

**Proceedings of Second Seminar on Petroliferous Basins of India.** Volume I. 18–20 December 1991 KDMIPE–ONGC Dehradun, Indian Petroleum Publishers, Dehradun. 739 pages. Price not known.

This volume contains 41 out of the selected 98 papers from those presented in the second seminar on the Petroliferous Basins of India held at Dehradun from 18 to 20 December 1991 and one invited paper. Subsequent to the first seminar on the same subject, which was held in 1983, considerable exploration work has been carried out in thirteen principal basins of India and this volume will be welcomed by the earth scientists, as it provides a very useful compilation of geological, geochemical and geophysical data of seven basins, viz. Upper Assam, Assam–Arakan fold belt, West Bengal, Mahanadi, Krishna–Godavari, Palar and Cauvery basins. The volume starts with a very well presented classification of Indian sedimentary basins from the plate tectonics angle. This classification is reportedly adopted from Dickinson. V. V. Sastri has also classified Indian basins on the criteria of hydrocarbon generation and accumulation potential. This being very relevant to the theme of the seminar, its mention in the paper was desirable.

The usefulness of the volume would have been enhanced, if it had addressed to the situation in a basin as a whole irrespective of the political boundaries, as for example the Bengal basin and Assam–Arakan fold belt. Only in the first paper the learned authors have 'classified' East Bengal as remnant ocean basin.

Besides the introductory paper on basin classification in plate tectonics framework, there are five papers on Bengal basin, eight on Cauvery basin, nineteen on upper Assam basin and Assam–Arakan fold belt, besides two papers each on Andaman and Palar basins and one paper on Mahanadi basin.

To the extent the petroliferous basins are so called because of their commercial

oil status, the title of the seminar is somewhat far from appropriate as it seems to have covered even basins in which commercial hydrocarbon strikes are either probabilities or speculations. Perhaps the seminar could have been more appropriately called a seminar on Indian sedimentary basins being explored for petroleum

Most of the authors have been very optimistic in assigning petroleum potential of the basins where they seem to have worked. Enormous potential of the oil in West Bengal basin has been claimed in spite of over 40 dry wells having been drilled in the total basinal area of 57000 km<sup>2</sup> (i.e. on an average one well for about 1350 km<sup>2</sup>). However, the status of 42 wells nicely compiled does not go beyond indicating some dissolved gas and minor oil shows in a few wells. It would have been useful if the economics of the exploration in the basin in terms of cost of wells drilled and amount of money invested in exploration had also been discussed.

The papers on Cauvery basin indicate the oil potential to be mainly in the Tranquebar and Nagapattinam sub-basins where oil has been found on the southern flank of Karaikal ridge and north-eastern flank of Pattukottai – Mannargudi ridge.

The papers on Krishna–Godavari basin are very useful in understanding the hydrocarbon accumulations in lobate type constructive delta regime from Cretaceous to Tertiary, the sediment deposit giving rise to different types of hydrocarbon plays.

The paper on geology and hydrocarbon exploration in Assam and Schuppen belt cover a lot of information of interest to petroleum explorationists. Evidence of anticlinal structures below the advancing thrust sheet of Naga hills in the Dhansiri valley coupled with higher thermal gradient make the Schuppen belt more prospective for oil, sitting as it seems on the 'Oil Kitchen', than the anticlinal folds of the foreland basin.

While relating hydrocarbon generation to thermal maturity of the Tertiary sedi-

ments, the prospects of coal bed methane in commercial quantities is a new aspect discussed. Also the differing folding and faulting sequences on the east and west of Kadi fault in NW of Manipur hills may have the implication of extending Schuppen tectonics further south west.

The few papers on Andaman forearc, Palar, Pennar and Mahanadi basins generally summarize the status of the exploration in these basins with the possibility of locating hydrocarbons under certain geological conditions which need to be looked for in future exploration programmes. Of particular interest is the promise of the use of airborne Synthetic Aperture Radar (SAR) survey for structural and lithological detailing of otherwise inaccessible regions like the east of Jarwa thrust in the Andamans, which could not be mapped earlier due to the hostility of the Jarwa tribes inhabiting that part of the island and clouds/weather obstructing in obtaining sharp aerial photographs. SAR has shown the capability of recording data under all weather conditions.

The binding of the volume containing such a valuable source of reference material could have been better. The scaling, lettering and reproduction of the figures and diagrams positively need better attention by the editors during the printing of the companion volume. Some of the glaring lapses are: absence of longitudes and latitudes in maps, scales of maps indicated in ratios when they were to be reduced while printing (p. 595, p. 145–158), depiction in map being incompatible with index or text (II C on p. 4, fig. 1 on p. 144), sections across lines not corresponding to map and index in map missing (section C on p. 9 and map), missing sentences (bottom of p. 3 and top of p. 5), jarring spelling mistakes (in fig. 2, p. 7 and caption of fig. 2, p. 687), etc.

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