

## WULFENITE



Wulfenite is a relatively common supergene mineral occurring in oxidized lead deposits, where it typically forms thin, tabular, yellow, orange, or red tetragonal crystals. The paragenesis of the wulfenite described here, however, is completely different, as it occurs as a constituent in altered uraninite ("gummite"). It is believed that oxidation of associated molybdenite provided the molybdate anion that reacted with radiogenic lead present in the uraninite to produce an uraniferous wulfenite (up to .22 a.p.f.u. U substituting for Pb). The authors are aware of only one other such occurrence of wulfenite associated with radiogenic lead worldwide: the Payne molybdenite prospect in the Gatineau Park, Québec, where it forms up to 1 mm-thick white crusts on uraninite octahedrons. Northern Peninsula.

**Gogebic County:** Uranium prospect a short distance from the "Paulding Lights" north of Watersmeet: As yellow-orange powdery coatings on weathered uraninite. Verified by electron microprobe analysis (WDS) and X-ray diffraction. Other phases in the Watersmeet "gummite" include unaltered uraninite, hydrated U-oxide(s) plus kasolite (q.v.).

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