Rutherford Trail

Site 8:

The following is a description of the buildings which will give you an idea of what went on in each of the areas:

Georgetown Courier August 3 1918 p1 c5

Central Mines Open Ore Plant.

After a year's careful preparation the new ore treatment plant of the Colorado Central Mining company, is ready to ship concentrates to the smelters, the chief values in the same being silver and lead, both in demand at present, and at prices which compensate for the advance in overhead charges since August 1914, when the world war was projected by the misguided Kaiser. The plant under notice is of the modern concentration class, using tables and flotation units. The cost of the plant proper is $300,000, but preparation in the mines, the construction of one mile of railway connecting the mines and dumps with the mill, and other essential items, involve a total expenditure of $500,000 up to date. The location of the plant is a mile above Georgetown, on a good wagon road, over which auto trucks are used for delivery to the railroad cars.

In the rock house or preparation department of the mill, the capacity is 750 tons daily, while the mill proper can handle 350 tons of prepared material, the preliminary of concentration being from three to five tons into one. Blake crushers, two sets of rolls, roughing jigs and tepid water are used in preparing the dump material and the ore from the mines. The tepid water--an item not generally used in mills of this class--takes the clay from the surface of the dump rock, which is then mixed with fresh ore from the mines. The ore is crushed to about 25 mesh. Experiments in a small plant, conducted by the consulting Engineer, Edward S. Wiard [sic], who designed the plant, having determined this factor, as well as other items involved in the treatment scheme.

On two Empire and four Deister-Overstrom tables some 40 per cent of the silver lead values are taken out in the form of a desirable concentrate, ready for the smelter. The flotation cells are expected to collect an additional 50 per cent of the values, making 90 per cent all told--a very profitable extraction where the dump material is credited with from $4 to $6 per ton in silver and lead.

The size of the available dumps--which were created largely in the silver-lead period before 1893--is placed at 500,000 tons, while ore blocked out in the mines, added to the dump material, presents a cash possibility of $2,500,000 or 500 per cen on the expenditure up to date. The plant is furnished with electrical power and lights.

The main artery of that old-time bonanza, the big Colorado Central mine, will be the Equator tunnel, out of which all the ore will be brought and from the mouth of which a light railroad will run to the rock house, where the cars will be dumped by a special tipping device into large steel bins, of which there are three, each having a capacity of 250 tons. Beneath each of these bins a revolving steel plate twelve feet in diameter, is placed, upon which the ore from the bins is delivered automatically. Near the edge of each revolving plate is a plow that cuts off a ribbon of crude ore delivering it to a softening pit of warm water to remove clay and other solubles, from whence it is dragged by a traveling belt to a shaking grizzly with one-inch openings. From this it travels to the washing cylinder and out on to a steel traveling belt, from which the waste will be picked by hand, then to the trommels, the jogs and tables. The two gifts will be worked alternately, as they will be skimmed every forty minutes.

All the clean oversize ore is again conveyed back into the first steel bin and goes on thru the machinery a second time, the fines and the slimes being handled the first time and deposited on a through conveyor belt and taken into the main mill building for final treatment. The conveyor belt is 168 feet in length from center to center of the end pulleys.

There are eighty different flotation mills in Colorado districts, but in none of them is the preliminary handling of the ore and dump material so well provided for as in the Colorado Central plant, which seems to be the final form on this phase of a developing problem. It is likely, therefore, that a number of experts and mill men will find their way to Georgetown in the near future to see for themselves how the arrangement works out. The consulting engineer has few doubts on the subject. The size of the preparatory building is seventy-three by ninety feet, while that of the principal mill--where the concentrates are made--is 113 by 136 feet. Both buildings are erected on substantial concrete foundations, so that the machinery moves without perceptible jar. The tables stand on a reinforced concrete floor which facilitates good work. Ball mills are used for regrinding before the "tails" are passed to the flotation units and the flotation product is also retabled to get rid of excessive moisture. The ball mills are each driven by separate motors of fifty-horse power each and driven direct therefrom by Renoid silent chain drives.

The mill has been so designed as to eliminate shafting as much as possible, thereby conserving power and reducing breakage and shut downs to a minimum. It will also handle with equal success every kind and condition of ore from large dry ore to clayey slimes, containing lead, copper, zinc, iron, gold and silver.

Dr. Victor C. Alderson, president of the Colorado School of Mines, who is about to have prepared a circular on the application of the flotation process to Colorado ores and dump material made a careful inspection of the Colorado Central plant. He was accompanied by T. W. Chow, a member of the junior class, who took photographs and numerous notes. Chow's uncle is a general in the Manchurin branch of the Chinese army, and expects service with the allies in Siberia, where the United States will probably be represented by a division of Philippine troops, now fully equipped and ready for the transports.

The underground work being carried on by the Colorado Central company in their extensive claims is progressing in every way satisfactory to the management. The retimbering of the Marshall tunnel has been completed and the crosscut being driven to tap the main shaft from the Equator tunnel has less than 100 feet to go. When this is finished the real opening up of this famous old producer will be well under way, and there must be many large and rich ore bodies yet to be found in the virgin ground owned by the company.