

GEOROM VIII, SEG, 2002, 8 CDs, \$449, (SEG members \$299)

While this is not a review of a conventional book, or a conventional review in the sense of judging content, it nevertheless fits within the context of this column. GEOROM is a vast library unto itself, containing the full text of all papers from GEOPHYSICS and THE LEADING EDGE, and thus will provide a major source of research material for geophysicists around the world. In addition to the journal contents, it contains the third (1990) edition of Sheriff's *Dictionary*, and a searchable Digital Cumulative Index, which catalogues all the SEG publications, along with many from other related organizations (EAGE, CSEG, ASEG).

The value of the material is without question: What is of more interest to potential purchasers is how usable the compilation is. While I can't give it an A+ grade, overall the packaging is quite effective, and anyone using GEOROM should have little trouble finding what they need. Ease of use flows from the basic design strategy: All papers are stored as PDF files and retrieved through a standard Web browser interface. As a result, there is no software to install (assuming one is already using the Adobe Acrobat reader), and the user's normal techniques for retrieving, viewing, and printing information will apply.

There are two methods for finding journal articles. The contents can be viewed by year and issue, with the abstract or full text of each paper available at the click of a mouse. Alternately a search can be done by author, title, or keywords in the text. Any papers that meet the search criteria can then be retrieved by selecting the title from the list of results. Speed of search and retrieval is impressive, especially when the full contents can be stored on disk. This option requires 8.5 GBytes of available space; but GEOROM can also be used in a configuration where only the index etc. is stored on disk, reducing the requirement to just 120 MBytes. In this mode, the abstracts are on disk and will appear immediately, but requests for full text will prompt you to load the appropriate CD.

Before proceeding to some problems and limitations, I will reiterate that GEOROM is very easy to use, so what follows is mostly intended to improve the next edition. Anyone who regularly refers to SEG back issues will find it invaluable. In addition to being a great time-saver, it will also liberate a lot of space on the bookshelf.

The main area which could be improved is the search function. Results are displayed in a small window, so that only 5 titles can be seen at one time—this requires excessive scrolling to browse results. The search criteria include "search in," but no choice other than "GEOPHYSICS and THE LEADING EDGE," which suggests that there was at least an intent to allow searching them separately. Some of my search attempts led to a "bad query" message, which would not go away until I exited the search function and started over (a result of not reading instructions, but a nuisance nonetheless). The year search does not have a range option, only single year or decade.

It may be necessary to experiment with display settings to read the PDF files on the screen—for some of the older ones the text breaks up in a full page view. Printed versions are fine, however. Finally, a warning to new users: Read all of the package notes first! The install procedure can stall on some file copy errors—if you ignore this, the search functions behave in a bizarre and unpredictable fashion. There is a manual method to overcome this problem, but it is not documented in the "readme" file on the CD, but only in a printed insert in the back of the CD holder.

—WILLIAM R. GREEN
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3-D Seismic Survey Design by Gijs J. O. Vermeer, ISBN 1-56080-113-1, SEG, 2002, 225 pp., \$97 (SEG members \$69)

A few books are milestones in geophysical technology and science. They sometimes mark the decade when we graduated, or when we specialized, or simply they have been our daily reference for a long time. Examples are the Aki-Richards' "Bible," Dobrin's and Yilmaz's textbooks, and Sheriff's *Encyclopedic Dictionary*. These books are outstanding because they update the reader to the state of the art by a clear style, with plenty of clear figures and real data examples, and avoid all unnecessary formulas and theoretical details. This is what most professionals and students need, but few authors provide.

I feel that Gijs Vermeer's book belongs to this class, even though the subject looks a bit specialized; designing seismic surveys is a niche of geophysics. However, since Vermeer relates these techniques to the main problems of wave propagation and signal processing, the real scope of the book is broader than it might appear. Also, since clear understanding of the data is critical to subsequent processing and interpretation, the book provides a good basis for our further work or studies.

In the first and second chapters, the basic concepts of wavefield sampling are introduced. The reader can appreciate that the switch from 2D to 3D is not that obvious, by comparing the parallel geometry of the early years for 3D surveys, still used for marine streamer surveys, and the orthogonal one, typical for land data and ocean-bottom cables. New physical effects become observable—as azimuthal anisotropy—and new criteria emerge for an optimum layout.

In the third chapter, the issue of noise suppression comes to play, and the need for source and receiver arrays is nicely presented as a way for achieving acceptable compromise. Reducing source and receiver density (for limiting acquisition costs) can alias some events; a proper choice of arrays can reduce this problem considerably. In the fourth chapter, several examples with real data further examine practical concerns that arise during data processing, such as common-mid point and azimuthal fold, offset distribution within the bins, multiples' interference, and so on. Some recent experience with zig-zag geometries is discussed and later (in the seventh chapter) also the brick-wall variety.

In the fifth chapter, the current debate about the value of marine conventional versus ocean-bottom streamers gets a clear treatment. The sixth chapter introduces the elastic wavefield. The treatment of converted waves poses new problems due to the asymmetry in their raypaths.

In the last three chapters, Vermeer presents the effects that the recording geometry produces in the later processing steps (e.g., dip moveout and prestack migration).

I liked this book a lot—it is definitely one to select for personal geophysical libraries, whether or not we will ever design a 3D seismic survey ourselves. However, I disagree with the Foreword by Ian Jack, which states that this is a "definitive work." The author also disagrees, since he warns the reader that some technology is evolving so rapidly that a few parts of the book could become soon obsolete. Probably, this is the best reason for reading this book; it provides a clear overview of current science and technology, which may help us to avoid getting lost within the tumultuous stream of innovation.

—ALDO VESNAVER
Saudi Arabia
(Continued on p. 494)

(Reviews, from p. 491)

Mountains: Geology, Natural History, and Ecosystems by
Martin F. Price, World Life Library, Voyager Press, 2002.
Large Format Softcover, 72 pp. ISBN 0-89658-251-5. \$16.95

This book is full of photographs of mountains from Africa, Antarctica, Argentina, Austria, Bolivia, Canada, Chile, Ecuador, France, Indonesia, Japan, Nepal, New Zealand, Peru, Scotland, Switzerland, Tibet, the United States, and Wales. Many are stunning and easily make this small book worth its modest price. I have long been fond of mountains and so was attracted to the book by its title and the description that I found at Amazon.com.

The main focus of the text is an introduction to the *modern* natural history of mountains and people, a topic of professional interest to the author. The subjects of geology and ecosystems play more of a supporting role in the book. I enjoyed reading it but feel that the subtitle of the book is a little misleading.

—WILLIAM A. SCHNEIDER JR.