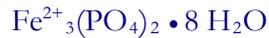


## VIVIANITE



A widespread iron phosphate found in some metalliferous veins and as a weathering product in various rocks. It is also a relatively common diagenetic constituent in unconsolidated sediments and sedimentary rocks. The Michigan occurrences are of the last type. Northern and Southern Peninsulas.

**Eaton County:** The first documented occurrence of vivianite in Michigan rocks is at the Cheney quarry, in the NW ¼ NW ¼ section 28, T1N, R6W, near Bellevue (Naski, 1982; Morris, 1983; Slaughter, 1999). Here, vivianite occurs as tabular and prismatic crystals up to 2 mm long as cementing and infilling material in the interstices of a pyrite-rich collapse shale breccia in limestone of the Bayport Formation (Mississippian). Its identity has been confirmed by optical, X-ray, and chemical means.

**Lake Superior:** Dell (1971) identified vivianite at various depths in 14 cores drilled into unconsolidated sediments in the bottom of Lake Superior. It appears as grains, pellets, and nodules, some of which consist of relatively well-crystallized blades. Some 12 of these drill sites are in Michigan water (Dell, 1971). The color varies from green, through blue to bluish black.

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