Sierra County, New Mexico, Vanadium Deposits.

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Mining World

October 29, 1910.

P536

(INCOMPLETE)

In the variety and magnitude of its mineral deposits, Sierra County, New Mexico, is undoubtedly one of the richest, if not the richest, districts in the territory. Lead, zinc, coal, copper, gold, silver, iron and manganese have been produced, and recently large deposits of vanadium have been uncovered.

In the past, the county was famous for the enormous production of silver from the Apache, Kingston and Lake Valley districts, and a large gold production from the Las Animas district, while the Caballos has produced considerable copper and some lead and coal. The Apache district is now producing silver and lead, and the largest gold property of Las Animas is now in active operation, making regular shipments of bullion and concentrates, but the mining interests of the county is now centered upon the vanadium mines.

Two deposits have been found in Sierra County, one in the Caballos district, on the eastern slope of the Sierra de los Caballos, and the other amid the foot-hills of the eastern slope of the Black Range in the Las Animas district. These properties have been carefully prospected and are now being opened up, and both managements are planning the erection of reduction plants and the production of vanadium pentoxide, the commercial form of vanadium, in large quantities.

The Vanadium Mines Co.s property is in the Caballos district and is now the scene of much activity, owing not only to the development work on the White Swan mine, but to the remodelling of the old lead mill, the erection of offices, laboratories and other buildings, and the installations of power lines.

The vanadium-bearing ore occurs in two parallel true fissure veins, lying about a quarter of a mile apart, and known as the Dewey and the White Swan. They run in a northeasterly by a southwesterly direction cutting across the limestone, and are between 300 and 400 feet in length. No development work has yet been done on the Dewey, save the sinking of two shafts, one 15 ft. and the other 50 ft. in depth. More attention has been paid to the White Swan, and the main shaft, equipped with a 40-hp. steam hoist, is now down 140 ft., with a level at 80 ft. some 150 ft. in length, run on the ore. Another level is just being started at the 140, and large masses of ore are being encountered.

For treatment, the ore will first be taken to the old lead mill, of 50 tons daily capacity, about 1½ miles distant, which is being remodelled and equipped with four new A & E slime tables, where it will be given a straight concentration. These concentrates will then be hauled to Cutter, 12 miles distant, where the company is now preparing to erect a $100,000 leaching plant, consisting of 10 leaching tanks, 2 evaporating furnaces and 1 calcining furnace, where the lead-sulphides will be separated and shipped to the paint manufacturers, and the vanadium pentoxide prepared. The daily capacity of this plant will be 2,000 lbs. of pentoxide. The situation of the reduction plant at Cutter is most fortunate, as this town is located on the main line of the Albuquerque and El Paso division of the Santa Fe, at the junction of the branch railroad to the Elephant Butte dam, which is the largest irrigation project yet attempted by the Reclamation Service, and excellent water is to be obtained in abundance at a depth of about 100 feet.

The various buildings and offices of the company are connected by telephone lines, and electric power, lights and water are supplied by a power plant situated about 5 miles east of the mine, on the edge of the Jornada del Muerto, where are three excellent 300 ft. wells. Two 125-hp. horizontal tubular boilers have been installed to operate a 200-hp. Monarch Corliss engine, direct connected with a 110-kwt. A. C. generator, which is to supply all electric power. Water is pumped to the various parts of the works by a 12 by 4 by 12 steam pump.

So far as can be learned, the entire (due to an error in printing, the report ends at this point).