



Society of Petroleum Engineers



PETRONAS

SPE Workshop: Natural Gas Management and Development

7 – 8 December 2022 | Conrad Bangkok, Thailand



Sign up before 4 November 2022 for
Early Bird Discount!



Who Should Attend

Professionals involved in:

- Asset Planning and Commercial Management
- CCS/CCUS
- Digital and Robotic Transformation
- Drilling and Well Completion Engineering
- Energy Transition
- Facilities and Production Engineering
- Geoscience
- Government Regulators and Stakeholders
- LNG Development (Trading and Marketing)
- Marketing and Business Development (Investors, PSCs, Technology Providers)
- Petroleum and Reservoir Engineering
- Production and Operation Management
- Production Technology
- Project Engineering
- Project Management
- Research and Development
- Strategic Planning and Risk Management

Currently, natural gas development opportunities remain high, as the world still has a quarter of its natural gas resources undeveloped or stranded offshore. Future gas demand will increase in parallel with worldwide industrial development, population, and geopolitical challenges. Governments around the world are seeking various opportunities to secure sufficient fuel supplies. The cause of these dynamic changes in the oil and gas industry is not only the price volatility but also the societal pressure towards energy transition and decarbonisation efforts to achieve net-zero in the near future. Apart from the current energy crunch and global climate ambitions and actions, the disruption from digitalisation, and the Internet of things IoT (such as reduced-manning and remote operations) cannot be overlooked as the growth of its trend has never ended.

Tight margins, the introduction of updated regulations, societal and environmental demands necessitate for “out-of-the-box” approach to natural gas development and management. A holistic and integrated natural gas development approach involving all disciplines, such as exploration and prospects/leads identification, triggering of region/field contaminant mapping, area development plan (ADP), resources maturation, and innovative development and technology, is crucial.

Our industry's strategy and direction need to shift and reprioritised to meet the 2050 net-zero goals in which Carbon Capture, Utilisation and Storage (CCUS) and greenhouse gas (GHG) management becomes essential. Depleting hydrocarbon fields would be a potential solution for carbon storage, while late-life oil fields can provide further opportunity for gas cap blowdown to meet gas demand while facilities are still within their operational life or require asset life extension to continue operation.

This workshop invites an exchange of ideas and solutions amongst attendees, in order for our industry to accomplish the goal of optimising natural gas development and management and doing so strategically and sustainably.

Technical Programme Committee

CO-CHAIRS

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Peninsular Malaysia,
Malaysia Petroleum
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**PTT Exploration and
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Mohd Afzan Mohammad
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Regional Technical Advisory
Committee

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Regional Technical Advisory
Committee

GROUP REGISTRATION AVAILABLE

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

go.spe.org/23WA01W

Workshop Objectives

The workshop will provide industry updates and knowledge sharing on holistic natural gas development and management, including high contaminants, GCB, CCUS, the pathway to net zero, and its challenges. The aim is to keep participants abreast with new ideas in developing and managing natural gas resources. The applications of various digital technologies along with environmental awareness will also be deliberated.

The workshop will also share the latest updates on innovative, technological solutions in natural gas development projects through technical dialogues with subject matter experts and sharing of best practices and case studies to achieve optimised and cost-effective operations.

WORKSHOP STATISTICS



10+
hours of peer-to-peer
networking opportunities



30+
hours of knowledge sharing
and technical discussion



30
expert-led technical
discussion topics



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 Jessie Lee at jslee@spe.org by Friday, 4 November 2022.

Technical Programme Preview

WEDNESDAY, 7 DECEMBER 2022

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

08:50 – 09:00 Safety Announcement

09:00 – 10:15 Welcome Remarks and Keynote Address

10:15 – 10:30 Group Photo/Coffee and Tea Break

10:30 – 12:30 **Panel Session: Gas Development and Management – Practical Cost-Efficient Exploration**

Session Managers: Syahrini Mokhtar, **PETRONAS**; Mohd Faizal Sedaralit, **PETRONAS**; Supot Lertsakulsup, **PTT Exploration and Production Public Company Limited**.

Natural gas, a noble energy source of the twenty-first century would contribute significantly to the total energy mix in the future. Its transformation into Liquefied Natural Gas (LNG) has made it possible to transport to distant places in various countries where the requirement is high. Therefore, natural gas, which is also less GHG-emitting compared to other fossil fuels, will play the role of transition fuel in decarbonisation and development of renewable energy. The gas markets have also shifted from a traditional model comprising limited number of buyers and suppliers to an accelerated growth market. However, Exploration and Production (E&P) is becoming challenging and cost-intensive as easy and big discoveries are either discovered or difficult to find. Most of the gas fields yet to be discovered are either small/contaminated or in hostile environments like deep/ultra-deepwater and High Pressure, High Temperature (HPHT). Exploration is vital for E&P companies to supply gas while ensuring security of supply such as LNG for power generation at competitive development cost and selling prices.

The growth of the gas sector brings in three types of challenges: Business strategies, technology, and project execution. New projects and technology development are taking place at an accelerated pace for monetisation of contaminated and isolated stranded gas fields. These efforts open a wide scope for innovative and collaborative technologies and project execution to be brought forward with operators to meet the challenges set out by business strategies. These innovations can be implemented with a structured approach toward balancing cost, quality, reliability, safety, and sustainability in the long-term.

This panel session will expound on effective strategies for exploration, contaminated gas management and development, market development, demand, game-changing technologies, and approaches, as well as lessons learnt to capture the growth potential in an increasingly competitive market.

- Bringing prudence in capital-intensive exploration strategies, seismic acquisitions, and geohazards while understanding early uncertainty and risks.
- Expediting decision-making for development investment.
- Strategies for monetisation of stranded and contaminated gas fields in conjunction with CCUS.
- Sustaining gas supply, especially through LNG.
- Impact on the climate from greenhouse gas removal technologies for efficient contaminants management.
- Technological challenges in offshore for energy efficiency and reducing GHG facilities while enhancing renewable energy for operation.

GENERAL INFORMATION

DOCUMENTATION

- Proceedings will not be published; therefore, formal papers and handouts are not expected from speakers.
- 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 presenter.

ATTENDANCE CERTIFICATE

All attendees will receive a Workshop attendance certificate. This certificate will be provided in exchange for a complete Attendee Survey Form.

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.

REGISTRATION FEE

- Registration fee ONLY includes all workshop sessions, coffee breaks and luncheons for the registrant. Accommodation is NOT included.
- SPE will provide details of recommended hotels upon receipt of your registration.
- Taxes: Registration 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.

REGISTRATION POLICY

- Registration fee MUST be paid in advance for attending the Workshop.
- Full fixed fee is charged regardless of the length of time the registrant attends the Workshop, and cannot be prorated or reduced for anyone.

12:30 – 13:30 Networking Luncheon

13:30 – 15:30 **Session 2: Sustainability in Gas Development: Carbon Capture, Utilisation and Storage (CCUS), Greenhouse Gas (GHG) Management, Renewable Energy, and Future Trends**

Session Managers: Nunthachai Amarutanon, **PTT Exploration and Production Public Company Limited**; Veerachai Suwanmajo, **Thai Nippon Steel Engineering & Construction Corporation Ltd.**; Bunthita Phirumphisit, **Woodside Energy**

Today, the effects of global climate change have become more and more apparent. Whilst the oil and gas industry continue to play an important role in delivering energy to fulfil basic needs as well as industrial development, the industry is also in a crucial position to minimise any impacts to the environment and provide sustainable energy solutions.

This session will focus on sustainable solutions in gas development to mitigate global climate change, including:

- Carbon neutral and net zero target initiatives
- CCUS solutions
- Greenhouse gas reduction
- Renewable energy
- Future trends

15:30 – 15:45 Coffee and Tea Break

15:45 – 17:45 **Session 3: Innovations in Well Design and Operation**

Session Managers: Wan Amni Wan Mohamad, **PETRONAS Carigali Sdn. Bhd.**; Wan Rokiah Ismail, **PETRONAS Carigali Sdn. Bhd.**

As a quarter of gas reserves are still undeveloped and stranded due to regulations and societal environmental demand, it is imperative to improve well design and operations to overturn the economics for natural gas field development while preparing for the energy transition in meeting the net-zero target by 2050.

This session will discuss innovative well completion design and operations that improve safety, cost, and efficiency. This includes a paradigm shift in completion design/strategy for gas wells that is fit-for-purpose to improve well economics, enhancement of metallurgy and strategy selection to manage high contaminants, and application of new technology and digitalisation that reduces the operating cost and improves efficiency. This session will also discuss well design in terms of converting existing wells to monetise gas caps through Gas Cap Blowdown (GCBD) and CCUS projects implementation.

Apart from knowledge sharing on net-zero initiatives and relevant new technologies in preparation for energy transition and future requirements for GHG management, the session will also gather lessons learnt from various projects and available technologies to overcome challenges related to gas wells development that will overturn the economics in gas field development projects.

17:45 – 18:30 Poster Session

18:45 – 20:45 Welcome Dinner

THURSDAY, 8 DECEMBER 2022

08:00 – 09:00 Arrival of Delegates and Registration

09:00 – 11:00 **Session 4: Reservoir Development, Management, and Operational Excellence**

Session Managers: Kamarul Ariffin Buang, **ExxonMobil Exploration and Production Malaysia Inc.**; Nor Azila Mohd Salleh, **Hess Exploration & Production (Malaysia) B.V.**; Pichaya Ruthairung, **PTT Exploration and Production Public Company Limited.**

Collaboration between the host government, resource owners, operators, and partners is always important to ensure holistic reservoir development, management, and operations of natural gas resources in meeting the ever-growing energy demand. For the security of gas supply, reservoir development strategy is key to ensure optimum recovery of gas resources through effective exploration and appraisal programmes. Innovative approaches and cost-effective, well-established technologies are adopted for the development of assets and maintaining the operational uptime throughout their production life.

This session will focus on the collaboration between subsurface and surface parties in integrating reservoir management and facilities' operational life for the proper depletion of hydrocarbon fields without leaving significant remaining resources untapped. This session will also provide opportunities for professionals to share their expertise and current best practices in securing gas supply either through gas hub development, sand and impurities management, sweet spot evaluation for categorising reservoir quality, Behind Casing Opportunity (BCO) technology, production enhancement/idle well reactivation (PE/IWR) methods and sustainability of Maintenance & Reliability (M&R) uptime.

11:00 – 11:15 Coffee and Tea Break

11:15 – 13:15 **Session 5: Practical Application of Digital Transformation in the Gas Industry**

Session Managers: Uzaymee Mohd Yusof; **JX Nippon Oil & Gas Exploration (Malaysia) Limited**; Khamis Al-Abdali, **Mubadala Energy**

Many organisations across the oil and gas business have been taking major steps toward digital transformation by utilising digital technologies to enhance operational efficiencies in all aspects of the end-to-end value chains including but not limited to exploration, production, cost, safety, and people management. Many tools and application were already developed either internally or by business partners to serve these purposes.

This session will share some of the great initiatives with advanced digital technologies that were adopted in natural gas management and development focusing on Exploration & Production (E&P) big data analytics and machine learning for predictive capabilities in enhancing overall system performances and sustainability. These initiatives include:

- Real time remote operations and connected workers
- Implementation of digital twins of onshore/offshore facilities
- Tools used to improve the development of gas reservoirs
- Management of integrated gas production systems at operation phase
- Reservoir management
- Improvement to the drilling and well services efficiency
- Improvement to the management of complicated logistics
- Wells and asset integrity
- Safety and environmental aspects

13:15 – 14:15 Networking Luncheon

14:15 – 16:15 **Session 6: Value Creation from Late-life and Depleting Fields through Gas Blowdown (GBD) Opportunity and Facilities Management**

Session Managers: Mohd Afzan Mohammad, **PETRONAS**; Kittichai Chinkiri, **PTT Exploration and Production Public Company Limited**

With mature oil and gas-producing assets approaching late-life phase, exploitation of gas-cap blowdown opportunity and effective late-life facilities management is critical for optimising field recovery and continued safe and profitable operation. Collaboration between subsurface and surface parties in integrating the facilities' operational life will be important to properly deplete hydrocarbon fields without leaving significant remaining resources untapped.

Understanding the key considerations and trade-off value for GBD execution and asset life opportunities requires in-depth knowledge of the condition of the existing systems (subsurface and surface) and how functional requirements change over time.

This session will cover:

- Early consideration for GBD exploitation of existing fields
- Methodology and triggers for enabling GBD opportunity
- Cost-effective and feasible development plan
- Late-life and depleted fields facilities management
- Re-locate/re-use of the facilities
- Decommissioning of the facilities
- Asset's integrity, reliability, and availability assurance

16:15 – 16:30 Coffee and Tea Break

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

REGISTRATION FORM

SPE WORKSHOP:
Natural Gas Management and Development
 7 – 8 December 2022 | Bangkok, Thailand



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.

ATTENDEE INFORMATION					
SPE Member	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Membership Number		
First Name (Forename)			Last Name (Surname)		
Job Title					
Company Name					
Mailing Address					
City			State/Province		
Postal Code			Country		
Office Phone		Office Fax		Company URL	
Direct Line			Mobile Phone		
Email Address					
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 7 Oct 2022	Early Bird by 4 Nov 2022	Standard after 4 Nov 2022		
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
<p>1. Registration Fee</p> <p>a. Fee DOES NOT include accommodation. SPE will provide details of recommended hotels upon receipt of your registration.</p> <p>b. Registration is non-transferable without written notification to SPE.</p> <p>c. Registration of participation will only be confirmed upon receipt of full payment or an acceptable employer's letter of guarantee.</p> <p>d. SPE reserves the right to cancel the registration if no payment is received prior to or on the date of the event.</p> <p>e. Full fee is charged regardless of the length of time the Participant attends the event and cannot be pro-rated.</p> <p>2. Taxes</p> <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> <p>3. Cancellation Policy</p> <p>a. A processing fee of USD 150.00 will be charged for cancellation received before 17 November 2022.</p> <p>b. No refund for cancellation received after 17 November 2022.</p> <p>c. Participants who failed to attend will not be eligible for a refund.</p> <p>d. Cancellation must be notified in writing to SPE. Email your cancellation request to spekl@spe.org.</p> <p>4. Health and Safety</p> <p>a. 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.</p> <p>b. Participants who do not comply with the rules and guidelines will not be permitted to enter or remain in the event venue.</p> <p>5. Privacy Policy</p> <p>a. 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.</p> <p>b. For any queries or concerns please contact the events team at spekl@spe.org.</p> <p>6. Disclaimer</p> <p>a. SPE reserves the right to change the speaker(s), date(s) and/or to cancel the event should circumstance beyond its control arises.</p> <p>b. 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.</p>

PAYMENT METHODS
<p><input type="checkbox"/> Telegraphic Transfer</p> <p>Bank details will be provided in the invoice.</p> <p><input type="checkbox"/> Credit Card</p> <p>SPE accepts American Express, Visa, MasterCard and Diners Club and payment will be processed in US Dollars only.</p> <p>To pay online, go to: http://go.spe.org/23WA01W.</p> <p>For manual payment, you will receive an email with instruction on securely submitting your payment.</p>

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