Clayton H. Riddell Faculty of Environment, Earth, and Resources



Riddell Faculty Seminar Series Presents:

Disappearing diomignite and its petrologic implications

Alan J. Anderson Ph.D.,

Department of Earth Sciences, St. Francis Xavier University Date: Friday, January 20th, 2017

Time: 1:30 p.m. - 3:00 p.m.

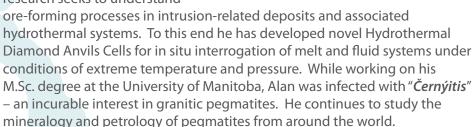
Location: Klaus Hochheim Theatre

(5th floor, Wallace Builing)

Abstract: Diomignite (Li₂B₄O₇), the first mineral to be described solely as a daughter mineral in fluid inclusions, is discredited as a valid mineral species, and this discreditation has been approved by the IMA Commission on New Minerals Nomenclature and Classification (CNMNC). It will be shown that the evidence given in the original description (IMA 84-58) is circumstantial, incorrect or equivocal. Diomignite was reported to occur in virtually every crystal-rich inclusion in spodumene from the Tanco pegmatite (London et al. 1987). However, the analysis of 30 randomly selected crystal-rich inclusions in the purported type material deposited at the Smithsonian Institution, National Museum of Natural History (NMNH), 30 inclusions in the type material from the American Museum of Natural History (AMNH), and several hundred inclusions in self-collected samples, indicates that crystals of Li₂B₄O₇ are absent in every inclusion examined. Because no holotype specimen exists, and a neotype specimen was not furnished by the surviving authors of the original description, the existence of diomignite could not be validated.

The name diomignite was derived from Homeric Greek, dios mignen, meaning divine mix, in allusion to the fluxing properties of Li2B4O7 on silicate-water systems. The discreditation of the divine mix, however, negates its alleged role in the internal evolution of Tanco pegmatite as proposed by London (1985,1986, 1990, 2008).

Biography: Alan Anderson is currently the W.F. James Research Chair and professor of petrology and mineralogy at St. Francis Xavier University, Nova Scotia He received a Ph.D in Geology from Queen's University and postdoctoral experience at the Fluids Research Laboratory, Virginia Tech. His research seeks to understand



12:00 p.m. Free Pizza lunch for graduate students with Alan Anderson, Dean's office Boardroom - 440 Wallace Building.

