Yoder, Jr., also of the Geophysical Laboratory, for the use of his internally heated gas apparatus for the 8-kb experiments.

REFERENCES


THE AMERICAN MINERALOGIST, VOL. 51, MAY-JUNE, 1966

SCHROECKINGERITE FROM AMBROSIA LAKE URANIUM DISTRICT

V. J. BARCZAK, Kerr-McGee Oil Industries, Inc., Oklahoma City, Oklahoma.

Schroeckingerite NaCa₃(UCO₃)₃(SO₄)F·10H₂O, is a secondary uranium mineral named in honor of J. von Schroeckinger, who found (Schrauf, 1873) and later described (Schroeckinger, 1875) the occurrence at Joachimsthal, Bohemia. It since has been reported from a number of localities, including several in the United States. In the Western United States it is found in Sweetwater and Carbon Counties, Wyoming (Larsen and Gonyer, 1937; Vine and Prichard, 1954); in Yavapai County, Arizona (Axelrod et al., 1951); in Grand, San Juan, Emery and Piute Counties, Utah (Wecks and Thompson, 1954; Gruner et al., 1954). It has been reported as occurring in the Ambrosia Lake, New Mexico uranium district by Towle and Rapaport (1952) and Rapaport (1952). This occurrence later was disputed by Gruner et al. (1954), who stated the mineral identified as schroeckingerite actually was meta-autunite. The most recent papers on uranium mineralogy in the Ambrosia Lake area (Corbett, 1963) (Granger, 1963) do not mention schroeckingerite as one of the secondary minerals present in that area.

During a recent visit to Kerr-McGee section 22 mine, McKinley
County, Ambrosia Lake uranium district, the author collected several
specimens for laboratory examination. Subsequent x-ray powder diffrac-
tion analysis of these specimens with a diffractometer disclosed the pre-

cence of schroeckingerite in two different samples. One sample was an
ercrustation on sandstone from a mine wall, the other was a deposit that
had formed on the metallic shield of a light bulb. Schroeckingerite was
more abundant in the latter specimen but, in each sample, the predomi-
nant mineral was gypsum with lesser amounts of andersonite,
Na₂Ca(UO₂)(CO₃)₂·6H₂O, and schroeckingerite. The deposit from the
lamp shield also contained minor amounts of a zippeite-like mineral.
Certain other samples from mine walls were found to consist only of
gypsum and andersonite.

The schroeckingerite described herein occurs as poorly developed
crystals, typically around 10 microns in diameter, intimately mixed with
the other previously mentioned minerals, as encrustations on gypsum.
This type of occurrence precluded obtaining pure material for chemical
analysis. Indices of refraction in white light are α = 1.492, γ = 1.540.

Acknowledgments

The author wishes to acknowledge Kerr-McGee geologists H. E.
Whitacre, F. D. Ludeman and A. D. Robinson for the mine tour and their
assistance in collecting specimens.

References

Corbett, R. G. (1963) Uranium and vanadium minerals occurring in Section 22 Mine,
uranium deposits of the Colorado Plateau and adjacent regions. U. S. Atomic Energy
Comm. RME-3092.
Larsen, E. S. Jr. and F. A. Gonver (1937) Dakeite, a new uranium mineral from Wyo-
Schauf, A. (1873) Schröckingerit, ein neues Mineral von Joachimsthal. Tschemak's
Towle, C. C. and I. Rapaport (1952) Uranium deposits of the Grants district, New
Mexico (abs.). Econ. Geol. 47, 128.
Vine, J. D. and G. E. Prichard (1954) Uranium in the Poison Basin area, Carbon County,
Weeks, A. D. and M. E. Thompson (1954) Identification and occurrence of uranium and
vanadium minerals from the Colorado Plateau. U. S. Geol. Survey Bull. 1009-B.