

There is a fair amount of spelling mistakes and usage of loose or non-standard terminology; printing has rendered some figures almost undecipherable (p. 106). Finally, the price will probably put it out of reach of the personal shelves of most Indian earth scientists, although libraries will be well advised to get it in their collection.

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**CARBONATE PETROLEUM RESERVOIRS.** Edited by Perry O. Roehl and Philip W. Choquette (Eds.); Springer-Verlag, New York-Berlin-Heidelberg-Tokyo, 1985, pp. 622, DM. 220.

Carbonate rocks have assumed importance in recent years owing to their association with the majority of the world's giant oil and gas fields. The study of carbonate rocks, therefore, experienced a quantum jump after World War II. In India, with the discovery of the giant oil and gas fields in Bombay offshore with its main reservoirs in Miocene Limestones, the study of carbonate rocks has become important. Reservoir petrography is one of the main aspects of studies of carbonate rocks. A very large information base is often required to elucidate the important characteristics of carbonate reservoirs. Such information base can be crucial for the design of adequate supplemental recovery programmes. The book under review provides such an information base.

The book presents case histories from 35 different oil fields from different parts of the world. Various types of carbonate reservoirs formed in diverse environments from deep sea to supra-tidal, have been chronologically documented. The book is unique in its style of presentation and selection of papers.

Eight carbonate reservoir types have been classified, viz., (a) sub-unconformity dolomites and limestone (sub-aerial diagenetic terrain), (b) dolomites (subtidal-supratidal regimes), (c) carbonate sands on shelves and ramps, (d) biogenic and reef mounds, (e) debris deposits, (f) pelagic chalks, (g) fractured basinal to shelf sands, and (h) others. The generalisations that have been made on reviewing the case histories in the Introductory Chapter provide leads for exploration. A large majority of carbonate reservoirs developed their present pore-system during diagenesis near or at the earth's surface clearly underscores the importance of regional unconformities. It has been pointed out at the end of the chapter that future studies in reservoir geology of carbonate rocks will have the obvious implication in understanding recovery efficiencies based on primary production drive. A correlation between porosity, permeability and recovery factors may have to be found out by 'careful post-mortem studies long after initial field discovery'. The article by Perry O. Roehl on Depositional and Diagenetic Controls on Reservoirs Development and Petrophysics in Silurian Tidalites, Montana, is a pioneering work in this direction. The treatment of fractured shale reservoirs of Miocene Monterey Formation of West Canyon Oil field, Santa Maria Valley, California, is another good paper which focusses attention on the fractured reservoirs—the latest target in exploration.

Origin of the Miocene Carbonate Reservoir Rocks, Fukubezawa Oil Field, NE Honshu, Japan, is another interesting paper by Koichi Aoyagi which brings out diagenetically converted carbonate rocks from volcano-siliciclastic sediments in bathyal environment as a reservoir rock in deep sea basins, a frontier area of exploration today.

A unique feature of this book is a Table at the front of each case study in which each reservoir example is summarised with characterisation of the geologic setting, tectonic style, size of field, nature of reservoir and trap, petrophysical data of reservoir rocks, reserve and production data, hydrocarbon source, age of reservoir formation, etc. In the Appendix, the geologic classification and many esoteric terms used in case studies, familiar to carbonate sedimentologists but unfamiliar to many of their reservoir engineer colleagues, are summarised in a Glossary and an illustrated outline of classifications.

A noticeable deficiency is that Tertiary carbonate reservoirs are poorly represented. However, this does not, in any way, reduce the value of the book. The book is an excellent contribution and a valuable document for professional geologists like petroleum geologists, carbonate sedimentologists and production and development geologists, as also for the reservoir engineers. Academics will also find valuable information on carbonate sedimentology.

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**CONTRIBUTION TO THE HISTORY OF GEOLOGICAL MAPPING—**  
E. Dudich (Editor). Publisher: Akademiai Kiado, Budapest, 1984, 442 pages, Price :  
34 US Dollars.

The International Commission on the History of Geological Sciences (INHIGEO) organised a symposium on the historical development of geological mapping in connection with progress in geological thinking under the aegis of the Central Geological Authority of geological research in Hungary at Budapest during 16–22, August 1982. The book under review contains the proceedings of the symposium. There are 64 papers of which 24 are only abstracts. The topics covered are broadly the trends in the development of geological mapping, historical stages in geological mapping of different regions, evolutions of specialised map types and individual achievements of outstanding scientists in the thematic field of the symposium.

The plotting of gold fields in Egypt on papyrus in the 13th century is pointed to be perhaps the first 'geological' map. The first compilation of a geological map, we are told, was undertaken by M. Lister at the end of the 17th century (Pavlinov, p. 31).

The paper by Dudich summarises the diversification of earth science maps from the traditional, representing observation of outcrop and solid geology, to a great variety of maps which include geochemical and geophysical maps passing into three dimensional block diagrams and multi-horizon transparent maquettes. The range is unlimited with multi-purpose map series depicting a variety of aspects, computerised plotting and processing of geocartographic information, mapping of the sea floor, airborne surveys, geology in orbit and finally the frontiers of outer-space which cover the entire solar system as another step on the road to reach the stars.

Under the section on regional development, the historical stages and the status of geological mapping of different regions and countries are described. This chapter is by no means complete since only a few continents are covered. Europe including