



# **REPORT on**

**PETRONAS - PETRAD - INTSOK – CCOP**

**WORKSHOP ON DEEPWATER SUBSEA TIE-BACK**

**Damai Puri Resort & Spa, Kuching, Sarawak, MALAYSIA**

**24th - 26th January, 2011**

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### Summary Report

<b>Project number:</b> 200481	<b>Title of workshop:</b> Workshop on Deepwater Subsea Tie-Back	<b>Date:</b> 24-26 January 2011
<b>Total number of participants:</b> 94	<b>From which countries:</b> Malaysia, Singapore, Norway and Vietnam	<b>Number of female participants:</b> 15
<b>Venue:</b> Damai Puri Resort & Spa, Kuching, Sarawak, Malaysia		
<b>Organisers:</b> PETRONAS, PETRAD, INTSOK and CCOP Technical Secretariat		<b>Sponsors:</b> Cost Sharing by PETRONAS and PETRAD and INTSOK

Involvement of Norwegian institutions (Embassies, Innovation Norway, Intsok etc.):  
Aker Solutions, ABB AS, Det Norske Veritas AS Sdn. Bhd., Deep Sea Achors, iSURVEY AS, Weatherford Petroleum Consultants, Framo Engineering, Nexans, ClampOn, Roxar Flow Measurement, SPT Group, Bredero Shaw

#### Goal achievement:

The Workshop on Deepwater Subsea Tie-Back was requested by Petronas, Malaysia and WAS also open for participation to other CCOP and ASCOPE members. The workshop was conducted by PETRONAS, PETRAD, INTSOK in cooperation with CCOP Technical Secretariat on 24-26 January 2011 in Kuching, Malaysia.

The Welcome Remarks and Opening Address delivered by *En. Ramlan Abd Malek*, Vice President, Petroleum Management, PETRONAS, and *Ms. Åshild Kjøl*, First Secretary, Royal Norwegian Embassy, Malaysia, and *Dato Yunus Abdul Razak*, Permanent Representative of Malaysia to CCOP, Director-General of Mineral Geoscience Department, Malaysia.

The Malaysian Keynote Address on “Challenges in Developing Deepwater Discoveries in Malaysia was presented by *En. M Jukris Abd Wahab*, Senior General Manager, PMU, Petronas which focused on Deepwater Malaysia, mainly offshore Sabah - Southern Hub and upcoming Malakai developments, ie a Northern Hub. The Norwegian Keynote Address on “Subsea Layout for Tie-Back Developments – a Conceptual Discussions” by *Mr. Morten R. Pedersen*, VP – MSP/SPS Concepts & Studies, Aker Solutions that focused on giving a conceptual overview of tie-back challenges and technology and discussed the typical parameters that describe and affect the tie-back solution.

A total of 94 participants attend the workshop. There were 21 papers presented during 2-day workshop by 21 Guest Speakers. The theme of this workshop was sharing of technology and knowledge on the subsea tie-backs, performance and monitoring, flow simulations; tools supporting subsea operation, online simulations, flow assurance through; direct electrical heating, insulation of flow lines and risers, insulation of piping, subsea processing; multiphase boosting and compression, subsea power supply and distribution, reliability aspects related to subsea, subsea tie-back design, installation and instrumentation, subsea module handling/launch and recovery systems, seabed positioning, high pressure compact flanges for dynamic risers, bend stiffeners.

The presentations also included importance of pipeline integrity management and highlighted GTS methodology in assessing deepwater pipeline integrity and findings the lesson learnt from the recent case study. Subsea umbilical systems and the critical components were emphasised. The presentation from PETRONAS covered the experience in carrying out reliability activities during the project stage and demonstrated the importance of direct interaction with project engineers to ensure an effective implementation of these activities. Through the workshop, participants had the opportunity to share their experiences with the Guest Speakers.

Certificates of attendance were presented by Dr. Øystein Berg, Managing Director, PETRAD to representative from each country organizations, and followed by the Words of Appreciation to all Guest Speakers, Organizing Committee and PETRONAS, Malaysia for the wide range in experience & technologies sharing through the workshop and it will establishing business development opportunities in the petroleum industry in the region. The Official Closing Remark delivered by Mr. Haja Zamri Ahmad, Senior Manager, PMU, PETRONAS. Mr. Haja Zamri Ahmad expressed sincere thanks to PETRAD, INTSOK and CCOP Technical Secretariat to bring Guest speakers to this Workshop and hope to integrate the future business development with all in the region.

#### Comments:

- Many, especially who are in the decision making position to overcome the many challenges in deepwater development and technologies.
- Staff in development, production, and strategy planning departments
- round table discussion would be good to get closer to clients and share experiences
- overhead projector screens is so small and far from audience
- it should be controlled, not much marketing purpose related to products and services
- this is very informative and valuable knowledge sharing and to build the net working
- applied to client engagement
- workshop gives a better understanding on the technology available that can be utilized in deepwater development project
- a good mixture of practical applications and theory/academic would be more exciting to learn
- there are many good presentations and knowledge learn in this workshop
- to incorporate on technology advancement in strategic studies and future development plans
- good to know more on the implementation and application of the product
- technology can adopt into deepwater project, very beneficial to all
- it is a good mixture of subsea topic, both for beginner and expert
- this workshop topic on deepwater subsea should be applicable for future discussion
- to compilation of papers on subsea tie-back project development from feasibility stage to operational stage from various operators

#### Future work:

Suggestions of topics to other PETRAD tailor-made seminars or Workshops:

- New Development on Seabed Preparation for Subsea Installations
- Deepwater Field Development and Installation
- Marginal Field Development
- Integrated Operation
- IOR/EOR

#### Supporting Documents:

- 1) Programme
- 2) Speaker – Short CV
- 3) List of Distinguished Guests, Speakers, and Participants
- 4) Summary Evaluation
- 5) Pictures from Workshop

# Programme

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## Day 1: Monday, 24<sup>th</sup> January 2011

14.00 Pre-Registration & Check-In Hotel : A separate counter at the hotel main lobby  
(Arrival of VIPs, Distinguished Guest, Speakers & Participants)

18.00 Free & Easy

## Day 2: Tuesday, 25<sup>th</sup> January 2011

08:30 Workshop Registration @ Grand Ballroom 1, Damai Puri Resort & Spa

09:00 Safety Briefing by Hotel

09:05 Doa Recital

09:10 Welcoming Remarks

*By En. Ramlan Abd Malek, Vice President, Petroleum Management, PETRONAS*

*By Ms. Åshild Kjøk, First Secretary, Royal Norwegian Embassy, Kuala Lumpur*

*By Dato Yunus Abdul Razak, Permanent Representative of Malaysia to CCOP, Director-General of Mineral Geoscience Department, Malaysia*

09:50 Malaysian Keynote Address : Challenges in Developing Deepwater Discoveries in Malaysia

*By En. M Jukris Abd Wahab, Senior General Manager, PMU, PETRONAS*

10:20 Norwegian Keynote Address : Subsea Layout for Tie-Back Developments - a Conceptual Discussions

*By Mr. Morten R. Pedersen, VP - MSP/SPS Concepts & Studies, Aker Solutions*

10:50 Group Photo - Coffee/Tea Break

Session 1 : Subsea Tie-backs, Performance & Monitoring

Session Chairman : En. M Rashid Sainal, General Manager, PMU, PETRONAS

11:30 Paper#1 : Recent Developments in Control and Monitoring of Remote Subsea Fields

*Speaker : Mr. Espen Storakaas, Head of Department Integrated Operation Sales, ABB*

12:00 Paper#2 : Deepwater Pipeline Integrity Assessment

*Speaker : Ms. Naila Rusma Bt Idris, GTS, PETRONAS*

12:30 Paper#3 : Deepwater Asset Optimization using Performance Forecasting

*Speaker : Mr. Alex Tan Tuan Yong, Consultant, Det Norske Veritas*

13:00 Lunch

# Programme

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**Session 2A : Subsea Tie-backs, Design and Installation**  
**Session Chairman : En. Mohamad Othman, Senior Manager, PMU, PETRONAS**

**14:00 Paper#4 : Deepwater Pipeline Design**  
*Speaker : En. M Amirushah Zakaria, Project Engineer, Project Implementation, PMU, PETRONAS*

**14:30 Paper#5 : Piles for Deepwater Facilities – Survey, Design and Installation**  
*Speaker : Mr. Ong Wah Chong, Civil Marine Geotechnical Engineer, Shell Projects & Technology, KL*

**15:00 Paper#6 : New Innovate Anchor Solution for Deepwater Mooring – gravity installed anchors reduce time and costs of marine operations**  
*Speaker : Mr. Jon Tore Lieng, CTO, Deep Sea Achors*

**15:30 Coffee/Tea Break**

**Session 2B : Subsea Tie-backs, Design and Installation**  
**Session Chairman : En. Rosli Hamzah, General Manager, PCSB, PETRONAS**

**16:00 Paper#7 : Subsea Positioning in Deep Water**  
*Speaker : Mr. Frode Ingar Karlsen, Project Director, iSURVEY*

**16.30 Paper#8 : Field Development Planning of Subsea Tie-backs**  
*Speaker : Dr. Johan Tronvoll, Weatherford Petroleum Consultants.*

**17:00 Paper#9 : Installation of Pipeline End Manifold (PLEM) and Subsea Tie-in of Expansion Spool**  
*Speaker : En. Zamri Ahmad, Senior Manager - Deepwater, PMU, PETRONAS*

**17.30 End of Session**

**19.30 DINNER**

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## **Day 3: Wednesday, 26<sup>th</sup> January 2011**

**08:00 Workshop Registration**

**Session 3A : Subsea Processing**  
**Session Chairman : En. Saiful Azuan A Aziz, Senior Manager, PCSB, PETRONAS**

**08:30 Paper #10 : Subsea Compression - the big boost for subsea gas fields**  
*Speaker : Mr. Morten R. Pedersen, VP-MSP/SPS Concepts & Studies, Aker Solutions*

**09:00 Paper#11 : Powering Subsea Loads Over Long Distances**  
*Speaker : Mr. Johan Backa, Sales Manager, ABB*

**09:30 Paper#12 : Reliability, Operability and Maintainability For Deepwater Subsea Development – A Paradigm Shift**  
*Speaker : Ms. Farah Julieana Nasri Huang, Subsea System Engineer, PETRONAS Carigali.*

**10:00 Paper#13 : Deepwater Subsea Tie-back Flow Assurance Overview**  
*Speaker : En. Tengku Salehuddin, Project Manager - Pipeline, Murphy Oilcorp, KL*

**10.30 Coffee/Tea Break**

# Programme

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**Session 3B : Subsea Processing**

**Session Chairman : En. Zulkairnain B. Ismail, General Manager, PCSB, PETRONAS**

**11:00 Paper#14 : Subsea Multiphase Boosting Systems, Field Proven Technologies for Increased Recovery**  
*Speaker: Mr. Mads Hjelmeland, General Manager – Asia Pacific, Framo Engineering*

**11:30 Paper#15 : Umbilicals – Experience and Challenges, Tie-Back installations**  
*Speaker: Mr. Bjørn Bjørnstad, Sales Manager Offshore Nexans*

**12:00 Lunch**

**Session 4 : Subsea Instrumentation**

**Session Chairman : En. Ahmad Fuad Idris, Senior Manager, PCSB, PETRONAS**

**13:00 Paper#16 : Non Intrusive Corrosion - Erosion Monitoring for subsea applications**  
*Speaker: Mr. Geir Instanes, Vice President ClampOn*

**13:30 Paper#17 : Subsea Instrumentation for Enhanced Recovery Rates and Flow Assurance**  
*Speaker: Mr. Vincent Vieugue, Vice President Sales & Marketing, Roxar Flow Measurement*

**14:00 Paper #18 : Installation of Deepwater Facilities**  
*Speaker: Tuan Syed Jamil Fadaak, Deputy Project Director, Sapura Acergy, KL*

**14:30 Coffee/Tea Break**

**Session 5 : Flow Assurance**

**Session Chairman : En. Zamri Ahmad, Senior Manager, PMU, PETRONAS**

**15:00 Paper#19 : Versatile Flow Assurance Solutions for Design and Operation of Subsea Developments**  
*Speaker : Dr. Priscilla Ujang, Senior Consultant, SPT Group Malaysia*

**15:30 Paper#20: Direct Electrical Heating**  
*Speaker: Mr. Bjørn Bjørnstad, Sales Manager Offshore, Nexans*

**16:00 Paper#21: Insulation of Flowlines and Risers**  
*Speaker : Dr. Shiwei William Guan, Vice President – Strategic Markets and Technology, Bredero Shaw*

**16:30 Certificate Presentation**  
*By Dr. Øystein Berg, Managing Director, Petrad*

**16:45 Close of Program**  
*By En. Zamri Ahmad, Senior Manager, PMU, PETRONAS*

**17:30 Bus Departure from Damai Puri Resort to Kuching Airport**

# List of Presentation Documents

<b>Malaysian Keynote Address</b> : Challenges in Developing Deepwater Discoveries in Malaysia Speaker: En. M Jukris Abd Wahab, Senior General Manager, PMU, PETRONAS	
<b>Norwegian Keynote Address</b> : Subsea Layout for Tie-Back Developments – a Conceptual Discussion Speaker: Mr. Morten R. Pedersen, VP – MSP/SPS Concepts & Studies, Aker Solutions	
Paper No. 1	Recent Developments in Control and Monitoring of Remote Subsea Fields Speaker: Mr. Espen Storkaas, Head of Department Integrated Operation Sales, ABB
Paper No. 2	Deepwater Pipeline Integrity Assessment Speaker: Ms. Naila Rusma Bt Idris, GTS, PETRONAS
Paper No. 3	Deepwater Asset Optimization Using Performance Forecasting Speaker: Mr. Alex Tan Tuan Yong, Consultant, Det Norske Veritas
Paper No. 4	Deepwater Pipeline Design Speaker: En. M Amirushah Zakaria, Project Engineer, Project Implementation, PMU, PETRONAS
Paper No. 5	Piles for Deepwater Facilities – Survey, Design and Installation Speaker: Mr. Ong Wah Chong, Civil Marine Geotechnical Engineer, Shell
Paper No. 6	New Innovate Anchor Solution for Deepwater Mooring – Gravity Installed Anchors Reduce Time and Costs of Marine Operations Speaker: Mr. Jon Tore Lieng, CTO, Deep Sea Achors
Paper No. 7	Subsea Positioning in Deep Water Speaker: Mr. Frode Ingar Karlsen, Project Director, iSURVEY
Paper No. 8	Field Development Planning of Subsea Tie-Backs Speaker: Dr. Johan Tronvoll, Weatherford Petroleum Consultants
Paper No. 9	Installation of Pipeline End Manifold (PLEM) and Subsea Tie-in of Expansion Spool Speaker: En. Zamri Ahmad, Senior Manager – Deepwater, PMU, PETRONAS
Paper No. 10	Subsea Compression – the Big Boost for Subsea Gas Fields Speaker: Mr. Morten R Pedersen, VP – MSP/SPS Concepts & Studies, Aker Solutions
Paper No. 11	Powering Subsea Loads Over Long Distances Speaker: Mr. Johan Backa, Sales Manager, ABB
Paper No. 12	Reliability, Operability and Maintainability for Deepwater Subsea Development – A Paradigm Shift Speaker: Ms. Farah Julieana Nasri Huang, Subsea System Engineer, PETRONAS Carigali
Paper No. 13	Deepwater Subsea Tie-Back Flow Assurance Overview Speaker: En Tengku Salehuddin, Project Manager – Pipeline, Murphy Oil Corp.
Paper No. 14	Subsea Multiphase Boosting Systems – Fields Proven Technologies for Increased Recovery Speaker: Mr. Mads Hjelmeland, General Manager, Asia Pacific, Framo Engineering
Paper No. 15	Umbilicals – Experience and Challenges – Tie-Back Installations Speaker: Mr. Bjørn Bjørnstad, Sales Manager Offshore Nexans
Paper No. 16	Non Intrusive Corrosion – Erosion Monitoring for Subsea Applications Speaker: Mr. Geir Instanes, Vice President ClampOn
Paper No. 17	Subsea Solution for Enhanced Recovery Rates and Flow Assurance Speaker: Mr. Vincent Vieugue, Vice President Sales & Marketing, Roxar Flow Measurement Sdn Bhd
Paper No. 18	Installation of Deepwater Facilities Speaker: Tuan Syed Jamil Fadaak, Deputy Project Director, Sapura Acergy, K.L.
Paper No. 19	Versatile Flow Assurance Solutions for Design and Operation of Subsea Developments Speaker: Dr. Priscilla Ujang, Senior Consultant, SPT Group
Paper No. 20	Direct Electrical Heating Speaker: Mr. Bjørn Bjørnstad, Sales Manager Offshore, Nexans
Paper No. 21	Insulation of Flow Lines and Risers Speaker: Dr. Shiwei William Guan, Vice President – Strategic Markets and Technology, Bredero Shaw



# VIPs

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1	<b>Ms. Åshild Kjøk</b> First Secretary, Deputy Head of Mission	Royal Norwegian Embassy Vista Tower, 53rd Floor, Jalan Tun Razak, 50400 Kuala Lumpur, Malaysia Tel. +60 13 387 6042 E-mail: <a href="mailto:Ashild.Kjok@mfa.no">Ashild.Kjok@mfa.no</a>
2	<b>Dr. Øystein Berg</b> Managing Director	PETRAD- International Programme for Petroleum and Administration, Prof. Olav Hanssens vei 10, PO Box 598 4003 Stavanger, Norway Tel.: +47 51 87 61 39, Mobile: +47 48 05 07 50 Telefax: +47 51 87 64 28 E-mail: <a href="mailto:oystein.berg@petrad.no">oystein.berg@petrad.no</a>
3	<b>En Ramlan Abd Malek</b> Vice President Petroleum Management	PETRONAS Kuala Lumpur, Malaysia E-mail : <a href="mailto:ramlanm@petronas.com.my">ramlanm@petronas.com.my</a>
4	<b>Dato' Yunus Abdul Razak</b> Permanent Representative of Malaysia to CCOP Director-General	Minerals and Geoscience Department 20th Fl., Tabung Haji Building, Jalan Tun Razak, 50650 Kuala Lumpur, Malaysia Tel. +603 2161 1036 E-mail: <a href="mailto:yunus@img.gov.my">yunus@img.gov.my</a>
5	<b>Datuk Abang Abdul Karim Tun Abang Haji Openg</b>	Chairman of Brooke Dockyard Engineering Works Corporation (BDEWC) Email: <a href="mailto:dahak_opg@yahoo.com">dahak_opg@yahoo.com</a>

# Distinguished Guests

1	<b>En M Jukris Abd Wahab</b> Senior General Manager	Petroleum Resource Development Petroleum Management Unit (PMU) PETRONAS E-mail: <a href="mailto:jukrisw@petronas.com.my">jukrisw@petronas.com.my</a>
2	<b>Mr. Morten Renstrom Pedersen</b> VP – Major Subsea Project / SPS Concepts & Studies	Aker Solutions Snaroyveien 30, NO-1360 Fornebu, P.O. Box 94, NO-1325 Lysaker, Norway Tel. +47 90 691897 E-mail : <a href="mailto:morten.pedersen@akersolutions.com">morten.pedersen@akersolutions.com</a>
3	<b>Mr. Per Hagen</b> Regional Director	INTSOK - Norwegian Oil and Gas Partners, Hoffsveien 23, (0275), OSLO Postal address: P.O. Box 631, Skøyen, OSLO, 0214, Norway Tel.: +47 22 06 14 80, Mobile: +47 91 708129 Fax:22 06 14 90 E-mail: <a href="mailto:per.hagen@intsok.com">per.hagen@intsok.com</a>
4	<b>Mr. Tuan Hai Ewe</b> Head of the Commercial Section	Royal Norwegian Embassy, 53 Floor, Vista Tower, Jalan Tun Razak, 50400 Kuala Lumpur, Malaysia Mobile. +6012 389 8163 E-mail: <a href="mailto:Tuan.Hai.Ewe@innovationnorway.no">Tuan.Hai.Ewe@innovationnorway.no</a>
5	<b>Mr. Chen Shick Pei</b> Honorary Adviser to CCOP	No. 1617, Jalan Urat Mata Lorong 3, 93350 Kuching, Sarawak, Malaysia E-mail: <a href="mailto:spchen.kch@gmail.com">spchen.kch@gmail.com</a>
6	<b>Prof. Dr. He Qingcheng</b> Director	CCOP Technical Secretariat CCOP Building 75/10 Rama VI Rd., Phayathai, Ratchathewi, Bangkok 10400, Thailand Tel. +66(0) 2644 5468 Ext. 401, Mobile: +66(08) 1839 8488 E-mail: <a href="mailto:heqc@ccop.or.th">heqc@ccop.or.th</a>
7	<b>Mr. Terry Freckelton</b> Venture Manager Deepwater	Shell E-mail: <a href="mailto:Terry.Freckelton@shell.com">Terry.Freckelton@shell.com</a>

## Session Chairpersons

<b>SESSION 1:</b> Subsea Tie-Backs, Performance & Monitoring	<b>En. M Rashid Sainal</b>	General Manager, PMU, PETRONAS E-mail: <a href="mailto:mrashid_sainal@petronas.com.my">mrashid_sainal@petronas.com.my</a>
<b>SESSION 2A:</b> Subsea Tie-Backs, Design and Installation	<b>En. Mohamad Othman</b>	Senior Manager, PMU, PETRONAS E-mail: <a href="mailto:mohamot@petronas.com.my">mohamot@petronas.com.my</a>
<b>SESSION 2B:</b> Subsea Tie-Backs, Design and Installation	<b>En. Rosli Hamzah</b>	General Manager, Exploration Drilling, PCSB, PETRONAS E-mail: <a href="mailto:roslih@petronas.com.my">roslih@petronas.com.my</a>
<b>SESSION 3A:</b> Subsea Processing	<b>En. Saiful Azuan A Aziz</b>	Head Engineering Solution, PCSN, PETRONAS E-mail: <a href="mailto:azuanaa@petronas.com.my">azuanaa@petronas.com.my</a>
<b>SESSION 3B:</b> Subsea Processing	<b>En. Zulkarnain Ismail</b>	General Manager Drilling Engineering, PCSB, PETRONAS E-mail: <a href="mailto:karnai@petronas.com.my">karnai@petronas.com.my</a>
<b>SESSION 4:</b> Subsea Instrumentation	<b>En Ahmad Fuad Idris</b>	Senior Manager Subsea Engineering, PCSB, PETRONAS E-mail: <a href="mailto:fuadi@petronas.com.my">fuadi@petronas.com.my</a>
<b>SESSION 5:</b> Flow Assurance	<b>En. Zamri Ahmad</b>	Senior Manager, PMU, PETRONAS E-mail: <a href="mailto:zamri_ahmada@petronas.com.my">zamri_ahmada@petronas.com.my</a>

# Guest Speakers Name List and Addresses

<b>Tuesday 25 January</b>		
<b>Paper No</b>	<b>Name / Position</b>	<b>Address / Tel. / E-mail</b>
<b>Malaysian Keynote: Challenges in Developing Deepwater Discoveries in Malaysia</b>		
	En. M Jukris Abd Wahab	Senior General Manager Petroleum Resource Development Petroleum Management Unit (PMU) PETRONAS E-mail: <a href="mailto:jukrisw@petronas.com.my">jukrisw@petronas.com.my</a>
<b>Norwegian Keynote: Subsea Layout for Tie-Back Developments – A Conceptual Discussions</b>		
	Mr. Morten Renstrom R. Pedersen	VP – Major Subsea Project / SPS Concepts & Studies Aker Solutions Snaroyveien 30, NO-1360 Fornebu, P.O. Box 94, NO-1325 Lysaker, Norway Tel. +47 90 691897 E-mail : <a href="mailto:morten.pedersen@akersolutions.com">morten.pedersen@akersolutions.com</a>
<b>ABB</b>		
# 1	Dr. Espen Storkaas	Department Manager, Integrated Operation Sales ABB AS Ole Deviks Vei 10, N-0603 Oslo, Norway Tel. +47 92 421512 E-mail: <a href="mailto:espen.storkaas@no.abb.com">espen.storkaas@no.abb.com</a>
<b>PETRONAS</b>		
# 2	Ms. Naila Rusma Bt Idris	Senior Pipeline Engineer (Integrity) Group Technical Services (GTS), Technology & Engineering Division, PETRONAS Level 7, Menara Dayabumi, Jalan Sultan Hishamuddin, 50050, Kuala Lumpur. E-MAIL: <a href="mailto:naila@petronas.com.my">naila@petronas.com.my</a>
<b>Det Norske Veritas</b>		
#3	Mr. Alex Tan Tuan Yong	Consultant Det Norske Veritas AS Sdn. Bhd. Level 24 Menara Weld, 76 Jalan Raja Chulan, 50200 Kuala Lumpur, Malaysia Tel. +603 2050 2888 E-mail: <a href="mailto:alex.tan@dnv.com">alex.tan@dnv.com</a>

<b>PETRONAS</b>		
#4	En. M. Amirushah Zakaria	Project Engineer, Project Implementation, Petroleum Resource Development, Petroleum Management Unit, PETRONAS Level 59, Tower 1, PETRONAS Twin Towers KLCC 50088, Kuala Lumpur, Malaysia E-mail: <a href="mailto:amirushah_zakaria@petronas.com.my">amirushah_zakaria@petronas.com.my</a>
<b>Shell Project &amp; Technology, K.L.</b>		
# 5	Mr. Ong Wah Chong	Civil Marine Geotechnical Engineer, Shell Project & Technology, K.L. E-mail: <a href="mailto:wah-chong.ong@shell.com">wah-chong.ong@shell.com</a>
<b>Deep Sea Achors</b>		
# 6	Dr. Jon Tore Lieng	Chief Technical Officer (CTO) Deep Sea Achors Pirsenteret, Havenegata 9, N-7010 Trondheim, Norway Tel. +47 905 48 833 E-mail: <a href="mailto:Jon.lieng@deepseanchors.com">Jon.lieng@deepseanchors.com</a>
<b>iSURVEY AS</b>		
# 7	Mr. Frode Ingar Karlsen	Project Director iSURVEY AS Billingstadsletta 25, P.O. box 300, NO-1397 Billingstad, Norway Mobile: +47 90041543 E-mail: <a href="mailto:frode@isurvey.no">frode@isurvey.no</a>
<b>Weatherford Petroleum Consultants</b>		
#8	Dr. Johan Tronvoll	Senior Staff Geomechanics Engineer Weatherford Petroleum Consultants Stilestadveien 1 N-7040 Trondheim, Norway Mobile +47 934 01 180 E-mail: <a href="mailto:Johan.Tronvoll@wftpc.com">Johan.Tronvoll@wftpc.com</a>
<b>PETRONAS</b>		
#9	En. Zamri Ahmad	Senior Manager – Deepwater PMU, PETRONAS L59, TOWER 1, PETRONAS TWIN TOWERS, KLCC, Malaysia E-mail: <a href="mailto:Zamri_ahmada@petronas.com.my">Zamri_ahmada@petronas.com.my</a>
<b>Wednesday 26 January</b>		
<b>Aker Solutions</b>		
# 10	Mr. Morten R. Redersen	VP – Major Subsea Project / SPS Concepts & Studies Aker Solutions Snaroyveien 30, NO-1360 Fornebu, P.O. Box 94, NO-1325 Lysaker, Norway Tel. +47 90 691897 E-mail : <a href="mailto:morten.pedersen@akersolutions.com">morten.pedersen@akersolutions.com</a>

<b>ABB Pte Ltd.</b>		
# 11	Mr. Johan Backa	Senior Manager ABB Pte Ltd. 2 Ayer Rajah Crescent, Singapore 139935 Tel. +65 97 309389 E-mail: <a href="mailto:johan.backa@sg.abb.com">johan.backa@sg.abb.com</a>
<b>PETRONAS Carigali</b>		
# 12	Ms. Farah Julieana Nasri Huang	Subsea System Engineer PETRONAS Carigali Level 18, Tower 1, PETRONAS Twin Towers, KLCC, 50088 Kuala Lumpur, Malaysia E-mail: <a href="mailto:farah_julieana@petronas.com.my">farah_julieana@petronas.com.my</a>
<b>Murphy Oil Corp</b>		
#13	En. Tengku Salehuddin	Project Manager – Pipeline Murphy Oil Corp. K.L. 28 <sup>th</sup> Floor, Tower 2 E-MAIL: <a href="mailto:TengkuSalehudin_TengkuBakar@murphyoilcorp.com">TengkuSalehudin_TengkuBakar@murphyoilcorp.com</a>
<b>Framo Engineering</b>		
# 14	Mr. Mads Hjelmeland	Regional Manager, Asia Pacific Framo Engineering Asia Pacific Sdn. Bhd. Suite 18-5, 18 <sup>th</sup> Floor, Wisma UOA II, No 21, Jalan Pinang, 50450 Kuala Lumpur, Malaysia Mobile. +6017 880 8635 E-mail: <a href="mailto:mh@framoeng.no">mh@framoeng.no</a>
<b>Nexans</b>		
# 15	Mr. Bjørn Bjørnstad	Sales & Marketing Manager Nexans Norway AS Innspurten 9, 0605 Oslo, Norway Tel. +47 900 444 57 E-mail: <a href="mailto:bjorn.bjornstad@nexans.com">bjorn.bjornstad@nexans.com</a>
<b>ClampOn</b>		
# 16	Mr. Geir Instanes	Vice President ClampOn AS, Damsgaardsveien 131, NO-5160 LAKSEVAAG, Bergen, Norway Tel: +47 5594 8850, Mobile: +47 92 883 862 E-mail: <a href="mailto:geir.instanes@clampon.com">geir.instanes@clampon.com</a>
<b>Roxar Flow Measurement Sdn Bhd</b>		
# 17	Mr. Vincent Vieugue	Vice President Sales & Marketing Roxar Flow Measurement Gamle Forusvei 17, PO Box 112, N-4065, Norway Mobile: +47 9587 9496 E-MAIL: <a href="mailto:Vincent.Vieugue@roxar.com">Vincent.Vieugue@roxar.com</a>

<b>Sapura Acergy</b>		
#18	Tuan Syed Jamil Fadaak	Deputy Project Director SAPURACERGY SDN. BHD. Level 7, Sapura@mines, No. 7 Jalan Tasik, The Mines Resort City, 43300 Seri Kembangan, Selangor, Malaysia E-mail: <a href="mailto:jamil.fadaak@sapuraacergy.com">jamil.fadaak@sapuraacergy.com</a>
<b>SPT Group</b>		
# 19	Dr. Priscilla Ujang	Senior Consultant SPT Group Kuala Lumpur, Malaysia E-mail: <a href="mailto:priscilla.ujang@sptgroup.com">priscilla.ujang@sptgroup.com</a>
<b>Nexans</b>		
# 20	Mr. Bjørn Bjørnstad	Sales & Marketing Manager Nexans Norway AS Innspurten 9, 0605 Oslo, Norway Tel. +47 900 444 57 E-mail: <a href="mailto:bjorn.bjornstad@nexans.com">bjorn.bjornstad@nexans.com</a>
<b>Bredero Shaw</b>		
#21	Dr. Shiwei William Guan	Vice President – Strategic Markets and Technology, Bredero Shaw 101 Thomson Road, #17-01/02 United Square, Singapore 307591 Mobile : +65-9235-9400 E-mail: <a href="mailto:sguan@bredeoshaw.com">sguan@bredeoshaw.com</a>

# Name List of Participants

<b>PETRONAS PMU</b>		
<b>1</b>	<b>Pn. Liyana Nikmatlah</b>	<b>TCDM</b> E-mail: liyana_nikmatlah@petronas.com.my
<b>2</b>	<b>En. Rosli Ajmain</b>	<b>TCDM</b> E-mail: rosli_ajmain@petronas.com.my
<b>3</b>	<b>En. Wan M Hanizan</b>	<b>TCDM</b> E-mail: hanizan@petronas.com.my
<b>4</b>	<b>En. Abdul Manaf Mohammad</b>	<b>PreX</b> E-mail: manaf@petronas.com.my
<b>5</b>	<b>En. Badrul Hisam Ismail</b>	<b>PreX</b>
<b>6</b>	<b>En. Zahari Ibrahim</b>	<b>POM</b> E-mail: zaharib@petronas.com.my
<b>7</b>	<b>En. Abu Bakar Ahmad</b>	<b>POM</b>
<b>8</b>	<b>En. Mokhzani Mohammad</b>	<b>SP</b> E-mail: mokhzani_mohammad@petronas.com.my
<b>9</b>	<b>Pn. Masnizah Supu</b>	<b>SP</b> E-mail: masnizah_supu@petronas.com.my
<b>10</b>	<b>En. Ismail Omar</b>	<b>PRD</b> E-mail: ismailomar@petronas.com.my
<b>11</b>	<b>En. Mohamad Othman</b>	<b>PRD</b> E-mail: mohamot@petronas.com.my
<b>12</b>	<b>Mr. Sanjeev Kumar A/L Nanta Kumar</b>	<b>PRD</b> E-mail: sanjeev_kumar@petronas.com.my
<b>13</b>	<b>Tuan Syed Shaharudin Syed Harun</b>	<b>PRD</b> E-mail: syshaharudin_syharun@petronas.com.my
<b>14</b>	<b>En. Ikmal Hisham Yaacob</b>	<b>PRD</b> E-mail: ikmalh@petronas.com.my
<b>15</b>	<b>En. Mohd Nizam Parnoh</b>	<b>POM</b>
<b>16</b>	<b>En. Muhammad Behesti Mohd Kamil</b>	<b>POM</b>
<b>17</b>	<b>Pn. Zakiah Zakaria</b>	<b>POM</b>



<b>PETRONAS HOLDING</b>		
18	Assoc. Prof. Dr Fakhruldin Mohd Hashim	UTP E-mail: fakhruldin_mhashim@petronas.com.my
19	Assoc. Prof. Dr Nasir Shafiq	UTP E-mail: nasirsahfiq@petronas.com.my
20	En. Mohd Shahrul Amir Zamberi	PRSB (GTS) E-mail: shahrulamir@petronas.com.my
21	En. M Hisham A Bakar	PRSB (GTS) E-mail: mhisham@petronas.com.my
22	Pn. Sapiah Ali	PRSB (GTS) E-mail: sapiaha@petronas.com.my
23	Pn. Zakiyah Zakaria	GSCM E-mail: zakiyah@petronas.com.my
24	Pn. Yusniza Yahya	GSCM E-mail: yusnizy@petronas.com.my
25	Pn. Hazlin Hashim	GSCM E-mail: hazlinahussein@petronas.com.my
26	En. Noor Mohamed Taj Mohd	GSCM
<b>PETRONAS Carigali Sdn Bhd (PCSB)</b>		
27	En. Saiful Azuan A Aziz	PCSB E-mail: azuanaa@petronas.com.my
28	En. Zulkarnain Ismail	PCSB E-mail: karnai@petronas.com.my
29	En. M Farid A Rahman	PCSB E-mail: faridr@petronas.com.my
30	En. Yunus Alwi Yusof	PCSB E-mail: yunusalwi_yusof@petronas.com.my
31	En. Fikri Anwar Emran	PCSB E-mail: fikri_anwar@petronas.com.my
32	En. Rosli Hamzah	PCSB E-mail: roslih@petronas.com.my

33	En. M Zaidan B Khalid	PCSB E-mail: zaidank@petronas.com.my
34	En. M Nizam Ramli	PCSB E-mail: nizamml@petronas.com.my
35	En. Haris Majid	PCSB E-mail: haris@petronas.com.my
36	Mr. Bolhi Maskawi	PCSB E-mail: bolhi@petronas.com.my
37	En. Ismail Hj Bujang	PCSB E-mail: ismaib@petronas.com.my
38	En. M Azizul Hakim Bin Zainal Abidin	PCSB E-mail: azizulhakim@petronas.com.my
39	En. Armi Faisal B Awang	PCSB
40	En. Shamsawi B Ahmad	PCSB
<b>PSC</b>		
41	Mr. Gareth John Bamford	Newfield E-mail: gbamford@newfield.com
42	Mr. Clement Ng Kok Peng	Newfield E-mail: cng@newfield.com
43	Mr. Girish Chandran	Talisman E-mail: gchandran@talisman-energy.com
44	En. Abu Bakar Md Nor	Talisman E-mail: abnor@talisman-energy.com
45	En. Bahari Sulaiman	Talisman E-mail: bsulaiman@talisman-energy.com
46	En. Makhtar Latif	Petrofac E-mail: makhtar.latif@petrofac.com
47	Ms. Norazila Sulaiman	Petrofac
48	Mr. Ian Ramsay	MurphyOil E-mail: ian_ramsay@murphyoilcorp.com

<b>49</b>	<b>En. Mohd Redza Mohd Tahir</b>	<b>EMEPMI</b> <b>E-mail:</b> mohd.t.mohdredza@exxonmobil.com
<b>50</b>	<b>En. Norazhar Adbul Rahman</b>	<b>EMEPMI</b> <b>E-mail:</b> norazhar.abdulrahman@exxonmobil.com
<b>51</b>	<b>Mr. Damian Hiew</b>	<b>SHELL</b> <b>E-mail:</b> damian.hiew@shell.com
<b>52</b>	<b>Mr. Serit Janwong</b>	<b>SHELL</b> <b>E-mail:</b> serit.janwong@shell.com
<b>53</b>	<b>Ms. Ho Chooi Yee</b>	<b>SHELL</b> <b>E-mail:</b> chooi-yee.ho@shell.com
<b>54</b>	<b>Ms. Lee Lay Mee</b>	<b>SHELL</b> <b>E-mail:</b> L-M.Lee@shell.com

# Company Delegates and CCOP / ASCOPE Participants

No.	Name	Designation / Company / E-mail Address
55	Mr. Dagfinn O. Tegnander	Business Development Manager, SEA/China Scana Oil and Gas No. 21 Bukit Batok Crescent, #18-73 WCEGA Tower, Singapore 658065 Mobile: +601231 71005 E-mail: <a href="mailto:dte@scana.no">dte@scana.no</a>
56	Mr. Roger Gildseth	Business Development Manager iSURVEY AS Billingstadsletta 25, P.O. Box 300, NO-1397 Billingstad, Norway Mobile: +47 9209 5177 E-mail: <a href="mailto:roger@isurvey.no">roger@isurvey.no</a>
57	Mr. Kjetil Jensen	Project Manager iSURVEY AS Billingstadsletta 25, P.O. Box 300, NO-1397 Billingstad, Norway Mobile: +47 4162 7625 E-mail: <a href="mailto:kjetil@isurvey.no">kjetil@isurvey.no</a>
58	Mr. Nguyen Huu Nhan	Project Engineer PETROVIETNAM Exploration and Production Corp. 5th Floor, City-Light Tower, 45 Vo Thi Sau, DaKao Ward, District I, HCM City, Vietnam Tel. +84 8 3629 06050 ext 195 E-mail: <a href="mailto:nhannh@pvep.com.vn">nhannh@pvep.com.vn</a>
59	Mr. Bui Quang Thai	Drilling Team Leader – PVEP HCM PETROVIETNAM Exploration and Production Corp. City-Light Tower, 45 Vo Thi Sau, DaKao Ward, District I, HCM City, Vietnam Tel. +84 09 3605 6682 E-mail: <a href="mailto:thaibq@pvep.com.vn">thaibq@pvep.com.vn</a>
60	Mr. Tran Trong Dai	Production Engineer, PETROVIETNAM 18 Lang Ha Street, Ba Dinh District, Hanoi, Vietnam Tel. +84 4 3825 2526 Ext. 6719 E-mail: <a href="mailto:daitt@pvn.vn">daitt@pvn.vn</a>
61	Mr. Tran Manh Cuong	Drilling Engineer, PETROVIETNAM 18 Lang Ha Street, Ba Dinh District, Hanoi, Vietnam Tel. +84 09 88654840 E-mail: <a href="mailto:cuongtm@pvn.vn">cuongtm@pvn.vn</a>
62	Mr. Ngo Van Hung	Petroleum Geology Engineer, Science&Technology Division Vietnam Oil and Gas Group 18 Lang Ha Street, Ba Dinh District, Hanoi, Vietnam Tel. +84 09 1232 6700 E-mail: <a href="mailto:hungnv@vpn.vn">hungnv@vpn.vn</a>
63	Mr. Elling Nygaard	VP Business Development ABB AS Ole Deviks Vei 10, N-0603 Oslo, Norway Tel. +47 90844194 E-mail: <a href="mailto:Elling.nygaard@no.abb.com">Elling.nygaard@no.abb.com</a>

<b>64</b>	<b>Mr. Oyvind Bjorkhaug</b>	Director – Strategic kay Accounts Roxar Flow Measurement Sdn Bhd Level 9, Menara Chan, 138 Jaan Ampang, 50450 Kuala Lumpur, Malaysia Mobile: +60123 997760 E-mail: <a href="mailto:oyvind.bjorkhaug@roxar.com">oyvind.bjorkhaug@roxar.com</a>
<b>65</b>	<b>Mr. Kenny Tan</b>	Sales Manager ABB Malaysia Sdn Bhd Lot 608, Jalan SS 13/1K, 47500 Subang Jaya, Selangor Darul Ehsan, Malaysia Tel. +60 12 2987809 E-mail: <a href="mailto:kenny.tan@my.abb.com">kenny.tan@my.abb.com</a>
<b>66</b>	<b>Mr. Srinivas Tati</b>	Sales Manager ABB Pte Ltd 2 Ayer Rajah Crescent, Singapore 139935 Tel. +65 91 725865 E-mail: <a href="mailto:srinivas.tati@sg.abb.com">srinivas.tati@sg.abb.com</a>
<b>67</b>	<b>En Ashraf Assai</b>	BDEWC Kuala Lumpur, Malaysia E-mail: <a href="mailto:mashraf.assai@gmail.com">mashraf.assai@gmail.com</a>
<b>68</b>	<b>Mr. Ivar Erdal</b>	CEO, Deep Sea Anchors P.O. Box 1227 Pirsenteret N-7462 Trondheim, Norway Tel. +47 73500350, Mobile: +47 911 89 395 E-mail: <a href="mailto:ivar.erdal@deepseaanchors.com">ivar.erdal@deepseaanchors.com</a>
<b>69</b>	<b>Dr. Samsul Bahar Sadli</b>	Business Development Director Det Norske Veritas AS Sdn. Bhd. Level 24, Menara Weld, 76 Jalan Raja Chulan, 50200 Kuala Lumpur, Malaysia Tel. +603 2050 2888 E-mail: <a href="mailto:Samsul.Bahar.Sadli@dnv.com">Samsul.Bahar.Sadli@dnv.com</a>
<b>70</b>	<b>Mr. Ariffin Salim</b>	Area Manager (Malaysia & Brunei) Det Norske Veritas AS Sdn. Bhd. Leve. 24, Menara Weld, 76 Jalan Raja Chulan, 50200 Kuala Lumpur, Malaysia Tel. +603 2050 2888 E-mail: <a href="mailto:Ariffin.Salim@dnv.com">Ariffin.Salim@dnv.com</a>
<b>71</b>	<b>Mr. Zulfaisal Mohamed</b>	Senior Engineer Det Norske Veritas AS Sdn. Bhd. Level 24, Menara Weld, 76 Jalan Raja Chulan, 50200 Kuala Lumpur, Malaysia Tel. +603 2050 2888 E-mail: <a href="mailto:Zulfaisal.Mohamed@dnv.com">Zulfaisal.Mohamed@dnv.com</a>
<b>72</b>	<b>Mr. Kieran Nash</b>	Head of International Sales Storm Geo Nordre Nøskaen 1, N-5011 Bergen, Norway Tel. +47 982 950 93 E-mail: <a href="mailto:Kieran.nash@stormgeo.com">Kieran.nash@stormgeo.com</a>

73	<b>Mr. Ahmad Fauzi Ghazali</b>	Executive Chairman Far Frontier Energy Services (m) Sdn Bhd B3A/5/5, Level 4, One Ampang Business Avenue, Jalan Ampang Utama ½, 68000 Ampang Saya, Selangor D.E., Malaysia Tel. +60 12 2033180 E-mail: <a href="mailto:fauzighazali@farfrontierenergy.com">fauzighazali@farfrontierenergy.com</a>
74	<b>Mr. Rudisham Marjohan</b>	Business Development / Technical Manager Atlas Hall Sdn Bhd C/O Framo Engineering Asia Pacific Sdn. Bhd. Suite 18-6, 18th Fl., Wisma UOAll, No. 21, Jalan Pinang, 50450 Kuala Lumpur, Malaysia Tel. +603 7490 8861, Mobile: +60 12 939 0363 E-mail: <a href="mailto:rudi@atlashall.com.my">rudi@atlashall.com.my</a>
75	<b>Mr. Erwan Hashim</b>	Business Development Manager, South East Asia Suite 12.4, 12th Floor, East Wing, Rohas Perkasa, No. 8, Jalan Perak, 50450 Kuala Lumpur, Malaysia Tel. +601 22065120 E-mail: <a href="mailto:Erwan.hashim@sptgroup.com">Erwan.hashim@sptgroup.com</a>
76	<b>Dr. Parlapalli Madhu Sudhana Rao.</b>	Det Norske Veritas AS Sdn. Bhd. Level 24, Menara Weld, 76, Jalan Raja Chulan, 50200 Kuala Lumpur, Malaysia Tel. +603 20502888, Mobile: +60 1232 56802 E-mail: <a href="mailto:Madhu.Sudhana.Rao.Parlapalli@dnv.com">Madhu.Sudhana.Rao.Parlapalli@dnv.com</a>
77	<b>Mr. Mohammed Abdul Kadher Gul</b>	QA Manager / Technical Specialist Det Norske Veritas AS Sdn. Bhd. Level 24, Menara Weld, 76, Jalan Raja Chulan, 50200 Kuala Lumpur, Malaysia Tel. +603 2050 2888 E-mail: <a href="mailto:Gul.Abdul@dnv.com">Gul.Abdul@dnv.com</a>
78	<b>Mr. Khairul Taufiq Saidin</b>	Senior Pipeline Engineer Det Norske Veritas AS Sdn. Bhd. Level 24, Menara Weld, 76, Jalan Raja Chulan, 50200 Kuala Lumpur, Malaysia Tel +603 2050 2888 E-mail: <a href="mailto:Khairul.Taufiq.Saidin@dnv.com">Khairul.Taufiq.Saidin@dnv.com</a>
79	<b>Mr. Joshua Raj Rajagopal</b>	Service Manager, MOTCO (Malaysia) Sdn Bhd 256, Jalan Bandar 12, Taman Melawati, 53100 Kuala Lumpur, Malaysia Tel: +603 4107 2975 Mobile: +6012 5622 949 E-mail: <a href="mailto:joshua@matcomalaysia.com">joshua@matcomalaysia.com</a>
80	<b>Mr. Mohd Rahimi B. Abdul Rahman</b>	Pioneer Engineering Sdn. Bhd. E-mail: <a href="mailto:rahimi@pioneers-group.com">rahimi@pioneers-group.com</a>
81	<b>Mr. Gunalan Gingan</b>	Pioneer Engineering Sdn. Bhd. E-mail: <a href="mailto:guna@poineers-group.com">guna@poineers-group.com</a>
82	<b>Mr. Chan Ken Sing</b>	BDEWC E-mail: <a href="mailto:changks@brookedockyard.com.my">changks@brookedockyard.com.my</a>
83	<b>En. Khadrishah Khalid</b>	Sapura Acergy E-mail:

# Organizing Committee

No.	Name	Designation / Company / E-mail Address
84	Mr. Haji Zamri Ahmad	PMU-PETRONAS Mobile: +6012 304 8020 E-mail: <a href="mailto:zamri_ahmada@petronas.com.my">zamri_ahmada@petronas.com.my</a>
85	Mr. Othman Putit	PMU-PETRONAS Mobile: + 6019 365 1911 E-mail: <a href="mailto:othman_putit@petronas.com.my">othman_putit@petronas.com.my</a>
86	Ms. Mirzatul Khairiyah Bt Othman	PMU-PETRONAS Mobile : +6019-260 0053 Email : <a href="mailto:mirzatul_khairiyah@petronas.com.my">mirzatul_khairiyah@petronas.com.my</a>
87	Ms. Nadiah Bt Suhaimi	PMU-PETRONAS E-mail: <a href="mailto:nadiah_suhaimi@petronas.com.my">nadiah_suhaimi@petronas.com.my</a>
88	Mr. Logenthiran AL Manogaran	PMU-PETRONAS E-mail: <a href="mailto:logenthiran_m@petronas.com.my">logenthiran_m@petronas.com.my</a>
89	Ms. Erica Ting Mei Shang	PMU-PETRONAS
90	Ms. Alia Haryati Bt Shalleh	PMU-PETRONAS
91	Ms. Norhasanah Shinaz Bt M Noor	PMU-PETRONAS
92	Mr. Tan Mao Cheng	PMU-PETRONAS
93	En. M Amirushah Zakaria	PMU-PETRONAS E-mail: <a href="mailto:amirushah_zakaria@petronas.com.my">amirushah_zakaria@petronas.com.my</a>
94	Ms. Petcharat Sarawisutra	CCOP Technical Secretariat Bangkok, Thailand Mobile: +66 81 823 3729 E- mail: <a href="mailto:fern@ccop.or.th">fern@ccop.or.th</a>

# Guest Speakers' Information

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**Tuesday, 25 January 2011**

**MALAYSIAN Challenges in Developing Deepwater Discoveries in Malaysia**

**KEYNOTE :**



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**EN. M JUKRIS ABD WAHAB**

Senior General Manager,

PMU, PETRONAS

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## Short's Bio-data

Mohd Jukris Abdul Wahab is presently the Senior General Manager of Petroleum Resource Development, Petroleum Management Unit (PMU), PETRONAS.

He has served PETRONAS for about 20 years and has held various portfolios during this period. He started off as a Reservoir Engineer in early 1990s involving in the development of the several oil & gas fields offshore Malaysia.

He has also led the field surveillance teams managing producing fields in offshore East Malaysia. Graduated from Texas Tech University, USA with BSc. Degree In Petroleum Engineering, Mohd Jukris also led the Capability Development Department in PETRONAS Carigali Sdn Bhd. prior to his assignment as Senior Manager of Strategic Planning in PMU.

Mohd Jukris has also served as the Executive Assistant to the then President of PETRONAS, Tan Sri Hassan Marican. As an SPE member, Mohd Jukris has also served in several SPE led events committees as well as one term as Program Chairman of an SPE Chapter in East Malaysia. He has also served as the SPE Director for Northern Asia Pacific Region and member of SPE Board of Directors.

Current, Mohd Jukris is the Director for:-

- 
1. Star Energy Ltd
  2. MITCO Japan Sdn Bhd
  3. PERMATA Sdn Bhd
  4. PETRONAS Technical Services Sdn Bhd
  5. PETRONAS Carigali Iraq Holding B.V.
  6. PETRONAS Carigali Iraq (Garraf) Ltd 7. MLNG, MLNG 2 & MLNG 3

Mohd Jakris is married and blessed with 5 children.

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**MR. MORTEN R. PEDERSEN**

VP – MSP/SPS Concepts & Studies Aker Solutions  
Fornebu - Norway

E-mail: [morten.pedersen@akersolutions.com](mailto:morten.pedersen@akersolutions.com)

---

**Short Bio Data:**

He started working for Kvaerner in 1986 - the then predecessor of today's Aker Solutions subsea.

He has worked with projects concerning Subsea Production Systems hardware supply for most of these 24 years.

He has been subsea system engineering responsible for several subsea development projects around the world, such as Total's Dalia in Angola, Murphy's Kikeh in Malaysia, StatoilHydro's Morvin in Norway and Reliance's KG-D6 in India.

Pedersen is now responsible for the front end studies and conceptual developments within the subsea section of Aker Solutions.

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**Company profile:**

Aker Solutions is one of the world's top four providers of subsea production systems and related services. We aim to be a lifecycle partner throughout the value chain of subsea and sub-surface technologies, solutions and services for the oil and gas industry. Aker Solutions' offerings cover all phases of the life of field, from concept screening and design through manufacturing, fabrication, installation and commissioning to operational support, maintenance and services. Our capabilities are available either as individual products and services or as complete EPCI deliveries.



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**MR. ESPEN STORKAAS**

Head Of Department, Integrated Operations Sales

ABB

Ole Deviks vei 10, N-0603 Oslo, Norway

E-MAIL: [espen.storkaas@no.abb.com](mailto:espen.storkaas@no.abb.com)

---

**Short Bio Data:**

Espen Storkaas has a MSc and PhD in Chemical Engineering from Norwegian University of Technology and Science, and has been working with engineering, implementation sales and management of various projects related to Integrated Operations and Increased Oil Recovery in ABB for the last six years. Currently, Espen Storkaas is Head of Department for the Integrated Operations Sales department in ABB.

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**Company profile:**

ABB ([www.abb.com](http://www.abb.com)) is a leader in power and automation technologies that enable utility and industry customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 117,000 people.



---

**MS. NAILA RUSMA BT IDRIS**

Senior Pipeline Engineer (Integrity)

Group Technical Services (GTS), Technology & Engineering Division, PETRONAS  
Level 7, Menara Dayabumi, Jalan Sultan Hishamuddin, 50050, Kuala Lumpur.

E-MAIL: [naila@petronas.com.my](mailto:naila@petronas.com.my)

---

**Short Bio Data:**

Educational and work experience:

Naila graduated from University Putra Malaysia with Bachelor of Engineering (Civil) and started her career in PETRONAS as a Civil/Structural Engineer in Dec. 1998. She has been involved in various structural/ platform studies, among are platform in-place and fatigue analysis and metocean studies for green field developments in her earlier years in PETRONAS. Beginning year 2000, she changed her career path by focusing on pipeline integrity and since then she has been involved with the development of Risk Based Inspection (RBI) for PETRONAS pipelines, pipeline RBI detailed assessment, Fitness for Service (FFS) assessment and various pipeline integrity studies. She's also involved with development of PETRONAS deepwater riser engineering manual and recent integrity assessment of a deepwater pipeline system.

Naila is an active member of PETRONAS Pipeline Integrity Community of Practice, and a senior pipeline engineer (Integrity) in PETRONAS Group Technical Services (GTS), an engineering arm under Technology & Engineering Division in PETRONAS.

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**Abstract:****Deepwater Pipeline Integrity Assessment**

The presentation will share the importance of pipeline integrity management and highlight GTS methodology in assessing deepwater pipeline integrity. The presentation will share the findings and lesson learns from the recent case study.



MANAGING RISK

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**Mr. Alex Tan Tuan Yong****Consultant****Det Norske Veritas****Level 24 Menara Weld, 76 Jalan Raja Chulan, 50200 Kuala Lumpur, Malaysia****E-MAIL: [alex.tan@dnv.com](mailto:alex.tan@dnv.com)**

---

**Short Bio Data:**

Alex is a Consultant based in the Kuala Lumpur office performance forecasting team, specializing in the upstream oil and gas sector. He is involved in a wide variety of high profile projects with system performance evaluation and analysis, including the associated disciplines of reliability, availability and maintainability, asset and risk management, life-cycle and cost benefit analysis studies, integrated logistic support, and operability studies. Alex graduated from Imperial College London with a chemical engineering background.

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**Company profile:**

DNV (Det Norske Veritas) is an independent foundation with the purpose of safeguarding life, property, and the environment. As a leading international provider of services for managing risk, the point of managing risk is not necessarily to eliminate risk, but to have an overview of the most critical risks and manage them professionally. DNV's technology understanding blended with competency within risk management has been used to assess, evaluate and manage the risks involved in numerous high-profile projects around the world.



---

**MR. M AMIRUSHAH B ZAKARIA**

Project Engineer

Petroleum Management Unit, PETRONAS

Level 59, Tower 1, PETRONAS Twin Towers

KLCC 50088, Kuala Lumpur

E-MAIL: [amirushah\\_zakaria@petronas.com.my](mailto:amirushah_zakaria@petronas.com.my)

**Presentation: Deepwater Pipeline Design**

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**Short Bio Data:**

En. M Amirushah Zakaria has a Bachelor of Engineering in Mechanical, Specialization in Petroleum Engineering from Universiti Teknologi PETRONAS. He has 3 years of experience as a Project Engineer with Project Implementation, Petroleum Resource Development, Petroleum Management Unit, PETRONAS in Malaysia. He has facilitated various Production Sharing Contractors in execution various green and brown field developments in Malaysia.

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**Abstract:**

The design of deepwater pipeline becomes increasingly challenging with increasing in water depth and extreme field requirement. To give a complete picture, this paper present the design aspects and main comparison between rigid and flexible pipeline for deepwater application specifically for subsea tie-back. Understanding of the ways to manage challenges in deepwater development will ensure safe design and benefit to the overall project cost.

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**MR. ONG WAH CHONG**

Deepwater Civil Marine Engineer (Geotechnical)

Shell Projects & Technology - Upstream Major Projects East

11, Jalan Pinang, Etiqa Twins Tower, Tower 1, 50450 Kuala Lumpur

E-MAIL: [wah-chong.ong@shell.com](mailto:wah-chong.ong@shell.com)

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**Short Bio Data:**

Ong has a Master in Civil Engineering from National University of Singapore, majoring in Advanced Foundation and Advanced Structural Design, and Honours Degree in Civil Engineering from Nanyang Technological University, Singapore. He has 17 years of experience in civil engineering infrastructure design and construction, covering land reclamation, rock blasting, construction of petro-chemical plants, upgrading of marine structures, building of remote military runway, deep excavation in soft marine clay, deep tunnel excavation to managing coal mining operations in Indonesia. In Shell, Ong has worked in a range of roles and lead in various civil marine Greenfield and Brownfield downstream projects. Currently, he is based in Shell Projects & Technology - Upstream Major Projects East focusing on offshore soil investigation, geohazards and foundations design/construction/installation for deepwater projects ie Malikai, Gumusut, Prelude and Malampaya projects in this office. He has recently completed Malikai offshore geotechnical investigation campaign and has successfully installed the driven piles for Gumusut project.



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**MR. JON TORE LIENG**

Chief Technical Officer (CTO)

Deep Sea Anchors

ADDRESS: Pirsenteret, Post Office Box 1227, 7462 Trondheim

E-MAIL: [jon.lieng@deepseaanchors.com](mailto:jon.lieng@deepseaanchors.com)

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**Short Bio Data:**

Dr. eng. in soil mechanics from the Norwegian Institute of Technology in Trondheim.

20 years working on research at Geotechnical Dept., SINTEF (Foundation for Industrial and Technical Research) Trondheim, Norway

Started development of the Deep Penetrating Anchor (DPA) in the mid 1990's

Managing director of established spinoff company GeoProbing Technology since 1997

and CTO at Deep Sea Anchors from 2009 both companies in Trondheim Norway.

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**Company profile:**

Deep Sea Anchors is a commercial provider of innovative anchor and mooring solutions for the offshore energy industry. Established in early 2009 but based on technology from the mid 1990s i.e. the Deep Penetrating Anchor (DPA™) a gravity installed anchor for mooring of offshore floating structures. Web site [www.deepseaanchors.com](http://www.deepseaanchors.com)


**MR. FRODE INGAR KARLSEN**

Project Director, iSURVEY AS

Billingstadsletta 25, P.O. box 300, NO-1397 Billingstad, Norway

 E-mail: [frode@isurvey.no](mailto:frode@isurvey.no)
**SHORT Bio Data:**
**EDUCATION**

1994	Naval College, Bergen	Bergen
1989-1990	Naval Officers' Training School,	Horten
1987-1989	Engineering College – Electronics	Oslo
1984-1987	Røyken Secondary School, Natural Science	Røyken

**EXPERIENCE**

2008-dd	iSURVEY AS	Project Director
2004-2008	iSURVEY AS	Operations Manager
2003-2004	Fugro Survey AS	Department Manager
2002-2003	Fugro Survey AS	Deputy Department Manager
2001	Fugro Survey AS	Key Account Manager and Subsea Positioning Supervisor, Navigation department
2000-2001	Fugro-Geoteam AS	Subsea Positioning Supervisor, Navigation Department
1999-2000	Fugro-Geoteam AS	Senior Field Engineer, Navigation Department
1997-1999	Fugro-Geoteam AS	Electronics Engineer, Navigation Department
1996	Naval Defence Training Centre	Group Leader subsea sensors, Submarine Department.
1994-1996	Ula Class Submarine	Weapon Technical Officer
1993-1994	Ula Class Submarine	1st Sensor Officer
1991-1993	Ula Class Submarine	2nd Sensor Officer
1990-1991	Ula Class Submarine	Weapons Officer; Sensor Assistant

**Company Profile:** iSURVEY AS offers specialists in deep water positioning and survey services to support a variety of professional offshore operations

**Supports:** • Rig and FPSO operations, • Deep water marine construction work, • VERIPOS DGNSs sales and support

**Provides:** • Experienced Offshore Surveyors and Project Management Staff, • iNAV® and iSAFE® system solutions - Eiva Navipac integrated navigation system, - VERIPOS DGNSs services, - Complete solutions for subsea positioning - 3D visualization, - Communication solutions, • Bathymetric data acquisition and processing, • Gyro and USBL calibrations, • LBL network planning and installation, • Technical procedures and work instructions, • Documentation - Data processing and reporting, • Geodetic consultancy, • Geodetic consultancy, • GIS and CAD





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**DR. JOHAN TRONVOLL**

Senior Staff Geomechanics Engineer  
Weatherford Petroleum Consultants  
Stilestadveien 1  
N-7040 Trondheim, Norway  
Mobile +47 934 01 180  
E-mail: [Johan.Tronvoll@wftpc.com](mailto:Johan.Tronvoll@wftpc.com)

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**SHORT Bio Data:**

Johan Tronvoll holds a M.Sc. in petroleum engineering and a Ph.D in rock mechanics from the Norwegian Institute of Technology. He also holds a Master of Management from the Norwegian School of Management BI -Executive School.

He has work experience from North Sea drilling operations and from R&D and consulting within petroleum engineering and rock mechanics. He was a co-founder of the consulting agency ORMIS, where he served five years as a Managing Director. He later founded Petroleum Geotechnology, which is an engineering technology and consulting company. He later joined SINTEF Petroleum Research as a Research Director, after which he served as General Manager at ResLab in Trondheim, Norway. After acquisition by Weatherford he was involved in business development for Weatherford Laboratories globally. He currently is a Senior Staff Geomechanics Engineer at Weatherford Petroleum Consultants.

He has published about 40 technical papers in international journals and at conferences.



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**MR. ZAMRI AHMAD**

SR MANAGER, DEEPWATER

PETRONAS

L59, TOWER 1, PETRONAS TWIN TOWERS, KLCC

E-MAIL: [Zamri\\_ahmada@petronas.com.my](mailto:Zamri_ahmada@petronas.com.my)

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**Short Bio Data:**

Obtained degree from Case Western Reserve Univ. Ohio, USA in Mechanical Engineering. Started working in Petronas since 1991. Being exposed to various disciplines in upstream oil&gas industry including: 5 years in Health, Safety and Environment Management; 1year Onshore fabrication of platforms; and 1 year in linepipe coating. Extensive experience (13 years) in Offshore Installation. Starting from an offshore installation engineer moved to be an offshore Company Site Representative and finally was assigned as Manager for Pipeline Installation in Petronas Carigali. Has involved in numerous installation programme for pipeline and structures for Petronas Carigali domestically and internationally.

Currently assigned as Senior Manager in Petronas, responsible for managing project implementation of Deep Water projects.

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**Abstract:**

Subsea Pipeline End Manifolds (PLEM) are commonly use nowadays to serve the purpose of commingling flows from different locations. It eliminates the need for additional risers coming up to a platform while expansion spools are use to cater for the expansion of subsea pipeline due to temperature difference. Subsea PLEM and Expansion spool installation requires unique challenges where accuracy and skill play an important role. Installation of subsea facilities, even in shallow water, requires extensive use of resources namely a crane barge, diving spread, remotely operated vehicle (ROV) and high accuracy of survey equipment. The installation requires a full commitment and good coordination between various sub disciplines i.e. engineering, rigging, welding, diving and ROV.

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Wednesday, 26 January 2011

Paper #10

Subsea Compression – the Big Boost for Subsea Gas Fields

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**MR. MORTEN R. PEDERSEN**

VP – MSP/SPS Concepts & Studies Aker Solutions

Fornebu - Norway

E-mail: [morten.pedersen@akersolutions.com](mailto:morten.pedersen@akersolutions.com)

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**Short Bio Data:**

He started working for Kvaerner in 1986 - the then predecessor of today's Aker Solutions subsea.

He has worked with projects concerning Subsea Production Systems hardware supply for most of these 24 years.

He has been subsea system engineering responsible for several subsea development projects around the world, such as Total's Dalia in Angola, Murphy's Kikeh in Malaysia, StatoilHydro's Morvin in Norway and Reliance's KG-D6 in India.

Pedersen is now responsible for the front end studies and conceptual developments within the subsea section of Aker Solutions.

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**Company profile:**

Aker Solutions is one of the world's top four providers of subsea production systems and related services. We aim to be a lifecycle partner throughout the value chain of subsea and sub-surface technologies, solutions and services for the oil and gas industry. Aker Solutions' offerings cover all phases of the life of field, from concept screening and design through manufacturing, fabrication, installation and commissioning to operational support, maintenance and services. Our capabilities are available either as individual products and services or as complete EPCI deliveries.



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**MR. JOHAN BACKA**

Senior Manager – Oil, Gas & Petrochemicals

ABB Pte Ltd

2 Ayer Rajah Crescent, Singapore 139935

E-MAIL: [johan.backa@sg.abb.com](mailto:johan.backa@sg.abb.com)

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**Short Bio Data:**

Johan Backa holds the position Senior Manager for sales and project execution for Oil & Gas electrification in South East Asia.

Mr. Backa has a BSc in Electrical Engineering and has an extensive background in electrical and subsea applications for the Oil & Gas industry from various positions in ABB.

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**Company profile:**

ABB ([www.abb.com](http://www.abb.com)) is a leader in power and automation technologies that enable utility and industry customers to improve performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 117,000 people.

**MS. FARAH JULIEANA BT. NASRI HUANG**

Subsea System Engineer

PETRONAS CARIGALI SDN. BHD

Level 18, Tower 1, PETRONAS Twin Towers,

KUALA LUMPUR CITY CENTRE, 50088 KUALA LUMPUR, MALAYSIA

E-MAIL: [farah\\_julieana@petronas.com.my](mailto:farah_julieana@petronas.com.my)**Short Bio Data:**

Farah Julieana bt. Nasri Huang is currently working as a Subsea System Engineer in Subsea Engineering, Engineering Department, PETRONAS Carigali. She was involved in the development of PETRONAS Subsea Reliability & Integrity Management System (S-RIMS) for subsea project as per API 17N. She is currently assigned to the Kumang Kanowit Subsea Development Project and is involved in the implementation of the S-RIMS for the project.

**Abstract:**

Production availability and system life cycle cost are very much driven by the reliability performance of equipment particularly for remote deepwater applications where the cost of intervention is high. Historically, the reliability performance of subsea hardware has been unsatisfactorily either due to design errors, defects introduced during manufacturing or offshore installations. Through these experiences, the industry now has a better appreciation of the importance of embracing reliability principle throughout the supply chain. Subsequently, API Recommended Practice RP 17N was created to support subsea industry in its implementation of reliability management best practices for subsea projects. PCSB Development Division (DD) has taken a proactive approach in creating a reliability management system in line with API RP 17N and PETRONAS RIMS in order to support the implementation of subsea development project in the company. This paper covers PETRONAS's experience in carrying out reliability activities during project stage and demonstrates the importance of direct interaction with project engineers to ensure an effective implementation of these activities.



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**EN. TENGKU SALEHUDIN TENGKU BAKAR**

PIPELINES PROJECT MANAGER

Murphy Oil

28<sup>th</sup> Floor, Tower 2

E-MAIL: [TengkuSalehudin\\_TengkuBakar@murphyoilcorp.com](mailto:TengkuSalehudin_TengkuBakar@murphyoilcorp.com)

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**Short Bio Data:**

Tengku Salehudin has over 21 years experience in the offshore oil and gas industry in engineering, procurement, and management of conventional and deepwater submarine pipeline/flowline systems. Possess a Bachelor of Science degree in Civil Engineering and is a Registered Professional Engineer. Experience covers both as a consultant and a client representative in various project development phases such as Pre-FEED, FEED, detailed and execution phases.

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**Abstract:**

The presentation covers a brief overview of the Siakap North Petai Development, and discusses preliminary flow assurance findings. It also covers flow assurance, field architecture, technologies considerations for the project Pre-FEED / FEED phase.



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**MR. MADS HJELMELAND**

General Manager, Asia Pacific

**COMPANY** Framo Engineering Asia Pacific Sdn Bhd

Suite 18-5, 18<sup>th</sup> Floor, Wisma UOA II, Jalan Pinang, 50450 Kuala Lumpur

**E-MAIL:** [mh@framoeng.no](mailto:mh@framoeng.no)

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**Short Bio Data:**

Mads Hjelmeland holds a MSc in Marine Technology & Fluid Dynamics with the Norwegian University of Science and Technology, and currently holds the position as General Manager with Framo Engineering Asia Pacific. Mads has been with Framo Engineering for the last seven years, and initially started out working in the technical department where he worked with design of multiphase pump- and wet gas compression systems. Prior to his posting in Malaysia in 2008 he was working as Multiphase Domain Product Champion out of the Schlumberger Regional Technology Centre in Abu Dhabi, U.A.E., and he was also the Area Sales Manager in Asia Pacific in the period from 2008 to 2010.

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**Company profile:**

Framo Engineering (FE) is owned by Frank Mohn, a Norwegian pump manufacturer, and by Schlumberger, a well-known International Oil Services company. FE is one of the world's leading companies within the multiphase flow and swivel technology area. Product and services include development and manufacturing of: multiphase booster pump systems for subsea and topside applications, multiphase and wet gas flow meters for subsea and topside applications, swivel systems for floating production vessels, subsea separation and water injection systems. These systems secure cost-effective means to the challenges in marginal satellite fields, long-distance tie-backs and deepwater developments, and represent key enabling technologies for Increased Oil Recovery Systems. We also provide systems for transfer and offloading of oil and LNG. Our focus is to work closely with the operators to assist in their needs. Our market position is therefore a result of this support, commitment and clear strategy. FE has offices in Bergen, Houston, Aberdeen, Rio and now Kuala Lumpur and will expand further due to the expected growth of field developments in deeper waters and more remote locations.



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**MR. BJØRN BJØRNSTAD**

Sales & Marketing Manager

Nexans Norway AS

Innspurten 9, 0605 Oslo, Norway

E-MAIL: [bjorn.bjornstad@nexans.com](mailto:bjorn.bjornstad@nexans.com)

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**Short Bio Data:**

Born: 13.12.1954

Sales & Marketing Manager in Nexans with global responsibility since 2008. Sales Manager for Gulf of Mexico from 1997 to 2008. Held various positions from research to project management in the company from 1985 to 1997.

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**Abstract:**

The presentation will focus on Subsea umbilical system, and the critical components. Key challenges, and main consideration when designing umbilicals will be described.





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**MR. GIER INSTANES**

Vice President

ClampOn AS

Damsgaardsveien 131, NO-5160 Laksevaag, Bergen, NORWAY

E-MAIL: [geir.instanes@clampon.com](mailto:geir.instanes@clampon.com)

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**Short Bio Data:**

Geir Instanes is the vice president of ClampOn AS. He finished his education as an instrumentation engineer in 1988 and has been working with development of ultrasonic sensors in the oil and gas industry for almost 20 years.

Mr. Instanes is one of the entrepreneurs and owners of ClampOn. The company was established in 1994 and has grown to be the world's largest supplier of ultrasonic intelligent sensors.

Mr. Instanes also holds the position of R&D Manager in ClampOn and strives to continue the development of ClampOn's instruments to always be in the forefront with new and improved technologies.

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**Company profile:**

ClampOn is a privately owned Norwegian company. The company was founded in 1994. ClampOn has become the leading worldwide supplier of topside and subsea non-invasive ultrasonic intelligent sensors for sand/particle monitoring, pig detection, leak monitoring and corrosion-erosion monitoring. We work with our customers in the oil & gas industry to optimize their well productivity and to safeguard their investments.

Uncomplicated technology, modular design, easy installation and little or no calibration are watchwords for ClampOn's range of instruments.

Our approach to the market has been very well received by all our clients world-wide. Our leading-edge technology has made ClampOn capable and competitive in offering the products that customers are looking for. Our reference list is an expression of this. We regard sales to companies such as BP, ConocoPhillips, Petrobras, Chevron, ExxonMobil, Statoil, Total and Shell as proof that we offer what the market needs. Some of these have selected ClampOn as its main supplier of sand monitoring systems after extensive testing of all systems available today on the market.

Sand Management & Support is part of our service available for oil companies. ClampOn can monitor and maintain installed sand monitoring systems from the ClampOn office, giving the operators all the information they need to produce safely with regards to sand. Our personnel have long experience in the petroleum industry and we offer first-class expertise in this sector.

ClampOn has grown to be the largest supplier of passive ultrasonic systems to the petroleum sector. Concentrating on our core technology has enabled us to sell user-friendly, cost-effective products all over the world.



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**MR. VINCENT VIEUGUE**

Vice president Sales & Marketing

Roxar Flow Measurement

Gamle Forusvei 17, PO Box 112

E-MAIL: [Vincent.Vieugue@roxar.com](mailto:Vincent.Vieugue@roxar.com)

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**Short Bio Data:**

Vincent has a M.Sc in Oceanography and in Geophysics. He has worked 17 years of in the Oil&Gas industry with a broad international experience both in exploration and production. He joined Roxar in 2006 and became part of the executive team since June 2008 as Vice President of Global Sales and Marketing for the Flow measurement division.

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**Company profile:**

Roxar Flow Measurement is an instrumentation solution supplier for the oil and gas industry and has since 2009 been part of Emerson Process Management. The Roxar subsea and topside products are essential for reservoir management and flow assurance and are used by oil and gas operators world wide.



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**MR. SYED JAMIL FADAAK**

Deputy Project Director

SAPURACERGY SDN. BHD.

Level 7, Sapura@mines,

No. 7 Jalan Tasik, The Mines Resort City,

43300 Seri Kembangan, Selangor, Malaysia

E-MAIL: [jamil.fadaak@sapuraacergy.com](mailto:jamil.fadaak@sapuraacergy.com)

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**Short Bio Data:**

Involved in Oil&Gas industry for nearly 29 years. Worked for TL Offshore for 20years since 1991 and 9 years with Carigali from 1982 to 1991.

Graduated from Glasgow University in Civil Engineering.

Main work focus is in Project Management especially in Offshore Transportation and Installation. Experience covers transportation and installation of pipelines and off platforms. Now involves in deepwater projects installing of subsea facilities like FPS, flowline, risers, PLET and SLED, jumpers, piles and moorings.

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**Abstract:**

The paper will cover the overall aspect of offshore installation in deepwater environment focusing on key equipment and project management. The scope will cover from engineering, procedure development, sub contracting & procurement, fabrications, installation, transportation, pre-commissioning. In the execution works, it will highlight key equipment used in the installation works ex. Dynamic Positioning Barge, J-Lay tower, ROV vessel, ROV, underwater equipment, positioning systems and pre-commissioning

In brief it also cover a general overview of typical Deepwater Development with highlights on key features in deepwater project covering flowline and riser, piles and mooring, FPS/TLP, trunklines, jumpers, PLT, SLED and manifolds.



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**NAME:** Dr Priscilla Ujang

**POSITION:** Senior Consultant, e-Field Delivery

**COMPANY:** SPT Group

**ADDRESS:** Suite 12.4, 12<sup>th</sup> Floor, East Wing, Rohas Perkasa, 50450 Kuala Lumpur, Malaysia

**E-MAIL:** [priscilla.ujang@sptgroup.com](mailto:priscilla.ujang@sptgroup.com)

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#### Short Bio Data:

Priscilla has over 10 years experience in the field of multiphase flow modelling, mainly on slug flow initiation, evolution and tracking in gas-liquid systems. She obtained her Masters of Engineering degree from Imperial College London and subsequently her PhD in slug flow studies from the same institution. Her experience includes the development of Eulerian and Lagrangian models for slug flows and 3D modelling of gas-liquid pipeline flow systems. Upon completion of her PhD, Priscilla continued her work in slug flow modelling by developing slug tracking models and algorithms at Imperial College prior to becoming a Flow Assurance Consultant with SPT Group. Her experience encompasses the steady-state and transient modelling of complex gas condensate and deepwater oil networks and fluid characterization and regression. She has been involved in the delivery of several Pipeline Management Systems utilising the OLGA Online technology developed by SPT Group in her current role as a Senior Consultant for OLGA Online. Priscilla has implemented several key Advisors used within these Pipeline Management Systems, which includes the Dead-Oil Displacement Advisor, Slug and Surge Advisor and Water and Gas Breakthrough Advisor for wells.



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**MR. BJØRN BJØRNSTAD**

Sales Manager Offshore

Nexans

Innspurten 9, 0605 Oslo, Norway

E-MAIL: [bjorn.bjornstad@nexans.com](mailto:bjorn.bjornstad@nexans.com)

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**SHORT Bio Data:**

Born: 13.12.1954

Sales & Marketing Manager in Nexans with global responsibility since 2008. Sales Manager for Gulf of Mexico from 1997 to 2008. Held various positions from research to project management in the company from 1985 to 1997.

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**Abstract:**

The presentation will focus on the development and experience with DEH since the first development in 1987 to the last delivery in 2010. Nexans has delivered DEH systems for heating of 18 pipelines. More than 200 km of DEH cable has been supplied.



## Bredero Shaw

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### DR. SHIWEI WILLIAM GUAN

Vice President – Strategic Markets and Technology

Bredero Shaw

101 Thomson Road, #17-01/02 United Square, Singapore 307591

E-MAIL: [sguan@bredeoshaw.com](mailto:sguan@bredeoshaw.com)

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#### Short Bio Data:

Shiwei William Guan has over 25 years of experience in corrosion engineering and coatings. He is currently Vice President of Strategic Markets and Technology, Asia Pacific of Bredero Shaw, the global leader of pipe coating solutions. He received his B.Eng. and M.Eng. degrees from China, and a Ph.D. degree in Materials Science and Corrosion from Canada. Dr. Guan is Chair of NACE International TG265 task group for two layer polyolefin pipe coatings, Chair of TG353 for multi-layered polyolefin pipe coatings, and Chair of TG281 for field applied polyurethane coatings. He is also a member of Editorial Advisory Board of the UK Journal of "Anti-Corrosion Materials and Methods". Dr. Guan is a NACE International Certified Coating Inspector and a CIP instructor.

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#### Abstract:

Thermal insulation is a key tool to ensure reliable operation of subsea flowlines and risers. The talk will review the trend in the industry and the limitations of the current flow assurance insulation products. It will also introduce Thermotite<sup>®</sup> ULTRA™ a novel and new generation thermal insulation product for deep and ultra deep applications and the development of Bredero Shaw's new state-of-art Simulated Service Vessel.

# INTSOK Representative

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**MR. PER HAGEN, Regional Director**

## **INTSOK – The Norwegian Oil and Gas Partners**

Web site: <http://www.intsok.com>

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### **Bio:**

Mr. Per Hagen is INTSOKs Regional Director for Angola, Nigeria and Malaysia.

Mr. Hagen has worked for FMC Kongsberg Subsea and some 20 years for Shell before joining INTSOK. At FMC he worked on field development studies leading up technical proposals for tenders for larger international field developments. He has worked for Shell in Malaysia, Egypt, Oman the Netherlands and Norway where he was involved two major projects, the Draugen and Troll developments. He was responsible for tendering and execution of the main contract and sub-contracts for the onshore plant on the Troll project.

Mr. Hagen has a MSc in Mechanical Engineering and an MBA.

Mr. Hagen is responsible for developing relations to Shell, Total, ConocoPhillips, NNPC, Sonangol and PETRONAS on behalf of INTSOK.

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### **Company profile:**

INTSOK – The Norwegian Oil & Gas Partner represents some 160 partners companies including subsidiaries. These companies have proven their competitiveness winning international contracts in most supply chains, referred to as “World Class Clusters”.

INTSOK was established in 1997 by the Norwegian oil and gas industry and the Norwegian Government with the objective to assist in internationalization of the industry. The Founders were three ministries, Industry associations and the Norwegian oil companies.

The INTSOK secretariat works to:

- Assess market opportunities and enhance the ability of the partners to compete in the global marketplace
- Build relations to clients and government representatives abroad
- Provide information about Norway’s achievements in enhanced recovery, cost reduction strategies and Health, Safety and Environment measures.

# PETRAD Representative



Dr. Øystein Berg, Managing, Director, Petrad

**Address:**

PETRAD

Prof. Olav Hanssens vei 10,

P.O. Box 598, N-4003, Stavanger, Norway

Tel. +47 51 876139,

Mob. +47 48 050750

E-mail: [oystein.berg@petrad.no](mailto:oystein.berg@petrad.no) Web : [www.petrad.no](http://www.petrad.no)



**Dr. Øystein Berg:** Dr. Berg holds a BSc in Civil Engineering from Queens University of Belfast, Northern Ireland, as well as a Postgraduate Diploma in Industrial Administration and PhD in Business Administration from The Management Centre, Bradford, England.

In 1978 Dr. Berg was appointed by the Norwegian Petroleum Directorate as Project Manager for 1/3 of the largest Safety Research Programme ever undertaken in Norway, 'Safety on the Norwegian Continental Shelf'. Dr. Berg was responsible for a total of 51 R&D projects from 1978 until 1981. Between 1981 and 1986, Dr. Berg held various positions such as Director for the Department of Marine Technology, Director of the Strategy Department of the Safety Division and deputized as Director of Safety Division of the Norwegian Petroleum Directorate in the period 1986-89.

In 1989 Dr. Berg was called upon by the Norwegian Government to develop the Petrad Programme (International Programme for Petroleum Management and Administration). Currently Dr. Berg serves as Managing Director for Petrad. Dr. Berg has participated in a large number of national and international advisory committees in the petroleum sector and within R&D. He has since 1984 been Advisor to Government Agencies and National Oil Companies in Asia through the CCOP and ASCOPE Organizations. Prior to establishing Petrad, Dr. Berg also lectured on topics related to industrial maintenance, risk and reliability and safety in the offshore petroleum industry in USA, Asia and Europe. Dr. Berg received in 2004 the "Friendship Award" from the Chinese Government for long standing cooperation on knowledge transfer in the petroleum sector. This is the highest award given to foreigners by the Chinese Government.

Dr. Berg was in May 2006 appointed to the Academic Advisory Board of University Teknologi Petronas, Malaysia, under the Chairmanship of former Prime Minister of Malaysia, Dr. Mahathir Mohamed. Dr. Berg is also a member of the 3 man nominations committee for the Malaysian 'Merdeka Award' – Health, Science and Technology category.

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**Company profile:** Petrad became a non-for-profit Government Foundation on January 1, 1994. Being able to draw on the combined expertise of the Norwegian oil and gas industry puts Petrad in the front rank for expertise and experience transfer between present and future leaders of the petroleum sector worldwide. The Petrad Programme has become internationally known for its 8-week courses in the Norwegian "oil capital" Stavanger, and its tailor made seminars and workshops arranged in Africa, Asia, Latin America and the former Soviet Union.



**PETRONAS-PETRAD-INTSOK-CCOP**  
**Workshop on Deepwater Subsea Tie-Back**  
**24-26 January 2011, Kuching, Malaysia**

**SUMMARY EVALUATION**

Description	Excellent			Unsatisfactory	
	5	4	3	2	1
1) Were the Lecturers well prepared?	35	42	17		
2) Were the Lecturers knowledgeable?	32	46	16		
3) Workshop presentations	28	41	25		
4) Did the Speakers, Workshop help you with your needs and requirement?	37	33	24		
5) Was there a good mixture of theory and practice?	33	38	23		
6) Were the Breakout Sessions good?	-	-	-	-	-
7) Was the Workshop relevant to your job?	24	48	22		
8) Overall Workshop assessment.	31	39	24		
9) Did you enjoy the Seminar/Workshop?	22	38	34		
10) Did the Workshop meet your expectations?	35	30	29		

**11) Please clarify if you missed something.**

- Subsea completion and Intervention methods
- Costing for these technologies should be presented
- Decommissioning aspect of subsea technology should be included
- Challenges in Southeast Asia Oil & Gas upstream industry
- Case study, lesson learnt, completed projects

**12) How many people in your institution/company/organization will benefit from the workshop?  
 (please give an estimate)**

- Many, especially who are in the decision making position to overcome the many challenges in deepwater development and technologies.
- Staff in development, production, and strategy planning departments

# SUMMARY EVALUATION

## 13) What changes do you think could be made to improve the Workshop?

(contents, venue, facilities, etc.)?

- round table discussion would be good to get closer to clients and share experiences
- overhead projector screens is so small and far from audience
- it should be controlled, not much marketing purpose related to products and services

## 14) Perspectives after the Workshop. How would you put value to the knowledge learned?

- this is very informative and valuable knowledge sharing and to build the net working
- applied to client engagement
- workshop gives a better understanding on the technology available that can be utilized in deepwater
- a good mixture of practical applications and theory/academic would be more exciting to learn
- there are many good presentations and knowledge learn in this workshop
- to incorporate on technology advancement in strategic studies and future development plans
- good to know more on the implementation and application of the product
- technology can adopt into deepwater project, very beneficial to all
- it is a good mixture of subsea topic, both for beginner and expert
- this workshop topic on deepwater subsea should be applicable for future discussion
- to compilation of papers on subsea tie-back project development from feasibility stage to operational stage from various operators

## 15) Comments on the food, accommodation and the venue for the workshop?

- need good internet connection
- nice surrounding but isolated
- food and facilities at the hotel required to improve
- hotel facilities, toilet, and overall would be required good maintenance
- hotel front office need orientation and training on international standard, system and management
- Transportation from/to Airport should be provided

## 16) Suggestion of Workshop/Seminar topics to other PETRAD/INTSOK/CCOP in the future.

- New Development on Seabed Preparation for Subsea Installations
- Deepwater Field Development and Installation
- Marginal Field Development
- Integrated Operation
- IOR/EOR

# PICTURES FROM WORKSHOP ON DEEPWATER SEBSEA TIE-BACK



## PETRONAS - PETRAD - INTSOK - CCOP DEEPWATER SUBSEA TIE-BACK



Damai Puri Resort & Spa, Kuching, Sarawak, MALAYSIA  
24th - 26th January, 2011







**INTSOK - the Norwegian Oil and Gas Partners** - was established in 1997 by the Norwegian oil and gas industry and the Norwegian Government. The upstream oil and gas sector is a vital element in the Norwegian economy, providing employment for some 250.000 people directly and indirectly in Norway. INTSOK's objective is to work with companies throughout the industry to expand the business activities in the international oil and gas markets on the basis of the industry's leading edge experience, technology and expertise. The industry has developed competitive, high quality products and services in one of the most demanding oil and gas provinces in the world, the Norwegian Continental Shelf.

INTSOK is an effective vehicle for promoting the Norwegian offshore industry's capabilities to key clients in overseas markets and providing market information to its partners. The focus on global opportunities is increasing, not only amongst large Norwegian companies but also amongst small and medium-sized enterprises.

#### ***Active Government support***

INTSOK is a network-based organisation where the partners exchange experience and knowledge of market developments internationally. The organisation encourages active dialogue between oil companies, technology suppliers, service companies and governments. The Norwegian Government actively supports INTSOK's initiatives, and the activities are financed jointly by the industry and the government.

#### ***Growing number of partners***

Norwegian oil and gas firms, anticipating declining investments on the Norwegian Continental Shelf, have made substantial moves to win business in international markets. And they have succeeded in growing their international business considerably in recent years. The increased focus on international markets has resulted in more partners joining INTSOK. The organisation had 160 partner companies on December 31, 2004.

#### ***The INTSOK team works to:***

- Assess market opportunities and enhance the ability of the partners to compete in the global marketplace
- Build relations between clients and government representatives abroad
- Provide information about Norway's achievements in: enhanced recovery, cost reduction strategies and Health, Safety and Environment measures.

**INTSOK, Hoffsvæien 1 A - P.O. Box 631 Skøyen - 0214 Oslo. Phone: +47 22 06 14 80.**

**Fax: +47 22 06 14 90. E-mail: [INTSOK@INTSOK.com](mailto:INTSOK@INTSOK.com)**



**PETRAD – INTERNATIONAL PROGRAMME FOR PETROLEUM MANAGEMENT AND ADMINISTRATION**

Petrad is a Norwegian Government Foundation established in 1989 to facilitate sharing of knowledge and experience on Petroleum Management, Administration and Technology between managers and experts within Governments and National Oil Companies.

Petrad arranges tailor-made courses and seminars covering a wide range of topics on the management of petroleum resources. The activities are conducted in Norway and abroad lasting from 1 day to 10 weeks. The courses and seminars have a practical focus.

Petrad also conducts Training Needs Assessments and assistance with Institutional Development.

Petrad draw on resource persons and lecturers from the total Norwegian and International petroleum industry. They hold considerable experience from senior managerial and technical positions with Government, Operating-, Engineering- and Service Companies, Consultancies, R&D Institutions and Universities.

Petrad has arranged a total of more than 400 courses and seminars with more than 14.000 participants from 103 countries.

**PETRAD PRODUCTS & SERVICES**

<p><b>8-WEEK COURSES</b> (Stavanger, Norway – annually)</p> <ul style="list-style-type: none"> <li>- Petroleum Policy and Resource Management</li> <li>- Petroleum Development and Operations</li> </ul> <p><b>TRAINING MODULES</b> (World wide – on request)</p> <ul style="list-style-type: none"> <li>- Policy and Management of Petroleum Sector development</li> <li>- Good Governance</li> <li>- Resource management</li> <li>- Revenue management</li> <li>- Environment management</li> <li>- Legislation - Licensing</li> <li>- Contracts for the Petroleum Sector</li> <li>- Local Content - Anti-corruption</li> <li>- Petroleum Sector Understanding for the Civil Society</li> <li>- Fiscal Metering - Data Management</li> <li>- Downstream Petroleum Management</li> <li>- HSE - Health, Safety and Environment Management</li> </ul>	<p><b>TAILOR MADE SEMINARS</b> (World Wide – on request)</p> <ul style="list-style-type: none"> <li>- All topics within petroleum management, administration and technology</li> </ul> <p><b>TNA – TRAINING NEEDS ASSESSMENT</b> (World Wide – on request)</p> <p><b>INSTITUTIONAL DEVELOPMENT</b> (World Wide – on request)</p>
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For further information please contact: **PETRAD**, Professor Olav Hanssens vei 10, P.O. Box 598, NO-4003 Stavanger, Norway