STATISTICS



OF

MINES AND MINING

IN THE STATES AND TERRITORIES

WEST OF THE ROCKY MOUNTAINS;

United States, Tressury Dept.

BEING THE FOURTH ANNUAL REPORT OF

(for 1871)

ROSSITER W. RAYMOND,

UNITED STATES COMMISSIONER OF MINING STATISTICS.

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1873.

fully, and erect fire as the Tarshish and hinery and process

me lode-here calle roximity, and which on, by a shaft on the op the rich ore of the 00 per ton; but the tement at about that thing has since been co company-have t failed to strike the await the develop south, known as the

on the Hercules lode eek, about 1,000 fee be Mountain, on the erica. Subsequently Esmeralda lode were ed in the summer of five years previously it and Silver Glance

strike the lode, in an 400 feet below the The tunnel is a sub rogressing at the rate opper ore was struck nd's thickness in the An inclined share eighteen inches wide cent., valued at the n for the silver. The mon center in Glob doubt that the vein in the limits of the eralda lode, and the Globe claim, and the a great distance. The fully equipped, will red yards below the saving the heavy ex addition to the main

The fact that there manufacture of sul pment in the Glob silver ores, and the

nire capital to make andinavian districts. or less opened. The as 1865, when it prowned by an English e ore. This company t, having been built reduction for profitthe modern improve m the Imperial, will ne 1,800 feet, start lodes of the district, e a productive prop-is the Mount Bullion egging away in the

iles below Bulliona a large body of low plying fifty tons per the impossibility of reducing that quality of ore profitably. The improvements in metallurgy of the past two years make this a valuable property. Mr. Thornton, the present owner, has placed one-half the mine on the London market at \$75,000 for a working capital, negotiations being carried on through an influential San Francisco house.

Though the mines of Alpine have been overshadowed by their near neighbor, the Comstock, upon which all the capital and influence of San Francisco that could be applied were profusely lavished, yet their developments thus far have proved them to contain ore of a better grade than ever was shown in the Comstock mines, even in those now worth tens of millions of dollars in the market. Nor have I any doubt but that Monitor contains silver lodes that will lead in extent and richness any now known in the mining regions of the Pacific. Where a thousand dollars have been expended in development here, a hundred times that amount have been invested in the Comstock.

In no part of California, and certainly not in Nevada, can be found the facilities for cheap exploitation of ore as here, with wood and water without limit.

Parallel with the silver lodes of the mineral belt, and often in close proximity to them, as in the Globe mine, are found copper-veins of fine quality. The Morning Star is situated two miles to the north, and east of Monitor, in the Great Mogul district. It was developed six or seven years ago, and some hundreds of tons of good copper ore raised; but at that time there was no method by which the ore could be profitably secured, or a market found for it. The ore is highly argentiferous. A tunnel of 1,000 feet intersects the lode; and a shaft, with hoisting-works, was completed two years ago. It is owned by a San Francisco company, who have let the mine lie idle for some time awaiting the developments elsewhere to open a method of profitable treatment

The Leviathan mine is about six miles northeasterly from Monitor. It was opened in 1864, as a gold and silver mine, the croppings being metamorphic sandstone, impregnated with red oxide of iron, resembling quartz. The tunnel at 350 feet found no gold or silver, and the mine was abandoned, the copper found instead having no value at the time. In 1869, Mr. Dorsett, an English gentleman, purchased the property, and has since worked it regularly for copper, having taken out some \$25,000 in value in the course of opening out the mine up to the present time. Two tunnels, 176 feet apart, have been run into the sandstone, which is over 200 feet in thickness, and a third is about to be started. There are from two thousand to three thousand tons in sight, growing better the further it is opened. The ore is a red oxide and carbonate, entirely free from sulphur; the latter mineral underlying the lode in a nearly pure crystalline form. The Leviathan is under the management of Professor W. T. Rickard,

now the assayer and metallurgist of the Tarshish.

The copper ore of the Globe mine is yellow sulphuret in the upper portion of the lode, changing to peacock in depth, and the latter giving way to a fine quality of antimonial, argentiferous; gray ore. Experts who have visited Alpine say the Globe copper is the finest they have ever seen on this coast. Its percentage is from 28 to 36 for the gray variety, and with depth increases in silver-bearing. Steam pumping and hoisting works were erected on the lode last fall. The recent large advance in the Eastern and European prices for metallic copper gives additional value to this vein, as

the facilities for reduction are of a superior character.

THE CENTRAL MINING REGION.

The central mining region of California contains the most productive and important districts in the State, both quartz and gravel, and embraces the counties of El Dorado, Placer, Nevada, Yuba, Sierra, and Butte. Within these counties are found the rich quartz mines of Grass Valley and Auburn, the deep placers of Yuba, Nevada, and Placer Counties, and the drift-diggings of Sierra County and of Forest Hill and

The country differs materially in its topographical and geological features from that described under the heading of "southern mines." The streams are larger, the mountains higher, and the canons deeper and more abrupt. The ancient channels are wider, and the detrital matter covers a larger area and is deeper. As in the southern mines, surface and river mining is no longer a source of profit for white men, and has been abandoned to the Chinese, who are yet found on some of the rivers mining with "long-tom" and rocker. Quartz mining has become the principal mining interest, while the deep placers have attracted the attention of capitalists, large tracts of valuable ground