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OTC Schedule of Events

Schedule as of 15 April 2010. Check back regularly for updates.

Monday, 3 May

- 0700–1700 **Registration** - Reliant Center & Reliant Arena
- 0730–0900 **Ethics/Topical Breakfast** - Reliant Arena, Level 2, Rooms 2 & 3
- 0900 **Coffee** - Reliant Arena
- 0900–1730 **Exhibition** - Reliant Center & Reliant Arena
- 0930–1200 **Technical Sessions** - Reliant Center, Level 2
- 1030–1200 **NEW! Special Session: Marine 3D Seismic Surveys–The Basics** - Reliant Arena, Level 2, Room 2
- 1200–1400 **MMS SAFE Awards Luncheon** - Reliant Center, Level 2, Room 302
New Date! Moved from Thursday to Monday
- 1215–1345 **Topical Luncheons** - Reliant Center, Level 2
- 1400–1630 **General Panel Session** - Reliant Center, Level 2
- 1400–1630 **Technical Sessions** - Reliant Center, Level 2, and Reliant Arena, OTC Theater
- 1500–1600 **Exhibit Refreshments** - Reliant Arena, Exhibit Floor
- 1600–1700 **Spotlight on New Technology Presentation** - Reliant Center, Lobby B Rotunda

Tuesday, 4 May

- 0700–1700 **Registration** - Reliant Center & Reliant Arena
- 0730–0900 **Topical Breakfasts** - Reliant Arena, Level 2, Rooms 2 & 3
- 0730–0900 **Industry Breakfast** - Reliant Center, Level 2, Room 302
- 0900 **Coffee** - Reliant Arena
- 0900–1730 **Exhibition** - Reliant Center & Reliant Arena
- 0930–1200 **Technical Sessions** - Reliant Center, Level 2, and Reliant Arena, OTC Theater
- 1000–1200 **NEW! Special Session: Going Beyond Your Best Data** - Reliant Center, Level 2, Room 201
- 1215–1345 **Awards Luncheon** - Reliant Center, Level 2, Room 302
- 1400–1630 **General Panel Session** - Reliant Center, Level 2, Room 306
- 1400–1630 **Technical Sessions** - Reliant Center, Level 2
- 1500–1600 **Exhibit Refreshments** - Reliant Arena, Exhibit Floor
- 1900–2100 **OTC Night at the Ballpark** - Minute Maid Ball Park

Wednesday, 5 May

0700–1700	Registration - Reliant Center & Reliant Arena
0730–0900	Topical Breakfast - Reliant Arena, Level 2, Rooms 2 & 3
0730–0900	Industry Breakfast - Reliant Center, Level 2, Room 302
0900–1400	The Next Wave Program - Reliant Arena, Level 1, OTC Theater
0900	Coffee - Reliant Arena
0900–1730	Exhibition - Reliant Center & Reliant Arena
0930–1200	Technical Sessions - Reliant Center, Level 2
1215–1345	Topical Luncheons - Reliant Center, Level 2
1400–1630	General Panel Session - Reliant Center, Level 2, Room 306
1400–1630	Technical Sessions - Reliant Center, Level 2
1500–1600	Exhibit Refreshments - Reliant Arena, Exhibit Floor
1700–1830	The Next Wave Reception - Reliant Stadium, East Club
2000–2200	NEW! Houston Dynamo Soccer Game - Robertson Stadium

Thursday, 6 May

0700–1400	Registration - Reliant Center & Reliant Arena
0730–0900	Topical Breakfasts - Reliant Arena, Level 2, Rooms 2 & 3
0730–0900	Industry Breakfast - Reliant Center, Level 2, Room 302
0730–1500	Energy Education Institute: Teacher Workshop - Reliant Center, Level 2, Room 202
0830–1330	Energy Education Institute: High School Student STEM Event - Reliant Arena, Level 1, OTC Theater
0900	Coffee - Reliant Arena
0900–1400	Exhibition - Reliant Center & Reliant Arena
0930–1200	Technical Sessions - Reliant Center, Level 2
1215–1345	Topical Luncheons - Reliant Center, Level 2
1400–1630	General Panel Session - Reliant Center, Level 2, Room 306
1400–1630	Technical Sessions - Reliant Center, Level 2
1600–1700	OTC Closing Reception - Reliant Center, Level 2, Café on the Park

All events in conjunction with OTC 2010 occur at Reliant Center and Reliant Arena in Houston, Texas, USA unless otherwise noted above.

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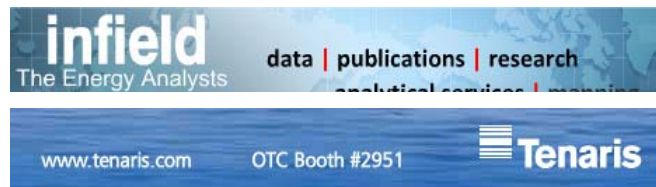
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OTC .10 Technical Program

The OTC .10 technical program offers a well-balanced, three-prong focus on technical, business, and regulatory issues in the oil and gas industry. It emphasizes a wider spectrum of energy sources and global reach.

Browse Technical Program by day.

Monday Sessions	Tuesday Sessions	Wednesday Sessions	Thursday Sessions
0930-1200 1400-1630	0930-1200 1400-1630	0930-1200 1400-1630	0930-1200 1400-1630

Session Recordings—New in 2010!

This year we bring you OTC On Demand—an interactive, online portal to access the OTC 2010 presentations, digitally recorded and available as audio synchronized to PowerPoint presentations. On Demand will be available to all paid, registered OTC 2010 attendees after the conference. [Watch a sample presentation.](#)

Primary Focus on Oil and Gas Developments and Technology

OTC offers case studies and updates on the latest deepwater projects from majors, independents, national oil companies, and service companies.

It also includes a panel discussion on surface BOPs and burst pressure requirements in pipeline and riser design as well as papers on updated API recommended practices.

Sessions focus on

- the dynamics of salt tectonics,
- the impact of geoscience technology on project economics,
- riser technology,
- subsea processing and power distribution,
- offshore LNG developments,
- flow assurance,
- fiber moorings, and more!

OTC .10 presents a full day of discussion on metocean conditions, covering recent hindcasts and future updates on storms and hurricanes.

Business Risks

The business environment is changing and presenting new challenges.

Senior executives will discuss how best to manage social and environmental risks in international projects; how to sustain technological innovation in periods of volatile earnings; and how oilfield service companies can manage through current tough times.

Oil companies will also offer their perspective on the upstream business in Brazil.

Balanced Opinions on Regulatory Issues

OTC .10 policy sessions bring diverse and balanced opinions—without advocating a particular political opinion.

Discussion includes the costs to implement climate change policies; whether climate change and humans are at fault for more and stronger hurricanes; the DOE carbon capture and sequestration program; and the role of energy on jobs and the economy.

Expanding the Energy Spectrum

OTC now presents alternative energy sources such as offshore wind energy, ocean wave energy, ocean thermal energy conversion, and gas hydrates.

Breakfast presentations will cover ocean renewables and thermal energy. A series of sessions discuss new developments in gas hydrates—from resource evaluation to flow testing.

Global Reach

The program covers oil and gas case studies from the deepwater “golden triangle” region of the Gulf of Mexico, Brazil, and Africa. Other focus areas are the Caspian Sea, Arabian Gulf, and Atlantic Canada, as well as offshore construction in China.

OTC’s invited organization, the American International Petroleum Negotiators (AIPN), will have a panel session on “Sustaining Business in Global Volatility.”

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Technical Program - Monday, 3 May, 0930-1200

Monday Sessions 0930-1200 | 1400-1630 **Tuesday Sessions** 0930-1200 | 1400-1630 **Wednesday Sessions** 0930-1200 | 1400-1630 **Thursday Sessions** 0930-1200 | 1400-1630

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Panel: Changing the Game Bit by Bit

Exploration is one of the pillars of supply and is perhaps the most discussed due to the risks, with images of remote harsh areas, fortunes won and lost, and geoscientists scouring across the globe in search of the next big play.

Yet due to these same risks, when commodity prices drop, it is the first to suffer budget cuts. A historical review of discoveries shows the peak of oil discoveries was in the mid-1960s and gas in the mid-1970s. Since then, exploration has yielded an average of almost 13 Bbo per year, with a recent uptick in 2008 to 15 Bbo, thanks mostly to deepwater.

This panel will look at the future of exploration and what obstacles we face towards meeting the future targets for exploration which are estimated at some 20 Bbo per year by year 2030.

Some of the key topics to be discussed from both an operator and service company prospective will be:

- Where are the next new petroleum provinces or plays that will change the game?
- Has the unconventional revolution changed conventional exploration thinking?
- What area would benefit the most from a technology breakthrough and what tools do we need?
- Are we making progress in solving the great crew change?
- Will government policy and legislation make it impossible?
- How do we get more efficient with our exploration investments?

Moderators: **Bob Fryklund**, IHS CERA; **Jim Demarest**, Noble Energy

Panelists

- Robert Hobbs, CEO, TGS NOPEC
 Steve Thurston, Vice President, Global Deepwater, Chevron
 Jim Farnsworth, President, Cobalt International
 Larry Archibald, Senior Vice President, ConocoPhillips
 Satish Pai, Vice President, Schlumberger
 Frank Patterson, Vice President, Anadarko

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ADVANCES IN FLEXIBLE RISER TECHNOLOGY

Session Chairpersons: Adrian Connaire, MCS
 Mark Kalman, Deep Flex

0930	20973	Flexible Pipe Integrity Monitoring: A New System To Assess the Flexible Pipe Annulus Condition	J. Rogues, B. Balague, Total; D.H. Dion, G. Audouin, Schlumberger
0952	20863	Real-Time Continuous Structural Integrity Monitoring of Flexible Risers With Optical Fiber Sensors	S. Morikawa, C.S. Camerini, Petrobras; A.M. Braga, R.W. Llerena, PUC-Rio
1014	20578	Challenges of Flexible Riser Systems in Shallow Waters	D. Hanonge,

Technip; A. Luppi, SEAL Engineering

- 1036 20636 **Flexible Pipe Curved Collapse Behavior Assessment for Ultradeepwater Developments for the Brazilian Pre-Salt Area** J.A. Clevelario, F. Pires, G. Falcao, Z. Tan, J. Lu, T. Sheldrake, Wellstream International
- 1058 21067 **Qualification and Use of IR-Cured XLPE for Flexible Pipes** I.M. Procida, N.R. Nielsen, NKT Flexibles
- 1120 20518 **Flexible Pipe Design for a High-Temperature/Highly-Insulated Production Flowline for the North Amethyst Project in the North Atlantic** R.J. Mandeville, L. Turpin, S. Searle, Technip; G. Phillips, Husky Energy

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Thunder Horse and Atlantis I: Lessons Learned From Frontier Deepwater Developments

Session Chairpersons: **David Barton**, Kellogg Brown & Root; **Kevin Kennelley**, BP

- 0930 **Keynote** **Deepwater Developments in the Gulf of Mexico** James Dupree, Sr. VP Gulf of Mexico, BP
- 0952 20395 **Thunder Horse and Atlantis: The Development and Operation of Twin Giants in the Gulf of Mexico** S. Todd, D. Replogle, BP
- 1014 20401 **Thunder Horse: Materials, Welding and Corrosion Challenges and Solutions** J.D. Burk, C.L. Ribardo, BP
- 1036 20400 **Thunder Horse and Atlantis: Advanced Collaboration Environment: Shrinking the Gulf** F. Ragan, A. Ford, R. Huebel, K. Moore-Cernoch, J. Ross, BP
- 1058 20402 **Thunder Horse and Atlantis Floating System and Riser Monitoring: Performance During Extreme Events** N. Cramond, D.J. Petruska, J. Geyer, S. Jesudasen, BP
- 1120 20403 **Thunder Hors and Atlantis: Starting Up Two World-Class Facilities in World-Class Fashion** W. Al Monthiry, R. Newcomb, J. Lowe, K. DeJohn, BP

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Drilling Technology

Session Chairpersons: **Brian Noel**, ConocoPhillips Alaska; **Lee Smith**, Alaskan Energy Resources

- 0930 20425 **Solving the Salt Challenge: Unique Drill Bit Philosophy Delivers Breakthrough Performance in the Gulf of Mexico** S.P. Barton, R. Weeden, NOV Downhole; G. Mensa-Wilmot, Y. Harjadi, Chevron
- 0952 20921 **Visualization and Collaboration: Keys to Optimal Platform Placement** J.H. Cristancho, R. Peters, Halliburton; W.W. Denham, D. Algu, P. Daley, C. Njoku, Shell E&P
- 1014 20929 **Bridging the Stimulation and G&G Worlds** M. Farabee, M. Trenholm, R. Dodds, Halliburton
- 1036 20370 **Dynamic BHA Modeling of Hole Enlargement While Drilling Leads to ROP Improvement in Gulf of Mexico** M. Barrett, Shell International E&P; M.T. Compton, M. Agnihotri, F. Verano, S. Mitchell, D. Fitzmorris, Smith International
- 1055 20894 **Real-Time Proactive Optimal Well Placement Using Geosignal and Deep Images** M.S. Bittar, R. Chemali, J. Pitcher, Halliburton; R. Cook, C. Knutson, Pioneer Natural Resources
- 1120 20775 **Optimization of Drilling Riser Operability Envelopes for Harsh Environments** D. Williams, MCS Kenny
- 1140 20933 **Game-Changing Technology Developments for Safe and Cost-Effective Determination of Free Point in Horizontal and Vertical Wells** C.W.

Kessler, J. Hill, J. Weiser, Halliburton

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Subsea Risk and Reliability

Session Chairpersons: **Jennifer Bell**, Chevron Corporation; **Kieran Kavanagh**, MCS

- 0952 20367 The Life-Cycle Management of Subsea Facilities** J.E. Strutt, J.H. Baker, Atkins Boreas
- 1014 20980 Subsea Sensors for Non-Intrusive Monitoring of Temperature, Pressure and Asset Integrity** G. Thivend, Schlumberger
- 1036 20526 An Integrated Approach to Successful Integrity Management of Deepwater Facilities Within the Framework of API RP 75** J.T. Von Aschwege, J.F. Chappell, J.K. Brownlee, J.C. MacNeill, K. Bhalla, Stress Engineering Services
- 1058 20604 Flexible Pipe Integrity Analysis Using Event Trees** R. Loback, B.B. Matos, C.V. Raposo, R. Kumar, Det Norske Veritas
- 1120 20895 Integrated Operations and Integrity Management: Subsea System Vendors as Value-Added Providers** K.R. Knight, O. Akinkunmi, Ingvar Koppervik, FMC Technologies

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LNG and LPG Operations Offshore

Session Chairpersons: **Marcus Krekel**, Exmar; **Han Tiebout**, SBM Offshore N.V.

- 0930 20422 LPG Operations Offshore** C. Stott, Maersk FPSOs
- 0952 20447 Safe Transfer of Liquefied Gas in the Offshore Environment** M.A. Newby, ConocoPhillips; W. Pauw, Marin
- 1014 20590 Offshore Liquefaction of Natural Gas** A.I. Unum, BW Offshore
- 1036 20593 A Marine View on Offshore LNG** J. Dekker, J. Van Doorn, Marin
- 1058 20638 Numerical Simulations To Optimize Offshore Offloading Operations** A.J. Voogt, Marin; H. Brugts, Bluewater
- 1120 20730 Tandem Transfer of LNG: Interface With the Operator** P.J. Cox, Technip; E. Jeanneau, Total; J. Eidem, Teekay

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Marine Geohazards and GIS Applications

Session Chairpersons: **Aaron Broughton**; **Gareth Turner**, Shell E&P Company

- 0930 20829 Developing a GIS Data Model for Seabed Site Surveys** G. Turner, T. Bell, Shell Upstream America
- 0952 20958 Strategies To Incorporate Pre-Development High-Resolution AUV Surveys Acquired for Archeological Requirements Into the Project Lifecycle and Workflow** B.I. Monsalve, D.R. McConnell, AOA Geophysics; J.A. Worthen, Mariner Energy; L. Landry, L.A. Landry & Associates
- 1014 20664 Geodatabase Design for Streamlining Geohazard Site Characterization** C.J. Noll, A. Broughton, K.J. Campbell, Fugro GeoConsulting
- 1036 20753 Bottom Current Measurements at Gulf of Mexico Furrows for the Cascade and Chinook Fields Development** J.A. Lima, E.O. Ribeiro, J. Daniel, Petrobras; L.I. Ivanov, Woods Hole Group
- 1058 20858 GIS Database Applications to Evaluation of Marine Geohazards: New Los Angeles County Ocean Outfall Project** S. Varnell, P.J. Hogan, Fugro West; A. Broughton, Fugro GeoConsulting; Dean, Fugro West

Arena Room

Advances in Offshore Materials Technology

Session Chairpersons: **Rick Hill**, Microalloying International; **Paul Jukes**, J P Kenny

- 0930 20475 **Assessing the Integrity of Subsea Dissimilar Joints to Ensure Safe Operations** A. Bahrami, M. Gittos, H. Pisarski, P. Woollin, TWI

- 0952 20909 **The Effects of Large-Scale Forgings and Heat Treatment on the Mechanical Performance of Mooring Connectors** P. Hughes, First Subsea; M. Flores, University of Sheffield

- 1014 20368 **Fatigue Life Extension Procedure for Offshore Structures by Ultrasonic Peening** L. Lopez Martinez, Lets Global

- 1036 20995 **Material Assessment for Souring Subsea Systems** R.T. Hill, F.A. Ramirez, UniversityPegasus

- 1058 20657 **Structural Repair at a Production Platform by Means of a Composite Material Patch** L.D. Meniconi, I.N. Porciuncula, Petrobras; D. McGeorge, Det Norske Veritas; A. Pedersen, Umoe Mandal

- 1120 20317 **Offshore Platform Materials Integrity: Remediation Measures** S.P. Mahajanam, M.W. Joosten, B. Craigie, ConocoPhillips

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General Session Panel: Jobs and the Economy: How the Energy Industry is Creating Jobs, Leading the Economy and Impacting Consumers

This panel brings together consumers, businesses, energy providers, and governmental officials to discuss the complex relationship between energy and economic sustainability. They will also discuss the importance of energy production in boosting state and national economies and stimulating jobs while properly protecting the environment.

Organizers: David Holt, President, Consumer Energy Alliance
Sandeep Khurana, Advisor, Devon Energy Corporation

Moderator: Paul Bledsoe, Vice President, National Commission on Energy Policy

Panelists

Part I: Government's Role in Supporting Energy and Creating Jobs

- The Honorable Sean Parnell, Governor of the State of Alaska
- The Honorable Bob McDonnell, Governor of the Commonwealth of Virginia
- The Honorable Bob McLeod, Minister of Industry, Tourism and Investment, Legislative Assembly of the Northwest Territories
- Jack Gerard, President and CEO, American Petroleum Institute
- Dave Lawrence, Executive Vice President, Exploration and Commercial, Shell Upstream Americas

Part II: Private Sectors Role in Supporting Energy and Creating Jobs

- Dr. Michael Webber, Instructor, The University of Texas at Austin
- Randall Luthi, President, National Ocean Industries Association
- Ken Bromfield, US Commercial Director, Energy Business, Dow
- Jeff Moseley, President, Greater Houston Partnership
- David Holt, President, Consumer Energy Alliance

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Advances in Deepwater Riser Technology

Session Chairpersons: **Kieran Kavanagh**, MCS; **Carlos Moreira**, Technip

- | | | |
|------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1400 | 20816 | New Code for the Design of Dynamic Risers for Floating Production Installations P.N. Stanton, Technip Offshore; D.L. Garrett, Stress Engineering Services |
| 1422 | 20778 | Design Methods in ISO 13628-12 and Implications for Gulf of Mexico SCRs P.P. Sharma, Det Norske Veritas; R. Song, Technip Offshore; J. O'Donnell, Technip USA; K.J. Mork, Det Norske Veritas; W.K. Kavanagh, MCS |
| 1444 | 20605 | Parque das Conchas (BC-10) Steel Lazy Wave Riser Installation: Pre-Abandonment, Recovery and Transfer Challenges B. Thomas, Shell International E&P; A. Benirschke, T. Sarkar, Subsea 7 |

- 1506 20437 **Gulf of Mexico Wet Tree Deepwater Riser Concepts With Sour Service**
D. Deka, M. Campbell, K. Kakar, 2H Offshore; P.R. Hays, Chevron
- 1528 20908 **Design of Retrofit Hang-Off Receptacle Clamp for Tie-Back of Steel Catenary Risers to Pompano Platform** J. Chen, S. Sriraman, MCS; R. Clark, S. Lange, J P Kenny; M. Conner, BP America; B. Cooley, Llog Exploration

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Thunder Horse and Atlantis II: More Lessons Learned

Session Chairpersons: **David Barton**, Kellogg Brown & Root; **Kevin Kennelley**, BP

- 1400 20396 **Thunder Horse Takes Reservoir Management to the Next Level** G. Arnold, S. Cavalero, P.J. Clifford, E.M. Goebel, D. Hutchinson, H. Leung, E.N. Paclibon, T.D. Weiss, D.B. Grass, BP America
- 1422 20397 **Unlocking Atlantis: An Integrated Approach to Reservoir Management of a Giant Subsalt Field** R.M. Bartlett, P.K. Singh, J.M. Howie, K. Humphrey, J.A. Kurtz, M.D. Croft, BP America
- 1444 20398 **Atlantis: A case Study in Thoroughly Planned and Scheduled Well Delivery** J.D. Sprague, K.E. Mix, J. Faulkerson, BP America
- 1506 20399 **Gulf of Mexico Deepwater Completions: The Devil is in the Details** D.A. Rich, B. Rogers, Q. Dyson, K.Olsen, J. Smart, D. Tiffin, BP America
- 1528 20414 **Two Assets, Two Approaches To Tackling Subsalt Imaging: Thunder Horse and Atlantis** J.M. Howie, M. Trout, BP America
- 1550 20404 **Future Challenges for Deepwater Developments** F. Adison, K. Kennelley, F. Botros, BP America

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Innovative Drilling Technology

Session Chairpersons: **Osama Hanna**, Abu Dhabi Co. Onshore Oil Opn.; **Hanaey Ibrahim**, Zakum Development Company

- 1400 20823 **2,500,000-Pound Landing String Challenges: Have We Reached the Limit of Today's Technology?** J.N. Brock, D. Chin, NOV Grant Prideco; L.W. Sanclemente, Workstrings
- 1422 21026 **Proper Bit and Underreamer Synchronization Concept Delivered Excellent Performance in Gulf of Mexico Deepwater Well** B. Morel, M. Hafle, BP America; I.J. Thomson, C.C. Ubaru, S. Radford, Baker Hughes
- 1444 20880 **Directional Casing While Drilling Heralds a Step Change in Drilling Efficiency From a Producing Platform** G. Dawson, A. Buchan, I. Kardani, Schlumberger; A. Harris, L. Wercholuk, TESCO; A. Khazali, A. H. Shariff, K. Sisson, H. Hermawan, Petronas
- 1506 20652 **Field Implementation of a Real-Time Drilling Problem Diagnostic for Deepwater Exploratory Wells** R.A. Gandelman, A.A. Waldmann, A.L. Martins, G.T. Teixeira, A.F. Aragao, Petrobras; M. Rezende, A. De Mari, ESSS Scientific Software

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Subsea Process Technology

Session Chairpersons: **Chuck Horn**, Technip; **Pete Worman**, J. Ray McDermott Engineering

- 1400 20619 **Experience to Date and Future Opportunities for Subsea Processing**
S.R. Davies, W. Bakke, R.M. Ramberg, R.O. Jensen, Statoil
- 1422 20633 **Current Trends and Design Limitations of Subsea Control Hardware** A. Beedle, J. Stansfield, Duco
- 1444 20687 **DeepStar Jules Verne Subsea Processing Road Map** T. Lowry, Technip USA; T. Ray, ConocoPhillips
- 1506 20927 **Subsea All Electric** A. Aadland, K. Petersen, Oceaneering International

1528 20746 **Large-Scale Condition Monitoring for a Subsea Gas Compression System** K.G. Eriksson, Aker Solutions; K.O. Staver, Statoil

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LNG 2010

Session Chairpersons: **George Montgomery**, J. Ray McDermott Engineering

1400 20513 **FLNG Design Issues: Building on Known Technology** C. Fagan, H.O. Sele, T. Oestvold, DNV

1422 20982 **Operational Risk Analysis of LNG Loading** B.H. Chin, P. Friis-Hansen, T.G. Saetren, DNV

1444 20683 **Converting Existing LNG Carriers for Floating LNG Applications** D. Franklin, Mustang; H. Reeve, Alan McClure Associates; B. Hubbard, Mustang

1506 20442 **Key Learnings: Risk-Based Verification of Process Systems on a Floating LNG Producing Unit** E. Skramstad, DNV; D. Almandoz, CH IV International; F. Savio, Flex LNG

1528 21055 **A New Tank Containment System to Floating LNG and CNG Processing and Storage Offshore Platforms** T. Lamb, University of Michigan; R. Ramoo, Mohan Parthasarathy; J. Santini, ALTAIR Engineering

1550 20809 **Intermediate Fluid Vaporizers for LNG Regasification Vessels, SRVs and FSRUs** P.H. Sandaroe Madsen, D. Karsten, R. Strande, Hamworthy Gas Systems

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Foundations and Anchors

Session Chairpersons: **Jason Newlin**, Shell Oil Company; **Daniel Spikula**, Geoscience Earth & Marine Service

1400 20861 **Comparison of Observed and Predicted Performance for Jacket Pile Foundations in Hurricanes** R.B. Gilbert, J.Y. Chen, University of Texas at Austin; B. Materek, HNTB; F. Puskar, S. Verret, Energo Engineering; J. Carpenter, A.G. Young, GEMS and J.D. Murff

1422 20631 **RP 2GEO: The New API Recommended Practice for Geotechnical Engineering** P. Jeanjean, BP America; P.G. Watson, Advanced Geomechanics; H.J. Kolk, Fugro Engineers; S. Lacasse, Norwegian Geotechnical Institute

1444 20520 **Predicting Consolidation Settlement in Very Soft Clay: Comparison of Conventional 1-D Theory and 3-D Numerical Simulation** D. Lee, S. Liu, P. Cooper, I. Nash, N. Evans, Intecsea (UK)

1506 20554 **Elastic Solutions for Consolidation Around Seabed Pipelines** S.M. Gourvenec, D. White, University of Western Australia

1528 20758 **Installation of Two Prototype Deep-Penetrating Anchors at the Gjoa Field in the North Sea** J.T. Lieng, Deep Sea Anchors; T.I. Tjelta, K. Skaugset, Statoil

Arena Room

Monitas JIP

Session Chairpersons: **Colin Duffett**, MCS; **Barbara Thompson**, Lonestar Deepwater

1400 20872 **Overview of the Monitas JIP** D. L'Hostis, Total; M.L. Kaminski, P. Aalberts, Marin

1422 20871 **Implementation of the Monitas System for FPSO Units** M.L. Kaminski, P. Aalberts, Marin

1444 20873 **The Monitas System for the Glas Dowl FPSO** P. Aalberts, J. van der Cammen, BES; M.L. Kaminski, Marin

1506 20870 **Application of Fatigue Damage Sensors in the Monitas System** Y. Takaoka, Kawasaki Shipbuilding Corporation; K. Nihei, Kawaju Techno Service Corporation; P. Vargas, Chevron; P. Aalberts, M.L. Kaminski, Marin

1528 **20869** **Wave Measurements for the Monitas System** J. Hanson, WaveForce Technologies; A. Lubben, OceanWaves; P. Aalberts, M.L. Marin

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Panel: IOC Perspective of the Upstream Business in Brazil

In the past 10 years, Brazil has experienced changes in the way the upstream business has been run. After the change in the regulatory legislation that allowed other companies to participate in the E&P phases in offshore and onshore areas, new players initiated their activities in Brazil with incremental investments.

Several companies have participated in discoveries that have included marginal developments in onshore to high impact discoveries in ultradeepwater fields. These companies are now facing a challenge to play an important role in the upstream business in Brazil, as new regulations will be applied depending on the productivity of the fields.

The panel will focus on the perspective of oil companies and the Brazilian government in the face of technical challenges and new regulations. The panelists will address the following:

- Technical challenges in projects
- New development concepts to be applied in the operated blocks
- The future of investments
- The impact of different regulations in the projects
- Infrastructure of pipelines, shore base, and terminals

Moderators: **Joao De Luca**, Institute Brasileiro de Petroleo; **Alvaro Negrao**, Repsol

Panelists

Marco Antonio Martins Almeida, Secretary of Oil and Gas, MME Brazil

Nelson Silva, Brazil Vice President, BG Energy Holdings Limited

Wes Lohec, President, Chevron Latin America

Joseph P. Ash, Vice President of Offshore Exploration, Devon

Ramon Hernan Paadin, Managing Director North America and Brazil, Repsol

Marco Brummelhuis, Development Vice President, Shell Brazil

Jorge M.T. Camargo, Senior Advisor, Statoil Brazil

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AKPO Project

Session Chairpersons: **Pierre Alain Delaittre**, Harchambe Consulting; **Frederic Garnaud**, Total

0930	20989	Keynote: Akpo Project: Development Overview	F. Rafin, A. Laine, Total
0952	20990	Leading Edge Subsurface Technologies for Akpo: A Complex Condensate Field	V.A. Bandele, G. Claudel, Total
1014	20992	Drilling Akpo: 22 Wells Required, 22 Wells Delivered for Production Start Up and Plateau	B. Ludot, E. Delaittre, Total
1036	20993	Akpo: The Subsea Production System	S.G. Nelson, Total
1058	20994	Akpo Project: The Successful Implementation of Steel Catenary Risers	

H. Gueveneux, Total

- 1120 20996 Akpo Project: Floating Production and Offloading System** T. Bernard, Total
- 1142 20997 Akpo Project: Start-Up and Operation** F. Fournie, Total

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Invited Organization, AIPN: Risk Mitigation in International Oil & Gas Developments

Oil and gas exploration is a technology-driven industry. The most substantial new deepwater discoveries are pushing the outward limits and capabilities of existing methods. Exploration and production companies have to explore previously untapped emerging markets, overcome barriers to maximize existing fields, and exploit previously uneconomic projects. While the economy appears to have turned the corner and commodity prices are stabilizing in many markets, overall uncertainty remains. In this regard, it is of paramount importance for companies to be able to protect their international investments through legal, financial, technical, and other means.

This panel will seek to identify the primary risks involved in an international E&P project and identify tools and methodologies to mitigate such risks. After a brief introduction from each panelist, this diverse group will examine upstream risks and mitigation techniques from the viewpoints of a major integrated IOC, independent IOC, NOC, service company, and international financial advisor.

Active audience participation will be encouraged to vote on how a certain project risk should be approached, such as host country security, protection of intellectual property, or securing declarations of commerciality to satisfy terms of a production-sharing contract. Then, our panelists will address the situation and how they would recommend that their company handle such project risk.

Organizers

Christopher P. Moyes, President, Moyes & Co., Inc., and AIPN President
 Sandeep Khurana, Advisor, Devon Energy Corporation and OTC Program Chair

Moderator: Steven Otillar, Baker & McKenzie

Panelists

Guy Dayvault, Director LNG Commercial Development, Gazprom Marketing & Trading USA, Inc.
 Mick Jarvis, Global BD Manager Commercial Negotiations, ConocoPhillips
 Pietro A. Milazzo, Strategic Business Development Manager, Weatherford Latin America
 Christopher P. Moyes, President, Moyes & Co., Inc. and AIPN President
 Ken Resnick, Vice President & General Counsel, GE Oil & Gas

- 21075 Invited Organization: AIPN**
 S.P. Otillar, Baker & McKenzie

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ATP Mirage Project

Session Chairpersons: **Glenn MacDonald**, Stress Subsea; **Katrina Ridley**, Shell E&P

- 0930 21037 Considerations for Standalone Development of Small Deepwater Fields**
 R.M. Shivers, G.R. Frazer, ATP Oil & Gas Corporation
- 0952 21003 Mirage Field Multi-Column Deep-Draft Floating Platform: Graving Dock Construction and Hull Fabrication** C. Ocker, Bluewater Industries; C. Bordlee, Gulf Marine Fabricators
- 1014 21018 Mooring Design and Installation Considerations for the Mirage and Telemark Field Development** T. Veselis, InterMoor; G.R. Frazer, ATP Oil & Gas Corporation; M. Huntley, Whitehill Manufacturing
- 1036 21022 Development of Mirage and Telemark Fields: Classification and Regulatory Considerations Applied to a Novel Concept** L.P. Feijo, ABS; G.R. Frazer, ATP Oil & Gas Corporation; W.J. Parker, WJP Enterprises
- 1058 21024 Top Tensioned Riser Systems for a New Floater Type** D.L. Garrett, Stress Engineering Services; R.M. Shivers, G.R. Frazer, ATP Oil & Gas Corporation; L. Garrett, Stress Engineering; D. Trent, DTI; J. Massaglia, V&M Tubes

- 1120 20986 **Controlling Export Pipeline Pressure To Optimize Gas Throughput From, the Mirage Floating Production Unit** G.R. Frazer, ATP Oil & Gas Corporation; J. Hines, D. Reed, Pegasus International
- 1142 21029 **Performance Benefits of the MinDOC Hull at the Mirage Field in a Post-Katrina/Rita Environment** D. Herman, Bennett and Associates; D. Garrett, Stress Engineering; R.M. Shivers, ATP Oil & Gas Corporation; T. Veselis, Intermoor

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Metocean I: Hurricanes, Cyclones, and Tropical Storms—Recent Hindcasts and Updated Forecasts

Session Chairpersons: **Gene Berek**, ExxonMobil; **Emmett Ward**, Texas A&M University

- 0930 20533 **Comprehensive Hindcast of Winds and Waves in the Gulf of Mexico in Hurricane Ike, 2008** V.J. Cardone, A.T. Cox, Oceanweather
- 0952 20968 **Ocean response to Hurricanes in Presence of the Loop Current** S.A. Frolov, Weather Predict Consulting
- 1014 20699 **A Synthetic Model for Gulf of Mexico Hurricanes** P. Vickery, D. wadhwa, Applied Research Associates; J. Stear, Chevron ETC
- 1036 20732 **Extreme Hurricane Design Criteria for LNG Developments: Experience Using a Long Synthetic Database** J.D. Mcconochie, S. Stroud, Woodside Energy; L. Mason, Marine Modelling Unit, Australian Maritime College
- 1058 20690 **Model Investigations of the Effects of Climate Variability and Change on Future Gulf of Mexico Topical Cyclone Activity** G. Holland, J. Done, C. Bruyere, National Climate and Atmospheric Research; C. Cooper, Chevron ETC; A. Suzuki-Parker, Georgia Tech

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Advances in Seafloor Imaging Applications of Multibeam Backscatter

Session Chairpersons: **Daniel McConnell**, AOA Geophysics; **Craig Shipp**, Shell Intl. E&P Company

- 0930 20866 **Seafloor Acoustic Backscatter Measurements With Multibeam Echosounders** C. De Moustier, HLS Research
- 0952 20853 **Utilization of Multibeam Bathymetry and Backscatter for Documenting and Planning Detailed Investigations of Deepwater Archaeological Sites** D. Warren, C.W. Wu, R.A. Church, R. Westrick, C. Wu, C & C Technologies
- 1014 20672 **Applications of Multibeam Backscatter: Using Multibeam Echosounder Backscatter to Characterize Map Seafloor Features in Shallow and Deep Water** A.T. Hewitt, R. Salisbury, Fugro Geoservices; J. Wilson, Fugro Pelagos
- 1036 20860 **Multibeam Backscatter: Insights Into Marine Geological Processes and Hydrocarbon Seepage** D.L. Orange, P.A. Teas, J. Decker, Niko Resources
- 1058 20662 **Backscatter Characterization of Seep-Associated Seafloor Features in the Vicinity of Bush Hill, Northwest Green Canyon, gulf of Mexico** Z. Zhang, D. McConnell, AOA Geophysics

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Ocean Thermal Energy Conversion

Session Chairperson: **Phil Grossweiler**, M&H Energy Services

- 0930 20498 **OTEC Power Efficiency Challenges** J. Hurtt, A. Pellen, N.J. Nagurny, Lockheed Martin
- 0952 20671 **Ocean Thermal Plantships for Co-Production of Ammonia and Desalinated Water** C.B. Panchal, E3Tec Service; P.P. Pandolfini, Johns Hopkins University/Applied Physics Laboratory; W.H. Kumm, Arctic Energies

1014	20559	Ocean Thermal Energy Capacity Estimation and Resource Assessment of Southeast Florida A.E. Leland, F.R. Driscoll, J.H. VanZwieten, Florida Atlantic University; N.J. Nagurny, R.J. Howard, Lockheed Martin
1036	20340	Study on the Cost-Effective Ocean Thermal Energy Conversion Power Plant N. Srinivasan, M. Sridhar, Deepwater Structures; M. Agrawal, ANSYS
1058	20957	First Generation 50 MW OTEC Plantship for the Production of Electricity and Desalinated Water L.A. Vega, National Marine Renewable Energy Center, University of Hawaii; D. Michaelis, Energy Island
1120	20644	Ocean Thermal Energy Conversion: Strategies for System Integration and Implementation Using Commercially-Available Components and Technology J.A. Marti, T.J. Plocek, M.A. Laboy, O.E. Ruiz, Offshore Infrastructure Associates
1142	20702	Comparison of Aluminum Alloys and Manufacturing Processes Based on Corrosion Performance for Use in OTEC Heat Exchangers M. Eldred, A. Landherr, IC. Chen, Makai Ocean Engineering

Arena Room

HP/HT Well Challenges

Session Chairpersons: **Kevin Renfro**, Anadarko Petroleum Corporation; **Mauricio Werneck**, Petrobras

0930	21058	Case History: First Isochronal Reservoir Test Successfully Performed Worldwide at a Bottomhole Temperature Greater Than 430 Degrees M. Khati, L. Pedrosa, Halliburton; M. Farooqui, Z.A. Khan, Gujarat State Petroleum Corporation
0952	21066	New 9-7/8in. HP/HT Permanent Packer With New Back-Up System Provides North Sea Operator With an Effective Solution for Damaged or Worn Casing R. Innes, M. Eddy, Total; J. Ligertwood, NRD; T.E. Robb, E. Valentine, Halliburton
1014	20734	Development of an Innovative High-Performance Premium Threaded Connection for OCTG M. Sugino, K. Nakamura, S. Yamaguchi, Sumitomo Metal Industries; D. Daly, G. Briquet, E. Verger, Vallourec Mannesmann Oil & Gas
1036	21060	Challenging Well-Testing Operations in High-Temperature Environments: Worldwide Experiences and Best Practices Learned A. Salguero, E. Almanza, J.R. Haddad, Halliburton Energy Services

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Technical Program - Tuesday, 4 May, 1400-1630

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General Session Panel: What is the Right Global Energy Mix? Desired Transition Pathways to an Affordable and Secure Energy Future

Session Chairpersons: **Ahmed Hashmi**, BP; **Gamal Hassan**, Baker Hughes

Panelists

Mohammed Al-Qahtani, Executive Director, Aramco

Ali Moshiri, President, Chevron

Pascal Barthellemy, Deputy CEO, IFP

Matthias Bichsel, Director of Projects and Technology, Board of Director, Shell

Phyllis Yoshida, Deputy Assistant Secretary, US Department of Energy

The recent global financial crisis has brought about a significant deterioration in near-term energy demand and a consequential reduction in supply, which has possible long-term implications. Climate change considerations and greater regulation of the energy mix are also on the horizon. The combination of these—one being a mega event and the other a mega trend—has already had significant impact on the oil and gas sector and could also lead to a fundamental transformation in the long-term.

Since oil and gas production declines naturally but energy demand will remain the same, sustaining it to 2050 requires rebuilding the equivalent of today's oil and gas business over the next 40 years—and doing so from more technically challenging deposits.

At the same time, the world increasingly desires lower carbon energy. A rapid transition to green energy will likely prompt the introduction of more green incentives and increased regulation of fossil fuels. This in turn could lead to an increase in the total cost of energy, since most renewable energy options are inherently more expensive to scale up than energy derived from fossil fuels.

All of this raises a key question: What is the desirable energy mix and transition pathways that will provide the world with affordable, secure, and increasingly lower-carbon energy?

- 21079** **Panel: What Is the Right Energy Mix? Desired Transition Pathways to an Affordable and Secure Energy Future**
G.A. Hassan, Baker Hughes; A. Hashmi, BP

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Well Completion Technology

Session Chairpersons: **Rusty Bayh**, Halliburton; **Mauricio Werneck**, Petrobras

- 1400** **21063** **Indonesian Operator's First Field-Wide Application of Intelligent-Well Technology: A Case History** K.S. Youl, Harkomoyo/Kodeco Energy Company; D.B. Finley, Halliburton
- 1422** **20893** **A Comparative Assessment of 3-3/8 inch Perforators Using Reactive and Nonreactive Shaped Charges in Oil and Gas Applications** A. Pettitt, SPEX;

D.J. Haggerty, D. Manning, J. Barker, D. Leidel, Halliburton

- 1444 20820 **Taking the Gas Lift Valves to a New Level of Reliability** J.A. Carlsen, Statoil; O. Stokka, E. Kleppa, PTC
- 1506 21059 **Predicting Pressure Behavior and Dynamic Shock Loads on Completion Hardware During Perforating** A. Canal, Repsol; P. Miletto, Petrobras; M.F. Schoener-Scott, J. Medeiros, D. Barlow, Halliburton
- 1528 20348 **Design, Analysis, and Diagnostics for Passive Inflow Control Devices With Openhole Packer Completions** P. Gavioli, A. Garcia, J.C. Serrano, Baker Hughes
- 1550 21057 **Upper Completion Advanced Designs: Spacing-Out Production Tubing in Subsea Wells** M.N. Smith, T.J. Bergeron, T.O. Roane, Halliburton

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FPSO Technology: New Horizons for Floating Production Supports

Session Chairpersons: **Frederic Garnaud**, Total; **Svein Hellesmark**, Remora

- 1400 20677 **Evaluation of Floating Liquefied Natural Gas Units for Brazilian Scenarios** A.F. Teles, A.D. De Abreu, A.C. Saad, D.C. De Mello, F.B. Campos, J.P. Silva, L.F. Quintanilha, M.D. Ferreira, Petrobras
- 1422 20497 **Sulfur Recovery Processes Modified for FPSO Topside Installations** J.F. Watson, Merichem Chemicals & Refinery Services
- 1506 20762 **Demonstrating the Feasibility of Steel Catenary Risers From a Cylindrical FPSO in Harsh Deepwater Locations** J.V. Aarsnes, F. Major, Sevan Marine; P. Rooney, J. Muren, 4subsea
- 1640 20868 **Efficiency and Economy of Automating Displacements for FPSO Pipe Stress Analysis** B. Robleto, J. Williams, KBR
- 1550 20777 **Optimization Procedure of a Steel Lazy Wave Riser Configuration Connected for Spread Moored FPSOs in Deepwater Offshore Brazil** E.Q. de Andrade, L.L. de Aguiar, S.F. Senra, E.F. Netto Siqueira, A.L. Lima Torres, M.M. Mourelle, Petrobras
- 1612 20856 **Development of Roll Suppression Device for LNG FPSO Application** JungHan Lee, YongSoo Kim, Daewoong Kim, Daewoo Shipbuilding & Marine Engineering (DSME)

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Azurite Field Development

Session Chairpersons: **Thomas Kelly**, FMC Technologies; **Michael Williams**, FMC Technologies

- 1400 20482 **FDPSOs: The New Reality and a Game-Changing Approach to Field Development and Early Production Systems** W.D. Harris, H.J. Howard, K.C. Hampshire, Murphy West Africa; J.A. Moore, K.J. Bayne, J. Pepin-LeHalleur, Doris
- 1422 20489 **Azurite Field Development: FDPSO Design and Integration Challenges** K.C. Hampshire, Murphy West Africa; B.J. Eiermann, M.P. Andrews, Doris; T.F. Smith, William Jacob Management
- 1444 20492 **Flow Assurance, Operability Challenges, and Artificial Lift for the Azurite Field Development** R.K. Brezger, II, W. Rodriguez, Murphy West Africa; J. Cai, M.C. Reaux, Doris; L. Korneliussen, Framo Engineering
- 1506 20491 **Drilling From an FDPSO: A Two-Stack Approach** K.C. Hampshire, G. Noles, Murphy West; A.J. Kachich, Doris
- 1528 20495 **Subsea Hardware Installation From an FDPSO** T. Stensgaard, Murphy West Africa; C. White, K.R. Schiffer, Doris
- 1550 20496 **Three Kings and One Castle: Operational Challenges of the Azurite FDPSO** R.K. Brezger, II, M. Estorffe, Murphy West Africa; K. Cooper, Doris;

J.G. Buchan, i-Quantum solutions

- 1612 20484 **Azurite Field Development: Lessons Learned From Industry's First FDP** H.J. Howard, K.C. Hampshire, Murphy West Africa; J.A. Moore, C.E. White, K.J. Bayne, Doris

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Metocean II: Metocean Modeling, Measurements, and Maxima

Session Chairpersons: **David Driver**, BP; **James Stear**, Chevron Corporation

- 1422 20602 **A Statistical Hindcast and Forecast Model for the Loop Current** G.Z. Forristall, Forristall Ocean Engineering; R.R. Leben, C.A. Hall, University of Colorado
- 1444 20826 **The Gulf of Mexico Current Simulation: A 32-year Run of 1/12? HYCOM** W. Wang, O.E. Esenkov, ExxonMobil Upstream Research Company
- 1528 20797 **Validation of HYCOM Current Profiles Using MMS NTL Observations** S. Fan, K. Dupuis, L. Harrington-MissinK, M. Calverley, A. Watson, G. Jeans, Fugro GEOS
- 1550 20792 **Toward an Inertial Current Forecast System for the Gulf of Mexico** P. Brickley, Horizon Marine; S. Frolov, WeatherPredict Consulting
- 1400 20694 **Measurements and Modeling Topographically Trapped Waves Along the Sigsbee Escarpment** S. Morey, D. Dukhovskoy, Florida State University; C. Cooper, Chevron ETC
- 1506 20947 **Metocean Measurements at Northern Santos Basin, Brazil** M. Vogel, Shell International EP; I.C. Silveira, B.M. Castro, Universidade de Sao Paulo; J.A. Lima, Petrobras; A.F. Pereira, Hidromares; P. Williams, GEOS

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Salt Structural Styles Informing Deepwater Exploration

Session Chairpersons: **Aurora Castelan**, Schlumberger; **Dan Ebrom**, StatoilHydro

- 1400 20937 **Deep Water Gulf of Mexico Sub-Salt Structural Framework** B. Kilsdonk, R. Graham, R. Pilcher, Hess Corporation
- 1422 20936 **Revisiting the Subsalt Trap Archetype Classification Scheme After Eight More Years of Gulf of Mexico Subsalt Drilling** B. Hart, M.L. Albertin, BP
- 1444 20925 **Salt Flow in the Angolan Margin** X. Fort, g.o. logical consulting; J.E. Welhaven, K. Hager, Statoil Angola; H.C. Ferreira, Sonangol
- 1506 20938 **Analysis of Layered Evaporites Within the Santos Basin, Brazil** J.C. Fiduk, CGGVeritas
- 1528 20926 **The Role of Wide Azimuth in Subsalt Imaging** E. Fromyr, PGS
- 1550 20935 **Subsalt imaging Using Wide Azimuth Data** S.J. Kapoor, N. Moldoveanu, D. Vigh, WesternGeco

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Ocean Mining: Past, Present, and Future

Session Chairpersons: **Julien Denegre**, Technip; **Eric Foell**, Consultant

- 1400 20502 **Deep Ocean Seafloor Mineral Extraction: Environmental and Social Considerations** D. Smith, Nautilus Minerals
- 1422 21000 **Offshore Diamond Mining in the Early Days** J.J. Swoboda, Jr., Indicom
- 1444 20978 **Understanding SMS Behavior To Define the Subsea Mining Operating System** P. Espinasse, Technip
- 1506 20629 **Design and Selection Process of Vertical Transport Systems** S. Verichev, J.V. Bloois, R.G. Van de Ketterij, IHC Merwede

- 1528 20575 **Experimental Results for Long-Term CO2 Injection Near Methane Hydrate Formations** Y. Ikegawa, K. Kubota, K. Suzuki, CRIEPI; M. Masuda, Tokyo University; H. Narita, T. Edinuma, AIST
- 1550 20914 **The International Marine Minerals Society's Code for Environmental Management of Marine Mining** P. Verlaan, MMS
- 1612 21082 **Deep Ocean Seafloor Resource Exploration: Technique Enhancements for a Rapidly Growing Industry** I. Stevenson, J. Lowe, Nautilus Minerals

Arena Room

Deepwater Technology, Gas Hydrates, and CO2 Qualifications

Session Chairpersons: **Hani Elshahawi**, Shell; **Gamal Hassan**, Baker Hughes

- 1400 20471 **Material Innovation for Ultradeepwater Performance of Long-Term Mooring Cables** S.L. Fletcher, S.J. Calverley, S. Cawthorne, J. Mohanraj, J. Verwaayen, Bridon International
- 1422 20939 **Gulf of Mexico's First Application of Riserless-Mud Return for Tophole Drilling: A Case Study** J.H. Cohen, J. Kleppe, AGR; T.B. Martin, T. Tveit, Statoil; W.J. Gusler, C.F. Christian, Baker Hughes; S. Golden, Transocean Offshore
- 1444 20551 **Numerical Investigation of Gas Production Strategy for the Hydrate Deposits in the Shenhu Area** Z. Su, Guangzhou Institute of Energy Conversion; G.J. Moridis, K. Zhang, Lawrence Berkeley National Laboratory; R. Yang, N. Wu, Guangzhou Institute of Energy Conversion
- 1506 20724 **CO2 Injection and Storage: Qualification of Well Barriers in Adjacent Wells** B. Vignes, A.M. Enoksen, J. Ovesen, Petroleum Safety Authority Norway
- 1528 20573 **Prediction of Wave Impact in Extreme Weather** C. Stansberg, R. Baarholm, K. Berget, Marintek; A.C. Phadke, ConocoPhillips Company

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Panel: Burst! What is it?

One of the principle criteria for the design of a deepwater pipeline is the selection of the proper wall thickness needed to satisfy installation, test, and operating conditions. The definition of the term "burst" impacts this selection process.

Over the past year, many people have spent significant time looking into the ramifications of the several equations for determining burst failure of a pipeline.

A high-level panel will discuss the implication this term has on the design of submarine pipelines and risers in deep water in the Gulf of Mexico and worldwide.

Session Chairpersons: **John Bomba**, Technip; **Paul Stanton**, Technip

Panelists:

- Kim Mork**, Det Norske Veritas
- Carl Langner**, Carl Langner & Associates
- Andrew Palmer**, National University of Singapore
- David Garrett**, Stress Engineering Services

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Impact of Subsea Processing Power Distribution

Session Chairpersons: **Pierre Alain Delaitre**, Harchambe Consulting; **Jean Francois Saint Marcoux**, Acergy

- | | | | |
|------|-------|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| 0930 | 20621 | Subsea Power Systems: A Key Enabler for Subsea Processing | S. Middtveit, B. Monsen, S. Frydenlund, K.A. Stenevik, Statoil |
| 0952 | 20483 | Electrical Transmission and Distribution Architectures for Subsea Processing Systems | E. Thibaut, E. Meyer, E. Rambaldi, Total E&P |
| 1014 | 20468 | Subsea Switchgear Module: A Key Enabling Component in Subsea Installations | T. Hazel, R. Alessandrini, P. Andrea, J.L. Eschbach, Schneider-Electric; S. Pana, Poseidon Group |
| 1036 | 20741 | Qualification of Dynamic Deepwater Power Cable | B.R. Slora, S. Karlsen, S. Lund, P.A. Osborg, K. Heide, Nexans Norway |
| 1058 | 20509 | Case Study: Optimized Field Architecture for Electrical Boosting in Deep Water | S. Easton, Acergy |
| 1120 | 20886 | Powering New Frontier Ultradeep Water: R&D, Innovation or Evolution? | C. Noel, R. Dee, J.C. Vivic, Shell International E&P |

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Perdido Development: World's First Ultradeepwater Drilling and Production Facility

Session Chairpersons: **John Barnes**, AMEC Paragon; **Nina Rach**, E&P Magazine

- 0930 20887 World's First Ultradeepwater Drilling and Production Facility** D. Snyder, B. Townsley, Shell International E&P Company
- 0952 20879 Great White WM12 Reservoir and Silvertip M. Frio Field Development Plans and Comparison of Recent Well Results With Pre-Drill Models** V. Eikrem, R. Li, M. Medeiro, B. McKee, E. Schumilak, B.L. Boswell, R. Mohan, Shell International E&P Company
- 1014 20882 Subsea and Flowline Systems** G. Ju, H.S. Littell, T.B. Cook, M. Dupre, K.M. Clausing, E. Shumilak, W.W. Schoppa, Shell International E&P Company; W.A. Blizzard, Seahorse Deepwater Technology
- 1036 20885 Spar and Moorings** C. Lohr, K. Smith, Shell International E&P Company
- 1058 21081 Extending the Functionality of a Single Lift Topside** K. Shallenberger, K. Smith, Shell International E&P
- 1120 20645 Perdido Deepwater Export Connection** M.H. Dupre, Shell International E&P Company; D. Nelson, Nomad Consulting
- 1142 20889 Perdido Regional Host Surveillance and Operations Technology** G.E. Purdy, H.S. Littell, S. Lajeunesse, T. Coulon, K. Durham, A. Lee, Shell International E&P

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Flow Assurance: New Frontiers and Subsea Processing

Session Chairpersons: **Thomas Kelly**, FMC Technologies; **Jeff Zhang**, Fluor Offshore Solutions

- 0930 20451 Subsea Processing at *Parque das Conchas* (BC-10): Taking Flow Assurance to the Next Level** S. Lyer, P. Lang, W. Schoppa, D. Chin, A. Leitko, Shell E&P
- 0952 20528 Design and Operability Considerations of the Gas Flowline at *Parque das Conchas* (BC-10) Ostra Field** Z. Atakan, D. Chin, P. Lang, S. Lyer, Shell E&P
- 1014 20372 Development of an Antifoam for Subsea Application for the *Parque das Conchas* Project, BC-10 Block, Offshore Brazil** J. Hera, Jr., Nalco Company; R. Gingrich, Shell E&P Production Company
- 1036 20371 Development of a Combination Corrosion-Scale Inhibitor for the Subsea Separation and Boosting Systems of the *Parque das Conchas* Project in Brazil** M.A. Silvestri, D.H. Emmons (retired), S. Linares-Samaniego, Nalco; R. Gingrich, Shell E&P
- 1058 21033 Blind Faith Gas Export Pipeline Precommissioning and Commissioning Challenges** H.Y. Shen, H.T. Phan, Williams
- 1120 20900 Deliquification of an Offshore Oil Well: An Innovative Approach To Overcome Paraffin Plugging** S. O'Brien, E. Kiihne, J. Macias, E. Vita, J.A. Gonzalez, Champion Technologies
- 1142 20617 High-Viscosity Oil-Gas Flow in Vertical Pipe** D.T. Akhiyarov, H. Zhang, C. Sarica, University of Tulsa

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Ocean Wave and Thermal Energy Generation and Transportation

Session Chairpersons: **John Smart**, BP; **Tere Sonne**, Technip

- 0930 21016 Economics of Ocean Thermal Energy Conversion (OTEC): An Update** L.A. Vega, National Marine Renewable Energy Center, University of Hawaii
- 0952 20366 Model Tests and Simulations on a Wave Energy Converter Based on Inverse Offshore Engineering** B. Buchner, Marin
- 1014 20815 Dynamic Subsea Power Cable Design Considerations for Renewable**

Energy Applications P. Worrall, JDR Cable Systems; J. Hurtt, Lockheed Martin

- 1036 20408 **Formation of Synthesis Gas Using Solar Concentrator Photovoltaics and High-Temperature Co-Electrolysis of CO₂ and H₂O** L.J. Frost, J. Hartvigsen, S. Elangovan, Ceramatec
- 1058 20805 **The First Experiences of Certification of Marine Energy Converters** C. Bittencourt, J. Flinn, Det Norske Veritas

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Gas Hydrates I: Discovery of Rich Gas Hydrate Accumulations in Sand Reservoirs in the Gulf of Mexico

Session Chairpersons: **Emrys Jones**, Chevron ETC; **Dendy Sloan**, Colorado School of Mines

- 0930 20560 **Gulf of Mexico Gas Hydrates Joint Industry Project: Overview of Leg II LWD Results** R. Boswell, U.S. Department of Energy; T.S. Collett, U.S. Geological Survey; D. McConnell, AOA Geophysics; M. Frye, W. Shedd, Minerals Management Service; S. Mrozewski, G. Guerin, A. Cook, Columbia University; D. Shelander, J. Dai, Schlumberger; P. Godfriaux, R. Dufrene, Minerals Management Service; E. Jones, R. Roy, Chevron
- 0952 20452 **Gulf of Mexico Gas Hydrate Joint Industry Project Leg II: Logging-While-Drilling Operations and Challenges** T.S. Collett, U.S. Geological Survey; R. Boswell, U.S. Department of Energy; M. Frye, B. Shedd, P. Godfriaux, R. Dufrene, Mineral Management Service; D. McConnell, AOA Geophysics; S. Mrozewski, G. Guerin, A. Cook Columbia University; E. Jones, R. Roy, Chevron
- 1014 21023 **Gulf of Mexico Gas Hydrate Joint Industry Project Leg II: LWD Logging Program Design, Data Acquisition and Evaluation** S. Mrozewski, A. Cook, G. Guerin, D. Goldberg, Lamont-Doherty Earth Observatory; T.S. Collett, US Geological Survey; R. Boswell, US Department of Energy; E. Jones, Chevron
- 1036 20801 **Gulf of Mexico Gas Hydrate Joint Industry Project Leg II: Initial Results From the Green Canyon 955 Site** D.R. McConnell, AOA Geophysics; T.S. Collett, US Geological Survey; R. Boswell, National Energy Technology Laboratory; M.C. Frye, W.W. Shedd, R. Dufrene, P. Godfriaux, Mineral Management Service; S. Mrozewski, G. Guerin, A. Cook, Lamont-Doherty Earth Observatory; E. Jones Chevron
- 1058 20552 **Gulf of Mexico Gas Hydrate Joint Industry Project Leg II: Results From the Alaminos Canyon 21 Site** M. Frye, W.W. Shedd, P.D. Godfriaux, R. Dufrene, Minerals Management Service; T.S. Collett, M.W. Lee, US Geological Survey; R. Boswell, US Department of Energy; E. Jones, Chevron; D.R. McConnell, AOA Geophysics; S. Mrozewski, G. Guerin, A. Cook, Lamont-Doherty Earth Observatory
- 1120 20806 **Gulf of Mexico Gas Hydrate Joint Industry Project Leg II: Results From the Walker Ridge 313 Site** W.W. Shedd, M. Frye, P. Godfriaux, R. Dufrene, Minerals Management Service; D.R. McConnell, AOA Geophysics; R. Boswell, US Department of Energy; T.S. Collett, US Geological Survey; S. Mrozewski, G. Guerin, A. Coopk, Lamont-Doherty Earth Observatory; D. Shelander, J. Dai, Schlumberger/WesternGeco
- 1142 20659 **Seismic Modeling Analysis and Characterization for a Gas Hydrate and Free Gas Mixed System in Green Canyon, Gulf of Mexico** Z. Zhang, D. McConnell, AOA Geophysics

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Atlantic Canada

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

- 0930 20696 **Ice Keel-Seabed Interaction: Numerical Modeling Validation** R. Phillips, J.A. Barrett, A. Al-Showaiter, C-Core
- 0952 20697 **New Insights Into the Tectonostratigraphic Evolution of the Labrador Margin** K. Dickie, C.A. Keen, G.L. Williams, S.A. Dehler, Geological Survey of

Canada

- | | | | |
|------|-------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1014 | 20698 | Arctic Offshore Technology Assessment of Exploration and Production Options for Cold Regions of the U.S. Continental Shelf | M.J. Paulin, formerly of IMV Projects Atlantic; S.C.Thistle, K.P. Kennedy, IMV Projects |
| 1036 | 20701 | Play Fairway Analysis, Offshore Nova Scotia | H.A. Wilson, M.N. Luheshi, D.G. Roberts, RPS Energy; R.A. MacMullin, Nova Scotia Department of Energy |
| 1058 | 20703 | Offshore Petroleum Play Fairway Analysis and Geoscience Data Package Program | O.S. Van Belle, H.A. Wilson, M.N. Luheshi, RPS Energy; R.A. MacMullin, Nova Scotia Department of Energy; W.F. St-Amour, Offshore Energy Technical Research Association |
| 1120 | 20704 | Dry vs. Wet: An Evaluation of Subsea Tie-Backs and Surface Platform Development Strategies for Nova Scotia | C. Dunn, P. Rushton, Martec, member of the Lloyd's Register Group |
| 1142 | 20899 | Plate Tectonics Reconstruction of Nova Scotia's Offshore | M.N. Luheshi, K.R. Nunn, D.G. Roberts, H.A. Wilson, RPS Energy |

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General Session Panel: Addressing Social and Environmental Performance Risks in International Development Projects: From Soft Awareness to Hard Management

Moderator: **Chris Ross**, CRA International

This session focuses on how social performance management is evolving from recognition of "soft" issues to proactive management of these issues using "hard" metrics. The session includes a social performance management expert, two major oil company representatives, an IFC representative, and an industry technology expert.

Panelists:

John Simon, Senior Vice President Production, Hess Corporation

Robbie Schilhab, Safety, Security, Health, and Environmental Manager, ExxonMobil Development Company

Rich Haut, Senior Research Scientist, Houston Advanced Research Center

Pandora Snethkamp, Independent Consultant, Social Performance Management in International Energy Development

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Updated API Recommended Practices: A New Suite of Standards

Session Chairpersons: **Philippe Jeanjean**, BP; **David Wisch**, Chevron ETC

- 1506 20831 Strategy and Structure of the API 2 Series Standards, 2010 and Beyond** D.J. Wisch, Chevron ETC; A. Mangiavacchi, Experia Consulting; P. O'Connor, BP; W.R. Wolfram, ExxonMobil Development Company
- 1528 20837 22nd Edition of API RP 2A Recommended Practice for Planning, Designing and Constructing Fixed Offshore Platforms: Working Stress Design** F. Zwerneman, Mustang Engineering; K.A. Digre, API Consultant
- 1612 20693 RP 2MET: An API Recommended Practice for Metocean** J. Stear, Chevron ETC
- 1550 20817 API Bulletin 2HINS: Guidance for Post-Hurricane Structural Inspection of Offshore Structures** F.J. Puskar, R.E. Spong, Energo Engineering
- 1422 20675 API RP SIM: Recommended Practice for Structural Integrity Management of Fixed Offshore Platforms** S. Defranco, P. O'Connor, BP; F.J. Puskar, Energo Engineering; J. Bucknell, GLNoble Denton; K.A. Digre, API Consultant
- 1444 21047 API RP2EQ: Seismic Design Procedures and Criteria for Offshore Structures** A.H. Younan, ExxonMobil Upstream Research; F.J. Puskar, Energo Engineering

1400 20864 **Tie-Down Loads for Drilling Rigs and Modules on Floating Structures**
E.G. Ward, M.H. Kim, Y.H. Bae, Texas A&M University

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Parque das Conchas (BC-10) Project: An Ultradeepwater Heavy Oil Development

Session Chairpersons: **Doreen Chin**, Shell International E&P Company; **Robert Patterson**, Shell E&P Technology Company

- 1400 20537 **Parque das Conchas (BC-10): An Ultradeepwater Heavy Oil Development Offshore Brazil** K.H. Stingl, A.H. Paardekam, Shell
- 1422 20599 **Parque das Conchas (BC10): Subsurface Challenges in Developing a Deepwater Shallow Geologically Complex Field** L. Stockwell, SPWLA; J.A. VanKonijnenburg, G. Holmes, G. Stewart, Shell; S. Zambrano, Schlumberger
- 1444 20608 **Parque das Conchas (BC-10): Delivery of Deepwater Extended-Reach Wells in a Low-Fracture Gradient Setting** W. Bode, MMS; R. Hartmann, A.M. Kenworthy, Shell
- 1506 20647 **Parque das Conchas (BC-10) FPSO Espirito Santo: An Ultradeepwater Heavy Oil Surface Host Facility** C.T. Howell, R. Andring, C. Wibner, T. Muirhead, Shell; J.M. Felderhoff, SBM Offshore
- 1528 20649 **Parque das Conchas (BC-10) Subsea Hardware Systems: Selection, Challenges and Lessons Learned** L.A. Olijnik, D.A. LaCaze, Shell
- 1550 20650 **Parque das Conchas Pipeline, Flowline and Riser System Design, Installation and Challenges** J. Hoffman, H. Yun, A. Modi, Shell; R. Pearce, Nomad Consulting
- 1612 20532 **Parque das Conchas (BC-10) High Voltage Power Umbilical Design and Installation** S.P. Eckerty, R.K. VonTungeln, D.J. Liney, Shell

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Flow Assurance: Design and Operation

Session Chairpersons: **Sandeep Patni**, Shell; **Thomas Sifferman**, ETPP Consulting

- 1400 **Keynote: The Evolution of Flow Assurance: Optimal Performance through Multidisciplinary Integration** Gerry Elphingstone, Chevron
- 1422 20668 **Wax Deposition and Rheology: Progress and Problems From an Operator's View** R. Venkatesan, J.L. Creek, Chevron ETC
- 1444 20464 **The Impact of Reservoir Fluid Compositional Variation and Its Origin on Flow Assurance Evaluation** O.C. Mullins, D.E. Freed, J.Y. Zuo, Schlumberger; H. Elshahawi, Shell
- 1506 20436 **Unplanned Shut-in and Deepwater Gas Hydrate Prevention** S.M. Chen, Husky Energy
- 1528 20338 **Pioneer Challenge Reduction of MEG Consumption Using KHI for Hydrate Control in a Deepwater Environment Offshore Egypt** F.A. Agizah, T.A. Ali, M. Baydoon, Rashid Petroleum Company; S. Allenson, A. Scott, Nalco Energy Services
- 1550 20896 **Proper Selection of LDHI for Gas-Condensate Systems in the Presence of Corrosion Inhibitors** R. Alapati, E.A. Sanford, E. Kihne, E. Vita, Champion Technologies
- 1612 20841 **Fundamental Understanding on the Effects of Anti-Agglomerants Towards Overboard Water Quality** P.A. Webber, Nalco

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Creating Value Through Geoscience

Session Chairpersons: **Charles Knobloch**, Arnold & Knobloch; **Jim Kreamer**, Weinman Geoscience

- 1400 20975 Sustaining Ocean Offshore Value Creation Demands Responsive Governments, Responsible Companies, Respectful NGOs and Informed Publics** J. Hofmeister, Citizens for Affordable Energy
- 1422 21071 Carbon Capture and Sequestration: Overview and Offshore Aspects** C.L. Liner, University of Houston
- 1444 20379 The "Reliable Technologies" Rule What Did the SEC Intend?** W.J. Lee, Texas A&M University
- 1506 20862 Recent Advances in Development and Application of Wide Azimuth Seismic Technology** T. Summers, S. Mitchell, B. Barley, M. Foster, BP
- 1528 20854 Technologies To Identify Salt-Related Deepwater Drilling Hazards** P. Cullen, J. Taylor, W. Thomas, P. Whitehead, Devon Energy Corporation; M. Brudy, W. Van Der Zee, GeoMechanics International
- 1550 20639 Assessing the Quantitative Value of Seismic Data in a Mature Production Setting** J.M. Reilly, ExxonMobil Upstream R/research Company

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Gas Hydrates II: Resource Evaluation and Production Estimates

Session Chairpersons: **Ray Boswell**, U.S. Department of Energy; **Hideo Narita**, National Institute of Advanced Industrial Science/Technology

- 1400 21049 Preliminary Evaluation of the Production Potential of Recently Discovered Hydrate Deposits in the Gulf of Mexico** G.J. Moridis, M.T. Reagan, Lawrence Berkeley Laboratory; R. Boswell, US Department of Energy; T.S. Collett, US Geological Survey; K. Zhang, Lawrence Berkeley National Laboratory
- 1422 20485 Gas Hydrate System of Shenhu Area, Northern South China Sea: Wire-line Logging, Geochemical Results and Preliminary Resource Estimates** N. Wu, Guangzhou Institute of Energy Conversion,CAS; S. Yang, Guangzhou Marine Geological Survey; H. Zhang, China Geological Survey; J. Liang, H. Wang, Guangzhou Marine Geological Survey,CGS
- 1444 20548 Evaluation of Gas Production Potential From Marine Gas Hydrate Deposits in Shenhu Area of the South China Sea** X. Li, Guangzhou Institute of Energy Conversion; G.J. Moridis, K. Zhang, Lawrence Berkeley National Laboratory; X.S. Li, Guangzhou Center of Gas Hydrate Research
- 1506 20787 Model Calculation on Economics of Depressurization-Induced Gas Production From Oceanic Methane Hydrates** Y. Masuda, Y. Hariguchi, University of Tokyo; Y. Konno, National Institute of Advanced Industrial Science; M. Kurihara, H. Ouchi, Japan Oil Engineering Company
- 1528 20729 Reservoir Characterization of Methane Hydrate Bearing Turbidite Channel in the Eastern Nankai Trough, Japan** S. Noguchi, N. Shimoda, N. Oikawa, O. Takano, T. Saeki, T. Inamori,T. Fujii, JOGMEC
- 1550 20737 Prediction of Production Test Performances in Eastern Nankai Trough Methane Hydrate Reservoirs Using 3D Reservoir Model** M. Kurihara, A. Sato, H. Ouchi, Japan Oil Engineering Company; H. Narita, T. Ebinuma, K. Suzuki, National Institute of Advanced Industrial Science and Technology; Y. Masuda, University of Tokyo; T. Saeki, K. Yamamoto, T. Jujii, Japan Oil, Gas & Metals National Corporation

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Offshore Wind Energy

Session Chairpersons: **Puneet Agarwal**, Stress Engineering Services; **James Dailey**, Technip Offshore Inc.

- 1400 20656 Inspection Guidance for Offshore Wind Turbine Facilities** R.E. Sheppard, F.J. Puskar, C. Waldhart, Energo Engineering

- 1422 20811 **On Hurricane Risk to Offshore Wind Turbines in US Waters** A. Jha, D.K. Dolan, MMI Engineering; W. Musial, National Renewable Energy Laboratory; C. Smith, Petroleum Research Atlantic Canada
- 1444 21001 **Load Extrapolation Methods for Offshore Wind Turbines** P. Agarwal, Stress Engineering Services; L. Manuel, University of Texas at Austin
- 1506 20674 **Qualification of a Semi-Submersible Floating Foundation for Multi-Megawatt Wind Turbines** C. Cermelli, A. Aubault, Marine Innovation and Technology; D. Roddier, Principle Power; T. McCoy DNV Global Energy Concepts

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Panel: Caspian Sea Energy Developments

This panel will focus on the current developments and challenges facing the energy industry in the Caspian region. They will examine how the parties involved assess and deal with the technical, environmental, political, and business factors that influence the activities.

Additionally, the panel will discuss the various roles that contractors, operators, governments, and organizations fulfill in facing the challenges underlying energy projects in the Caspian Sea.

Moderator

Buford Pollett, Texas Attorney and Licensed Geoscientist
John Roberts, Energy Security Specialist, Platts

Panelists

John Couch, Baker & McKenzie
Kate Hardin, IHS CERA
Jim Roman, ConocoPhillips
Mike Simmons, Neflex

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Deepwater Technology

Session Chairpersons: **Frederic Garnaud**, Total; **Robert Mccavitt**, Chevron Corporation

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| 0930 | 20635 | Newbuild Compact Deepwater Drillship Designed for Surface BOP System L. Claassen, S. Hendriks, G.H. Zijderveld, GustoMSC |
| 0952 | 20456 | Autonomous Vehicle Qualification Demonstrates Potential for a Game Change J.A. Mair, J. Jamieson, Subsea 7; I. Tena, J. Evans, Seeyte |
| 1014 | 20506 | Deepwater Pipeline and Riser Installation by Reel-Lay Method S.N. Smith, A.J. Clough, Subsea 7 |

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Sand Control Completions

Session Chairpersons: **Earl "Chip" Claiborne**, Chevron Corporation; **Kevin Renfro**, Anadarko Petroleum Corporation

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| 0930 | 20434 | Deepwater Frac-Pack Maximum Treating Pressure Limits: An Examination Using Bottom-Hole Pressure Gauges K.F. Lizak, C. Hinnant, Shell International E&P |
| 0952 | 20970 | Development and Field Applications of an Aqueous-Based Consolidation System for Remediation of Solids Production J. Villesca, G. Hurst, P. Burn, BP; P.D. Nguyen, R.D. Rickman, R.G. Dusterhoft, Halliburton |
| 1014 | 20883 | Integrating Lessons Learned From over 20 years of One-Trip Tubing-Conveyed Perforating and Frac Pack/Gravel Pack Applications O.Y. Mohamed, S. Davis, Baker Hughes |

- 1036 20429 **Fiber-Optic Distributed Vibration Sensing Provides Technique for Detecting Sand Production** S.J. Mullens, G.P. Lees, Schlumberger; G. Duvivier, BP
- 1058 20488 **Technology or Intangibles: What Drives Sand Control Selection?** R.B. Waltman, D. Torres, R. Dusterhoft, Halliburton; K.F. Lizak, Shell
- 1120 20842 **Mechanical Performance of a Gravel Pack Prototype Under High-Stress Contrast** F.M. Guzman Villarroel, Baker Hughes; M. Bloch, Petrobras; E.D. Vargas Jr., Catholic University of Rio de Janeiro

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Offshore Pipeline Projects and Repairs

Session Chairpersons: **John Bomba**, Technip; **Eric Smith**, E.W. Smith & Associates

- 0930 20750 **Lessons Learned From Observing Walking of Pipelines With Lateral Buckles, Including New Driving Mechanisms and Updated Analysis Models** D.A. Bruton, F. Sinclair, M. Carr, Atkins Boreas
- 0952 20850 **Technical Challenges and Success for Deepwater Riser Wet Parking, Recovery and Transfer Installation In Frade Field** J. Wang, E. Radan, R.K. Hagen, J. Bullock, Acergy
- 1014 20770 **The Medgaz Project Ultradeepwater Pipeline Project** J. Chaudhuri, Petroconsultor; M. Pigliapoco, M. Pulici, Saipem
- 1036 20795 **Installation Analysis of Matterhorn Pipeline Replacement** D. Chu, MMI Engineering; M. Boisne, A. Malassagne, Technip USA
- 1058 20818 **Ormen Lange Hot Tap Operations: World Record in Hot Tapping** K. Apeland, J. Berge, B.S. Opheim, Statoil; M. Armstrong Isotek Electronics
- 1120 20814 **The Kvitebjorn Gas Pipeline Repair** E. Gjertveit, J.O. Berge, B.S. Opheim, Statoil

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Fiber Moorings: Recent Experiences and Research

Session Chairpersons: **Craig Colby**, Diamond Offshore Drilling; **Matt Ferrell**, Energo Engineering

- 0930 20836 **Fiber Moorings, Recent Experiences and Research: Updating API RP 2SM on Synthetic Fiber Rope for Offshore Moorings** D.J. Petruska, P. Kelly, BP; B. Stone, Intec-Sea; V. Ahjem, DNV; E.H. Zimmerman, R. Garrity, Delmar Systems; T. Veselis, Intermor
- 0952 20833 **Analysis, Design and Installation of Polyester Rope Mooring Systems in Deep Water** O.P. De Andrade, A.S. Duggal, Sofec
- 1014 20846 **Modeling Fiber Rope Load-Elongation Properties: Polyester and Other Fibers** M. Francois, Bureau Veritas; P. Davies, Ifremer; F. Grosjean, IFP; F. Legerstee, Bureau Veritas
- 1036 20844 **Fiber Rope Tether Manufacturing: Current Best Practice and a Vision for the Future** D.S. Rowley, Offspring International; S. Leitte, Lankhorst Ropes
- 1058 20845 **Moorings With Polyester Ropes: Experience and the Evolution of Life Cycle Management** R.R. Rossi, C.J. Del Vecchio, R.C. Goncalves, Petrobras
- 1120 20838 **Fiber Rope Mooring Assessment: Original API RP 2SM Piecewise Linear Stiffness vs. Non-Linear Stiffness With Integrated Permanent Rope Elongation** E.H. Zimmerman, R. Garrity, Delmar Systems
- 1142 20843 **Impact of Splinters on Polyester Rope Strength** H. Shu, Shell International E&P; I.M. Ridge, Tension Technology

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Gas Hydrates III: Sampling, Well Design, and Geomechanical Analysis

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

- 0930 20827 **Pressure Coring and Pressure Core Analysis for the Upcoming Gulf Of Mexico Joint Industry Project Coring Expedition** P.J. Schultheiss, Geotek; J.T. Aumann, Aumann & Associates; G.D. Humphrey, Fugro Geoconsulting
- 0952 21015 **Well Design Requirements for Deep Water and Arctic Onshore Gas Hydrate Production Wells** S.H. Hancock, RPS Energy Canada; G.J. Moridis, Lawrence Berkeley National Laboratory; S. Wilson, Ryder Scott Company; A. Robertson, RPS Energy Canada
- 1014 20716 **Case Study of Push-the-Bit Vertical Drilling in Shallow Sediments of the Nankai-Trough Seismogenic Zone** Y. Shinmoto, K. Wada, I. Sawada, Japan Agency for Marine-Earth Science and Technology; Y. Ito, Y. Ikeda, Schlumberger
- 1036 20582 **Heat Transfer and Wellbore Stability Analysis in Hydrate-Bearing Zone in the East Sea, South Korea** I. Khurshid, K.J. Lee, Seoul National University; J. Bahk, Korea Institute of Geoscience & Mineral Resources; J. Choe, Seoul National University
- 1058 21048 **A Modeling Study of Geomechanical Performance of Sloping Oceanic Hydrate Deposits Subjected Production Activities** J. Rutqvist, G.J. Moridis, Lawrence Berkeley National Laboratory
- 1120 20744 **Study for Estimation of Seabed Stratum Deformation in Methane Hydrate Production** E. Ogisako, S. Nishio, A. Denda, Shimizu Corporation; F. Oka, S. Kimoto, Kyoto University
- 1142 20721 **Effect of Confining Pressure on Triaxial Compressive Properties of Artificial Methane Hydrate-Bearing Sediments** K. Miyazaki, A. Masui, Y. Sakamoto, N. Tenma, National Institute of Advanced Industrial Science and Technology; T. Yamaguchi, Toho University

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Topsides Technology

Session Chairpersons: **Tom Rodkey**, Fluor International

- 0930 20558 **Three-Phases Separator Sizing Using Drop Size Distribution** J.H. Song, B.E. Jeong, H.J. Kim, S.S. Gil, DSME
- 0952 20748 **Field Test of Compact Cyclonic Technology for Separation of Gas/Liquid and Oil/Water at the Gullfaks Field** B.L. Knudsen, M. Bjorkhaug, B. Johannesen, M. Ottoy, O. Sorensen, G.S. Eidsmo, T. Bruun, Statoil
- 1014 21064 **Platform Waste Gas Combustion: Efficiently, Safely, Reliably and Economically** A. Mascarenhas, J. Sutherland, Questor Technology
- 1036 20648 **Effects of Modular Systems on Construction Productivity and Project Management Processes** Z. Ahmed, Hilti Corporation
- 1058 21039 **Five Dangerous Trends in Hazardous Operations** L. Ebot, IRC Risk and Safety
- 1120 20415 **Barrier Diagrams the Next Stage for Enhancing Offshore Operations Safety** R. Pitblado, R. Tahilramani, DNV

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General Session Panel: Surface BOP Technology: State of the Art and Future Opportunities in Deep Water

As the pressure increases to lower deepwater well costs, technology trends are surfacing that could revolutionize the industry. Surface BOP technology is one of the most promising. It is already a highly regarded enabler for driving well costs down in some deepwater applications. This panel of SBOP technology experts offers a range of perspectives from operators, drilling contractors, consultants, and regulators. These diverse experts have one thing in common: they all are actively engaged in safely applying this technology to lower deepwater well costs.

Moderators

Greg Carter, Owner, Nautilus Offshore Company Incorporated
 Neil Kavanagh, Chief Science and Technology Manager, Woodside Energy Ltd.

Panelists

Russell Hoshman, Petroleum Engineer, MMS
 Brian Tarr, Senior Engineer, Shell
 Earl Shanks, Senior Engineer, BP
 John Kozlcz, Transocean
 Gavin Humphreys, New Business and Technology Manager, Stena Drilling
 David Bond, General Manager, Drilling, Ophir Energy

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Subsea Well Intervention

Session Chairpersons: **Syed Ali**, Schlumberger; **Francois Auzeais**, Schlumberger

1400	20416	Spoolable Compliant Guide: A Solution for Well Intervention	C. Bridge, X.J. Guedeney, Schlumberger
1422	20417	Operating Experiences From Second Generation Riserless Light Well Intervention Systems in the North Sea	V. Sten-Halvorsen, B. Neumann, B. Skeels, FMC Technologies
1444	20418	Experiences From Operating New Generation Riserless Light Well Intervention Units in the North Sea: Challenges and Future Opportunities	R. Friedberg, S.N. Jossang, B. Gramstad, S. Delane, Island Offshore Subsea
1506	20438	Development of a Deepwater Subsea Well Intervention Package Control System	P. Nellessen, Schlumberger
1528	20419	Subsea Intervention: The Balance of Effectiveness, Risk and Cost	K.L. Hurzeler, Well Ops, A Helix Company
1550	20420	Riserless Subsea Well Intervention: Technology and Practice	N.C. Crawford, I.R. Still, Blue Ocean Technologies

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High-Pressure Subsea Gas/Liquid Separation

Session Chairperson: **Earl "Chip" Claiborne**, Chevron Corporation

- | | | |
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| 1400 | 20453 | Theoretical Prediction of Interfacial Tensions for Hydrocarbon Mixtures With Gradient Theory in Combination With Peng-Robertson Equation of State H. Nilssen, NTNU; A.O. Fredheim, E. Solbraa, Statoil; B. Kvamme, University of Bergen |
| 1422 | 20389 | Droplet Size Measuring Technique and Application J.M. Marchetti, L.E. Patruno, NTNU; A. Gaebler, Sulzer Chemtech; H.F. Svendsen, NTNU |
| 1444 | 20440 | Scrubber Separation: Droplet Entrainment in High-Pressure Gas Liquid Separation L.E. Patruno, J.M. Marchetti, C.A. Dorao, H.A. Jakobsen, H. Svendsen, NTNU; D. Tayebi, Shell Technology Norway |
| 1506 | 20511 | High-Pressure Droplet-Deposition: From Experiments To Closure Laws P.M. Dupuy, H.A. Jakobsen, M. Fernandez, H. Svendsen, Norwegian University of Science and Technology; A. Gaebler, Sulzer Chemtech |
| 1528 | 20512 | Diffusion Coefficient: The Silent Coalescence Inhibitor P.M. Dupuy, M. Fernandez, H.A. Jakobsen, H. Svendsen, Norwegian University of Science and Technology; S.M. Whitney, ExxonMobil Upstream Research |
| 1550 | 20745 | CO2 Droplets: One Component, Two-Phase System as Model Fluid for High-Pressure Hydrocarbon Systems P.M. Dupuy, M. Fernandez, H. Svendsen, Chemical Engineering Department, NTNU; R. Westra FMC Technologies |
| 1612 | 20390 | Scrubber Performance: Investigation of Liquid Holdup I Mech Pad at Ambient Conditions With Applications to High-Pressure Separation E. Setekleiv, H. Svendsen, NTNU |

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Offshore Pipelines Soil / Structure Interaction

Session Chairpersons: **Mark Brunner**, Technip Offshore Engineering; **Lisa Medeiros**, OYO Corporation

- | | | |
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