



SPE Workshop: Unlocking Deepwater Potential through Innovation and Technology Enhancement

18–19 July 2022 | Kuala Lumpur, Malaysia



**Sign up before 17 June 2022
for Super Early Bird Discount!**

Who Should Attend

Professionals involved in:

- Asset Integrity
- Drilling and Completions
- Geoscience
- HSE and Sustainability
- Petrophysics
- Logistics and Procurement
- Management of Change
- Process Safety Management
- Production Technology
- Reservoir Engineering and Management
- Risk Assessment Management
- Supply Chain Management
- Well Engineering, Operations, and Services

Technical Programme Committee

CO-CHAIRS

Muhammad Aizat Abu Bakar
Senior Manager, Front End
Engineering Wells (FEEW)
Well System and
Engineering Solutions (WSES)
PETRONAS

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Manager Decommissioning &
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PTTEP

Rong Xu
Senior Reservoir Engineer
Schlumberger

Suphawit Kiartkul
Staff Engineer, Operations
PTTEP Sabah Oil Limited

Marlene Kereshanan
Drilling Technical Lead
Schlumberger WTA Sdn. Bhd.

Deepwater exploration and development have become more promising over the years since global oil and gas players first ventured into this complex area. Compounding the increase in demand and the fact that there are no longer easy-to-reach reservoirs at shallower water depth, key industry players have raised numerous discussions on opportunities and mitigation to the challenges for deepwater drilling operations. With technological enhancement and increased demand for oil exploration, operators have invested in deep-sea projects to access untapped reservoirs underneath the deep-sea floor. Countless efforts and investments in technologies have taken place in order to switch the mindset of deepwater drilling from a risky business into an opportunity to unlock greater discoveries.

Apart from the existing challenges already faced by deepwater operators, many manhours have also been allocated to produce low-breakeven and low-carbon deepwater projects with value-accretive solutions to increase profit, whilst supporting the upstream decarbonisation agenda. Deepwater rig contractors, for example, have increased their investment in drilling technologies and operational efficiencies. The complexity of ultra-deep drilling has made it highly dependent on extensive studies on deepwater play and reservoir management, project engineering and design, as well as thorough risk assessment on overall project scopes.

Session Highlights

Deepwater Drilling | Deepwater Formation Evaluation

Deepwater Completion | Deepwater Production and Facility Management

Deepwater Project Delivery | Carbon Reduction in Deepwater Development

GROUP REGISTRATIONS AVAILABLE
Contact us at apweb@spe.org to arrange your group.

go.spe.org/23WM05W

WORKSHOP ADVISOR

Saifon Daungkaew
Reservoir Engineering Advisor
Schlumberger
Member, SPE Asia Pacific Regional Technical Advisory Committee

Workshop Objectives

This workshop aims to explore the latest advancement and best practices on deepwater drilling, as well as project management on both exploration and development from operators, service partners, independent consultants, and academia. Furthermore, this workshop provides an avenue for collaborative discussion and idea exchange by sharing the latest technologies, case studies, lessons learnt, and strategic approaches in deepwater development.



Bespoke and industry-curated technical content



Knowledge sharing and discussions with subject matter experts



Networking opportunities with like-minded peers



POSTER SOLICITATION & INFORMATION

All participants are encouraged to prepare a poster for the Workshop. Presentations on both research and field experience are welcomed. Posters, including unconfirmed/partial results, are to be presented at an assigned time and are open for discussion. Posters will be on display for the entire Workshop period.

When preparing your poster:

- Avoid commercialism. No mention of trademarks/product name
- Poster size should be approximately 0.8m x 1.2m (W x H) or size A0 in portrait layout
- Identify topic by title, 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 in sequence: beginning with the main idea or problem, method used, results, 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)

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

If you are interested to participate, please email your proposed topic with a short abstract (between 200-300 words) to Renee Wong at rwong@spe.org by 17 June 2022.

MONDAY, 18 JULY 2022

08:00 – 08:50 Arrival of Delegates and Registration

08:50 – 09:00 Safety Announcement

09:00 – 09:30 **Welcome Remarks by Workshop Co-Chairs**

Co-Chairs: Muhammad Aizat Abu Bakar, **PETRONAS**; Zhafran Sulaiman, **PETRONAS**

09:30 – 10:00 **Keynote Address**

10:30 – 12:30 **Session 1: Deepwater Drilling**

Session Managers: Konstantin Puskarskij, **Maersk Drilling**; Mohamad Khairol Affendy Abdul Razak, **PETRONAS Carigali Sdn. Bhd.**; James Hunter Manson, **PTTEP**

Deepwater drilling has always been viewed as technically challenging and warrants an extensive capital investment. Due to these two factors, many of the deepwater reserve potentials are being held up by operators. To unlock these massive potentials in deepwater areas, new and innovative ways to drill and complete the wells in a safe and cost-effective manner are needed.

This session will discuss and highlight current deepwater drilling best practices application as well as potential future innovations and enhancements, to enable continuous improvement in both exploration and development drilling execution. Ultimately, helping to maintain and drive enhanced deepwater project economics, whilst trying to reduce the development drilling carbon footprint.

Discussion topics may include:

- Deepwater narrow margin drilling challenges in both exploration and development including infill, focusing on progress made in deepwater Managed Pressure Drilling (MPD) / Pressurised Mud Cap Drilling (PMCD), and deepwater wellbore strengthening equipment, techniques and applications.
- Integrated disciplinary optimisation of well trajectory planning on challenging deepwater plays: What has been achieved and what is possible to produce the optimal development option?
- Deepwater geohazards management and regulations for safe operating distance (respud well distance).
- Deepwater rigs: Current fleet, future demand, equipment reliability, utilisation of working rigs/warm stacked/cold stacked rigs, whilst identifying and driving down carbon emissions.
- Deepwater development drilling and completion optimisation and best practices: Best use of rig innovations and new equipment including drilling and completion batching/well-sequencing optimisation, logistics, service supply, and Personnel on Board (POB) management.

GENERAL INFORMATION

DOCUMENTATION

- Proceedings will not be published; therefore, formal papers and handouts are not expected from Discussion Leaders.
- Work in progress, new ideas, and interesting projects are sought.
- Note-taking by attendees 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 highlights of the Workshop and the report will be circulated to all attendees.
- PowerPoint presentations will be posted online and provided to attendees after the Workshop. Provision of the materials by Discussion Leaders will signify their permission for SPE to do so.

COMMERCIALISM

In keeping with the Workshop objectives and the SPE mission, excessive commercialism in posters or presentations is not permitted. Company logos must be limited to the title slide and used only to indicate the affiliation of the Discussion Leader.

ATTENDANCE CERTIFICATE

All attendees will receive a Workshop digital attendance certificate.

CONTINUING EDUCATION UNITS

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

TRAVEL/VISA

Attendees are advised to book their airline tickets early. All travellers must be in possession of passports valid for at least six (6) months with proof of onward passage. Contact your local travel agent for information on visa requirements.

DRESS CODE

Business casual clothing is recommended. The Workshop atmosphere is informal.

PHOTOGRAPHY AND VIDEOGRAPHY

Attendees are not allowed to take photos or videos of the presentation materials shown during the event without prior written consent by the presenter.

12:30 – 13:30 Networking Luncheon

13:30 – 15:30 **Session 2: Deepwater Formation Evaluation**

Session Manager: Noor Rohaellizza Hademi, **Schlumberger**; Marlene Kereshanan, **Schlumberger WTA Sdn. Bhd.**

Due to the nature of deepwater wells, large well spacing may be needed to reduce the high operating cost. This will lead to higher uncertainties in reservoir characterisation such as reservoir heterogeneity, reservoir compartmentalisation, pore pressure variation, and zone producibility. These subsurface uncertainties could potentially create problems before and during the production stage. Thus, this session will focus on formation evaluation for subsurface data gathering from the deepwater reservoir. Topics that will be discussed will include the following:

- What are the challenges that might exist before and during formation evaluation?
- How to plan for efficient and effective formation evaluation for the deepwater reservoir?
- What are the latest technologies?
- What are the best practices and lessons learnt on formation evaluation from existing deepwater wells?

15:30 – 15:45 Coffee and Tea Break

15:45 – 17:45 **Session 3: Deepwater Completion**

Session Managers: Harni Fariyah Mohd Safari Lai, **PETRONAS Carigali Sdn. Bhd.**; Noppanan Nopsiri, **PTTEP Sarawak Oil Limited**

As the deepwater operation continues to grow, it is inevitable for operators to spend higher CAPEX to monetise the field. Investment may be critical in a marginal deepwater field or a more complex field environment.

This session will focus on completion design and optimisation efforts that can be replicated or improvised based on industry experience. This will include key drivers, best practices, lessons learnt, strategic approaches, challenges, and technologies. This session will also discuss some of the consideration points in deepwater completions and development as below:

- Deepwater Sandface Completion Design: Comparison of techniques, industry improvement, and challenges.
- Deepwater Open Hole Gravel Packing: Equipment advances, length limitations.
- Deepwater Upper Completions: Current and new technology/hardware
- Deepwater Development Drilling and Completion Optimisation: Batch operation, sequence optimisation, logistics management, and best practices for well suspension.
- Deepwater Trees: Horizontal vs Vertical, equipment reliability, and QA/QC.
- Best practices for Subsea Umbilicals, Risers & Flowlines (SURF)-rigs, Intervention Workover Control System (IWOCs), and Wellhead-XT interface for smoother operation.
- Deepwater intervention.

17:45 – 18:45 **Poster Session**

18:45 onwards Welcome Dinner

TUESDAY, 19 JULY 2022

09:00 – 11:00 **Session 4: Deepwater Production and Facility Management**

Session Manager: Suphawatt Kiertkul, **PTTEP Sabah Oil**

This session will cover topics on both topside and subsea facilities in deepwater production operations, which include a review of how to extract hydrocarbon in a deepwater reservoir from drilling and well unloading up to the production phase. Some of the key flow assurance challenges at the surface, for instance, hydrate formation, wax and scale deposition (including erosional and corrosion in the surface flowlines), as well as practical mitigation plans from wellbore to the host facilities, would be discussed from the practical point of view. Additionally, this session will also dive deeper into how to optimise well performance to prolong plateau production.

Key discussion topics may include:

- Hydraulic fracture in low permeability reservoir offshore: Profitable or too early?
- Challenges of chemical EOR in deepwater.
- Flow assurance in deepwater development and production.
- In-situ hydrates dissociation risk in deepwater development: Lessons learnt and mitigation strategies.
- How to remedy the hydrate formation in deepwater fields.
- Best practices in direct well unloading to host facilities (FPSO or platform).
- Maximising well life and deliverability as well as intervention management.

11:00 – 11:15 Coffee and Tea Break

11:15 – 13:15 **Session 5: Deepwater Project Delivery**

Session Managers: Shathiskumar Sockalingam, **PETRONAS Carigali Sdn. Bhd.**; Lim Tee Bin, **Shell**

Oil and gas development are moving further offshore and deeper underwater as energy companies and service partners seek sources of production in these remote areas. Due to the remoteness and challenging environment, the capital cost for deepwater projects is often very substantial, and the risks for oil companies grow exponentially. The main factor for a successful deepwater operation is the alignment of project goals, deliverables, and measurements of success. Deepwater development requires the incentive that these remote basins will hold significant deposits of recoverable hydrocarbon reserves to be profitable for development in a very high cost and technically challenging environment. Unfortunately, large reserves in deepwater play are getting lesser and a shift in approach is required to make deepwater projects an attractive investment in the current global energy mix.

The session will review and discuss how deepwater projects can become a viable investment through the following:

- Technology advancement and best practices in pushing the technical boundaries and sustaining the project competitive with lower development costs.
- Technology innovation in green energy solutions as the industry aims to achieve the net-zero emissions target.
- Field development optimisation through geological uncertainty and risk mitigations.
- Reducing the time from discovery to first hydrocarbon production while addressing Technical, Economical, Commercial, Organisational, Political-Societal (TECOP) challenges.
- Critical role in project economics as the industry grapples with rising costs throughout the life cycle of asset development and production.
- Talent and experience retention strategies throughout oil and gas cycles for both operators and service industry.
- Overcoming challenges in deepwater facilities decommissioning and abandonment.
- Realistic approaches to contract management, commercial rigour and cost control to commercialise a prospect.

13:15 – 14:15 Networking Luncheon

14:15 – 16:15 **Session 6: Carbon Reduction in Deepwater Development**

Session Managers: Bei Gao, **Schlumberger**; Rong Xu, **Schlumberger**

Directly and indirectly, the oil and gas industry accounts for 42% of global carbon emissions. As the pressure to act on climate change builds, how can oil and gas companies use hydrogen and carbon capture and storage to help lower the emissions?

This session will discuss the existing and potential technologies that are crucial to achieving a low-carbon economy in deepwater offshore whilst providing an opportunity to share experiences and/or challenges implementing those technologies. In the long run, driving standardisation and innovative solutions for sustainable energy development in deepwater.

16:15 – 16:30 Coffee and Tea Break

16:30 – 17:00 Workshop Summary and Closing Remarks

Why Sponsor



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For a detailed list of available sponsorship opportunities, including benefits and pricing, contact **Renee Wong** at rwong@spe.org.

Sponsorship Opportunities

Sponsorship support of the event helps offset the cost of producing workshops and allows SPE to keep the attendance price within reach of operation-level individuals, those who benefit most from these technical workshops. Supporters benefit both directly and indirectly by having their names associated with a specific workshop. While SPE prohibits any type of commercialism within the virtual event platform itself, SPE recognises that supporting companies offer valuable information to attendees outside the technical sessions.

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Acknowledgement during Welcome Remarks	✓		
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Company logo in digital platform as on-demand for up to one (1) month post event	✓	✓	✓
Opportunity to insert sponsors' promotional materials (PDF or link) as downloadable resources in digital platform	✓		
Price	USD 10,000	USD 7,000	USD 4,000

REGISTRATION FORM

SPE WORKSHOP:

Unlocking Deepwater Potential through Innovation and Technology Enhancement

18 – 19 July 2022 | Kuala Lumpur, Malaysia



Society of Petroleum Engineers

By registering for this event, participants consent to allow SPE to store and process the information submitted below and to provide participants with information about this event in accordance to [SPE Privacy Policy](#); accept the Registration Terms & Conditions and Workshop Guidelines; and agree to be bound by participants. Participants can unsubscribe at any time by sending your request to spekl@spe.org.

Participants have chosen to participate in this event understand that SPE will implement, and participants agree to abide by all, preventative measures to minimise the spread of COVID-19. Notwithstanding SPE's measures and participants' compliance, participants acknowledge that SPE cannot guarantee that participants will not contract COVID-19. In exchange for allowing participants' participation in this event, participants agree to release SPE, its employees, directors, officers and agents, from any claim or damages arising from or relating to COVID-19 resulting from the participation in this event.

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Do you wish to be considered a Discussion Leader (10-15 minutes presentation)? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, please indicate the subject/topic on which you would like to present:					
Please state your Technical Discipline (Select one ONLY): <input type="checkbox"/> Completions <input type="checkbox"/> Data Science and Engineering Analytics <input type="checkbox"/> Drilling <input type="checkbox"/> Health, Safety, Environment, and Sustainability <input type="checkbox"/> Management <input type="checkbox"/> Production and Operations <input type="checkbox"/> Projects, Facilities and Construction <input type="checkbox"/> Reservoir					
Please state your expectation for the workshop, so that we can tailor a portion for the workshop to answer attendees' concerns.					
Send me the latest news, events, and product information as it becomes available. <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, your information will be used in accordance with SPE Privacy Policy.					

REGISTRATION CATEGORY						
Description		Fee Per Person			Tick (✓)	Amount (USD)
		Super Early Bird by 20 May	Early Bird by 17 June	Standard after 17 June		
Workshop	Member	USD 1,200	USD 1,300	USD 1,400		
	Non-Member	USD 1,400	USD 1,500	USD 1,600		
Group Registration - Register 5 save 25%, Register 10 save 30% (Refer to Group Registration Form or contact spekl@spe.org for more information)						
TOTAL AMOUNT (USD)						

REGISTRATION TERMS & CONDITIONS
<ol style="list-style-type: none"> Registration Fee <ol style="list-style-type: none"> Fee DOES NOT include accommodation. SPE will provide details of recommended hotels upon receipt of your registration. Registration is non-transferable without written notification to SPE. Registration of participation will only be confirmed upon receipt of full payment or an acceptable employer's letter of guarantee. SPE reserves the right to cancel the registration if no payment is received prior to or on the date of the event. Full fee is charged regardless of the length of time the Participant attends the event and cannot be pro-rated. Taxes <p>Fees are made free and clear of, and without any deduction or withholding for and on account of, any taxes, duties or other deductions. Any such deduction or withholding, if required by the laws of any country are the sole responsibility of the participant.</p> Cancellation Policy <ol style="list-style-type: none"> A processing fee of USD 150.00 will be charged for cancellation received before 28 June 2022. No refund for cancellation received after 28 June 2022. Participants who failed to attend will not be eligible for a refund. Cancellation must be notified in writing to SPE. Email your cancellation request to spekl@spe.org. Health and Safety <ol style="list-style-type: none"> Participants agree to adhere to policy and procedures regarding COVID-19 to ensure the health and safety of all participants. These policies may include, but are not limited to, wearing a mask while on property, maintaining social distancing, and refraining from physical contact with other participants on-site. All rules and guidelines will be according to the local government's regulations in which the event takes place and the event venue facility. Participants who do not comply with the rules and guidelines will not be permitted to enter or remain in the event venue. Privacy Policy <ol style="list-style-type: none"> SPE cares about the protection of participants' personal information. SPE complies with applicable privacy laws, including GDPR, in collecting and processing your data. SPE's Privacy Policy describes the information practices regarding how SPE collects, uses, discloses, or transfers the Personal Information that participants share with SPE or that SPE collect about participants when participants attend one of SPE events, visit SPE websites, or use SPE mobile applications. All participants maintain the right of erasure and can withdraw their consent at any time. Please see SPE's privacy policy for additional information. For any queries or concerns please contact the events team at spekl@spe.org. Disclaimer <ol style="list-style-type: none"> SPE reserves the right to change the speaker(s), date(s) and/or to cancel the event should circumstance beyond its control arises. SPE will not be liable to participants for any damages, costs, losses or expenses of any kind incurred or suffered by participants as a result of or in relation to SPE modifying, postponing or cancelling the event or any part of the event.

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