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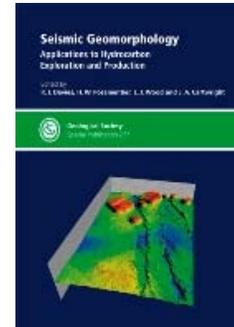
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Seismic Geomorphology—Applications to Hydrocarbon Exploration and Production, edited by R.J. Davies, H.W. Posamentier, L.J. Wood & J.A. Cartwright, 2006. Geological Society Special Publication 277. The Geological Society of London, The Geological Society Publishing House, Unit 7, Brassmill Enterprise Centre, Brassmill Lane, Bath, BA1 3JN, United Kingdom. Hardback, 288 pages. Price GBP 70.00 (fellow price GBP 35.00; corporate affiliates price GBP 56.00; other societies' price GBP 42.00). ISBN 978-1-86239-223-6.



This special publication is the result of a joint SEPM/GSL conference held in February 2005 in Houston (Texas), which was repeated to some extent later in the same year at the annual AAPG meeting in Calgary (Alberta). The papers presented at these conferences attempt to capture the development of a new discipline called “Seismic Geomorphology”, somewhat along the same lines as the development of the highly successful – then new – discipline of sequence stratigraphy in the late seventies of the last century. With the advent, during the past decades, of increasingly better quality 3-D seismic imaging techniques, the study of subsurface geomorphological features has become within the reach of seismic interpreters, adding another dimension to the traditional science of surface geomorphology. The recognition of evolving seascapes and landscapes through time and space, in combination with sequence stratigraphy, could enable the subsurface interpreter to predict lithologies, stratigraphic architecture and geological processes. Potentially, this could be a powerful addition to the hydrocarbon explorer’s tool kit.

The book is subdivided into three sections dealing with (1) the principles, (2) data-analysis issues, and (3) case studies of sedimentary environments. Apart from the introductory overview, out of the 13 papers presented, two (both in the principles section) have been written by authors from the petroleum industry; the remaining eleven papers originate from academia and research institutes. Obviously, the 3-D seismic data used throughout the various papers originate from petroleum-industry activities. An improved subsurface picture undoubtedly contributes to better interpretation results, but the claim within the book’s title of providing an application to hydrocarbon exploration and production remains somewhat unsubstantiated. The potential practical application is only touched upon in the two industry papers, showing examples from the West African margin and the Mahakam shelf off East Borneo.

The data-analytical section contains three papers. One on the utilisation of neural-network classification of carbonate seismic facies within the mid-Cretaceous of the Persian Gulf, and the second on the parameterization of meander-belt elements within the shallow Tertiary of Suriname. The third paper illustrates the use of curvature attributes for defining stratigraphic features in some North American examples.

The six papers in the case-studies section deal with examples of the application of seismic geomorphology to specific sedimentary environments, ranging from ice streams in the Norwegian Barents Sea, Jurassic carbonate ramps in Louisiana, North American Paleozoic collapse features, fluvial seismic geomorphology in general, submarine channels offshore Angola, and turbidity currents off Mauritania to soft-sediment features offshore Norway.

The book is a useful collection of papers and thoughts on the interpretation of high-resolution 3-D data sets. It is well executed and lavishly illustrated with maps, seismic sections and other

relevant figures, many of which in color. However, the claim of capturing a new discipline seems to be somewhat exaggerated, since most of the applications shown are already an integral part of the well-established seismic stratigraphic interpretation method. Perhaps one could consider the geomorphological approach as an improvement of 3-D seismic interpretation techniques. Despite the academic overtone, the book can be recommended to scientific and industry professionals alike.

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