

Minerals and Geology of the Weyerhauser Copper Mine, near Gordon, Douglass County, Wisconsin

Through the years the dream of striking rich native copper deposits in Wisconsin similar to those of the Keweenaw Peninsula in Michigan has spurred prospectors. A number of small mines and prospects have been developed, but none have been economic successes. One of the more ambitious mining ventures was Weyerhauser Mine located between Gordon and Hayward in northern Wisconsin. This site is still accessible and provides some interesting mineral collecting.

The Weyerhauser Mine consists of a series of shafts and small dumps in the NW 1/4SE 1/4Sec. 12 (Shafts #1, #2 and #3) and in the SW 1/4 SW 1/4 Sec. 11 (the F Shaft) T. 43N. R.10W. Mine symbols mark the site of Shaft #1 and Shaft F on the Chittamo 7 1/2' topographic map, which should be consulted by people wishing to more easily find the mines. The main dump and shafts #2 and #3 are located just southwest of Shaft #1 on the south side of the creek. To find the locality, drive north on Hwy 27 from Hayward about 17.5 miles to Denver Road. Turn west (left) onto Denver Road. Follow Denver Road several miles to a "T" intersection with East Mail Road. Turn south (left). The pavement ends. Go about 1/2 mile and turn left, then left again in another 1/2 mile. Go another 1 mile across 2 small bridges. You will see the dumps for Shafts #2 and #3 straight ahead of you. Shaft #1 is uphill and behind you. Continue another mile and you will see F Shaft and dumps. Continue straight ahead 0.3 miles from F shaft brings you to a T intersection. Turn right here and you will return to East Mail Road. The dirt roads were easily passable to my Volvo sedan in good weather. If in doubt, park and walk in. The Wisconsin woods here make for pleasant hiking, provided you prepare for mosquitoes. Taking the Chittamo NE topographic map with you is a good idea. Be sure to obtain permission from the owners before entering any of these properties.. Care should be taken in working on the steep dump piles. Do NOT go into any of the shafts!

The deposit was discovered in the late 1890's. It was described in a survey of the copper prospects of the area written by a young geologist named U.S. Grant in 1901. Grant's assessment of the copper potential of the entire region was not very encouraging. His conclusions so infuriated the residents of Douglas County, who were hopeful of a copper mining boom, that they filed a petition with the state geological survey urging his dismissal. The furor resulted in a revised edition of the survey being published with a new afterword written by the state geologist giving a more encouraging picture of copper resources there. It must be noted that no economic copper mines have been developed in the region in the years since Grant's report, bearing out his original conclusions. Development work continued at the Weyerhauser Mine in 1906-1914 with shafts, trenching and drilling. F Shaft, for example, was sunk 300 feet and has 4 levels. Even so, no more than a few thousand pounds of ore were produced. Renewed investigation by the U.S. Geological Survey occurred in the 1940's, at the behest of U.S. Senator "Fighting Bob" LaFollette. Shaft #3 was dewatered and many samples were analyzed. The Survey concluded that the ore, though rich in spots was too erratic in its distribution to warrant further investigation. The only recent activity is the use of the dump rock for crushed stone.

The copper at the Weyerhauser Mine is found in basalt lava flows like those of northern Michigan. The flows have been tilted so that they now trend northeasterly and dip gently to the northwest. A few conglomerate beds occur with the flows, representing gravel deposits laid down between volcanic eruptions.

Minerals found in the mine and on the mine dumps include copper, silver, bornite, malachite, azurite, calcite, quartz, chlorite, epidote, prehnite, K feldspar, plagioclase and augite. The native copper was the primary ore mineral, being found as wires and masses reportedly weighing up to 7 lbs. In my collecting I have only found a few small wires. Silver was reported in one sample found by the U.S. Geological Survey. Bornite was reported as small grains within the basalt. Malachite and, more rarely, azurite occur as films on the native copper. Calcite is found as white cleavable masses in amygdules. Amygdules and veins often contain white quartz and occasionally some brown agates. Chlorite is abundant as light to dark green soft scaly masses. Epidote is found as masses and small radiating crystal groups in amygdules. Prehnite is particularly common in Shaft #3 dumps where it occurs as white to pale green or pale pink masses, often with a radiating internal structure. The pink color could come from small included flakes of copper. Prehnite forms the bulk of what I informally "spot rock". This contains veins of radiating clusters of prehnite cores of the dark green chlorite or yellow green epidote. The rock appears to have a case of green measles. K feldspar occurs as pink to orange grains in amygdules. Plagioclase and augite make up the bulk of the basalt rock which is the matrix for the veins and amygdules.

The Weyerhauser Mine remains a fascinating spot for getting an insight into a nearly forgotten phase of Wisconsin history and geology.

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References cited:

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