

REPORT

-ON-

THE WALL STREET GOLD EXTRACTION COMPANY.

BOULDER, COUNTY.

For The Year 1902.

MINE MANAGER'S REPORT PAGE 35.

STATE BUREAU OF MINES

STATE OF COLORADO.

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REPORT OF THE WALL STREET GOLD EXTRACTION COMPANY.

The Wall Street Gold Extraction, organized under the laws of Colorado. Capital stock \$500,000. Preferred stock \$150,000, common stock \$350,000. Principal office, Denver, Colorado. Business office, Boston, Mass. President, J. A. Wilder, of Boston, Secretary and Treasurer, Thomas L. Nelson, of Boston. Organized to construct and operate a plant, under the Robinson and Greenawalt system, for the treatment of metalliferous ores on a custom basis, in Boulder County. Owns the Harrold and Courtland Mill sites and additional territory, Section twenty-one (21), Township one (1), N. R. seventytwo (72) West, Boulder County, Colorado. It has completed a large plant, at a cost of \$150,00, which is constructed upon ordinary lines, with the addition of improvements under the patents of Messrs. Robinson and Greenawalt. The process, briefly, is one of ordinary crushing, roasting and chlorination leaching. The former is accomplished by the ordinary method of rock breaker, rolls, and screens of the ordinary type. The dryers being of special make and consisting of perpendicular steel towers, with interior chamber perforated, into which the ore is elevated and dumped, and the waste heat from the boilers is introduced and penetrates the ore until it is thoroughly dried. The ore is then passed through Davis Iron Works rolls 16x42 and Jeffrey's Screens, reduced to 40 mesh, and finally conducted to a furnace with ordinary rabbling mechanism, having a 12 foot hearth, 125 feet long, gaseous fuel being used, which is generated by gas producers of the Greenawalt type.

The furnace is provided with dust chamber and water precipitating tower, into which the dust, fumes and gases are collected and precipitated, thus preventing the escape of values by volatilization. After roasting, the hot ore is conveyed into a sealed pit where it is cooled slowly and during the cooling process hot air and chlorine gas are introduced, under pressure, which penetrates the ore en masse and further digests it. After which it is elevated and conveyed into large open tanks with porous filter, and subjected to a chlorination leaching with a solvent which is manufactured by the electrolysis of salt solution on standard lines, and which, after percolating through the ore is returned to electric cells where the values which have been dissolved by the solution are precipitated out by electrolysis and collected and refined by ordinary methods. The solution is returned to the first set of cells, regenerated and used over again. The process being a continuous one and the solvent being constantly regenerated and kept to stand strength.

The following description will serve to give some idea of the size and character of the plant. The same will be in operation within 60 days, and have an immediate capacity of 125 tons per day, with a crushing capacity of 300 tons per day. It is hoped by this process to handle the low grade telluride and sulphide ores of Boulder County, which, at present, are not profitable on account of excessive transportation and treatment charges.

The accompanying illustration gives some idea of what the external appearance of the new mill will be.

The first large building shown is the leaching room and is 60x300 feet; the one in the rear, for precipitating, is 25x200 feet, the next one in the rear is the regenerating building, 20x150 feet. The furnace pit shown on the left of the cut is solid masonry, fifty feet square and seventy-five feet high, and incloses the cooling pit where the hot ores are prepared for the leaching.

The crushing capacity of the mill, 200 tons per day, is furnished by three sets of monster rolls 16x12 inches. The crusher weighs 36,000 pounds. The ore is dried in two steel towers fifty feet high and 12 feet in diameter. The whole plant is energized by 250 h.p. engine and includes a complete electric lighting and power plant, air compressors, blowers and other machinery. The sampling room is as complete as any in the State.

The upper and lower buildings are connected by the furnace and the furnace building which extends from the roll room to the pit, 175 feet. The distance from the crusher to the end of the leaching building is 600 feet. When finished the mill will be one of the most complete and up-to-date plants in the country.

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