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CANADIAN MINE SERVICES LTD.

619-620-475 HOWE STREET

VANCOUVER 1, B.C.

671914

Progress Report on the Property
of
Plutus Mines Ltd.,
Likely, B.C.

R.W. Phendler, P.Eng.

August, 1968



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INTRODUCTION

During the winter of 1967-1968 Plutus Mines Ltd. drove 825 feet of underground working to explore the down-dip extensions of three lead silver bearing quartz veins. The most prominent of the three veins was traceable on surface for more than 600'. All veins strike northwesterly and dip between 15° and 20° to the north.

Only one of the three quartz veins were intersected in the underground development but all three were intersected and recognized in the subsequent diamond drilling. Most intersections of the principal quartz veins showed the presence of lead silver mineralization, the best of which assayed 5.35% Pb and 12.1 oz. Ag across 5.0'.

Additional drilling from surface to explore these veins to east and west of the underground workings is warranted.

Host rocks of the vein system are black phyllites and grey siliceous argillites. The latter is considered to be the more favourable of the two for the presence of stronger veins of mineralization, being more competent.

To date, surface and underground detailed geological mapping and diamond drilling has determined that the mineral-bearing quartz veins are sympathetic with the bedding. Continuity of veins has been established and additional exploration of the veins appears to be warranted.

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The Falls showing in the vicinity is an interesting exposure of lead-silver mineralization and should be explored further.

LOCATION AND ACCESS

The showings are covered by an indetermined amount of claims which are constantly being increased as additional interesting quartz exposures are being made.

Access is by gravel road sixtyfour miles from 150 mile house through Likely, B.C. The last eleven miles from Likely are rather steep, rising to an elevation of 4800 feet.

A fully-equipped mining camp is established at the mine site, consisting of cook-house, office, machine shop, three man staff cabin, mine dry, and bunk house accomodation for sixteen men.

GENERAL GEOLOGY

The area of interest is underlain by interbedded black phyllites and medium-to fine grained argillites of the MIDAS formation of the Cariboo group of Lower Cambrian age.

Local silicification of the argillites has taken place, creating a more competent and consequently a more favourable geological environment for the presence of quartz veins of economic width.

Folding and crumpling of the sediments has taken place and dips of the bedding in the vicinity of the veins is between 35° and horizontal.

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Numerous quartz veins measuring up to 20 feet in thickness occur throughout the area but no intrusives are in evidence. The quartz veins in general strike N70° W and dip to the north between 35° and 15°.

The structure in the area is characterized by the northwesterly trends of the folds and major faults. The quartz veins of the Plutus area appear to occupy bedding plane faults that parallel the general trend. Cross faulting of the veins and rock formations is present but displacement is not believed to be great. At present there is little mining activity in the area but such placer gold was recovered from the region in the past.

MINERAL DEPOSITS

1. Principal showings. No. 1 Vein. - This is the footwall vein of the three in the vicinity of the mine and has limited lateral extent on surface. The original exposure has been covered by later trenching on the No. 2 vein.

The principal crosscut intersected the No. 1 vein at 260' and the observed dip was 17° north. Minor galenasphalerite mineralization was observed.

Drill hole # 1 intersected the vein thirty feet above the level and mineral intersection assayed as follows:

1.05% Pb, 1.75 oz. ag across 1.2'

3.25% Pb, 5.80 oz. ag. across 1.1'

Drill holes #6 and # 8 were drilled east and west of the main crosscut to intersect the No 1 vein along strike but nothing of interest was found.

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Drill hole # 3 was drilled down from the main level and intersected No. 1 vein a few feet below the level as follows:

0.26% Pb, 0.39 oz. Ag. across 4.6'.

Drill hole # 5 was drilled to intersect # 1 vein below the level but found little of interest.

No. 2 Vein.

This, the principal vein, has been traced on surface for 600 feet along strike with galena mineralisation found throughout.

The principal crosscut lacks approximately seventy feet to intersect the down dip extension of this vein. Up hole drilling intersected this vein with the following results.

<u>Drill hole No.</u>	<u>% Pb.</u>	<u>oz. Ag.</u>	<u>Width</u>	<u>Location.</u>
D.H. # 1	0.67	1.37	2.5'	50'E of XC
D.H. # 2	0.30	0.41	1.1'	Above XC
D.H. # 4	0.30	0.29	1.2'	Above XC
D.H. # 7	1.85	4.10	0.8'	66'E of XC
D.H. # 9	3.50	10.90	2.0'	145'E of XC
D.H. # 9	1.60	3.66	2.5'	150' E of XC

No. 3 Vein.

This vein has been exposed a surface for a strike length of 280' and generally shows less width than the # 2 vein. This vein was intersected by all holes drilled to the structure and results are as follows:

<u>Drill hole No.</u>	<u>% Pb.</u>	<u>oz. Ag.</u>	<u>width</u>	<u>Location</u>
D.H. # 1	0.37	0.29	2.7'	75'E of XC
D.H. # 2	0.70	1.52	0.8'	Above XC
D.H. # 4	3.80	12.20	1.3'	Above XC
D.H. # 7	6.56	2.60	1.0'	70'E of XC
D.H. # 9	5.35	12.1	3.0'	200'E of XC
D.H. # 9		1.1	4.0'	150'E of XC

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First indications are that the latter intersection is the No 3 vein and that the higher, grade intersection in hole 9 is a new 4th vein lying 60' above the No 3 vein or indicates a flattening of the No 3 vein.

B. Falls showing

Galena mineralization irregularly disseminated throughout a system of quartz veins has been traced along strike for 130'. Strike is N60° W and dip is approximately 30° NE. The veins lens out to the northwest but are lost under overburden to the east. The mineralization warrants additional investigation by diamond drilling.

C. OTHER

Other minor showings in the area are the Dobson and the Gosling exposures of quartz veining. A little underground work has been done with lead-silver mineralization being encountered. There does not appear to be any relationship to other showings in the area, other than that they also have similar strike and dip.

Other mineral bearing quartz veins have been observed throughout the area and additional prospecting may increase their importance.

Diamond Drilling Summary - Underground

D.H. # 1	Location 4826.5' N, 14382.0' E, bearing N40° E Dip, +30° Length 300' - Recovery 66.9%
D.H. # 2	Location 4972.5, N, 14414.0E. Bearing N13° E Dip, +30° Length 300'. Recovery 72%
D.H. # 3	Location 4958.0N, 14412.0E. Bearing S15° W, Dip +30° Length 180'. Recovery 73%
D.H. # 4	Location 5103.0E, 14446.0E. Bearing N14° E. Dip +30° Length 131' . Recovery 77.4%

- D.H. # 5 Location 5096.0W, 14445.0E. Bearing S15 W
Dip + 54°, Length 52'. Recovery 47%
- D.H. # 6 Location 5042.0W, 14344.0E. Bearing S20 W
Dip - Horizontal, Length 111.0'. Recovery 96.2%
- D.H. # 7 Location 5050.0W, 14346.0E. Bearing N20 E
Dip + 35°. Length 291.0'. Recovery 67%
- D.H. # 8 Location 5036.0 W, 14529.0E. Bearing S20 W
Dip - Horizontal, Length 130'. Recovery 78.5%
- D.H. # 9 Location 5043.0W, 14526.0E. Bearing N50 E
Dip, +30°. Length 302'. Recovery 70.3%
- D.H. # 10 Location 5039.0W, 14540.0'S. Bearing N70 E
Dip +15°. Length 340'
- D.H. # 11 Location 5136.0W, 14452.0E. Bearing N14 E
Dip + 5°. Length 80'

Average recovery Holes 1-9 74%

Note: At time of writing core from holes 10 and 11 had not been examined by the writer.

SOIL SAMPLING

A series of eleven soil samples were taken at 100 feet intervals across the veins. With background of 20 to 50 parts per million for Pb and 0.5 parts per million for Ag, significant anomalous readings were returned to strongly outline the mineral bearing structures. Readings above the vein areas were at background and a definite dropping off of values was evident below the structures as well. (See accompanying sketch).

Conclusions are that this could be a useful tool to check for continuity of these and other mineral-bearing structures in the region.

CONCLUSIONS

The Plutus Mines vein system is made up of three shallow-dipping quartz veins that are about 60' apart. The principal vein has been exposed for 600 feet along strike. The upper two veins have been picked up by drilling for W 300' down the dip. All drill hole intersections on the upper two veins showed the presence of lead-silver mineralization.

Underground drilling has explored the veins along a strike length of 300'

Lead-silver mineralization in quartz veins is commonly erratic and the entire length of the vein system must be explored. In many cases, drilling is done for structure alone and the presence of any mineralization is encouraging.

Only one intersection, on vein #3 can be considered to be of commercial grade. This assayed 5.35% Pb. and 12.1 oz. Ag. across 5.0'.

RECOMMENDATIONS.

All veins should be explored in depth by diamond drilling from surface both east and west from the main showings along a strike length of 1500'.

Geochemical sampling is warranted to aid in outlining and extending the zone of interest along strike.

Drilling of the Falls showing is warranted and two holes that would intersect the mineral zone about 150' down dip from the surface exposures is recommended.

Details of the program as follows:

Surface drilling of principal zone	2400' @ \$ 10.- per foot	\$ 24000.-
Surface drilling of Falls zone	600' @ \$ 10 per foot	- 6000.-
Geochemical sampling and analysis		- 6000.-
Engineering and geology		<u>- 2000.-</u>
		\$38000.-

At the termination of this program it should be determined whether additional underground development is warranted. Steep raises from the tunnel up to the veins and flat raising up the veins should be considered.

Respectfully submitted

B. W. Phendler Eng.





Sample 8 - 27 ppm Pb, 1.0 ppm Ag
7+00 N

Sample 7 - 84 ppm Pb, 1.0 ppm Ag
6+00 N

Sample 6 - 815 ppm Pb, 5.5 ppm Ag
5+00 N

No 3 VEIN (UPPER)

Sample 5 - 240 ppm Pb, 1.0 ppm Ag
4+00 N

No 2 VEIN (LOWER)

Sample 4 - 275 ppm Pb, 1.0 ppm Ag
3+00 N

Sample 3 - 870 ppm Pb, 1.5 ppm Ag
2+00 N

Sample 2 - 54 ppm Pb, 5.0 ppm Ag
1+00 N

Note: values shown in parts per million.
Background for lead (Pb) - 20-50 ppm.
Background for silver (Ag) - 0.5 ppm.

Sample 1 - 109 ppm Pb, 2.5 ppm Ag
0+00

Sample 9 - 250 ppm Pb, 2.5 ppm Ag
1+00 S

Cookhouse

Sample 10 - 92 ppm Pb, 1.0 ppm Ag
2+00 S

Bunkhouse

Sample 11 - 22 ppm Pb, 0.5 ppm Ag
3+00 S



office.

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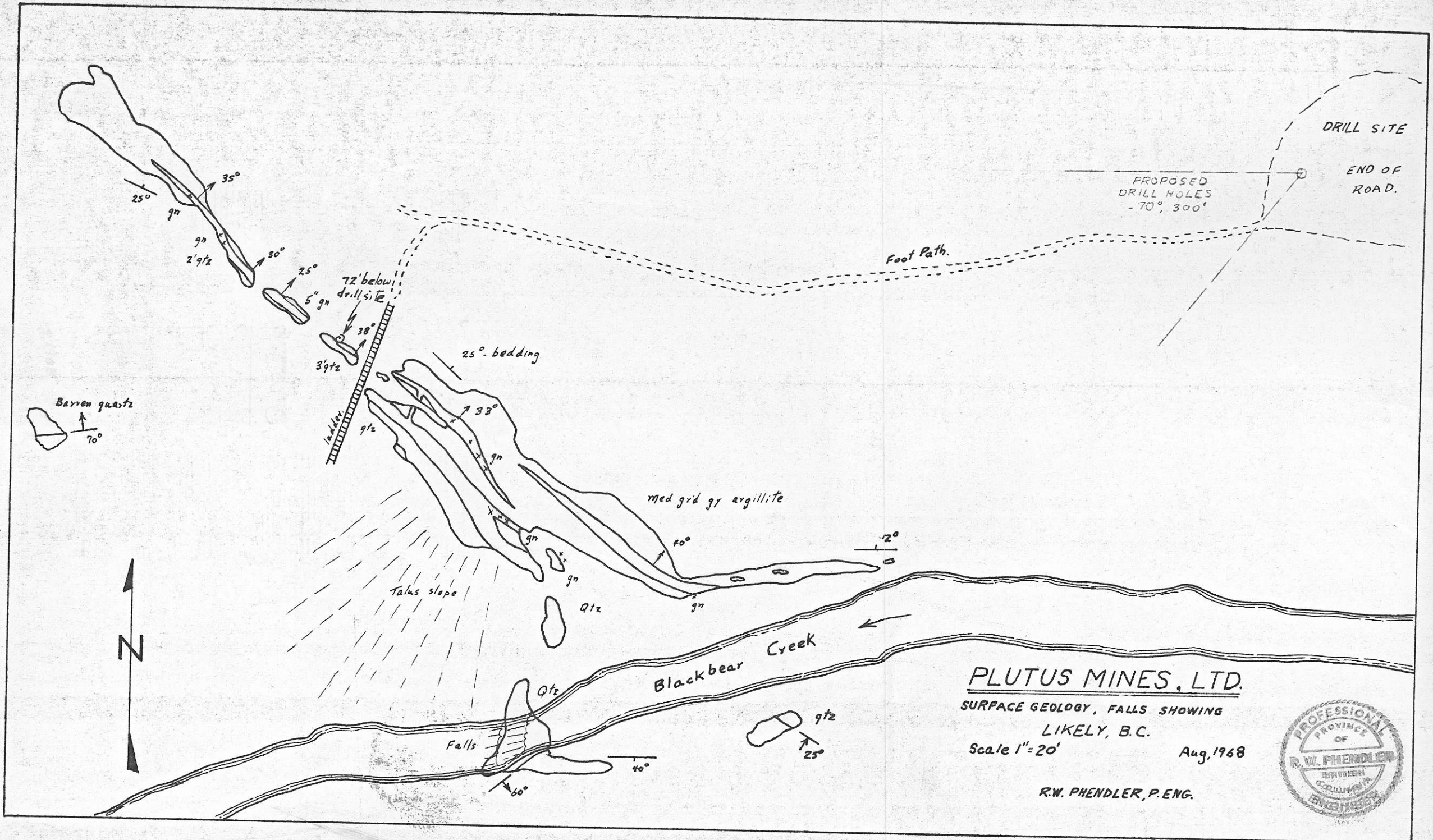
PLAN OF SOIL SAMPLES ACROSS VEINS.

LIKELY, B.C.

Scale 1" = 100'

Aug, 1968

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SURFACE GEOLOGY, FALLS SHOWING

LIKELY, B.C.

Scale 1" = 20'

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