

## MILLERITE

NiS

A widespread nickel mineral found in hydrothermal veins, replacement deposits, volcanogenic massive sulfide deposits, and vugs and geodes in certain limestones and shales. Northern and Southern Peninsulas.



Figure 103: Millerite crystals filling a 3 cm quartz geode from the Wallace Stone Company quarry near Bay Port, Huron County. A. E. Seaman Mineral Museum specimen No. DM 23132, Jeffrey Scovil photograph.

**Huron County:** *Wallace Stone Company quarry, Pigeon, near Bay Port:* In fine specimens of brassy, hair-like crystals in small quartz geodes along with calcite, dolomite, pyrite, and other minor sulfide minerals. Some of the millerite appears green, due to chemical alteration (millerite alteration products, Part III) (Morris, 1983).

**Marquette County: 1.** *Ropes gold mine, NW ¼ section 29, T48N, R27W:* As a minor constituent in the gold-bearing quartz veins (Bornhorst et al., 1999). Millerite also occurs rarely as brassy, acicular crystals in and on dolomite and calcite crystals (M. Basal, personal communication, 2001; confirmed by energy dispersion X-ray spectrometry). **2.** *Presque Isle:* In veins along faults in serpentinite with galena, pyrite, chalcopyrite, pyrrhotite, and violarite (Snelgrove et

al., 1944; K. Spiroff, personal communication). Not verified.

**FROM:** Robinson, G.W., 2004 *Mineralogy of Michigan* by E.W. Heinrich updated and revised: published by A.E. Seaman Mineral Museum, Houghton, MI, 252p.

### UPDATE

**Menominee County:** Unnamed prospect near Nathan: Microcrystals with violarite and other minerals in calcite veinlets in rock. Verified by energy dispersion X-ray spectrometry.



Powdery white monohydrocalcite coating a 2.5 cm calcite crystal from Presque Isle, Marquette County. A. E. Seaman Mineral Museum specimen DM 27633, George Robinson photograph.

**UPDATE FROM:** Robinson, G.W., and Carlson, S.M., 2013, *Mineralogy of Michigan Update*: published online by A.E. Seaman Mineral Museum, Houghton, MI, 46p.