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THE

COPPER RESOURCES

OF CALIFORNIA.

BY

LEWIS E. AUBURY,

State Mineralogist.

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ALPINE COUNTY.

Some of the occasional occurrences of copper along the higher portion of the Sierra Nevada range are to be noted in Alpine, a small elevated county which straddles the crest of the range and lies east of El Dorado, Amador, and Calaveras counties, and west of Mono County and the State of Nevada. It is remote from railroads, and its small population devotes its energies mainly to mining, stock-raising, and lumbering. Gold- and silver-bearing lodes are abundant, but the ores are largely base and the mining industry is in a backward state. Quite a number of important mines have been developed and operated, however. This remote region has frequently, but erroneously, been given the honor of possessing the first copper deposit discovered and opened in the State. This deposit was found in Hope Valley in 1855 by "Uncle Billy" Rogers. ore occurred in the form of a "chimney," presented a beautiful appearance, was rich in garnets, and attracted considerable attention for a brief time. Other deposits of better commercial value were later discovered and opened. Two have been noted.

Leviathan Mine.—Owned by D. Bari, of Silver Creek, California. The mine is located ten miles east of Markleeville. The nearest point to a railroad is Carson City, forty miles distant. There is a 400-foot tunnel tapping the ledge 250 feet below the outcrop; 200 feet below this tunnel another tunnel is in 700 feet. Both tunnels are connected by a winze. The ore occurs in kidneys in porphyry. About 300 tons of ore have been shipped to a smelter. The property is idle at present.

Stella Mine.—Located two and a half miles southwest of the Leviathan, and is owned by an English company. The mine has been operated for silver and copper. There is a 300foot shaft and hoisting apparatus. Water power is available. The mine is idle at present.

The Morning Star mine, an old mine in the Mogul district north of Markleeville, has recently been again productive. It is operated as a gold and silver property, but the ore carries a good deal of copper. One lot of 22 tons mined last year is reported to have yielded 17 per cent of copper, and \$32 in gold