JACOBSITE (Mn²⁺,Fe²⁺,Mg)(Fe³⁺,Mn³⁺)₂O₄

An uncommon member of the spinel group found in some manganese-rich metamorphic iron ores. Northern Peninsula.

Marquette County: Champion mine: In manganiferous quartz veins cutting Negaunee Iron Formation with "rhodonite" (pyroxmangite) and Confirmed by X-ray diffraction anhydrite. (Babcock, 1966a, b).

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

Iron County: Homer mine, Iron River: tiny inclusions of a zincian jacobsite have been found in crystals of shigaite from the Homer mine. Based on 4 oxygen atoms, electron microprobe analyses of the most Zn-rich inclusion observed thus far yields a formula of 27 mole % franklinite in the jacobsite-franklinite solid solution series.

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.