SPE Symposium: Decommissioning and Abandonment
Shaping Asia Pacific’s Decommissioning and Abandonment Future

3–4 December 2018
Pullman Kuala Lumpur City Centre
Kuala Lumpur, Malaysia

go.spe.org/19SM02

Symposium Programme
On behalf of the Society of Petroleum Engineers (SPE), and the Programme Committee, it is my pleasure to welcome you to the inaugural **SPE Symposium: Decommissioning and Abandonment**.

Effective D&A strategies have certainly become a priority for many oil and gas companies in the region. A well-planned journey through late-life operations of mature fields presents opportunities to capture further value from assets.

Recognising the need to expedite development of D&A capabilities in this comparatively young market, this symposium is set to encourage knowledge exchange, stimulate dialogues and foster partnerships among local and regional industry players, stakeholders and subject matter experts from more developed markets.

Themed **“Shaping Asia Pacific’s Decommissioning and Abandonment Future”**, the programme committee has developed a comprehensive programme that includes over 40 technical and knowledge sharing ePoster presentations. We will hear industry leaders discussing pertinent issues such as challenges and opportunities facing the Asia Pacific market, strategic planning and execution, innovations and technologies, and case studies and lessons learned during the opening, keynote, executive plenary and panel sessions. The symposium also features a technical showcase promoting latest technologies and solutions.

We would like to thank committee members, speakers, sponsors, exhibitors and participants for your continued support. We hope you will enjoy the opportunity to network, learn and share your experience with industry colleagues at this exciting event.

Sincerely,

Hj. Zakaria Kasah  
Symposium Chair  
Vice President, Group Project Delivery  
Project Delivery & Technology (PD&T)  
PETRONAS

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* This Symposium Programme is updated as at 26 November 2018
Ideas for a better life

Natural Gas, an abundant energy resource in Malaysia carries with it a huge potential for the creation of a cleaner future.

#SwitchtoGas

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Committees

Symposium Chair
Hj. Zakaria Kasah, PETRONAS

Programme Co-Chairs
Zainuddin Kamarudin, PETRONAS
Ismail Aslam Abdullah, PETRONAS
Devi Putra, PT PERTAMINA

Members
Calvin Yang, Baker Hughes, a GE company
Christina Phang, Environmental Resources Management
Azhar Abdul Aziz, Oceaneering International
Kevin O’Flaherty, Offshore Decommissioning Services
Morgan Howes Roberts, Offshore Decommissioning Services
David Hutchison, Petrofac
Azam A. Rahman, PETRONAS
Masitah Md. Jais, PETRONAS
Muhamad Che Lah, PETRONAS
M. Fahrul Nizam Engan, PETRONAS
M. Hatta M. Yusof, PETRONAS
M. Redzuwan A. Rahman, PETRONAS
M. Zhafran Sulaiman, PETRONAS
Nik Aman Manaf, PETRONAS
Shahida Abdullah, PETRONAS
Sulaiman Sidek, PETRONAS Carigali Sdn. Bhd.
Ian Crapper, Proserv
Mathieu Al Kharfan, Proserv
Chatawut Chanvanichskul, PTTEP
Sophia Kangan, PT PERTAMINA
Frederic Lan-Shun, Saipem
Md. Yusoff Mohamad Noor, Sapura Energy
Jamie Stewart, Schlumberger
Khor Chih-Wei, Shell
Ahmad Yunus Abdul Talib, Uzma
Seyri Anuwa Jahari, Vantage Energy Group
Ahmad Dollah, Vantage Energy Group
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sapura energy
Networking Luncheon - Day 1

REPSOL
Networking Luncheon - Day 2

Shell
Coffee/Tea Breaks - Day 1 and Day 2
Meeting Room Guide

Pullman Kuala Lumpur City Centre, Level 3

- **PULLMAN THREE - SIX**
  - Networking Luncheon

- **PULLMAN TWO**
  - Technical Sessions

- **PULLMAN ONE**
  - Opening, Keynote, Executive Plenary, Panel and Technical Sessions

- **FOYER**
  - Technical Showcase, Coffee/Tea Breaks and Welcome Reception (Monday, 3 December)

- **FOYER**
  - Knowledge Sharing ePoster Sessions

- **PULLMAN TWO**
  - Educational Sessions

- **PULLMAN ONE**
  - Registration

- **Headquarter and Speaker/Author Check-In**
### Schedule of Events

#### Sunday, 2 December

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<tr>
<td>1530 - 1600 hours</td>
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<td>1600 - 1730 hours</td>
<td>Technical Session 7</td>
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### Schedule Details

- **Opening, Keynote and Executive Plenary Session**
- **Panel Session 1**: Achieving Optimization and Efficiency through Multiple Collaborations
- **Networking Luncheon**
- **Technical Session 1**: Impact of Regulations, Policies and Guidelines on D&A Activities in Asia Pacific
- **Technical Session 2**: D&A Strategic Planning
- **Technical Session 3**: Integrity Improvement
- **Technical Session 4**: Execution Journey
- **Technical Session 5**: Innovation and Technologies
- **Technical Session 6**: Case Studies and Lessons Learned
- **Technical Session 7**: Integrated Approach for Asset Retirement
- **Technical Session 8**: Achieving Excellence in D&A Projects
**General Information**

**REMEMBER: SYMPOSIUM BADGES MUST BE WORN AT ALL TIMES**

**Venue**

**Pullman Kuala Lumpur City Centre**  
Jalan Conlay, 50450 Kuala Lumpur, Malaysia  
Tel: +603 2170 8888

**Event Headquarter**

**Headquarter, Level 3**  
Pullman Kuala Lumpur City Centre  
Jalan Conlay, 50450 Kuala Lumpur, Malaysia  
Tel: +603 2170 8888

**Speaker/Author Check-In Room**

Speakers, moderators, presenting authors and session chairs are required to report to the Author Check-In Room at **HQ and Speaker/Author Check-in Room** to load/review their PowerPoint slides. Changes to presentation slides will not be accepted less than four hours prior to the session.

Speakers, moderators, presenting authors and session chairs must report to their assigned session rooms 30 minutes before the session begins.

**Badge Collection**

Symposium badges are required for admission into the event and must be worn at all times. Badges are non-transferable. Use of a badge by a person not named on the badge is grounds for confiscation.

Badges can be collected at **Registration Counter, Level 3** during the following times:
- Sunday, 2 December 2018: 1300-1700 hours
- Monday, 3 December 2018: 0730-1830 hours
- Tuesday, 4 December 2018: 0800-1730 hours

**Safety and Security**

The safety and security of our event attendees are of utmost importance. Please be aware of and observe the following:
- Symposium badges must be worn at all times while at the event venue. Use of a badge by a person not named on the badge is grounds for confiscation.
- If you lose your badge, please return to the registration counter to obtain a replacement.
- No one under the age of 15 is permitted in the exhibition halls.
- Be aware of your surroundings, remain alert and be vigilant.
- Should you observe any suspicious packages or behaviour, please report to event/venue staff immediately.
- Due to the popularity of some session topics, it is possible for overcrowding to occur in a session or meeting room. Should this occur, we must comply with policies regarding room capacity and limit admittance to a room that is at capacity. Please make plans to arrive early for sessions that you have a strong interest in attending.
- Please remember to stay hydrated throughout the event.
- In the event of an emergency, SPE and/or Pullman Kuala Lumpur City Centre staff will provide attendees with the necessary information and instructions.
General Information

Digital Proceedings
Digital proceedings are available for collection at the Registration Counter, Level 3.

To purchase the proceedings, please go to the Registration Counter located at Level 3.

Technical Showcase Hours
The exhibition / technical showcase is open to all attendees at the following times:
• Monday, 3 December 2018: 1000-1830 hours
• Tuesday, 4 December 2018: 1000-1730 hours

Lost and Found
Lost and found items will be placed at HQ and Speaker/Author Check-in Room, Level 3.

First Aid
In case of an emergency situation, please alert the nearest SPE staff immediately.

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Photography and Audio Visual Copyright
All symposium sessions and the technical showcase are protected by international copyright laws.

Photography and video/audio recording of any kind in symposium sessions and the technical showcase are prohibited without prior written permission by SPE.

Mobile Phone
As a courtesy to the speakers and your fellow attendees, please turn off all mobile phones during meetings and sessions.

Alcohol
We recognise that legitimate serving of alcohol beverages in the process of conducting business and social activities is acceptable. However, we also recognise that the use and consumption of alcohol carries the requirement for all attendees to consume these beverages responsibly and in keeping with our professional code of ethics and conduct. We strongly oppose the abuse and misuse of alcohol.

Consent to Use of Multimedia
Attendance or participation in SPE events and other activities constitutes an agreement by the registrant to SPE’s use and distribution of the registrant’s image or voice in promoting future SPE events in any way SPE deems appropriate.
Operators around the world are reviewing their aging assets, and are coming to grasp with the reality that some offshore wells and fields are no longer economically viable. The North Sea and the Gulf of Mexico have seen a multitude of decommissioning activities. Emerging hot spots, including the Asia Pacific region in particular, is set to follow over the next decade – and operators must prepare for what is typically a mammoth task.

With forecasts ranging in the billions, delivering an effective decommissioning and efficient late-life asset management and operations are vital to further capture the economic value from assets.

This session will engage leaders in the region to discuss opportunities and challenges, share experiences and lessons learned, and on how technology and digitalisation may affect decommissioning activity - all of which are critical in shaping the future of decommissioning and abandonment in the region.
It is expected that more than 700 production facilities in Asia Pacific will go into decommissioning and abandonment (D&A) phase in the next 10 years. It is a fact that D&A poses a unique challenge to both operators and service providers in various ways which include cost, environmental impact and liability. However, regional operators see two big opportunities in their favour. The first is efficiency enhancement through technology-centred solutions which is a key in solving the puzzle where D&A activities in the region are expected to intensify. The second opportunity is the wide reaching potential for collaboration. With technology and collaboration being the drivers in Asia Pacific’s growing D&A market, industry captains need to take an active role in shaping the D&A market to position the oil and gas sector as a key growth engine to the Asia Pacific economy.

The panel session will gather leading decommissioning experts and practitioners from operators, service and technology providers and contractors to discuss pressing issues facing D&A:

- Unique challenges and approach facing D&A
- Utilisation of techniques and technologies to fulfill potential
- Identifying future trends in waste management
- Managing liabilities, ownership and methodologies
- Opportunities for D&A “cross-border” value chain collaboration
It was reported in a present study that over 380 oil and gas fields in the Asia Pacific region are expected to cease production while nearly 2,600 platforms and 35,000 wells need to be decommissioned in the years ahead. However, there were only a few decommissioning projects that have been implemented in the region. With limited experience and lessons learnt, this could lead to high costs and other operational risks that may hold operators back from planning decommissioning activities. Nevertheless, it is the operator’s obligation to do wells plugging and abandonment, production facilities decommissioning and site restoration.

A full life cycle management of an oil and gas asset is therefore important to an operator. This includes concept development, design, construction, operations through to decommissioning. They will face many challenges in ensuring effective and efficient asset management throughout its life cycle.

This panel will gather representatives from operators, service providers and subject matter experts, to address challenges, share experiences and best practices including:

- Challenges and approaches in life cycle asset management
- Decommissioning aspect in design consideration
- Well plug and abandonment complexity
- Challenges of repurposing facilities
- Site restoration methods and technologies
In anticipation of increased decommissioning activities in Asia Pacific given the high number of mature assets that are approaching their end of life service, the industry faces many challenges in ensuring that the plans and processes are well developed to achieve compliance and meet operational best practices.

Knowledge on how to address legal obligations, cost optimisations, safety, waste management, environmental and social aspects associated with decommissioning and abandonment of the field facilities is crucial for success. Decommissioning activities have been well established in more mature operating environments such as the North Sea and Gulf of Mexico, and it is therefore plausible that we learn from experience of operators, service providers as well as requirements of the different regulatory framework from those regions.

The aim is to share knowledge by capitalising on compelling case studies to achieve more optimised planning and desired outcomes covering the following aspects:

- Compliance to international, regional and national regulations
- Identification and engagement of relevant stakeholders
- Understanding the required processes and obligations
- Established and upgrading decommissioning facilities in the country and regions
- Meeting health, safety and environment requirements (HSE Case)
- Required capability and capacity for undertaking this complex end of field life project

This panel session will also cover discussions on options for decommissioning and abandonment of surface facilities, wells plugging and abandonment, pipelines and others. Speakers will also share other relevant topics on obligations of the operator and other parties during and after the decommissioning programme.
## Technical Programme

### Monday, 3 December 1400 – 1530 hours | Pullman One, Level 3

**Technical Session 1: Impact of Regulations, Policies and Guidelines on D&A Activities in Asia**

**Session Chairs:** Mohd. Izzat Mohd. Thiyahuddin, PETRONAS Research Sdn. Bhd.; Ahmad Yunus Abdul Talib, Uzma

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<th>Time</th>
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| 1400  | 193946   | **Different Routes - Same Destination: Planning Processes for Decommissioning**  
|       |          | in South East Asia                                                           |
|       |          | S. Laister and S. Jagerroos, Environmental Resources Management             |
| 1420  | 193940   | **Well Reclassification Guidelines: The Backbone for Optimised Well Management**  
|       |          | at Country Level in Malaysia                                                 |
|       |          | R. Guillory, W. Wan Razali, R. Masoudi, N. Ahmad, A. Abdul Hamid and K. Mahadi,  
|       |          | PETRONAS                                                                      |
| 1440  | 193943   | **Assessing the Social and Economic Impacts of Oilfield Closure and**  
|       |          | **Decommissioning**                                                          |
|       |          | D. Snashall, Environmental Resources Management                             |
| 1500  | 193979   | **Policy and Institutional of Offshore Platform Decommissioning in Indonesia Oil**  
|       |          | and Gas Upstream Industry to Improve Performance of Navigational Safety and**  
|       |          | **State-Owned Asset Management**                                              |
|       |          | S. Amelia and Y. Latief, U. of Indonesia; N. Wan Abdullah Zawawi, U. Teknologi  
|       |          | PETRONAS; A. Santos, U. of Djuanda                                           |

### Monday, 3 December 1400 – 1530 hours | Pullman Two, Level 3

**Technical Session 2: D&A Strategic Planning**

**Session Chairs:** M. Redzuan A. Rahman, PETRONAS; Chatawut Chanvanichskul, PTTEP

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| 1400  | 193991   | **Overview of Decommissioning Option Assessment: A Case for Comparative**  
|       |          | **Assessment**                                                                |
|       |          | D. Palandro and A. Aziz, ExxonMobil                                           |
| 1420  | 193985   | **NEBA Application for Offshore Subsea Pipeline Decommissioning**              |
|       |          | J. Kankamnerd, S. Chonchirdsin, C. Chanvanichskul and P. Phanichtriphop; PTTEP  |
| 1440  | 193959   | **Malaysia’s First Subsea Fields Abandonment**                               |
|       |          | C. Ho, Sarawak Shell Bhd.                                                     |
| 1500  | 193963   | **Seeking the Proper Decommissioning Method in Gross Split Era**              |
|       |          | K. Junedi, PT PERTAMINA Hulu Energi ONWJ                                      |
## Technical Programme

### Monday, 3 December

**Technical Session 3: Integrity Improvement**

**Session Chairs:** Kevin O’Flaherty, *Offshore Decommissioning Services Asia*; Ian Crapper, *Proserv*

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| 1600   | 193950   | **Permanent Caprock Abandonment (P&A) Assessment Incorporating Rock Mechanics Analysis from Petrophysics Perspective**
| 1620   | 193953   | **Well Abandonment and Subsequent Elimination of Sustained B-Annulus Pressure: A Case Study**
         | P.P. Saikia, R. Tumung and U.A. Dutta, Oil India Ltd.                                                                                                                                                         |
| 1640   | 193939   | **Rigless Abandonment with Bismuth and Thermite**
         | P.J. Carragher and J. Fulks, BiSN Oil Tools, Llc.                                                                                                                                                             |
| 1700   | 193965   | **Cap Rock Restoration in Plug and Abandonment Operations: A Success Story of Cost and Risk Management through Workflow Optimisation and Integrated Assessment**

### Monday, 3 December

**Technical Session 4: Execution Journey**

**Session Chairs:** Azhar Abdul Aziz, *Oceaneering International*; Mohd. Zhafran Sulaiman, *PETRONAS*

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| 1600   | 193981   | **Converted Barge for Wellhead Platform Decommissioning**
         | D. Yimtae, M. Aimcharoenchayakul, S. Uiyyasathian, M. Svasti-xuto and C. Chanvanichskul, PTTEP                                                                                                              |
| 1620   | 193970   | **Planning and Execution of ‘FIELD 1’ Subsea Facilities Decommissioning**
         | A. Yap, Sarawak Shell Bhd.                                                                                                                                                                                   |
| 1640   | 193976   | **Crane-Less, Diver-Less, Platform Decommissioning as an Alternative to Reduce Cost, Enhance Safety and Efficiency**
         | A. Choudhary and M. Howes-Roberts, Offshore Decommissioning Services Asia Pte. Ltd.                                                                                                                         |
| 1700   | 194054   | **Well Decommissioning Campaign in Block SK 305, Sarawak, Malaysia (7 Production Wells and 9 Suspended Subsea MLS Exploration Wells)**
         | M. Mhd. Yusof, M. Mohamad Ros and M. Omar, PETRONAS                                                                                                                                                    |
## Technical Programme

### Tuesday, 4 December

**Technical Session 5: Innovation and Technologies**  
**Session Chairs:** Morten Myhre, HydraWell Intervention AS; Ahmad Dollah, Vantage Energy Group

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<td>Well Integrity, Plugging and Abandonment: Abrasive Cutting Applications for Well Severance</td>
<td>D. Anderson, Proserv Far East Pte. Ltd.</td>
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<td>1420</td>
<td>193989</td>
<td>Dual Annuli ‘Closed System’ Perforate, Wash and Cement</td>
<td>C. Teo, Sarawak Shell Bhd.; T.A. Stokkeland and P. Matthews, Archer; A. Helleren, Archer-The Well Company; A. Sainuddin, Reservoir Link</td>
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<td>1440</td>
<td>193964</td>
<td>Perforation Performance Simulation in Complex Multicasing Scenarios</td>
<td>T. Burky, G. Craddock and J.I. Lavery, Halliburton</td>
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### Tuesday, 4 December

**Technical Session 6: Case Studies and Lessons Learned**  
**Session Chairs:** M. Fahrul Nizam Engan, PETRONAS; Khor Chih-Wei, Shell

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<tr>
<th>Time</th>
<th>Paper #</th>
<th>Presentation</th>
<th>Details</th>
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<tr>
<td>1400</td>
<td>193990</td>
<td>Successful of SK305 Artificial Reefing Decommissioning Project</td>
<td>M. Sulaiman and M. Mohamad Ros, PETRONAS; M. Azizan, Sapura Energy</td>
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<tr>
<td>1420</td>
<td>Invited Speaker</td>
<td>Case Study: IWAKI Offshore Platform Decommissioning Project</td>
<td>R. Leetham, Sapura Energy</td>
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<tr>
<td>1440</td>
<td>Invited Speaker</td>
<td>Case Study: Diver-less Disconnection and Removal of Floating Facilities</td>
<td>M. H. Youssef, Sapura Energy</td>
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### Technical Programme

**Tuesday, 4 December**  
1600 – 1730 hours | Pullman One, Level 3

#### Technical Session 7: Integrated Approach for Asset Retirement

**Session Chairs:** M. Hatta M. Yusof, PETRONAS; David Anderson, Proserv

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<tr>
<th>Time</th>
<th>Paper #</th>
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| 1600  | 193984  | **An Alternative Approach to Well Re-Entry and Permanent Well Abandonment from a Monohull Vessel in the UK Continental Shelf**  
S.A. Canny, Weatherford |
| 1620  | 193980  | **Malaysia's First Subsea Development Well Plug and Abandonment**  
F. Othman, C. Teo and F. Bakri, Sarawak Shell Bhd. |
| 1640  | 193938  | **Plug and Abandonment Technology and Efficiency Improvement for Asset Retirement in Gulf of Thailand**  
P. Rodprom and C. Pochan, Chevron Thailand E&P Ltd. |
| 1700  | 193983  | **Operator/Contractor Collaboration Results in Lightweight Drilling Package for Long-Term P&A Campaign**  
J.C. Le Guen, J. Ong and M. Mohamed Yunus, Sapura Energy |

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**Tuesday, 4 December**  
1600 – 1730 hours | Pullman Two, Level 3

#### Technical Session 8: Achieving Excellence in D&A Projects

**Session Chair:** Sulaiman Sidek, PETRONAS Carigali Sdn. Bhd.

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<tr>
<th>Time</th>
<th>Paper #</th>
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| 1600  | 193961  | **Estimating Cost and Commercial Risks of North Sea Decommissioning Projects: Lessons Learnt for Asia Pacific**  
| 1620  | 193978  | **Comparison of Offshore Abandonment Projects in Indonesia: The Evaluation, Challenges and Effectiveness**  
A.E. Prasetya and R. Rakhmahwidiati, SKK Migas |
| 1640  | 193974  | **Maximizing Value from Well Abandonment Through Shallow Gas Hunting and Integrated Well Surveillance**  
Knowledge Sharing ePosters

During the ePoster session, presenters will deliver their presentations in an informal setting and facilitate direct discussions with attendees at designated ePoster stations. Attendees are encouraged to attend the sessions for more knowledge sharing and networking opportunities. ePosters are also available for attendees’ viewing at ePoster stations throughout the symposium.

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<th>Time</th>
<th>Paper #</th>
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<tr>
<td>1030</td>
<td>193956</td>
<td>Plug and Abandonment Procedures for Onshore Wells and the Utilisation of Reserved Abandonment and Site Restoration (ASR) Funds A.E. Prasetya, R. Rakhmahwidiati and R. Hutabarat, SKK Migas; S. Paulus, ConocoPhillips (Grissik) Ltd. (Alternate Paper in Technical Session 8)</td>
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<tr>
<td>1530</td>
<td>193987</td>
<td>The Optimisation for Cost-Effective Well Plug and Abandonment Techniques A.E. Prasetya and S.A. Herputra, SKK Migas (Alternate Paper in Technical Session 7)</td>
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</tr>
<tr>
<td>1030</td>
<td>193966</td>
<td>Phase III Well Abandonment Experiences from an Offshore Process Platform in Asia S.A. Canny, Weatherford</td>
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</tr>
<tr>
<td>1530</td>
<td>193944</td>
<td>Practice of Sustained Casing Pressure Removal for JZ Gasfield Production Well Plug and Abandonment in Bohai Bay X. Li, C. Wang, Y. Wang, F. Li and H. Xu, CNOOC EnerTech-Drilling &amp; Production Co.</td>
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# Knowledge Sharing ePosters

## Tuesday, 4 December

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<tr>
<td>1030</td>
<td>193954</td>
<td><strong>Innovative Rigless Well Intervention on Collided Platform Using New Designed Extended Deck on a Dynamic Positioning Vessel</strong>&lt;br&gt;E. Bahrami, A. Safari, M. Mortazavizadeh, G. Bahrami and A. Zangenehvar, Mehran Engineering &amp; Well Services Co.&lt;br&gt;(Alternate Paper in Technical Session 7)</td>
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<tr>
<td>1530</td>
<td>193982</td>
<td><strong>A Comparative Study: Rig v/s Rigless Abandonment in Western Indian Offshore</strong>&lt;br&gt;A. Mittal, Independent; U. Gupta, Oil &amp; Natural Gas Corp.&lt;br&gt;(Alternate Paper in Technical Session 7)</td>
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<td>1030</td>
<td>193969</td>
<td><strong>The Technological Solution for Collecting Samples from Pipe Walls for Subsequent Analysis of Contaminants</strong>&lt;br&gt;P. Silakorn, C. Chanvanichskul, S. Punpruk and P. Phanichtraiphop, PTTEP; M. Stuvik and J. Samofark, Dacon Inspection Services Co. Ltd.</td>
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<tr>
<td>1530</td>
<td>193937</td>
<td><strong>Managing Flow Assurance Challenges for Decommissioning of a Deepwater Field</strong>&lt;br&gt;A. Anuar, R.M. Norpiah and N. Mustaffa, PETRONAS&lt;br&gt;(Alternate Paper in Technical Session 2)</td>
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<tr>
<td>1030</td>
<td>193945</td>
<td><strong>Perforate Wash and Cement for Large Casing Sizes</strong>&lt;br&gt;L.P. Delabroy, Aker BP; T.A. Stokkeland, Archer Oiltools; G. Astrand, Ridge AS; E. Norum, Aker BP&lt;br&gt;(Alternate Paper in Technical Session 5)</td>
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List of Exhibitors

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<td>EMAS Energy Services (Thailand) Limited</td>
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<td>Oceaneering</td>
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<td>PETRONAS</td>
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<td>Serba Dinamik Sdn. Bhd.</td>
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<td>T7 Global Berhad</td>
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<td>Vantage Energy Group Sdn. Bhd.</td>
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