

Brownfield Optimisation and Marginal Asset Development

28 - 29 AUGUST 2018 | KUALA LUMPUR, MALAYSIA



**SIGN UP BEFORE 29 June 2018
FOR SUPER EARLY BIRD DISCOUNT!**

Who Should Attend

Professionals involved in:

- Field Development Planning
- Geology and Geophysics
- Reservoir Engineering and Management
- Drilling and Completions
- Production Engineering and Production Surveillance
- Facilities and Process
- Asset Development and Management
- Business Ventures
- Integrated Operations
- Technology and Concept Innovations
- Unconventional Development for Marginal Undeveloped Fields



Despite challenges, optimising depleted brownfields and monetising marginal assets are possible by taking a new approach to the way field development planning is carried out – from creating win-win scenarios during PSC/PSA negotiations through to executing bold and innovative technology selection – stakeholders can ensure no “money is left on the table” in their portfolios.

Rejuvenation of brownfield assets has been instrumental in sustaining profitability as well as ensuring long-term success of those assets. Combinations of conventional and new technologies, as well as cost optimisation initiatives, have catalysed efficient exploitation of such assets. But has the industry exhausted all viable options? In addition to brownfield developments, currently uneconomical marginal and stranded fields left untouched-to-date must be addressed.

With the improvement and stabilisation of crude oil prices, coupled with technological advancements, it is time to challenge the norm and reconsider the development scenarios.

This workshop provides a platform for oil and gas stakeholders and professionals to further educate themselves in the ever changing business environment, especially in a period of continued crude oil price fluctuation. The workshop also promotes opportunities for knowledge transfer and networking, focusing on capturing additional value from depleting brownfield and undeveloped marginal assets.

Session Highlights

Win-Win Holistic Approach to Monetise Brownfield and Marginal Fields – Vantage Point of Resource Owner, Operators and Service Providers	Brownfield Production Enhancement and Recovery Maximisation
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Innovative Applications and Emerging Technologies in Subsurface Surveillance and Well Intervention for Brownfields	Surface Facility Strategy for Brownfield and Marginal Asset
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Concept Select and Economics of Marginal Undeveloped Field Development	Technologies for Marginal Field Development
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Technical Programme Committee

CHAIRPERSON

Cheol Hwan Roh

Principal Production Technology Petroleum Engineering
PETRONAS

COMMITTEE MEMBERS

Kamarul Ariffin Buang

Reservoir Engineering Advisor
ExxonMobil Exploration & Production Malaysia Inc

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Production Technologist
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PETRONAS Carigali Sdn Bhd

Thakerngchai Sangvaree

Reservoir Engineering Manager, Thai Onshore Asset Group
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Managing Director
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WORKSHOP ADVISORS

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Juhaidi Jaafar

Head of Resource Management Sarawak – Cluster 3, Malaysia Petroleum Management, **PETRONAS**

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

go.spe.org/19WM05W

Workshop Objectives

This workshop provides opportunities for sharing and discussing views, experience, success stories, technology advancement and challenges from various facets including that of operators, service providers and regulators. The programme discusses lessons learnt and value improvements generated through strategic collaborations, and workable strategies to improve project maturity and execution efficiency to extract more oil and gas from producing fields and untapped marginal fields.

WORKSHOP STATISTICS



10+
hours of peer-to-peer
networking opportunities



30+
hours of knowledge sharing
and technical discussion



30
expert-led technical
discussion topics



ATTENTION NON-MEMBERS:
Join our worldwide membership!

Non-member full workshop attendees can join SPE at no additional cost. Look for your exclusive offer by email shortly after the event.

LEAGUE OF VOLUNTEERS



Engage • Support • Contribute

Join our league of dedicated members who provide the energy that makes our society work.

- Enhance your leadership skills
- Contribute to programmes and activities with your knowledge and experience
- Meet and network with members near you and around the globe
- Demonstrate thought leadership in your area of expertise and interest at both local and international levels

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Preliminary Workshop Schedule

TUESDAY, 28 AUGUST 2018

0800 – 0850 Arrival of Delegates and Registration

0850 – 0900 Safety Announcement by Hotel

0830 – 0900 Discussion Leaders and Session Managers Briefing

0900 – 0910 **Session 1: Welcome and Introduction**

Chairperson: Cheol Hwan Roh, **PETRONAS**

0910 – 1000 Joint Keynote Addresses

1000 – 1030 Group Photo / Coffee and Tea Break

1030 – 1230 **Session 2: Panel Session: Win-Win Holistic Approach to Monetise Brownfield and Marginal Fields – Vantage Point of Resource Owner, Operators and Service Providers**

Session Advisor: Kamarul A. Buang, **ExxonMobil**
Session Managers: Faez Rahmat, **Petrofac Malaysia**;
Sharifudin Salahudin, **Sutera Energy Solutions Sdn Bhd**

In Malaysia and similarly worldwide, there remains numerous brown and marginal fields that are waiting to be revitalised and exploited. Despite technical challenges, these assets could be monetised with the right conditions. In the current environment, the traditional approach to development plan as well as restrictive heritage fiscal terms may result in low interest leading to 'money left on the table' by stakeholders. Paradigm shifts are required to create an ecosystem where all parties are incentivised to succeed. Efforts towards making economically challenging assets feasible via enabling technologies should be encouraged by all stakeholders. The authorities, operators and service providers should have a collaborative mindset and work on removing obstacles and any potential show stoppers. A win-win approach should be the focus to continue the drive of fully reaping the benefits from marginal/brownfield assets. Applying this mode of thinking during PSC/PSA negotiations, sharing of novel technologies coupled with synergies between all stakeholders (resource owner, operators, service providers) could be the catalyst to unlocking these assets.

1230 – 1330 Networking Luncheon

1330 – 1530 **Session 3: Brownfield Production Enhancement and Recovery Maximisation**

Session Managers: Kamarul A. Buang, **ExxonMobil**;
Siti Najmi Farhan Zulkpli, **PETRONAS Carigali**

Managing brownfield assets often calls for a forward approach in production planning and reservoir management to stretch the original target, and maximise cash generators and value chain in all production stages. The key to maximising reserves with positive economic margin lies in the holistic Field Development Plan (FDP) work prioritising any hydrocarbon discovery for fast-track development and production tie-in, exploitation of nearby developed and undeveloped resources, and exhausting the bypassed reserves from existing wellbores. Some efforts commonly executed to achieve the objective include enhancing wellbore production; accessing behind casing opportunities; modifying producers-injectors relationship while balancing the 'oil sandwich' in addition to utilising the natural reservoir mechanisms; developing thin oil rim resources; and chasing vertically and laterally present bypassed oil in developed reservoirs. Data acquisition is key to increase technical certainty of the opportunities while managing the uncertainties associated with the ongoing FDP.

Advancement in technology such as gas-to-liquid condensate recovery mechanism provides additional insight to improve hydrocarbon value chain. Aiming for bold and unlimited technology application as well as out-of-the-box reservoir solutions to maximise recovery, this session will focus on replenishing additional reserves in

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 **Jenny Chong** at jchong@spe.org by **15 July 2018**.

The Society of Petroleum Engineers (SPE) is a not-for-profit organisation. Income from this event will be invested back into SPE to support many other Society programmes. When you attend an SPE event, you help provide even more opportunities for industry professionals to enhance their technical and professional competence. Scholarships, certification, the Distinguished Lecturer programmes, and SPE's energy education programmes Energy4me are just a few examples of programmes that are supported by SPE.

depleting brownfields through FDP optimisation and other related production enhancement efforts.

1530 – 1545 Coffee and Tea Break

1545 – 1745 **Session 4: Innovative Applications and Emerging Technologies in Subsurface Surveillance and Well Intervention for Brownfields**

Session Manager: Siti Najmi Farhan Zulkipli, **PETRONAS-Carigali Sdn Bhd**; Agoes Irawan, **PETRONAS**

The high cost in operational and well intervention activities for brownfields are contributed by a few major factors including costly coil tubing deployment, complex cement isolation job and additional logistics requirements such as barge or catenary vessels. Technology and innovation to simplify the complex operational procedures are keys to managing brownfield intervention while exhausting the efforts to lower the cost and maximising cash inflow in day-to-day operation. The latter could be achieved through proactive reservoir surveillance to squeeze additional barrels from the remaining hydrocarbon potential in individual well or string. Restoring well productivity through an integrated well integrity and remedial solutions, as well as prompt subsurface intervention through real-time, enabled production monitoring or integrated operation (IO) network are the additional milestones to achieve.

A significant value from the incremental reserves can be recovered by bringing new and emerging subsurface technologies either from physical hardware deployment or chemical based solutions to unlock more reservoir potential. Aiming to achieve stretch production enhancement targets, it is crucial to gain some insights on current and emerging industry trends to exceed the existing forecast for brownfields production.

This session will focus on the latest technology breakthroughs, accumulating best practices and lessons learnt in operating brownfields which may pioneer an exemplary model for cost optimisation, safety enhancement, operational efficiency, asset integrity and boosting the field production.

1745 - 1845 **Session 5: Poster Session**

Session Managers: Thakerngchai Sangvaree, **PTTEP**

1845 onwards Welcome Dinner

WEDNESDAY, 29 AUGUST 2018

0900 – 1100 **Session 6: Surface Facility Strategy for Brownfield and Marginal Assets**

Session Managers: Dipta Dwitiya, **Medco E&P Indonesia**; Izwan Shahmin, **PETRONAS**

Surface or topside facilities have the ability to make or break development initiatives. With relatively slim economic gains in brownfield development, it becomes highly crucial for teams to generate strategies that would lead to more attractive projects to prolong the field life. Longer field life may enable some smaller projects / developments. This session will explore how teams can address the challenges related to surface facility optimisation through collaboration, from conceptual to decommissioning while protecting the environment, possible asset life extension through de-complexing while maximising extraction from dying assets.

1100 – 1115 Coffee and Tea Break

1115 – 1315 **Session 7: Concept Select and Economics of Undeveloped Field Development**

Session Managers: Chen Jiun Horng, **IPCM**; Noor Azmah Abdullah, **PETRONAS**

The high cost of utilising the full suite of surface facilities installation would mean that many are not willing to develop marginal undeveloped resources. However, high capital investment can be reduced by renting a temporary mobile production and storage facility. Strategic production unitisation is a good example of development and production tie-in. With simpler surface equipment, creativity and a less rigid surveillance is required in daily production operations. This session will explore the above concepts and economics in developing marginal undeveloped resources.

1315 – 1415 Networking Luncheon

1415 – 1615 **Session 8: Technologies for Marginal Field Development**

Session Managers: Rohit Deshmukh, **PETRONAS**; Arul Jothy, **NGLTech Sdn Bhd**

Marginal fields have not been exploited due to various reasons such as the lack of infrastructure in the vicinity and profitable consumers, small sizes of reserves to the extent of not being economically viable, prohibitively high development costs considering small resources, fiscal levies and technological constraints. While adjusting to fluctuating oil prices, the industry still endeavours to exploit such marginal fields and convert uneconomical prospects into profitable resources by deploying conventional and unconventional methods and technologies. This session will review existing and emerging technologies that could be instrumental in the development of marginal or stranded fields. The session will also discuss enabler technologies applicable in driving a radical change in the capabilities of the user and the conventional workflow.

These include:

- Mini offshore floating LNG for offshore gas liquefaction and storage, of which gas can be shipped with transport vessels to markets
- Drilling of exploration or appraisal cum development wells
- Short terms production hummingbird concept to realise or monetise development
- Tie-in of uneconomical small resources together into a hub
- Technologies for even more uneconomical marginal gas resources than oil resources
- Novel well concepts such as slim well design and multilaterals
- Subsea infrastructure tailored to small resources
- Cost-effective IOR techniques
- Coiled tubing drilling

1615 – 1630 Coffee and Tea Break

1630 – 1700 **Session 9: Workshop Summary and Closing Remarks**

Chairperson: Cheol Hwan Roh, **PETRONAS**

SPONSORSHIP SUPPORT INFORMATION

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 workshop room itself, the Society recognises that supporting companies offer valuable information to attendees outside the technical sessions.

SPONSORSHIP CATEGORIES

Sponsorship categories are offered on a first-come basis. Please contact SPE to enquire and verify the availability of categories. Existing supporters have the opportunity to renew the same level of support for annual workshops.

SPONSORSHIP BENEFITS

In addition to onsite recognition, SPE will recognise sponsors on the SPE website and in all printed materials for the workshop. Based on the category selected, supporting companies also receive logo visibility on promotional workshop items.

FOR MORE INFORMATION

For a detailed list of available sponsorship opportunities, including benefits and pricing, contact **Jenny Chong** at **jchong@spe.org**.

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.

REGISTRATION FORM

SPE WORKSHOP:

Brownfield Optimisation and Marginal Asset Development

28 - 29 August 2018 | Kuala Lumpur, Malaysia



Society of Petroleum Engineers

SPE Member Yes No

Membership No. _____

First/Forename _____ Middle _____ Last/Family Name _____

Position _____

Company _____

Address _____

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Tel _____ Fax _____ Email _____

Would you be willing to give a brief (10-15minutes) presentation? Yes No

If yes, please attach the topic with a short abstract of your proposed presentation.

One of the Programme Committee members will contact you to discuss your presentation.

***IMPORTANT: REGISTRANTS FOR SPE WORKSHOPS ARE ACCEPTED ON THE BASIS OF INFORMATION SUBMITTED BY EACH REGISTRANT.**

Technical Disciplines (Check One)

- Drilling Health, Safety, Security, Environment, and Social Responsibility Reservoir Description and Dynamics
 Completions Production and Operations Projects, Facilities and Construction
 Management and Information

Primary Responsibility (Check One)

- Drilling Economics Geology Geophysics Management
 Operation Production Reservoir Surveillance Other _____

Listing background and experience. (Use additional paper if required)

List your expectation for the Workshop, so that the committee can tailor a portion of the Workshop to answering attendees' concerns.

(Use additional paper if required)

Registration Fees (Please tick appropriate box)

SUPER EARLY BIRD REGISTRATION BY 29 JUNE 2018		EARLY BIRD REGISTRATION BY 27 JULY 2018		REGISTRATION AFTER 27 JULY 2018	
SPE MEMBER	NON-MEMBER	SPE MEMBER	NON-MEMBER	SPE MEMBER	NON-MEMBER
<input type="checkbox"/> USD 1,500.00	<input type="checkbox"/> USD 1,700.00	<input type="checkbox"/> USD 1,600.00	<input type="checkbox"/> USD 1,800.00	<input type="checkbox"/> USD 1,700.00	<input type="checkbox"/> USD 1,900.00

Group Registration Available - Please contact us at spekl@spe.org

Note: Fee includes workshop sessions workbook, certificate, daily luncheons and coffee breaks. Registration fees do not include accommodation. 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.

Payment Methods

Telegraphic Transfer

Bank details will be provided in the invoice



Credit Card

Payment via credit card (American Express, Visa, Mastercard and Diners Club) is available online at www.spe.org/go/19WM05. Credit card payment will be processed in US Dollars only. For manual payment, an email with instruction on securely submitting your payment will be provided

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Note: Forms will not be processed and seats cannot be guaranteed unless accompanied by payment for total amount due.

Cancellation Policy

- A processing fee of USD150.00 will be charged for cancellation received thirty (30) days prior to the first day of the workshop.
- 25% refund will be made for cancellation received between twenty nine (29) - fifteen (15) days prior to the first day of the workshop.
- No refund on cancellation received fourteen (14) days prior to the first day of the workshop.
- No refund will be issued if a registrant fails to show up on-site.

This form may be used as a company invoice.

Mail completed registration form with remittance and any supporting material to:

Society of Petroleum Engineers

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