

SPE Virtual Symposium: Deepwater - Raising Potential through Innovation

24–26 August 2021 | Virtual

go.spe.org/22SM01S

Symposium Highlights



Welcome Message

Dear Colleagues,

We are pleased to welcome you to the inaugural **SPE Virtual Symposium: Deepwater – Raising Potential through Innovation** scheduled **24–26 August 2021**.

Deepwater exploration and production present a host of challenges. Major findings through case studies and technological advancements are guiding businesses in areas of operational decision making, cost optimisation, risk management, and improving safety and efficiency. Through this process, closer partnerships and collaboration between operators and service companies have produced environmentally friendly innovations. These significant reforms have reenergised interest in deepwater developments, unlocking ultra-deepwater potential and in enabling new projects in high-cost oil producing regions.

Although deepwater and ultra-deepwater exploration remains a new frontier in the Asia Pacific region, it presents a significant resource potential that can be unlocked on the back of established deepwater development projects, operational excellence and successful case studies. The symposium will discuss these best practices and lessons learnt focusing on how production and operations can be sustained and improved through innovation.

We encourage efforts and collaboration of our industry and its leaders to support this inclusive opportunity to bring the industry together to share and discuss the latest insights on future challenges and opportunities.

We look forward to your support for the SPE Virtual Symposium: Deepwater – Raising Potential through Innovation.

Sincerely,



Mohamad Abu Bakar
Symposium Co-Chair
General Manager
Resource Development
and Management
Malaysia Petroleum
Management
PETRONAS



Daniel Abbott
Symposium Co-Chair
Development Manager
Sabah Deepwater Assets
**Sabah Shell Petroleum
Company**

Table of Contents

Welcome Message	2
About the Symposium	3
Committee	4
Symposium Programme Schedule	5
Opening, Keynote and Executive Plenary Session	6
Panel Sessions	7
Technical Sessions	9
Sponsorship Opportunities	11
Registration	13

**This Symposium Highlights is updated as at 27 July 2021*

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About the Symposium

The inaugural SPE Virtual Symposium: Deepwater – Raising Potential through Innovation will be held from 24–26 August 2021 (UTC +8).

The SPE Virtual Symposium: Deepwater – Raising Potential through Innovation provides participants with crucial insights into the latest industry trends, technological advancements, best practices and lessons learnt on deepwater and ultra-deepwater exploration and production through a comprehensive three-day programme with stimulating plenary, panel and technical sessions.

What's Planned for 2021

- Executive plenary and panel sessions with industry business leaders and regulators
- 100+ participants from 18+ countries
- 30+ industry and subject matter expert speakers
- 10+ hours of business and technical content
- 4+ hours of virtual interactive panel sessions with subject matter

Who Attends

- Asset Integrity
- Drilling and Completion
- Geology and Reservoir Characterisation
- HSE and Sustainability
- Logistic and Procurement
- Management of Change
- Process Safety Management
- Production Technology
- Regulators
- Research and Development
- Risk Uncertainty and Risk Assessment
- Supply Chain Management
- Wells Engineering and Service

Registration is now open

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Visit go.spe.org/22SM01SHR to register for the SPE Virtual Symposium: Deepwater – Raising Potential through Innovation



Committee

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Senior Manager, Resource Development and Management
Malaysia Petroleum Management
PETRONAS

Symposium Co-chairs

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Resource Development and Management
Malaysia Petroleum Management
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Daniel Abbot
Development Manager
Sabah Deepwater Assets
Sabah Shell Petroleum Company

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Subsea Asia Pacific
Aker Solutions

Tan Coon Seng
Senior Sales Manager
Baker Hughes

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Adjunct Lecturer
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The University of the West Indies

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Master Flo Valve Inc.

Shankar Bhukya
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Team Lead, Reservoir Engineering
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Planning & HPIM Manager
Sabah Shell Petroleum Company

Khairil Khairuddin
General Manager
SBM Offshore

Kevin Lau
Deepwater Project Lead
Shell Malaysia

Arnaud Roux
Field Development Group Manager
Subsea 7

Zakwan Hakeem Mohd Zainee
Business Development Manager
Technip FMC

Julie Morgan
Chief Flow Assurance Engineer
Woodside Energy Ltd.



Society of Petroleum Engineers

About the Society of Petroleum Engineers

The Society of Petroleum Engineers (SPE) is a not-for-profit professional association whose more than 140,600 members in 144 countries are engaged in oil and gas exploration and production. SPE is a key resource for technical knowledge providing opportunities to exchange information at in-person and online events and training courses, publications, and other resources at www.spe.org.

Symposium Programme Schedule

Time (UTC +8)	Stream 1	Stream 2
Tuesday, 24 August 2021		
1300 - 1430 hours	Opening, Keynote and Executive Plenary Session	
1430 - 1500 hours	Networking Session	
1500 - 1630 hours	Technical Session 1 Exploration	Technical Session 2 Development
Wednesday, 25 August 2021		
1300 - 1430 hours	Panel Session 1 Sustainable and Profitability Development of Deepwater Fields	
1430 - 1500 hours	Networking Session	
1500 - 1630 hours	Technical Session 3 Production and Operations Excellence	Technical Session 4 Partnership and Collaboration
Thursday, 26 August 2021		
1300 - 1430 hours	Panel Session 2 Accelerating Deepwater's Transition to a Carbon Neutral Energy Business	
1430 - 1500 hours	Networking Session	
1500 - 1630 hours	Technical Session 5 Innovative Technology and Solutions Enabler	Technical Session 6 Commercial and Contractual Terms

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Who We Are

SPE is a not-for-profit professional association supporting more than 140,600 members in 144 countries.

Why Join or Renew

Connect with the E&P industry's brightest minds through SPE's global network of knowledge for every stage of your career.

What You Get

Access to SPE's vast collection of technical resources and networking channels to assist with your challenges.

JOIN OR RENEW TODAY!



Join our worldwide membership today and receive member registration rates for SPE events. Visit go.spe.org/joinSPE.



Society of Petroleum Engineers

Opening and Keynote Session

Tuesday, 24 August 2021 | 1300 - 1430 hours (UTC +8)

Welcome Remarks



Mohamad Abu Bakar
Symposium Co-Chair
General Manager
Resource Development and Management
Malaysia Petroleum Management
PETRONAS



Daniel Abbott
Symposium Co-Chair
Development Manager
Sabah Deepwater Assets
Sabah Shell Petroleum Company

Keynote Address



Adif Zulkifli
Executive Vice President and
CEO Upstream
PETRONAS

Executive Plenary Session: Deepwater – Raising Potential through Innovation

Tuesday, 24 August 2021 | 1330 - 1430 hours (UTC +8)

Moderators



Mohamad Abu Bakar
Symposium Co-Chair
General Manager
Resource Development and Management
Malaysia Petroleum Management
PETRONAS



Daniel Abbott
Symposium Co-Chair
Development Manager
Sabah Deepwater Assets
Sabah Shell Petroleum Company

This session will engage leading executives from the region in a stimulating and forward-looking dialogue on deepwater opportunities and challenges, as well as to share knowledge and best practices with a focus on how production and operations can be sustained and improved through innovation.

Panel Session 1: Sustainable and Profitability Development of Deepwater Fields

Wednesday, 25 August 2021 | 1300 - 1430 hours (UTC +8)

Sessions Chairs



Haydn Ian Furlonge
Adjunct Lecturer
ALJ Global School of Business
The University of the West Indies



Kevin Lau
Deepwater Project Lead
Shell Malaysia

Speakers



Phillip Solomon
Executive Director,
Commercial
GaffneyCline



Aidil Shabudin
Head of Resource
Development and
Management
Malaysia Petroleum
Management
PETRONAS



Richard Kho
General Manager
Malaysia and
Philippines Projects
Sarawak Shell Berhad



Torfinn Akselsen
Vice President of
Subsea Commercial,
Asia Pacific
TechnipFMC

Development of deepwater fields have always been pursued with favourable reservoirs due to the high cost and long development time involved. Many initiatives have been undertaken over the past few decades to standardise solutions to help improve the overall profitability of these fields by reducing overall cost and ultimately minimising the necessary interventions in the operations phase. However, these efforts have not taken away the overall impression that deepwater developments are generally expensive and can be seen as an unattractive investment if the subsurface realisations fall in the low case.

In recent years, we have seen deepwater developments buck this trend as they have managed to continuously obtain lower unit development cost values through, not only technology and innovation, but also through disciplined project management practices and more realistic subsurface predictions. This panel of distinguished speakers will aim to showcase some of the more recent projects that have shown greater cost competitiveness in light of the downturn back in 2015 and more recently during the pandemic. These projects have also been able to compete for the necessary capital in various fiscal regimes within the region as they are becoming more of an attractive investment.

Some areas of discussion include:

- What are the key enablers to ensuring a development is profitable in this current day and age and what key practices are various project teams using?
- Is deploying new technology the only way to further reduce costs in an overall project or are we better served being more innovative on existing standard solutions?
- What subsurface tools/practices are being used in the industry to help mitigate against low case realisations?
- How can deepwater development adjust to a post pandemic world where ways of working (virtual) will be the norm going forward?



Panel Session 2: Accelerating Deepwater's Transition to a Carbon Neutral Energy Business

Thursday, 26 August 2021 | 1300 - 1430 hours (UTC +8)

Session Chairs



Priscilla Ujang
Planning and HPIM Manager
Sabah Shell Petroleum Company



Julie Morgan
Chief Flow Assurance Engineer
Woodside Energy Ltd

Speakers



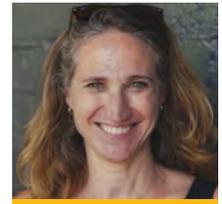
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Derek Price
Vice President
Oilfield Equipment
APACI
Baker Hughes



Handan Ramli
Head Production and Operation
Production and Operation
Management
Malaysia Petroleum Management
PETRONAS



Karen Westley
Vice President
Carbon and Environment
Shell

This panel session aims to address how the deepwater business can respond to the challenge to halt global warming and in step with society's progress as it works towards the Paris Agreement goal of limiting the increase in the average global temperature to 1.5°C above pre-industrial levels.

This imperative is being incorporated into corporate strategies as carbon neutrality goals, typically net-zero carbon by 2050. For the energy industry, the tactics considered are numerous and range from well-established practices such as utilisation of natural sinks through tree planting, driving operational excellence to eliminate flaring and abating methane intensity, shift to natural gas, through to the more challenging transition to renewable energy and alternative decarbonised fuels, to major projects involving carbon capture and storage.

How can the deepwater industry respond to this urgent challenge and develop solutions which allow them to retain economic potential? This will require a fundamental transformation of how the industry produces and utilises energy and hence, industry-wide collaboration is essential. This panel of industry experts will share their views on how co-operation can bring together the best solutions and match the development pace to align with other sectors so that global energy sources remain economical for society.

Some areas of discussion include:

- How can we accelerate the abatement of Scopes 1 & 2 emissions and play a role in Scope 3?
- What are the appropriate technologies to pursue? Ranging from emissions reduction, energy utilisation efficiency, efficiency improvements through digitalisation and novel hardware
- How viable is carbon capture and storage for deepwater developments?
- What cultural changes may be necessary to accommodate innovative solutions and how do we pace the transition across different geographical regions so that deepwater development and operations remain sustainable?

Technical Sessions

Tuesday, 24 August 2021

Technical Session 1: Exploration

1500-1630 hours (UTC +8) | Stream 1

Session Chairs: Samsul Idrus, **PETRONAS**; Faizah Musa, **PETRONAS Carigali Sdn. Bhd.**; Tan Sue Chein, **PTTEP Sabah Malaysia**

Deepwater fields and prospects can be more geologically puzzling with acquisition of new data compared to initial understanding. Surprises during appraisal and development stages can either upgrade the asset value or degrade the project economic. For this reason, capturing of multiple scenarios of geological concepts during exploration, appraisal and field development is critical.

One of the challenges in geological concept is in defining the deposition environment i.e. whether it is fan lobes deposit, channel-levee complex or others, which control the reservoir areal extension and sand connectivity. Since drilling of a deepwater well and associated data acquisition are generally very expensive, geological model of deepwater reservoir relies heavily on good and reliable seismic images. However, at the same time, fluid and reservoir prediction can also be very challenging as low saturated gas sand or silty gas sand can give very high seismic amplitudes that leads to over optimistic of net pay prediction.

In area where hydrocarbon has been discovered, we often observe seismic amplitudes dimming beneath the gas clouds or where shale diapirs occur, which further deteriorate the reservoir image. Thus, good seismic data and a good rock physics models are a necessity for exploring and developing deep water oil and gas fields. This session aims to promote knowledge sharing of recent exploration technologies in deepwater and replication of innovative workflows in geoscience.

Technical Session 2: Development

1500-1630 hours (UTC +8) | Stream 2

Session Chairs: Sharina M Salim, **PETRONAS**; Kevin Lau, **Shell Malaysia**

In recent history, there has been a downturn in oil prices which has led to greater pressures to ensure developments in the deepwater space to be more cost competitive and shorten the overall maturation timeline. The ability to innovate on existing technology or practices such as standardising of low-cost subsea equipment or enabling extended reach drilling and depletion drilling has supported projects to lower their overall costs, enabled quicker schedules and ultimately made them more attractive from an investment standpoint. These types of initiatives also allow the industry to mature fields which are “stranded” and further away from a host/platform. This session aims to explore the various practices and technologies being utilised in the industry to enable projects to screen, move faster and ultimately being sanctioned. Presenters will come from a multidisciplinary background, showing how integration and working out of “silos” can help further advance the overall development of deepwater fields.

Wednesday, 25 August 2021

Technical Session 3: Production and Operations Excellence

1500-1630 hours (UTC +8) | Stream 1

Session Chairs: CN Chong, **Aker Solutions**; Priscilla Ujang, **Sabah Shell Petroleum Company**

Over the last three decades, the oil and gas industry has made significant strides in the development of deepwater fields, usually at the forefront of technology advancements to counter the rising challenges of having to explore and extract the hydrocarbon from increasingly deeper water depths. Operations of deepwater fields are, arguably, significantly more expensive and complex compared to their shallow water and onshore peers and require manning by highly skilled, multi-disciplinary teams. As the industry further needs to constantly adapt to ever changing market conditions and the fluctuations in oil and gas prices, operators need to drive down their unit operating costs to sustainable levels in order to remain profitable and competitive. To further add complexity to an already very challenged business, deepwater operators are now expected to play a key part in aligning themselves to the Paris Agreement goal to halt global warming by reducing the greenhouse gas emissions from routine operations.

This session aims to address the interplays of the above factors and for the various industry players to share best practices and ideas, in the areas of operational excellence, production and recovery enhancement, technology deployment including digitalisation and human asset development, that will enable safe, profitable and sustainable deepwater oil and gas operations.



Technical Sessions

Wednesday, 25 August 2021

Technical Session 4: Partnership and Collaboration

1500-1630 hours (UTC +8) | Stream 2

Session Chairs: Brett Phillips, **Oceaneering**; Ernieza Nasir, **PETRONAS**

Unlocking the deepwater potential is a technically and commercially complex endeavour which requires speedy innovations on multiple fronts, and this can be achieved through effective partnership and collaborations among the players. The competitive approach in the past can only take the industry so far. Now it is time to evolve into a more collaborative model that brings together resources and expertise for accelerated innovations. In the current challenging landscape, the industry has more incentive to collaborate between multiple technology providers, operators and JV partners alike. For the industry to overcome the challenges, collaboration and partnership in areas such as improving design efficiencies through technology advancement, evolving contracting strategies, cost optimisation opportunities, leveraging specialised providers as well as digital enablers, can be keys to success. This session aims to explore the recent case studies of partnership and collaborations on how they have enabled progress in deepwater as well as to promote the potential future collaborations in the industry.

Thursday, 26 August 2021

Technical Session 5: Innovative Technology and Solution Enablers

1500-1630 hours (UTC +8) | Stream 1

Session Chairs: Craig Robinson, **Master Flo Valve Inc.**; Shankar Bhukya, **NOV Grant Prideco**; Paul Lonsdale, **One Subsea**

Flow control technology is critical to controlling production and maintaining the integrity of the downstream equipment. Deeper wells, HP/HT and changes in production behaviour throughout the life of the well, all push the boundaries of materials and product design. With the industry's current climate, the focus on cost and efficiency is paramount for operators and investors alike. This session aims to provide discussion on challenges driving design advancements for optimised production, with the aim of extending the operating life of the well with low cost of ownership. Presenters will share experience of industry challenges, solutions and lessons learned across the industry.

Technical Session 6: Commercial and Contractual Terms

1500-1630 hours (UTC +8) | Stream 2

Session Chairs: Tan Coon Seng, **Baker Hughes**; Julie Morgan, **Woodside Energy Ltd.**

Deepwater exploitation, especially when incorporating carbon neutral policies, will place increasing demands on commercial and contractual terms. Supply-chain efficiencies and standardisation have helped reduce project complexity and capital costs through industry-level agreements that align specifications. But how will developing technologies such as digitalisation (including data transmissions) be incorporated into standard contractual terms and insurance coverage? Similarly, as contractors and service companies innovate and expand their roles, the standard terms may not provide adequate coverage.

Are frame agreements a suitable mechanism to establish common protocols and standards? Will this model allow advances in design to be incorporated while reducing risk? Will the drive towards early contractor engagement to build trust and true operator/contractor partnership with integrated teams address these concerns? This session aims to identify the innovations in commercial and contractual models which can encourage energy transition, greener technologies and the move to decarbonisation in deepwater.





Sponsorship Opportunities Available

The symposium's virtual environment will provide attendees with an engaging experience, including the ability to interact and network with speakers, sponsors and more. The platform is designed to allow attendees to view each session and gain insight through the presentations and discussions by leading industry executives and experts. Sponsors will benefit from the ability to showcase their brand and products to a virtual and global audience.



Why Sponsor

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Sponsorship Opportunities

Standard Packages

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Price	USD 7,500	USD 5,400	USD 3,900

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USD 8,000

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Notes:

* Full Access registration includes access to the Symposium sessions (Opening and Executive Plenary, Panel and Technical Sessions with live Q&A) and On-Demand content.

For further information about sponsorship or exhibiting at SPE Virtual Symposium: Deepwater - Raising Potential through Innovation, contact:

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How to Register

Register online at go.spe.org/22SM01SHR

Individual Registration

Full Access Registration	Fee Per Person		
	Super Early Bird by 25 June	Early Bird by 22 July	Standard Rate after 22 July
Full Access: Member	USD 370	USD 400	USD 430
Full Access: Non-Member	USD 430	USD 460	USD 490
Full Access: Speaker / Author / Committee / Session Chair	USD 340	USD 370	USD 390

Group Registration

Register for 5 and save up to 15%, Register for 10 and save up to 20%

What Do You Get

Full Access Registration: Access to the Symposium sessions (Opening and Executive Plenary, Panel, Technical Sessions with live Q&A), virtual networking sessions and On-Demand content.



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Visit go.spe.org/22SM01S for more information



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