TABLE OF CONTENTS

VOLUME 1

Advances in Reservoir Modeling: A New Approach for Building Robust Reservoir Models .......................................................... 1
Kayode, B.; Qahatani, G.; Thawadi, F.; Hage, A.

Advances in Transient Modeling: Conducting High Resolution Transient Modeling on Full-Field Coarse Simulation Models ........................................................................................................... 20
Kayode, B.; Gharweh, Z.; Kabaisy, J.; Hage, A.

An Analytical Model to Evaluate the Capillary Trapping During CO2 Storage in Aquifers ................................................................. 31
Zhu, Langtao; Liao, Xinwei; Chen, Zhiming; Mu, Lingang; Wang, Tianyi

An Anomalous Productivity Model for Naturally Fractured Shale Gas Reservoirs ................................................................. 48
David Obembe, Abisola; Hasan, Muhammad; Fraim, Michael

Applicability of Using Electrical Downhole Heaters in Sudanese Oilfields, Modeling Supported .......................................................... 79
Elgadi, Musaah; Mahgoub, Musah

Application of Critical Drawdown Pressure Prediction in Completion Design to Minimize Sanding in a Clastic Gas Reservoir in Saudi Arabia ........................................................................................................ 94
Geovany Moreno, Ferney; Guizade, Pablo; Arly Abdul Aziz, Ahmed; Khani, Fekri; Rakdan N.

Application of Geomechanics and Hybrid Metaheuristics in Designing an Optimized Well Path ........................................................... 106
Salman, Mohammad; Joshi, Deepak; Samuel, Rohello

The Application of Water Shut-off Technique in Jidong Oilfield .................................................................................................................. 125
Zhang, Guowen; Qian, Jie; Shen, Zijun; Zhang, Weiping; Xue, Jianjun; Huang, Peng; Liu, Chenlong

Applications of High-Resolution LWD Resistivity Image Logs for Carbonate Reservoir Characterization .................................................. 132
Wang, W. H.; Thagafy, M. M.

An Approach to Improve Sweep Efficiency of Extra Low Permeability Reservoir by Vertical Injector and Producer with Large Scale Hydrofracture ........................................................................ 145
Wang, Jinfang; Zheng, Xingfan; Wang, Zhengmao; Tian, Changbing; Shi, Chengfang

Assessment of Explosion Hazards Associated With Nano-Powders ........................................................................................................... 154
Deshmukh, Adnan; Varma, Sangit; Sakpal, Nilesh; Wakale, Sagar; Agwan, Akshay; Patwardhan, Samarth D.

Assessment of Polymer Interactions with Carbonate Rocks and Implications for EOR Applications .......................................................... 164
AlSofi, Abdulkareem M.; Wang, Jinjun; Leng, Zhenpeng; Abbad, Mohammed; Kaidar, Ziyad F.

Bit Wear Control and Optimization in Autonomous Rotary Steerable Drilling ......................................................................................... 173
Kamel, M. A.; Elkatazny, S.; Myrosarevala, M.; Al-Majid, A. A.; Elshaer, M.

Calculating Casing Leak Cross Flow Rate Using Surface Injection Data ......................................................................................... 185
Al-Hajri, Nasser M.; Al-Ajmi, Mohammed D.; Al-Meshal, Fahad M.; Al-Shammari, Nayef S.

Calculation of Sulfur Deposition in Gas Condensate Wells in Middle East .............................................................................................. 200
Al-Jaberi, Jaber; Al-Azari, Khaleed; Fraim, Michael

Challenges with Securing Power Water Injectors Completed in the Reservoir Oil-Water Contact ................................................................. 211
Al-Hajri, Nasser M.; Al-Ajmi, Mohammed D.; Mahsoon, Ahmed H.; Al-Tammar, Abdulmohsen A.; Al-Meshal, Fahad M.; Al-Shammari, Nayef S.

Clayey Sandstone Rocks Integrity after Flooding with High pH Chelating Agent EOR Solutions ................................................................. 221
Mahmoud, Ahmed Abdulhamid; Al-Hashim, Hasan S.

CO2-Foam Rheology Behavior Under Reservoir Conditions ................................................................................................................... 234
Al-Qasim, Abdulaziz; Alsabiti, Fawaz; Kokal, Sunil; Zhou, Xianmin

Combining Microwave and Activated Carbon for Oilfield Applications: Thermal-Electromagnetic Analysis of Activated Carbon .................................................................................................................. 247
Omer, Omer Ahmed; Soltan, Mohammad Y.

Common Misinterpretations of Gas Condensate Reservoirs .................................................................................................................. 263
Abdulrah, Muhamed S.; Al-Zawad, Makki A.; Fraim, Michael L.

A Comparative Study of Proxy Modeling Techniques in Assisted History Matching ............................................................................. 289
Shams, Mohamed; El-Banbi, Ahmed H.; Sasyouh, Helmy

Completion Optimization While Drilling – Geomechanical Steering towards Fracable Rock for Optimal Selection of Stage Spacing and Cluster Density in Unconventional Wells ............................................................................. 305
Ouenser, A.; Dirksen, R.; Parzian, M.; Rehman, S.; Bari, M.

A Comprehensive Experimental Study of Bare-Scale and Core-Scale Processes During Carbonated Water Injection Under Reservoir Conditions ..................................................................................... 321
Molzazi, Pedram; Tzolis, Pantelis; Sohrabi, Mehran; Enesi, Sultan; Yousef, Ali A.; Eid, Ahmed A.

A Comprehensive Study of Directional Drilling Systems in the Kingdom of Saudi Arabia ............................................................................... 348
Salamah, F. F.; Oliveira, V. C. C.; Martinez, M. A. R.; Zahran, B. S.; Abouelhajj, K. K.

Consideration to Batch Mixing Time Improves API Recommendation for Testing Cement Slurries and Prevents Cement Failures: Lab Testing and Field Application ........................................................................ 357
Al-Yami, Abdulla S.; Wagle, Vikrant; Mukherjee, Tushar S.; Al-Badran, Mohammad; AlJubran, Mohammad

Controlled Breakdown Technique Enables Proppant Fracture Placement by Enhancing Fracture Initiation; Fracture Pressure is Reduced when Applied ............................................................................ 368
Buenastrro, Adrian; Abdulkareem, Harbi S.; Noaman, Yousef M.; Driweesh, Saad; Shammari, Nayef; Palanivel, Maharaja; Khalifa, Mohamad

CO2-Based Technologies in Unconventional Resources: Impact of Rock Mineralogy on Adsorption ........................................................................ 378
Al Imsil, Maytes; Zedaka, Mark
First Deployment of a New Integrated Expandable Under Reamer Technology With a Conventional Drilling BHA in a Vertical Well in KSA ................................................................. 723

Al-Dahab, Ali A; Schimmack, M; Grynewald, Serenity

The First Successful Nitrogen Lifting Job without Stripping Out for a Gas Well in Saudi Arabia ........................................................... 732

Purusharthty, Naresh K; Alhamed, Khalid I.; Fraikh, Saud B.; Asel, Sultan A.; Shammar, Nayef S.; Atwi, Mohammed A.

Fit for Purpose Design of High Performance Water Base Mud Successfully Replaced Oil Base Mud ............................................................. 742

Ferras, Abdelkader; Al Obaidany, Rashid; Qassabi, Nabhan; Al Aghbari, Salim; Abry, Nadia; Bennemahdi, Mohamed Oukil; Bennemahdi, Samir; Radwan, Mohmed; Van Der Wefff, Niels; Abdel Samiee, Rudy; Mahrouqi, Mohammed; Chihani, Zied

Flowing Gels for Loss Circulation Prevention ........................................................... 749

Hashmat, M. D.; Sultan, Abdalrahman S.; Rahman, Saifur; Hussain, S. M. Shakib; Ali, Shaikh Azarof

Fractured Well Productivity: Proppant Pack vs. Pillar Fracture - Numerical Study ................................................................................. 758

Gomaa, Ahmed M.; San-Roman-Alregi, Damian P.; Al-Nozami, Khalid R.; Al-Muntasher, Ghaithan A.

VOLUME 2

Genuine Software Utility to Accelerate Dynamic Models Update ........................................................................................................... 779

Tayeb, Yousef Z.; Najem, Abdullah A.; Naseef, Faisal H.

Geophysical Surveillance of a Steam Injection Project in a Kuwait Heavy Oil Field .................................................................................... 788

Al-Mutairi, Amal; Biao Ren; Za; Al-Haqueen, Hamad; Tianin, John

High-Temperature Fracturing Fluid Based on Nanofiltered Seawater ........................................................................................................... 798

BinGhanim, Ahmed; Al-Maza, Ali; Al-Olaby, Maryam; Biyani, Mahesh; Cortez, Janette; Bataweel, Mohammed; Chen, Tao; Rabah, Raed

Holistic Management of Calcium Carbonate Scaling in a Mature Field: A Case Study .......................................................... 814

Malik, Ankit; Tivami, Amith; Fartijal, Prachant; Lele, Sarang; Manickavasagam, Chandran; Sharma, Neel Mani

How Geomechanical Study Helped Minimize Drilling Challenges in Highly Deviated Wells, Offshore, Saudi Arabia: A Case Study ..................... 831

Ahmed, Majibed; Al-Dossary, Khalid S.; Baht, S; Ahmad, Al Hamad; Nasser A

A Hybrid Artificial Intelligence Method to Predict Gas Solubility and Bubble Point Pressure ................................................................. 845

Moussa, Tamer; Elkhatamy, Salaheldin; Abdurahimeem, Abdulazeez; Mahmoud, Mohamed; Aloush, Rami

Hydraulic Fracturing Technologies of Deep Heavy Oil Reservoirs in Block KM, Yumen Oilfield ................................................................. 855

Jin, Fu; Shunyuan, Zhang; Bingzhan, Liu

Identification and Characterization of Thermally Induced Fractures Using Modern Analytical Techniques .................................................... 881

Elmi, Leif; Prakasa, Boma; Muradov, Khafiz; Davies, David

The Impact of Salinity on Water Dynamics, Hydrocarbon Recovery and Formation Softening in Shale: Experimental Study .............................. 903

Mehana, Mohamed; Al Salman, Mohamed; Fafes, Mashhad

Impaction and Wear-Resistant Carbon Elastic Seal for HTHP Downhole Valve Application .............................................................. 918

Zhao, Lei; Xu, Zhiyue; He, Peter

Implementation of Assisted History Matching Under Uncertainty in Integrated Reservoir Modeling .............................................................. 928

Maucce, Marco; Awan, Arwar R.; Benedek, Lajos; Lyngra, Stig

Improve Plugging Efficiency in Fractured Sandstone Reservoirs by Mixing Different Preformed Particles Gel Size ........................................ 942

Alhuraishawy, Ali K.; Sun, Xindi; Bai, Busujai; Wei, Mingzhen; Imqam, Abdulmohsin; Ahsansour, Abdullahl

Improvements in Automated Continuous Measurement of Drilling Fluid Properties .................................................................................. 960

Dotson, Adam; Mahajian, Lalit; Kulkarni, Sandeep D.; Landry, Andy; Eiland, Edward

Improving the Drilling Fluid Properties Using Nanoparticles and Water-Soluble Polymers ................................................................. 971

Ahmad, Hafiz Mudaser; Kamal, Muhammad Shajadz; Murzaza, Mohsen; Al-Harrith, Marnameen A.

Improving Wellbore Economics and Long Term Integrity by Optimizing the Design and Evaluation of Annular Sealants for Hydraulically Fractured Wells: A Case Study ..................................................... 986

Jimenez, Walmy Cuello; Pereira, Joel; Mattar, Luis

Increasing Certainty in Formation Evaluation Utilizing Advanced Mud Logging Gas Analysis ................................................................. 999

Ighodalo, Endurance; Davies, Graham; Soza, Steve Austin; Ahmed, Abdhalmid

Influence of Rock Wettability Alteration on Dielectric Dispersion Data ................................................................................................... 1017

Al-Ojfi, Salah; Sauerer, Bastian; Dughyl, Evgeny; Valori, Andrea; Abdulah, Wael

Injection of Polymer for Improved Sweep Efficiency in High Temperature High Salinity Carboante Reservoirs: Linear X-Ray Aided Flood Front Monitoring .............................................................. 1042

Hashmet, Muhammad Rehan; Quiser, Yemna; Mathew, Eric Sonny; Al-Amemi, Waleed; AlSumaiti, Ali M.

Innovative Approach to Optimize ESP Power Consumption Through Developed Software ................................................................. 1060

Almukhtar, Mohammed A.; Alabdulmohsin, Youas A.; Shawly, Alaa S.; Shehri, Ayed M.; Shammar, Nayef S.; Al-khalidi, Mohammed

An Innovative Approach Towards Real-Time Torque and Drag Model and its Analysis - A Case Study .......................................................... 1069

Alsharif, Mohammed; Al Khudiri, Musab; Albasam, Bassam; Ahmad Khan, Kamran

Instantaneous Shut-In Wellhead Pressure for SSA Field Oil Wells ............................................................................................................ 1076

Al-Zayer, Rayed M.; Al-Hussain, Ali Masa; Arlheke, James; Al-Khamees, Saud A.

Integrated Cloud Computing Environment for Upstream Workflows: Unconventional Resources Case Study .................................................. 1096

Al-Thani, Lulwah; Al-Ghamdi, Yasser; Al-Habib, Muradah; Al-Ghamdi, Turki

Integrated Topographic Multiphase Flow Modeling in Surface Pipelines - A Case Study ................................................................. 1105

Homoud, A. A.; Ayub, M.; Mohammed, E.

Integrating Field Performance and History Matching Uncertainties Using Fuzzy Logic To Minimize Well- Placement Risks .............................. 1110

Khan, Waqas A.; Sudirman, Sharizan B.; Qahtani, Ghazi D.
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Interpretation of Miscible Fluid Displacements in Multimodal Carburetes</td>
<td>1119</td>
</tr>
<tr>
<td>Introducing a Big Data System for Maintaining Well Data Quality and Integrity in a World of Heterogeneous Environment</td>
<td>1135</td>
</tr>
<tr>
<td>Introducing a Universal System Design and Workflow for Efficiently Capturing and Managing Geological Modelling Data Assets</td>
<td>1142</td>
</tr>
<tr>
<td>Investigating the Compatibility of Enzyme with Chelating Agents for Calcium Carbonate-Filter Cake Removal</td>
<td>1154</td>
</tr>
<tr>
<td>Jumping Mass Spectrometer</td>
<td>1170</td>
</tr>
<tr>
<td>Laboratory Customizations and Field Application of Water-based Drill-in Fluid to Enhance Well Productivity – A Case Study from the Kingdom of Saudi Arabia</td>
<td>1176</td>
</tr>
<tr>
<td>A Laboratory Study of In-Depth Gel Treatment To Improve Oil Recovery</td>
<td>1193</td>
</tr>
<tr>
<td>A Low Elastic-Microsphere/Surfactant/Polymer Combined Displacing Method after Polymer Flooding</td>
<td>1203</td>
</tr>
<tr>
<td>Low Salinity Water Flooding Possible Mechanisms and the Impact of Injected Sulphate Variation on Oil Recovery in Carbonate Reservoirs: Compositional Modelling Approach</td>
<td>1216</td>
</tr>
<tr>
<td>Model Algorithms Applied to Detection of Well Control Events</td>
<td>1243</td>
</tr>
<tr>
<td>A Mathematical Model for Transient Testing of Naturally Fractured Shale Gas Reservoirs</td>
<td>1253</td>
</tr>
<tr>
<td>The Methods of Correcting NMR Data from Dry Gas Wells Drilled with Formate Based Muds by Advanced NMR Techniques</td>
<td>1287</td>
</tr>
<tr>
<td>Modelling and Optimizing Inflow Control Devices</td>
<td>1324</td>
</tr>
<tr>
<td>Modelling Temporal and Spatial Sedimentary Architectural Complexity in Mixed Aeolian-Fluvial Reservoir Successions</td>
<td>1343</td>
</tr>
<tr>
<td>Mud-Gas Extractor and Detector Comparison</td>
<td>1357</td>
</tr>
<tr>
<td>Nano-Scale Imaging at Crude Oil/Brine/Rock Interface in Carboneates: A Pore Scale Approach</td>
<td>1369</td>
</tr>
<tr>
<td>NanoSurfactant for EOR in Carbonate Reservoirs</td>
<td>1380</td>
</tr>
<tr>
<td>New Advancements in Mitigating Sand Production in Unconsolidated Formations</td>
<td>1388</td>
</tr>
<tr>
<td>New Algorithm to Quantify Well Productivity of Wells in Solution Gas Drive Reservoirs with More than One Permeability Circles Region</td>
<td>1399</td>
</tr>
<tr>
<td>A New Approach for Reducing Numerical Dispersion in Reservoir Simulation</td>
<td>1414</td>
</tr>
<tr>
<td>A New Approach to Predict Failure Parameters of Carbonate Rocks using Artificial Intelligence Tools</td>
<td>1428</td>
</tr>
<tr>
<td>New Technique to Determine the Total Organic Carbon Based on Well Logs Using Artificial Neural Network (White Box)</td>
<td>1441</td>
</tr>
<tr>
<td>A Novel Acid Transport Model with Robust Finite Element Discretization</td>
<td>1453</td>
</tr>
<tr>
<td>Novel Algorithm to Quantify Productivity of Multi-Layered Gas Condensate Heterogeneous Reservoirs</td>
<td>1470</td>
</tr>
<tr>
<td>A New Approach to Formulation of Emulsified Acid Using Waste Oil</td>
<td>1484</td>
</tr>
<tr>
<td>Novel Fibrous Lost Circulation Materials Derived From Deceased Date Tree Waste</td>
<td>1503</td>
</tr>
<tr>
<td>Novel Method and Apparatus for Sticking Fluid Performance Evaluation</td>
<td>1511</td>
</tr>
<tr>
<td>A Novel Two-Stage Treatment to Remove Scales from Oil Producing Wells in a Sandstone Reservoir</td>
<td>1530</td>
</tr>
</tbody>
</table>
On the Edge of Chaos: Complexity Offering Value Expectations on O&G Projects .......................................................... 1545

Open Hole Washout Maneuvering Technology Using Coiled Tubing .................................................................................. 1557

Al-Hajri, Nassar M.; Al-Ajmi, Mohammed D.; Al-Sabaei, Feheald M.; Al-Meshal, Fahad M.; Al-Shammari, Nayeef S.

VOLUME 3

Optimization of Infill Drilling in Whicher Range Field in Australia .......................................................................................... 1567

Al-Fahtawi, Omar; Vimal Roy, Asswin R.; Hossain, Md Mofazzal; Kabir, Akim H.

Optimizing Hydraulic Fracturing Design by Analyzing Reservoir, Completion, and Stimulation Parameters and Their Influence on Post-Fracturing Gas Rates .............................................................................................................. 1590

Rahim, Zillur; Al-Kanaan, Adnan; Kayamov, Rijat; Al-Jalul, Zaad; Viswanathan, Annu

Optimizing Injector-Producer Spacing for CO2 Injection in Unconventional Reservoirs of North America .................. 1603

AlFargh, Dheisah; Wei, Mengfen; Bui, Baujun; Almansour, Abdulahad

An Overview of Polymer Resin Systems Deployed for Remedial Operations in Saudi Arabia ................................................................. 1619

Alshiahi, Zainab A.; Al-Yami, Abdullah S.; Wagle, Vikrant; BinAli, Ali; Mukherjee, Tushar S.; Al-Kubaisi, Abdullahah; Halim, Ab Hamid Abdul; Khalil, Mohamed; AlSufran, Ali

Performance Analysis and Flow Regime Identification of Fractured Horizontal Wells in Tight Oil Reservoirs .................. 1634

Hu, Peng; Qiuan, Ran; Yong, Li; Min, Tong

Petrophysical Joint Inversion for Reservoir Saturation Mapping: A Case Study .............................................................................. 1642

AlSaif, Sarah; Marwala, Alberto

Predicting the Flow ID of Water Injectors Identified with Obstruction in the Horizontal Section ........................................... 1649

Al-Ajmi, Mohammed D.; Al-Nuaim, Sami A.; Al-Hajri, Nassar M.; Al-Hajri, Muhammad A.; Al-Shammari, Nayeef S.

Pressure Transient Analysis of Vertically Fractured Well in Tight Oil Reservoirs with Rectangle Stimulated Reservoir Volume ............................................................................................................................................... 1657

Zhu, Langtao; Liao, Xinwei; Chen, Zhiming

Probabilistic Performance Forecasting in History Matching of Low Permeability Reservoirs ......................................................... 1681

Zhang, Xueqiao; Xue, Yongchao; Ding, Guangyong

Productivity Enhancement from Acidizing Horizontal Wells Drilled in Thin Carbonate Reservoir Layers .............................. 1690

Varela-Pineda, Alfonsos; Fham, Ali; Al-Abdullah, Hassan M.; Muslin, Hassam

Pushing the Technical Limits in an 8½-in. Section of Manifa ERD Wells Through a Redesigned PDC Bit and Reengineered Drilling Practices .................................................................................................................................................................................. 1704

AlDhakeeri, Badur; Alhathelool, Mohammed; Saleem, Loay; Al-Ajeel, Fahad; Al Mutaeri, Yousef; Ghazzawi, Ayman

Real Time Prediction of the Rheological Parameters of NaCl Water-Based Drilling Fluid Using Artificial Neural Networks ...................................................................................................................................................... 1726

Elkatatny, Salhehdinn; Mahmoud, Mohamed

Realization of ULTRG (Unrecoverable Liquid Fuels to Recoverable Gaseous Fuels) as an Innovative Microbial EOR ................................................................................................................................................. 1741


A Reliable Method for Determining Fast Shear Azimuth of Sonic Data .......................................................................................... 1750

Hamid, Osman; Ahmed, Omaer; Hassam, Aborshaid; Ba-Wazir, Omar

Remaining Oil Saturation Measurements for CO2-EOR Pilot in Saudi Arabia .................................................................................. 1765

AlOtaibi, Fawaz; AlOthaimi, Falah; Sanni, Modia; Kokal, Sanil; Al-Razally; AlHashboul, Almohanand

Reservoir Description Insights From an Inter-Well Chemical Tracer Test .......................................................................................... 1776

Sanni, Modia; Abd, Mohammd; Kokal, Sunil; Ali, Razally; Zrifzazy, Ibrahim; Hattwig, Sven; Huseby, Olaf

Reservoir Simulation History Matching and Waterflooding Performance Forecast for a Large Sandstone Reservoir in Middle East .................................................................................................................................................. 1789

Yong, Li; Baozhu, Li; Benbiano, Song; Wemin, Zhang; Qi, Zhang; Xiong, LiHui

Reservoir Surveillance Program Optimization Using Rapid Nuclear Modeling Integrated with Formation Testing and Sampling .................................................................................................................................................. 1803

Eltaher, Y.; Ma, S.; McLroy, C.; Guergueb, N.

Residual Saturation: An Experimental Study of Effect of Gravity and Capillarity During Vertical and Horizontal Flow .................................................................................................................................................. 1817

Adehaya, Abdulrauf K.; Barri, Assad A.; Shatat, Kamal, Muhammd

Revised Experimental Approaches To Address Shale Drilling Challenges .................................................................................. 1831

Al-Arja, Mohammed K.; Amanullah, Md; Zaaid, Syed; Sultan, Abdullahah S.; Abu-Khamin, Sadiq

The Role of Drilling Azimuth on Wellbore Geomechanical Instability in a Major Offshore Field ............................................ 1842

Aljubran, M. J.; Alsalman, M. A.; Al-Yami, Abdullah S.; Ghazali, Ma; Almansour, Murad; Markabi, Maen

ROP Enhancement and Drilling Time Optimization for Long Horizontal Sections in Tight Gas Formations Utilizing MPD Systems – A Case History .................................................................................................................................................. 1853

Amer, Mustafa M.; Dahab, Abdel Sattar; El-Sayed, Abdel-Alim Hashem

An ROP Predictive Model in Nile Delta Area Using Artificial Neural Networks ................................................................................. 1875

Han, Kyungnam; Alexeyenko, Alexey; Chavarria, Marcon; Markabi, Mez

Running LWD Azimuthal Sonic and Azimuthal Density in Tandem Confirms the Azimuthal Sonic Technology for Real Time Dip Picking and Geosteering Application, Middle East Case Study .................................................................................................................................................. 1886

Nestyaugin, Andrei; Al Arja, Salif; Alshiahi, Hassan; Elkholy, Mohamed; Fekry, Mohamed; Awaad; Huda; Mohamed, Omar

Scale Resistant Production Tools .................................................................................................................................................. 1904

Kumar, Deepak; Bano, Darren; Xu, Zhiyue
Sedimentological and Stratigraphic Characterization of Late Paleozoic Unayzah Reservoirs, Central Arabia, Saudi Arabia ................................................................. 1916

Self Optimizing Thermal Field Using Beam Pumps with Variable Speed Drive ................................................................. 1937

Alwazeez, Abdullah; Rojas, Luis Vargas; Marin, Antonio Andrade; Mackay, Angus; Rady, Haytham; Salih, Khalid; Parada, Dimas

Solving Complex Petrophysical Characteristics to Unlock Hydrocarbon Potential of a Naturally Fractured Pre-Cambrian Reservoir .................................................................................. 2007

Al-Azmi, Ali Abdullah; Tiswari, Brajesh Kumar

Shale Gas Reservoir Development Strategies Using Complex Specified Bottom-Hole Pressure Well Architectures ................. 1963

Ahmed, Abdulazeem; Mohamed, Mahmoud; Elkatatny, Salaheldin; Barri, Assad; Muhammadain, Abdulrahim

Surface Jet Pump Trial Test in Safaniya Field: Evaluation and Case Study ................................................................. 2080

Mey, Wenrong; Peevan, Syed

Surface Jet Pump Trial Test in Safaniya Field: Evaluation and Case Study ................................................................. 2080

Mey, Wenrong; Peevan, Syed

Surface Jet Pump Trial Test in Safaniya Field: Evaluation and Case Study ................................................................. 2080

Mey, Wenrong; Peevan, Syed

Techniques to Improve the use of Microwave to Produce Heavy Oil Reservoirs: Numerical Study ................................................................. 2091

Ohman, Hatimah A.; Soliman, Mohamed Y.; Seturi, A.

Thermosensitive Water Soluble Polymers: A Solution to High Temperature and High Salinity Reservoirs .......................... 2115

Ramasamy, Jothi Bassia; Ba Hamdan, Abdulaziz; Amanullah, Md

A Thorough Investigation Into the Transient-Pressure Data from Horizontal Oil Wells Equipped With Electrical Submersible Pumps ... 2131

Al-Khalidi, H. A.; Al-Obathani, O. H.; Ansizar, Rahman, N. M.

A Thorough Study on the Attrition Resistance of Sized Bridging Materials ................................................................. 2142

Ramasamy, Jothi Bassia; Ba Hamdan, Abdulaziz; Amanullah, Md

Two Component Lost Circulation Material for Controlling Seepage to Moderate Losses ............................................. 2151

Unconfined Compressive Strength Prediction from Petrophysical Properties and Elemental Spectroscopy Using Support-Vector Regression ................................................................. 2161

Negara, Ardiansyah; Ali, Syed; Al-Dhaman, Ali; Kesserwan, Hasan; Jin, Guodong

Unconventional Pre-Workover Diagnosis and Decision Making using High Precision Temperature and Spectral Noise Logging: Case Study ................................................................................................. 2172

Abdeljabbar, Ahmad M.; Gozeman, Julio C.; El Sheshawy, Mohamed

Use of 3D Seismic to Boost the Profitability of Infill Drilling in an Offshore Sandstone Oil Field ................................................................. 2181

Daramola, Babatola

The Use of Artificial Neural Networks to Quantify the Effect of Formation Damage on Well Production Response .......................... 2196

Bukhamseen, Nader Y.; Ertekin, Turgay

Use of Local Binary Pattern in Texture Classification of Carbonate Rock Micro-CT Images ................................................................. 2212

Rahimov, Khursheed; Al-Sumaiti, Ali M.; Al-Murzouqi, Hasan; Jouini, Mohamed Soufiane

Utilization of Real-Time Data and Advanced Correlation/Interpretation Tool for Picking the Formation Tops and Casing Points Remotely: A Cost Effective Solution by RCC ................................................................. 2224

Abduljabbar, Dania; Saklou, Mohammed; Al Khudiri, Musab; Ghamdi, Yasser; Barayyan, Mohammad; Attique Amer, Muhammad; Rasheed, Farhan; Kashif, Muhammad

Validating Hydraulic Fracturing Properties in Reservoir Simulation Using Artificial Neural Networks ................................................................. 2232

Bukhamseen, Nader Y.; Ertekin, Turgay

Water Control in High-Water-Cut Oil Wells Using Relative Permeability Modifiers: A Saudi Lab Study ................................................................. 2243

Abduljabbar, Ibrahim; Shaheeb, Mazamer Ali; Bingham, Ahmed; Eghbouni, Mohamed; Rahal, Raed; Al-Yaq, Ali; Al-Rustum, Abdulah


Larsrud, Vineet; Kalyani, Tejas; Regulation, Rhandy

Effect of Novel Chelating Agent Seawater Based System on the Integrity of Sandstone Rocks .......................... 2258

Ahmed, Abdulazeeem; Mohamed, Mahmoud; Elkatatny, Salaheldin; Barri, Assaad; Muhammadain, Abdurrahim

Evaluating the Effect of Surface Tension on Two-Phase Flow in Horizontal Pipes ................................................................. 2268

Baker, Ali S.; Cajibhy, Rahul; Abdulraheem, Abdulazeez
Field Implementation of Tar Removal Using Solvent Based Chemical Treatment for Water Disposal Wells

Al-Hussain, Ali Musa; Al-Zayer, Rayed M.; Al-Zubail, Makki A.

IPR of Triple Continuum Reservoirs, Analytical Approach

Youssef, AbdAllah A.; Alnuaim, Sami

A Multiscale Time-Splitting Discrete Fracture Model of Nanoparticles Transport in Fractured Porous Media

El-Amin, Mohamed F.; Kou, Jisheng; Sun, Shuyu

Surface Modified Nanoparticles as Internal Breakers for Viscelastic Surfactant Based Fracturing Fluids for High Temperature Operations

El-Amin, Mohamed F.; Kou, Jisheng; Sun, Shuyu

Understanding the True Stimulated Reservoir Volume in Shale Reservoirs

Hussain, Maaruf; Saad, Bilal; Negara, Ardiansyah; Sun, Shuyu

Effect of Steering Mechanism on Wellbore Tortuosity in Horizontal Wells

Al-Rushud, Albaraa; Biscaro, Enrico; Mohammad, Muntasar; Ghamdi, Bandar

Author Index