



Society of Petroleum Engineers

TECHNICAL PROGRAMME COMMITTEE

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Baker Oil Tools

Frank McEwan
Schlumberger

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Jason Pinto
ROC Oil Co. Ltd.

Guillaume Plessis
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John Ratulowski
Schlumberger

Richard Russell
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Michael Scott
The Expro Group

Colin Swan
FMC Technologies

SPE Applied Technology Workshop

DEEPWATER DRILLING TECHNOLOGY

19-22 October 2009 • Ayodya Resort Bali • Bali, Indonesia

WORKSHOP DESCRIPTION

Deepwater drilling activity in Asia-Pacific is in an upsurge, with active Exploration and Appraisal ongoing in several deepwater basins. In addition, a number of development projects are slated to be onstream in the very near future. High drilling costs, volatile oil prices and market uncertainties, add further challenge to deepwater drilling activities. Successful execution of deepwater drilling projects requires in depth technical knowledge, integration of other disciplines expertise and a strong team focus. Participants at previous ATWs have consistently highlighted the opportunity for professional networking across disciplines as a key benefit.

WORKSHOP OBJECTIVES

The objectives of the workshop are to enable operators, service companies, research bodies and other organisations to develop the resources and technology base to meet the challenges of deepwater drilling projects in the Asia-Pacific region. The workshop will also deliver an awareness of the key deepwater drilling technologies available to meet the challenges of forthcoming exploration and developments and an understanding of how to apply them in an integrated manner. This will include presentations and discussions to assess key risks and opportunities.

WORKSHOP FOCUS

This comprehensive workshop will focus on the latest practical applications of Deepwater Drilling Technology and best practices that can be considered for immediate application as well as providing excellent networking opportunities for current and future technology exchange.

The workshop agenda will include the following sessions:

- Deepwater Drilling – What Are The Challenges?
- Deepwater Drilling Hazards
- Deepwater Drilling Practices
- Deepwater Completions
- Drilling Rigs and Structures
- Well Interventions – Rig Assisted and Rigless
- New and Emerging Deepwater Drilling Technologies
- Research Opportunities

Within the main sessions, the sub-topics will include:

- Technology Awareness and Required Technical Skills
- Worldwide Best Practices
- Well Engineering and Well Construction Considerations
- Risks and Opportunities
- Costs control

WHO SHOULD ATTEND

This workshop will be of particular value to drilling professionals and professionals from other disciplines in the oil and gas industry, as well as key service suppliers with experience in deepwater development. Registrants will be encouraged to discuss their own case histories and experiences.

REGISTRATION DEADLINE: 30 SEPTEMBER 2009

EARLY BIRD REGISTRATION DEADLINE: 25 AUGUST 2009

REGISTER EARLY TO SAVE US\$100!

DEEPWATER DRILLING TECHNOLOGY

Preliminary Workshop Timetable

Note: While every attempt will be made to adhere to the schedule, the status/availabilities of session topics, discussion leaders and moderators are subject to change. For updated technical agenda information, please visit the SPE website at www.spe.org/atws.

Monday, 19 October 2009

1400 hours	Hotel Check-in
0900-1200 hours	Programme Committee Meeting
1600-1800 hours	SPE Registration/Poster Set-up
1800-1900 hours	Discussion Leaders and Session Managers/Moderators Briefing
1930-2100 hours	Welcome Reception/Dinner

Tuesday, 20 October 2009

0700-0830 hours	Breakfast
0830-1000 hours	Session 1: Introduction/Opening/ Keynote Addresses
1000-1030 hours	Group Photo/Coffee Break
1030-1230 hours	Session 2: Deepwater Drilling – What are the Challenges?
1230-1330 hours	Lunch
1330-1530 hours	Session 3: Deepwater Drilling Hazards
1530-1600 hours	Coffee Break
1600-1800 hours	Session 4: Deepwater Drilling Practices
1800-1900 hours	Poster Session
1930-2100 hours	Group Dinner

Wednesday, 21 October 2009

0700-0800 hours	Breakfast
0830-1030 hours	Session 5: Deepwater Completions
1030-1100 hours	Coffee Break
1100-1300 hours	Session 6: Drilling Rigs and Structures
1300-1400 hours	Lunch
Afternoon	Rest & Recreation/Networking Opportunities/Dinner on own

Thursday, 22 October 2009

0700-0800 hours	Breakfast
0830-1030 hours	Session 7: Well Interventions – Rig Assisted and Rigless
1030-1100 hours	Coffee Break
1100-1300 hours	Session 8: New and Emerging Deepwater Drilling Technologies
1300-1400 hours	Lunch
1400-1530 hours	Session 9: Research Opportunities
1530-1600 hours	Coffee Break
1600-1700 hours	Session 10: Parking Lot /Summary and Wrap Up
1930 hours	Group Dinner

Friday, 23 October 2009

0730-1030 hours	Breakfast at Leisure
1200 hours	Hotel Check-Out

Poster Solicitation and Information

Poster Session Chairperson:

John Ratulowski, Schlumberger Canada

As an adjunct to the scheduled presentations, the Programme Committee will incorporate a poster presentation session in this Workshop. The poster session will allow participants an opportunity to present additional new ideas to those interested. The poster session is scheduled from **1800 - 1900 hours** on **Tuesday, 20 October 2009**.

All participants are encouraged to prepare and bring a poster presentation to the Workshop. Posters will be on display for the entire Workshop period and provide participants an excellent opportunity for networking. As with the session discussions, the poster session will be conducted off the record to encourage frank discussion and presentation of unconfirmed or partial results. Presentations on both research and field experience are solicited.

SPE WORKSHOPS AND COMMERCIALISM

The Workshop Programme Committee has a stated policy against the use of commercial trade names, company logos, or language that is commercial in tone.

Note that the Workshop Programme Committee will review all posters prior to display, and reserves the right to refuse permission to display any poster considered by the committee to be commercial in nature.

The poster display should be designed for eye-level viewing and made from simple graphic materials. Size of the poster board will be advised at a later time. The poster display may include printed materials, tables, graphs, photographs, or illustrations. All the materials should be of sufficient size so as to be easily read and should be prepared in a manner that will accomplish the following:

- Identify topic by title, presenter, affiliation, address, and phone number.
- Include a brief abstract that summarises the technology to be addressed.
- Make the display as self-explanatory as possible.
- Place the information sequentially; beginning with the main idea or problem, method used, result, etc. (Draw a plan keeping the size and number of illustrations in mind).
- Keep illustrations simple by using charts, graphs, drawings, and pictures to create interest and visually explain a point.
- Use contrasting colours.
- Use large print for narrative materials. (We suggest a minimum of 24 points or 3" high letters for the title).

Whether or not you elect to participate in the poster session or have been invited by the Programme Committee to present during one of the regular sessions, please come prepared to participate actively in the discussions. Open interaction is encouraged. With the full cooperation and participation of all attendees, we anticipate an outstanding Workshop.

DEEPWATER DRILLING TECHNOLOGY

PRELIMINARY TECHNICAL AGENDA

Tuesday, 20 October • 1030-1230 hours

SESSION 2: DEEPWATER DRILLING – WHAT ARE THE CHALLENGES?

Session Co-Chairpersons/Moderators:

Colin Swan, FMC Technologies

Nigel Meany, AGR Petroleum (ME) Ltd.

This session will review the technical limit challenges and risk management issues along with the people requirements for deepwater drilling; also what are the differences in the deepwater basins in Asia versus the other deepwater basins around the world what lessons can we learn. Access to deepwater rigs and what options do we have.

The session subtopics include:

- Risk Management, Application and Process
- Regional Subsurface Variations
- Infrastructure/Logistics
- Cost
- Availability and Development of Training (Best Practices)
- Application of Process to Reduce Dependency on People

Tuesday, 20 October • 1330-1530 hours

SESSION 3: DEEPWATER DRILLING HAZARDS

Session Co-Chairpersons/Moderators:

Frank McEwan, Schlumberger

Melvin Devadass, 3M Malaysia Sdn. Bhd.

The goal of the session is to share information and experience on critical safety issues in deepwater drilling operations. The topics covered will include an overall view of deepwater drilling in fractured carbonates and well control hazards such as shallow water flow and gas hydrates. De-risking these scenarios is therefore of primary importance to the industry, requiring a focused approach in pre-drill planning. The session sub topics include:

- Shallow Hazards
- Exploration
- Development
- Completion
- Well Integrity – Short and Long Term
- Deepwater Carbonates
- Consideration for Drilling Fluid Selection

Tuesday, 20 October • 1600-1800 hours

SESSION 4: DEEPWATER DRILLING PRACTICES

Session Co-Chairpersons/Moderators:

Bjørn-Tore Anfinson, SPT Group

Guillaume Plessis, NOV Grant Prideco

The operating window for well control while drilling, running casing and cementing is typically narrower in deepwater wells. This is caused by lower overburden weight and also extreme geometry with the BOP located relatively close to the reservoir and also large riser volume and long choke and kill lines. This may require deploying specific tools or techniques to ensure a safe and successful drilling operation. This session will address the following:

- Well Control Challenges
- Technology Awareness and Required Technical Skills
- Worldwide Best Practices
- Well Engineering and Well Construction considerations
- Dual Gradient / MPD Solutions for Deepwater
- Consideration for Drilling Fluid Selection

Wednesday, 21 October • 0830-1030 hours

SESSION 5: DEEPWATER COMPLETIONS

Session Co-Chairpersons/Moderators:

Ben Lim, Baker Oil Tools

Nathaniel Peter, Baker Hughes (M) Sdn. Bhd.

The design of Deepwater completions vary widely in terms of complexity and technical challenges. Various parameters such as water depth, riser configuration and the required completion objectives can drastically affect the way the completion is

designed. Additional factors such as completion system reliability, pressure integrity, inflow control and monitoring have to be considered in the design of deepwater completions. This session addresses the important topics related to deepwater completions.

- Completion System Design for Long Term Well Integrity
- Sand Management in Deepwater Completions
- Flow Assurance from the Production Perspective
- Management of Casing Annulus Pressure Fluctuations
- Intervention-less Completions and Monitoring

Wednesday, 21 October • 1100-1300 hours

SESSION 6: DRILLING RIGS AND STRUCTURES

Session Co-Chairpersons/Moderators:

Ahmad Nahravi bin Mohamad, PETRONAS

Jason Pinto, ROC Oil Co. Ltd.

Deepwater drilling changes the game for drilling rigs too and these Mobile Offshore Drilling Unit (MODU) have to be designed and/or upgraded to be able to work in ever deeper waters. This session aims at reviewing what is required for rigs used for drilling or intervening in deepwater exploration or development programs and shall include discussion on:

- Rigs Availability
- Surface BOP for Deepwater
- Managing New Start-up
- Extending Rig Water Depth Capability

Thursday, 22 October • 0830-1030 hours

SESSION 7: WELL INTERVENTIONS – RIG ASSISTED AND RIGLESS

Session Co-Chairpersons/Moderators:

Colin Swan, FMC Technologies

Michael Scott, The Expro Group

This session will review the development of technology for rigless and rig assisted well intervention, develop an appreciation on the technical limits and applications for both vertical and horizontal tree systems. It will also help understand the cost saving benefits of these systems over each other and possible future application of this technology in Asia.

The session will address the following:

- Well Abandonment in Deepwater
- Flow Assurance
- Intelligent Completions
- Simple Completions / Low Cost Intervention
- Drill Pipe Risers

Thursday, 22 October • 1100-1300 hours

SESSION 8: NEW AND EMERGING DEEPWATER DRILLING TECHNOLOGIES

Session Co-Chairpersons/Moderators:

Kaustubh Dighe, Transocean Drilling Sdn. Bhd.

Richard Russell, Halliburton

As one of the latest frontiers in the search for oil and gas, deepwater exploration and production continues to grow in importance. New and emerging deepwater technologies will therefore have an even more relevant part to play in the future of our industry. In this session, some of the exciting new developments in deepwater technology will be presented. There will also be opportunity to discuss the application and effects of these and other new innovations.

Thursday, 22 October • 1400-1530 hours

SESSION 9: RESEARCH OPPORTUNITIES

Session Co-Chairpersons/Moderators:

Frank McEwan, Schlumberger

Nigel Meany, AGR Petroleum (ME) Ltd.

The session sub topics include:

- Support from Regional Research Organisations
- Joint Industry Projects

DEEPWATER DRILLING TECHNOLOGY

Documentation:

1. Proceedings will not be published; therefore, formal papers and handouts are not expected from speakers.
2. Work in progress, new ideas, and interesting projects are sought.
3. Professionally-prepared visual aids are not required; handwritten viewgraphs are entirely acceptable.
4. Note-taking by participants is encouraged. However, to ensure free and open discussions, no formal records will be kept.

Workshop Deliverables:

- The committee will prepare a full report containing the highlights of the Workshop discussions. This report will be circulated to all attendees. A one-page summary will be prepared by the Workshop Co-Chairperson, which will be posted on the SPE Web Site, and published in the Journal of Petroleum Technology (JPT), if space permits. The copyright of the Summary Report will belong to SPE.
- PowerPoint presentation materials will be posted on a specific SPE URL address after the Workshop. Provision of the materials by the discussion leaders will signify their permission for SPE to do so.

Commercialism:

In keeping with ATW objectives and the SPE mission, excessive commercialism in posters or presentations will not be permitted. Company logos must be limited to the title slide and used only to indicate the affiliation of the presenter and others involved in the work.

Attendance Certificate:

All attendees will receive an attendance certificate attesting to their participation in the Workshop. This certificate will be provided in exchange for a completed Workshop Questionnaire.

Continuing Education Units:

This workshop qualifies for SPE Continuing Education Units (CEU) at the rate of 0.1 CEU per hour of the ATW.

Attendees' Information:

General and detailed accommodation information will be forwarded to registrants with the attendee package prior to the scheduled Workshop, in September 2009.

Transportation/Visa:

All delegates are advised to book their international airline tickets early from their country to Bali, Indonesia. Further detailed transportation information will be available and included in the attendee package upon registration. All travellers to Indonesia must be in possession of passport valid for at least six (6) months with proof of onward passage, either return or through tickets. Please check with your travel agent for information on visa requirements to Indonesia.

Dress Code:

Casual clothing is recommended. The Workshop atmosphere is informal.

Workshop Venue:

Ayodya Resort Bali

Jalan Pantai Mengiat, Nusa Dua 80363, Bali, Indonesia
Tel: 62.361.771102 • Fax: 62.361.771616

REGISTRATION FEES:

Early Bird Registration Deadline: 25 August 2009

- **SPE MEMBER: US\$2,450.00/person**
- **NONMEMBER: US\$2,550.00/person**

Registration Deadline: 30 September 2009

- **SPE MEMBER: US\$2,550.00/person**
- **NONMEMBER: US\$2,650.00/person**

Fee includes the following:

- Three-day registration fee for all Workshop sessions;
- Four nights accommodation based on single occupancy with arrival Monday, 19 October 2009 and departure Friday, 23 October 2009;
- Welcome reception followed by dinner (Monday Evening);
- Three meals per day except on Wednesday;
- Daily coffee/tea breaks;
- Workshop Workbook and Certificate of Continuing Education Unit (CEU);

Note: Registration fee does not include hotel accommodation and meal costs for additional family member(s).

Registration Policy:

- Registration fee **MUST** be paid in advance for attending the Applied Technology Workshop.
- Full Fixed fee is charged regardless of the length of time that the registrant attends the Workshop.
- Fixed fee cannot be prorated or reduced for anyone (Workshop chairpersons, committee members, speakers, discussion leaders, students and registrants).
- Attendees are expected to attend all Workshop sessions and are not permitted to attend on a partial basis.

Cancellation & Refund Policy:

- A processing fee of **US\$150.00** will be charged for cancellation received before the registration deadline **30 September 2009**.
- For cancellation received after the registration deadline **30 September 2009**, a 25% refund will be made to the registrant.
- No refund on cancellation received seven (7) days prior to the starting of the Workshop date, on or after **12 October 2009**.
- Substitutions will not be accepted without prior Programme Committee approval.
- **No refund** will be issued, if a registrant fails to show up at the Workshop on-site.

**ATTENTION NON-MEMBERS:
JOIN SPE DURING THIS WORKSHOP AND RECEIVE
YOUR FIRST YEAR'S MEMBERSHIP FREE!
SUBMIT YOUR MEMBERSHIP APPLICATION ONSITE!**