American Mineralogist, Volume 90, pages 276, 2005

BOOK REVIEW

INTRODUCTION TO ORE-FORMING PROCESSES, Laurence Robb, Blackwell Science Ltd., Malden, MA, 2004, 373 p. $74.95 (soft cover).

How strange it is that our consumption of the world's mineral resources continues to climb, while the number of universities around the world that offer courses on how, why, and where mineral deposits form and are to be found, continues to shrink. The situation is worse in some countries—for example the United States, where economic geology is declining rapidly—while in others, such as South Africa, the discipline in alive and well. How strange it is too, to contemplate this dichotomy when the scientific yields from the study ore-forming processes are ever more vibrant, and contribute more and more basic insights to the broad stream of geological enquiry. Mineral deposits, for example, are sensitive recorders of climatic change, of changes in tectonic styles, and of the grand sweep of supercontinent formation and supercontinent fragmentation.

Writing from South Africa, where he is the Pavitt Professor of Economic Geology at the University of the Witwatersrand, Laurence Robb has produced an elegant introduction to the diverse processes that form ores. The volume is a great place to start finding out why the field is so dynamic. The book is intended as an introduction, and it presupposes knowledge of geology equivalent to about a senior year in North America, or a third year in the three-year curriculum of European and Australian schools. It can also serve as an introduction at the beginning graduate level, because topics are treated in a balanced manner that encourages further reading into the primary literature. In my opinion it will be a great book with which to teach the subject. I intend to use it myself in the course I teach at Yale.

My enthusiasm for the book derives from Robb's approach to the subject. Traditionally, books on ore deposits have been overbalanced with descriptions and under balanced with discussions of processes. Robb has struck an excellent balance. Most of the book is about processes, while descriptions of classic deposits are separated as short boxes. The book is organized around the three main groups of ore-forming processes, those formed as a result of magmatic processes, the large and diverse group of deposits formed from hydrothermal solutions, and deposits formed by surficial and sedimentary processes. The fourth and final part of the book is devoted to global tectonics and metallogeny.

During Robb's productive career he has been involved in studies of some of the more puzzling mineralized regions of the world—three mentioned in the volume are the Bushveld Igneous Complex, the Witwatersrand, and the Central African Copper Belt. In such cases it is all too easy to push one's own point of view, but Robb has avoided that trap. He treats the diversity of opinions involved fairly and in a balanced way.

The book brings a fresh new look to an old topic; it is balanced as to coverage, it is well and engagingly written, it is up to date, and it is global in coverage. I recommend the volume.

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—DOI: 10.2138/am.2005.426

ERRATUM

New clinopyroxene-liquid thermobarometers for mafic, evolved, and volatile-bearing lava compositions, with applications to lavas from Tibet and the Snake River Plain, Idaho by K.D. Purika, H. Mikaelian, F. Ryerson, and H. Shaw (2003, vol. 88, p. 1542–1554).

The authors have discovered an error in the caption of Figure 2. The sample calculation should read $P = 13$ kbar, $T = 1239$.

—DOI: 10.2138/am.2005.431