

SPE Annual Technical Conference and Exhibition (ATCE 2015)

Houston, Texas, USA
28-30 September 2015

Volume 1 of 8

ISBN: 978-1-5108-1322-9

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2015) by the Society of Petroleum Engineers
All rights reserved.

Printed by Curran Associates, Inc. (2016)

For permission requests, please contact the Society of Petroleum Engineers
at the address below.

Society of Petroleum Engineers
P. O. Box 833836
Richardson, Texas 75083-3836

Phone: (800) 456-6863
Fax: (972) 952-9435

books@spe.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

VOLUME 1

SPE-174720-MS Dynamic Simulation to Predict Self-Restart Potential of Acid Stimulated Wells by Bullhead Treatment in Deepwater Environment	1
<i>O. Ugoala, K. K. Thakur, B. Siddiqi, Z. Cristea, K. H. Gad, P. Robson, J. D. Pacho Carrillo, A. Hosny</i>	
SPE-174721-MS Helicopter Load/Unload Operation Safety on Offshore Platform	33
<i>H. Yonebayashi, T. Collins</i>	
SPE-174725-MS Road to Success and Lessons Learned in Intelligent Completion Installations at the Santos Basin Pre-salt Cluster	47
<i>E. Schmitzler, D. A. Silva Filho, F. H. Marques, F. K. Delbim, K. L. Vello, L. F. Goncalvez, T. C. Fonseca</i>	
SPE-174726-MS Mechanistic Prediction of Oil-Water, Two-Phase Flow in Horizontal or Near-Horizontal Pipes for a Wide Range of Oil Viscosities	64
<i>L. Li, F. Popa, B. Houchens</i>	
SPE-174727-MS Enhancing Production Performance of Horizontal Wells in Naturally Fractured Carbonate Reservoirs Using Inflow Control Devices (ICDs)	79
<i>E. Alalyan, S. M. Al-Mutairi, O. O. Ukaegbu, O. A. Ogunsanwo</i>	
SPE-174728-MS Probabilistic Bullheading Analysis is a Unique Risk Assessment Tool for Drilling and Completion Equipment Selection for Critical HP/HT Wells	98
<i>A. Haghshenas, A. J. Cuthbert</i>	
SPE-174729-MS Material Supply Challenges in the Offshore Project Environment	111
<i>B. K. Kendig</i>	
SPE-174732-MS Root Cause Analysis Solves Inoperability Problem with Downhole Flow Control Valves	121
<i>R. K. Agarwal, M. Galiunas, M. Barrilleaux, C. Stewart, M. G. Burns</i>	
SPE-174735-MS Maximizing Information through Data Driven Analytics in Petrophysical Evaluation of Well Logs	140
<i>V. Jain, K. Gzara, G. Makarychev, C. Cao Minh, D. Heliot</i>	
SPE-174736-MS Case History: First Lower Tertiary Multi-Zone Single-Trip Intelligent Completion in an Ultra-Deepwater Development	151
<i>K. P. Joseph</i>	
SPE-174737-MS Unlocking Heavy Oil Potential from Shallow Reservoirs: Successful Cold Flow Testing of Heavy Oil Exploration Wells with PCP Artificial Lift System	167
<i>A. R. Al-Ibrahim, H. Al-Bader, A. R. Al-Nabhan, P. Subban, V. Duggirala, M. Ayyavoo, A. Ibrahim</i>	
SPE-174738-MS Method to Create Multiple Collocated Hydraulic Fractures Using a Temporary Localized Change in Stress Anisotropy Produced During an Initial Stimulation Treatment	176
<i>B. J. Lewis, J. B. Surjaatmadja</i>	
SPE-174739-MS Screen Erosion Guidelines for Sand Control Completion and Sand Production Management: Case Study West Delta Deep Marine (WDDM) Offshore Egypt	205
<i>H. S. Mahmoud, A. M. Ali, A. A. Abdel Sayed, E. Zalam</i>	
SPE-174740-MS Minimum Facility Platform for Sub-Commercial Reservoirs in the Gulf of Thailand	221
<i>B. Chamwith, P. Pheerasak, S. Thitinun, L. Natthawadi, T. Tanadcha, M. Taweepong, P. Yossaran, S. Wanvisa, P. Suchada, H. Pongpat, L. Ratchada, D. Supamittra, T. Vuthiphon, K. Warakorn, S. Wiwit, S. Penporn, K. Choosak, U. Saran</i>	
SPE-174741-MS Drilling Depleted Sands: Geomechanics, Challenges and Mitigations	236
<i>R. Majidi, S. Edwards, J. Zhang, R. V. Sant, N. C. Last</i>	
SPE-174742-MS Theory of Petroleum Engineering Education: Big Bounce, Big Crunch, or Big Freeze?	255
<i>T. Plaksina, E. Gildin</i>	
SPE-174743-MS Completion Optimization Provides Step Changes in Horizontal Well Performance in the Nuiqsut Formation – An Oooguruk Field (Alaska) Case History	270
<i>A. J. Bond, R. Jasser, V. Johnson, M. Morgan, M. Martin, T. Palisch, B. Williams</i>	
SPE-174745-MS Managing Hand Injury Risk - Perspective of International Well Servicing Company	291
<i>S. Chen, W. Leong, M. Wells, R. Kennedy</i>	
SPE-174746-MS CFD Study For Heat Transfer And Flow Characteristics of Nanofluid In A Flat Tube Heat Exchanger	304
<i>M. S. Elsebay, A. Hussein, M. Elshemy</i>	
SPE-174747-MS Key Engineering Highlights of Facilities and Equipment for Oil and Gas Production	320
<i>B. Mirza, F. Al-Kharqawi</i>	
SPE-174748-MS Human Factors Risk Programs Implementation a Drilling Material Dispatch Unit and Well Equipment Repair Workshop	335
<i>F. Al-Dhamen, G. A. Gopaul, A. Al-Shatti, A. Al-Khaldy</i>	
SPE-174749-MS Formulation of a Transient Multi-Phase Thermal Compositional Wellbore Model and its Coupling with a Thermal Compositional Reservoir Simulator	347
<i>F. Forouzanfar, A. P. Pires, A. C. Reynolds</i>	
SPE-174750-MS Streamline-based History Matching of Arrival Times and Bottomhole Pressure Data for Multicomponent Compositional Systems	379
<i>S. Tanaka, D. Kam, A. Datta-Gupta, M. J. King</i>	
SPE-174751-MS A New Method to Detect Blockage in Gas Pipelines	420
<i>K. Ling, X. Wu, Z. Shen</i>	

SPE-174753-MS Successful Application of a New Fracturing Fluid with Supramolecular Complex Structure	433
<i>J. Yang, W. Cui, Y. Duan, Z. Yang, X. Qiu, B. Guan, Y. Lu, W. Zhai, P. Liu, Y. Ding, J. Bai</i>	
SPE-174754-MS Proving the Concept of Unconventional Gas Reservoirs in Saudi Through Multistage Fractured Horizontal Wells	443
<i>A. M. Al-Momin, M. Kurdi, A. Al-Saihati, K. Mechkak, S. Baki</i>	
SPE-174755-MS Review and Analysis of Zonal Isolation Effectiveness in Carbonate Reservoirs Using Multi-Stage Stimulation Systems	462
<i>M. Nozaki, R. C. Burton, K. Furui, N. R. Zwarich</i>	
SPE-174756-MS Drilling Through Layers of Unstable Shale Formations and Depleted Sand Sequences, the Managed Pressure Drilling / Wellbore Strengthening Approach to Successfully Drill Offshore Development Wells. A Case History	487
<i>I. Henry, J. Hernandez, A. Ngan, M. A. Arnone, S. M. Boutalbi, C. Lagrandeur</i>	
SPE-174757-MS Optimized Fracture Stage and Perforation Placement in Horizontal Wells using a New Calibrated Pulsed-Neutron Log Workflow	505
<i>J. Dahl, J. E. Samaripa, J. Spaid, E. D. Hutto, D. Buller, B. J. Johnson, C. McIlroy</i>	
SPE-174761-MS Consistent Entry Hole Diameter Perforating Charge Reduces Completion Pressure and Increases Proppant Placement	519
<i>C. Rasmuson, J. Walden, C. Smith, J. C. Pinkett</i>	
SPE-174763-MS Novel Use of Electro Coalescence to Enhance, Optimize and Debottleneck Oil Separation Trains	529
<i>M. Amarzguoui, P. C. Jacobsen</i>	
SPE-174764-MS Gas Evolution Rates in Crude Oil for Subsea Separator Applications	547
<i>A. Daniel, S. Mohammad, J. R. Whiteley, G. E. Kouba, D. M. Lavenson, A. Kelkar, H. J. Subramani, C. P. Aichele</i>	
SPE-174765-MS Assessing Diverse Variables and Technologies and Their Impact on Sustained Gas Production in Carbonate Reservoirs - Field Examples	554
<i>Z. Rahim, H. A. Al-Anazi, A. A. Al Kanaan, R. E. Kayumov, Z. Al-Jalal</i>	
SPE-174766-MS A Comparison of Air Emission Estimation Protocols for Drilling Rigs	583
<i>S. Stuver</i>	
SPE-174768-MS Modelling with Multidimensional Matrices for Project Economics, Portfolio and Business Plan Generation and Analysis	591
<i>T. Tahirov</i>	
SPE-174769-MS New Foam Drilling Hydraulics Calculations by Using Two Foam Flow Regimes	605
<i>A. Edrisi, S. I. Kam</i>	
SPE-174770-MS Quantification of Wellbore Strengthening Mechanisms: Comprehensive Parametric Analysis	630
<i>M. Pordel Shahri</i>	
SPE-174771-MS Tractor-Conveyed Magnetic Fishing in an Extended-Reach Lateral Completion	659
<i>C. McMullen, W. Hathaway</i>	
SPE-174772-MS Optimizing Number of Fractures in Horizontal Well	670
<i>V. Guk, M. A. Tuzovskiy, D. S. Wolcott, J. M. Mach</i>	
SPE-174773-MS Rheological Hierarchy Optimization Improves Fluid Displacement and Well Integrity, 3 Worldwide Case Studies	688
<i>A. Shadravan, A. Alegria, R. Castanedo</i>	
SPE-174774-MS Using Association Rule Mining and High-Dimensional Visualization to Explore the Impact of Geological Features on Dynamic Flow Behavior	704
<i>S. Suzuki, D. Stern, T. Manzocchi</i>	
SPE-174776-MS Walking the Walk -- Industry Support of Natural Resource High School Education	736
<i>J. C. Tobin, J. Todd</i>	
SPE-174777-MS Behind Pipe Log Evaluation Study: Deepwater Subsea Abandonments in the Gulf of Mexico	742
<i>G. G. Donovan, P. F. Fadesere, G. Ware, L. J. Daigle, F. Suparman, G. J. Frisch, P. E. Fox, M. Englar, G. L. Moake, W. Guo</i>	
SPE-174778-MS Innovative Process for Formation Damage Removal in Sandstone Reservoir Based on Real-Time Downhole Monitoring - A Malaysia Case History	765
<i>L. Riyanto, M. Musa, N. Mat Deris, M. Y. Yaakub, R. Ghazali, Z. Hamidon, D. Wijoseno, J. Jenie, A. Parapat, M. Kasim</i>	
SPE-174779-MS Implementation of Drilling Systems Automation - Halifax Workshop Summary: Industry Standards, Business Models and Next Steps	774
<i>F. Florence, C. D. Chapman, J. D. Macpherson, M. Cavanaugh</i>	
SPE-174780-MS A Real Time Chemical Monitoring Platform for Inventory and Usage	804
<i>C. M. Piovesan</i>	
SPE-174781-MS Mechanical Versus Mineralogical Brittleness Indices Across Various Shale Plays	811
<i>E. Kias, R. L. Maharidge, R. S. Hurt</i>	
SPE-174782-MS Fracture Gradient Prediction Using the Viscous Relaxation Model and Its Relation to Out-of-Zone Microseismicity	826
<i>Y. Yang, H. Sone, M. Zoback</i>	
SPE-174783-MS Using Swelling Materials to Control Fracture Complexity: Experimental Study	841
<i>A. M. Gomaa, Q. Qu, S. G. Nelson, H. Sun, V. C. Go Boncan</i>	
SPE-174784-MS Machine Learning as a Reliable Technology for Evaluating Time-Rate Performance of Unconventional Wells	856
<i>D. S. Fulford, B. Bowie, M. E. Berry, B. Bowen, D. W. Turk</i>	

VOLUME 2

SPE-174785-MS Effective Force: Fiction or Reality?	887
<i>A. I. Nergaard</i>	
SPE-174788-MS Novel Laboratory and Field Approaches to Control Halite and other Problematic Scales in High Salinity Brine from the Bakken	896
<i>H. Lu, J. Penkala, J. Brooks, C. Haugen, C. Harbaugh, C. A. McAfee, L. J. Kalfayan</i>	
SPE-174789-MS Secret Weapon Against the Red Queen: Using Chemical Packers and Degradable Mechanical Diverters in Refracturing Operations	911
<i>F. E. Fragachan, A. Babey, D. Arnold, E. M. Heminway, F. Yuan</i>	
SPE-174790-MS Insights of Wormhole Propagation during Carbonate Acidizing: Constant Pressure vs. Constant Rate	925
<i>A. M. Gomaa, A. Nino-Penaloza, J. L. Cutler, S. A. Chaudhary</i>	
SPE-174791-MS Mathematical Modeling and Experimental Breakthrough Curves for the Adsorption of Toxic Vapors Emitted from Crude Oil and Condensate Storage Tanks	947
<i>O. A. Oyelakin, O. Lawal, D. Ramirez</i>	
SPE-174792-MS Cost-efficient And Improved Treatment Technology For Produced Water Reuse	974
<i>J. Cao, S. P. Monroe, H. Sun, L. Li</i>	
SPE-174793-MS Comparison of Open Hole and Cased Hole Dipole Sonic Data in Horizontal Well Completions	983
<i>C. Smith, A. Bashkirseva, M. Robinson, J. Atteberry, R. Barber</i>	
SPE-174795-MS Forecasting Production Performance in Reservoir-Network Coupled Systems with Asphaltene Modeling	1002
<i>E. Valbuena, M. A. Barrufet, J. E. Killough</i>	
SPE-174796-MS Environmentally Preferred Process For Efficient Boron And Hardness Removal For Produced Water Reuse	1027
<i>J. Cao, S. P. Monroe, D. Hendry</i>	
SPE-174797-MS Vibration Modeling and Analysis under Backreaming Condition	1034
<i>R. Samuel, A. Mirani</i>	
SPE-174798-MS Analytical Model to Estimate the Directional Tendency of Point and Push-the-Bit BHAs	1050
<i>Y. Zhang, R. Samuel</i>	
SPE-174799-MS Geology Driven EUR Prediction Using Deep Learning	1062
<i>L. Crnkovic-Friis, M. Erlandson</i>	
SPE-174800-MS Evaluation of the EIF Onshore Discharges Tool For Assessing Environmental Risk From Accidental Spills And Leaks Associated With Hydraulic Fracturing Operations	1072
<i>S. K. Firth, U. I. Musdalslien, R. E. Hagemann</i>	
SPE-174801-MS Case Study of Soft Particle Fluid to Improve Proppant Transport and Placement	1085
<i>H. Sun, M. Zhou, H. D. Brannon, D. V. Gupta, M. Ault, P. Carman, R. S. Wheeler</i>	
SPE-174802-MS Coupling Nanoparticles with Waterflooding to Increase Water Sweep Efficiency for High Fines-Containing Reservoirs: Lab and Reservoir Simulation Results	1101
<i>T. Huang, J. Han, G. Agrawal, P. A. Sookprasong</i>	
SPE-174803-MS End-to-End Data Provenance	1115
<i>R. T. Rundle, R. Vuurboom, Y. Duroy</i>	
SPE-174804-MS Root Cause Failure Analysis as a Tool for Investigating Operational Failures: A Case Study	1135
<i>S. E. Scolnick, J. C. Garrett, S. Griffith, K. K. Ward</i>	
SPE-174805-MS Predicting and Optimizing ROP in Competent Shale by Utilizing MPD Technology	1144
<i>E. Mammadov, N. Osayande, J. M. Breuer, W. L. Al-Hashmy</i>	
SPE-174806-MS Innovative New Frac Manifold Trailer Offers Step Change in Slickwater Pumping	1156
<i>R. W. Gusek, F. Ghasripor</i>	
SPE-174807-MS Digital Rock Technology for Quantitative Prediction of Acid Stimulation Efficiency in Carbonates	1167
<i>D. E. Klemm, A. Nadeev, M. Ziauddin</i>	
SPE-174808-MS Flow-Loop Testing of Subsea Produced Water Quality Monitoring Sensor Prototypes	1184
<i>X. Yin, P. Moore, K. Gul, J. Lachance</i>	
SPE-174809-MS Automated Workflow for Real-Time Management in a Large Carbonate Field	1198
<i>M. M. Alnakhli, A. S. Nuaim, M. M. Dallag</i>	
SPE-174811-MS Real-time Monitoring of Health Hazards During Hydraulic Fracturing	1213
<i>I. Uyanik, S. Dursun</i>	
SPE-174812-MS Fuzzynistic Models for Multiphase Flow Pattern Identification	1220
<i>F. Popa, S. Dursun, B. Houchens</i>	
SPE-174813-MS Sustainable Flow Back and Produced Water Treatment Using A Next Generation Electro-Oxidation Reactor	1236
<i>M. L. Fraim, S. D. Jakhete</i>	
SPE-174814-MS Using Eco-Friendly Biodegradable Materials For Designing New Completions and Re-Fracturing Acidizing Applications in which Diversion and Zonal Isolation Enhance Efficiency	1252
<i>A. G. Babey, P. Schmeltz, F. E. Fragachan</i>	
SPE-174815-MS Identifying Leading Indicators to Address the Risk of Drilling and Completions for Shale Gas	1260
<i>P. Tamilselvan, B. Das</i>	
SPE-174816-MS Sand, Resin-Coated Sand or Ceramic Proppant? The Effect of Different Proppants on the Long-Term Production of Bakken Shale Wells	1271
<i>K. Hu, A. Schmidt, J. L. Barhaug, J. Wong, J. Tian, B. E. Hall</i>	

SPE-174817-MS Study on Inhibition of High-Molecular-Weight Paraffins for South Eagle Ford Condensate	1289
<i>K. P. Gawas, P. Krishnamurthy, F. Wei, E. Acosta, Y. Jiang</i>	
SPE-174818-MS A New Model for Hydraulic Fracture Growth in Unconsolidated Sands with Plasticity and Leak-off	1300
<i>D. Lee, P. Cardiff, E. C. Bryant, R. Manchanda, H. Wang, M. M. Sharma</i>	
SPE-174819-MS Restimulation Design Considerations and Case Studies of Haynesville Shale	1321
<i>J. Melcher, S. B. Persac, A. Whitsett</i>	
SPE-174821-MS Long Range Electromagnetic Telemetry Using an Innovative Casing Antenna System	1342
<i>J. Chen, S. Li, C. W. Macmillan, G. Cortes, D. Wood</i>	
SPE-174822-MS Emerging Hydraulic Fracturing Execution Technologies in Unconventional Gas and Tight Oil	1352
<i>E. R. Fonseca, Y. Liu, B. Mowad, J. Gujral</i>	
SPE-174823-MS Velocity Tracking for Flow Monitoring and Production Profiling using Distributed Acoustic Sensing	1365
<i>R. Paleja, D. A. Mustafina, P. In 't Panhuis, T. Park, D. Randell, J. Van Der Horst, R. Crickmore</i>	
SPE-174824-MS Obtaining Operational Efficiencies by Applying Process Safety KPIs Developed for Offshore Production Installations	1381
<i>F. Infortunio, G. V. Bedford, F. J. Vacas</i>	
SPE-174825-MS Water-Swellable Elastomers for Heavy Brine Environments	1393
<i>X. Wang, A. K. Sadana, V. Mathur</i>	
SPE-174826-MS Revealing the Benefits of the Intelligent Well Pad for Onshore Shale Assets	1403
<i>J. D. Krome, M. H. Bloom, A. B. Swanson, D. Anthony, S. Derise, L. Rightmire</i>	
SPE-174827-MS Experimental Study on Mechanisms of Wax Removal During Pipeline Pigging	1413
<i>W. Wang, Q. Huang, Y. Liu, K. Sepehrnoori</i>	
SPE-174828-MS Slickwater Proppant Transport in Complex Fractures: New Experimental Findings & Scalable Correlations	1438
<i>M. A. Al-Otaibi, J. L. Miskimins</i>	
SPE-174829-MS Using Radial Bond Segmented Waveforms to Evaluate Cement Sheath at Varying Depths of Investigation	1463
<i>G. J. Frisch, P. E. Fox, D. Hospedales, K. Lutchman</i>	
SPE-174830-MS Making the Impossible Possible with MPD Application on 0.4 ppg Mud Weight Window – A Case History Successful Automated Managed Pressure Drilling, Managed Pressure Run 11 3/4 "Liner & 9 5/8" Liner (Tieback Liner), and Managed Pressure Cementing in a Semisubmersible Offshore Sarawak Malaysia	1481
<i>J. R. Tang, A. E. Praseia, J. F. Gallo Zapata, F. Rojas, I. Rubianto</i>	
SPE-174831-MS Maximizing Well Deliverability in the Eagle Ford Shale Through Flowback Operations	1489
<i>T. Deen, J. A. Daal, J. Tucker</i>	
SPE-174832-MS Estimation of Fracture Volume Between Well Pairs Using Deuterium Tracer	1502
<i>Y. Leong, J. E. Iongh De, S. Bahrng, A. Tuxen, T. B. Nielsen</i>	
SPE-174833-MS Operationalising Bowties - Demonstrating Barrier Management In Real Time	1514
<i>T. Bakker, A. Van Aggelen, P. Kools</i>	
SPE-174834-MS Accounting for Deepwater Reservoir Heterogeneities Through 3D/4D Seismic-Guided Reservoir Model Petrophysical Infilling	1523
<i>S. O. Amoyedo, M. Buraimoh, H. Atoyebi, T. Modiano, A. Atewologun, M. Soudani, G. Piquet, A. Vacheyrou, A. Nateganov</i>	
SPE-174835-MS Integrated Production Logging Approach for Successful Leak Detection between Two Formations: A Case Study	1535
<i>A. A. Al-Mulhim, I. Al-Thwaiqib, A. Bogari, M. A. Bawazir, M. Abdein</i>	
SPE-174836-MS Successful Case History of Drilling Through Major Loss Zone Using MPD/PMCD Techniques on a Santos Basin Well	1550
<i>R. A. Tomita, E. Schnitzler, J. F. Destri, P. H. Da Silva, N. R. Brasiliense, A. A. Fernandes, D. S. Gozzi, T. Pinheiro Da Silva, A. Kozlov</i>	
SPE-174837-MS Sand Control Screen Erosion: Prediction and Avoidance	1562
<i>A. D. Procyk, X. Gou, S. K. Marti, R. C. Burton, M. Knefel, D. Dreschers, A. Wiegmann, L. Cheng, E. Glatt</i>	
SPE-174838-MS Solving Pre-Salt Underream While Drilling Challenge: Dynamic Simulations Optimize BHA/Cutter Block Configuration Offshore Brazil	1588
<i>M. A. Breton Diaz, M. Barreto, F. Hosein, D. A. Palomino Rojas, J. R. Mayol, M. Stewart</i>	
SPE-174839-MS Engineered Shale Completions Based on Common Drilling Data	1599
<i>W. D. Logan</i>	
SPE-174840-MS Integrated Injection Modeling	1614
<i>B. Izgec</i>	
SPE-174843-MS Model-Based Production Optimization of the Rubiales Field, Colombia	1625
<i>M. E. Stanko, M. Asuaje, C. Diaz, M. Guilmain, M. A. Borregales, D. C. Gonzalez, M. Golan</i>	
SPE-174844-MS Reducing Costs and Optimizing Drilling and Completion Efficiencies in Unconventional Plays Using Completion Diagnostics	1638
<i>C. W. Senters, M. N. Warren, C. L. Squires, R. A. Woodroof, R. S. Leonard</i>	
SPE-174845-MS Optimizing Unconventional Asset Development and Reserves Confidence With Portfolio Tradeoff Analysis	1654
<i>K. Kostuik, Y. Mu, R. M. Parma, J. Wearly, K. T. Rooney</i>	
SPE-174846-MS Progressive Royalty Framework for Oil and Gas Development Strategy: Lessons From Nigeria	1675
<i>J. C. Echenidu, O. O. Iledare</i>	
SPE-174848-MS Root Cause Analysis of Drilling Lost Returns in Injectite Reservoirs	1688
<i>S. Buechler, J. Ning, N. Bharadwaj, K. S. Kulkarni, C. Devalve, C. C. Elsborg, T. Head, A. L. Mols</i>	

SPE-174849-MS Functional Approach to Data Mining, Forecasting, and Uncertainty Quantification in Unconventional Reservoirs	1704
<i>O. S. Grujic, C. Da Silva, J. K. Caers</i>	
SPE-174850-MS Novel 2 1/8-in. Real-Time Downhole Data Monitoring System for Coiled Tubing Operations	1721
<i>S. Livescu, D. A. Blanco, L. Vacik, K. Kubicki</i>	
SPE-174851-MS Targeted Perforating in the Granite Wash Based on Traced Cement Spacer Leakoff	1736
<i>E. Crawford, T. Hodgson, C. W. Senters, R. A. Woodroof, S. Knowles</i>	

VOLUME 3

SPE-174852-MS Liquid Loading of Highly Deviated Gas Wells from 60° to 88°	1752
<i>Y. Alsaadi, E. Pereyra, C. Torres, C. Sarica</i>	
SPE-174853-MS How Far Can We Push the Boundary of Horizontal Drilling? A Rivalry Between Wellbore Friction and Drillpipe Buoyant Weight and Stiffness	1770
<i>M. Mehrabi, S. Z. Miska</i>	
SPE-174854-MS Case Studies Validate the Effectiveness of Aluminum-based HPWBM in Stabilizing Micro-fractured Shale Formations: Field Experience in the Peruvian Amazon	1784
<i>V. H. Soriano Arambulo, J. N. Perez Colque, E. D. Ascencios, R. M. Ahmed</i>	
SPE-174855-MS Development Best Practices in the Duvernay Liquid Rich Shale - Early Stage Sensitivity Analyses and Comparative Economics for Decision Making	1798
<i>D. Braun, C. Gurden, Y. Wu, A. Macgregor</i>	
SPE-174856-MS A Case Study Of Using Expandable Liner Hangers And Advanced Cementation Techniques For Erd Wells In India	1808
<i>J. Li, A. Kestwal, A. Vaibhav, A. Singhal, J. Kolay, A. Kumar, C. Langley, R. Varghese, M. Lobo, S. Doodraj, R. Kant, P. Sinha</i>	
SPE-174857-MS Systems Of Action - A Blue Print For Real-time Decision Support Systems	1832
<i>H. Wesenberg, E. Landre</i>	
SPE-174858-MS A Three-Dimensional Thermal Model for Hydraulic Fracturing	1848
<i>K. Amini, M. Y. Soliman, W. V. House</i>	
SPE-174859-MS Nanotechnology Improves Wellbore Strengthening and Minimizes Differential Sticking Problems in Highly Depleted Formation	1870
<i>W. J. Al-Baghli, V. Saradhi, A. Muhammed, A. Alherz, A. Rajagopalan, S. Tobei, F. I. Khatib, P. B. Jadhav, P. Yadav</i>	
SPE-174860-MS Wellbore Stability of Deviated Wells in Depleted Reservoir	1879
<i>X. Li, K. E. Gray</i>	
SPE-174861-MS Success of Deepening Workovers in Permian Basin Carbonates	1893
<i>A. B. Babaniyazov, P. M. Bazin</i>	
SPE-174863-MS Is Pumping Large Volume Sand Frac Treatments Sustainable?	1907
<i>R. F. Shelley, K. Shah, N. Guliyev, A. Mohammadnejad, S. Sheludko</i>	
SPE-174864-MS Action Based Leadership-Intensive Development of Senior Technical Leaders & Enterprise Teams	1921
<i>J. F. Sheegog, K. Graham</i>	
SPE-174865-MS Dynamic Water Injection Profiling In Intelligent Wells Using Distributed Acoustic Sensor with Multimode Optical Fibers	1933
<i>J. Xiao, M. Farhadiroushan, A. Clarke, S. Jacob, A. Almulhem, H. C. Milne, J. Shawash, T. Parker</i>	
SPE-174866-MS Analysis of Water Hammer Signatures for Fracture Diagnostics	1942
<i>M. A. Carey, S. Mondal, M. M. Sharma</i>	
SPE-174867-MS Self-Suspending Proppant Transport Technology Increases Stimulated Reservoir Volume and Reduces Proppant Pack and Formation Damage	1967
<i>B. Goldstein, A. Vanzeeland</i>	
SPE-174868-MS A Real Options Approach to the Gas Blowdown Decision	1983
<i>P. Thomas, R. B. Bratvold</i>	
SPE-174869-MS Numerical Analysis for Promoting Uniform Development of Simultaneous Multiple Fracture Propagation in Horizontal Wells	2003
<i>K. Wu, J. E. Olson, M. T. Balhoff, W. Yu</i>	
SPE-174870-MS The Effects of Fracture Orientation and Elastic Properties Anisotropy on Hydraulic Fracture Conductivity in the Marcellus Shale	2018
<i>M. McGinley, D. Zhu, A. D. Hill</i>	
SPE-174871-MS Structuring an Integrative Approach for Field Development Planning Using Artificial Intelligence and its Application to an Offshore Oilfield	2040
<i>S. P. Ketineni, T. Ertekin, K. Anbarci, T. Sneed</i>	
SPE-174872-MS Advanced Data-Driven Performance Analysis For Mature Waterfloods	2061
<i>R. Mijnaerends, A. Frolov, F. Grishko, S. Kryanev, E. Mikhaylenko, E. Nizamutdinov, O. Plokhomichenko, I. Surovets, E. Ulyanov, Y. Volokitin, A. Gladkov, M. Belyanushkina, A. Lvov</i>	
SPE-174873-MS Real-Time Monitoring and Diagnosis of Electrical Submersible Pump	2083
<i>G. Han, M. Chen, H. Zhang, K. Ling</i>	
SPE-174874-MS A Framework for Transparency in Drilling Mechanics and Dynamics Measurements	2103
<i>J. D. Macpherson, P. E. Pastusek, M. Behounek, R. J. Harmer</i>	
SPE-174875-MS Experimental Study of Drop Size Distribution for Air-Oil Two-Phase Flow in Large Diameter Pipe	2131
<i>K. P. Gawas, E. Pereyra, C. Sarica</i>	

SPE-174876-MS Leak-Off Test Model Combining Wellbore and Near-Wellbore Mechanical Behavior	2152
<i>A. Gandomkar, J. Fu, K. E. Gray</i>	
SPE-174877-MS Acoustic Signature of Flow from a Fractured Wellbore	2170
<i>K. Chen, D. Zhu, A. D. Hill</i>	
SPE-174880-MS Fracture Diagnosis in Multiple Stage Stimulated Horizontal Well by Temperature Measurements Using Fast Marching Method	2187
<i>J. Cui, C. Yang, D. Zhu, A. Datta-Gupta</i>	
SPE-174881-MS Successful Testing of Single Gradient Subsea MudLift Drilling Technology in Deep Water Gulf of Mexico	2207
<i>S. Rahman, C. Holt, J. D. Dowell, J. Morales, S. Davis</i>	
SPE-174882-MS Furthering the Capabilities of Coiled Tubing Production Logging in Horizontal and Highly Deviated Wells: The Advent of Reservoir Saturation Logging in Southern Mexico	2215
<i>O. Jimenez Bueno, A. F. Mejia Nava, H. Hernandez Leyva, C. A. Mendoza Ortega, P. Ramondenc, S. Hassig Fonseca, R. A. Galo Fernandes, F. L. Rodriguez</i>	
SPE-174883-MS Well Integrity Management: Forecasting CO₂ Cavity Corrosion on Tubing of Gas Wells	2226
<i>M. E. Alsalman, Z. Nasizadeh, M. M. Hosseini, R. Samuel</i>	
SPE-174884-MS Successful Squeezing Operation of Magnesium Based Ultrafine Cement Through Wire Wrapped Screen With Mesh Size of 20/40	2240
<i>N. Karim, L. Maluan</i>	
SPE-174885-MS Two Dimensional Monte-Carlo Simulation Method of Risk Assessment for Strategic Asset Investment Decision Making	2247
<i>D. Li, P. Chang, X. Yang, Z. Sun, F. Jin, Y. Yin</i>	
SPE-174886-MS Architecture Characterization of Sandy Braided Fluvial Reservoir_A Case Study of P Offshore Oilfield(Neogene), Bohai Offshore, China	2260
<i>X. Zhongbo, H. Kai, S. Chunsheng, L. Xianbo, H. Bin, K. Kai, C. Yukun, H. Xinrong, L. Lin, Z. Bowen, L. Jiaqi, L. Guosong, Y. Xiaohong</i>	
SPE-174888-MS Effective Training Delivery Mechanism- A Successful Case Study	2277
<i>N. A. Al-Anezi, E. H. Al-Daihani, S. M. Razaa, A. K. Nandi</i>	
SPE-174889-MS Offshore Project Risk Management Model (OPRMM) As a Tool for Efficient Field Development	2283
<i>A. Talipova</i>	
SPE-174890-MS Blowout Prevention and Relief Well Planning for the Wheatstone Big-Bore Gas Well Project	2307
<i>E. R. Upchurch, S. L. Falkner, A. R. House, C. Nguyen, K. Russell</i>	
SPE-174891-MS Why “Do Not Disturb” is a Safety Message	2330
<i>R. E. Sweatman, A. Bottiglieri, R. F. Mitchell</i>	
SPE-174892-MS Use of Novel Self Healing Materials to Control Sustained Casing Pressure and Prevent Long Term Environmental Impact	2361
<i>M. A. Khattak, B. Jain, S. Al Kalbani, J. Ahmed, A. A. Afrianto, N. Qassabi, S. Al Aghbari, A. Salti, S. Rashidi</i>	
SPE-174893-MS Packing the Unpackable: How the Use of Best Sand Control Technologies Reversed the Marginal Project of Atlanta in a Promising Development	2370
<i>C. A. Pedroso, F. Liborio, M. Rausis, M. B. Moreira, J. B. Salies</i>	
SPE-174895-MS How Culture And Practice Workshops Can Help Developing The Safety Accountability Of Operational Staff	2395
<i>V. Kiehl, C. Amadei, E. C. Pradie, M. Sibout, C. Boj, X. Watremez</i>	
SPE-174896-MS Drilling the Undrillable: Atlanta Field - Heavy Oil in Ultra Deep Water	2403
<i>M. G. Rausis, C. A. Pedroso, J. B. Salies, F. Liborio, M. M. Barbosa, P. R. Luz, J. R. Siqueira, J. F. De Oliveira, M. D. Marsili, L. M. Nogueira, A. Heleno, G. Domingues, R. Aguiar</i>	
SPE-174897-MS Testing a Heavy Oil Wells in Ultra Deep Waters: Challenges Overcome by the State of Art Technology in Atlanta Project, Santos Basin, Brazil	2429
<i>C. A. Pedroso, G. G. Monteiro, M. D. Marsili, F. Liborio, R. F. Pessoa, M. Farias</i>	
SPE-174898-MS How Big is Too Big? Assessing Seismic Hazard and Hydraulic Fracture-Induced Seismicity	2449
<i>S. Bowman, T. I. Urbancic, G. Viegas, L. Meighan, E. Von Lunen, J. Hendrick</i>	
SPE-174899-MS Assessing Field Development Plan for Green Fields Using an Integrated Asset Approach, an Angolan Case Study	2460
<i>J. A. Rojas Mora, S. H. Khor, D. Mason, M. L. Nistor, T. Willans</i>	
SPE-174900-MS Using Data Analytics to Analyze Reservoir Databases	2481
<i>B. B. Lee, L. W. Lake</i>	
SPE-174902-MS Advanced Modeling of Interwell Fracturing Interference: An Eagle Ford Shale Oil Study	2492
<i>M. Marongiu-Porcu, D. W. Lee, D. Shan, A. N. Morales</i>	
SPE-174904-MS New Electronics Ensure Increased Operational Efficiency in Highly Deviated, High Temperature Gas Well	2518
<i>H. Sagr, K. Al-Sadoon</i>	
SPE-174905-MS Experimental Design or Monte Carlo Simulation? Strategies for Building Robust Surrogate Models	2523
<i>J. Schuetter, S. Mishra</i>	
SPE-174906-MS Comprehensive Global Model for Before-Closure Analysis of an Injection Falloff Fracture Calibration Test	2544
<i>G. Liu, C. Ehlig-Economides</i>	
SPE-174907-MS Rapid Data Integration and Analysis for Upstream Oil and Gas Applications	2573
<i>C. Cheung, P. Goyal, G. Harris, O. Patri, A. Srivastava, Y. Zhang, A. Panangadan, C. Chelms, R. McKee, M. Theron, T. Nemeth, V. Prasanna</i>	

SPE-174908-MS Application of Kalman Filter to Predictions of Pore Pressure While Drilling	2591
<i>E. Bektas, S. Z. Miska, M. E. Ozbayoglu, M. Yu, N. E. Takach, D. Velazquez-Cruz, M. Pordel Shahri</i>	
SPE-174909-MS Analysis of the Effect of Eccentricity on Displacement of Non-Newtonian Fluids with a Hybrid Method	2606
<i>L. Xie, S. Chaudhary, Z. Chen</i>	

VOLUME 4

SPE-174910-MS Permeability, Skin and Inflow Profile Estimation from Production Logging Tool Temperature Traces	2616
<i>J. F. App</i>	
SPE-174911-MS Advanced Drilling Induced Fracture Modeling for Wellbore Integrity Prediction	2634
<i>N. Kostov, J. Ning, S. V. Gosavi, P. Gupta, K. S. Kulkarni, P. F. Sanz</i>	
SPE-174912-MS Intelligent use of Big Data for Heavy Oil Reservoir Management	2643
<i>A. S. Popa, E. F. Grijalva, S. D. Cassidy, J. Medel, A. B. Cover</i>	
SPE-174913-MS Aluminum Alloy Enhanced Drill String Saves \$500,000 by Increasing Small Rig Depth Capacity in Marcellus	2657
<i>J. Lehner, J. Garcia</i>	
SPE-174914-MS Performance Evaluation of Automatically Generated Statistical Type Curves	2674
<i>H. A. Kuzma, J. D. Conradson</i>	
SPE-174915-MS Short-term Production Operation Management: Continuous Application of an Innovative Integrated Production Optimization Tool	2688
<i>S. Scaramellini, P. Cerri, A. Bianco, S. Masi</i>	
SPE-174916-MS Non-intrusive Multiple Zone Distributed Acoustic Sensor Flow Metering	2704
<i>D. C. Finfer, T. R. Parker, V. Mahue, M. Amir, M. Farhadiroushan, S. Shatalin</i>	
SPE-174919-MS Dynamic Multiphase Process Simulation as a Powerful Tool to Sustain Production: A Real Case Application	2713
<i>G. Riccio, A. Di Sarra, A. Bianco, F. Dibello, S. Masi</i>	
SPE-174920-MS Design, Construction and Operation of an Automated Drilling Rig for the DSATS University Competition	2722
<i>V. A. Bavadiya, M. J. Aljbran, J. M. Kibe, S. M. Christy, H. N. Le, R. Ahmed, F. Florence</i>	
SPE-174921-MS Effects of Downhole Parameters on Horizontal Milling Applications	2740
<i>J. M. Maczura, M. Miller, N. Scudroni, D. Daley</i>	
SPE-174922-MS High-Performance Plug-and-Perf Completions in Unconventional Wells	2755
<i>L. McNelis, W. Salt, T. S. Scharf</i>	
SPE-174923-MS Differentiating Open Natural Fractures From Healed Fractures Using The New, High-Definition Oil Based Mud Microelectrical Imager - Case Studies From Organic Rich Shales	2764
<i>B. Li, Y. Chen, K. Gawankar, C. Miller, W. Xu, R. J. Laronga, D. Omeragic</i>	
SPE-174924-MS Autonomous Marine Vehicle: A Cost Effective Technology To Manage Risk In Exploration And Production	2780
<i>S. Pai</i>	
SPE-174925-MS Strategic Insights From Faltering Exploration Results	2790
<i>J. P. Wilson, D. G. Highton, A. Wilson, A. Latham, S. Miles, A. Utz, S. Toulmin</i>	
SPE-174926-MS Experimental Investigation of Three-Phase Low Liquid Loading Flow	2801
<i>H. Karami, C. F. Torres-Monzan, E. Pereyra, C. Sarica</i>	
SPE-174927-MS FLNG vs ‘Subsea-To-Beach’: A Study on the Critical Factors Governing Concept Selection in Deepwater Gas Field Developments	2820
<i>F. Beltrami, F. Olugbode, K. Subramanian, A. Barrero</i>	
SPE-174928-MS Improving Fiber-Optic System Reliability in Permanent Installations	2846
<i>C. G. Blount, K. E. Frieauff, B. E. Smith, D. Smith, M. Jaaskelainen, C. Baldwin</i>	
SPE-174929-MS Extra Deep Azimuthal Resistivity for Enhanced Reservoir Navigation in a Complex Reservoir in the Barents Sea	2859
<i>D. S. Larsen, A. Hartmann, P. Luxey, S. Martakov, J. Skillings, G. Tosi, L. Zappalorto</i>	
SPE-174930-MS The Effect of Reservoir Layering on Downhole Microdeformation Hydraulic Fracture Height Measurements	2886
<i>J. Sepehri, K. Agarwal, E. J. Davis</i>	
SPE-174932-MS Uncertainty and Risk Management Plans are Critical for Team Alignment and Better Decision Quality	2907
<i>R. S. Sawiris, C. S. Howes, J. A. Rodriguez, W. L. Foley</i>	
SPE-174935-MS Offshore Membrane Deaeration as a Replacement for Vacuum Tower Deaeration - A Comparative Study	2921
<i>S. Van Pelt, H. Churman</i>	
SPE-174937-MS Optimizing Separation Efficiency of Produced Water Tanks by Installing CFD Designed Internals	2936
<i>N. Trofaier, A. Weilharter, B. Puchner, J. Konieczny, N. Friedl, R. Markl, G. Kuemmel, A. Steinbrugger, O. A. Perez</i>	
SPE-174939-MS Solving Community Protection for Inhabited Areas Surrounding a Drilling Site: A Case Study in Saudi Arabia	2947
<i>M. Usman, M. Gilbert, E. Daher</i>	

SPE-174940-MS The Use of a pH-Triggered Polymer Gelant to Seal Cement Fractures in Wells	2955
<i>J. F. Ho, J. W. Patterson, S. Tavassoli, M. Shafiei, M. T. Balhoff, C. Huh, P. M. Bommer, S. L. Bryant</i>	
SPE-174941-MS Effect of OBM Contamination On PVT Properties And Its Impact On Field Development	2975
<i>S. Sharma, M. Eissa, A. Agarwal, V. P. Deshpande, S. S. Batshas</i>	
SPE-174942-MS Geomechanical Analysis to Evaluate Production-Induced Fault Reactivation at Groningen Gas Field	2987
<i>P. F. Sanz, S. P. Lele, K. H. Searles, S. Hsu, J. L. Garzon, J. A. Burdette, W. E. Kline, B. A. Dale, P. D. Hector</i>	
SPE-174943-MS Comparison of Single-Entry Coiled Tubing-Activated Frac Sleeves vs. Multi-Cluster Plug-and-Perf Completion in the Permian and Anadarko Basin: A Case Study	3006
<i>O. A. Algadi, L. Castro, R. Mittal</i>	
SPE-174945-MS New Fast and Accurate 3D Micro Computed Tomography Technology for Digital Core Analysis	3026
<i>A. Katsevich, M. Frenkel, M. Feser, H. Huang, M. Andrew, T. Case, A. Gu, W. Thompson</i>	
SPE-174946-MS The Role of Induced Un-propped (IU) Fractures in Unconventional Oil and Gas Wells	3039
<i>M. M. Sharma, R. Manchanda</i>	
SPE-174947-MS Treating Acid Mine Drainage for Use as Source Water: A Pilot Study	3053
<i>T. Beers, M. Heinrichs, A. Lane, R. Peterson</i>	
SPE-174949-MS The Effect of Bit Type on Reactive Torque and Consequent Toolface Control Anomalies	3060
<i>L. W. Ledgerwood, R. W. Spencer, O. Matthews, J. A. Bomidi, J. M. Hanson</i>	
SPE-174950-MS Radio Frequency Identification (RFID) Enable Diverter Circulation sub Precisely Spots Loss Circulation Material in Critical Interval	3079
<i>E. Valverde, R. R. Reitsma, T. Hutchings</i>	
SPE-174951-MS A Commercial Evaluation of Refracturing Horizontal Shale Wells	3086
<i>P. Indras, C. Blankenship</i>	
SPE-174954-MS Microseismic-Derived Expected Ultimate Fracture Half-Height Above/Below Wellbore in Unconventional Stimulated Reservoir Volume in a Multi-fractured Horizontal 10 Well Pad - Canadian Horn River Basin Case Study	3100
<i>C. J. Virues, J. Budge, E. Von Lunen</i>	
SPE-174955-MS Comparing Openhole Packer Systems With Cemented Liner Completions in the Northern Montney Gas Resource Play: Results From Microseismic Monitoring and Production	3148
<i>J. Reimer, M. Ng, B. Dusterhoft, B. Birkelo, B. Hlidek</i>	
SPE-174956-MS The New Reality of Hydraulic Fracturing: Treating Produced Water is Cheaper than Using Fresh	3169
<i>C. M. Barnes, R. Marshall, J. Mason, D. Skodack, G. Defosse, D. G. Smith, S. Foreman, T. Hanna, M. Cecchini</i>	
SPE-174958-MS Extending Openhole Gravel Packing Capability - Initial Applications of Alternate Path Openhole Shunt Packers to Provide Upfront Zonal Isolation	3198
<i>M. D. Barry, M. T. Hecker, S. P. Arnold, S. J. Barrilleaux, C. M. Sweeney, M. J. Siegman</i>	
SPE-174959-MS Modeling of Perforation Erosion for Hydraulic Fracturing Applications	3208
<i>G. Long, S. Liu, G. Xu, S. Wong</i>	
SPE-174960-MS Sand Transport in Stratified Flow in a Horizontal Pipeline	3222
<i>R. Dabirian, R. S. Mohan, O. Shoham, G. E. Kouba</i>	
SPE-174961-MS OPEC and Unconventional Resources	3240
<i>C. Ashayeri, I. Ershaghi</i>	
SPE-174962-MS Development and Qualification of a New High Pressure Gas Tight Rotary Shouldered Connection Incorporating Metal-to-Metal Technology for Deepwater Drilling and Completion Applications	3260
<i>W. D. Bassarath, M. Lafuente, R. Branly</i>	
SPE-174963-MS CFD Modeling of WBG T for an Offshore Platform	3281
<i>K. Tsai</i>	
SPE-174964-MS CFD Simulation of Turbulent Flow Structure in Stratified Gas/Liquid Flow and Validation with Experimental Data	3291
<i>R. Dabirian, A. Mansouri, R. S. Mohan, O. Shoham, G. E. Kouba</i>	
SPE-174966-MS Scale Squeeze Fractured Reservoirs in the Bakken, North Dakota	3307
<i>S. E. Cook, H. Lu, J. L. Cutler, C. Haugen, L. M. Cenegy, C. A. McAfee</i>	
SPE-174968-MS Measurement of Key Shale Petrophysical Properties	3324
<i>M. Zamirian, K. K. Aminian, S. Ameri</i>	
SPE-174969-MS Ensemble Model Predictive Control for Robust Automated Managed Pressure Drilling	3335
<i>A. Eaton, L. D. Beal, S. D. Thorpe, E. Janis, C. B. Hubbell, J. Hedengren, R. Nybo, M. Aghito, K. BJORKEVOLL, R. El Bousfi, J. Braaksma, G. Van Og</i>	
SPE-174970-MS Design and Operation of Production Facilities of the Quifa Field In-situ Combustion Project	3351
<i>H. Prieto, E. Lima, M. R. Gaviria, E. Gil, N. J. Benitez, M. H. Fuenmayor</i>	
SPE-174971-MS Managing the Production Lifecycle: A Framework for Scalable Digital Oilfield Implementations	3362
<i>S. Gyara, S. Purwar, C. E. Bravo, S. Queen</i>	
SPE-174972-MS Estimating Permeability Anisotropy From Downhole Distributed Temperature Measurements	3371
<i>K. McCabe, R. N. Horne</i>	
SPE-174973-MS A Comprehensive Study of Proppant Transport in a Hydraulic Fracture	3391
<i>C. A. Blyton, D. P. Gala, M. M. Sharma</i>	
SPE-174976-MS How to Effectively Strengthen Wellbores in Narrow Drilling Margin Wells: An Experimental Investigation	3412
<i>O. Razavi, A. Karimi Vajargah, E. Van Oort, M. H. Aldin, R. Patterson</i>	
SPE-174977-MS Quantifying Flow Rates from Temperature and Pressure Measurements in Deepwater Wells	3436
<i>A. Venkatraman, A. R. Hasan, R. Soheil, S. Patni, H. Elshahawi, M. H. Yousif, F. Abbasi</i>	

SPE-174979-MS Refracs - Diagnostics Provide a Second Chance to Get it Right	3440
<i>R. S. Leonard, C. Moore, R. A. Woodroof, C. W. Senters</i>	
SPE-174980-MS Novel Uses of Multifinger Calipers Utilizing 3D Visualization: Case Studies From the North Slope of Alaska	3473
<i>J. Burton, J. Julian</i>	
SPE-174981-MS Searching for Energy Policy Alternatives	3480
<i>F. T. Blaskovich</i>	
SPE-174982-MS Overcoming A Cementing Failure: Sequenced Fracturing Technique For Remedial Application	3494
<i>M. Rainbolt, S. Zakharchenko, W. Zheng, D. Oussoltsev, A. Dunaeva, B. D. Clark</i>	

VOLUME 5

SPE-174983-MS A Competency Framework for Petroleum Engineering University Graduates	3508
<i>T. Aggour, B. R. Donohue, D. A. Donohue</i>	
SPE-174984-MS Practical Considerations for Production Forecasting in Unconventional Reservoir Systems -- Processing of Large Group of Wells Using Production Diagnostics and Model-Based Analysis	3515
<i>P. Collins, D. Ilk</i>	
SPE-174985-MS Topological Data Analysis to Solve Big Data Problem in Reservoir Engineering: Application to Inverted 4D Seismic Data	3547
<i>A. Alfaleh, Y. Wang, B. Yan, H. Song, C. Wei, J. E. Killough</i>	
SPE-174986-MS Maximizing Drilling Sensor Value through Optimized Frequency Selection and Data Processing	3564
<i>T. Baumgartner, E. Van Oort</i>	
SPE-174987-MS Evaluation of Solid Particle Erosion Equations and Models for Oil and Gas Industry Applications	3582
<i>H. Arabnejad, A. Mansouri, S. A. Shirazi, B. S. McLaury</i>	
SPE-174988-MS Next-Generation Boron-Crosslinked Fracturing Fluids: Breaking the Lower Limits on Polymer Loadings	3603
<i>J. Holsclaw, G. R. Montenegro-Galindo, P. Chopade</i>	
SPE-174990-MS New Insights about Acid Fracture Conductivity at Laboratory Scale	3622
<i>A. Nino-Penaloza, A. Al-Momin, D. Zhu, A. Hill</i>	
SPE-174991-MS Australia's First Build Own Operate CSG Produced Water Treatment and Beneficial Reuse Project	3652
<i>H. T. Le, S. Chalmers</i>	
SPE-174992-MS Dual Reaming Reduces Vibration in Deepwater Well	3661
<i>A. Goodwin, C. P. Salminen, E. Valverde</i>	
SPE-174993-MS A Probabilistic Economic Approach to Optimize Field Development and Maximize Asset Value	3671
<i>V. A. Huerta, J. W. Aliaga</i>	
SPE-174994-MS Liquids Rich Organic Shale Recovery Factor Applications	3695
<i>R. E. Barba</i>	
SPE-174995-MS Operational Risk: Stepping Beyond Bow-Ties	3720
<i>D. Fraser, J. Braun, M. Cunningham, B. Marple, D. D. Moore, A. Sas-Jaworsky, J. Wilson</i>	
SPE-174996-MS Variations of Gas Flow Regimes and Petro-physical Properties during Gas Production Considering Volume Consumed by Adsorbed Gas and Stress Dependence Effect in Shale Gas Reservoirs	3746
<i>J. Wang, H. Luo, H. Liu, Y. Ji, F. Cao, Z. Li, K. Sepehrnoori</i>	
SPE-174997-MS Investigation of Gas Transport in Shale Reservoirs Using Multiscale Modeling and Principal Component Analysis	3781
<i>C. Chen</i>	
SPE-174998-MS Production Analysis of One Shale Gas Reservoir in China	3800
<i>W. Pang, Q. Wu, Y. He, J. Du, T. Zhang, C. A. Ehlig-Economides</i>	
SPE-174999-MS Diagnosis and Characterization of Cross Flow Behind Casing From Transient-Pressure Tests	3809
<i>N. A. Rahman, S. A. Bin Akresh, F. M. Al-Thawad</i>	
SPE-175000-MS East Vacuum Grayburg San Andres Unit; 30 Years of CO2 Flooding; Accomplishments, Challenges and Opportunities	3828
<i>P. D. Moffitt, D. Pecore, M. Trees, G. F. Salts</i>	
SPE-175001-MS A New Stable Second Order Finite Difference Scheme for the Novel Multiphase Flow Formulation in the Integrated Wellbore-Reservoir Multi-Phase Model During Injection/Production	3844
<i>H. Wu, S. Madasu, A. Lin</i>	
SPE-175002-MS Stress Profiling with Microfracturing and Sonic Logs in Antelope Shale	3860
<i>M. Malik, A. K. Singh, M. K. Lal</i>	
SPE-175003-MS Development of a General Likelihood Maximization Method for Robust Parameter Estimation from Pressure Transient Data	3874
<i>P. Bandyopadhyay, R. N. Horne</i>	
SPE-175004-MS The Reservoir Technical Limits Approach Applied to Maximising Recovery From Volumetric and Aquifer-drive Gas Fields	3894
<i>A. Alane, P. J. Lumsden, P. C. Smalley, R. J. Hallam, P. A. Salino, S. J. Wells, T. Primmer</i>	
SPE-175005-MS Material-Balance Analysis of Gas Reservoirs with Diverse Drive Mechanisms	3912
<i>C. Kabir, B. Parekh, A. Mustafa</i>	
SPE-175006-MS Precision Control of Gel Formation Using Superparamagnetic Nanoparticle-Based Heating	3940
<i>K. K. Panthi, K. K. Mohanty, C. Huh</i>	

SPE-175007-MS Design and Interpretation of Transient Tests at Well's Inception	3960
<i>G. Hashmi, C. Kabir, A. R. Hasan</i>	
SPE-175008-MS Transient Flowing-Fluid Temperature Modeling in Oil Reservoirs for Flow Associated with Large Drawdowns	3980
<i>N. Chevarinotai, A. R. Hasan, C. Kabir</i>	
SPE-175009-MS Improving Reservoir Forecasts by Understanding the Relative Impacts of Sparse Data, Reservoir Modeling Workflow and Parameter Selection, and Human Bias	3997
<i>W. S. Meddaugh</i>	
SPE-175011-MS Experimental Study of Composition Variation during Flow of Gas-Condensate	4012
<i>H. X. Vo, R. N. Horne</i>	
SPE-175012-MS Determination of Insitu Reservoir Absolute Permeability Under Multiphase Flow Conditions Using Transient Well Testing	4031
<i>M. M. Kamal, S. S. Morsy, F. Suleen, Y. Pan, A. Dastan, M. R. Stuart, E. C. Mire, Z. Zakariya</i>	
SPE-175013-MS Modeling Method of Point Bar Internal Architecture of Meandering River Reservoir Based on Meander Migration Process Inversion Algorithm and Virtual Geo-surfaces Automatic Fitting Technology	4047
<i>X. Shu, Y. Hu, B. Jin, R. Dong, H. Zhou, J. Wang</i>	
SPE-175014-MS New Rock-Typing Index Based on Hydraulic and Electric Tortuosity Data for Multi-Scale Dynamic Characterization of Complex Carbonate Reservoirs	4057
<i>F. C. Ferreira, R. Booth, R. Oliveira, G. F. Carneiro, N. Bize-Forest, H. Wahaniik</i>	
SPE-175015-MS Dimensionality-Dependent Foam Rheological Properties: How to Go from Linear to Radial Geometry for Foam Modeling and Simulation?	4083
<i>W. Lee, S. Lee, S. I. Kam</i>	
SPE-175016-MS An Empirical Extended Exponential Decline Curve for Shale Reservoirs	4118
<i>H. Zhang, M. J. Cocco, D. C. Rietz, A. L. Cagle, J. Lee</i>	
SPE-175017-MS Investigation of Geomechanical Response of Fault in Carbonate Reservoir and Its Application to Well Placement Optimization in YM2 Oilfield in Tarim Basin	4141
<i>Z. Cai, H. Zhang, H. Yang, G. Yin, Y. Zhu, P. Chen, X. Han</i>	
SPE-175018-MS Modeling Low Salinity Waterflooding in Mineralogically Different Carbonates	4168
<i>C. Qiao, R. T. Johns, L. Li, J. Xu</i>	
SPE-175019-MS Determining Relative Permeability In Shales By Including The Effects of Pore Structure on Unsaturated Diffusion and Advection	4188
<i>H. Daigle, S. Ezidiegwu, R. P. Turner</i>	
SPE-175020-MS Interpretation of Real-Time Pressure Measurements to Detect CO₂ Leakage	4210
<i>S. A. Haghighat, S. D. Mohaghegh</i>	
SPE-175021-MS Stochastic Modeling of a Fracture Network in a Hydraulically Fractured Shale-Gas Reservoir	4238
<i>A. Mhiri, T. A. Blasingame, G. J. Moridis</i>	
SPE-175022-MS Compositional Variation in SAGD	4280
<i>M. Ghasemi, C. H. Whitson</i>	
SPE-175024-MS Correlations Between Nano-Scale Geology and Porosity Logs of Vaca Muerta Shales	4304
<i>D. Hu, M. Garcia, C. Chen, D. E. Wyatt, V. N. Martysevich</i>	
SPE-175025-MS Tie-Line Solutions for MMP Calculations by Equations-Of-State	4324
<i>S. Khorsandi, R. T. Johns</i>	
SPE-175026-MS A Robust Automatic Dip Picking Technique to Improve Geological Interpretation and Post-Drill Formation Evaluation of Azimuthal Wellbore Image Logs	4355
<i>S. Ye</i>	
SPE-175027-MS Foams with Wettability-Altering Capabilities for Oil-Wet Carbonates: A Synergistic Approach	4372
<i>R. Singh, K. K. Mohanty</i>	

VOLUME 6

SPE-175029-MS Analysis of Drawdown Sensitivity in Shale Reservoirs Using Coupled-Geomechanics Models	4395
<i>K. Wilson</i>	
SPE-175030-MS Modeling Impact of Geochemical Reactions on Real Reservoir Fluid Mixture during CO₂ EOR	4411
<i>A. Venkatraman, B. Dindoruk, H. Elshahawi, L. W. Lake, R. T. Johns</i>	
SPE-175033-MS Dynamics of Fracture-matrix Coupling during Shale Gas Production: Pore Compressibility and Molecular Transport Effects	4426
<i>A. Wasaki, I. Akkutlu</i>	
SPE-175034-MS Enhanced Oil Recovery in Liquid-Rich Shale Reservoirs: Laboratory to Field	4450
<i>N. S. Alharthy, T. Teklu, H. Kazemi, R. M. Graves, S. B. Hawthorne, J. R. Braunberger, B. Kurtoglu</i>	
SPE-175035-MS Predicting Gas Apparent Permeability of Shale Samples: A Novel Analytical Approach	4479
<i>M. Kazemi, A. Takbiri Borujeni</i>	
SPE-175036-MS SAGD Performance with Temperature Dependent Properties - An Analytical Approach	4495
<i>M. Heidari, S. Hejazi, S. S. Farouq Ali</i>	
SPE-175037-MS Pressure Transient Behavior of Horizontal Wells Intersected by both Multiple Hydraulic and Natural Fractures in Conventional and Unconventional Unfractured and Naturally Fractured Reservoirs	4521
<i>F. J. Kuchuk, D. Biryukov, A. J. Fitzpatrick, K. L. Morton</i>	
SPE-175038-MS Integration of PCA with a Novel Machine Learning Method for Reparameterization and Assisted History Matching Geologically Complex Reservoirs	4558
<i>J. Honorio, C. Chen, G. Gao, K. Du, T. Jaakkola</i>	

SPE-175039-MS Enhanced Reparameterization and Data-Integration Algorithms for Robust and Efficient History Matching of Geologically Complex Reservoirs	4576
<i>G. Gao, J. C. Vink, C. Chen, F. O. Alpak, K. Du</i>	
SPE-175040-MS Water Content Effects on Dynamic Elastic Properties of Organic-rich Shale	4603
<i>B. Lai, H. Li, J. Zhang, D. Jacobi, D. T. Georgi</i>	
SPE-175043-MS A Multi-pass Procedure for Redistributing Linearized Mass Balance Errors to Improve Simulator Performance	4628
<i>Q. Wang, G. C. Fleming, Z. Gu</i>	
SPE-175045-MS Reservoir Modeling of a Structurally Complex Deepwater Field: A Gulf of Mexico Case History	4645
<i>S. Fontana, N. A. Atmajasetiadi, F. Brega, J. A. Villacres Sanchez, K. Aliyev, C. Catalani</i>	
SPE-175046-MS Value of Information of Frequent Time-Lapse Seismic for Thermal EOR Monitoring at Peace River	4657
<i>J. K. Przybysz-Jarnut, C. Didraga, J. H. Potters, J. L. Lopez, J. R. La Follett, P. B. Wills, S. K. Bakku, Y. Xue, T. B. Barker, D. R. Brouwer</i>	
SPE-175047-MS A Novel Solution for Performing Real-Time Fiber Optic Temperature Measurements	4666
<i>A. Barry, D. Broaddus, J. Ivasauskas, W. Johnstons</i>	
SPE-175048-MS Computation of Apparent Formation Dip From Single Azimuth Sensor Data Having Different Depths of Investigation	4684
<i>E. J. Stockhausen, J. C. Rasmus, S. Bammi</i>	
SPE-175049-MS A New Perspective on Applying a Conformance Lookback Analysis for the Central Permian Basin Fields	4695
<i>C. C. Hinds, M. Sayarpour, A. Hameed</i>	
SPE-175050-MS Improved NMR Logging Approach to Simultaneously Determine Porosity, T₂ and T₁	4701
<i>R. Coman, H. Tietjen, H. F. Thern, M. Blanz, S. Christensen</i>	
SPE-175051-MS Modelling of Transport Properties Using the SAFT-VR Mie Equation of State	4728
<i>A. Gonzalez Perez, L. M. Pereira, P. Paricaud, C. Coquelet, A. Chapoy</i>	
SPE-175052-MS Effect of Mineralogy on Nuclear Magnetic Resonance Surface Relaxivity: A Case Study of Middle Bakken and Three Forks Formations	4740
<i>M. Saidian, M. Prasad</i>	
SPE-175053-MS Reconciling Log-Derived Water Saturation and Saturation-Height Function Results through Resistivity Modeling, Core-Log Integration and Image Log Data: A Case Study from Deepwater Gulf of Mexico	4763
<i>L. J. Miranda, M. Rabinovich, J. G. Hamman, M. Moussavi</i>	
SPE-175055-MS Predicting Middle Bakken Well Performance with Shale Capacity	4791
<i>C. Newgord, M. Mediani, A. Ouenes, P. O'Conor</i>	
SPE-175056-MS A CFD Compositional Wellbore Model for Thermal Reservoir Simulators	4799
<i>A. Shahamiri, M. Heidari, W. L. Buchanan, L. X. Nghiem</i>	
SPE-175057-MS Fly Ash Nanoparticle-Stabilized CO₂-in-Water Foams for Gas Mobility Control Applications	4815
<i>R. Singh, A. Gupta, K. K. Mohanty, C. Huh, D. Lee, H. Cho</i>	
SPE-175058-MS Development of a Mechanistic Numerical Simulator for Preformed Particle Gel Applications in Non-Crossflow Heterogeneous Reservoirs	4828
<i>A. H. Imqam, A. Goudarzi, M. Delshad, B. Bai</i>	
SPE-175059-MS Machine Learning Applied to Multiwell Test Analysis and Flow Rate Reconstruction	4848
<i>C. Tian, R. N. Horne</i>	
SPE-175060-MS Successive Substitution Augmented for Global Minimization of the Gibbs Free Energy	4863
<i>S. Eghbali, R. Okuno</i>	
SPE-175061-MS Model for a Shale Gas Formation with Salt-Sealed Natural Fractures	4880
<i>H. Merry, C. Ehlig-Economides, P. Wei</i>	
SPE-175062-MS Innovation and Practice of Reservoir Architecture Detailed Characterization and Remaining Oil Potential Tapping Technology in High Watercut Stage of Large Offshore Fluvial Heavy Oil Field	4906
<i>S. Yanchun, L. Tingli, H. Chunliang</i>	
SPE-175063-MS A New Analysis on the Convective Heat Transfer at the Edge of the SAGD Chamber	4920
<i>Q. Li, Z. Chen</i>	
SPE-175064-MS An Investigation on the Impact of Heterogeneity on Fluid Injectivity Loss during Water-Alternating-Gas Injection in Carbonate Formations	4941
<i>M. Saneifar, Z. Heidari, M. A. Linroth</i>	
SPE-175065-MS Multi-scale Evaluation of Nanoparticle-Stabilized CO₂-in-Water Foams: From the Benchtop to the Field	4956
<i>A. J. Worthen, A. Taghavy, A. Aroonsri, I. Kim, K. P. Johnston, C. Huh, S. L. Bryant, D. A. Dicarlo</i>	
SPE-175066-MS Pore Connectivity and Permeability Assessment in Carbonate Formations Using NMR Log-Inject-Log Method	4969
<i>K. Cheng, Z. Heidari</i>	
SPE-175067-MS Fractured Volcanic Reservoir Characterization: A Case Study in the Deep Songliao Basin	4982
<i>D. Sun, F. Zhang, J. Gao, X. Xi, J. Lin</i>	
SPE-175068-MS A New Approach for Simultaneous Estimation of Relative Permeability and Capillary Pressure from Coreflood Experiments	4995
<i>A. Jahanbakhsh, M. Sohrabi</i>	
SPE-175069-MS Reservoir Rock Characterization Using Centrifuge and Nuclear Magnetic Resonance: A Laboratory Study of Middle Bakken Cores	5008
<i>S. Karimi, M. Saidian, M. Prasad, H. Kazemi</i>	

SPE-175070-MS Increasing Shale Gas Recovery through Thermal Stimulation: Analysis and an Experimental Study	5026
<i>Y. Lin, H. Wang, S. He, M. Nikolaou</i>	
SPE-175071-MS Challenges in Deepwater Reservoir Characterization: From Well Log Interpretation and Well Testing to 3D Geocellular Modeling	5045
<i>K. Saikia, W. Khan, S. Ramakrishna</i>	
SPE-175073-MS Improving Performance of the Phase Equilibrium Calculations in the Surface Network Portion of an Integrated Reservoir Simulator/Surface Network Compositional Model	5053
<i>Z. Gu, T. Wong, J. Ma</i>	
SPE-175074-MS Effect of Large Capillary Pressure on Fluid Flow and Transport in Stress-sensitive Tight Oil Reservoirs	5072
<i>Y. Xiong, P. H. Winterfeld, C. Wang, Z. Huang, Y. Wu</i>	
SPE-175075-MS Reducing Reservoir Uncertainty During Appraisal and Development - Novel Applications of a new Wireless Reservoir Monitoring Technology in Santos Basin Pre-Salt	5098
<i>B. P. Champion, E. Puntel</i>	
SPE-175077-MS Investigation of Wettability and Fluid Distribution in Organic-rich Mudrocks using NMR Two-Phase Simulation	5114
<i>L. Chi, Z. Heidari, A. P. Garcia</i>	
SPE-175078-MS Quantifying Electrical Resistivity of Isolated Kerogen from Organic-Rich Mudrocks using Laboratory Experiments	5134
<i>G. Firdaus, Z. Heidari</i>	
SPE-175079-MS Constant GOR as an Infinite Acting Effect in Reservoirs Producing Below (Dew/Bubble) Saturation Pressure	5151
<i>M. Zhang, L. F. Ayala</i>	
SPE-175080-MS Characterizing Reservoir Thermofacies by Using Distributed Temperature Sensing Measurements	5177
<i>A. Leone, G. Galli, A. Drago, G. Brown</i>	
SPE-175081-MS A New Material Balance Equation for the Analysis of Liquid Rich Natural Gas Reservoirs	5188
<i>M. Zhang, L. F. Ayala</i>	
SPE-175082-MS Dynamic Analysis of Architecture Anatomy and Its Application for the Remaining Oil Forecasting	5214
<i>Q. Bai, T. Xia, P. Meng, J. Wu, M. Zhu</i>	
SPE-175083-MS Reducing Uncertainty in Horizontal Well Placement for Improved Field Development	5225
<i>S. Rajput, M. Xinjun, A. Bal, K. Rahman, W. Junwen</i>	
SPE-175085-MS Modeling of Compositional Variation with Depth for Five North Sea Reservoirs	5243
<i>K. Schou Pedersen, H. P. Hjermstad</i>	
SPE-175086-MS Description of Insitu Oil Upgrading Mechanism for Insitu Combustion Based on a Reductionist Chemical Model	5260
<i>B. Hascakir</i>	
SPE-175087-MS Nuclear Magnetic Resonance Investigation of Surface Relaxivity Modification by Paramagnetic Nanoparticles	5270
<i>C. Zhu, H. Daigle, S. L. Bryant</i>	

VOLUME 7

SPE-175088-MS DST Matching and Interpretation through Numerical Well Testing on the Johan Sverdrup Field	5284
<i>B. E. Ludvigsen, H. Le</i>	
SPE-175092-MS Discrete Fracture-Vug Network Modeling in Naturally Fractured Vuggy Reservoirs Using Multiple-Point Geostatistics: A Micro-Scale Case	5324
<i>M. M. Fadlelmula F., M. L. Fraim, J. He, J. E. Killough</i>	
SPE-175093-MS Logging Services: Towards the 3D Measurement of Formation Properties in High-Resolution with a Continuous Depth of Investigation	5338
<i>K. Walker, J. Granville, G. Kainer, A. Cheng</i>	
SPE-175094-MS Integrated Reservoir Characterization and Distribution of Carbonate Reef-Flat Complexes in Genetic Units of Different Phases of the Ordovician Carbonates in Tarim Basin, Western China	5355
<i>Y. Zhu, W. Zhao, B. Song, X. Deng, C. Wei, H. Yang, Y. Gao, Z. Cai</i>	
SPE-175095-MS Experimental Study of Confinement Effect on Hydrocarbon Phase Behavior in Nano-Scale Porous Media Using Differential Scanning Calorimetry	5374
<i>S. Luo, J. L. Lutkenhaus, H. Nasrabadi</i>	
SPE-175097-MS Developing and Validating Simplified Predictive Models for CO₂ Geologic Sequestration	5387
<i>S. Mishra, P. Ravi Ganesh, J. Schuetter, J. He, Z. Jin, L. J. Durlofsky</i>	
SPE-175098-MS Unified Finite Difference Modeling of Transient Flow in Naturally Fractured Carbonate Karst Reservoirs - A 3D Case Study	5420
<i>J. He, J. E. Killough, M. M. Fadlelmula Fadlelseed, M. L. Fraim</i>	
SPE-175100-MS Map-Based Estimation of Reservoir Pressure and Saturation from 4D Seismic with a Data-Driven Procedure	5432
<i>J. Landa, M. Meadows, C. Thacher, R. Waddle, N. Williams</i>	

SPE-175101-MS Enhancing Hydrocarbon Permeability After Hydraulic Fracturing: Laboratory Evaluations of Shut-ins and Surfactant Additives	5457
<i>T. Liang, R. Longoria, J. Lu, Q. P. Nguyen, D. A. Dicarolo</i>	
SPE-175102-MS Mechanistic Modeling of Modified Salinity Waterflooding in Carbonate Reservoirs	5475
<i>A. Kazemi Nia Korrani, W. Fu, A. Sanaei, K. Sepehrmoori</i>	
SPE-175103-MS Reservoir Flow Geometry from Primary Production: F-Φ Curves	5496
<i>R. M. Dean</i>	
SPE-175104-MS A New Salinity-Independent Cased Hole Water Saturation Method Using Pulsed Neutron Oxygen Activation Logging: Physics, Modeling and Interpretation	5517
<i>D. Chace, F. Inanc, Q. Zhang, S. Gade</i>	
SPE-175105-MS Permeability Measurement of Organic-Rich Shale - Comparison of Various Unsteady-State Methods	5531
<i>G. Jin, H. J. Gonzalez, A. A. Al Dhamen, S. S. Ali, A. J. Nair, G. Agrawal, M. Khodja, R. Syed, Z. Z. Jangda, A. Z. Ali</i>	
SPE-175106-MS Robust Optimization of Well Placement in Geologically Complex Reservoirs	5546
<i>F. O. Alpak, L. Jin, B. Ramirez</i>	
SPE-175107-MS Adsorption-Enhanced Transport of Hydrocarbons in Organic Nanopores	5559
<i>S. Riewchotisakul, Y. I. Akkutlu</i>	
SPE-175108-MS Miscible CO₂ Water-Alternating-Gas (CO₂ -WAG) Injection in a Tight Oil Formation	5579
<i>L. Han, Y. Gu</i>	
SPE-175109-MS An Integrated Approach to Optimize Production in Marcellus Shale Gas Reservoirs	5606
<i>W. Yu, K. Wu, K. Sepehrmoori</i>	
SPE-175110-MS Phase Envelope Calculations for Reservoir Fluids in the Presence of Capillary Pressure	5631
<i>D. Sandoval Lemus, W. Yan, M. L. Michelsen, E. H. Stenby</i>	
SPE-175111-MS Fracture Detection Using the Conductivity Triaxiality Index	5646
<i>G. Wang, A. Abubakar, T. D. Barber, S. Alatrach</i>	
SPE-175112-MS Application of the DDFN (Discrete and Deformable Fracture Network) Method within an Integrated Unconventional Reservoir Study Workflow	5667
<i>N. Khvoenkova, D. Bossie-Codreanu, N. Broussard, M. Delorme, J. Lecomte</i>	
SPE-175113-MS Iteratively Coupled Fluid Flow & Geomechanics Simulation using Estimated Equivalent Permeability and Porosity by Fractal and Statistical Methods	5693
<i>S. Lee, D. S. Schechter</i>	
SPE-175115-MS Physics-Based Approach for Shale Gas Numerical Simulation: Quintuple Porosity and Gas Diffusion From Solid Kerogen	5714
<i>B. A. Lopez Jimenez, R. Aguilera</i>	
SPE-175116-MS Effective Method for Monitoring Oil Based Mud Contamination in Wireline Formation Testers Sampling	5746
<i>W. F. Pineda, F. Gozalpour, M. Haghshenas</i>	
SPE-175117-MS Study on the Behaviours of Settled Heavier Phase in Two Phase Flows in Pipelines	5758
<i>A. J. Koguna, H. Yeung, L. Lao</i>	
SPE-175118-MS Direct Observation Of The Impact Of Nanopore Confinement On Petroleum Gas Condensation	5780
<i>E. Parsa, X. Yin, E. Ozkan</i>	
SPE-175120-MS New Methods For Interpretation Of NMR Measurements Acquired In Spatially Heterogeneous Rocks	5787
<i>D. Medellin, V. R. Ravi, C. Torres-Verdin</i>	
SPE-175121-MS Bayesian Style History Matching: Another Way to Under-Estimate Forecast Uncertainty?	5803
<i>J. C. Vink, G. Gao, C. Chen</i>	
SPE-175122-MS An Efficient and Practical Workflow for Probabilistic Forecasting of Brown Fields Constrained by Historical Data	5822
<i>C. Yang, L. X. Nghiem, J. C. Erdle, A. Moinfar, E. Fedutenko, H. Li, A. Mirzabozorg, C. C. Card</i>	
SPE-175123-MS A New Algorithm for Multiphase Fluid Characterization for Solvent Injection	5840
<i>A. Kumar, R. Okuno</i>	
SPE-175124-MS Modeling Fishbones Using the Embedded Discrete Fracture Model Formulation: Sensitivity Analysis and History Matching	5868
<i>J. D. Cavalcante Filho, Y. Xu, K. Sepehrmoori, H. Hogstol</i>	
SPE-175127-MS Forecasting Of Steamflood Performance In A Heavy Oil Field	5890
<i>E. Rubin, O. Izgec</i>	
SPE-175128-MS Mechanistic Study of the Effect of Gas/Oil IFT on the Performance of Gas, WAG and SWAG Injections in Mixed-Wet Systems	5907
<i>S. Fatemi, M. Sohrabi</i>	
SPE-175129-MS Three-Phase Relative Permeability in Consolidated Media	5955
<i>A. Kianinejad, X. Chen, D. A. Dicarolo</i>	
SPE-175130-MS Chemical EOR for Offshore Platforms using a Novel Chemical Gradient Design	5969
<i>E. Trine, P. T. Suniga, R. Fortenberry</i>	
SPE-175131-MS Simulation of Fracture-to-Fracture Gas Injection in an Oil-Rich Shale	5985
<i>P. Zhu, M. T. Balhoff, K. K. Mohanty</i>	
SPE-175132-MS A Modified HLD-NAC Equation of State to Predict Alkali-Surfactant-Oil-Brine Phase Behavior	6003
<i>S. Ghosh, R. T. Johns</i>	
SPE-175133-MS Single Well Deconvolution - Multi-fractured Horizontal Shale Gas With 8 Well Full Pad - Canadian Horn River Basin Case Study	6030
<i>C. J. Virues, T. Shimamoto, M. Suzuki</i>	

SPE-175134-MS Modeling of Low-Tension Surfactant-Gas Flooding Process in a Four-Phase Flow Simulator	6069
<i>H. Lashgari, K. Sepehrnoori, M. Delshad</i>	
SPE-175135-MS Compositional Simulation Including Effect of Capillary Pressure on Phase Behavior	6090
<i>M. Rezaveisi, K. Sepehrnoori, G. A. Pope, R. T. Johns</i>	
SPE-175137-MS Numerical Study of Production Mechanisms and Gas-Oil Ratio Behavior of Liquid-Rich Shale Oil Reservoirs	6127
<i>M. Khoshghadam, A. Khanal, W. J. Lee</i>	
SPE-175139-MS Addressing Forecasting Non-Uniqueness and Uncertainty in Unconventional Reservoir Systems Using Experimental Design	6152
<i>P. W. Collins, M. Fernandez Badessich, D. Ilk</i>	

VOLUME 8

SPE-175140-MS Enhanced Heavy Oil Recovery by Intermittent CO2 Injection	6177
<i>S. Seyyedsar, S. Farzaneh, M. Sohrabi</i>	
SPE-175141-MS Assessing the Consistency of Measurements and Models for the Kinetics of In Situ Combustion	6194
<i>M. Cinar, A. R. Kovscek</i>	
SPE-175142-MS Using Embedded Discrete Fracture Model (EDFM) and Microseismic Monitoring Data to Characterize the Complex Hydraulic Fracture Networks	6215
<i>M. Shakiba, K. Sepehrnoori</i>	
SPE-175143-MS Flowback Fracture Closure: A Key Factor for Estimating Effective Pore-Volume	6238
<i>D. O. Ezulike, O. A. Adefidipe, Y. Fu, H. Dehghanpour, C. J. Virues, D. Bearinger, R. V. Hawkes, R. Steve Jones Jr.</i>	
SPE-175144-MS A Multi-Objective Markov Chain Monte Carlo Approach for History Matching and Uncertainty Quantification	6264
<i>F. Olalotiti-Lawal, A. Datta-Gupta</i>	
SPE-175145-MS Treatment of Condensate and Water Blocks in Hydraulic Fractured Shale Gas-Condensate Reservoirs	6287
<i>R. Ganjdanesh, M. Rezaveisi, G. A. Pope, K. Sepehrnoori</i>	
SPE-175146-MS Rock Typing of Tight Gas Sands: A Case Study in Lance and Mesaverde Formations from Jonah Field	6305
<i>E. Aliyev, M. Saidian, M. Prasad</i>	
SPE-175147-MS An Experimental Study of the Impact of Injection Water Composition on Oil Recovery from Carbonate Rocks	6326
<i>M. J. Al-Shakhs, A. R. Kovscek</i>	
SPE-175149-MS Study of Kerogen Maturity using Fourier Transmission Infrared Spectroscopy (FTIR) and Thermogravimetric Analysis (TGA)	6347
<i>S. T. Dang, C. H. Sondergeld, C. S. Rai</i>	
SPE-175150-MS Capillary Corrections to Buckley-Leverett Flow	6358
<i>L. Deng, M. J. King</i>	
SPE-175151-MS Phase Behavior and Flow in Shale Nanopores from Molecular Simulations	6377
<i>Z. Jin, A. Firoozabadi</i>	
SPE-175152-MS Theoretical Investigation of the Effect of Membrane Properties of Nanoporous Reservoirs on the Phase Behavior of Confined Light Oil	6412
<i>Z. Zhu, X. Yin, E. Ozkan</i>	
SPE-175153-MS Modeling Point Bars Using a Grid Transformation Scheme	6426
<i>H. Li, S. Srinivasan</i>	
SPE-175154-MS Advances in Flowback Chemical Analysis of Gas Shales	6436
<i>A. Zolfaghari, Y. Tang, J. Holyk, M. Binazadeh, H. Dehghanpour, D. Bearinger</i>	
SPE-175155-MS Pore Size Distribution from Water Adsorption Isotherm	6454
<i>A. Zolfaghari, H. Dehghanpour</i>	
SPE-175157-MS Advances in Understanding Wettability of Tight Oil Formations	6469
<i>A. Habibi, H. Dehghanpour, D. Bryan, G. Uswak</i>	
SPE-175159-MS A Thorough Investigation of Mechanisms of Enhanced Oil Recovery by Carbonated Water Injection	6497
<i>M. Sohrabi, A. Emadi, S. Farzaneh, S. Ireland</i>	
SPE-176745-MS Advancing Multidisciplinary Training and Development for Young Professionals in the Oil and Gas Industry	6530
<i>E. S. Holderby, M. Van Domelen</i>	
SPE-176746-MS The First Master in Geothermal Engineering Offered by a Petroleum Engineering School: Curriculum Challenges and Opportunities	6539
<i>G. Falcone, C. Pawellek, C. Teodoriu</i>	
SPE-176747-MS Incorporating Quality Assurance in a Competency and Employee Development Program	6548
<i>J. Leuro, D. T. Kruger</i>	
SPE-176749-MS Modernizing Petroleum Engineering Education: A New Global Online Petroleum Engineering University Serving all Universities	6559
<i>T. Aggour, T. Donohue, D. A. Donohue</i>	
SPE-177281-MS A Numerical Analysis of the Features of the Stress Disturbance during Pulsating Hydraulic Fracturing in Coal Seams	6568
<i>L. Peiqing, G. Li, Z. Huang, X. Li, S. Tian, X. Song, M. Sheng</i>	

SPE-178418-MS Nature Friendly Application of Ionic Liquids for Dissolution Enhancement of Heavy Crude Oil.....	6583
<i>Sivabalan Sakhivel, Sugirtha Velusamy, Ramesh L. Gardas, Jitendra S. Sangwai</i>	
SPE-178724-STU The MSE Ratio: The New Diagnostic Tool to Optimize Drilling Performance in Real-Time for Under-Reaming Operations	6595
<i>Andrew Abbott</i>	
SPE-178725-STU Thermodynamic Analysis of Solvent Assisted Steam Injection	6608
<i>Arash Memarzadeh, Hamid Rahnema</i>	
SPE-178726-STU A New Pseudosteady Triple-Porosity Model for Naturally Fractured Shale Gas Reservoir.....	6623
<i>Abiola D. Obembe, M. Enamul Hossain</i>	
SPE-178727-STU Extension of the Gray Correlation To Inclination Angles	6644
<i>Adeoluwa Oyewole</i>	
SPE-178728-STU New Artificial Lift Design for Sidetracks Operations	6652
<i>Anton Zaytsev, Anastasia Kirichenko</i>	
SPE-178729-STU Performance of Fiberglass Casing and Tubing in Highly Corrosive Environments	6664
<i>Ahmed Abdul Rauf</i>	
SPE-178730-STU Petrophysical Evaluation and 3D Geostatistical Reservoir Modeling of Okati field for Development, Shallow Offshore, Niger Delta	6675
<i>Bibobra Michael Alabrah</i>	
SPE-178731-STU A Probabilistic Approach to Quantify the Value of Information of 4D Seismic Projects.....	6692
<i>Carla J. Ferreira</i>	
SPE-178733-STU Novel Analysis to Determine Gas Permeability	6709
<i>Damian Dion Salam</i>	
SPE-178734-STU Mathematical Modeling of Two-Phase Production from Unconventional Wells Using Analogy to Nature	6721
<i>Edyta Mikolajczak</i>	
SPE-178735-STU Forecasting Production Performance in Reservoir-Network Coupled Systems with Asphaltene Modeling	6728
<i>Ernesto Valbuena</i>	
SPE-178736-STU Multi-Component Physical Sorption Investigation Of Gas Shales at the Core Level	6753
<i>Hamza Aljamaan</i>	
SPE-178737-STU Errors in Estimating Interporosity Flow Coefficients in Naturally Fractured Reservoirs.....	6777
<i>Leilani Coral Rebolledo, Iraj Ershaghi</i>	
SPE-178738-STU Field Development Planning - A Key towards Success in Rich Gas Condensate Reservoirs	6793
<i>Muhammad Shoaib</i>	
SPE-178739-STU Investigating Nano-fluid Mixture Effects to Enhance Oil Recovery	6803
<i>Mohamed Tarek</i>	
SPE-178740-STU Gas Permeability Evolution with Soaking Time in Ultra Tight Shales.....	6814
<i>Nirjhor Chakraborty, Zuleima T. Karpyn</i>	
SPE-178741-STU Thermodynamics of Flat Thin Wetting Films with Applications to Low-Salinity Waterflooding.....	6825
<i>Philip C. Myint, Abbas Firoozabadi</i>	
SPE-178742-STU Mathematical Model of a Well, Draining Fractured Reservoir	6840
<i>Durkin Sergey</i>	
SPE-178743-STU Conceptualizing a Novel Method of Perpetual Energy Source from Gas Hydrates	6851
<i>K. Steffones</i>	
SPE-178744-STU Shale Gas Productivity: A Geo-chemical Diagenesis Perspective	6860
<i>Samarth D. Patwardhan</i>	
SPE-178745-STU Full Resolution Full Field Simulation Using Localized Computations	6879
<i>Soham M. Sheth</i>	
SPE-178746-STU A Simulation Study of Enhanced Oil Recovery Using Carbon Dioxide Foam in Heterogeneous Reservoirs.....	6901
<i>Su Li Tham</i>	
SPE-178747-STU A Comprehensive Model for Simulation of Gas Transport in Shale Formation with Complex Hydraulic Fracture Geometry	6918
<i>Wei Yu</i>	
SPE-178748-STU Practical Applications of the T-Matrix Approach to Fractured Porous Rocks	6953
<i>Yury Alkhimenkov</i>	
SPE-178749-STU A Hybrid Dual-Continuum Discrete Fracture Modeling Approach for Numerical Simulation of Production from Unconventional Plays	6962
<i>Yuhang Wang</i>	
SPE-178750-STU Beaver Creek Unit Reservoir Evaluation	6980
<i>Yogashri Pradhan, William Sprague</i>	
SPE-178751-STU A Modification to the Jones Inflow Model for Improving Completion Efficiency and Production Optimization by Turbulence Analysis.....	6998
<i>Titus Z. D.</i>	
SPE-178752-STU The Fiscal System Influence on Oil Fields Development and Government Participation	7016
<i>Livia Moraes Marques</i>	
SPE-178754-STU Use of Individual Well Indicators on the Optimization of Production Strategies.....	7030
<i>Victor R. Alves</i>	

Author Index