

# GEOLOGY

By Dale Russell

## Gold & Silver in Oregon Myrtle Creek Area

**Location:** The Myrtle Creek area lies east & northeast of the town of Myrtle Creek, in the drainage areas of North & South Myrtle Creeks. Known areas of mineralization are in T. 28 S., R. 4W., and T 29 S., R 3W. The area is general mountainous, with a well-developed drainage pattern. Most of the streams flow in either a southerly or a southwesterly direction. Elevations range from about 900 feet in the stream valleys to a little more than 3000 feet on the higher ridges & buttes. White Rock, a prominent feature composed of Western Cascades volcanic rock lying just east of the area, is 4019 feet high. Access roads follow valleys of the principal streams, and spur logging roads extend into the hills.

**Geology & Mineralization:** The geology of the Myrtle Creek area was originally mapped by Diller (1898), & was reinterpreted on the basis of subsequent work in this & adjacent regions by Diller & Kay (1924) and by Wells & Peck (1961). The oldest rocks are sediments & volcanics of the Dothan, Rogue, and Galice Formations. These rocks, mapped as “metagabbro” in the Roseburg quadrangle by Diller (1898), are in part altered to gneiss & have been complexly intruded by diorites, gabbros, and dacites. They occupy the drainage areas of North & South Myrtle Creeks. Rocks of the Myrtle Group, principally conglomerates & sandstones of the Riddle Formation, underlie the area around the town of Myrtle Creek & extend to the northeast about 5 miles. A narrow northeast-trending band of serpentinite from a quarter to a mile wide lies along the northwestern boundary of the area in the vicinity of Dodson & Brushy Buttes. Other small bodies of serpentinite are situated to the northeast along this same general trend. Wells & Peck (1961) map three small bodies of diorite & related intrusives in the Myrtle Creek area: one in the vicinity of Buck Fork, one near Frozen Creek, and the third on a ridge between the branches of Lewis Creek. The Buck Fork, & Lewis Creek bodies were mapped by Diller as “dacitic rocks (generally conspicuously porphyritic).” Mineralization in the northern portion of the area is in part localized in shear zones within & around the serpentinite bodies near Brushy & Dodson Buttes. These zones contain some chalcopyrite, pyrite, and secondary copper carbonates with limonite. Some placer gold has probably been derived by weathering & erosion of these deposits. The bulk of the area in which mineralization occurs is underlain by the rocks mapped as “metagabbro” by Diller, who described them as having a texture like granite, with an original mineral composition of plagioclase feldspar & lime-soda pyroxene, which is largely altered to hornblende or chlorite. The feldspar is altered in part to an aggregate of quartz, muscovite, epidote, and kaolin. Mineralization at the Chieftain & Continental lode mines on South Myrtle Creek occurs in a quartz vein in the “metagabbro.” Diller (1898) believed the bulk of placer gold mined on tributaries of North Myrtle Creek was derived from numerous small quartz veins in the “metagabbro.” He reports that nuggets show little rounding & are generally attached to pieces of vein quartz. The gold occurs both in gravels of the stream valleys & on slopes of hills in the decomposed rock.

**History & Production:** Diller (1898) reported that placer mining had been active during the rainy seasons for many years. Principally on Lee Creek & Buck Fork of upper North Myrtle Creek, and he estimated placer production to 1898 at \$150,000. Some seasonal placer mining continued to about 1942. The two principal lode mines of the area (Chieftain & Continental) were apparently discovered shortly after Diller’s work in the area. They were being worked during the early 1900’s. Each of these mines is believed to have had a production of about \$100,000.