

analysis, basin mapping methods, depositional systems, study of basin history (sequence stratigraphy) and thermal history. Last chapter is an attempt to put everything together under the blend of plate tectonics and eustatic-sea-level changes.

The presentation of the material in the book is of review type and not instructional. According to the author, the book may be used for instruction purposes at undergraduate, graduate and postgraduate levels. In the opinion of the reviewer, the book can only serve the needs of advanced basin analysts and professional fossil-fuel and mineral explorers. An undergraduate and/or a graduate student who does not have enough background in sedimentology, stratigraphy, subsurface mapping techniques, cyclic sedimentation and elementary notions of plate tectonics will not be able to follow the arguments. The book will be useful for advanced students and professional basin analysts in petroleum and mineral industry. If one starts reading the book one can hardly put it down as the running style of the book carries him away. If he wants to know more details he has only to turn to the exhaustive list of references at the end of each chapter.

The book is well supported by line drawings, block diagrams, cross-sections but very few field photographs. Printing is in bold letters, but some tables and line drawing have been reduced to such an extent that it tends to become illegible.

The book is recommended for the use of study groups engaged in oil and mineral exploration, to get a precise idea of the present state of the art.

Bangalore

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NATIONAL GEOPHYSICAL RESEARCH INSTITUTE, ANNUAL REPORT, 1989-1990. By the Director of the Institute.

The following investigations have been high-lighted in the report: Deep Seismic Sounding in West Bengal Basin which has shown basement depths of 10 to 11 km and Moho depths varying from 25 to 30 km; preparation of a basement depth map for a part of the Saurashtra Basin; collection of 7200 line km of aeromagnetic data in Upper Assam and Arunachal Pradesh; identification of a zone of abnormally high helium values in the Jaisalmer Basin of Rajasthan. Whether hydrocarbons are present in the high helium zones is yet to be established. Seismographic observations are being continued in the NE region. Augmentation of groundwater resources in over-exploited aquifers through artificial recharge in Nagpur district is stated to be under way.

The Director's foreword is silent on the activities of the geochemistry and geochronology sections of the Institute. Geochemical Wing has concentrated on the geochemistry of Banded Iron Formation of Karnataka. Coccoid and spheroids of possible biogenic origin from the Iron Formation of Sandur are reported. REE pattern of Proterozoic granitoids from Dharwar Craton are presented. New Rb-Sr ages of Bababudan metavolcanics (2721 ± 42 Ma), of stromatolite-bearing cherts (2574 ± 87 Ma), of Indian kimberlites (1205 ± 12 Ma), of carbonaceous shales of Garhwal Himalaya (624 ± 10 Ma) are furnished. The significance of these data and limitations of the method can only be appreciated when fuller details of the geology and metamorphic history of the terrain and detailed petrography of the samples is made available.

We trust the investigations, briefly touched in the report, will be followed by detailed papers for the benefit of the geological community.

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