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Marker George — Rye Patch Dist.

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Item 18

The Marker George patented claim is at the west front of the Humboldt Range about 0.5 mile south of Rocky Canyon, Lovelock quadrangle, and adjoins the Oreana tungsten mine on the north. In 1944, the claim was owned by George Stoker. In 1941-42, the Oreana Extension Co. (C. A. Wagner, president, and C. A. Michaels, secretary-treasurer) explored the property by numerous trenches and 1,200 feet of adits and raises. In 1942-43, the claim was leased to W. M. Cooney.

Scheelite occurs sporadically as rich streaks in 5 pegmatite dikes that range in thickness from a half inch to 10 inches and average about 4 inches. For the most part, the dikes consist of quartz and feldspar, or of quartz alone, but locally they contain scheelite, blue beryl, or black tourmaline. Although the entire width of a dike may in places be scheelite, the streaks do not extend more than a few feet in any direction.

The wall rocks of the dikes are interbedded limestone and hornfels that strike northwest and dip 20° - 45° NE. The dikes also strike NW., but dip 60° - 80° NE., and cut across the beds. The

best scheelite mineralization appears to be where the dikes cross the contact between hornfels and limestone.

Oreana

The Oreana tungsten mine (formerly known also as the Gordon mine) is at the west front of the Humboldt Range between Wright Canyon and Rocky Canyon, in sec. 3, T. 29 N., R. 33 E., Lovelock quadrangle. It is 6 miles northeast of Oreana and 3.5 miles southeast of Rye Patch. The original discovery was made in 1934. Shortly afterward, Rare Metals Corporation purchased the property, and operated continuously from 1935 to 1942. Production during this period was 17,029 tons of sorted ore treated at the Toulon mill with a yield of 310 tons of concentrate (approximately 18,600 units of WO_3). The geology of the deposit was described by Kerr[1].

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[1] Kerr, P. F., Tungsten mineralization at Oreana, Nevada: Econ. Geol., vol. 33, no. 4, pp. 390-427, 1938.

In the vicinity of the tungsten occurrences, limestone of the Triassic Star Peak formation strikes northwest, dips 25° - 35° SW., and is invaded by several sill-like masses of metadiorite(fig. 153).

Fig. 153. Geologic map of the vicinity of the Oreana mine, Pershing County, Nevada.

Scheelite is found in narrow pegmatite dikes, and in irregular pegmatite pods, both of which lie in the metadiorite country rock. Two major, steeply-dipping or vertical pegmatite dikes and a number of minor ones cut through the metadiorite and associated aplite dikes, but they die out in the limestone that lies both below and above the metadiorite. Scheelite in these dikes is found only near the lower contact between limestone and metadiorite, and extends upward perhaps 50 feet above this contact. Scheelite is also found in a number of lenticular pegmatite pods along this lower contact. The arrangement of the pods is linear, roughly in the same direction as the pegmatite dikes, but no direct connection was found between the

dikes and the lenses along the contact. It appears that the mineralizing solutions may have travelled upward along this contact, and that the ultimate feeder channels are unknown.

The pegmatite dikes range in thickness from a few inches to 5 feet. They consist dominantly of quartz, fluorite, oligoclase, albite, beryl, scheelite, and phlogopite. These minerals were distributed very erratically through the pegmatites, portions of which were nearly solid scheelite, fluorite, or quartz. In the eastern one of the 2 main pegmatite dikes, at the original discovery where ore cropped out, one stretch of 100 feet yielded high-grade scheelite ore that was hand-sorted and shipped without further concentration.

Beryl was a common constituent of ore mined from the vertical dikes, but was less abundant in the lenses of pegmatite along the contact. The beryl crystals, pale green in color, were for the most part small, but ranged from microscopic size to crystals almost an inch thick and 4 inches long. The quantity of beryl present was in

no place sufficient to constitute beryllium ore, and the mill tailings from the tungsten ore treated contained only about 0.1 percent of BeO.

The Oreana mine was opened by nearly a mile of drifts and cross-cuts on 8 levels connected by raises and winzes with the main adit (figs. 154 and 155). The deepest workings were 235 feet beneath the

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✓ Fig. 154. Geologic map of workings in the Oreana mine, Pershing County, Nevada.

No Fig. 155. Geologic section and projection of the Oreana mine, Pershing County, Nevada.

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surface. At least 4 dikes were followed, but only 2 of them, plus numerous lenses along the contact, contained substantial ore bodies. The west dike was opened for a strike length of 1,120 feet, and yielded a large part of the ore produced.

Panther Canyon

The Panther Canyon prospect is on the north side of Panther Canyon near the mouth, 2.5 miles east of Rye Patch, in sec. 23, T. 30 N., R. 33 E., Lovelock quadrangle. In 1942, the property was

held by Fred Johnson, mine foreman for Rare Metals Corporation. Scheelite is found in several thin, north-dipping quartz veins that lie parallel to bedding in the limestone country rock. The largest of the veins is one foot wide, extends for 400 feet on the surface, and contains scheelite and a little colorless beryl irregularly distributed through the vein. The average tungsten content is about 0.5 percent of WO_3, and ore containing one percent can be sorted. The vein was prospected by a short adit and a 75-foot inclined shaft. A second vein, 300 feet south and 100 feet lower, is 6 inches wide, contains about 0.5 percent of WO_3, and is opened by 2 short adits. Still lower on the hill, a crosscut adit was driven 350 feet to tap the 2 veins at depth. A number of 1 to 6 inch quartz stringers containing scheelite were found in this adit, which passes beneath the south surface vein. The projected position of the larger north vein is still 350 feet beyond the face of the adit.

According to Vitaliano[1], small amounts of scheelite are found

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[1] Vitaliano, C. J., Contact metamorphism at Rye Patch, Nevada: Geol. Soc. Am. Bull., vol. 55, no. 8, pp. 936, 940, 1944.

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in tactite about a half mile southeast of the Panther Canyon prospect. The tactite borders a small body of quartz monzonite intrusive into limestone.