Barremian – Aptian stratigraphy and hydrocarbon habitat of the Eastern Arabian Plate

Editors:
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Barremian – Aptian stratigraphy and hydrocarbon habitat of the eastern Arabian Plate comprises 18 papers covering one of the most hydrocarbon-rich stratigraphic intervals in the Middle East. They were written over a period of two and a half years by more than 60 authors and co-authors from industry, academia, geological surveys and research organisations, and reviewed by 34 experts and the four editors (F.S.P. van Buchem, M.I. Al-Husseini, F. Maurer and H.J. Droste).

The two volumes are the fourth of the series of GeoArabia Special Publications. They are presented in 614 pages including more than 300 graphics and several large enclosures, which illustrate a vast array of new multi-disciplinary data and interpretations in high-resolution, color-matched designs. The graphics illustrate fossils, chemostratigraphic curves, 2-D and 3-D seismic, well logs, core, outcrop photos, maps and much more. Every paper starts with a figure showing its study area on a common late Early Aptian palaeogeographic basemap, followed by a stratigraphic figure comparing the local stratigraphy to that of the Arabian Plate synthesis; and in the GTS 2004 time scale. These two figures carry the reader’s eyes effortlessly across all the papers.

The major improvement of our understanding of the Barremian – Aptian carbonate strata can be directly applied by petroleum geoscientist and engineers, both at the reservoir and exploration scales. It sets an example for an integrated approach that is equally applicable to other stratigraphic intervals.

The glacio-eustatic, sea-level fluctuations recorded in the Arabian Plate are believed to have a global expression which suggests the here presented conceptual models can be extrapolated to other plates and basins.
• Permeability anisotropy from North American analogues of tidally-influenced reservoirs
• Sedimentology and stratigraphy of the Walloon Sub-group, eastern Australia
• Multi-scale characterization of dense zones in Ekofisk chalk reservoirs, offshore Norway
• An integrated workflow for geodynamic modelling of deep-water rifted margins