TABLE OF CONTENTS
VOLUME 1

SPE 119811 Study and Application of Reservoir Protection Fluid System for Drilling & Completion Using Oil-film Method ................................................................. 1
G.C. Jiang, C.F. Ji, X.P. Ma

SPE 119994 A New Technique to Enhance Cement Resistance to Mud Acids ............................................. 14
Ali A. Al-Taq, Hisham A. Nasr-El-Din, Tawfiq A. Al-Shafei

SPE 119999 Induced Sulfur Deposition During Carbon Dioxide Miscible Flooding in Carbonate Reservoirs ................................................................. 28
Shedid A. Shedid, Abdulrazag Y. Zekri

SPE 120122 Numerical Simulation of Wellbore Dynamics during Underbalanced Perforation ................................................................. 47
Hassan Bahrami, Jamal Siavoshi, Mehdi Sheikh Veisi, Ramin Bahraie

SPE 120226 Fluidic Oscillation Technique in Conjunction with Acid Stimulation Improves Gas Wells Productivity ................................................................. 57
Ahmed Hegazy, Bruce Conrad, Arshad Waheed, Osama Sanad

SPE 120273 Hydrate Blockage in Subsea Water Injection Wells - Causes and Preventive Procedures ................................................................. 66
Valdo F. Rodrigues, Helder M. Frota, Luiz G. Loures, Fernando D. Siqueira

SPE 120468 Novel Chelating-Based Technology Application in Complex and Heterogeneous Injector Wells in the Algyo Field, Hungary ................................................................. 73
Martin Urraca, Ferenc Udvari

SPE 120472 Silanol Resin Consolidation System for Deepwater Completions and Production Optimization ................................................................. 82
Irfan Kuravle, Nakul Mahalle, Mohit Kaul, Amith Nair, Nikhil Kulkarni

SPE 120560 Winning Productivity and Injectivity in Sabiriyah Upper Burgan: Life-of-Field Approach to Tackle Development Challenges ................................................................. 87
H.B. Chetri, Bodoor Baroon, Ealian Al-Anzi

SPE 120651 Best Cleanup Practices for an Offshore Sandstone Reservoir with ICD Completions in Horizontal Wells ................................................................. 94
Ali M. Shahri, Khalid Kilany, Drew Hembling, J. Eric Lauritzen, Varma Gottumukkal, Olusegun Ogunyemi, Oscar Becerra Moreno

SPE 120749 Reservoir Pressure Depletion and Water Flooding Influencing Hydraulic Fracture Orientation in Low-Permeability Oilfields ................................................................. 104
S. Kuzmina, K.K. Butula, A. Nikitin

SPE 120762 Recovery of an Oil Producer Severely Damaged by OBM Using an Advanced Barite Dissolver System ................................................................. 122
C. Davies, A. Twynam, R. Bulgachev, R. Harrington

SPE 120829 An Alternative Method for Predicting Injectivity Decline in Produced Water Re-Injection ................................................................. 133
Mao Bai, John McLennan, William Standifird
<table>
<thead>
<tr>
<th>Paper ID</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPE 120867</td>
<td>Potential Increase of Formation Damage at Horizontal Wells as a Result of Changing Dynamic Filter Cake Properties with the Shear Rate</td>
<td>146</td>
</tr>
<tr>
<td></td>
<td>Mohamad Dangou, Howard Chandler</td>
<td></td>
</tr>
<tr>
<td>SPE 120901</td>
<td>Sand Consolidation Testing in an API RP 19B Section IV Perforation Flow Laboratory</td>
<td>160</td>
</tr>
<tr>
<td></td>
<td>D.J. Haggerty, J.D. Manning, P.D. Nguyen, R.D. Rickman, R.G. Dusterhoft</td>
<td></td>
</tr>
<tr>
<td>SPE 120939</td>
<td>First Regional Selective Packerless Acid-Fracture Stimulation With Coiled Tubing: A Documented Case History From Saudi Arabia</td>
<td>172</td>
</tr>
<tr>
<td></td>
<td>Leopoldo Sierra, Robert Bustin</td>
<td></td>
</tr>
<tr>
<td>SPE 120964</td>
<td>Unlocking Hidden Reservoir Potential Through Integrated Formation Damage Evaluation</td>
<td>186</td>
</tr>
<tr>
<td></td>
<td>C.A. McPhee, M. Byrne</td>
<td></td>
</tr>
<tr>
<td>SPE 120988</td>
<td>Modeling the Effect of Asphaltene on the Development of the Marrat Field</td>
<td>201</td>
</tr>
<tr>
<td></td>
<td>T. Yi, A. Fadili, M. Ibrahim, B.S. Al-Matar</td>
<td></td>
</tr>
<tr>
<td>SPE 121143</td>
<td>Successful Field Application of a High-Temperature Conformance Polymer in Mexico</td>
<td>220</td>
</tr>
<tr>
<td></td>
<td>Modesto Mercado, Juan Carlos Acuna, Julio Vasquez, Carlos Caballero, Eduardo Soriano</td>
<td></td>
</tr>
<tr>
<td>SPE 121221</td>
<td>Evaluation of Reservoir Performance under Water Injection Considering the Effect of Inorganic Scale Deposition in an Iranian Carbonate Oil Reservoir</td>
<td>233</td>
</tr>
<tr>
<td></td>
<td>A. Taheri, M. Zahedzadeh, Rahim Masoudi, F. Alkhani, E. Roayaee, M. Ghanavati</td>
<td></td>
</tr>
<tr>
<td>SPE 121376</td>
<td>The Challenge of Modelling and Deploying Diversion for Subsea Scale Squeeze Application</td>
<td>244</td>
</tr>
<tr>
<td></td>
<td>M.M. Jordan, E. Mackay</td>
<td></td>
</tr>
<tr>
<td>SPE 121382</td>
<td>Horizontal Well Deliverability with Turbulence Effects</td>
<td>260</td>
</tr>
<tr>
<td></td>
<td>Xiuli Wang, Michael J. Economides</td>
<td></td>
</tr>
<tr>
<td>SPE 121408</td>
<td>Case Study: Water Shut-off Mechanism in Small, Remote Platform-Process &amp; Challenge</td>
<td>271</td>
</tr>
<tr>
<td></td>
<td>F.M. Noordin, A. Razak, M. Ismail</td>
<td></td>
</tr>
<tr>
<td>SPE 121415</td>
<td>Successful Continuous, Multi-Stage, Hydraulic Fracturing Using a Seawater-Based Polymer-Free Fluid System, Executed from a Supply Vessel; Black Sea Offshore</td>
<td>283</td>
</tr>
<tr>
<td></td>
<td>Tomislav Bukovac, Rafik Belhaouas, Daniel Perez, Alexandru Dragomir, Zoran Krilov</td>
<td></td>
</tr>
<tr>
<td>SPE 121464</td>
<td>The Optimum Injection Rate for Wormhole Propagation: Myth or Reality?</td>
<td>293</td>
</tr>
<tr>
<td></td>
<td>Gerard Glasbergen, Nitika Kalia, Malcolm Talbot</td>
<td></td>
</tr>
<tr>
<td>SPE 121501</td>
<td>Water and Sand Control Through Linear-Gel Frac Pack and Relative Permeability Modifier Techniques: Case Histories From the Casanare Basin, Colombia</td>
<td>309</td>
</tr>
<tr>
<td></td>
<td>V. Escobar, L. Rodriguez, P. Zambrano, O. Martinez</td>
<td></td>
</tr>
<tr>
<td>SPE 121543</td>
<td>Different Applications of Expandable Screens Through Three Case Studies</td>
<td>320</td>
</tr>
<tr>
<td></td>
<td>Jean-Noel Furgier, Ryad Souilah, Eric Delattre, Sébastien Bourgoin</td>
<td></td>
</tr>
<tr>
<td>SPE 121570</td>
<td>Optimization of Selective Stimulation Treatments Using Coiled Tubing and Fluidic Oscillator Yields Additional Oil Production From Carbonate Formations in Southern Mexico: Case Studies</td>
<td>326</td>
</tr>
<tr>
<td></td>
<td>Juan Jose De la Fuente Rodriguez, Francisco Garcia Torres, Joel Vladimir Ulloa Gutierrez, Eduardo Soriano Duverney, Carlos Caballero Campos</td>
<td></td>
</tr>
<tr>
<td>SPE 121632</td>
<td>Underbalanced Drilling in a Highly Depleted Reservoir, Onshore South Australia: Technical and Operational Challenges</td>
<td>343</td>
</tr>
<tr>
<td></td>
<td>M.L. Vonthethoff, S. Schoemaker, A.L. Telesford</td>
<td></td>
</tr>
</tbody>
</table>
SPE 121637 The Effect of Gas on the Injectivity of Particles in Sandstone .................................................................353  
Q.P. Nguyen, Peter K. Currie, P.S.R. Bouzanga

SPE 121649 Observations on Gas Permeability Measurements Under HPHT Conditions in Core Materials Exposed to Cesium Formate Brine ........................................................................................................364  
J.D. Downs

SPE 121803 Wormhole Formation in Carbonates Under Varying Temperature Conditions ..................................................386  
Nitika Kalia, Gerard Glasbergen

SPE 121805 Modeling Formation Damage for Flow Simulations at Reservoir Scale ..............................................................405  
D.Y. Ding

SPE 121812 In Situ Water Blocking Measurements and Interpretation Related to Fracturing Operations in Tight Gas Reservoirs ........................................................................................................423  
B. Bazin, Y. Peysson, F. Lamy, F. Martin, E. Aubry, C. Chapuis

SPE 121814 Multilateral System Allowing 100 Level 5 Laterals Drilled Simultaneously .............................................................432  
Rune Freyer, Tron Kristiansen, Merete Vadla Madland, Edvard Omdal, Øyvind Omdal

SPE 121827 Case Study: YM204 Obtained High Petroleum Production by Acid Fracture Treatment Combining Fluid Diversion and Fracture Reorientation .................................................................439  
Fujian Zhou, Yuzhang Liu, Xiongfei Liu, Chunming Xiong, Xianyou Yang, Xinfeng Jia, Xiangdong Li, Daobin Wang, Faxiang Zhang, Hongxiang Shi, Yifeng Lian, Shijun Tao, Chunjiang Qian

SPE 121834 Openhole Gravel Packing With Exposed Shales: Waterpack Case Histories From Underground Gas Storage Wells in Italy ........................................................................................................448  
A. Zanchi, G. Ripa, M. Colombo, G. Ferrara, E. Belleggia, R. Barbedo, R. Illuminati, J. Rezende, S. Shenoy

SPE 121844 A Self-Mitigating Sand Control Screen ........................................................................................................460  

SPE 121850 How to Apply the Flow Velocity as a Design Criteria in RPM Treatments .............................................................466  
Arne Stavland

SPE 121856 Modelling the Placement of Scale Squeeze Treatments in Heterogeneous Formations with Pressurised Layers .............................................................................................................481  
O. Vazquez, E. Mackay, K. Sorbie

SPE 121857 Impact of Mutual Solvent Preflush on Scale Squeeze Treatments: Extended Squeeze Lifetime and Improved Well Clean-up Time .....................................................................................491  
O. Vazquez, E. Mackay, K. Sorbie, M. Jordan

SPE 121865 Determination of Skin Radius Caused By Drilling Operations in Naturally Fractured Reservoirs .................................................................................................................505  
Mehdi Zamiri, S.R. Shadizadeh

SPE 121897 Fines Migration in a High Temperature Gas Reservoir – Laboratory Simulation and Implications for Completion Design .......................................................................................................520  
M. Byrne, Carigali Hess

SPE 121905 Design and Application of Invert Emulsion Drilling and Aqueous Completion Fluids for Long Horizontal Multilateral Wells ......................................................................................................530  
Alistair Hutton, Stephen Vickers, Marcus Davidson, Jon Wharton, Andy Hatch, Roger Simmonds, David Brankling

SPE 121916 Investigation of Cleanup Efficiency of Hydraulically Fractured Wells in Gas Condensate Reservoirs .........................................................................................................................537  
P. Ghahri, M. Jamiolahmady, M. Sohrabi
SPE 121920 Open-Hole Gravel Packing with Solid-Free Oil-Based Carrier Fluids – A Case History and World Class Triumph for the Industry ..............................................................552
   Tom Jones, Steven Willis, Leo Hill, J.E. Charles, Baker Hughes, Pat Brown, Mike Frederick

SPE 121926 Cases History Studies of Production Enhancement in Cased Hole Wells Using Microemulsion Fluids .................................................................559
   Lirio Quintero, Thomas A. Jones, David E. Clark, David Schwertner

SPE 121928 Field Development and Productivity Improvement in Offshore Mexico: An Engineering and Laboratory Synergistic Approach to Carbonate Fracture Acidizing ........567
   Antonio Inda, Octavio Steffani, Eduardo Soriano, Fernando Robles

SPE 121931 Flow Performance Of Perforation Tunnels Created With Shaped Charges Using Reactive Liner Technology .................................................................577
   D.C. Atwood, W. Yang, B. Grove, L.A. Behrmann

VOLUME 2

SPE 121933 VES: An Alternative to Biopolymers in Reservoir Drill-In Fluids.................................................................594
   Ray Ravitz, LaTosha Moore, Shawn Lu

SPE 121944 Water Induced Formation Damage in Unconventional Gas Reservoirs István Lakatos, SPE, Tibor Bódi, SPE and Julianna Lakatos-Szabó, Research Institute of Applied Earth Sciences ........................................604
   U. Miskolc

SPE 121964 Overcoming Near Wellbore Damage Induced Flow Impairment with Improved Perforation Job Design and Execution Methods ..............................................613
   Hanaey Ibrahim, Ali Harrasi, Alan Salsman, Alvaro Javier Nunez

SPE 122018 Overcoming Poroelastic Behaviour in the Water Injector Wells in the Kikeh Deepwater Development ........................................................................627
   Tamara Webb, Jusni Omar, Saifon Daungkaew, Lee Chin Lim, Ray Tibbles, Ivan Munoz, Hugo Morales

SPE 122021 Successful Modelling of Post-Fracture Cleanup in a Layered Tight Gas Reservoir ..................................................................................................................639
   Josep R. Shaoul, Johan de Koning, C. Chapuis, Jean Rochon

SPE 122026 The Mitigation of Formation Damage and the Application of a New Scale Squeeze Inhibitor .................................................................657
   Hua Guan, Hans Christian Rohde

SPE 122033 A Comprehensive Methodology to Analyze the Impact of the Sand Control Technique on the Efficiency of an Horizontal Well ..................................................665

SPE 122034 Integrated Evaluation of Water Phase Trapping Damage Potential in Tight Gas Reservoirs ........................................................................................................682
   Lijun You, Yili Kang

SPE 122054 Horizontal Open Hole Gravel Pack Placement Requirements in Selective Completion Projects ........................................................................................................692
   B.V. Loureiro, J.V.M. de Magalhães, M.V.D. Ferreira, A. Calderon, A.L. Martins, F.P. dos Santos

SPE 122060 Water Quality and Well Injectivity: Do Residual Oil-in-Water Emulsions Matter? .................................................................................................................704
   S. Buret, L. Nabzar, A. Jada
<table>
<thead>
<tr>
<th>Paper ID</th>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPE 122076</td>
<td>Tailoring Filtrate Rheology for Invasion Control in Heavy and Light Oil Reservoirs</td>
<td>R.B.Z.L. Moreno, E.J. Bonet, A.T.A. Waldmann, A.L. Martins</td>
<td>722</td>
</tr>
<tr>
<td>SPE 122109</td>
<td>Microemulsion Technology for Improved Fluid Recovery and Enhanced Core Permeability to Gas</td>
<td>Andrei S. Zelenov, Linda B. Ellena</td>
<td>736</td>
</tr>
<tr>
<td>SPE 122111</td>
<td>Reducing Water Rates to Increase Hydrocarbon Rates in Australia</td>
<td>Mary A. Hardy McGoven, Emile Barrett, Thivanka Dedigama, Andrew Squire, Julio Vasquez</td>
<td>749</td>
</tr>
<tr>
<td>SPE 122113</td>
<td>Formation Damage Reduction in Retrograde Gas Wells With The Use Of Systematic Production Rate Changes</td>
<td>Luis F. Quintero, R. Klishch</td>
<td>770</td>
</tr>
<tr>
<td>SPE 122133</td>
<td>New Insights into Application of Foam for Acid Diversion</td>
<td>Rouhollah Farajzadeh, Alexey Andrianov, Hans Bruining, P.L.J. Zitha</td>
<td>776</td>
</tr>
<tr>
<td>SPE 122135</td>
<td>Skin Free Production through a New Gravel Pack Completion for Gas</td>
<td>Andreas Trieb, Nikolaus Philippovich, Wolfgang Überer, Eduard Nederlof, Florian Thomas</td>
<td>793</td>
</tr>
<tr>
<td>SPE 122138</td>
<td>An Inflow Prediction Model for Open Hole Gravel Pack and Frac &amp; Pack Completions</td>
<td>Juan J. Tovar, Ferney Moreno, Syed R. Haider</td>
<td>813</td>
</tr>
<tr>
<td>SPE 122140</td>
<td>Salt Precipitation in Gas Reservoirs</td>
<td>Q. T. van Dorp, M. Slijkhuis, P.L.J. Zitha</td>
<td>821</td>
</tr>
<tr>
<td>SPE 122152</td>
<td>Effect of Oil Saturation on Foam for Acid Diversion</td>
<td>M. Simjoo, M. Mahmoodi Nick, P.L.J. Zitha</td>
<td>845</td>
</tr>
<tr>
<td>SPE 122153</td>
<td>Identifying Point of Failure and Repairing Damaged Sand Screens in Gravel Packed Wells: A Case History From the Heidrun Field</td>
<td>Per Einar Svela, Øyvind Gustavsen, Hilde Songstad Solli, Øystein Brandal</td>
<td>853</td>
</tr>
<tr>
<td>SPE 122174</td>
<td>Reactive Perforating: Conventional and Unconventional Applications, Learnings and Opportunities</td>
<td>M.R.G. Bell, J.T. Hardesty, N.G. Clark</td>
<td>865</td>
</tr>
<tr>
<td>SPE 122178</td>
<td>Prevention of Production Breakdown Caused by Formate Drilling Fluid</td>
<td>Kai Schulze, Christoph Kersten, Gery Verient, Wolfgang Oswald, Michael Dammerer-Kerbl, Christoph Empl, Christian Marchel, Harold Karsch</td>
<td>871</td>
</tr>
<tr>
<td>SPE 122180</td>
<td>Analysis of Fracture Growth Induced by the Injection of Water Above the Fracture Pressure in Nonconsolidated Sandstones and Soft Carbonates - Deviations from the Linear Elastic Elastic Model or Why Can’t I Inject Even Above the Fracture Pressure?</td>
<td>Carlos Alberto Pedroso, Luiz Carlos do Carmo Marques, Luiz Carlos Alves da Patião, Paulo Roberto da Motta Pires, Eurípedes Barsanulpho Luz Junior</td>
<td>881</td>
</tr>
<tr>
<td>SPE 122181</td>
<td>A Novel Timer Activated Sandface Valve to Improve Wellbore Productivity</td>
<td>Leigh-Ann Russell, Grahame Elliott, John Graham, Alex Wallace, David Coull, David Forsyth</td>
<td>906</td>
</tr>
</tbody>
</table>
SPE 122197 Recent Developments in the Deposition of Colloidal Asphaltene in Capillary Flow: Experiments and Mesoscopic Simulation

Alexander D. Wilson, Edo S. Boek, Hemant K. Ladva, John Crawshaw, Johan T. Padding

SPE 122225 Gas Condensate Productivity Improvement by Chemical Wettability Alteration

A. Delavarmoghaddam, S.A. Mirhaj, P.L.J. Zitha

SPE 122231 Efficient Intelligent Well Cleanup Using Downhole Monitoring


SPE 122241 Formation Damage and Well Productivity Simulation

Arild Lohne, Liqun Han, Claas van der Zwaag, Hans van Velzen, Anne-Mette Mathisen, A. Twynam, Wim Hendriks, R. Bulgachev, Dimitrios G. Hatziagnostiou

SPE 122267 Advanced Well Flow Control Technologies Can Improve Well Cleanup


SPE 122269 Sand Control Screen Erosion – When Are You at Risk?

George Gillespie, Colin Jones

SPE 122280 Water Shut-Off in a Fractured System Using a Robust Polymer Gel

M. Simjoo, A. Dadvand Koooi, M. Vafaie-Setfii, P.L.J. Zitha

SPE 122307 Comparison of Flowback Aids: Understanding Their Capillary Pressure and Wetting Properties

Paul R. Howard, Nita Moniaga, Laura Schafer, Glenn Penny, Keith Dismuke

SPE 122319 Combining the Prediction of Penetration Depth of Downhole Perforators with the Depth of Invasion

Mikhail Gladkikh, Brian LeCompte, William Harvey, Alexander Makarov, Yuriy Antonov, Baker Hughes, Phillip M. Halleck

SPE 122321 Computing True Formation Pressure Using Drilling and Logging Data

Yuriy Antonov, Jianghui Wu, Aleksander Kashevarov, Alexander Makarov, Mikhail Gladkikh

SPE 122326 New Methodology of Mini-Fall-Off Test to Optimize Hydraulic Fracturing in Unconventional Reservoirs

R.L Ceccarelli, A. Ciucca, M. Tambini

SPE 122327 Carefully Designed Water-Based Drill-In Fluid and Filter Cake Removal System Improve Reservoir Productivity and Reduce Well Completion Costs

M. Al-Mehailani, N. Abdullah Al-Anzi, A. Gohain, I. Hussain, B. Haider, E. Davidson, B. MacMillan

SPE 122333 Acid-Fracture Conductivity Correlation Development Based on Acid-Fracture Characterization

M. Pournik, D. Zhu, A.D. Hill

SPE 122351 Predicting Well Inflow Using Computational Fluid Dynamics—Closer to the Truth?

M. Byrne, M.A. Jimenez, Juan Carlos Chavez

SPE 122353 Fluid Diversion Monitoring: The Key to Treatment Optimization

Gerard Glasbergen, Valerie Yeager, Robert Reyes, Don Everett

SPE 122357 Models and Methods for Understanding of Early Acid Breakthrough Observed in Acid Core-floods of Vuggy Carbonates

O. Izgec, D. Zhu, A.D. Hill
SPE 122361 Understanding the Near-Wellbore Phenomena for Hydraulically Fractured Wells: A Comprehensive Inflow Performance Numerical Model ............................................................. 1134
   M.A. Jimenez, Juan Carlos Chavez

SPE 122843 Formation Damage Zone Radius and Its Applications to Well Stimulation ...................... 1146
   M. Nunes, P. Bedrikovetsky, B. Newbery, R. Paiva, C. Furtado, A.L. de Souza

SPE 122844 Taking Advantage of Injectivity Decline for Sweep Enhancing during Waterflood with Horizontal Wells............................................................................................................. 1159
   P. Bedrikovetsky, A.W. Muhammad, G. Chang, A.L. de Souza

SPE 122845 New Fundamental Insights into Perforation-Induced Formation Damage ...................... 1172
   Juliane Heiland, B. Grove, Jeremy Harvey, Ian Walton, Andrew Martin

SPE 122847 A Successful Expandable Sand Screen Case History in a Deep, Corrosive Gas Well Application ............................................................................................................................... 1183
   Noel Ginest, Abdulaziz Al-Sagr, Bandar Al-Malki, Muhammad Al-Khawajah, Colin Jones, Quentin Morgan, Keith Parry

Author Index