

## HOOKER DISTRICT

## LOCATION

The Hooker district is in the west-central part of the Selenite Range, about 15 miles southeast of Gerlach and approximately 2.7 miles east of State Route 447. All the mines and prospects can be located on the Kumiva Peak 15 minute topographic sheet.

## HISTORY

The following data is from Nevada Bureau of Mines and Geology Bulletin 89: "The gypsum deposits in the central Selenite Range were the first commodity discovered in the Hooker district. ...Gypsum claims were first patented between 1910 and 1916. In 1922 the Pacific Portland Cement Co. began construction of a crushing and calcining plant at what is now Empire, 3 miles south of Gerlach. A 5-mile aerial tramway was built to connect the Empire mill with the gypsum quarry. The property was acquired by U.S. Gypsum Co. in 1948 and has been continually mined to the present. Production of gypsum by Pacific Portland Cement Co. from 1927 to 1940 totals 1,070,519 tons... . Production of gypsum by U.S. Gypsum Co. from 1948 through 1970 totals 4,980,912 tons." Production from 1971 to the present is not known.

"The deposit was developed by open-pit mining methods, and a primary crushing station was constructed to feed minus 5-inch rock to the tramline. U.S. Gypsum Co. added a gypsum-board plant to the operations at Empire. ....Five principal products are made: gypsum plaster, wall board, plaster board, land plaster, and crushed gypsum. ...."

"Tungsten deposits were first located in the Selenite Range in 1941 by various prospectors working in different parts of the range. Apparently all the known tungsten deposits were discovered that year. Between 1941 and 1957 the Stormy Day Mine, the most productive tungsten mine in the district, produced 19,523 tons of tungsten ore averaging 0.66 percent  $WO_3$ . The mine was initially developed during World War II and underwent extensive exploration and development starting in 1952. The Thrasher Mine and the Thrabert claims adjoining the Stormy Day Mine on the north were also developed between 1941 and 1957." Production from these properties has been quite small.

## GEOLOGIC SETTING

"The Selenite Range is underlain by metamorphic volcanic rocks of Late Permian age and sedimentary rocks of Triassic and Jurassic age that have been intruded by Cretaceous granodiorite. Locally the Paleozoic and Mesozoic rocks are capped by volcanic and sedimentary rocks of Tertiary and Quaternary age. All the commodities mined occur in the Mesozoic metasedimentary rocks."

"The metasedimentary rocks consist marble, coarsely crystalline dolomite, calc-silicate hornfels, and schist. The rocks strike northward

and dip steeply to the west. ....Apophyses of the granodiorite extend several hundred feet into the metasedimentary rocks as dikes and sills."

"Tactite lenses have been formed mainly in the metasedimentary rocks 10 to 25 feet from the contact with the granodiorite. The main mineralized zone is 15 to more than 20 feet wide and consists of alternating, steeply dipping layers of scheelite-bearing tactite separated by layers of barren tactite, calc-silicate hornfels, or silicated limestone. ...."

## ORE DEPOSITS

Only two commodities have ever been mined from the district — gypsum and tungsten. Nothing further will be said about the gypsum deposits, other than what has been said in the history section. For a little additional information on these deposits the reader is referred to Nevada Bureau of Mines and Geology Bulletin 70 and the discussion on gypsum by Papke.

The Stormy Day Mine is the largest producer of tungsten in the district. It is located on the west side of the Selenite Range about 18 miles south of Gerlach. It was discovered in late 1941 and was first explored by small adits and test pits along the outcrop zone for about 3 miles. The property was leased in 1953-54 and the party concentrated exploration efforts on the south end of the deposit. Part of the funds for this work came from the government sponsored DMEA program. Several other individuals and mining companies leased the property for short periods up until 1957. Since this time there has apparently been very little activity on the property. Production through 1956 amounted to about 20,000 tons of ore which produced 6,819 units of  $WO_3$ . Grade of the ore ran from 0.6% to 1.0%  $WO_3$ . What production, if any, there has been since 1956 is not known. There are about 2,000 feet of workings consisting of 4 levels, crosscuts and drifts. Levels are in part connected by stopes.

The mine area is underlain by metasedimentary rocks of Triassic and Jurassic age intruded by granodiorite of Cretaceous age. Scheelite occurs in tactite along the limestone-granodiorite contact. The tactite consists of a coarse-grained aggregate of garnet, epidote, pyroxene, quartz, and accessory pyrite, pyrrhotite, chalcopyrite, molybdenite, and powellite. The ore bodies mined occurred along a strike length of 750 feet, varied from 1 to 15 feet in width, and extended down a dip of  $50^\circ$  to  $70^\circ$  from the surface to 225 feet. Diamond drilling in 1953 indicated that ore extended at least 100 feet below the lowest adit level. Whether or not this ore was ever mined is not known. Mining was by shrinkage-stope methods.

The only other producing tungsten mine in the district is the Jeakins Mine (Thrabert Mine). The mine is located about 15 miles south of Gerlach on the west side of the Selenite Range. It joins the Stormy Day Mine to the south. The deposit was discovered in 1941 with intermittent work done over a period of years, but the only recorded production was in 1968 when 45 units of  $WO_3$  were produced. Mine workings consist of two crosscut adits and several open cuts and pits along the "granite"-limestone contact.

Scheelite occurs in a narrow tactite zone, from 2 to 5 feet wide, along about 200 feet of the contact between calcareous metasediments and the granodiorite. The bedding in the metasediments strikes north or northeast and dips  $60^\circ$  to  $80^\circ$  west. The intrusive contact parallels the

bedding in general but locally tongues of "granite" cut across the beds. Grades range from 0.05% to 0.5%  $WO_3$ . The ore shipped in 1968 contained about 0.7%  $WO_3$  but is thought to have been hand sorted.

#### SELECTED REFERENCES

- Bonham, H. F., and Papke, K. G. (1969) Geology and mineral deposits of Washoe and Storey Counties, Nevada: NBMG Bull. 70, p. 119-120.
- Johnson, A. C., and Benson, W. T. (1963) Tungsten resources of Nevada: U.S. Bur. of Mines unpublished data.
- Johnson, M. G. (1977) Geology and mineral deposits of Pershing County, Nevada: NBMG Bull. 89, p. 58-59.
- Stager, H. K. (in prep) Tungsten deposits in Nevada: NBMG Bull.