from West to East, known as Higgins' Creek.

These creeks together with the earlier glacial erosion have been instrumental in carving out and removing a very considerable proportion of the original rock formation. More recent weathering has resulted in extensive breaking down of the mountain sides and as a consequence the upper part of the property is covered with rock slides.

Geology

The rock formations are chiefly argillites and schists with occasional quartzite, which formation is locally classified as the Hazelton group of the Jurassie period. Intersecting the country is in a general north and south direction are a series of rhyolite and porphyry dykes.

The veins that have been uncovered and developed are found to be of the contact variety close to the contact between the intrusive dyke rocks and the older Hazelton formation. In some cases the veins are well defined between the dyke and schist, in others the mineralization extends from the dyke well into the schist, making a wide ore body.

Minor faults have displaced the veins in places but these are of an unimportant nature; their courses are not hard to follow and it will not be a difficult to pick up faulted ore bodies.

Eastern fringe of the Coast Range batholith viz; a more or less intimate mixture of lead, zinc, iron and copper sulphides, enriched with varying quantities of fold and silver- all carried in a gangue of quartz, calcite and spathic iron. As is usual, the veins are readily susceptible to oxidation, thus rendering them hard to recognize on the surface. Considerable slide rock and disintegrated porphyry has covered the Victoria Basin veins, but the outcrop of a rhyolite dyke is almost as sure an indication as the outcrop of the vein on the property.

Exploration work

Exploration work to the present has identified two veins, viz;(2) the mains or East vein.
(b) the west vein.

(A) The Main Vein. The four eastern claims of the group have been located along the general strike of this vein. Several open cuts, test pits and tunnels have been opened up on the vein. Until more extensive work has been carried out, it will be difficult to determine whether these openings are on one vein or on a series of parrallel veins. From the survey made by the writer, it would appear that only one vein exists-which vein varies in width and complexity along its strike. The

development so far carried out is as follows:-

(I) Near No.I Post Nellie C. Claim, elevation 5000

(a) An extensive open cut on the vein from which a small shipment was made. This exposure was sampled by the Provincial Mineralogist and showed over a 2'0" width

Au. 0.50z., Ag. 298.03.1b. 21%

- (b) Shaft sunk in hanging wall, but was not carried down deep enough to intersect vein.
- (c) Adit Tunnel-Cross cut 70°0" drift 100°0" on vein. At 30°0" in from portal Rhyolite-rorphyry dyke was intersected and cross cut for 30°0" (20°0" at vright angle to strike) On the foot wall of the dyke, the was vein intersected and followed for a distance of 100 feet-face of drift now showing 4½° of good grade ore. A well defined vein is exposed in the drift, consisting of a gangue of quartz, brecciated slate, calcite and spathic iron, carrying galena, sphalerite, grey copper, and pyrite, -

Frovincial Mineralogists sampling showed; Clean Galena- Au. 0.06 Oz. Ag. 86.2 Oz. Pb. 55%
Clean ZincblendeAu. 0.02 " Ag. 22.0 " Zn. 52.8%

- Samples taken in this vein by District Mining Engineer gave; (P) Ficked specimen showing Tetrahedrite; Au. 1.30 Oz. Ag. 1064 Oz.
 - (2) Galena from face;-Au.16 Oz Ag. 69 Oz Pb.13%

The main vein has been traced intermittently for a distance of approximately 3000 feet, the uppermost (or most southerly) cuts showing a strong well defined vein-approximately 600 feet higher in elevation than the openings enumerated near No.1 Post Nellie C. Claim

The vein has been traced over the divide on the Victoria claim and float from the Little Joe side of the mountain assayed;-

Au. 0.030 Oz. Ag. 230. oz.

- Relation 4925', 500 feet north of workings near No.1 Post
 Nellie C. The vein has been exposed in a drift 50' long. The writer is
 of the opinion that the wall followed on West side of tunnel is not
 the footwall of the vein proper. Cross cuts should be run East and West
 near the face in order to explore the ground thoroughly. The ground so
 far drifted in shows evidence of close proximity to an ore body.
- (3) Elevation 4875' 200 feet north of previously mentioned workings
 (2) extensive open cuts have produced sufficient ore to enable a
 small shipment to be made some years ago. Smelter returns gave;-

Ag. 5loz. Pb. 25% Zn. 38%

This vein is not in contact with the Rhyolite dyke and therefore may prove to be a parallel vein 18" in width. The strike of the vein at this particular point does not conform with the general strike, i.e. a few degrees west of south-having approximately S 45 W.

(4) Elevation 4750. A working tunnel has been started and is now advanced 25.0" in from portal. This adit is well located for permanent development, and should intersect the vein about 300. in on its present course. The portal of the tunnel is located approximately 1000. from the workings described above near No.1 Post Nellie C.

The general indication and evidence given by the work accomplished on this vein point to the ultimate development of a very profitable body of ore. The tenor of the ore appears to be from 1 to 2

ounces of silver per unit of lead over a good workable stoping width with sufficient gold value in addition to considerably enhance the value of recoverable ore while continuity of the vein cannot be questioned, it will probably be proved that the veins will contain shoots of ore that will be considerably above the average-depending greatly on the quantity of grey copper present. From results so far obtained it is the writers opinion that development will show an average width of 3 to 4 feet of ore assaying;

Au..2Coz. Ag. 250z. Pb. 13-15% Zn. 10% which represent a very attractive milling grade of ore.

The average dip of the vein -70° will ensure good working conditions in stopes and chutes, thus helping to keep down the cost of mining.

(B) WEST VEIN, exposed in open cut 400 feet south of No.1 post
Silverton M.C. a short distance we south of the small lakes located
in the middle of the group. The vein shows a width of 8 feet - strike
S. 5 E. with dip 60° to the west. This vein is well mineralized and
represents good mill feed, carrying approximately equal quantities of
lead and zinc. Gangue consists of quartz, calcite and side mite. The
vein is on the hanging wall side of a wide porphyry dyke which can
be traced several hundred feet south where the dyke has a flatter dip
This vein occurs near the contact of the andesitic rocks of Mount
Hyland and the schistose rocks that prevail on the Victoria Basin
group of Claims. The quantity of well mineralized quartz float to be
found in the slide rock on the West side of the group lead one to
believe that systematic prospecting will uncover some large bodies
of ore.

The West vein is located between 700 and 800 feet west of the main vein series.

Timber. The Dumphy claim is well timbered with suitable timber for mining purposes. Additional claims have been staked in order to ensure timber sufficient for future needs. Additional claims have been secured in the Little Joe Basin adjacent to Victoria Claim. These claims are also densely timbered and will provide all necessary timber at such time the workings are carried through the mountain to the Little Joe side.

The new claims acquired adjacent to Dumphy M.C. contain very valuable water power. The Valley is very suitable for dam construction and by securing the ground no trouble need be anticipated from flooding other claims not belonging to the group. For present needs the naeds there is ample water flowing over the claims.

CAME & DOMESTIC. Good sites are available for camp purposes on the Dumphy M.C. close to the proposed road connecting with the Cronin-Telkwa road and also convenient for the new main tunnel already started. On the Little Joe side the same remarks apply. The group is exceptionally well favoured in respect to convenience of operation during the periods of development and production. The mine will be developed from the North side and production will be carried on from the Little Goe on South side.

RECOMMENDATION. The lower or main tunnel should be driven to intersect vein and development of vein carried on. It will not be necessary to spend further money on the surface prospecting the main vein on the Victoria Basin side. After the vein has been opened up on the lower tunnel level, which work can be done during the winter months, some work should be done on the surface of the Little Joe side. A cross cut tunnel should be started at a convenient point about 400' west of the north

shaft on Texas M.C. (near the old survey post- south of the waterfall) The tunnel should be driven west and would intersect the vein at a point approximately 600° from the portal of tunnel. This would not give a great deal of stoping ground at point of intersection but as development south proceeded- greater depth would be rapidly gained.

In the event of more extended work being carried on than has been the case in the past, it will be necessary to build a new cabin. It is recommended that this be erected on higher ground on the Dumphy claim, east of the present cabin. The necessary water coul be piped along the creek of the side hill.

SUMMARY.

opportunity to develop a profitable mining operation. The advent of extensive work on the Babine Bonanza property(Cronin's mine) ensures an early improvement of the old Cronin Road to Telkwa or Smithers. This will nullify the disadvantage that has attached utself to the Victoria group in the years gone by. The grade of ore is very attractive. The geological conditions are all that can be desired. Convinuity to a great degree has been proved. Ar Higgins who staked the ground has done very earnest and intelligent work, and only the lack of necessary funds has prevented him from having a producing mine.

As noted above the property is well favoured in having two points from which to attack development, viz Victoria Basin on the north and Little Joe on the south.

In conclusion, the writer has no hesitation in recommending this property as one that is well worthy of the expenditure of considerable money to bring it to the point of production.

Respectfully submitted.

(Sed) Alfred J. Gaul.

Professional Registered Engineer Province of British Columbia.

Vancouver B.C. September 12th-1928.

