## Contents

Preface v  
Acknowledgements vi  

### 3D seismic technology: are we realising its full potential?: DAVIES, R. J., STEWART, S. A., CARTWRIGHT, J. A., LAPPIN, M., JOHNSTON, R., FRASER, S. I. & BROWN, A. R.

#### Depositional systems

Seismic geomorphology: imaging elements of depositional systems from shelf to deep basin using 3D seismic data: implications for exploration and development: POSAMENTER, H. W.


Structural controls on the positioning of submarine channels on the lower slopes of the Niger Delta: MORGAN, R.

Sea bed morphology of the Faroe-Shetland Channel derived from 3D seismic datasets: LONG, D., BULAT, J. & STOKER, M. S.

3D anatomy of late Neogene contourite drifts and associated mass flows in the Faroe–Shetland Basin: KNUTZ, P. C.

Interactions between topography and channel development from 3D seismic analysis: an example from the Tertiary of the Flett Ridge; Faroe-Shetland Basin, UK: ROBINSON, A. M., CARTWRIGHT, J. A., BURGESS, P. M. & DAVIES, R. J.

3D seismic analysis reveals the origin of ambiguous erosional features at a major sequence boundary in the eastern North Sea: near top Oligocene: HANSEN, J. P. V., CLAUSEN, O. R. & HUUSE, M.

### Structural and igneous geology

3D analogue models of rift systems: templates for 3D seismic interpretation: MCCLAY, K. R., DOOLEY, T., WHITEHOUSE, P., FULLARTON, L. & CHANTRAPRASERT, S.

Structural evolution of a complex 3D fault array in the Cretaceous and Tertiary of the Porcupine Basin, offshore Ireland: JONES, G., WILLIAMS, L. S. & KNIFE, R. J.

Three-dimensional geometry and displacement configuration of a fault array from a raft system, Lower Congo Basin, Offshore Angola: implications for the Neogene turbidite play: DUTTON, D. M., LISTER, D., TRUDGILL, B. D. & PEDRO, K.

Initial deformation in a subduction thrust system: polygonal normal faulting in the incoming sedimentary sequence of the Nankai subduction zone, southwestern Japan: HEFFERNAN, A. S., MOORE, J. C., BANGS, N. L., MOORE, G. F. & SHIPLEY, T. H.

The evolution and growth of Central Graben salt structures, Salt Dome Province, Danish North Sea: RANK-FRIEND, M. & ELDERS, C. F.

Integrating 3D seismic data with structural restorations to elucidate the evolution of a stepped counter-regional salt system, Eastern Louisiana shelf, Northern Gulf of Mexico: TRUDGILL, B. D. & ROWAN, M. G.

Exploration 3D seismic over the Gjallar Ridge, Mid-Norway: visualization of structures on the Norwegian volcanic margin from Moho to seafloor: CORFIELD, S. M., WHEELER, W., KARPUZ, R., WILSON, M. & HELLAND, R.

Tertiary inversion in the Faroe-Shetland Channel and the development of major erosional scarps: SMALLWOOD, J. R.

3D seismic analysis of the geometry of igneous sills and sill junction relationships: HANSEN, D. M., CARTWRIGHT, J. A. & THOMAS, D.

Kinematic indicators for shallow level igneous intrusion from 3D seismic data: evidence of flow direction and feeder location: TRUE, K. J.

### Application at development and production scale

Visualization and interpretation of 3D seismic in the Carboniferous of the UK Southern North Sea: LYNCH, J. J.

Direct visualization and extraction of stratigraphic targets in complex structural settings: JAMES, H., BOND, R. & EASTWOOD, L.

Locating exploration and appraisal wells using predictive rock physics, seismic inversion and advanced body tracking: an example from North Africa: PICKERING, G., KNIGHT, E., BLETCHER, J., BARBER, R. & KEMPER, M.

Use of 3D visualization techniques to unravel complex fault patterns for production planning: Njord field, Halten Terrace, Norway: DART, C., CLOKE, I., HERLEVER, A., GILLARD, D., RIVENES, J. C., OTTERLEI, C., JOHNSEN, E. & EKERN, A.

Seismic characteristics of large-scale sandstone intrusions in the Paleogene of the South Viking Graben, UK and Norwegian North Sea: HUUSE M., DURANTI, D., STEINSLAND, N., GUARGENA, C. G., PRAT, P., HOLM, K., CARTWRIGHT, J. A. & HURST, A.
Integrated use of 3D seismic in field development, engineering and drilling: examples from the shallow section: Austin, B. 279
4D/time-lapse seismic: examples from the Foinaven, Schiehallion and Loyal Fields, UKCS, West of Shetland: Bagley, G., Saxby, I., McGarrity, J., Pearse, C. & Slater, C. 297

New applications
Improved drilling performance through integration of seismic, geological and drilling data: Stewart, S. A. & Holt, J. 303
4D seismic imaging of an injected CO2 plume at the Sleipner Field, central North Sea: Chadwick, R. A., Arts, R., Eiken, O., Kirby, G. A., Lindeberg, E. & Zweigel, P. 311
Towards an automated strategy for modelling extensional basins and margins in four dimensions: White, N., Haines, J., Jones, S. & Hanne, D. 321
Modelling fault geometry and displacement for very large networks: Lister, D. L. 339

Index 349