



TUESDAY, 22 MARCH • 1600-1730 HOURS
 TECHNICAL SESSION 1: AUTONOMOUS VEHICLES FOR
 OFFSHORE EXPLORATION
 ROOM 401/402, LEVEL 4

SESSION CHAIRPERSONS:
 MARIN ABELANET, SUBSEA 7
 MOHAMAD RIZAL ARSHAD, U. SAINS MALAYSIA

PAPERS

- 26702 **The Zipangu of the Sea "Project Overview: Focusing on the R&D for Simultaneous Deployment and Operation of Multiple AUVs"**
 K. Kim and K. Tamura, National Maritime Research Inst.
- 26481 **Development of a Novel Hybrid AUV System for Pipeline Inspection in Gulf of Thailand**
 P. Hoonsuwan, PTTEP; Y. Tipsuwan, Kasetsart U.; and T. Slanvetpan, PTTEP
- 26845 **New Applications of AUVs for Hydrocarbon Exploration**
 D. McConnell, C. Pastor, K. Chow and J.J. Gharib, Fugro
- 26693 **AUV-Based Seabed Characterisation Using a Lightweight Towed Array System**
 V. Pallayil, National U. of Singapore, and N. Chotiros, U. of Texas at Austin

TUESDAY, 22 MARCH • 1600-1730 HOURS
 TECHNICAL SESSION 2: IOR/EOR I
 ROOM 403/404, LEVEL 4

SESSION CHAIRPERSONS:
 LIM MIN-TEONG, PETRONAS
 YANTI KAMARUDDIN, SCOMI ENERGY SERVICES

PAPERS

- 26363 **Analytical Model of Nanofluid Injection to Improve the Performance of Low Salinity Water Flooding in Deepwater Reservoirs**
 B. Yuan and R.G. Moghanlo, U. of Oklahoma
- 26590 **Comparison of CO₂ EOR Performance Between Offshore and Onshore Environments**
 S. Ghanbari, E.J. Mackay and G.E. Pickup, Heriot-Watt U.
- 26543 **Doing Ordinary Things Extraordinarily Well in the Execution of Large Scale Offshore EOR Project in Malaysia**
 Z. Awab and S.B. Selamat, ExxonMobil Exploration and Production Malaysia Inc.
- 26769 **Key Challenges in Assessing IOR/EOR Processes in a Complex, Multi-Stacked Reservoir**
 N.H. Husain, Sarawak Shell Bhd.; R. Masoudi, PETRONAS; R.D. Tewari, PETRONAS Carigali Sdn. Bhd.; M.C. Tayok, Sarawak Shell Bhd.; S.G. Goodyear, Shell E&P UK; and R. Abd Karim, PETRONAS Carigali Sdn. Bhd.

TUESDAY, 22 MARCH • 1600-1730 HOURS
 TECHNICAL SESSION 3: RISER SYSTEMS
 ROOM 405, LEVEL 4

SESSION CHAIRPERSONS:
 LARS CHRISTENSEN, MCDERMOTT
 ALLAN MAGEE, NATIONAL U. OF SINGAPORE

PAPERS

- 26410 **Lightweight Drilling Riser Achieves 12 Years Successful Operation in Offshore Brazil**
 J. Lehner, Alcoa Oil & Gas; S. Natarajan, 2H Offshore; and I. Barker, Paragon Offshore
- 26718 **Riser Support Structure for Support of Flexible Risers and Umbilicals**
 J. Rayappa, McDermott Asia Pacific Pvt. Ltd.
- 26785 **Challenges in Riser Design - The Ichthys LNG Project**
 N. Coone, McDermott Australia Pty. Ltd.
- 26849 **Mid Depth Buoys Design for Long Life Using Syntactic Foam Buoyancy, Redundant and Replaceable Tether Systems**
 G. Aberle, Icon Engineering Pty. Ltd., and L. Christensen, McDermott Australia Pty. Ltd.

TUESDAY, 22 MARCH • 1600-1730 HOURS
 TECHNICAL SESSION 4: MATERIALS, CORROSION AND INSPECTION I
 ROOM 406/407, LEVEL 4

SESSION CHAIRPERSONS:
 MAX ONG, INST. OF MATERIALS, MALAYSIA
 MOHD SURADI YASIN, MALAYSIAN OFFSHORE CONTRACTOR ASSOCIATION (MOCA)

PAPERS

- 26569 **Development of Top-of-Line Corrosion Inhibitors and a Top-of-Line Inhibition Mechanism Hypothesis**
 A. Jenkins and I.H. Gilbert, M-I SWACO
- 26639 **Behind Casing Inspection Using Active Gamma-Gamma Technique**
 Y. Hu and W. Guo, Halliburton
- 26788 **Oilfield Microbiology: Detection Techniques Used in Monitoring Problematic Microorganisms Such as Sulphate-Reducing Bacteria (SRB)**
 D. Bennet, Intertek
- 26717 **Corrosion Under Insulation: 10 Years on How the Proper Application of a Protective Coating Continues to Protect**
 A. Ovington, U. of Swansea

TUESDAY, 22 MARCH • 1600-1730 HOURS
 TECHNICAL SESSION 5: SAFETY AND ENVIRONMENT CHALLENGES
 ROOM 408/409, LEVEL 4

SESSION CHAIRPERSONS:
 LIN JENQ PING, SHELL
 ELIE DAHER, UNITED SAFETY

PAPERS

- 26455 **Six Years On: How the Global Industry Has Risen to the Oil Spill Response Challenge**
 S. Flynn, IPIECA
- 26402 **Produced Water Management - The Challenges Faced**
 G.D. Ariaratnam, Jorin Ltd.
- 26686 **Optimisation of Injection and Production Parameters for Sour Gas Storages: A Case Study**
 Z. Chen, X. Liao and X. Zhao, China U. of Petroleum, Beijing



26762 Cost Effective Project Delivery Through Fire and Gas Mapping Study - Performance Evaluation Using Improved Risk Based Approach
S. Cao, M. Yeung and J. Wan, ERM

TUESDAY, 22 MARCH • 1600-1730 HOURS
TECHNICAL SESSION 6: COMPLETIONS: OPERATIONS AND CASE STUDIES
ROOM 410, LEVEL 4

SESSION CHAIRPERSONS:
MOHD ZAIDAN KHALID, PETRONAS CARIGALI SDN. BHD.
ORIENT BALBIR SAMUEL, PETRONAS CARIGALI SDN. BHD.

PAPERS

- 26644 Perforating the Largest High-Pressure Wells in the Gulf of Mexico**
C.E. Baumann, A.S. Quam, M.E. Smart and C. Stulb, Schlumberger, and T. Anderson and C.M. Aures, Chevron Corp.
- 26787 Best in Class: Low Cost and Fast Track Zuhai East EMP Project; Quartile 1 Drilling Performance Project Delivery**
F. Mohd Razif, PETRONAS Carigali Sdn. Bhd.
- 26416 Optimised Well Performance Through Stage Fracturing and Coiled Tubing Perforations and Isolation Operations in a Horizontal Tight Gas Reservoir: A Case Study**
A. Anand, Schlumberger Asia Services Ltd.
- 26669 Managing Total Circulation Losses With PMCD During Well Completion: Case History of Practical Solution**
G.A. Osuji-Bells, PETRONAS Carigali Sdn. Bhd., and M. Hajiyeva, R. Roslan, A. Upadhyay and M. Buch, PETRONAS

WEDNESDAY, 23 MARCH • 1400-1530 HOURS
TECHNICAL SESSION 7: DECOMMISSIONING AND WELL ABANDONMENT
ROOM 401/402, LEVEL 4

SESSION CHAIRPERSONS:
HAN TIEBOUT, GUSTOMSC
CHOO YOO SANG, NATIONAL U. OF SINGAPORE

PAPERS

- 26795 Establishing Decommissioning Capability**
I. M. Jais, N. Anis and J.C. Lim, PETRONAS
- 26638 Single Trip Abandonment Approach**
M.W. Denmon and B. Irvine, Halliburton
- 26710 Decommissioning of High Torque Threaded Drilling Riser at World Record Break Out Torques of 257,000 ft-lbs**
B.T. Chang, Weatherford Intl. Ltd.; T.H. Goh and A. Galbreath, Weatherford; and D. Sandlin, Murphy Oil
- 26432 Eliminating Sustained Casing Pressure in Subsea Well Abandonment**
I.E. Obodozie, Baker Hughes

WEDNESDAY, 23 MARCH • 1400-1530 HOURS
TECHNICAL SESSION 8: IOR/EOR II
ROOM 403/404, LEVEL 4

SESSION CHAIRPERSONS:
LIRIO QUINTERO, BAKER HUGHES INC.
ERIC DELAMAIDE, IFP TECHNOLOGIES CANADA INC.

PAPERS

- 26509 Limitations of Using Smart Wells With Inflow Control Capacity to Achieve Waterflood Conformance in Stacked Heterogeneous Reservoirs: Case Study From Piltun Field**
H. Khural, Shell India Markets Pvt Ltd.; U. Rai, Shell Technology Center, Bangalore; and R. Kumar and R. Kumar, Shell India Markets Pvt. Ltd.
- 26812 Live Remote DTS Data for WAG Field Surveillance**
N.D. Nik Mohamed and S.B. Selamat, ExxonMobil Exploration and Production Malaysia Inc.
- 26356 Well Life-Cycle Optimisation and Strategy for Improved Oil Recovery**
S. Ahmed, Weatherford and Heriot-Watt U., and H. Younus, Pakistan Petroleum Ltd.
- 26472 Improvement in Oil Recovery Through Pro-Active Reservoir Management for a High Value Asset - A Case Study**
R. Kumar, PETRONAS

WEDNESDAY, 23 MARCH • 1400-1530 HOURS
TECHNICAL SESSION 9: FRACTURED RESERVOIRS
ROOM 405, LEVEL 4

SESSION CHAIRPERSON:
AHMAD BUKHARI, PETRONAS

PAPERS

- 26676 Fracture Analysis Using Multicomponent (3C) Seismic Data From Malay Basin**
R.D. Subramaniam, S. Pajapati and D.P. Ghosh, U. Teknologi PETRONAS
- 26464 A Ternary Classification of Naturally Fractured Carbonate Reservoirs**
N. Barros-Galvis, Instituto Mexicano del Petróleo
- 26400 New Development in Wireline Logging Under Activated PMCD Enabled Fractured Carbonates Evaluation**
A.K. Ooi, Schlumberger; K. Kyi, PETRONAS Carigali Sdn. Bhd.; and S.S. Haddad, Schlumberger
- 26742 Understanding Noises From Different Flow Mediums in Near Well Bore Region: A Novel Approach for Detection and Characterisation of Sub-Vertical Natural Flow Paths in North Kuwait Gas Fields**
M.N. Acharya, A. Al-Mershed, S.R. Narhari, M. Al-Azmi and Q.M. Dashti, Kuwait Oil Co.; S. Chakravorty, Schlumberger Oilfield Eastern Ltd.; R.I. Abdulkadir, Petroleum Development Oman; and S. Prosvirkin, TGT Oil & Gas Services

WEDNESDAY, 23 MARCH • 1400-1530 HOURS
TECHNICAL SESSION 10: MATERIALS, CORROSION AND INSPECTION II
ROOM 406/407, LEVEL 4

SESSION CHAIRPERSONS:
MELISSA CHAN, U. TEKNOLOGI MARA
ANDREW SPOWAGE, WOOD GROUP



PAPERS

- 26497 **Fit-for-Purpose Qualification for Corrosion Resistance Alloy (CRA) Tubing Selection in High CO₂ Field Based on Field Experience and Laboratory Test**
Z. M. Zin and S.G. Ong, PETRONAS Carigali Sdn. Bhd.
- 26383 **Hidden Danger of Internal Rate of Return: What and How to Resolve**
Y.P. Silitonga and E. Prehandhika, PT Pertamina (Persero)
- 26701 **Influence of Additional Heat Treatment on Performance of High Chromium Martensitic Stainless Steel**
Y. Otome, T. Ohe, Y. Tomio, H. Takabe and H. Amaya, Nippon Steel & Sumitomo Metal Corp.
- 26832 **Application of Flexible Composite Pipe as a Cost Effective Alternative to Carbon Steel - Design Experience**
S. Adam and S. Ghosh, Brunei Shell Petroleum Co. Sdn. Bhd.

WEDNESDAY, 23 MARCH • 1400-1530 HOURS
TECHNICAL SESSION 11: INSTALLATION/
CONSTRUCTION/PIPELAY AND OPERATIONS I
ROOM 408/409, LEVEL 4

SESSION CHAIRPERSONS:
FREDERIC LAN-SHUN, SAIPEM ASIA SDN. BHD.
LIN JENQ PING, SHELL

PAPERS

- 26544 **Tuneable Passive Heave Systems - The Next Generation**
D. Cannell and S. Riddell, Technip UK, and S. Sannes, Ernst+B Johansen AS
- 26568 **Gaslift Compressor Initial Start-Up Outside of the Design Envelope**
A.H. Abdul Halim, J.A. Samad and S. Ngiam, Petrofac Malaysia Ltd., and G. Jack and R. Mills, Petrofac Energy Developments
- 26720 **Structures Deepwater Installation Challenges - North West Shelf Australia**
V. Tachoures, Subsea 7 Australia
- 26408 **The Benefits of Detailed Global Analysis Modelling for the Installation Flexibles, Umbilicals, and Rigid Pipelines**
C. Jones, Xodus Group

WEDNESDAY, 23 MARCH • 1400-1530 HOURS
TECHNICAL SESSION 12: INTEGRATED OPERATIONS
ROOM 410, LEVEL 4

SESSION CHAIRPERSONS:
MARIN ABELANET, SUBSEA 7
BRETT HOWARD, TECHNIP

PAPERS

- 26562 **Emerging Technologies and Workflows in Digital Oil Field Technology**
S. Prakash, P. Chanana, T. Soni and U. Bhakne, Wipro Technologies
- 26555 **Pushing the Limit of Idle Well Management - A Nationwide Industry Approach**
S.R. Mohd Mokhtar and S. Abu Bakar, PETRONAS

- 26485 **Reestablishing the Norms - Realising Savings From Optimisations of Malaysian Drilling Industry**
M.Z. Sulaiman, H. A Hakim, H.H. Nguyen and S. Abu Bakar, PETRONAS
- 26740 **Integrated Gas Blending & Optimisation**
Z.B. M Sori and S.B. Hashim, PETRONAS, and A.K. Leo, Protechnology Sdn. Bhd.

WEDNESDAY, 23 MARCH • 1600-1730 HOURS
TECHNICAL SESSION 13: FLNG
ROOM 401/402, LEVEL 4

SESSION CHAIRPERSON:
TUSHAR PODDAR, SMOE PTE. LTD.

PAPERS

- 26433 **Advanced Cryogenic Structural Collapse Analysis (CSCA) - Flow, Heat Transfer and Structural Collapse for CSP Optimisation**
J. Pujol Fernandez, Lloyd's Register Consulting Ltd.; R. Kleiveland, ComputIT AS; T. Holmas, Usfos AS; and J. Amdahl, NTNU
- 26575 **Safe LNG Loading of Conventional LNG Carriers in Severe Open Sea Environments**
S. Paquet, C. Lamourette and E. Auburtin, Technip France; S.B. Hellesmark, 7 Seas Oil & Gas Group LLC; and T.B. Thorsen, Sevan Marine ASA
- 26592 **CFD Modelling of Multicomponent Flashing in LNG Rollover**
L. Rahumathulla, C. Wu, V. Srinivasan and S. Joshi, ANSYS Inc.
- 26793 **Anti-Sloshing System Using Floating Mat for Floating LNG Bunkering Terminal**
M. Lee, CyTroniQ Co., Ltd.

WEDNESDAY, 23 MARCH • 1600-1730 HOURS
TECHNICAL SESSION 14: RESERVOIR MODELLING
TECHNOLOGY
ROOM 403/404, LEVEL 4

SESSION CHAIRPERSON:
LIM MIN-TEONG, PETRONAS

PAPERS

- 26593 **Reservoir Mapping While Drilling in Karstified and Heterogeneous Carbonate Reservoir - A Case From East Java Basin**
N. Ardikani, O. Azwar, D. Permanasari and I.T. Pasaribu, Schlumberger, and A. Pujiriyanto, F. Muhammad and B. Abrar, PETRONAS Carigali Indonesia
- 26404 **High-Resolution Seismic Stochastic Inversion as a Direct Input for Reservoir Modelling**
C. Xin, J. Li, X. Wei, Y. Li, X. Yan and Y. Xia, GRI, BGP, CNPC
- 26635 **Real Time 3D Modelling to Optimise Geosteering in Offshore Complex Reservoir - Case Study**
F. Bashir, Saudi Aramco PE&D EASD, and M. Al Hawi, I. Bhuana and M. Abbas, Saudi Aramco



26588 An Integrated Reservoir Modelling Approach in Constructing a Representative Thin, Heterogeneous Clastic Reservoir - Case History
A.K. Das, D. Arsanti, N. Ghadami, K.H. Tunio, I. Nolira and A.M. Ali, PETRONAS Carigali Sdn. Bhd.

WEDNESDAY, 23 MARCH • 1600-1730 HOURS
TECHNICAL SESSION 15: STATION KEEPING IN DEEPWATER: MOORING VS DYNAMIC POSITIONING
ROOM 405, LEVEL 4

SESSION CHAIRPERSON:
ALLAN MAGEE, NATIONAL U. OF SINGAPORE

PAPERS

- 26843 Comparative Analysis of Well Efficiencies Achievable Between Mooring and Dynamic Positioning for Station Keeping**
O.O. Ajimoko, Rhetort
- 26586 Study About Statistical Approach in External Turret Mooring Analysis of FLNG**
T. Hayashi and T. Ando, ClassNK, and S. Kato and K. Yukawa, National Maritime Research Inst.
- 26527 Neural Network Based Adaptive Control for a Thruster Assisted Mooring Vessel in Mooring Line Failure**
H. Kwon and N. Kim, Seoul National U.
- 26552 Generic Design Approach in Turret Mooring System for Floating Systems**
H. Kim, D. Lee, J. Youn and Y. Suh, Samsung Heavy Industries Co. Ltd.

WEDNESDAY, 23 MARCH • 1600-1730 HOURS
TECHNICAL SESSION 16: FLOW ASSURANCE I
ROOM 406/407, LEVEL 4

SESSION CHAIRPERSONS:
STEPHEN SINCLAIR, BW OFFSHORE
JULIE MORGAN, WOODSIDE ENERGY

PAPERS

- 26754 Role of Flow Assurance in Integrated Asset Modelling - A Comparative Case Study**
R. Sankararaj, S. Memon and A.W. Wadsley, Stochastic Simulation Ltd.
- 26854 A More Efficient Use of MEG to Fully Inhibit Hydrates With Reduced Cost**
E.M. Grzelak and M. Stenhaus, OneSubsea
- 26380 Flow Assurance Enhancement by the Degradation of Waxes Using Pseudomonas Fluorescens**
S. Priya, J.S. Sangwai and M. Doble, Indian Inst. of Technology Madras
- 26846 Thermal and Cooldown Modelling of Subsea Components and Validation Against Experimental and Test Data**
E. Gharabab, W.J. Antel, S. K., R. Paggiaro and M. Barri, GE Oil & Gas - Subsea Systems

WEDNESDAY, 23 MARCH • 1600-1730 HOURS
TECHNICAL SESSION 17: INSTALLATION/ CONSTRUCTION/PIPELAY AND OPERATIONS II
ROOM 408/409, LEVEL 4

SESSION CHAIRPERSONS:
FREDERIC LAN-SHUN, SAIPEM ASIA SDN. BHD
MARIN ABELANET, SUBSEA 7

PAPERS

- 26566 Empirical Equation for As-Laid Ovality Prediction for a Reel-Laid Pipeline**
T. Ngai and E.J. Croucher, McDermott Asia Pacific Pte Ltd.
- 26518 Extended Pipeline Bundle Length for Field Development**
K. Animashawun, M. Goodlad and A. Eyiboh, Subsea 7
- 26581 The Use of Preservation Chemicals for Extended Shut-Ins Following Hydrostatic Testing of Gas and Service Pipelines**
A. Hali, Baker Hughes Inc.
- 26487 Experience With DP Pipelay Vessels for Pipelay Operation in Shallow and Deep Water Projects**
K.L. Teh, Braemar Technical Services (Offshore) Pte. Ltd.; T.A. Pham, Braemar Technical Services (Offshore) Vietnam Co., Ltd; and S.K. Ho, Braemar Technical Services (Offshore) Pte. Ltd.

WEDNESDAY, 23 MARCH • 1600-1730 HOURS
TECHNICAL SESSION 18: MARGINAL FIELDS I
ROOM 410, LEVEL 4

SESSION CHAIRPERSON:
RAHIM MASOUDI, PETRONAS

PAPERS

- 26823 Applications of Surface Jet Pump Technology to Revive Low Pressure Struggling Wells - Lessons Learned and How to Choose Best Candidate Wells**
S.M. Sarshar, Caltec Ltd.
- 26811 Marginal Gas Field Development Through Innovative Sand Control Completion Concept**
M. Zambari, M. Mohd Sallehud-Din, S. Shaffee and N. Nik Kamaruddin, PETRONAS, and M.B. Jadid and Z. Johar, PETRONAS Carigali Sdn. Bhd.
- 26756 Low Pressure Enhanced Liquid Recovery System (ERS)**
H. Thiruthonder and A. Jothy, NGLTech Sdn. Bhd.
- 26542 Conceptual Design of Offshore Surface Facilities in Marginal Field at Heavy Traffic Ultra Shallow Water Using Shallow Water Subsea Wellhead for CAPEX Optimisation in O-Field Development**
H. Yananto and Y. Girindra, PT Pertamina Hulu Energi ONWJ

THURSDAY, 24 MARCH • 0900-1030 HOURS
TECHNICAL SESSION 19: DEEPWATER DESIGN AND DEVELOPMENT I
ROOM 401/402, LEVEL 4

SESSION CHAIRPERSONS:
CHEN XIABO, BUREAU VERITAS
ARUN DEV, U. OF NEWCASTLE

PAPERS

- 26850 Response-Based Analysis of Coupled TLP-TAD Systems in Southeast Asia**
R. Kota, S. Amurul Jamal and H. Tan, Sarawak Shell Bhd.



- 26641 Dry Tree Semisubmersible for Cost-Effective Deepwater Development**
J.H. Tan, F. Kiprawi, Y. Teng, J. Kyoung and J.F. O'Sullivan, Technip
- 26651 Tension Leg Platform Design With Consideration of Tendon Springing and Ringing**
Y. Teng, J.H. Tan, J.W. Kim, F. Kiprawi and K.M. Yen, Technip
- 26411 The Role of Model Testing in the Execution of Deepwater Projects**
A.R. Magee, National U. of Singapore

THURSDAY, 24 MARCH • 0900-1030 HOURS
TECHNICAL SESSION 20: HIGH PRESSURE HIGH TEMPERATURE I
ROOM 403/404, LEVEL 4

SESSION CHAIRPERSONS:
TONY DIEMERT, HUSKY ENERGY
HENDRIK SCHOKKER, PETRONAS

PAPERS

- 26474 Heavy Duty Cleanup: Caesium Formate - Based Micro-Emulsions Make Light Work of a Tough Job**
L.P. Moroni, M. Davidson, J. Lam and A. Goonoo, Baker Hughes Inc.; J. Twycross, Brunei Shell Petroleum Sdn. Bhd.; and S.K. Howard, Cabot Specialty Fluids
- 26735 Pioneering HPHT Field Development in Malaysia**
A. Mohamad Sofian, M. Jayah, M. Bakar, N. Azmi, M. Mohd Yusof, I. Abd Rahman, M.B. Ishak and M.H. Baharuddin, PETRONAS
- 26364 Study and Application of 220°C Ultra-Temperature Polymer Fluid for Enhanced Stimulation in HPHT Reservoirs**
B. Cai, RIPED, PetroChina
- 26714 HPHT Carbonate Acidising - Recent Discoveries and Contradictions in Wormhole Phenomenon**
C. Karale, Halliburton Technology India Pvt. Ltd.; A. Beuterbaugh, Halliburton Co.; M.C. Pinto, Halliburton Energy Services Group; G.J. Hipparge, Halliburton Saudi Arabia; and A. Prakash, Independent

THURSDAY, 24 MARCH • 0900-1030 HOURS
TECHNICAL SESSION 21: STIMULATION AND FRACTURING
ROOM 405, LEVEL 4

PAPERS

- 26385 Using Mesophase Technology to Remove the Oil-Based Mud Filter Cake Damage - Case Histories, Saudi Arabia**
A.V. Addagalla, B.A. Kosandar and M.S. El-Araby, Baker Hughes Saudi Arabia
- 26825 Successful Remedial Stimulation Design and Treatment in the Bokor Field, Malaysia: A Case History**
M.H. Zulkapli and A. Abu Bakar, PETRONAS Carigali Sdn. Bhd., and M.A. Khidri and N. Karim, Baker Hughes
- 26664 Single Trip Frac Packing Multi Layers Arang Formation in Natuna Offshore**
J.R. Ginting, D. Sutejo and S. Waryan, Premier Oil Indonesia

- 26372 A Method of Diagnostic & Predictions for Sliding Sleeve Systems for Multistage Fracturing**
Y. Liu, Schlumberger

THURSDAY, 24 MARCH • 0900-1030 HOURS
TECHNICAL SESSION 22: FLOW ASSURANCE II
ROOM 406/407, LEVEL 4

SESSION CHAIRPERSONS:
MARC LEHMANN, INPEX
ASHFAQ PALEJWALA, INTECSEA

PAPERS

- 26794 CFD Modelling of Mixed Flow Regimes in Gas-Liquid Systems**
S. Mohan, S.K. Nallamothu, V.K. Gupta and A. Benhadjali, ANSYS Inc.
- 26695 Study a Novel Inter Pipe Coating Material for Paraffin Wax Deposition Control and Comparison the Results With Current Mitigation Technique in Oil and Gas Industry**
M. Rashidi and M. Marhamati, Middle East Technical U.
- 26469 Flow Considerations and Pitfalls in Subsea Equipment Design**
L. Ji, M. Leong and B. Headridge, FMC Technologies (S) Pte Ltd.
- 26456 Design Considerations for Mitigating the Impact of Contaminants in Rich MEG on Monoethylene Glycol Recovery Unit (MRU) Performance**
T.M. Latta, WorleyParsons Canada

THURSDAY, 24 MARCH • 0900-1030 HOURS
TECHNICAL SESSION 23: GEOTECHNICAL - PILES AND ANCHORS
ROOM 408/409, LEVEL 4

SESSION CHAIRPERSONS:
NANCY CHAN, FUGRO (SINGAPORE) PTE. LTD.
JOEHAN ROHANI, PETRONAS CARIGALI SDN. BHD.

PAPERS

- 26656 Evaluating Soil Resistance to Driving in Carbonate Sand**
M. Abd Elrahman and L. Maged, Enppi
- 26478 Back Analysis of Pile Driving and Monitoring Data**
J. Goh, Fugro (Singapore) Pte. Ltd.; R. Stevens, Fugro-Mc Clelland Marine Geosciences; N. Chan, Fugro (Singapore) Pte. Ltd.; and N. Hung, Cuu Long Joint Operating Co. (CLJOC)
- 26548 A Comparison of Chain Anchor Catenary Profiles in Silica and Carbonate Sands**
A.J. Maconochie and J. Kennedy, Technip UK Ltd.
- 26549 Permanent Mooring Anchors for Floating Facilities - A Review and Selection Process for Carbonate Soils**
A.J. Maconochie and J. Kennedy, Technip UK Ltd.

THURSDAY, 24 MARCH • 0900-1030 HOURS
TECHNICAL SESSION 24: MARGINAL FIELDS II
ROOM 410, LEVEL 4



SESSION CHAIRPERSONS:
HAN TIEBOUT, GUSTOMSC
MARIN ABELANET, SUBSEA 7

PAPERS

- 26797 **Seismic Inversion Driven Improved Reservoir Characterisation and Production Optimisation in a Mature Field**
S. Rajput, Baker Hughes; Y.Y. Khor and R. Pathak, PETRONAS Carigali Sdn. Bhd.; F. Kandau, Baker Hughes; M. Embong, PETRONAS Carigali Sdn. Bhd.; P. Agrawal, M. Ring, L. Le Gurun and L. Bertoldi, Baker Hughes; and H. Amat and S. Ismail, PETRONAS Carigali Sdn. Bhd.
- 26856 **Development Strategy of Thin Oil Rim Reservoirs Under Gas Cap and Water Drive**
S. Anandhan, Coastal Energy
- 26594 **Characterising Coriolis Meters for Use in 3-Phase Flow in Marginal Fields**
C. Marshall and A. MacGillivray, NEL
- 26358 **Forecasting the Reliability of Salt Water Disposal System Using Nodal Analysis: A New Approach (Case Study)**
M.K. Mugharbil, Saudi Aramco SAOO

THURSDAY, 24 MARCH • 1100-1230 HOURS
TECHNICAL SESSION 25: ENERGY EFFICIENT GREEN VESSELS
ROOM 401/402, LEVEL 4

SESSION CHAIRPERSONS:
HAI GU, AMERICAN BUREAU OF SHIPPING
ROB DUNCANSON, WOODSIDE ENERGY

INVITED PRESENTERS:
PATHWAYS TO SAFER, SMARTER AND GREENER SHIPPING
TIMOTHY HOLT, COUNTRY MANAGER, AUSTRALIA & NEW ZEALAND, DNVGL

PAPER 26859 : GREEN TECHNOLOGIES FOR OFFSHORE INDUSTRY
MICHAEL ROA, SENIOR MANAGING PRINCIPAL ENGINEER – SINGAPORE ENGINEERING SERVICES, AMERICAN BUREAU OF SHIPPING (ABS)

PAPERS

- 26390 **Economically Viable Green and Deepwater Offshore Support Vessels**
A. Dev, Newcastle U. Intl. Singapore

THURSDAY, 24 MARCH • 1100-1230 HOURS
TECHNICAL SESSION 26: DRILLING BITS AND TUBULAR TECHNOLOGY
ROOM 403/404, LEVEL 4

SESSION CHAIRPERSONS:
AHMAD NAHRAWI, PETRONAS CARIGALI SDN. BHD.
HASSAN AHMAD, PETRONAS CARIGALI SDN. BHD.

PAPERS

- 26807 **Evaluation of Fatigue Performance on Semi-Premium Connection for Casing Drilling Application to Prevent Connection Fatigue Failure**
S.G. Ong, PETRONAS Carigali Sdn. Bhd.; Y. Ando and T. Yamamoto, Nippon Steel Sumitomo Metals Corp; and M.N. Ramli and H.B. Ahmad, PETRONAS Carigali Sdn. Bhd.
- 26421 **Innovative Conical Diamond Element (CDE) Bits Deliver Superior Performances Drilling a Geothermal Well in the Philippines**
D. Fanti and T. Omar, Schlumberger Oilfield Services, and J. Jumawan, G. Melliza and M. Mission, EDC Philippines
- 26722 **Pushing The Limit, New World Record Deepest 20" Level 2 Casing While Drilling - A Case Study for a Malay Basin Well**
M. Mohd Makri, PETRONAS Carigali Sdn. Bhd.
- 26419 **Development and Qualification of a New High Pressure Gas Tight Rotary Shouldered Connection Incorporating Metal-to-Metal Technology for Deepwater Drilling and Completion Applications**
W.D. Bassarath, M. LaFuente and J. Franchi, Vallourec Drilling Products USA; and R. Branly, Vallourec

THURSDAY, 24 MARCH • 1100-1230 HOURS
TECHNICAL SESSION 27: PROJECT MANAGEMENT AND ECONOMICS
ROOM 405, LEVEL 4

SESSION CHAIRPERSONS:
HJ. ABU FITRI ABD JALIL, MALAYSIA MARINE & HEAVY ENGINEERING HOLDINGS BHD.
TUSHAR PODDAR, SMOE PTE. LTD.

PAPERS

- 26731 **The Economic Assessment of McT (Multi Column TLP) and Jacket Platforms Application in Multiple Marginal Oil Fields**
A. Tahar, P. Nurtjahyo, J. Suardin and F. Chaniadi, Petroneering
- 26398 **Optimising Field Development Integrating Economic and Technical Risks - A Norne Field Study**
K. Katterbauer, Heriot-Watt U.
- 26709 **Formation of Project Management Institute Leads to Improved Project Delivery**
A.R. Tait and R.B. Kadri, PETRONAS Carigali Sdn. Bhd.
- 26541 **Quality Management Systems (QMS) in Offshore Wind Farm (OWF) Applications and Implementation of Best Practices From Other Energy Industries**
D. Ekici, DNV-GL

THURSDAY, 24 MARCH • 1100-1230 HOURS
TECHNICAL SESSION 28: SUBSEA PRODUCTION AND PROCESSING SYSTEMS
ROOM 406/407, LEVEL 4

SESSION CHAIRPERSONS:
COLIN SWAN, FMC TECHNOLOGIES PTE. LTD.
JIM MALACHOWSKI, GENESIS OIL & GAS CONSULTANTS



PAPERS

- 26815 The Deployment of the World's First Subsea Multiphase Compression System - Enabling Increased Recovery**
M. Hjelmeland, OneSubsea Processing AS, and B.H. Torkildsen, OneSubsea
- 26844 Flow Induced Vibration for Design and Operation of Subsea Systems - Stat-of-the-Art, Limitations and Potential Developments**
E. Gharaibah, M. Barri and R. Tungen, GE Oil & Gas - Subsea Systems
- 26435 Performance Tests of Permanent Magnet and Induced Magnet Motors of Electrical Submersible Pump in Test Well**
R.S. Minette, Petrobras -Petroleo Brasileiro, and O. Castelloes, Petrobras S.A.
- 26391 Maximise Investment Rewards : Investigating the Effect of Field Characteristic on the Optimal Subsea Processing Solution**
D. Sandy, FMC Technologies Pte Ltd.; Z. Hasan, FMC Technologies Australia Ltd.; and B. Headridge, FMC Technologies Pte Ltd.

THURSDAY, 24 MARCH • 1100-1230 HOURS
TECHNICAL SESSION 29: GEOTECHNICAL - JACK-UPS AND OTHERS
ROOM 408/409, LEVEL 4

SESSION CHAIRPERSONS:
RUTH FEARON, SARAWAK SHELL BHD.
DAVID WHITE, U. OF WESTERN AUSTRALIA

PAPERS

- 26798 Improving Jack-Up Rig Spudcan Penetration Predictions in Malaysian Waters**
N. Chan and K. Tho, Fugro (Singapore) Pte. Ltd., and M.J. Rohani, F.A. Sha'Ari and B. Wan Mohd Marzuki, PETRONAS Carigali Sdn. Bhd.
- 26449 Large Deformation Finite Element Analysis of Spudcan Penetration in Sand Overlying Clay Profile**
M.J. Rohani and B. Wan Mohd Marzuki, PETRONAS Carigali Sdn. Bhd., and N. Chan and K. Tho, Fugro (Singapore) Pte. Ltd.
- 26778 Numerical Modelling of Seismically Induced Settlement for Ichthys Riser Support Structure**
C. Erbrich, P. Wallbridge and N. Yamamoto, Fugro, and J. William, McDermott
- 26848 Determining Scour Depth for Offshore Structures Based on a Hydrodynamics and Optimisation Approach**
A.L. Pang and G. Johan, Lloyd's Register Global Technology Centre Pte Ltd., and S. Lim and M. Skote, Nanyang Technological U.

THURSDAY, 24 MARCH • 1100-1230 HOURS
TECHNICAL SESSION 30: RESERVOIR SURVEILLANCE AND FACILITIES INTEGRATION TECHNOLOGY
ROOM 410, LEVEL 4

SESSION CHAIRPERSON:
RAHIM MASOUDI, PETRONAS

PAPERS

- 26414 Integrated Wellbore Surveillance Techniques for Effective RMP on Malaysian Oil Field**
A. Saadat, M. Abdul Rahman, R. Masoudi and M. Othman, PETRONAS, and F.Y. Shnaib, TGT Oil & Gas Services
- 26429 Novel Methodology to Estimate Reservoir Pressure and Productivity Index in Unconventional and Conventional Reservoirs Using Production Data**
V. Gottumukkala and B.D. Poe, Schlumberger
- 26535 Data Integration to Aid Water Breakthrough Management and Prediction in a Mature Gas Field, Luconia Province, Malaysia**
E. Chiew, A. Binda, G. Warrlich and E. Adams, Sarawak Shell Bhd.
- 26675 Integrated EOR Approach via Application and Installation of Distributed Fiber Optic Technology**
M.S. Chin and G. Woon, Halliburton Malaysia, and K. Wood and B. Gorgi, Pinnacle, a Halliburton Service

THURSDAY, 24 MARCH • 1400-1530 HOURS
TECHNICAL SESSION 31: DEEPWATER DESIGN AND DEVELOPMENT II
ROOM 401/402, LEVEL 4

SESSION CHAIRPERSONS:
RAVIKIRAN KOTA, SARAWAK SHELL BHD.
JAIME TAN, TECHNIP

PAPERS

- 26799 Best Laboratory Procedures Beyond API Recommendations for Improving Deepwater Liner Cementing**
M.G. Gannam, Schlumberger; L. Rossi, Schlumberger Well Services; A. Gregatti, Schlumberger Offshore Svcs; I. Khalfallah, Schlumberger; and J. Aslan, M. Sledz and G. Campos, Petrobras
- 26409 Overcoming Shallow Hazards in Deepwater Malikai Batch Set Tophole Sections With Engineered Trimodal Cement System**
J. Goenawan, R. Goncalves and M.I. Dooply, Schlumberger, and T. Heu, L. Chan, S. Bhaskaran and W. Hinoul, Shell
- 26520 Concept Stage Site Assessments, Deepwater Development Risks, and Long-Term Value Preservation: Why Getting it Right the First Time is More Important Than Ever**
W.C. Haneberg and K.J. Campbell, Fugro Geo Consulting

THURSDAY, 24 MARCH • 1400-1530 HOURS
TECHNICAL SESSION 32: CENTRAL LUCONIA - CONTINUED GROWTH
ROOM 403/404, LEVEL 4

SESSION CHAIRPERSONS:
MOHAMMAD YAMIN ALI, PETRONAS RESEARCH SDN. BHD.
MARTIN KIM, WOODSIDE ENERGY LTD.



PAPERS

- 26420 **Central Luconia Carbonates: Insights into Success and Failure Mechanisms in a Mature Gas Province**
P. Owen, J. Clark, S. O'Brien and B. Dawe, SapuraKencana Energy Inc.
- 26650 **Carbonate Platform Geomorphology and Karstification of the Southern Field High Central Luconia Province**
W. Chung, D. Menier and D.P. Ghosh, U. Teknologi PETRONAS
- 26572 **Innovative Approach of Managing Commercial and Physical Constraints for Complex Gas Network**
H. Yong, Sarawak Shell Bhd.; R. Daling, Shell Intl. E&P BV; and B. Timmerarends, Shell Global Solutions Intl. B.V.
- 26482 **AVO and Spectral Crossplot: A Case Study in the Malay Basin**
C. Liu and D.P. Ghosh, U. Teknologi PETRONAS

THURSDAY, 24 MARCH • 1400-1530 HOURS
TECHNICAL SESSION 33: ASSET INTEGRITY I
ROOM 405, LEVEL 4

SESSION CHAIRPERSONS:
ADRIAAN (AD) TANGE, LLOYD'S REGISTER ENERGY
ANDREW SPOWAGE, WOOD GROUP

PAPERS

- 26387 **Integrated Workflow for Robust Reservoir Management Through Production Optimisation in Reservoirs With Geomechanics-Dependent Permeability**
C. Temizel, Aera Energy LLC-EBS
- 26560 **Quantitative Metal Loss Assessment of Multi Barrier Completion in Challenging Environments Using Latest Innovations**
O. Alaref, GOWell Intl. LLC, and M. Khabibullin, M.P. Rourke and A. Yakupov, GOWell Petroleum Equipment Co. Ltd.
- 26534 **Ensuring Asset Integrity Through a Wellhead Integrity Program: A Case Study**
E. Daher and B. Shah, United Safety
- 26842 **Optimising Data Processing for Subsea System Surveillance Through Subsea Condition Monitoring**
P. Leong and W. Cheah, FMC Technologies

THURSDAY, 24 MARCH • 1400-1530 HOURS
TECHNICAL SESSION 34: OFFSHORE PIPELINES/
UMBILICALS I
ROOM 406/407, LEVEL 4

SESSION CHAIRPERSONS:
LARS CHRISTENSEN, MCDERMOTT
ROBBY O'SULLIVAN, TECHNIP

PAPERS

- 26440 **Reel-Lay Installation Approaches for Mechanically Lined Pipes**
T. Tkaczyk, M. Chalmers and A. Pepin, Technip

- 26789 **Design & Installation Requirements for an Ultra-Deepwater High Pressure Gas Pipeline**
D. Lawson, Wood Group Kenny
- 26610 **ROV Deployable Dynamic Curvature Sensor to Monitor the Fatigue of Spans in Subsea Pipelines**
S. Gauthier and M. Owais, Pulse Structural Monitoring Ltd.
- 26790 **Deepwater Pipeline Heating Study for Malaysia**
H. Tan and S.M. Llave, Wood Group Kenny

THURSDAY, 24 MARCH • 1400-1530 HOURS
TECHNICAL SESSION 35: GEOHAZARDS
ROOM 408/409, LEVEL 4

SESSION CHAIRPERSONS:
RAZALI AHMAD, PETRONAS CARIGALI SDN. BHD.
BONG KHIN FAH, SARAWAK SHELL BHD.

PAPERS

- 26463 **De-Risking Drilling Campaign From Geohazards and Overpressured Reservoirs - A Case Study**
S. Vijapurapu, C.K. Chong, E. Lee, G. Warrlich and A. Mukhopadhyay, Sarawak Shell Bhd.
- 26470 **Geo-Mechanical Weakening of Limestone Due to Supercritical CO₂ Injection**
Y. Zhang, S. Iglauer, M. Sarmadivaleh, M. Lebedev and A. Barifcani, Curtin U.
- 26567 **3D Overpressure Prediction in a Field of Malay Basin**
I.A. Satti, D. Ghosh and W.W. Yusoff, U. Teknologi PETRONAS
- 26443 **Combining Sonic While Drilling and Formation Pressure While Drilling for Pore Pressure Analysis to Reduce Drilling Risk - A Case Study in Offshore Vietnam**
T. Nguyen Dac, Schlumberger

THURSDAY, 24 MARCH • 1400-1530 HOURS
TECHNICAL SESSION 36: SAND MANAGEMENT I
ROOM 410, LEVEL 4

SESSION CHAIRPERSONS:
SHARIFUDIN SALAHUDIN, HALLIBURTON ENERGY SERVICES GROUP
MOHD ZAIDAN KHALID, PETRONAS CARIGALI SDN. BHD.

PAPERS

- 26508 **A New and Practical Model for Sand Amount and Rate Prediction**
B. Wu and S.K. Choi, CSIRO Energy Flagship; R. Denke and T. Barton, CSIRO Mineral Resources Flagship; M. Zamberi and S. Shafee, PETRONAS; M.B. Jadid and Z. Johar, PETRONAS Carigali Sdn. Bhd.; K. Lim, CSIRO Energy Flagship; and B.B. Madon, PETRONAS Carigali Sdn. Bhd.
- 26554 **Holistic Sand Management Methodology: A Multi-Disciplinary Team Approach to Cater Sub-Surface & Topside Aspects of Sand Production and Optimisation**
A. Gupta, N. Borhan, D.B. Kamat, A. Mat, R. Singh, R. Sunnapu, F. Baghdadi, M.B. Jadid, M. Gong and B.B. Madon, PETRONAS Carigali Sdn. Bhd.



- 26488 **Development of a Sand Transport and Erosion Tool for Efficient Sand Management**
F. Baghdadi, A. Gupta, R. Singh and M.B. Jadid, PETRONAS Carigali Sdn. Bhd.
- 26763 **Solids Production Prediction and Management for Oil Producers and Water Injectors in Highly Depleted Reservoirs in a Mature Malaysian Field**
M. Asadin and A. Khaksar, Baker Hughes; M. Yin Yin, PETRONAS; and D. Saric, Baker Hughes

THURSDAY, 24 MARCH • 1600-1730 HOURS
TECHNICAL SESSION 37: FLOATERS
ROOM 401/402, LEVEL 4

SESSION CHAIRPERSONS:
GU HAI, AMERICAN BUREAU OF SHIPPING
WONG MENG HOE, MH WONG MARINE PTE. LTD.

PAPERS

- 26851 **Dynamic Simulation for Berthing Problem Between FSRU and LNGC in Waves**
B.W. Nam, Korea Research Inst. of Ships & Ocean Engineering; Y. Kim, Seoul National U.; and S.Y. Hong, Korea Research Inst. of Ships & Ocean Engineering
- 26558 **CFD Simulation of Hydrodynamic Loads on Extended Bilge Keels for FPSO/FLNG**
S. Kim, ABS, and G. Wu and R. Seah, Chevron Corp.
- 26750 **No Dry Dock Safely**
D. Constantinis, EM&I Group
- 26813 **FSI Analysis for Sloshing Structural Assessment of LNG CCS by Multiphase Fluid Model**
S. Hwang, J. Lee and Y. Kim, INHA U.

THURSDAY, 24 MARCH • 1600-1730 HOURS
TECHNICAL SESSION 38: DOWNHOLE BHA TECHNOLOGY
ROOM 403/404, LEVEL 4

SESSION CHAIRPERSON:
AZRAL RAHIM, PETRONAS

PAPERS

- 26690 **Journey to Success - Advancement of Coiled Tubing Drilling in Malaysia**
Z.W. Ooi, N.E. Hamzah, M. Pozdnyshv, N. Ahmad Fauzi and Z. Ibrahim, PETRONAS Carigali Sdn. Bhd.
- 26515 **New On-Command Integrated Expandable Under Reamer Technology Reduces Operational Uncertainty and Saves Operational Cost**
L. Fang and S. Schwartz, Baker Hughes Inc., and G. Grindhaug and C. Kanzler, Statoil ASA
- 26728 **The New Frontiers of Offshore Drilling Activities: "Hand-Off" Drill Floor and Capability to "Talk Continuously With the Bottom Hole"**
A. Calderoni, S. Angeli and P. Cantalupo, Drillmec S.p.A
- 26712 **Coring Parameter Optimisation - The Secret to Long Carbonate Cores**
K. Cheong and A. Safari, PETRONAS, and A.B. Abdul Rahim, PETRONAS Carigali Sdn. Bhd.

THURSDAY, 24 MARCH • 1600-1730 HOURS
TECHNICAL SESSION 39: ASSET INTEGRITY II
ROOM 405, LEVEL 4

SESSION CHAIRPERSONS:
ADRIAAN (AD) TANGE, LLOYD'S REGISTER ENERGY
ANDREW SPOWAGE, WOOD GROUP

PAPERS

- 26522 **Seismic Sensitivity Studies for Fixed Offshore Platforms**
A. Sari, H. Nguyen and U. Azimov, Genesis Oil & Gas Consultants
- 26451 **The Importance of SIMS in Structural Integrity Review and Life Extension Requirement for Existing Fixed Offshore Structure**
A.E. Kajuputra, B.S. Wong and M.A. Shamsuddin, PETRONAS
- 26833 **Structure Integrity Monitoring of Fixed Platform in Oil Field**
M. Lee and J. Chung, CyTroniQ Co., Ltd.
- 26751 **Complex Subsea to Subsea Pigging Operations of Pipelines**
P. Nesje, Kongsberg Oil & Gas Technologies AS

THURSDAY, 24 MARCH • 1600-1730 HOURS
TECHNICAL SESSION 40: OFFSHORE PIPELINES/
UMBILICALS II
ROOM 406/407, LEVEL 4

SESSION CHAIRPERSON:
MARTIN GOODLAD, SUBSEA 7

PAPERS

- 26780 **HP/HT Flowline Lateral Buckling and Walking Design for 40 Year Design Life**
C. Sicilia, INTECSEA, and R. Khalkho, McDermott
- 26796 **18"/12" CRA and 42" Carbon Steel Tie-In Spool Design and Installation for High Temperature/High Pressure and Sour Service**
A. Kacher, McDermott
- 26466 **Practical Considerations for Standard Flaw Acceptance Criteria on Subsea Pipeline Girth Welds**
K.D. Reeves and J. Tran, INTECSEA
- 26517 **Pre-Tensioned Pipeline Bundles Design Challenges and Solution for HPHT Field Development**
K.S. Qadir and K. Morris, Subsea 7, and M. Goodlad, Subsea 7 Joint Venture

THURSDAY, 24 MARCH • 1600-1730 HOURS
TECHNICAL SESSION 41: GEOSCIENCE I
ROOM 408/409, LEVEL 4

SESSION CHAIRPERSONS:
DAVID PITCHER, GENEL ENERGY
MARTIN KIM, WOODSIDE ENERGY LTD.

PAPERS

- 26745 **Behind Fault Well Planning: The Strong Influence of Geological Structure in Planning Complex Well Trajectories in the Gulf of Thailand**
S. Sarah, J. Nate-pracha and G.C. Kaeng, Halliburton



- 26783 **Confronting Fluid Interpretation Challenges in Thin Laminated Sands With NMR Diffusion Maps**
C.C. Ozobeme, G.R. Gaafar, M. Altunbay and F. Hj Musa, PETRONAS Carigali Sdn. Bhd.
- 26654 **Analysing Fault Seal Capacity in Carbonate Platform Reservoir of Tiaka Field, Eastern Sulawesi, Indonesia**
D. Dzahirkan and R. Armanda, JOB Pertamina - Medco E&P Tomori Sulawesi
- 26767 **AVO Analysis to Estimate Fluid Saturation Changes From Time-Lapse Seismic Data for Reservoir Surveillance in Malay Basin Field: Feasibility Study**
S. Danaei, M. Hermana and D.P. Ghosh, U. Teknologi PETRONAS

- 26547 **Prediction of Individual Waves From Point Observation**
Y. Sakurai, R. Wada, R. Mondal and K. Takagi, U. of Tokyo
- 26764 **Gust Ratios in Squalls on the West Borneo Shelf**
J. Muyau and K. Ewans, Sarawak Shell Bhd.

FRIDAY, 25 MARCH • 0900-1030 HOURS
TECHNICAL SESSION 44: DEEPWATER PRODUCTION AND RESERVOIR MANAGEMENT
ROOM 403/404, LEVEL 4

SESSION CHAIRPERSON:
AKI NAKAJIMA, INPEX CORP.

PAPERS

- 26830 **Quantitative Risk Analysis of Well Integrity Issues in Deepwater Well Intervention**
O.O. Ajimoko, Rhetort
- 26624 **Reservoir Surveillance Design and Implementation in the Argonauta O-North Field Development to Manage Water Movement and Optimise Reservoir Sweep**
P. Hewitt, Tracerco, and J.M. Baima Da Silva, Shell Brazil E&P
- 26447 **Liwan Field Development: The First Deepwater Gas Field in China**
Y. Fu, Husky Oil China Ltd.; W. Gong and R. Su, Husky Energy Inc.; L. Li, China National Offshore Oil Corp; and F. Wei, Husky Oil China Ltd.
- 26599 **Effective Water-Injection Measurement in Deepwater Operation Using Field Tested Tool**
E.E. Udofia, Shell Nigeria Exploration & Production

FRIDAY, 25 MARCH • 0900-1030 HOURS
TECHNICAL SESSION 45: FLUIDS AND CEMENTING
ROOM 405, LEVEL 4

SESSION CHAIRPERSONS:
PANKAJ JAIN, PETRONAS CARIGALI SDN. BHD.
SALIM TAOUTAOU, SCHLUMBERGER

PAPERS

- 26670 **Case Study - Engineered Fiber-Based Loss Circulation Control Pills (EFLCC) Solves Total Loss Circulation Challenges on Complex Depleted and Fractured Formation in Natuna Sea, Indonesia**
A.T. Wicaksono, M.F. Jaffery and I. Widyarsa, Schlumberger
- 26677 **Underbalanced Drilling in High Temperature Malay Basin Basement With Nitrified Water - Mitigating Foaming and Corrosion Issues**
M. Ab Latip, M. M Nor, M. Abdul Razak and M.M. Pepple, PETRONAS Carigali Sdn. Bhd.; D. Che Ismail and K. Kee, U. Teknologi PETRONAS; and F. Yunus, Acme Chemicals (Malaysia) Sdn. Bhd.
- 26600 **Dispersants for Water-Based Drilling Fluids Weighted with Manganese Tetroxide: Effect of Contaminants**
A.M. Al Moqbil, Texas A&M U.
- 26608 **Deepwater Cementing Challenges in Remote Location - Case Histories in Indonesia**
L. Weber, Cementing Consultant, and J. Hagura, Schlumberger

THURSDAY, 24 MARCH • 1600-1730 HOURS
TECHNICAL SESSION 42: SAND MANAGEMENT II
ROOM 410, LEVEL 4

SESSION CHAIRPERSONS:
ONG SEE HONG, BAKER HUGHES
ORIENT BALBIR SAMUEL, PETRONAS CARIGALI SDN. BHD.

PAPERS

- 26528 **Intrusive Erosion Probes on Subsea Equipment - Design and Placement Considerations**
M. Leong, FMC Technologies (S) Pte. Ltd.
- 26671 **Successful Deployment of Open Hole Stand Alone Screen and Two Cased Hole Gravel Pack in Highly Deviated Well - A Case History With A Field in Malaysia**
M. Ab Rasid and S.B. Mohd Zain, PETRONAS Carigali Sdn. Bhd.
- 26779 **Sand Control From a Supply Vessel: Mobile Frac Fleet Saves Rig Time in Sub-Sea Completions**
D.M. Agee, Dowell Schlumberger, and A. Syifaa'i, K.B. Peacock, I. Emmanuel, A. Sutherland and B.Z. Malik, Schlumberger
- 26477 **Combination of Innovative Multi Zone Single Trip Gravel Pack System Aids Cutting Completion Cost in Mahakam Block**
B.H. Muryanto, Total E&P Indonesia; D. Caillon, Total E&P; R. Wijaya, Total E&P Indonesia; F. Lavoix, Total; and Y. Ji, Halliburton

FRIDAY, 25 MARCH • 0900-1030 HOURS
TECHNICAL SESSION 43: METOCEAN HYDRODYNAMICS I
ROOM 401/402, LEVEL 4

SESSION CHAIRPERSONS:
ALLAN MAGEE, NATIONAL U. OF SINGAPORE
VADIM ANOKHIN, SARAWAK SHELL BHD.

PAPERS

- 26546 **Optimum Design of Multi-Body Floating Logistics Terminal**
R. Wada, R. Mondal, K. Kamizawa and K. Takagi, U. of Tokyo
- 26510 **Sensitivity of Smoothed-Particle Hydrodynamic Parameters on Slamming Simulations**
M. Sasson, S. Chai, Y. Jin and J. Rafieshahraki, Australian Maritime College, U. of Tasmania



FRIDAY, 25 MARCH • 0900-1030 HOURS
TECHNICAL SESSION 46: FLEXIBLE PIPELINES
ROOM 406/407, LEVEL 4

SESSION CHAIRPERSONS:
ROBBY O'SULLIVAN, TECHNIP
KIERAN KAVANAGH, WOOD GROUP KENNY

PAPERS

- 26734 **A New Flexible Pipe for Dynamic Gas Riser Applications Featuring FLIP Resistant Carcass**
A. Lyckegaard, R. Hansen, E. Bendiksen and C.D. Cappeln, National Oilwell Varco
- 26506 **Qualification of a New Robust and Cost-Effective Polymer for Flexible Pipe Pressure Sheath**
F. Tronc, Technip
- 26739 **Step Riser Configuration for Deepwater Application**
Y. Hou, GE Oil & Gas
- 26490 **Multiscale Modelling Approaches for Flexible Risers: Procedures, Capabilities and Demonstrations**
B.D. Edmans, Lloyd's Register Global Technology Centre; T. Guo, Z. Zhang, D.C. Pham and S. Narayanaswamy, Inst. of High Performance Computing, Agency for Science, Technology and Research; and G. Stewart, Lloyd's Register Energy

FRIDAY, 25 MARCH • 0900-1030 HOURS
TECHNICAL SESSION 47: GEOSCIENCE II
ROOM 408/409, LEVEL 4

SESSION CHAIRPERSONS:
AZHAR YUSOF, PETRONAS
MUHAMMAD KAMAL EMBONG, PETRONAS CARIGALI SDN. BHD.

PAPERS

- 26437 **Optimising the Lithology and Pore Fluid Separation Using Attenuation Attributes**
M. Hermana, D.P. Ghosh and W.S. Chow, U. Teknologi PETRONAS
- 26636 **Monitoring Strength Reduction in Sandstones Associated With Fluid Substitution Using Advanced Rock Mechanics Testing**
J. Sarout and J. Dautriat, CSIRO Energy Flagship, and C. David, U. of Cergy-Pontoise
- 26618 **Improved Permeability Estimation in Siliciclastic Sands With Geochemical Logs and Formation Pressure Tests**
T. Li, Schlumberger - D&M, China
- 26820 **First Meta-Sedimentary Basement Reservoir Formation Evaluation in Offshore Sarawak; A Detail Insight on Fracture Morphology**
I. Wu, S. Parashar and C. Lee, Halliburton; M. Kamarul Zaman and M. Mohd Bukhari, PETRONAS; H. Mansur, PETRONAS Carigali Sdn. Bhd.; and C. Lowrans, PETRONAS

FRIDAY, 25 MARCH • 0900-1030 HOURS
TECHNICAL SESSION 48: COMPLETIONS: NEW MATERIAL AND SOLUTIONS
ROOM 410, LEVEL 4

SESSION CHAIRPERSON:
TOMASZ MATLAK, SCHLUMBERGER

PAPERS

- 26462 **World's First Concentric Coiled Tubing Cleanout via a Wireless Catenary Coiled Tubing Unit**
J. Larke and D. Choo, Baker Hughes, and R. Hutabarat and H. Visser, Shell
- 26596 **Development of Degradable Sealing Elements for Fully-Degradable Frac Plugs**
T. Takahashi, S. Takahashi and M. Okura, Kureha Corp.
- 26615 **Development of World's First S13Cr Gun System**
J.I. Lavery and C. Hoelscher, Halliburton, and R.M. Quaden, Shell Australia Ltd.
- 26382 **Fiberglass Casing and Tubing in Highly Corrosive Environments**
A. Rauf, Texas A&M U. at Qatar

FRIDAY, 25 MARCH • 1100-1230 HOURS
TECHNICAL SESSION 49: METOCEAN HYDRODYNAMICS II
ROOM 401/402, LEVEL 4

SESSION CHAIRPERSON:
MOHD SHAHIR LIEW, U. TEKNOLOGI PETRONAS

PAPERS

- 26668 **Consistent Design Criteria for South China Sea With a Large-Scale Extreme Value Model**
L. Raghupathi, Shell India Markets Pvt Ltd.; D. Randell, Shell Global Solutions (UK); K. Ewans, Sarawak Shell Bhd.; and P. Jonathan, Shell Global Solutions (UK)
- 26646 **Brief Introduction of the Currently World Largest Deep Ocean Engineering Basin**
H. Sung, S. Hong and J. Kim, Korea Research Inst. of Ships and Ocean Engineering
- 26792 **Tropical Cyclones and Their Impact on the Northwest Borneo**
W. Loh, V. Anokhin and K. Ewans, Sarawak Shell Bhd.
- 26436 **Distribution of Surface Elevations in Nonlinear Seas**
M.A. Tayfun and M. Alkhalidi, Kuwait U.

FRIDAY, 25 MARCH • 1100-1230 HOURS
TECHNICAL SESSION 50: PROCESS SAFETY AND BARRIERS INTEGRITY
ROOM 403/404, LEVEL 4

SESSION CHAIRPERSONS:
TONY DIEMERT, HUSKY ENERGY
SALIM TAOUTAOU, SCHLUMBERGER

PAPERS

- 26607 **Managing Billing, Work Permits, HSE Documents, and Access Control: A Case Study of Risk Management Software Development**
E. Daher, United Safety; G. Ciccone and A. Ferrante, SIS Srl; and R. Simonetti, Eni S.p.A.
- 26827 **Ultrasonic Gas Leak Detection Technology for Hazardous Oil and Gas Operations**
M. McCoy, Emerson Process Management



26480 Operationalising Barrier Management in Upstream Process Safety

W. Leong, Baker Hughes Inc.

26819 Barrier Management in Operation for the Rig Industry - A Joint Industry Project

E. Sjolie, DNV GL

FRIDAY, 25 MARCH • 1100-1230 HOURS
 TECHNICAL SESSION 51: MANAGED PRESSURE DRILLING TECHNOLOGY
 ROOM 405, LEVEL 4

SESSION CHAIRPERSON:
 MARK ARATHOON, PETRONAS

PAPERS

26753 Application of UBD Technology for Basement Drilling in Malaysia

M. Arathoon, PETRONAS Carigali Sdn. Bhd.

26613 Early Kick Detection and Performing Managed Pressure Cementing Using EC-Drill System in GOM Deep Water Drilling

B. Elahifar and R.F. Malt, Enhanced Drilling

26857 Next Generation Well Modelling Software for Managed Pressure Drilling

J. Riddoch and C. Wuest, Weatherford

26379 Advent of Innovative Adaptive Drilling Methods

P.A. Potter, SubC Engineering Ltd.

FRIDAY, 25 MARCH • 1100-1230 HOURS
 TECHNICAL SESSION 52: HIGH PRESSURE HIGH TEMPERATURE II
 ROOM 406/407, LEVEL 4

SESSION CHAIRPERSONS:
 AKI NAKAJIMA, INPEX CORP.
 GARY ONG, PETRONAS CARIGALI SDN. BHD.

PAPERS

26659 A Streamlined Product Development Process for Permanent Downhole Gauge: Key to High Operational Reliability in HPHT

P. Shrivastava and J.A. Flygare, Halliburton; M. Buchan, Shell; R.M. Quaden, Shell Australia Ltd.; C. Smith, Shell; and A. Balasubramanian, Halliburton

26454 Sub-Surface Safety Valve (SSSV) Erosion Assessment in HPHT Gas Field - A Case Study

B. Toldo, A. Shuttleworth and P.N. Zabelina, BP

26397 Qualification of Check Valve Used in Downhole Injection Systems

Z.Y. He and O.O. Bello, Baker Hughes Inc.

26684 Successfully Managing NPT in a Deep, Deviated, High-Temperature Interval in Kuwait by Bridging Hole-Enlargement Technology and Drilling Efficiencies

A. El Berry, Weatherford Kuwait Petroleum Co., and H.M. Helmy, Weatherford

FRIDAY, 25 MARCH • 1100-1230 HOURS
 TECHNICAL SESSION 53: GEOPHYSICS
 ROOM 408/409, LEVEL 4

SESSION CHAIRPERSONS:
 ARTHUR CHENG, NATIONAL U. OF SINGAPORE
 DEVA GHOSH, U. TEKNOLOGI PETRONAS

PAPERS

26632 Assimilation of Workflows to Describe and Characterise LRLC Reservoirs Using Advanced Wireline and Core Data

G.R. Gaafar, M. Altunbay, Y. Bonnye and F. Hj Musa, PETRONAS Carigali Sdn. Bhd.

26583 Vertical Cable Seismic (VCS) Survey for Buried Hydrothermal Sulfide Deposit

E. Asakawa, J-MARES/JGI, Inc.; K. Tara, The U. of Tokyo; and F. Murakami, H. Tsukahara and S. Mizohata, JGI, Inc.

26642 Geomechanical Model From Subseismic Resolution Data

E.W. Purnomo and D. Ghosh, U. Teknologi PETRONAS

26626 Statistical Characterisation of Porous Media With Flow and Seismic Data

Y. Li and P.K. Kang, Massachusetts Inst. of Technology

FRIDAY, 25 MARCH • 1100-1230 HOURS
 TECHNICAL SESSION 54: COMPLETIONS: DESIGN AND IMPROVEMENTS
 ROOM 410, LEVEL 4

SESSION CHAIRPERSON:
 MARIA EUGENIA YANEZ BANDA, SCHLUMBERGER

PAPERS

26418 Using Multilaterals to Extend Well Life and Increase Reserves: An Offshore Thailand Project Case History

C. Hogg, Weatherford Intl. Ltd.; A. Timms, Salamander Energy; S. Cham, Weatherford Asia Pacific PTE; and C.L. Hicks, Weatherford Intl. Ltd.

26375 Coiled Tubing Horizontal Extension Recompletion Technique: A Case History in Alternative Water Control Treatment

E.R. Acorda, R. Ramnarine and W. Munir, Baker Hughes, and K. Gurbachan, Y. Phoon and S. Khairuddin, PETRONAS Carigali Sdn. Bhd.

26678 Challenging Well Completion and Intervention Technique for Multizone Offshore Brown Field Well

K.B. Chandak, Cairn India Ltd.; S. Anand and B. Patil, Cairn Energy India Pty. Ltd.; P. Sarma, Cairn India Ltd; J.P. Nayak, Welltec A/S; and N.S. Koshy and S.V. Vadapally, Cairn India Ltd.

26503 Restoring a Liquid Loaded Well by Installing Velocity String Packer

S.N. Jorgensen, Interwell Norway AS

FRIDAY, 25 MARCH • 1430-1600 HOURS
 TECHNICAL SESSION 55: SENSORS AND MEASUREMENTS
 ROOM 401/402, LEVEL 4

SESSION CHAIRPERSONS:
 VENUGOPALAN PALLAYIL, NATIONAL U. OF SINGAPORE
 NEIL KAVANAGH, WOODSIDE ENERGY LTD.



PAPERS

- 26505 **Deep Sea Laser Raman - Past, Present and Future Developments for In Situ Chemical Analysis and Applications**
W. Kirkwood, Monterey Bay Aquarium Research Inst.
- 26715 **Field Application of Downhole and Surface Vibration Measurement**
W. Gao, CNPC Drilling Research Inst.
- 26814 **A Development of Ocean Surface Wave and Wind Measurement From X-Band Marine Radar**
Y. Yang, Pusan National U.

FRIDAY, 25 MARCH • 1430-1600 HOURS
TECHNICAL SESSION 56: UNCONVENTIONAL RESOURCES
ROOM 403/404, LEVEL 4

SESSION CHAIRPERSONS:
SHARIFUDIN SALAHUDIN, HALLIBURTON ENERGY SERVICES GROUP
MICHAEL D. ZUBER, SCHLUMBERGER

PAPERS

- 26682 **A New Methodology for Petrophysical Evaluation of Shale Gas Reservoirs: A Field Case Study for Marcellus Shale**
L.T. Yildirim, Pennsylvania State U.
- 26355 **Adsorbed Gas Surface Diffusion and Bulk Gas Transport in Nanopores of Shale Reservoirs With Real Gas Effect-Adsorption-Mechanical Coupling**
K. Wu and Z. Chen, U. of Calgary
- 26697 **Successful Tight Gas Development Practice in Ordos Basin of China**
X. Zhang, PetroChina Co. Ltd.; M. Zhang, PetroChina Changqing Oilfield Co; and C. Ge, H. Deng, B. Cui and G. Chen, PetroChina Co. Ltd.
- 26633 **Opportunities and Challenges of Shale Oil and Shale Gas Field Development in Indonesia**
S. Am, UPN Veteran Yogyakarta

FRIDAY, 25 MARCH • 1430-1600 HOURS
TECHNICAL SESSION 57: WELLBORE SURVEY AND WELL PLANNING
ROOM 405, LEVEL 4

SESSION CHAIRPERSONS:
RAHIMI WAHAB, PETRONAS CARIGALI SDN. BHD.
MARIA EUGENIA YANEZ BANDA, SCHLUMBERGER

PAPERS

- 26821 **Proper Planning Supported by Latest Technology Leads to Drilling the Longest 8.5 Inch Section in an Extended-Reach Well: Case Study**
A.A. Al Dabayah and B.A. Zubairi, Baker Hughes Saudi Arabia, and I.S. Al Umairin, J.I. Chima, D. Kunhiveetil and H.W. Otaif, Saudi Aramco D&WO
- 26362 **Innovative Solutions for Directional Surveying and Wellbore Positioning in Arctic**
S. Hussain, Schlumberger D&M

- 26782 **Operational Excellence (OE) - The Catalyst for Top Quartile Drilling Performance**
M. Tajuddin, M. Hassan, M. Nazarudin and A. Ahmad Tajuddin, PETRONAS Carigali Sdn. Bhd.
- 26817 **Well Integrity Management - Application of Risk Assessment to Optimise Your Decisions**
H. Brandt, DNV GL Group; P. Dembele, Total E&P; and A. Siswanto, Total E&P Indonesia

FRIDAY, 25 MARCH • 1430-1600 HOURS
TECHNICAL SESSION 58: TOPSIDE CONSTRUCTION
ROOM 406/407, LEVEL 4

SESSION CHAIRPERSONS:
MICHAEL SI, SHELL PROJECTS & TECHNOLOGY – EAST
KUAN ENG YEOW, TECHNIP

PAPERS

- 26441 **Technical & Economic Comparison and Analysis for Gas Export, Gas Injection and Modular GTL & GTL FPSO**
H. Kwon, D. Choi, Y. Moon, S. Ahn, N. Jang, H. Lim and W. Kim, Daewoo Shipbuilding & Marine Engineering
- 26730 **Case Study - Super Lifting of Topsides for the Integration of Gumusut-Kakap Semi-Floating Production System (FPS)**
J.F. Infante, N.B. Hj Mansor and H. M. Hanafi, Malaysia Marine & Heavy Engineering Sdn. Bhd.
- 26757 **Case Study - Construction of Malikai's Tension Leg Platform (TLP) Hull**
M.B. Abu Bakar, D.T.B. Roa and H. M. Hanafi, Malaysia Marine & Heavy Engineering Sdn. Bhd.