Reco from Ron Bilguist Kabrishids June 1986

# NANAIMO RIVER

# VANCOUVER ISLAND

#### FORWARD:

Mr. H. Bevan, Victoria, acting on behalf of the several owners, requested the writer to make an examination of the Silver Leaf, to determine what possibilities it had as a mining property. This was done on July 18 - 19, 1964, in mild but overcast, damp weather.

The writer acknowledges the generous assistance of Mr. Bevan and also of Mr. F. Wilfert, of Nanaimo, who looked after transportation and accommodation.

## INTRODUCTION:

Discovered about 1911 by the late T. Service of Lake Cowichan, this property was developed over a period of many years by him and his associates, Miller and Gore-Langton. Present ownership rests with the heirs of these men.

Numerous examinations have been made of the Silver Leaf, by both government and private engineers. The reader is referred to the list of References appended, to which the writer has access. Other reports exist but have not been seen by him.

Present holdings consist of three crown grant mineral claims, listed below:

Silver Leaf	-	Lot 29G
Mountain Ash	-	Lot 28G
Hemlock Fr.	-	Lot 30G

672895



# REFERENCES

1. Report on the Silver Leaf and Adjoining Claims in the Cowichan District, Vancouver Island, B. C.

Aug. 1923 H. G. Nichols

2. Minister of Mines Reports of B.C.

1923	P.	260
1927	<b>p</b> .	348
1928	P.	376

3. B. C. Department of Mines

Special Report - Silver Leaf 1937

4. B. C. Department of Mines

Bulletin 37 - Geology of the Cowichan Lake Area 1955 - J. T. Fyles These claims are reported to possess both surface and mineral rights. Although the timber has not yet been removed, the writer understands it has been sold to MacMillan, Bloedel and Powell River Company.

The claims are in Nanaimo Mining Division, near the headwaters of a tributary of Jump Creek, which is in turn, tributary to the the South Fork of Nanaimo River (see Map 1, opposite). They lie six miles almost due North of Youbou on Cowichan Lake but are separated from it by a rugged mountain pass (elevation 3600 ft.), about three quarters of a mile south of the showings.

Early access to the property was by an 11 mile pack trail from Youbou. Present access is by road from Nanaimo, a distance of 30 miles. Half this distance is over private roads of the MacMillan, Bloedel Company. Wheeled vehicles may be driven to within one quarter mile of the property.

In addition to the logging company, other organizations, which have interests in the area, are the E. and N. Railway, in whose land grant the claims are located and the Nanaimo Water District, which controls the watershed.

# **REGIONAL GEOLOGY:**

The claims are underlain by basaltic lava and diabase of the Franklin Creek volcanic formation, which is part of the Vancouver group of volcanics. This latter group covers large areas of Vancouver Island, right to the northern end.

- 2 -

The rocks around the property are massive, gray-green, and show little obvious structure. Minor bedded tuff bands exist within the more massive rocks. In the rugged peaks, one half mile to the West is an outcrop of granodiorite, which forms a large body, extending for some miles farther west.

The general structure of the Franklin Creek rocks is thought to be bedded, dipping gently northward.

A number of large steep faults and shear zones intersect the rocks in the vicinity of the claims. One set of faults trends northerly and the other to the east. It is with the latter set that the mineralization is associated.

# DESCRIPTION OF THE SHOWINGS:

Mineralization follows steep easterly trending shear zones, which vary in width from a few to 40 feet. It forms a fine grained dense matrix of banded sulphides in the plane of the shear. These sulphides form lenses or pods, being mixed to some extent with wall rock and gangue minerals.

Fyrrhotite and pyrite (iron sulphides) are the most abundant metallic minerals, followed by chalcopyrite (copper sulphide) and some arsenopyrite (arsenic sulphide). It is quite possible that other sulphides occur but they were not observed. Assays show that appreciable amounts of gold and silver exist in the ore, probably associated with the arsenopyrite. Gangue, or waste mineralization consists of quarts and calcite.

- 3 -

Three known mineral bearing shear zones have been found on the Silver Leaf group. The main zone has been developed by open cuts and two short adits and contains a small lens of good mineralization. The north zone, about 100 feet away and higher up the hill than the main, has narrow pods of sulphides on surface but is largely barren in the adit which follows the shear underground. One thousand feet or more to the southwest is the Mountain Ash vein, consisting of a heavily oxidized outcrop of sulphide and gangue rock in a wide shear, beneath precipitous bluffs. On the whole it appears low grade.

A brief description of each zone follows:

#### MAIN ZONE

This zone outcrops on steep slopes and in rocky bluffs on the west side of the creek, two hundred feet above the road. A section and plan (Appendices 1 and 2) illustrates its position.

No. 2 adit (elev. 2465) follows the shear for 150 feet into the mountain. Except for a twelve foot length of good sulphide ore, which commences 20 feet in from the timbered portal, the shear is largely barren. The ore forms a band about 28 inches wide, dipping 50 degrees to the south. A rough chip sample from the back assayed: gold 0.19 oz/ ton, silver 0.31 oz/ton, copper 2.0%.

No. 1 adit (elevation 2500) follows the same shear zone for 115 feet but the ore shoot is confined to the first 75 feet from the portal. Mineralization consists of sulphides in a four foot wide quartz vein, also dipping steeply to the south. At sixty feet in, a six foot deep winze (water-filled) explores the vein downward.

- 4 -

Above No. 1 adit the mineralization is exposed in a steep rocky gut for 150 feet up slope, where it disappears beneath surface mantle. Its average width is 3 feet, with lenses of calcite and wall rock between streaks of massive sulphides. This outcrop is an impressive sight.

# NORTH ZONE

No. 3 adit (elevation 2600) explores this shear for 170 feet in a west-southwest direction. In this distance sulphide mineralization is confined to a few small streaks; otherwise the shear is barren. On the surface above the adit it outcrops in a rugged box canyon, which forms a narrow gut, in the bluffs. In the 250 feet, that the writer was able to follow it, there were several small lenses of heavy sulphide. None of this compares with that of the Main Zone.

#### MOUNTAIN ASH ZONE

This shear zone is traceable in bluffs on both west and east sides of the valley where it forms steep box canyons in almost unscalable bluffs, and is about one half mile long.

The mineralized outcrop (elevation 3100) is at the head of the western box canyon and can be reached only with great difficulty. It forms a prominent rusty gossan (oxidized and brown), varying from 12 to 40 feet wide, standing almost vertical in the canyon. The chief sulphide is coarse pyrite with very minor amounts of chalcopyrite. Wide barren lenses of calcite and wall rock occur within this gossan. A picked sample of heavy sulphides assayed: Gold 0.14 oz/ton

f heavy sulphides assayed:	Gold	0.14  oz/ton
	Silver	0.28  oz/ton
•	Copper	1.6 %

- 5 -

The general appearance of the zone and its difficult location are not favorable.

A fairly new surveyor's corner post has been set 50 feet west of the creek and 250 feet upstream from the bridge. The writer suspects it represents an original corner of one of the crown grant mineral claims, to which subsequent timber lots and other claims have been tied. It is marked as follows:

> North side - SE L.61 East side - BK 987 South side - No. 16 West side - I.P.

#### **ECONOMIC CONSIDERATIONS:**

Of the three known mineral shears on the property, only the Main Zone contains any developed ore. This ore forms a small shoot plunging down to the east, much of which has been removed by natural erosion. (see Appendix 1).

A calculation was made of the tonnage and grade of this ore shoot by averaging the numerous assay values (from previous reports) across a mining width of 3 feet, which is close to the average width of mineralization. The figures are:

	Tonnage	<b>.</b>	1650 <sup>°</sup> tons
Assavs	(Gold Silver	-	0.71 oz. per ton 1.62 oz. per ton
	(Copper	-	6.16 %

Using today's prices, we arrive at:

Estimated gross value of ore - \$65 /ton Estimated net value after smelting - \$53 /ton

At the present U.S. - Canadian exchange rate:

Estimated net value - \$57 per ton - Canadian.

- 6

## ESTIMATED COSTS:

Mining and delivering to bin	\$25.00 /ton
(includes development costs)	•
Trucking to Nanaimo	\$ 2.25 /ton
M & B road royalty	\$ 0.50 /ton
Barging to Tacoma	\$ <u>1.00</u> /ton

\$28.75 /ton

Total operating costs

Based on the known ore, this should yield an operating profit of 28.25 /ton, for a gross of 46,600.00. From this operating profit must be subtracted certain capital, legal and administrative costs, which the writer is not able to estimate at present.

If more ore is to be found, it will require additional exploration in the form of diamond drilling or tunnelling. It is not unreasonable to visualize a sum of \$20,000.00 for exploration with a 20% chance of finding an equal or greater amount of ore than is now known.

There are, however, other factors to consider in evaluating the Silver Leaf property, that might yield a higher return than trying to operate it as a mine. Because it is in M & B forest lands, the Nanaimo Water District and E. and N. Railway Lands, it undoubtedly has value to one or all of these organizations. They might be willing to pay more than any possible profit the mine could yield, just to have it under their control.

## CONCLUSIONS:

The Silver Leaf property at present contains a small tonnage of high grade ore which should yield a small profit if operated efficiently by knowledgeable miners.

- 7 -

The writer is of the opinion that large tonnage orebodies do not exist on these claims. Of the three mineral zones, only the main one has possibilities for more ore.

## **RECOMMENDATION:**

Because the possible reward from mining the present orebody is small and because of the apparent conflict of interests in the area, between the claim owners and other titleholders, the writer recommends a thorough investigation of all these angles, before deciding to mine the property. If, after this investigation (the cost of which should also be borne by the property), mining appears the best course, it should be done by negotiating a lease-royalty agreement with a small operator, who can work with low overhead. Any other scheme of mining would probably result in a net loss.

Respectfully submitted,

John Lamb

July 24, 1964.

John Lamb, P. Eng. Geologist.

ORE SHOOT. 1580 :540 500 bar #2 adit. 460' ba en APPENDIX 1. SECTION 'A-A' OF MAIN ZONE SILVERLERF GROUP NANAIMO M.D. SCALE 1" = 40' July 1964 J.Lamb at some Wan i child be sinder

2450 (2500 550 urtace outcrop of zone (2600') #3 AF APPENDIX 2 PLAN OF . MINE WORKINGS SILVER LEAF GROUP NANAIMO M.D. surface SCALE 1"= 40' of mineral zone copied from BECM BULLETIN 37 J. Lamb. July 1964 Company A Man Kalanter . 2

то	Mr. John Lamb		INDIFE NOT	File No
	c/o Empire Development			July 23. 1964
	736 Granville St., Vancouver	CERTIFICATE OF ASSAY		SILVER LEAF
•	GENERAL	TESTING LABORATORI	ES CO. LI	D. PROPERTY

325 HOWE STREET

• VANCOUVER 1, B.C., CANADA • TELEPHONE: 684-1374

We hereby certify that the following are the results of assays made by us upon the herein described submitted <u>2 ore</u> samples.

	MARKED	GOLD		SILVER CONDET						TOTAL VALUE.		
	·····	Ounces per Ton	Value per Ton	Ounces per Ton	Value per Ton	Percent	Value per Ton	Percent	· Value per Ton	Percent	Value per Ton	PER TON (2000 LBS.)
- 	10928	0.19		0.31		2.0		grab bac	samp. k of	le ac. No	2 adi	8" from t.
	10929	0.14		0.28		1.6.	·	gra	b som	ple	of he	avy oxidia
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