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Item 18

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Silver Peak, Nevada
Feb. 8, 1946

Pacific Butte Mines Co.
Tonopah, Nevada.

Dear Sirs:

Herewith is a preliminary report on your HILLSIDE mining claim located in the Vanderbilt area of the Silver Peak district, Esmeralda County, Nevada. This outlines a proposed diamond drilling program which if carried out is, in this writers opinion, certain to perforate new orebodies or extensions of the old ones. Also is attached a map of the claim and the adjoining ones, showing the locations of the known orebodies and the proposed diamond drill holes.

Respectfully,

Harry H. Hughes

History:

The silver-gold mines of the Silver Peak district were the first ones worked in the area, records of them going back to the 1860s. The principal producers were the Pocatello and the Vanderbilt. The Pocatello is the northerly continuation of the Vanderbilt and lies just off the accompanying map. In the early days the ores were hauled down the mountain in wagons and treated in stamp mills at Silver Peak, recovery being made (of the gold and silver) by means of pan amalgamation with copper sulphate.

Production from the Vanderbilt and Pocatello is reported variously at between six and ten million dollars. Mr. Martin Chiatovich told this writer that he saw the mill records of the old Brunton & Taylor operation in the 1870s, which showed that mill heads averaged \$169 per ton for more than a year, or a gross of \$1,014,000. That ore was treated in a 10-stamp mill, so the yearly tonnage was probably 6000 tons processed. The size of the stopes indicate that at least 30,000 tons were produced, and since much of the ore is said to have yielded more than \$200 per ton, the production must have been well over six million dollars.

The HILLSIDE claim location is such that it covers a part of the old Vanderbilt workings, and includes two areas which have never been prospected, both of which are sections of potential production of importance.

Geology:

The Vanderbilt area is at the southeastern end of Mineral Ridge, the mountain in which the Mary mine is located; and the structure and mineralization at the Vanderbilt are very similar in most respects to that of the Mary mine. The two principal differences between them are that the orebodies in the Vanderbilt area are higher in the geologic column, and the ores carry more silver than those of the Mary. The Vanderbilt ores also carry minor amounts of copper.

A granitic rock, alaskite, has intruded a series of altered sedimentary rocks. This was followed by two stages of quartz mineralization and more or less faulting. Still later the ore-bearing quartz was injected, after which there was much shattering and distortion of the beds and veins. And into and around all of the quartz there is the latest intrusion, of diorite (altered to greenstone) in the form of sheets and dikes. This is found above, below and completely surrounding the quartz; and has so effectively hidden the continuation of the orebodies that the cost of prospecting for them by drifting, crosscutting or raising would be prohibitive. Because of these diorite intrusions it is impossible to solve the faulting which may have displaced the orebodies at their known margins. This leaves diamond drilling as the only cheap and rapid method to find the extensions or duplications of the orebodies. And in this writer's opinion completion of the drilling program as outlined below is certain to discover a new orebody or orebodies.

Diamond Drilling Program:

It will be noted on the accompanying map that there are five drilling stations shown, with an alternate (No.3) for one of them. These have been laid out so that it would hardly be possible for all of the holes to penetrate the ore horizon and not have at least one of them cut an orebody of the size of one of the previously mined bodies. In other words, out of this series of holes at least one is almost certain to perforate a part of any existing orebody in the ore zone.

The drill stations are numbered from 1 to 5, with an alternate for No. 3; and it is recommended that they be drilled in the order as numbered, with the No. 3 alternate last. The individual holes are also numbered and it is further recommended that they be drilled in the order shown. The direction of the northerly holes should be between N 10 E and N 20 E; and N 30 to N 40 W, depending on local conditions. The southerly holes may be drilled at a direction 180 from the corresponding northerly ones. The northerly holes should be drilled at a dip of about 50 from the horizontal, while the southerly ones should dip about 70 . The depth of all should be between 100 and 200 feet, depending on where the ore zone is penetrated. Hole No. 2 at station 2 should be about 250 feet deep to be sure that the alaskite underlying the known orebodies is the true footwall alaskite, since it is not certain from observation that it is such. It is believed that a maximum of 2000 feet of drilling will find new ore. When ore is cut by any hole the program should be altered to fan additional holes from the same station, or a move made only a short distance, in order to outline roughly the extent of the ore. This could save considerable time and money in driving to the ore to extract it. It might further be noted that at any station the setup may be made within a radius of say 50 feet from the point shown, as local surface conditions indicate.