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Item 12

July 14
1959

Mr. H. H. Cowan
Box 511
Tonopah, Nevada

Dear Mr. Cowan:

Attached is my preliminary report on your Big Pine Group of mining claims situated in the Manhattan, Nevada mining district.

Respectfully submitted,

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PRELIMINARY REPORT ON THE BIG PINE GROUP

SUMMARY AND CONCLUSIONS

The Big Pine group, originally consisted of only three claims, but the discussion in this report includes a total of 17. Fourteen of which have been secured to add greatly to the area and ore potentialities. These are all patented lode mining claims.

The mine referred to is located in the camp of Manhattan, Nevada. It lies about 48 miles north of Tonopah, the County seat of Nye County. Of this distance 41 miles are over paved Highway 8-A and the remaining seven are a gravelled alternate State Highway.

The gold, which is the only economic mineral, occurs in veinlets in a highly fractured Cambrian schist shale and quartzite. The veinlets fill the interstices of the joints and fractures and they (the veinlets carrying the gold) readily break free from the schist on crushing so that after the material is crushed virtually all of the values are in the fines.

In U. S. Geological Survey Bulletin No. 723, Ferguson states that between 1914-1917 the Big Pine had a probable production of $300,000. From this operation there is remaining today a dump of 50,000 tons of rejects from screening through a one-inch

screen.

From this dump a total of 19 samples have been taken which show an average value of $4.63 per ton in these rejects. And since there was recovered from these 50,000 tons a total of $300,000 this indicates a recovered value of .3 ounce gold per ton (in 1914-17 gold was worth $20.00 per ounce). The $4.63 per ton remaining in the tailings would be .13 oz. which indicates a total value in the ore milled of .43 ounces per ton or $15.05 at today's price.

Since the .13 ounces left in these rejects seems quite high and also since they represent the undersize through a one-inch screen this writer suggests that had the run-of-mine ore been reduced to say 1/2" or even 3/8" size these rejects would carry much less gold because a proportionally larger amount of gold should have been freed in crushing finer.

The writer understands that Mr. Albert Silver, consulting metallurgist of Reno, has been retained to make tests on these ores. Mr. Silver enjoys the reputation of being probably the best metallurgist in Nevada; and has designed and built mills all over the State. This writer has been informed that Mr. Silver says that he can extract the gold from the Big Pine ores for a cost of $1.00 per ton. If this is true the writer is perfectly willing to accept Silver's estimate.

In addition to the 19 dump samples mentioned above, there have been taken 105 other samples from the various pits opened

on the several claims in the group. An average of the total of 124 samples taken shows a value of $3.54.

It is said that several heavy-equipment operators have bid a price of around 35¢ per ton to mine these ores by open pit; on a basis of 1,000 tons per day. This seems a little low to this writer, so let us assume a mining cost of 50¢ per ton. This, with Mr. Silver's estimate of $1.00 per ton for milling totals a cost of $1.50 per ton. Assuming a 90% recovery this indicates an operating profit of $1.68 per ton, or on a 1,000 ton per day basis, a daily profit of $1,680.

The deposits total at least 4,000 feet long by 600 feet wide. This shows, using a factor of 12 cubic feet per ton a volume of 200,000 tons per vertical foot. Fifty feet should be a perfectly safe depth to assume that the veinlets will crush free from the schist so that if we assume that mining will proceed to this 50 feet we have a tonnage of 10,000,000, or an operating profit of $16,800,000. Should the veinlets continue to free from the schist to a depth of 100 feet, figures would of course double.

The writer has not discussed with Mr. Silver the probable ratio of concentration of these ores through crushing and screening but will guess that it will be from 10 to 1 to even 20 to 1; so that in order to treat 1,000 tons per day of mine ore, aside from the crushing and screening plant, the jigging (this is necessary to separate the large nuggets which

occur) and cyanide plant will need to be not larger than 100 tons per day capacity; and perhaps not more than 50 tons.

This property if equipped and operated as outlined above discussed should make a very profitable venture over a long period of time.

LOCATION AND ACCESSIBILITY

The Big Pine mine is located near the town of Manhattan in northern Nye County, Nevada. It is reached over paved State highway from Tonopah, the County seat, 41 miles north over the 8-A road and then 7 miles east over a gravelled and maintained spur of this 8-A.

The claims are located in Sections 19 and 20 , T. 8 N., R. 44 E. f the Mount Diablo Meridian.

The ground is accessible throughout the year and year-around operation is feasible.

PROPERTY

The ground covered by this report consists of 17 lode mining claims, most of them being the full 600 feet by 1500 feet in area:

Name of claim	U.S.Mineral Survey No.
Skookum	2822
Cresent	2845
Jackson	2914
Union 9	2556

Continued-----

Name of Claim	U.S.Mineral Survey No.
Carson	2613
St. George	2729
Virginia	2965
Reilley Fraction	2846
Big Pine	2759
Gold Wedge	2847
Pinenut	2915
Mayflower	2759
Black Jack	2842
Joker Fraction	4052
Last Chance	2696
Stray Dog	2563
Jumping Jack	2756

These are all held under U. S. Patents.

GEOLOGY

Mr. H. G. Ferguson has written in great detail a description of the geology of the entire camp of Manhattan. This has been published as U. S. Geological Survey Bulletin No. 723, and the reader is referred to this for more detailed descriptions of the beds and intrusives, which is not within the scope of this report.

The ores of the Big Pine and associated claims occur in schists, shale and quartzite, in narrow veinlets from 1/8 to 1/2" thick; and these break free from the inclosing rock when

crushed. Ferguson reports that these lose their tendency to break free at depth; but inasmuch as some pits were opened to depths of 50 to 75 feet the writer feels that the depth of 50 feet assigned by him in calculating tonnage is an absolute minimum and that future pits opened will go to 100 feet.

ORE DEPOSIT

There are on the claims under consideration four ore zones approximately 1,000 feet long by 150 feet wide. These were used in figuring the tonnage previously mentioned. And the 124 samples referred to were taken from these ore zones and the dump.