

Oil and gas traps

by **Jenyon M.K.**, Published by John Wiley and Sons Lt., Baffins Lane, Chichester, West Sussex PO 19 1UD, England, 1990. 398p. Price US \$150.00, ISBN 0-471-92549-7.

Review by **Christopher G. Kendall**

This excellent handbook documents the seismic character of hydrocarbon traps, with many of the cited examples represented by seismic cross-sections from the North Sea, reflecting Jenyon's experience and access to data from this area. This should not deter the reader, since many of the structural concepts and relationships described in the text can be extrapolated to other settings.

The book begins with an introductory review of source rocks, petroleum migration, and reservoir and seal formations. This section is a simplistic and oriented at the novitiate but forms a good foundation to an understanding of hydrocarbon exploration. The author explains that beyond this introduction, which is necessary to a text on traps and their styles, the book does not lend itself to a more expanded treatment of these subjects. Instead the numerous cited references to other texts should help the reader in need of a more rigorous treatment of hydrocarbon generation and migration.

The rest of the book gets to the meat of the purpose of the author which is to document the seismic character of different styles of hydrocarbon traps. These are broken down into Structural Traps, Stratigraphic Traps, Combination and Complex Traps, and Special Situations. The text is very complete and Jenyon, while following a fairly classic approach to the topic, does a good job.

The structural traps are broken down into traps related to folds, faults, salt and shale deformation. Stratigraphic traps include unconformities, buried topography, porosity and pinchout, carbonates, evaporites and reefs, deltas and fans. The combination traps involve permeability effects, faults and block faults, while the complex traps involve thrust belts. The special situations include direct hydrocarbon indicators like bright flat spots, gas escape features and hydrates. Jenyon also discusses astroblems and igneous features. All these trap types are illustrated with clear seismic cross-sections or line drawings.

At the professional level the book will be helpful to seismic interpreters and play generators, particularly those playing the North Sea. While the experienced hand may be know or understand many of the trap examples cited, there is probably sufficient material beyond these to warrant owning the book. The professional starting a career in the oil business will find this a useful book, as will the seismic processor trying to gain a feel for the nature of seismic interpretation. I know I would have liked to have it on hand in my first days with the oil industry. This book will definitely be helpful to the graduate student. A good buy though a little expensive.