*The Magic of Minerals.* By Olaf Medenbach and Harry Wilk. Springer-Verlag, New York, 1986. 204 pages, $45.00 U.S.

It's not often that mineralogists have the chance to impress their nongeological friends with the fascination of minerals and their myriad crystal-forms. This coffee-table-sized book provides a device to get the attention of both those who abhor geology and those who practice its arcane ways.

The book is not just a collection of pretty faces. There is an elementary discourse on the nature of crystalline substances and a description of the physical properties we have all learned (more or less) to use in identification. (Remember the alternate tasting and acid dousing that accompanied most of our early efforts?).

The basic structural groups of the silicate minerals are described in enough detail to suffice in first-year geology but all this is just icing. This is a book about which, with an absolutely clear conscience, you can say "I only look at the pictures". The photographs and the quality of their printing are stunning. There are 110 color photographs, and each one is an experience. The mineral specimens are works of art in their own right; whereas nearly every mineral covered in introductory mineralogy is here, the chances of ever seeing specimens like these outside a museum are remote. The book could still serve as an inspiration to that person in his or her first mineralogy course, who is suddenly overwhelmed by the sheer mass of different names of minerals. If nothing else, it can provide the student with an interlude from $2/m\ 2/m\ 2/m$; alpha, beta, gamma; *a,b,c,* (or *X,Y,Z*); {1011} and the biaxial indicatrix.

This book is not cheap, but if you know someone who needs their mineral fix or have a collector friend (and a bank account with a margin for expenditure), it is outstanding value. If you're stuck for a gift for a lattice-oriented friend, this would do the trick.

The description that accompanies each photograph is a wonderful combination of the historical origins of the mineral name, its uses and a physical description. A treasure house of information is stored in readable form on each page. I can highly recommend this book for experienced geologists who love minerals and as an inspiration to novices in the field.

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*The Stillwater Complex, Montana: Geology and Guide.* G.K. Czamanske and M.L. Zientek, technical editors. Montana Bureau of Mines and Geology (Main Hall, Montana College of Mineral Science and Technology, Butte, Montana 59701), 1985, Special Publication 92, 396 p., 4 geological maps. Price: US $28.00 (softbound).

This book on the Stillwater Complex, Montana, is an up-to-date synthesis of Stillwater geology. It was prepared, in part, as a detailed guide for field-trip participants in Project 161 of the IGCP on sulfide deposits in mafic and ultramafic rocks, as well as those from the fourth Platinum Symposium, 1985. The result is an excellent combination of observation, description, direction, clarification, hypotheses and bibliography, prepared by many authors from surveys, universities and industries, with a strong guiding hand from the USGS.

The volume consists of 28 chapters, plus an extensive bibliography (15 pages), other references and four uncolored geological maps. Unfortunately, there is no single map of the complex as a whole. The chapters are of uneven length and quality, a result of the multiauthor approach. In general, the first half of the book provides the geological framework of the Complex, including a very necessary chapter that pulls together the many stratigraphic approaches and varied terminology that have been used in the Stillwater literature; the second half deals with detailed directions to, and descriptions of, outstanding exposures. The chapters are richly illustrated with photographs (many of them quite delightful historical and hysterical mementos of Stillwater history), as well as pen sketches. Especially valuable to the field tripper will be the panoramic photos with superimposed geological contacts.

The standards in the book (such as presentation, editing, style, paper) are very high, although some groups of photographs have very low contrast. Some of the many maps are reduced to such a scale that a hand lens is necessary for careful appreciation; on the whole, however, the diagrams and figures are very good. This book is meant to be taken to the field and used in self-guided study of the Stillwater Complex; because of the very poor binding, however, it will certainly not last beyond the second or third stop. Binding it with a hard cover will make it an excellent purchase for field trips to the Complex, or in the lecture room and laboratory.

The value of this book will mainly be apparent on field trips, but it is also useful in senior and graduate-level courses that deal with layered intrusions and their metallogeny. The volume does contain a wealth of information that has not been published, as well as vast quantities of good descriptive material that can be put to good use in trying to sort through some of the published genetic models of such enigmatic processes as crystallization of the Stillwater magmas, magma mixing, chromite and platinum-group-element concentration.

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