CANDELARIA DISTRICT

The Candelaria district also known as the Columbus district, is in the Candelaria Mountains at an altitude of 5,665 feet above sea level, 22 miles south of Mina by automobile road. Silver veins were discovered here in 1863 by a party of Spaniards. The Northern Belle, the oldest and most productive mine, was located in 1864 and in the same year was acquired by Messrs. Bateman, Allen, and Holmes. Subsequently this property was abandoned, to be relocated in 1870 by A. J. Holmes. In 1873, a company was incorporated to work the Northern Belle property, and in the same year a 20-stamp mill and 3 White furnaces were erected at Belleville 8 miles from the mine. With the successful development of the Northern Belle property, attention was attracted to the district, and it became the most productive silver camp in Esmeralda County and one of the foremost in Nevada. The 20-stamp mill erected at Belleville was equipped with 10 pans and 6 settlers for treating the ore by the Washoe process (amalgamation in pans heated by steam).

In 1876, a second 20-stamp mill, equipped with 12 pans and 6 settlers, was erected by the Northern Belle Co. at Belleville. The two mills had a combined capacity of 120 tons of ore per day. Power was generated with steam, pine wood being used for fuel. An old report states that the two mills required 1,000 cords of pine wood per month. Other companies erected mills at Columbus and Sodaville. The value of the ore treated in the early days averaged from $45 to $60 per ton.

In 1883, the Holmes Mining Co., whose property adjoined the Northern Belle, sued the latter company for trespass and sought compensation for ore extracted from its ground. The court awarded the Holmes Mining Co. $360,000 damages, and the Northern Belle Mining Co. mine and mills were sold by the United States marshal in 1884 to the Holmes Mining Co.

As the bonanza ore of the early days became exhausted, the camp declined and fell into decay. The last important revival of activity in the district was in 1919, when the Candelaria Mines Co. was organized. This company was a consolidation of the most important mines, including the Argentum, Mount Diablo, and other properties of less importance.

In 1882, water was brought to Candelaria by gravity from the White Mountains. The pipe line has a diameter of 4 to 5 inches and is 27 miles long. It is still in serviceable condition.

From 1913 to 1918 about 125,000 tons of old tailings at Belleville were re-treated in a 120-ton cyanide plant.

The total production of the district in the early days is reported to have been $20,000,000. According to a report of the Mint,6/ by the end of

6/ Director of the Mint, Report for 1883, p. 508.

1883 the total amount of silver bullion aggregated $10,000,000, out of which about $2,000,000 had been paid as dividends.

From 1903 to the present time production has been in excess of $1,000,000.

Argentum Mining Co.

The Argentum Mining Co. property includes the Northern Belle and Holmes mines and other mineral acreage in the Candelaria district. Fred G. Gruby, 241 Sacramento Street, San Francisco, Calif., is the western representative of this company. In 1918, the Argentum holdings were leased to the Candelaria Mines Co. Lease was canceled in 1927 for failure to comply with its provisions. In 1922, the Candelaria Mines Co. erected a 300-ton cyanide plant, which operated at intervals until September 1925. A large proportion of the ore treated consisted of tailings and material from mine dumps. Considerable difficulty was encountered in the metallurgy. This mill has been dismantled.

Property is developed by the Northern Belle and Argentum shafts, the latter 1,365 feet deep, and many miles of underground workings.

According to Knopf7/ the rocks of the district consist of a steeply dipping series of cherts, argillites, and felsites intruded by peridotite or allied rock and quartz monzonite porphyry. Resting uncomformably on this group of older rocksis a series of Tertiary volcanics, mainly rhyolite, lavas, and tuffs capped in places by basalt flows.

The ore deposits are highly oxidized manganiferous silver veins mostly several hundred feet in length and a few feet wide, broken up by complex fissures. No silver minerals are visible, and the value of the ore can be determined only by assay. The amount of gold in the ore is of minor importance. The veins are fairly persistent and dip at high angles. The deepest workings are 1,365 feet vertically below surface, and at this depth water level has not been reached. There is said to be little hope at depth, either in grade or quantity of ore.

According to Fred G. Gruby, several reports on the property made by prominent engineers give estimates of ore reserves in excess of 200,000 tons and averaging 10 to 15 ounces in silver.

Secretary Lode Mines Co.

The Secretary Lode Mines Co. owns five claims in the Candelaria District between the Mount Diablo and Lucky Hill mines. In the fall of 1936 this mine was reopened under the direction of Mark G. Bradshaw of Tonopah. A carload of ore was shipped from the property in September 1936.

7/ Knopf, Adolph, The Candelaria Silver District, Nevada: U. S. Geol. Survey Bull. 735-A, 1922, 22 pp.

The property is developed by a 600-foot shaft and tunnels, which with other workings total about 1 1/2 miles. Equipment includes two Chicago pnuematic compressors and rock drills.

Turquoise and Variscite

Turquoise and variscite deposits were discovered in the Candelaria Mountains in 1908 by A. L. Dees and Edward Murphy. One deposit is several miles northwest of the deserted camp of Columbus and the other is 2 miles west of Rock Hill siding on the Southern Pacific R. R. between Redlich and Coaldale. These deposits have been worked intermittently for gem material when market conditions were favorable.

The production of gem material from these deposits is not a matter of record. According to Carl Reik, who until recently held turquoise claims near Columbus, more than 1,000 pounds of turquoise has been produced by him since 1916.

The Reik group of three claims was sold in 1936 to W. F. Godber, owner of the Western Gem and Jewel Co., 1639 Wooster St. Los Angeles, Calif., wholesale dealers in turquoise. This company uses approximately 25 pounds of turquoise per day for gem stones.

According to Godber, Nevada turquoise is the finest produced in the United States, and much of the material is sold in foreign countries, including England and India, for semiprecious gems.

The turquoise occurs in limestone and shale formation, principally as veinlets along joints or fissures. The veinlets range from knife-blade thickness to a maximum of 1/2 inch. The joints or fissures are quite local and can be traced only a few feet in any direction. The turquoise is closely associated with variscite, which is sometimes mistaken for turquoise.

In October 1936, three men were employed in mining the turquoise. Considerable patience is required because explosives cannot be used and the ground is fairly hard. According to Godber, the quality of the turquoise improves with the hardness of the enclosing rocks. Mining is done mainly in open-cuts, and three men can produce about 1 pound per day.

DOUBLE SPRINGS MARSH DISTRICT

Double Springs Marsh is about 8 miles east of Schurz, a station on the Mina Hazen branch of the Southern Pacific R. R. at the north end of Walker Lake.

The only mining activity on the marsh occurred about 1898, when the Occidental Alkali Co. produced a considerable amount of high-grade soda.

Double Springs Marsh is a typical dry-lake deposit formed by the evaporation of mineral-bearing waters derived from drainage from the surrounding