

*copy of*

# CALIFORNIA STATE MINING BUREAU.

WILLIAM IRELAN, JR., STATE MINERALOGIST.

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CONCORD, N. H.

# STATE MINERALOGIST.

FOR THE YEAR ENDING OCTOBER 1, 1888.



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hundred and forty feet long, and a shaft forty feet deep. Present exploration indicates a chimney about two hundred feet in length, and from one to ten feet in width. It is proposed to sink a two-compartment shaft, five and one half by ten feet in the clear. This location, made in 1880, is on the mother lode.

EQUATOR MINING COMPANY.

North of the Church Mine, in the Mud Springs Mining District, the Equator Mining Company owns twenty-nine locations and an agricultural patent to one hundred and seventy-two acres, all situated in the Diamond Springs Mining District, about two and one half miles southeast of the town of Diamond Springs, and about three miles southeast of El Dorado. The company's claims are situated on the belt of the mother lode, and consist of three parallel veins on the western side, aggregating eighteen hundred feet in width and three thousand feet in length, and on the eastern side twenty-six parallel locations, comprising three thousand feet in width by fifteen hundred feet in length. The course of the veins conforms to the general trend of the mother lode in this locality—a little west of north and south of east, with an easterly dip. The veins are mostly in black slate, and the diorite (greenstone) and black gouge are in the usual occurrence. The shoots have not all been explored. One is over two hundred and fifty feet long on the surface, showing a width of about three feet. There is one incline, one hundred and ten feet deep, and at the bottom is a drift in ore two hundred and fifty feet long. There are three other inclines, from ten to seventy-two feet deep, and two tunnels, running east and west, three hundred and five hundred feet, respectively, situated near the bed of Mathines Creek, which passes through the property at an altitude of about twelve hundred and fifty feet, as indicated by the aneroid. A substantial building midway between the tunnel mouths incloses an Ingersoll compressor and a four-foot Pelton wheel, which drives, under one hundred and fifty-foot pressure, two Ingersoll drilling machines at the face of each tunnel. Sixty-five miner's inches of water are required for this power. The water is free, however, for seven months in the year, the company having, at an expense of \$800, constructed about one hundred and eighty-eight rods of ditch, capable of conveying a volume of two hundred and fifty miner's inches of water. If it were required, water can be obtained by making proper connections with the Park Canal, affording a head at this point of about four hundred and fifty feet. Both tunnels are furnished throughout with twelve-pound "T" rails. Five hundred to seven hundred and fifty pounds of Safety Nitro powder, No. 2, are used monthly. Very little timber is required, but it can be obtained for \$20 per thousand. It is proposed to put up a twenty-stamp mill on the property.

MATHINES CREEK MINE.

About two and one half miles due north of the Church Mine is situated the Mathines Creek Mine, on which a five-stamp Huntington mill is in operation, crushing nine to ten tons of ore per day, using a No. 9 angle slot screen. The mill is run by a three-foot Knights wheel, under seventy-foot pressure, requiring forty-five miner's inches of water at a cost of 20 cents per inch. The mill is provided with an outside electroplate, two and one half by five feet in dimensions. The rock is said to contain about 3 per cent of sulphurets, but only thirty pounds per day are recovered, bur-lap being used for this purpose. The mine is worked by tunnels, one, one hundred feet in length, the other, three hundred; the walls are slate.