Monday Morning

Monday, 5 May, 0930 to 1200
306
PANEL: LOW PRODUCTION COSTS FOR HIGH-COST RESOURCES

Moderators:  Chris Ross, CRA International
            Sandeep Khurana, Devon Energy Corporation

Panelists:
Chuck Pierce, VP Indonesia Deepwater, Chevron
David Bairrington, Heavy Oil Technology Manager, ConocoPhillips
Jim Farnsworth, COO, Cobalt
Andrew Slaughter, Senior Economics Advisor, Shell
Brad Boswell, Vice President, CRA
Tim Parker, CEO, Loews

0930  19163  Toward Low Costs for High-Cost Resources
        C. Ross, CRA International

Monday, 5 May, 0930 to 1200
604
PETROTECHNICAL VISUALIZATION: VISUALIZE THE OPPORTUNITY FROM PROSPECT TO PROJECT

Session Chairperson:  Frank Love, Shell International E&P Company

0930  19596  Visualize the Opportunity From Prospect to Project
            F.R. Love, Shell International E&P Company

Monday, 05 May, 0930 to 1200
602
ADVANCES IN DEEPWATER STEEL CATENARY RISER TECHNOLOGY

Session Chairpersons:  Carlos Moreira, Technip
                      Ruxin Song, Technip

0930  19401  Steel Catenary Riser Design Based on Prescribed Motions From Coupled Analysis Methodology
            M.V. Rodrigues, V.L. Hansen, R.A. Bahiense, C.V. Raposo, Det Norske Veritas

0952  19438  Steel Catenary Umbilical Stability Analysis

1014  19256  An Effort Toward SCR Receptacles Standardization
            M.M. Mourelle, C.C. Moreira, J.T. Lima, Petrobras

1036  19495  Model Tests for Steel Catenary Riser in Marine Clay
            C.P. Aubeny, Texas A&M University; T. Langford, Norwegian Geotechnical Institute

1058  19544  Spectral and Cycle-Counting Fatigue Damage Estimation Methods for Steel Catenary Risers
Monday, 5 May, 0930 to 1200
312
MALEO MOPU: FAST JACK-UP CONVERSION FOR SEISMICALLY ACTIVE SOFT-SOIL SITE

Session Chairpersons: Mike Ooley, Global Process Systems
                       William Stewart, Stewart Technology Associates

0930 19581 The Maleo MOPU Project: Overview and Keynote Introduction to Session
      M. Ooley, Global Process Systems; W.P. Stewart, Stewart Technology Associates

0952 19583 Seismic Design Criteria Maleo Producer, Madura Straits
      A. Nisar, MMI Engineering

1014 19480 Seismic Time History Response Analysis of Maleo Producer
      P. Jacob, MMI Engineering; W. Stewart, Stewart Technology Associates

1036 19553 Overturning Analysis of Maleo Jack-Up Mat Foundation on Soft Clay
      J.D. Murff, Texas A&M University; A.G. Young, Geoscience Earth & Marine Service

1058 19582 Soft-Clay Dynamic Characteristics for Madura Straits From Advanced Geotechnical Tests
      D.R. Spikula, Geoscience Earth & Marine Service; S. Garmon, Marsco

1120 19645 Time Domain FE Seismic Analysis of Mat-Supported Jack-Up Structure on Soft Clay
      J.S. Templeton, Sage USA

1142 19580 Detailed Geotechnical Investigation Around In-Place Mat Foundation Including T-Bar and CPT
      Comparisons
      S. Neubecker, Advanced Geomechanics; W.P. Stewart, Stewart Technology Associates; J. Audibert,
      Quest Geo-Technics

Monday, 5 May, 0930 to 1200
610
ACTIVE ARENA: ANGOLA 2020

Moderator: Pierre-Alain Delaittre, Consultant

Monday, 5 May, 0930 to 1200
606
EAST COAST OF CANADA: LEADING EDGE R&D INITIATIVES

Session Chairpersons: Paul Barnes, CAPP
                       Paul Harvey, Nova Scotia Department of Energy

0930 19273 Atlantic Canada Petroleum Industry: Regional Overview
      P. Barnes, CAPP

0952 19271 Produced-Water Discharge Monitoring
      T. Husain, H. Niu, S. Adams, B.J. Veitch, K. Hawboldt, Memorial University of Newfoundland

1014 19234 Using MRI To Measure Capillary Pressure in Petroleum Reservoir Test Core
      B.J. Balcom, University of New Brunswick

1036 19269 Compressed-Air Breathing Apparatus for Helicopter Underwater Evacuation
      P.N. Gibbs, Survival Systems

1058 19272 Mitigation of Ice Risk to Subsea Infrastructure
      V. Morgan, C. Randell, R.D. Phillips, F. Ralph, C-Core

1120 19270 Small-Field Development and Subsea Tieback Technologies
      G.D. Dillabough, D.W. Hawkins, M. Ruelokke, F. Way, C-NLOPB; W.I. Chipman, Canada Newfoundland
      Offshore Petroleum

1142 19233 Evacuation Training Using Immersive Simulators
      B.J. Veitch, Memorial University of Newfoundland; R.J. Billard, Virtual Marine Technology
ADVANCES IN THE CONTROL OF SAND PRODUCTION

Session Chairpersons: Chip Claiborne, Chevron Corporation
Mark Kalman, Halliburton Energy Services Group

0930 19130 Orientated Perforating as a Sand Prevention Measure: Case Studies From a Decade of Field Experience Validating the Method Offshore Norway
J.S. Andrews, Statoil; H. Joranson, StatoilHydro; A.M. Raaen, Statoil

0952 19172 Case Histories of Improved Horizontal Well Cleanup and Sweep Efficiency With Nozzle-Based Inflow Control Devices in Sandstone and Carbonate Reservoirs
A.G. Raffn, J.E. Lauritzen, Reslink; A.H. Sunbul, D.E. Hembling, Saudi Aramco; T. Moen, Reslink; M. Zeybek, Schlumberger

1014 19185 A Generic Model for the Prediction of Sand Production in Oil and Gas Well Systems
K.E. Abhulimen, University of Lagos

1036 19341 Expandable Screens: Optimized Horizontal Gas Production Through Collaboration
A. Lopez Lara, Pemex; G.A. Garcia, Baker Oil Tools; J. Aguirre Montalvo, A. Salas Zapata, Pemex; E.G. Bowen, Baker Oil Tools

1058 19484 Kikeh Development: Sand Control Selection, Design, and Implementation of ESS
M.K. McFadyen, Murphy Sabah Oil Company

1120 19622 Case Histories of Unique Multizone Intelligent Deepwater Sand-Control Completions: How Successes Were Achieved and the Associated Lessons Learned
R.C. Jannise, Halliburton Energy Services Group; S.J. Jeu, Thunderbyrd Energy Services; J.B. Salies, Petrobras America; G.S. Arnold, Well Dynamics

1142 19465 New Approach to Sand Removal
S.D. Coffee, Enerscope Systems

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### Monday Afternoon

**Monday, 5 May, 1400 to 1630**

#### 306 PANEL: MANAGING RISK IN THE OFFSHORE ENERGY INDUSTRY

**Moderator:** Buford Pollett, Technip

Based on the earlier work of pioneers in risk management in the offshore industry, this panel will discuss and provide an overview of how people and entities now evaluate risk/opportunities surrounding the various aspects of the offshore industry (e.g., geological and engineering evaluations, insurance coverages, weather risks, and contract terms) so that the decision-makers can better appreciate the true value of projects in the offshore industry.

**Panelists:**
- Tommy Laurendine, Assistant Vice President, Risk Engineering, Liberty International Underwriters
- Hugo Diogo, Senior Manager, Fortis Bank
- Scot Anderson, Partner, Natural Resources Group at Davis Graham & Stubbs
- Daniel Murphy, President, Systech International
- Judi Robertson, Legal Manager, Weatherford International

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<td>Risk Management in the Offshore Energy Industry</td>
<td>B. Pollett, Technip</td>
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<td>1422</td>
<td>Thinking About Risk in the Offshore Energy Industry</td>
<td>S.W. Anderson, Davis Graham &amp; Stubbs</td>
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<td>1444</td>
<td>Gulf of Mexico Offshore Platforms: Risk Engineering</td>
<td>T.T. Laurendine, Liberty International Underwriters</td>
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<td>1506</td>
<td>International Risk Management</td>
<td>D.V. Murphy, Systech International</td>
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#### 604 OFFSHORE NEEDS ADDRESSING ASIA FPSOs

**Session Chairpersons:** Izabela Gruen, Exmar
- Sam Ryu, Sofec

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<td>Structural Design Overview of the Drillships</td>
<td>H. Moon, Daewoo Shipbuilding and Marine</td>
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<td>1528</td>
<td>SHI Improved EPC Integration Management for FPSOs</td>
<td>J. Kim, Samsung Heavy Industries Company</td>
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<td>1550</td>
<td>Collaboration for EPC of Offshore Structures</td>
<td>H. Shin, Hyundai Heavy Industries</td>
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Monday, 5 May, 1400 to 1630

ADVANCES IN FLEXIBLE RISER TECHNOLOGY

Session Chairperson: Enda O'Sullivan, MCS

1400 19437 Free-Standing Flexible Riser: A Novel Riser System for an Optimized-Installation Process
J. Remery, Technip; C. Silva, Brasflex Tubos Flexibles

1422 19386 Fatigue Design of Flexible Risers With a Nondry Annulus Environment
R.J. Smith, V. Stoica, MCS

1444 19427 Present and Future Possibilities Within Optical Condition Monitoring of Flexible Risers
N. Weppenaar, M. Kristiansen, NKT Flexibles

1506 19197 Development of the End-Fitting-Tensile-Wires Fatigue Analysis Model: Sample Tests and Validation in an Unbonded Flexible Pipe
Y. Shen, F. Ma, Wellstream International; Z. Tan, Halliburton Company; T. Sheldrake, Wellstream International

1528 19250 Flexible Pipe Design Optimization for West Africa Deepwater: Agbami Case Study
E. Sas, J. Pere, P. Savy, Technip; A. Omar, Chevron

1550 19397 Flow Assurance and Optimal Design of Thermal Characteristics in Flexible Pipes
K.G. Nielsen, M. Kristiansen, E. Bendiksen, NKT Flexibles

1612 19399 A Systematic Appraisal of Thrulife Integrity Management and Life Extension of Deepwater Subsea Systems
C. Saunders, P. O'Brien, B. Dines, MCS

Monday, 5 May, 1400 to 1630

312

WORLDWIDE ADVANCES IN GEOTECHNICS

Session Chairpersons: Roger Ingersoll, Mobil Research & Development Corporation
Alan Young, Geoscience Earth & Marine Service

1400 19687 Quality Assessment of Marine Sediments Recovered With a Hydraulically Tethered Piston Sampler
P.J. Kelleher, Benthic Geotech

1422 19149 Characterization of Near-Seabed Surface Sediments
M.F. Randolph, H. Low, University of Western Australia; J.M. Brooks, B.B. Bemard, TDI-Brooks International

1444 19684 Worldwide Advancements in Deepwater Geotechnics: SEPLAs as Permanent Preset Moorings for Field Development in Congested Fields Offshore West Africa
D. Cobb, InterMoor

1506 19349 Site Characterization Through Integration of Geophysical and Geotechnical Data
C.J. Ehlers, Chevron Corporation; D.R. Spikula, J.R. Brand, Geoscience Earth & Marine Service

1528 19290 Design and Testing Out of Deepwater Seabed Sampler
T. Lunne, T.I. Tjelta, Statoil; A. Walta, A.P. van den Berg; A. Barwise, Gardine Lankelma

1550 19193 Characterization of Soft Deepwater West Africa Clays: SHANSEP Testing is Not Recommended for Sensitive Structured Clays
M.H. Le, J.-F. Nauroy, Institut Français du Pétrol; N. Thanh, E. Flavigny, INPG/L3SR; J. Colliat-Dangus, Total; V. De Gennaro, P. Delage, CERMES/ENPC; A. Puech, J. Meunier, IFREMER

1612 19683 Differences in Shear Strength Between Jumbo Piston Core and Conventional Rotary Core Samples
P.C. Wong, ExxonMobil Development Company

Monday, 5 May, 1400 to 1630

610

INCREASED OIL RECOVERY
### Monday, 5 May, 1400 to 1630

#### 606  ISSUES RELATED TO THE SELECTION OF CORROSION-RESISTANT ALLOYS AND ELASTOMERS FOR DEEPWATER COMPLETIONS

**Session Chairpersons:** Syed Afaq Ali, Schlumberger  
Francois Auzerais, Schlumberger

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<td>Formate Fluids for Extreme Conditions: Do They Have Limitations?</td>
<td>W.J. Benton, J. Downs, Cabot Specialty Fluids</td>
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<td>1506</td>
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<td>Understanding the Impact of Completion Brine Packer Fluids on Cracking Susceptibility of CRA Materials for Deepwater Applications</td>
<td>P.H. Javora, M. Ke, D. Stevens, BJ Services Company</td>
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<td>Proper Performance Testing to Maintain Seal Integrity in Deepwater Completions</td>
<td>B. Slay, Halliburton</td>
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<td>Selecting Seal Materials for Deepwater Completions</td>
<td>J.E. Goodson, Baker Oil Tools</td>
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<td>Fracture Mechanics-Based Fatigue Predictions for HP/HT Equipment</td>
<td>R. Cordes, R.I. San Pedro, Stress Engineering Services</td>
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### Monday, 5 May, 1400 to 1630

#### 600  WELL COMPLETIONS: PRODUCTION OPERATIONS AND INTERVENTIONS

**Session Chairpersons:** Rusty Bayh, Halliburton Energy Services Group  
Riley Goldsmith, Goldsmith Engineering

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<td>Isolation Valve Contingencies Using Wireline Stroker and Tractor Technologies</td>
<td>B.J. Schwanitz, Welltec; J.L. Hupp, BP</td>
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<td>Collaborative Effort Enables Repair of Prolific Gas Well With Solid-Expandable-Chrome Liner</td>
<td>P. York, Weatherford International</td>
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<td>19302</td>
<td>Downhole Tool Design Challenges for Deepwater Highly-Deviated Wells</td>
<td>M. Howell, M. Johnson, G. Roscoe, Halliburton Energy Services</td>
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Tuesday Morning

Tuesday, 6 May, 0930 to 1200

306 PANEL: CHALLENGES TO DELIVERING TOMORROW'S ENERGY: ACHIEVING A BALANCE BETWEEN ENERGY SECURITY AND CLIMATE SECURITY

Moderators: Bob Fryklund, IHS
Ann Oglesby, ConocoPhillips

Panelists: Amy Myers Jaffe, Rice University
David Hobbs, CERA
Fatih Birol, International Energy Agency
Ann Hudson, Climate Control

1058 19354 Challenges to Delivering Tomorrow's Energy: Achieving a Balance Between Energy Security and Climate
B. Fryklund, HIS; Ann Oglesby, ConocoPhillips

Tuesday, 6 May, 1400 to 1630

604 CO2 CHALLENGE: MONITORING, MINIMIZATION, REMOVAL TECHNOLOGY AND DETECTION

Session Chairpersons: Klaas Koster, Shell International E&P
Joseph Reilly, ExxonMobil Upstream Research Company

1400 19244 Multiphase Flow and Trapping of Carbon Dioxide in Deep Saline Aquifers
S.M. Benson, F.M. Orr, Stanford University

1422 19229 Draft Contribution to Future Guidelines for Licensing of CO2 Storage in Saline Formations and Depleted Hydrocarbon Reservoirs
H. Groenenberg, ECN Policy Studies; B. Beck, IEA Greenhouse Gas R&D Programme; A. Chatwick, British Geological Survey; C. Bernstone, Vattenfall

1444 19202 Integrated Monitoring Strategy for CO2 Sequestration Regulatory Management
K.J. Dodds, J. Underschultz, Csiro Petroleum; S. Sharma, Schlumberger; M. Urosevich, Curtin University of Technology; D. Etheridge, Csiro Marine and Atmospheric Research; A. Kepic, Curtin University of Technology; D.H. Sherlock, Csiro Petroleum

1506 19515 Carbon Storage in Deepsea Sediments: An Important Part of the CCS Portfolio
D.P. Schrag, Harvard University

1528 19558 Spatiotemporal Imaging for Continuous Monitoring of CO2 Storage in Geological Formations
J. Harris, Stanford University

1550 19532 Time-Lapse Seismic Modeling and Inversion of CO2 Saturation for Sequestration and Enhanced Oil Recovery
M.A. Meadows, 4th Wave Imaging; D. Markus, Ikon Science; D.C. Adams, S.P. Cole, 4th Wave Imaging

1612 19309 A General Standard for Subsurface CO2 Storage Capacity Calculations
L. Van der Meer, TNO Institute Application Geosciences

Tuesday, 6 May, 0930 to 1200

602 KIKEH DEVELOPMENT
Session Chairperson: Michael McFadyen, Murphy Sabah Oil Company

0930 19481 Kikeh Development: Project Overview
M.K. McFadyen, S. Dechant, J.D. Weber, R.W. Jenkins, T.S. Shahrudin, Murphy Sabah Oil Company

0952 19482 Kikeh Development: Project Execution Model
S. Dechant, T. Stensgaard, Murphy Sabah Oil Company

1014 19639 Kikeh Development: Spar Topside Floatover Installation, Naval
D. Smiley, Murphy Sabah Oil Company; D. Edelson, M.Y. Luo, J. Halkyard, Technip

1036 19471 Kikeh Development: Design of the World's First Gravity Actuated Pipe Fluid Transfer System
P. Brown, E. Rooduijn, Single Buoy Moorings; G. Stone, Murphy Sabah Oil Company

1058 19637 Subsea Equipment Installation Challenges for Malaysia's First Deepwater Development
G. Murray, Technip; A. Ledingham, T. Stensgaard, I. Robertson, Murphy Sabah Oil Company; D. Lowther, Technip

1120 19469 Kikeh Development: Challenges in Implementing a Smart Field
A.J. Terry, R. Chan, Murphy Sabah Oil Company; D.R. Dixon, F. Gard, NSI

1142 19467 Kikeh Development: Delivering World-Class Completion Performance
T. Webb, N.F. Omar, K. Selamat, R.A. Desormeaux, P.M. Moran, Murphy Sabah Oil Company

Tuesday, 6 May, 0930 to 1200

312

LNG INDUSTRY OVERVIEW AND NEW DESIGNS

Session Chairpersons: Rebecca Maitland, Consultant
Tere Sonne, Moffatt & Nichol

0930 19510 LNG Imports Into North America and Implications
M. Juden, T. Inglesby, S. Bodden, McKinsey & Company

0952 19636 LNG Terminal Expansions: Working Successfully Within a Live Plant
D. Tennison, Southern Natural Gas

1014 19658 Critical Parameters for LNG Marine Terminal Site Selection
T.R. Sonne, Moffatt & Nichol; J.G. Bomba, Technip

1036 19439 Engineering Considerations for Offshore FSRU LNG Receiving Terminals
R. Ho, Moffatt & Nichol

1058 19306 Update on LNG Facility Construction
J. Scotti, T. Phalen, Fluor Corporation

1120 19662 Overview of the LNG World Industry
W.R. True, Oil and Gas Journal

1142 19339 Trends and Technologies in LNG Carriers and Offshore LNG Facilities
Y.M. Lee, T. Cho, O.Y. Kwon, Daewoo Shipbuilding & Marine Engineering Company

Tuesday, 6 May, 0930 to 1200

610

ADVANCES IN DEEPWATER DRILLING TECHNOLOGY

Session Chairpersons: Tom Gee, Weatherford International
Kieran Kavanagh, MCS

0930 19251 Fatigue Life Assessment of a Drilling Riser Containing Corrosion Pits
A.C. Benjamin, D.S. Cunha, G.C. Campello, F.E. Roveri, Petrobras; R.C. Silva, J.N. Guerreiro, LNCC

0952 19656 Solid Expandable Monobore-Openhole Liner Extends 13 3/8-in. Casing Shoe Without Hole Size Reduction for Deepwater Applications
P. York, Weatherford International

1014 19159 Steering Response for Directional Wells in Soft Formations in Deepwater Developments
R. Nygaard, Missouri S&T; R.A. Hartmann, Norske Shell; G. Hareland, University of Calgary; S. Hellvik, AGR-DPT
Tuesday, 6 May, 0930 to 1200

ADVANCE FIELD DEVELOPMENT TECHNOLOGY: DRILLING, MODELING, SIMULATION, DESIGN, AND OPTIMIZATION

Session Chairperson: Daniel Georgi, Baker Hughes

0930 19307 Drilling Through Bitumen in the Gulf of Mexico: The Shallower vs. the Deeper
G. Han, K.C. Hunter, J. Osmond, M.J. Zambonini, Hess Corporation

0952 19550 Overcoming Weight Transfer Challenges in Complex, Shallow, Extended-Reach Wells on Alaska’s North Slope

1014 19455 Mature Offshore Fields Rejuvenation Through Long-Reach Wells and Massive Hydraulic Fracturing: Kitina Case History

1036 19680 Deepwater Gas Fields Development Offshore Egypt: Concept Selection and Installation Aspects
W.F. El-Laithy, Agiba Petroleum Company; M. Gaber, Burullus Gas Company

1058 19451 Multilateral Wells To Improve Production Performance in Heavy-Oil Reservoirs: The Challenges of the ZAM-408ML Well
L. Tealdi, D. Baldini, A. Baioni, L. Riccobon, G. Obondoko, H. Malonga, F. Itoua Konga, D. Isella, F. Okassa, M. Rampoldi, Eni Congo

1120 19316 Modeling Overburden Stress Change Due to Compaction of Stacked Reservoirs, and Application of Model Results in 4D-Seismic and Infill Drilling
P.M. Schutjens, K.O. Hindriks, J. Van der Horst, C. Collins, Shell

1142 19320 Changing Reservoir Drill-In Fluids and Completion Strategies To Drill Sensitive Shale Reservoirs in High-Angle Wells in Bohai Bay
M.A. Dick, M-I Swaco; J.D. McRae, Kerr-McGee China Petroleum; D.M. Bump, Anadarko Petroleum Corporation; E.J. Van Dike, Kerr-McGee Oil & Gas Corporation; G.B. Phillips, M-I Swaco; C. Aldea, Smith

Tuesday, 6 May, 0930 to 1200

MARINE GEOHAZARDS

Session Chairpersons: Craig Scherschel, BP
Rick Burrell, ExxonMobil

0930 19173 Reducing the Impact of Submarine Debris Flow on Pipelines
A. Zakari, International Centre for Geohazards; K. Hoeg, F. Nadim, Norwegian Geotechnical Institute

0952 19280 Measured Swabbing Pressures and Implications for Shallow Gas Blowout
S. Kortekaas, J. Peuchen, Fugro

1014 19319 Geohazard Assessment and Avoidance on the GAZA Marine Subsea Development
N. Willis, Inetc Engineering (UK); E.J. Parker, D’Appolonia; I. Howard, BG BG

1036 19563 Geohazard Challenges of the Woodside OceanWay LNG Development, Offshore Southern California
P.J. Hogan, Fugro; A. Lane, Woodside Energy; J. Hooper, Fugro-McClelland Marine Geosciences; A. Broughton, Fugro; B. Romans, Stanford University

1058 19600 North Falkland Basin Palaeo Mega Furrows: Preliminary Investigations and Geohazard Potential
J.E. Gale, K.A. Day, RPS Energy

1120 19535 Modern Deepwater Site Investigation: Getting It Right the First Time

1142 19496 Impact on Wellsite Selection and Facilities Location/Fluid and Gas Expulsion: Impacts on Seafloor Geology and Biology
H.H. Roberts, Louisiana State University; W.W. Shedd, J.L. Hunt, Minerals Management Service
Tuesday Afternoon

Tuesday, 6 May, 1400 to 1630
306
GENERAL SESSION: PETROLEUM—ENERGY OF THE FUTURE

Moderators: Mohamed Hamel, OPEC
Hasan Qabazard, OPEC

Tuesday, 6 May, 1400 to 1630
604
ARCTIC OFFSHORE PROJECTS AND TECHNOLOGIES

Session Chairpersons: Nina Rach, Oil and Gas Journal
Chandler Wilhelm, Shell E&P Company

1400 19526 Oooguruk Project Field Development Concept and Execution
J.D. Hall, Pioneer Natural Resources USA

1422 19343 Alaskan Beaufort Sea Exploration and Production Islands: Civil Design and Construction
J. Lucas, Sandwell; D.M. Masterson, Chevron Canada Resources; J.D. Hall, Pioneer Natural Resources Alaska; C.J. Perry, Perry Group

1444 19353 Oooguruk Offshore Arctic Flowline Design and Construction
G.A. Lanan, Intec Engineering; D.H. Maguire, B. Hazen, Northern Construction Engineering; J.D. Hall, Pioneer Natural Resources Alaska; C.J. Perry, Perry Group

1506 19359 Specialized AC Drilling Rig for Arctic Offshore Drilling Applications
J.R. Neason, Nabors Alaska Drilling

1528 19369 Waves, Ice, and River Discharge: Coastal Engineering Design of Arctic Offshore Production Facilities
C. Leidersdorf, P.E. Gadd, G.E. Hearon, Coastal Frontiers Corporation

1550 19275 Ice Management With Icebreakers in Support of Floating Platforms
A.J. Keinonen, E.H. Martin, AKAC

1612 19131 Safe and Environment Friendly Offshore Loading Systems for Arctic Conditions
R. Grindheim, K. Grenlee, J. Hovik, J.M. Grindheim, Aker Kvaerner Pusnes

Tuesday, 6 May, 1400 to 1630
602
RONCADOR FIELD DEVELOPMENT OVERVIEW: A CASE IN DEEP WATER

Session Chairpersons: Sandeep Khurana, Devon Energy Corporation
Jacques Braile Salies, Petrobras America

1400 19254 An Overview of the Roncador Field Development: A Case in Deepwater Production
V.C. Barbosa, R. Dias, Petrobras

1422 19296 Reservoir Aspects and Well Development Strategy
P.P. Neves, M.K. Mihaguti, Petrobras

1444 19291 Challenges of Flow Assurance in the Roncador Field

1506 19274 Development of Subsea Facilities in the Roncador Field (P-52)
J.T. Lima, M.L. Kuppens, P.F. Stock, P.F. Silveira, Petrobras
Tuesday, 6 May, 1400 to 1630

INVITED ORGANIZATION: SOCIETY FOR UNDERWATER TECHNOLOGY (SUT)

Session Chairperson:  Enda O'Sullivan, MCS

1400 19703 High-Integrity Pressure Protection Systems Development for the Gulf of Mexico: Update on DeepStar, API 170, and Industry Developments
C.J. Lindsey-Curran, BP

1422 19704 Sandwich Pipes for Ultradeepwater Applications
X. Castello, S.F. Estefen, University Federal Rio de Janeiro

1444 19705 Disconnectable FPSOs: Management and Experience From Australia Applied to Other Locations
E. O'Sullivan, MCS; M. Witton, Bentonic Consulting; J. Winkle, BHP Billiton

1506 19706 Subsea Challenges in Australia
C. Lawlor, Woodside Energy

1528 19707 Diverless Maintained Cluster Subsea Architecture: 14 Years of Experience
P.M. Roberts, J. White, R. Tucker, VerdErg

1550 19708 Developments in Underwater Technology and the Role of the Learned Society
I.N. Gallet, Society for Underwater Technology

1612 19709 Installing Disconnectable Turrets and Offloading Buoy
B.K. Green, BSW; K. McClure, Nexen Petroleum UK

Tuesday, 6 May, 1400 to 1630

PANEL: CO2 SEQUESTRATION IN THE OFFSHORE ENVIRONMENT: CHALLENGES, OPPORTUNITIES, AND SOLUTIONS

Moderators:  Joseph Reilly, ExxonMobil Upstream Research Company
             Klaas Koster, Shell International E&P

Panelists:  Daniel P. Schrag, Harvard University
             Daniel R. Burns, Massachusetts Institute of Technology
             Kevin J. Dodds, CO2CRC/BP
             Heleen Groenenberg, ECN Policy Studies
             Sally M. Benson, Stanford University

1400 19710 Discussion on CO2 Sequestration
J.M. Reilly, ExxonMobil Upstream Research Company

Tuesday, 6 May, 1400 to 1630

NEW APPROACHES TO MANAGING PRODUCTION FLOW

Session Chairpersons:  Tom Danielson, ConocoPhillips
                      Joel Olener, PSR Group

1400 19525 Virtual-Metering Technology Field Experience Examples
P. Haldipur, G.D. Metcalf, Multiphase Solutions

1422 19140 Oilwell Testing by Injection of Miscible Fluid
J.J. Voelker, Chevron Corporation; N.C. Last, Sigma Oilfield Consulting

1444 19152 Evaluation of PhaseWatcher MPFM Performance in Sour Environments
M.N. Al-Khamis, A.F. Al Bassam, Saudi Aramco; M.N. Aftab, Z. Bakhteyar, Schlumberger

1506 19347 Leak Detection in Subsea Pipeline: A Mechanistic Modeling Approach With Fixed-Pressure Boundaries
S.I. Kam, Louisiana State University; R.N. Gajbhiye
Tuesday, 6 May, 1400 to 1630

WELL-COMPLETION TECHNOLOGY: HP/HT

Session Chairpersons: Riley Goldsmith, Goldsmith Engineering
                     Himanshu Gupta, BP

1400  19621 Development of a High-Temperature Rechargeable Battery for Downhole Use in Petroleum Industry

1422  19264 Diagnosis of Well Performance Degradation on Elgin-Franklin HP/HT Fields Using Only Wellhead Temperature Measurements
      G. Joffroy, Total E&P UK

1444  19201 Titanium Alloy Tubing for HP/HT Applications
      M.E. Gonzalez, Chevron ETC; J.W. Skogsberg, Consultant; J.L. Kuberry, D.E. Reeves, Hunting Energy Service

1506  19366 Effects of Startup and Shutdown of HP/HT Wells on Wellbore Hydraulic Control-Line Design
      C. Zhao, P.K. Notz, Technip Offshore

1528  19544 Structural Optimization of Subsea Pressure Vessel Equipment for HP/HT Application With a Design by Analysis: Case Study of a Typical BOP
      S.I. Khandoker, P. Huff, G. Landthrip, Hydril Company

1550  19286 Real-Time Casing Annulus Pressure Monitoring in a Subsea HP/HT Exploration Well
      J.P. Faget, N.W. Sultan, J. Sinet, Total; D.G. Fyfe, Metrol Technology; M. Fjeldheim, Total

1612  19632 Lessons Learned on the Openhole Completions for the Two HP/HT Retrograde Gas-Condensate Fields Using Expandable Liner Hangers, External Sleeve Inflatable Packer Collars, and Swell Packers for Zonal Isolation
      J.W. Williford, Halliburton; I. Nizam, KNOC Vietnam; D.C. Lim, Halliburton; Y. Kim, K. Kwang, B. Murugappan, Korea National Oil Corporation; A.T. Jackson, Halliburton

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Wednesday Morning

Wednesday, 7 May, 0930 to 1200

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PANEL: NEW WAVES IN THE GULF OF MEXICO

Moderators:  Sandeep Khurana, Devon Energy Corporation
             Thomas Miller, Chevron Corporation

Panelists:
Russ Ford, Vice President Technical, EP Americas, Shell
Darrell Hollek, Vice President, GOM Operations, Anadarko
Chris Oynes, Associate Director, MMS
Brian Smith, General Manager, Major Capital Projects, Chevron
Niel Shaw, Senior Vice President, Exploration and Production, BP

0930 19259 New Waves in the Gulf of Mexico
      S. Khurana, Devon Energy Corporation; T. Miller, Chevron Corporation

Wednesday, 7 May, 0930 to 1200

604
IMPACT OF FATIGUE ON DEEPWATER DEVELOPMENT

Session Chairpersons:  Robert McCavitt, Chevron Corporation
                       Jean-Francois Saint-Marcoux, Acergy

0930 19192 Improvement of Fatigue Life of Steel Catenary Risers and Oil Offloading Lines in West Africa
      D. Bertaso, G. Hutt, P. Tews, Acergy

0952 19240 Structural Integrity of Girth Welds in Deepwater Pipelines and SCRs
      M. Cheaitani, TWI

1014 19249 Influence of Fatigue Issues on the Design of SCRs for Deepwater Offshore Brazil

1036 19298 Enhanced Fatigue Methodologies for Flexible Risers and Applications for Brazilian Offshore Conditions
      O. Serta, MCS; C.D. Lemos, A.G. Vaillant, Petrobras; C.R. Neves, C.T. Sanches, R.J. Smith, MCS

1058 19425 Fatigue in Deepwater Steel Catenary Risers: A Probabilistic Approach for Assessment of Risk
      T.K. Sen, Kellogg Brown & Root

1120 19443 Managing Fatigue in Deepwater Flexible Risers
      N.R. Nielsen, N. Weppenaar, D. De la Cour, C. Kristensen, NKT Flexibles

1142 19198 Polyester Moorings: Is Insert Recovery and Testing the Best Way To Determine Rope Integrity?
      R.R. Ayers, Stress Engineering Services; N. O’Hear, Tension Technology International

Wednesday, 7 May, 0930 to 1200

602
FLOW ASSURANCE: IMPACT ON FIELD DEVELOPMENT

Session Chairpersons:  Matthew Lamey, Anadarko Petroleum Corporation
                       Wade Schoppa, Shell Global Solutions

0930 19624 Design and Initial Results of EOR and Flow-Assurance Laboratory Tests for K2 Field Development
Wednesday, 7 May, 0930 to 1200
312
toward the instrumented oilfield: emerging geophysical technologies

Session Chairpersons: Rocco Detomo, Shell International E&P Company
                      Shuki Ronen, Chevron Corporation

0930 19391 Fiber-Optic Reservoir Monitoring: Field Trials and Results
      J. Langhammer, H. Nakstad, M. Eriksrud, A. Berg, E. Ronnekleiv, O. Waagaard, Optoplan; M. Thompson, Statoil

0952 19383 Focused Seismic Monitoring on the Snorre Field
      M. Thompson, M. Andersen, O. Lyse, Statoil

1014 19445 4C Fiber-Optic Permanently-Installed Sensor Cable for Seismic Reservoir Monitoring
        S. Maas, B. Bunn, Petroleum Geo-Services

1036 19691 Emerging Geophysical Technologies: Is Planting and Replanting of Nodes in a 4C-4D Scenario the Optimum and Most Cost-Effective Solution for Field Reservoir Monitoring?
      E. Berg, Seabed Geophysical; C. Vuillermoz, CGG Integrated Studies; G. Woje, Seabed Geophysical; G. Ekmann, Seabed

1058 19678 Optimum Optical Architectures for Seismic Reservoir Monitoring
      A. Strudley, Stingray Geophysical

1120 19693 Emerging Geophysical Technologies: Downhole Microseismic Reservoir Monitoring—A New Instrumentation Technology for Monitoring the Digital Oil Field
      S. Wilson, G. Le Floch, R. Jones, Schlumberger

1142 19213 Acoustic Signatures of Crossflow Behind Casing for Monitoring Production in Commingled Reservoirs
      A. Bakulin, Shell International E&P; V. Korneev, Lawrence Berkeley Laboratory

Wednesday, 7 May, 0930 to 1200
610
panel: alternative energy—what does the future offer?

Session Chairpersons: David Kanagy, Executive Director, SME
                      George Luxbacher, President Elect, SME

The panel will examine the future of selected alternative energy sources such as natural gas, tar sands, nuclear energy, wind, and tidal. The participants will highlight the relative advantages and disadvantages of each as well as the economic, political, and environmental issues associated with them.

Panelists: Mike Ashar, SunCor
          Ahmed Hashmi, BP-UK
          David Eppinger, Fluor Corporation

1058 19491 Alternative Energy Sources
      G.L. Richardson, Consultant

Wednesday, 7 May, 0930 to 1200
606
hydrates: geology and resource assessment

Session Chairpersons: George J. Moridis, Lawrence Berkeley Laboratory
                      Hideo Narita, National Institute of Advanced Industrial Science and Technology

0930 19241 Geology of Marine Gas Hydrates and Their Global Distribution
      T.S. Collett, US Geological Survey

0952 19519 Four Critical Needs to Change the Hydrate Energy Paradigm From Assessment to Production: The 2007 Report to Congress by the US Federal Methane Hydrate Advisory Committee
      E.D. Sloan, Colorado School of Mines

1014 19414 The Research Path to Determining the Resource Potential of Marine Gas Hydrates
      R. Boswell, US Department of Energy
Wednesday, 7 May, 0930 to 1200

ENVIRONMENTAL CONSTRAINTS ON DEEPWATER WELLS AND FACILITIES SITTING

Session Chairpersons:  Adam Jackson, Chevron
                      Herlinde Mannaerts, BP America

0930  19355  Impact on Well Site Selection and Facilities Location: Developing a Better Bio-Geology Overview and Information Needs for Effective Assessment of the Environmental Risks of Deepwater Oil and Gas Development
        R.S. Carney, LSU

0952  19360  Impact on Wellsite Selection and Facilities Location: Puma, a Cornucopia of Deepwater Geohazards
        R.J. Weiland, G.P. Adams, R.D. McDonald, L.M. Wills, BP

1014  19358  AUV and ROV Data Integration To Identify Environmentally Sensitive Areas in Deep Water
        A.T. Hewitt, J. Smith, Fugro; R.J. Weiland, BP

1036  19356  Impact on Wellsite Selection and Facilities Location: Integrated Site Investigation of Seafloor Features and Associated Fauna, Shenzi Field, Deepwater Gulf of Mexico

1058  19348  Geophysical and Visual Identification of Chemosynthetic Communities Near Perdido Canyon
        T.W. Neurauter, Geoscience Earth & Marine Service

1120  19352  Environmental Constraints on Deepwater Wells and Facilities Sitting
        E.C. Cauquil, Total; J. Adamy, Sage Geodia

1142  19461  Improved Assessment of Chemosynthetic Community Presence in Areas of Potential Deepwater Oil and Gas Development by Modification of Routine Sampling Methods

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Wednesday Afternoon

Wednesday, 7 May, 1400 to 1630
306
GENERAL SESSION: GLOBAL ENERGY OUTLOOK—WHAT ARE THE CHALLENGES?

Moderators: Ahmed Atif Hashmi, OPEC  
Melanie Kenderdine, Massachusetts Institute of Technology

To meet today’s and tomorrow’s energy needs, all available energy sources must be accessed, enhanced, and utilized in both the developed and developing world. The questions that have captured many news headlines worldwide are: Why are oil and gas prices at their current level, and what are the challenges ahead to provide sustainable and affordable supplies of oil and natural gas? Some of the challenges ahead include new technological developments that increase exploration, enhance oil recovery, and reduce costs; uncertainty of future supply and future investments; tightness in the downstream refining sector; access to resource; rising project costs; environmental concerns such as CO2; and government energy policy and its role in protecting companies’ assets and providing skilled labor resources.

Panelists: Martin Craighead, Group President, Baker Hughes  
William Davie, CFO, Schlumberger  
James A. Slutz, Deputy Assistant Secretary for Oil and Gas, US Department of Energy  
Nick Lampson, Chair of the Energy Committee, US Congressman

Wednesday, 7 May, 1400 to 1630
604
ACG PROJECT IN CASPIAN SEA

Session Chairpersons: John Bomba, Technip  
Sandeep Khurana, Devon Energy Corporation

1400 19235 ACG Program: Performance Enabled Through a Production Line of Standardized Concepts and Components Delivered at Scale
B. Luberski, N. Shaw, M. Brown, A. Luckins, G. Withers, BP Exploration Caspian Sea

1422 19236 ACG Topside Design and Fabrication
C.L. Kearney, M. James, BP Exploration Caspian Sea; G. Tate, T. Nethercott, KBR

1444 19218 ACG Jacket Design and Fabrication
R. Ciezarek, KBR; A.D. Penman, A. Cormack, BP Exploration Caspian Sea; R. Mackie, BOS Shelf; G. Tate, KRB

1506 19238 ACG Phase-3 Subsea Water-Injection Scheme
A. Richmond, P. Barralet, BP Exploration Caspian Sea

1528 19447 ACG Onshore Terminal Expansion
N. Ingram, J. Sutcliffe, J. Lilley, BP Exploration Caspian Sea; D. Ellis, KBR

1550 19237 ACG Marine Delivery
F. Wilson, A. Munro-Kidd, BP Exploration Caspian Sea

1612 19217 ACG Offshore Platforms Temporary Pin-Pile Foundations
N. Kitney, A.D. Penman, BP

Wednesday, 7 May, 1400 to 1630
602
FLOW ASSURANCE: SOLIDS MANAGEMENT
Session Chairpersons: Tom Sifferman, ETTP Consulting  
Aditya Singh, Total E&P

1400 19690 Mechanism and Simulation of Asphaltene Deposition  
J.L. Creek, Chevron ETC

1422 19247 Developing Hydrate Monitoring and Early-Warning Systems  
B. Tohidi, A. Chapoy, J. Yang, F. Ahmadloo, I. Valko, Heriot-Watt University; Z.M. Zain, Petronas

1444 19160 Design Challenges Due to Wax on a Fast-Track Deepwater Project  
A.T. Alwazzan, AMEC Paragon; M.W. Utgard, Paragon Engineering Companies; D. Barros, Petrobras

1506 19514 Predicting When and Where Hydrate Plugs Form in Oil-Dominated Flowlines  

1528 19505 Two Field Case Studies Demonstrate That New LDHI Chemistry Performs Even at High Water Cuts Without Impacting Oil/Water Quality  
R.R. Alapati, J. Lee, D. Beard, Champion Technologies

1550 19634 Hydrates Blockage Experience in a Deepwater Subsea Dry-Gas Pipeline: Lessons Learned  
M. Kane, A.P. Singh, Total E&P

1612 19154 Application of Paraffin Inhibitor Treatment Programs in Offshore Developments  
M.E. Newberry, Baker Petrolite Corporation; D.W. Jennings, Welchem

Wednesday, 7 May, 1400 to 1630

312 ELECTROMAGNETICS: OUT OF THE LABORATORY AND INTO THE BOARDROOM

Session Chairpersons: David Ridyard, emgs  
Larry Scott, Global Geophysical Services  
Daniel Orange, Black Gold Energy

1400 19370 High Grading Prospect Portfolios Using EM Data  
J. Willoughby, Shell International E&P

1422 19295 On the Use of EM Technology in the Exploration Decision-Making Process  
J. Mohr, C. Guargena, W. Svellingen, S. Sorensen, Aker Exploration

1444 19702 Application of Electromagnetic Scanning to an Australian Frontier Basin With Complex Bathymetry  
D.J. Monk, J. Ross, Apache; F. Roth, emgs

1506 19541 Marine Transient Controlled-Source Electromagnetics: A Novel Marine Electromagnetic Technique—Results From BP's Egypt Field Trial  
D. Meaux, S. Li, L. Thomsen, A. Sharma, BP

1528 19188 Reservoir Characterization Through Joint Interpretation of EM, Seismic, and Well-Log Data  
L. MacGregor, OHM; P. Harris, Rock Solid Images; D. Andreis, OHM

1550 19659 Marine Magnetotelluric Data Interpretation in the Gulf of Mexico for Subsalt Imaging  
S.K. Sandberg, T. Roper, T. Campbell, WesternGeco Electromagnetics

1612 19421 Seabed Logging Survey Design Optimization Using Grid Modeling  
J.E. Danielsen, A.H. Bhuiyan, emgs

Wednesday, 7 May, 1400 to 1630

610 DEEPWATER MARGINAL FIELDS: OVERCOMING THE CHALLENGES

Session Chairpersons: Greg Carter, Nautilus Offshore Company  
Mauricio Werneck, Petrobras

1400 19517 Installation-Driven Field Developments for Deepwater Subsea Projects  
M.A. Dixon, DeepSea Engineering & Management

1422 19642 The Next Major Challenge for Deep Water: Developing Marginal Fields  
K.K. Millheim, Global Drilling Fluids

1444 19511 Deepwater Horizontal ESP Pumping Station Development  
L. Farestvedt, FMC Technologies; M. Neto, Petrobras
Wednesday, 7 May, 1400 to 1630

606 HYDRATES: LABORATORY STUDIES FOR HYDRATE PROPERTY DETERMINATION

Session Chairpersons: Masanori Kurihara, Japan Oil Engineering Company
E. Dendy Sloan, Colorado School of Mines

1400 19284 Estimation of the In-Situ Permeability of Nankai Trough Hydrate Bearing Sediments From PTCS Core Measurements
T. Ebinuma, K. Suzuki, H. Narita, National Institute of Advanced Industrial Science and Technology

1422 19536 Hydrate Relative Permeability of Methane-Hydrate-Bearing Sand
T.J. Kneafsey, Y. Seol, Lawrence Berkeley National Laboratory; A. Gupta, Shell; L. Tomutsa, Lawrence Berkeley Laboratory

1444 19305 Relation Between Permeability and Pore-Size Distribution of Methane-Hydrate-Bearing Sediments

1506 19379 Estimation of Thermal Properties of Methane-Hydrate Sediment
Y. Yamamoto, M. Ohtake, T. Kawamura, National Institute of Advanced Industrial Science and Technology; T. Tsuji, College of Industrial Technology, Nihon University; Y. Tsukada, National Institute of Advanced Industrial Science and Technology

1528 19601 Borehole Pressure Coring and Laboratory Pressure-Core Analysis for Gas Hydrate Investigations
G.D. Humphrey, Fugro-McClelland Marine Geosciences

1550 19376 Dissociation Rate Analysis From Methane-Hydrate-Bearing Core Samples by Using Depressurization or Depressurization With Well-Wall Heating Method
H. Oyama, T. Ebinuma, J. Nagao, K. Suzuki, H. Narita, National Institute of Advanced Industrial Science and Technology; Y. Konno, Y. Masuda, University of Tokyo

1612 19326 Thermodynamic Conditions and Kinetics of Integrated Methane Recovery and Carbon Dioxide Sequestration
B. Tohidi, J. Yang, A. Chapoy, Heriot Watt University; P.S. Jadhawar, University of Adelaide

Wednesday, 7 May, 14:00 to 16:40

600 OFFSHORE ENVIRONMENT AND STRUCTURAL RESPONSE

Session Chairpersons: Ian Chu, Kellogg Brown & Root
Jason Newlin, Shell Oil Company

1400 19565 Monitoring of Floating Offshore Installations' Wave Frequency Motions
P. Liagre, H. Gupta, H. Banon, BP

1422 19618 The Case Against Severe Cold Eddies
C.K. Cooper, Chevron ETC

1444 19413 Life and Times of Eddy Zorro: A Review of the 2007 Gulf of Mexico Loop Current Activity
S.P. Anderson, P.D. Coholan, Horizon Marine; S. Frolov, Accurate Environmental Forecasting

1506 19477 A Methodology for Derivation of Motions of Offshore Platforms From Accelerometers and GPS Field Measurements
V. Gkaras, H. Gupta, H. Banon, BP; P.D. Spanos, Rice University

1528 19180 A Riser and Mooring-Monitoring System for Floating-Production Systems
T.J. Brown, BP; A. Smith, SRD

1550 19534 Analyses and Measurements of Conductor Response for Jack-Up Drilled Wells in 110 m Water Depth in Harsh Environments
A. North, Noble Denton Consultants; M. Baerheim, Statoil; O. Steinkjer, Det Norske Veritas

1612 19429 A Coupled FE-SPH Approach for Simulation of Structural Response to Extreme Wave and Green-Water Loading
J. Campbell, R. Vignjevic, M.H. Patel, Cranfield University

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Thursday morning

Thursday, 8 May, 0930 to 1200

306

OFFSHORE STRUCTURES STANDARDS: A NEW ERA

Session Chairpersons: Subir Bhattacharjee, ExxonMobil Upstream Research Company
Robert Spong, Energo Engineering

0930 19605 ISO 19900 Series: Offshore Structures Standards
R.O. Snell, BP Exploration; D.J. Wisch, Chevron ETC

0952 19604 ISO 19901-xx, General Standards: The Why and How
D.J. Wisch, Chevron ETC

1014 19608 ISO Floating and Fixed Standards ISO 19902, ISO 19903, and ISO 19904
D.N. Galbraith, D.J. Wisch, Chevron ETC

1036 19606 Changing Times
D.J. Wisch, Chevron ETC; A. Mangiavacchi, Experia Consulting

1058 19602 Development of API RP2 Met: The New Path for Metocean
J.B. Stear, Chevron

1120 19603 API RP 2T and RP 2 FPS: Moving Forward
S.J. Leverette, Atlantia Offshore; D.J. Wisch, Chevron ETC

1142 19607 API RP 2 SK: Station Keeping—An Emerging Practice
D.J. Petruska, BP; D.J. Wisch, Chevron ETC

Thursday, 8 May, 0930 to 1200

604

GEOTECHNICAL ISSUES FOR RISERS AND FLOWLINES

Session Chairpersons: Robert Gilbert, University of Texas at Austin
James Murff, Texas A&M University

0930 19589 Pipe/Soil Interaction With Flowlines During Lateral Buckling and Pipeline Walking: The Safebuck JIP
D.A. Bruton, Boreas Consultants; M. Bolton, Cambridge University; D. White, M. Carr, Boreas Consultants

0952 19493 Interaction Model for Steel Compliant Riser on Soft Seabed
C.P. Aubeny, G. Biscontin, Texas A&M University

1014 19432 Riser Seafloor Interaction Using Explicit Finite Element Methods
P. Jacob, MMI Engineering; P.P. Sharma, DnV Energy

1036 19261 Flowline and Riser: Soil Interaction in Plastic Clays
H. Dendani, Total

1058 19219 Reassessment of P-Y Curves for Soft Clays From Centrifuge Testing and Finite Element Modeling
P. Jeanjean, BP; J.S. Templeton, Sage USA; E. Clukey, E.A. Liedtke, BP

1120 19128 Pipeline Embedment in Deep Water: Processes and Quantitative Assessment
M.F. Randolph, D. White, University of Western Australia

1142 19303 Long-Term Soil Stiffness for Assessment of Fatigue for Steel Catenary Risers at Touch-Down Point
E.C. Clukey, BP Exploration; A.G. Young, Geoscience Earth & Marine Service
### Thursday, 8 May, 0930 to 1200

#### 602

**MEETING THE CHALLENGES OF ULTRADEEPWATER PIPELINE INSTALLATIONS**

**Session Chairpersons:** Robert McCavitt, Chevron Corporation  
Skipper Strong, J. Ray McDermott Engineering

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<td>Strain Criteria for Deepwater Pipe Laying Operations</td>
<td>I. Frazer, D. Perinet, Acergy</td>
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<td>19400</td>
<td>Advancements in Response Prediction Methods for Deepwater Pipe-In-Pipe Flowline Installation</td>
<td>D. Lang, R. O'Grady, MCS; H. Bakkenes, Heerema Marine Contractors; A. Connaire, MCS</td>
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<td>Jet-Induced Trenching Operations: Mechanisms Involved</td>
<td>J. Vanden Berghe, Fugro Engineers; H. Capart, National University of Taiwan</td>
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<td>C. Traverso, E.J. Parker, D'Appolonia; R. Moore, Halcrow Group; T. Evans, BP</td>
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<td>A Novel Method for Coiled-Tubing Installation</td>
<td>P. Simpson, S. Hatton, 2H Offshore</td>
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### Thursday, 8 May, 0930 to 1200

#### 312

**SUBSEA PROCESSING**

**Session Chairpersons:** Peter Metcalf, J P Kenny  
Sandeep Khurana, Devon Energy Corporation

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<td>G. Mogseth, FMC Technologies</td>
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<td>Technical Challenges and Production Forecast for Subsea-Compression System</td>
<td>B. Oiungen, F. Gustavsson, R. Morgan, J. Solvik, DNV</td>
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<td>Electric/Hydraulic vs. All-Electric Subsea Control: A Risk-Based Comparison From the Ormen Lange Subsea-Compression Development</td>
<td>K.A. Joergensen, Det Norske Veritas; K. Haram, Hydro; F. Gustavsson, A. Stokke, Det Norske Veritas</td>
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<td>Extending the Use of Conventional Construction Technology for the Installation of Subsea Production Facilities in Deep Water</td>
<td>O. Vennemann, Acergy; R. Tornqvist, DNV</td>
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<td>The Pipe Separator: Simulations and Experimental Results</td>
<td>S. Sagatun, P. Gramme, G.H. Lie, StatoilHydro; T. Gilhuus, Norsk Hydro; T. Ruud, O.J. Horgen, M. Storvik, FMC Technologies</td>
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<td>Improving Reliability and Reducing Intervention Costs of Ultradeep Subsea Technology at the Design Stage</td>
<td>P. Fanailoo, G. Andreassen, Det Norske Veritas</td>
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### Thursday, 8 May, 0930 to 1200

#### 610

**MODERN LNG MARINE TERMINALS**

**Session Chairpersons:** George Montgomery, J. Ray McDermott Engineering  
Karl Gerdes, Chevron
0930  19267  Preparing the Way for Future Offshore LNG Marine Terminals  
P.J. Cox, Technip  

0952  19405  Qualification of a New Flexible-Hose-Based LNG Transfer System at the Gaz de France Montoir-de-Bretagne LNG Terminal  
G. Rombaut, A. Peigne, Gaz de France  

1014  19396  Lightening the Load, LNG  
Y. Mason, FenderCare Marine  

1036  19337  Marine Support to Offshore LNG Terminals  
J. Gourmelon, Tidewater Marine  

1058  19239  Innovative Pipe System for Offshore LNG Transfer  
C. Frohne, F. Harten, Nexans Deutschland Industries  

1120  19551  Onshore vs. Offshore LNG Import Facilities: Commercial Advantages and Limitations  
H.K. Danielsen, G. Andreassen, Det Norske Veritas  

1142  19351  Industry Experience Strengthens Guidance for Offshore LNG Terminals  
I. Simpson, H.N. Patel, P.G. Rynn, ABS  

Thursday, 8 May, 0930 to 1200  
606  

HYDRATES: GAS PRODUCTION STRATEGIES AND PROCESSES  

Session Chairpersons:  Ray Boswell, US Department of Energy  
E. Dendy Sloan, Colorado School of Mines  

0930  19382  Prediction of Gas Productivity From Eastern Nankai Trough Methane-Hydrate Reservoirs  
M. Kurihara, A. Sato, H. Ouchi, Japan Oil Engineering Company; H. Narita, National Institute of Advanced Industrial Science and Technology; Y. Masuda, University of Tokyo; T. Saeki, T. Fujii, Jogmec  

0952  19554  Sensitivity Analysis of Gas Production From Class 2 and Class 3 Hydrate Deposits  
M.T. Reagan, G.J. Moridis, K. Zhang, Lawrence Berkeley National Laboratory  

1014  19283  Field-Scale Simulation for Compaction and Gas Production Behavior During Depressurization Process of Methane Hydrate in Marine Sediments  
Y. Sakamoto, T. Komai, N. Tenma, T. Yamaguchi, National Institute of Advanced Industrial Science and Technology  

1036  19435  Field-Scale Studies on the Enhanced Performance of Class 2 and Class 3 Hydrate Deposits Through Coproduction With Conventional Gas  
G.J. Moridis, M.T. Reagan, K. Zhang, Lawrence Berkeley National Laboratory  

1058  19433  Improvement of Near-Wellbore Permeability by Methanol Stimulation in a Methane Hydrate Production Well  
Y. Masuda, Y. Konno, University of Tokyo; T. Kawamura, National Institute of Advanced Industrial Science and Technology; M. Kurihara, H. Ouchi, Japan Oil Engineering Company  

1120  19458  Numerical Simulation of Methane-Hydrate Production From Geologic Formations by Carbon Dioxide Injection  
M.D. White, B.P. McGrail, Pacific NW National Laboratory  

1142  19568  Use of Analytical Models and Monte Carlo Simulation for Quantification of Uncertainties Associated With Gas Production From Type I Hydrate Reservoirs  
M. Pooladi-Darvish, S. Gerami, Fekete Associates  

Thursday, 8 May, 0930 to 1200  
600  

WELL COMPLETION EQUIPMENT AND METHODS  

Session Chairpersons:  Riley Goldsmith, Goldsmith Engineering  
Ryan Dornak, Weatherford International  

0930  19623  New Reservoir Testing/Sampling System Reduces Costs and Improves Real-Time Data Acquisition in Deepwater and Environmentally Sensitive Wells: Gulf of Mexico Case Histories  
E.A. Almanza, H. Kool, M.A. Salguero, Halliburton
Thursday afternoon

Thursday, 8 May, 1400 to 1630

604

VIV

Session Chairperson: Dan Smith, Mustang Engineering

1400  19670  Full-Scale VIV Response Measurements of a Drillpipe in Gulf of Mexico Loop Currents
       P.A. Beynet, M. Campbell, R.B. Shilling, BP; E. Tellier, 2H Offshore

1422  19373  Fairings vs. Helical Strakes for Suppression of Vortex-Induced Vibration: Technical Comparisons
       D.W. Allen, L. Lee, D. Henning, Shell

1444  19374  Fairings vs. Helical Strakes for Suppression of Vortex-Induced Vibration: Installation,
              Maintenance, and Economic Considerations
       D.W. Allen, C. West, L. Lee, D. Henning, Shell

1506  19289  Effectiveness of Polyethylene Helical Strakes in Suppressing VIV Responses After Sustaining
              High Roller-oad Damage During S-Lay Installation
       R. Boubenider, Stress Engineering Services; K. Alptunaer, Eni Petroleum Company; P.J. Fourchy,
              Murphy E&P Company; J. De Wilde, Marin

1528  19161  Tests With a Flexible Pseudofairing To Reduce Riser Drag, Suppress VIV, and Limit Drilling
              Downtime
       R. King, RKconsulting; A. Brown, Allbrown Universal Components

1550  19591  Vortex-Induced Vibrations of Marine Risers
       A.E. Spiller, Texas A&M University at Galveston

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PROJECT EXPERIENCE ON FLOATOVER DECKS

Session Chairperson: Sandeep Khurana, Devon Energy Corporation

1400  19230  Floatover of Arthit APP Deck
       A. Kocaman, D. Kim, J. Seto, J. Ray McDermott

1422  19227  Topside and Jacket Modeling for Floatover Installation Design
       J. Hamilton, R. French, KBR; A.D. Penman, BP; P. Rawstron, KBR

1444  19300  Arthit Field Development: Floatover Hardware Design and Issues
       B. Tan, J.A. Haney, B. Leow, S. Sahasrabudhe, J Ray McDermott

1506  19231  New Floatover Hardware
       D. Kim, A. Kocaman, J. Seto, J. Ray McDermott

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FROM DRILLING TO PRODUCTION: ALL OF THE ABOVE

Session Chairperson: Gamal Hassan, Baker Hughes

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       J.P. Davis, BP; R. Butcher, Fugro Chance; M. Taylor, R.D. Lynch, BP; R. Simpson, Fugro Chance; T.
       Philips, BP; G. Openshaw, PanGeo Subsea
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LNG TECHNOLOGY 2008

Session Chairpersons: Tom Rodkey, Hydrocarbon Processing Solutions
Jack Smart, John Smart Consulting Engineers

1400 19393 Heavy Production Platform for Offshore LNG Development
J. Cholley, P.A. Thomas, G. Lebois, P. Maniere, Technip

1422 19450 The Impact of the Use of the Full QTF on LNG Moored in Shallow Water
C. Brun, F.C. Rezende, Bureau Veritas; M. Naciri, Single Buoy Moorings; J. Mombaerts, Bureau Veritas

1444 19516 Energy-Based Methodology for Collision Protection for LNG Carriers

1506 19561 A New Experimental Study on the Spreading of Liquid Nitrogen Over Water
F. Gavelli, M.K. Chernovsky, H.K. Kytomaa, Exponent

1528 19630 LNG Terminals: Towards Advanced LNG Offshore Design and Operations
M. Zalar, L. Diebold, F.C. Rezende, Bureau Veritas

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HYDRATES: PRODUCTION-RELATED GEOMECHANICAL AND GEOPHYSICAL PROCESSES

Session Chairpersons: Masanori Kurihara, Japan Oil Engineering Company
George Moridis, Lawrence Berkeley Laboratory

1400 19559 Mechanical Strength and Seismic Property Measurements of HBS During Hydrate Formation and Loading Tests
S. Nakagawa, T.J. Kneafsey, G.J. Moridis, Lawrence Berkeley Laboratory

1422 19277 Mechanical Properties of Natural Gas Hydrate-Bearing Sediments Retrieved From Eastern Nankai Trough
A. Masui, K. Miyazaki, H. Haneda, Y. Ogata, K. Aoki, National Institute of Advanced Industrial Science and Technology

1444 19324 Laboratory Study of Hydraulic Fracturing Behavior in Unconsolidated Sands for Methane Hydrate Production
T. Ito, Tohoku University; A. Igarashi, K. Suzuki, National Institute of Advanced Industrial Science and Technology; S. Nagakubo, M. Matsuzawa, Japan Drilling Company; K. Yamamoto, Japan Oil, Gas & Metals National Company

1506 19572 Coupled Hydrologic, Thermal, and Geomechanical Analysis of Wellbore Stability in Hydrate-Bearing Sediments
J. Rutqvist, G.J. Moridis, Lawrence Berkeley Laboratory

1528 19364 Coupled Soil Deformation-Flow-Thermal Analysis of Methane Production in Layered Methane Hydrate Soils
K. Soga, A. Ng, University of Cambridge; A. Klar, Technion-Israel Institute of Technology

1550 19260 Ultrasonic Wave Velocities Associated With Formation and Dissociation of Methane Hydrate in Artificial Sandy Sediments

1612 19489 Feasibility of Monitoring Gas Hydrate Production With Geophysical Methods
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PIPELINES

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