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THINGS CHANGE

It is hard to believe but this is already the last newsletter of the season. The trees have yet to be adorned by foliage and the less said about the temperature the better. But here we are and we still have 2 very exciting events before we end for the season.

At the start of the season we welcomed INEOS to the fold both as an E&P Company and as an operator in the Danish North Sea. Now we can bid a fond “bienvenue” to Total as an operator in the Danish North Sea and we look forward to as strong a partnership as the SPE has had with Maersk Oil for these many years.

Of course it is also the end of an era. Maersk Oil is no more as a legal entity at least but its legacy lives on and its culture and values also live on both in Total Denmark and also in a large number of other companies now employing ex-Maersk staff.

The oil and gas industry stands at a crossroads and there is perhaps a no more fitting time for the baton to be handed to the next runners.

In my current professional capacity I am humbled to be working with some of the biggest and most forward sighted

companies within the oil and gas industry as well as a number of tech companies in Silicone Valley, helping develop and execute their innovation strategies and drive forward development. Some of the projects and research I'm involved with will change the industry for the better and in some very fundamental ways.

So change is here to stay and from where I stand I can see an industry that is definitely alive and kicking and will be for many years to come but mostly for those companies that truly embrace the change.

On the subject of change, should anyone wish to make their voice heard and make their mark on the SPE then feel free to put your name forward for election to the SPE board. The Copenhagen section only works because of the time, effort and dedication given by present and past board members.

We all look forward to welcoming you to the last few events of the season and the excitement and unpredictability of what next season might bring, for some probably a posting in France. ◀

Anders Krag
SPE Chairman
Copenhagen Section

FUTURE MEETINGS

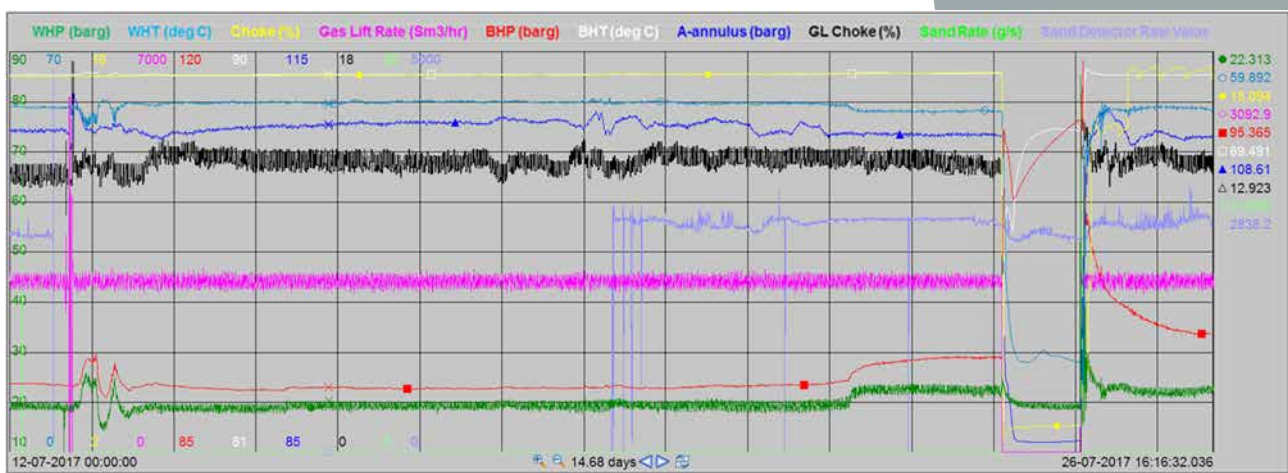
FOR MORE INFORMATION REGARDING THE PROGRAMME SEE PAGE 8

BIOGRAPHY



Lee Pei Yen
Production Engineer at INEOS

Lee has a background in Chemical Engineering and has been in the O&G industry for 12 years. She started her career working offshore on a production platform in Malaysia, and has since taken up various roles in production optimisation and surveillance. She currently resides in Denmark with her family. Lee is an expert in analysing and finding correlations between data for production and reservoir optimisation / surveillance. ◀



ABSTRACT

HISTORY CASE:

Integrated Approach to Sand and Completion Evaluation for a Mature Field North Sea

An integrated approach to manage sand production and evaluating the actual downhole well condition including the sand screen is very critical especially in North Sea mature field. It is divided into 2 major areas; which are surface sand management and downhole evaluation. The LEAN workflow incorporates a multidisciplinary approach, lesson-learned, best practices and application of multiple latest logging technologies. Integrated risk assessment was performed to ensure no compromise in the service quality, health, safety and environment. An actual history case of a mature sand producer is discussed in detail to demonstrate the integrated evaluation workflow.

The well sand management incorporates the geo-mechanical model analysis and the field experience to define the optimized well operating envelope for well start up, production optimization and shut in. The well real-time surveillance and monitoring is in place for early solid production detection. Standard evaluation packages are defined for all solid samples.

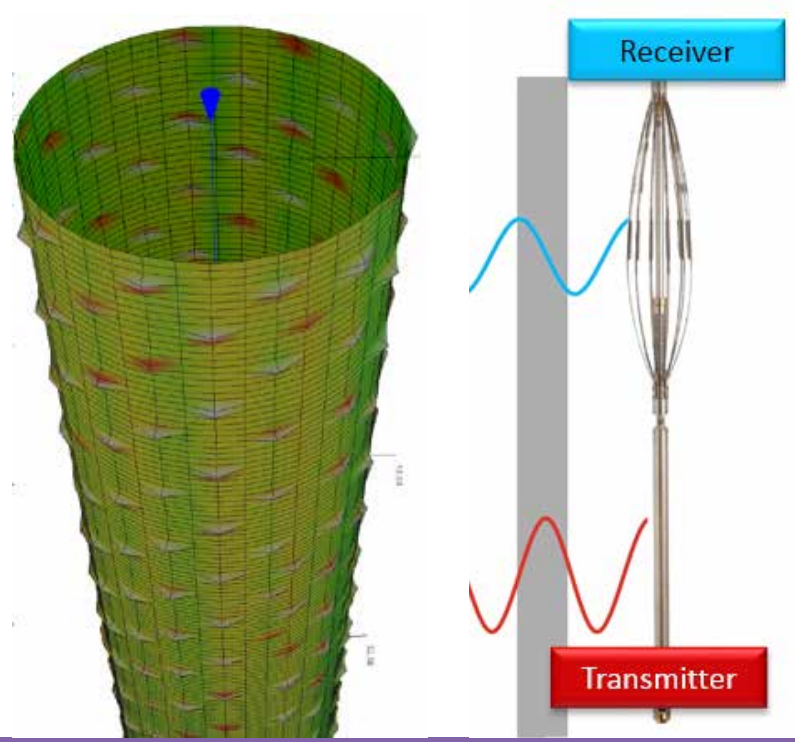
A downhole assessment of well integrity was undertaken to directly identify sand entry points and assess the condition of the stand-alone premium sand control screen. A combination of multi-sensor electromagnetic and multi-finger caliper technologies were selected in order to evaluate the integrity of the complete sand screen system, from base pipe to outer shroud and with full 360-degree circumferential coverage. The multi-finger caliper provides highly accurate measurements of the internal profile of the wellbore, while the electromagnetic measurement responds to variations in downhole component thickness utilizing an array of remote field eddy current sensors. The combination of these sensors, circumferentially positioned around the wellbore, allow identification of mechanical defects, orientation and, by cross-referencing the response of each sensor technology, provide supporting information to assist with the diagnosis of the mode of failure.

A multiple array production log was subsequently deployed across the screens with the objective of correlating the three-phase inflow profile with any anomalies observed in the combined multi-finger caliper and electromagnetic survey. Additionally, dual tubular (tubing and production casing) integrity evaluation was performed on the upper completion with the application of pulsed eddy current technology. This measurement provides quantitative thickness evaluation through multiple concentric tubulars, utilizing the principle of electromagnetic transient decay.

Management of Sand Producer

Included in this intervention are preventative wax removal and solid removal with wireline bailing tool and tractor. The operation encountered multiple operational challenges. The problems identifications, lesson learnt and solutions will be discuss respectively.

The multidisciplinary integrated evaluations of all the results enable identification of the most economical and technical viable solution for each sand producer wells and optimized for value creation. The short, medium and long-term solutions are define accordingly. ◀



SPE STUDENT SECTION SCHOLARSHIP

The SPE Copenhagen Student Section Scholarship can be applied for once a year by students working with petroleum engineering or closely related topics.

The total amount that can be applied for is 15,000 DKK. The scholarship can be applied for by filling in the application form, which can be downloaded from the website www.spe-cph.dk from April 5 2018.

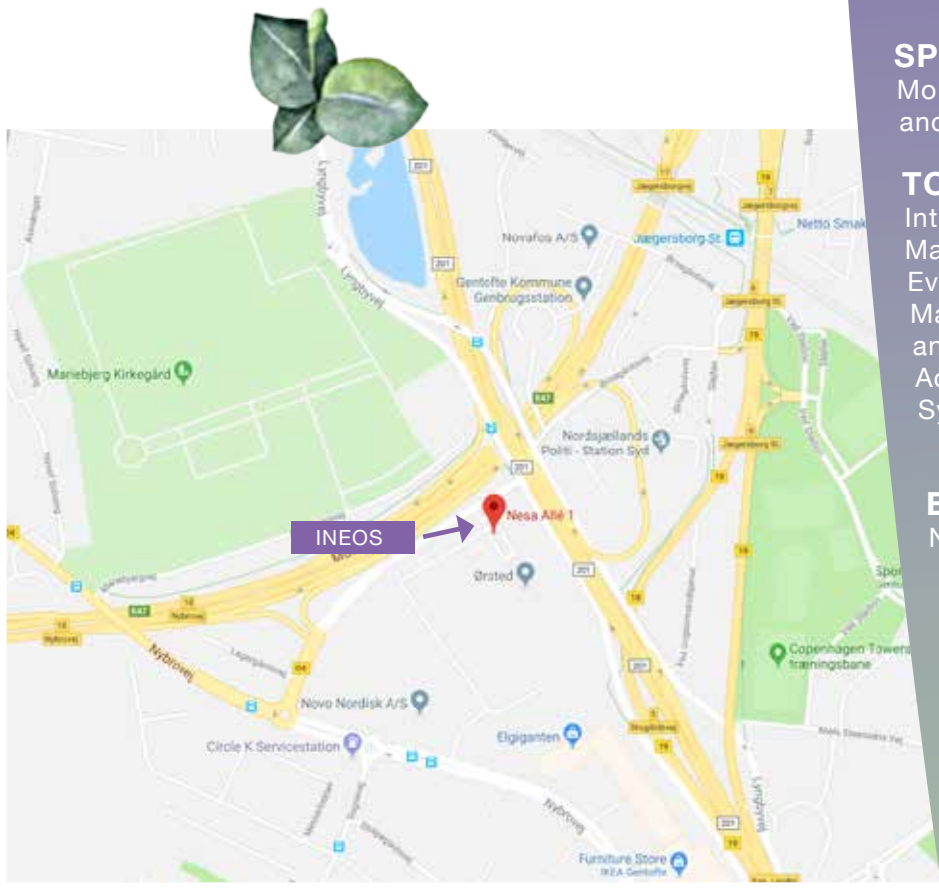
The application form should be returned to the Secretary of the SPE Copenhagen Section: Claus Marnar Myllerup at cmyl@dtu.dk before 17:00 Thursday 15th May 2018. The e-mail should be marked SPE Student Scholarship.

BIOGRAPHY



Mohd Zahirin Ruslan
INEOS

Mohd Zahirin Ruslan (Zach) joined INEOS Oil & Gas (formerly known as DONG Energy) in 2014 after almost 11 years working in multidiscipline area with Schlumberger (IPM/SPM) across the globe. Zach has been actively supporting SPE and been serving as SPE Distinguished Lecturer Committee since 2011. He has authored and co-authored multiple journal and technical papers for internal and externals. ◀



PROGRAMME

17:00 - 18:00
DRINKS

18:00 - 19:00
PRESENTATION AND SPE NEWS

19:00 - 20:30
TAPAS

LOCATION

INEOS
Nesa Alle 1
2820 Gentofte

SPEAKERS

Mohd Zahirin Bin Ruslan, INEOS
and Lee Pei Yen, INEOS

TOPICS

Integrated Approach to Sand Management and Completion Evaluation for Sand Producer in Mature Field North Sea and The 7 Sins of Managing Acoustic Sand Monitoring Systems

ENTRANCE FEE

None

REGISTRATION

Please indicate your attendance by Wednesday 11 April by signing up on the internet www.spe-cph.dk Registration required - will be checked upon arrival.

SPONSOR



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SECTION
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APRIL

SPE MEETING SCHEDULE
 2017-2018

October 9	MAIN SPEAKER	AFTER DINNER
TOPIC	Developing a Proactive Late Life Asset Mindset & Decision-Based Roadmap	Partnering for performance <i>Lee Hodder,</i> <i>VP Demark Shell</i>
SPEAKER	Odin Estensen, Shell	
LOCATION	Charlottehaven	
SPONSOR	Shell	
November 21	MAIN SPEAKER	AFTER DINNER
TOPIC	Fluid flow simulation in fractured reservoirs Influence of Porous Media on fluid PVT	Industry-academia research collaboration – how can we make this work for the benefit <i>vas von Solms,</i> <i>DHRTC-CERE</i>
SPEAKER	Hamid Nick, DHRTC, Wei Yan, CERE	
LOCATION	DTU	
SPONSOR	DTU	
December 5	MAIN SPEAKER	AFTER DINNER
TOPIC	Essential Pre-Requisites for Maximizing Success from Big Data	
SPEAKER	Muhammad Khakwani (SPE DL)	
LOCATION	GEUS	
SPONSOR	GEUS	
January 24	MAIN SPEAKER	AFTER DINNER
TOPIC	Surviving Lower for Longer Prices with Lean Thinking	Applying Lean <i>Agustin Riccio-Rodriguez,</i> <i>Hess</i>
SPEAKER	Gregg Stocker, Hess LEAN Advisor	
LOCATION	Moltke's Palæ	
SPONSOR	HESS	
February 28	MAIN SPEAKER	AFTER DINNER
TOPIC	Tyra Future	
SPEAKER	Niels Jensen & Morten Hesselager Pedersen, Maersk Oil	
LOCATION	Maersk (Amerika Plads)	
SPONSOR	Maersk	
March 22	MAIN SPEAKER	AFTER DINNER
TOPIC	Integrated Historical Data Workflow: Maximizing the Value of a Mature Asset	
SPEAKER	Anne Valentine (SPE DL)	
LOCATION	Welltec	
SPONSOR	Welltec	
April 17	MAIN SPEAKER	AFTER DINNER
TOPIC	Integrated Approach to Sand Management and Completion Evaluation for Sand Producer in Mature Field North Sea and The 7 Sins of Managing Acoustic Sand Monitoring Systems	
SPEAKER	Mohd Zahirin Bin Ruslan, INEOS and Lee Pei Yen, INEOS	
LOCATION	INEOS	
SPONSOR	INEOS	
May 30	MAIN SPEAKER	AFTER DINNER
TOPIC	Captain Field EOR Pilot	AGM
SPEAKER	Anette Poulsen, Chevron	
LOCATION	Charlottehaven	
SPONSOR	Chevron	
June	MAIN SPEAKER	AFTER DINNER
TOPIC	SPE Summer party	
SPEAKER		
LOCATION		
SPONSOR	Schlumberger	

 NOTE!
 NEW DATE

FULL INTEGRATION
COMPLETION AND INTERVENTION
SOLUTIONS FOR MAXIMIZING
VALUE TO OUR CLIENTS

Welltec

**BY 2050 THERE WILL BE AROUND
NINE BILLION PEOPLE ON THE PLANET
COMPARED TO SEVEN BILLION TODAY**

 As the global population grows and living standards improve, total energy demand will rise substantially in the coming decades. At Shell, we use human ingenuity, innovation and technology to unlock energy, use it more efficiently, and limit our impact on the environment.

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DENMARK FACTS

\$1 Billion <small>INVESTED TO EXTEND PRODUCTIVE LIFE OF THE SOUTH ARNE FIELD</small>	14,000 <small>(BOE/D) NET PRODUCTION</small>	5th <small>LARGEST PRODUCER IN DENMARK</small>	7% <small>OF DENMARK'S PRODUCTION</small>
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Hess is a leading global independent energy company engaged in the exploration and production of crude oil and natural gas. We are one of the largest oil producers in Denmark and adhere to rigorous operational standards. Our employees work closely with our communities and partners to find new approaches and apply innovative technologies that can help us operate safely, improve efficiencies, protect the environment and make a positive impact on the lives of those we touch.


Hess.com

Annual General Meeting

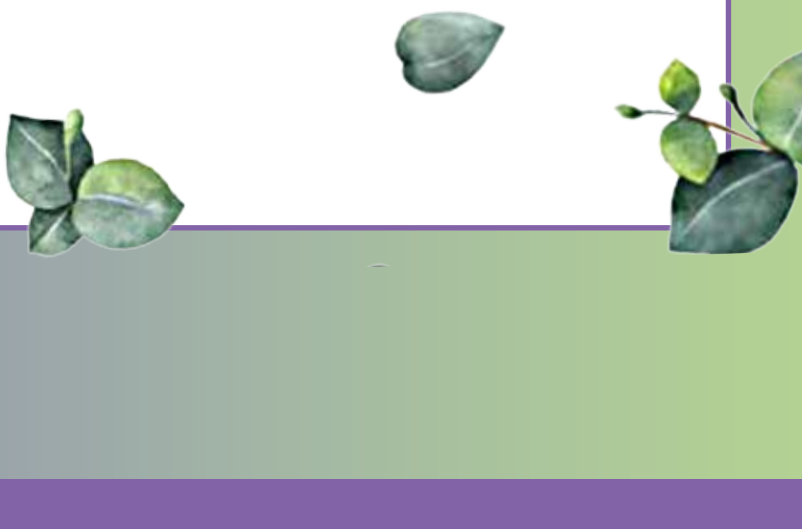
2017-2018 SEASON

Prior to the Chevron SPE presentation 30 May 2018 we will hold the AGM

We are always looking for new energy, ideas and input and if you think we could do anything better then we would welcome your presence on the board. If you would like to join the board of the SPE Copenhagen Section then please contact Anders Krag before the AGM.

Agenda:

1. 2017-2018 Season Look Back
2. Financial Statement Approval
3. 2018-2019 Copenhagen Board Proposal
4. 2018-2019 Copenhagen Board Approval
5. AOB



NOTE!
NEW DATE

COPENHAGEN MEETING

WEDNESDAY 30 MAY 2018

EOR Pilot

MAY



rates more uniform along the wellbore. We also drilled a post-polymer observation well in the swept zone between the pilot wells. Logs from this well established remaining oil saturations to polymer that we used to confirm our calculations for polymer flood volumetric sweep. The post-polymer flood oil saturations confirmed the performance of the polymer flood.

We show a full suite of surveillance data and its use in quantitative interpretation. We also show innovative uses of the surveillance data in our interpretation methods. The results prove the subsurface and operational success of polymer flooding a heavy oil reservoir with horizontal wells, even in a harsh offshore environment such as the UK North Sea.

PROGRAMME

17:00 - 18:00
DRINKS

18:00 - 19:00
ANNUAL GENERAL MEETING
AND PRESENTATION

19:00 - 21:00
DINNER

LOCATION

Charlottehaven
Hjørringgade 12C
2100 Copenhagen

SPEAKER

Anette Poulsen
Chevron

TOPIC

Captain Field EOR Pilot

ENTRANCE FEE

None

REGISTRATION

Please indicate your attendance by Thursday 24 May by signing up on the internet www.spe-cph.dk Registration required - will be checked upon arrival.

SPONSOR



SPE COPENHAGEN SECTION

www.spe-cph.dk
www.spe.org

INEOS IS A TOP 10 COMPANY IN THE NORTH SEA

INEOS Oil & Gas is a fast-growing entrant into the North Sea with around 100,000 boe of production and close to 560 mboe of reserves. It comprises six different businesses operating in the UK Southern North Sea and West of Shetland, Norway, and Denmark, with the capability and interest to take on further projects and growth.

“ The North Sea continues to present new opportunities for INEOS. We have a strong track record of acquiring non-core assets and improving their efficiency and reliability, securing long-term employment and investment. ”

Jim Ratcliffe, Chairman, INEOS

INEOS
THE WORD FOR CHEMICALS

Visit our website at www.ineos.com



Save the Date!

Dear SPE Member,

You and your partner are invited to the 2018 SPE Summer party on the 8th of June at Peter Lieps Hus in Dyrehaven at 6 PM.

Please register at: <https://spe-cph.nemtilmeld.dk/10/>
and transfer 350 DKK per person to the SPE account at Nordea: 2274 – 5360 613 323

Please mark payment SPE – “your name”

For further information please contact: Mhansen4@slb.com