

Lodge has gradually increased in strength until now its membership is forty-seven. It is in a flourishing condition, and meets in the Methodist Episcopal Church. Present officers:—A. T. Kerr, W. C. T.; Miss C. M. Perry, W. V. T.; Mrs. Roville Gulclie, Recording Secretary; Miss Ida Hughes, Asst. Secretary; Mrs. B. O. Burrough, Financial Secretary; W. M. Woodward, Treasurer; Palmer Shaw, Marshal; Miss Ida Taylor, Dep. Marshal; Miss C. Clark, R. H. S.; Miss Olivia Coulter, L. H. S.; Miss Charlotte Weekes, Inside Guard; Houston Jones, Outside Guard; Miss Shaw, Organist; Charles Miller, Grand Lodge Deputy; F. J. Jacobs, P. W. C. T.; Mrs. M. Fraitas, Chaplain.

SAN RAFAEL LODGE, A. O. U. W., No. —.—This Lodge was instituted March 11, 1878, the Charter members being the original office-holders, who were:—George W. Beatty, P. M. W.; Edwin Gardner, M. W.; S. M. Augustine, Gen. For.; O. Collister, Guide; Charles S. Barney, Recorder; A. La Rock, Financier; C. E. Bartlett, Receiver; Frank Jacobs, Overseer; John Woods, Inner Watchman; James T. Stocker, Outer Watchman. The membership in good standing is now twenty-five, while the present officers are:—S. F. Barstow, P. M. W.; William F. Waite, M. W.; Thomas Hansen, General Foreman; Jacob Gardner, Guide; S. M. Augustine, Recorder and Medical Examiner; J. H. Leszinsky, Financier; H. Iverson, Receiver; Edward Eden, Overseer; James Duncan, Inner Watchman; James F. Stocker, Outer Watchman. The Lodge meets in the Methodist Church on the first and third Tuesday of each month.

SAN RAFAEL AND COAST RANGE MINES.—The following report will fully explain the probabilities, or rather, the possibilities of these mines, for we believe that their working has been suspended for a time at least.

SAN FRANCISCO, December 22, 1879.

*To the Directors of the San Rafael and Coast Range Mining Companies, No. 646 Market Street, San Francisco*—GENTLEMEN:—I have the pleasure to report to you, after having carefully examined the property of your respective companies, and obtained by information from others, much of interest to you in connection with them, that the mines are located in Marin county, about four miles from the town of San Rafael.

They lie contiguous to the line of the North Pacific Coast Railroad and the county road, east, and west from San Rafael runs nearly parallel to the general course of the outcroppings, which can be plainly seen to extend from near Fairfax station, on the above mentioned road, for about four miles, in a south eighty degrees west course.

The foot wall of syenite as well as the hanging wall, can be plainly seen at various points over the four miles, and show a very wide and true fissure, these walls being from two hundred and fifty to two hundred and seventy-

five feet apart. The croppings at many places over the entire distance are very heavy, and on the "San Rafael mine," where I measured them carefully, they stand boldly above the surrounding soil to a height of from eight to ten feet, and show a width above the ground of eighty-five feet. I took from these croppings about nine hundred pounds of the ore, obtaining it from various places on them, and as fair an average of the ore, as in my judgment could be selected; this I retained in my possession and sent it to this city, and had about seven hundred pounds of it crushed and properly sampled by Messrs. Mendheim & Hofmann; sample bottles under their seal being delivered to my order. These I have had assayed by a number of assayers, who have made the following returns:—

William Gardner reports by fire assay:—gold, twenty-five and one one-hundredths dollars; silver, ten and ninety-nine one-hundredths dollars; total thirty-six dollars. J. H. McCrorey reports by fire assay:—gold, eighty-four and thirty-three one-hundredths dollars; silver, twelve and twenty-eight one-hundredths dollars; total ninety-six and sixty-one one-hundredths dollars.

A vapor assay made by an entirely new discovery shows wonderful and startling results, which I need not refer to here, as any of the other assays shows sufficient gold to pay well for working the ore.

Upon the mines no work had been done beyond surveying for roads to the tunnel location, as well as surveying for a tunnel site, building a boarding-house for miners, and blacksmith's shop near the proposed tunnel. A road from the county road to the mouth of the tunnel, can be made at a very small expense, nearly the whole distance requiring but the clearing out of the growth of the underbrush to make it suitable for all the ordinary uses. A side-track from the main line of the North Pacific Coast Railroad can be easily made, requiring little grading or other work than laying the ties and rails upon the ground.

Timber, lumber and wood can be had at extremely low rates; the whole Russian river country being the general source of supply, though a large amount of wood can be obtained in the immediate vicinity of the mines.

Water in sufficient supply for large mills can be had immediately at the mines, and every facility for successfully working them can be secured at the very minimum of cost.

Before making any suggestions for the future working of these valuable mines, I will state that after a careful examination of them at and in the immediate vicinity of the point from which my samples were mostly obtained, I proceeded in a general westerly direction upon the croppings, which continue at intervals to the extreme western end of the claims, each claim embracing an area of six hundred feet in width by seven hundred and fifty feet in length, upon the course of the out-crop.

From the lowest point (at which I took the samples herein referred to) the surface of the ground rises very sharply and reaches a height, at the western end of the ground belonging to the "Coast Range Company," of some five hundred or six hundred feet above the railroad track. The land at the western end of the last mentioned claim falls very abruptly away, and at an angle of from forty to fifty degrees, opening a valley nearly two miles wide. All traces of the ledge are lost here, and do not appear again until the hills rise sharply on the opposite side of this valley.

I proceeded across this valley and found the same general character of ore, or of croppings; but giving lower assays, say about ten dollars per ton, and being more broken, but showing apparently as great a width of vein matter as the "San Rafael" or "Coast Range" mines.

On this side of the valley above referred to, the out-crop can be traced for about three thousand six hundred feet. The entire distance has been located, and four companies have been incorporated, but only one company, the San Geronimo, is, I believe, doing any work. On this mine many permanent improvements had been made. They have small steam hoisting works, and a one compartment shaft two hundred feet deep, from bottom of which a cross-cut has been run for two hundred feet, no walls having been found in that distance.

At about one hundred feet from the shaft, and after running most of that distance in black-spar, the ledge was struck, and for forty-two feet is a solid, continuous body of quartz crystals, cemented by lime rock, and also containing some feld-spar. This ore assays very rich in gold and silver, and gives promise of great value in the near future. The assays from this cross-cut, I am informed, are as follows: No. 1 gold, \$90.74; No. 1 silver, \$3.79; total, \$94.53. No. 2 gold, \$77.09; No. 2 silver, \$8.93; total, \$86.02.

Beyond this forty-two feet of ore, black-spar with streaks of quartz and limestone were found, and the head of the cross-cut was in such a formation at the time of my visit.

Since I visited the San Geronimo mine, which was made specially to examine the underground deposit of ore, I am informed that the company have started drifts north and south upon the vein, and that the ore is showing in the face of these drifts to be equally good with that found in the cross-cut, and that preparations are now being made to erect suitable machinery to work the ores.

The vein at the depth of two hundred feet may be considered remarkably strong, and the entire formation indicates that it will improve both in width and quality as depth is obtained.

No water of moment has been encountered in sinking the two hundred feet.

I have referred fully to the San Geronimo mine in this report, as it is the

only one upon which work has been done below the surface out-crop, and to show that the croppings over the entire distance are exactly of the same character, and that at the depth of two hundred feet the quality of the ore has greatly improved from that found at the surface, and that the same improvement may be reasonably expected when depth shall have been obtained in the mines of the "San Rafael" and "Coast Range" companies; and as the assays of the croppings on these last mentioned mines are much richer than the San Geronimo croppings, so we may look for proportionately richer ore at the depth of a few hundred feet in them.

For the development of your mines I should suggest the following:—

At a point yet to be determined, below the out-crop on the south side of them, a tunnel should be run into the hill, and when the ledge is struck, a cross-cut should be made to the hanging wall, and drifts upon the vein be started, both along the hanging and foot walls, which by the time they reach a point perpendicular from the first large croppings on the surface, will be at least one hundred feet below them.

While this work is being prosecuted, I should advise that immediately below the prominent croppings above referred to, that across the ledge an open face be made, and the ore taken out and piled up to be worked when required. This will give you a large amount of good ore, and the level ground made by this work will be available for future hoisting works, mills, etc.

The process for working the ore, I advise, should not at present be decided upon, as some important developments in that direction are now being made, which promise to revolutionize the present plan of amalgamation, and by the time you have your mine properly opened, and taken out a reserve of ore, these developments and improvements will be fully determined upon.

Enough is now known to enable me to say pretty positively that the improved manner of working gold ores, is particularly well adapted for the ores of the "San Rafael" or "Coast Range" mines.

In conclusion I can say that the out-look for the future of these mines, located as they are, convenient to everything necessary to work a mine cheaply, with the finest climate in the world, and with an out-crop of ore of wonderful richness, and in such large quantities, and, as shown in the San Geronimo mine, extending already two hundred feet deep, is very favorable, and as a prospective investment, where it all looks so nearly certain of success, I know of nothing equal to it. Yours respectfully,

CHAS. H. SWAIN, M. E.

SAN FRANCISCO, January 3, 1880.

*San Rafael and Coast Range Mining Companies*—GENTLEMEN:—There having been some difference of opinion among assayers and others, as to the value of the ores from your mines, and for the purpose of satisfying myself

before allowing my report upon them to be distributed, that they do contain gold and silver in large and paying quantities, I have assayed from one of the sample bottles referred to in my report, in two ways, with results as follows:—

No. 1—Treated with chemicals, and after being acted upon for sixteen hours, put into a strong fire and partially fused, after which a fire assay gave—gold, \$210.95; silver, \$5.65; total \$216.60.

No. 2—Treated direct from the sample bottles, with the use of no chemicals, and by an ordinary fire assay, gave—gold, \$60.27; silver, \$5.65; total \$65.92. Very truly yours,

CHAS. H. SWAIN.

