

CALIFORNIA STATE MINING BUREAU.

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TENTH ANNUAL REPORT

OF THE

STATE MINERALOGIST,

FOR THE

YEAR ENDING DECEMBER 1, 1890.



SACRAMENTO:

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average of \$13 per ton, exclusive of sulphurets. Encouraged by the results obtained, the company contemplate various improvements on their property.

The present ten-stamp mill will be enlarged as soon as developments in the mine will enable the ore to be dropped instead of being raised; also, additional concentrators are to be added, and, as far as practicable, the entire machinery run by water. In July, the company's mill was run for eighteen days on \$8 and \$9 ore; in August, a sixteen days' run was made on \$13 ore; September's run for the same number of days showed a steady improvement in the quality of the ore. The concentrates, amounting to about two tons per month, of an average value of \$100 per ton, are shipped partly to the Sutter Creek Chlorination Works, and partly to the Selby Smelting Works, near San Francisco.

North of this property, situated on the Mother Lode or its adjuncts, are the following claims:

THE EQUATOR, SUPERIOR, MILLER, GRIFFITH, MANZANITA, ORIFLAMME, AND MATHINAS CREEK.

On all of these more or less work has been done during the past year; not on all of them, however, has the work been continuous.

The Mathinas Creek Mine has been opened by two tunnels, one hundred feet and three hundred feet long, respectively, exposing a vein of fair grade ore, containing 3 per cent of sulphurets. A Huntington mill belongs to the plant, but is not running at present. An early resumption of the work is talked of here.

On the Equator Claim a tunnel now in one thousand three hundred feet has crosscut three distinct gold-bearing veins at a depth of five hundred feet. They average from ten to thirty feet in thickness, and yield, by mill process, from \$8 to \$12 per ton. Each of these veins has been drifted on for a distance of one hundred feet. The large amount of water coming in at the face of the main tunnel, which is being pushed ahead, would seem to indicate proximity to another large vein. There is a good opportunity here to develop a low grade mine of considerable extent; enough ore is exposed at present to keep a small mill running over a year.

Two tunnels have been driven in the Superior Mine, the upper one two hundred and fifty feet, and the lower seven hundred and fifty feet in length, the latter attaining a vertical depth of one hundred and sixty feet. The pay shoot, intersected in this tunnel at a point two hundred feet from its mouth, varies in thickness from two to ten feet, and yields, in the ten-stamp mill of the company, an average of \$15 per ton, in gold. During the past year the mill has been changed from a steam to a water mill. Five thousand four hundred feet of eleven-inch pipe were required to bring the water on the ground.

The exploratory work on the Miller Mine, which is doing very little at present, consists of two shafts, each thirty-five feet deep, and a connecting tunnel one hundred and twenty-five feet in length. A body of good ore about three feet in thickness has been exposed.

On the Griffith Mine, opened by a shaft one hundred and fifty feet deep, a five-stamp mill run by water has been put up, but it has not been running nor has any work been done on the mine of late.

Into the Manzanita ground, which carries three parallel veins, a tunnel is being extended to cut them at a depth of one hundred and fifty feet.

On the Oriflamme a tunnel is being driven and a shaft put down; the tunnel has reached a length of three hundred and fifty feet. An ore body has been opened up here, but not yet cut through.

Coming on to Placerville, we find located in and about this town the extensive group of mines belonging to

THE PLACERVILLE GOLD QUARTZ MINING COMPANY,

Comprising the following claims, viz.: Pacific, Epley, Mammoth, Faraday, Henrietta, Van Hooker, Cross, Eureka, Rose, Chester, Ida, Oregon, and Oregon Extension. All are supposed to be on the Mother Lode, or the lateral belts running with it. Of these several claims, only the Pacific has been thoroughly exploited and equipped with reduction works; the remainder are mostly furnished with hoisting works, and all have had more or less work done on them. The ore extracted when worked gave good returns.

The leading mine in this group, situated with its plant in the town of Placerville, has been idle for a number of years. The English company to whom the property belongs has determined to recommence operations by deeper workings, for which purpose the requisite additional machinery has been put in place. This includes two air compressors, one for the drills and the other for hoisting. Three shifts have been put on to continue sinking the 700-foot shaft, another three hundred feet, after which drifts and crosscuts will be started at suitable intervals. The shaft follows the wall, which dips at an angle of 68 degrees to the east. A tunnel has been run in on the vein to intersect the shaft, which it reaches in five hundred feet, striking the shaft three hundred and twenty feet below the surface. The twenty-stamp water-power mill is to be started as quickly as ore developments warrant, and if thought necessary, it will have its stamping capacity increased. The Pacific was a large bullion producer in former days, and it is thought will become such again. If this effort proves at all remunerative, the company contemplate exploiting some of their other claims by a deep tunnel starting from the south bank of the South Fork of the American River, which would at the same time prove the Young Harmon, Old Harmon, and True Claims.

Crossing the South Fork and proceeding north, we find

THE BIG SANDY

In the porphyry belt to the east, and which has a width here of one hundred feet. A tunnel one hundred and fifty feet long has been driven in, connecting with a shaft sunk in the ore deposit to a depth of sixty feet. The ore-bearing material, a mixture of quartz, porphyry, spar, talc, etc., is broken out and dropped down the shaft into the cars standing in the tunnel below. Two men per day break enough ground to keep the ten-stamp mill running night and day. Eight men all told run the entire thing—six men in the mill, two at a time on eight-hour shifts, the other two working in the mine. This mixture of quartz, clay, and auriferous material generally yields in the mill \$1 25 to \$2 25 per ton, yet the production of bullion was more than sufficient to pay all expenses.