



SOCIETY OF PETROLEUM ENGINEERS

# SPE NEWS

COPENHAGEN SECTION

## A significant year of change: 2020, 2050...

Dear SPE members, hope all of you are doing well as the ongoing COVID pandemic continues to impact our daily lives, worldwide and in Denmark.

We started the 2020-2021 season in good fashion with 3 virtual events. The first one was hosted by the DTU & DHRTC, where Professor Erling Stenby and Associate professor Philip Loldrup Fosbøl from DTU Chemical Engineering department presented the latest on their cutting-edge research on cover carbon capture storage (CCS). On the second part of the event, Claus Myllerup CTO from Kairos Technology AS, shared how digitalization and artificial intelligence is being brought into oil and gas operations via the 'Control Room Assistant'. The second SPE Cph event was hosted by the SPE Cph section and continued the digitalization front. SPE Distinguished Lecturer Professor Roland N. Horne from Stanford University, showed us that self-driving cars and reservoir analysis have more in common than one can think of when applying artificial intelligence. He shared the huge potential in reservoir analysis when big data and machine learning are combined, and that is just one area in the industry where this technology can be applied.

The last event of the year will be on the topic of energy transition: Jeanne Mia Lønstrup from Maersk Drilling and Johan Byskov Svendsen from INEOS Oil & Gas, will discuss the relevant topic of CCS, where they will provide an overview of the 'Project Greensand' where depleted oil reservoirs can potentially be re-utilized for long-term safe CO<sub>2</sub> storage.

After the Christmas, we will have another set of interesting events: starting in January Rasmus B. Boesen from Calsep will share basic asphaltene behavior and highlight some of the aspects that make dealing with asphaltenes one of the biggest challenges in reservoir fluid modeling. In February our second SPE Distinguished Lecturer Henk Krijnen will present scenario planning for decision making in the energy industry.

The broad oil and gas industry are facing unprecedented change. Exposure to prolonged low oil prices and the significant oil

demand in 2020, combined with the energy transition is transforming the oil and gas industry. At local level, Denmark's climate and energy minister has recently announced that will end new oil and gas exploration in the North Sea and will close the country's oil industry by 2050 to contribute to the goal of cutting emissions by 70% in 2030. This is a historical decision for Denmark which is the biggest oil producer in the EU and it will be very interesting to see how the oil and gas industry adjust to those announcements. One thing that the deal does is to provide a clear framework and certainty for the industry and opens the door to re-use the existing infrastructure and skills for CCS as part of the energy transition.

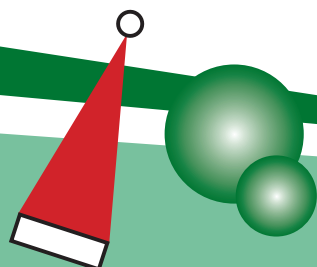
At macro-energy level, there are signs demand is slowly recovering and that supply is falling due to the OPEC+ strategy to keep production at reduced levels and lack of growth investments. This is causing a tighter balance and a potential precursor of an oil price spike sometime in 2021. Another evidence of the ongoing recovery has been the ca. \$10/bbl that the oil price has recovered during the last quarter even with several worldwide lockdowns caused by the COVID pandemic.

We continue to encourage all SPE members to actively participate in the virtual events. We are testing different meeting times to maximize the audience and the purpose of the meetings which is knowledge sharing. As a friendly reminder, please remember to renew your SPE membership to continue to enjoy the broad benefits that SPE brings.

While writing this newsletter new measures related to the COVID19 pandemic are being adopted in Denmark beyond the Christmas holidays. From the SPE Cph board we wish all SPE members a good holiday season.

Looking forward to interacting with all of you either virtually or face to face at some point in time during the 2020-2021 season.

Sincerely Yours,  
Jaime Casaus-Bribian  
SPE Copenhagen  
Section Chairman



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<https://www.linkedin.com/company/spe-copenhagen-section>

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# CALSEP SPONSOR STORY

**Calsep is a nearly 40-year-old niche company headquartered in Kgs. Lyngby. Calsep specializes in fluid modeling and is the company behind the software product, PVTsim, which is internationally recognized as a golden standard for PVT modeling in the oil industry.**

The first version of PVTsim was developed in the nineteen eighties in close collaboration with Statoil (now Equinor) and released in 1988 as a PVT simulator for use in PVT laboratories. Following the first release of PVTsim, Calsep was approached by reservoir and flow assurance engineers who asked to have PVTsim further developed to be applicable within their subject areas. It became the beginning of what is today a worldwide corporation with branches in Houston, Dubai and Kuala Lumpur. The focus has changed over the years. PVT modeling was previously considered a time-consuming specialist discipline that only a few could hope to master. Today, customers demand automated workflows that without human interaction links PVT laboratory data to the more than 30 other software products that use PVTsim's models. Calsep is constantly challenged by customers to deal with new topics. An example is shale fluids, which 10 years ago was unknown land for Calsep. Since then, Calsep has provided software to and carried out consulting and R&D projects for major shale fluid producers. Currently, Calsep has much focus on CCS and is in the process of documenting that the fluid models used for hydrocarbon mixtures, with small modifications, are also applicable to both pure and polluted CO<sub>2</sub>.



## Abstract:

### Asphaltenes – Fascination and Frustration

Asphaltenes have been described as the 'Cholesterol of Petroleum' due to their ability to deposit and create severe production problems. Asphaltenes can precipitate from crude oil as a highly viscous and sticky solid-like liquid when pressure and temperature change, when gas is injected for Enhanced Oil Recovery (EOR) purposes or when mixing the oil with other crudes.

Predicting when and if asphaltenes will precipitate is important to avoid plugging of wells, pipelines, or process equipment. Several theories have been presented about the mechanisms that make asphaltenes precipitate, and it was long a mystery why crude oils with high asphaltene contents caused less operational problems than oils with lower asphaltene contents.

Waxes and hydrates are examples of solids that can cause precipitation problems during oil and gas production. While these solids will decompose at higher temperatures, asphaltenes exhibit a more complicated picture. There are examples that asphaltenes do not precipitate at reservoir temperature but can precipitate at both higher and lower temperatures.

This talk will discuss basic asphaltene behavior and highlight some of the aspects that make dealing with asphaltenes one of the biggest challenges in reservoir fluid modeling.

## Biography:



Rasmus R. Boesen holds a Ph.D. degree in Chemical Engineering from the Technical University of Denmark. In 2011 he started working as a consultant in Calsep A/S where he is now part of the company's R&D group. His work is mainly focused on thermodynamic modeling of reservoir fluids and calculation of fluid properties.

# Virtual meeting JANUARY 26

## PROGRAMME

17:00 – 18:00

PRESENTATION AND SPE NEWS

## TOPIC

Asphaltenes – Fascination and Frustration

## SPEAKER

Rasmus R. Boesen,  
Calsep A/S

## REGISTRATION

Registration will be through SPE-I;  
sign-up e-mails with details will

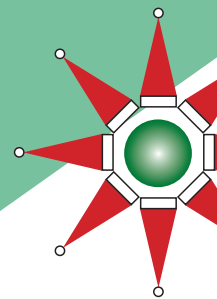
be distributed to Copenhagen & Esbjerg section members in advance of the meeting.

## SPONSOR



<b>October 29</b>	<b>MAIN SPEAKER</b>	<b>AFTER DINNER</b>
<b>TOPIC</b>	<b>Carbon Capture and Storage Research at DTU CERE and Control Room Assistant</b>	
<b>SPEAKER</b>	E.H. Stenby (DTU), P.L. Fosbøl (DTU) and C.M. Myllerup (Kairos)	
<b>LOCATION</b>	VIRTUAL MEETING	
<b>SPONSOR</b>	DTU	
<b>November 11</b>	<b>MAIN SPEAKER</b>	<b>AFTER DINNER</b>
<b>TOPIC</b>	<b>Big Data and Machine Learning in Reservoir Analysis</b>	
<b>SPEAKER</b>	Roland N. Horne, DL Stanford U.	
<b>LOCATION</b>	VIRTUAL MEETING	
<b>SPONSOR</b>	SPE	
<b>December 15</b>	<b>MAIN SPEAKER</b>	<b>AFTER DINNER</b>
<b>TOPIC</b>	<b>Project Greensand</b>	
<b>SPEAKER</b>	Jeanne Mia Lønstrup, Maersk Drilling and Johan Byskov Svendsen, INEOS Oil & Gas, Denmark	
<b>LOCATION</b>	VIRTUAL MEETING	
<b>SPONSOR</b>	SPE	
<b>January 26</b>	<b>MAIN SPEAKER</b>	<b>AFTER DINNER</b>
<b>TOPIC</b>	<b>Asphaltenes – Fascination and Frustration</b>	
<b>SPEAKER</b>	Rasmus R. Boesen, Calsep A/S	
<b>LOCATION</b>	VIRTUAL MEETING	
<b>SPONSOR</b>	SPE	
<b>February 11</b>	<b>MAIN SPEAKER</b>	<b>AFTER DINNER</b>
<b>TOPIC</b>	<b>Using Scenario Planning for Decision making in the Energy Industry</b>	
<b>SPEAKER</b>	Henk Krijnen, SPE DL	
<b>LOCATION</b>	VIRTUAL MEETING	
<b>SPONSOR</b>		
<b>March</b>	<b>MAIN SPEAKER</b>	<b>AFTER DINNER</b>
<b>TOPIC</b>		
<b>SPEAKER</b>		
<b>LOCATION</b>		
<b>SPONSOR</b>		
<b>April 14</b>	<b>MAIN SPEAKER</b>	<b>AFTER DINNER</b>
<b>TOPIC</b>	<b>From Piper to Macondo and 737 Max: The Danger of a Pure Compliance Culture</b>	
<b>SPEAKER</b>	Thomas Hinterseer, SPE DL	
<b>LOCATION</b>	VIRTUAL MEETING	
<b>SPONSOR</b>		
<b>May</b>	<b>MAIN SPEAKER</b>	<b>AFTER DINNER</b>
<b>TOPIC</b>		<b>Agm</b>
<b>SPEAKER</b>		
<b>LOCATION</b>		
<b>SPONSOR</b>		
<b>June</b>	<b>MAIN SPEAKER</b>	<b>AFTER DINNER</b>
<b>TOPIC</b>	<b>Summer Party</b>	
<b>SPEAKER</b>		
<b>LOCATION</b>		
<b>SPONSOR</b>		

# Using Scenario Planning for Decision Making in the Energy Industry



## Abstract:

Scenario planning is a methodology that is employed by majors such as Royal Dutch Shell and Equinor, but also for example by the International Energy Agency (IEA). The primary purpose of scenario planning is to develop a better understanding of the business environment to aid corporate strategic visioning. A secondary purpose can be to engage in the public domain on energy policy topics. The methodology provides a useful framework for getting to grips with the key uncertainties and risks in the broader business environment. For globally operating energy companies these include geopolitics, macroeconomic developments, regulation, climate change and technology. Many of such trends cannot be predicted. However, it is possible to distinguish possible future alternate outcomes and consider how these might hang together. In this way two to four images of alternative futures can be composed and presented through narratives, selectively underpinned by quantification. In the presentation we will look at some examples of scenarios as these have been developed by Shell, Equinor and IEA.

It is also useful to distinguish between exploratory scenarios, for gaining deep understanding, and focused scenarios. This latter category is aimed at specific investment decision making. Scenario planning can be linked to enterprise risk management and decision analysis methodologies. In this way, operationally embedding the scenario planning practice in a company becomes meaningful and visible.



## Biography:

Henk Krijnen graduated with a MSc in geodetic engineering from Delft University, the Netherlands. He joined Shell in 1980 and spent the first half of his 35 year career with the company in technical roles in Indonesia, Thailand, the United States and the Netherlands. The second half of his time with Shell he held several senior roles in Economics. The last five years he spent in the Corporate Strategy and Planning department, the home of the Shell scenario practice. After he retired from Shell in 2015 he established his own consultancy NavIncerta.

## Virtual meeting FEBRUARY 11

**Don't miss this SPE Distinguished Lecturer!**

[Register HERE](#)

### PROGRAMME

18:00 – 19:00  
PRESENTATION AND SPE NEWS

### SPEAKER

Henk Krijnen,  
SPE DL

be distributed to Copenhagen & Esbjerg section members in advance of the meeting.

### TOPIC

Using Scenario Planning for Decision making in the Energy Industry

### REGISTRATION

Registration will be through SPE-I; sign-up e-mails with details will

### SPONSOR



**An Extra 45 Minutes Can Provide a World of Knowledge**

# Christine Morris appointed as the new CFO of Maersk Drilling



Today, The Drilling Company of 1972 A/S (“Maersk Drilling”) announces that the Board of Directors has appointed Christine Morris as the new Chief Financial Officer (“CFO”) and member of the Executive Management with effect from 5 January 2021. The appointment follows the decision by Jesper Ridder Olsen, announced on 31 July 2020 (link), to pursue another opportunity outside Maersk Drilling.

Christine Morris has solid experience from the oil and gas industry and 25 years of broad finance experience, including CFO and Treasurer positions for US public and private corporations. Christine Morris has a successful track record of leading global finance organisations as well as in-depth experience with capital markets, corporate finance and M&A.

## **Claus V. Hemmingsen, Chairman of the Board of Directors of Maersk Drilling says:**

“I am very pleased that Christine Morris will be joining Maersk Drilling. Christine brings strong qualifications and a wealth of experience from publicly listed companies in global industries, including extensive experience from the oil and gas industry. Along with significant execution and management expertise, this makes her an excellent fit for this position.”

## **Jørn Madsen, Chief Executive Officer of Maersk Drilling says:**

“I am truly delighted that Christine Morris has decided to join Maersk Drilling. With her strong industry experience and financial background, she will be well-positioned to further develop

our business transformation agenda. We’re on a very exciting journey as a company, adapting to a rapidly changing business environment, and I am confident that Christine will bring new, valuable insights and ideas to our Executive Leadership Team.”

## **Christine Morris says:**

“I am very excited to join Maersk Drilling as the potential for value creation is significant, given its strong balance sheet, customer relations and operational excellence. I look forward to partnering with Jørn and the team to continue building on the success of the organisation and further increase shareholder value.”

Jesper Ridder Olsen will remain at Maersk Drilling until the end of January 2021 to ensure a smooth handover process.

## **CV for Christine Morris**

Age: 53

Nationality: Dual Belgian and American citizenship

## **Recent previous positions:**

- 2018 – 2020: BJ Services, CFO and EVP (since 2019)
- 2017: NESR, CFO
- 2010 – 2017: Halliburton, executive finance positions

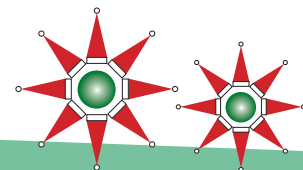
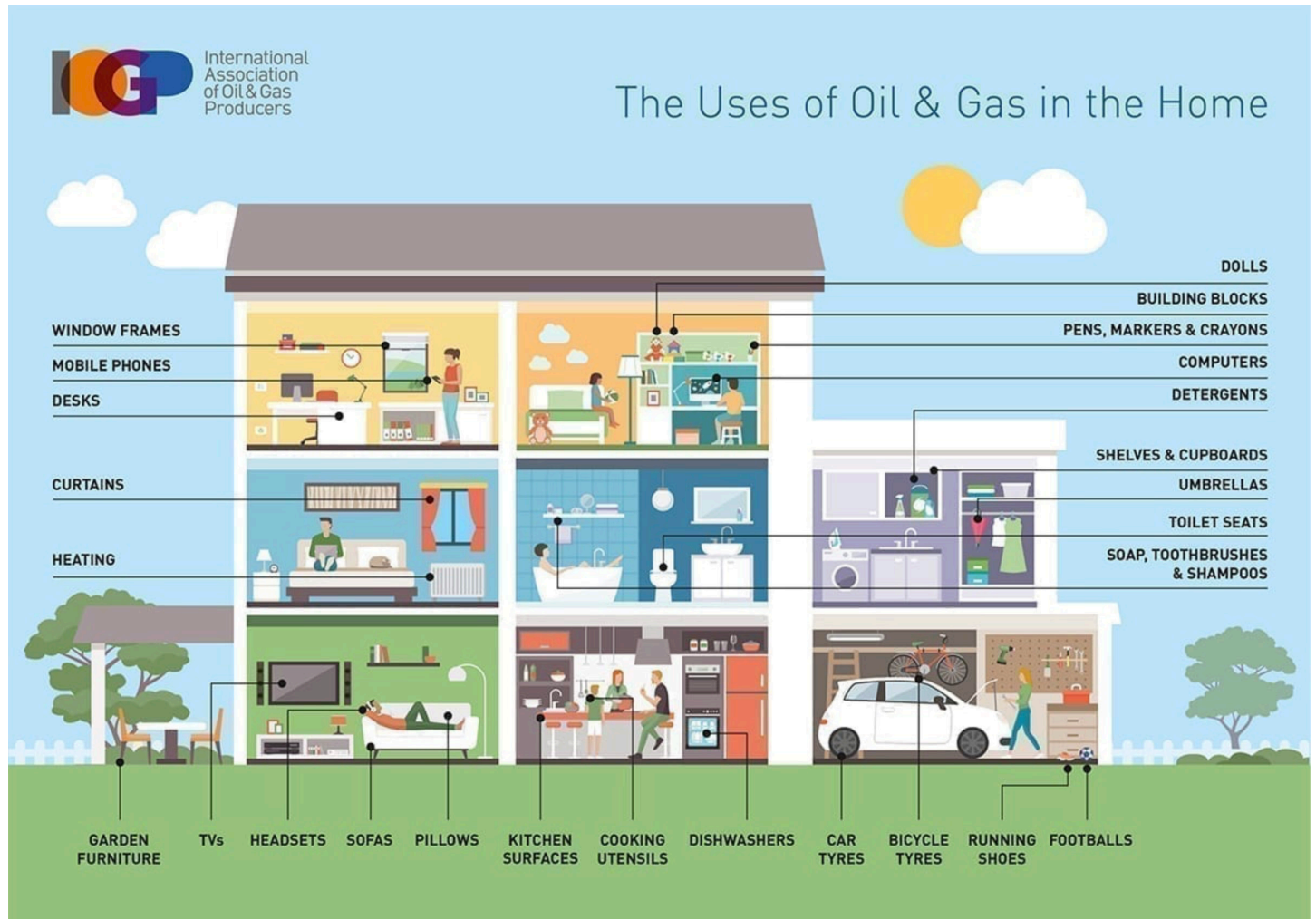
## **Education:**

- MBA, Stanford Graduate School of Business, USA, 1994
- M.Sc. Actuarial Sciences, Université Catholique de Louvain, Belgium, 1990
- B.Sc. Mathematical Sciences, Université Catholique de Louvain, Belgium, 1988

# USE OF OIL & GAS IN THE HOME

Oil and gas are mainly thought of as fuel – so if you don't travel, and you work from home, does that mean that you don't use oil or gas? Chances are that you come across a number of items

based on oil and gas in your home. IOGP's new infographic showcases some of the household items that may be made from oil and gas.



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