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REPORT
ON
SILVER QUEEN GROUP
KAMLOOPS MINING DIVISION
BRITISH COLUMBIA

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PROPERTY FILE
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LOCATION MAPS

The first map following shows the location of SILVER QUEEN relative to Vancouver and other points. By Trans-Canada Highway the distance, Vancouver to Lytton, is 166 miles. The railway distance by both railways is just under 160 miles. The second map shows the immediate area in detail. An air photo and map of the claims will be found in the pocket.

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R E P O R T

O N

SILVER QUEEN PROPERTY

Kamloops Mining Division
British Columbia

Summary and Conclusions

The Silver Queen Property consists of eighteen Crown Granted mineral claims situated approximately twenty-five miles north-west of Lytton, B.C. It is owned by Mr. J.G. Campbell and Associates of Vancouver.

The principal showings occur at elevations of 5500 to 5700 feet, and tunnel sites are available at lower elevations. The showings consist of several fissure veins containing values in gold, silver, lead and zinc. These are located in a complex of rhyolite and acid porphyry which may be an embayment in, or a zone cutting through the granodiorite. The exposures are found in two creek beds approximately 3000 feet apart, and although the dip at surface in the exposures in each creek does not altogether conform, the showings are approximately on strike, giving the impression of structural persistence for this distance and beyond. The elevation of the divide between the creeks is approximately 6000 feet.

The veins vary in width from 1.0 feet to 5.25 feet and generally strike N 60° - 70° E. Those in the east creek dip 50° - 60° with the hill to the north, and the principal showing in

the west creek dips 75° - 80° into the hill to the south.

This variance in dip may be due to surface influence.

In two instances, one in each creek, sufficient depth has been reached to give significant samples and these suggest a per ton mined ore value of 0.08 oz. Au, 25 oz. Ag, 4 % Pb, and 5 % Zn.

In other instances values are lower but in some of these the zone of surface influence has not been completely penetrated, and samples from these locations, though encouraging, only establish the desirability of further work.

The exposures described in this report result from a limited amount of surface work only. Overburden is perhaps 10 - 12 feet deep and even in the two creeks conditions are such that additional veins could easily have been missed.

The general picture is one of a raw but attractive prospect, in a virgin area, indicating a good possibility of developing sufficient ore for a profitable operation and therefore justifying an intensive initial exploration program.

Location and Access

The property is located 25 miles north-west of Lytton, B.C. a town located on the Fraser River at its junction with the Thompson, and served by the Canadian Pacific and Canadian National Railways, and by the Trans-Canada Highway.

The property is reached by four miles of road from Lytton, followed by twenty-one miles of pack trail from the Fraser

River west fifteen miles up the Stein River to Cottonwood Creek, and thence six miles up Cottonwood Creek to the property. A road would generally follow the trail. Its proposed location and construction details are shown on the aerial photograph in the pocket. A first class mining road is estimated to cost about \$200,000.

There is a substantial stand of timber in the upper reaches of the Stein Valley. This timber is now held by the Crown. Three applications for Forest Management licences in this area have been made to the provincial government. Thus with this interest in the timber, there is, in addition to the usual government assistance, the possibility of having the timber bear part of the cost of this road construction.

Timber

There is adequate timber, chiefly balsam and spruce, on the property for mining purposes, and ample pine and fir easily accessible for other purposes.

Power

There is an adequate hydro power site on the Cottonwood about a mile above its junction with the Stein and about six miles from the property.

Water

Gravity water supply is ample for all purposes.

Freight Rates

The C.P.R. freight rate on concentrates from Lytton to Tadanac (Trail smelter), via Spences Bridge, is \$15.20 per ton on concentrates having a value of \$100.00 or less, and increasing by 20 % of the base charge for each \$50.00 increase in value.

The property is on the west side of the Fraser River, and the C.P.R. tracks are on the east side. This means crossing the river by Public Works Department ferry, and during certain seasons this is complicated by floating ice or by high water, and means delay. This problem however is not serious.

Alternatively, but at slightly higher rates, concentrates could be loaded on the C.N.R. on the west bank of the river for shipment via Hope. The published base rate on this route is \$20.44 per ton, with a lower rate of \$17.40 which may be applied for.

Climate

The climate in the area is moderate. At Lytton, elevation 700 feet, the records show a mean January temperature of 27°, a winter low of 10° and a summer high of 97°. Precipitation average for 24 years is 16.73 inches. At the mine camp, which would be about 4500 feet, precipitation is shown on the government map at 45 inches. Both winter and summer temperatures would be somewhat lower than at Lytton.

First snow may be expected at the property any time between October 15th and November 30th and ground in the open would be generally free of snow by May 15th. In sheltered areas snow would be in evidence until July 1st.

General Geology

The veins occur in rhyolite and in altered quartz diorite, probably a border phase of the coast intrusives. The relation between the rhyolite and the quartz diorite is not clear. Thin sections have been made of both rocks and one geologist calls the rhyolite an arkose but there is not unanimity of opinion.

The principal sulphides are sphalerite, galena, pyrite and minor chalcopyrite, and values are in gold, silver, lead and zinc. The relationship between the gold and silver and the sulphide minerals is not clear.

The following spectrographic analysis was made of a composite of the principal samples taken.

Spectrographic Analysis

<u>Composite of sample nos. 0131-0147 incl.</u>	<u>Approximate Quantity</u>
Silicon	Major Constituent
Lead)	Intermediate Constituents
Iron)	
Zinc)	
Aluminum)	
Potassium.....	1 %
Sodium.....	0.1 %
Manganese.....	0.1 %
Calcium.....	0.1 %
Titanium.....	0.05 %
Copper.....	0.05 %
Barium.....	0.05 %
Magnesium.....	0.05 %
Boron.....	0.001 %
Gallium.....	0.001 %
Strontium.....	0.001 %
Chromium.....	0.001 %
Silver.....	Present

Description of Showings

Each of the showings is designated by a red letter either on the claim map in the pocket or on the map following this page. A description of each of these follows:

- A. This pit is completely caved. The prospector who located the claims states that he exposed a vein at this point.
- B. This is the principal showing on the east creek. The structure is strong and walls appear to be good. The strike is N 60° E and the dip about 50°N, with the hill. The mineralized exposure here is 5.25 feet wide, normal to the dip. On the footwall side is a band of heavy sulphides which are 9 inches to over a foot in width. The balance of the exposure is altered porphyry with sulphide mineralization disseminated throughout.

Samples 1190 and 1191 were taken July 30, 1951, and in this instance the hanging wall sample avoided galena and sphalerite in order to check for silver values other than in direct association with those minerals.

Subsequently, in October, 1951, samples 0144 and 0145 were taken four feet above the floor of the cut, and 0146 and 0147 one foot above the floor of the cut.

The results of all of these samples follow.

<u>Sample No.</u>	<u>Location</u>	<u>Width in inches</u>	<u>Au ozs.</u>	<u>Ag ozs.</u>	<u>Pb %</u>	<u>Zn %</u>
1190	F.W.	21"	0.14	42.0	8.8	14.6
1191	H.W.	51"	0.02	7.6	tr	tr
	Average	72"	0.06	19.2	2.9	4.9
0144	F.W.	21"	0.16	32.0	8.3	15.5
0145	H.W.	42"	0.04	16.5	2.0	2.7
	Average	63"	0.08	21.7	4.1	6.9
0146	F.W.	21"	0.16	46.6	3.2	8.9
0147	H.W.	42"	0.08	49.0	3.0	3.0
	Average	63"	0.10	48.2	3.1	4.9
	Average 0144-0147	63"	0.09	54.9	3.6	5.9 ←

c. This cut, though down to the level of the creek, is not yet into fresh material. There is, however, definite evidence of vein structure and for several feet along the floor of the cut there is a band of heavy sulphides up to a foot in width. This is presumably an extension of the sulphide band in cut B

Sample 0131 taken from the floor of the cut at the face is of siliceous rock containing galena. It shows the indefinite vein structure 18 inches wide. Sample 0132, also from the floor of the cut six feet back from the face is from the band of sulphides, at this point six inches wide.

<u>Sample No.</u>	<u>Width</u>	<u>Au ozs.</u>	<u>Ag ozs.</u>	<u>Pb %</u>	<u>Zn %</u>
0131	18"	0.08	18.1	12.6	2.0
0132	6"	0.08	30.3	22.2	10.4

- D. This cut shows odd patches of heavy sulphides but is very shallow and the situation is generally indefinite.
- E. A face of decomposed quartz, shot with galena and sphalerite, not yet in the solid, assayed as follows;

<u>Sample No.</u>	<u>Width</u>	<u>Au ozs.</u>	<u>Ag ozs.</u>	<u>Pb %</u>	<u>Zn %</u>
0143	2'	Tr	5.4	1.1	3.5
0148	2'	0.02	14.4	1.2	3.9

- F. This vein, 42 inches wide, striking N 65° E and dipping 45°-50° N is exposed in the bottom of the creek. Sample 0140 is across the full width of the vein in the creek. Sample 0141 is from the H.W. side at a point where the balance of the vein is under water. Sample 0142 is of loose pieces only, taken from a shallow surface cut upstream where there are indications of the extension of the vein.

<u>Sample No.</u>	<u>Width</u>	<u>Au ozs.</u>	<u>Ag ozs.</u>	<u>Pb %</u>	<u>Zn %</u>
0140	42"	Tr	2.5	0.6	3.0
0141	12"	0.04	4.4	Tr	4.9
0142	Specimens	0.03	1.4	2.9	1.3

- G. A piece of heavily pyritized rock in the creek at this point may be either a vein or float. It was blasted and sampled with these results;

<u>Sample No.</u>	<u>Au ozs.</u>	<u>Ag ozs.</u>	<u>Pb %</u>	<u>Zn %</u>
0139	0.08	2.1	0.2	0.1

H. There is a ten to twelve foot mass of gossan at this location in which two shallow pits have been dug. In one of these there is evidence of vein material over a few inches. The showing is located on a steep hillside and could easily be opened up further. A sample of this vein material assayed as follows:

Sample No.	Au OZS.	Ag OZS.	Pb %	Zn %
0138	0.04	20.0	1.6	Tr

I. There is very little work at this point but grey decomposed rock gives evidence suggesting a vein conforming with that at 'J' lower down the west creek. Well mineralized siliceous material can be picked out and a sample of these pieces assayed as follows:

Sample No.	Au OZS.	Ag OZS.	Pb %	Zn %
0133	0.04	18.5	10.3	11.3

J. This is the principal showing on the west creek. Here the vein is exposed for thirty feet along its strike, and is structurally strong. The strike is N 60° E and dip 72°-80° S. This showing is illustrated in some detail on the map following page 5. The east face consists of a three to five inch band of heavy sulphides (samples 0134 and 0149) on the south or H.W. side and two feet of decomposed material on the footwall side (samples 0135 and 0150). This decomposed material is largely siliceous and contains streaks or seams of sulphides.

Eleven feet west of this face, and at creek level, the vein is exposed and shows a width of thirty inches. Of this, sample 0136 covers 24 inches on the hanging wall side. This part is heavily mineralized but the balance of the vein, under water, appeared to be less well mineralized. Sample No. 1193 was taken from this section in July when the water in the creek was higher, and is therefore over a narrower width. At the west face, nineteen feet further west, the vein is twelve inches wide with very massive sulphides over the seven inches on the footwall side. This is covered by sample No. 0137. Details of these samples follow:

Sample No.	Location	Width	Au ozs.	Ag ozs.	Pb %	Zn %
0134	H.W.	3"	2.58	46.0	8.9	27.5
0135	F.W.	24"	0.36	84.5	2.8	4.2
0149	H.W.	3"	0.40	99.1	8.7	20.0
0150	F.W.	24"	0.24	33.6	1.1	1.8
Average of east face, cutting Au in 0134 to 0.40 oz. 27"			0.31	60.4	2.6	5.2
0136		24"	0.08	16.7	9.9	12.5
1193		15"	0.04	16.6	7.7	11.9
0137		12"	0.08	37.6	13.9	10.2
The average of samples 0134-0137 and 0149-0150 based on a three foot mining width is			0.11	23.0	4.3	5.2

Profit Possibilities

With the limited amount of development work done and with no measurable ore reserves, any profit estimates must be of a purely hypothetical nature. The table of figures on page 11

is, therefore, set out as an indication only of what may result from successful development work. These figures are based on the samples taken from the two main showings in the primary ore, on the current smelter schedules of the Consolidated Mining and Smelting Company and on the following assumptions;

- a. Daily tonnage mined and treated of 150 tons.
- b. Operating costs of \$13.00 per ton mined.
- c. Concentrating ratio of 6 to 1, and separate lead and zinc concentrates.
- d. A 95% overall recovery with the lead concentrate containing 82% of the recovered gold and silver, 93% of the lead and 10% of the Zinc.

	<u>% Mill Recovery</u>	<u>% Paid for by Smelter</u>	<u>% in conc.</u>	<u>Original content oz. or lbs.</u>	<u>Price Paid</u>	<u>Gross Smelter Return</u>
<u>Pb Conc.</u>						
Au	95	97.5	82	0.08	35.00-1.25	\$ 2.05
Ag	95	95	82	25	0.80	14.80
Pb	95	92.5	93	80	14-2.5	7.50
Zn	95	50	10	100	13-6	.33
<u>Zn Conc.</u>						
Au	95	80	18	0.08	35.00-1.25	.37
Ag	95	80	18	25	0.80	.27
Pb	95	80	7	80	14-4.75	.39
Zn	95	83	90	100	13-3.5	<u>6.75</u>
						\$32.46

Freight on \$300 concentrate	\$27.36	
Haulage from mine to Lytton	8.00	
Base smelter charges	<u>13.00</u>	
	\$48.36 or	
	\$ 8.06 per original ton	
Operating and general costs	<u>13.00</u>	<u>21.06</u>
Operating profit		<u>\$11.40</u>

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Initial Development Work

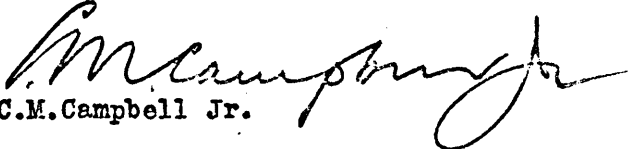
Several of the showings require further opening up on surface and, if this work is successful, these, as well as the two principal showings already opened up, should be extended by drifting and diamond drilling.

The deposit is admirably situated for diamond drilling, and necessary equipment for this work could be brought in by pack horse or possibly by helicopter from Lytton.

Preliminary drifting may be carried out by hand steel methods or alternatively small compressors and light drilling equipment could be taken in by helicopter and the operation effectively serviced by pack train.

It would thus be possible to do sufficient preliminary work reasonably quickly on which a decision for major expenditure could be made.

The necessary camp for this work could be established without difficulty.


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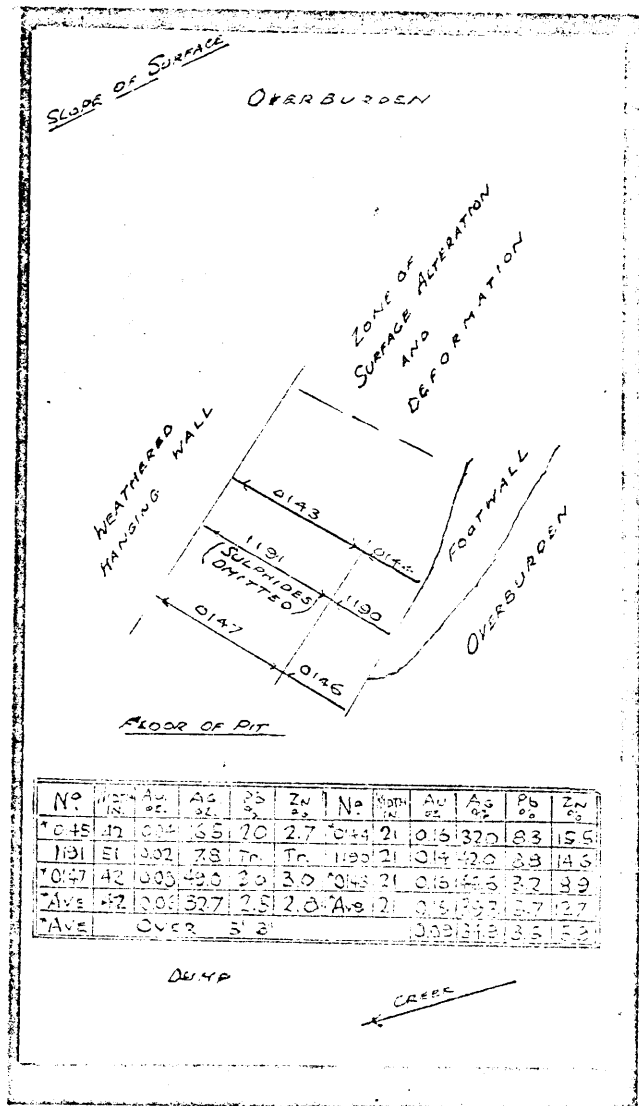
December 19, 1952.

MAIN VEIN

Branch creeks are shaply V-shaped and veins are found by following up the creeks. This showing, marked "B" on the map, is on East creek and the vein is exposed in the bank. As a result of weathering the upper walls have started to close in and the vein peters out at a point about ten feet below the surface. The lower part of the vein is unaltered and does not vary in width as far as followed.

This is the only place where the vein has been opened up to any depth and, if this is a pattern, the other showings, essentially outcrop showings, are likely to improve when the normal zone is reached. The grade of this showing is marked on the descriptive leaf attached.

On the other side of this creek, 45 feet distant, this vein also appears but only the surface zone has been reached. It does, however, show vein structure ("C", p.7) and from good to high-grade ore.



No.	Wt. %	Au	Ag	Pb	Zn	No.	Wt. %	Au	Ag	Pb	Zn
		oz.	oz.	oz.	oz.			oz.	oz.	oz.	oz.
0145	47	0.04	35	70	2.7	0142	21	0.15	320	83	15.5
1131	51	0.02	73	70	1.0	1130	21	0.14	220	88	14.6
0147	42	0.03	490	20	3.0	0146	21	0.15	55	32	3.9
Ave	42	0.03	327	25	2.0	Ave	21	0.15	257	2.7	2.7
Ave		Over	5	2				0.03	313	3.5	5.3

VIEW OVERLOOKING STEIN RIVER

This is a view from the upper part of the trail to the mine overlooking the Stein River valley and it gives a general idea of the topography.

THE MEADOW ON "FALL FRACTION" CLAIM

This meadow, with accompanying small lake, is about 300 ft. by 500 ft. in size and is conveniently located at elevation 5800 feet above sea level. It provides feed for horses and a landing place for a helicopter. There is a good camp site and it is on the route from East Creek, past the "H" showing, to the West creek showings.

BRIDGE OVER STEIN RIVER

This is the pack trail crossing of the Stein River and the bridge is above high water. With abutments the length of a road bridge nearby would be from 125 feet to 150 feet.

THE STEIN RIVER

This is a low-water view taken from a point in the canyon on the Stein River. The road would follow the river bank on the left of the photo and some rock work shows in the centre. There is additional rock work below for 200 to 300 feet.

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SEVENTH MERIDIAN

R. 30

R. 29

R. 28

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