

Seismic Geomorphology:
Applications to Hydrocarbon Exploration
and Production

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**Seismic Geomorphology:
Applications to Hydrocarbon Exploration
and Production**

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Preface

This Geological Society Special Publication is the result of a highly successful joint SEPM and Geological Society conference held in February 2005 in Houston, Texas. The papers attempt to capture the development of a new discipline, 'Seismic Geomorphology'. The discipline of geomorphology has a long and illustrious history but in recent years an entirely new way of studying landscapes and seascapes has been developed. It involves the use of seismic data – specifically 3D seismic data. Just as CAT scans allow medical staff to view our anatomy in 3D, seismic data now allow Earth Scientists to do what the early geomorphologists such as William Morris Davis and Albrecht Penck could only dream of – and view 10's and 100's of square kilometres of the Earth's subsurface in 3D. Such evolving image technologies enable geoscientists to see more geological detail than before and how seascapes and landscapes have evolved through time. Seismic Geomorphology, when integrated with seismic and sequence stratigraphy, is also a powerful tool for the prediction of lithologies, stratigraphic architecture and processes in space and time. It therefore has a commercial significance for drilling lithologies suitable for hosting and sealing hydrocarbons. The book is divided into three main sections, (a) review of the basic assumptions in seismic data analysis of depositional systems and revisiting sequence stratigraphic models, (b) data interrogation strategies and (c) sedimentary environment case studies.

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