A number of tungsten prospects occur at elevations of 6,000 to 7,000 feet in the hills west of Teels March 4 to 8 miles southwest of the deserted town of Marietta, in T. 4 N., R. 32 E., Hawthorne quadrangle. The unimproved road from Marietta to Huntoon Valley passes near the prospects 8 miles west of Marietta.

In September 1942, C. W. Fletcher, Frank Watkins, and associates located 21 claims covering the known tungsten occurrences. These claims were named, from east to west, the Defender, Pine Crow, Vitamine, and Denham's Dump groups. Tungsten mineralization was found in several bodies of scheelite-bearing tactite, and in a small, high-grade scheelite-wolframite vein. Only one of the occurrences, the Defender, was reasonably well exposed by nature; the others were mantled by alluvium and slide rock, and exposed only by trenching.

The pre-Tertiary rocks of the area are a series of folded and metamorphosed sedimentary rocks invaded by granite. The metamorphic rocks are mostly sandstone and conglomerate, but also include some limestone and a feldspar-epidote-amphibole rock with a conglomeratic texture. According to Muller and Ferguson[1], these rocks are a part

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[1] Muller, S. W., and Ferguson, H. G., Mesozoic stratigraphy of the Hawthorne and Tonopah quadrangles, Nevada: Bull. Geol. Soc. Am., vol. 50, pp. 1573-1624, 1939. (no. 10,)

of the Dunlap formation of lower Jurassic age.

The tungsten occurrences are along the north and east edge of the metamorphic rocks at or near the granite contact. They lie in an eastward-trending belt nearly 3 miles long that includes the only limestone seen in the area. The limestone beds are thin and lenticular, and the ore bodies that replace them are probably similar in character.

The tungsten content of the tactite bodies is in general low, ranging in the mineralized portions from 0.2 to 1.0 percent of WO_3. The scheelite contains considerable molybdenum.

Defender

The Defender prospect is at the east end of the tungsten belt on a body of dense garnet tactite 240 feet long and 20 to 40 feet thick (fig. 123), bounded by granite on the north and east, by horn-

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No Fig. 123. Geologic map and section of the Defender prospect, Marietta district, Mineral County, Nevada.

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fels on the south and west. The tactite dips 30° - 45° SW., and is

exposed to a depth of 30 feet by erosion.

Scheelite is irregularly distributed throughout the tactite with an average content of about 0.2 percent of WO_3. Although portions of the rock contain 0.5 percent or more, the body had not been adequately sampled in 1943 and it was not known what grade of material could be produced by selective mining.

Dough God

The Dough God prospect is opened by a surface cut and an adit 90 feet long, driven along the strike of the ore zone (fig. 124).

No Fig. 124. Geologic map and section of the Dough God prospect, Marietta district, Mineral County, Nevada.

A tactite bed averaging 2 feet thick, inclined 42° SE., lies against hornfels on the footwall of a bed of marble 10 to 20 feet thick. A parallel bed of marble and tactite, containing 1 foot of ore, is exposed 25 feet north of the main body in a surface cut, and similar

zones might lie still farther toward the granite, which is exposed several hundred feet north.

The tactite in the adit and surface cuts is 80 feet long and pinches out at both ends. It contains fine-grained scheelite throughout and averages about 1 percent of WO_3 as shown by assays and mill tests. Parts of the garnet tactite contain abundant fluorite.

Pine Crow

The Pine Crow No. 1 prospect is one-half mile west of the Dough God. Scheelite-bearing tactite, in a body about 100 feet long and 5 feet wide, is exposed in a number of trenches and pits. The tactite is interbedded with hornfels that strikes in the same direction as the beds at the Dough God prospect, but dips at flatter and more variable angles. The rock contains more powellite than the Dough God ore, and the grade is lower.

A vein containing both wolframite and scheelite is exposed a few

hundred feet northwest of the Pine Crow No. 1 prospect. The vein occupies a steep, westdipping fault that strikes northerly at right angles to the tactite bodies in the main tungsten belt. Granite is the footwall of the vein, metamorphic rocks the hanging wall.

The vein consists of 5 feet of gouge and breccia resting on 6 inches of quartz on the granite footwall. It contains high-grade streaks of scheelite and wolframite, both in the quartz and as nodules in the gouge. The quartz contains small crystals of light-blue beryl along the granite wall, and some bismutosphaerite after bismuthinite.

The vein is opened by several pits for 60 feet along the outcrop. The high-grade streak, only a few feet long, was being dug out in 1943 in the hope of getting a few tons of sorted ore containing 10 to 20 percent of WO_3.