BOOK REVIEW

PETROLEUM GEOSCIENCES: INDIAN CONTEXT. Edited by Soumyajit Mukherjee (Springer Geology, 2015) ISBN 978-3-319-03118-7; ISBN 978-3-319-03119-4 (eBook) Price: eBook: 142,79 Euros, Hardcover:169,99 Euros

It is a compact book which delves into some of the aspects of hydrocarbon exploration in India. The book is a collection of 12 papers on diverse fields, accompanied by detailed charts and pictures. It will serve as an introductory handbook which covers topics ranging from potential hydrocarbon reservoirs, methods for increasing production from existing reservoirs, petroleum waste control and policies regarding energy requirement of the country. The editor has done a good job in compiling and annotating the papers. The first paper, by Bhattacharya and Yatheesh, deals with the reconstructions and describes a model for the early plate-tectonic evolution of adjoining deep ocean basins of the western continental margin area of India. The second paper, by Roy et al. deals with the analysis of internal architecture of the north east coast-Mahanadi (NEC-MND) rift system, eastern continental margin of India. The third paper, by Srivastava et al., is a report on laboratory studies and detailed compositional simulations of enhanced oil recovery (EOR) methods, specifically CO_2 EOR from a mature oil field in the Cambay basin of west coast of India. The fourth paper by Mani et al., investigates the hydrocarbon reserve potential, with the help of organic geochemistry, of a few sedimentary basins such as Vindhyan, Krishna-Godavari, Kutch, Cambay and Jammu and Kashmir. The fifth paper, by Chatterjee et al., uncovers overpressure zones, by analysing pressure coefficients, from pore pressure studies in the Krishna-Godavari basin of the eastern continental margin of India. The sixth paper by Paul et al., deals with the estimation of critical reservoir parameters of coal seams as coal bed methane (CBM) reservoir and also to identify the most potential zone for CBM development. In the seventh paper, by Suman Sarkar, the Palaeogene calcareous algal assemblages characterizing the carbonate units of the Sylhet Limestone Group, Assam shelf, has been analysed to understand the palaeoenvironmental implications. The eighth paper, by Singh et al., deals with palynology to estimate the hydrocarbon potential of the Paleogene Disang Group of rocks in Manipur State of India. In the ninth paper by Sen and Banerjee, vitrinite-inertinite ratio was analysed from Raniganj coal bed methane block, Essar Oil Limited, India, which can be used as an effective tool for coal bed methane exploration. The tenth paper by Sarma and Prasad, explains how contamination by hydrocarbons can be effectively removed by plant-microbes, which can help in combating pollution caused by petroleum wastes. The penultimate paper, by Sakthipriya et al., puts forwards EOR techniques in context to Indian reservoirs. Use of EOR methods in India can hugely help support its economy which is adversely affected by oil imports. The final paper, by K.C. Varigonda, is a study on the Indian petroleum policies and associated geopolitics.

The author puts forward a few future policy options for the Indian petroleum industry. The diversity of information put together in this book will be useful to have in libraries of universities and oil industries, for individuals associated with the oil industry, as well as amateur geologists who are interested in the Indian hydrocarbon exploration scenario. The disadvantage of the book is that it is of a higher level and will serve little purpose for the students new to the hydrocarbon field.

Indian Institute of Technology, Bombay
E: partha.saikia31@gmail.com
PARTHA PRATIM SAIKIA