Contents

Preface vii

JOLLEY, S. J., BARR, D., WALSH, J. J. & KNIFE, R. J. Structurally complex reservoirs: an introduction 1

DOMÍNGUEZ, R. Structural evolution of the Penguins Cluster, UK northern North Sea 25

WELBON, A. I. F., BROCKBANK, P., BRUNSDEN, D. & OLSEN, T. S. Characterizing and producing from reservoirs in landslides: challenges and opportunities 49

HOFFMAN, K. S. & NEAVE, J. W. The fused fault block approach to fault network modelling 75

TERTOIS, A. L. & MALLET, J. L. Editing faults within tetrahedral volume models in real time 89

KREŽSEK, C., ADAM, J. & GRUJIC, D. Mechanics of fault and expulsion rollover systems developed on passive margins detached on salt: insights from analogue modelling and optical strain monitoring 103


WILKINS, S. J. Fracture intensity from geomechanical models: application to the Blue Forest 3D survey, Green River Basin, Wyoming, USA 137

LEWIS, H., HALL, S. A., GUEST, J. & COUPLES, G. D. Kinematically-equivalent but geomechanically-different simulations of fault evolution: the role of loading configurations 159

HALL, S. A. & LEWIS, H. A damage domain approach to integration of geomechanics and seismic anisotropy for fractured reservoir characterization 173

BERGBAUER, S. Testing the predictive capability of curvature analyses 185

FERRILL, D. A., MORRIS, A. P. & SMART, K. J. Stratigraphic control on extensional fault propagation folding: Big Brushy Canyon monocline, Sierra Del Carmen, Texas 203

FISHER, Q. J. & JOLLEY, S. J. Treatment of faults in production simulation models 219

CHILDs, C., WALSH, J. J., MANZOCCHI, T., STRAND, J., NICOL, A., TOMASSO, M., SCHÖPFEr, M. P. J. & APLIN, A. C. Definition of a fault permeability predictor from outcrop studies of a faulted turbidite sequence, Taranaki, New Zealand 235

DEE, S. J., YIELDING, G., FREEMAN, B. & BRETN, P. A comparison between deterministic and stochastic fault seal techniques 259

MYERS, R. D., ALLGOOD, A., HIJELLBAKK, A., VROLIJK, P. & BRIEDIS, N. Testing fault transmissibility predictions in a structurally dominated reservoir: Ringhorne field, Norway 271

ZIiLSTRA, E. B., REEMST, P. H. M. & FISHER, Q. J. Incorporation of fault properties into production simulation models of Permian reservoirs from the southern North Sea 295

MANZOCCHI, T., WALSH, J. J., TOMASSO, M., STRAND, J., CHILDs, C. & HAUGHTON, P. D. W. Static and dynamic connectivity in bed-scale models of faulted and unfaulted turbidites 309

MA, J., VASZI, A. Z., COUPLES, G. D. & HARRIS, S. D. The link between a heterogeneous model and its flow response: examples from fault damage zones highlighting issues in domain discretization and flow simulation 337

HARRIS, S. D., VASZI, A. Z. & KNIFE, R. J. Three-dimensional upscaling of fault damage zones for reservoir simulation 353

MAEKEL, G. H. The modelling of fractured reservoirs: constraints and potential for fracture network geometry and hydraulics analysis 375


BARR, D. Conductive faults and sealing fractures in the West Sole gas fields, southern North Sea 431
ZHANG, X., KOUTSABELOULIS, N. C., HEFFER, K. J., MAIN, I. G. & LI, L. Coupled geomechanics–flow modelling at and below a critical stress-state used to investigate common statistical properties of field production data

MAIN, I. G., LI, L., HEFFER, K. J., PAPASOULIOTIS, O., LEONARD, T., KOUTSABELOULIS, N. C. & ZHANG, X. The Statistical Reservoir Model: calibrating faults and fractures, and predicting reservoir response to water flood

Index