NEW PRIVATEER MINES LTD. -
(92-F)
October 24th, 1979. Date

The following brief dissertation is an attempt to answer your question about New Privateer Mines.

I attempted to call a man by the name of Pinkerton who is a retired Real Estate Agent and is currently the President of Privateer. He does not answer the telephone.

George Cross tells me that there is a local group who are trying to put together some kind of financing package through the sale of shares to the public.

A search through various types of literature in this office was not very rewarding in terms of recent work - in point of fact, we found nothing. Production from May 1937 through the first half of 1946 was $\$ 5,610,423$. from 139,254 tons of ore. At that time, gold was selling for $\$ 35.00$ an ounce. Based on these figures the recovered grade was 1.15 ounces per ton of ore. We suspect however, this is a cobbed grade inasmuch as the vein averaged only one foot in width. Since any stope would have to be three feet wide, it would mean that the diluted grade would be 0.38 ounces per ton. This figure corresponds closely with the information shown in the 1948 Minister of Mines Report, which indicates that 10,484 ounces of gold were recovered from 23,648 tons mined. The grade mined that year therefore would be 0.443 ounces per ton. The actual millhead grade that year was 0.728 indicating that $40 \%$ of the mine tonnage was cobber prior to milling.

The Privateer property was mined at eight levels over a vertical interval of 750 feet and the vein, despite its narrow width, was persistent over a. 1300 foot length on each of these levels. The Northern Miner Handbook indicates that the ore reserves are 125,000 tons averaging 0.24 ounces of Au per ton. There is also mention of another zone which allegedly shows 200,000 tons of $2 \%$ copper.

At this point in time I do not know where the ore reserve is but I will assume that it is somewhere near the bottom of the mine. If the tonnage and grade indicated have been calculated over a three foot width, and if there is some possibility of extension of depth, then the property may have some merit, although that merit is tenuous at $\$ 300.00$ gold.

It seems unlikely that Mr. Pinkerton will be very voluble on the subject but there may be someone around who is more familiar with the details. We will dig a little deeper and keep you posted.


# PRIVATEER MINE 

By H. C. Gunning*

The Privateer is the major mine of the Zeballos mining camp, with a total production from May 1937 through the first half of 1946 of \$5,610,423 from 139,254 tons of ore. This includes a small production from the connected Prident mine. The entire operation was closed from October 1943 to November 1945.

John S. Stevenson has presented in this volume a structural analysis of the camp's auriferous veins based on recent areal studies. The following notes are based primarily on an examination of the Privateer in 1940, before the No. 3 vein had been exploited. They are presented with the much appreciated permission of the management.

Two veins have contributed most of the Privateer ore. They are essentially parallel and dip from vertical to steeply north. No. 1 vein is 250 feet south of No. 2 and is the more continuous, having been drifted on for a total strike length of over 1,300 feet on eight levels. The top level is at 600 feet and the bottom one at 1,350 feet above sea-level. No. 2 vein and the major part of No. 1 strike east, but the west end of No. 1 swings to an east-northeast trend resembling a tensional fissure related to the main vein. East-northeast fissures of tensional type diverge from the main veins (Fig. 1).


Fig. 1.-Part of No. 1 vein, 1,225-foot level, Privateer mine.
The deposits are free-walled fissure veins bordered by gouge or a relatively smooth surface of altered wall-rock; gold does not extend into the walls. The veins are filled with a sulphide-rich mixture of quartz, calcite, and the sulphides galena, sphalerite, arsenopyrite, pyrrhotite, chalcopyrite,

[^0]and pyrite, named in approximate order of abundance. Native gold is present in variable amounts but in much of the rich sulphide ore, assaying many ounces to a ton, is not visible to the eye. Vein widths vary up to about 3 feet, but the average is probably well under 1 foot. The sulphides and gangue minerals are coarse grained and depositional banding is prominent. Vugs and comb structure are common features. Ribbon structure is less common. With some exceptions galena seems to be the chief indicator of high gold content. The adjoining wall-rock is altered in varying degree across widths of up to a foot or so to a mixture of calcite, sericite, and kaolinitic material with occasional new albite.

The vein fissures are faults of small displacement, the offset varying up to about 7 feet. No. 1 vein fissure shows a left hand offset, No. 2 a right hand, so that the two veins can be considered as bounding a block that has moved west relatively to its walls. There is much evidence that the offset diminishes gradually toward the ends of the veins. With this the vein filling decreases in width and the fissure tends to split and become poorly defined. Therefore, the determination of offset is of some practical value in that it assists in determining the economic limit for drifting on the vein fissure. The veins gradually pinch and become irregular at their west end and to some extent at the east, but in the lower levels No. 1 vein is cut off on the east against a post-vein fault that strikes north and dips steeply west.

An outstanding characteristic of the Privateer veins in comparison with most other Zeballos veins is the remarkable length of the ore shoots. This is particularly true for No. 1 vein. On it, 1,000 feet of continụous ore was mined on the 1,000 -foot level in spite of the narrow width. This may be due to the fact that the wall-rock at the Privateer is unlike that of the other mines. The normal host rock for the others, excepting Mount Zeballos and a few prospects, is quartz diorite of the Zeballos batholith or related granodiorite. The Privatecr veins lie outside the southwest contact of the quartz diorite mass in a band of hard, brittle hornfels and skarn intruded by dykes and irregular bodies of the diorite. The silicated rocks were formed by the contact metamorphism of limy and argillaceous sediments interbedded with tuff and lava. The original bedding is in part preserved as a crude banding by such minerals as wollastonite, diopside, garnet, and vesuvianite. This band of brittle rocks follows a sinuous northerly course and varies in width from 650 to 1,500 feet. It is bordered on the east by the irregular west contact of the batholith and on the west passes gradationally through hornfels into less altered volcanic rocks almost devoid of primary structure. The bedded rocks are essentially vertical. Immediately north of the Privateer mine the strike swings to $\mathrm{N} \cdot 30^{\circ} \mathrm{W}$. from the prevalent northerly strike at the mine. At the mine the west contact of the batholith suffers a similar deflection. Therefore, the veins lie at and just south of the major flexure. They cut across the silicated rocks almost at right angles
to the bedding where these rocks are widest due to a small embayment in the batholith where its contact changes trend.

Surface and underground studies indicate that the silicated rocks favoured the development of straight, well-defined fissures. Their hardness reduced to a minimum the formation of gouge by fault movement. Furthermore, they were relatively inert in the vein-forming solutions and, therefore, were not softened by hydrothermal alteration to the same extent as quartz diorite. This again reduced the development of gouge during the mineralizing period when some movement continued. The net effect was a relatively straight continuous fissure, unobstructed by gouge and altered wall-rock. The stage was set for deposition of the rich, persistent orebodies.

## TWIN "J" MINE*

By John S. Stevenson $\dagger$

The Twin " J " mine is on mount Sicker, 8 miles by road northwest from . Duncan, on Vancouver island. It includes the old Lenora, Tyee, and Richard III mines, formerly under separate ownership but now under the single ownership of Twin "J" Mines, Limited.

During the main period of production from 1898 to 1909 the old mines produced 253,000 tons of copper-gold ore. During the recent period of production from July 1943 to May 1944 the Twin " J '" mine produced 35,000 tons of ore with an average grade of: gold 0.075 oz . a ton; silver 2.05 oz . a ton; copper 1.32 per cent; lead 0.6 per cent; and zinc 6.12 per cent.

## General Geology

The rocks in the Twin " J " mine and nearby area include cherty tuffs, graphitic schists, rhyolite porphyry, and diorite.

The cherty tuffs and graphitic schist together form a band of sediments 100 to 150 feet wide that near the workings is at least 2,100 feet long. It may be longer, but the scarcity of outcrops prevents tracing it with certainty. The trend of the band and the strike of the sediments is $\mathrm{N} .70^{\circ} \mathrm{W}$. The dip of the sediments is $50^{\circ}$ southwest. Where relatively undeformed, the rocks are slaty, where moderately deformed their laminæ are bent into small canoe-shaped folds, and where intensely deformed, either by close folding or shearing, they are highly schistose.

[^1]The average number of men employed during the year was fifty-one. The bunkhouse and cook-house were enlarged to accommodate seventy-five men.

Approximately 3,300 . tons of crude ore was shipped this year to Tacoma smelter. In November a 120 -ton flotation-mill was completed, in accordance with the operational agreement, and milling started. Only 2,800 tons of ore was milled in November and December. A copper-gold concentrate is made and shipped to the Tacoma smelter. Gross production: Copper, $82,235 \mathrm{lb}$.; gold, 495 oz .; silver, 897 oz .
[References: Minister of Mines, B.C., Ann. Rept., 1944, pp. 66, 163-174; 1945, p. 114 ; 1946, pp. 176, 177; 1947, p. 179.]

## VANCOUVER ISLAND.

$$
\text { Zeballos ( } 50^{\circ} 126^{\circ} \text { N.W.).* }
$$

## Gold.

Company office, 602 Stock Exchange Building, Vancouver. D. S. Tait,

Privateer Mine, Ltd. president; N. E. McConnell, managing director; C. H. Hewat, mine manager. Capital: $3,000,000$ shares, no par value. This company operates a consolidation of the Privateer and Prident mines in Spud Valley, about 4 miles by motor-road from Zeballos.

The mine-workings are on narrow quartz-sulphide veins which dip almost vertically. The ore-bodies are mined by shrinkage stoping.

The mine is serviced by levels developed from adits-that is, $200-, 400-, 600-, 800-$, 900 -, 1,000 -, 1,100 -foot levels-and from a three-compartment shaft sunk from the 1,100 -foot level, with the $1,200-$ and 1,300 -foot levels developed from it.

The original Privateer claims were staked in 1933, and others were added to these in 1934, 1936, and 1937. A great deal of development-work was done, which resulted in the construction of a 75 -ton cyanide-mill in 1938. Operations continued until October, 1943, when they were stopped for the duration of the war. In October, 1945, the mine was reopened, though milling was delayed till November, 1946. In October, 1948, operations again ceased.

In 1948, 1,115 feet of development-work was completed as follows: Drifting, 723 feet; crosscutting, 142 feet; slashing, 25 feet; raising, 127 feet; stope-raising, 98 feet. Two hundred and fifty-two and one-half feet of exploratory diamond-drilling was also done. While the mine was operated, the number of employees averaged seventy-one.

Production: Ore mined, 23,648 tons; ore milled, 14,402 tons. Gross contents: Gold, $10,484 \mathrm{oz}$.; silver, $5,059 \mathrm{oz}$.
[References: B.C. Dept. of Mines, Lode-gold deposits of the Zeballos area, 1938. Minister of Mines, B.C., Ann. Rept., 1937 to 1947, inclusive.]

Company office, 609 Bank of Nova Scotia Building, Vancouver. Capital:
Beano (Victory 10,000 shares, $\$ 1$ par value. The property is on Beano Creek, $31 / 2$ Mining Co., Lfd.). miles from the mouth of the Little Zeballos River. Victor Davies and associates are driving a short adit 25 feet vertically below the outcrop of the quartz network near the top end of the tram-line.
[Reference: Minister of Mines, B.C., Ann. Rept., 1947, p. 181.]
Muchalat Arm ( $49^{\circ} 126^{\circ}$ N.E.).*

## Zinc.

Company office, 911 Birks Building, Vancouver. J. C. McCutcheon,
Danzig Mine. mine superintendent. The Silbak Premier Mines, Limited, is operating this property. The claims are on the south shore of Muchalat Arm

[^2]
# Kerr Addison Mines Limited <br> (FOR INTEROFFICE USE ONLY) 



A telephone call at 10:05 a.m. on October 17, 1979, from E. R. Shepherd, Address: Box 220, Borden, Saskatchewan Telephone: 306-997-2060

He recommended our examination of the old gold property in the Zeballos area, Vancouver Island. Mr. Shepherd is an old friend of the deceased Kerr Addison director, Ken Gray, and a prospecting partner of the deceased, Cyril Knight.

Shepherd has no interest in the prospect other than he worked on the property in the $1930^{\top}$ s.

I said that we would look into it, and if "Kerr Addison could make allot of money" on the recommendation, we would get back to him.

/mc
cc: Mr. W. M. Sirola


[^0]:    *Professor of Economic Geology, University of British Columbia.

[^1]:    *Published with the permission of the Chief Mining Engineer, B.C. Department of Mines. $\dagger$ Mining Engineer, B.C. Department of Mines.

[^2]:    * By R. B. King.

