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CONSOLIDATED CORTEZ SILVER MINES COMPANY

ADMINISTRATIVE REPORT

CONSOLIDATED CORTEZ SILVER MINES COMPANY

OFFICE OF THE CONSULTING ENGINEER
648 MILLS BUILDING

SAN FRANCISCO, CALIFORNIA

January, 1923

The President & Directors,
Consolidated Cortez Silver Mines Company,
New York City, New York.

Gentlemen:

Progress at your property since my last report of January 3 has been excellent. We have been very fortunate in having an open winter so far. Hauling of supplies and equipment has gone forward very rapidly and everything at the railroad has been cleaned up. All of the quarters and boarding houses have been put in commission, and this has enabled us to put on a total of 85 men to rush the work along.

MINE:

As you know in order to facilitate the operations underground, in the very great territory embraced by the Cortez company holdings, we deemed it very necessary to open out the Cage shaft, retimber it, and put in a hoisting engine and cage. This shaft will serve the mine through the vertical block from No. 1 tunnel to No. 7 tunnel, a distance of over 500 feet from which miles of drifts and crosscuts are driven at each section from 1 to 7. These drifts and cross-cuts open out many orebodies already exposed and ready for mining, and when the Cage shaft is finished, equipped and operating, we can place our men, air-pipes, rails, ore cars, machine drills and mining timber at any of these places and mine the ore with efficiency and dispatch, as well as to do the development work in which we are all so keenly interested. The ore produced in mining can be loaded into cars at any point, trammed to the Cage shaft and lowered to No. 1 tunnel in the Cage from where a short tram will land it to be dumped into the long ore pass from No. 1 tunnel to the main haulage at the Arctic level; the large cars and electric motor at the latter level taking it direct to the mill bins. As we progress with the mining work, we shall have an ore pass (upraise) driven from the top of the Arctic raise to connect with every level above No. 1 tunnel clear through to No. 7, and then the tramming of ore by hand will be reduced to a minimum, and it will not be necessary to lower it in the Cage,—thus saving considerable in working costs.

We are getting leasers at work gradually and expect to expand this department of our work right along. The benefit from leasing certain portions of a

mine have been fully demonstrated in many western mines and may be briefly stated as follows:

The very best class of miners are always anxious to lease or do contract work as it is the natural outlet for their superior skill and industry to bring them more remuneration. They will not only work much harder, but very much more efficiently on lease work than they do on company account or day's pay, and require the minimum of supervision. This personal initiative makes it possible for them to extract ore at a good profit from the narrow rich places, or from parts of a mine where the ground is caved, and where men on company account would either refuse to work as being dangerous, or would mix waste rock with ore until it was too low grade for a profit. The Cortez mine is particularly adapted to be worked in this manner; there are many wide and large orebodies where the company will operate working miners on day's pay under the close supervision of good shift bosses and a competent mine foreman. There are also many places where narrow streaks of very high grade ore exist and bunches of ore in limestone which must be taken down carefully and sorted free of low grade material. The leasing that was done before construction started showed clearly what could be done in this connection as ore from $300 to $600 per ton was produced by several leasers in just such places. Now that our mill will soon be operating, the silver, gold and lead in this lease ore can be recovered very much cheaper. The cost of hauling freight to smelter and smelter charges ran over $30 per ton on high grade ore whereas we can make a charge of approximately $8 to our leasers, saving them $22 on the cost per ton of marketing. This will enable them to make good money producing ore of say $50 grade, and will greatly increase the tonnage that can be had from this source.

It is quite evident from our figures that we can expect to make a profit of $16 per ton of lease ore produced and about $6 per man per day working on leases. It will be our endeavor to get in as many men as we can work, since all their operations will be confined to places where we could not make any money on day pay work.

MINE DEVELOPMENT:

Regarding mine development. I consider that we have excellent prospects of opening out entirely new and untouched bodies of high grade ore in following up the recommendations of our geologist, J. A. Burgess. There are big areas in your mine where no drifts, crosscuts, nor raises have penetrated. The great block of ground between Arctic tunnel and No. 1, 360 feet in vertical dimension, is certain to yield ore. The ore comes down strongly to No. 1 tunnel and we have already, with very limited work, found ore at the Arctic, and very fine ore. The possibility of extending the ore zone from the Ferguson area down along the limestone-quartzite contact is excellent. Just as soon as we finish our preparatory work

and can work efficiently, we will be able to lay out a definite development program, and there is no question about favorable results. Mr. Burgess' recommendations at Rochester resulted in our finding several entirely new veins, and a great deal of new ore in territory that did not present anything like the possibilties we have at Cortez, and in fact we have him come in every few months, review the work, and make new plans for development. Here we do 600 to 800 feet of work each month and have had splendid results from this system. We all feel confident that the same policy at Cortez should, in addition to the excellent showing of ore now existing, develop a new mine there with reasonable expectation of some spectacular ore disclosures.

POWER SYSTEM:

This job has made fine progress. All engines are set on foundations, building completed, and the generators are being installed. We are not only going to have a very fine power plant, but a very economical one to operate. At the present time, the 27 plus gravity fuel oil is selling at the lowest price it has touched for many years, and our figures show we shall generate all power used for milling, pumping water, compressed air, hoisting, and lights, at a total monthly cost of $2,815, allowing in this figure $400 per month to be accrued for spares and repairs. The power plant will be ready for duty when the mill is completed.

MILLING PLANT:

Progress has been very good on this job. The proportions of the extraction plant have grown as the flow sheet rounded out, and we have a big mill considering the tons per day to be handled, but with high silver and lead values as demonstrated for Cortez ores, it was not possible to put up a simple cyanide plant. The work is now going forward in such fine shape that we hope to have all the concrete walls, floors and foundations finished and the most of the building up by March first, after which time the equipment will go in very fast. Our water system is well ahead, and only pumps and a few tanks to erect for this. The entire organization is now focusing on completion of the mill at the very earliest date.

Trusting the above gives you all the information you wish to date, I remain

Sincerely yours,

C. D. KAEDING,
General Manager.