

Hydrothermal Vents and Processes

Edited by L. M. Parson, C. L. Walker, and D. R. Dixon, published by the Geological Society, London, Special Publication No. 87, ISBN 1-897799-25-X, 411 pages, 1995, \$65.00.

Review by Christopher G. Kendall

This book represents a comprehensive synthesis of the current understanding of hydrothermal vents and their processes. The book contains thirty papers which focus on hydrothermal vents, largely associated with mid oceanic ridges. These papers document how these features developed and are related to the fluids that are being released into the sea, leading to the development of bazaar faunal and floral communities. The attempt is to see how these various isolated communities are in some way connected both in space and time. The authors have used both geological and biological technology to attempt to build interpretative and predictive models for these features. The papers describe how these events occur in a range of tectonic settings from plate boundaries to oceanic spreading centers to backarc rifts and transform fractured zones. These papers are largely concentrated on sites from the north Atlantic but includes sites from offshore Australia and the Pacific. There are numerous papers which deal with the characterization of the chemistry of the waters or fluids being emitted from these hydrothermal vents and their relationship to the mineralogy of the sediments accumulated around them. There are a number of papers which deal with the floral communities and others that consider the physical processes. There seems to be no particular organization to the papers either alphabetically, geographically, or on the basis of subject matter. The book attempts to bring together under one cover a variety of different authors and different scientists reporting on the state of the art of their understanding of these features.

If you are investigating hydrothermal vents, this is the book for you. It's a specialist's text but because it covers so many disciplines it may contain valuable information for you whatever your specialty. The book has been carefully edited, the text is well referenced, and the illustrations are clear and the line drawings are understandable and nicely reproduced. This is a book for graduate students who may be trying to gain a better understanding of hydrothermal vents and their processes, and for the specialist in this field. For the general reader, this book is probably not for your library but it should be in the university or company's library in that the information described here is unique. I would have liked to see a little more organization to the order of the papers but the information content of the book is great, ranging from the morphology, sedimentation, fauna, and chemistry and the distribution of these features; all valuable to the science of this emerging field of geology. It was no trivial undertaking to put these papers together.