REPORTon
THE SILVER PROSPECTof
plutus Mines LTD.
LIKELY, BRITISH CCLUMBIA
for
MR. H.J. OFFERS
by
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## IHTROLUCTION

The Plutus Mines silver prospect is located sixtyfour miles northeast of 150 Mile House in the Cariboo district of central British Columbia. Access is by gravel road throunh Likely, The eleven miles beyond Likely are rather steep, rising to an elevation of 4800 feet at the property.

Gently dipping quartz veins in a host rock of phyllite and argillite contain galena and associated silver mineralization. The most prominent of the veins is traceable on surface for 600 feet; it strikes northwesterly and dips between $15^{\circ}$ and $20^{\circ}$ to the north.

Underground emploration and diamond drilling were carried out in 1967 and 1968; an exploration raise vas partially completed when work was suspended in late 1968.

## GEIERAL GEOLOGY

The Plutus silver prospect is underlein by interbedded black phyllites and medium to fine-grained grey argillites of the Midas formation. This formation is part of the Cariboo group of Lower Cambrian ase.

Silicification of the argillites has occurred locally, creating generally favourable conditions for the emplacenent of quartz veins of considerable size. Three silver-bearing quartz veins have been found on sursace; the principal one has been traced for 600 feet.
along strike. Width of this gently-dipping structure varies between a few inches and 15 feet, averaging about 5 feet. Two parallel veins occur within a few tens of feet of this principal vein. The footwall vein has been designated No. 1 vein, the principal vein the No. 2 vein and the hangingwall vein, the No. 3 vein.

A few miles southwest of the 3 veins, close to Blackbear Creek, a galena-bearing quartz vein has been exposed. It has been traced along strike for $130^{\prime}$. Mineralization is sporadic in the flat dipping vein which averages about 2 feet in width.

Other quartz veins have been found in the Plutus Mine area but little is known of their potential.

## DEVELOPMENT

During the winter of 1967-1968 Plutus Mines Ltd. drove 825 feet of lateral underground workings to explore further dow-dip extensions of the three lead-silver bearing quartz veins. The work was done on the mistaken assumption that the veins dipped steeply (about $60^{\circ}$ ) and would be intersected within two hundred feet of the portal.

As the principal, or No. 2 vein, strikes slightly north of west, the portal was collared $140^{\prime}$ south of the central part of the vein and was driven for $430^{\prime}$ on a bearing of $N 15^{\circ} \mathrm{E}$. This crosscut intersected a two foot wide quartz vein with a few specks of galena and sphalerite at 265' from the portal and this is probably the No. 1 vein. An attempt was made to drift on this vein to the west but the quartz disappeared within a few feet. The drift was driven $1^{\prime} \mathbf{n}^{\prime}$ but no additional mineralization was encountered.

The main crosscut vas continued for $160^{\prime}$ north of the No. 1 vein and an exploratory drift was put out to the east for $120^{\prime}$. No significant quartz veining or galena was encountered.

The diamond drilling program, which is discussed in the following scction of this report, showed thet the No. 2 vein lies north of the workings at the adit elevation.

Subsequent to the diamond drilling, a raise was driven from the adit for the purpose of exploring the three quartz veins. It is reported that this raise was terminated at 60', no significant amounts of quartz or mineralization having been encountered.

## DIAMOND DRILLING

During June, July and August of 1968, underground diamond drilling was carried out. Eleven BQ wireline holes were completed, totalling 2217 feet. Overall core recovery was about $75 \%$ with no appreciable difference in the quartz vein material. Following is a summary of the drilling with significant mineral intersections:

| D.D.I. No. | Dip | Length | Width | \% F | 02.4s | Vein |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | + $30^{\circ}$ | $300^{\prime}$ | 1.11 | 3.25 | 5.80 | \% 1 |
| 1 | $+30^{\circ}$ | $30{ }^{\prime}$ | 1.21 | 1.05 | 1.75 | 1 |
| 1 | $+30^{\circ}$ | 300 | 2.51 | 0.67 | 1.37 | \% |
| 2 | $+30^{\circ}$ | $300{ }^{1}$ | 1.11 | 0.30 | 0.41 | :2 |
| 2 | $+30^{\circ}$ | 3001 | 1.5' | 0.30 | 0.35 | \%2 |
| 2 | + $30^{\circ}$ | $300^{\prime}$ | 0.81 | 0.70 | 1.52 | 湤 |
| 3 | $-30^{\circ}$ | 169 ' | 4.61 | C. 26 | 0.39 | \% 1 |
| 4 | $+30^{\circ}$ | $131{ }^{\prime}$ | 1.21 | 0.30 | 0.29 | 2 |
| 4 | $+30^{\circ}$ | 131 ' | 1.31 | 3.80 | 12.20 | it3 |
| 5 | $-54{ }^{\circ}$ | $52^{\prime}$ | - | - | - | - |
| $\sigma$ | $0^{\circ}$ | 111' | - | - | - | - |
| 7 | $+35^{\circ}$ | 291 ' | 1.4' | 0.80 | 1.33 | 教 |
| 7 | +35 ${ }^{\circ}$ | 291 ' | 0.81 | 1.85 | 4.10 | \#3 |
| 7 | $+35^{\circ}$ | 291' | $1.0^{\prime}$ | - | 2.60 | - |
| 3 | $0^{\circ}$ | $130^{\prime}$ | - | - | - | - |
| 9 | $+30^{\circ}$ | 3021 | $2.0^{\prime}$ | 3.50 | 10.90 | \% |
| 9 | $+30^{\circ}$ | 302 ' | 2.51 | 1.60 | 3.66 | 2 |
| 9 | $+30^{\circ}$ | 3021 | 4.01 | - | 1.11 | - |
| 9 | $+30^{\circ}$ | 3021 | $5.0{ }^{\prime}$ | 5.35 | 12.10 | \#3 |
| 10 | $+15^{\circ}$ | 34:0' | 1.5' | 0.45 | 0.90 | \%2 |
| 10 | $+15^{\circ}$ | $340^{\prime}$ | 1.5' | 0.70 | 1.50 | \% |
| 10 | $+15^{\circ}$ | 3401 | 0.81 | 4.15 | 9.20 | \%3 |
| 10 | $\because 15^{\circ}$ | $340^{1}$ | 6.41 | 0.60 | 1.30 | - |
| 11 | $0^{\circ}$ | $80^{1}$ | $0.2^{\prime}$ | No vi miner | le zation | F2 |

## SOIL SAMPLING

Eleven soil samples were taken at 100 foot intervals across the principal vein. With a background of 20 to 50 parts per million for lead and 0.5 parts per million for silver, significantly anomalous results were obtained that clearly indicated the presence of the vein.

## CONCLUSION: \& PECOMENDATICI!

A number of quartz veins, some containing silver, occur on the property of Plutus lines Ltd. The continuity of some of these veins is encouraging and more exploratory work in the area is warranted. Geological reconnaissance of the entire property should be undertaken in addition to reconnaissance silt and soil sampling. Such a program need not cost more than $\$ 15,000$ and future plans would depend entirely on the results of this work.

Respectfully submitted,
BACON $\varepsilon$ CROTHURST LTD.


