REPORT OF THE DENVER CITY PROPERTY, SAGUACHE COUNTY, COLORADO

BY

THOMAS E. SCHWAB

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SAGUACHE COUNTY
H. S. Clark, Esq.,
Agent, Ianyon Zinc Co.,
Denver, Colo.

Dear Sir:—

I have examined the Denver City property, in accordance with your instructions. The report, submitted herewith, is made with special reference to your acquiring control of the property under your lease and option, and is not a complete report.

LOCATION

The Denver City comprises one full patented claim, 300 x 1500, and is located in Saguache County, about a 12 mile drive south of Gunnison City, Colorado. The Colorado and Southern R.R., and the D. & N.G. R.R. are both about 10 miles from the shaft, over good wagon roads. The town of Iris, now nearly deserted, is close to the property. The altitude is about 9,000 feet.

FORMATION.

The general geology I did not take the time to work up. The ore occurs in a chimney of altered and mineralized country rock, at the junction of several fracture planes, with a prominent bedding plane of what, for the present, I will term andesite. This latter formation dips west, with a nearly north and south strike, whilst the ore lies in streaks or shoots having a northeast and southwest trend.

The chimney is of very limited area on the third level, where the development is the most extensive. All the drifts and crosscuts soon
pass out of mineral into barren ground, and above the third level much altered country rock which is heavy and requires timbers to hold. From this, it will be evident that the ore does not appear to have but little lateral extent. Whilst there are small bunches of ore outside the main chimney, there are no indications of other large chimneys occurring.

The surface shows no traceable outcrop, but shows a capping of a granitic rock.

The fourth or bottom level, 176 feet deep on the incline, is in very hard unaltered ground.

COSTS.

Labor gets $3.00 per day of eight hours for miners.

Ore hauling to the railroad is worth $3.00 per ton. Freight to Denver is $3.00 per ton.

Coal at present brings $4.50 per ton for Crested Butte coking slack, at the mine. This cost could probably be reduced.

Timber and water are scarce. The mine makes but little water, probably not over 250 gallons per hour, which is hoisted.

IMPROVEMENTS.

The surface plant consists of a small single V-friction hoister, and a 30-H.P. vertical boiler. Both are too light for increased work, and would have to be replaced. The log shaft house is too open for work, except in summer.

The shaft is 4 x 8 in the clear, cribbed, and vertical to the second level.

THE ORE SHOWING.

Upon the first level at a depth of 86 feet the drift extends 35 feet north, and the same distance south of the shaft. In the end of the
north drift there is a small stope, not now accessible, which may have produced some zinc ores. Outside of this, there are only two or three streaks of a foot or two in width which show zinc ores in the south drift.

The second level, about 25 feet below the first, has but very limited development. It consists of a drift 30 feet in length to the south of the shaft. This drift shows no ore upon the east side, but the west side of its entire length is in a mineralized gangue rock, showing bunches of iron and copper pyrite, but with very little zinc blende. At the extreme end of this drift, however, there is a streak of 35 to 40 per cent zinc, from one to two feet in width.

At the second level the shaft assumes the dip of the formation, and the third level is opened at a depth of 156 feet from the surface. On this level is the principal development of the mine. The drifts extend for a distance of about 150 feet in a north and south direction, and 100 feet or more in an easterly and westerly direction. These workings disclose an ore chimney at the shaft of about 20 feet by 30 feet in size. Portions of this are simply mineralized silicious gangue, carrying in spots some copper pyrite. Occurring, however, in the chimney, are lenses of rather clean zinc blende. These zinc bodies do not show any persistence, cutting off abruptly against some dip, or merging into the adjoining rock. With the exception of a small stope near the end of the north drift, said to have carried some zinc ores, but now inaccessible, there is practically no zinc showing elsewhere on this level.

The fourth level, 40 feet below the third on the incline, is in very tight ground and shows but very little work. The north drift, about 25 feet in length, shows no ore. The south drift swings around to the east and the west of the shaft, and in the southeasterly breast shows from one to two feet of mixed iron pyrite and zinc blende. The other
breast shows a small bunch of zinc blende 2 1/2 feet thick, in the bottom of the level, but very small in the back. This ore is very hard and in very tight ground, and is the showing from which No. 51 sample was taken.

Upon the surface there are a few small ore dumps which have been kept separate from the waste. Two of these have been roasted, but in all they do not exceed 50 tons.

THE SAMPLES.

Samples were taken as follows:

No. 46, 9 feet across a portion of the ore chimney upon the third level, just north of the shaft.

No. 47, 5 feet adjoining the portion sampled by No. 46, on the south.

No. 48, 3 1/2 feet in width in breast of crosscut opposite the shaft, and apparently the west end of the same ore covered by No. 46 sample, about 10 feet from it.

No. 49, 4 feet ore streak showing in the back of south drift, third level, about 15 feet from shaft. This apparently does not extend further south.

No. 50, a selected sample from the west side of the second level south, and showing the product that could be made from the ore body by careful sorting.

No. 51, 2 1/2 feet across the bottom of ore showing in breast of south drift, fourth level.

The assay certificate showing the returns on the above samples, is appended hereto.

RECOMMENDATIONS.

From the foregoing, you will note the following as features of
First. That there is no strong showing of zincblend, until the third level is reached, and that the fourth level shows very little.

Second. That the ground surrounding the ore on the third level, and most of the ore itself, is so soft as to make it impossible to mine it cleanly.

Third. That it is very doubtful if other ore chimneys carrying zinc ores exist on the property.

Fourth. Owing to small lateral extent of the ore body, if it continues strong in depth, you would require to constantly push your developments down, at a steadily increasing cost per ton.

Fifth. That owing to the changes in character of the ore in short distances, there is no assurance that the zinc bodies now in sight could be followed in stoping.

The property is therefore not in shape to produce any definite tonnage of zinc ores, and it is not likely to become a large producer. I cannot advise you to take it up under your option.

Respectfully,

Mining Engineer.