Pershing Co. 3070 0052
S 33, 26, 27, 24
34N, 34E
Nevada-Massachusetts

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Item 54

Tungsten deposits in the Mill City mining district were discovered in 1917. In 1918, two 125-ton gravity-type concentrators were erected by the Pacific Tungsten Co., and the Nevada-Humboldt Tungsten Mines Co. A pumping plant about 4 miles east of Tungsten, was installed by the 2 companies on the Humboldt River, and a supply pipeline laid from this plant to the mills. An electric transmission line, also jointly owned by the companies mentioned, was extended from Oreana to the mines. The low price offered for tungsten concentrates in 1919 forced suspension of operations. The properties were inactive until 1924.

The Nevada-Massachusetts Co. Inc., organized in 1924, purchased the Pacific Tungsten Co. The Humboldt tungsten mine was acquired the following year. Operations began in May 1925 and have been continuous except for a short period in 1932 and from the last of June 1958 to the present.

The Nevada-Massachusetts area is underlain by metamorphosed Triassic sediments over 4,000 feet thick. The area has been cut in various directions by dikes of granodiorite, aplite, quartzdiorite, and andesite. The Triassic beds trend N. 10° to 30° E. with dips of 60° to 70° W. A mass of granodiorite, about 2,500 wide to 3,000 feet long in surface dimension, covers the central part of the ditrict. This igneous mass probably was the source of the tungsten-bearing solutions, and that contact metamorphism of the adjacent limestone beds resulted in the formation of scheelite-bearing tactite bodies.

The more highly metamorphosed scheelite-bearing beds are distinguished by their abundance of garnet and epidote. The beds are known locally, from east to west, as the East, East-West, Sutton, Humboldt, Springer, Stank,

USBM Unpubl. data, 1963

Yellow-Scheelite, Keyes, Summit, Hard Luck George, and West Beds as shown in figure 1.

FIGURE 1. - Topographic and Geologic Map, Nevada-Massachusetts Co.

The scheelite occurs as crystals ranging in size from a pin-head to several inches in diameter. Minor constituents in the ore are pyrite, chalcopyrite, molybdenite, and arsenopyrite. The gangue minerals are silicates of lime, magnesia, and iron, of which garnet and epidote are the most abundant.

The property has been developed by 2 inclined shafts--Stank and Humboldt. The shafts have been sunk to depths of 1,300 and 1,850 feet, respectively, with levels at 100 feet intervals. The mineralized beds were mined by shrinkage stopes because the dip was favorable and a minimum of support was necessary. In recent years, a considerable tonnage of ore was mined from surface pits.

During peak production, mining was at the rate of 600 tons of ore a day. The ore averaged about 0.5 percent WO_3. The ore reserves are sufficient to supply this rate of production for several years. The property was shut down in 1956, and the surface plant and mill sold in 1962.