

SPE Conference at Oman Petroleum & Energy Show 2025

Muscat, Oman
12 - 14 May 2025

Volume 1 of 5

ISBN: 979-8-3313-2092-8

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© (2025) by Society of Petroleum Engineers
All rights reserved.

Printed with permission by Curran Associates, Inc. (2025)

For permission requests, please contact 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: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

VOLUME 1

DIGITAL TRANSFORMATION: CASE STUDIES

AI-Aided Real Time Data Decoder for Mud Pulse Telemetry - A Case Study Available	1
<i>Prasad Anjangi, Rex Dael Navarro, Rashobh Rajan Sobhana, Felipe Costa Oliveira Chagas, Bipin Pillai</i>	
Advanced Machine Learning for Accurate Reservoir Characterization: Predicting Fluid Saturations in Gharif Reservoir Using a Custom Ensemble Model Available	11
<i>Ghadna Al-Sulaimi, Mohammed Al-amri</i>	
Leads: A Deep Learning Approach to Revolutionizing Gas Plant Maintenance with Advanced Anomaly Detection Technology Available	27
<i>Febrita Kusuma Wardana, Ady Bastian Saputra, Ade Anggi Naluriawan Santoso</i>	
Developing Digital Maintenance Job Card, a Case Study in Sirikit Oil Field - Thailand Available	49
<i>L. Kridsada, S. Narupon</i>	
Securing the Flow: A DAMA-ISO 27001 Cybersecurity Framework for Oil & Gas Data Pipelines Available.....	63
<i>S. Al Hosan</i>	
Evergreen OT Security Assurance: A Sustainable Approach to OT Cybersecurity Risk Management Available.....	71
<i>N. Al Alawi</i>	

EOR/IOR: WELL DESIGN AND COMPLETION

Innovative Density-Based Autonomous Inflow Control Technology to Enhance Well Performance Available.....	90
<i>Georgina Corona, Ryan Novelen, Stephen Greci, Ryan McChesney, Caleb Warren, Ibrahim El Mallawany, Pranay Asthana, Ahmed Bukhamseen</i>	
From Single to Multilateral: The Breakthrough of Multilateral Drilling and Completion Technologies Available.....	101
<i>Walaa Almukhtar, Haidar Alraml, Carl Lindahl, Abdulrakeeb Almasri</i>	
Biodegradable Gelatin-Carbon Nanocomposites as Effective Shale Inhibitors in Water-Based Drilling Fluids Available	112
<i>Mobeen Murtaza, Muhammad Shahzad Kamal, Azeem Rana, Sohail Nadeem, Mohammed H. Alyousef, Shirish Patil</i>	
Optimizing Production and Extending Well Life: Autonomous Inflow Control Valve (AICV) Technology in North Oman's Field - A Case Study Available	119
<i>H. Al Kharusi, S. Al Riyami, A. Al Hussaini, A. Al Salmi., Y. Al Araimi, A. Al-Fatlawi, A. Baqer, I. M. Ismail, A Fahmy</i>	

Nanotechnology-Driven Bridging Package Approach for Improving Wellbore Stability, Preventing Differential Sticking, and Reducing Loss Events in Severely Depleted Formations in Oman Available.....	130
<i>Mahmoud Amin, Ayman Fawzy, Mohamed Dawood, Ayman Rahal, Nilia Salazar, Fahad Al Maktoum, Mahmood Al Kindi, Mansoor Al Rashdi</i>	
Advanced Multifunctional Fracture Fluid with Improve Oil Recovery Capability Available	137
<i>M. Diaz, A. Imqam, J. Jackson, B. Haubert, C. Lyu, A. Andrianov, E. Liu</i>	
Enhanced Drag Reduction in Extended-Reach Wells Using In-House Synthesized Zwitterionic Surfactant Available.....	150
<i>Muhammad Israr, Mobeen Murtaza, Masooma Nazar, Syed Muhammad Shakil Hussain, Muhammad Shahzad Kamal, Naji Ali Mohammed Al Radhi</i>	

ENERGY TRANSITION AND SUSTAINABILITY: ADVANCES IN CARBON CAPTURE UTILISATION AND STORAGE (CCUS)

Assessing the Influence of Reservoir Heterogeneity on CO ₂ Storage and Dispersion Patterns Available.....	158
<i>Kartik Mawa, Bruno Ramon Batista Fernandes, Mojdeh Delshad, Larry W. Lake, Rouhi Farajzadeh, Kamy Sepehrnoori</i>	
Dynamic Modeling of the Physics of CO ₂ Sequestration in Saline Aquifers Available.....	183
<i>R. K. Albeesh, B. O. Moriwawon</i>	
Competition Between Dry-Out and Hydrate Formation in Cold CO ₂ Injection into Depleted Reservoirs Available.....	199
<i>S. Kahrobaei, J. Snippe, R. Farajzadeh</i>	
Investigating Asphaltene Deposition Behavior During Carbon Dioxide (CO ₂) Injection Using the Asphaltene Integrated Model (AIM) Available	209
<i>Eissa M. Al-Safran, Ahmed Aql, Mohammad Ghasemi</i>	
Temperature Analysis of CO ₂ Injection into Multi-Layer Saline Aquifer Considering Capillary Force Available.....	223
<i>Xinyang Guo, Shiqing Cheng, Wenpeng Bai, Zhoutian Weng, Yang Wang</i>	

INNOVATIVE TECHNOLOGY: NEW WELL CONSTRUCTION TECHNOLOGIES I

Overcoming Drilling Hazards and Pore Pressure Uncertainty, an MPD Approach in West Kuwait Field for the Deepest Well Since 2002 in Kuwait Oil Company (KOC) Available	232
<i>Jomah Bashir, Ahmad Al-Shehab, Abdullah Khaleel Ajmi, Mohammad Al-Hashemi, Anshul Kumar, Abdulaziz Alsaeedi, Brahim Selami, Raghad Alqabandi, Hakim Benyounes</i>	
Pioneering Techniques for Enhanced Drilling and Stimulation in Extended Horizontal Sections Available.....	244
<i>M. A. Rotan, I. A. Mamari, M. A. Ghaithi, M. M. Khusaibi, A. H. Shekaili, A. N. Abri, A. S. Rubkhi, I. K. Siyabi, A. Z. Kurnia, F. A. Yarobby, A. N. Blatter</i>	
Revolutionizing Lateral Section Drilling: Improved Performance with Shaped Cutters in Pdc Bits Available.....	257
<i>J. Bahsir, Y. Al Shammari, J. Al Najar, A. Suleiman, M. Hassanein, M. El Zein, A. Al Otaibi, A. Khalil, S. Roberts</i>	

HSE AND WELFARE: ZERO HARM CULTURE AND APPLIED TECHNOLOGY

Transforming Wells Safety Culture by Introducing Must'ed – Are You Ready Concept Available	277
<i>Sulaiman AlSalmi, Khalid AlSawwafi</i>	
Boots on the Ground Mobile Application (BOTG) Available	286
<i>Nasser Al Rashdi, Ahmed Al Balushi</i>	
Structuring the Active Safety Briefing Through Enhanced Toolbox Talks (TBT): An Applied Approach Available	290
<i>B. N. Al Jabri, A. S. Al Ghafri, A. N. Al Hinai</i>	
E-SAFAR (Electronic Safe Journey Management System) Available.....	298
<i>Sulaiman Al Sulaimi, Waeel Atiah, Ally Al Shidhani</i>	
Optimizing Safety of Marginal Unmanned Wellhead Platforms: CFD-Based Feasibility Study for Flammable Gas Detection Available	311
<i>Pakorn Sangsurane</i>	
Data-Driven Approach to Risk Analysis of PDO-Owned Junctions Available.....	321
<i>Majid AlRashdi, Mustapha Azzouzi</i>	

GAS DEVELOPMENT: TIGHT GAS HYDRAULIC FRACTURING

Pillar Frac Strategy in BP Oman: Case Studies of Implementation in Barik and Forecasted Challenges in Miqrar Available	331
<i>Adil Mohammed Al Maki, Stevanus Dwi Kurniadi, Ahmed M. Gomaa, Syukron Lutfi, Habib Ahmed, Asma Al Darai, Khalid Al Fadhli, Alberto Casero, Roy Alistair, Khalfan Al Shuraiqi</i>	
Performance Prediction of Multi-Fractured Horizontal Wells in Shale Gas Condensate Reservoirs Using Flowback Rate Transient Analysis Available	346
<i>Chia-Hsin Yang, Hamid Emami-Meybodi</i>	
Successful Installation of a New 15K Multistage Frac (MSF) Completion in a Challenging Extended Reach Lateral HPHT Gas Well Available	364
<i>Arias Urbina, Rommel Ernesto, Awad Alenezi, Ahmed Saber, Kareem Mahfouz</i>	
Enhancing Hydraulic Fracturing Capabilities in Sandstone Gas Reservoirs: A Comparative Study of Abrasive Jetting and Wireline Perforations from the Middle East Available	387
<i>Mustansar Raza, Abdulaziz Almulhim, Pablo Vandeweerd Coello, Andhika Pratama, Alfredo Lopez</i>	
Addressing Multiple Challenges of Hydraulic Fracturing in HPHT Sandstone Reservoirs. a Case Study from Saudi Arabia Available	404
<i>A. Yudin, M. Dawoud, W. Arshad, N. Nurlybayev, Z. Al-Jalal, C. McCollum, F. Al Hadyani, R. Bukhamseen, L. Belaouane</i>	
Wavelet Transform for Fracture Diagnostics in Tight Gas Sandstone Available	417
<i>K. Alsiyabi, M. H. Al-Aamri, A. Kazemi, G. Nejad</i>	

DIGITAL TRANSFORMATION: DATA SCIENCE

Preventing Drill String Twist Off: Automatic Flagging of Abnormal Pressure Loss Signatures in Real-Time Available	431
<i>J. Cortez, M. Yi, D. Yoon, M. Behounek, P. Ashok, C. East, M. Elghor, G. Hickin, J. Pearce, T. Peroyea, S. White</i>	
Core Digitization: A Journey to Digital Transformation of Unconventional Mudstone Reservoir Available.....	443
<i>Septriandi Chan, Abdullah Badawod, Fouad Al Zahrani, Moin Muhammad, Izul Qudsi, Ardiansyah Koeshidayatullah</i>	
Takatuf Dashboard: Leveraging Data Analytics and Business Intelligence in the Oil and Gas Industry to Improve PDO Operations and Engineering Efficiency Available	455
<i>Fatema Al Ajmi, Omaimah Al Marikhi, Amitkumar Patel</i>	
Application of Wellbore Engineering Data Evaluation and Analysis for Drilling Performance Improvement Available.....	464
<i>Sen Yang, Tianshou Ma</i>	

EOR/IOR: ARTIFICIAL LIFT

Improving ESP Reliability Through Advanced Thrust Bearing Design: Field Insights from Colombia's Llanos Oilfields Available	478
<i>P. Mantilla, M. Mogollon, C. H. Escobar Ardila, L. Pineda Villegas, E. Velasquez, F. Leon, J. D. Zuluaga Castro</i>	
Rigless Operations and Reduced Emissions: Advancing ESP Performance with Microemulsion Technology Available	496
<i>M. Zidan, I Halawa, A. Abd El-Sattar, O. Gneedy</i>	
Breakthrough Multiphase Pumping Using an Ultra-High-Speed High-Gas-Volume-Fraction Pump Available.....	505
<i>C. E. Ejim, H. M. Banjar, A. Shakirov, Y. Alexeev</i>	
Deepening of Sucker-Rod Pumps in Horizontal Wells to Boost Oil Production Available	514
<i>Suad Al Harrasi, Ahmed. T. Al Abri, Said Al Badi, Khalil Al Hadidi, Omran Al Faraji, Hamood Al Dafai, Khalfan Al Busaidi, Khamis Al Wahaibi, Ahmed. N. Al Abri, Atul Khemnar</i>	
Advancing Recovery: A Data-Driven Approach to Enhancing Artificial Lift Pumps Longevity and Fault Detection in Oil Reservoirs Using Deep Learning, Computer Vision, and Dynamometer Analysis Available	524
<i>Amr Gharieb, Hossam Zidan, Nihal Darraj</i>	

ENERGY TRANSITION AND SUSTAINABILITY: INNOVATION PATHWAYS IN GHG MITIGATION AND MANAGEMENT

Techno-Economic Analysis of Carbon Dioxide Utilization from Acid Gas Removal Unit in Oman LNG Available.....	538
<i>Al Maamari Aaisha, Samir Thakkar, Al Rizeiqi Nasser</i>	

Ensuring Safe CO ₂ Storage - Measurement, Monitoring and Verification (MMV) Approach for the Blue Horizons CCS Project, Leveraging Industry Best Practices and Cutting-Edge Technologies Available.....	551
<i>A. Di Matteo, M. Dean, S. O'Brien, N. Borner, F. Aljiroudi, R. Al Mjeni, N. Al Bulushi</i>	
Laser Technology Accelerating the Path to Net Zero Upstream Operations Available	560
<i>Ahmed A. Alrashed, Sameeh I. Batarseh, Damian P. San Roman Alerigi, Taqi Y. Alyousuf</i>	
Evaluating the Impact of Solar Hybrid Technology on Diesel Generator Dependence in Oil Fields. a Case Study in Oil ESP Wells Available	570
<i>Mazin Al Shidhani, Waleed Al Washahi, Hamed Al Hashmi, Mohamed Al Busaidi</i>	
Leveraging Artificial Intelligence & Fixed, Continuous Methane Monitoring to Identify Fugitive Emissions Rapidly Available	580
<i>Blake Gendron, Qazi Saeed, Syed Haider</i>	
Quantitative Study of CO ₂ Huff-N-Puff Enhanced Oil Recovery in Shale Formation Using Online NMR and Core Simulation Technology Available	589
<i>Peifu Xu, Hao Chen, Mingcheng Ni</i>	

INNOVATIVE TECHNOLOGY: PROCESS IMPROVEMENTS AND TECHNOLOGY FOR AGILE AND COST EFFICIENT OILFIELD OPERATIONS I

Formation Damage Investigation to Determine Root Cause Analysis and Remedial Actions – a Case Study for Kuwait's Exploratory Wells Available.....	608
<i>J. Peres, B. Duncan, G. A. Al-Sahlan, K. Leyrer, S. Al-Ali, A. Al-Nabhan</i>	
Innovative Applications of High-Quality Foam in Coiled Tubing Milling for Depleted Wells: A Case Study Available	630
<i>Said Al-Ofi, Vidiawan Akbar, Nasser Al-Rajhi, Faisal Niyadi, Sultan Al-Jahdhami, Al Basha Naji Zaiba</i>	
Synergistic Effects of Natural Gums as Sustainable Water-In-Oil Emulsifiers for Heavy Crude Oil Transport Application Available	637
<i>R. Al Hattali, U. H. Taura, W. Alshidi, S. Al-Khamisi, F. Al Jahwari</i>	
Innovative Recovery Strategies for High-Risk Well Integrity Failures Available	648
<i>M. Al Mahrooqi, P. Lambkin, A. Harrasi, F. Hatmi, B. Mcgrath</i>	
Azimuthally Oriented Formation Testing While Drilling Resolves Permeability Variations Around the Wellbores Available	666
<i>R. Alkhalifah, A. Taher, M. Fouda, S. Alsawafi</i>	
Advancements in Salt Inhibitor Flush for Controlling Blockage in Production Lines Available	687
<i>Mubarak Al-Adwani, Kim Long Nguyen, Meshal Al-Wadi</i>	

OFFSHORE EXPLORATION AND DEVELOPMENT: FIELD DEVELOPMENT, INTEGRITY, AND FLOW ASSURANCE

Predictive Maintenance Automation: Artificial Maintenance Management Agent (AMMA) Framework Available.....	695
<i>A. Qura, A. Ibrahim</i>	

Remarkable Step Toward 4th Generation of Wellhead Platform Design Optimization Available	704
<i>P. Chaiwiboonpol, I. Sa-Nguanwong, S. Katanyoowongcharoen, B. Yontsakul, P. Wongwiwatchai, K. Ruangpattanatawee, N. Chalermpanchai</i>	
Innovative Drilling and Completions Fluids Strategy to Drill a Horizontal Well in the Gulf of Mexico Case Study Available.....	716
<i>Andres Nunez Davila, Mauro Gamargo, Juan Pablo Jaimes, Oscar Bravo, Colton Tidwell, Seth Croy, Michael Tate, Samuel McGlaughlin</i>	

VOLUME 2

The Application of Automated Measurement of Drilling Fluids Properties in Deep-Water Wells Available.....	743
<i>Xiaojun Xin, Jun Zhu, Hao Huang, Wei Zhang, Liam Zeng, Jingzhe Li, Baiquan He, Junwei Wang</i>	
Accelerate QA Growth Opportunities- Through an Integrated Phased Portfolio & Agile Approach Available.....	752
<i>L. Hamdoun, SH. AlKhudhuri, H. Al Ismaili, H. Al Jabri, A. Al-Shuely, F. Al-Wardi, Z. Al Ghafri, Y. Al Hajri</i>	
Identification, Characterization and Impact of Baffle Zones on Fluid Flow Within Fractured Dolomite Carbonate Reservoir Available	761
<i>A. Nabil, A. Farag, A. Gaber</i>	
Novel Approach to Crude Viscosity Reduction- A Crude Transportation Case Study of Low API Gravity and High Viscous Crude Oil Available.....	780
<i>M. Arham, M. O. Pamula, V. Denny, A. Sylviana</i>	

GAS DEVELOPMENT: STIMULATION AND CARBONATE ACIDISING

Enhanced Gas Production Through Analysis, Skin Calculation Utilizing Dual-Method Stimulation: CTU Integrating Pre-Stimulation and High-Rate Matrix Acidizing Using a Novel Retarded Acid System Available	791
<i>Ghusun Al Aamri, Manal Al Bulushi, Saleh Al Saqri, Al Muatasam Al Hashami, Mohammed Al Balushi, Ali Altammar, Ahmed Ghallab, Said Al Waili</i>	
Re-Stimulation of Non-Producing Jurassic Gas Well with Multi-Stage Open-Hole Completion Using CO ₂ Acid Fracturing Revives the Production Potential in Jurassic HPHT Depleted Reservoir in North Kuwait Available.....	810
<i>Y. Lezghem, Ayo Ajayi, Hajar Al Harbi, Erkan Fidan, Abdullah Al-Saeed, Kholoud Al-Mefleh, Jassim Barki</i>	
Unlocking the Well Potential with a Novel Solids-Free Acid Diverter System in Middle Eastern Stimulation Operations Available	836
<i>S. Otaibi, S. F. Ashby, Mustansar Raza, A. Pratama</i>	
Constructing Flow Capacity of Fracture Networks in Deep Carbonate Reservoir Through Hybrid Acid Stimulation Available.....	853
<i>Jichuan Ren, Ziqiang Yao, Jianchun Guo, Peixuan Xu, He Jie, Tao Zhang, Yan Deng</i>	
A Novel Water-Less Horizontal Well Fracturing Solution in Water-Sensitive and Low-Resistivity Tight Gas Reservoir Available.....	874
<i>Fangchao Tong, Yongbo Cao, Xuejiang Long, Ming Li, Junfeng Wang, Taiji Wang, Jie Zhang, Haoyan Li, Yunlong Fu, Xianfeng Bai, Yin Luo</i>	

Simulation-Based Optimization of Gas Storage Reservoir Through Acidizing Available.....	887
<i>Matin Dargi, Ehsan Khomehchi, Javad Mahdavi Kalatehno, Fatemeh Souri</i>	

DIGITAL TRANSFORMATION: ARTIFICIAL INTELLIGENCE

Towards Autonomous Rotary Drilling System: A Robust Rate of Penetration Model for Drilling Operation Using Artificial Intelligence Available.....	905
<i>R. M. Elgaddafi, K. Amadi, B. M. Biltayib, M. T. Al Saba, M. Omar, A. Dashti, M. Alali, M. Alabdullah</i>	
Enhancing Drilling Efficiency Through Automated Data Management and Artificial Intelligence for Real-Time Monitoring Services Available.....	922
<i>Neha Jamil, Mohammad Rasheed Khan, Syed Hassan Ali Shah, Zubair -</i>	
Real-Time Machine Learning for Advanced Beam-Pump Dynacard Surveillance and Predictive Analytics: Opportunities and Challenges Available	932
<i>Shifa Khaliq Al Kiyumi, Muneer Al Balushi</i>	
Conversational AI - ADAM: A Solution to Enhance Well Engineering Decision-Making with Retrieval-Augmented Generation (RAG) Available	950
<i>Sajad Al Lawati, Tariq Al Sulaimani, Al Salt Al Bahri</i>	

KNOWLEDGE SHARING EPOSTER

Evaluation of Rock-Fluid Interfacial Tension in Organic Hydrogen Carriers for Geological Hydrogen Storage Applications Available.....	957
<i>Muhammad Ali, Narendra Kumar, Manojkumar Gudala, Zeeshan Tariq, Mutaz Alsubhi, Faisal Alissa, Abdulwahab Ghamdi, Hussein Hoteit</i>	
Toward Hydrogen Storage and Transportation Over Long Distances Via Dehydrogenation of the Cyclo-Based Liquid Organic Hydrogen Carrier in the Presence of the PdO/Al ₂ O ₃ Available	968
<i>Ameen A. Al-Muntaser, Muneer A. Suwaid, Ildar R. Ilyasov, Shadi A. Saeed, Ismail Khelil, Xiaodong Zhou, Elina B. Isaeva, Anastasia N. Mikhailova, Mikhail A. Varfolomeev, Ahmed S. Al-Fatesh, Lokesh Joshi, Danis K. Nurgaliev</i>	
The Evolution of Perforation Techniques Over Time: An Overview Available.....	981
<i>Ahmed A. Alrashed, Sameeh I. Batarseh, Abdullah M. Alharith, Luai A. Alhamad</i>	
Solvent-Induced Organic Adsorption Variations in Calcite/H ₂ /Brine Systems: Implications for Underground Hydrogen Storage Available	994
<i>Aneeq Nasir Janjua, Muhammad Ali, Mubeen Murtaza, Muhammad Shahzad Kamal, Shirish Patil, Mohamed Mahmoud, Arshad Raza, Hussein Hoteit, Muhammad Younas</i>	
Novel High-Performance Low Carbon Footprint Cement-Free Geopolymer System for Carbon Capture and Sequestration Wells Available	1006
<i>B. Engelke, R. Pernites, S. Kapoor, N. Droger, C. Abad, S. Malik, B. Jain, B. Agostinho</i>	
Non-Invasive Temperature Technology Available	1019
<i>A. Amri, A. Farsi, I. Hinai, A. Zidjali, S. Naimy, A. Kiyumi, R. Alawi, A. Ismaili</i>	

EOR/IOR: CASE STUDIES

A Multi-Scale Evaluation of Polymer Injectivity and Fracture Behavior in the Burgan Field Available.....	1030
<i>Mohammad B. AlAbdullah, Meshal Algharaib, Randall S. Seright, Abbas Sanaseeri</i>	
Maximising Oil Recovery and Reducing Water Cut in South Oman Fields: Results from Novel Organic Oil Recovery (OOR) Waterflooding Campaigns Available	1047
<i>Linda Tatiana Lezama Viveros, Christopher Venske, Taj Uddin, Colin Hill, Michael Carroll, Nabil Al Harthy, Salim Al Hashmi, Husain Al Lawati</i>	
Restoration of Oil Production Through a Versatile Iron Sulfide Scale Dissolver: A Case Study from Oman Available	1064
<i>I. Al Balushi, A. Charushin, M. Muhammad, M. Alaulaqi</i>	
Reviving One of the Largest Mature Waterflood Fields in the World Through Integrated Reservoir Analysis Available	1072
<i>I. Al Shukri, A. Al Dhahli, A. Al Maqbali, A. N. Al Balushi, A. Al Rawahi</i>	

EOR/IOR: CHEMICAL EOR/IOR

Research on High-Performance Surfactant Blend for Microemulsion-Based SP Flooding at 100°C for High Water Cut Reservoir Available	1084
<i>Jun Jin, Yingcheng Li, Weidong Zhang, Yanhua Liu, Shengyang Liu, Xining Bao, Yong Meng, Zhiqing Su, Xiujuan He, Yan Guo, Ou Sha</i>	
Enhancing Sweep Efficiency in Mature Waterflooded Carbonate Reservoirs in North Oman Through Advanced Chemical Water Shutoff Treatments Available	1094
<i>Abdullah Saud Al Ruqaishi, Maryam Humaid Al Wahaybi, Najeeb Al Harthi, Hamood Al Ghafri, Khalfan AL Sibani, Yousuf Al Hadhrami, Erik Ferdiansyah, Saleh Al Saqri, Fahad Al Habsi, Ahmed Al Kindi, Suhaib Al Lawati</i>	
The Journey and Evaluation of Chemical Water Shut-Off Treatments in Carbonate Reservoirs: A Case Study from Northern Oman Available	1105
<i>Hilal AL-Mufargi, Hamood Al Harthi, Ahmed Al-Naabi, Mohammed Al Shuely, Khamis AL-Wahaibi</i>	
Novel Complex Core-Shell Microspheres as Profile Control Agent Available	1123
<i>Zhiqing Su, Yingcheng Li, Jun Jin, Xiujuan He, Hui Xu, Hui Sun</i>	
Wettability Alteration by Combinations of Chelating Agents and Surfactants Available	1133
<i>X. Deng, M. Otaibi, M. Fahmi, Mobeen Murtaza, S. M. Shakil Hussain, S. Patil, M. Mahmoud, M. S. Kamal</i>	
Polymeric Surfactant to Improve Oil Recovery in Reservoirs with High Temperature and Salinity Available.....	1146
<i>Chang Da, Xuan Zhang, Jinxun Wang, Mohammad AlOtaibi</i>	
Analyse Oilfields Portfolio to Develop Chemical EOR Screening Tool Available	1154
<i>Al Yaqathan Al Ghafri, Mandhr Al Kalbani, Dawood Al Mahruqi</i>	

INNOVATIVE TECHNOLOGY: NEW WELL CONSTRUCTION TECHNOLOGIES II

Learning from Innovative Approaches to Dual Horizontal Well Completions in Challenging Reservoirs Available	1169
<i>Abdulraakeeb Almasri, Abdullah Abdulhalim, Micah Janzen, Hessa Alhumidan</i>	
Optimized Cementing Slurry Design for HPHT Wells with Salt Formations and Water Influx Under a Narrow Pressure Window: Case Studies and Best Practices Available.....	1178
<i>Muhammad Imran, Mustafa Sarbast, Serwer Yousif, Kamil Shahzad, Omar El Zanaty, Vladimir Afletunov, Paiman Anwar</i>	
Assessing the Impact of a Novel Vibration Mitigation Technology: Results from Abu Dhabi Offshore Trials Available.....	1196
<i>A. Wahyudi, M. L. Voghell, R. V. Che, H. M. Biyanni, Z. Diltayev, O. L. Kadoura, H. N. Jadallah</i>	
Conser Duetto Technology: An Innovative Approach to the Production of Biodegradable Plastics Available.....	1215
<i>Francesca Dignani, Gabriella Compagnone</i>	
Rig Sizing: Revolutionizing Rig Sizing for Optimal Performance and Efficiency Available	1227
<i>B Abdulla, T Ahmad</i>	
Performance Analysis of Digital Underreamers in Motorized Bottom Hole Assembly Available	1234
<i>Bagga Pawandeep Singh, S. D Khatri</i>	

HSE AND WELFARE: SAFETY, WELLBEING AND ENVIRONMENT PRACTICES: JOURNEY TO EXCELLENCE

Enhancing Worker Welfare in the Oilfield: A Holistic Approach to Managing Heat Stress in NESR Operations Available	1247
<i>Bader M. Al-Hadhrani, Mohammed Kurish, Lama Debs</i>	
Waste 2 Wealth Non-Hazardous Waste Recycling Approaches in Oil and Gas Fields Available	1255
<i>Mahmood AL Jadidi, Ghassan AL Ghassani</i>	
Driving Safety Behaviors Through PDO Wells Safety Support Center Available.....	1261
<i>F. Al Sharji, M. Al Aufi, Mina Al Fahal</i>	
Deep Learning-Based Classification Study of Hidden Violations in Oil Well Engineering Field Available.....	1269
<i>Tao Huang, Chunyan Wu, Dengpan Xie, Zuer Han, Qijun Zeng, Jun Zhu</i>	
Near Miss – Behavior and Effect Available.....	1279
<i>Uche Aigbokhai, A. A. Al Balushi, S. Al Barwani, T. AL Wadhahi, S. A. Al Yarubi, O Osobajo</i>	

GAS DEVELOPMENT: UNCONVENTIONAL AND TIGHT GAS HYDRAULIC FRACTURING

Strategic Methodology to Unlock Hydrocarbon Volumes Thru Additional Stimulation: Opportunities from Oman Tight Gas Fields Available	1290
<i>Adnan Al Hinai, Ghusun Al Amri, Al Muatasam Al Hashami, Omar Al Raisi, Dawood Al Kharusi, Ali Al Ghaithi</i>	

Unveiling of Multi Stage Fracturing Sleeves Opening Signatures: Resolving Uncertainty Via Pattern Classification and Innovative Data Acquisition Available	1304
<i>Rasim Serdar Rodoplu, Abdullah J. Khamees, Mugdad M. BoHulaiqa, Mahmoud Abd EL-Fattah</i>	
Lessons Learned from a Successful Hydraulic Fracturing and Stimulation Treatments in Deep Gas Clastic and Carbonate Reservoirs. Offshore Field – Abu Dhabi Available	1317
<i>A. Ali Khodja, H. M Al Hammadi, A. Al Meamari, A. Ladmia, Y. Battam, I. Nabil Mohamed</i>	
Shale Gas Three-Dimensional Development Adjustment Workflow Based on Dynamic Changes of Geostress and Artificial Intelligence Algorithm to Achieve Efficient Shale Gas Extraction Available	1326
<i>Mingyi Gao, Hua Liu, Xiaohu Hu, Yanyan Wang, Dongying Wang, Hui Qiao, Chuxi Liu, Wei Yu</i>	
Novel Emulsion-Based Fracturing Fluid for In-Situ Thermal Shock to Facilitate Hydraulic Fracturing in Unconventional Geothermal Reservoirs Available	1338
<i>Fahad Khan, Mohamed Mahmoud, Arshad Raza, Mobeen Murtaza, Shirish Patil, Muhammad Shahzad Kamal</i>	
Successfully Optimizing Hydraulic Fracture Design and Execution for an Exploration and Appraisal Program in Central Oman – Case History Available.....	1347
<i>Sundus Al Shibani, Ramzi Abdulkadir, Lang Zhan, Alexander Nezich</i>	
A Novel Plug & Perf Hydraulic Fracturing Approach for Unlocking Reservoir Potential and Addressing Completion Deformation in Gas Reservoirs Available.....	1366
<i>Dmitrii Gromakovskii, Koray Yilmaz, Marcus Chan Choon Hoong, Stefano Farias</i>	

EOR/IOR: POLYMER FLOODING

Mechanical Shearing of Polymers for Improved Injectivity in Carbonates: A Path to Expand CEOR Field of Application Available	1382
<i>Noor Al-Muzaini, Maissa Souayah, Rashid S. Al-Maamari, Ahmed Mansour, Thomas Divers</i>	
On the Development of Viscous Oil Field by Polymer Flood at Competitive UTC and GHG Intensity Available.....	1400
<i>Al Yaqathan Al Ghafri, Lars Bellman, Hanaa Al Sulaimani</i>	
Polymer Flooding in Gharif Reservoirs: From Concept to Pilot Available	1412
<i>H. Al Lawati, S. Al Hashmi, N. Al Harthi, H. Salimi, I. Al Shaqsi, T. Divers, J. Nesbit, G. Dupuis</i>	
Optimizing Polymer EOR Performance Under High Salinity and High Temperature Conditions for a Clastic Reservoir in Kuwait Available	1427
<i>H. E. A. Al-Mayyan, A. Al-Dabbous, S. Eadulapally, D. Al-Rukaibi, R. Al-Abbas, M. T. Al-Murayri, D. Rousseau, E. Delamaide</i>	
Novel Micro-Scale Insights for Systematic Testing of Polymer Flooding Available	1455
<i>Y. Al Siyabi, N. Mosavat, M. Q. Al Azzawi, M. S. Al Abri, D. Mahruqi, H. Al Sulaimani, F. Battashi</i>	

VOLUME 3

Optimizing Enhanced Oil Recovery Through Low-Salinity Polymer Flooding: Influence of Injection Sequence Mode, Rock Mineralogy, and Oil Properties Available	1474
<i>Intisar K. Al-Busaidi, Rashid S. Al-Maamari, Mahvash Karimi, Dawoud Al Mahrouqi</i>	

Enhanced Oil Recovery Using Novel Polymer-Nanoparticle Composites: Synthesis and Characterization Available.....	1494
<i>Arwa Al Naabi, Usman Taura, Isehaq Al-Nafai, Wee'am Al Shidi, Sami Al-Khamisi, Farooq Al Jahwari</i>	

ENERGY TRANSITION AND SUSTAINABILITY: LOW-CARBON SOLUTIONS: HYDROGEN AND GEOTHERMAL ENERGY

Harnessing White Hydrogen: Generation, Potential, and Future Implications Available.....	1513
<i>M. Al Kalbani, M. Serati, H. Hofmann, T. Bore</i>	
Insight in the Decarbonization of Oil Refining by Integrating High-Temperature Electrolysis Available.....	1527
<i>R. Coupan, K. Karam, A. Al-Yaarubi</i>	
An Analytical Study on the Cost and Environmental Impacts of Hydrogen Blending in Gas Turbines Using Long-Term Natural Gas Operational Data Available	1536
<i>A. Al Balushi</i>	
Optimizing Closed-Loop Geothermal Systems Through Coupling Transient Hydraulic Model with Near-Wellbore Formation Simulation and Surface Power Generation Dynamics Available.....	1546
<i>A. Nassereddine, O. L. Toktas, K. Putri, C. K. Kwok</i>	

INNOVATIVE TECHNOLOGY: PROCESS IMPROVEMENTS AND TECHNOLOGY FOR AGILE AND COST EFFICIENT OILFIELD OPERATIONS II

Successful Implementation of Innovative Technologies and Solutions for the Design and Construction of Heavy Wall Oversized Double Deck Floating Roof Tanks at MAF Tank Farm Available.....	1568
<i>A. Shahul Hameed, Hussein Salmi, Zaher Hajri</i>	
Acid Wash of Dual-Laterals Junction Entry Windows with Near off Bottom Liner Using 2-3/8" Coiled Tubing with Real-Time Downhole Sensors & Multi-Lateral Entry Tool Available.....	1582
<i>A. Almazrou, A. Alaedan, K. Redouane, R. Bukhamseen, I. Bin Abdullah</i>	
Driving Drilling Optimization with Pioneering Data Recording Technology in Oman's 6.125 In. Bits Available	1594
<i>J. Perez, M. J. Bailey, A. Jones, S. Doudou, A. Al Lawati</i>	
Beyond Traditional Stationary Surveying Method: Continuous High-Definition Surveys While Drilling Enable Precise Well Placement Available	1616
<i>A. Aché, F. Salamatulah, S. Alharbi, M. Fouda, E. Bikchandaev, A. Taher, R. Alsaif</i>	
Advantages of Utilizing Early Kick and Loss Detection System in High-Pressure High-Temperature Wells Available	1632
<i>Ahmed Sabri, Mohammad Abdullah, Ibraheem Al-Kanderi, Feroz Khan, Mohsen Regaey, Ahmad Shoeibi, Majid Moazami, Avataram Nadiminti, Alberto Martocchia</i>	

INNOVATIVE TECHNOLOGY: NEW WELL LOGGING TECHNOLOGIES I

World First Horizontal Look-Ahead from Ultra-Deep 3D Resistivity Inversion for Proactive Geosteering Available.....	1642
<i>A. A. Elkhamry, K. Katterbauer, J. Ma, N. Clegg, M. Bittar, A. Duriez, A. Taher</i>	

Leading H2S Sampling: Effective Methods and Insights from Malaysian Experience Available	1659
<i>N. Hademi, S. Daungkaew, D. Ling, C. Liu, P. Gopalan, M. Htun, S. Wattanachai, A. Raouf, K. Ling, V. Vevakanandan, H. Lee, T. Worawutthichanyakul, M. Hamdan</i>	
Addressing Structural Uncertainties in Carbonate Reservoirs Through Advanced Geosteering and Reservoir Mapping: Lessons from Southern Oman Available.....	1684
<i>Y. H. Al Saadi, A. S. Al Salmani, J. Fiter</i>	
Integrated Advanced Well Data and Structural Analysis to Address Challenges in Fractured Carbonate Reservoirs: Insights from Successful Exploration and Appraisal of Cambrian Dolomite on the Eastern Flank of the South Oman Salt Basin Available.....	1698
<i>G. Djazuli, D. Solisa, N. Hasan, P. Ariyanto, O. Al Riyami, H. Sudono, H. Al-Dhuhli</i>	
Synergy of Intelligent Wireline Formation Testing Platform Together with Drill Stem Testing to Unlock Hydrocarbon Potential in Asia Greenfield Available	1708
<i>D. Ling, S. Daungkaew, M. Kristensen, C. Cavalleri, H. Espinosa, A. Gisolf, A. Thorat, M. Lefranc, K. K. Chee, N. R. Hademi, W. B. Habel, B. Yang, P. Kumar, C. Nguyen Van, S. N. Cheng, C. L. Chua, A. N. Azwa, M. A. Abu Talib, S. N. F. Zulkipli, E. Motaei</i>	
Advanced Structural & Petrophysical Interpretations at Reservoir-Scale Enabled by New Developments in Logging While Drilling Ultra-Deep Resistivity Measurements Available	1729
<i>A. Taher, E. Bikchandaev, M. Fouda</i>	
Accelerated Learning Curve: Well Placement Strategy Changes to Unlock New Potential Available.....	1739
<i>Viktor Dovgopolyi, Dean Baker, Raya Al Abri, Manal Al Azri, Latifa Al Maani</i>	

GAS DEVELOPMENT: GAS PRODUCTION SYSTEM OPTIMISATION

Automated Intermittent Production (AIP) Technology: Enhancing Gas Well Uptime Through Automated Control Systems Available.....	1747
<i>Ahmed Al Aamri</i>	
Block 61 Condensate Decline Management Strategy Available.....	1755
<i>Rovshan Mollayev, Mohammed Al Harrasi, Ruqia Al Shidhani, Mohammed Al Lawati, Ghaida Al Farsi</i>	
Assessment of Methanol Consumption Reduction at Gas Treatment Facilities Through Non-Fire Regeneration of Water-Methanol Solution – Methanol Stripping Available	1765
<i>M. Patrikhin, A. Chernoyarov</i>	
Condensate Optimization Using Physical-Based Models in Tight Gas Field in Oman Block 10 Available.....	1773
<i>Ong Lee Kuan, Hawra Abdul Abbas, Osama Al Kindi, Shabib Al Hasni, Mahmood Al Busafi</i>	
Optimizing Acid Gas Sweetening Operations: Addressing Foaming and Solvent Degradation Challenges Available	1782
<i>A. Al Zidi</i>	
Effective Options Utilized to Reduce Risk for Fault Critical Re-Active Stress Evaluation Available	1793
<i>Suming Hu, Jie Zhang, Zitong Zhao, Wei Zhou, Jianye Zhang, Can Cui, Rongjun Tian, Ping Lei, Xiaobo Chen, Shuang Chen, Fei Hu, Xingning Huang</i>	
A Research on Maximizing Gas Storage and Oil Recovery in Gas Condensate Reservoirs Available	1802
<i>Lidong Mi</i>	

DIGITAL TRANSFORMATION: DIGITAL TWINS AND ASSET PERFORMANCE MANAGEMENT

- Enhancing Drilling Efficiency in the Western Desert: Leveraging Visual Data Analysis, RSS BHA and Instantaneous Bit Performance Optimization Available 1813
R. AitAli, S. Debab, M. E. A. Eissa, K. Beheiry, S. Grymalyuk
- Deployment of Digital Oil Field for Production Optimisation in Critical Sour Facility Available 1831
R. Mihajlov, A. Mujaini, I. Alsiyabi, K. Bahri, C. MorenoGomez
- Study on Digital Twin Technology to Drilling Performance Improvement and Risk Reduction Available..... 1844
Haiming Wang, Xiang Li, Pu Wei, Lei Fu, Wei Zhou, Junfei Li, Yajie Ding, Qianqian Cao, Xingning Huang

DIGITAL TRANSFORMATION: OPERATIONAL EXCELLENCE

- Virtual Metering: Black Oil Tool for Non-Characterized Wells Available 1854
S. Russo, A. Tiozzo, M. Montini
- Integrated Physical Modeling with Live Data Base to Develop Exception Base Surveillance Engine for Deep Tight Gas Fields Available..... 1865
Osama Al Kindi, Shabib Al Ahsani, Mahmood Al Busafi, Abdulkadir Ramzi Ibrahim, Anjana Yadav, Susan Varghese, Anant Mutalik Desai, Hawra Abdul Abbas
- Innovating Production Forecasting with AI: A Full-Field Implementation in Oman Available 1875
M. Abri, A. Naabi, A. Barhi, S. Sulaimi, S. Subhi
- Wellhead's Facility Adequacy Simulator (Well- FAST); Enhancing Wellhead Platform Engineering Efficiency Through an In-House Verification Simulation System Available..... 1883
S. Watanapanich, A. Siriyut, P. Wanaphattharaphan, T. Eakviliyakig, N. Langkulanont, N. Khumwongsakul, P. Chaiwiboonpol, W. Wanamonthon, K. Watanakun, T. Wongkham, P. Wongwiwatchai
- Deployment of Innovative Mathematical Decision Model Leveraging Operability & Trouble Shooting Enhancement for Remote Facilities Available 1893
S. M. Ahmed, E. Al Blooshi, A. Al Ketbi, K. AlShehhi, F. Haider, M. Aslam, O. AlRiyami
- Fracturing Bottomhole Pressure from Automated Friction Estimation with Execution Data-Driven Models Available 1907
Esteban Ugarte, Abdul Muqtadir Khan, Sidney Flores, Brandon Hobbs, Samir Menasria, Tim Drews
- Unlocking Efficiency: A Case Study in Eliminating Motor Twist-Offs Through Practical Problem Solving (PPS) Approach: Case Study in Highly Deviated Wells, Sultanate of Oman Available..... 1930
A. Al Senani, M. H. Al-Aamri, J. Salim, A. AlRubkhi, M. Al Omairi, Y. Abri, Z. Al Rawahi, S. Al Aufi, A. Kendi, A. Al Ghafri

EOR/IOR: CO2 INJECTION

- CO2 EOR Pilot in Tight and Thin Carbonate Reservoir in the Sultanate of Oman: Results and Interpretation Available 1950
Ramez Nasralla, Jeppe Gavnholt, Raul Valdez, Sameer Al Baloshi, Fadi Aljiroudi, Nicholas Borner, Nabil Al Bulushi

Key Insights of Polymer-Alternating-Gas CO₂ Injection from Pore to Field-Scaled Study Available 1964
Rapheephan Laochamroonvorapongse, Falan Srisuriyachai, Jirawat Chewaroungroaj, Puntira Henglai, Pichit Varcharragosad

Overcoming Operational Challenges in Mobile Nitrogen Generator Unit for Crude Oil Extraction in S1 Outstation Locations Available 1977
S. Sassanapitak, N. Boonpakorn, P. Tanasombut, D. Chaisalee, A. Rungchaya

EOR/IOR: EOR/IOR FOR CARBONATE AND UNCONVENTIONAL RESERVOIRS

Improved Oil Recovery of Viscous Tertiary UeR Oil Reservoir Through Water Flooding in Block 5, North Oman: Challenges and Successes Available..... 1985
A. M. AL Badi, M. S. AL Yarubi, S. M. Ba Omar, I. S. AL Sinani, W. N. AL Subhi, A. S. AL Balushi, H. A. Al Dafai, A. S. AL Shekaili, Sh. A. AL Issaei, H. N. AL Saqri, Kh. H. AL Habsi, F. A. AL Kiyumi

A Workflow to Identify Target Block and Optimize Cyclic CO₂ Injection for Enhancing Oil Recovery in Shale Reservoirs Available..... 1995
Ming Ma, Qian Zhang, Hamid Emami-Meybodi

Evaluation of Wafra 2E Single Well Injection Test to De-Risk a Polymer Flood Multi-Well Test Available..... 2013
Younis Osman, Adam Jackson, Basim Al-Rowaih, Jamal Al-Rubaiyea, Graeme Loble, Nayi Arismendi, Ahaad Al Mutairi, Preston Fernandes, Bader Thekrallah

Chemical Water Shutoff in Fractured Carbonate Reservoirs: Lessons Learnt After Six Treatment Campaigns Available 2027
A. Zaitoun, N. Salehi, A. Templier, G. Omonte, J. Bouillot, H. Al Mufargi, H. Al Harthi, A. M. Al Naabi, M. Al Shuely, K. Al Busaidi, M. Al Rawahi, H. Al Dafai, S. Al Harrasi, K. Al Wahaibi, K. Al Hadidi, H. Al Jabri, A. Al Mandhari

Characterization and Rheological Performance of Novel Viscoelastic Surfactants for Hydraulic Fracturing in Unconventional Reservoirs Available 2037
A. Mahboob, M. S. Kamal, M. Mansha, M. Israr, S. M. S. Hussain, Shirish Patil, S. Ali, S. Khan

Evaluation of Alternative Polymer-Based EOR Mechanisms to Improve Sweep Efficiency and Water Management in Complex Light Oil Carbonate Reservoirs in Abu Dhabi Available 2049
J. M. Leon, S. K. Masalmeh

INNOVATIVE TECHNOLOGY: WELL INTEGRITY TECHNOLOGY I

Reduced Portland Self-Healing Cement System for CO₂ Environment Wells Available..... 2069
Fahad Al Habsi, Safiya Al Hatmi, Rizwan Ashraf

Cutting-Edge Wellhead Support to Secure Subsiding and Unstable Onshore Wells: Casing and Structural Rehabilitation Methodology Available 2081
A. M. Darwish, M. M. Al Hammadi, A. M. Alsakhawi

Optimizing Casing Design in Mature Middle East Fields: Foam Cementing Technology as a Diverter Valve Tool Alternative Available..... 2094
Fabricio Escalera, Tiberiu Ioan, Paul Silva, Rodrigo Varela, Mauricio Corona, Imran Khurshid, Abdullah Hammad, Rohit Kumar Agarwal

Innovative Scouring Spacer Applied in Liners Cementation Enhanced Zonal & Cement Bond Logs Available.....	2108
<i>S. Al-Menhali, F. G. Khan, L. E. Valencerina, O. Sahabzada, J. Varghese, A. Ismatullah, D. L. Ong, S. Zetouni, J. C. Pohl</i>	
In-House Synthesized Amphoteric Amphiphiles for Shale Swelling Inhibition and Wellbore Integrity Enhancement in Oil and Gas Reservoirs Available.....	2124
<i>Mobeen Murtaza, Azeem Rana, Muhammad Israr, Syed Muhammad Shakil, Muhammad Shahzad Kamal, M Mohsin Bashir, Mohamed Mahmoud, Shirish Patil</i>	
Evaluation of a Spacer System for Enhanced Well Cementing and Integrity in Challenging Formations Available.....	2133
<i>M. Abdelmoteleb, M. Kurish, K. Monteiro, J. A. Al-Najar, M. Kader, M. Farouk, A. Al-Ajmi, J. Pohl, J. Rockwood</i>	
Application of Prevent Casing Deformation for Horizontal Wells in Unconventional Resource Available.....	2146
<i>Guangliang Gao, Bin Duan, Yang Zhang, Zhibin Yang, Wei Liu, Xianguo Zhang, Xiaosong Qiu, Mancang Liu, Xingning Huang</i>	

OFFSHORE EXPLORATION AND DEVELOPMENT: DRILLING AND COMPLETION

Pioneering Fracture Detection with High-Resolution LWD Imaging in Extreme Wildcat Offshore Exploration Well Available	2158
<i>Jalal Dashti, Othman Matar, Mohammad Al-Khabbaz, Faisal Al-Qattan, Bader Al-Adsani, Abdulmohsen Al-Qenaie, Fahad Al-Dosari, Anar Abdulkarim, Nadir Farhi, Moataz El-Demerdash</i>	
Reusable Navigation Aids Platform for Stand-Alone Substructure After Topside Removal Available	2172
<i>Washira Kaew-amatawong, Taweepong Maneeanekoon</i>	
Specialized Bridging Mud System Improves Drilling Performance Through the Nahr Umr Formation and Allow Drilling Long Open Hole Interval for a Major Client in Oman Available.....	2184
<i>Mahmoud Amin, Mohamed Dawood, Nilia Salazar, Younis Al Habsi, Issa Al Rashdi, Abderrazak Zouaghi, Brahim Ferras</i>	
Revolutionizing Oil Production: Microemulsion Technology Succeeds in Gulf of Thailand Available.....	2194
<i>M. Nanknaka, K. Nanda Kumar, P. Trizio, P. Raksuwan, P. Sriratchachawan, D. Leesakulrak, T. Choyamongkhon</i>	

VOLUME 4

GAS DEVELOPMENT: INTEGRATED RESERVOIR CHARACTERISATION

Tracking the Formation Compressibility in Carbonates and Determination of Fracture System Compressibility Through Interference Testing, Case Studies in Naturally Fractured Reservoirs from Mexico Available.....	2207
<i>Ricardo Alcantara, Jose Luis Bashbush, Gorgonio Fuentes-Cruz, Amin Sharifi</i>	
Hard Rock Drilling Strategy for Barik/Miqrat Vertical Wells in Block-61 Available.....	2237
<i>Khalid Al Maharbi, Younis Al Masoudi, Mohammed Al Yaarubi, Ghassan Al Hajri, Majda Al Hooti, Roberto Peralta, Muzna Al Abri</i>	

Enhancing Mechanical Specific Energy (MSE) Analysis Through Geomechanical Triaxial and Scratch Test Data: Estimating Confined Compressive Strength (CCS) in Deep Tight Gas Rocks, North of Oman Available.....	2249
<i>A. Al Senani, M. H. Al-Aamri, M. Al Omairi, Y. Abri, A. AlRubkhi, A. Al Ghafri</i>	

Unlocking Potential of Condensate-Rich Tight Gas Fields: Integrating Rate Transient Analysis and Flowing Material Balance for Enhanced Production Forecasting and Accurate Reserves Estimation Available.....	2269
<i>A. M. Hegazy</i>	

DIGITAL TRANSFORMATION: MACHINE LEARNING

Rapid Field Development Assessment and Well Performance Evaluation in a Conventional Reservoir by Machine Learning and Data Analytics Available	2289
<i>Lujun Ji, Raquel Gordillo, Yi Xiao, Salim Al Salmi, Nasar Al Qasabi</i>	

Application of Machine Learning for Comprehensive Predictive Modelling of Drilling Key Performance Indicators Using Historical Drilling Data – Collaborative Case Study Between Academia and Industry Available	2307
<i>A. Sheraz, S. Khan, N. Abdelhamid, A. Manzoor</i>	

Christmas Tree Pressure Testing Time Optimization with Pressure Prediction Model Available.....	2316
<i>Wisarat Satitkanitkul, Sirawich Tippawanich</i>	

An Unsupervised Learning Framework for Managing ESP-Driven Oil Field Operations with Water Injection in Northern Oman Available.....	2324
<i>Amjad H. Al Ghafri, Ahmed Al Senani, Hassan Al-Salmi, Sultan Al-Mamari, Emre Artun</i>	

Seismic Fracture Characterization Using Vector High Fidelity (VHF) Signal Enhancement Technique and Machine Learning (ML) Fault Prediction: An Example from Cambrian Ara/Birba Dolomite Oil Discoveries in the Sultanate of Oman Available	2339
<i>Nurhasan -, D. Solisa, G. Djazuli, J. Al Balushi, D. Djunaedi, P. Ariyanto</i>	

EOR/IOR: EOR FIELD DEPLOYMENT

The Challenging S1 Sirikit Large EOR Project in Thailand Available.....	2346
<i>Chakrit Manyasi</i>	

Study and Large Scale Field Trial of Activator Flooding for Heavy Oil Reservoir Development in Bohai Bay Available	2356
<i>Jian Zhang, Yi Jin, Zhao Hua, Hong Zhang, Guang Yang, Yuyang Liu, Yuejun Zhu</i>	

Promoting Field Success in Conventional EOR: Harmonizing Field-Scale Formulation for Commercial Volume Deployment Available	2368
<i>G. Herman, C. Bittner, N. Watts, A. Mishra</i>	

Carbonated Water Flooding for Oil Recovery and Carbon Reduction Available	2381
<i>J. Wang, M. B. Otaibi, A. M. AlSofi, A. M. Boqmi</i>	

Achieving the Extraordinary: Lessons from Record-Breaking ESP Run Life that Help in Improving the Oil Recovery (IOR) in Block 5 Available.....	2395
<i>Samir Al Sulaimi, Yaqoob Al Fulaiti, Khamis Al Wahaibi, Nasser Al Hinai</i>	

EOR/IOR: EOR MONITORING AND SURVEILLANCE

- A Novel Downhole Flow Measurement Technology Applied to Ceor Wells: A New Calculation Method and a Field Test Case Developed in Argentine Oilfield Company Available 2406
P. G. Chiuchiarelli, A. B. Soler Martinez, A. M. Ruiz Martinez, F. Arriagada Guerrero, H. O. Maturana, A. Yakupov, G. A. Tennerini
- Optimizing Injection Profiling in a Field with Enhanced Oil Recovery (Polymer Flooding) Using a Combination of Production Logging Data from Different Sources - Case Study Available..... 2421
N. S. Al Hinai, S. S. Al Shoaibi, M. M. Al Sawafi
- Innovative Slug-And-Sweep Gravel Pack Approach with Novel Relative Permeability Modifier for Reliable Gravel Pack Operations in Long-Producer Intervals: Lessons from a 20-Well Campaign in Iraq Available..... 2429
J. Corrales, A. Al-Lawi, K. Aliedani, M. Ahmed, A. Agrawal, J. Tellez, M. Ramirez, A. Masoodi, E. Chuc, X. Alarcon, I.M Taha, A. Ghonim, A. El Beltagy
- Evaluating the Efficiency of Enhanced Oil Recovery Methods Using the Capacitance-Resistance Model: A Case Study Approach Available..... 2442
R. Ziniukov, V. Sudakov, S. A. Usmanov, A. A. Shakirov, A. Kozlov, M. Iakupov, A. Galimova
- Enhancing Gas Injection Efficiency in Naturally Fractured Reservoirs: Real Time Pseudodensity Insights for GOR Control Available 2455
Leopoldo C. Farias Rodriguez

INNOVATIVE TECHNOLOGY: WELL INTEGRITY TECHNOLOGY II

- Well Integrity Evaluation Through a Completion Redesign for Cyclic Steam Stimulation in Non-Thermal Wells of the Zuata Principal Field in the Orinoco Oil Belt – Venezuela Available 2466
R. Morales, F. Rodriguez, E. Quintero, C. Bejarano, H. Belhaj, F. Alhameli, R. Ahadli, J. Alvarez
- Maximizing Displacement Efficiency and Cement Bond Quality by Removing Thick Gelled Mud Using Launched Heavy Weight Spacer Technology Available..... 2481
Mustafa Sarbast, Muhammad Imran, Kamil Shahzad, Omar El Zanaty, Serwer Yousif, Abdullah Abubaker, Zhekaf Hussein, Vladimir Afletunov, Paiman Anwar
- Successful Abandonment Plugs with Bottomhole Disconnect Tool in Long Intervals Available..... 2497
Sara Al Adhali
- Cutting-Edge Capabilities for Corrosion and Cement Inspection by Combining Mechanical-Electromagnetic with Ultrasonic Technologies Available 2505
O. Rouabah

INNOVATIVE TECHNOLOGY: NANO TECHNOLOGIES AND ADVANCED MATERIALS FOR OIL AND GAS FIELDS

- Engineered Low Rheology Water-Based Fluid with Nanocomposite Sealant Technology Improves Drilling Performance in Hard Rock Formations Available..... 2517
Ahmed Ismail, Jacques Butcher, Ibrahim Elsayed, Mohamed Galal, Francky Barbeau, Aubyii Rekieh, Abdullah Al Balushi

Sealing Inflow Control Device ICD Leak with Thermal Setting Nanosilica: A Reliable Repair Solution Available	2528
<i>Ayman Almohsin, Mohammed Mugharbil, Mohammed I. Alabdrabalnabi, Mohammed Khunaizi</i>	
Novel Techniques to Control Fluid Loss by Optimizing Filter Cake Properties During Drilling Operations Available	2540
<i>J. J. Abraham, A. Kanjirakat, A. Carvero, C. Teodoriu, M. Amani, M. AlMujalhem</i>	
Digital Special Core Analysis for Tight Sandstone Reservoirs: A Case Study of the Masirah Bay Reservoir, Mukhaizna Field Available.....	2554
<i>A. S. Al Salmani, A. A. Al Kalbani</i>	
Thermoplastic Liners for Gaseous Applications - An Effective Technology Available.....	2565
<i>Mohana M Adhyatmabhattar, Jonathan Hickey, Jeff Schell</i>	
Assessing the Impact of a Novel Organoclay on the Performance of Oil-Based Drilling Fluids Available.....	2573
<i>A. Mahmoud, R. Gajbhiye, S. Elkataatny</i>	
Assessing Ceramic and Polymer Nonmetallic Materials for ESP Durability in Extreme Conditions Available.....	2586
<i>E. H. Al Munif, Y. A. Alturki, L. Alhamad, A. Alarawi</i>	

GAS DEVELOPMENT: TIGHT GAS DEVELOPMENT AND PRODUCTION OPTIMISATION

Evaluating Production Performance and Recovery of Tight Gas Reservoirs in Bahrain by Integrating Multiple Decline Curve Methods and Simulation Studies Available	2598
<i>Lakshi Konwar, Ebrahim Hamad, Sajeda Barni, Nadia Nemmwi, Mohamed Shamlooh, Abdullah Garadah, E. M. Alawainati</i>	
Advanced Recovery Strategies for Tight Gas Reservoirs: A Case Study from Northern Oman Available.....	2624
<i>I. AlFazari, U. Chaudry, R. Wulandari, M. Balushi, M. Abri</i>	
Modeling Hydraulic Fracturing of Deep Shale Gas Reservoirs at HPHT Conditions Available	2637
<i>Mario E. S. Abdelmalek</i>	
Reviving Production in Deep and Depleted Gas Wells in the Sultanate of Oman: Advanced Stimulation Design Techniques and Water Banking Mitigation Strategies Available	2655
<i>Faris Farsi, Ghusun Al Aamri, Saleh Saqri, Said Al Maskari, Anton Charushin</i>	
Long Term Production Profiles Generation in Tight Gas Reservoir Using Rate Transient Analysis and TDRMTM Approach Available	2663
<i>Mahmood Al-Hinai, Siyavash Motealleh</i>	
Optimizing Brown Gas Field Development Plan Available	2671
<i>M. AL Ismaili</i>	

DIGITAL TRANSFORMATION: ADVANCEMENTS IN AI AND MACHINE LEARNING

Agile Structural Modelling: Using AI Towards Fully Automated Seismic Interpretation Available	2682
<i>H. S. N. Alkhanjari, M. M. Glukstad, D. G. Repol, N. Al Rajaibi, A. Alrubaiey, N. Ali, O. A. Albadi, L. Q. Albalushi</i>	

Integrating Artificial Neural Networks and Genetic Programming for Enhanced Gas Production Forecasting Available	2695
<i>Fatemeh Yousefmarzi, Mohammad Ahmadi, Javad Mahdavi Kalatehno, Matin Dargi, Keyvan Miladi</i>	

Modeling of Oil Reservoir Exploitation Based on Deep Learning Agents Available	2721
<i>Aodi Liu, Jing Li, Jianfei Bi, Beichen Zhao</i>	

Satellite Derived Bathymetry in Hard-To-Reach Areas: Leveraging ICESat-2 and Sentinel-2 with ML and DL Techniques Available	2733
<i>Neha Supekar, Madhavi Dewalkar, Ashwini Deshpande, Sriram Peddada</i>	

EOR/IOR: SIMULATION MODELLING FOR ENHANCED WATER FLOODING

Predictive Modeling for Optimal Gel Treatment Design in Brownfields Using Ensemble Machine Learning and Data Upsampling Via Generative AI Available	2748
<i>Munqith Aldhaheeri, Baojun Bai, Mingzhen Wei</i>	

Geological-Driven Reservoir Simulation for the Hybrid Gas EOR: A Case Study from the Largest Onshore Oil Field in Thailand Available	2770
<i>P. Henglai, P. Taweepornpathomgul, C. Centhonglang, L. Surawut, P. Amonpantang, U. Chanthanaphalin, K. Limchuchua, R. Laochamroonvorapongse, P. Sinhabaedyia</i>	

Integrating Surveillance Data into a Successful Modelling of Polymer Flood Pilot in a High Salinity and Sour Reservoir: Challenges and Approach Available	2784
<i>A. Alkindi, T. Aladwani, J. Pennell, L. Alabbasi, A. Kharghoria</i>	

Investigation of Naturally Fractured Carbonate Reservoir Development in Northern Oman Through Dynamic Modelling Available	2801
<i>Amjad H. Al Ghafri, Rashid S. Al-Maamari, Emre Artun</i>	

Evaluating the Performance and Feature Importance of Machine Learning Models for Oil Formation Volume Factor Estimation Available	2824
<i>Javad Mahdavi Kalatehno, Ali Haratian, Fatemeh Yousefmarzi, Alireza Kazemi, Mohammad Ahmadi</i>	

ENERGY TRANSITION AND SUSTAINABILITY: RENEWABLE FRONTIERS IN ENERGY TRANSITION

From Emissions to Revenue: Emissions Reduction and Hydrocarbon Recovery from Permeate Via Acid Gas Removal Unit Optimization and Synergizing of Upstream and Downstream Processes Available	2844
<i>A. S. Ismail, E. Ismail, H. Abdullah, R. Mokhtar, A. Y. Ayub</i>	

Industry First Zero Liquid Discharge and Zero Mineral Discharge Process for a Produced Water Available	2854
<i>P. D. Patil, M. Muhammad, H. Samouei</i>	

Petroleum Engineering Capability Required for the Energy Transition Available	2864
<i>D. M. Boersma, R. Farajzadeh, D. Voskov</i>	

Unlocking Geothermal Potential: Repurposing Abandoned Oil and Gas Wells for Sustainable Energy Available	2876
<i>I. H. Siyabi, A. Mayasi, M. A. L. Lawati</i>	

Underground Gas Storage in an Extra-Heavy Oil Reservoir in the Orinoco Oil Belt-Eastern Venezuela Basin: Modeling Phase Behavior and Main Recovery Mechanisms Available	2887
<i>H. Belhaj, F. Rodriguez, T. Alekhina, D. Dorhjie, A. Askarova, R. Morales, C. Bejarano, A. Cheremisin, F. Alhameli, R. Ahadli, F. Posso</i>	

INNOVATIVE TECHNOLOGY: NEW WELL CONSTRUCTION TECHNOLOGIES III

Revolutionizing the Industry: Unprecedented Success of Cutting-Edge Mechanized Drilling Rigs in Breaking Field Records Available	2908
<i>Saud Salim Al Ghafri, Ahmed Said Al Salmi, Younis Rashid Al Habsi, Abdullah Mohammed Al Noumani</i>	
Industry First: 7-5/8" Casing Open Hole Gravel Pack Completion with Distributed Temperature Sensing Technology in ACG Field Available	2917
<i>Javid Aliyev, Natig Kerimov, Naila Salimova, Gulay Gambarova, Telman Mirzayev, Almardan Aslanli, Yoliandri Susilo, Ravan Adilov, Ravana Karimova, Umid Tarlanli</i>	
Pivotal Optimization, Agility in the Commissioning and Hook Up of Exploration Wells in South Oman Available	2930
<i>Salim Al Mashrafi, Idris Al Zeheimi, Salim Al Kharusi</i>	

VOLUME 5

Enhanced Isolation in Deep Production Cementing in Appraisal Well Available	2941
<i>Mohamed Lamine Benras, Soham Mitra</i>	

INNOVATIVE TECHNOLOGY: NEW WELL LOGGING TECHNOLOGIES II

Unlocking New Insights in Reservoir Navigation: At-Bit Gamma Ray Quadrant Imaging for Optimizing Well Placement in Ultra-Thin Carbonate Reservoirs Available.....	2950
<i>Alberto Aché, Salman Alharbi, Ahmed Ariffin, Ammar Khuwailidi, Randa Sallout, Hesham Elmasry, Ali Coutry</i>	
Integrated Framework for Time-Lapse Surveillance and Monitoring: Findings from the Patterns of Polymer Enhanced Oil Recovery Pilot in a Sour, High-Salinity, Shallow Heavy Oil Reservoir Applying Low Injection Rates Available.....	2964
<i>A. A. Hassan, N. A. Alajmi, M. T. Al-Murayri, H. Ayyad, M. Mehraj, A. Khlustikov, A. Yakupov, M. Rourke</i>	
Advanced Evaluation of ICD Completion Performance Using Array Production Logging Tools, Spectral Noise Logging, and Numerical Temperature Modeling in Horizontal Oil Producer Available.....	2974
<i>Aleksandr Dolgikh, Dmitry Shubenok, Adnan Al Hinai, Andrei Yurievich Lantsov, Mohamed Sabry, Hilal Al Mufargi, Hamood Al Harthi, Ahmed M. Al Naabi, Mohamed Al Shuely, Hamood Al Dafai, Faisal Al Kiyumi, Suad Al Harrasi, Khamis Al Wahaibi, Mohammed T. Al Harrasi</i>	
Advanced Through Tubing Tractor Conveyed Resistivity Log to Evaluate Gas Water Contact in Horizontal Wells Available	2984
<i>M. AlJawad, D. AlJeshi, R. Yateem, Z. Zaouali</i>	

Formation Evaluation Using High-Resolution Resistivity Imaging and Ultrasonic Imaging Tool for Reservoir Characterization in Horizontal Wells Available	2993
<i>Pramod Kumar, B. K. Behera, T. C. Rao, Pawandeep Bagga, Supriya Walke, Chandrajyoti Chitroda</i>	

Evaluation of Deep Resistivity Inversion Geosteering Technology Applications in Carbonates and Siliciclastic Reservoir Environments: A Comparative Case Study in South and North Fields of Oman Available	3002
<i>Alsulaimani Mustafa, Senani Mohammed, Al Badi Mohammed, Cristancho Diana, Hiyam Al Yahyai</i>	

DIGITAL TRANSFORMATION: NEW FIELD DEVELOPMENT TECHNOLOGIES

Driving Digital Innovation in North Kuwait Heavy Oil: Strategic Framework, Implementation Blueprint, and Roadmap for Industry-Wide Transformation Available	3014
<i>S. Al-Ballam, K. Ziyab</i>	

Democratizing Data Science Journey in PT Pertamina Hulu Rokan (PHR): Empowering Domain Experts Strategy with No-Code AI/ML Platforms Available.....	3024
<i>A. A. Santoso, A. S. Negara, M. Missuari</i>	

Next-Generation Valve Leak Detection: Exploring and Implementing Acoustic Emission-Based Digital Valve Inspection Using I-Safe Smartphones Available.....	3035
<i>E. Natarajan, N. Almenhali, B. Krishnan</i>	

Digital Transformation in the Energy Industry Available	3044
<i>H. Al Hajri, K. Al Nuaimi, S. Al Abri</i>	

EOR/IOR: SIMULATION MODELLING AND CHARACTERISATION OF CEOR

Solvent-Aided Polymer-Flooding: Novel Hybrid Method to Unleash the Potential of a Deep Extra-Heavy Oil Middle-Eastern Reservoir Available	3081
<i>A. Al-Otaibi, S. Akther, B. Baroon, A. Soltani, R. Garifullin, E. Delamaide, D. Rousseau</i>	

Laboratory Evaluation and Numerical Simulation of Alkaline-Surfactant-Polymer (ASP) Flooding Available.....	3090
<i>A. Sengel, H. Salimi, L. Chacon</i>	

Automating the Workflow for Integration of Experimental Polymer Flooding Results in the Numerical Model Available.....	3099
<i>Saket Kumar, Akshay Aggarwal, Ashutosh Yadav, Surej Kumar Subbiah, Ying Ru Chen</i>	

Theoretical Study of Polymeric Surfactant with Multiple Types of Branched Ethylene/Propylene Oxide (EO/PO) Structure by DPD Simulation Available	3111
<i>Hui Xu, Zhiqing Su, Jun Jin, Yingcheng Li</i>	

Study on Proppant Transport Mechanism in Rough Fractures for Numerical Simulation in Unconventional Reservoir Available	3122
<i>Zhichao Zhang, Chunguang Zhan, Lei Xie, Wei Zhou, Baoqiang Ji, Jing Chen, Gang Xu, Xingning Huang</i>	

EOR/IOR: THERMAL EOR

- Steam Quality Management in the Issaran Field, Egypt Available..... 3135
Marcel Zwaan, Mohamed Osman, Ahmed Agwa, Hamidreza Salimi
- Infill Drilling Role in Enhancing Steamflood Efficiency in Matured Steamflood Project Available 3147
Abdullah Al Rasbi, Aaisha Al Aamri
- Development and Field Application of a Flexible Cement System for High-Temperature Steam Injection Wells to Enhance Well Integrity Available 3157
M. Abdelmotaleb, M. Kurish, L. Ong, A. Saitova, D. Al-Saadi, K. Monteiro, N. Shadad, A. Kamal
- Techno-Environmental Evaluation of Exothermic Reactions of Cyclic Steam Injection: Accelerating the Implementation of Low-Carbon IOR/EOR Methods in Venezuela Available 3175
R. Morales, F. Rodriguez, E. Quintero, C. Bejarano, H. Belhaj, F. Alhameli, R. Ahadli, J. Álvarez
- Chemical Utilization to Unlock the Potential of Production Constraints Due to High Viscosity Producing Wells Available..... 3192
M. A. Al-Ruqaishi, I. N. Al-Amri, W. K. Al-Naamani, I. M. Al-Himali, S. S. Al-Lamki, M. M. Busaidi

INNOVATIVE TECHNOLOGY: PROCESS IMPROVEMENTS AND TECHNOLOGY FOR AGILE AND COST EFFICIENT OILFIELD OPERATIONS III

- Maximizing Oil Production in a Brown Field: A Case Study of a Compact Wide-Range ESP Deployment in Ecuador Available 3200
H. Vasquez, N. Vela, R. Fraga, N. Medina, C. Eras, R. Segovia, G. Tagarot, L. Salazar, K. Andagoya, F. León, O. Sierra, L. Aguirre, A. Izurieta, M. Hidalgo
- Novel Solution to Repair B&C Annuli Available 3217
M. Al Mahrooqi, H. Ibrahim, H. Al Riyami, R. Al Masfry, D. McPherson, A. Kjonnerod
- Achieving Crude Oil Salt Content with Optimized Washing and Minimal Infrastructure Available 3227
H. Al Kalbani, K Al Abri
- A Groundbreaking Rigless Workover Approach in Congested Locations: Introducing Hydraulic Workover Unit in ADNOC Onshore to Support Responsible Energy Growth in the United Arab Emirates Available..... 3235
Ygnacio Nunez, Mouza Ali Al Nuaimi, Ghany Rachman, Renny Alexis Ottolina, Ahmed Magdy, Qaisar Khan Marwat, Giuseppe Ambrosi, Rakesh Palappetta
- Eliminating Top Hole Stuck Events in the 12.25 Inch Top Hole Section in Marmul-RTQ Fields Available..... 3245
Mohamed Shahdad Al Balushi, Khalil Al Zakwani, Yasser Al Balushi, Abdul Sallam Al Kendi, Abdulla Braiki, Salim Ghafri, Suleiman Abri, A Wahid, Mohamed Tariq

INNOVATIVE TECHNOLOGY: GEOSCIENCE INNOVATIONS AND SEISMIC TECHNOLOGY DEVELOPMENT

- Innovative Reservoir Quality Delineation in Conglomeratic Fan Delta Sedimentary Facies Using Integrated LWD Technology and Core Data, Bohai Bay, Eastern China Available..... 3261
Yunjiang Cui, Hongbing Chen, Bo Liu, Gang Wei, Yehong Cao

Improved Seismic Image of the New 3D Seismic Wide Azimuth (WAZ) and Pre-Stack Depth Migration (PSDM): An Example from Permian Al Khlata Sandstone and Cambrian Ara/Birba Dolomite Oil Discoveries in the Sultanate of Oman Available	3282
<i>Nurhasan -, D. Solisa, G. Djazuli, J. Al Balushi, P. Ariyanto</i>	
Laboratory Investigation of the R Factor: Geomechanical Insights into Time-Lapse Seismic Signatures of Permian Aeolian Clashach Sandstone, Morayshire, Scotland Available	3289
<i>M. Al Hinai, M. -D. Mangriotis, A. Cartwright-Taylor, I. Main, A. M. Al Kalbani</i>	
Stress Inversion and Stochastic Wellbore Stability Modelling in the Kutch-Saurashtra Basin, India Available.....	3305
<i>Rahul Talreja, Somessh Bahuguna, Ashani Kundan, Surej Kumar Subbiah</i>	
Enhancing Reservoir Characterization in Gharif Sandstones Through Integrated Petrophysical Modeling Mukhaizna Field, Oman Available.....	3319
<i>A. S. Al Salmani, S. S. Al Fahdi</i>	

DIGITAL TRANSFORMATION: PROCESS AUTOMATION

Enabling Automation Opportunities for Directional Drilling, and Real-Time Formation Evaluation for Accurate and Efficient Well Placement Available.....	3331
<i>L. Rayo, A. Taher, M. Fouda, A. Elgamal</i>	
Digitally Enhanced Oil Forecasting for Thermal and Unconventional Oil Field Applications Available.....	3356
<i>Q. Al Kindi, A. Al Abri, J. M. Al Lawati, E. Cameron, M. H. Al-hadhrami, S. Al Mamari, F. Al Brashdi, M. Alawfi, A. Al Marjeby</i>	
The Automated Data Quality Assessment Tool for Low Frequency Drilling Data from Rig Site Available.....	3365
<i>A. Udomsak, S. Satsanakul, S. Sukhon, S. Buapha</i>	
Smart Corrosion Analysis & Integration with Control Systems Available	3373
<i>J. Baig, Osama Alrubayyi</i>	
Intelix Mobile App Application (Daily Vehicle Check List) Available.....	3383
<i>Sara Al Rawahi</i>	
Algorithm for Automatic Selection of Candidate Wells for Sidetrack Drilling from the Non-Operating Well Stock Available.....	3395
<i>V. V. Savelev, V. A. Sudakov, S. A. Usmanov</i>	

EOR/IOR: WATER MANAGEMENT

Excellence in Well-Reservoir-Facility Management (WRFM) in Southern Oman's Oil Fields: Best Practices and Successes Available	3407
<i>S. S. Al Musalami, F. S. Saadi, N. Hinai, S. H. Hattali, K. K. Busaidi, M. K. Alkalban, S. H. Hinai, H. Aghbari, M. I. Hinai, I. A. Al Hadhrami, Y. N. AlAbri, R. Y. Al Sheheimi, H. G. Ghefeli, G. A. Hinai</i>	
Experience with On-Site Coreflood Testing for Estimation of Injector Performance for Filtered and Unfiltered Injection Water Available	3418
<i>H. Salimi, P. van den Hoek, C. Laffra, J. Nortier</i>	

Advanced Treatment of Produced Water for Enhanced Oil Recovery Available.....	3431
<i>W. Labaky, R. J. G. W. Stoffele, C. Matecki</i>	
Improving Oil Recovery by Increasing the Annual Water Flood Throughput in Carbonate Reservoir Available.....	3439
<i>A. K. Al Mandhari, M. R. Al Rawahi, K. H. Al Habsi, I. S. Al Sinani, M. T. Al Harrasi, S. A. Al Mahrouqi, F. A. Al Kiyumi</i>	
Harnessing H ₂ S Scavengers for a Circular Economy: Innovations in Sour Produced Water Treatment for Zero Liquid Discharge Available	3449
<i>Q. Saeed, M. Muhammad, B. Gendron, A. Akram</i>	

INNOVATIVE TECHNOLOGY: WELL INTEGRITY TECHNOLOGY III

Design and Field Application of High-Strength Ultra-Lightweight Flexible Cement Slurry for Zonal Isolation in Water Injection Well: A Case Study from the Kurdistan-North Iraq Available	3459
<i>Mustafa Sarbast, Muhammad Imran, Kamil Shahzad, Omar El Zanaty, Serwer Yousif, Hemin Yousif</i>	
Innovative Fluid Migration Control Cement System Demonstrating Improved Results for Primary Cementing Using Controlled Particle Size Distribution: A Novel Approach to Ascertain the Wellbore Integrity Available.....	3476
<i>Wajid Ali, Ahmad Atef Hashmi, Faisal Abdullah Al Turki, Mouloud Bouaraki, Moathe Aljardan</i>	
Cement Technique to Cure Artesian Flow in North Oman Gas Wells Available	3492
<i>Nueman Al Turki, Rizwan Ashraf</i>	
Lost Circulation Plug and Squeeze Using Managed Pressure Cementing to Regain Shoe Integrity Available.....	3500
<i>F. A. Siddiqi, A. A. Maksoud, U. K. Qasmi, O. Ajlani, A. Hababi</i>	
Advances in Gauge Hanger Technologies, Expanding Well Interventions Beyond Conventional Reach Available	3517
<i>S. AlHalwaki, R. Bukahmseen, K. Ashutosh</i>	
Application of Impressed Current Cathodic Protection (ICCP) for Well Casing External Corrosion Protection Available.....	3532
<i>S. S. Al Mahrouqi, R. Bernardo, M. A. A. Al Zadjali, S. H. Al Qassabi, S. S. Al Sulaimi, A. M. Al Kindi, R. A. Al Habsi</i>	
First Light Weight Cement Slurry Design: Combining Self-Supporting Character and Fluid Loss Controlled Property in a Single Solution Available.....	3552
<i>Mustafa Sarbast, Muhammad Imran, Kamil Shahzad, Omar El Zanaty, Serwer Yousif, Abdullah Abubaker, Zhekaf Hussein, Sherwan Taher</i>	

INNOVATIVE TECHNOLOGY: NEW WELL INTEGRITY AND LOGGING TECHNOLOGIES

Unlocking Reservoir Potential: Global First Deployment of Reservoir Mapping Tool Below Motor in Motorized Rotary Steerable System Bottom Hole Assembly Available.....	3570
<i>A. M. Al Maimani, S. Al Barwani, M. H. Shoaib, R. Vilorio, K. Al Jassasi</i>	

Innovative Formation Evaluation and Wireline Formation Tester Solutions for Ultratight Reservoirs, Incorporating High-Precision Techniques Available	3579
<i>S. Zulkipli, K. Salleh, S. Kumar, M. Abu Talib, N. Sultanov, N. Hademi, S. Daungkaew, C. Cavalleri, A. Gisolf, H. Espinosa, P. Gopalan, T. Khunaworawet, D. Ling, R. Nandakumal, C. Liu, L. Oo, T. Htaik, C. Acevedo</i>	
Enhancing Fluid-Loss Control in High-Performance Water-Based Muds: The Role of Modified Starch in High Temperature and Pressure Available	3598
<i>Avni Goswami, Azarudeen Sulthan</i>	
Evaluating the Osmotic Effects on Shale Swelling and Proposing New Solutions Available	3606
<i>A. A. Houshyar, A. M. Ebadi, F. Goaharpey, M. Dehvedar</i>	
Temperature Distribution of Cement Slurry During Placement Available	3620
<i>Rui Zheng, Yong Li, Le Jiang, Yu-Yan Zhu, Si-Da Cheng</i>	
Reservoir Characterization Derived from 2D Nuclear Magnetic Resonance T1-T2 Logging and Borehole Microresistivity Image of Vertical and Horizontal Wells in the Lacustrine Shale Oil Reservoir of China Available.....	3630
<i>Xue Feng Yang, Hai Bo Zhao, Yue Wang, Shu Jun Yin, Jing Mo, Wei Lin Yan, Jin Long Wu, Yun Shuo Wu, Feng Pan, Alaa Hassan Mohammed Al Zarafi</i>	
Addressing the Saturation Challenge Utilizing Inverted True Resistivity from a Multi-Spacing Laterolog LWD Tool Available.....	3644
<i>Radwa Attia Soelem, Ahmed Taher, Laila Warkhaida, Syed Shah</i>	

DIGITAL TRANSFORMATION: ADVANCING OILFIELD OPERATIONS

Brown Fields Development: Strategies, Challenges, and Opportunities Available	3655
<i>R. S. Rezk, M. S. Abd-Elhamed, M. Hegazy, M. Abu Halawa, M. Atwa</i>	
Operation and Production Critical Valves Digitalization, Emergency Showdown Valves Digitalization Journey in Oil South Fields in Sultanate of Oman for Safer and Higher Ultimate Production Available	3664
<i>N. Naabi, D. Mahrezi, M. Fazari, M. Ruqaishi, A. Hadhrami</i>	

Author Index