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Geotechnical Consulting / Exploration Services

geology
geophysics
geochemistry

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Ladner Creek
Carolin Mines
92H

October 17, 1977

PROGRESS REPORT #77-2

For: Carolin Mines Ltd. (N.P.L.)
Re: Ladner Creek Project

Surface and underground work has continued uninterrupted during this period. The main 2.4 by 2.7 metre (8' x 9') decline is being kept at -20% and bearing mine north, has reached the 187 metre (614') mark. The 600 cross cut, which is driven easterly from the 107 metre (350') point in the main decline, is now complete at 68 metres east. Early in October a significant amount of water was encountered in the main decline in the 160 to 170 metre interval and grouting was necessary which delayed progress somewhat. The water problem in this area has been solved and attention is now being concentrated on the main decline.

The following categories describe the progress in various areas of the work.

1. Sample Plant:

A 15" x 24" jaw crusher, rolls, twin G.M. 200 KW generator, motors, conveyors and electrical supplies were purchased from Highmont Mining Corp. and this equipment was interfaced with a sampling tower, coarse ore bin and vibrating feeders built by Nelson Machinery Ltd. This plant was erected into re-enforced concrete foundations at the muck storage site on October 11 and 12. Mr. Ted Worthington, P. Eng. is in charge of the design and assembly of the plant and final electrical wiring, and "tune up" will be completed shortly. Mr. Bub Bateman has been retained by Carolin Mines as field foreman on the project.

The plant has a designed capacity of 25 short tons per hour and will quite adequately handle the muck from the underground workings.



2. Muck Storage Area:

An additional muck storage area has been cleared, level and backfilled to accommodate the underground development muck on a round by round basis. Each round is tagged and flagged off so that facile identification of each 2.4 metre (8') round from the underground workings may be easily identified and trucked to the sample plant for processing.

3. Underground Sampling:

A "car" sampling system has been initiated whereby each scoop load from a given round is sampled and the composite sample thus produced is assayed.



Underground sampling is also being conducted by channel sampling, pannel sampling and small core diamond drilling (bazooka work).

Underground Diamond Drilling:

In addition to the small core test diamond drilling being conducted by Carolin, a contract has been recently awarded to Kema Drilling Inc. for a minimum of 1500 metres (approx. 5000') of A.Q. wireline underground drilling. The first A.Q. hole has now been completed to 51.8 metrea and was drilled easterly at $+36^{\circ}$ from the 600 cross cut. An additional 400 metres of drilling is planned in the cross cut. A drill station has been established at the 665 metre north point in the main decline and a ring of holes is planned from this section.



5. Geology and Engineering:

The main decline obliquely drifted through the Lower Idaho Zone, and has recently crossed the nose and is now in the Upper Idaho Zone. The "nose" area is a complexly folded and faulted area and had to be grouted because of incoming water. The first mineralized band of the Upper Idaho Zone was encountered in the 170 metre area of the decline and appears to be approximately 3.5 metres thick and well replaced. Future advance in the main decline will be confined to the Upper Idaho Zone, and underground drilling will be used to further test the lower zone.

The 600 cross cut east initially encountered the hanging wall band of the lower zone, and this was followed by 20 metres of barren graphitic slate (dead stuff in the middle) and finally 40 metres of the Upper Idaho Zone was cross cut. The mineralization encountered in the Upper Zone is as anticipated from surface diamond drilling. The replacement type mineralization is essentially restricted to specific lithologic units with weaker zones between the heavily altered sections.



In view of the firm and rising price of gold, various cut off grades will be studied.

6. Environmental:

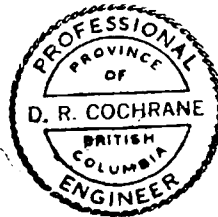
Ker - Preistman and Associates Ltd., and B. C. Research have been retained to conduct environmental impact studies on the mine site area and immediate environs. Collection of field data on native fish populations, species and water quality monitor sites have been completed to permit compilation of the Prospectus and stage 1 reports.



7. Cost:

The direct field related expenditures, (between June 1 and September 30, 1977, and including engineering and supervision) on the project are \$348,000.00

Respectfully submitted



D. R. Cochrane, P. Eng.

October 17, 1977,

Delta, B. C.

