1070 0002

(325)

Item 2

REPORT OF J.H. WEBER, GEOLOGIST

ON

NEVADA MOTHER LODE MINING CO.

At the request of A.F. Dotterer and his associates I went to Cherry Creek, Nevada to examine the Mother Lode Mine.

The mine is situated four miles northwest of Cherry Creek, and is reached by a first-class wagon road. The property consists of four claims.

FORMATION

The Formation is lime and shale, and the veins are on the contact between the lime and the shale. There is one Great Mother vein along this contact which crops out for miles, and at times it stands many feet above the country rock.

It is on this great vein most of the work has been done. There are shafts, pits and open cuts in many places showing ore in abundance. Also a very large cross cut tunnel was run for 1143 feet to tap the vein at 250 feet on the dip, as the trend of the vein is north and south, this tunnel was run east and west, so as to strike it at right angles.

After a thorough survey it has been found the tunnel must be run about 100 feet to strike the vein, if it keeps its present dip of 30 degrees west. At the point where the tunnel will intercept the vein, the surface shows the vein to be over 25 feet wide.

ORE

The ore is mostly silver and some lead, with a little gold, making an ideal concentration ore, and after concentration the tailings will yield to cyandation. The ore on the surface shows values from $5 to $250 per ton and some picked samples, many hundreds.

EQUIPMENT

The present equipment consists of a full set of drills, a compressor, engine, pipe, etc. to the face of the tunnel, tracks, cars, air pipe, another small gasoline engine to run the fan, and everything up-to-date with blacksmith outfit, etc. (At the present time, June 1948, only the tracks, car, and air pipe, and what remains of the engine, remain.) There are two small houses to man the men.

WATER AND TIMBER

There is sufficient water 3000 feet down the canyon to run a 50-100 ton mill if the water is reused, and in time, as development proceeds, more can be developed; already there is sufficient developed in the long tunnel for domestic use and to supply the gasoline engines.

The mountains above the mine are covered with plenty of timber, which adds greatly to the property.

SUGGESTIONS, ETC.

After a thorough examination of the property and a sampling of the ore, I would make the viz. suggestions:

In a canyon running southwest a deep gorge has been cut, the vein coming down to this canyon is all in massive limestone on the foot wall; when this great fissure was made along the shale and limestone, the least resistance was along this lime shale; at one time it was mud in a sea bottom, but the calcareous waters changed it to lime shale, or it would have been slate by metamorphism. In the tilting and bucking of the stratus when it was uplifted to a 30 degree west, the vein meeting the least resistance along this shale followed it, coming from the north southward at this canyon the shale turned westward at an acute angle, and the vein following the least resistance did the same; so it went westward instead of southward several hundred feet, and then it took its general course northward and southward again; but at this time it made a wonderful body of ore from 20-75 feet wide, and here I suggest to start a tunnel which if driven in 175 feet or even less, tens of thousands of tons of concentrating ore can be quarried out. The tunnel could be driven westward many hundreds feet in ore, and with machine drills could be quarried out for 50¢ per ton, and then dropped in the tunnel and trammed to the mouth of big tunnel. Also a drift could be driven northward on the big vein, and by driving this several hundred feet all in pay ore, then an upraise in the big tunnel, after it has been driven into the vein, could be made of about 365 feet, and by so doing sufficient ore would be developed to last a 100-ton mill 15-20 years.

I estimate it will cost merely $5,000 to run this 175-foot tunnel and drift on the vein to open this great body of pay ore.

This should be done at once. I took samples along a 50-foot face and 20 feet high, also samples of a pile of ore and over the dump (see assay certificate) and it averaged nearly $12 per ton.

A concentration test showed only 70 per cent of the silver saved, and 9 tons concentrated into one, and the concentrates assayed $62.36 in silver and gold.

In a mill at least 80-85 per cent will be saved, thus giving a concentrate of $75 and over. Remember, this is only on the surface. In 59 feet depth the values will increase and more concentrates per ton will come in, so one can figure on a concentrate going $100 per ton, especially when the concentrates will contain more lead, as you will see, there is no lead values in the assays.

To erect a 50-ton up-to-date concentration mill will cost less than $25,000 (ofttimes a mill can be bought at a great sacrifice which has only been used a few months.)

If the values increase and the amount concxntrates increase a concentrate of a $100 value is not overestimation and then there will be more concentrates; so one can calculate viz:

50 tons ov crude ore will make at least 7 tons of concentrates	
7 tons concentrates, $100 per ton	$700.00
To concentrate these 50 tons should not cost over per ton	2.50
50 tons, at $2.50 per ton	125.00
To mine 50 tons, 75 cents per ton	37.50
To haul 7 tons concentrates to depot $3.00 per ton	21.00
To smelt 7 tons, $5.00 per ton	35.00
To freight 7 tons to smelter, $3.00 per ton	21.00
Cost of 7 tons	$239.50
Value of 7 tons, $100 per ton	700.00
5 per cent of the silver values given by smelter	35.00
Net	$865.00
COST TO PRODUCE 7 tons concentrate	239.50
Profit per day	$625.50

In driving this 175 foot tunnel and drifting on the vein, no doubt much ore will be encountered which can be shipped and will pay a good profit.

The mill could be planned for in the spring. This should be erected at the mouth of the big tunnel, a pumping plant 1000 feet lower and about 3000 feet from the mouth of tunnel can be installed for less than $5,000. To haul the ore to the water would cost at least $37.50 per day, but the water can be pumped for about $10-$15 per day. To drive the big tunnel into the vein and cross cut the vein and raise and drift drifts will cost about $10,000-$12,000. If $50,000 were raised, an up-to-date milling plant could be installed, big tunnel extended across the vein, upraises made, thousands of feet of drifts run, pumping plant installed, more houses built, and a big paying dividend mine, which would pay for many years to come. If the company should decide to run the short tunnel (175 feet) and erect a short tram, install a 25-ton mill and add to this as the profits accrue, then $25,000 will be sufficient to pay at least $200 per day profit.

I calculate there is sufficient ore exposed that can be quarried by an open cut to last a 25-ton mill at least five years and more. The outlook is very flattering and the company should at once set to work and raise sufficient funds to finance this wonderful prospect. It has been my privilege to examine many thousands of prospects and mines, but I myst confess I was greatly surprised to find such a valuable prospect idle.

J.H. WEBER
Sheridan, Montana

October 12, 1911