

# **Abu Dhabi International Petroleum Exhibition and Conference (ADIPEC 2023)**

Abu Dhabi, United Arab Emirates  
2 - 5 October 2023

Volume 1 of 15

ISBN: 978-1-7138-8719-5

**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© (2023) by Society of Petroleum Engineers  
All rights reserved.

Printed with permission by Curran Associates, Inc. (2024)

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](mailto: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](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

# TABLE OF CONTENTS

## VOLUME 1

### **FIELD DEVELOPMENT: OIL DEVELOPMENT STRATEGIES**

DeepStar Innovative Technology Development & Deployment Outlook .....	1
<i>S. Shamsy, C. Lee, J. Joseph, W. Sun, J. Gayneaux, T. Sakurai, J. Gomes, C. Thompson, C. Lima, S. Patni, K. Mateen</i>	
Urban Planning Tool: Innovative and Automated Assist Solution for Field Development Planning .....	20
<i>F. Z. Al-Mutairi, S. AL-Refai, A. H. Alkhalidi, A. Kaushik, A. Dasgupta, Vander Heyden, G. De-Bruijn</i>	
Innovative FDP Reframing to Reverse Unfavorable Project Economics of Underdeveloped Field via Modular Approach Utilizing Digital FDP Ecosystem .....	32
<i>A. Bin Mohd Isa, R. Rj Kamal Tauphy, Z. Mokhtar, Y. Seah, M. Abdul Rahman</i>	
Integrated Tracer Gas Flood Study for Development Optimization .....	46
<i>Felwa Alameri, Mazna Naji</i>	
Proven Agile Reflection Through Greater Hawqa Asfoor Projects to Accelerate First Oil .....	60
<i>Kathiya Al Alawi, Nasser Yarubi</i>	
Unlocking Potential of a Shuaiba Reservoir Field Through Accelerated Field Development and Utilization of New Technologies in Geosteering and Production Optimization.....	70
<i>Z. A Al Kindi, A. AL Balushi</i>	
Short Spacing, Lower Viscosity, and Sub-Optimum Operating Conditions SAGD Trial in Mukhaizna Heavy Oil Field .....	77
<i>B. S. Al Yahmadi, R. M. Al Aamri, Z. M. Al Ajmi, W. S. Al Suqri</i>	
Maximizing the Value of Gas Lift for Efficient Field Development Plan Optimization Through Smart Gas Lift Optimization in a Giant Onshore Carbonate Oilfield.....	85
<i>S. J. Su, A. M. Ismail, K. Al Daghar, O. El-Jundi, H. Mustapha</i>	

### **FIELD DEVELOPMENT: MONITORING RESERVOIR PERFORMANCE TECHNIQUES**

Diagnosis of GOR Evolution in Carbonate Reservoir, Offshore Abu Dhabi, Undergoing a Major Miscible Gas Injection Operation.....	97
<i>M. N. Khan, K. Mogensen, A. Sainz</i>	
Subsurface-Guided Production Surveillance for High-Confidence Operational Decisions .....	109
<i>Osama Hasan Khan, Omer Gurpinar, Raj Banerjee, Daniel Pupim Kano, Camillo Tellez, Gabriel Gil Suarez, Ricardo Grijalva, Samad Ali</i>	
Combining DAS and DTS Measurements for Oil-Water Two-Phase Flow Profiling in Sucker Rod Pump Wells.....	125
<i>Jiayi Song, Weibo Sui, Jinbao He, Junwei Li, Yanming Yang, Huan Guo, Changyun Wen</i>	
Intelligent Chemical Tracers Provide Zonal Flow Identification in a High Water Cut Well .....	140
<i>Safiya Hatmi, Mahmood Harthi, Rasha Rashed</i>	
Innovative Method to Understand Flow Behavior in Horizontal Wells with Challenging Borehole Conditions Using Spectral Noise, High Precision Temperature and Pulsed Neutron Logs .....	149
<i>Al Naser Ethar, Benlakhdar Noureddine</i>	

Prediction and Analysis of Liquid Carrying by Plunger Gas Lift in Wellbore .....	158
<i>Shuquan Xiong, Binbin Zhang, Ping Liu, Wei Zhao, Yongfeng Li, Jianbo Zhang, Xiuan Sui, Weiqi Fu</i>	
Successful Implementation of Waterflood in Mature Oil Fields – A Case Study from South Oman .....	167
<i>E. Borkent, M. Mufarji, M. Morianta, I. Busaidi, I. Mahrouqi, M. Al Badi, A. Ibrahim, M. Harthy, S. Al Kindi</i>	

### **PROJECT MANAGEMENT: PROJECT EXECUTION STRATEGIES**

Efficient Solutions to Reinforce Weak Soil Strata .....	176
<i>Sreekanth Nuthanapati, T. S. Subramanian, Ibrahim Al Awadhi</i>	
Integrated Drilling Services Model Driving Cost Optimization and Operation Efficiency .....	189
<i>Faisal Al Hadabi, Zakiya Al Rashdi, Mohamed Al Bulushi</i>	
Digitally Transforming EPC Brownfield Project Execution with AWP: Applying the ADKAR Change Management Model for Scalability and Improved Uptake .....	198
<i>A. Robertson, L. De Vellis</i>	
Techno-Economic Assessment of Crude Oil/WaterEmulsion Separation Efficiency .....	212
<i>Mashhor Aljabrine, Neil Fairweather</i>	
Integrated Risk Management Strategy for Offshore Drilling Operations .....	218
<i>Andres Nunez Davila, Juan Ramon Lopez, Miguel Basso, Lucas Rossi, Edison Barrera</i>	
Robust, Economical, And Agile Well Construction Commissioning of Various Artificial Well Types in South of Oman .....	230
<i>Salim Al Mashrafi, Omar AL Naabi, Hafidh AL Azkawi, Said Al Harrasi</i>	

### **DRILLING: STEP CHANGES IN DRILLING TECHNOLOGIES**

Improving Lateral Drilling Performance by Better Understanding Energy Transition and Downhole Dysfunctions Using in Bit High Frequency Sensors .....	244
<i>R. Kouzaiha, C. Saidi, R. Rehman, I. Behiani, S. Al-Khalidi, S. Al-Rahbi</i>	
Achievement on Automatically Simulation Model Calibration to Provide Fit-For Basin 4D Fea Dynamic Drilling Analysis .....	263
<i>B. Liu, J. Ma, Y. P. Xu, Y. S. Huang, F. Feng, G. Xu</i>	
The Digitization of Mud Motor Power Section Life Cycle: From Concept to Operation .....	274
<i>D. Belov, A. Kolyshkin, B. Reid, S. Rocchio, K. Le, E. Cantarelli, E. Liland, G. Johnson</i>	
New Technologies and Practices to Enable Remote Operations, Increasing Complex Long Multilateral Horizontal Wells and Enriching Project Sustainability and Efficiency: A Real Case from Northern Europe .....	294
<i>A. Dixit, M. Bang, R. Gonzalez, O. Inge Andresen, T. Stangeland</i>	

### **ENERGY TRANSITION AND DECARBONISATION: CO2 EMISSION REDUCTION IN WELL OPERATIONS**

Repurposing Wells Instead of Abandoning Them to Generate Electricity Using Geopressure .....	305
<i>M. Salehabadi, A. Buang, B. Tupman, A. Abu Bakar, A. Omar, S. Md Tarif, M. A. Md Yakup, S. Mukherjee, I. Jaafar</i>	
Onshore Electrified Rig, A Sustainable Strategy .....	322
<i>Mélissa Dumoulin</i>	
A Novel and Innovative Flare Gas Recovery Solution - From Waste to Value .....	341
<i>Mathen Muthalaly, Fatma Harthy, Rodoljub Mihajlov, Abdullah Hadhrami</i>	

Reducing Carbon Emissions in Drilling Operations Offshore Abu Dhabi .....	358
<i>P-M. Hinden, H. Farrouk, G. Innes, L. Crowther, S. Kustanto</i>	
Renewables for Subsea Power – Transformational Low Carbon Subsea Power Project.....	366
<i>P. Slorach, I. Crossland, A. Silva, N. Money</i>	
The Path to Sustainable Cementing: Embracing a Non-Portland Cement Solution for Oil and Gas Wells.....	389
<i>Ahmed Abdelaal, Salaheldin Elkatatny, Ahmed Abd El Fattah</i>	
Emissions Optimization Platform to Quantify and Reduce Rig-Based Emissions .....	399
<i>N. Minhas, A. Abdelmoaty, S. Al Dakhil, S. Alsemail, J. Razzak, M. Jenkins</i>	

## **COMPLETIONS: NEW COMPLETION TECHNOLOGIES**

Configurable Adaptive Chemical Inflow Control Device Eliminates Intervention .....	409
<i>P. Asthana, A. Sulaiman, S. Jacob, A. Bukhamseen</i>	
Preexistent Sleeve Nozzle Design for Targeted Planar Propagation as a Counter to Stress Shadowing in Hydraulic Fracturing .....	420
<i>T. Watkins, J. Najafov, E. K. Watson, S. Livescu</i>	
Transforming Decision Making in Carbonate Matrix Acidization Domain .....	438
<i>Gaurav Chandola, Mohan K. R. Panga, Assiya Ugursal, Amit Kumar, Garima Garima, Yang Chen</i>	
Unlocking Hydrocarbon Potential in Tight Gas Reservoir in Onshore Abu Dhabi Through Different Completion Technologies .....	453
<i>B. Bernadi, S. S. Al Ameri, F. O. Al Awadhi, H. A. Al Shehhi, M. A. Al Hosani, A. M. Al Bairaq</i>	
Innovative Solution to Minimize Oil-Based Mud Formation Damage in Jurassic Depleted Reservoirs.....	478
<i>Al-Dhafiri Anood, Al-Otaibi Yousef, Bloushi Taha, Al-Mutawa Majdi, Al-Ajmi Moudi, Abdelbagi Mamoun, Sierra Martinez Sebastian, Abdel-Basset Mohammed</i>	

## **UNCONVENTIONAL RESOURCES DEVELOPMENT: DRILLING AND COMPLETION CHALLENGES**

First Application of Hybrid Bit Technology to Drill Abrasive and Massive Cherts in Long Interval Section, Reaching Successfully the Target in One Run in Unconventional Gas Field, ADNOC Onshore UAE .....	493
<i>F. Ruiz, M. Elzaky, R. Al-Rahma, C. Anumba, A. Eldeiry, M. Abdelhamid, Y. Nunez, R. Kumar, R. Kamble, M. Ibrahim, M. Sas, A. Baruno, M. Anwar, I. Hamdy, E. AL Shamisi, A. Bin Sumaida, A. Bin Shamlan, C. Kirby, M. Coscia, B. El Yossef</i>	
Tight Gas Reservoir Characterization and Comparison of PLT Methods: Micro-Seismic Monitoring, Fiber Optical Production Logging and Tracer Coated Sand Monitoring Applied in the Same Well.....	511
<i>Xiao Yao, Zeng Qinggao, Deng Haibo, Song Linke, Liu Xinggang, Heng Haiyan, Zhang Wenjing, Sun Geng, Wang Guangyu, Anna Belova, Nadir Husein</i>	
First Unconventional Najmah Horizontal Well in Green Jurassic Gas Field Unlocked the Reservoir Potential and Setup Development Strategy Roadmap .....	521
<i>M. Abdel-Basset, Y. Al-Otaibi, S. Al-Ajmi, S. Al-Mulla, T. Bloushi, M. Al-Mutawa, M. Al-Ajmi, A. Hadi</i>	
Cyclic Injection Scheme to Reduce Breakdown Pressure in Hydraulic Fracturing Wells: Case Study .....	536
<i>Mohamed Salah, Mohamed Thani Al Hammadi, Afnan AL Marzooqi, Hajer Mohamed Ali J. Alshehhi</i>	

## **AI AND DIGITAL TRANSFORMATION: AI FOR SUSTAINABILITY**

Study and Application on Intelligent Carbon Emission Management System for Petrochemical Enterprises .....	548
<i>Yan Gong, Liya Zhang, Liang Cheng, Jian Liu, Hua Wang</i>	
SAOO Leveraging IR4.0 Technologies to Reduce GHG Emissions .....	560
<i>E. M. Elayoubi., S. N. Boulaiyan</i>	
Towards 2030: Transforming Asset Emissions in Upstream Production Operations .....	568
<i>Peter Carydias, Preben Nielsen</i>	
Enhancing Digital Twin Accuracy for Energy Efficiency and Decarbonization .....	581
<i>R. J. White, A. A. Alhamoud, H. A. Fallatah, M. M. Elbaradie, M. S. Mulfi</i>	
A Framework for the Application of AI Solutions for Facilitating and Speeding-Up the Industrialization of Innovative R&D Technologies for Targeting Net-Zero Emissions .....	593
<i>M. Suardi, F. Cannarile, G. Guastone, A. Fidanzi, R. Millini, D. Testa</i>	
Successful Reduction of GHG Flaring Emissions in South Oman Cluster Using Simple CI Tools .....	601
<i>A. Mandhari, P. Ramakrishnan, M. Maskari, A. Hadhrami, R. Mihajlov, A. Shukaili, Y. Tobi</i>	
Long Short-Term Memory Network for High-Fidelity Tracking of Greenhouse Gas Emission .....	612
<i>V. Kumar, A. Roy, S. Misra</i>	

## **GEOSCIENCE: REGIONAL GEOLOGY**

Stratigraphic Evolution and Reservoir Quality of the Tuwaiq Mountain and Hanifa Formations, Onshore and Offshore Abu Dhabi .....	626
<i>Anthony J.-B. Tendil, Laura Galluccio, Stuart Hatter, Alexandre Letteron, Catherine Breislin, Kate Al Tameemi, John Aitken</i>	
A Dual Petroleum System in the Eastern Onshore Abu Dhabi .....	644
<i>Takahiro Zushi, Shin Tokuoka, Takahiro Shimomura, Motoyoshi Yamanaka, Bernardo J. Franco, Jawaher Al Shamsi</i>	
Stratigraphy and Depositional Environments of the Paleogene Pabdeh Foredeep Basin: A Shallow Shelf to Deep Basin Transect, Ras Al Khaimah, UAE .....	658
<i>W. S. Mills, K. Socha, M. Malczewski, P. H. Swire, G. Firpo, A. O. Balta, T. Burckhart, M. Kepinski, R. Ryder, C. Cetean, R. Sekti, A. Pardon, A. Mccarthy, D. P. Gold, D. Holloway, P. Hadro, H. Hjalmsdottir, P. Hayward</i>	
Quantitative Stratigraphy of the Early Jurassic Middle Marrat Formation in Kuwait: A Revival of the Epeiric Island Model .....	682
<i>Michael C. Poppelreiter, Michele Claps, Eugene Rankey</i>	
Reservoir Quality Heterogeneity of the Asab Formation: A Detailed Sedimentological and Reservoir Quality Evaluation .....	698
<i>L. Galluccio, C. Breislin, A. J.-B. Tendil, Christoph Lehmann, Aysha Al Hosani, Alya Al Mannaee, Salman Alawadhi, Muhammad Ali Arianto, Lalu Abdul Aziz, Arnaud Fournillon</i>	
Integrated Workflow for Understanding the Sedimentary Basin and the Rock Quality of the Cretaceous Upper Shuaiba, Bab Member, in the Northwest of Oman Through Thickness Mapping and Rock Typing at Regional Scale .....	713
<i>A. Al-Hamdi, C. Nicholls, M. Azzazi</i>	
Sedimentary Evolution of Delta and Reservoir Distribution Under the Control of a Volcanic System .....	727
<i>Dongmei Hou, Chao Li, Pengyu Gao, Xun Yuan, Xiaolong Zhang, Zhong Cheng</i>	

## **PEOPLE DEVELOPMENT AND DIVERSITY: TALENT MANAGEMENT AND NATIONALISATION**

A Systematic Approach in Developing Young UAE National Engineers as Part of Strategic Nationalization and Organizational Development.....	742
<i>H. Al Karbi, M. Jamal Bahumaish, N. K. Unnikrishnan, M. Al Suwaidi, M. Alnuaimi, M. Alshamsi</i>	
Self-Ignited People Development Via Technical CoPs - Optimum Engagement Strategies to Foster the Full Potential of Our Local Staff .....	749
<i>J. D. De Sousa Drumond</i>	
Re-Skilling Young Sarawak's Talents into Oil and Gas Workforce, A Noble Social Engagement to the Community .....	761
<i>M. E. Yanez Banda, Z. J. Johan, A. Dubois, D. H. Abang, N. Musa</i>	
Creating an Inclusive and Skilled Workforce .....	770
<i>B. A. Banihammad, J. J. Al Mirza, A. A. Ashraf, R. S. Kumaresan</i>	

## **VOLUME 2**

Ex Factor: Is Leveraging Mentoring & Sponsorship to Fast Track Diverse Leadership Pipelines Underestimated in Employee Experience (EX)? .....	777
<i>N. W Gustave, K. G Chapa</i>	

## **OPERATIONAL EXCELLENCE: HSE, SECURITY, AND SUSTAINABILITY**

Remote Pressure Monitoring that Put an Entire Drilling Campaign at Risk and how the Campaign was Saved.....	793
<i>A. L. Ryba, G. Mahanti, S. Lawati, S. Kindi, W. Farsi</i>	
Improved Operational Excellence in Oil and Gas Production Management Through New Well Management System .....	801
<i>M. Shekaili, I. Balushi, N. Kumar, E. Marin</i>	
Expired Medications as Corrosion Inhibitors in the Oil and Gas Industry .....	816
<i>T. Almubarak, F. AlOtaibi, M. Rafie, A. Baiz</i>	
Sand Waste Utilization for Dehydration Application .....	825
<i>Duangkamon Suttipat, Prasert Pavasant, Praewpakun Sintharm, Suratsawadee Sukeesan, Sunisa Watcharasing, Prapoj Kiattikomol</i>	

## **KNOWLEDGE SHARING EPOSTER - STATION 1 - MONDAY, 02 OCTOBER 2023**

Excellence in Emergency Drills Compliance Monitoring and Assurance Through Digitalization Using Power Platform .....	835
<i>Subhan Satopay, Amer Al Maflahi</i>	
Innovative Analytical Approach to Eliminate Repetitive Unmanned Offshore Oil Platforms Interruptions .....	844
<i>Hashem H Ghanem, Ioannis Georgiou, Khaled A Mana</i>	
Inflow Chemical Tracers: An Innovative Approach to Quantify the Zonal Contribution from Inaccessible Drains.....	853
<i>Fadwa Al Maimouni, Osama Keshtta, Yann Bigno, Rasha Rashed, Doha Abasher</i>	

Miscible Water Alternating Gas Injection WAG Field Scale Application in Algeria: An Effective Way to Improve Oil Recovery, Rejuvenate Mature Field and Develop Opportunities to Stream Gas Sales .....	863
<i>M. A. Allal, A. Brancolini, F. Smail, Z. Kaaroud, M. A. Kriat, M. Elmutardi</i>	
Overcoming Challenges of Testing Gas Lifted Wells Via Multiphase Flowmeters with a Novel Work-Process Approach Embedded in a Digital Outlook to Enhance Well Test Data Quality. Lesson Learned from a Smart Field in Abu Dhabi .....	877
<i>Erismar Rubio, Gaurav Gupta, M. Al-Attar, Abdalla Ali Ahmed Qambar, Ibrahim Eltony, Rayner Davila, Mai Al Nuaimi</i>	
Developing Mature Oil Rim Reservoirs with Large Gas Cap and Weak Aquifer: Key Decisions and Approach, Using A Mature Field in Oman as Case Study.....	897
<i>G. Kumar, S. Khadhuri, M. Gharbi, H. van Neck, Y. Hajri, R. Yazidi</i>	

## **KNOWLEDGE SHARING EPOSTER - STATION 2 - MONDAY, 02 OCTOBER 2023**

New Era of Sucker Rod Hanger: Innovative Design to Enhance Pulling Out and Running in Hole Sucker Rod Operations.....	905
<i>S. K. Altubi, A. AlRubkhi, A. Jyoti</i>	
De-Carbonization: Zero Flaring by Acid Gasrerouting Project.....	917
<i>Somayajula Harish, Ramalingam Satheeshkumar, Soni Ashish, AlMerri Hamad</i>	
GHG Reduction Initiative Via Direct Flaring Reduction: How a Downhole Mechanical Gas Shut-Off was Successfully Carried Out in a High Gas Production Well in the Malay Basin.....	925
<i>E. E. Chong</i>	
Restoration Technology Hand in Hand With Nature-Based Solutions: ADNOC's Drone Led Mangrove Restoration Project.....	935
<i>A. A. AlRaisi, S. Al Hameedi, R. M. AlBuainain, J. Glavan, C. Rhodes</i>	
Enhancing Drilling Efficiency in Soft and Plastic Formation: A Field Trial of Hyperbolic Diamond Element (HDE) Bits in Eastern Offshore Basin and Assam-Arakan Basin, India.....	941
<i>S. Prakash, M. Zayyan, S. Narayanan, A. M. Haque, A. Soi, B. James, R. Menon, V. K. Sharma, D. Nandi</i>	

## **OPERATIONAL EXCELLENCE: GHG EMISSION REDUCTION**

Revolutionizing Sustainability: Achieving Net Zero Emissions with Lean Gas Flare Tip Technology Breakthrough in the Gulf of Thailand .....	958
<i>N. Amarutanon, B. Assavanives, K. Watanakun, S. Jairakdee, N. Rakpratanporn, N. Muangsuankwan, N. Sayatanan, K. Sinthavarayan, S. Watcharasing, Z. Kodesh</i>	
Achieving Zero Routine Flaring from Block 60 Oil Production Facilities.....	970
<i>Manal Al Siyabi, Arwa Al Ajmi</i>	
Underbalance Coil Tubing Drilling in Depleted Tight Gas Reservoir with Closed Loop System - Contributed Towards Adnoc Sustainability Targets by Minimizing Hydrocarbon Flaring in High Sour Gas Well.....	978
<i>Muhammad Ali Siddiqui, Abdullah Alhaj Al Hosani, Maad Hasan Qayed Subaihi, Mohammed Ibrahim Al Janahi, Fawad Zain, Mohamed Ahmed Baslaib, Abdulla Haidar Abdulla Al Zarouni, Maryam Omar AlBlooshi, Reem Mohamed Alhammadi, Mohamed Osama Abd El-Meguid, Mubashir Ahmad, Abdulla Mohammed Al Marzouqi, Ahmed Al Mutawa, Ayman El Shahat, Ali Sulaiman Bin Sumaida</i>	
Innovative Surface and Subsurface Solutions to Reduce Emissions and Optimize Production in a Brownfield Offshore Malaysia .....	991
<i>N. A. Dasuki, R. Islamov, S. Anand, M. Ghaneezabadi, L. A. Bidin, I. Subari, F. A. Salleh, R. Bakar, R. Z. A. Raja Zainal Raffik, M. D. Munawar, A. Eskov, A. Jamil</i>	



### **KNOWLEDGE SHARING EPOSTER - STATION 3 - MONDAY, 02 OCTOBER 2023**

Utilization of High Pressure Water to Recover Flared Gas at Gas Oil Separation Plants.....	1007
<i>H. D. Alzahr, M. A. Almuhainy</i>	
Curing Packer Leak Riglessly Using Bismuth Alloy: Results of the Field Pilot .....	1014
<i>Bilal Ahmad, Andrey Yugay, Mohamed Masud Akhtar, Mohammad Rajai Baker Hijjawi, Sergei Vorozhikhin, Abdulla Almuharrami, Amir Nadeem, Mayank Varshney, Ehsan Arif, Eisa Al Harmoodi</i>	
Enhancing the Overall Operational Efficiency and Reducing the Emission Rates of Brownfield Facilities .....	1028
<i>A. Al Mehairi, K. M. Youssef, A. Salami</i>	
Development and Evaluation of a Novel Non-Combustion Gas Turbine for Offshore Platform Application .....	1036
<i>M. F. Muhammad, M. M. M. Thant, Firmansyah Firmansyah, N. M. R. N. M. Daud, M. F. Sedaralit</i>	
Hydrogen as a Futuristic Solution to Energy Poverty in Eastern Europe - Case Study of Greece .....	1051
<i>A. O. Aluko, G. O. Odularu, L Suleymanli</i>	

### **MARINE OPERATIONS AND LOGISTICS: SUBSEA ENGINEERING AND INSTALLATION**

Repairing Clad Pipelines: The First-Of-Its-Kind Metal-Seal Connector.....	1069
<i>F. Cavallini, D. Lazzarin, R. Mattarucco, L. Michelazzo, A. Quick</i>	
Estimation of Corrosion Rate for Ruptured Subsea Pipeline With Electrochemical Measurement.....	1077
<i>H. Mizukami, T. Sunaba</i>	
Gap Analysis for EHV Submarine Cable Design .....	1087
<i>Kamaljit Singh, Raju Paul, Faris Kamal</i>	
Unconventional Method of Subsea Umbilical Retrieval Using Anchor Handling Vessel .....	1101
<i>P. D. S. Dharma Dian, M. F. Rashid, A. Berwanto, A. Z. Abdullah, A. T. Obaidelah, I. Ghazali</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 4 - MONDAY, 02 OCTOBER 2023**

Corrosion Study of a Trunk Line of Western Offshore of India .....	1131
<i>Maushumi Kakoti Talukdar, Simran Bareja, Arzoo Saini</i>	
Targeting Offshore Installation Efficiency: An Innovative Tool for a Safer Offshore Lifting & Handling of Pipes Without Human Intervention .....	1142
<i>G. Monacchi, G. Arcangeletti, G. Castriotta, G. Toso, A. Loi, A. Vaglio, G. Zornetta</i>	
Selection of Acid Types to Achieve Uniform Stimulation in Long Laterals of Horizontal Wells .....	1152
<i>Liu Hui Feng, Xu Ning, Liu Qi, Tian Hongzhao, Ming Yue, Chen Zhangxin</i>	
Ultra ERD Well Completions: Extending the Limits to Drive Profitability .....	1174
<i>M. K. Panga, F. Al Hammadi, J. D. Marsh, A. Mohamed, D. Pace, J. Wills</i>	
The Challenge to Integrate Sedimentology and Well Completion to Predict Production Performance in an Unconventional Reservoir .....	1185
<i>Ricardo C. B. de Melo, Sergiy Mykhaylenko, Laksmikantha Rao Hosur</i>	
A Magnetic Levitation Turbine Generator for Downhole Electronic Devices .....	1198
<i>Tao Fu, Qinghai Yang, Wei Sun, Chenglong Liao, Bairu Shi, Yazhen Liu</i>	

## **FIELD DEVELOPMENT: SURVEILLANCE FOR RESERVOIR MANAGEMENT**

Potential Risk Evaluation of Biogenic Reservoir Souring for Decision Support of Water Flooding Field Development Plan in a Giant Offshore Oil Field in Abu Dhabi .....	1207
<i>Kota Ashikawa, Koki Ikeda, Atsushi Iino, Takeshi Hiraiwa, Ken Makishima, Yukito Nomura, Saeeda Mohamed Al Ameri, Adedayo Dada, Hideharu Yonebayashi</i>	
ESP Challenges in an EOR Project After Breakthrough. An Analysis of Continuous Improvement for ESP Designs Towards the Reduction of OPEX .....	1218
<i>Kevin Ismael Andagoya Carrillo, Jorge Luis Villalobos Leon, Mario David Hidalgo, Carlos Morales, Andrés Orozco, Raúl Naranjo, Luis Enriquez, Carlos Reyes</i>	
Water Shutoff and Conformance Improvement for Lamadian Oilfield in Daqing Using a Novel Polymer System: Experimental Study, Simulation, and Pilot Tests.....	1230
<i>Meng Lu, Harpreet Singh, Jianshen Li, Qiushi Huang, Chi Ma, Gaojun Shan, Qinglong Du, Meng Cai, Haitao Wang, Xiangbin Liu, Yan Qiao, Huan Chen, Zhao Chen, Cong Nie</i>	
End-to-End Reservoir Surveillance Optimization Through Automated Value of Information Assessments.....	1252
<i>S. Ramatullayev, S. Tahir, O. El Jundi, S. Su, C. K. Kloucha, H. Mustapha</i>	

## **HEALTH AND SAFETY: INNOVATIONS IN ENVIRONMENTAL PROTECTION**

Enhancing Bioremediation of Petroleum-Contaminated Soil Using Rhamnolipids: A Combined Laboratory and Field Study .....	1261
<i>Pan Ni, Yonglin Ginger Ren, Derick G. Brown, Kris Ayres</i>	
Purging Gas Plant Flare System Using Gas Turbine Generators Exhaust Emissions – A Novel Approach .....	1273
<i>Mohamed G. Ali, Ahmed H. Besheer, M. H. M. Hassanean</i>	
Reduction of NORM Waste in the Oil and Gas Industry with Indirect Heated Vacuum Distillation Technology .....	1280
<i>J. Borbet, J. Veciana, C. Stiels, R. Schmidt</i>	
Full-Scale Reuse Treatment of Wastewater Produced by Oxidation-Absorption Technology of Tail Gas from Natural Gas Purification Plant .....	1291
<i>Quanwu Tang, Jing Li, Dong Lin, Tianxin Chen, Yue Wang, Liang Zhao, Guobin Jiang</i>	

## **DRILLING: DRILL BIT TECHNOLOGIES**

First 22" PDC Successful Run on Rotary Steerable System, Optimum Bit Design Selection for Challenging Directional Application .....	1311
<i>N. Shadad, S. Reboul, A. Hussein Saffar, M. Ragaey, A. Alraish, E. El Genidy, M. Gamal, V. Tissot</i>	
Innovative Bit Body Design Unveils Manufacturing Novelty, Improves Drilling Performance and Dogleg Assurance in Rotary Steerable Applications .....	1325
<i>O. Gjertsen, R. Santana, L. Craigie, P. James, G. Andreasen, J. Ross, R. Boualleg, K. H. Tang, D. Li, D. Mendoza, J. Gatell, B. Durairajan, R. Mushinski, V. Karuppiah</i>	
Case Study & Learnings of the Fastest Well Drilled in Highly Challenging Northern Region of Pakistan .....	1336
<i>Dayal Parkash, Shahjahan Khan, Zaman Sarfraz, Usama Sabir</i>	
Innovative PDC Bit Design to Improve Drilling Performance in Highly Abrasive Sandstone Reservoirs .....	1348
<i>Sajid Hussain, Victor Jose Bustamante Rodriguez, Chaouki Boufama</i>	

## **ENERGY TRANSITION AND DECARBONISATION: ENERGY EFFICIENCY DRIVES OUR SUSTAINABILITY GOALS**

Energy Efficiency Surveillance Tool (EEST).....	1360
<i>H. I. Al Farsi, A. Wahaibi, N. Subhi, A. Maqbali, A. Brockman, J. Rumhi, A. Sabri, S. Abri, I. Shuaily, H. Al Hosni, A. Al Harthi, M. Al Araimi, A. Subhi, P. Willcox, A. Balushi, M. Rashdi, A. Riyami, R. Ghammari</i>	
An Advanced Desalination System with an Innovative CO2 Power Cycle Integrated with Renewable Energy Sources .....	1370
<i>Orazio Alberto Terracciano, Francesco De Francesco, Rita Brizzi, Francesco Annese, Michele Doninelli, Lorenza Putelli, Marcello Gelfi</i>	
Green Corridor: A Feasible Option for the UAE Decarbonization Pathway, Opportunities & Challenges .....	1383
<i>S. Diaz, N. Al Hammadi, A. Seif El Nasr, F. Villasuso, S. Prakash, O. Baobaid, D. Gracias, R. Mills</i>	
Industrial Operational Feedback of Solvent Acidification for a More Energy-Efficient Operation of an AGRU .....	1404
<i>D. Rakotoalimanana, M. Scala, R. Cadours, E. Cloarec, F. Lucile, M.-A. Paran</i>	

## **COMPLETIONS: WELL PERFORMANCE DEVELOPMENT**

Improving Injection Efficiency in CCUS Wells: A Comparative Analysis of Different Completion Designs .....	1413
<i>Prakasa Bona, Murray Fraser, Allen Clifford</i>	
Multizone Open Hole Gravel Pack Completion with Selective Production Capability in ACG Field .....	1434
<i>Yoliandri Susilo, Khsitij Dharmadhikari, Sherif Taha, Ayisha Ismayilova, Ilkin Guliyev, Zaur Jafarli, Natig Kerimov, Ravana Kerimova, Samir Veliyev, Kevin Whaley, Alex Wallace, Elvin Mammadov, Mike Foster</i>	
Using a Permanently Installed Fiber Optic Sensing System for Water Injection Monitoring on an Onshore Water Injection Well in a Carbonate Reservoir .....	1447
<i>J. Mason, G. Naldrett, S. Rachapudi Venkata, F. Ofowena, J. Vargas Rios, J. Ahmed, H. Mahmood, T. Langnes</i>	
Success Story: Selective Completion Combined with Wide-Range ESP in KOC.....	1464
<i>Hussain Shuber, Abdullah Al-Watyan, Ali Alaryan, Kunal Kishore, Ciro Aparicio, Sameer Yadavalli, Cai Houben</i>	

## **UNCONVENTIONAL RESOURCES DEVELOPMENT: PETROPHYSICS CHARACTERISATION**

A Novel Approach for Improved Accuracy in Water Volume and Reservoir Quality Assessment During Field Development in Organic Shales .....	1476
<i>U. D. Bustos, C. Bernhardt, L. Vera</i>	
Characterization of Pore Structure and Fluid Saturation of Organic-Rich Rocks Using the Set of Advanced Laboratory Methods .....	1493
<i>A. Mukhametdinova, B. Andreyev, M. Latypova, G. Kalmykov, A. Kalmykov, N. Bogdanovich, M. Spasennykh, A. Cheremisin</i>	
The Vital Role of Advanced Cutting Analysis in Unconventional Reservoir Characterization .....	1507
<i>Mahmoud Fawzy Fahmy, Kim Long Nguyen, Mohammed Dasma, Nami Al-Mutairi, Rasha Al-Morakhi, Abrar Yousef Alkandari, Riyadh Quttainah, Karim Ousididene, Ahmed Moustafa, Mohab EL Masry, Caroline Magnier, Sachin Sharma</i>	

Novel NFDW Workflow: An Approach to NMR Data Processing for Accurate Fluid Typing and Saturation Determination.....	1518
<i>J. Gao, H. T. Kwak, M. Boudjatit, S. Althaus, J. Chen, G. H. Sørland</i>	

**KNOWLEDGE SHARING EPOSTER - STATION 5 - MONDAY, 02 OCTOBER 2023**

Novel Method to Calculate Free-Gas-Filled Porosity for Shale-Gas Reservoir and Production Prediction Using Wireline Nuclear Magnetic Resonance: A Case Study in Sichuan Basin, China .....	1529
<i>Yun Rui, Yue Wang, Wei Niu, Xian Ran Zhao, Ye He, Hui Geng Li, Yang Zhi Shi, Jin Long Wu, Feng Pan, Kai Xuan Li, Lei Xu</i>	
Generating Synthetic Temperature Surveys for Wells Through Subsurface Spatial Machine Learning Modeling and Time Series Forecasting .....	1542
<i>Ahmed S. Al-Qahtani, Bayan A. Momtan</i>	

**VOLUME 3**

Insights into CH <sub>4</sub> /CO <sub>2</sub> Adsorption and Mechanisms Enhanced CH <sub>4</sub> Recovery in Kerogen Slit Nanopores by Innovative Molecular Dynamics .....	1551
<i>Jiawei Li, Rui Wang, Xu Dai, Sheikh S Rahman</i>	
Leveraging Strategic Lessons Learned from a Challenging Marginal Field Water Flood Development .....	1566
<i>Helal Al Menhali, Ajay Kumar Samantray, Ahmed Alneaimi, Mohamed Lotfy Elbaramawi, Sultan Loobari, Muhammad Mukhtar, Riadh Bejaoui, Ferran Bell, Anoop Mishra</i>	

**AI AND DIGITAL TRANSFORMATION: AI FOR SUBSURFACE**

Machine Learning Advisory System for Mitigating Downhole Vibrations for Horizontal Sections .....	1579
<i>Ramy Saadeldin, Ahmed Alsabaa, Ahmed Gowida, Hany Gamal, Salaheldin Elkhatatny</i>	
Minimizing Geological Core Destructive Analysis Using Machine Learning .....	1590
<i>M. Mezghani, L. Tao</i>	
Rapid High-Fidelity Forecasting for Geological Carbon Storage Using Neural Operator and Transfer Learning .....	1598
<i>Yusuf Falola, Siddharth Misra, Andres Calvo Nunez</i>	

**KNOWLEDGE SHARING EPOSTER - STATION 6 - MONDAY, 02 OCTOBER 2023**

Enhancing Oilfield Management: The Digital Wellsite Advantages .....	1611
<i>Xueqiang Wang, Jun Zhu, Wei Zhang, Qijun Zeng, Zhicheng Zhang, Yulong Tan</i>	
An Artificial Intelligent Method to Optimize and Enhance Well Performance and Oil Production Wells by Approaching Well Behavior.....	1620
<i>D. Surya, P. Putra, G. Utomo, R. Ramadhan, M. B. Pratama</i>	
Jurassic Hydrocarbon System Appraisal and Implications for Prospectively in Central and Southern Iraq, Middle East .....	1631
<i>Guosheng Qin, Youjing Wang</i>	
Unearthing Hidden Treasures Beneath Our Feet: The Thrilling Journey of Recent Oil Field Discovery and Charting Future Opportunities, Onshore Abu Dhabi .....	1640
<i>A. A. Salahuddin, M. R. Al-Ghaferi, K. A. Khan, E. Warsito, N. M. Aljneibi</i>	

## **GEOSCIENCE: NEW EXPLORATION PLAYS**

- Seismocracks: Tectonic Origin of Stylolites, Abu Dhabi Carbonates..... 1656  
*Abdelwahab Noufal, Hamda Alshehhi*
- Forced Regressive Wedge of the Early Cretaceous Sembar Formation, the Potential Reservoir Body Encased Within Outershelf Sediments; Lower Indus Basin, Pakistan ..... 1676  
*Shakeel Ahmad, Shahid Ghazi, Rana Faisal Shahzad, Iftikhar Ali, Shahid Iqbal, Shakeel Akram, Muhammad Akram Qureshi, Uzair Hamid Awan, Imran Khan, Ghayoor Ahmad*
- Undiscovered Potential in North Oman's Subtle Natih Truncation Traps ..... 1690  
*Emma Butler, Bushra Al Shukaili*
- Unlocking the Nahr Umr Play Potential in North Oman from Regional Evaluation of the Limestone Marker Unit ..... 1704  
*Maram Al Belushi, Mohamed A. K. El-Ghali*

## **GEOSCIENCE: ROLE OF GEOSCIENCE IN UNCERTAIN ASSESSMENT**

- Multi-Seismic Attribute Interpretation and Machine Learning Based Analysis to Unlock Development of Stratigraphically Complex Secondary Reservoir Potential ..... 1718  
*S. Mata García, A. Carrillat, W. Torres, P. Cisneros, A. Lucas, C. Miller, J. Garrido, J. Rodas, P. Zamora, J. Karelis*
- Uncertainty and Sensitivity of Permeability Models ..... 1736  
*Russell Farmer*
- Managing New Development Uncertainty with Scenarios and Multiscale Modelling: An Integrated Study of the Fogelberg Discovery ..... 1760  
*James R. Mullins, Maria Mendez, Luka Bajan, Dimitri Rocher, Adam Spitzmüller, Tom Marsh, Bjørn A. Berntsen*
- Automated Well Log-Based Prediction of Formation Tops: Case Study of Norway Offshore Data ..... 1774  
*A. B. Shakirov, A. Lipko, M. Mezghani*

## **KNOWLEDGE SHARING EPOSTER - STATION 7 - MONDAY, 02 OCTOBER 2023**

- Near Bit, Real-Time 1D and 3D Ultra-Deep Resistivity Inversion; A Case Study in the Longest Maximum-Reservoir-Contact well Offshore Abu Dhabi, UAE..... 1783  
*Amr Serry, Shafiq Ahmed, Abdelrahman Arif, Osama Keshta, Sharifa Yousif, Asma Alhamedi, Christophe Cottin, Wael Fares, Vinda Manurung, \_Waseem, Nigel Clegg*
- Integrated Modelling Approach Employing High Resolution Porosity Realizations Derived from Impedance-Porosity Joint Inversion in a UAE's Complex Carbonate Reservoir ..... 1792  
*Saif Al Shamsi, Anurag Grover, Jahan Zeb Ahmed, Luis Manuel Ramos, Katharine Emma Bowden, Uli Micksch, Jean-Michel Codo, Ehsan Sadeghi*
- Improved Reservoir Mapping by Integrated Interpretation Approach Using Horizontal Wells ..... 1806  
*M. I. Mergany, A. R. Narino*

## **OPERATIONAL EXCELLENCE: LEAN OPERATIONS**

- Modernize Execution Phase of Drilling Process in Offshore Brownfield (Gulf of Thailand) to an Overlapped Environment Using Digital Solution..... 1814  
*P. Yuhun, H. Roenthon, K. Laitrakull, C. Boonmeelapprasert, D. Tungthansamma*
- State-Of-The-Art Technologies and Engineering Approach to Production Logging of Penta Lateral Electrical Submersible Pump Driven Offshore Wells..... 1828  
*A. J. Abdulghani, H. A. Muailu, M. N. Shurafa*

Enhancement of Drilling Effectiveness Through Lean 6 Sigma Methodology .....	1838
<i>A. S. ALAlawi, J. Peter, A. ALKindi, H. ALAdawi, N. Husaini, M. ALAlawi, M. AL Nuumani</i>	
Integrated Performance Workflow to Optimize ESP Daily Operations .....	1850
<i>Abdulla M. Al-Jazzaf, Abdulaziz Shehab, Abdulaziz Abdal, Hamad Al-Askar</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 8 - MONDAY, 02 OCTOBER 2023**

Sand Clean Out With Coiled Tubing and the Use of a Special Sand Clean Out Tool: A Case Study in Depleted Wells in Colombia .....	1864
<i>Caterin Barrera Cortés, Miguel Sanchez, Richard Hampson</i>	
Formation Sampling in Ultra-Low Mobility Reservoirs with the Aid of Targeted Stimulation Utilizing Wireline Formation Testing Tool .....	1876
<i>Osama Ramadan, Abdulelah Binghaith, Jeelani Bhat, Wael Soleiman</i>	
Streamlining Information Retrieval Using a Chatbot Application .....	1887
<i>N. Sittipolkul, S. Wanwilairat, K. Sujjintararat</i>	
Increasing Electric Submersible Pumps Run Life: How to Mitigate the Impact of Sensor Data Loss? .....	1896
<i>L. N. Guillca, L. Enriquez, E. Batallas, C. Reyes, G. Tagarot, D. Campana, R. Segovia, K. Andagoya, M. Hidalgo, R. Naranjo, J. Villabos</i>	

### **OPERATIONAL EXCELLENCE: PROCESS SAFETY**

Integrity Challenges and Damage Mechanisms Affecting Storage Tanks Bottom Plates: Implementation of Cost-Effective Mitigation and Control .....	1907
<i>Saleh Salem Al Ameri, Ajiv Mohan Nair, Jayadevan Pattali</i>	
Process Safety Site Assessment Program (PSSAP®): Do Repeat Assessments Help Assure Success? .....	1925
<i>C. M. Frazier, R. D. Meng</i>	
Gas Piping Condition Monitoring Deployment .....	1935
<i>Sergey Drygin, Pierfrancesco Guagnano</i>	
Advanced High-Efficiency Column Internals for Layout and Height Optimization of FPSO TEG Contactor and Reducing TEG Loss .....	1955
<i>M. Shi, M. Talseth, H. Kumar, F. Carlson</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 9 - MONDAY, 02 OCTOBER 2023**

Breaking Barriers: Downhole H2S Scavenger Automation Pilot Trial Intellisweet .....	1970
<i>A-Sukaimy Abd-Rahman, Michael Turner, Rahul Kulkarni, Stuart McGregor, Sulaimon Ajibode, Jeremy Leidensdorf, Alejandro Pukall, Abdullah Othman</i>	
Preventing Process Safety Incidents in Upstream & Downstream Oil & Gas Operations by a Systematic Approach to Strengthen Process Safety & Asset Integrity Barriers .....	1978
<i>Muhammad Tayab, Hamda Al Suwaidi, Hind Al Zaabi, Pravin Kumar, Vishal Shah, Abdulla Saif</i>	

### **MARINE OPERATIONS AND LOGISTICS: UNDERWATER TECHNOLOGIES**

Seabed Mining & Technology .....	1987
<i>A. D'Cunha</i>	
Asset Inspection Efficiency Maximization: Utilizing Alternative Methods .....	2008
<i>L. M. Pietranek</i>	

Production Enhancement Through Subsea Wells Reactivation Via Topside Technology: Offshore Libya Gas Field .....	2022
<i>N. Alawar, S. Raniolo, C. Esposito, F. Guzzo, N. Polzone, K. Mazzocchitti, N. Allegro, E. Trovato, M. Vergani, E. Ong, T. McCudden</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 10 - MONDAY, 02 OCTOBER 2023**

Sustainable and Profitable Subsea Life Extension: Giving Extra Operating Life to Corroded Pipelines .....	2030
<i>Ahmed Hashi, Mohammad Ehtasham Alam, Mohamed Abdul Hameed Alhammadi</i>	
Novel Approach of Reservoir Management to Ensure Reservoir Healthiness and Gas Availability to the Network .....	2041
<i>Nouf Al Yaqoubi, Maxim Sudarev, Shamma Al Hammadi, Laila Al Marzooqi, Eduard Latypov, Mariam Al Hosani, Ahmed Al Biraq</i>	
Production Optimization Based on Inter-Well Connectivity Analysis Using Multi-Source Data in X Oilfield, China .....	2062
<i>Xiankang Xin, Saijun Liu, Ruicheng Ma, Gaoming Yu, Zexuan Lei</i>	
Solution of Suspending Submarine Pipeline with Bionic Protective Technology .....	2079
<i>LIANG Shuang, MIAO Wencheng, CHU Shengli, Zhang Jiawei, LUO Fangwei</i>	

### **FIELD DEVELOPMENT: GAS AND WATER FLOOD EXCELLENCE**

Enhancing Waterflooding Performance Using a combined Data Driven and Physical Modeling Approach .....	2088
<i>R. Grijalva, C. Tellez, C. González, J. Parra, F. Eremiev, F. Florez, M. Frorup, S. Khatanar, S. Biniwale, M. Elfeel, X. García-Teijeiro</i>	
Reactive Transport Modelling for a More Rigorous Scaling Risk Evaluation and Mitigation in a Giant U.A.E Carbonate Field .....	2102
<i>S. Baraka-Lokmane, X. Wang, Y. Bigno, B. Decroux, J. Olsen, M. El Hassan, D. Younes, M. Singleton, E. Mackay</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 11 - MONDAY, 02 OCTOBER 2023**

Efficient Water Flood Management Along with Novel Approach to Infill Drilling Resulting in Increased Oil Production at Lower Cost and Reduced GHG Intensity .....	2118
<i>G. Kumar, S. Khadhuri, S. Shehab, Y. Hajri, R. Yazidi</i>	
Multi-Scale Drill-Core Digitalization Technique and its Applications for Reservoir Characterization: A Case Study of an Unconventional Reservoir in China .....	2126
<i>H. Sun, X. Liu, L. Luo, T. Ge, W. Shi, D. Li, Y. Zhu, L. Sun, H. Zhang, M. Arif</i>	
A Success Story of Implementing Autonomous Inflow Control Devices (AICD) for Gas Control in a Brownfield Asset - What Can We Learn? .....	2136
<i>Maryvi Martinez Santiago, B. Priyadarshini, J. Ortiz</i>	

### **GEOSCIENCE: STATE OF ART IN RESERVOIR CHARACTERISATION**

Investigating Relationship Between Capillary Pressure, Phase Saturation, and Interfacial Area in a Three-Phase Flow Water-Wet System .....	2146
<i>Faisal Aljaberi, Abdullah Alhosani, Hadi Belhaj, Martin J. Blunt</i>	

Application of High-Resolution Imaging and Simulation to Interpret Resistivity Index Measurements.....	2160
<i>Matthias Appel, Justin Freeman, Nishank Saxena, Manu Singhal, Yousuf Al-Mahrouqi, Alvaro Munoz Beltran</i>	
Caprock Porosity and Permeability Characterisation for CO2 Storage Seal Integrity Assessment Using Preserved Core and Drill Cuttings .....	2173
<i>Wan Muhammad Luqman Sazali, Jim Buckman, Ma Jingsheng, Wen Pin Yong, Andreas Busch</i>	
Carbonate Rock Typing: Challenges, Mitigations and Pragmatic Workflows .....	2184
<i>M. Singh, D. Voleti, R. Reddy, A. S. Aldahmani</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 12 - MONDAY, 02 OCTOBER 2023**

Integrating the Dielectric and NMR Techniques to Investigate the Petrophysical Properties of Sandstone and Carbonate Formations .....	2204
<i>Ali Oshaish, Mahmoud Elsayed, Amjed Hassan, Salah Al-Ofi, Ammar El-Husseiny, Mohamed Mahmoud</i>	
Model Approach to Achieve Zero Methane Emissions Contributing to Global Methane Pledge .....	2226
<i>Y. Vaswani, O. Al Kamali, Z. Rasulova, S. Al Ameri, F. Almemari</i>	

### **DRILLING: DRILLING OPERATIONS**

Method for Cleaning the Downhole of a Well from Cuttings While Drilling Actions Using Rotary Layers of Extended Surfaces Mechanism.....	2236
<i>I. Althowiqeb</i>	
Optimizing Well Placement in a Complex Reservoir: A North Sea Case Study of World First Utilization of Latest Surveying and Geosteering Technologies in Drilling Operations.....	2242
<i>M. G. Fawzy, H. K. Hassan, A. Z. ELSeDeq, D. N. Nketah, E. Uzuegbu, D. Kumar, J. P. Castagnoli, Rutger V. D. Vliet</i>	
First Multilateral L4 Well with Six Open Hole Laterals in Middle East: Drilled and Stimulated All Laterals Under Challenging Reservoir Condition and Enhanced Production.....	2260
<i>Fahad Fares Al-Otaibi, Shareef Al-Awadhi, Rijun Ali Unneen, Abhijit Dutta</i>	

### **ENERGY TRANSITION AND DECARBONISATION: METHANE MEASUREMENT, MONITORING AND REDUCTION**

Tackling Climate Challenge Through Mitigation of Methane Emissions.....	2267
<i>Shayma Al Mazrouei, Dinesh Kumar Aggarwal, Jwaher Shaalan</i>	
Unlocking the Value of Cloud-Enabled Emission Monitoring Systems for Sustainable Operations in the Oil and Gas Industry .....	2279
<i>S. Saboo</i>	
Quantifying CH4 and NO2 Emissions Using Satellite Measurements with Environmental Impact in Texas: A County-Wide Assessment for Oil & Gas Industry .....	2290
<i>Bilal Hungund, Geetha Nair, Pradyumna Singh Rathore</i>	
Quantification & Reduction of Methane (GHG) Emissions Through Aerial Intelligence .....	2307
<i>Ronnie Fahy</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 13 - MONDAY, 02 OCTOBER 2023**

Overview of Emerging Technologies for Methane Measurement, Monitoring and Reduction in US Onshore Upstream Oil & Gas Industry .....	2318
<i>Aditya Singh</i>	



## VOLUME 4

Energy Sector: An Operator's Perspective on New Regulatory Frameworks for Methane Emissions Reduction .....	2328
<i>G. Kotsiopoulos</i>	
First Multi-Zone Single Trip Cased Hole Gravel Pack Workover Enabling Production from Existing Reservoirs in Brunei Brownfield .....	2335
<i>E. Newn, J. Lim, E. Mogga, M. Lopez, C. Lim, A. Adeyeba, M. Kolakalapudi, G. Goh Kim Fah, M. Yun Wei Xiong, C. Zou, R. Razali, G. Barretto, J. Gil, O. Dada</i>	
Dynamic Underbalance Perforating for Production Enhancement and Frac Optimization in Tight Gas Wells: Case Study from Sultanate of Oman .....	2343
<i>Ahmed Al Suleimani, Adnan Saif Al Hinai, Alvaro Nunez, Said Al Rasbi</i>	

### **COMPLETIONS: WELL COMPLETION AND ASSOCIATED PERFORMANCE**

Effective Utilization of Innovative Sand Screen Technology for Resolving Water Injection Challenges: A Case Study of Field X in Nigeria .....	2356
<i>Justus Ngerebara, Olusiji Alawode, Mojtaba Moradi</i>	
Buoyancy Technology Used to Successfully Install Casing in Argentina's Longest Extended Reach Slim Well Pad .....	2369
<i>C. Bahl, W. Tait, S. Garcia, M. Munawar</i>	
New Downhole Wet-Mate Design Resulted in Capex Reduction .....	2379
<i>Abdulrakeeb Almasri, Jounathan Joubran, Adnan Alsadah</i>	
Overcoming Accessibility Challenges in Open Hole Laterals Longer than 10,000 Feet .....	2394
<i>I. I. Galvan, G. L. Mallanao, G. McClelland, T. Shaheen</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 14 - MONDAY, 02 OCTOBER 2023**

Extended Reach Lower Completions: Enhanced Operational Performance and Efficiency .....	2409
<i>Geoff David Cannon, Cristiano Caproni, Neeraj Mukund Kulkarni, Ohoud Abdullah Al Yammahi, Saeed Salem Al Hajri, Ahmed Abubaker Al Harbi, Adelson Jose De Barros</i>	
Thermoplastic Lined Tubing: A Cost-Effective and Uptime-Enhancing Solution to Prolong Well Run Life .....	2427
<i>M. K. Alisaee, M. I. Al Hinai, S. Al-Mandhari, S. Y. Al Riyami, F. Al Saadi, G. Alhinai, I. K. Al Busaidi, A. H. Al Harthy, R. Al Masfry, A. Al Suleimani, H. Al Riyami</i>	
Reservoir Monitoring Data Driven Workflow Automation in Giant Onshore Oil Fields - An Integrated Approach for Resources Optimization and Improving Value of Information .....	2435
<i>Nagaraju Reddicharla, Erismar Rubio, Shamma Saeed Alshehhi, Hossam El Din Mohamed El Naggar, Geetha Selvamoorthy, Jim Mathew, Amit Kumar, Mayada Sultan Ali</i>	
Novel Real-Time Artificial Intelligence Algorithm Detects Mud Motor Stalls for Automated Stall Recovery .....	2445
<i>A. Groh, M. E. Kaya, C. Christopher</i>	

### **AI AND DIGITAL TRANSFORMATION: ANALYTICAL MODELLING AND OPTIMISATION TECHNIQUES**

ADNOC's Largest Immersive Integrated Capacity Model (ICM) Unlocking Major Opportunities by Reducing Carbon Content While Maintaining Hydrocarbon Supply .....	2455
<i>Iman Hamad Al Selaiti, Mohammad Faizul Hoda</i>	

CO2 as a Service (CO2aaS) Advisory and Optimization Contractual Models for Critical Production Assets .....	2465
<i>Daniele Porciani, Ilaria Parrella, Michele Lauriola</i>	
Physics Informed Machine Learning Models for Simulating CO2 Injection into Saline Aquifer .....	2473
<i>S. M. Sheth, M. Shaykhattarov, D. Dias, S. T. Sathujoda, O. Coker</i>	
Multi-Objective Optimization of Crude Oil Stabilizing Process Using Data-Driven Models.....	2486
<i>M. Al Rashid</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 15 - MONDAY, 02 OCTOBER 2023**

AI-Assisted History Matching Application to a Large Onshore Carbonate Reservoir .....	2496
<i>N. El Droubi, S. Tahir, A. Maarouf, S. J. Su, O. El Jundi, C. Kada Kloucha, H. Mustapha</i>	
Zero-Flaring Technique to Boost Low Pressure Oil Wells Production and Revive Dead Wells Through Multiphase Ejectors .....	2506
<i>H. D. Alzaher, A. A. Mulhim</i>	
Application of 4D Geomechanical Modelling for Fault Critical Re-Active Stress Evaluation in CO2 Storage.....	2513
<i>Xinxing He, Wei Zhou, Yongliang Tang, Dong Chen, Zhaotin Huang, Hanbing Xu, Liming Lian, Ronghong Cheng, Xiaobo Chen, Ying Fu, Yongping Wu, Mimi Wu, Xia Qiao, Yandong Wang, Guang Feng, Zhenzhen Xu</i>	

### **OPERATIONAL EXCELLENCE: CO2 MANAGEMENT**

Carbon Capture, Utilization and Storage (CCUS) in Tight Oil Reservoir .....	2523
<i>Cui Weixiang, Wang Chunpeng</i>	
CO2 Huff and Puff Injection Operation Overview in Jatibarang Field Lessons Learned from a Successful Case Study in Mature Oil Field .....	2532
<i>D. Halinda, A. Az Zariat, O. Muraza, M. Marteighianti, W. Setyawan, A. Haribowo, M. Rajab, M. Firmansyah, I. Hasan, D. Nurlia, A. Adham, P. Prabowo, H. Okabe, K. Mikami, K. Kento, P. Susanta, A. S. Palupi</i>	
Challenges and Lessons Learned: Rotating Packed Bed (RPB) Technology for Acid Gas Removal.....	2546
<i>F. H. Rahman, R. S. Salihuddin, T. K. Yiin, A. Surmi, M. F. A. Zuhdi</i>	
Joint Optimization of Oil Recovery and Carbon Intensity in a Middle-East Oil Field Under Miscible Water Alternating Gas.....	2556
<i>M. Blanchet, M. Bourgeois, S. Gu�erin, O. Garnier, P. Chehade, S. D'Alessandro, C. Prinnet, R. Marmier, V. Barres-Montel, A. K. Alhosani, S. Alhammadi</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 10 - TUESDAY, 03 OCTOBER 2023**

Inter-Well Similarity Analysis as a Key Pre-Processing Step in Stratigraphy Interpretation Workflows .....	2569
<i>M. V. Subbotina, N. V. Bukhanov, E. M. Tirikov, N. A. Michael</i>	
Augmented Learning Parameter Advisor for Wellbore Domain Interpretations .....	2578
<i>Karim Rekik, Abdelkabir Bouyghf, Olfa Zened, Tanya Kotsedal</i>	

### **FIELD DEVELOPMENT: COMPLEX RESERVOIRS AND MATURE FIELDS**

Bhagyam Field: Peripheral Waterflood to Full Field Polymer Flood. Subsurface, Reservoir Management & Field Development Learnings from 10-Year-Old Field Journey .....	2590
<i>V. Kumar, H. Garg, V. Lodha, N. Biswas, J. Das, S. Mishra, M. S. Kumar</i>	

Flow Profile Evaluation in Producer Wells by Geochemical Studies of Oil and Water and Analysis of Anomalies Associated with Deep Fault Zones .....	2618
<i>M. S. Shipaeva, D. K. Nurgaliev, V. A. Sudakov, A. A. Shakirov, B. G. Ganiev, A. A. Lutfullin</i>	
Locating the Remaining Oil in a Mature Complexly Channelized Clastic Reservoir Using a Combination of Geological and Reservoir Engineering Concepts .....	2640
<i>A. Alsane, A. Bora, P. Dhote, C. Thakuria, B. Dharanidharan, F. Koyassan Veedu, A. Alnajjar, M. A. Bin Salamah</i>	
Production Data Analysis of Smart Well Completion Revealed the Unknowns of Water Injection in a Heavily Faulted Multi-Stacked Reservoir.....	2661
<i>Mehdi Ghane Ezabadi, Kwang Chian Chiew, Ashvin Avalani Chandrakant, Raja Zuhaili Aimran Raja Zainal Raffik</i>	
Improved Waterflood Recovery for a Mature Oilfield with Challenging Reservoir Conditions and Complex Development Status .....	2687
<i>X. G. Lu, S. Q. Sun, G. J. Shan, L. H. Lin</i>	
Maximize Sweep Efficiency Using Proactive Tar Boundary Detection to Effectively Place a Water Injector Well Using Multiple Workflows of Distance-To-Boundary Inversion Techniques .....	2707
<i>Y. Liu, L. Deng, A. Augustine, H. Thar, A. Al Ali, A. K. Anurag, A. Alkatheeri, A. Soliman, E. Elabsy, M. Atia</i>	
New Insight in Developing Tight Fractured Carbonate Reservoirs, Mishrif Formation, West Kuwait .....	2720
<i>M. El-Jeaan, S. Al-Sabea, K. Ziyab, T. M. Gezeeri, D. Ningrat, A. Al-Najaf, M. Al-Haddad, M. Bu-mijdad, A. Salem, P. Enkababian, H. Ayyad, O. Nohut, M. Elsebaee, L. Peiwu, N. Al-Hamad</i>	

## **FIELD DEVELOPMENT: GAS DEVELOPMENT PLANS AND STRATEGIES**

1st FLNG Development in Mozambique: Real-Time Monitoring & Subsurface Insights Supporting Project Start-Up.....	2731
<i>M. Spagnuolo, F. Esperanca, V. Norelli, M. Boane, B. Balate, V. Parasiliti Parracello, F. Ursini, S. Furlani</i>	
Sour Service Fracture Toughness from Lab-Scale to Full-Scale: An Overview of the Impact of Test Parameters and How They Link with the Cracking Mechanism .....	2750
<i>F. Thébault, A. Mizukami, B. Andres, D. Garcia, C. Gomes, I. Barsoum</i>	
Nanoparticle Application for Risk Mitigation of Condensate Blockage in the North West Sidi Ghazi Field.....	2767
<i>S. Mukherjee, R. Morgenstern, C. Burmester, R. Nazarov, A. M. Abdelhasseb, Z. A. Khan</i>	
Condensate Tracking and GOR Management in an Oil-Gas Reservoir.....	2787
<i>E. A. Mastny, R. Sunagatullin, Y. Wang, J. Guillaume, V. Rodrigues, Y. Al Hammadi, K. Saadi</i>	
De-Risking Horizontal Well Challenges in a Compartmentalized Multifaulted Reservoir of Lower Gabus Formation, West Natuna Basin Indonesia.....	2806
<i>Dian Permanasari, Ni Made Wilasari, Olivia Azwar, Kalim Bonafid, Rendiza Vataneta, Komang Wisnu Murti, Irene Sihombing, Retno Wijayanti, Dino Akbar, Ari Wibowo, Mudji Prajitno, Heru Putranto</i>	
Reservoir Simulation Box Model to Provide Quick-Look Forecast of Remobilizing Trapped Gas in a Gas-Water Jurassic Reservoir with Large Aquifer .....	2824
<i>Helene V. Daae, M. Indriaty Susanto, Benjamin Morgan</i>	

## **PEOPLE DEVELOPMENT AND DIVERSITY: DIVERSITY AND EMPOWERMENT**

Bringing Diversity to Our Leadership .....	2843
<i>S. Lakahal, M. Allam, R. Issa, D. Issentayeva</i>	

Lack of Integration Between Academia and the Industry: How to Upscale Experience Through Innovative Guidelines Involving Research Outcomes.....	2856
<i>Gehad M. Hegazy, Maryem. G. Ali, Bassel. A. Abdeltawab, Mena. G. Ali</i>	
Gender Diversity in Indian Oil & Gas Sector.....	2875
<i>Mrs. Neha Bhagat</i>	
The Untold Success Stories of NEB Females Leading the Way.....	2886
<i>Sabha Al Qaydi, Amna Ali Al Meraikhi, Reem Al Harthi</i>	
Breaking Gender Stereotypes: Advancing Women’s Careers in the Oil and Gas Industry .....	2892
<i>B. A. Banihammad, K. M. Al Shehhi, A. A. Ashraf</i>	
The Importance of Gender Balance Committees to Promote Gender Diversity.....	2900
<i>S. Lakahal, R. Issa</i>	

## **PROJECT MANAGEMENT: ENGINEERING AND PROCUREMENT**

Project Execution Philosophy - Design Build Own Operate & Maintain (BBOOM) Contracting Strategy.....	2908
<i>J. H. Al Busaidi, J. Al Naamani, A. Mohammadi</i>	
Decommissioning a Lightweight Marginal Field Platform: Challenges and Journey to Successful Execution.....	2917
<i>Teh See Yee, Raja Sharifuddin Ahmad B. Raja Badrol, Noor Hidayah Shaharuddin, Amirah Bt C. Zakaria, M. Norfisyah B. Alifah, M. Syaifullah B. M. Azali, M. Aziehan Mat Kasah</i>	
Abandonment of a Well Located in a High Torrent River: Under-River Project using an HWO Unit in Colombia. ....	2927
<i>Guerrero Eladio, Palacios Jinna, Saumeth Roberto, Jaramillo Jose, Padilla Luis Dario, Quintero Valentin, Castellanos Diego, Galindo Oscar</i>	
Title- Planning and Contract Management Strategies for Successful EPC Project Execution .....	2943
<i>Aniruddha Mahajan, Milind Baride</i>	

## **DRILLING: DIRECTIONAL DRILLING TECHNOLOGIES**

Longest Extended Reach Drilling Well Worldwide Drilled in Middle East, Offshore Abu Dhabi, UAE.....	2952
<i>M. M. Alabed, N. S. Alsuwaidi, J. S. Duguid, J. D. Marsh, D. L. Pace, M. A. Alyan, M. S. Alharbi, E. A. Mohamed, J. A. Alali, N. A. Ali, M. N. Alhashmi, N. J. Alqaydi, K. G. Alnayadi, S. H. Abbas, M. S. Kaabi, A. Mikhaylov, A. AbdelNaby, A. Maghawri</i>	
Successful Utilization of RSS in 22? Section Delivering the 1st S-Shape Worldwide A Case Study of KOC and SLB .....	2965
<i>A. Hussein Saffar, N. Shadad, M. Ragaey, K. Albannai, A. Alraish, B. Chambers, A. Mustafayev</i>	
Successfully Drilled the 1st Undercut Profile Well Exposing the Reservoir Positioned Underneath the Surface Location into the Least Stress Direction, Case Study from Kuwait .....	2979
<i>J. Bashir, M. Al-Khaja, B. Taha, S. Sindhu, A. Al-Manaseer, J. Ali., A. Malik, H. Al-Haddad, Y. Al-Otaibi, J. Jamal., A. Ajmi, T. Rashidee, S. Al-Enezi, W. Nouh, N. Farhi, G. Ishak</i>	
Practical Application of 3D Dubins Curve Method in Directional Well Trajectory Planning .....	2992
<i>Haoge Liu, Tor Berge Gjersvik, Audun Faanes</i>	

Case Study of Multilaterals Drilling in Under-Balanced Coiled Tubing Drilling (UBCTD) Implementation and Challenges for the First Time in Operator Group of Companies .....	3007
<i>Mohamed Osama, Ali Sulaiman Bin Sumaida, Ayman El Shahat, Ahmed Al Mutawa, Saeed Almazrouei, Abdalla Saleh, Fawad Zain Yousfi, Nama Ali Alnteiri, Mohamed Baslaib, Alfonso Mantilla, Rohit V. Deshmukh, Tarek Solaiman, Fouad Abdulsallam, Abdelhak Ladmia, Pedro Rangel, John Rennox, Shuai Cui, Yerlan Jumagaliyev, Maged Basha</i>	
First-Ever MWD Dynamic Directional Surveys in the Norwegian Continental Shelf .....	3017
<i>M. G. Fawzy, H. K. Hassan, K. S. Dhaher</i>	
A Novel Approach to Improve Whipstock Setting and Milling Operations with Existing Downhole Measurement and Logging Technology in an Offshore Field, Norway .....	3028
<i>Sayed Elkasaby, Tim Parker, David Munoz, Endre Slettebo</i>	

## **ENERGY TRANSITION AND DECARBONISATION: THE ROAD TO NET ZERO**

Innovative Practice and Development Countermeasures of Oil and Gas Cooperation Along the Belt and Road with the Background of Carbon Neutrality .....	3038
<i>Changyong Li, Yi Tong, Junshuai Jiang, Risu Na, Lina Da</i>	
Excellence Journey Towards Environmental Stewardship Through Circular and Sustainable Decarbonization, Ecosystem and Biodiversity Initiatives .....	3052
<i>Mohammed S Alhazzaa, Ioannis Georgiou, Hashem H Ghanem</i>	
The Potential CEA/CCER Market Value for Natural Gas+ System: An Assessment Using the Logistic Growth and Technology Transfer Model.....	3059
<i>Xiong Ye</i>	
Navigating Net Zero – The Emerging Role of the National Energy Company .....	3075
<i>Virginia Markouizou</i>	
Sustainable Economic Strategies for Corporate CEOs: AI-Driven Leadership in Driving Innovation, Growth, Safety, Sustainability, and Climate Change Resilience to Save Lives and Our Planet -A Comprehensive Comparative Policy Analysis on Unlocking Pakistan's Geothermal Potential.....	3083
<i>Syed Muhammad Aun Ali, Syeda Fardees Zaidi, Clifford Louis, Muntaha Anjum, Syed Imran Ali, Javed Haneef, Shaine Muhammadali Lalji, Shabeer Ahmed</i>	
ADNOC's Approach in Piloting ESG Third Party Due Diligence Framework .....	3100
<i>Samar Al Hameedi, Azza Al Raisi, Majid El Ghazouli, Mona Ahmed Balalaa, Yadaira Orsini, Courtenay Smith</i>	

## **VOLUME 5**

### **COMPLETIONS: QUALIFICATIONS AND TECHNIQUES**

Historical Cement Packer Case Study from Trinidad & Tobago Columbus Basin .....	3107
<i>R. Mammadli, R. Adilov, Y. Bassie, M. Rasmine, N. Hosein, J. Somai, T. Bruce</i>	
Advances in Modeling of High-Power Laser Perforation .....	3125
<i>Ahmed A. Alrashed, Jennifer L. Miskimins, Sameeh I. Batarseh, Damian P. San Roman Alerigi</i>	
Offline Stimulation Through a TAML Level 5 Multilateral Junction: Operational Success Within a Carbonate Formation Through Design Collaboration and Joint Planning .....	3143
<i>Fabian Bjørnseth, Anna Vigrestad Tjensvoll, Hans Petter Lande, Johanna Sastre, Angus Barron, Morten Falnes, Hans-Henrik Kogsbøll, Erik Jakobsen</i>	
Novel Plug and Perf Technique in Monobore Completion of Jurassic Gas Well in Kuwait.....	3162
<i>Mohammad Al-Matar, Abdullah Theyab, Hamad Al-Mubarak, Faisal Al-Shammari, Mohammad Al-Jaber</i>	

First Application of Cemented, Single-Ball-Shifted Multiple Sleeves for Stimulation of Velkerri Shale .....	3182
<i>T. Ishmeev</i>	

### **UNCONVENTIONAL RESOURCES DEVELOPMENT: EOR ADVANCEMENTS**

Sensitivity Analysis of Diffusion-Based Hydrocarbon Gas Huff-n-Puff Injection in Eagle Ford Shale .....	3190
<i>Q. Fu, J. S. Tsau, D. Mohrbacher, J. Zaghoul, A. Baldwin, M. Alhajeri, R. Barati</i>	
Maturing Organic-Rich Source Rocks Using Superheated Gases Injection: Heat Transfer Analysis .....	3217
<i>A. M. Hassan, S. M. Alawad, A. E. Moh-Ali, M. A. Mahmoud, A. H. El-Husseiny, I. S. Abu-Mahfouz</i>	
Perspectives of Hydrogen Peroxide Injection to the Carbonate Reservoir for ISC Initiation .....	3231
<i>A. G. Askarova, K. V. Maerle, E. Y. Popov, S. E. Malaniy, P. A. Grishin, O. V. Slavkina, A. N. Cheremisin</i>	
Impact of Diffusion and Adsorption on the Performance of CO <sub>2</sub> , CH <sub>4</sub> , and Cyclic Gas Huff-n-Puff Injection into Light Oil Reservoirs .....	3245
<i>Khaled A. Enab</i>	
Successful Application of Solvent to Treat Condensate Banking in High Pressure, High Temperature Deep Tight Gas Reservoirs .....	3259
<i>Adnan S. Al Hinai, Ghusun A. Al Amri, Salim K. Al Subhi, Dawood N. Al Kharusi, Ahmed M. Al Yaarabi</i>	
Use of Double Machine Learning for Microseismic Data Analysis: What Factors Influence Microseismic Events? .....	3275
<i>Oliver Rojas Conde, Siddharth Misra, Rui Liu</i>	

### **AI AND DIGITAL TRANSFORMATION: AI INNOVATIONS IN HSE**

Moving Towards Automation and Artificial Intelligence in Managing HSE Risks and Incidents .....	3294
<i>C. H. Go, F. Agusalim, W. Wan Hussin, E. J. T. Chang, V. Gonaserger, N. S. Abd Kahar, S. I. Syd Hamdan, O. R. Sazali</i>	
PSM Evergreening with Artificial Intelligence .....	3302
<i>A. Casal</i>	
SmartVessel-v2: A Faster, Better, Stronger, Safety Monitoring Solution for Marine Vessels .....	3317
<i>D. Egorov, S. Sharan, M. Tahiri, Y. Tamaazousti, M. Amri</i>	
The Dawn of Routine Satellite-Based Monitoring for Energy Infrastructure is Now .....	3331
<i>R. Peter Weaver</i>	
Optimizing Industrial Risk Management Through AI and No-Code Platform: A Global Solution for the Oil and Gas Industry .....	3349
<i>H. E. Fortunato, K. Marcomini, G. J. Soares, M. F. Gremes, P. F. Alberto, F. J. Reis, C. Abbas</i>	
Detection of Leakage and Illicit Tapping by Means of Vibroacoustic Technology in a Challenging Regional Scenario .....	3360
<i>M. Marino, A. P. Gomes, J. Reynaud, O. Ekpikie, G. Giunta</i>	

### **GEOSCIENCE: DEFINING RESERVOIR PERFORMANCE**

Log Derived Novel Approach to Estimate Vertical Permeability in Multilayer Reservoirs Through Resistivity Anisotropy in the Natih Formation, Oman .....	3369
<i>A. A. Adetosoye, J. J. Moreno, M. A. Al Ghuzaily, A. J. Ulincy, A. M. Urazimanova, A. Samad, R. G. Barroeta, C. A. Portilla</i>	

Estimating Relative Permeability and Capillary Pressure Functions from Unsteady-state Core Flooding Data Using Dynamic Optimization Techniques .....	3390
<i>Ramanzani Kalule, Umar Alfazazi, Shehzad Ahmed, Hamid Ait Abderrahmane, Waleed Alameri, Mohamed Sassi</i>	
Integration of Multi-Well Ultra-Deep Resistivity Inversions to Map Oil-Water Contact at Reservoir Scale .....	3402
<i>E. Bikchandaev, M. Fouda, A. Taher, M. Abdulmohsin</i>	
Leveraging Look-Ahead Technology to Manage Subsurface Uncertainty in High-Impact Exploration Drilling.....	3415
<i>Soazig Leveque, Ni Made Wilasari, Olivia Azwar, Dian Permanasari, Rendiza Vataneta, Triputra Agung Pribadi, Hilman Ramdani, _ Jaenudin, Arie Naskawan, Tutus Fidiatmoko, _ Ferdy, Ikhwan Maulana Harun, Gatot Darmaji, Fahmi Novalasa, Herman Siagian</i>	

## **GEOSCIENCE: ROCK PHYSICS AND GEOMECHANICS**

Abu Dhabi Tectonic Evolution: Novel Model Impacting Hydrocarbon Potentiality and Trapping Mechanism .....	3431
<i>Abdelwahab Noufal, Safeya Alkatheeri, Khalid Obaid, Abdulla Shehab, Hamda Al Shehhi, Saleh Al Hadarem</i>	
4D Geomechanics Application for Successful Well Drilling Plan.....	3452
<i>Farrukh Moid, Osman Hamid</i>	
Sub-Seismic Transverse Faults and Fractures Sets Identification Through Geomechanical Modeling Using Elastic Dislocation (ED) Theory: A Case Study from Kohat-Potwar Foldbelt Zone, Upper Indus Basin (UIB) of Pakistan.....	3471
<i>Imran Khan, Rana Faisal Shahzad, Zahoor Khan, Iftikhar Ali, Muhammad Akram Qureshi, _ Shams-Ul-Alam, Shakeel Ahmed, Shabeer Ahmed Abbasi, Uzair Hamid Awan</i>	
A 4D Geomechanics Modelling Approach Using Machine Learning for Drilling Events Predictions in the Giant North Kuwait Jurassic Field .....	3487
<i>M. Haas, N. Al-Hamad, J. Heiland, A. M. Hussein, S. Shekhar, D. N. Srivastava, J. Ramon, M. Abdel-Basset, Abdullah Al-Anzi, Ibrahim Al-Obaidi</i>	
Advanced 3D Geomechanical Modelling of Seismic Fault Pattern Above the Crest Structure in a Giant Oilfield, Offshore Abu Dhabi .....	3498
<i>K. Tsusaka, A. M. Hussein</i>	
Estimating the Effects of Wag-EOR on Elastic Properties for Seismic Reservoir Monitoring in Abu Dhabi .....	3507
<i>M. Mohamed, J. Ahmed, H. Mahmood, A. Aljaberi, M. Waqas, A. Alhamedi, T. Mouri, H. Shimizu, Y. Yamada, M. Mochizuki</i>	

## **OPERATIONAL EXCELLENCE: AUTOMATION AND REMOTE OPERATIONS**

Ground Robotics: A Comprehensive Journey Towards Remote Operations .....	3519
<i>Jean Michel Munoz, Eric Bartoli, Gildas Collin, Philippe Grenier</i>	
Resource Optimization at Remote Facilities by Leveraging Advance Maintenance Practices TPM (Total Productive Maintenance), ODR (Operator Driven Reliability) and Industry 4.0 Technologies.....	3533
<i>Muhammad Shahzad Ahmed, Ahmed Yousef Alhammadi, Asad Ali, Syed Mubeen Ahmed, Hamad Jasim Hussain Ali Al Raeesi, Ahmed Darwish Eid, Nasser Salem Sumaida, Muhammad Aslam, Mahdi Abdula Al Bloushi, Mubarak Khalaf Al Mazrouei, Hesham Khalid Al Awadhi</i>	
De-Manning Offshore Operations and Reducing Carbon Emissions with Autonomous Subsea Drones .....	3544
<i>F. Cavallini, G. Massari, C. Nevoso, A. Quick, T. Alexander</i>	

Coiled Tubing Autonomous Conveyance Improves Consistency of Offshore Intervention Operations .....	3554
<i>J. Segura, V. V. Tran, L. Fossati, P. Ramondenc, A. Gabdullin</i>	
WAG Switchover Automation Transformation Towards Realizing Remote Operation.....	3568
<i>Muhammad Zakwan Mohd Sahak, Tengku Amansyah Tuan Mat, Maung Maung Myo Thant, Eugene Castellano, Hiu Ying Law, Zalina Harun, Nur Atikah Razale</i>	
Wells and Facilities Instrumentation and Automation Towards Achieving Field Intelligence .....	3577
<i>M. M. Salim, I. Traboulay, G. S. U. Ahmed, E. Ibrahim, S. Al Wehaibi, O. Al Hammadi, N. Ballaith, M. Al Houqani</i>	

### **MARINE OPERATIONS AND LOGISTICS: ENVIRONMENTAL MITIGATIONS**

A Revolutionary Environmental Solution in Subsea Engineering and Installations: Ai-Driven Ecosystem Insights .....	3587
<i>R. P. J. Wilmlink, N. A. Oostenbrink, R. T. C. Kersten</i>	
Real-Time Monitoring of Coastal & Offshore Construction Noise for Immediate Decision Making .....	3594
<i>Corentin Troussard, Laurent Dufrechou, Pierre-Alain Tremblin, Yan Eustache</i>	
Integrated Bridge in Offshore Topsides - Installation Engineering .....	3608
<i>Sumit Moharir, Digin Thomas, Cibu Varghese, Faris Ragheb Kamal</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 7 - TUESDAY, 03 OCTOBER 2023**

Innovative Submarine Solution for Overcoming Challenges in Offshore Oil and Gas Operations.....	3616
<i>Mena G. Ali, Gehad M. Hegazy, Abdelaziz Atef, Maryem. G. Ali</i>	
Innovative Hydrocarbon-Based Additives for Diesel Engines in Oil Field Operations: Mitigating GHG Emissions, Improving Performance, and Advancing Sustainability .....	3630
<i>M. M. Alrefaai, U. Hashmi, M. S. AlJneibi, A. A. Alhebsi, F. O. Alkatheeri, G. De Jesus Geurrero Pena A</i>	
From Disposal to an Oasis in the Desert .....	3646
<i>M. Lawati, M. Abri, S. Marhourqi</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 8 - TUESDAY, 03 OCTOBER 2023**

Soil Set-Up Period Reduction for Early Drilling Rig Approach.....	3658
<i>M. Svasti-xuto, C. Sinthumongkhonchai</i>	
Techno-Economic Analysis of GTL, LNG, CNG and GTW for Monetizing Marginal Remote Gas Field: A Case Study .....	3668
<i>M. K. Gupta, N. B. Joshi, V. K. Singh</i>	
Viable Business Case to Unlock Sustainable Profitability from CCUS Projects.....	3682
<i>M. Y. Alklich, K. Tazerout, M. Alshuaibi, A. R. Al Zaabi, N. Y. Aljneibi, S. Batavle, A. K. Mehta, F. Al Khalifi, M. A. Binsumaidaa, A. Elsubai</i>	
Overcome Parted Sucker Rod in Artificial Lift Sucker Rod Pump Without Fishing Operation in Pendopo Oil Field.....	3692
<i>R Nova Rifika Arifien, Mario Aditya Haris Putra, Muhammad Rasyid, Anang Arie Kuncoro, Sucipto , Utuh Khair</i>	



## **FIELD DEVELOPMENT: UNLOCKING FIELD POTENTIAL**

- Field Application and Performance Evaluation of a Cost-Effective Matrix Acidizing Technique in Naturally Fractured Carbonates - Case Studies from Gulf of Suez ..... 3715  
*Amr Hegazy, Emad Abdel Hakim, Ahmed Ramadan, Kareem El-Shiekh, Khaled Saleh*
- Maximizing the Value of Transition Zone Reservoirs with Extra Deep Resistivity Measurements for Improved Field Development and Production Optimization—A Case History from a Marginal Field, Onshore Abu Dhabi ..... 3743  
*Mohammed Ugonoh, Ruslan Makhiyanov, Raphael Onyeije, Elamari Assreti, Mais M. Suleiman, Sumayya Khader Ali A, Hafsa Ahmed Aldhuhoori, Sami Abdalla AlSaadi, Sanathoi M Potshangbam*
- From Field Trial to Full-Scale Deployment of Pulse Waterflooding on Mature Oil Fields. Incremental Oil at No Cost ..... 3761  
*Mukanov Adil*
- Geosteering in Swept and Stacked Channel Reservoir - Integrated Approach Using Mathematical Reservoir Modeling Towards Completion Optimization ..... 3773  
*Talal S. Al-Kandari, Abdullah Sadeq, Omar H Al-Shammari, Sultan Al-Dhafeeri, Gagok Imam Santos, Sarah Mohammed AlGhamdi*
- Maximizing Hydrocarbon Potential in Marginal Field Using Data Integration Techniques, A Case Study from the Saraswati Field, Barmer Basin, India ..... 3787  
*B Kumari, D. Chatterjee, S. Kumar Singh, K. Gollapudi v s, S. Somasundaram, S. Chakraborty*

## **KNOWLEDGE SHARING EPOSTER - STATION 9 - TUESDAY, 03 OCTOBER 2023**

- A Novel Integrated Approach to Characterize Transition Zone in a Low Relief Marginal Field ..... 3797  
*Igor Kobenko, Russell George Farmer, Alyazia Mohamed*
- ESP Deployment Cable Demonstrates Resilience in the Face of Corrosion Challenges in Harsh Downhole Environments ..... 3811  
*E. H. Al Munif, H. M. Banjar, C. E. Ejim, J. Xiao*
- ESP Cable Deployment has Induced a New Paradigm in UAE to Turn the ESP Business into Rigless Operation, Presenting a Cost Efficient and Faster Application ..... 3819  
*Rodrigo Guzman, Zahra Faisal Al Hashmi, Ruslan Ilyasov, Tarek Mohamed El Sonbaty, Sanchay Gupta, Hector Aguilar, Azubuiké Martins, Onyebuchi Ofodile, Jose Cardozo Padron*

## **HEALTH AND SAFETY: HUMAN FACTORS AND PROCESS SAFETY**

- A Disruptive Approach to CRM and Situational Awareness Competencies ..... 3837  
*J. C. Lopez, C. Botero, G. Miranda, F. Aguilera, G. Mirdad, S. Moynet, K. Shehabeldeen, A. M. Villalobos, A. Alvarado*
- Fingers of Fire: Understanding Hand and Fingers Injuries in Oil and Gas Industry ..... 3849  
*D. Kusumawati, D. Erwandi, W. Puspa*
- Deployment of Automated Dynamic Kill System to Manage Well Control Activities in High Risk Shallow Gas Cap Wells ..... 3861  
*Ammar Hamed Al Salmi, Nasser Issa Al Makhmari, Noaman Hilal Al Naamani*
- Managing Shift Workers Fatigue Using Psychomotor Vigilance Test and Biomathematical Modelling ..... 3871  
*Farrukh Qureshi, Hanafi Karyum, Shayma Al Mazrouei, Nooh Al Hammadi, Rashed Bametraf, Saud Al Hammadi, Ahmed Saleh*

## VOLUME 6

Development of a Repeatable and Objective Decision Model for the Human Error Probability Estimation According to the HEART Framework .....	3880
<i>R. Mascherona, M. Compare, S. Medici, E. Zio, A. Ronchi, F. Zausa, A. Caia</i>	
Incorporating Human Aspect into Service Contract Procurement .....	3894
<i>A. M. Almaghaslah</i>	
Session: 47   Health and Safety: Human Factors and Process Safety .....	3904
<i>M. Aslam, K. Venkatesan, S. Ahmed, A. Al Ketbi, M. S. Ahmed, K. Alshehhi, F. Haider, M. K. Al Mazrouei</i>	

### **PROJECT MANAGEMENT: SMART FIELD TECHNOLOGIES**

Application of Digital Twin Technology to 3D Seismic Iterative Processing and Dynamic Geological Modeling- A Case Study from China .....	3914
<i>Guoyong Xia, Jianhai Li, Linchao Lu, Shaoguang Ma, Ying Chen, Yanbin Liu, Hanbing Xu</i>	
Using Drones to Improve Project Construction Monitoring .....	3927
<i>Mohamed Shawky</i>	
Improving Process Control Performance in Project Delivery .....	3948
<i>S. Al Mawali, O. Al-Sibani, M. Moosawi, A. Alawi</i>	
A Conceptual Model to Maximize Project Efficiency Through Automated Scheduling Using Generative AI Models .....	3956
<i>Anwar Ali Mohamed, Azharuddin Mohammed, Nasser Saif Al Busaedi, Shah Saud, Amal Salem Al Sayari</i>	
China Offshore Intelligent Oilfield Production Monitoring System: Design and Technical Path Forward for Implementation .....	3974
<i>Zhong Cheng, Huan Wan, Hongbin Niu, Xiaohui Qu, Xiangxiang Ding, Hongtao Peng, Yi Zheng</i>	
Smart Field Technology / Automation and New Technologies Applied to Projects .....	3996
<i>Rajendran Sasipriya</i>	
Paving the Road for Wireless Gauge Installation in Onshore Field .....	4004
<i>Amr H. Almadani, Mohammad A. Eissa, Mulad B. Winarno, Khaled M. Mutairi</i>	

### **DRILLING: DRILLING AUTOMATION**

Hybrid Data Driven Intelligent Algorithm for Stuck Pipe Prevention .....	4013
<i>R. AitAli, P. Arevalo, D. Dashevskiy, M. Mahmoud, A. Pocaterra, A. Al Bouny, Mohamed Qassem Hussain, Agung Baruno, Satia Mohammed</i>	
Fully Automated Land Rig Pipe Handling: Learnings from the First Year in Operation .....	4025
<i>C. Craig, A. Gupta, D. Yenzer, D. Hasler, J. Towns</i>	
Sustaining Business Resilience - AI Driven Drilling Automation as the Catalyst for Consistent .....	4035
<i>K. Khazali-Rosli, J. Jamal, M. Murad, M. A Mokhti, M. Zurhan, N. Mat Noh, M. Kereshanan, K. Abdul Rashid, S. Ting, C. Cheng, C. Herrera</i>	
Next-Generation Drilling Fluid Management: Real-Time Monitoring and Autonomous Control .....	4052
<i>Z. Zhang, R. M. Rached, Y. Xun, J. Tian, Z. Wang, S. Fan</i>	
Closing the Loop with the Subsurface: First Deployment of Autonomous Well Placement Following Reservoir Boundaries .....	4064
<i>S. Wessling, O. Hummes, F. Jonsbraten, C. Hansen, V. Klemme, S. Haberer</i>	

Plug and Abandonment Excellence Journey in Malaysia from the Perspective of Malaysia Petroleum Management (MPM), Petronas .....	4078
<i>M. Omar, C. C. Yee Xiong, F. R. Idris, A. Zawawi</i>	
Digital Innovation of Well Construction Process in Ecuador Through Rig Automation .....	4091
<i>Karen Peña, Kevin Etcheverry, Hugo Quevedo, Esteban Rojas, Raquel Correa, José Castellanos, Cory Labatte, Leonardo Márquez, Willem Sepúlveda, Brennan Goodkey</i>	

## **ENERGY TRANSITION AND DECARBONISATION: INVESTING IN ENERGY EFFICIENCY**

Empower Decarbonization Through Successful Replication of Lean Six-Sigma Approach .....	4103
<i>Ahmed Al-Salmi, Said Al-Hajri, Aisha Al Shukaili, Yousuf Al-Zaabi, Carl Kays, Lubna Al-Bahri, Ghaliya Al Mahrouqi, Sara Al Balushi</i>	
Successful Increase of Clean in-House Power Generation Through Collaborative Inter-Disciplinary Steam Feed Study .....	4112
<i>K. Alkhoujah, J. Al Qaydi</i>	
High Conversion Refineries: An Approach to Reduce the Carbon Footprint by Hydrogen Network Optimization and Flexibility Enhancement .....	4124
<i>Veronica Campanelli, Ciro Magliulo, Claudio Albanese, Ignazio Arces</i>	
Comprehensive Steam System Optimization: A Key Element for Carbon Emissions Reduction and Energy Efficiency .....	4137
<i>A. Hou, A. Gooma, T. Mita</i>	
A Thermodynamic Approach to the Enhancement of Reliability and the Optimization of Energy Efficiency of Centrifugal Compressors .....	4151
<i>Ahmed Al-Mamari, Nasser Al-Azri, Nabeel Al-Rawahi</i>	
Maximizing Efficacy and Efficiency in a De-Flaring Project: Integrated Gas Processing Solutions for Associated Gas Recovery .....	4163
<i>Franco Lucherini, Jochen Bildeheim, Federico Gattinoni, Lorenzo Bergamini, Alessio Ricci</i>	

## **COMPLETIONS: INTEGRATED COMPLETION SYSTEMS**

Completion Design and Equipment Selection to Facilitate Operations in a New Deepwater Region .....	4178
<i>C. Giuliani, T. Tahirov, W. Hou, Y. Xiao, M. Eissa, M. Varghese, K. McKenzie, A. Roy, M. Leng</i>	
Wireless Operation of Subsea Hardwares in Field X, Nigeria .....	4207
<i>J. Ngerebara, I. M Ugbor, O. Alawode, R. Brewer, R. Prandi, T. Lokka, A. Tarakanov</i>	
Fit for Purpose Low-Cost Solution for Upper Drain Accessibility in Dual Wells .....	4216
<i>T. Saqib, O. T. Mirza, A. M. Sabri, S. S. Al-Hajri, I. R. Mefleh, B. Butler</i>	
Cost-Effective Solution for Highly Deviated Wells in Egypt: The Optimal: Artificial Lift System (ALS) Combination Using Continuous Rod with RRP .....	4227
<i>M. A. Tharwat, G. A. Ariza Gonzalez, A. H. Naguib, D. R. Connally, A. Mohammadain, M. Awadallah, E. M. Farouk, I. Halawa, M. Ahmed, M. Ghareeb</i>	
An Autonomous Approach to Mitigate Risks Associated with Well Intervention in ESP Completed Wells .....	4244
<i>O. M. Balkhair, O. T. Afif, A. A. Aljindan, A. F. Raad</i>	
ESP Design Improvements Associated with Downhole Slotted Gravitational Filter and Downhole Chemical Treatment Prolong ESPs Run Life in Western Desert of Egypt: Case Study .....	4249
<i>Ahmed Salah, Ahmed Sabaa, A. Samir Abd Elhaleem, Ahmed Medhat, Ahmed Diaa, Osama Abu-hozifa</i>	

Lower Completion Optimization Using Ultra Deep Resistivity Tool Improves Reservoir Management and Lower Water Production in Giant Carbonate Reservoirs in the Middle East .....	4267
<i>E. Barragan, A. Holmquist, P. Thakur, A. A. Alshalabi, M. Muhamad Sidek</i>	

**UNCONVENTIONAL RESOURCES DEVELOPMENT: ASSESSMENT AND DEVELOPMENT**

Understanding the Influence of Subsurface Bedding-Parallel Fractures in Shale Gas Enrichment.....	4277
<i>Pan Feng, Jiang Yuqiang, Luo Yufeng, Xiong Jiabei, Wang Yue, Yuan Xiaojun, Mei Jue, Zou Chen, Zhang Hanbing</i>	
Long Term Development Implications of Parent-Child Interactions in Unconventional Reservoirs .....	4291
<i>Karthik Srinivasan, Andrew Bryce Faulk, Karen Elizabeth Sanders, Kyle Brandon Guice, Melissa Y Ramirez, Lavanya Mohan, Nandini Rajput, Daniel Weisman, Rajgopal Malpani</i>	
A New Inflow Performance Relationship for Shale Gas Reservoirs Using Well Logs and Geochemistry Data .....	4302
<i>Ali Oshaish, Sami Alnuaim, Amjed Hassan, Mohamed Mahmoud</i>	
An Innovative Approach Towards Improving Pressure Transient Analysis for a Tight Oil Formation: A Case Study .....	4322
<i>Aadel AlNaqbi, Sharina AlMuhairi</i>	
Multi-Scale Reservoir Characterization of a Diagenetically Complex Tight-Gas Reservoir; The Miqrat Formation, Oman.....	4334
<i>Salim N. Al Hajri, German Merletti, Peter Armitage, Khalil Al Rashdi, Ewan Gray, Sawsan Al Saadi</i>	
Re-Development of Tight Fractured Carbonates Through Extended Laterals and Hydraulic Fracturing .....	4353
<i>A. Buono, C. Taylor, A. Dordan, B. Evans, G. Staus, C. Zhu, J. MacQuaker</i>	
Comprehensive Correlation Analysis of Influencing Factors of Shale Gas Productivity Based on Adaptive Lasso Regression .....	4364
<i>Wentao Zhao, Weiyi Wang, Majia Zheng, Di Luo, Mengke Xie, Ya Wu</i>	

**AI AND DIGITAL TRANSFORMATION: COMPUTER VISION TECHNOLOGIES**

Lithology Prediction from Drill Cutting Images Using Convolutional Neural Networks and Automated Dataset Cleaning .....	4374
<i>E. Tolstaya, A. Shakirov, M. Mezghani</i>	
Riding the Wave: One-Touch Automatic Salt Segmentation by Coupling SAM and SegGPT .....	4383
<i>Ardiansyah Koeshidayatullah</i>	
From Pixels to Insights- Harnessing the Power of Deep Learning for Facies Classification in Borehole Images.....	4390
<i>S. Mukherjee, X. Jiang, M. Al Ka'abi, M. Khan, J. Kherroubi</i>	
On Raster Image Segmentation, Well Log Instance Detection, and Depth Information Extraction from Rasters Using Deep Learning Models .....	4400
<i>O. A. Gune, A. R. Lokhande, P. R. Mangsuli</i>	
Personal Protective Equipment Detection Using Computer Vision Techniques.....	4415
<i>R. S. Aldossary, M. N. Almutairi, N. M. Alotaibi, D. Serkan</i>	
Artificial Intelligence (AI) and Machine Learning (ML) Enabler for Asset Data Sustainability and Governance.....	4433
<i>Satyaprasad Jadhav</i>	

## **GEOSCIENCE: AI IN GEOSCIENCE APPLICATION**

Applying Machine Learning NLP Algorithm for Reconciliation Geology and Petrophysics in Rock Typing.....	4452
<i>A. Tveritnev, M. Khanji, S. Abdullah, L. Rojas, A. Ermilov, F. Al Mansoori, A. Alblooshi</i>	
A Comparison Between ANNs and Ant Tracking Outputs for Fault and Fracture Detection.....	4468
<i>R. Mohammadi, R. Mohebian</i>	
Deep Learning Application for Inverting Petrophysical Properties Directly from Seismic.....	4475
<i>C. L. Lew, C. MacBeth, A. Elsheikh</i>	
Artificial Intelligence-Assisted Seismic Mapping of Mediterranean Complex Turbidite Reservoirs Depositional Architectures for Effective Gas Exploration and Development .....	4487
<i>Ahmed Hafez, John Castagna</i>	
Data-Driven Modeling of Oil Saturation from Dielectric Logs Using Ensemble Regression, Dimensionality Reduction and Anomaly Detection Machine Learning Algorithms .....	4500
<i>M. A. Alghazal, D. Krinis</i>	
A Reliable Multilayer Perceptron Neural Network Estimator of Gas Condensate Reservoir Initial Composition and Dew Point Pressure .....	4519
<i>Aisha Embaireeg</i>	
AIML Provides the Efficiency and Precision in our Subsurface Geological Understanding .....	4530
<i>Muhammad Sajid, Seemant Rajput, Ahmad Riza Ghazali</i>	

## **GEOSCIENCE: SEISMIC RESERVOIR CHARACTERISATION**

Time-Lapse FWI Using Borehole Seismic Data for CO <sub>2</sub> -EOR Monitoring in a Carbonate Field Onshore Abu Dhabi .....	4538
<i>Y. Yamada, S. Nakayama, T. Ishiyama, M. Mochizuki, T. Mouri, H. Shimizu, A. A. Aljaberi, A. M. Al Hamed, M. Mohamed, J. Ahmed, M. Waqas</i>	
4D-Coprocessing: Case Study Offshore Abu Dhabi.....	4548
<i>O. Kirstetter, M. Mahgoub, G. Cambois, F. Papillon, A. Varghese, B. Six2, R. Reboul</i>	
Petrophysical Reservoir Property Prediction from Seismic Data. Bridging the Geophysical Properties to Geological Information. Case Study from Marib Basin Yemen, Alif Formation .....	4561
<i>Amin Al-Maktari, Aref Al Shadadi, Mohammed Ali Al-Rawqi, Omar Aly, Aya Ibrahim, Tarek Nafie</i>	
First Application of Wave Equation Based-AVO Inversion on a Carbonate Reservoir in UAE.....	4583
<i>J. Ahmed, H. Mahmood, S. Al-Naqbi, A. Aljaberi, P. Doulgeris, H. Gonza,ez, M. Zhang, P. Denitez</i>	

## **OPERATIONAL EXCELLENCE: ASPHALTENES MANAGEMENT**

Managing Stealth Asphaltene Flow Assurance Potential Risk in Gas Injection Field Based on Data Science Using Over 20 years Accumulated Dataset.....	4598
<i>H. Yonebayashi, T. Hiraiwa, K. T. Khlaifi, R. Sakurai, Y. Inokuma, S. Bahri, A. A. Abed, Y. Nomura, K. Makishima, M. Tange, M. Sawata, S. H. Alkaabi</i>	
Integrated Approach for Effective Asphaltene Precipitation and Deposition Detection in Greenfield Wells.....	4609
<i>W. Lee, M. Hamza, J. Shim, K. Mogenssen, M. Grutters</i>	

A Life-Cycle Comprehensive and Evolving Asphaltene Management Strategy of Sour MGI Oil Fields of South Oman.....	4618
<i>Pankaj Agrawal, Asaad Busaidi, Alyaqadhan Al Hinai, Zahir Abri, Aiman Quraini, Abdullah Hadhrami</i>	
A Three-Phase Integrated Asphaltene Deposition Model in Oil Wells.....	4631
<i>E. M. Al-Safran, A. A. Aql, M. Ghasemi, H. G. Alrashedi, A. Qubian</i>	
Screening and Evaluation for Asphaltene Dispersants for Hassi Messaoud Field-Algeria: Laboratory Tests .....	4645
<i>Maatallah Djamila, Benaceur Fatima Zohra, Daniel Ferreira, Elham Mahmoodaghdam</i>	

## VOLUME 7

Chemical Inhibitors for Asphaltene Control in the Oil Industry: A Comprehensive Review of Laboratory Experimental Techniques and Performance Evaluation.....	4668
<i>Syed Muhammad Aun Ali, Syeda Fardees Zaidi, Syed Imran Ali, Clifford Louis, Shaine Muhammadali Lalji, Javed Haneef, Syed Muhammad Ali</i>	
Impact of Waxphaltenes on Overall Stability of Asphaltenes, Paraffins, and Emulsion .....	4685
<i>Abhishek Punase, Rashod Smith, Will Burnett, Kevin Mutch</i>	

### **OPERATIONAL EXCELLENCE: MAINTENANCE AND RELIABILITY**

AI-Enhanced Tools for Performance Enhancement in Energy and Water Systems.....	4697
<i>Dylan Kobayashi, Ganesh Arumugam, Mark Kimura, Matthew Nakatsuka, Jasmine Taketa-Tran, Sumil Thapa, Vinod Veedu, Alexander Ventura</i>	
Leveraging Condition Based Major Overhaul for Higher Uptime and Profitability .....	4712
<i>Khaled Al-saedi, Hesham Al Awadhi, Muhammad U Ddin Kalhoro, Muhammad Nadeem, Sultan Al Harmi, Saleh Al Halabi</i>	
Operational Pigging Prediction by Machine Learning .....	4722
<i>M. Ramlan, K. A. Khabri</i>	
Case Study on Catastrophic Failure of the Cooling Water Pump DE Bearing .....	4731
<i>Simon Whittaker, Sanjit Sidhu, Moorthy Subramanian</i>	
Fouling Monitoring on Process Centrifugal Compressors.....	4746
<i>Dario Santagati, Fabio Turconi, Mattia Pezzola, Francesco Beduschi</i>	

### **MARINE OPERATIONS AND LOGISTICS: OFFSHORE ENGINEERING**

Fragility Analysis of Fixed Offshore Platform in Malaysia Under Earthquake Effect .....	4759
<i>F. S. Azlan, M. M. A. Wahab, M. Z. Ramli, A. Abdul Rahman</i>	
Foundation Re-Assessment for Ageing Platforms.....	4768
<i>S. K. Pillai, H. Mohammed Abdul Khader</i>	
A Case Study of Using Alternative Engineering Approach for Pipeline Free Span Analysis in the Gulf of Thailand .....	4777
<i>B. Yontsakul, T. Sotananan, C. Trithipchatsakul</i>	
Offshore Pipeline Operation Leak Mitigation – A Case Study on Single Point Mooring Operation.....	4784
<i>Tedy Susanto, Rajesh Sharma, Renato Finol, James Ladd</i>	
Integrity of Buried Flexible Pipeline Using Numerical Approach .....	4806
<i>K. Chaitanya, D. T. Yurindatama, N. Singh</i>	

Jack-Up Rig Installed Wellhead Platform: A Novel Solution for Marginal Field Development .....	4819
<i>Raja Sharifuddin Ahmad B. Raja Badrol, Ahmad Rizal B. A. Rahman, Noorizal B. Nasri Huang, Azam Abdul Rahman</i>	

### **FIELD DEVELOPMENT: DIGITAL RESERVOIRS AND DATA-DRIVEN APPLICATIONS**

Data Analytics Driven Subsurface Reservoir Sectorization Review of a Giant Abu Dhabi Onshore Field Carbonate Reservoir for Efficient Reservoir Management .....	4828
<i>Khalid Javid, Sara Alshkeili, Fatema Al-Hammadi, Nouredine Benourkhou, Saleh Ali Al Sayari, Maher Kenawy, Sergey Ryzhov</i>	
Deep Learning-Driven Optimization of Development Plans for Hydrocarbon Reservoirs .....	4851
<i>D. K. Gupta, N. Belayouni, S. Tahir, A. A. Al Tandi, R. Ayoubi, M. Gubbala, M. A. Elfeel, S. Su, M. Amri, H. Mustapha</i>	
A Hybrid Model Approach to EOR Polymer Injection Pattern Ranking in a Mature Waterflood Field in South Oman.....	4861
<i>T. Al-Aulaqi, D. Davudov, A. O. Mabadeje, A. Venkatraman, A. Malkov, H. AlSulaimani, Z. Yaaribi, O. Riyami, V. Karpan, H. Nabhani</i>	
Automated Development Concept Generation—Digital Transformation of Field Development Planning.....	4876
<i>A. Harb, P. Amoudruz, S. Roy, H. Hayek, M. Hurtado, R. Torrens</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 1 - TUESDAY, 03 OCTOBER 2023**

An AI-Driven Multiwell Placement and Scheduling Method.....	4889
<i>A. A. Al Tandi, S. Tahir, M. Ahmed Elfeel, N. Belayouni, D. Gupta, R. Ayoubi, I. Shaik, C. Hernandez, S. Su, M. Gubbala, S. Majhi, C. Rat, S. Ramatullayev, H. Mustapha, M. Amri</i>	
Data Analytics from a Legacy Dataset Enabling Optimization of Coiled Tubing Drilling Laterals in a Geologically Complex Gas Storage Reservoir .....	4901
<i>H. Saradva, S. Jain, M. Shaikh, A. Barhate, K. Bihade</i>	

### **PEOPLE DEVELOPMENT AND DIVERSITY: CAPABILITY CULTURE**

Gamification as a Tool to Boost Employees Engagement.....	4917
<i>A. Dubois, B. V. Kelamcherry</i>	
Driving Efficiency and Productivity: A Data Analytics Approach to Technical Talent Competency Management in Petronas Upstream.....	4928
<i>Yushafidi Bin Yusof, Syahirah Bt Ismail, Ruzmilawati Bt Ismail, Muhammad Alif Bin Azaman</i>	
Transforming with Our People – Leading Business Transformation Through People Development.....	4944
<i>Boon Keng Ho, Christelle Saint Paul, Giedre Daniseviciute</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 2 - TUESDAY, 03 OCTOBER 2023**

A Unique Development Model for Paraprofessionals at Engineering Organization .....	4953
<i>Hassan Saeed Al-Qarni</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 3 - TUESDAY, 03 OCTOBER 2023**

Digital Way of Working: Harnessing the Power of Micro Learning, Podcasts, and Knowledge TechTalks for On-Demand Knowledge .....	4962
<i>Saif Al Auqi, Asif Ismail, Amit Sijaria, Qasim Al Hinaai, Kingsley Emeye, Daniel Rees, Abdullah Al Braiki, Khalid Al Kharusi, Sulaiman Salmi, Sulaiman Qarni, Philip Chappell, Haris Sahlan, Saud Dohani</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 4 - TUESDAY, 03 OCTOBER 2023**

Capability Development of Technician in Oil and Gas Operation: A Story of PETRONAS Upstream Business in Revolutionizing Competency Development in Meeting the Aspiration for the Field of the Future .....	4976
<i>Mohamad Hafez Hussain, Hana Maslinda Md Idrus</i>	
Drilling and Completing of Highly Depleted and Unconsolidated Sand Requiring Overbalance Mud Weight for Shale Layer. A Control Made Possible with Strong Well Planning Optimization and Mechanical Earth Model Iteration .....	4985
<i>M. Chembou Ninga, G. Ponte, T. Rouat, P. Murray, R. C. Ozioko, A. Bois, O. Oredolapo</i>	

### **DRILLING: BEST PRACTICES IN DRILLING OPERATIONS**

Cost Model Optimization of Integrated Drilling Services Contracts in Delivering Economical and Fit for Purpose Development Wells for Petronas Operated Field in Middle East .....	5003
<i>H. Aldarkazly, W. Han Sze, R. Rj Zainal Alam, A. Md Ali, W. Y. Wan Yusof, A. Ramli, M. K. Affendy, H. Al-Shaheen, W. Mutlag, A. Marzoq, M. Alqasim, A. Jamal, A. L. Ismail, M. Bin Nazarudin, J. H. Johar, W. Che Hamat</i>	
A Case Study: Adaptation of Integrated Drilling Services Approach and Improved Operational Practices to Drill Linerless Slim Hole Extended Reach Wells in an Onshore Field Abu Dhabi, United Arab Emirates .....	5010
<i>Rahul Kamble, Zaheer Abbas, Clifford Kirby, Abdulla Sulaiman Al Menhali, Manal Al Mazrouei, Matthew Sas, Yogeshwar Patil, Syed Gohar</i>	
In Field Referencing Study by Drone Aeromagnetic Measurement .....	5028
<i>A. Wiharja, J. Jufrihadi, M. F. Sany, F. Gunawan, M. Pribadi, L. Macresy, F. Momot, A. Sikal, P. Harbidge</i>	
Bit Wear Prediction Using Adaptive Data Analytics: Dynamic Scenario for Real Time Well Engineering .....	5042
<i>Robello Samuel, Zhengchun Liu</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 5 - TUESDAY, 03 OCTOBER 2023**

Calculating Invisible Loss Time (ILT) Index Values & Predictive Analysis Using Bayesian Approach to Improve Drilling Operational Efficiency: Adopting Best Practices .....	5056
<i>Pranav Dubey, Rachit Garg, Prateek Kumar, Akash Tyagi, Aditi Jain, Pramit Chakraborty, Sameer Chhabra</i>	
A Novel Approach to Delayed Survey for Stuck-Pipe Prevention Practices and Drilling Performance.....	5067
<i>C. Khader, A. Soh, Al. A. Lawati, H. A. Humaidi, F. A. Harrasi, M. Elanbiya, S. A. Bahri, A. A. Hinai, Y. A. Habsi, M. A. Belushi, A. A. Noumani</i>	



## **KNOWLEDGE SHARING EPOSTER - STATION 6 - TUESDAY, 03 OCTOBER 2023**

Digital Transformation Thru MPD Automation ..... 5075  
*W. Ziadat, A. Kadadha*

## **ENERGY TRANSITION AND DECARBONISATION: ENERGY EFFICIENCY SOLUTIONS**

Leveraging Real Time Operational Data to Reduce Greenhouse Gas Emissions..... 5086  
*Juan Sebastian Guzman, Douglas Fuenmayor-Gonzalez, Benjamin Turrel, Lucas Dauce*

Towards Greener Hvac Refrigerant Usage For Offshore and Onshore Facilities -Petronas Journey in  
Managing Refrigerant in its Production Facilities ..... 5098  
*H Basri, A Ekhwan*

## **COMPLETIONS: RIG AND RIGLESS ARTIFICIAL LIFT SOLUTIONS**

A Paradigm Change in Rigless Intervention: The First Worldwide Deployment of Through Tubing  
ESP in Dual Completions, Case Study from South East Kuwait..... 5109  
*Fawaz Al-Shammari, Kholoud Al-Rasheedi, Saad Al-Meshwat, Lamyaa Al-Otaibi,  
Mohammad Al-Mousharji, Mariam Al-Advani, Hamad Al-Mehanna, Khaled Al-Jabal, Yousef  
Al-Shemmari, Asmaa Al-Obaidli, Hazim Ayyad, Abdulaziz Alajmi, Raghuvveer Tapdiya, Khaled  
Abdulrahim, Nurul Nabila Abd Manap, Calum Crawford, Alan McAleese, Mike Banda,  
Naveen Saini*

Rigless Thru-Tubing Gas Lift Retrofit System Optimizes Production in Shut-In Well by Deepening  
Injection Point Below Production Packer..... 5130  
*F. Suhaimin, D. Sabri, S. Gutleber*

The Best-In-Class Implementation of Dual ESP Technology in an Abu Dhabi Mature Offshore Oil  
Field to Successfully Extend Well Life with Significant Contribution to Sustainability ..... 5145  
*A. I Abdelkerim, S. Ballah, M. Al Ameri, A. Obeid, A. Arawi, D. Sanghavi*

Challenge of Maximizing Brown Field Production in High Artificial Lift Failures Frequency  
Environment as a Result of Wells Harsh Conditions ..... 5157  
*M. S. Abd-EL hamed, R. S. Rezk, M. Abu Hallawa, M. Hegazy*

## **GEOSCIENCE: AUTOMATION IN GEOSCIENCE APPLICATION**

Machine Automation in Seismic Interpretation and Modelling: Applications to CO2 Storage. A  
Case Study from the Gippsland Basin, Victoria, Australia ..... 5170  
*T. C. T. Wilson*

Characterizing the Stimulated Reservoir Volume Using Manifold Learning on 3d Motions of  
Microseismic Sources..... 5183  
*Aditya Chakravarty, Siddharth Misra*

Deep Learning Algorithms Based Approach for AI Derived Borehole Images Automatic  
Interpretation ..... 5194  
*A. Petrov, N. Belayouni, M. Belouahchia, L. Xin, Y. Fan, A. Noufal*

Machine Learning Application of Core and Log Prediction in Various Depositional Environment  
Case Studies ..... 5205  
*Jamari Mohd Shah, Rahim Masoudi, Nur Fatimah M Zulkifli, Salmi Sansudin, M Imran M  
Fadhil*

## **KNOWLEDGE SHARING EPOSTER - STATION 11 - TUESDAY, 03 OCTOBER 2023**

- The Wiggle that Makes a Difference: Using AI to get the Right Wavelet with Multi Well Input..... 5215  
*H. S. N. Alkhanjari, M. M. Glukstad, S. H. Alqassabi, A. Alrubaiey, N. Ali, O. A. Albadi*
- Combining Automatic Decline Curve Analysis and Geostatistical Methods to Help Analytical Predictions ..... 5224  
*Pierre Biver, Alexandre Lesage, Anthony Ong, Dimitri Dor, Remi Estival*

## **AI AND DIGITAL TRANSFORMATION: NLP AND LARGE LANGUAGE MODELS**

- Enabling Contextual Natural Language Search on Oil and Gas Databases ..... 5235  
*Avinash Lokhande, Prashanth Pillai, Purnaprajna Mangsuli*
- Generative AI Enabled Conversational Chatbot for Drilling and Production Analytics..... 5249  
*Ajay Singh, Tianxia Jia, Varun Nalagatla*
- Large Language Models Trained on Equipment Maintenance Text ..... 5264  
*P Y Abijith, Piyush Patidar, Gaurav Nair, Rohan Pandya*
- Wells Around Formation Issues WAFI Tool-Machine Learning Tool to Extract Field Issues from Daily Reports..... 5275  
*Ahmad Al-Taha, Tariq Al-Sulaimani, AL-Salt Al-Bahri*

## **KNOWLEDGE SHARING EPOSTER - STATION 12 - TUESDAY, 03 OCTOBER 2023**

- Unsupervised Multitask Learning for Oil and Gas Language Models with Limited Resources ..... 5286  
*Maxime Marlot, Divya Nidhi Srivastava, Fui Kent Wong, Ming Xiang Lee*
- Leveraging Natural Language Processing for Benchmarking and Enhancing Maintenance and Reliability in the Energy Industry..... 5300  
*Muhammad Abdullah, Ramin Rahnama, Kevin Stewart*

## **KNOWLEDGE SHARING EPOSTER - STATION 13 - TUESDAY, 03 OCTOBER 2023**

- Machine Learning Algorithm Autonomously Steered a Rotary Steerable System Drilling Assembly Delivering a Complex 3D Wellbore in Challenging Downhole Drilling Environment: A Case Study, Malaysia ..... 5310  
*Saiful Haq B. Mad Said, M. Ridzuan B. M. Mokhti, Sathiseelan B. Arumugam, Keng Hung B. Kok, Rosli B. Sidek, Jonathan B. Ow, Mohd Arza Ahmad*
- The Emergence of Maintenance as a Source of Competitive Advantage: A Sustainability Perspective from the Upstream Services Sector ..... 5322  
*Mustansar Raza*

## **OPERATIONAL EXCELLENCE: ADVANCED PROCESSES**

- Innovative High-Velocity Oxy-Fuel Thermal Spray Coating Applied to Electrical Submersible Pump Stages Enables 70% Scrap Reduction and Enhances Stage Mechanical Properties by 50% ..... 5335  
*R. Naranjo Lopez, F. Leon, S. Estrada, E. Velasquez, P. Escalona, M. E. Quinzo Bravo, O. G. Sierra Mogollon, K. I. Andagoya, D. Marquez Morales, E. Batallas, L. Guillca*
- Driving Safe, Reliable and Sustainable Operations Using a Novel Asset Performance Management Framework..... 5345  
*Linda A. Alrabady*

Bringing Old Non-Integral Wells Back to Life. Latest Unconventional Maintenance Techniques to Improve Asset Reliability, Sustainability and Reduce Carbon Footprint .....	5354
<i>Abdul Basit P. Eng.</i>	
Lite Optimisation and Recommender Systems for Maintenance Inventory Management .....	5362
<i>J. D. Visser, P. Carydias</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 14 - TUESDAY, 03 OCTOBER 2023**

Management of Facilities Services Across ADNOC Group Companies .....	5373
<i>Mouza AlMazrouei, Reda Hashem Ahmed, Joseph Muckattu</i>	
PDO Waterflood Gap to Potential Focus Area and Key deliverables from Central Waterflood Team .....	5385
<i>F. I. Al Balushi, N. S. Hadfield, D. K. Al Brashdi, M. M. Al Shaaili, K. M. Al Hinai</i>	

### **OPERATIONAL EXCELLENCE: WATER MANAGEMENT**

Selective and Reversible Water Shut-Off Technology Based on Emulsion System with Nanoparticles for Low to High Permeabilities Carbonate Reservoirs at HTHS Condition .....	5400
<i>H. Yonebayashi, M. Abe, V. Sergeev, J. Furuno, S. Murakami, T. Sonoda, T. Hiraiwa, M. Suzuki, R. Arief, K. Zahaf, M. Al Ameri</i>	
A Novel Water Shut-Off Technology, Lab and Field Application, Using Sized Calcium Carbonate Particles in Safah Field, Oman .....	5415
<i>Abdulaziz Ali Al Shuaibi, Khalil Hassan, Badar AL Busafi, Rashid S Al-Maamari, Khalid Nasser Al Ghammari, Rupam Bora, Wahiba Al Sarkhi, Mohammed Zahir Al Aghbari, Khalid Ali Al Ghammari, Salim Al Salmi</i>	
Towards Water Sustainability: A Success Story of Waste Water Reuse for Fracturing Operations .....	5424
<i>M. Alkhowaildi, S. Ruwayshid, Q. Sahu, A. Al Ali</i>	
Aquifer Water Preservation in Water Injection Systems.....	5432
<i>N. Alblooshi, M. Al Memari, A. A. Alshamsi, M. Al Breik, M. Solaippan, J. M. Modi, G. R. Pillai</i>	

## **VOLUME 8**

### **KNOWLEDGE SHARING EPOSTER - STATION 15 - TUESDAY, 03 OCTOBER 2023**

Reservoir Souring Management in a Mature Waterflooded Offshore Field Malaysia: Case Study of Field-D .....	5439
<i>W. Ismail, A. Mithani, T. Tengku Zainal Alam Shah, M. Mawardi, M. T. Lajawai, M. M. Tahir, A. A. Bak, L. Koyyalamudi, G. Runham, H. M. Nor</i>	
Acoustic Anti-Scaling Technology for Sustainable Scaling Prevention in the Oil and Gas Industry .....	5456
<i>E. H. Al Munif, L. A. Alhamad, T. A. Almubarak</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 16 - TUESDAY, 03 OCTOBER 2023**

Unlocking Oil Production Through Debottlenecking Water Facilities by Implementation of a Novel PWRI Solution .....	5468
<i>Mark Grutters, Saloua Tiar, Avnish Kumar Mathur, Jawaher Mohamed AlDhanhani, Noora Adel Mohammed Alblooshi, Weiliang Liu, Zhengzhong Li, Feng Zhai</i>	

## **MARINE OPERATIONS AND LOGISTICS: OFFSHORE ENGINEERING - LESSON LEARNED**

- State of Art Engineering Approach to Optimize Existing Subsea Pipeline Free Span Rectification ..... 5485  
*Mohammed Eissa Alhajaj, Ali Abdulla Al Marzooqi, Sandeep Panambur, Mohammed Nasser AlHammadi*
- Installation of Bridges in Offshore Brownfield Projects - Challenges & Mitigations ..... 5495  
*Digin Thomas, Cibu Varghese, Faris Ragheb Kamal*

## **KNOWLEDGE SHARING EPOSTER - STATION 17 - TUESDAY, 03 OCTOBER 2023**

- Offshore Facilities Load Out - Case Study of Jacket Superstructure Loadout by Strand Jacking Skidding Method ..... 5509  
*Nor Arinee binti Mat Saoud, A. Rahim Baharudin, Muhammad Afiq Azman, Farah Adiba A. Sani*
- Drilling Time Optimization by De-Risking a Re-Engineered Well Architecture Implemented in Offshore Shallow-Water Tertiary Wells in Gulf of Mexico ..... 5518  
*Edison Barrera, Jose Manuel Gomez, Jose Alarcon, Jorge Ponce, Maria Andrea Torres, Pablo Gonzalez, Gladys Hernandez, Cesar Hernández, Carlos Bravo*
- Offshore WTG Monopile Installation – Crane Vessel Preparation ..... 5534  
*C. J. George, C. Varghese, F. Kamal*

## **KNOWLEDGE SHARING EPOSTER - STATION 18 - TUESDAY, 03 OCTOBER 2023**

- Mechanical Interference Fit Connection (MIFC) for Offshore Pipeline Application: A Case Study of Dynamic On-Bottom Stability Analysis ..... 5548  
*I W. Eka Putra, M. N. A. M. Adnan, T. Chin Chien*

## **FIELD DEVELOPMENT: RESERVOIR MODELLING AND SIMULATION**

- Rapid Model Update - Enabling Fast, Structured Dynamic Model Updates Leveraging Automation ..... 5562  
*S. J. Su, S. Tahir, S. Ramatullayev, C. Kada Kloucha, H. Mustapha*
- Assessment of CO2 Storage Capacities and Identification of Operational Risks Using Large Basin-Scale Multi-Physics Simulation ..... 5578  
*D. Kachuma, T. Ramsay, H. Gross, C. Kloucha, F. Hamon, M. Gacem, R. Jellema, M. J. Noushabadi*
- New Possibilities with the Novel Modelling Approaches developed for WAG and FAWAG ..... 5598  
*A. Skauge, P. L. K. C. Chang, K. S. Sorbie*
- Novel Impressions of Hybrid Low Salinity Polymer (LSP) Injection: A Geochemical Modeling Study ..... 5612  
*Anas M. Hassan, Emad W. Al-Shalabi, Ahmed S. Adila, Mursal Zeynalli, Muhammad S. Kamal, Shirish Patil, Syed M. Shakil Hussain*
- Application of Distance Based Generalized Sensitivity Analysis and Bayesian Inversion Method in Simulation of a Giant Fractured Carbonate Reservoir with Unstructured Grids ..... 5640  
*Junling Fang, Chen Li, Wen Shi, Tao Yang, Hehua Wang, Maitha AL Marzooqi, Rasha Al Ansi, Liang Zhang, Xuezhi Hu, Jiafeng Xu, Shuisheng Zhou, Fengqiang Xu*

## **FIELD DEVELOPMENT: COMPLEX RESERVOIR DEVELOPMENT SOLUTIONS**

- Comprehensive Wax Evaluation of High Wax Content Crude of A100 Field; From Lab Characterization to Prevention and Mitigation Measures..... 5653  
*Turia. Belashehr, Fathi. Essa, Alsiddiek. Alaboub. Attia, Ayoub. Sherik.*
- Reducing Water Saturation Uncertainties in a Low Resistivity Pay Carbonate Reservoir ..... 5670  
*I. O. Bankole, R. Nachiappan, Y. B. Pramudyo, R. Reddy, K. I. Al Marzouqi, M. Alsalami, M. Alzeyoudi, A. Ojha, M.F Fathalla, M. A. Baslaib, M. Amer*
- Implementing Selective Water Injection Strategy in Thin Reservoirs of a Mature Field in Ecuador ..... 5684  
*L. A. Paredes, P. I. Cornejo, P. D. Bermeo, K. R. Luzuriaga, P. I. Zamora, J. D. Anaya, B. F Bonfanti, E. G. Alba, J. M. Garrido, M. A. Mendoza, W. N. Torres*
- Comprehensive Screening of Available Technologies to Improve Productivity of Complex Undeveloped Carbonate Reservoir for Optimizing Field Development Plan Abu Dhabi UAE ..... 5712  
*E. Sanchez, B. Moreno, V. Dantla, J. Safaa, S Jamal Haj Bin Naqeh, M. Kadeeb*

## **DRILLING: REAL-TIME MONITORING**

- Improving Reservoir Efficiency by Drilling Super Slim Multilateral Wellbores ..... 5729  
*Z. Zakirov, R. Galiev, R. Miftahov, N. Galimova, T. Karimov*
- Workflow to Utilize Realtime Mechanical Specific Energy in Formation Tops Identification and Drilling Optimization in a Multilayer Heterogenous Mature Oilfield Offshore Abu Dhabi..... 5741  
*F. A. Mendez Gutierrez, M. Ashraf, D. R. Contreras Perez, B. Al Dhafari, F. Landaeta Rivas, A. Krikor, S. Nakano, K. Andrews, M. Al Zaabi, T. Toki, J. C. Vega Aragon, S. Nishikori, K. Fukuda*
- Improved Drilling Performance Using an Innovative Cloud-Based Ecosystem and Bespoke Operator Technology ..... 5760  
*Jonathan Barry, Melissa Lee, Tad Bostick, Curtis Cheatham, Agustin Maqui, Chris Schneider*
- An Innovative Automatic Alarm System for Early Kick or Influx Events by a Machine Learning Based Abnormal Flowback Detection ..... 5776  
*MU Chao, Graeme Paterson, Zhao Jian, Yu Tao*
- Unlocking the Secrets of Downhole Vibrations: A Novel Analysis Workflow for Downhole Tool Diagnostics ..... 5783  
*Rached M. Rached, Abrar Alshaikh, Eduardo Silva, Tu Yulin, Bodong Li, Guodong Zhan*
- Lessons Learnt on How to Do a Successful Pressure While Drilling Tests Despite Challenging Environment in Middle East..... 5792  
*N. H. Al Riyami, I. Baca Espinoza*

## **ENERGY TRANSITION AND DECARBONISATION: DECARBONISATION OPPORTUNITIES**

- Energy Storage Study for Water Electrolysis Based Green Ammonia Plant ..... 5808  
*Soumya Jyoti Choudhury, Sunil Kumar Singhal*
- A Holistic System Optimization Method to Maximize Energy Savings Within Existing Pump-Systems..... 5817  
*P. J. Teesink, R. Hurst, T. Bastiaansen, T. Thomas, B. White, J. Lopez Carrillo, V. Butz*
- Design and Evaluation of Carbon Capture Systems for Enhanced Efficiency in Fossil Fuel Power Plants ..... 5826  
*M.B. Irfan, M. Ahmed, U. Ahmed, M.T. Siddiqui*

Energy Efficiency Improvement Technique in Industrial Cooling Tower in Large Petrochemical Complex - Case Study in Sidpec .....	5835
<i>M. Salaheldin, V. Subramanian, M. Salah</i>	

## **GEOSCIENCE: SEISMIC ACQUISITION AND PROCESSING**

Improved Up-Down Deconvolution in Ultra-Shallow Waters Offshore Abu Dhabi .....	5843
<i>M. Mahgoub, G. Cambois, S. Domont, T. Nassar</i>	
A Journey of FWI Offshore Abu-Dhabi – From Concept to Reality .....	5853
<i>Anish Varghese, Subhrankar Paul, Sonia Domont, Fritz Damianus, David Mccarthy, Mohamed Mahgoub, Guillaume Cambois</i>	
Data-Driven Approach to Eliminate Internal Multiples Based on the Marchenko Method for a Carbonate Field in the Middle East .....	5862
<i>Nozomi Yamamoto, Kotaro Fujita, Yuji Yamada, Shotaro Nakayama, Frederico Xavier de Melo, Suyang Chen, Luis Arechiga Salinas</i>	
Walkaway VSP Processing for Anisotropy Characterization - An Integrated Approach with Surface Seismic in the Khazzan Field, Oman.....	5873
<i>A. Al Anboori, P. Cook, R. Johnston, E. Barnes, M. Al Battashi, R. Rufino, R. Guerra, O. Al Badi</i>	
Utilizing Near-Field Hydrophones for Near-Surface Imaging Over Shallow Salt Structure Offshore Abu Dhabi .....	5884
<i>S. Babkina, O. Khakimov, S. Anthoine, A. Al Kaabi, M. Waqas, F. Aljaberi, G. Cambois, M. Mahgoub</i>	

## **AI AND DIGITAL TRANSFORMATION: EDGE COMPUTING OPERATIONAL EFFICIENCY**

Rapid Digital Oilfield Transformation Using Edge Computing and AI .....	5898
<i>S. Shukla, K. Hassan, A. Elsiwi, S. Bosnina, N. Saeed, J. Fannir, A. El-meshri, A. Gamberrato, J. Haddad</i>	
Enabling Autonomous Well Optimization by Applications of Edge Gateway Devices & Advanced Analytics.....	5908
<i>Manish Kumar, Nakul Varma, Manjunath Rao, Ravi Chandak, Sujit Jadhav, Himshella Sharma, Joy Singhal, Amit Ranjan, Shailesh Chauhan, Avinash Bohra, Atul Patni</i>	
Pilot Deployment of IIoT-SCADA by Leveraging Low Power Communication Technologies, Sensors, and Legacy Scada Controllers.....	5934
<i>Muhammad Shahzad Ahmed, Mahdi Abdula Al Bloushi, Asad Ali, Ahmed Alhammadi Yousef, Kalpit Jayendrabhai Mistry, Hushish Hernandez Henson, Aijaz Ahmed Shar</i>	
Implementation First of a Kind Edge Computing Solution to Increase Production and Reduce Emissions at Bakken and Permian Unconventional Basins.....	5948
<i>S. G. Baaren, R. R. Sharma</i>	
Rig Sensor Data for AI-ML Technology-Based Solutions: Research, Development, and Innovations .....	5964
<i>Hany Gamal, Salaheldin Elkatatny, Salem Al Gharbi</i>	
Leveraging IoT, Machine Learning and Cloud to Deploy at Scale Remote Monitoring Capabilities in Coal Seam Gas (CSG) Well Pads .....	5983
<i>D. Shekhawat, C. Shannon, R. Grover</i>	
Prescriptive Analytics of a Surface Safety Valve at the Edge.....	5993
<i>H. Gharib, M. Whitehead, M. Chin, H. Flesher</i>	

## **OPERATIONAL EXCELLENCE: SOLUTIONS IN FLOW ASSURANCE**

How to Properly Place a Scale Inhibitor Squeeze Treatment? .....	6006
<i>M. Rafie, T. Almubarak, F. Alotaibi, K. Alsunary</i>	
A Novel Modeling Enhancement of Emulsion in Condensate with High Aromatic.....	6021
<i>S. F. S. W. Sagar, N. H. Halim, M. I. M. Amir, L. Hendraningrat</i>	
Conquer Liquid Loading in Raageshwari Gas Field by Automated Intermittent Production and Deliquification.....	6035
<i>Nitin Johri, Sanket Kadam, Kees Veeken, Aditya Prakash, Hrithik Suvarna, Prakhar Singh, Shashank Daukia, Sandeep Kadirus, Anindya Goswami, Suyash Aakash</i>	
Cost Effective Solution for Liquid Loading Elimination & Ensuring Production Sustainability .....	6064
<i>Manar Maher, Mohamed Albadi, Zeeshan Ahmed, Ashraf Shaker, Abdulla Al Zarouni, Ahmed Al Bairaq, Mahmood M. Douglas, Rohit Negi, Robert Murphy, Joel George, Moritz Brehme, Arturo Palomo</i>	
Novel Multi-Functional Chemistry to Maximize Performance in Paraffin Coated Acid Soluble Scale Cleanups .....	6080
<i>Morales Rosanel</i>	
Experimental Investigation of Wax Deposition in Model Oils Under the Influence of New Eco- Friendly Wax Inhibitors.....	6090
<i>Rohit Sharma, Anuesh Pattnaik, Pratik Raj Kar, Prabh Preet Singh, Abhigyan Tiwari, Barasha Deka</i>	

## **OPERATIONAL EXCELLENCE: EFFICIENCY IN CIRCULAR ECONOMY**

Unlocking Potentials of Big Data: A Method for Enhancing H2S Specification in NGL Product From Condensate Stripper Column .....	6101
<i>Hatem A. Bajuaiifer, Ashiff- Khan, Ahmad M. Hawsawi, Majed M. Otaibi</i>	
Path to a Green and Circular Decommissioning.....	6112
<i>C. H. Friederichs</i>	
Optimizing Sulphur Granulation Process Scheme to Reduce System CAPEX .....	6128
<i>Pankaj Kumar</i>	
An Alternative Coiled Tubing Solution to Access Isolated Reserves Below Two Ball Valves in the Columbus Basin of Trinidad & Tobago .....	6135
<i>R. Mammadli, R. Adilov, A. Ramkissoon, N. Hosein, J. Friedli, D. Holder</i>	
Adoption of Practical Problem Solving (PPS) Methodology to Drive Business Performance Improvement in PDO, Sultanate of Oman.....	6151
<i>Humaid Khalifa Al Adawi, Ahmed ALAlawi, Peter Johnston, Adil ALKindi, Nasser ALHusaini, Fatik Al Balushi, Zakariya Al Mamari</i>	
Novel Hydraulic Fracturing Fluid Supporting the Sustainability Initiatives for Freshwater Conservation.....	6159
<i>Rajendra Kalgaonkar, Mustafa Alkhowaildi, Qasim Sahu, Ali Alali</i>	

## **OPERATIONAL EXCELLENCE: ASSET INTEGRITY TECHNOLOGIES**

Berri Increment Project Approach to Improve Hydrocarbon Condensate Quality .....	6170
<i>Talal A. Al-Zahrani, Ali M. Al-Hajri, Hashem H. Al-Ghanem, Samusideen A. Salu, Fahad M. Al-Otaibi</i>	

Assuring the Structural Integrity of a Fleet of 119 Offshore Platforms in the Egyptian Gulf of Suez by Applying RBI Methodology and Adopting a Qualitative and Semi Quantitative Approach. .... 6180  
*M. Amer*

Unique Technique for Successful Stuck Test Plug Removal ..... 6203  
*S. A. Tkach, B. Callihoo, I. M. Soliman, H. M. Ali*

## VOLUME 9

Identification and Mitigating Risk in Deepwater Surface Casing Strings with a Cradle to Grave Approach .....6211  
*Jeremy R. Angelle, Robert L. Thibodeaux, Roger A. Norma, Seth J. Fadaol, Taylor D. Snell, Logan E. Smith*

Flow Assisted Corrosion in Steam Condensate Collection System, A Case Study ..... 6235  
*Antonio Medina, Ahmed Ali Al Shehhi, Mohamed Al Ameri*

### **OPERATIONAL EXCELLENCE: ASSET INTEGRITY CHALLENGES**

Non-Metallic Materials & Technology for Pressurized Applications, Prospective and Value-Added..... 6245  
*S. Qamar, I. Al. Awadhi, A. S. Gongade*

Research on Bubble Migration in Pipe Under Gas-Liquid Countercurrent Flow ..... 6266  
*Bangtang Yin, Tianbao Ding, Wei Zhang, Zhiyuan Wang, Baojiang Sun, Yonghai Gao, Jianbo Zhang*

Collaborative Research on Grouted Pile-Leg Sleeve Connections Enabled Life Extension of Aged Platforms ..... 6278  
*Raja. S. Rao Aita, Anjan Sarkar, M. Eissa, X. D. Qian*

Enhancing Pipeline Integrity Management with Machine Learning and Integrated Monitoring Technologies..... 6300  
*Kang Wang, Adnan Chughtai, Joshua C. May, Sneha Poddar*

Enhanced Explosion Risk Management Through Ex-RBI and Data Analytics: Implementation Strategies and Case Study ..... 6313  
*Raja Fernaliz Raja Harris, Muhammad Naiem Naquiuddin Zaharin, Ahmad Fairuz Yahaya*

A Value Chain Analysis of Non-Metallic Reinforced Thermoplastic Pipe (RTP) ..... 6333  
*Sean Connors*

Challenges in Implementing a Corrosion Monitoring Operating Envelope Program in Matured Offshore Operations ..... 6347  
*H. S. Zulkafli, A. A. On, K. Nair, V. G. Kerisnan*

Light Weight Tomographic Monitoring of Pipe Wall Thickness ..... 6358  
*Geir Instanes, Audun O. Pedersen, Francesco Simonetti, Peter B. Nagy*

### **FIELD DEVELOPMENT: POLYMER EOR APPLICATIONS**

Achieving Accurate History Matching in Polymer-Flooded Reservoir Through Advanced Simulation of Polymer Properties..... 6367  
*A. Negre, G. Suzanne, S. Charonnat, E. Delamaide*

India's 1st Polymer Flood Scheme Implementation from Laboratory to Field in Heavy Oil Having Strong Aquifer ..... 6380  
*Ajay Kumar Sharma, Sandeep upadhyay, Sujit Mitra, Rakesh Meena, Ravi. S. Mavoori*



First Successful Long-Term Polymer Injectivity Test in the Upper Burgan Formation of the Sabriyah Field to Fast-Track Phased Commercial Polymer-Flooding Development .....	6401
<i>Mohammed Taha Al-Murayri, Abraham Abdelgadir Hassan, Naser Amash Alajmi, Mohammad Yunus Khan, Abrar Al-Qattan, Mariam Jamal, Ali Ameen, Satish Kumar Eadulapally, Shweta Kakade, Anirban Banerjee, Alexey Andrianov, Elio Dean</i>	
Comparison of Different Methods to Evaluate the Effect of Temperature on Polymer Retention and Degradation in the Presence and Absence of Oil on Carbonate Outcrops .....	6418
<i>Anoo Sebastian, Muhammad Musthaq, Emad W. Al-Shalabi, Waleed AlAmeri, Kishore Mohanty, Shehadeh Masalmeh, Ali M. AlSumaiti</i>	
Impact of Produced EOR Polymer on Production Facilities .....	6434
<i>M. T. Al-Murayri, D. Kamal, A. de Kruijf, A. Andrianov</i>	
13 Years of Comprehensive Reservoir Monitoring and Surveillance in South of Oman EOR Polymer Project .....	6457
<i>M. S. Al Sawafi, T. A. Al Ghailani, O. Al Kindi, M. Al Abri, S. Al Hinai</i>	

### **FIELD DEVELOPMENT: EOR GAME CHANGER TECHNOLOGIES**

Metagenomic Sequencing of Formation Water Sample of Upper Assam Oil Fields and Its Possible Applications in Microbial Enhanced Oil Recovery .....	6468
<i>Saurav Bhattacharjee, Borkha Mech, Naved Wasim Ahmed, Ankita Khatanar, Aparoo Das</i>	
Novel Sustainable Nanofluids from Waste Plastics for Oil Recovery Displacement and Decarbonization.....	6493
<i>Wei Wang, Sehoon Chang, Ayrat Gizzatov, Gawain Thomas</i>	
Dual Ring Injection Fence Technology: A Novel Method to Optimally Co-Develop Hydrocarbon Reservoirs with Free Gas Caps Over Producing Oil Zones.....	6503
<i>M. J. L. Aikman, M. Mabrook, X. Jing, H. Al Hammadi</i>	
Novel Application and First Full Deployment in the World for Gas Lift in Gas Fields .....	6527
<i>M. S. Subhi, S. K. Al-Subhi, N. S. Al-Siyabi, Z. Al Hinai Kharusi</i>	
India's Pioneer High Pressure Air Injection Process Design: An Evaluation of its Efficacy for Enhanced Oil Recovery .....	6536
<i>S. Singh, S. Sharma, S. Trivedi, G. Mishra, R. Meena, S. Mitra</i>	
Achieving the Impossible – Chasing Oil Column in Extremely Heterogeneous and Highly Flooded Area by Utilizing Extra Deep Azimuthal Resistivity.....	6552
<i>Ibrahim Abdelgaffar Seddik, Firdaus Bin Mohamed Noordin, Khalid Mohamed Abdul Aziz, Dicky Trisnadi, Mohamed Ali Zuraiqi, Sanathoi Potshangbam, Krishnan Saravanakumar, Mohammed Yehia, Ali Bouny</i>	

### **PEOPLE DEVELOPMENT AND DIVERSITY: FUTURE-SKILLING**

Skills for the Energy Transition and Beyond: Human Resource in the Industry 4.0 Energy Sector .....	6566
<i>E. Obode, T. Osunrinde, O. Ifalade</i>	
Introducing CareerNow@Baker Hughes - Where Your Skills Gain Energy .....	6578
<i>Elie Alam, Wendy Bergeron, Olga Bogatyreva</i>	
Revisiting Petroleum Engineering Curriculum: Adaptation to Energy Landscape.....	6586
<i>Emad W. Al-Shalabi, Manish N. Srivastava, Arash D. Taleghani, Iraj Ershaghi</i>	
Future Workforce Planning - Building a Future-Ready Organization Using a Prospective Study Approach .....	6597
<i>Boon Keng HO</i>	
Successfully Transitioning the O&G Workforce to a Cleaner, Greener Future .....	6606
<i>E. Jayaram, A. Reed, L. Kane, P. Krawchuk, A. Kannike, B. Stander</i>	

## **PROJECT MANAGEMENT: HYDROGEN PROJECTS**

ESG. A Challenge for the Oil & Gas Industry? .....	6621
<i>J. M. Arboleda</i>	
Optimal Energy Strategy for a Complex Brownfield Ethane Recovery Maximization Project.....	6629
<i>Mi AlGhailani, Saqib Sajjad</i>	
Well Hookup Surface Completion Optimization .....	6638
<i>M. Al-Mawali, R. Al-Hasni, A. Al-Abri, M. Al-Barwani</i>	
Sustainable Aviation Fuel Investment and Feedstock Calculations by Microalgae Applications with Biorefinery Approach .....	6645
<i>Irmak Özdemir</i>	

## **DRILLING: INNOVATIVE DRILLING FLUID SOLUTIONS**

Wellbore Strengthening Geomechanics: An Engineering Design Workflow to Help Minimize Risk of Induced Lost Circulation .....	6659
<i>Sharath Savari, Eric Van Beest, Claudia Bonin, Yonggui Guo</i>	
Sustainability in Drilling Operations Using Zero Liquid Discharge Wastewater .....	6669
<i>J. Ramasamy, M. K. Al-Arfaj, S. C. Ayirala, S. H. Saleh</i>	
The Critical Factors Causing Casing Corrosion in Aqueous Drilling Fluids.....	6678
<i>E. Barmatov, E. Corcoran, J. Isaacs, A. Medvedev, B. Panamarathupalayam, S. Young</i>	
Investigating the Effect of Salt, Polymer and Magnetic Nanoparticles on Critical Drilling Parameters—Coupled with Novel 3D Image Processing Technique.....	6695
<i>Muhammad Arqam Khan, Muhammad Aamir, Muhammad Asad, Muhammad Junaid, Shaine Mohammadali Lalji, Syed Imran Ali, Hashir Ahmed, Zeeshan Ali Lashari, Kaihe Lv, Mei- Chun Li, Jinsheng Sun</i>	
Extreme Efficiency from High Performance Water-Based Mud Under HPHT Conditions.....	6721
<i>L. Affede, M. Giubertoni, A. Ciuca, L. Bertoldi, L. Pinto Vieira, G. Carpineta, M. Minelli, L. P. Moroni, K. Fatkullin</i>	
An Experimental Study of Shale-Drilling Fluid Interactions to Enhance Long-Term Shale Inhibition .....	6737
<i>Mohammad AlArfaj, Mohammad AlRashead, Mohammad AlOtaibi</i>	
Influence of Nanoparticle-Based Drilling Fluids on Egyptian Shale Swelling – An Experimental Investigation .....	6745
<i>Ahmed Mady, Mostafa M. Abdelhafiz, Abdel Sattar Dahab, Gehad M. Hegazy, Omar Mahmoud</i>	

## **ENERGY TRANSITION AND DECARBONISATION: GHG EMISSIONS ASSESSMENT AND REDUCTION**

Track & Reduce Carbon Emission Using Planning Model to Make More Sustainable Operation for Refineries and Olefins .....	6765
<i>Piyush Jain</i>	
Achieving Greenhouse Gas Management Success: How we Exceeded Our Target 8 Years Ahead of Schedule .....	6775
<i>P. Sricharoen, P. Dhanasin, K. Lertwiriyaprapa</i>	
On the Road to Net-Zero Carbon Emissions: A Cementing Emissions Assessment Tool for Quantifying, Evaluating, and Helping Decarbonization.....	6785
<i>N. Droger, S. Kapoor, A. Yakovlev, V. Lafitte, O. Mendoza</i>	

Reducing Embodied Carbon by Using Fibre Reinforced Polymers (FRP) Rather Than Steel .....	6792
<i>S. Eves, N. Lye, B. Herbert, A. Chiu, R. Friedrich</i>	
Quantitative Analysis on Reducing Greenhouse Gases Emissions through the Implementation of Flare Gas Recovery Systems in Gas Oil Separation Plants .....	6811
<i>Sarah Y. Alaskar, Turki A. Alsawad</i>	
Accelerating Decarbonisation through Enterprise Level Orchestration .....	6823
<i>M. Prabagar, Y. Kuah, M. Mohd Uzaini</i>	

### **COMPLETIONS: FLOW CONTROL**

The First Implementation of Shifting Sleeves Using Real-Time Hybrid Coiled Tubing with a Flow Through 360° Multi-Side View Camera, Kuwait .....	6831
<i>Nakul Khandelwal, Sapna Chawla, Joshua Travesso, Mohammed Al-Kreebani</i>	
Learnings from 150+ Autonomous Inflow Control Completions in 7 Unique Reservoirs in Sultanate of Oman .....	6848
<i>Al-Jumah Ali, Harthi Mahmood, Kindi Said, Sinani Yousuf, Azri Nasser, Al Lawati Ahmed</i>	
Qualification of an Emerging Class of AICDs with Artificial Gravity: The Density-AICD Technology .....	6862
<i>Ibrahim El Mallawany, Ryan McChesney, Stephen Greci, Ryan Novelen, Georgina Corona, Caleb Warren, Pranay Asthana, Ahmed Bukhamseen</i>	
A State-of-the-Art Water Shutoff System in Carbonate Reservoir: From Lab to Field .....	6881
<i>M. I. Alabdrabalnabi, A. M. Almohsin, A. I. Baiz, A. S. Busaleh, H. Al Bin Saad</i>	
A Novel Method: Injection Dynamic - Transient Acoustic Pressure Thermal Logging to Increase the Effectiveness of Water Shutoff and Remediation Operation in Depleted Production Wells .....	6889
<i>P. Nayung Galih, S. Rudhy, S. Asep, M. Nur Cahya, H. A. Humam</i>	

### **UNCONVENTIONAL RESOURCES DEVELOPMENT: PRODUCTION ENHANCEMENT**

First Successful Hydraulic Fracture Treatment in Deep Pre-Khuff Clastics: Lessons Learned from the Implementation of Cutting-Edge Technology Offshore Abu Dhabi .....	6897
<i>H. Buijs, M. Ibrahim, Mahmoud Basoni, J. A. Alloghani, A. Elmahdi, S. Sayed, T. Swedan, Y. Azoug, A. Al Kaabi, A. Bulekbay, M. Efnik, A. E. Al Hammadi, R. K. Al Kindi, F. M. Al Aryani, U. B. Bregar, R. Nuriakhmetov</i>	
Synthesis and Study on a Type of New Salt-Resistant and Slow-Expansion Gel Particles for Deep Water Control .....	6934
<i>Haiqing Zhang, Qixin Liu, Luming Meng, Zhongtao He, Yining Wu, Caili Dai</i>	
Investigating the Effect of Geological and Engineering Parameters on the Fracture Height Growth in Naturally-Layered Shale Reservoirs Using 3D Lattice Method .....	6952
<i>Rui He, Youcheng Zheng, Weihua Chen, Zefei Lv, Ji Zeng, Jie Yan, Tao Wang, Yang Wang, Aiwu Cao</i>	
Estimation of Well Interference by Integrating Fracture-Driven Interactions (FDIs) and Post-Stage Fall-Off .....	6970
<i>A. F. Ibrahim, A. I. Assem, M. Sinkey, T. Johnston</i>	
Numerical Simulation of Proppant Heterogeneous Distribution in Shale Gas Reservoirs .....	6980
<i>Tengfei Hou, Yang Zhang, Litao Shang, Shiling Zhang, Fengchao Xiao, Haoli Bai, Xun Sun, Yan Qiao, Gang Xu, Qingyao Zhang</i>	

## VOLUME 10

Challenges and Mitigations in Geosteering the Longest 6 1/8 Inch Horizontal Reservoir Section in Adnoc Onshore History .....	6997
<i>Zoheir Chikhi, Fatima Abdulla Al Hosani, Mariam Yousif Al Blooshi</i>	
Experimental Investigation on Hydrate Formation and Decomposition Behaviors in Micro-Pore Channels .....	7006
<i>Jianbo Zhang, Shujie Liu, Yilong Xu, Binbin Zhang, Zhiyuan Wang, Bangtang Yin, Shuxia Li, Yonghai Gao, Baojiang Sun</i>	
Production Profiling Optimization Enabled by the Development of Distributed Acoustic Sensing Technology .....	7016
<i>L. Urmantseva, G. Lees, K. Wilma, C. Godefroy, A. Gysen, Y. Mao</i>	

### **AI AND DIGITAL TRANSFORMATION: PREDICTIVE ANALYTICS**

Application of Artificial Neural Networks in Predicting Discharge Pressures of Electrical Submersible Pumps for Performance Optimization and Failure Prevention .....	7026
<i>M. A. Mahmoud, M. AbuObida, O. Mohammed, A. M. Hassan</i>	
Deployment of AI/ML Based Predictive Model for Early Detection of ESP Failure .....	7040
<i>Muhammad Aslam, Nagaraju Reddicharla, Ayman Elmansour, Khulood Alshehhi, Prabhaker Reddy Vanam, Bader Al Dhaheri, Abdulla Al Ketbi, S. Ahmed, M. S. Ahmed, Shamma Al Shehhi, Tarek Al Sonbaty</i>	
Valve Leakage - How Acoustic Emission and Artificial Intelligence Can Reduce Losses and Increase Safety and Efficiency in Oil and Gas Plants.....	7052
<i>Michael Hettegger, David Berezovsky</i>	
A Data-Driven Approach for Forecasting Static Bottom Hole Pressure Using Machine Learning Methods.....	7063
<i>S. Alasiri, S. Ureiga, M. Madan</i>	
Auto-Detecting Drilling Vibrations Through Intelligent 4IR Solution.....	7070
<i>Ahmed Gowida, Ramy Saadeldin, Hany Gamal, Salaheldin Elkatatny</i>	
Predicting Porosity from Drilling Data Using Machine Learning – Challenges and Solutions.....	7080
<i>H. A. Alhowaish, M. M. Mezghani, A. Shakriov</i>	
Autonomous Parametric and Machine Learning Estimation Models Revolutionize Capital Expenditure Process of Engineering and Construction Project in Pttep.....	7090
<i>Suchart Srivaranon</i>	

### **GEOSCIENCE: OPEN AND CASED LOGGING**

Resolving the Petrophysical and Production Challenges Associated with Complex Low-Porosity, Low-Salinity Fractured Carbonate Reservoirs – A Case Study .....	7113
<i>A. Adedamola, M. Kozłowski, S. Eyuboglu, A. Deliktas, A. Sengel</i>	
Comparison of Cement Evaluation Utilizing Different Logging Tools and Cementing Best Practices: A Case Study in Middle East.....	7126
<i>Kumar Nathan, Muhamad Aizat Kamarudin, Lingges Devadass, Mustafa Jawad Mohammed, Kok Kwi Yen, Hadi Amat, Tan Boon Choon</i>	
Essential Agreement to Get Robust Analysis of Production Logging in Horizontal Wells .....	7146
<i>A. Tveritnev, N. Kotlar</i>	

Standalone Cased Hole Evaluation Reveals the Potential of Gas Bearing Cretaceous Reservoirs in the Sultanate of Oman .....	7156
<i>Rinat Lukmanov, Aryaf Al Amri, Ebtsam Al Nasser</i>	
Deployment of Novel Wide Dynamic Range Through-The-Bit OBM Borehole Imager Enables Logging in Challenging Environment-Implications for the Ordovician and Silurian Siliciclastic Facies Characterization .....	7167
<i>Ayman El-Khamry, Naif Rubaie, Wang Weihua, El-Saied Hassan</i>	

## **OPERATIONAL EXCELLENCE: WELL INTEGRITY CHALLENGES**

Optimization of the Well Diagnostics Investigation .....	7176
<i>A. Yugay, A. Zhukin, S. Vorozhikhin, F. Girgis, M. A. Alkarbi</i>	
Optimizing Well Integrity with Accurate Forecasting of Casing and Tubing Resistance Reduction Trends Through Innovative Numerical Modelling Techniques .....	7195
<i>E. Aliko, D. Casciaro, A. Conte, C. Busollo, E. Baronio, E. A. Abdo</i>	
The Use of Artificial Intelligence (AI) to Give Insight to a Complex Well Tubing Issue to Ensure Suitable Corrosion Mitigation Approaches .....	7219
<i>M. Mohamed-Said, B. Cowe, A. Bertocello, F. Oliveira-Martinez, L. Galliot</i>	
A Multiphysics Model for Assessing Casing Integrity in Sour Service Applications.....	7237
<i>A. Negi, I. Barsoum, A. AlFantazi</i>	
Development of a New Retarder Recipe Containing Boric Acid for Improved Performance Efficiency at Mid Temperature Range (MTR) in Oil and Gas Well Cementing Operations .....	7251
<i>Chioma Ohochukwu, Samuel Mathew</i>	
Tracing the Origin of Annulus B Oil Return Using Integrated Geochemical Analysis to Identify the Effective Barrier Remediation Strategies, Case Study in Giant Gas Condensate Field.....	7276
<i>A. Alsaedi, A. Gadelhak, T. Koksalan, M. Mubarak Albadi, D. Yassein, N. AlSaadi, J. Yan</i>	
Well Integrity Challenges vs Water Salinity Variation Across Al-Khafji Field Case Studies .....	7296
<i>Tawakol I. Mohammed, Khaled J. Al-Qenae, Yousef R. Al-Dhaferi</i>	
Design of a Novel Sensor for Circumferential Multi Casing Corrosion Measurement Through Tubing .....	7305
<i>S. M. Dutta, M. S. Ramirez, A. Smith, J. Olaiya, L. Friere, J. Kverneland</i>	

## **OPERATIONAL EXCELLENCE: SOLUTIONS FOR INDUSTRY**

A World Record Set for Wireline Intervention by Conveying PLT BHA Beyond 40,000 ft MD With Composite Carbon Rod and High Powered Tractor Conveyance in Extended Reach Wells With Complex Trajectories.....	7316
<i>Gladwin Correa, Mohand Alyan, Karim Nasr, Mahmood Zakaria, Duncan Troup, Stuart Murchie</i>	
Remedial Alcoholic Condensate Banking Treatment in Deep Gas Wells in the Sultanate of Oman .....	7335
<i>Ghusun Al Aamri, Ahmed Al Yaaribi, Adnan Al Hinai</i>	
Improving Wastewater Treatment Through Application of Industry 4.0 .....	7345
<i>Devendra Singh Fonia</i>	
Robotic Screening of Demulsifier Chemistries with an Enhanced-Chemical-Profile .....	7355
<i>H. Oskarsson, M. Smout, P. E. Hellberg, A. Mostafa, R. Nazari Moghaddam</i>	
Driving Artificial Lift Excellence in South & East Kuwait, Kuwait Oil Company .....	7363
<i>Saud Al-Haddad, Abdullah Al Watyan, Nalini Mahabirsingh, Sara Al-Ragheeb, Salem Al-Ajmi, Ahmed Khaleefoh, Menayer Al-Jadi, Sofiene Bentoumi, Lea Duong, Kamran Novruzov, Mohamed Amr, Vusal Fataliyev</i>	

A JetSweep Technology for Cleaning Under-Pressured Wellbores .....	7380
<i>Al Hinai Ahmed, Kamyani Ibrahim, Rajaibi Fathiya, Al Harrasi Ameera, Nahwi Talal, Kalbani Ghadeer, Nahwi Mohammed</i>	
Applications & Challenges of the Non-Metallic Material for Hydrocarbon Piping .....	7389
<i>W. S. Saeed, A. S. Al Mehairi, A. M. Alnaqbi, S. O. Al Blooshi</i>	

### **MARINE OPERATIONS AND LOGISTICS: MARINE ENGINEERING TECHNOLOGIES**

Redefining Dynamic Positioning (DP2) Power Plant Requirements for Sustainable Upstream Operations using Unique Hybrid Technology .....	7398
<i>Manoj Venkataraman, Adrian Ionescu, Daniel Zrncic, Claudio Santellanes, Anish surnameAsokan</i>	
A Comprehensive Review into Decarbonization Technologies Available for OSV Sector .....	7420
<i>Gireesh Mukundan, Basant Konat, K Sivaprasad, P K Satheesh Babu</i>	
UAE's First Wind Energy Project - ADNOC Logistics & Roll Group partnership and Barges Solution for Offshore Breakbulk Challenges.....	7434
<i>Muhammad Shahid Khan, Salim Al Marashda</i>	
The Effects of Marine Fouling in the Shipping Industry .....	7454
<i>Chris Hewitt</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 19 - WEDNESDAY, 04 OCTOBER 2023**

A Comparative Study of Simplified vs Orcaflex Using an Automated Analysis System .....	7466
<i>B. Sørby, D. A. Sveen, M. L. Vinther</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 20 - WEDNESDAY, 04 OCTOBER 2023**

Offshore Underwater Fixed Structure Integrity Assessment Using LRUT, PEC & ACFM Advanced Technologies with Minimal Marine Growth Removal .....	7477
<i>Paramasivam Krishnamoorthy, Charles Tremblay, Paul Jackson</i>	
Utilisation of Inflatable Buoyancy for Efficient and Safer Subsea Cable Laying over Traditional Methods.....	7499
<i>Graham Brading, Rakesh Bangera</i>	

### **FIELD DEVELOPMENT: EOR ADVANCE APPLICATIONS**

Holistic and Mechanism-Focused Evaluation of Low Salinity Waterflood in Carbonate Reservoirs ?Fluid-Fluid Interaction Screening and Core Floods.....	7509
<i>T. Hiraiwa, M. Tange, K. T. Khlaifi, R. Sakurai, S. Bahri, A. A. Abed, Y. Inokuma, M. Sawata, M. F. Mehraban, R. Stalker, G. Graham, S. H. Alkaabi, H. Yonebayashi</i>	
Predicting EOR Polymer Viscosity with Varying Molecular Weight and Chemistry Using Machine Learning .....	7520
<i>Rémi Maillon, Pinaki Ghosh, Clayton Wilson</i>	
Feasibility Study of Low-Tension-Gas Flooding Application in High Temperature High Salinity Sandstone Reservoirs.....	7537
<i>Nancy C. Zhou, Fangya Niu, Krishna K. Panthi, Mohammad B. Abdullah, Meng Lu, Steven Vaughan, Danhua Leslie Zhang, Kishore K. Mohanty, Delshad Mojdeh, Jianshen Li, Fuchen Liu, Zhenzhou Yang</i>	

Application of Dispersed Particle Gel (DPG) Technology for Enhanced Oil Recovery and Water Production Management.....	7552
<i>Siqing Xu, Caili Dai, Xili Deng, Nu Lu, Yifei Liu, M. Baslaib, A. A. BinAmro, Hector Alonso, Ruicheng Ma, Reem Hasan Mohammed Al Ali</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 21 - WEDNESDAY, 04 OCTOBER 2023**

Mixture of Anionic Surfactant and Surface-Modified Silica Nanoparticles for Enhancing Foam Stability .....	7570
<i>Zuhair AlYousef, Dongkyu Cha, Muhammad Almajid, Subhash Ayirala</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 22 - WEDNESDAY, 04 OCTOBER 2023**

Optimal Well Spacing within the Context of Decision Optionality Regarding the Long-Term Reservoir Recovery Process for a Complex Carbonate Offshore Oil Field.....	7579
<i>B. Davidescu, B. Male-Pirker, A. Valente, R. E. Hincapie, H. Hendizadeh, S. Masalmeh, S. Ghedan, M. Aikman, M. Khan</i>	
Business Agility: Enabling PDO to Thrive in a Rapidly Changing World .....	7593
<i>Z. S. Al Ghafri, Y. A. Al Auqi, L. Y. Al Bahri, Z. A. Al Yazeedi, T. S. Al Kindi, T. Crampin, H. O. Hillgartner</i>	

### **PROJECT MANAGEMENT: MEGA PROJECTS**

Agile Field Development Workflow Enabled Fast-Tracking of Clastic Oil Reservoir Maturation: An Agile Early Adopter Success Story, Sultanate of Oman .....	7603
<i>Ghadna Sulaimi, Olanrewaju Oladiran, Fakhriya Shuaibi, Mahmood Hosni, Abdul Malik Kalbani, Suliman Mandhari, Kathiya Alawi</i>	
Excellent Engineering Solution in Compressor Area to Avoid Project Delay .....	7613
<i>Alya AlQaydi, Ibrahim Al Awadhi, Ashish Shivaji Gongade, Haribabu Locharla</i>	
Analytical Method and Approach on Early Warning Indicators for Enterprise Capital Project Management .....	7625
<i>Ts-Muhammad Azri Ahmad Baharom, Asrul Sani Abdullah</i>	
Flawless Startup – A Holistic Approach to Fasttrack Starting Up a Multimillion Project.....	7638
<i>Tiberiu Ioan, Cecilia Malagon, Alexey Ruzhnikov, Haytham Elmokashfi</i>	
Fast Track Implementation of Large Projects in Today's VUCA Environment .....	7646
<i>Aniruddha Mahajan, Milind Baride</i>	
An Integrated Project and Risk Management Approaches for Value Maximization from a Smart Oil Field Integration Outlook .....	7652
<i>A. Alsaeedi, S. Soni, M. Albadi, F. Alharthi, M. Al Hammadi</i>	
Engineering Capabilities and High Performance: The Key Success for Operating Companies .....	7665
<i>Ameed Alashqar, Wael Al Shouly, Najem A. Qamber, Abdulla R. Alshaiba, Wael Almadhoun</i>	

### **ENERGY TRANSITION AND DECARBONISATION: CARBON FOOTPRINT TRACEABILITY**

PDO Flare Management Transformation Towards NZE Journey .....	7674
<i>N. A. Al Waily, B. A. Al Riyami, M. A. Al Mahrooqi</i>	
The intelligent Carbon Leakage Surveillance (iCLS) System .....	7684
<i>Abdulaziz S. Al-Qasim, Alia Alzayani, Abdulrahman Almuaibid, Ali Yousef, George Burba, Gerardo Fratini, Frank Griessbaum, Dirk Facius</i>	

A Novel Workflow Proposed to Calculate Net Carbon Intensity for EOR Applications in Giant Middle East Oil Reservoir .....	7702
<i>O. Garnier, M. Blanchet, S. D'Alessandro, M. Bourgeois, C. Prinet, C. Romero, Y. Vaswani, M. Aljaberi, A. Elbekshi, H. A. Al Saadi, O. Hegazy, K. Al Daghar, A. Alhammadi</i>	
Cost to Decarbonise.....	7715
<i>Shivram Balasubramaniam Iyer, Sharifah Norliza Syed Salim, Mashitah Jais</i>	
Digitalization as the Key Enabler to Unlock New Carbon Value Streams .....	7724
<i>Malou Thiebaut De Kergret</i>	
The Accurate Emission Forecast at the Well Planning Stage .....	7736
<i>Alexey Ruzhnikov, Aleksandr Nifantov, Mohammed Julaidan, Ashley Johnson, Rakan Alharthi, Diego Medina</i>	
Leveraging Carbon Market Mechanism to Achieve De-Carbonization Targets .....	7748
<i>Shayma Al Mazrouei, Dinesh Kumar Aggarwal, Suresh Ganesan, Kumaravel Ramachandran</i>	

## **DRILLING: DRILLING FLUID TECHNOLOGIES**

Qualification and Deployment of a Nanocomposite Wellbore Sealant Water-Based Mud for Drilling a High Temperature Well.....	7761
<i>Erik Kerkhoff, Ahmed Ismail, Mihai Vlajie, Abdullah Al Balushi, Aubyii Rekieh</i>	

## **VOLUME 11**

First Application of Biogenic Fibres in a Reservoir Drilling Fluid to Enable Safe Drilling and Data Acquisition Across a Depleted, Highly Laminated, Carbonate Reservoir With Heterogenous Characteristics .....	7772
<i>R. Jeughale, R. N. Khan, K. H. Andrews, F. A. Mendez, S. Nakano, T. Toki, M. A. Alzaabi, K. R. Klungtvedt, G. Sarap, Z. Meki, K. Gupta, A. V. Vallejo, N. Ramnarine, S. F. Nofal, A. Y. Alzaabi</i>	
The Study of Application of Multiphase Foam as a Drilling Fluid to Drill Shale and Manage Water Influx Simultaneously with Multiphase Drilling Medium in Kirthar Block - A Case Study.....	7795
<i>Saad Idress, Qasim Ashraf, Muhammad Azhar Hussain, Mateusz Gorniak, Michal Makos</i>	
Taro Mucilage as Green Inhibitor in Water-Based Drilling Fluid to Modify the Rheological and Filtration Properties and Mitigating Shale Swelling Characteristics .....	7808
<i>Muhammad Arqam Khan, Muhammad Aashan Sheikh, Muhammad Salman, Shaine Mohammadali Lalji, Syed Imran Ali, Mei-Chun Li, Kaihn Lv, Jinsheng Sun</i>	
Nanoparticles Improved Sedimentation Stability of Oil-Based Completion Fluids while Drilling Ultra-Deep Wells .....	7832
<i>L. L. Yan, J. H. Wang, X. X. Ni, J. S. Sun, J. W. Zhang, R. Wang, J. Q. Zhang, X. B. Cui</i>	
Don't Stop Drilling Operations but Use Customized Cross-Linked LCM Solution for Fractured Formations.....	7842
<i>Walid Al-Zahrani, Tulio Olivares, Abdulaziz Bahamdan, Donnie Burts</i>	
Keep Your BHA Cooler While Drilling Through High-Temperature Formations.....	7849
<i>Zainab Alabdulmohsen, Abdullah Al-Shubaith, Chidiebere Anioke, Qassem Al-Saqer</i>	
One Step Closer to Replacing Portland Cement with Geopolymers for Oil Well Applications .....	7858
<i>M. Kamali, M. Khalifeh, J. Kverneland, M. Benmesbah, L. Delabroy, R. Middleton</i>	



## **ENERGY TRANSITION AND DECARBONISATION: CCS TECHNOLOGIES AND DEPLOYMENT**

CCS in Onshore Deep Carbonate Saline Aquifer: Fast-Track from Feasibility to Project Implementation.....	7871
<i>Siqing Xu, A. Al Keebali, M. Baslaib, A. A. BinAmro, I. Ali, A. Vantala, H. Para, M. Karim, B. El Yosef, M. Farouk Abdelazim, J. Mason, Zayed Al Shehhi, Dilshad Ahmed, Mohamed Anwar, Gurbandurdy Arbadov, Muhammad Mourad, Khalid Ibrahim Al Marzouqi, Mohammed Rizwan</i>	
Innovative Molecular Sponges: Next-Generation Direct Air Capture Technology Enabled by Metal-Organic Frameworks .....	7886
<i>A. J. Cruz, I. Parrella, G. Wenz, J. Storey, J. Husk</i>	
Arthit Carbon Capture and Storage Project: The 1st CCS Implementation in Thailand.....	7897
<i>S. Kanokngam, S. Nitayaphan, M. Pulsawat, K. Sinthavarayan, N. Ngamlertsirichai, T. Nitipan, N. Rakpratanporn</i>	
Optimization Design of Gravity Assisted Gas Drainage Combined with Pattern Flooding and the Application in Pilot in H Reservoir .....	7909
<i>Rujun Wang, Liming Lian, Chengze Zhang, Dong Chen, Hanbing Xu, Zhaoting Huang, Wei Zhou, Ronghong Cheng, Ji Luo, Ying Fu, Yongping Wu, Quan Jin, Lisheng Dong, De'er Ka, Xiaobo Chen</i>	
Technology Demonstration of Multi-Species (CO <sub>2</sub> , SO <sub>2</sub> , NO <sub>2</sub> , & PM) Capture.....	7921
<i>Christopher Wagstaff, Mohammad AlGahtani, Sylvain Michaux, Sai Shrinivas Sreedharan, Deoras Prabhudharwadkar, William Roberts</i>	
Experimental Investigation of Long-Term CO <sub>2</sub> Exposure to Brine-Saturated Reservoir Chalk Core Material .....	7931
<i>R. Mokhtari, A. Talaei, K. Feilberg</i>	

## **COMPLETIONS: BREAKTHROUGHS IN HYDRAULIC FRACTURING**

Photonic-Hydraulic Fracturing Hybrid Approach Minimizing Breaking Pressure.....	7940
<i>Sameeh I. Batareseh, Damian P. San Roman Alerigi, Ahmed A. Alrashed, Ibrahim Zefzafy</i>	
Production Breakthrough from Channel Fracturing: A Seven-Year Journey in South Sulige Tight Gas Field .....	7948
<i>Wu Fuyang, Ma Qian, Dai Libin, Jin Ting, He Tao, Yang Shengfang, Lei Yu, Wang Long, Dong Yifan, Wang Qiang, Li Na, Luo Yin, Zhao Liang</i>	
Co-Application of Indirect Hydraulic Fracturing and Micro-Proppants with Existing Surface-to-Inseam Wells to Improve Pre-Drainage of Low Permeability Coals in Mining Areas .....	7962
<i>H. M. Ramanandraibe, R. L. Johnson, M. Sedaghat, C. R. Leonardi</i>	
Next Steps in Hydraulic Fracturing in the Clair Field – An Evolving Story .....	7988
<i>Anastasia Bird, Alistair Roy, Declan Tuffy, Alberto Casero, James Hoad</i>	
Development and Performance Evaluation of a Novel Nano-Composite Crosslinked Fracturing Fluid for Ultra-Deep Reservoir in Tarim Basin .....	8010
<i>Yanpeng Xue, Shiyong Qin, Sasa Yang, Ju Liu, Xin Wang, Hang Xu, Yinglin Hong, Erbiao Lou, Qianxing Deng</i>	
Chemical Tracer Evaluation of First Horizontal Multistage Fracturing Treatment Well in the Telisa Formation, Indonesia.....	8023
<i>G. Yudhanto, A Pramadana, A. Akbari, E. E. Gani, D. Koseluk, B. Harjaya, A. Makmun, A. Swarnanto</i>	

New Form of Skin Due to Flow Convergence Towards Perforation Intervals in Hydraulically Fractured Wells. Is Perforation a Concern Post Fracturing?.....	8036
<i>A. Samy</i>	

**UNCONVENTIONAL RESOURCES DEVELOPMENT: SUBSURFACE CHARACTERISATION AND INTEGRATION**

Integration of Special Core Analysis, Wireline Logs and Multi-Scale Injection Data to Build Robust Mechanical Earth Models for Hydraulic Fracture Optimization Projects .....	8048
<i>S. S. Al Sadi, G. Merletti, P. Armitage, I. Gil, V. Sesetty, M. Jaboob, A. Casero, P. Gramin, H. Al Salmi, S. N. Al Hajri</i>	
Fracture Characterization and Evaluation Using Fault Likelihood Technology Reveals Sub-Seismic Deformation Zones and Reduces Drilling Uncertainties in Abu Dhabi Unconventional Plays, United Arab Emirates .....	8070
<i>Salah El-Din R Mahmoud, Hassan Al-Marzooqi, Abdullah Al-Blooshi, Amana Alharthi, Abdulla Al-Hashmi</i>	
Research on Geophysical Response Analysis and Geostress Prediction Technology Based on Seismic Azimuthal Anisotropy .....	8085
<i>Chang Wang, Xuewen Shi, Jianfa Wu, Dongjun Zhang, Maojie Liao, Ruhua Zhang</i>	
Reservoir Characterization Utilizing Advanced Geochemical Measurements Acquired at Surface.....	8102
<i>Khalid Qubaisi, Mohamed Haceb, Haitham Ahmed, Caroline Magnier</i>	
Study On In-Situ Stress Evolution and Infill Well Fractures Propagation in Unconventional Reservoir .....	8119
<i>Xiang Li, Wei Zhou, Lei Xie, Dan Xie, Hanbing Xu, Qianqian Cao, Junfei Li, Yajie Ding, Jingya Dong, Yan Liu, Gang Xu, Zijian Han, Cao Hou, Liten Chen, MingHong Li</i>	
A Novel Methodology to Capture Anisotropy in Unconventional Reservoirs: Theory and Methodology .....	8128
<i>E. Ibáñez, J. Alvarellós, R. C. Bezerra de Melo, R. H. Laksmikantha</i>	
Structural and Fracture Intensity Modelling, an Integrated Approach for Fracture Basement Characterization: A Case Study of Mumbai High Field, Western Offshore India .....	8138
<i>Varsha Suresh More, S. C. Malviya, Sanjoy Mukherjee, Deelip Singh</i>	

**AI AND DIGITAL TRANSFORMATION: DATA SCIENCE IN DECISION MAKING**

Well Logging Operations Optimization at Scale Using Closed Loop Data Analytics Workflow .....	8150
<i>Vladislav S. Torlov, Abdullah A. Alakeely, Jeelani G. Bhat, Waiam H. Malibari</i>	
Causes of Rapid and Extensive Fracture Propagation After Fracture Coalescence .....	8161
<i>Yuteng Jin, Siddharth Misra, Esteban Rougier</i>	
Finding the Causal Signatures of Fracture Propagation: A Knowledge-Driven Causal Inference Workflow.....	8179
<i>Rui Liu, Siddharth Misra, Yuteng Jin</i>	
Transforming Operations Data into Business Intelligence: Leveraging Natural Language Processing (NLP) and Machine Learning (ML) for Accurate and Sustainable Insights .....	8192
<i>S. Mukherjee, S. Shekhar, S. S. Martinez, A. K. Gupta, S. Kumar, A. Z. Karrar</i>	
Literature Study and Model Example of Machine Learning Application for Plugging Prediction at Hydrate Inhibitor Regeneration System: Study Case .....	8203
<i>M. I. Hamidiy, A. D. Suryodipuro, A. N. Sommeng, A. Nengkoda, M. F. Amir</i>	
Machine Learning Models for Predicting Relative Permeability of Two-Phase Flow in Porous Media.....	8213
<i>Sulaiman M. AlGannas, Ali A. AlTurki, Sharizan B. Sudirman</i>	

Using Multilinear Regression to Predict Key Engineering Quantities for Estimation in EPC Projects .....	8224
<i>R. Banotra, S. R. J. Peace</i>	
Cloud Enable Geosteering Trajectory Planning Ahead of the Bit Fit for Drilling and Completion Optimization.....	8233
<i>Gagok Santoso, Wael Al-Alqum, Syed Mohammed Amer Ali, Hashim A. Al-Towailib, Ali al Meer, Rodrigo Varela, Paul Silva, Arief Prasetyo I, Ahmad Naim Husain, Jean Michel Denichou</i>	

## **GEOSCIENCE: LOGGING TECHNOLOGIES AND INTERPRETATION**

Shale, Clay and Thin Bed Reservoirs: Appropriate Characterization with the Single Model .....	8245
<i>E. Tyurin, M. Davenport</i>	
Developing Carbonate Low Resistivity Pay Using Advanced LWD Ultra-Deep Resistivity with Nuclear Magnetic Resonance and High-Resolution Micro-Resistivity Imaging, A Case Study in a Mature Field, Onshore Abu Dhabi .....	8276
<i>Wael Fares, Swapan Dey, Paul New, Warda Albreiki, Atiqurrahman Bin Abd Rashid, Gabriela Lopez, Ahmed Ghobashy, Muhammad Mubeen, Nigel Clegg</i>	
Field Development Opportunities Unveiled in Low Resistivity Reservoirs, Sub-Andean Oil & Gas Reservoirs.....	8288
<i>U. D. Bustos, D. Quiroga, O. Tapia, C. Mosquera</i>	
From Conventional Dips to Geological Features Mask Generation for Advanced Borehole Analysis .....	8299
<i>A. Petrov, N. Belayouni, M. Belouahchia, L. Xin, Y. Fan, N. Leseur</i>	
Enhanced Bioturbated Sandstones Reservoir Evaluation and Characterization: An Insight from Baram Delta.....	8313
<i>A. Trianto, S. F. S. Wan Sagar, F. H. Kasim, L. Hendraningrat, N. A. Ramly, S. A. A. Rasid, S. Bannu, M. F. Sedaralit</i>	
Rock Type-Based Geosteering in a Multilayered Reservoir by Combining LWD NMR Measurements and Ultradeep Azimuthal Resistivity Images .....	8324
<i>A. Al-Otaibi, H. Osman, M. Van Steene, G. Santoso</i>	

## **AI AND DIGITAL TRANSFORMATION: DIGITAL TWIN APPLICATIONS**

Visual Twin for Pipeline Leak Detection.....	8336
<i>M. Hamilton, W. Al-Ammari, Y. AbuShanab, A. Sleiti, R. Hassan, I. Hassan, M.S. Kaan, S. Rezaei-Gomari, M. A. Rahman</i>	
Vehicle Detection and Tracking for the Gas Station Digital Twin System .....	8351
<i>F. Yue, J. Ma, Z. Qian, T. Xu, W. Jiang, J. Dong</i>	
Robust Digital Twin Approach Towards Operational Excellence and Sustainability Goals.....	8361
<i>R. Sudhakar</i>	
Digital Twin Applications in EPC Projects.....	8373
<i>A. Samad, R. Wasnik, H. Singh, F. Kamal</i>	
Short-Term Production Optimization in a Time-Dependent Parameters Scenario .....	8382
<i>M. Parravicini, M. Montini, E. Vignati</i>	
Transformation of Operations Through Digital Twin Application .....	8399
<i>Ahmed Almessabi, Khaled Al-saedi, Muhammad U Ddin, Mohammed Al Naqbi</i>	

## **OPERATIONAL EXCELLENCE: PRODUCTION CONSTRAINTS MANAGEMENT**

Subsea Debottlenecking Project Increases Production from Caesar Tonga Field, Gulf of Mexico .....	8407
<i>S. Fowler, K. Lammers, J. Ramsey, T. King, T. Coker, D. Ford</i>	

Cost-Efficiency and Recyclability of Metal Foam/Micromesh for Arsenic and Mercury Removal in Oil & Gas Applications .....	8424
<i>Naruphorn Dararatana, Suchada Punpruk, Sith Kumseranee, Matina Thammachart, Nattawut Yotapan, Kornrawee Srisawat, Pimpa Limthongkul, Korakot Sombatmankhong</i>	
Novel Combination Iron Sulfide-Corrosion Inhibitor Development, Testing and Field Assessment for an Integrated Scale Management System .....	8434
<i>Cyril Okocha, Nihal Obeyesekere</i>	
Design and Testing of AI Enabled Non-Radioactive Multiphase Fraction Meter.....	8452
<i>Muhammad Akram Karimi, Muhammad Arsalan, Atif Shamim</i>	
Testing Of Production Profile Monitoring in Multi-Stage Fractured Horizontal Wells of Changqing Oilfield, China: Based On the CT-Conveyed ESP.....	8459
<i>Hongjun Lu, Guangsheng Liu, Dajian Li, Haitao Yang, Qingming Gan, Hongzheng Zhu, Wenhao Cui, Zubo Su</i>	

### **MARINE OPERATIONS AND LOGISTICS: DIGITALISATION IN MARINE LOGISTICS**

Offshore Shipping Logistics Excellence – Digitalization and Control Room / Integrated Planning Center Concept.....	8469
<i>Saud Awad, Mohammad Abdul Salam</i>	
FlexDelivery – Integrated Logistics in the Offshore Sector .....	8476
<i>Kris Vedat</i>	
Technology for Continuous Cyber Monitoring of Offshore Assets .....	8486
<i>Z. S. Irani, R. George, R. Dayal</i>	
Solving Integrated Logistics Challenges Through a Digital Platform for Humanitarian Efforts.....	8494
<i>Anoop Mohandas, Shashank Panchangam, Chris Wolf</i>	
Digitalization In Marine Logistics Using Real-Time Data and Vessel Metrics to Improve Operations Across the Supply Chain .....	8505
<i>Matthew R. Miller</i>	
Non Tampered ODMCS Log Using IoT/Blockchain.....	8515
<i>A J Kitherian Xavier</i>	
ULL-UAD - AI Nouf Field Synergy – Study Report on Long-Term Jetty .....	8525
<i>Rajendran Selvam, Guruprasad Sunkari, Abdul Rahman Ahmed AlJaberi, Khaled Ahmed Al Qubaisi, Ahmed Saeed Almheiri</i>	

### **FIELD DEVELOPMENT: FLUID CHARACTERISATION, PVT, AND SCAL**

Improving the Predictive Power of Equation of State Models for Fluid Systems Undergoing CO2 Injection.....	8538
<i>K. Mogensen</i>	

## **VOLUME 12**

On-Line Full Molecular Characterization of Flashed Gases with a New Generation of NGD Detectors for Micro-GC .....	8553
<i>A. Maniquet, L. Alonso Sobrado, J. Collell, E. Colinet, M. Loriau</i>	
CO2-Brine Relative Permeability of HPHT High CO2 Complex Carbonate Rocks: Case Study from Sarawak Basin, Offshore East Malaysia .....	8570
<i>M. Z. Kashim, A. Giwelli, M. B. Clennell, L. Esteban, R. Noble, S. S. Md Shah, M. F. Zaidin, R. D. Tewari</i>	

Phase Behaviour and Physical Properties of Dimethyl Ether (DME)/CO <sub>2</sub> /N <sub>2</sub> /Water/Heavy Oil Systems Under Reservoir Conditions .....	8588
<i>Yunlong Li, Desheng Huang, Xiaomeng Dong, Daoyong Yang</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 9 - WEDNESDAY, 04 OCTOBER 2023**

A Novel Procedure for Addressing Compositional Uncertainty in Volatile Oils, Critical Fluids, and Gas Condensates.....	8610
<i>C. D. Watson, K. Mogensen, K. Krejbjerg</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 10 - WEDNESDAY, 04 OCTOBER 2023**

Use of Critical Point in Equation of State Modeling for Reservoir Fluids .....	8626
<i>K. S. Pedersen, P. L. Christensen, J. A. Shaikh</i>	
Assessing the Impact of CO <sub>2</sub> -H <sub>2</sub> S at 400 ppm for Storage: A Geochemistry Perspective .....	8644
<i>M. F. Zaidin, A. A. Razak, W. M. S Abdullah, R. D. Tewari</i>	

### **FIELD DEVELOPMENT: NOVEL FOR TECHNOLOGIES**

Alkali Polymer Flooding: Tackling Risks and Challenges from Feasibility Study to Pilot.....	8657
<i>A. Janczak, R. E. Hincapie, S. Grottendorfer, T. Schröckenfuchs</i>	
Gas Compositional Effect on Fit-For-Purpose CO <sub>2</sub> Storage Capacity Estimation: A Case Study in Malaysian Depleted Clastic Gas Reservoir .....	8675
<i>R. A. Affandi, H. Yakup, L. Hendraningrat, M. A. Jalil, R. D. Tewari</i>	
Nanospheres Application for Conformance Control in Low-Permeability Carbonate Formation in Oman Block 5.....	8689
<i>A. Andrianov, Y. Wang, K. Busaidi, Z. Kindi, A. M. Naabi, M. Hasani, E. Liu</i>	
Significant Oil Uplift from Field Implementation of the First High Salinity Polymer-Flood Targeting a Sour Heavy Oil Reservoir Worldwide .....	8704
<i>Mohammed Taha Al-Murayri, Hadeel Faisal Abdulraheem, Faisal Ahmed Qureshi, Abraham Abdelgadir Hassan, Satish Kumari Eadulapally, Jose Gregoria Garcia, Manar Hatem Al-Otaibi, Lulwa Adel Alabbasi, Remi Maillon, Jimmy Nesbit</i>	
Surface Complexation Modeling for Low Salinity Polymer (LSP) Injection in Carbonate Reservoirs Under Harsh Conditions .....	8720
<i>Anas M. Hassan, Emad W. Al-Shalabi, Ahmed S. Adila, Ahmed Fathy, Muhammad S. Kamal, Shirish Patil, Syed M. Shakil Hussain</i>	

### **PEOPLE DEVELOPMENT AND DIVERSITY: FUTURE-PROOFING**

Leadership Assessment, Development and Succession Management .....	8737
<i>Vinit Sharma</i>	
Khebra Program .....	8752
<i>Mariam Abdul Aziz Al Hosani</i>	
Systematic Talent Management & Succession Planning .....	8760
<i>T. Taechasapasith, N. Silakorn</i>	
ECO Development Procedure .....	8766
<i>A. S. Alhaji, F. A. Al-ghanem</i>	

## **DRILLING: WELLBORE STABILITY CHALLENGES**

An Integrated Geomechanical Approach in Mud Loss Pressure Prediction in a Giant Oil Field in Offshore Abu Dhabi .....	8774
<i>K. Tsusaka, M. Toma, Y. G. I. Goraya, K. Fujita, S. Nakayama, S. Saito, K. Fukuda, T. Toki, H. Matsubuchi</i>	
Reducing Geomechanical Model Uncertainty Through Multiple Trajectory Stability Analysis Using Vertical and Highly Deviated Wells.....	8791
<i>Nanthakumar Rajaiah, Julian Guerra, Yousif Mohammed Baqer Al-Asadi, Guifen Xi, Salem Mubarak Aljaberi, Jamal Rashed Alblooshi</i>	
Unconventional Cementing Technique to Achieve Good Zonal Isolation in Primary Casing Cementation Jobs for Weaker Formations or Loss Zones .....	8803
<i>A. Khaldy, J. Hassan, S. K. Gupta, Z. A. Baloushi, F. A. Alqattan, Abhijit Datta, Ken Monterio, B. Kunchur, M. Khadar Hussain, Chelsea Ellis, R. Singh, N. Kalgutkar</i>	
Integrated Geomechanics and Structural Geology Models Guiding Strategic Decisions in Well Planning of Highly Risks Appraisal Wells Crossing Bounding Fault.....	8813
<i>Salim Al Busaidi, Ruqaiya Al Zadjali, Roger Yuan, Loic Bazalgette</i>	
Adopting Cost Effective Cutting-Edge Technology to Mitigate Cemented Annulus Pressure and Reduce Carbon Footprint .....	8826
<i>R. M. Abdi, A. H. Alhosani, Ali. S. Bin Sumaida, M. H. Ahmad, H. Alshehhi, A. Altamimi, F. H. Issa, F. M. A. Elrefai, D. Barker, M. J. Murty</i>	

## **ENERGY TRANSITION AND DECARBONISATION: HYDROGEN TRANSPORTATION AND UTILISATION**

Grid Parity Energy From Ammonia Fuel Cell.....	8840
<i>Chetan Laddha</i>	
Green Hydrogen for Oil Industry Green Mobility.....	8850
<i>Marco Castagnini, Michele Rinaldi, Dejan Pojatar, Massimiliano Castagnini</i>	
Repurposing Networks for Hydrogen.....	8885
<i>C. Peace, N. Waple, Hooman Haghighi, Harry Cotton</i>	
The Hydrogen System in the Subsurface: Implications for Natural Hydrogen Exploration.....	8894
<i>Hongwen Zhao, Ernest A. Jones, Rajput Seemant Singh, Hasnol Hady B. Ismail, Seng WahTan</i>	
Hydrogen Blending in Gas Network – A Case Study of Jubail City in Saudi Arabia.....	8904
<i>Saud AlShammari, Bashirul Haq, Dhafer Alshehri</i>	
Transitioning from a Grey to Clean Hydrogen Economy: Considerations for Scaling Production and Making Use of Existing Transport Infrastructure .....	8915
<i>Manuel Kuehn</i>	

## **COMPLETIONS: LIFE CYCLE WELL INTEGRITY**

Successful Customized Thru-Tubing Plug & Abandonment from a Light Well Intervention Vessel as an Alternative to Heavy Workover Operations to Reduce Time and Cost - A Case Study from Brazil .....	8923
<i>Rodrigo Boldrin, Raul Martinez, Mauro Nunes, André Ayusso, Victor Vivas</i>	
Metal Expandable Packer Secures the Integrity of a Cemented Casing Shoe and Protects the Caprock from Potential High Injection Pressures.....	8937
<i>Paul Hazel, Brian Jacobsen, Arve Huse, Synnøve Lind Rygh, Paal Ludvik Jørgensen, Petter Lønning, Frode Strømsvik</i>	

Well Integrity Compliant, Innovative Dual Cut-To-Release Packer System Addresses Well Challenges in high profile wells for ADNOC.....	8949
<i>Issam Rezk Mefleh, Mohammed Fawzi Abdulla, Muna Al Marzouge, Alan MacKenzie, Gordon McMillan, Atul B. Sood, Fateh Hajiji, Laith El Sayed</i>	
Cost Optimization of Deferred Production Using New Rigless Technology.....	8960
<i>Laila Abdullah, Zubair Gilani, Shiv Jalan, Ahmad Al-Naqi, Fawaz Al-Shammari, Kholoud Al-Rasheedi</i>	
Field Trials of Chokes, Frac Pump Valve Seats and Top Drive Washpipe with Smart Abrasion Resistant Nano-Composites: Increasing Mean Time Between Failures to Reduce Red Money.....	8967
<i>Ting Roy, Kamel Ben Naceur, Siggi Meissner, Yoshihiko Koyanagi, Russell Ring, Anil Singh, Christian Wilkinson, Hifzi Ardic, Indranil Roy</i>	

## **AI AND DIGITAL TRANSFORMATION: DIGITAL TWIN ANALYTICS**

Predictive Maintenance of Heat Exchangers Using Digital Twin Models Systematic Literature Review.....	8980
<i>A J Huzaifa</i>	
Leveraging the Power of Spatial-Temporal Information with Graph Neural Networks as the Key to Unlocking More Accurate Flow Rate Predictions .....	8990
<i>A. Voskresenskii, M. Pakhomov, K. Katterbauer</i>	
A New Approach to Creating a Digital Twin of Well for Production Monitoring in Western Siberia Fields.....	9008
<i>O. Kobzar, G. Mosyagin, M. Gudilov, T. Ganeev, D. Isaev, M. Polinov, A. Shestakov, E. Yudin, R. Khabibullin, A. Andrianova</i>	
Drilling Digital Twin Predicts Drilling Dysfunctions and Performance in Real Time .....	9027
<i>R. A. Gandikota, N. Chennoufi, S. Saxena, B. Schellenberg, A. Groover</i>	
Combining Machine Learning and a Multiphase Flow Model for Hybrid Virtual Flow Metering .....	9044
<i>A. Gryzlov, S. Safonov, B. Krasnopolsky, M. Arsalan</i>	
Advancing Energy Performance Monitoring of Large Compression Units Using a Thermodynamic Digital Twin.....	9060
<i>Y. S. Alzaabi, S. S. Sajjad</i>	
Application of a Digital Twin for Asset-Wide Production Planning and Optimization – A Case Study.....	9070
<i>N. Atibodhi, P. Toprasert, W. Thienthanukit, D. Supha-Kitti, W. Pongsripian, F. Wang, E. Luengo, F. Nazir, G. Mijares</i>	
Cloud Based Open API Applications Delivers Differential Value in Well Planning Efficiency Saving 60% of Well Planning Time.....	9086
<i>Peter Levison Mwansa</i>	

## **GEOSCIENCE: ENERGY TRANSITION**

A Novel Methodology to Capture Anisotropy in Unconventional Reservoirs: A Case Study with Stress Anisotropy.....	9108
<i>E. Ibáñez, J. Alvarellós, R. C. Bezerra de Melo, R. H. Laksmikantha</i>	
Serpentinization in Peninsular Malaysia: Implication for Hydrogen Generation .....	9118
<i>H. H. Ismail, H. Zhao, S. Rajput, E. A. Jones, S. W. Tan, B. I. Basori</i>	
Lithostratigraphy Modeling with Transformer-Based Deep Learning and Natural Language Processing Techniques.....	9127
<i>M. V. G. Jacinto, M. A. Silva, L. H. L. de Oliveira, D. R. Medeiros, G. C. de Medeiros, T. C. Rodrigues, L. C. de Montalvão, R. V. de Almeida</i>	

First Onshore DAS VSP in Abu Dhabi, A Complete Case Study, Onshore Abu Dhabi, UAE .....	9138
<i>Jose Vargas, Frank Ofowena, Jahan Ahmed, James Bailey</i>	
Multi-Wave Joint Characterization Technique of Channel Sand Body in Shaximiao Formation, Northwestern Sichuan Basin .....	9149
<i>Wei Wei, Qi Ran, Kang Chen, Junchen Dai, Guangguang Yang, Yuanyuan Yan, Yan Lv, Cheng Xi</i>	
Emphasis of High Order Stratigraphic Sequences Enabled by the Relative Geological Time Modelling Method: Application to Fractured Thin Reservoirs in a Pre-Salt Gas Field, Offshore Netherlands.....	9159
<i>N. Daynac</i>	

## **MARINE OPERATIONS AND LOGISTICS: INTEGRATED LOGISTICS**

Use A Software-As-A-Service Solution to Digitalize Cargo Operations.....	9176
<i>Fredrik Larsen</i>	
Bringing Intelligence into Marine Logistics for the Oil Industry .....	9186
<i>A. Yahia, M. Al Qahtani, A. Alsalim</i>	
Lighthouse: Enabling Users to Unlock the Value in their Data by Transforming it from Information to Insights .....	9191
<i>J. Deighton</i>	
Digitalization Potentials in Supporting Offshore Logistics .....	9209
<i>Hussam Suyyagh</i>	
Walk to Work and the Automation of the Offshore Oil and Gas Market .....	9221
<i>G. Eley, J. Moran, S. Kaub</i>	

## **FIELD DEVELOPMENT: CO2 AND GAS EOR APPLICATIONS**

First Pilot Design of Low-Tension-Gas (LTG) Flooding in Carbonate Field in North Oman .....	9232
<i>Mohammed Al-Abri, Dawood Al Mahruqi, Nawal Al- Aamri, Siavash Kahrobaei, Diederik van Batenburg, Groenenboom Jeroen Peter Abram, Sam Carter, Ramez Nasralla, Sulaiman Al Amri, Anindya Das, Ahmed Abuawad, Yaqoob Ramidhi, Zahir Al Malki</i>	
Developing Consistent Relative Permeability and Capillary Pressure Models for Reservoir Simulation of CCS Projects .....	9248
<i>L. S. Lun, B. Gao, P. Krishnamurthy, K. Kohli, R. C. Wattenbarger</i>	
Innovative In-Situ Foam Generation and Injection Strategy Using Greenhouse Gases for Conformance Control .....	9262
<i>Alvinda Sri Hanamertani, Omar Elkhatib, Ying Yu, Shehzad Ahmed</i>	
First Successful Execution of Miscible Gas Injection EOR Pilot in Kuwait: Challenges & Opportunities .....	9275
<i>A. Pradhan, H. Al-Mayyan, D. Kamal, K. Ziyab, P. Nurafza, A. Srivastava, S. Mishra, C. Singh, T. Faulkner</i>	
Very Rich Laboratory Data Set Paves the Way for Miscible Gas Injection Evaluation Onshore Abu Dhabi .....	9295
<i>B. Larrouilh, K. Mogensen, A. Dehane</i>	
Large-Scale High-Throughput Sensitivity Analysis of CO2 MMP to Optimize Gas Injection EOR Processes .....	9306
<i>A. Abedini, Z. Qi, T. de Haas, D. O'Brian</i>	
Experimental Investigation of Hydrocarbon and Non-Hydrocarbon Gas Injection in a Tight Danish North Sea Oil Reservoir .....	9319
<i>R. Mokhtari, A. Talaei, K. Feilberg</i>	



## VOLUME 13

### **OPERATIONAL EXCELLENCE: PROCESS CONTROLS**

Restoring Critical Well Integrity in A High-Pressure Gas Well Via Coiled Tubing in the Sultanate of Oman .....	9330
<i>Kusela Sang Ardia, Hamdan Gheilani, Ahmed Benchekor, Dragos Cruceru, Muataz Al-Aulaqi, Saja Al-Balushi, Anton Charushin, Said Al-Maskari, Khamis Al-Mataani, Sami Makkawi, Hatem Al-Hatmi, Yousif Eltorabi</i>	
Well Hookup Acceleration by X-Mas Tree Prediction .....	9344
<i>M. S., K. T., A. A.</i>	
API Pipeline Safety Management Systems: Assessments Updates and Contractor Safety Programs .....	9353
<i>C. M. Frazier, L. A. Knape</i>	
Implementation of Casing While Drilling Leading to Substantial Savings in West Kuwait Fields .....	9362
<i>Al-Khalifa Nasser, M. H. Farouk, H. R. Al-Muraikhi, D. Joshi, A.E. M. Al-Qazweeni, Omar K. Elsheikh, I. Pasaribur, Ayomarz H. Jokhi</i>	

### **DRILLING: WELL INTERVENTION**

High Performance Tractor Conveyance with Integrated Telemetry Capability Enables Real-Time Production Logging Acquisition While Tractoring to the World's Most Extreme Extended Reach Wells .....	9375
<i>S. W. Murchie, G. Correia, P. N. Tabrizi, G. Arnaly, A. Shvedikov</i>	
Torque-Balanced Sour-Service Cable and Intelligent Extreme Wireline Tractor Enables Access to Deepest Sour Reservoirs in UAE .....	9390
<i>M. Varghese, M. L. Benserradj, J. Woods, J. Varkey, A. Cevallos, S. Chang, J. Mangum, K. Nigmatullin, G. M. Correia, H. Mustafa, A. Gadelhak, A. Bazuhair</i>	
Paradigm Shift in Well Integrity Management Through the Use of Autonomous Wireless Well Intervention Robots .....	9406
<i>Julio Q. M. Guedes, João H. G. Batista, Adriel B. Souza</i>	

### **ENERGY TRANSITION AND DECARBONISATION: CO2 TRANSPORTATION AND SEQUESTRATION**

Stepping on Screening and Feasibility of Gas Development with In-Situ CO2 Sequestration in Associated Aquifer of a Giant Contaminated Offshore Field .....	9419
<i>P. K. Tiwari, A. H. Mazeli, I. H. Musa, M. N. Mohamad, S. F. S. Wan Sagar, M. N. F. Che Mat, S. N. M. Sabri, H. Othman, F. S. Dzulkefli, S. M. Sahad, A. Khanifar, J. Leem, A. Trianto, R. J. Leite, R. D. Tewari, C. P. Tan</i>	
CCUS and Geothermal Energy Activities in Saskatchewan, Canada: Novel Technologies in Carbon Capture and Storage Related the University of Regina's Clean Energy Technologies Research Institute and the PTRC's Aquistore Deep Saline Storage Project .....	9436
<i>R. Narayanasamy, H. Ibrahim, M. Kamali, M. Fabrik</i>	
CO2 Injectivity Test Proves the Concept of CCUS Field Development.....	9451
<i>Y. Kaipov, B. Theuveny, A. Maurya, A. Alawagi</i>	
CO2 Storage in a Giant Depleted Carbonate Gas Reservoir -Addressing Feasibility and Design Challenges with Field Data .....	9461
<i>Siqing Xu, A. Al Keebali, M. Baslaib, A. A. BinAmro, I. Ali, A. Vantala, B. El Yosef, M. Farouk Abdelazim, S. Perumalla, C. Mascagnini, F. Benaichaoui, C. Harper, H. Singh, S. Pandya, H. Kasekar</i>	

## **AI AND DIGITAL TRANSFORMATION: SUCCESS STORIES OF APPLYING AI**

In-Pipe Localization for Pipeline Intervention Gadgets .....	9487
<i>Mohammed H. AlSharif, Mohammad Ba'adani, Frankly Toro, Khalid Ghamdi, Salah Zahrani, Mohammed Abdulmohsin, Ahmed Al-Jarro</i>	
Artificial Intelligence for the Automatic Generation of Material Take offs from Piping and Instrumentation Diagrams .....	9497
<i>Mina Ya-alimadad, Thomas Hulard, Vasil Shteriyarov, Jing Wu, Richa Banotra</i>	
Smart Production Operations in a Remote Field in Latin America .....	9510
<i>Paola Rueda, Hugo Quevedo, Iván Osma, Javier Anaya, Johanna Gallegos, Leonardo Márquez, Raquel Correa, Daniel Villota, Juan José Alvo, Gary Tagarot, Benjamín Bonfanti, Marcos Useche, Fabian Florez, Annalyn Azancot, Angélica Vargas, Vidal Noya, Roberto Castro, Patricio Salcedo, Óscar Núñez, Ángel Valencia, Diego Galárraga, Jose Urresta, Julia Carrera, Ambica Agarwal, Cristian Romero</i>	
Next Gen of Field Operation Era for Artificial Lift Real-Time Monitoring: A Method to Significantly Optimize Oil Production of Mature Field .....	9529
<i>A. Hidayat, S. Isnanto, H. Lazuardi, C. Kurniawan, H. Kusuma, G. B. Ramadhan, H. B. Santoso, K. Hesti, H. Handarianto</i>	

## **AI AND DIGITAL TRANSFORMATION: AI FOR AUTONOMOUS OPERATIONS**

HSURF: A New Modular Platform for Underwater Remote Semi-Autonomous Facilities Inspection .....	9538
<i>S. Iacoponi, H. Alhosani, N. Mankovskii, A. Infanti, I. Zhilin, F. Renda, C. Stefanini, G. De Masi</i>	
Successful Deployment of Unmanned Survey Vessel for Offshore Project - Opens New World of Opportunities .....	9545
<i>Ashish Srinivasan, Jayaprakash Athmaram, Marwan Al Shamsi, Abdul Hakeem Al Seiri, Djaafar Bouremel</i>	

## **GEOSCIENCE: DATA ACQUISITION**

Innovative Geological Interpretation Framework for Real-Time Drilling Operations .....	9555
<i>Ruaa Alohal, Murtadha Alhabib, Ibrahim Alkhardawi, Yasser Alghamdi</i>	
Re-Inventing Pressure Retained Core Acquisition for Advanced Reservoir Property Determination .....	9563
<i>D Wunsch, T. Rothenwänder, Erik Anders, T. Deutrich, D. Brown, J. Ramoin, C. Verret, P. Mukherjee</i>	
Acquiring Surface Seismic Without Surface Receivers: A 3D DAS-VSP Case Study Offshore Abu Dhabi .....	9582
<i>J. Mason, G. Cambois, S. A. Al Mesaabi, J. Cowell, F. Boukhanfra, M. Mahgoub, A. M. Al Neyadi</i>	
Effects of Pressure on Oil Thermal Cracking: Insights on the Data from High-Pressure Optical Cell (HPOC) Experiments.....	9596
<i>Yanyan Chen, Shizhen Tao, Ning Ma, Yahui Li, Xiaowan Tao, Jianrong Gao, Wanjun Lv, Lin Wei</i>	
Ultrasonic Borehole Imaging in the Logging While Drilling Domain in All Mud Types, a Case Study in Offshore Abu Dhabi .....	9604
<i>Hassan Mohamed, Hamed Al Hashmi, Basit Altaf, Wael Fares, Ashrakat Reda</i>	

## **KNOWLEDGE SHARING EPOSTER - STATION 11 - THURSDAY, 05 OCTOBER 2023**

- Integrated Wireless Barrier Monitoring Prevents Greenhouse Gas Emission During Extended Well Suspension in Carbon Capture and Storage (CCS) Field ..... 9615  
*Firman Pahuruan, Vinicios Azevedo*
- KNPC Blockchain Platform & the Digitization of the Shipment Nomination Process ..... 9628  
*Khaled Hasan Mohammad Albaddah*
- End-To-End Solution: Distributed Temperature Sensing (DTS) High-Frequency Data Transmission via Edge-Driven IIOT Solution ..... 9635  
*A Hakim Basri, Nur'ain Minggu, Dylan Ho Zhen Xin, Liew Yi Ling, Wan Zul-atfi Mat Nawi, Hamdi Mohamed, Szalee M. Aris, M. Amirul Ariff M. Tarmizi, M. Hairol B. Zainul, Jong Pieu Lang, Chee Seong Tan, Sanggeetha Kalidas, Sarah Hanes, Lukman Salifu Nayendi, Edwin Lawrence, Muhammad Firdaus Hassan, Nur Faizah P. Mosar*

## **KNOWLEDGE SHARING EPOSTER - STATION 12 - THURSDAY, 05 OCTOBER 2023**

- Enhancing Polyethylene Reactor Operation, Efficiency & Process Control Using Online Inference of Polymer Properties: Melt Index & Density ..... 9647  
*Nishchay Kathuria*
- Need of the Hour – Transformation of the Weakest Link to Strongest Defense in Critical Sour Operations – OT Cybersecurity ..... 9657  
*Jawahar Kumar Murugiah, Mubarak Maskari, Jamal Balushi, Badar Mughairi, Iman Asfoor*
- Matrix Stimulation in Heterogenous Carbonate Reservoir: A Case Study from the UAE using Custom Acidizing and Self-Diverting Acid Treatment as an Alternative to Conventional 15% HCl Treatment..... 9668  
*Ella Tuoyo, Giuseppe Ambrosi, Leticia Hernandez-Solana, Mathayl AlKamali, Renny Ottolina, Osama G. Akl, Hajer Alshehhi*
- Centralized Predictive Analytics and Diagnostics Platform ..... 9678  
*Fawaz Hanif, Ahmed S. Al Ameri, Ahmed Abdulla Al Zaabi*
- Improving Industrial Operations with Real-Time Information Using Augmented Reality ..... 9687  
*Shamma Alshamsi*

## **KNOWLEDGE SHARING EPOSTER - STATION 13 - THURSDAY, 05 OCTOBER 2023**

- A Next-Generation, Fully Controllable Alloy Wellbore Sealing Technology..... 9699  
*Alex Lucas, Gary McWilliam, Robert Eden, Gert Rege, Kay Even Osnes, Sam Worthington, Kristian Gudmestad*
- Revolutionary Electrical-Mechanical Punching Solution for Remediation of Declining Hydrocarbon Production ..... 9720  
*Houssam Mourani, Jon-Erik Stølen Rustan, Edward Thomas Owen*
- Effects of Rock Heterogeneity and Wettability on CO<sub>2</sub> Mineralization During Storage in UAE Depleted Carbonate Gas Formations ..... 9734  
*A. Fathy, A. S. Adila, S. Ahmed, A. M. Hassan, E. W. Al-Shalabi, W. Al Ameri*
- A Simple Convincing Proto-Saturation Model for Clastics, Carbonate, and Tight Gas Reservoirs ..... 9754  
*Y. E. Sugiharto*
- ML Driven Integrated Approach for Perforation Interval Selection Based on Advanced Borehole Images AI Assisted Interpretation..... 9774  
*A. Petrov, M. Belouahchia, D. Noufal*

## **KNOWLEDGE SHARING EPOSTER - STATION 14 - THURSDAY, 05 OCTOBER 2023**

Drilled Dry Structures – From Yesterday's Failure to Today's Success .....	9785
<i>Debasis Priyadarshan Das, Pankaj Kumar Tiwari, Prasanna Chidambaram, M Syafeeq B E Amir, Raj Deo Tewari, Salina Bt Baharuddin</i>	
Robotics Application in Hazardous Operation and Construction .....	9795
<i>J. Mehta, M. Alshaali</i>	
Well On/Off Time Classification Using Recurrent Neural Networks and a Developed Transient Well Simulator.....	9804
<i>Y. K. AlHammad, H. Hoteit</i>	
Machine Learning Based Time-to-Event Models for Optimizing Asset Health and Prognostics.....	9827
<i>P. Rai, M. A. Affonso, N. Gulati</i>	
Multi-Objective Schedule Optimization for Intermittent Pumping Wells Based on NSGA-II.....	9834
<i>Y. Sun, X. Zhang, R. Zhao, C. Wang, J. Shi, H. Zhao, G. Ma, H. Yi, C. Yu, Q. Zuo, D. Sun, J. He, M. Xu, S. Chen, G. Chen</i>	

## **KNOWLEDGE SHARING EPOSTER - STATION 15 - THURSDAY, 05 OCTOBER 2023**

Comparison of Drilling Rate Penetration Prediction Based on Deep Learning Approaches, A Volve Dataset Use Case .....	9844
<i>B. R. Djamaluddin, S. A. Mohammed</i>	
A Robust Method for Data-Driven Gas-Lift Optimization.....	9857
<i>A. Gambaretto, K. Rashid</i>	
Evaluating the Robustness of Autonomous Inspections in the Energy Industry with a Quadrupe d Robot.....	9867
<i>M. Fiorucci, G. Schillaci, M. Tannous, L. Bianchi, L. Salusti, S. Cioncolini, A. Politano, G. De Magistris</i>	
How to Design a Modular, Effective, and Interpretable Machine Learning-Based Real-Time System: Lessons from Automated Electrical Submersible Pump Surveillance .....	9878
<i>Harsh Patel, Jonathan Chong</i>	
Innovative Isolation of In-service Pipelines Using STATS Remote Tecno Plug for Modification Works.....	9894
<i>Jimesh Chandran, Angus Bowie, Unnikrishnan Menon, Mohsin Backer, Zayed Mohammed Eisa, Chirag Madhusudan Gor</i>	
Innovative Sustainable Approach to Reuse Dredged Sand Material to Promote Decarbonization and Circular Economy Toward Net Zero Emissions .....	9904
<i>Hashem H Ghanem, Baker Khojah, Ioannis Georgiou, Rehman Khalilur, Ahmed Bakodah, Mohammed Alhazzaa</i>	

## **KNOWLEDGE SHARING EPOSTER - STATION 16 - THURSDAY, 05 OCTOBER 2023**

Revolutionizing Drilling Efficiency With Neuro Autonomous Solutions: DrillOps Automate, DD Advisor, And AutoCurve Coupled With SLB Well Construction Rig & Blue BHA .....	9911
<i>M. N. Al-Mudhaf, A. Al-Herz, H. Abdel Hafiz, K. Albannai, A. A. Ahmad, A. Chakchouk, S. Gangopadhyay</i>	
Enhancing Production From Low-Permeable Reservoirs With Advanced Hydraulic Fracturing Monitoring Techniques.....	9925
<i>Yulia Fesina, Dmitrii Smirnov, Stanislav Uralsky, Vasilii Skitin, Artur Butaev, Sulaimi Ghadna, Abdullah Hadhrami, Mahrooqi Alkhattab</i>	

Different Origin of Microseismic Activity Highlighted by Magnitude of Completeness and B-value Computation Case Study on Underground Salt Exploitation and Storage .....	9937
<i>Eric Fortier</i>	
Effects of Microcracks Closure/Pore Collapse in Ultrasonic Analysis in Carbonates During CO2 Core-Flood Experiments .....	9947
<i>R. J. Leite, M. R. A. Rashidi, S. M. Shah, N. H. Mohsin, Z. A. Bakar, F. J. Azuddin, A. H. Goodman</i>	
Importance of Benchmarking, Parametric Assessment for Capacity Enhancement .....	9955
<i>Surendarbabu Sivanandam, Fauzeyya Al Marzooqi</i>	
Key Factors in the Development of High Circulating Temperatures in Horizontal HPHT Wells.....	9967
<i>O. Sissenov, S. Rajadhyaksha</i>	

### **FIELD DEVELOPMENT: WELL COMPLETION AND ARTIFICIAL LIFT SOLUTIONS**

Finding Optimal Motor Valve Open Triggers in Plunger Lifted Wells with Offline Reinforcement Learning .....	9982
<i>Walter Mayfield, Felipe Lopez, Yingwei Yu, Haozhu Wang</i>	
Successful Velocity String Deployment Pilot to Improve Productivity and Sustainable Gas Recovery for Three Sub-Optimal Completion Wells in Oman Block-61 .....	9991
<i>A. Al Darai, K. Al Fadhli, S. Al Harrasi, M. A. Najwani, A. Raji, O. Qamar, P. Villarroel, S. Daoud, B. van der Ven</i>	
Advanced ESP and Completion Solution for a Remarkable Run Life in an Offshore-High Corrosive Environment .....	10003
<i>E. Aklefa, A. Ehbeash, R. R. Elhajjaji, B. Elhamali, H. Avedan, S. Abusnina, E. Anabtawi, M. Eltamimi, I. Entira, M. Hkoma, O. Jazwi</i>	
Plunger Lift Application in Packer Wells – Success Stories, Challenges & Lessons Learnt.....	10015
<i>Z. H. Khan, Q. Hafeez, R. Ahmed, S. A. Memon, R. A. Khan</i>	
Front End Maturation of Thermal Electrical Submersible Pump Design in a Steam Development in the North Oman .....	10028
<i>Aamri Nawal, Ghadani Adnan, Crampin Tom, Bos Robert</i>	

### **OPERATIONAL EXCELLENCE: ASSET INTEGRITY MANAGEMENT**

A-LOC - ADNOC Leak Clamp-On Containing Device .....	10036
<i>J. V. Bijoy, M. S. Hegazi, S. R. Surendra, S. A. Omran, Mohammed Alshemeili</i>	
A Novel Methodology for Fatigue Analysis on Welded Non Tubular Connections on Offshore Platform Decks Using Shell Fatigue Method .....	10052
<i>A. P. Thomas, O. J. Nekstad</i>	
Flexible Pipelines Risk Based Integrity Management Planning .....	10063
<i>M. Nadzeri M. Shahrustami, Karim Khairul Anuar, Hussien Hayati, Ali Noor Razak Siti Aishah, A. Samad Khairul Anwar, Nik Zulkefli Nik M. Firmann, Zain Zahrin, Zakaria Nor Salwanie</i>	
Remote Wells Wireless Integrity Monitoring – Field to Desk (FTD).....	10073
<i>Tural Yusubov, Matar Bani Malek, Teemu Vähäkangas</i>	

## **OPERATIONAL EXCELLENCE: PRODUCTION OPTIMISATION TECHNOLOGIES**

Wellsite Multi-Phase Flow and Core Online Detection Technology .....	10093
<i>Feng Deng, Bin Liu, Huabing Liu, Guanhong Chen, Shiwen Chen, Mengying Wang, Junfeng Shi, Weidong Jiang, Yangyang Yu, Lei Wang, Ruidong Zhao, Haitao Geng, Yuanzheng Wang, Dongliang Liang, Hanjun Zhao, Xing Wang, Tianbo Liu</i>	
Production Optimization with Clamp-On Multiphase Flowmeter.....	10105
<i>Michael Black, Carsten Heinks, Ron Cramer</i>	

### **VOLUME 14**

How to Evaporate Heavy Hydrocarbon in a Natural Gas Stream Within a Short Distance -The AIM Concept.....	10117
<i>Fariz Maktar, Christian Chauvet, John Sabey</i>	
Hands-Free Driving of Flush OD Conductor Tubulars .....	10133
<i>P. D. Dupuis, P. A. Adams, L. E. Smith</i>	
Impact of Solids on Topsides Operations in EOR Context .....	10140
<i>C. Blazquez, M.-H. Klopffer, E. Kohler</i>	
A Dynamic Braking Resistor (DBR) -Less Variable Speed Drive (VSD) Solution for the Rod-Lift Systems.....	10152
<i>Arefeen Mohammed</i>	
Successful Pipe Recovery Solutions in Unique Stuck Scenarios for Coiled Tubing and Downhole Completions.....	10161
<i>A. AlMarzooqi, A. M. Faqir, K. K. Nasr, S. Bana, I. Baca Espinoza, C. Garzon, A. Abushamat</i>	
Experimental Study on the Compatibility of Hydrate Inhibitor and Anti-Scale Agent .....	10174
<i>Sui Xiuan, Wang Zhiyuan, Tong Shikun, Guo Yukun, Zhang Jianbo</i>	

## **DRILLING: ENHANCEMENTS IN WELL INTEGRITY**

Well Life Extension Via Casing Corrosion Control.....	10183
<i>A. Yugay, Dr. Fady Elsabbagh, J. N. H. Maldonado, H. Yang, S. Vorozhikhin, A. Zhukin, F. Girgis, M. A. Alkarbi</i>	
CO2 Injector Integrity: The Comparison of Semi-Analytical Solution with FE Analysis of Near Wellbore Thermo-Poro-Elasticity Couplings .....	10194
<i>Antonina Barsukova</i>	
Cement Bond Logging; A Generational Review of Technologies & Log Interpretation .....	10212
<i>Sebastien Kamgang, Amer Hanif, Rakesh Neupane, Matthew Goralczyk</i>	
Impact of Change in Mud Weight & Offset Well Injection Pressure on Cement Sheath Integrity; Case Study for UAE Offshore Field. ....	10232
<i>Azza Elhassan, Patrick Manga, Mohamed S. Abdellatif, Ahmedagha Hamidzada, Kerron Andrews, Takahiro Takahiro, M. Sherif</i>	
Identification of Multiple Annuli Leakages Using Acoustic Sensor.....	10243
<i>B. K. Almulhim, N. A. Ikhsanov</i>	
Utilizing Innovative Nanolime-Geopolymer as a Cement for Gas Wells .....	10253
<i>A. Mario, S. Salem, M. Tantawy, S. Rammah</i>	

## **ENERGY TRANSITION AND DECARBONISATION: GEOTHERMAL SYSTEMS**

- Practices of Low Carbon Transition of Tarim Oilfield ..... 10273  
*Qianxing Deng, Fuxiao Shen, Kelin Wang, Jieyu Gao, Ruyong Li, Zhang Wen, Zhiqiang Wei, Xinyong Guo, Guode Liu, Xianwei Xia, Xinyue Miao*
- An Overview of Monitoring and Surveillance Technologies for Geothermal Systems ..... 10284  
*Alia Alzayani, Abdulaziz Al-Qasim, Peter Birkle, Abdullah Al-Muhaideb*
- A Pore-To-Process Digital Design Methodology for Life-Cycle Assessment of a Geothermal Power Plant..... 10301  
*A. Behrang, H. Abbas, C. Istchenko, A. Solano, S. Kisra*
- An Industry-First, Unflashed Perforating Gun for Enhanced Geothermal, Ultra HPHT, and SAGD, Rated to 750 °F, 15-Kpsi ..... 10319  
*Ting Roy, Kamel Ben Naceur, Casey Harrison, James Shelton, Holden Harrison, Aaron Hall, Kenny Jones, Yoshihiko Koyanagi, Mari Takahashi, Christian Wilkinson, Hifzi Ardic, Indranil Roy*
- Upscaling of Modeling of Thermal Dispersion in Stratified Geothermal Formations..... 10335  
*Jinyu Tang, Yang Wang, William R. Rossen*

## **COMPLETIONS: MATRIX STIMULATION**

- Design of Limited-Entry Completions Using Near-Wellbore Simulator for Effective Acid Stimulation of Heterogeneous Carbonates ..... 10351  
*M. Bedewi, A. Andreev, V. Khorikov, K. Mogensen, R. Burke*
- Production Enhancement Strategy by Combining Ultralong Horizontal Wells with Single-Phase Retarded Acid..... 10361  
*Y. Shbeb, A. Ibrahim, A. Al-marzouqi, A. Al Tamimi, A. A. Al Kiyoumi, M. Alyan, M. Al Harbi, M. Panga, F. A. Tavarez, G. Garima, A. Ugursal, A. Ryan, V. Arali, G. Martinez, P. Enkababian, W. Mahmoud*
- Unique Coil-Shifted Limited-Entry Acid Matrix Completion Overcomes Challenges of Stimulation and Wellbore Cleanup through an ESP Y-Block..... 10375  
*M. Paredes*
- Potential Formation Damage Following Matrix Acidizing Treatments. North Africa Field ..... 10383  
*A. Ali Khodja, K. Chouali*
- A Custom-Fit Approach for Temporary Well Suspension Saves Remedial Stimulation and Well Activation in North Kuwait ..... 10392  
*Fahad Mahmoud Bastaki, Mohammed Ahmad Mohammed AlMatar, Zakaria Al-Bahar, Mizan BinOmar Chong, Jassim Hamed Barki, Mariam Jamal, Mehanna Al-Mehena, Mohamed Hedi Slama, Kareem Badrawy, Nestor Molero, Rustem Sunagatov, Mohannad Adel Sebah*
- Numerical Investigation of Acid Stimulation Process in Carbonate Rocks with Heterogeneous Mineral Distributions..... 10409  
*Cunqi Jia, Saif Alkaabi, Jinchuan Hu, Kamy Sepehrnoori*
- Successful Implementation of a Novel Low-Viscosity Retarded Acid System in a Depleted Reservoir – Case History from Mexico ..... 10421  
*Ramiro Lugo, Guillermo Guillot, Modesto Mercado, Julio Vasquez, Alberto Colon*
- Holistic Approach of Acid Stimulation Selection in Carbonate Fields for Productivity Enhancement ..... 10432  
*A. B. Sarsekov, A. Ryan, B. Kamaletdinov, V. Arali, G. Araque*

## **UNCONVENTIONAL RESOURCES DEVELOPMENT: AI IN UNCONVENTIONAL RESOURCES**

Ultrafast Multiphase Production Forecasting for Large Gas Condensate Shale Reservoirs .....	10447
<i>Mohammad Elkady, Siddharth Misra, Uchenna Odi, Nathan Meehan, Andrew Silver, Karri Reddy, Cenk Temizel</i>	
Physics-Augmented Data Driven Method to Detect and Quantify the Impact of Well Interference .....	10457
<i>Utkarsh Sinha, Prithvi Singh Chauhan, Hardikkumar Zalavadia, Varad Sabharwal, Sathish Sankaran, Clark Chen</i>	
Machine Learning Assisted Fracture Network Characterization of A Naturally Fractured Reservoir Using Seismic Attributes .....	10473
<i>A. K. Ray, R. Dandapani, S. Devulapalli, S. Biswal</i>	
Optimization of Hydraulic Fracturing Design using ANN- A Case Study .....	10483
<i>Hasna A. AL-Shuaibi, Majid A. AL-Wadhahi, Rashid S. AL-Maamari, Said S. AL-Kindi, Ahmed M. AL-Kindi</i>	
i-Geo Sensing: An End-to-End Fracture Direct Diagnostic Platform.....	10502
<i>Vuong Van Pham, Amirmasoud Kalantari Dahaghi, Aydin Babakhani</i>	
Predicting the Rock Hardness of Unconventional Shales Based on Elemental Compositions by Employing Artificial Neuron Networks.....	10522
<i>A. M. Hassan, F. I. Alkhayyal, S. A. Chan, A. Abdulraheem, M. A. Mahmoud, J. D. Humphrey</i>	
New Approach for the Probabilistic Assessment of Organic Matter in the Source Rocks of the Bazhenov Formation for Estimation of Shale Hydrocarbons Resources.....	10535
<i>M. Topchii, A. Bondarev, A. Degterev</i>	

## **AI AND DIGITAL TRANSFORMATION: DATA QUALITY BEST PRACTICES**

Machine Learning Assisted Cement Integrity Evaluation During Plugging and Abandonment Operations .....	10548
<i>I. G. Camerini, G. R. B. Ferreira, L. P. B. de Souza, J. A. S. Hidalgo, Tiago M. Correia, A. S. Rodrigues, J. H. G. Batista</i>	
Unlocking a Digital Twin and Scalable AI Models Through Fit-For-Purpose Reliable Data.....	10557
<i>Bert Baeck</i>	
Live Digital Twin Improving Drilling Performance and Providing Foundation for the Realtime Data Quality Control.....	10564
<i>R. Karpov, N. Kojadinovic, U. Kokotovic, K. Zakirov, K. Valiullin</i>	

## **GEOSCIENCE: BREAKTHROUGH TECHNOLOGIES**

Water Flood Fronts Monitoring with Ultra-Deep 1D and 3D Resistivity Inversions, A Pilot Case Study in a Mature Carbonate Reservoir, Offshore Abu Dhabi, UAE .....	10580
<i>Shafiq Ahmed, Amr Serry, Owais Khan, Gaya Al Mazrouei, Salim Kaouche, Pawan Agrawal, Alya AlSalati, Abdelrahman Arif, Wael Fares, Vinda Manurung, Ahmed Ghobashy, Nigel Clegg</i>	
New Generation of Modular Production Logging Array Tool that Enhances Flow Profiling in Hostile Environment and Complex Well Design.....	10590
<i>A. Tveritnev, N. Almansoori, A. Manea, M. Benfriha, J. Escobar, E. Donzier, V. Schoepf</i>	
A Deep Learning Framework to Forecast Spatial-Temporal Dynamics of CO2 Mineralization in Reactive Rocks .....	10609
<i>Zeeshan Tariq, Bicheng Yan, Shuyu Sun</i>	



Advanced Thin Bed Evaluation to Unlock Hydrocarbon Potential in Offshore Malaysian Fields.....	10625
<i>N. A. Ramly, L. Hendraningrat, M. F. Sedaralit, A. Trianto, F. H. Kasim, S. Baharuddin</i>	

### **MARINE OPERATIONS AND LOGISTICS: ENERGY TRANSITION IN THE LOGISTICS**

PEM Fuel Cell Retrofit Solutions for Marine Industry .....	10637
<i>C. Skajem</i>	
AI-Enabled Offshore Circular Economy: Tracking, Tracing and Optimizing Asset Decommissioning.....	10644
<i>Abhijith Suboyin, Morgan Eldred, Carsten Sonne-Schmidt, Jimmy Thatcher, Jens Thomsen, Ole Andersen, Ole Udsen</i>	
ESG Strategies in the Oil and Gas Industry from the Maritime & Logistics Perspective - Opportunities & Risks .....	10662
<i>J. Martto, S. Diaz, B. Hassan, S. Mannan, P. Singh, F. Villasuso, O. Baobaid</i>	

### **FIELD DEVELOPMENT: ASSET MODELLING APPLICATIONS**

Optimizing the Balance Between Production Availability, Capex and Opex of Projects While Managing Environmental Aspects with a Simulation Tool .....	10680
<i>N. Clavé, M. Estécachandy</i>	
Integrated Asset Modeling for Multi Sour Fluids Reservoirs to Optimize the Full Field Development Plans.....	10698
<i>M. A. Basoni, A. Y. Al Blooshi, S. Meziani, O. Omobude, Kirill Bogachev, Roman Shakirov, Aleksandr Zagainov, Aleksei Grishin, Maksim Kuzevanov</i>	
Data Science Empowers Well and Surface Network Modelling .....	10712
<i>A. Gie, A. Soltani, B. Auffray, T. Duval, T. Languereau</i>	
Production Optimization Using Integrated Modelling and ESP Survival Analysis Based on Historical Data and Machine Learning.....	10722
<i>Wisam Sindi, Rudolf Fruhwirth, Ernst Gamsjäger, Herbert Hofstätter</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 17 - THURSDAY, 05 OCTOBER 2023**

Improving the Value: A Case Study of Integrated Asset Modelling of a Giant Contaminated Gas Field.....	10750
<i>U. Farooq, Z. Ashraf, C. M. Saqib, M. Ali</i>	
Integrated Pore-to-Process Modelling Approach for Confident Decision-Making in Field Development of a Complex Onshore Gas-Condensate Asset in the Middle East.....	10764
<i>S. H. Khor, B. Limpasurat, M. Q. Zhang, I. Graa</i>	
Well Control Optimization with Output Constraint Handling by Means of a Derivative-Free Trust Region Algorithm .....	10780
<i>M. Hannanu, T. L. Silva, E. Camponogara, M. Hovd</i>	
Well Design Selection's Impact to the Zonal Isolation Across Aquifers.....	10794
<i>Aidar Zhukin, Andrey Yugay, Sergei Vorozhikhin, Fadi Girgis, Majed Ahmed Alkarbi</i>	
Adding Value in Challenging Well Environments: Case Studies Illustrate How a Systematic Risk Control Approach Can Maximize Cost Savings by Combining Multiple Trips (Cement Drill Out, with Well Bore Cleaning and Casing Pickling and Displacement in Lower Completion) .....	10803
<i>Olabintan O. Olawale, Ahmed Akram, Yaseen Ismael, John McCormick, Mohammed Mohsen</i>	

## **KNOWLEDGE SHARING EPOSTER - STATION 18 - THURSDAY, 05 OCTOBER 2023**

Integration of a Production Optimization System with Intelligent Well Surveillance for an Effective Reservoir Management in Abu Dhabi Field .....	10820
<i>M. O Al Jawhari, A. K Bazuhair, J. E. Lopez, M. Alqemzi, P. Cremades</i>	
Increasing the Reliability of Injection Wells with the Application of Ventury Injector Concept Study Case LSA-175 Limau Oilfield Indonesia .....	10833
<i>A. Riyadi, A. Ardiansyah, Z. Akbar</i>	
Steam Trap Management Re(de) fined .....	10840
<i>Ilayaraja Palani, Abdulrahman Q Wassly, Faris A Alnashry, Fayez H Sharahely, Turki F Alruzayhi</i>	
A Case Study to Recover LP Steam from Deheptanizer MP Steam Condensate .....	10853
<i>Mi AlGhailani, Saqib Sajjad</i>	
Design, Test and Validation of a 100% H2 Gas Turbine to Enable Energy Transition .....	10862
<i>S. Gabriele, G. Sarti, M. Baldini, F. Gerbi</i>	

## **OPERATIONAL EXCELLENCE: PRODUCTION OPTIMISATION PROCESSES**

Diverse Use Cases for Advanced Model-Based Process Controls Deployment Towards Long-Term Sustainable, Safer, Energy-Efficient and Profitable Operations .....	10876
<i>G. Kotsiopoulou</i>	

## **VOLUME 15**

## **DRILLING: WELL CONTROL PREVENTION**

Challenges in Drilling and Completing Extended Reach Drilling Wells with Casing Design Optimized from Conventional Ones .....	10888
<i>N. K. Unnikrishnan, M. Alnuaimi, M. Al Suwaidi, S. Al Yamani, M. Jamal Bahumaish, H. Al Karbi, G. Salem, S. Al Ameri</i>	
Active Pressure Management Maintained the Primary Well Control and Enabled to Strengthen and Drill through Naturally Fractured Carbonates Formation with Extremely Narrow Drilling Margins and Resulting in One of the Vital Hydrocarbons Discovery in Northern Pakistan – A Successful Approach of Managing Wellbore Pressure Profiles by Managed Pressure Drilling (MPD) .....	10909
<i>Qasim Ashraf, Uzma Chisti, Muhammad Tashfeen, Muhammad Umar Farooq, Muhammad Abdul Rehman</i>	
Electric Well Control: The Next Century Blowout Preventer .....	10927
<i>Samantha Beim, Matthew Givens, Matthew Olson</i>	

## **KNOWLEDGE SHARING EPOSTER - STATION 19 - THURSDAY, 05 OCTOBER 2023**

Achieving Excellent Zonal Isolation in Linerless Casing Design Through Innovative Cementing Practice .....	10935
<i>N. Alhadhrami, A. Sinaga, I. El-Sayed, M. Husein, A. Loucif</i>	
Analysis of the Ballooning Effect: No Loss, Only Gain .....	10951
<i>Rodrigo Varela, Mohammed Julaidan</i>	

## **ENERGY TRANSITION AND DECARBONISATION: RENEWABLE AND ENERGY STORAGE SYSTEMS**

- BlueVault - High Safety Modular Containerized Energy Storage Solution..... 10960  
*Stig Olav Settemsdal*
- Hybrid and Mobile Solar Power for Well Interventions Minicamp in Block 61 Oman ..... 10970  
*T. Al Shidhani, M. Al Juma, S. Al Harrasi, M. A. Najwani, K. A. Al Shereiqli, K. Al Amri, L. Natividad, A. Destremau*
- Decarbonization of Offshore Oil and Gas Installations with Offshore Wind and Energy Storage Solutions..... 10987  
*Karishma Laskar, Avinash Kumar*

## **COMPLETIONS: STIMULATION TECHNIQUES IN HYDRAULIC FRACTURING**

- First Successful Openhole Multistage Completion and Acid Fracturing Treatment to Unlock the Production Potential in an HP/HT, High-H2S Exploratory Well in North Kuwait..... 11000  
*Peiwu Liu, Abrar Mohamed Salem, Valentin Pochetnyy, Abdulrahman Alghannam, Ammar Bosalhah, Sulaiman Almulla, Vidya Sagar Duggirala, Mani Maran Ayyavoo, Haifa Al-Bader, Abdulmohsen Al-Obaidi, Mishari Al-Saqabi, Khadejah Mudhfer, Abdulmohsen AlQenaei, Ahmed Hadi*
- Fracture Traversing Optimization Design for Longitudinally Strongly Heterogeneous Continental Shale in the Fuxing Area ..... 11017  
*Qianli Lu, Zhuang Liu, Jianchun Guo, Hang Zhang, Jialin Xiao, Jiejing Bai, Xinwei Gong*
- Overview of Multi-Stage Fracturing Using Fiber Enabled Coiled Tubing Plug and Perf Method: First Deployment in Indonesia ..... 11028  
*G. Yudhanto, F. Asrul, D. Ultra, E. F. Saib, E. Aprilianto, S. N. Hidayat, A. Pramadana, A. Akbari, F. A. Hermawan, S. A. Agatha, J. Jenie, E. E. Gani*
- Quick Technique to Identify Individual Stage Contribution in Multi Stage Hydraulic Fracturing..... 11045  
*M. Alhaqbani, R. Almurayshid, F. Aleid*

## **KNOWLEDGE SHARING EPOSTER - STATION 20 - THURSDAY, 05 OCTOBER 2023**

- Improvement of Thru Tubing Gravel Pack Placement Techniques Enhancing Gas Potential for Offshore Fields ..... 11056  
*A. Choodesh, W. Chantarataneeawat, C. Peerakham, N. Piyakunkiat*
- World Longest 7 in Single Trip for Multizones High Rate Water Pack Enhances Completion Strategy in Offshore Indonesia ..... 11071  
*K. W. Tokoh, R. Jatikusuma, D. N. Manalu, P. Yudis, C. Li*
- Enhanced Back Allocation Process Assisted by Real Time AI-Based Virtual Metering. Field Case Study in a Giant Field Project..... 11090  
*Erismar Rubio, Nagaraju Reddicharla*

## **AI AND DIGITAL TRANSFORMATION: COMPUTE ANALYTICS**

- Integrated Gas Asset Optimization System (IGAS) - Developing an Integrated Production Efficiency Optimization Tool Across Upstream and Downstream Process Lifecycles for a Gas Condensate Asset in Abu Dhabi ..... 11101  
*J. Al Maazmi, M. Mabrook, M. Al Badi, A. Al Baira, K. Mogensen, E. Al Suwaidi, A. Al Saeedi, F. Al Hareithi, S. Sivanandam, N. Al Yaaqoubi, E. Al Mheiri*

Step into Geological Samples Digital Twins .....	11110
<i>Dmitriy Tishechkin, Yannick Agbor</i>	
Application of Digital Twin for Real-Time Early Identification and Warning of Pipe Stuck Using Hybrid Approach of Physics Model and Machine Learning .....	11122
<i>Jiawei Zhang, Hongchun Huang, Haige Wang, Qing Wang, Guodong Ji, Hong Li</i>	
A Methodology to Evaluate Video Analytics for Drilling Safety Operation Using Machine Learning .....	11135
<i>Sultan Alkaabi, Ahmed Al Azri, Saud Al Zakwani, Fadhil Al Tamimi</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 21 - THURSDAY, 05 OCTOBER 2023**

Enhancing Drilling Operations and Management Through Digital Ecosystem.....	11149
<i>Jing Zhang, Xusheng He, Yong Dai, Jinlu Wang, Jun Zhu</i>	
Empowering Frontline Workers to Work Effectively with Hands-Free Computing Devices .....	11160
<i>Hussain Alyassi, Premachandran Nair</i>	
Smart-Drive Navigation & Emergency Response Solution.....	11170
<i>H. J. Almasri, A. J. Al-Hosany, M. H. Al Habshi, B. M. Khalil</i>	
Leveraging First-Ever OBN in India for Reservoir Characterization and Near-Field Exploration in a Carbonate Field at Offshore Mumbai, India .....	11192
<i>Rajesh Soni, Saumya Kanti Goswami, Anubhatri Mukherjee, Raghad Elsayed, Uday Mishra, Subhankar Basu, Srilata Mahapatra, Anand Prakash, Anoop Singh</i>	

### **AI AND DIGITAL TRANSFORMATION: FIELD MOBILITY AND AR/VR**

Artificial Intelligence Eco-Mobility System Unmanned Shuttle.....	11207
<i>S. Al Blooshi, A. Al Salami, W. Salem, M. Al Hammadi, M. Mahyoub, A. Al Marzooqi, A. Al Tamimi</i>	
AI-Powered Mobility Application for Field Inspection Rounds.....	11215
<i>R. Samanoodi, A. Alrasheed, A. Felemban, A. Althobaiti, Y. Alnumay, H. Trigui, A. Algethmi, A. Alsomali, S. Patel</i>	
Pioneering the First Immersive Virtual Reality Solution for Onshore Oil & Gas Facility and Beyond with Sustainable Operations Ecosystem from 100% Development by In-House Talents .....	11227
<i>Danial Shaffiq Abdul Latif</i>	

### **GEOSCIENCE: DEVELOPMENT OF GEOSTATIC AND GEOLOGICAL MODELLING**

Integrated Carbonate Lithofacies Modeling Based on the Deep Learning and Seismic Inversion and its Application.....	11235
<i>Chen Xin, Chang Deshuang, Liu Qing, Sun Qian, Zhong Weixiang, Yu Wenwen, Li Xiaoliang, Fan Hanzhou, Yang Qingning, Xiao Dengyi, An Fuli, Wang bo, Lv Lu, Peng Yu, Liu Qiang, Huang Kongzhi</i>	
Automatic Estimation of Reservoir Properties Using 3D Machine Learning Workflow Independent of Well Alignment in the Presence of Geological Complexes .....	11245
<i>Kinjal Dhar Gupta, Haibin Di, Aria Abubakar</i>	
Digital Analogues to Assess Uncertainty of Layering Methods in Reservoir Modelling .....	11253
<i>E. N. Kozlowski, A. Davies</i>	

### **KNOWLEDGE SHARING EPOSTER - STATION 22 - THURSDAY, 05 OCTOBER 2023**

Cross Functional Improvements in Modelling Complex Carbonate Reservoirs .....	11263
<i>S. Wahbah, A. Almheiri, T. Hattori, F. Alhosani, R. Farmer, M. T. Gacem</i>	

Turning Acid Treatments from Failure to Success Using Polymer-Free Single-Phase Delayed Acid: A Case Study of Complex Horizontal Well in Dolomitic Formation, UAE .....	11290
<i>A. Zakaria, C. Sirlupu Ruiz, A. Singh, R. Mahabir</i>	
Upscaling Linear to Radial Acidizing Curve in Carbonate Stimulation using Pickering Emulsified Acid .....	11300
<i>Moustafa Aly, Abdullah Sultan, Gallyam Aidagulov, Devon Gwaba, Mustapha Abbad</i>	

## **FIELD DEVELOPMENT: CARBONATE STIMULATION AND RIGLESS INTERVENTIONS**

Large-Scale Acid Jetting of Smart Liner Completions - Learnings and the Way Ahead .....	11318
<i>K. Mogensen</i>	
Water Shutoff in Fractured Carbonate Vertical and Horizontal Wells by Bullhead Chemical Injection: A Success Story .....	11334
<i>H. Al Mufargi, H. Al Harthi, A. Al Naabi, M. Al Shuelly, M. Al Rawahi, M. Al Abri, M. Al Farsi, M. Al Rashdi, M. Al Harrasi, A. Al Mandhari, L. Hernando, N. Martin, N. Salehi, J. Bouillot, A. Templier, G. Omonte, A. Zaitoun</i>	
Highly Successful Acid Stimulation of a Vastly Heterogeneous Carbonate Formation Using Combination of Coiled Tubing and Non-Damaging In-Situ Foamed Diverter Gel .....	11346
<i>Muhammad Sana-ul-Hussnain, Muhammad Ijaz Malik, Zulfiqar Ali Anjum, Sahir Inam, Muhammad Arif, Imran Shafee, Mateen Haider, Hossam A. Elmoneim, Arif Yousuf, Saad Y. Khokhar, Rameez Anwar, Muhammad Salman Saeed</i>	

## **OPERATIONAL EXCELLENCE: ASSET PERFORMANCE**

Worldwide's First Time Successful Hydraulic Fracture Operation Through GRE Composite Fiberglass Lined API 5CT Carbon Steel String .....	11361
<i>A. Ali, G. Radhakrishnan, A. AlKhouly</i>	
Operational Excellence Digital Assessment Platform .....	11376
<i>Tanthai Poopaiboon</i>	

## **DRILLING: OVERCOME DRILLING CHALLENGES**

Preparation, Execution, and Associated Challenges for Utilizing the First Successful Closed Loop System Methodology Worldwide in Underbalanced Coiled Tubing Drilling in ADNOC'S Fields .....	11395
<i>Mohamed Osama, Ali Sulaiman Bin Sumaida, Ayman El Shahat, Ahmed Al Mutawa, Saeed Almazrouei, Abdalla Saleh, Fawad Zain Yousfi, Nama Ali Almtairi, Mohamed Baslaib, Alfonso Mantilla, Rohit V. Deshmukh, Tarek Solaiman, Fouad Abdulsallam, Abdelhak Ladmia, Pedro Rangel, John Rennox, Shuai Cui, Yerlan Jumagaliyev, Maged Basha</i>	
Highly Thixotropic Engineered Cement Solution Helps Overcome Lost Circulation While Drilling Deepwater Exploration Well .....	11406
<i>A. Velasco, J. Segouffin, B. Duarte, S. Simental, M. Rowe, J. Major, G. E. Toranzo, S. Garcia</i>	
Curing Total Losses Via Placement of Aggressive Cement Recipe Through Sacrificial Fiberglass Pipe .....	11413
<i>M. Aljuzayri, M. Corona, N. Franco, A. Alzlfawi, S. Bansal, A. A. Albarut, F. Siddiqi, T. Buizran, Y. A. Al Kubaish, C. Ertus, M. E. Alhassan, M. Antonov</i>	

## **ENERGY TRANSITION AND DECARBONISATION: HYDROGEN PRODUCTION AND STORAGE**

Provision of Hydrogen and Nitrogen for Blue Ammonia Production at Large Scale .....	11424
<i>A. Brandl, K. Wawrzinek</i>	

Hydrogen: Comparing Production and Optimized Solutions .....	11434
<i>Jag Singh</i>	
Exploring the Potential of Offshore Green Hydrogen Production: A Concept Study for a Large-Scale Installation .....	11445
<i>Rimma Dzhusupova, Ron Vis</i>	
Analysis of the Japanese Depleted Gas Fields' Prospect for Underground Hydrogen Storage .....	11456
<i>A. Safari, Y. Sugai, M. Sarmadivaleh, M. Imai, H. Esfandyari, M. Haghighi, M. Moradi, A. Zeinijahromi</i>	
A Mathematical Model for Formation Caprock Integrity Incorporating Creep Deformation Mechanism: A Hydrogen Storage Seasonal Case Study.....	11471
<i>M. AlDhuhoori, H. Belhaj, F. AlHameli</i>	
H2 and H2 Blends with Natural Gas Transportation in Offshore Pipelines: An Overview from Flow Assurance Perspective .....	11492
<i>A. Di Felice, D. David, E. Mosci, A. Canestrari, O. Masi, G. Arcangeletti</i>	
Green Hydrogen Export – Technical Readiness of Jetty-Less Marine Loading Terminals .....	11504
<i>C. Peace, D. Campbell, W. Shen</i>	

## **GEOSCIENCE: GEOSTATIC AND GEOLOGICAL MODELLING**

Multi-Scale Sedimentary Forward Reservoir Modelling: A Disruptive Solution for Simulating Heterogeneity in Carbonates. Application to the Kharai-2 Reservoir Unit .....	11512
<i>G.J. Massonnat, Julien Michel, Pierre Gatel, Jérémy Ruiu, Charles Danquigny, Jean-Louis Lesueur, Jean-Borgomano</i>	
Data Integration for Fracture Model Characterization in a Middle East Carbonate Reservoir .....	11525
<i>N. Colombi, F. Bigoni, R. Colin, F. Bombaci, D. Giamminonni, L. Spaggiari, V. Mattonelli</i>	
Powerful Methodology to Un-Mask Sedimentological Characteristics of Carbonates That Heavily Affected by Diagenesis to Map Depositional Trends for Building 3D Static Model .....	11544
<i>Sanat Aidarbayev, Maojun Qiu</i>	
The Case Study of the Effect of Fault Transmissibility on the Oil Reservoir Production in the Onshore Field, United Arab Emirates.....	11554
<i>Hussain H. Al Hashemi, Q. J. Fisher</i>	
Prospect Focused Imaging Through Advance Seismic Driven High-Resolution Fluid Modeling Approach .....	11579
<i>Jagannath Mukherjee, Debjyoti Das, Dibakar Chakraborty</i>	
Tar Origin and Prediction in an Offshore Oil-Field Abu Dhabi.....	11592
<i>E. Peralta, L. Cajas, M. Al Jawhari, C. Carr, A. Alaminos, H. Buhindi, H. Al Harbi, L. S. Ibrahim, R. Escobar, Y. Liu, A. K. Anurag, J. O. Grimmer</i>	
Modeling Fractures in a Heterogeneous Carbonate Reservoir Onshore UAE: A Case Study .....	11608
<i>Arthur P. C. Lavenu, Alan Irving, Elena Niculescu, Nepal Singh, Amirul Kusyairi, Hela Douik</i>	

## **AI AND DIGITAL TRANSFORMATION: AI IN STRATEGIC PLANNING AND EXECUTION**

Establishing the Sustenance and Cutting-Edge Operationalisation Strategy to Unlock Company-Wide Potential Value Thru Automated Production Enhancement Screening .....	11622
<i>Nur Afrina Inani Zul Azhar, Fatin Liyana A Halim, Nusheena Mat Khair, Sulaiman Sidek, Wan Zul-atfi Mat Nawli, Nik Zarina Suryana Nik Khansani, Mohamad Mustaqim Mokhlis, Nurdini Alya Hazali, Roberto Fuenmayor, Nabil Saifuddin</i>	

Strengthening Digital Transformation of Rigless Well Intervention Through ROSE Platform, Driven by Well-Planned Strategy and Business Objective Alignment .....	11631
<i>Manar Maher, Muhammad Syafruddin, Nagaraju Reddicharla, Maad Subaihi, Mohamed Albadi, Tarek Desouky, Zeeshan Ahmad</i>	
Digitalization of Offshore Wells Risk Management Through Quantitative, and Automated Risk Assessment Techniques .....	11640
<i>Ahmed Hassan Ahmed, Abeer Al-Ali, Ahmed Al Hosani, Mohamed Saleh Ali, Hassan Ali Al Hammadi</i>	
Architecture for Building Tech Intensity: Practical Implementation of the Data Strategy for the Energy Transition in the Middle Eastern Based International Energy Company .....	11653
<i>M. K. Yaqoob, F. Sulaiman, S. Shaat, Adnan. Omar. Bu Fateem, Haila. Al Rejaibi, Khadija. Mazouari</i>	

**Author Index**