

SPE Abu Dhabi International Petroleum Exhibition & Conference 2017

Abu Dhabi, United Arab Emirates
13-16 November 2017

Volume 1 of 11

ISBN: 978-1-5108-5256-3

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© (2017) by Society of Petroleum Engineers
All rights reserved.

Printed by Curran Associates, Inc. (2018)

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

SESSION 1: E&P GEOSCIENCE – ADVANCES IN REGIONAL GEOLOGY - I

Transpressional and Transtensional Structural Patterns in Abu Dhabi Fields, UAE	1
<i>Abdelwahab Noufal, Khalid Obaid</i>	
Controls on Reservoir Quality and Reservoir Architecture of Early Cretaceous carbonates in an Abu Dhabi Onshore Field Lekhwair, Kharaiab and Lower Shuaiba Formations	19
<i>Jaehoon Jeong, Abdulla Ali Al-Ali, Hyunyoung Jung, Alyazia Abdelrahman, Al Dhafra, Hesham T. Shebl, Jeonggil Kang, Aurélie Bonin, Matthieu Deville De Perriere, Alexander Foote</i>	
Recent Exploration Activities in Eastern Onshore Abu Dhabi: Implications of the First Exploration Well in 30 Years in the Region	37
<i>L. Fava, G. Rock, F. Conradi, R. Aliabadi, E. Kwiecinski, A. Al Shateri, J. M. Witte, Y. I. Abu Hijleh</i>	
Comparison of the Diagenetic and Reservoir Quality Evolution Between the Anticline Crest and Flank of an Upper Jurassic Carbonate Reservoir, Abu Dhabi, United Arab Emirates	54
<i>Daniel Morad, Fadi Nader, Marta Gasparrini, Sadoon Morad, Fatima Al Darmaki, Marco Martines, Helge Hellevang</i>	
Seismic Stratigraphy and Depositional Evolution of the Mishrif Formation in Western Onshore Abu Dhabi	70
<i>S. Perrotta, V. Zampetti, G. Chaari, T. Krayenbuehl, M. Braun, B. J. Franco, F. Neves, A. Saad Al Kobaisi</i>	
Evolution of the West Alboran Basin, Mediterranean, Offshore Morocco: Implications for Hydrocarbon Prospectivity	83
<i>John F. Aitken, Alastair Beach, Khalfan Al-Mansoori</i>	

SESSION 2: E&P GEOSCIENCE – SEISMIC INVERSION

Carbonate Clinoforms, Sinkholes, Reefs, and Flow Units: Integrated Seismic Reservoir Characterization in Shuaiba Formation UAE	101
<i>Uwe Strecker, Mahmoud Mudi Ibrahim</i>	
Deterministic and Stochastic Seismic Inversion, a Comparison Study Applied to Capture Major Heterogeneities and its Associated Uncertainties during Early Characterization Stage in Upper Jurassic Reser...	113
<i>Muhammad Aamir, Luis Gerardo Figuera, Khaled Al Hosani, Maniesh Singh, Mula Nur Ahmad, Tarek Solaiman, Salah Al Qallabi, Arcides Araque, Nnamdi Dike, Widad Krissat, Walid El-Mawla, Omar Aly, Raghad Elsayed, Anubrat Mukherjee, Glenn Nyein, Khushboo Havelia, Tarek Nafie</i>	
Seismic Inversion of 3D WAZ Data Supporting the Evaluation of a low UTC Natih Stratigraphic Trap Discovery in North Sultanate of Oman	123
<i>Angelika-M. Wulff, Hubert Dejong, Uzma Ghulam</i>	
High-Resolution Seismic Inversion Pinpoints Ultra-Thin Shale Interbeds and Sweet Spots	133
<i>Guo Tongcui, Xia Zhaohui, Wang Hongjun, Qu Liangchao, Zhao Wenguang, Wang Ping, Kong Xiangwen, Liu Li, Ma Zhi, Zhang Sansheng, Zhao Jianguo</i>	
Maximize the Value of 3D Seismic with AVO Inversion for Reservoir Modeling and Field Development Optimizing, Offshore Abu Dhabi, UAE	146
<i>H. Miyamoto, A. Kohda, Z. A. Alfarhan, T. Shibasaki, S. Bellah, M. B. Al-Ameri, S. M. Jasem</i>	
Coupling Geostatistics and Rock Physics in Reservoir Modeling and Characterization	154
<i>Leonardo Azevedo, Catarina Amaro, Dario Grana, Amilcar Soares, Luís Guerreiro</i>	
Supervised Waveform Analysis to Find Wasia Carbonate Stratigraphic Traps in Rub' Al-Khali Basin, Saudi Arabia	161
<i>Hussain Alqattan, Sihai Zhang</i>	

SESSION 3: E&P GEOSCIENCE – BASIN ANALYSIS AND MODELLING, SOURCE TO MIGRATION TO TRAPMENT

Evaluation of Late Cretaceous Cenomanian Petroleum System in Offshore Abu Dhabi with Geochemical Analysis	174
<i>K. Kojima, M. Yamanaka, T. Taniwaki, M. Amo, S. Chiyonobu</i>	
Observations on Hydrocarbon Migration, Jasmine-Ban Yen Field; Block B5/27, Gulf of Thailand	183
<i>S. J. Clark, R. C. Davis</i>	
Bedding Corridors as Migration Pathways in Abu Dhabi Fields	197
<i>Abdelwahab Noufal, Khalid Obaid</i>	
Characterization of Fault Damage Zones and Associated Fracture Networks and Their Influence on Fluid Flow in the Tight Carbonate Reservoir	218
<i>Feng Shen, Marcos Torres, Francisco Mosqueda, Jose Carmen Gutierrez, Fernando Guevara, Shengyu Wu</i>	
Integrated Data Analysis Reveals the Presence of Sealed Fractures in a Large Tight Gas Field	231
<i>Faris Al Zadjali, Vikram Singh Saroj, Stephen Calvert, Karima Djermouni, Ahmed Al Hattali, Mohamed Al Rawahi, Jean-Christophe Noirot, Dawood Al Kharusi</i>	

SESSION 4: PRODUCTION FACILITIES TECHNOLOGIES – PROTECTING AND SAFEGUARDING PRODUCTION FACILITIES

Corrosion Control in Sulphur Recovery Units – Claus Process	242
<i>A. Alkaseem, A. Slavens, H. Dhinda, A. S. Berrouk</i>	
Case Study - Failure Caused by Mercury Embrittlement in MCHE Main Cryogenic Heat Exchanger in a LNG Plant	258
<i>Anwar Zeeshan, A. Manikandan</i>	
Heavy Oil Production Challenges and Solutions in North Kuwait Pilot Project Illustrated through Case Examples	267
<i>Abduallah Al-Marta, Yousef Al-Basheer, Mohamed Al-Mehri, Mubarak Al-Metlea, Tomas Sierra, Assem M. Ibrahim, Mohamed H. Fawzy, Mustafa S. Sobhy</i>	
The Development and Field Testing of Novel Online Salt-in-Crude Oil Measurement Method and Analyzer - A Systematic Approach to Technology Qualification	276
<i>Sebastien Duval, Simone Less, Ryszard Szczebiot, Iran Charry Prada, Ramsey White, Sajjad Al-Khabaz, Regis Vilagines</i>	
Oil Producer Tie-in Modular Skid	289
<i>Ammar Alawadhi</i>	

SESSION 5: FIELD DEVELOPMENT – CHALLENGING DEVELOPMENTS – OIL RIMS, MARGINAL FIELDS, COMPLEX RESERVOIRS

Waterflooding in Giant Carbonate Reservoir; Successes and Challenges	301
<i>S. Mahmood, P. Salazar, X. Zhao, M. Pointing, A. Sayed</i>	
When we Dare to Look Deeper: Drilling Downflank on Alternative Fluid-Fill and Reservoir Architecture Concepts for a Carbonate Field in the Sultanate of Oman	319
<i>M. Boya Ferrero, A. Dhahli, E. Unal, L. Bazalgette, A. Wahabi, M. Holst, H. Doan</i>	
Journey of Developing the Transition Zone for a Giant Carbonate Reservoir from Subsurface Modeling to Execution – Case Study	340
<i>Ashraf Lotfy El Gazar, Mohamad Yousef Alklich, Tariq Ali Al-Shabibi, Agus Izudin Latief, Tengku Mohd Fauzi, Syofvas Syofyan, Tadashi Hashimura</i>	
Modelling of a Large Depleted and Tilted Carbonate Oil Rim Reservoir - An Integrated Case Study from UAE	356
<i>Ashish Kundu, Deepak Kumar Voleti, Mohd Nazaruddin Mokhri, Saadi Manseur</i>	
Workflow for the Estimation of Initial Water Saturation in a Low Permeability Carbonate Reservoir in a Marginal Field and its Impact on Field Development Planning, Case Study from Abu Dhabi, UAE	376
<i>Muhammad Faisal Abdul Hameed Khan, Shaymaa Ali Al Maskari, Deepak Kumar Voleti, Ashish Kundu, Ali Salem Al-Rawahi</i>	
Effective Use of Reservoir Surveillance to Optimize Production in a Complex Stacked-Sand Oil Field	393
<i>A. Laoroongroj, N. Last, A. Bu Ali</i>	

SESSION 6: FIELD DEVELOPMENT – NEW AND EMERGING TECHNOLOGY - I

Application of Nanoparticle Aided Silicate Reservoir Conformance Control Method at the Algyo Field, Hungary: Fundamentals and Case Histories	405
<i>I. Lakatos, G. Szentes, A. Vago, Z. Karaffa</i>	
Coral South FLNG Technology from Screening to Real Application	421
<i>Francesco Rossi</i>	
Improving the Efficiency of H2S Mitigation in Middle East Oil and Gas Fields	432
<i>A. Hofmann, W. Van Strien, R. Malekzadeh</i>	
The Potential Evaluation of Superheated Steam with High Degree Assisted Gravity Drainage Process in Oil Sands Project	445
<i>Guangyue Liang, Shangqi Liu, Yang Liu, Yanyan Luo, Bin Han, Jixin Huang</i>	
Nano-Enabled Smart Materials and Sensors for Oil and Gas Applications	463
<i>Darryl Ventura, Rostyslav Dolog, Qusai Darugar, Valery Khabashesku, Baker Hughes</i>	
Formation Damage Assessment of High pH and Salinity Completion Fluids in Gas Wells	471
<i>Abdullah Al Moajil, Mohammed Khaldi, Bilel Hamzaoui, Abdullah Al-Rustum, Hameed Al-Badairy</i>	
Development and Application of a Modified Superheated Steam Flooding Assisted by N2 Foam and High-Temperature Resistant Gel	485
<i>Aut Xu Anzhu, Mu Longxin, Bo Bing, Shan Fachao, Li Xingbo</i>	

SESSION 7: OPERATIONAL EXCELLENCE – WATER MANAGEMENT

Assessment of Produced Water Reinjection in a Giant Carbonate Reservoir	495
<i>Peng Chen, Thomas Willingham, Timothy Ian Morrow, Alunood K. Al Sowaidi, Dragan Stojkovic, Jing Ning, Bo Gao</i>	
A New Cost Effective and Reliable Water Shutoff System: Case Study in Kuwait	510
<i>Ahmed E. Al-Ebrahim, Naser Al-Houti, Mohammad Al-Othman, Al-Mehanna Hamad, Mohammad Al-Mehanna, Abdullah Mubarak, Yousef Al-Adwani, Wael Mahmoud, Liu Hai, Mohan Panga, Valerie Lafitte, Jesse Lee</i>	
Flow Assurance in High-Pressure Water Injection Flowlines using GRE Composite Lined API 5CT Threaded and Coupled Tubing	519
<i>Mohamed Ibrahim Abdel-Aleem, Mohamed Kamal Abdel-Mottleb, Mohamed Sobhy Mohamed, Mahmoud Mohamed El-Dardiery, Reda Aly Amer Badr El-Din, Gokulnath Radhakrishnan, Etman Youssef, Alwyn Fernandes, Amr Al Khouly</i>	
Optimizing Water Disposal: Case Study of an Integrated Multi-Disciplinary Project in the Jasmine Oil Field	533
<i>T. Trekarjanavong, N. Last, M. Edwards, T. Wasanapradit</i>	
Innovative Approach of Reviving Water Injectors with Minimum Cost Investment and Maximize Production Offtake. Case Study	551
<i>Arlen Sarsekov, Kevin McNeilly</i>	
Successful Mitigation of Structural Risks for Corroded Conductors in Shallow Water Offshore Wells	561
<i>O. Spuskanyuk, W. Abdulhai, A. Mahmoud, S. Mumtaz, C. Lam Gan, A. S. D. Khemakhem</i>	

SESSION 8: DRILLING AND COMPLETION TECHNOLOGY – STEP CHANGE IN DRILLING EFFICIENCY

Invisible Lost Time Reduction and Drilling Risk Management Optimization in United Arab Emirates Onshore Field	575
<i>Elena Cantarelli, Nenad Kojadinovic, Khoa Pham Dang Le, Gamal Youssef Salem</i>	
Optimizing the Secret Recipe to Drill Oman's Carbonate Reservoirs with Impregnated Drill Bit Technology	592
<i>Roger Lee, Khalfan Alshaqsi, Volker Richert, Asila Al-Ramadhani, Bader Algharibi, Younis Al Sinawi, Ajay Mohanty, Fahad Almaktoumi, Hilal Alsabari</i>	
New Positive Displacement Motor Technology Significantly Improves the Drilling Performance through Challenging and Abrasive Strata in Northern Kuwait	597
<i>A. Alattar, M. M. Mustafa, D. Nobre, R. Applegate, M. Pushkarev, S. Dashti, K. Saleh, A. Hussein Saffar, A. Al Harbi, M. Anas</i>	
First Successful Single-Trip Hole-Enlargement-While-Drilling and Rathole Elimination Operation in Indonesia Using Integrated Borehole Assembly Design and Modeling	616
<i>Bonar Noviasta, Siti Awaliyah, Shannon Sonny, Kevin Pratama, Frengky Hasibuan</i>	

Robust Design of Rotary Steerable System RSS and Revised Drilling Procedure Deliver Superior Performance in a UAE Onshore Field.	635
<i>Ahmed Abdulla Al Mutawa, Fernando Quintero, Abdul Salam Awad Mohamad, Khoa P. D. Le, Elena Cantarelli, Lambo Thavaraj, Miron A. Dimas, Nenad Kojadinovic</i>	
High-Power Mudhammer: A Promising Solution for Hard Formations Drilling	651
<i>R. Souchal, M. Tarek, L. Gerbaud</i>	

**SESSION 9: DRILLING AND COMPLETION TECHNOLOGY – WELL INTERVENTION
ADVANCES: INNOVATION IN COIL TUBING**

The Ideal approach for casing leak repairs in Old wells	661
<i>Abdulla Faleh Al-Dossary, Abdulasalm Al-Warthan, Mohammed Al-Badran, Ibrahim S. Al-Ghamdi, Wessam Mutawaa</i>	
Development and World's First Field Deployment of 2.125 Tridem Coiled Tubing Tractor for Extended Reach Open Hole Horizontal Wells with ESP Completions	685
<i>Abubaker Saeed, Laurie Duthie, Timofey Yakovlev, Hani Sagr</i>	
Enhancing Well Interventions with the Use of Transient Software - New Case Histories from Around the World	696
<i>Steven Craig, Bill Aitken, Silviu Livescu</i>	
Evolution of Coiled Tubing Fiber Optic Real-Time Telemetry System in Saudi Arabia Ghawar Field Interventions	714
<i>Ahmed. Duatj, Danish. Ahmed, Mohammad Arifin, Adzlan Ayob, Rodrigo Sa, Valentin Pochetny</i>	
The First Successful Combination of an Electro-Mechanical Pipe Cutting Tool with the Intelligent Coiled Tubing System to Perform Cuts at a Deep-Water Horizontal Well in Brazil	730
<i>Ricardo De Paula Carvalho, Robledo Wakin Barros, Cícero Rondinelli França, Deylla Gomes Da Silva</i>	
Successful Production Enhancement for Carbonate Gas Reservoirs by Under Balanced Coiled Tubing Drilling Using Production and Seismic Data	740
<i>Hanyu Lu, Khaled F. Al-Faleh, Ahmed M. Al-Omair</i>	

**SESSION 10: DRILLING AND COMPLETION TECHNOLOGY – WELL INTERVENTION
ADVANCES: INNOVATION IN W/L, RIG, RIGLESS, SNUBBING**

Optimization of the Operation Time Required for Data Gathering Requirement in Extended-Reach Drilling Well by the Use of Open Hole Tractor in the United Arab Emirates	747
<i>Takahiro Toki, Mhammed Benygzer, Khalid Ahmed Al Wahedi, Atul Kumar Anurag, Rudrap Pratap Narayan Singh, Mohamed I Sayed, Alexey Ruzhnikov, Michael Jason Cocagne</i>	
Intelligent Completion or Well Intervention Robot?	756
<i>Nathalia Alves Correa, Tadeu Franca Pires Barcelos, Kazuo Miura, Jose Ricardo Pelaquim Mendes</i>	
Accurately Locating Casing Collars in Real Time with Drill Pipe Deployed Gamma Ray Density Measurement	767
<i>Ashton Dorsett, Priscila Lopes, Lei Fang</i>	
The First Slickline Rigless Deployed High Rate Slim Design ESP in the Middle East	777
<i>Majid Rafie, Mesfer Qahtani, Khaled M. Mutairi, Mulad B. Winarno, Yhossie S. Windiarto, Anwar Assal</i>	
Gas Tight Production Casing Remediation via Expandable Steel Patches	788
<i>Tomasz Szary, Daniel Newton, Yoann Riou, Benoît Echasseriau</i>	
Successful Use of Downhole Camera Technology to Assist Fishing Operation	799
<i>Nasser M. Al-Hajri, Hussain A. Al-Quwaisim, Rashad M. Al-Zahrani</i>	

VOLUME 2

SESSION 11: HSE – PROMOTING SAFETY CULTURE: CHANGE

Human Factors Engineering HFE: A Review of Human Elements that have Contributed in the Occurrence of Major Accidents in Process Industries and Total Abu Al Bukhoosh TABK Means of Engineering Effective...	809
<i>Vijai Ananth Viramuthu</i>	
Preventing Process Safety Repeat Incidents Driving better performance through embedded PS Incident learning	824
<i>Anthony W Sipkema, Arshad S Ahmed, Mohamed Aa Salmani</i>	

Human Factors Analysis and Classification System	839
<i>Muhammad Adnan Akhtar</i>	
Nurture the Culture; HSE Culture Improvement Program	850
<i>M. Al Badawi, M. Al Muhairi, G. Suresh Kumar, H. Al Hammadi, Y. Al Hamadi, A. Patil</i>	
Alert Today, Alive Tomorrow! Embedding Process Safety Across Organization	858
<i>Shamsuddin Ahmad Khan</i>	

SESSION 12: PROJECT ENGINEERING AND MANAGEMENT – CHALLENGES OF OIL AND GAS PROJECT MANAGEMENT AND STARTUP

Building Synergies, Strengthening Fundamentals, and Driving Leadership in Investment Decision Process within Petroleum Fields	869
<i>Z. Kenzhetayeva, R. Fleming</i>	
East Abu-Sennan Gas Plant Planning and Construction Challenges	884
<i>K. Alsawi, M. Abdelmonsef, M. Atwa, M. Hegazy</i>	
A Method for Quantifying Reservoir Connectivity Combining Reservoir Simulation and Production Data	906
<i>Yanjing Li, Xiaodong Wei, Ruikun Wu, Wenyuan Tian, Xin Chen, Xiaohuan Yan, Weixiang Zhong, Xia Yaliang, Chen Jin'E</i>	
CORAL 2.0: Forging Collaboration towards Industry Cost Competitiveness in Malaysia	917
<i>Hajejah Ali, Nurul Azni Mohamad</i>	
Challenges with the Development of the Yamal Peninsula	923
<i>Irina Akimova</i>	
Optimal Design of Surface Facilities Using Well Bore Analysis	928
<i>Senthilkumar Subramanian, Rakesh Wasnik, Harendra Singh, Faris Kamal, Oussama Takieddine</i>	

SESSION 13: E&P GEOSCIENCE – ADVANCES IN REGIONAL GEOLOGY - II

Understanding the H2S Variations in the Upper Arab Formation in Abu Dhabi	939
<i>P. Nederlof, S. Stearns, N. Kaczorowski, N. B. Lucas, M. Ghassan</i>	
Abu Dhabi Structural Evolution and Its Implications for Exploration	948
<i>Pascal Richard, Valentina Zampetti, Chadia Volery, Stephane Gesbert, Thomas Krayenbuehl, Michael Spaak, Shamil Murzin, Fernando Neves, Sabah Al Hosani</i>	
Reconstruction of Paleo-Structure Using 3D Seismic and Well Data - Case Study from a Lower Cretaceous Carbonate Formation Onshore Abu Dhabi	971
<i>M. Oke, K. Shin, F. Rosli, M. Buzdar, V. B. Dantla, I. A. Al Ali, A. Abdelaal, A. Hussain, M. Ali, B. Lardhi</i>	
Assessing Sedimentological Heterogeneity through High Resolution Sequence Stratigraphy and Facies Trend Mapping in Undeveloped Upper Jurassic Reservoirs, Abu Dhabi, UAE.	988
<i>David Green, Abdelmalek Messisha, Quintin Davies, Salah Al Deen Ali Muhsen Al Qallabi, Kook Sun Shin, Amna Ali Salim Abdalla Alkindi, Mula Nur Ahmad, Maniesh Singh, Faaeza Alkatheeri</i>	
New Sedimentological Data within the Minagish Formation: Insights from Undeveloped Area, Onshore Kuwait	1000
<i>Sunil Kumar Singh, Prabir Kumar Nath, Afrah Saleh Al-Ajmi, Aurélie Bonin, Matthieu Deville De Perriere, Jesal Hirani, Arun Kanti Dey, Eman Mohammed Al-Khandari</i>	
High-Resolution Sequence Stratigraphy Analysis and Diagenesis Evolution of a Barremian Carbonate Platform Kharai Formation, Onshore Abu Dhabi	1014
<i>Kevin Michael Torres, Mohammed Salawu Ugonoh, Noor Faisal Al Hashmi</i>	

SESSION 14: E&P GEOSCIENCE – ROCK PHYSICS AND GEOMECHANICS

Slim-hole Straddle Packer Microfrac Testing and Tectonic Stress Calibration in UAE Carbonate Reservoirs	1035
<i>J. A. Franquet, S. S. Smith, F. B. M. Noordin</i>	
A Novel Method for Predicting 3D Pore Pressure in Over-Pressured Carbonates	1056
<i>Osman Hamid, Adel Al-Qahtani, Hussain Albahrani, Yusuf Pamukcu</i>	
An Integrated Workflow to Close Out the Uncertainties in a Geomechanical Model in a Giant Onshore Carbonate Gas Field in Abu Dhabi, UAE	1066
<i>Rashad Masoud, A. Noufal, B. Ateeq, K. Al Ammari, M. El Gohary, H. Al Hammadi, S. Kumar, G. De Jousseineau, A. Bois</i>	

Mineralogy and Geomechanical Analysis for Hydraulic Fracturing: An Integrated Approach to Assess Rock Fracability in Sandstone Reservoirs	1084
<i>Noor A. Alsaif, Ahmad R. Hage, Hassan H. Hamam</i>	
Middle-Jurassic Carbonate Velocity Models in Saudi Arabia: Development and Validation	1094
<i>Abrar Alabbad, Chris Ayadiuno</i>	

SESSION 15: GAS TECHNOLOGY – ADVANCES AND RECENT DEVELOPMENTS IN GAS PROCESSING

cMIST™: Novel, Compact Dehydration System for Reducing Size and Weight	1109
<i>Danny Thierens, Shwetha Ramkumar</i>	
Optimization of Mercury Removal Unit MRU location in Gas Processing Facilities	1118
<i>Khalid Al-Sawafi, Hilal Al-Jabri</i>	
Maximizing Gas Production Using In-House Software-GIPS	1128
<i>Mubashir Ahmad, Basel Al Soufi, Mohamed Akoum, Ashraf Izmeqna</i>	
Bio-Derived Porous Graphitic Carbon as Highly Efficient Mercury Scavenger from Natural Gas Streams	1139
<i>Anjali Achazhiyath Edathil, K. Suresh Kumar Reddy, Priyabrata Pal, C. Srinivasakannan, Fawzi Banat</i>	
Integration of Sustainable Innovation in Research and Development Related to Natural Gas Processing	1147
<i>Prachi Singh, Dinesh Aggarwal, Tasnim Ahnaish, Aditya Namjoshi, Frank Geuzebroek</i>	
NGL Recovery - A New Concept for an Old Scrubber	1156
<i>Ankur Jariwala, Pinkesh Sanghani, Dag Kvamsdal</i>	

SESSION 16: UNCONVENTIONAL RESOURCES – PRODUCTION ENHANCEMENT

Waterless Stimulation for Unconventional Resources: An Alternative to Conventional Water-Based Fracturing Techniques	1172
<i>Weixiang Cui, Mingyue Cui, Chumpeng Wang, Chong Liang</i>	
A Cohesive Technique to Optimize an Openhole Multistage Acid Frac in Unconventional Oil Reservoir - North Kuwait	1186
<i>Sabry Abd El-Aziz, Chao Chin, Ayham Ashqar, Moudi Al-Ajmi, Rick Mauro, Mohamed Nada, Mohamed Nada</i>	
Frac Modeling: Integrating Proppant Transport with Geomechanical Properties for Long-Term Results in Liquids-Rich Plays	1200
<i>Ahmed Yusuf, Ilkin Bilgesu</i>	
First Unconventional Onshore Proppant Fracturing Treatment in UAE – Not an Easy One	1221
<i>Shahvir A. Pooniwala, Javier A. Franquet, Adebayo O. Onafowokan, Daniel R. Erickson</i>	
Parameters Affecting the Fractured Well Productivity: Proppant Pack vs. Pillar Fracture - Numerical Study	1240
<i>Ahmed M. Gomaa, Damian P. San-Roman-Alerigi, Khalid R. Alnoaimi, Alvaro J. Moraes</i>	
Microseismic Monitoring: A Tool for Evaluating Fracture Complexity in Various Geological Settings	1260
<i>J. Le Calvez, S. Hanson-Hedgecock, C. N Fredd</i>	

SESSION 17: FIELD DEVELOPMENT – MAXIMISING VALUE FROM MATURE FIELDS

Redevelopment of an Unconventional Oil Reservoir: Finding Unstimulated and Bypassed Reservoir Volume	1278
<i>Maksim Fayzullin, Peter Janiczek, David Contreras, Ivan Makar, Jose Gonzalez, Richard Day</i>	
Unlocking Bypassed Oil in Mature PDO South Oilfields by Developing Gharif Low Resistivity Pay	1289
<i>S. Mahaldar, S. Mandhari, W. Jorgensen, H. Busaidi, H. Saadi, A. H. Yaarubi</i>	
Big Completions to Recover More Hydrocarbons from Oil Producing Wells with High Water Cut in Prolific Reservoirs - A Paradigm Shift	1304
<i>Zohaib Channa, Fazeel Ahmad, Muhammad Navaid Khan, Salman. F. Nofal, Ibrahim. A. Al-Hosani, Omar Y. S. Al-Shehi, Ahmed K. Al-Neaimi</i>	
Prolonging Gas Production until the End of Concession by Optimizing Existing Resources: A Case Study from Greater Bongkot South Field Development Strategy	1320
<i>P. Kritsadativud, P. Sivapiromrat, T. Limprasert, S. Srihirunrusmee, J. Whangkitjamorn, P. Navasumrit, T. Roatkanjanaporn, K. Sapmanee, S. Palviriyachote, D. Thongpian, W. Kaewmuang, P. Promsen, S. Kittisupalauk, N. Kittisureethorn, S. Tan, L. D. Swarnanto</i>	

Water Shut - Off Treatments in Oilfield by Micro and Nano Technology: A Good Way to get More Oil and Less Water.....	1333
<i>A. Casalini, R. Lima</i>	

SESSION 18: FIELD DEVELOPMENT – NEW AND EMERGING TECHNOLOGY - II

pH-Responsive Supramolecular Gelling Agents Used in EOR and Their Potential as Fracking Fluids.....	1343
<i>Cengiz Yegin, Cenk Temizel, Yagmur Yegin, Mufrettin Murat Sari, Bao Jia, Mohamad Yousef Alklich</i>	
Laser Perforation: Lab to the Field.....	1358
<i>Sameeh I. Batarseh, Ramona Graves, Damian P. San-Roman-Alerigi, Karam Chand</i>	
Rapid Microfluidic Analysis of Thermal Foam Stability at 250 Degrees Celsius.....	1372
<i>Bo Bao, Aaron Sanders, Ginger Ren, Thomas De Haas</i>	
High Power Laser Technology in Downhole Applications, Reshaping the Industry.....	1384
<i>Sameeh I. Batarseh, Ramona Graves, Omar Al Obaid, Abdullah Al Hartih, Haitham Othman</i>	
Pore Scale and Reservoir Modeling for Near Miscible Three-Phase Flow Gas/WAG Flooding Reservoir.....	1399
<i>Muhammad A Gibrata, Mohamed Hashem</i>	
Successful Field Trials of Water Control in High Water Cut Wells Using an Improved Downhole Water Sink/Drainage System.....	1420
<i>Wenting Qin, Pingya Luo, Jigang Meng, Hongwei Li, Tiancong Mao, Andrew K. Wojtanowicz, Ming Feng</i>	
Oil Dehydration System Using Microfluidic Channel with Coating of Graphene Electronics.....	1433
<i>A. Al Shehhi, F. Almarzooqi, S. Al Harethi, I. Al Hammadi, I. Saadat</i>	

SESSION 19: OPERATIONAL EXCELLENCE – TECHNOLOGIES AND INNOVATION

Novel Compositions Based on Nanomaterials Designed for Use as Conformance Sealants.....	1442
<i>Rajendra Kalgaonkar, Vikrant Wagle, Khalid Alnoaimi, Ismail Alhussain</i>	
New Approach to Chemical Diversion Using Biodegradable Particulates and Fibers in Matrix Acidizing: Kuwait Case Studies.....	1455
<i>Mohammed Al-Othman, Yousef A-Matrouk, Zamzam Ahmed, Meshari Ashkanani, Ali Buhamad, Mohammad Al-Dousari, Abdul-Samad Ahmed, Erkan Fidan, Wael Mahmoud, Hai Liu, Abrar Salem, Max Nikolaev</i>	
Nanomaterials-Enhanced High-Pressure Tolerance of Borate-Crosslinked Guar Gels.....	1466
<i>Abdulrahman Alharbi, Feng Liang, Ghaihan A. Al-Muntasheri, Leiming Li</i>	
Overcoming Challenges to Reduce H2S Content in Sales Gas Transmission Pipelines.....	1476
<i>Jagannathrao Prakashrao Allamaraju, Rahul Mukherje</i>	
Novel Environmentally Benign Hydrogel: Nano-Silica Hybrid Hydrolyzed Polyacrylamide/ Polyethyleneimine Gel System for Conformance Improvement in High Temperature High Salinity Reservoir.....	1489
<i>Liping Ma, Shitou Wang, Yifu Long, Changqian Zhu, Hongbin Yang, Tangying Yang, Xiaochun Liu, Xiaorong Li, Baojun Bai, Wanli Kang</i>	

SESSION 20: DRILLING AND COMPLETION TECHNOLOGY – STEP CHANGE IN DRILLING EFFICIENCY - II

ERD Wells on Remote Artificial Islands: Successful Optimization Strategy to Boost a Performance.....	1502
<i>Alexey Ruzhnikov, Maria Yanez Banda, Cecilia Malagon, Khalid Al-Wahedi, Takahiro Toki, Mhammed Benygzter, Rudra Singh, Jose Alzate, Youssef Kasem</i>	
Performance Enhancement of Drilling and Completions Operations in Giant Offshore Field Abu Dhabi by Tracking and Monitoring Invisible Lost Time and Defined KPIs.....	1516
<i>Syed Ali Raza, Haythem Al-Braik, Mohamed Attalah, Mauricio Corona, Nenad Kojadinovic</i>	
Achieving a Step Change in Well Duration and Cost in a HPHT Tight Gas Field.....	1532
<i>Jeroen Smit, Anwar Adawi, Faisal Hinai, Mustafa Khayari, Mohammed Abri, Hassan Kiyumi, Naidu Nakireddi, Hamada Yousef</i>	
Mitigating Drilling Vibrations in a Lateral Section Using a Real-Time Advisory System.....	1540
<i>J. R. Bailey, G. S. Payette, M. T. Prim, J. Molster, A. W. Al Mheiri, P. G. McCormack, K. Leroy</i>	
Experimental Investigation of Cuttings Transport in Horizontal Wells Using Aerated Drilling Fluids.....	1556
<i>Sercan Gul, Ergun Kuru, Mahmut Parlaktuna</i>	

SESSION 21: DRILLING AND COMPLETION TECHNOLOGY: BEST PRACTICES IN WELL DELIVERY – FROM CONCEPT TO PRODUCTION

Wellbore Trajectory Quality Management: A Key Approach to Safe Casing & Completion Strings Deployment in Complex Wells..... 1574
B. Nobbs, N. H. Dao, B. Mollaret

Drilling Safe Wells through Efficient, Rapid and Site Specific Planning to Manage Risks & Improve Performance..... 1586
Muhammad R Tayab, Suhail Kunnath Valappil, Gerardo Prieto, Ammar Humaid Al Nuaimi

A Novel Efficient Solution to Isolate Cross Communicating Reservoirs and Delay Water Advance without Impacting Well's Workover/Drilling Duration: Case Studies from Giant Offshore Field in Abu Dhabi 1596
Mohamed Helmy Elfeky, Ahmed Al-Neaimi, Omar Yousef, Ibrahim Al-Hosani, Hiroki Iwama, Salman Farhan, Abouel Seoud, Zohaib Channa, Hocine Khemissa, Muhammad Navaid Khan

VOLUME 3

Delivering Value Through Advanced Geomechanics in Complex Drilling Environments: From Well Planning to Real-Time..... 1611
Saad Imtiaz, Satya Perumalla, Laura Hynes, Pramit Basu, Ashok Shinde, Salim Benmamar, Prajit Chakrabarti, Wael El Sherbeny

Yetagan Field Well Delivery- Infill ERD Development Wells Drill to Limit Performance..... 1625
A. Ateemin, M. N Jainuddin, C. Y Ong

A Holistic Approach to Drill First Deep Horizontal Well with Multistage Fracking in Tight Carbonate Reservoir - A Case Study of Lower Indus Basin in Pakistan 1638
M. Mohsin Usmani, S. Kamal

SESSION 22: DRILLING AND COMPLETION TECHNOLOGY – NEW PROTOCOLS AND TECHNOLOGY IN WELL CONTROL

Drilling Problems Detection in Basrah Oil Fields Using Smartphones..... 1663
Ibrahim Abdul-Salam Saleh, Bashar Saadoon Mahdi, Mohammed Saleh Al-Jawad

Study on a MEMS-Based Piezoelectric Energy Harvester..... 1682
Fu Tao, Pei Xiaohan, Yang Qinghai, Hu Yili, Ming Eryang, Meng Siwei, Huang Shouzhi

Design of Safe Well on the Top of Atharamura Anticline, Tripura, India, on the Basis of Predicted Pore Pressure from Seismic Velocity Data 1691
Jwngsar Brahma, Anirbid Sircar

Fit-For-Purpose Roller Cone Bit Technology to Improve Performance in Highly Interbedded Carbonates and Anhydrite Application in Southeast Kuwait..... 1711
Karim Beheiry, Ahmed Al Heiny, Abdullah Malik, Haitham Al Mayyan

New Shear Thickening Dilatancy Dispersion Based on Nano-Silica Beads for Oilfield Applications 1723
Abeer M. Al-Olayan, Alfredo Alexander-Katz

SESSION 23: HSE – INNOVATION IN ENVIRONMENTAL PROTECTION

First-Time Implementation of Innovative In situ Biotechnology on an Offshore Platform in Arabian Gulf for Continuous Water Quality Monitoring and Early Leak Detection..... 1730
P. Blanc, B. Ducastel, J. Cazin, M. Al Blooshi, S. S. Al Dhaheeri, M. H. Ali Al Marzooqi, E. Maneux, P. Ciret, M. Sow, J.-C. Massabuau

Assessing Peak Particle Velocity PPV and Air Pressure Disturbance from Marine Seismic Operations – Introducing a Method for Establishing Coastal Environmental Safety Distances 1749
G. S. Macglennon, P. B. Nilsson, G. A. Casson

Security of Critical Infrastructure Using Marine Radar Surveillance..... 1765
Brian Johnston

Oil Spill - Cleaning and Recovery by Multi-Layered Fibre Tube 1791
Manu Chaturvedi, Manan Manoj Adlakha, Animesh Choudhary

A Step towards to Minimize Environmental Footprint: An Innovative System to Dispose Generated Cement Waste on a Zero Discharge Artificial Island	1799
<i>Rudra Pratap Singh, Al-Wahedi Khalid, Rashid Al Kindi, G Elatreche Bassam, Maurizio Cesetti, Alzate Jose, Mhammed Benygzer, Mohammed Haddad, Mohammed Hassan, Cliff Kirby, Phalgun Paila, Ala Suleiman, Alexey Ruzhnikov</i>	

SESSION 24: PROJECT ENGINEERING AND MANAGEMENT – REALISING STRATEGIES/ECONOMIC BENEFITS OF STANDARDISATION AND USE OF TECHNOLOGY

ADNOC Journey in Developing an Unified Value Assurance Process for Capital Investment Projects.....	1808
<i>Tariq Khalil, Nagarajan Balsubramanian, Patrick Lugon</i>	
Engineering Documents from Jurassic Era to Avant-Garde	1832
<i>Hussam Tayfor, Anish Kumar</i>	
Changing Perspectives of Cathodic Protection System for Above Ground Storage Tanks.....	1851
<i>Ateeq. Ur-Rehman Hanif, A. M. Al Busaeedi</i>	
Optimized Engineering Under Current O&G Industry Scenario	1865
<i>Sudhakar Moro, Mohamed El-Sawah, Ashraf Shabaka, Ibtihaj Al Menthari</i>	
Opportunity for Cost Optimization Through Flowline Sharing and Using All in One Multi-Phase Flow Meter MPFM at Wellhead.....	1869
<i>S. M. Basloom, Ashwani. K. Kataria, M. H. Alsuwaidi, A. Constantini</i>	

SESSION 25: E&P GEOSCIENCE – ADVANCES IN FORMATION EVALUATION AND PETROPHYSICS - I

Resolving Water Saturation Uncertainty in a Thin Oil Rim Reservoir, Using Sigma While Drilling, Case Study from Onshore Abu Dhabi.....	1880
<i>Syofvas Syofyan, A. I. Latief, M. A. Al Amoudi, S. A. Al-Arfi, T. A. Al-Shabibi, Suvodip Dasgupta, Meretta Qleibo, Kais Gzara</i>	
Maximizing Production Performance in an Undeveloped Reservoir: A Case Study, Offshore Abu Dhabi.....	1893
<i>Sultan Dahi Al-Hassani, Ibrahim Mohamed Al-Tameemi, Owais Ameer Khan, Shafiq Naseem Ahmed, Osama Keshta, Mohamed Zubair Chaudhry, Wael Fares, Ramy Essam, Anar Abdulkarim, Ahmet Aki</i>	
Investigating Low Resistivity-Low Contrast Resistivity Pay in a Permo-Carboniferous Reservoir, Central Saudi Arabia	1909
<i>C. B. Ayadiuno, S. Khan, A. A. Alabbad, F. Almohsen</i>	
Integrated Formation Evaluation Applications in Tarmat Identification, Well Placement, and ICD Completions Design Using Source-Less NMR Technology – A Case Study from a Middle East Jurassic Reservoir.....	1926
<i>Atul Anurag, Anoop Mishra, Hammad Mustafa, Khalil Ibrahim Mohamed Hosany, Ghassan M. Al-Jefri, Sunil Chitre, Khalid Javid, Charles Smart, Pranjal Bhatt, Ahmed Soliman, Piyanuch Kiedupattum, Sanathoi Potshangbam</i>	
True Resistivity in High-Angle and Horizontal Wells - Correction of Thin Layer Effects Using Image-Constrained Inversion	1939
<i>David Boesing, Stefan Wessling, Roger Marsh, Mat Wright</i>	

SESSION 26: E&P GEOSCIENCE – CHALLENGES AND SOLUTIONS IN EXPLORATION

Regional Characterization and Stochastic Object Modeling of the Pre-Khuff Clastics in Abu Dhabi.....	1953
<i>Jialiang Hu, Abdulla Al Blooshi, Angelos Mavromatidis, Joop Witte, Fernando Neves, Maria Da Silva Caeiro</i>	
High-Density Surveillance in a Supergiant Field: Integrating Clastic Sedimentology With Dynamic Data in a Mature Asset.....	1973
<i>E. Jude, M. Wells, R. Brown, D. Camplin</i>	
Origin of Complex Carbonate Pore Systems and Associated Reservoir Quality Variations: an Example From the Arab Formation Upper Jurassic, Onshore United Arab Emirates	1990
<i>C Hollis, D Lawrence, Fatima Al Darmaki, Matthieu Deville De Perriere, Alexander Foote, Boris Kostic</i>	
Seismic Characterization of the Shuaiba Formation in the Western Region of UAE, a Predictive Tool to unravel Shuaiba Facies Mosaic?	2003
<i>Valentina Zampetti, Sonia Perrotta, Ghassen Chaari, Thomas Krayenbuehl, Matthias Braun, Fernando Neves, Jialiang Hu</i>	

Unlocking the Hidden Potential of an Upper Jurassic Carbonate Reservoir After 46 Years of Field Discovery: A Case Study in Offshore Abu Dhabi	2015
<i>Christophe Bassem Maalouf, Hernandez Jose Hernandez, Maher Zidan, Mattheus Uijitenhout, Salem Al-Jaberi</i>	

SESSION 27: GAS TECHNOLOGY – ENERGY CONSERVATION AND EFFICIENCY IN GAS PROCESSING

Advanced Model-Based Optimization of a Natural Gas Liquid Recovery Unit	2027
<i>S. Leyland, D. Georgis, J. Marriott, A. Andrade, S. Dara, A. S. Berrouk, Y. Al Wahedi, F. Geuzebroek, A. S. El Nasr, N. Ghanayem, A. Turner, I. Khan M</i>	
Major Energy Saving and Revenue Generation Initiatives in GASCO Bu Hasa NGL Plant in 2016	2041
<i>Ahmed Saleh</i>	
Selection of Optimized Gas Processing and Sulphur Recovery Technology Line Ups for Different Feed Gases	2049
<i>Rajiv Srinivasan, Nilesh Sonawane</i>	
Granulated Sulphur; Design & Operation Optimizations	2064
<i>Eman Thani Al Suwaidi</i>	

SESSION 28: PRODUCTION FACILITIES TECHNOLOGIES – MAXIMISING ASSET INTEGRITY THROUGH INNOVATION

Corrosion-Erosion Monitoring Systems for Managing Asset Integrity	2072
<i>Geir Instanes, Audun Oppedal Pedersen</i>	
Creation of a New Light Weight Grating	2085
<i>Bugs Yeow Kiang Tan</i>	
How ISO Principles can Simplify Process Plant Design, Construction and Maintenance to Deliver Cost and Production Efficiencies	2105
<i>Ashik Subahani, Iain Steven</i>	
Field Trial Results for 3rd Barrier Evaluation Using Technology of Individual Electromagnetic Metal Loss Logging Validated by Actual Excavations	2114
<i>A. Yugay, H. B. Daghmoumi, A. B. Ali, M. Volkov, S. J. Sparke</i>	
Underground Storage of Hydrocarbons: Advantages, Lessons Learnt and Way Forward	2127
<i>L. Londe</i>	
Successful Troubleshooting to Improve RFCC LPG Amine Absorber Performance	2138
<i>Velavan Sikkampatti Thamizhan, Nikhil Dwarakanath Darak</i>	

SESSION 29: FIELD DEVELOPMENT – GETTING THE MOST FROM RESERVOIR SURVEILLANCE

Employing Data Visualization of Reservoir Data for Better Understanding of a Mature Field	2145
<i>Asok Madathil, Bina George, Thibaut Dangin</i>	
Contribution of Tidal Analysis to Reservoir Monitoring - Field Case Study in a Fractured Reservoir Offshore Abu Dhabi	2154
<i>Mohamed Mehdi El Faidouzi</i>	
Optimizing Data Acquisition and Data Utilization to Maximize the Value of Reservoir Surveillance: Case Studies	2172
<i>Wenyang Zhao, Ahmed Khalifa Al-Neaimi, Omar Yousef Saif, Ahmed Mohamed Murad</i>	

SESSION 30: FIELD DEVELOPMENT – RESERVOIR SIMULATION-FIELD CASES

New Approach Using Dual Porosity Dual Permeability and Dissolved Pore Network to Simulation Modeling for Fractured Carbonate Reservoir in Abu Dhabi	2180
<i>H. Uematsu, G. Auxiette, S. Bellah, V. Virvan, T. Stojic</i>	
History Matching of Integrated Reservoir Simulation Model for Green Field Offshore Abu Dhabi	2198
<i>A. Semenov, B. Altaf, A. Allouti, H. Bu-Hindi, L. Ibrahim</i>	
A Recovery Curve Method Based Workflow for Reserves Estimation of Naturally Fractured Reservoirs – A Case Study	2211
<i>Justin Brand F., Georg M. Mittermeir, Gabor F. Heinemann</i>	

Evaluation of Viscously Unstable Water Flooding with Gravity Effects and Permeability Heterogeneities Through High-Resolution Simulations	2230
<i>G. Vaillant, R. De Loubens</i>	
The Value of Rate, Temperature and Pressure Surveillance in Steam Assisted Gravity Drainage SAGD Process	2254
<i>Wisam Shaker, Zhangxing Chen, Greg Walker</i>	

SESSION 31: OPERATIONAL EXCELLENCE – ROOT CAUSE ANALYSIS AND FAILURE INVESTIGATIONS (CASE STUDIES)

Main Oil Line Pump Seal Failure Prevention; Advanced Simulation and Case Study	2273
<i>A. M. Khalaf, A. M. Al Omari, A. H. Al-Sherif, A. Toubar, I. Barsoum, A. Karrech</i>	
Do You Know About Vibration In Static Equipment?	2281
<i>Khoulia Al Mashjari, Ibrahim Al Awadhi, Ashok Sharma</i>	
Cracks in Structural Steel - Investigations & Mitigations	2297
<i>K. Perumal, K. Adel, I. Al Awadhi</i>	
A Case Study on the Development and Implementation of a Software Assisted Pipeline Integrity Management System	2312
<i>Muhammad Qasim, Kevin Spencer, Girish Rao</i>	
Case Study - Dry Gas Seal Boosters' Failure and Impact on Centrifugal Compressor Auxiliary System	2324
<i>Arumugampillai Manikandan, Anwar Zeeshan</i>	

SESSION 32: DRILLING AND COMPLETION TECHNOLOGY – SPECIAL SELECTION

Kuwait's First Successful Implementation of MPD in Deep Jurassic Reservoirs of Abdulyah Field in West Kuwait	2334
<i>Rasha Al Moraikhi, Nitin Kulkarni, Dipak P. Patil, Mahesh Sounderrajan, Naveen K. Verma, Riyadh Qutainah, Eman Al-Kandari, Mohammad Al-Mohailan</i>	
Advanced Fracture Modeling: Lab Experiments to Field Applications	2347
<i>Shekhar V. Gosavi, Sandeep Kumar, Kedar Kirane, Jorge Garzon, Pablo Sanz, Erika Biediger, Kevin Searles, Kris Nygaard</i>	
Sequenced Fracture Degradable Diverters Improve Efficiency of Acid Fracturing in Multiple Perforated Intervals Completion Assembly	2366
<i>Zillur Rahim, Adnan A. Al-Kanaan, Rifat Kayumov, Ziad Al-Jalal</i>	
New Insights on Coiled Tubing Acid Tunneling Stimulation in Carbonate Reservoirs	2380
<i>Silviu Livescu, Steven Craig</i>	
Extending Technology Limits – Application of Multistage Open Hole Horizontal Completion in Offshore Environment	2393
<i>Bryan Hall-Thompson, Arias Urbina Rommel Ernesto, Abdullah A Utaibi, Bahi Mashat, Roberto Vega</i>	

SESSION 33: DRILLING AND COMPLETION TECHNOLOGY – ARTIFICIAL LIFT/COMPLETION AND MANAGEMENT SYSTEMS

Rigless Deployment of Innovative Electrical Submersible Pumping System for First Time Worldwide	2402
<i>Mulad B. Winarno, Rifat Said, Alaa S. Shawly, Khaled M. Mutairi, Majid M. Rafie, Brian A. Roth, Yahya Sarawaq</i>	

VOLUME 4

Case Study: Safe Thru-Tubing ESP Installation in Pressurized Well through Novel Killing Techniques	2416
<i>Mohannad Abdelaziz, Brian A. Roth, J. J. Xiao</i>	
Boost Capacity of Velocity String Completions in Sultanate of Oman by Including Sliding Side Door	2429
<i>Khalid Hinai, Kees Veeken, Norbert Janusz, Laila Mabsali, Hajer Naabi, Sharifa Al-Ruheili, Musallam Ruzaiqi</i>	
Enhance the Run Life of Downhole ESP Equipment in Water Supply Wells	2447
<i>Tarek Mohamed El Sonbaty, Ayman Elmansour</i>	

Evaluating Performance of Foam-Assisted Lift in Sultanate of Oman by Dedicated Field Testing	2463
<i>Kees Veeken, Khalid Hinai, Abdul Aziz Shanfari, Ahmed Yamadi, Abdullah Zadjali, Ali Saidi, Hatim Hadhrami, Thabit Daraai, Jeroen Mans, Idrees Yousfi, Hisham Hinai, Yousuf Wahaibi, Khamis Musalami, Rawa Medhi, Neil McIntyre, Ahmed Kindi, Osama Kindi, Hajer Naabi, Laila Mabsali, Hisham Dhahri</i>	
Optimum Selection & Application of Hydraulic Jet Pump for Well-1A: A Case Study	2483
<i>Shuaib Ahmed Kalwar, Abdul Quddos Awan, Fahad Aziz Qureshi</i>	

SESSION 34: DRILLING AND COMPLETION TECHNOLOGY – STEP CHANGE IN WELL DELIVERY

Taking Drilling Operations Optimization to New Heights	2493
<i>Islam Khaled Moustafa, Majid Al Hammadi, Gregory Rheau, Salim Al Ali, Ammar Jaorawala, Issam Rezek Mefleh, Osama Al Helali, Mohamed Abdel Salam, Bassam Akl</i>	
Optimized Whipstock and State-of-the-Art Dual-Reamer Assembly Deliver Highly Efficient Drilling Operation in the Norwegian North Sea	2501
<i>S. Labrousse, M. Kjøråas, T. T. Angeltvedt, C. Olsen, B. Torvestad, A. Konglevoll, R. H. Moldekleiv, M. Esmat</i>	
Performance Improvement: New 16-in. TCI Design Addresses Multiple Drilling Challenges Through Interbedded Shale and Carbonate Application	2513
<i>Karim Beheiry, Ahmed Al Heiny, Blake Linnerud, Zakaria Maouche, Jasim Al-Shelian, Zahraa Muqaddas, Abdullah Al-Mekhyal, Dakhil Al-Enezi</i>	
Optimal Matching of Bit and Reamer for Increased Reliability of Hole-Opening BHAs	2525
<i>A. Kueck, M. Ichaoui, C. Herbig, A. Hohl, G. P. Ostermeyer, H. Reckmann</i>	
Innovative Casing Drilling Technology Improved the Ability to Set the Casing Deeper Through the Problematic Zone in Indonesia Geothermal Operation	2542
<i>Bonar Noviasta, Hanafi Muhammad Falhum, Budi Setiawan</i>	
What is the Optimal Operation to Eliminate Cuttings Bed by Using Jet Comminuting Technique?	2554
<i>Yongsheng Liu, Deli Gao, Xin Li, Xing Qin, He Li, Hang Liu</i>	

SESSION 35: HSE – NEW TRENDS IN HSE METHODOLOGIES

Novel Approach to Well Threat Response Drills at the Rigsite - Experiences from the Middle East	2564
<i>Terrance Sookdeo, Sergey Peresypkin, Weng Fei Leong</i>	
Temporary Safe Refuge: An Oasis During a Lethal Crisis	2573
<i>N Thirugnanam, Mohamed Sunil, Khalid Adel, Ibrahim Al Awadhi</i>	
Assessment of Petrol Filling Stations Hazards Risk in Abu Dhabi, UAE - GIS Applications	2587
<i>Punithat Periyasamy, M M Yagoub, Mahmoud Al Hader</i>	
Innovative Approach to Save Plant and People	2600
<i>K. Subramaniam, A. M. Sharma, I. Al Awadhi, K. Al Mashjari</i>	

SESSION 36: PROJECT ENGINEERING AND MANAGEMENT – BROWNFIELD CHALLENGES AND ENERGY CONSERVATION

Optimization of LPG Recovery from Refinery Delayed Coking Gas Recovery Unit	2609
<i>A. A. El Khashab, A. M. El Maghraby, M. A. Refaat, H. A. El Meligy</i>	
Outlast the Blast, Avert the Loss	2626
<i>Manur Ajith Shenoy, Khalid Adel, Ibrahim Al Awadhi</i>	
Multi-Functional and Non-Acidic Iron Sulfide Scale Dissolver for Downhole Applications	2636
<i>Tao Chen, Qiwei Wang, Frank Chang, Esmael Albelharith</i>	
Diagnosis and Treatment of Sinking Ground	2647
<i>K. Perumal, K. Adel, I. Al Awadhi</i>	
Replacement of Critical LP Booster Compressor High-Voltage Motor With Non-Similar Motor for Blower Application	2661
<i>Atul Rege, Satish Bhat, Ahmed Al Kazeeri, Ahmed Badawy, Vivek Surange, Babu Ramasamy</i>	

SESSION 37: E&P GEOSCIENCE – ADVANCES IN FORMATION EVALUATION AND PETROPHYSICS - II

A Novel Approach for Azimuthal Permeability Estimation : Case Study of Heterogeneous Carbonate Reservoirs Offshore Abu Dhabi	2672
<i>A. K. Anurag, A. K. Mishra, E. K. Binabadat, K. I. Hosany, G. Al Hashmi, H. Al-Harbi, F. R. Brindle, M. Kuliye, K. Gzara</i>	
Building Variable Saturation Height Functions with an Improved Rock Typing Scheme	2693
<i>Ashish Kundu, Deepak Kumar Voleti, Michel Rebelle, Habeeba Ali Al Housani</i>	
Improved Reservoir Characterization in Complex Gas Carbonate Field in the North of the Sultanate of Oman	2718
<i>Mazin Al-Amri, Rinat Lukmanov, Mohammed Al-Barwani</i>	
New Method of Improving Formation Evaluation in High-Angle or Horizontal Wells Using Image-Constrained Inversion	2732
<i>S. Syofyan, M. S. Hanif, A. I. Latief, A. L. El Gazar, T. A. Al-Shabibi, D. Boesing, L. Deng, W. Fernandes, A. M. Soliman, C. Smart</i>	

SESSION 38: E&P GEOSCIENCE – ADVANCES IN RESERVOIR CHARACTERISATION - I

Validation of a Workflow for Digitally Measuring Relative Permeability	2743
<i>Gary R. Jerauld, Joanne Fredrich, Nathan Lane, Qiang Sheng, Bernd Crouse, David M. Freed, Andrew Fager, Rui Xu</i>	
In situ Wettability Measurement in a Carbonate Reservoir Rock at High Temperature and Pressure	2763
<i>Amer M. Alhammedi, Ahmed Alratrout, Branko Bijeljic, Martin J. Blunt</i>	
A Novel Bounded Capillary Pressure Correlation with Application to Both Mixed and Strongly Wetted Porous Media	2776
<i>Pål Østebø Andersen, Svein Magne Skjæveland, Dag Chun Standnes</i>	
Carbonate Rocks: A Case Study of Rock Properties Evaluation Using Multi-Scale Digital Images	2794
<i>Huafeng Sun, Dejia Di, Guo Tao, Sandra Vega, Kesai Li, Luofu Liu, Hadi Belhaj</i>	

SESSION 39: GAS TECHNOLOGY – CARBON CAPTURE AND STORAGE TECHNOLOGY

Soft-SAFT Equation of State as a Valuable Tool for the Design of new CO₂ Capture Technologies	2803
<i>Emanuel A. Crespo, Mónica Amaral, Claudio Dariva, Pedro J. Carvalho, João A. P. Coutinho, Félix Llovell, Luis M. C. Pereira, Lourdes F. Vega</i>	
Efficient Scheme for Native Carbon Dioxide Recovery from Sulphur Recovery Unit Tail Gas	2816
<i>Julie Bonnereau, Claire Weiss, France Delannoy, Matthias Linicus, Eckhard Jüngst, Paul Terrien</i>	
Upscaling Chemical Looping Combustion for Enhanced Oil Recovery	2829
<i>F. M. M. Snijkers, M. Jacobs, K. Albertsen, P. Moldenhauer, T. Mattisson</i>	
Gas to Wire With Carbon Capture & Storage: A Sustainable Way for On-Site Power Generation by Produced Gas	2841
<i>Maria Andrei, Giuseppe Sammarco</i>	
Enhanced Gas Recovery by CO₂ Injection and Sequestration: Effect of Connate Water Salinity on Displacement Efficiency	2858
<i>M. K. Abba, A. J. Abbas, G. G. Nasr</i>	
Guideline for Development of CO₂ Capture, Transport and EOR Integrated System for UAE	2870
<i>Prachi Singh, Frank Geuzebroek</i>	
Prediction of the CO₂ Solubility in Deep Eutectic Solvents: A Comparative Study between PC-SAFT and Cubic Equations of State	2880
<i>Olamide H. Animasahun, Muhammad N. Khan, Cor J. Peters</i>	

SESSION 40: UNCONVENTIONAL RESOURCES – UNCONVENTIONAL IN MIDDLE EAST

Unlocking Egypt's Unconventional Potential	2905
<i>Amr Zaher, Etienne Loubens, Mohamed Zayed, Nicholas Gill, Oneil Sadhu, Layla El Hares</i>	
Shedding the First Light on the Shilaif Source Rock in the Syncline, Onshore Abu Dhabi, UAE	2920
<i>Suvodip Dasgupta, Ishan Raina, Magdalena Povstyanova, Pierre Van Laer, Muhammad Zeeshan Baig, Neil Casson, Hassan Al Marzooqi, Salama Jumaa Al Suwaidi, Humair Ali, Surej Kumar Subbiah, Ashish D' Mello</i>	

Horizontal Wells Hydraulic Fracturing from Tight HPHT to Multilayer Differential Depleted Gas Accumulations in Oman	2943
<i>Chavez Juan, Hinai Mohamed, Alawi Fahad, Al-Ghaithi Ali</i>	
Successful Completion of the First Ten Multistage Acid Fracturing of an Oil Producer in Saudi Arabia	2954
<i>F. M. Alotaibi, M. N. Al-Dahlan, M. Rafie, S. G. Otaibi, Rifat Said, H. A. Aljulaih</i>	
Assessment of Reservoir Quality and Maturity using Near-Real Time Surface Measurements: Diyab Source Rock In Abu Dhabi	2968
<i>H. Ali, K. Bondabou, P. Van Laer, M. Z. Baig, I. Raina, S. Dasgupta, M. Ammar, A. M. Dmello, S. Khan</i>	
Appraising Unconventional Play Potential in Egypt's Western Desert	2988
<i>Mohamed Salah, Mazher H. Ibrahim</i>	
The Evaluation of the First Biodegradable Diverter in Acid Fracturing in Kuwait: Case Study	3010
<i>M. R. Al-Othman, M. Elmofiti, A. Bu Hamad, N. B. Alhouti, M. N. Al-Haddad, A. M. Al Hamad, A. Allam, W. Eid</i>	

SESSION 41: FIELD DEVELOPMENT – FLUID AND ROCK CHARACTERIZATION

Determination of Fluid Connectivity in the Middle Marrant of the Jurassic Fields of North Kuwait using Oil Fingerprinting	3029
<i>R. Dekker, E. Tegelaar, S. Perrotta, S. D. Miller, X. Le Varlet, C-A. Hasler, S. R. Narhari, J. D. Rao, N. Neog, A. A. Dwindt, S. Al-Haidar, Qusem Dasthi</i>	
Numerical Interpretation of Laboratory Spontaneous Imbibition - Incorporation of the Capillary Back Pressure and How it Affects SCAL	3042
<i>Pål Ø. Andersen, Bergit Brattekkås, Kenny Walrond, Daisy S. Aisyah, Oddbjørn Nødland, Arild Lohne, Håkon Haugland, Tore L. Føyen, Martin A. Fernø</i>	
Equivalent Fluid Model Characterization Expedites Daily Surface Network Optimization in a Complex Reservoir Under Miscible WAG, Field Case	3062
<i>Erismar Rubio, Karem Alejandra Khan, Luis Figuera, Rayner Davila, Ahmed Abdulla Bin Amro, Sergio Caicedo, Salem Al-Ameri</i>	
A Study on the Factors Affecting the Reliability of Laboratory-Measured Gas Permeability	3074
<i>Shadi Salahshoor, Mashhad Fahes</i>	
On the Importance of SCAL Integration with Key Geologic Controls for Better Field Performance Prediction: A Case Study from a Giant Carbonate Reservoir, Offshore Abu Dhabi	3091
<i>Balki Selvam, Manal Al Harbi, Rolf Herrmann, Li Dachang, Hesham Al Zawa, Gary Ottinger, Joe Patterson, Abdulla Al Neyadi</i>	

SESSION 42: FIELD DEVELOPMENT – MATURED FIELD RE-DEVELOPMENT AND CHALLENGES

Targeting Secondary Oil Rims GOGD in a Mature 50 Year Old Development in the Sultanate of Oman	3104
<i>M. Boya Ferrero, M. Holst, L. Bazalgette, E. Unal, S. Farsi, A. Sheheimi</i>	
Research and Application of Ultra-Short Radius Flexible Sealed Coring Technology in Re-Development of Matured Fields	3125
<i>He Liu, Shaolin Zhang, Qiang Sun, Tao Li, Eryang Ming, Shouzhi Huang, Weiye Han, Qiang Chen, Yiliang Li, Xiaohan Pei</i>	
Key Learnings from Re-Development Activity and Waterflood EOR of Mature Brown Field: Heterogeneous Compartmentalized Reservoir Case Study, Western Desert, Egypt	3134
<i>M. A. El-Bagoury, M. Fahmy, M. Kamal, A. Saad, V. Vanheeswijk, R. Kharboutly</i>	
Selection and Deployment of Downhole Self-Equalizing Sub-Surface Safety Valves over Non-Equalizing Sub-Surface Safety Valves in Deepwater Wells	3151
<i>Dheeraj Singh</i>	
Combined Viscoelastic Surfactant and Induced Imbibition for CEOR of Low Permeability Reservoir	3160
<i>Cai Hongyan, Zhang Yi, Li Jianguo, Tian Maozhang, Luo Wenli</i>	

SESSION 43: OPERATIONAL EXCELLENCE – INTEGRITY MANAGEMENT AND ASSET LIFE EXTENSION

Spheroid Life Extension: Contemporary Approach, Advanced Simulation and Case Study	3171
<i>Ammar Al Omari, Osama Herzallah, Ashraf Toubar, Zakaria Awda, Nouf Mubarak</i>	

Integrity of LNG Flare Systems	3182
<i>Houssam Sabry</i>	
Improve Integrity of Blowdown Lines Using Innovative Approach to Estimate Cold Temperature Creep	3195
<i>Vivek Prasad, Giorgio Loretelli, Harendra Singh, Faris Kamal, Oussama Takieddine</i>	
Flow Induced Vibration in Multi Phase Piping Systems - Successful Mitigation	3210
<i>Haribabu Locharla, Ibrahim Al Awadhi, Sathyanath Narayana, Alya Al Ahmad, Robert Miranda</i>	

VOLUME 5

Managing of Aging Assets and Ways for its Remnant Life Extension	3219
<i>Hatem Rashad</i>	

SESSION 44: IOR/EOR – APPLICATIONS OF CHEMICAL EOR IN HARSH RESERVOIR CONDITIONS

A New Facile Approach to Estimate EOR Polymers Thermal Stability at Harsh Reservoir Conditions	3231
<i>Xuan Zhang, Ming Han, Alhasan Fuseni, Abdulkareem M. Alsofi</i>	
Successful Field Trial of a Shear-Resistant, High-Injectivity, Reservoir-Triggered Polymer	3245
<i>David Chappell, Jon Stapley, Bilal Rashid, Martin Towns, William J. Andrews, Mojtaba Kiani, Mehdi Salehi</i>	
A New Thermally Stable Synthetic Polymer for Harsh Conditions of Middle East Reservoirs. Part I. Thermal Stability and Injection in Carbonate Cores.	3257
<i>Guillaume Dupuis, Sebastien Antignard, Bruno Giovannetti, Nicolas Gaillard, Stephane Jouenne, Gilles Bourdarot, Danielle Morel, Alain Zaitoun</i>	
Chemical Formulation Design in High Salinity, High Temperature Carbonate Reservoir for a Super Giant Offshore Field in Middle East	3274
<i>Muhammad Y. Jabbar, Alunood Al Sowaidi, Amna Al Obeidli, Thomas W. Willingham, Chris Britton, Stephanie Adkins, Mojdeh Delshad, Rong Xiao, Gary F Teletzke</i>	
Treatment of Produced Polymer-Containing Water with a Water Treatment Pilot Unit in the Matzen Field, Austria	3296
<i>Verena Leitenmueller, Johannes Wenzina, Rainer Kadnar, Karl Jamek, Herbert Hofstaetter</i>	
Feasibility and Influencing Factors of Oil Tolerant Nitrogen Foam on EOR Effect in the Fractured-Vuggy Carbonate Reservoir	3310
<i>Wei Su, Jirui Hou, Fenglan Zhao, Yuan Xi, Teng Zhao, Baodong Ding</i>	

SESSION 45: DRILLING AND COMPLETION TECHNOLOGY - ADVANCEMENTS IN RIG EQUIPMENT DESIGNS

Digitally Enabled Top Drive	3323
<i>Anders H. Holm</i>	
Automated Catwalk Machine for Land Rigs	3330
<i>Trond Loeyning</i>	
Safer, Faster and Efficient Operations Through Operation Offline Stand Building: A Case Study	3337
<i>Chaima Belbaraka, Osama Abd Elnaby</i>	
Offline Tubular Management System Improves Efficiencies of Total Well Time by More Than 10%	3349
<i>T. Banger</i>	
Multiple Key Operational Achievements Yield Major Economic Impact as a Result of Successfully Controlling Fluid Losses in Troublesome Zones of Jurassic to Permian Age in Offshore United Arab Emirates	3357
<i>Medhat Al Habsi, Patrick Bijjani, Graeme Dawson, Marcos Anez, Peter Henderson, Mark Luyster, Kim Tresco, James W. Dobson</i>	
Working together for Successful Drilling through a Fault: Risk Management, Planning and Execution	3378
<i>M. Yanez_banda, A. Ruzhnikov, A. Kasimin, M. Husien, C. Malagon, K. Al-Wahedi</i>	

SESSION 46: DRILLING AND COMPLETION TECHNOLOGY – EXTENDED REACH TECHNOLOGY AND BEYOND MRC

Modelling of Casing Reciprocation During Cement Displacement in ERD Wells	3388
<i>Olzhas Sissenov, Alexey Ruzhnikov</i>	

Casing Swivel Tool Greatly Expands Liner Deployment Capability in the Giant Offshore Oil Field Abu Dhabi Resulting in a World Record Single-Run 6-5/8 Inch Lower Completion	3398
<i>James Thomas Ryan, Juan Alvarez, Matthew Clews, Melanie Reichle, Tomasz Szary, Benoit Deschamps, Kent Espeland</i>	
Big Bore Remote Actuated Barrier Device Development and Qualification	3410
<i>Daniel Beaman, Daniel Newton, Jarle Oaland</i>	
Tailored Advanced Solutions for Challenging ERD Wells Intermediate Casing Cementing in UAE	3428
<i>Romulo Bermudez Alvarado, Luis Navas, Abdelkerim Doutoum Mahamat Habib, Sheldon Seales, Ruben Medina, Vignesh Vaidyanathan</i>	
Analytical Approach of Tractoring Strategies in Coiled Tubing Applications in Horizontal Wells.....	3451
<i>Mohamed N. Noui-Mehidi, Abubaker Saeed, Wael Badeghaish</i>	
Forecast Of Ultra-Shallow Three-dimension Horizontal Well Extension Limit	3456
<i>Kong Lulin, Tao Ye, Liu Xinyun</i>	
UAE New Drilling Record.....	3470
<i>Rashad Allahyarov, Osama Al Khatib, Romulo Bermudez</i>	

SESSION 47: PEOPLE AND TALENT – WORK FORCE ENGAGEMENT

Reduce the Costs of Ignorance through Retention of Critical Knowledge	3482
<i>Rob Van Der Spek, Michael Kelleher</i>	
How the CORE Project is Helping Drive a Culture of Continuous Improvement.....	3492
<i>Israa Al Saadi, Shahla Khan</i>	
Happiness Affecting the Workplace Environment and Employees Wellbeing.....	3504
<i>Hamda Sanad Al Qubaisi</i>	
Forty Years of AlMansoori Focused Workforce Engagement. A Catalyst for Customer Value, International Growth, Profitability with Happy Clients and Happy Employees!.....	3512
<i>Ibrahim Al Alawi, Chris Kuijken</i>	
Maximizing Cost Efficiency & Enhancing the Culture of Cost Consciousness Through Workforce Engagement.....	3527
<i>Shahla Khan, Israa Al Saadi</i>	

SESSION 48: PROJECT ENGINEERING AND MANAGEMENT – BENEFITS OF AUTOMATION AND OPTIMISATION

Optimization of Habshan-5 NGL Run-Down System.....	3536
<i>Murali Muthukrishnan</i>	
How Much is Steam Worth?.....	3546
<i>Ahmed S. Aseeri</i>	
Keyless Pigging	3558
<i>T. Tharmalingam, Mohamed El-Sawah, Pradip Kumar Sensarma, Ashraf Shabaka, Ali Hamed Al-Ameri, Amr Nessim</i>	
Real Gas Lift Optimization: An Alternative to Timer Based Intermittent Gas Lift.....	3570
<i>R. E. Moffett, S. R. Seale</i>	
Risk Based Quality Control in Projects Procurement	3579
<i>Ahmed Elhadad</i>	
IEC61850 Based Contingency Managed Load Shedding Solution at Gasco Ruwais.....	3589
<i>Shiva Sekar</i>	

SESSION 50: E&P GEOSCIENCE – ADVANCES IN FORMATION EVALUATION AND PETROPHYSICS - III

A Systematic Approach on Nuclear Magnetic Resonance Petrophysical Solutions to overcome Reservoir & Fluid Characterization Challenges in Exploration-cum-Fast Appraisal Carbonate Reservoir Field of Abu Dhabi, UAE.....	3599
<i>Maniesh Singh, Ibukun Bankole, Noora Al Shehhi, Asma Aldahmani, Salah Al Qallabi, Mula Nur Ahmad, Muhammad Aamir, Khaled Al Hosani, Deepak Voleti, Faaeza Alkatheeri</i>	
Using Casedhole Formation Evaluation to Bridge the Gap when Openhole Logging is Not Feasible.....	3623
<i>Raghu Ramamoorthy, Fatima Mohamed Al Aryani, Angelos Mavromatidis</i>	
Accurate Drawdown Mobility Estimation Using Computational Fluid Dynamics Simulation.....	3638
<i>Peng Yuan, Jianghui Wu, Hao Zhang, Xu Huang, Alberto Mezzatesta, Quming Zhou, Mohammad Elyyan</i>	

Normalized Depths as Key Input and Detailed QC Steps for Improved Permeability Predictions Using Existing Machine Learning Techniques	3652
<i>Deepak Kumar Voleti, Ashish Kundu, Maniesh Singh</i>	
Fluid Front Monitoring Using Smart & Safe Pulsed Neutron Technology on Slick-Line	3671
<i>Rahul Grover, Luke Perkins, Fabien Nibodeau, Roman Korkin</i>	
A Different Approach to Evaluate Wettability in Shales.....	3679
<i>Yani C. Araujo De Itriago, Jochen Albrecht, Andre Möeller, Gerald Dallmann</i>	

SESSION 51: E&P GEOSCIENCE – ADVANCES IN RESERVOIR CHARACTERISATION II

Improving Pore Network Imaging & Characterization of Microporous Carbonate Rocks Using Multi-Scale Imaging Techniques.....	3690
<i>A. Hassan, V. Chandra, M. P. Yutkin, T. W. Patzek, D. N. Espinoza</i>	
Innovative Workflow for Grouping, Averaging, End-Point Scaling and Assessing Uncertainty of Water-Oil Relative-Permeability Curves, Considering Corresponding Normalized Water-Fractional-Flow Curves, Reservoir-Rock Types and Wettability Indexes	3708
<i>F. C. Ferreira, F. Pairoys, D. V. Klemm, B. Baser-Langenhau, S. Safonov, O. Dinariev, N. Evseev, M. D. Silva, G. Da Fraga Carneiro</i>	
DigiCoal: A Numerical Toolbox for Fractured Coal Characterisation.....	3730
<i>Yu Jing, Ryan Armstrong, Peyman Mostaghimi</i>	
Low Resistivity Pay Identification in Lower Cretaceous Carbonates, Onshore UAE	3750
<i>J. L. Ruiz, M. E. El Gohary, H. Al Beshr, M. A. Al Hosani, L. Hannon, S. Rajwade</i>	

SESSION 52: GAS TECHNOLOGY – ADVANCES IN SOUR GAS PROCESSING

HPHT Sour Gas Production- Case Study	3762
<i>Mubashir Ahmad, Ihab Nabil Mohamed, Fawad Zain Yousfi, Zaher Hilal Hamdan Al Hajri, Saleem Salman Al Zaabi, Alaa Mohamed Nasr, Mourad Ben Romdhane, Mohamed Mubarak Albadi, Fuad Shamekh Al Badi, Abdulla Mubarak Bin Shamlan, Mohammed Hasan Al-Ahmed</i>	
Natural Gas Plant Debottlenecking Thanks to Hybrid Solvent.....	3774
<i>Eric Cloarec, Renaud Cadours, Claire Weiss</i>	
Future for Ancient Sulphur Recovery Units SRUs at Habshan.....	3786
<i>Yasser Hassan, Fatima Alraeesi</i>	
Formation of Mercaptans and Organosulfur Species in Claus Process	3795
<i>Ramees K. Rahman, Abhijeet G. Raj, Salisu Ibrahim</i>	

SESSION 53: UNCONVENTIONAL RESOURCES – CHALLENGES IN GEOSCIENCE

Assessing Reservoir Quality of the Diyab Source Rock in UAE	3807
<i>Muhammad Zeeshan Baig, Pierre Van Laer, Karl Leyrer, Gennady Makrachev, Hassan Al Marzooqi, Salama Al Suwaidi, Ishan Raina, Suvodip Dasgupta</i>	
Sweet Spot Mapping in the Montney Tight Gas Reservoir	3827
<i>A. Kato, K. Akihisa, L. Knapp, M. De Groot, K. Yamazaki</i>	
High-Resolution Porosity-Permeability Logs Driven by Macro-to-Nano Structures and PVT-Pyro-Geochemistry in a Middle East Unconventional Formation	3839
<i>Adnan Al-Shamali, P. K. Mishra, Naveen K. Verma, Riyad Quttainah, Osama Al Jallad, Avrami Grader, Joel Walls, Safouh Koronfol, Anyela Morcote</i>	
Importance of Borehole Images and Dipole Sonic Data for Optimal Stimulation in a Tectonic Compressive Setting	3851
<i>H. Gamero Diaz, L. Mohsin, J. Desroches, G. A. Waters, J. D. Peralta, O. Al Zeidi</i>	
Seismic Reservoir Characterisation for Horizontal Well Planning: A Field Case Study of an Unconventional Upper Jurassic Reservoir Onshore UAE.....	3868
<i>Maria Helena Cairo, Abdulla Al Kobaisi, Fernando Neves</i>	
Advanced Reservoir Characterization in Vaca Muerta using Chemical Tracer Technology	3880
<i>Patricio Panichelli, Joaquín Ramírez Martínez, Pablo Crespo, Iván Lanusse Noguera, Monalisa Chatterjee</i>	
Organic Matter Variability in the Early Silurian Qusaiba Source Rocks, Saudi Arabia	3892
<i>Shaun Hayton, Hartmut Jaeger</i>	

SESSION 54: FIELD DEVELOPMENT – EOR – CO2

Carbon Dioxide Saturated Water Injection for EOR in Carbonate Reservoir	3906
<i>Mai Shimokawara, Elakneswaran Yogarajah, Toyoharu Nawa, Satoru Takahashi</i>	
Coupled Multi-Reservoir Multi-Network Production Optimization of an Onshore Middle-Eastern Reservoir with Sour Gas Reinjection for Miscible EOR	3918
<i>Varun Pathak, Chelsea Palaschak, Anjani Kumar, Rob Eastick, Ralf Schulz, Abdullah Al-Hadhrani</i>	
Real-Time Resistivity Monitoring Tool for In-Situ Foam Front Tracking	3930
<i>Mohamed Haroun, Abdul Moqtadir Mohammed, Bharat Somra, Soham Punjabi, Ajayi Temitope, Youngsun Yim, Stavroula Anastasiou, Jassim Abu Baker, Liu Haoge, Mohammed Al Kobaisi, Metin Karakas, Fred Aminzadeh, Francisco Corova</i>	
Mechanisms and EOR Potential of Nitrogen Assisted Artificial Foamy Oil Flooding	3941
<i>Youwei Jiang, Bojun Wang, Qiu Li, Jian Zhao, Yunjun Zhang, Haoran Zheng</i>	
Experimental Phase Behavior Studies for EOS Modeling in CO2-EOR Projects in the UAE	3951
<i>N. A. Achuliwor, J. M. Williams</i>	
Molecular Simulation of CO2 Sequestration and Enhanced Gas Recovery in Gas Rich Shale: An Insight Based on Realistic Kerogen Model	3972
<i>Liang Huang, Zhengfu Ning, He Li, Qing Wang, Hongtao Ye, Huibo Qin</i>	

SESSION 55: FIELD DEVELOPMENT – EOR – LOW SALINITY

Integrating Microgels and Low Salinity Waterflooding to Improve Conformance Control in Fractured Reservoirs	3981
<i>Ali Alhuraishawy, Mingzhen Wei, Baojun Bai, Abdullah Almansour</i>	
Experimental Investigation of the Underlying Mechanism Behind Improved Oil Recovery by Low Salinity Water Injection in Carbonate Reservoir Rocks	4001
<i>Mohamed Alhammedi, Pedram Mahzari, Mehran Sohrabi</i>	

VOLUME 6

Surface Complexation and Equilibrium Modelling for Low Salinity Waterflooding in Sandstone Reservoirs	4018
<i>Y. Elakneswaran, M. Shimokawara, T. Nawa, S. Takahashi</i>	
A New Enhanced Oil Recovery Approach for Clayey Sandstone Reservoirs Using Sequential Injection of Chelating Agent Solutions with Different Concentrations	4033
<i>Ahmed Abdulhamid Mahmoud, Hasan Al-Hashim</i>	
The Effect of Ba²⁺ & Sr²⁺ on EOR Efficiency in Carbonate Reservoir During Low Salinity Waterflooding	4043
<i>Hyemin Park, Yongjun Park, Yeonkyeong Yeonkyeong, Joohyung Kim, Wonsuk Lee, Oukwang Kwon, Wonmo Sung</i>	

SESSION 56: OPERATIONAL EXCELLENCE – ADVANCED MONITORING ANALYTICAL APPROACH

Monitoring of Greenhouse Gas Emissions From Space in the Middle East	4057
<i>Jean-Francois Gauthier, Stephane Germain</i>	
Validating Automated Real-Time Produced Water Composition Measurement Device with Field Produced Water Samples: A Pathway to Field Trial	4066
<i>N. Ghorbani, C. Yan, P. Guraieb, R. C. Tomson, D. Abdallah, A. Ben Aouda, N. M. Odeh, T. A. Al Daghar</i>	
Produced Water Analysis by X-Ray Fluorescence with and without the Presence of Crude Oil	4079
<i>C. Yan, P. Guraieb, N. Ghorbani, R. C. Tomson, D. Abdallah, A. Ben Aouda, N. M. Odeh, T. A. Al Daghar</i>	
Application of a Fuzzy Expert System to Analyze and Anticipate ESP Failure Modes	4092
<i>David Grassian, Mohammed Bahatem, Trevor Scott, Daniel Olsen</i>	
Preventing Explosions and Sudden Breakdowns of Oil Filled Power Transformers by Packed Advance Oil Testing	4102
<i>Khaled Atef Abou Ali, Mohammed Alrais</i>	
Minimizing Production Losses through Effective Failure Analysis and Mitigation	4120
<i>Zhenhai Liu</i>	

Electromagnetic Corrosion Logs, Insights from Yard Test	4129
<i>Ali Al Macki, Albashir Al Salmi, Timothy Duggan, Eduardo Delgado, Jackie Kechichian, Hamood Al Busaidi, Nasser Al Azri</i>	

SESSION 57: IOR/EOR – LOW SALINITY WATER INJECTION FOR IOR/EOR APPLICATIONS

Modeling of Irreversible Wettability during Low Salinity Waterflooding	4138
<i>Shawket G. Ghedan, Vikram Chandrasekar, Fraser Skoreyko, Susan Fellows, Anjani Kumar</i>	
A Case Study of Oil Recovery Improvement by Low Salinity Water Injection	4167
<i>S. Amir Farzaneh, Andrew Carnegie, Mehran Sohrabi, John R. Mills, Juliana M. F. Facanha, Ben Sellers</i>	
Baseline Establishment for a Polymer Flood Pilot Test in an Unconsolidated Sandstone Reservoir in the South of the Sultanate of Oman	4210
<i>Hanaa Al-Sulaimani, Zainab Al-Rawahi, Conny Velazco Quesada, Mohammed Al-Ghannami, Mervin Frumau, Azza Al-Hussaini, Gijs Hemink, Muhammed Nadeem, Ali Khattak, Ghalib Al-Hinai, Majid Al-Mahrooqi, Maitham Al-Shidi, Muhammad Syed</i>	
Experimental Investigation of Electrokinetic Assisted Hybrid Smartwater EOR in Carbonate Reservoirs	4226
<i>Y. Yim, M. R. Haroun, M. Al Kobaisi, H. K. Sarma, J. S. Gomes, M. M. Rahman</i>	

SESSION 58: DRILLING AND COMPLETION TECHNOLOGY – SAND CONTROL AND ICD COMPLETION

Responsive Design of Inflow Control Devices Completions for Horizontal Wells	4249
<i>Christophe Bassem Maalouf, Maher Zidan, Mattheus Uijttenhout, Eglier Jose Hernandez, Salem Al-Jaberi, Yawar Saeed, Philippe Gambier, Adelis Alfonso Valero Gil, Robert A. Graham</i>	
First Successful Application of Ceramic Sand Screen in Maturing Oil Field, Offshore East Malaysia	4260
<i>Sulaiman Sidek, Kellen Goh Hui Lian, Yap Bee Ching, Kuku Trjanganung, Bahrom Madon, Zainuddin Yusop, Bhargava Ram Gundemoni, Richard Jackson, Peter Barth</i>	
Sand Control Technology for Extended-Reach Wells: Best Practices from the Longest Gravel Packs Performed Offshore Brazil	4281
<i>F. C. Colbert, A. L. Costa, R. F. Gachet, F. M. Garcia, A. T Jardim Neto</i>	
Integrated Sand Control Technique Utilization of Thru Tubing Sand Screen and Wellhead De-Sander Technology	4303
<i>Aldani Malau, Balok Sutarto, Farid Ghozali, Noviadi Istono, Tejo Sukotrihadiyono</i>	

SESSION 59: DRILLING AND COMPLETION TECHNOLOGY – DRILLING BEYOND THE LIMIT

New Challenges on Qualification and Selection of High Strength Materials for Critical Sour Environment	4315
<i>J. Oliveira, F. Thébault, V. Dalbert, D. Guedes, A. Yanik, G. Néel</i>	
Using Aluminum Drill Pipe with Axial Oscillation Tools to Significantly Improve Drilling Performance	4328
<i>K. Mills, S. Menand, R. Grissom</i>	
Intelligent Drilling System: Expanding the Envelope of Wired Drill Pipe	4341
<i>O. Sehsah, A. Ghazzawi, G. J. Vie, T. Al-Tajar, A. Ali, A. H. Al-Mohammed, M. Itani, S. Ullah, H. Escalera, M. Balka</i>	

SESSION 60: PEOPLE AND TALENT – SUCCESSION AND LEADERSHIP

Implementation of Dispersed Gas Model for Kick Tolerance Analysis of an HPHT Exploration Well in Norway	4357
<i>K. Karahasan, J. S. Oyovwevotu, W. E. Szemat Vielma</i>	
Deepest Horizontal Well Drilled to TD Using an Underbalanced Nitrified Foam System in a Depleted Limestone Formation in Pakistan: An Analysis of the Design, Execution, and Results	4370
<i>Ali Khalid, Qasim Ashraf, Khurram Luqman, Elie Takla, Agha Ghulam Nabi, Sajjad Ashraf, Naveed Hasan, Muhammad Ali</i>	
World Drilling Limit Envelope: Why it Shows an Irregular Triangle?	4381
<i>Xin Li, Deli Gao, Zhenxin Jiang, He Li, Hui Zhang</i>	

Drilling while Casing Extended-Reach Wells? What is the Limit?	4392
<i>He Li, Deli Gao, Xin Li, Fengrui Sun, Yongsheng Liu</i>	
Implementation of a Successful Talent Management & Succession Planning Governance Framework	4410
<i>Naveen Khare, Santhosh Koyadan</i>	
An Overview of Challenges faced by Woman and its Mitigation Plan in Upstream Oil & Gas Fields of Abu Dhabi, UAE	4420
<i>Faaeza Al Katheeri</i>	
Building a Common Narrative on Employee Performance	4429
<i>Karthik Nataraj Ramachandran, Khalil Al Hosaini, Ayesha Al Hammadi</i>	
Designing an Effective Leadership Development and Succession Strategy to Deliver Value Creation	4442
<i>Bjorn Ewers, Tamer M. Obied, Philipp Braun</i>	
Achieving Succession Management through the Identification and Positioning of Organizational Leaders Using Leadership Effectiveness Evaluation Tools	4452
<i>S. Okomgboeso</i>	
Preventing Zombie Organization Through Enagement Strategies	4465
<i>Bader Al Mansoori</i>	

SESSION 61: PROJECT ENGINEERING AND MANAGEMENT – STRATEGIES FOR SUCCESSFUL PROJECT EXECUTION

ADMA Baseline RBI Passport - Innovative Approach to Enhance Integrity Risks Mitigation in Major Projects and Operating Phase	4477
<i>Farooq Jaber Ali Al-Awadi, Mahdi Mohamed Al Marzooqi, Mohamed Saif Al-Hameli, Sanjay H Khade, Gary Penney, Naim Jamal</i>	
The Case for Requirement Management: How Industrial Design Requirements are Specified and Executed in the Oil Subsea Production Systems SPS vs. Shipbuilding Industries	4490
<i>Luca A. Piciaccia</i>	
Engineering and Constructability Challenges of Site Preparation at Zirku Island for the Satah Al-Razboot New Oil Field Development in the Arabian Gulf	4510
<i>Iqbal Ahmed, Sameh Seddik, Mohamed Eissa Al-Hajaj, Ioannis Chasiotis, Vasilis Vandolas</i>	
A Project Mode in Developing Oil and Gas on Artificial Islands: Cases Study of EPC, Batch Operation and Extended Reach Drilling	4529
<i>Yixiang Lyu</i>	
Upgrade Rig Moving System for Existing Land Rigs	4539
<i>Mahmoud M. Elrefai, Osama Abd Elnaby</i>	

SESSION 62: OFFSHORE AND MARINE – SUBSEA PIPELINES AND FLOW ASSURANCE

Flow Assurance during Gas Hydrate Production: Hydrate Regeneration Behavior and Blockage Risk Analysis in Wellbore	4551
<i>Zhiming Deng, Zhiyuan Wang, Yang Zhao, Yanli Guo, Jianbo Zhang, Baojiang Sun</i>	
Operational Bypass Pigging in Multiphase Lines - A Flow Assurance Study Comparison to Real Operation and Model Validation	4568
<i>Ashwin Pinto, Willi Voss, Ramesh Ladwa</i>	
Strength and Deformation Capacity of Lined Pipelines using Advanced FE Modelling	4582
<i>Lorenzo M. Bartolini, Roberto Bruschi, Lorenzo Marchionni, Antonio Parrella, Luitinog Vitali</i>	
Pipeline Blockage Location by Pressure Wave Analysis	4597
<i>Neil Stewart, Graham Jack</i>	
Offshore Pipeline Failure Root Cause Analysis	4607
<i>Emmanuel Iyeh, Grant Adams</i>	

SESSION 49: OFFSHORE AND MARINE – MARINE, LOGISTIC AND FIELD DEVELOPMENT

Acquisition of Satellite Derived Bathymetry Data for Offshore Engineering Projects - Island Case Study	4618
<i>Jayaprakash Athmaram, Ashish Gs Srinivasan</i>	
Soul - The Next Generation Heavy Lift Jack-Up Vessel	4637
<i>Gunnar Haug</i>	

Comprehensive Role of Structural Integrity Management for Offshore Assets – Project Case	4642
<i>Mohamed Elhabbal</i>	
Drivers and Constraints of International Projects Development in the Arctic	4651
<i>Irina Akimova</i>	

SESSION 63: E&P GEOSCIENCE – NEW APPROACHES IN CHARACTERISATION AND MODELLING COMPLEX RESERVOIRS - I

Characterization of High-Permeability Streaks Associated with Heterogeneous Stromatopoid Reefal Facies and Establishment of Modeling Workflow in Carbonate Reservoir, Offshore Abu Dhabi	4657
<i>Atsuro Kohda, Sameer Bellah, Toshiaki Shibasaki, Zahra Al Farhan, Akira Shibayama, Mohamed Al Hamami, Sami Al Jasmi</i>	
The ALBION Project: An Observatory in the Heart of a Carbonate Reservoir	4669
<i>Gérard J. Massonnet, Jean-Paul Rolando, Charles Danquigny</i>	
Novel Method for Consistent Initialization of Reservoir Simulation Models with Oil/Water Paleo-Contacts	4678
<i>Leonardo Patacchini, Farzeen Mohmed, Arthur P. C. Lavenu, Djamel Ouzzane, Richard Hinkley, Steven Crockett, Mahmoud Bedewi</i>	
Prediction of Reservoir Fluid Facies Through Collaborative Workflow of Advanced Surface and Downhole Methodology	4696
<i>H. Ali, A. Mavromatidis, D. Strapoc, A. M. Dmello, S. Khan, A. Al Blooshi, S. M. Lyonga</i>	
Novel Reservoir Modeling and Experimental Design Approach to Tackle the Challenge of Modeling Highly Compartmentalized Reservoirs under Large Uncertainties in a Mature Offshore Field, Malaysia	4708
<i>A. Sulaksana, M. Cheers, H. Dols, V. Yap</i>	

SESSION 64: E&P GEOSCIENCE: FAULTS AND FRACTURES

Integrated Fracture Characterization and Modeling in North Kuwait Carbonate Reservoirs	4731
<i>Pascal Richard, Sadok Lamine, Chinmaya Pattnaik, Neama Al Ajmi, Vijay Kidambi, Rao Narhari, Xavier Levarlet, Peter Swaby, Qasem Dashti</i>	
Sealing Faults: A Bamboozling Problem in Abu Dhabi Fields	4766
<i>Abdelwahab Noufal, Khalid Obaid</i>	
Delineation of Fracture Clusters by Integrating Tectonic Events, Seismic Attributes, BHI Interpretation, Mud Losses during Drilling and Well Test Data – A Case Study in a Carbonate Reservoir, Offshore	4788
<i>Lian Hou, Arthur P. C. Lavenu, Guifen Xi, Ahmed Saeed Al-Kaabi, Franciscus Van Kleef, Thierry Francis Lecoq, Asma Mohamed Al Blooshi</i>	
DFN Modeling Aided Reservoir Characterization	4804
<i>N. Karatalov, A. Stefaniak, L. Vaughan</i>	
Seismic Characteristics, Identification and Comparison of Strike Slip Fault Systems in Onshore/Shallow Marine Fields in Abu Dhabi, UAE	4817
<i>Muhammad Aamir, Mula Nur Ahmad, Dr. Abdelwahab Noufal</i>	

VOLUME 7

Twisting Slip and Rotation of UAE Fault System	4825
<i>Khalid Obaid, Abdelwahab Noufal, Mohamed Mahgoub</i>	
Integration of Pressure Transient Tests in Fracture Characterization in North Kuwait Carbonate Reservoirs	4841
<i>S. Lamine, P. Richard, E. Van Der Steen, C. Pattnaik, R. Narhari, X. Levarlet, Qasem Dashti</i>	
Fracture Modeling in Naturally Fractured Reservoir Using Damage Mechanics Coupled with Poromechanics	4858
<i>Ahmed Bubshait, Fred Aminzadeh, Birendra Jha</i>	

SESSION 65: PROJECT ENGINEERING AND MANAGEMENT – REALISING OPPORTUNITIES OF SMART FIELD TECHNOLOGY/AUTOMATION

Analysis of Wireless Data Transmission for the Site Survey of Telemetry Systems Projects	4871
<i>M. Aouadj, D. Sellami, F. Naciri, S. Aissi</i>	
Real Time Intelligent Alarm and Surveillance System in Heavy Oil Project- North Kuwait Illustrated Through Case Examples	4893
<i>Bassam Abdul-Aziz, Albesairi Ghazi, Alrashoud Ali, Alajmi Abdullallah, Al-Metlea Mubarak, Ledesma Fernando, Mohamed Assem, Heshmat Kareem</i>	
Main Automation Contractor Concept and Its Future Challenges	4900
<i>Islam Gazi, Hassan Ahmed Al-Ali, Ahmed Al-Falahi, Mohammad Hassan Al-Shamsi, Mohamed Khanbooli</i>	
Moving Toward Smart Monitoring and Predictive Maintenance of Downhole Tools Using the Industrial Internet of Things IIoT	4907
<i>Elias Temer, Hermann-Josef Pehl</i>	
Smart Automated Designs for better HSE Performance	4922
<i>Muhammad Adnan Akhtar</i>	
Long Term Downhole Wet-connector Technology for Separate Injection Well - A Case Study in Changqing Oil Field	4931
<i>L. Yang, L. Mu, H. Lu, W. Huang, B. Yao, Y. Ju, J. Wang, J. Yu, G. Hu, Z. Wang, S. Wang, W. Wang, S. Zhang, X. Lu, L. Sui</i>	

SESSION 66: PRODUCTION FACILITIES TECHNOLOGIES – EXTENDING THE LIFE CYCLE OF ASSETS

Tensioned String Anodes for Cathodic Protection of Offshore Platforms	4940
<i>Simone Tremolada</i>	
Successful Field Application of Bulk Water Removal Debottlenecks Declining Songkhla Marginal Offshore Fields, Extending Economic Life	4960
<i>Manuel De La Sota</i>	
Cathodic Protection Effectiveness Evaluation in ADCO Wells Utilizing Multi-Barrier Magnetic Defectoscopy	4971
<i>A. Yugay, H. B. Daghmouni, A. B. Ali, T. K. Gupta, S. P. R. Grandhe, M. Volkov</i>	
Improving Separation of Oil and Water Using a Novel Coalescing Centrifugal Pump	4981
<i>R. Husveg, T. Husveg, N. Van Teeffelen, M. Ottestad, M. R. Hansen</i>	
Integrated Surveillance in Cheleken Block Offshore Turkmenistan Using Automated Steady State and Transient Models	4994
<i>Roberto Espinoza, Suraj Mohan Uniyal, Ivan Marcelo Jaramillo Rivadeneira</i>	
In Situ Mercury Decontamination for Pipeline Decommissioning in the Gulf of Thailand	5006
<i>Chatawut Chanvanichskul, Suchada Punpruk, Passaworn Silakorn, Chanya Thammawong, Surapol Pornmitthum, Sith Kumsaranee</i>	

SESSION 67: FIELD DEVELOPMENT – EOR-PLANNING AND PILOTING

Development of Novel Foaming Agents for High Temperature Steam Applications	5016
<i>Aaron Sanders, M. N. Nguyen, Ginger Ren, Dana Westemoreland, Quoc Nguyen, Susan Dong, Carolina Rojas</i>	
Design of a Cyclic Steam Stimulation Pilot Test for the Orinoco Oil Belt. A New Vision About Steam Injection Flow Rates	5030
<i>Hilario Martin Rodriguez, Yaser Souraki, M^a Fernanda León, Ricardo Bezerra, Gilberto Peña, José Guitian, Elena Escobar</i>	
First Attempt of the Multi-Well Simultaneous Steam Stimulation for Offshore Heavy Oilfield: A Case Study	5053
<i>Xiaodong Han, Yigang Liu, Qiuxia Wang, Jian Zou, Hao Liu, Hongyu Wang, Xiang Zhang, Bing Wei</i>	
Improvements in EOR Screening, Laboratory Flood Tests and Model Description to Effectively Fast Track EOR Projects	5061
<i>J. Samuel Armacanqui T., L. F. Eyzaguirre G., G. Prudencio B., A. R. Choquejahua S., W. I. Prado S., J. A. Rodriguez C., Y. R. Tafur, J. M. Rojas, A. M. Hassan</i>	
Overcoming the Challenge of Forecasting EOR in Giant Extra-Heavy Oil Fields	5077
<i>E. Escobar, R. Coll, M. F. Leon-Carrera, S. Pérez</i>	

Atomic-Scale Theory of Relative Wettability of Surfaces for Enhanced Oil Recovery	5092
<i>Sokrates T. Pantelides, Sanjay Prabhakar, Jian Liu, Yu-Yang Zhang, Chia-Yun Lai, Matteo Chiesa, Saeed Alhassan</i>	

SESSION 68: FIELD DEVELOPMENT – ADVANCES IN EOR APPLICATIONS

A Geochemical Model for Investigation of Wettability Alteration during Brine-Dependent Flooding in Carbonate Reservoirs	5101
<i>Adedapo Awolayo, Hemanta Sarma, Long Nghiem, Gorucu Emre</i>	
Green EOR Utilizing Well-Defined Nano-Cellulose Based Nano-Fluids from Flask to Field	5121
<i>Bing Wei, Qinzhi Li, Hao Li, Laiming Lu, Wanfen Pu</i>	
Gas Injection Optimization in a Giant Offshore Carbonate Field and Impact on Field Development Plan. Case Study	5134
<i>Fazeel Ahmad, Arlen Sarsekov, Hiroki Iwama, Omar Yousaf Saif, Abdalla Abed, Ahmed Khalifa Al-Naeimi</i>	
Production Response to Supercritical CO₂ Cyclic Injection SCCI and CO₂ Sequestration Potential in a Tight Reservoir, China	5145
<i>Bing Wei, Xiang Zhang, Runnan Wu, Laiming Lu, Yibo Li, Wanfen Pu, Fayang Jin, Chongyang Wang</i>	
A Novel Displacement Mechanism of CO₂-Assisted Steam Flooding for Highly Acidic Heavy Oil Reservoir: An Experimental Study	5156
<i>Yi-Bo Li, Hao Gao, Wan-Fen Pu, Liu Yang, Hong Dong, Xiang Zhang, Runnan Wu, Qingzhi Li</i>	
Surfactants Impact on CO₂ Sequestration for Enhanced Gas Recovery and in Depleted Carbonate Reservoirs	5165
<i>Mohammed Eliebid, Mohamed Mahmoud, Reyad Shawabkeh, Salaheldin Elkatatny</i>	

SESSION 69: OPERATIONAL EXCELLENCE – COST OPTIMISATION

In-House Profit Improvement Program in Takreer	5177
<i>Ali Al-Mansoori</i>	
Step-Change in Maintenance and Inspection to Survive for Mid-to-Small E&P Company in this Continuing Oil Price Down Turn	5183
<i>Akgarat Panomrit, S. Sri-Intra, S. Limpanachaipornkul, W. Tanmon, D. Chaisalee, A. Buato, N. Sawattanakit, N. Kanokwareerat, C. Panmungmee, J. Udomsri, N. Chiawwattana, N. Taranut, W. Salee, C. Limsakul, R. Wichethamasak, P. Thamvechvitee, N. Kanlayanopakorn, S. Tangpuk, W. Wipoosanawan, S. Limprachaya, S. Nubsuwan, T. Sithiwasuwat, A. Banrungwong, J. Pongtemsuk, S. Chintanapatumporn</i>	
Value of LEAN Mentality with Trailer Mounted Well Test Unit in the Sultanate of Oman	5193
<i>Rafael Castiblanco</i>	
Reduce Total Cost of Ownership and Improve Industrial Grid Stability at Oil and Gas Facilities with Integrated Power Management	5203
<i>Taiyab Shamim, Andrés Felipe Moreno Pineda</i>	
A Smarter and Cost Saving Approach for Inhibited Hydrotest Water for Large Storage Tanks Commissioning	5215
<i>Houssam Sabry</i>	
1.800 Million \$ Cost Optimization in ADNOC LNG Plant Maintenance by Applying Creative Ideas Kaizen	5226
<i>Ahmed Al Ali</i>	

SESSION 70: DRILLING AND COMPLETION TECHNOLOGY: REAL VALUE OF REAL-TIME DRILLING OPERATIONS

Real-Time Operation: Game Changer Towards Effective and Collaborative Drilling Operation	5237
<i>Azizul Ateemin, Farah Farhana Iskandar, Amir Abd Aziz</i>	
High Resolution Data Integration Aid on Achieving Successful Level-4 Multilateral Wells in Clastic Reservoirs of Minagish Field, West Kuwait	5251
<i>Taher El Gezeery, Nasser Al Shemali, Adel Ebaid, Jeevan Kumar, Girija Padhy, Om Das, Tahani Al Rashidi, Cahyo Nugroho, Jhonatan H Pazos, Rabie S Noueihed</i>	
Variable In-Field Geomagnetic Referencing for Improved Wellbore Positioning in Directional Drilling	5272
<i>Hojjat Kabirzadeh, Elena Rangelova, Gyoo Ho Lee, Jaehoon Jeong, Ik Woo, Yu Zhang, Jeong Woo Kim</i>	

Optimizing the Drill Bit / Bottom Hole Assembly Pull Out of Hole Decision-Making Process Through the Use of Realtime, Downhole Drilling Data and Downhole Mechanical Specific Energy	5285
<i>Rashid Al-Kindi, Maurizio Cesetti, Rudra Singh, Rodrigo Antillon, Cliff Kirby, Charles Vanlammeran, Phalgun Paila</i>	
Is While-Drilling True Vertical Depth True?	5294
<i>Mahmoud Elgizawy, Natalia Androsovich, Hakim Rachi, Nashat Abbas, Yousef Al Katheeri, Saleel Koakkadan, Jamal Al Noukhatha, Brad Hargreaves</i>	
Experimental Investigation of the Effects of Rotational Speed and Weight on Bit on Drillstring Vibrations, Torque and Rate of Penetration	5302
<i>Vimlesh A. Bavadiya, Zeeneb Alsaihati, Ramadan Ahmed, Kyle Gustafson</i>	

SESSION 71: DRILLING AND COMPLETION TECHNOLOGY: MANAGING WELL BORE STABILITY IN CHALLENGING ENVIRONMENTS (REACTIVE SHALE, SALT, HIGH PRESSURE, LOW PRESSURE)

Resolving Shale Drilling Instabilities in the Middle East: A Holistic & Pragmatic Geomechanical Method	5324
<i>Hemant Singh, Prahlad Yadav, Saad Imtiaz, Satya Perumalla</i>	
Directional Underbalanced Drilling Success With Up to 40% Nitrogen Using Mud-Pulse MWD and Rotary Steerable Technology	5339
<i>Lee Dolman, Ken Sudron</i>	
A Proven Multidisciplinary Approach in Combating Water Flow Potential While Drilling the Asmari Formation in the Western Region of Abu Dhabi	5357
<i>F. A. Khan, M. Alhanash, G. Walters, M. Elenbaas</i>	
Formulation of Inhibitive Water Based Mud System with Synthesized Graft Copolymer: A Novel Approach to Mitigate the Wellbore Instability Problems in Shale Formation	5366
<i>Saket Kumar, Priyanka Sundriyal, Nitesh Kumar</i>	
Stabilizing Highly Fractured, Middle Cretaceous Formations by Using Organic Fibres While Drilling an Exploration Well in Eastern Abu Dhabi	5376
<i>Egil Ronaes, Drilchem Norge, Bjorn Ovreik, Drilchem Norge, Johannes Ladenhauf</i>	
Wellbore Stability Management to Avoid Serious Drilling Hazards in High Deviated Well-Application of Real Time Geomechanics	5384
<i>Mishari Al Hajeri, Waleed Al Safar, Pravind K. Gupta, Sushil K. Raturi, Omran Al Zankawi, Khaled Hussain Bojarah, Aisha Yousef Al Ghareeb, Ali Mansour Al Aryan, Vinay Naik, Mukesh Shastri, Mohamed Belhouchet, Abba Abdessalem</i>	

SESSION 72: DRILLING AND COMPLETION TECHNOLOGY – ADVANCES IN DEEP WATER DRILLING TECHNOLOGY

The Successful Application of One Run Drilling Technology in Big-Thickness Halite Formation of Ultra-Deep Water	5402
<i>Ping Liqiu, Wang Xi, Li Rong, Yang Rui, Liu Chenchao</i>	
Foam Cement Implementation - Deepwater Angola Case Histories	5411
<i>Antonio T. Joao, Gerson Andrade, Adriana Alegria</i>	
Deepwater MPD Operation and Design Method	5422
<i>Y. Kuroda, H. Kudo, K. Toyoda</i>	
Study on Rising Velocity of Methane Bubble in Deepwater Wellbore During the Shut-In Period	5432
<i>Hao Li, Baojiang Sun, Yonghai Gao, Yanli Guo, Xinxin Zhao, Jintang Wang, Jin Bo Wang</i>	
Step Change in Deepwater Drilling Performance Through Optimisation Saves Operator 3.5 Rig Days, West Africa	5453
<i>Nils Trulsvik, Lauren Grant, Gregg Alexander, Robert Alvarado, Waco Diffendaffer, Lindsey Macleod, Nicholas Tetley</i>	

SESSION 73: HSE – INTEGRATING ASSET INTEGRITY AND HSE MANAGEMENT

Early Gas Leak Detection EGLD	5465
<i>Marc Baque</i>	
QRA Ruleset for the Sour Pipelines of the Kashagan Field	5481
<i>Athena Scaperdas, Ian Lines, Marc Young, Philip Pennicott</i>	

Innovative Use of Drones Improves Safety on Asset Integrity	5494
<i>V. Sivaraj Kumar</i>	
The Study of Effects from Small Bore Connection Geometry for High Vibrational Excitation	5500
<i>S. Pewkliang, P. Janbanjong, P. Rahong, N. Muangsuankwan, S. Nokjib</i>	
Myanmar Online Bowtie to Prevent Major Accident Events MAEs	5520
<i>Sontirat Rujipattanapong, Akaradech Apornsuvan</i>	
Enhancing Sustainability in Acid Gas Flare Operations	5532
<i>Indrajit Dutt, Yasser Hassan</i>	

SESSION 74: E&P GEOSCIENCE: NEW APPROACHES IN CHARACTERISATION AND MODELLING COMPLEX RESERVOIRS - II

A New Shortcut Workflow in Flexible Reservoir Modeling: Introducing Structural Features without Re-Gridding	5544
<i>Alejandro Rodríguez Martínez, Stefano Frambati</i>	
Implementation of High Resolution Diagenetic Features into the Static and Dynamic Reservoir Models of a Giant Offshore Oil Field, Abu Dhabi	5552
<i>Ravi Shekhar, Amna Al Naqbi, Chukwudi Obeta, Gary Ottinger, Rolf Herrmann, Tomohiro Obara, Shamsa J. Almazrouei, Zinab N. Al Maqrani, Abdulla Al Neyadi, Ewart Edwards, Hesham Shebl, Dachang Li, Budoor Hasan Al Shehhi, Ayub Fazal</i>	
Saturation Modelling Under Complex Fluid Fill History - Drainage and Imbibition	5568
<i>H. Xian, L. Beugelsdijk, A. Kohli, E. Fokkema, A. Cense</i>	
Moving Models into Reality: An Automated Workflow to Calibrate Forward Stratigraphic Modeling; Application to Hanifa and Arab-D in Central Saudi Arabia	5585
<i>Hussain Alqattan, Mokhles Mezghani, Khalid Hmoud</i>	
Joint Inversion Facies Seismic Inversion to Delineate Thin Multi Layered Heterogeneous Reservoirs Offshore Abu Dhabi	5596
<i>Yassar Goraya, Sean Bale, Kester Waters, Mark Sams, Ahmed Khalifa Al Nemami, Ali Al Felasi, Hocine Khemissa, Fazeel Akram, Bader Al-Dhafari</i>	
Sampling From the Posterior in Reservoir Simulation	5604
<i>B. A. Ramirez, P. P. Gelderblom, A. D. Eales, X. Chen, M. P. Hobson, K. Esler</i>	

SESSION 75: E&P GEOSCIENCE: UNCERTAINTY ANALYSIS IN GEOSCIENCE

Realizing the Potential of Legacy Seismic - Getting More Value From Vintage Data	5615
<i>O. Khan, M. Spaak, A. Vial-Aussavy, F. Neves, F. Al Qubaisi</i>	
Structural Uncertainty Analysis using 3D Seismic and Well Data to Estimate Gross Rock Volume GRV Ranges in Reservoir: A Case Study in Carbonate Reservoir, UAE	5622
<i>Anurag Grover, Abrar Al Mesmari, Saif Al Shamsi, Tariq Al Shabibi</i>	

VOLUME 8

Scrutinize Logging While Drilling Data in Horizontal Wells: Reservoir Architecture & Fluid Fill Alternative Concepts Aids in Realizing the Potential of Flank Infill Opportunity in the Sultanate of Oman	5634
<i>Shahab Hadidi, Maria Boya Ferrero, Hilal Yaarubi</i>	
Looking Beyond the Wellbore: Formation Evaluation Mitigates Risk and Reduces Uncertainty in Multi-Stage Unconventional Completions	5645
<i>Sergey Kotov, Sergey Stolyarov, Eduardo Cazeneuve, Frank Walles, David Gadzhimirzaev</i>	
Porosity Measurements on Drill Cuttings - Comprehensive Inputs to Formation Evaluation near Real-Time While Drilling	5669
<i>Hasan Kesserwan, Elham Alshanaqaiti, Guodong Jin, Ivo Nuic</i>	

SESSION 76: GAS TECHNOLOGY: CRITICAL ROTATING EQUIPMENT IN GAS PROCESSING

Rectifying the Inherent Compressor Control Issues Using Dynamic Simulation	5678
<i>Vijayakrishna Nalagatla, Haitham Al-Kalbani</i>	
Running Feed Gas Compressor without Atmospheric Gas	5696
<i>Wael Khaled Al Braiki</i>	

Preventing Failures In LDPE Plants Caused By Vibrations And Pulsations Of Reciprocating Compressors.....	5702
<i>Cosimo Carcasci, Marco Sacco</i>	
Ways for Optimizing and Increasing Reliability of Centrifugal Compression Systems in Oil and Gas Industry: Case Study in Sultanate of Oman.....	5715
<i>Khalid Al Hatmi, As'Ad Al Mashrafi, Sa'Ud Al Balushi, Haitham Al-Kalbani, Mohammed Shaikh, G. Reza Vakili-Nezhaad</i>	
Development of Engine Drivers for Unconventional Gas.....	5738
<i>Kenneth Hall</i>	
Case Study on Performance Impact in Compressor Dry Gas Seals During Transient Condition.....	5745
<i>Arumugampillai Manikandan, Subramanian Moorthy</i>	

SESSION 77: PETROLEUM ADVANCED ANALYTICS – INTELLIGENT MODELS AND WORKFLOWS

Smart Workflows for Well and Facility Surveillance and Optimization: A Burgan Oil Field Experience.....	5755
<i>B. Al-Shammari, N. M. Rane, S. F. Desai, Salem Hamad Al Sabea, M. Pandey, S. Shankhdhar, R. Chacko, F. S. Ledesma</i>	
Study on the Classification and Formation Mechanism of Microscopic Remaining Oil in High Water Cut Stage Based on Machine Learning.....	5769
<i>Yuyun Zhao, Hanqiao Jiang, Junjian Li, Chuan Wang, Yajun Gao, Fuwei Yu, Hang Su</i>	
Mapping Completion Design Trends in a Compartmentalized Tight Oil Reservoir for Rapid Evaluation Using Artificial Neural Networks.....	5785
<i>Y. Bansal, T. Ertekin, Z. T. Karpyn</i>	
Machines Performance Algorithmic Modeling for Anticipating Machines Health Using Real Time Condition Monitoring Data.....	5796
<i>W. Almadhoun, A. Alashqar</i>	
Best Practices for Successful Implementation of Integrated Asset Model Based Well and Reservoir Workflow Automation - A Practical Learning Experience from Mature Brown Fields.....	5803
<i>N. Reddicharla, N. Al Meqbali, I. H. Alselaiti, S. Singh</i>	

SESSION 78: FIELD DEVELOPMENT – GAS RESERVOIR DEVELOPMENT

Removal of Gas-Condensate by CO2 Huff-n-Puff Injection: A Simulation Study.....	5817
<i>Muhammad Ayub, Moemen Ramadan, Mohammed A. Bataweel, Abdulrahman A. Al-Mulhem</i>	
Development Optimization of the Rich Gas Condensate Field in the Sultanate of Oman, Through Aspiring for Top Quartile Recovery Factor.....	5847
<i>M. Cobanoglu, A. Soleimani, A. Mourad, A. Sulaimi, M. Deori, J. C. Noirof</i>	
Identification of a Cost Competitive Development for a High-Pressure, High-H2S Richest Gas Condensate Carbonate Reservoir in the Sultanate of Oman.....	5863
<i>Ahmed Mourad, Stephen Calvert, Karima Djermouni, Ahmed Hattali, Abdullah Nabhani, Jean-Christophe Noirof, Ali Naamani</i>	
A Novel Non-Acid Stimulation in Deep HPHT Naturally Fractured Gas Sandstone.....	5876
<i>Peng Jianxin, Che Mingguang, Zou Guoqing, Liu Jiangyu, Wang Liao, Gao Rui, Xie Juan, Meng Leifeng, Fan Runqiang</i>	
Enumeration Approach in Condensate Banking Study of Gas Condensate Reservoir.....	5883
<i>Iqmal Irsyad Mohammad Fuad, Jang Hyun Lee, Nur Asyraf Md Akhir, Izzati Zulkifli</i>	
Hybrid Multi-Stage Acid-Fracturing in Deep Carbonate Gas Wells with HTHP in Anyue Gas Field of Sichuan Basin, SW China.....	5895
<i>Li Suzhen, Xu Yun, Wan Yujin, Che Mingguang, Gao Yuebin Wang Liao, Yang Zhanwei, Gao Rui, Lu Xinwei, Zhou Lang, Wang Yezhong, Chen Weihua, Zhou Hao</i>	

SESSION 79: FIELD DEVELOPMENT – WATER FLOODING OPTIMIZATION

Optimization of Infill Development in a Highly Heterogeneous Giant Offshore Carbonate Reservoir.....	5904
<i>Akihiro Kohata, Thomas Willingham, Anupam Tiwari, Alunood Al Sowaidi</i>	
Integrated Water Injection Treatment System Optimization and Impact on Field Injectivity on a Giant Offshore Carbonate Field. Case Study.....	5917
<i>Arlen Sarsekov, Kevin McNeilly, Ahmed Al Neaimi, Omar Yousef Saif, Rail Salimov</i>	

Reduced-Physics Modeling and Optimization of Mature Waterfloods	5932
<i>Fayadhohi Ibrahim, Agustin Maqui, Ana Suarez Negreira, Chao Liang, Feyisayo Olalotiti, Ouassim Khebzegga, Sebastien Matringe, Xiang Zhai</i>	
Inverted ESPs Actuating: Water Cone Control, Oil Production Increase, and Produced Water Subsurface Disposal - North Kuwait Case Study	5947
<i>N. H. Al-Maqsseed, E. P. Anthony, S. Z. Elaila, M. Areekat, M. Fox</i>	
Simultaneous Multiple Plane to Plane Waterflooding in Fractured Tight Reservoirs	5968
<i>Bhaskar J. Bhargav, Christine Ehlig, Economides</i>	
Reaping the Benefits of the Mega Water Flood Project in North Kuwait - Production Enhancement Opportunities Tracking & Implementing	5994
<i>Nada Saleh, Hom Chetri, Tasneem Al-Twaitan, Amna Al-Qenae</i>	

SESSION 80: OPERATIONAL EXCELLENCE – COLLABORATIVE DECISION MAKING AND DATA MANAGEMENT

TOTAL New Production Data Management System: from the Concept to Deployment	6008
<i>Christophe Allanic, Jose-Luis Trallero, Aymeric Vincent</i>	
A New Dimension to Field Development Well Planning Using Smart Integrated Workflow and Data Collaborative Environment for Improving Efficiency	6028
<i>N. Reddicharla, Mariam Sulaiman Alhammedi, Omar Ahmed Al Dhanhani, J. K. Pires, Javier Torres</i>	
Upstream Data Architecture and Data Governance Framework for Efficient Integrated Upstream Workflows and Operations	6043
<i>Richard Mohan David, Luigi Saputelli, Hafez Hafez, Ram Narayanan, Pascal Colombani, Tayba Al Naqbi</i>	
Integrated Fracturing Services Project: A Success Story of Collaboration Between Operator and Service Company	6049
<i>E. Sayapov, A. J. Nunez, H. Al Gheilani, E. G. Ibrahim, A. Al Ghaithi, M. Al Salmi, I. Al Farei, S. K. Kelkar, S. D. Kurniadi, O. Al Zeidi, A. M. Barakat, M. S. Al Kalbani</i>	
Extracting the Last Molecule of NGLs - GASCO L.P Model Experience	6062
<i>Arvind Ramachandran</i>	
Preserving and Securing Legacy Well Log Data	6070
<i>Purohit Pankaj, Nuaimi Fatema Al, Kumar Pranav, Kumar Amit</i>	

SESSION 81: IOR/EOR: CO2 INJECTION TECHNIQUES IN EOR PROJECTS

Experimental Data Acquisition and Modeling for the Study of Miscible CO2 WAG in Carbonate Reservoirs Under Oil-Wet Conditions	6083
<i>T. Joubert, S. Duchenne, M. Bourgeois, R. De Loubens, M. Petitfrere</i>	
Quantification of Oil Recovery Mechanisms during Gas Injection EOR Coreflood Experiments	6106
<i>Ed Wanat, Gary Teletzke, Dan Newhouse, John Lawrence, Rashed Al Shehhi, Thomas Willingham, Mohammad Omar Al Jawhari</i>	
Workflow For Multi-Scale Data Integration in Onshore CO2 EOR Project	6124
<i>Akira Igarashi, Noriaki Shimokata</i>	
A Field Case Study of an Interwell Gas Tracer Test for GAS-EOR Monitoring	6131
<i>Modiu Sanni, Mohammad Abbad, Sunil Kokal, Razally Ali, Ibrahim Zefzafy, Sven Hartvig, Olaf Huseby</i>	
Feasibility of Foam Application in a Giant Mature Field Under Miscible WAG Injection	6141
<i>Guido Bascialla, Jesús Montes, Pedro Romero, Rosario Rodriguez, Jaime Del Moral</i>	

SESSION 82: DRILLING AND COMPLETION TECHNOLOGY – ADVANCES IN DRILLING FLUID AND CEMENTING TECHNOLOGY

Drilling of Challenging ERD Wells with Water-Based Mud: How to Significantly Reduce Torque and Drag by New Generation Lubricant	6162
<i>Mohamed Haddad, Ahmed Rashed Al-Aleeli, Babar Zaheer, Alexey Ruzhnikov, Mohammad Husien, Pavel Marinescu</i>	
ARC Eco-Lube - A Food Industry Waste-Based Green Lubricant	6177
<i>Md Amanullah, Mohammed K. Arfaj</i>	
Assessment of Formation Damage Potential of Novel Drilling Fluids via Integration of Fluid Loss Data with Filter Cake Quality and Filtrate Core Penetration Depth from NMR and MRI	6192
<i>Zisis Vryzas, Grigorios Matenoglou, Vassilios C. Kelessidis</i>	

Engineered Fit-For-Purpose Cement System to Withstand Life-Of-The-Well Pressure and Temperature Cycling	6201
<i>Abdullah S. Al-Yami, Vikrant B. Wagle, Riefky Abdurrahman, Salim Taoutaou</i>	
Research and Application of High-Temperature Drilling Fluid for Scientific Core Drilling Project	6215
<i>Zheng Wenlong, Wu Xiaoming, Huang Yuming, Xu Jie, Wang Wenshi</i>	
Acid Soluble Drilling Fluids: Development and Field Trial	6225
<i>Vikrant Wagle, Abdullah S. Al-Yami, Hussain Al-Bahrani, Ali Alsafran</i>	

SESSION 83: DRILLING AND COMPLETION TECHNOLOGY: MANAGED PRESSURE DRILLING ADVANTAGES VERSUS UNDER BALANCE DRILLING APPLICATION FOR SOUR FIELDS

Integrating MPD into HPHT Well Planning	6241
<i>Michael Cadd, Lewis Steven, Robert Graham, Fedderik Van Der Bos, B. V Maatschappij, Craig Leggett, Emil Stoian</i>	
Application of UBD and MPD Improved Discovery of Fractured Granitic Basement Hydrocarbon Reservoirs	6258
<i>Peng Chen, Xi Wang, Lei Chen</i>	
Applicability of Managed Pressure Drilling MPD in a High Sulfur Content Fractured Reservoir	6274
<i>M. J. Safipour, Y. Mavaddat, M. Mavaddat, M. A'Rabi, N. Kadkhodaei, A. Abdollahi, S. M. Haeri Behbahani</i>	
Optimal Equivalent Liquid Rate ELR in Managed Pressure Drilling	6289
<i>Xiaoqian Christina Huang, Robello Samuel, Gabriela Morales, Mahdi Parak</i>	

SESSION 84: PEOPLE & TALENT – IMPROVING PERFORMANCE THROUGH COMPETENCE DEVELOPMENT

Skill Development Tool to Build Future Petro-Technical Professionals	6306
<i>Ayesha Al Hadhrami, Pranav Kumar, Nawal Eisa Ismail Saleh, Manahel Mohamed Abdulla Alnaqbi, Amin Jaradat, Majdi Mohamed Bamatraf</i>	
A Maturity Modeling Approach to Ensuring Effective Competency-Based Workforce Development	6324
<i>Jeffrey A. Johnson, Darrell Sim</i>	
Expanding Corporate Knowledge and Staff Capabilities to Address Complex Gas and Contaminated Hydrocarbon Field Development Challenges in the Sultanate of Oman	6340
<i>Jean-Christophe Noirot, Walid Hamed, Junaid Ghulam, Robert Svec, Mustafa Cobanoglu</i>	
Subsurface Competencies Verification & Management Model, a Case Study of Upstream Oil & Gas Company	6353
<i>Eisa Al-Daihani, Arun Kumar Nandi, Syed Mohammad Razaa</i>	
Intercultural Competency for Petroleum Professionals	6362
<i>Hon Chung Lau</i>	

SESSION 85: OFFSHORE AND MARINE – ASSET INTEGRITY

Mechanical and Corrosion Performance of Corrosion Resistant Alloy Tubing after Long Term Use in Corrosive Gas Well	6378
<i>Y. Suzuki, M. Ueyama, M. Sagara, H. Amaya</i>	
Alternative Framework for Structural Integrity Management of Jacket Platform Beyond its Design Life	6396
<i>A. Kongchang, A. Danthainum, T. Chattratichart, P. Sonachai, T. Thavornsuk, S. Katanyoowongcharoen, J. Sriparagul, P. Kosanunt</i>	
Sour Service Challenges	6405
<i>Roberto Bruschi, Manuela Gentile, Enrico Torselletti</i>	
Crevice Corrosion Effect on Alloy 625 in Untreated Seawater Environment	6422
<i>Sara Al-Abbadi, Hiba Aoudi, Wael Alshouly, Waled Saeed, Khalifa Alsafatli, Ashraf Toubar</i>	

VOLUME 9

Corrosion Mitigation of Hot Water Copper Pipes on Offshore Platforms and Possible Alternatives	6432
<i>H. K. Aoudi, S. A. Alabadi, W. Al-Shouly, A. Toubar, K. Al-Safetli, W. Saeed</i>	

Examining the Operational and Environmental Benefits of Using High-Voltage AC Transmission Systems to Supply Onshore Grid Power to Offshore O&G Installations	6441
<i>Adham Atallah, Dirk Audring, Uros Kerin</i>	

SESSION 86: E&P GEOSCIENCE: NEW APPROACHES IN CHARACTERISATION AND MODELLING COMPLEX RESERVOIRS - III

Integrated Characterization of the Regional Aquifers in Abu Dhabi Onshore. Dammam, Umm Er Radhuma and Simsima Formations. UAE.....	6450
<i>Humberto Parra, Dipankar Ghosh, Sofiane Tahir</i>	
Identification and Modeling of Inter-Reservoir Communication Using an Integrated Multi-Disciplinary Structural Framework in a Giant Offshore Carbonate Field, UAE	6467
<i>Ravi Shekhar, Khulood A. Almazrouei, Corey Wendland, Chukwudi Obeta, Osama Al Zinati, Taihei Omura, Mourad Bengharbia, Abdulla Al Neyadi, Naema Khouri, Budoor Hasan Al Shehhi</i>	
The Application of Specific Drilling Energy to Identify Overburden Lithological Boundaries and Aid Well Operations - Oman Khazzan Field	6478
<i>Nafa Al Jahdhami, Abdullah Al Anboori</i>	
A New Dual-Permeability Model for Naturally Fractured Reservoirs	6487
<i>Jing Lu, Jinbao Qu</i>	

SESSION 87: E&P GEOSCIENCE: TIGHT RESERVOIRS

Geomechanical and Thermal Dynamics of Distributed and Far-Field Dielectric Heating of Rocks Assisted by Nano-Enablers — A Numerical Exploration.....	6507
<i>Damian P. San-Roman-Alerigi, Yanhui Han, Haitham Othman, Sameeh I. Batarseh</i>	
An Integrated Numerical Simulation Scheme to Predict Shale Gas Production of a Multi-Fractured Horizontal Well.....	6528
<i>Jie Zhan, Jing Lu, Allan Fogwill, Ivan Ulovich, Jili Paul Cao, Ruijian He, Zhangxin Chen</i>	
Sweet-Spotting and Unlocking Tight Gas Volumes of Lower Miqrat Formation	6542
<i>R. B. Lukmanov, E. G. Ibrahim, K. Shamsi</i>	
Link Between Microporous Limestones and Elastic Properties in Tight Carbonates. A Case Study from the Lower Arab Formation Upper Jurassic, Onshore United Arab Emirates	6559
<i>Matthieu Deville De Perriere, Alexander Foote, Meriem Bertouche, Razza Shah, Fatima Al-Darmaki, Wala Bin Ishaq</i>	
An Experimental Study on Interactions between Imbibed Fracturing Fluid and Organic-Rich Tight Carbonate Source Rocks.....	6575
<i>Feng Liang, Bitao Lai, Jilin Zhang, Hui-Hai Liu, Weichang Li</i>	
Building Petrophysical Groups in a Low Permeability Carbonate Reservoir Located in Transition Zone: A Case Study from Onshore Field in UAE	6589
<i>Muhammad Faisal A. H. Khan, Shaymaa Al Maskari, Ashish Kundu, Deepak Kumar Voleti, Ali Salem Al-Rawahi</i>	
Pseudotransient Linear Flow in Naturally Fractured Reservoirs	6612
<i>Wisam J. Assiri, Erdal Ozkan</i>	

SESSION 88: GAS TECHNOLOGY: GAS MEASUREMENT AND METERING

Innovation and Technology Advancements in Measurement of Ultralow Sulfur in Natural Gas Products.....	6629
<i>Ukkirapandian Veerakumar, Sanjay Singh Lallan, Zeyad Nasser Bahamaish, Ahmad Abbas</i>	
Lattice Boltzmann Analysis of Orifice Plates with Slotted Rim for Improved Wet Gas Metering	6644
<i>Mohamed N. Noui-Mehidi, Talha J Ahmad, Jana Jindan</i>	
Common Pitfalls in Selection of Restriction Orifice for Depressurization of Oil and Gas Facilities	6651
<i>Rakesh Wasnik, Bhupinder Singh, Harendra Singh, Faris Kamal, Oussama Takieddine</i>	

SESSION 89: PETROLEUM ADVANCED ANALYTICS: ADDING VALUES USING ANALYTICS METHOD

Integrated Deployment of Digital Oil Field in Multiple Kuwait Areas in One Platform and Benefits Realized	6659
<i>Sara Al-Rakyan, Omar Abu Marie, Fernando Ledesma, Kareem Heshmat, Assem Mohamed, Mohamed Zahourdin</i>	

Simulator and Controller Tuning/Testing Rig for Artificial Gas Lift	6667
<i>Imad Matraji, Weiliang Wang, Igor Boiko, Ahmed Al-Durra, Ibrahim Y. Abushawish</i>	
ESP Data Analytics: Predicting Failures for Improved Production Performance	6680
<i>Mohannad Abdelaziz, Rafael Lastra, J. J. Xiao</i>	
The Value of Reservoir Surveillance - Applications to Fractured Carbonates Under Waterflooding	6697
<i>Alaa F. Shbair, Hamdan Al Hammadi, John Martinez, Olanike Adeoye, Medhat Abdou, Luigi Saputelli, Fahmi Bahrini</i>	
Inhouse Design and Implementation of Well Integrity Database Management System	6716
<i>M. A. Elrefai, A. M. Al Mutairi, M. Al Saadi, F. Nasser, R. M. Abdi, A. Alqamzi, M. A. Alnaqbi, Ali Ashgar</i>	
Automated Well Test Analysis Utilizing Self-Adaptive Differential Evolution Method	6728
<i>T. M. Moussa, R. M. Alloush, M. B. Issaka</i>	

SESSION 90: FIELD DEVELOPMENT: STIMULATION-GETTING MORE FROM YOUR WELL

Return Permeability Tests and Relevant Laboratory Evaluation to Optimize Remedial Design for Reviving Productivity of Cased Hole Well Damaged by Oil-Based-Mud	6742
<i>Hideharu Yonebayashi, Yoshihiro Miyagawa, Takumi Watanabe, Susumu Kurokawa, Satoshi Teshima, Michael H. Richmond</i>	
Design Transformation of Hydraulically Powered Coiled Tubing Tractors for Matrix Acidizing Stimulations in Extended Reach Carbonate Reservoirs	6754
<i>Laurie Duthie, Abubaker Saeed, Saud Shaheen, Hussain Saood, Bruce Moore, Ernie Krueger</i>	
State of the Art Biodegradable Diversion Technology Applied on Tight Carbonates Reservoir Leads to Maximized Production	6767
<i>David Gonzalez, Joel Ulloa, Reza Safari, Aws Al-Rawi, Andrew Babey</i>	
Microemulsion Additive to Mitigate Impacts of Acid Flow Back	6777
<i>R. Morales, C. Diaz</i>	
Use of a Novel Coiled Tubing Real-Time Downhole Flow Measurement Tool to Evaluate Matrix Stimulation Treatment for the First Time Worldwide	6788
<i>Ramiro Cedeño, Ibrahim Thwaiqib, Danish Ahmed, Rodrigo Sa</i>	
Acid Diversion in Carbonates with Nanoparticles-Based in Situ Gelled Acid	6801
<i>Elsayed Abdelfatah, Sangho Bang, Maysam Pournik, Bor Jier Shiau, Jeffrey Harwell, Mohammed Haroun, Motiur Rahman</i>	

SESSION 91: FIELD DEVELOPMENT: IMPROVING FIELD PERFORMANCE THROUGH EFFECTIVE RESERVOIR SURVEILLANCE

Development and Field Application of a Permanent Fiberoptic Wellbore Fluid Level Monitoring System	6826
<i>C. Staveley, C. Doyle, C. Coetzee, A. Franzen, H. Den Boer, A. Van Rooyen, W. Birch, A. B. Biderkab, E. Moes</i>	
Impact of Irreversible Retention on Tracer Deployments; Constraining Novel Material Deployments	6835
<i>Hsieh Chen, Anthony A. Kmetz, Jason R. Cox, Martin E. Poitzsch</i>	
Improving Sweep Efficiency by Zonal Isolation Using High Expansion Ratio Inflatable Plugs: A Case Study	6843
<i>Aman Goyal, Mayank Varshney, Sanket Kadam, Nimish Pandey, Arunabh Parasher, Sanjeev Vermani, Vaibhav Gupta</i>	
Chemical Water Shutoff Pilot in a Mature Offshore Carbonate field	6856
<i>Christophe Cottin, Omar Al-Amrie, Emmanuel Barrois, Arnaud Templier, Nazanine Salehi, Alain Zaitoun</i>	
Pressure Build-Up Test Interpretation Studies: Models, Numerical Simulation, and Field Test in the Huabei Oilfield	6869
<i>Y. Miao, X. Li, Y. Zhou, H. Li, J. Shi, Y. Chen</i>	
Environmental Leadership through Flare Optimization and Operations Excellence	6880
<i>Shynggys Mukhamedkali</i>	

SESSION 92: OPERATIONAL EXCELLENCE – INNOVATIVE SOLUTIONS FOR OPERATIONS EXCELLENCE

Development of an Energy Efficiency Improvement Methodology for Upstream Oil and Gas Operations	6890
<i>David Grassian, Mohammed Bahatem, Trevor Scott, Daniel Olsen</i>	

Benefits of Implementing Integrated Reservoir Management IRM Framework by Closing Gaps in People, Process and Technology - Second Act	6903
<i>Mohamed Al Marzouqi, Jamal Bahamaish, Luigi Saputelli</i>	
Optimization of Offshore Pipeline Routing Using DTM & FEA Tools	6916
<i>Devinder Singh, Rajendran Selvam, Najem A. Qambar, Adnan Al Shebli, Salah Jebara Al Bufalah, Jawed Ismail, Sandeep Panambur</i>	
Evaluation of Eco Friendly Bio-Oil Dispersants on the Inhibition of Asphaltene Precipitation in a Kuwaiti Crude Oil	6929
<i>Hessah Alrashidi, Hisham A. Nasr-El-Din</i>	
Enhance High Energy Centrifugal Pump Performance in Complex Well Applications Achieving Versatile Pump Operation	6938
<i>A. Amin El Eryan, M. Hazem Sadek</i>	
Reducing the Impact of Experience Gap and Increasing Service Delivery by Automating the Coiled Tubing Intervention	6950
<i>Bill Aitken, Rodrigo Micheli, Tim Ramsey, Ken Dobkins</i>	
Development of Comprehensive Inspection Program for Drill Bits Through Joint Industry Project for Failure Risk Mitigation and Reduction of Inspection Costs	6966
<i>A. M. Mulunjar, B. Durairajan, J. Williams, A. Griffio, S. R. Gokhale, A. Wells</i>	

SESSION 93: IOR/EOR: FIELD SCALE ASSESSMENT FOR EOR PROJECTS

Assessment of Field Scale Commercial Development for Miscible EOR in a Giant Offshore Carbonate Reservoir	6977
<i>Thomas W. Willingham, Akihiro Kohata, Alunood Al Sowaidi, John D. Martin, Drew D. Irwin</i>	
Base-Line Logging Before Commencement of the EOR Project to Enhance the Chances for Success	6992
<i>A. Al-Qenaie, H. B. Chetri, S. Tiwari, T. M. Al-Twaitan, M. B. Abdullah, P. Ranjan, I. Aslanyan, S. Prosvirkin</i>	
Surface Facilities for a Giant Thermal EOR Project - Cost and HSE Implications of Alternative Fuels for Steam Generation	7006
<i>R. Coll, G. Peña, J. Guitián, A. Mancera, E. Escobar</i>	
Tools to Determine and Quantify Mineralogical Changes During EOR Flooding Experiments on Chalk	7013
<i>Udo Zimmermann, Merete. V. Madland, Mona Minde, Laura Borromeo, Nina Egeland</i>	
Modified Starch Gel Foam: Research and Application in Naturally Fractured-Vuggy Carbonate Reservoir	7025
<i>Ming Qu, Jirui Hou, Qian Wang, Wei Su, Shixi Ma, Tianyuan Yang, Pengyang Li, Yu Bai</i>	
Investigation of Dissolution Effects on Dolomite Porous Media under Carbonated Water Injection CWI	7036
<i>R. Nunez, R. G. Vaz, E. T. Koroishi, J. A. Vidal Vargas, O. V. Trevisan</i>	

SESSION 94: DRILLING AND COMPLETION TECHNOLOGY: ADVANCES IN MULTISTAGE FRACTURING AND STIMULATION

Advancing the Understanding of Openhole MultiStage Completion Systems in Khazzan—Hydraulic Fracturing Execution and Analysis	7052
<i>O. A. Ishteiwy, A. Casero, A. Al-Shueili, G. Turk, A. Roy, A. Al Manji, W. Dawson, D. White, S. D. Kurniadi</i>	
Successful Recovery and Stimulation of a Long HP/HT Horizontal Well in One Intervention: A Case History of Acid Fracturing and New Generation of Diversion Systems Combination, Middle Marrat Carbonate ...	7082
<i>Leopoldo Sierra, Alaa Eldine Alboueshi, Mohamed Elmofiti, Walid Eid, Salma Sadeddin, Ahmed Allam, Mohamed Al Othman, Zamzam Ahmed, Erkan Fidan, Ibrahim Al-Zaidani, Neoq Nilotpaul, Meshari Ashkanani, Ali Buhamad, Mohammed Abdullah Al-Dousari, Abdul-Samad Mohammed Ahmed, Youssef Al-Matrouk</i>	
Improved Recovery of Carbonate Reservoir by Optimizing Acidizing Strategy; Coupled Wellbore, Reservoir, and Geomechanical Analysis	7097
<i>Reza Safari, Clayton Smith, Francisco Fragachan</i>	
Dynamic Wellbore and Near-Wellbore Clean-Up in Wells with a Sandface Flow Control Completion	7115
<i>Ehsan Nikjoo, Rufat Mammadov, Khafiz Muradov, David Davies</i>	
Configuring Dynamic Underbalance to Achieve Perforation Tunnel Clean-up in a Gas Well at High Static Overbalance	7135
<i>Dennis Haggerty, Jacob McGregor, Vadim Akhmadikin</i>	

SESSION 95: DRILLING AND COMPLETION TECHNOLOGY: REVITALIZE WELL DESIGN CONCEPT TO MAXIMIZE PERFORMANCE IN ALIGNMENT WITH DRILLING TECHNOLOGIES

4-Tier Anti-Collision Policy Adapted in a World Class ERD/MRC Drilling Project Covering Satellite Platforms and Artificial Islands for Collision Free and Optimum Wellbore Placement	7159
<i>F. Rashid, S. Kolakkodan, Y. Al Katheeri, J. John</i>	
Multi-Zone Completion Design Optimization in Offshore Prolific Carbonate Reservoirs: A Systematic Approach	7171
<i>Eglier Yanez Hernandez, Victoria Okotie, Christophe Bassem Malouf, Amnah Al Sereidi, Maher Zidan, Islam Abdel-Karim, Abdulla Adam Abdul-Halim</i>	
Revitalized Three-Dimensional Design Method Improves Tubular Design	7189
<i>Jan A. Aasen, Tor D. Ostvold, Bernit S. Aadnoy</i>	
Advanced Casing and Mud Line Suspension Designs for an UAE Khuff/Pre-Khuff Offshore Exploration Keeper-Well	7203
<i>Mark Van Aerssen, Craig Hendrie</i>	
High Strength Cold Worked Corrosion Resistant Alloy CRA Materials Deployed in HPHT Wells: Strength Uncertainties Due to Anisotropy and Associated Considerations	7220
<i>Sandeep Dhawan, Søren Lundgren Jensen</i>	
Achieving Cost Reduction In Mature Gas Fields Through Material Optimization	7230
<i>Y. Terras, D. Mansur, J. R. Saithala, P. R. Rincon Flores, M. S. Gonuguntla</i>	

VOLUME 10

Digital Slickline: One Stop Shop for Well Intervention	7239
<i>Sarunya Jongnarungsin, Feras Abu Jafar, Abdulla Bu Ali, Ajana Laoroongroj, Ahmed El Hariry, Toon Puttisounthorn</i>	

SESSION 96: PEOPLE & TALENT: YOUTH AND TALENT DEVELOPMENT

Marine Training Program for UAE Nationals	7249
<i>Mahmoud El Shehawy, Helmy Younes</i>	
Youth Development Through Competence Assurance Management Systems	7260
<i>Abdulla Ahmed Al-Harbi, Karim S. Shokry, Abdulla Juma Al-Marzooqi, Adeib Ali</i>	
Blue Print of Local Talent Acquisition, Development and Retention	7274
<i>Tawfeeq Al-Halal</i>	
Thinking Global, Acting Local: Customising Talent Development with International Exposure	7283
<i>Neville Sequeira, Anoop Gandhi, Zakeyya Almoosa</i>	
Building the Next Generation of Petrotechnical Professionals through Gamification	7294
<i>Paul Ugoji, Akii Ibhadowe, Anslem Amadi</i>	
Competency Development for the Next Generation of Petroleum Engineers	7307
<i>Hon Chung Lau</i>	

SESSION 97: E&P GEOSCIENCE: ADVANCES IN SEISMIC PROCESSES AND ACQUISITION

Improving Observed Azimuthal Anisotropy for Fracture Analysis in a Carbonate Reservoir of Abu Dhabi	7318
<i>Jose Edgardo Vargas, Y. P. Utami, D. Sturko, C. Smith, P. Reddy, A. Glushchenko, P. Vasilyev</i>	
3D SRME and Interbed Multiple Attenuation on Fully Regularized Common Offset Vector COV WAZ Data from Kuwait Single Sensor Survey	7327
<i>Moosa Al Jahdhami, Jan Willem De Maag, Alexander Mueller, Srinivasa Rao Narhari, Olusegun Kolawole, Vijaya Kumar Kidambi, Bashar Al-Qadeeri, Qasem Dashti</i>	
Use of Surface Waves for Near-Surface Characterization and Drilling Hazard Reduction	7337
<i>S. Al Mesaabi, M. Mohammed, B. Tertrais, T. Bardainne, K. Garceran</i>	
Large WAZ Broadband Seismic Data: From Acquisition to Evaluation	7350
<i>S. S. Al-Abri, J. Riyami, R. Kiyumi, E. Haupt, M. Shaibani</i>	
Post-Stack Seismic Merge: A Case History, a Pathway for a Desirable Survey Overlap	7357
<i>Mohamed Mahgoub, Hiroshi Hagiwara, Yousif Al Hammadi, Tarek Matarid, Hani Bu Hindi</i>	

Simultaneous Low-Frequency Data Acquisition Using Amplitude Modulated Half-Cycle Pseudorandom Sweep	7366
<i>Y. Nakamura, M. Takanashi, Y. Kunishi, J. Sakakibara</i>	
Deblended-Data Reconstruction for Time-Lapse Seismic Monitoring	7376
<i>Tomohide Ishiyama, Mohammed Ali, Gerrit Blacquiere, Shotaro Nakayama</i>	

SESSION 98: E&P GEOSCIENCE – NEW TECHNOLOGIES - I

First Successful Logging Jobs Worldwide with a High-Resolution Logging-While-Drilling Imaging Tool for 8.5-in. Boreholes	7388
<i>M. Al-Balooshi, A. K. Anurag, A. K. Mishra, A. E. Al-Ali, K. I. Hosany, G. M. Al-Jefri, R. Sinha, C. J. Maeso, S. Girinathan, F. Legendre, K. Gzara</i>	
An Integrated Approach for Comprehensive Formation Evaluation in Mixed Lithologies using Source-Less Logging While Drilling and Advanced Cutting Analysis: A Case History	7403
<i>Ahmed Taher, Ahmet Aki, Rachad Zeriek</i>	
Repeatability of a Highly Stable Permanent Seismic Source Evaluated Through Long-Term Operation at the Aquistore CO2 Injection Site	7436
<i>M. Nakatsukasa, H. Ban, A. Kato, K. Worth, D. J. White</i>	
Steamfront Detection Using Time-Lapse Micro-Gravity Inversion	7446
<i>Ali Al-Lazki, Ali Al-Ismaïli, Johannes Stammeijer, Mark Hamm</i>	
Characterizing a Complex Sandstone Reservoir Using Magnetic Resonance While-Drilling and Azimuthal Resistivity Inversion	7458
<i>Shaikh Abdul Azim, Cahyo Nugroho, Eri Sitinjak, Fayez Al-Mutairi, Ahmad Al-Awadh, Ghadeer T Boland, Maryam M Mesri</i>	
An Innovative Approach of Nuclear Magnetic Resonance 2D-T1T2 to Identify Complex Reservoir Fluid Regime of Gas-Condensate in Newly Discovered & Fast Appraisal Carbonate Reservoir Field of Abu Dhab...	7467
<i>Maniesh Singh, Ibukun Bankole, Asma Aldahmani, Mona Alzeyoudi, Zaher Al Hajri, Sami El Bahri, Mula Nur Ahmad, Ron Balliet, Kresimir Vican, Venkat Jambunathan</i>	

SESSION 99: FIELD DEVELOPMENT: WORKFLOWS FOR EXTENDING FIELD LIFE CYCLE

An Integrated Approach to Optimize Monthly Production Allowable in a Giant Offshore Field	7486
<i>Wenyang Zhao, Ahmed Khalifa Al-Neaimi, Omar Yousef Saif, Mohamed Helmy Al-Feky</i>	
Improved Field Development through Timely Integration of Post-Drill Analysis Results	7495
<i>Chukwuudi Obeta, Fatema Aljaberi, Naeema Khouri, Hesham Abdulla Al Zawa, Corey Wendland, Russell Dedmon, Omar Al Dhaleei, Gary Ottinger, Ravi Shekhar, Taihei Omura, Osama Al Zinati, Nada Abousayed, Saja Almurshidi, Mohammad Yunus Khan, Khaled Attalah, Abdulla Al Neyadi, Budoor Al-Shehhi</i>	
Integrated Workflow of GOR Management Towards Sustainable Oil Production	7509
<i>Arlen Sarsekov, Ahmed Al Neaimi, Omar Yousef Saif, Abdalla Abed</i>	
Evolution of Reservoir Management and Development Strategy of a Giant Offshore Field in Abu Dhabi	7517
<i>Muhammad Navaid Khan, Ahmed Al Neaimi, Omar Al-Shehhi, Zohaib Channa, Fazeel Ahmed, Mohamed Al Feky, Arlen Sarsekov</i>	

SESSION 100: PRODUCTION FACILITIES TECHNOLOGIES: CORROSION AND ASSET INTEGRITY MANAGEMENT

High Alloyed Duplex Stainless Steel for Reliable Seawater Cooling	7531
<i>J. Höwing, B. Ghai</i>	
Comparison of Erosion Resistance of Iron Carbonate Protective Layer with Calcium Carbonate Particles Versus Sand	7538
<i>Anass S. Nassef, Nafiseh Banazadeh-Neishabouri, Michael W. Keller, Kenneth P. Roberts, Edmund F. Rybicki, Erin V. Iski, Siamack A. Shirazi</i>	

SESSION 101: FIELD DEVELOPMENT: ADVANCES IN ARTIFICIAL LIFT APPLICATION

ADMA Rigless Intervention Campaign: Breathing New Life in to Old Wells	7562
<i>K. McNeilly, M. A. El-Sayed, J. Al-Blooshi, S. Al-Qubaisi</i>	

Electric Submersible Pump Performance and Numerical Modeling in Two- Phase Flow	7573
<i>Risa Rutter, Zheng Ye, Ryan Lack</i>	
Innovative Approach to Prolong ESP Run Life Using Algorithmic Models.....	7583
<i>Hisham Al Shuwaikeh, Marcelo Ramos, Abdul-Rahman Aifan, Ali A. Al-Sadah</i>	
Understanding ESP Performance in Multiphase Flow Condition in SAGD Production Wells	7595
<i>Song Shang, Nicolas Gomez Bustamante</i>	
Enhancing Unloading Operations on Intermittent Wells in an Offshore Carbonate Field in Abu Dhabi	7615
<i>B. M. Al Silwadi, A. K. Al-Neaimi, O. Saif, A. A. Abed, Z. Channa, A. Sarsekov, K. McNeilly</i>	
Novel Electric Submersible Pump Cable Operates in High H2S Production Environment.....	7632
<i>B. A. Roth, J. X. Xiao, M. Paquette</i>	
Effective Insertable Progressive Cavity Pump Anchor Optimizes Workover Costs.....	7648
<i>A. Sultan, M. Khalil, I. Attar, N. Gazi, S. Al-Sabea</i>	

SESSION 102: FIELD DEVELOPMENT: OPTIMISATION OF THE RESERVES AND PROJECT ECONOMICS

Optimization Of Green Field Development Using Multi-Realization Approach.....	7655
<i>Andrey Semenov</i>	
Integrated Asset Modelling Unlocks Reservoir Deliverability and Maximizes Asset Value in a Middle East Digital Oil Field	7667
<i>Erismar Rubio, Luis Figuera, Karem Khan, Rayner Davila, Ahmed Abdulla Bin Amro, Kahina Tazerout, Achmad Rusmantor, Ahmed Mohamed Emam</i>	
Low Pressure Operation LPO: Extending Field Life of Several High H2S Fields with Minimum Costs	7681
<i>A. Hadhrami, R. Mihajlov, M. Muthalaly, R. Schulz, Z. Alias, A. Riyami, Z. Abri</i>	
Integrated Approach to Address Reservoir Uncertainties in One of the Largest Recent Gas Discoveries Onshore Egypt	7691
<i>Mostafa Abdelkhalek, Layla Elhares, Victor Van Heeswijk, Sameh Amin, Nick Gill</i>	

SESSION 103: OPERATIONAL EXCELLENCE – WELL INTEGRITY

Optimizing Cost and Restoring Integrity with the First Saudi Aramco Mechanical Descaling Using a Wireline Torque Action Debris Breaker Tool.....	7705
<i>Abdullah A. Al-Ghamdi, Ibrahim M. Zefzafy, Mohammad. H. Al-Malki, Russell. Turner</i>	
High-Frequency Torsional Oscillation Laboratory Testing of an Entire Bottom Hole Assembly	7715
<i>Heinisch Dennis, Winkler Mathäus, Herbig Christian, Hohl Andreas, Reckmann Hanno</i>	
Unique Cost Saving Solution Applied in Tight Gas Field in Sultanate of Oman to Mitigate Corrosion and Well Integrity Damage.....	7736
<i>Imran Abdul-Majid, Ajayi Ayotunde, Balushi Shihab, Shuely Abdullah, Oguni Blessing</i>	
The Importance of the Stability of Cement Sheaths: Interaction between Cement, Acid, Carbon Steel and Formation and Treatment Fluids.....	7749
<i>H. A. Alsaiani, M. Sayed, B. R. Reddy, S. Metouri, I. Al-Taie</i>	
An Integrated Approach to the Integrity Diagnostics of Underground Gas Storage Wells	7759
<i>R. Kantukov, D. Grishin, R. Nikitin, A. Aslanyan, I. Aslanyan, R. Minakhmetova, S. Soroka</i>	
Well Integrity Data Assessment WIDA Implementation through Integrating Established Well Data Systems to Increase Safe Operability for Wells with a History of Interdependence Integrity Issues.....	7770
<i>Azlan Bin Ali, Dr. Hamdi Bouali Daghmouni, Andrey Yugay, Arwansyah Johan, Abby Kalio Amabipi, Dr. Kjell Corneliussen, Arne Kristian</i>	

SESSION 104: DRILLING AND COMPLETION TECHNOLOGY: SWELLSBORE INTEGRITY AND ZONAL ISOLATION

Rotating Tension Anchor Improves Cement Bond Quality in Steam Well Applications in a Heavy Oil Field Onshore Germany	7789
<i>Arian Ebrahimi, Clemens Sieveke, Helge Martin</i>	
Development of an Extended Delayed Oil Swell Packer for Deployment in Extended Reach Drilling Oil Wells	7801
<i>Campbell Mitchell, Niall Urquhart</i>	
Liquid Cement Premix System for Rigless P&A.....	7813
<i>Douglas Thom</i>	

First Implementation of a Resilient and Self-Sealing Cementing System in the UAE: A Case History of Overcoming Engineering Challenges	7823
<i>Y. Saeed, A. Bottiglieri, A. Brandl, J. Han, B. Elatrache</i>	
A Step Forward to Assess Cement Blend Flowability and Proneness to Segregation: Cases Histories	7839
<i>Arnaud Joseph Gino Bourlon, Sylvaine Le Roy-Delage, Salim Taoutaou</i>	

SESSION 105: DRILLING AND COMPLETION TECHNOLOGY: LATEST IN WELL INTEGRITY MANAGEMENT - I

The Impact of Smart Completions on Optimal Well Trajectories	7851
<i>T. R. Maas, M. N. Bouts, G. J. P. Joosten, J. D. Jansen</i>	
Allocation Of Zonal Production In Smart Wells: Offshore Abu-Dhabi Case Study	7871
<i>Rail Salimov, Arlen Sarsekov</i>	
Combined Investigation of Effects of Contact Stresses, Pore Size and Rotary Dynamics on Mud Plastering in Prevention of Lost Circulation in Weak Zones during Casing Drilling	7882
<i>Oscar Grijalva Meza, Tanveer Yaqoob, Opeyemi Bello, Faissal Boulakhrif, Javier Holzmann, Joachim Oppelt</i>	
Well Integrity Management: Challenges in Extending Life of a Mature Gas Condensate Field – A Case Study	7896
<i>S. Jain, M. A. Al Hamadi, H. Saradva, J. Asarpota, S. J. Sparke, M. Volkov, H. Abu Rahmoun</i>	
Expandable Liner Deployment Remedies Premature Casing Point in an Offshore Gas Well	7910
<i>Abdulaziz S. Almusa, Ikenna I. Obi, Joaquin S. Garcia</i>	

SESSION 106: DRILLING AND COMPLETION TECHNOLOGY: DRILLING WASTE MANAGEMENT AND ZERO DISCHARGE DRILLING TECHNOLOGY

Safe, Green Approach in Drill Cuttings Waste Mangement	7921
<i>Ibraheem Hussain, Dennis Clapper, Nadjmeh Doostdar</i>	
Processing and Recycling Drill Cuttings at Source - Technology and Services Adhering to Zero Discharge Legislation	7930
<i>Robbie Pond, Pierre-Marie Hinden</i>	
Application of Comprehensive Harmless Waste Treatment Technology to Treat Drilling Cuttings in the Tian Mountain Front Block in Tarim Basin	7942
<i>Zhu Jinzhi, Li Long, Yin Da, Li Jiaxue, Zhang Shaojun, Yang Yuping, Zhang Jie, Liu Yushuang</i>	
Integrated Treatment and Disposal of Waste Drilling Fluid Onshore China: Laboratory Investigation and Process Design	7953
<i>Wai Li, Xionghu Zhao, Bin Cai, Jishan Liu, Chao Yan, Wei Guo, Jian Zhang, Jiwei Jiang, Hui Peng, Danchao Huang</i>	

SESSION 107: HSE – ACCIDENT PREVENTION AND “LESSONS LEARNT” IN SAFETY

Enhanced Oil Spill Detection and Consequence Management Through Satellite Imagery	7974
<i>Rob Ayasse</i>	
Multidimensional Evaluation for Safe and Efficient Killing Using Dynamic Kill Method: A Case Analysis in China	7986
<i>Yunjian Zhou, Xiangfang Li, Andrew K. Wojtanowicz, Yanan Miao, Jingde Chen</i>	
Drains - A Hidden Source of Explosion!	8003
<i>Kuriakose Mathew Molelputhenpura, Khalid Adel, Ibrahim Al Awadhi</i>	
RFID Enabled Safe Load Indicator Data Logging System Enhances Higher HSE Standards in Offshore Crane Operations	8013
<i>Dileep Chandran, Morched Alila, Hatim Al Owaid, Abdulla Hantoosh, Sami Alawi, Yasir Sajjad, Kuljinder Singh</i>	

SESSION 108: E&P GEOSCIENCE: REAL-TIME FORMATION EVALUATION

Optimized RA Sourceless LWD Suite for Horizontal Well Placement and ICD Completion Design in Middle East Cretaceous Carbonate Reservoir: A Case History	8027
<i>F. R. Brindle, A. K. Mishra, B. A. H. Altaf, J. C. Aragon, A. K. Allouti, U. Herz, P. Bhatt, A. M. Soliman, L. Deng, S. Hassan, H. A. Masry</i>	

VOLUME 11

Optical Spectroscopy for Downhole Gas Show at the Drill Bit: Real-Time Sweet Spot Detection	8041
<i>Sandip Maity, Purbasha Halder, Yi Liao, Stewart Brazil, Nagapriya Kavoori</i>	
Optimizing Well Design and Real-Time Drilling Operations Using a Seismic Attribute Guided Methodology	8052
<i>Xing Liang, Chun Duan Zhao, Yong He, François Bouchet, Cheng Liu, Lizhi Wang, Qingshan Li</i>	
Selected Best Practices for Geo-steering Jobs Opportunities to Grow and Enhance Customer Partnerships	8066
<i>Eri Sarmantua Sitingjak, Saverio Damiani</i>	
NMR While Drilling in 6-in Hole - Advanced Technology as a Source-Less Solution for Well Placement Efficiency and Formation Evaluation for Reservoir Characterization in Highly Heterogeneous Carbonate Reservoir – A Case Study from offshore Abu Dhabi	8083
<i>Hocine Khemissa, Muhamed Ashraf, Ali Al-Felassi, Bader Al-Dhafari, Yasser In. Goraya, Charles Smart, Pranjal Bhatt, Ahmed Soliman, Warren Fernandes, Krishnan Saravanakumar</i>	

SESSION 109: E&P GEOSCIENCE – NEW TECHNOLOGIES - II

Quantifying Water Saturation in a Source Rock Gas Play Using Multi-Frequency Dielectric Measurements	8102
<i>Ishan Raina, Suvodip Dasgupta, Laurent Mossé, M. Zeeshan Baig, Pierre Van Laer</i>	
Improved Fracture Productivity Prediction Using Enhanced Seismic Attributes	8116
<i>Travis Ramsay, Luisalic Hernandez, Jesse Lomask, Allison Sullivan</i>	
Impact of Near-Surface Heterogeneity on Seismic Reservoir Monitoring Simulated Using the Real Field Data in Abu Dhabi	8129
<i>M. Nakatsukasa, Y. Nakamura, A. Kato, H. Hagiwara, A. Grandi, A. K. Elila</i>	
Integrated Workflow For Building 3d Digital Outcrop Models Using Unmanned Aerial Vehicles - Drones: Field Case Thamama Group, Wadih Rahbah, UAE.	8139
<i>Humberto Parra, Jorge Salgado Gomes, Hesham Shebl</i>	

SESSION 110: FIELD DEVELOPMENT: CASE STUDIES

The Application of Geological Concepts for Various Types of High-Permeability Streaks to the Full-Field Simulation Model History Matching of Carbonate Reservoir, Offshore Abu Dhabi	8151
<i>Akira Shibayama, Mohamed Tariq Al Hamami, Tatsuya Yamada, Atsuro Kohda, Zahra Abdulla Al Farhan, Sameer Bellah, Toshiaki Shibasaki, Sami Al Jasmii</i>	
A Multifaceted Strategy to Achieve Significant Reservoir Simulation Work Flow Efficiency Gains	8165
<i>Norman Kaczorowski, Alexander Knyazev, Majed Ghassan, Nigel Brock, Geoff Wilby, Colin Engle, Kirill Bogachev</i>	
An Integrated Geological-Reservoir Engineering Technique for Increasing Confidence in Field Development Planning for a Reservoir Under Primary Depletion	8174
<i>Aakash Biswas, Ali Al Jumah, Farhad Lalji, Mohamad Doush</i>	
Use of Pilot Wells to Cost-Effectively Unlock Field Potential: Case Studies from the Jasmine Field	8187
<i>Mukminin Yusuf, Farid Saifuddin, I Nengah Nuada, Muhammad Triandi</i>	
Successful Field Development Strategies to Sustain Long Term Oil Productivity in Giant Sabriyah Carbonate Mauddud Reservoir: Case Study	8197
<i>David Jesudian Nelson, Hossam El-Din, Sajan Nair, Hasan Ahmad Mohammad, Mukul Juyal, Martine Wenang, Chandan Jyoti Keot, Salih Noreldin Osman, Abeer Ahmed Mohammed, Khaled Mohamed El-Derini</i>	
M-9 Zawtika Marginal Field Development Study	8214
<i>L. Chaowarit, H. Pongpat, P. Korakote, O. Pariyachat, H. Pithak, B. Sirawat</i>	

SESSION 111: PRODUCTION FACILITIES TECHNOLOGIES: OUT OF THE BOX THINKING IN ANALYSING ARTIFICIAL LIFT DATA

Asset Optimization Using Downhole Corrosion Sensor for Electrical Submersible Pumps	8223
<i>Ashwin Chandran, Yi Liu, Othon Monteiro, Thomas McClain Scott, Zhengwei Liu, Sven Krueger</i>	
A Robust Surveillance and Optimization Workflow for Offshore Gas Lifted Wells	8236
<i>Feng Xiao, Neeraj R. Dani, Ted A. Long, Justin A. Gantt, Zachary H. Borden, Amr El-Bakry</i>	

Impact of Change in Reservoir Dynamics and ESP Installation on Subsea Pipeline System	8249
<i>Rajendran Selvam, Najem A Qambar, Adnan Al Shebli, Salah Jebara Al Bufalah, Jawed Ismail, Devinder Singh, Sandeep Panambur</i>	
Finite Element Based Optimization and Improvement of the Sucker Rod Pumping System	8265
<i>C. Langbauer, T. Antretter</i>	

SESSION 112: FIELD DEVELOPMENT: COMPLEX WELL ARCHITECTURE

A New ICD/ICV Well Completion Design Optimizer and Well Management Logic for Full Field Reservoir Simulation with Multiple ICD/ICV wells	8283
<i>D. Li, A. Alobedli, B. Selvam, Y. Azoug, C. Obeta, M. Nguyen, B. H. Al-Shehhi</i>	
First Successful Openhole Lateral Multistage Acid Frac in a Complex Unconventional Carbonate Reservoir North Kuwait	8300
<i>Badriya Al-Enezi, Mishal Al-Mufarej, Ayham Ashqar, Alejandro Navia</i>	
Hydraulic Study of a Horizontal Well to Compare Dual Horizontal-Vertical versus Single Vertical Completion	8317
<i>Ahmed Alshmakhy, Sergio Caicedo</i>	
An Automated Approach to Well Design: Using a Reservoir Simulator and Nodal Analysis	8332
<i>Zainub Noor, Vitaly Khoriakov, Ian Boisvert</i>	
Smart Well Completion Optimization in Multilateral Wells	8344
<i>J. O. Arukhe, F. Khelaiwi, O. Isichei, A. A. Dhubaiki</i>	

SESSION 113: FIELD DEVELOPMENT: DATA ANALYTICS-APPLICATIONS IN RESERVOIR MANAGEMENT

Evaluation of Miscible Water Alternating Gas WAG Injection by Comparing with Lesson Learnt from an Immiscible Gas Injection Pilot	8354
<i>Akihiro Kohata, Thomas Willingham, Peng Chen, Alunood Al Sowaidi</i>	
Modeling Early Time Rate Decline in Unconventional Reservoirs Using Machine Learning Techniques	8367
<i>Aditya Vyas, Akhil Datta-Gupta, Srikanta Mishra</i>	
Fast Integrated Reservoir Modelling on the Gjøa Field Offshore Norway	8390
<i>Jon Sætrom, Eirik Morell, Reza Rostami Ravari, Claire Le Maitre, Mailin Seldal</i>	
Data Driven Analysis for Rapid and Credible Decision Making: Heavy Oil Case Study	8404
<i>A. Kaushik, V. Kumar, A. Mishra, P. Tummala</i>	
Use of Data Analytics to Improve Well Placement Optimization Under Uncertainty	8416
<i>Daniel Busby, Frédéric Pivot, Amine Tadjer</i>	

SESSION 114: OPERATIONAL EXCELLENCE – MAINTENANCE STRATEGY

National Maintenance Management of Indonesian Upstream Oil and Gas Production Facilities	8426
<i>Mohamad Fauzan Amir, Tomy W. Poerwanto, Rossupanji Pribadi, Aswandi Aswandi, A. Farid Baidjuri</i>	
Pipeline Leakage Detection Using Fiber Optics Distributed Temperature Sensing DTS	8444
<i>A. Mishra, S. H. Al Gabani, A. Jumaa Al Hosany</i>	
Vibration Source Identification - Key to Process Safety	8458
<i>Alya Al Ahmad, Sathyanath Narayana, Ibrahim Al Awadhi</i>	
Partial Discharge Measurement in Transformer & Switchgear to Ensure its Integrity	8469
<i>Mustakim Middy</i>	
Optimize the Spares and Spare the Resources	8483
<i>Ashish Gongade, Ibrahim Al Awadhi, Sathyanath Narayana, Alya Al Ahmad, Robert Miranda, Sameer Oka</i>	

SESSION 115: IOR/EOR: CASE STUDIES OF NOVEL EOR APPLICATIONS

Analysis of IOR Pilots in Bakken Formation by Using Numerical Simulation	8495
<i>Dheiaa Alfarge, Mingzhen Wei, Baojun Bai, Mortadha Alsaba</i>	
Enhanced Oil Recovery in a High Stratigraphic Complex Reservoir: Casabe Project Case Study	8521
<i>Thaer Gheneim, Annalyn Azancot, Tito Acosta, Jose Francisco Zapata, Carlos Chaparro, Adriano Lobo, Ana María Jimenez, Gerson Perez</i>	

Extensive Miscible Water Alternating Gas WAG Simulation Study for a Giant Offshore Oil Field	8544
<i>Akihiro Kohata, Thomas Willingham, Mohammad Yunus Khan, Alunood Al Sowaidi</i>	
Functions of Nanoparticles and Surfactants in Enhanced Oil Recovery: Molecular Dynamics Studies	8566
<i>Oleg A. Mazyar, Qusai A. Darugar, Valery N. Khabashesku</i>	
The Study of Nanosurfactant EOR in Carbonates by Advanced NMR Technique	8577
<i>Ahmad M. Al Harbi, Jun Gao, Hyung T. Kwak, Amr I. Abdel-Fattah</i>	

SESSION 116: DRILLING AND COMPLETION TECHNOLOGY: LATEST IN WELL INTEGRITY MANAGEMENT - II

Technology Trends in Cement Job Evaluation Using Logging Tools	8590
<i>Mahmoud Khalifeh, Dave Gardner, Muhammad Yasser Haddad</i>	
Impact of Poro-Chemo-Mechanical Parameters on Pre-Stress and Cement Sheath Integrity under Well Pressure and Thermal Loadings	8606
<i>A. Onaisi, Ch. Urbanczyk, J-Y. Lansot, A. Garnier</i>	
New High-Definition Frequency Tool for Tubing and Multiple Casing Corrosion Detection	8622
<i>Luis Emilio San Martin, Ahmed Elsayed Fouda, Reza Khalaj Amineh, Ilker Capoglu, Burkay Donderici, Sushovon Singha Roy, Freeman Hill</i>	
Success Through Continuous Innovation to Achieve Better Zonal Isolation in Extended Reach Wells in a UAE Field	8636
<i>Abdelkerim Doutoum Mahamat Habib, Yousif Saleh Al Katheeri, Sheldon Seales, Rayaz Evans Ramdeen, Romulo Francisco Bermudez, Luis Eduardo Navas, Saurabh Kapoor, Surya Pallapothu, Azza El Hassan, Bipin Jain</i>	
Tackling the Problem of Ageing Well's Integrity and Rehabilitation in the Arabian Gulf	8647
<i>Ramesh Ramasamy, Eric Chau, Zainah Ibrahim</i>	

SESSION 117: DRILLING AND COMPLETION TECHNOLOGY: COST OPTIMISATION “DOING MORE WITH LESS” DECOMMISSIONING AND WELL ABANDONMENT

Saving Rig Time by the Use of New Generation Ultrasonic Transducers to Evaluate Cement in Outer Casing through Section Milled Window of the Inner Casing	8660
<i>L. Noble, A. Govil, C. McCann, G. A. Obando Palacio, O. Knutsen, B. Nesland, D. T. Mueller</i>	
Create a Rock-to-Rock Well Abandonment Barrier without Swarf at Surface!	8670
<i>Lambertus C. Joppe, Andrew Ponder, Daniel Hart, Bjørn T. Bruun, Gaute Grindhaug</i>	
Successful Well Design Journey-Oman	8685
<i>Rubaiey Hilal, Hajje Mohammed, Ali Baqir Al Lawati, Khaldi Saud, Terras Yan, Zeidi Badar, Ananda Pranava</i>	
Well Abandonment of Offshore Aging Gas Fields Using New Section Milling Technology Reduces Time and Costs to Set a Permanent Barrier- A Case Study of Section Milling 100 ft of 13-3/8” Casing to Set Cement Plug	8700
<i>Dean McTiffen, Glenn Tore Iversen, Michael Smalley, Mohammed Aleemul Haq</i>	
Campaigns of Opportunity – Rigless Subsea Phase III Well Abandonment Operations in the UK Continental Shelf	8708
<i>Steven A Canny</i>	
Advances in Rigless Well Abandonment: Pathfinder to Enormous Economic Advantage	8725
<i>Alok Singh, Aditya Prakash, Manish Kothiyal, Pj Sarma, Rajendra Srivastava</i>	

SESSION 118: HSE – MINIMISING ENVIRONMENTAL FOOTPRINT

An Industrial Hygiene Study in Support of a Sustainability Initiative: Clean Air for All	8736
<i>R. J. Simmons, C. C. Rodrigues, S. Stephen, M. A. Al Maflahi, R. Y. Yousuf</i>	
Reducing Operational Flaring through ALARP Based Decision Making	8746
<i>Harshit Agrawal, Mohammed Al Shuayli, Mohamed Salmani</i>	
Meeting ADNOC CoP CO & SO2 Emission Limits, at What Cost? Case Study	8757
<i>Dheeraj Nagwani, Yasser Hassan</i>	
Recovery of Casing Gas from Remote and Scattered Oil Wells	8769
<i>Xiangyu Cui, Yibin Weng, Ming Xue, Wenjia Xu, Junxin Fan</i>	
Risk Assessment for Groundwater Contamination from Hydraulic Fractured Shale to Aquifers	8775
<i>Weirong Li, Zhenzhen Dong, Cai Wang</i>	

SESSION 119: OFFSHORE AND MARINE – DRILLING, EMERGING AND ADVANCED TECHNOLOGY

Thirsty Reservoirs - Challenges in Drilling Through Severe Lost Circulation Zones	8786
<i>Chinthaka P. Gooneratne, Ernesto S. Gomez Gonzalez, Abdulaziz S. Al-Musa, Hugo F. Osorio</i>	
Study on the Drilling Fluid Flow Rate Allowable Range in Offshore Drilling Considering the Extended-Reach Limit.....	8799
<i>Xin Li, Deli Gao, Leichuan Tan, Hui Zhang, Xuyue Chen, Yingcao Zhou</i>	
PFLNG1 - Completing the LNG Value Chain Through Technology	8816
<i>Wan Mohd Ikhwan Wan Yusoff</i>	
Studies on Nanoparticle-Stabilized Foam Flooding EOR for a High Temperature and High Salinity Reservoir	8822
<i>Yuyi Zhu, Jing Tian, Qingfeng Hou, Yousong Luo, Jian Fan</i>	
Author Index	