

## REASSESSMENT OF THE VOLKONSKOITE-CHROMIAN SMECTITE NOMENCLATURE PROBLEM: REPLY

**Key Words**—Chromian smectite, Nomenclature, Octahedral cations, Volkonskoite.

A simple definition of the mineral species volkonskoite was given by Foord *et al.* (1987) and approved by the International Mineralogical Association Commission on New Minerals and Mineral Names (IMA) (E. H. Nickel, Division of Mineralogy and Geochemistry, CSIRO, Wembley, Western Australia, Australia, written communication, 1985) as “a dioctahedral member of the smectite group having Cr as the dominant octahedral cation”. Mackenzie (1988), however, has pointed out that the definition of volkonskoite should be further restricted by defining this species as “a dioctahedral mineral of the smectite group containing chromium as the dominant *trivalent* (emphasis added) cation in the octahedral sheet”, a definition approved by the Nomenclature Committee of the Association Internationale pour l’Etude des Argiles (AIPEA) (see supplement to AIPEA Newsletter No. 22, February 1986). Newman and Brown (1987) defined volkonskoite in the same manner as Foord *et al.* (1987).

If volkonskoite is defined as stated by Mackenzie (1988), the mineral from the Daba area, Jordan (Khoury *et al.*, 1984), would be a volkonskoite. Cr and Mg, however, are the only cations in the octahedral sheet of this mineral, and, stoichiometrically, Mg<sup>2+</sup> is dominant over Cr<sup>3+</sup>. The mineral is apparently dioctahedral, but has some trioctahedral characteristics. If, on the other hand, the definition approved by IMA and used by Foord *et al.* (1987) and Newman and Brown

(1987) is applied, this mineral should be given a new name.

It is apparent from the published literature that a universally accepted definition of volkonskoite has not emerged. We recommend that volkonskoite nomenclature be further reviewed by the nomenclature committees of both IMA and AIPEA, and that a simple and precise definition of this mineral be agreed upon.

U.S. Geological Survey  
Federal Center  
Denver, Colorado 80225

EUGENE E. FOORD  
HARRY C. STARKEY  
JOSEPH E. TAGGART, JR.  
DANIEL R. SHAW

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