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A REPORT ON THE MINING PROPERTY OF BAYVIEW MINING COMPANY LIMITED PORTLAND CANAL MINING DIVISION

STEWART, BRITISH COLUMBIA,

CANADA.

Stewart, B. C. September 15th, 1925.

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B. W. W. McDougall, Mining Engineer.

THE BAYVIEW GROUP OF MINERAL CLAIMS

Portland Canal Mining Division

British Columbia, Canada.

SITUATION AND EXTENT:

The Bayview Group of Mineral Claims is situated on the Eastern slopes of the Bear River Ridge about two and one half miles from the town of Stewart, B. C. The group includes fourteen claims and fractions. Five claims, - the Kent, Beth, K. P. No. 1, Tacoma and Lucille No. 1, including a total area of 183.64 acres, are Grown Granted. Two claims, - Bayview No. 1, and Bayview No. 2, including an area of 66.46 acres are surveyed and ready for Grown Granting. The remaining claims, the Netty, Zeal, First Fraction, Mary, Jim and two others situated to the South of Bayview No. 1 and Bayview No. 2 claims, are unsurveyed locations the total area of which will probably exceed 200 acres. The total surveyed area is accordingly 250.09 acres and the entire area is probably in excess of 400 acres.

TOPOGRAPHY:

The property extends from the Bear River nearly to the summit of the Bear River Ridge and elevations extend from about 50 feet above sea level at the Bear River to about 5000 feet at the North Western boundary. Timberline is at an elevation of about 3000 feet. Below this elevation the mountain slopes are rugged and steep but well forested except for a wide slide area on the North Eastern side of the property and the steep escarpments of Granite Creek canyon on the South West.

Above timberline rock outcroppings are plentiful though much of the surface is lightly covered with heather or with talus. The slopes are steep though, on the whole fairly regular. Most of the area is accessible though trails must be cut to permit convenient access. Most of the area above timberline is affected by snowslides during the winter and spring months.

The entire property is very rugged topographically. The range of vertical elevation is nearly one mile. Cliffs and bluffs with occasionally intervening benches and the whole traversed by slide areas and mountain stream canyons, characterize the area.

CAMPS, TIMBER, WATER, ETC.,

There is a well-constructed log cook house on the Zeal claim near the centre of the North West end line at an elevation of 2625 feet. This is the only building on the property. Tents have been used to furnish sleeping quarters during preliminary development proceedings. There is an area at the South East corner of the Bayview No. 1 claim at an elevation of 3450 feet where a summer camp has been established and which could be used as a winter camp site if this should be considered advisable. There is an excellent stand of timber on the property sufficient for all construction and mining requirements. This timber is conveniently situated to the probable mine equipment and mine entry sites.

There is sufficient water for domestic and metallurgical purposes. Granite Creek has hydro-electric power possibilities during at least a part of the year.

There is a pack trail from the main Bear River trunk road to the two camp sites above mentioned. In addition the principal ore showings have been made accessible by side trails which have been constructed at considerable expense.

CLIMATE:

Most of the property is free from snow from about July 1st till some time in October. This period represents the time during which surface work can be effected to advantage. During much of the remainder of the year that portion of the property which is above timberline is nearly inaccessible unless adequate provision be made to keep trails open.

That portion of the property in the vicinity of the cabin on the Zeal claim can be made accessible throughout the winter. The mine openings would probably be located in the vicinity of this cabin.

Winters on the mountain slopes are severe. The snow fall is very heavy and there are occasional periods during which low terperatures prevail. However, if ample provision be made, there is no particular difficulty in carrying on mining operations throughout the winters from camps situated in the timbered area on the North West end line of the Zeal claim.

TRANSPORTATION:

The present method of Transportation for in-going supplies and out-going ore is by pack animals and the cost is 3 cents per pound. Possibly this figure could be lowered to a slight extent in the event that there should be an important tonnage to move. For preliminary operations, however, the transportations rate, from Stewart to the camp site, is \$60.00 per ton.

From Stewart to the Bear River bridge, a distance of about one and one quarter miles, there is a road which is available for commercial vehicles practically the year round. From the bridge to the camp site on the Zeal claim, a distance of about three miles, the only transportation avenue is a pack trail. The trail is a steep and difficult one and it cannot be greatly improved except at heavy, if not prohibitive, expense. If such improvement should be effected the present costs of transportation would not be very materially reduced. The obvious remedy for overcoming present difficult and costly transportation is to instal a transway from a point near the Bear River bridge to the site that seems most advantageous for the lowest mine opening. The construction of such a tranway is entirely feasible and cost should not greatly exceed ten or twelve thousand dollars. The exact cost will wary depending on the type of equipment that might be decided upon and on construction conditions. The terminal points must be decided upon and a survey made before any close estimate concerning the cost can be determined.

If this tramway were installed the probable transportation cost, Stewart wharf to the lower Bayview camp site, would probably be between three and four dollars per ton.

LABOR:

For properties more or less similarly situated to Bayview the customary wage during preliminary operations is \$5.00 per shift plus board. Board, including cooks' wages, costs between two and three dollars per day. This wage rate could be substantially reduced on Bayview as soon as housing accomodations are improved and moderate scale operations commenced.

There is always an adequate supply of suitable labor.

REFERENCES:

The history, general and economic geology and other information pertaining to the Portland Canal District are fully discussed in the following publications issued by the Canadian Geological Survey:

iomoir	32	by	R.	G.	McConnell,		
lemoir	132	by	S.	0.	Schofleld and	G .	Hanson.

Copies of these publications may be obtained from the C. G. S. at Ottawa or from the Vancouver office in the Pacific Building.

GENERAL OBOLOGY:

The predominant geological feature of the coast of British Columbia and South Eastern Alaska is the Coast Eange batholith. This elongated mass of intrusive granitic rocks extends from the 49th parallel of North latitude almost to Mt. St. Elias, Alaska. On the rims or margine, or existing as roof-pendants in the granites, are the folded and faulted rock formations pre-batholitic in age. The basal members of the intruded series constitute the oldest rock formation in the area, - the formation is locally termed the Bear River Series. The lower members of the Bear River Series are volcanic in origin and have been built up by repeated lava flows - partial consolidations - and again lava flows. The base of the formation is not exposed and its maximum thickness is not known. Higher up in the series the volcanic agglomerates become interbedded with tuffs which have been built up by immense accumulations of volcanic ash.

The Bear River Series passes by gradual transition into the fine-grained conglomerates of the Salmon River formation. This Series caps the Bear River Series and it has apparently been laid down under water. The characteristic rock is a fine-grained conglomerate consisting of pebbles of the Bear River Series in an andesitic groundmass.

Capping the Salmon River formation and resting conformably on it is the Nass Series. This formation consists largely of argillites. It was laid down under water and is composed largely of the fine-grained alluvial material worn by erosion from the older rocks. The Nass formation is the youngest bedded formation of the district.

The three formations just described were intruded by the granitic rock masses of the Coast Range batholith. The whole coastal area rose above sea level and the Coast Range mountains were brought into existence.

The geological events thus briefly summarized are believed to have transpired in the Mesozoic, - more particularly in the late Jurassic period of that era. The ore deposits came into place as an end phase to the batholitic intrusion. Since that period the area has suffered no further geological revolution. The processes of erosion, however, have been extremely active and all the more drastic because of the high relief. In more recent geological times the great continental glaciers were very active and erosion was hastened.

The ore deposits of the Portland Canal District undoubtedly owe their origin to the batholith. Magmatically concentrated masses of the metals or of their sulphides occurred near the borders of the inbruding, plastic, rock magmas. The mineralizing agencies, highly heated silliceous solutions and vapors emanating from the interior of the batholith found exit through shrinkage rents in the cooling borders of the intrusives and thence into the more or less shattered zones of the overlying rock formations where, under lessened degrees of temperature and pressure, or by magmatic injection ores came into place. There seem to be at least two prerequisites for ore deposition,the mineralizing solutions and vapors rising from the cooling intrusives, or the magmatic material available for end-phase injections, must have had access to magmatically concentrated metals,and the overlying rock formations must have been shattered and sheared to a sufficient extent to permit of access and circulation by the mineralizing agencies.

LOCAL GEOLOGY:

The granodiorites of batholitic origin underlay a considerable portion of the Bayview property. The line of contact between the granodiorite and the greenstone enters the property from the West some place near the South West corner of the Tacoma claim. From this point it strikes in a direction a little North of East,crosses the Southern portions of Bayview No. 1 and Bayview No. 2 claims to the Bouth West corner of Lucille No. 1 claim. Following the same general direction it enters the Beth claim some six or seven hundred feet North West from the South West corner of this claim,thence in more or less the same general direction to the Eastern boundary of the property. The approximate location of this contact line is indicated on the accompanying maps. This contact line is a vital geological feature for it is very unlikely that any bodies of commercial ore of mining dimensions will be found in the granodiorites South of the contact zone.

The granodiorites dip under the greenstones which occupy that part of the property situated to the North of the contact line. The angle of dip could not be determined with certainty. Several clinometer readings of about 60 degrees to the North were observed but these are not considered as conclusive. It is certain however that the granitic rocks underlay the greenstones at greater and greater depths to the North.

Near the contact zone and for a distance of several hundred feet Northerly from it the greenstones exhibit a well defined banded structure and some thin bands of argillites were noted. The direction of these bedding planes is about S 80 %,- or, roughly, parallel to the line of contact. Farther to the North the greenstones assume a more massive character. The summit of the ridge above the Kent and K. P. No. 1 claims is capped by the coarse-grained agglomerates of the Bear River Series.

On the Kent claim the greenstones are traversed by a net-work of granitic dykes. The larger and stronger appearing ones strike about N 30 W while the smaller ones have a strike of about N 45 E. Frequently the greenstones in the vicinity of these dykes have been rendered schistose,- this condition is particularly noticable near the summit of Mt. Dolly, the highest point of which reaches to an elevation of 5425 feet (Ameroid) above sea level. The dykes represent the later phases of intrusive activity and characterize many of the contact zones throughout the district. There is abundant evidence that erosion has been very extensive. Certainly some, probably many, thousands of feet of the original surface have been eroded since the ore bodies were formed in Jurassic times.

DESCRIPTION OF ORE CROPPINGS:

It is convenient for purposes of explanation and description to consider the ore croppings under six headings:

1. Ore croppings following the line of contact between the granodiorite and the Greenstone on Rayview No. 1 and Rayview No. 2 claims.

2. Ore croppings of a vein more or less parallel to the above Mentioned contact line and some 500 feet, more or less, to the North,- on Bayview No. 1 and Bayview No. 2 claims.

3. Ore croppings on Bayview No. 2 claim at a mean ancroid elevation of 4230 feet above sea level, as disclosed in a closely-bunched group of open cuts.

4. Ore croppings on Bayview No. 2 claim at aneroid elevation of 4530 feet above sea level as disclosed in a flat-dipping vein from which a small shipment of ore was made during the closing days of August, 1925.

5. Ore croppings as exposed by open cuts on a vein mear the North East side line of the Lucille No. 1 claim at elevations of from 2700 to 2780 feet above sea level.

6. Ore croppings as exposed by open cuts on a vein situated on the Lucille No. 1 claim about 200 feet, more or less, West of No. 5.

(1) Closely following the contact line between the granodiorite and the granatone some exidized sulphide croppings were observed. A small amount of open cut and stripping work has been done in several places. There has not been sufficient work effected, however, either to demonstrate conclusively vein continuity or to permit proper sampling.

The Surface shows rather extensive though somewhat bunchy exidation in the greenstone near the contact over most of the distance that the contact was examined.

A Tunnel has been commenced to cut this contact zone. The Zone was passed near the portal though no ore was found.

Two samples were taken, one from each end of an open cut at elevations of 3640 and 3650 feet. These samples gave the following assay results:



- 7 -

The minerals noted were principally galena, pyrite and pyrrhotite in a quartz gangue.

Open cut and stripping work on this vein does not extend much to the West of the line of the tunnel and the contact was not examined a great deal farther on account of the precipitous nature of the ground.

(2) At a distance of 500 feet, more or less, from the contact between the granodiorite and the greenstone and striking nearly parallel to it, is a well-defined vein which has been opened up by a series of open cuts over a total length of about 240 feet. The vein can definitely be traced an additional distance of about 150 feet and it possibly extends well over on the Lucille claim. The open cuts are on and near the South East side line of the Bayview No. 2 claim. It was impossible to trace this vein far over on the Lucille claim because of the precipitous nature of the ground. The Western extension of this vein can be traced some little distance past the open cut work to the bottom of a talus-strewn draw. The next open cut work to the West, on the same general line of strike, however, seems to expose quite a different set of conditions.

This vein constitutes a most important showing. A small amount of ore has been sacked and shipped from the several cuts. A grab sample from 100 sacks of this sacked ore assayed as follows:

Oz. Au. 1.40 Oz. Ag. 76.50 Pb. 16.55% Zn. 18.21%

Definite linear continuity is demonstrated on this vein over a distance of about 400 feet and there is a probability that prospecting work will reveal a considerably greater length.

Vertical continuity is observed throughout a range of elevation of about 100 fest. If this vein extends to the Lucille claim, as is suspected, the range of vertical elevation will be between 500 and 1000 fest.

In all, 10 samples were taken from the series of open cuts on this vein. The approximate locations of these samples are indicated on the accompanying map of the Bayview No. 1 and Bayview No. 2 claims. These samples assayed as follows:

No .	<u>Elevation</u>	Width	Oz .Au .	OB.Ag.	<u>% pb</u> .	<u>× 2n</u> .
3	4055*	12"	0.04	12.5	3.6	8.5
4	4060	14"	0.01	2.5		and also also
5	4080'	15"	0.04	18.4	4.0	
6	4085'	13 ⁿ	0.04	15.5	5.3	-

* 🖏 *

No .	Elevation	<u>width</u>	Oz.Au.	OB.Ag.	ZPb.	<u>%2n</u> .
*7	40851	36 ⁴	0.04	41.5	9.0	9.1
8	4085	St	0.08	205.0	52.1	with the state
9	4095	6 ^W	0.02	24.6	5.3	11.9
10	4100	181	0.02	24.8	4.5	
11	4100'	22"	0.03	14.0	3.9	18.2
12	4110'	12"	0.005	26.8	5.1	4.0

The principal minerals noted in these open cuts are,galena and sphalerite,- of lesser importance are pyrite, pyrrhotite and chalcopyrite,- occasionally small amounts of grey copper and ruby silver are seen. The sulphides mostly occur in banded structure in the greenstone,- there is a very small amount of quarts and when this mineral does occur it is in marrow widths and is frequently speckled with ruby silver.

Eany of the cuts do not permit of full-width sampling. Sampling could not be done to advantage at regular intervals over the whole length of the vein exposed. There are high-grade patches of ore separated by distinctly low-grade zones. The assay results indicate the probability of a mill-grade ore sheet with intermittent high-grade possibilities.

(3). In the same general line of strike as the vein just described and farther to the West, - situated entirely on the Bayview No. 2 claim, - a cut on the summit of a steep bluff discloses a vein dipping about 47 degrees to the South West or towards the granodiorite contact. In the vicinity of this exposure there are several other open cuts and strippings all of which expose ore. A confusion of dips and strikes were observed which probably apply only bocally. Sufficient work has not yet been done to determine the importance of this occurrence. These croppings and cuts extend over an area of about 75 feet square. Six samples were taken from this area - their approximate locations being indicated on the accompanying map of Bayview No. 1 and Bayview No. 2 claims. These samples assayed as follows:

No.	Elevation	<u>Width</u>	<u>Oz.Au</u> .	<u>Or.Ac</u> .	%Pb.	<u> %2n.</u>
13	4385	18"	0.40	94.2	4.1	8.3
14	4386	18"	0.36	81.8	with state state	2.0
15	4450*	24"	0.30	141.2	8.4	3.0
16	4450*	16"	0.01	2.0		र्षक संग संग
17	44501	16"	0.01	36.2	4.4	12.7
18	4450*	48"	0.02	142.6	20.3	13.7

The minerals noted are similar to those described in connection with the East and West vein described under heading (2). The ore types, also, are similar and both croppings are characterized by the rather sparse amount of quartz in the gangue. (4). Nearly 300 feet to the North of the area just described and likewise on Bayview No. 2 claim,- and at an elevation of about 4530 feet above sea level, is a vein striking in a North Hasterly direction and dipping at an angle of about 20 degrees to the South Hast, or with the slope of the Mountain. The slope of the mountain at this place is considerably steeper than 20 degrees and unless the vein rolls to assume a steeper dip farther down the slopes, the entire lower part of the vein below the exposure has undoubtedly been removed by erosion. The vein is not exposed above this open cut but it possibly exists for some distance farther up the mountain.

The cut on the vein is about 50 feet in length. At the North East end the vein narrows down to an insignificant width,it has not yet been traced farther to the North East. The central portion of the cut shows massive lead and zinc sulphides about two feet in thickness with an additional width of about two feet of quartz and more disseminated sulphide mineralization underlaying the heavier sulphide portion. The crystallization is very coarse and the sulphides assay high in silver. The vein has not yet been opened up or traced much beyond the South West end of the open cut.

Ore was being sacked for shipment from this open cut during the latter days of August, 1925. Two grab samples from the tops of the ore filled sacks assayed as follows:

30 sacks	Oz.	A12 .	0.80	Oz.Ag.	204.1	2Pb.	21.5
100 *		目	1.00	11	224.5	**	22.1

Three samples taken from this open cut assayed as follows:

No.	Elevation	<u>Width</u>	<u>Oz.Au.</u>	OE.Ag.	<u>% Pb.</u>	🔬 Zn.
19 20 21	4530 ¹ 4530 ¹ 4530 ¹	24" 24"	0.02 0.05 0.02	224.5 253.2	16.8 20.3	14.7

The principal minerals noted are galena and sphalerite,a number of other ore minerals are also present in minor amounts. Sufficient work has not yet been done to determine the full significance of this showing.

(5). Situated on the Lucille claim near the North Hast side line and striking in a direction nearly due North West is a vein on which a considerable amount of open cut work has been effected. A tunnel has been commenced near a creek bottom at an elevation of about 2700 feet to cut this vein but, apparently, it has not been advanced far enough to encounter the vein. The vein can be traced a distance of about 150 feet and through a range of vertical elevation of about 80 feet. It is open-cut over a distance of about 70 feet. It dips to the South West at an angle of between 65 and 75 degrees. It cannot be found South of the contact between the granodiorite and the greenstone and it likely ceases at or near the contact. In the North Westerly direction it is probable that it extends for some considerable distance. Overburden has prevented its being traced readily. Some exidized croppings are revealed in a trench about 100 feet farther up the hill.

Ten samples were taken from the cuts on this vein. In most cases the full width was not available for sampling. These samples assayed as follows:

No.	Elevation	Width	Oz.Au.	Oz.Ag.	SPb.	<u>%2n.</u>
22	2755'	18 ⁿ	0.35	102.0	57.0	8.6
23	2745	38#	0.01	9.2	0.6	5.5
24	2750'	30"	0.08	57.0	28.6	3.8
25	2765*	28"	0.02	60.5	32.3	9.5
26	2755'	34 ¹¹	0.02	47.0	32.6	22.2
27	2766'	15"	0.04	14.5	21.4	11.1
28	2765	12"	0.04	29.4	25.9	14.5
29	2760'	48 ⁿ	0.02	6.4	2.3	4.7
30	2765'	8"	0.01	17.5	7.2	84.2
31	2770'	24**	0.06	16.0	2.4	10.3

The principal minerals noted are galena and sphalerite. There is only a small amount of quarts gangue and the croppings have been heavily oxidized.

(6). Some 200 feet, more or less, from the vein described under heading (5) and striking about N 20 W and dipping from 65 to 75 degrees to the South West is another vein. This vein has also been opened up at intervals by stripping and open cuts. A tunnel has been commenced at an elevation of about 2965 feet to cut this vein. The tunnel appears to have been turned to the right before the main vein was encountered,- It is crooked and does not crosscut the vein so that full-width sampling could not be done.

The vein can be traced a distance of about 400 feet and throughout a range of vertical elevation of about 200 feet. It is probable that it extends South West to the granodiorite contact and North West up along the side of the mountain for a considerable distance past the highest open-cut work.

At an elevation of about 3060 feet above sea level a branch vein, striking about N. 40 W. intersects with the main vein. There is also the suggestion that there may be other veins in the vicinity which have not yet been opened up. Development effected to date is far from being complete enough to determine the full importance of this area. Six samples were taken from the main vein. Only at one place, (the open cut in the creek bottom), could full-width sampling be done. These samples assayed as follows:

No.	Elevation	Width	Oz.Au.	OE .Ag .	%Pb.	2 2n.
32 33 34 35 36 37	3065 3066 3080 3125 3135 3155	58" 12" 10" 10" 6"	0.04 0.12 800.84 Tr 0.06 0.36	11.8 70.0 800.1 3.5 11.5 49.6	1.0 25.6 29.6 0.3 1.6 3.6	0.9 14.1 5.4 0.7 0.3 0.5

The principal minerals noted are galena and sphalerite. There is a small amount of quartz gangue.

DISCUSSION:

It is very unlikely that any commercial ore of mining dimensions will be found in the granodiorite. All that area situated to the South of the main line of contact is valuable only for its timber, its camp and mining plant sites, its right-of-way possibilities for trails and tramways and other incidental reasons. That area North of the contact is as yet not fully prospected and it is not at all unlikely that other veins will be found.

On the Bayview No. 1 and Bayview No. 2 claims there appears to be some slight possibility of finding small shoots of commercial ore along the contact of the granodiorite with the greenstone though there is no certainty of this. At the present time this contact area is regarded as territory possessing slight possibilities it may enclose a few small shoots of commercial milling-grade ore.

The vein which is more or less parallel to the contact and situated about 500 feet to the North of it, on Bayview No. 1 and Bayview No. 2 claims constitutes an important showing. It has favourable possibilities. It has been opened up to a very limited extent over a total length of about 240 feet and ore continuity persists for this distance. The ore exposed is millinggrade rather than high-grade though high-grade patches occasionally occur. Sufficient work has not yet been done to permit of a conclusive statement concerning the possibilities of this vein.

Lacking underground development, opinion concerning this ore occurrence can be based only on geological evidence. The vein has important linear and vertical continuity. The type of mineralization indicates fairly deep-seated deposition - erosion has planed off the original upper portions of the vein. However there seems to be no reason why the vein should not continue ore-bearing to reasonable mining depths. Concerning the erratic-appearing surface showings on the Bayview No. 2 claim and described under the foregoing No. (3) heading, but little more need be said. The ore types exposed are similar to those in the Bast and West vein described in the prargraphs immediately preceeding. Certainly the vicinity of these several croppings warrants thorough exploration.

The flat-dipping vein on the Bayview No. 2 claim at an elevation of 4530 feet cannot definitely be depended upon for any important tonnage of ore. The length of ore shoot as yet disclosed is short and the entire vein below the open cut appears to have been torn away by erosion. If this is really the case the section of the vein still remaining can, at best, extend only a comparatively short distance up the mountain. It is possible that beneath this "Blanket Vein" there may be other flat-dipping veins which are deep enough not to have been affected by erosion.

Concerning the veins North of the contact on the Lucille No. 1 claim sufficient has already been mentioned to indicate that these are very promising. The work effected to date on these two veins is very limited but the results indicated certainly warrants thorough exploration of the whole area in this vicinity. It is ouite possible that there are other veins near by which have not yet been discovered.

The strike of the two veins is nearly at right angles to the contact between the granodiorite and the greenstone and the dip is to the South West. It is very unlikely that they will continue to the South East past the contact some and accordingly the lowest mine openings must be made somewhere close to the contact and at an elevation of about 2700 feet above sea level.

Since the granodiorite presumably dips to the North under the greenstone, veins in this area should attain greater and greater depths as Northerly distance is gained. In other words, if a tunnel were commenced at the contact and exact bottom of one of these veins and were driven North Westerly on the vein, the contact between the granodiorite and the greenstone and presumably also the bottom of the vein, will be deeper and deeper below the tunnel face as North Westerly progress is made.

There are other promising areas North of the contact zone which have not yet been prospected. Tacoma, Kent, K. P. No. 1, and Beth claims all have possibilities and certainly the chances of finding other veins on Bayview No. 1, Bayview No. 2 and Lucille No. 1 claims are still far from being exhausted. The Bayview property is a prospect and exploration work is still far from being complete. No real mine development work has yet been attempted. There are, of course, no clearly ore reserves though certainly some ore could be shipped shortly after mining operations should have commenced. No prediction can be made concerning the amount and grade of ore that might be mined and shipped while driving tunnels on the two Lucille veins.

FURTHER DISCUSSION WITH CONCLUSIONS:

Bayview is not accessible to ordinary transportations. It cannot be reached by a wagon road and while the trail could be very much improved at rather heavy cost, such improvement would not necessarily result im much lower transportation costs than obtain at the present time. The property, to be operated economically, must be made accessible by a tramway.

Assuming that a light transvay could be constructed at a cost of \$12,000.00,-that pack horse freighting on the present trail costs \$60,00 per ton,- and that freighting costs, mine to wharf or wharf to mine, after the construction of the transvay is \$4,00 per ton,- it would require the moving of only about 225 tons of freight to justify the installation of this transvay.

If any adequate development campaign is decided upon, more than 225 tons of freight will have to be moved in to the property. It is also quite probable that much more than 225 tons of ore could be mined and shipped almost from the surface.

Again, assuming that a tranway has been installed, and that an adequate development campaign has been decided upon,- it would be economical to install an oil engine-compressor unit. I would suggest that at least a two-drill and preferably a three-drill equipment. This equipment could be transported to the property at minimum freighting expense over the tranway.

To fully equip and prepare for serious small-scale mining operations, the following capital units would be required: -1. A tramway with terminals. 2. Compressor, rock-drill, and steel-sharpening equipment. 3. Engine room and blacksmith's shop. 4. Small house at lower tram terminal. 5. Two or three additional camp buildings. The aggregate amount of capital necessart for the purpose of thus fully equipping the property would depend, to a large extent, on the type of equipment decided upon. A reasonable figure would be \$30,000.00.

The logical place at which to commence development operations is on the two Lucille veins where tunnels have already been faced off and driven short distances. It happens, however, that the entire Northern and Eastern portions of the claim are practically inaccessible during the winter on account of snow slides. The camp site on the Zeal claim is safely situated in the timbered area, - it is about 2000 feet distant from the two veins. - 14 -

In order to have access to the mine workings throughout the year it is apparent that considerable expense must be occasioned. Data is not available concerning just where the main mine entry should be commenced. To determine the best possible site surveys are desirable and more particularly the mountain slope should be thoroughly cruised and careful snow-slidemobservations made during at least a part of the coming winter.

On the location of the tunnel portal must depend the location of the upper tramway terminal. At the moment there seems to be no way of avoiding a 500 to 700 foot crosscut tunnel through the granodiorite to assure safe winter working conditions. It is possible that a tunnel site location may be found which will permit reaching the veins with a much shorter crosscut. Possibly, too, snow sheds may be used to some advantage to shorten the total length of crosscut necessary. Certainly the danger from snow slides during the winter, complicates the problem of getting development operations under way.

Bayview is a very promising prospect. Not only are its known ore exposures of good extent and grade but there are promising possibilities in the still-unprospected areas. It is my opinion that the property warrants the expenditure of a reasonable amount of capital in order to further explore and develop it.

RECOMMENDATIONS:

Opinions will doubtless differ as to the proper methods of undertaking the development of the property in such a manner as to get the maximum results in the shortest time, with consequent cheapest costs. The precise operating programme must depend, to a large extent, on the amount of capital that can be made available for the purpose. Certainly the cheapest means of effecting the development is to first install the necessary equipment as mentioned in preceeding paragraphs. To carry out this plan of operations at least \$75,000.00 and preferably \$100,000.00 should be available. It would be particularly desirable if this amount of operating capital could be obtained without increasing the capitalization of the Company.

To determine the proper place for tramway, tunnel and mine equipment the mountain side should be cruised very thoroughly and the snow slide conditions determined as well as possible. This information properly compiled and supplemented by some survey work, would furnish the data from which an operating programme could be decided upon. The only other means of procedure would seem to be to continue to develop the Lucille veins by employing hand-drilling operations during about six months of the year. If this method were decided upon I would not recommend the immediate construction of a tramway since the only mining excuse for hand-drilling operations is to more fully develop the known veins before comitting the Company to the heavier capital expense, if these earlier operations prove satisfactory. Incidentally this point metric some serious consideration. Hand-drilling operations, however, are very slow and unit costs because of added overhead are high and decisive results are very slow of attainment.

Stewart, B. C. September 15th, 1925. B. W. W. McDougall.

Mining Engineer.

SCHEDULE OF ASSAYS.

No.	Elev.	Claim	width	Oz.Au.	OZ .AE .	SPD.	g Zn.
1	3640*	Bayview No.1	18"	0.01	2.5		
2	3650'	do	26"	0.44	8.8	ware the pile day	and any other lines
5	4055	do	12"	0.04	12.5	3.6	8.5
4	4060	do	14"	0.01	2.5	-	una uph data tela
5	4080'	do	15"	0.04	18.4	4.0	an air an
6	4085	do	13"	0.04	15.6	3.3	****
7	4085	do	36"	0.04	41.5	9.0	9.1
8	4085	do	3"	0.08	205.0	52.1	
9	4095	Bayview No.2	5"	0.02	24.6	5.3	11.9
10	4100	do	18,	0.02	24.8	4.5	-
11	4100	do	22"	0.03	14.0	3.9	15.2
12	4110	do	12"	0.005	26.5	5.1	4.0
13	4385	đo	12"	0.40	94.2	4.1	8.3
14	4385	do	18"	0.36	81.8	5.6	2.0
15	4450	do	24"	0.30	141.2	8.4	3.0
16	4450	do .	16"	0.01	2.0		
17	4450	do	16"	0.01	36.2	4.4	12.7
18	4450	do	48"	0.02	142.6	20.3	13.7
19	4530	do	24"	0.02	224.5	16.6	14.7
20	4530	do	24"	0.06	253.2	20.3	20.2
21	4530	do	6 ⁿ	0.02	111.0	14.5	87.7
22	2756'	Lucille No.1	18"	0.35	102.0	57.0	8.6
23	2745	do	38"	0.01	9.2	0.6	5.5
24	2750	do	30*	0.08	57.0	28.8	3.8
25	2766	do	28"	0.02	60.5	32.3	9.5
26	2755	do	34"	0.02	47.0	32.6	22.2
27	2755	do	15"	0.04	14.5	21.4	11.1
28	2765	do	12 ⁿ	0.04	29.4	25.9	14.5
29	2760	do	48 [#]	0.02	6.4	2.3	4.7
30	2765	do	8"	0.01	17.5	7.1	24.2
31	2770	do	24 ¹¹	0.06	16.0	2.4	10.3
32	3065	do	6 8 "	0.04	11.8	1.0	0.9
33	3065	đo	12"	0.12	70.0	25.6	14.1
34	3080	ão	10"	0.84	800.1	29.6	5.4
35	3125	do	10"	Tr	3.5	0.3	0.7
36	3135	do	10"	0.06	11.5	1.6	0.3
37	3155	do	6"	0.36	49.6	3.6	0.5
38	2965'	đo	6"	0.08	8.2	0.7	0.7
39	2965	do	8"	0.02	0.6	1.7	0.2

Assays by Geo. H. Shepherd, Provincial Assayer, Stewart, B. C.