



SOCIETY OF PETROLEUM ENGINEERS

# SPE NEWS

COPENHAGEN SECTION

## CONTENT

| PAGE |   |
|------|---|
| 1    | <b>SPE NEWSLETTER</b><br>March 2011   |
| 2    | <b>Optimizing reservoir drainage through well interventions</b>   |
| 3    | <b>Visit by the global SPE President Alain Labastie</b>   |
| 4    | <b>Maximun reservoir exploitation - Higher return on capital</b>  |
| 5    | <b>Chemicals, Thermodynamics and the Oil industry</b>   |
| 8    | <b>Upper Jurassic reservoir sandstones in the Danish Central Graben: new insights on distribution and depositional environments</b> |
| 10   | <b>SPE summer party</b>   |
| 10   | <b>Waterflooding and Formation Damage Workshop</b>  |
| 11   | <b>The North Sea Fund and its future activities in Denmark</b>  |

## FUTURE MEETINGS

FOR MORE INFORMATION  
REGARDING THE PROGRAMME  
SEE PAGE 6

## MARCH 2011

The first meeting of 2011 included a review of DONG Energy's activities in the UK- from entering UK, current challenges and future opportunities. The meeting was hosted by DONG Energy. At the February meeting hosted by Maersk Oil, a SPE distinguished lecturer talked about annular isolation.

After the February meeting we have already passed the half-way mark of the 2010-2011 season. Looking back, I think we have covered some interesting topics by good talks given by inspiring speakers, which has also been reflected in the high number of attendees to the meetings. I would like to take this opportunity to thank our attendees for the support.

In March, Welltec host our next meeting, and Welltec also deliver the Main Speaker, Lars Mangal. The topic is Maximum Reservoir Exploitation, Higher Return on Capital. GEUS is hosting the April meeting, and as always on GEUS, we can expect a geological perspective on Oil and Gas business. This year Peter Johannesen will give us new insights on the Upper Jurassic Reservoir sandstone in the Danish Central Graben.

You may already have seen the note on our webpage, but nevertheless I am proud to announce that we have succeeded in arranging a 2-day Workshop on Waterflooding and Formation Damage. It is certainly a topic of interest for the Danish North Sea, and accordingly we hope that we will have many attendees when Professor Pavel Bedrikovetsky from the Australian School of Petroleum, gives a seminar over 2 days. The dates are 26-27 May 2011 and the venue is DTU, - please reserve the dates, and make sure to sign-up on the webpage when the formal invitation has been sent out. More details on the seminar will be in the next newsletter.

Last, I will mention that the President of SPE Alain Labastie will visit the SPE Copenhagen section this spring, and currently we are trying to make arrangements to ensure that Alain will get an insight into the Danish Oil and Gas business. There are more details later in this newsletter, but please stay informed by looking at our webpage.

**Morten G. Stage, Section Chairman** ◀



**Section Chairman: Morten Stage**

**DONG Energy**

Linde Allé 5B

Tel.: +45 9955 5076

e-mail: mogst@dongenergy.dk

**Programme Chairman: Hans Horikx**

**Maersk Oil and Gas AS**

Esplanaden 50, 1263 Copenhagen K

Tel.: + 45 3363 1735

e-mail: johannes.horikx@maerskoil.com

**Newsletter Chairman: Miriam Lykke**

**DONG Energy**

Agern Allé 24-26, 2970 Hørsholm

Tel.: +45 9955 5085

e-mail: mirly@dongenergy.dk

**Membership Chairman:**

**Carsten Møller Nielsen**

**GEUS**

Øster Voldgade 10, 1350 Copenhagen K

Tel.: +45 3814 2444

email: cmn@geus.dk

**Treasurer: Susanne Poulsen**

**Mærsk Olie og Gas AS**

Esplanaden 50, 1263 Copenhagen K

Tel.: +45 3363 3986

e-mail: susanne.poulsen@maerskoil.com

**Web Master: Erik S. Jakobsen**

**HESS Corp.**

Østergade 26B, 1100 Copenhagen K

Tel.: +45 20231374

e-mail: ejakobsen@hess.com

**Secretary: Daniël van Staaldin**

**Chevron Denmark Inc.**

Parken, Øster Allé 48, 2100 Copenhagen Ø

Tel.: +45 7021 8423

e-mail: Daniel.vanstaaldin@chevron.com

**Members:**

**Hans Plessing, Welltec**

Gydevang 25, 3450 Allerød

Tel.: +45 4814 3514

e-mail: HAP@welltec.dk

**William Ginty, BPS Aps.**

Tel.: +45 4055 5107

e-mail: Ginty@mail.tele.dk

**Klaus Hasbo, Noreco**

Klaus.hasbo@noreco.com

**Alexander Shapiro, DTU IVC-SEP**

Tel.: +45 4525 2881

e-mail: ash@kt.dtu.dk

**Felicity Boyd, Schlumberger Oilfield Services**

Tel.: +45 20785175

e-mail: fboyd1@slb.com

**Timothy R. Newman, Shell**

Nærum Hovedgade 6, 2850 Nærum

Tel.: +45 3337 2339

e-mail: tim.newman@shell.com

**Mette S. Munkholm, Baker Hughes**

Tel.: +45 3317 0468

e-mail: mette.munkholm@bakerhughes.com

# OPTIMIZING RES THROUGH WELL

By Lars Mangal, CCO, Welltec

## From smart wells to smart interventions

Wells underperform compared to what physically can be recovered. The actual recovery rate is dictated by costs, technology and operational factors. Factors which can be influenced and factors which ultimately drive different development approaches. From what is commonly referred to as “smart” wells which generally include integrated surveillance and controllability used to configure and adapt the wells over time versus well systems enabled for smart intervention where less complex well systems are maintained and periodically configured to reflect instantaneous conditions which provide optimal results. The ability to continuously adapt recovery to match the reservoir behavior is instrumental in optimizing drainage. Both approaches offer a solution – a complex, challenging and difficult to maintain one versus a simple, highly reliable and easy to maintain one.

## Smart intervention is smart

Smart well intervention adds the configurability, reliability and adaptability to wells which enables the operator to continuously optimize the performance, either by zonal management and similar mechanical operations for reconfiguring the wells or through maintenance which sustains performance. Approaches which further are enhanced by the advances in diagnostic tools and methods emerging. With smart well intervention the well operations become immensely more productive. The well completion is simplified, reducing risk, it becomes productive more quickly and operable or “smart” when needed. A simplified well completion further reduces the risk of mechanical malfunctions or other failure-prone elements such as control lines and connections, it allows for simpler considerations when the time comes for well abandonment. ◀

*Part of e-line intervention and diagnostic tool suit*



# ERVOIR DRAINAGE INTERVENTIONS

## Intervention becomes smarter and less intrusive

The proven approach of using robotic and tractor based technology on e-line for intervention provides the accuracy and controllability which offers reservoir managers the tools necessary to improve and implement the right measures. Smart intervention is synonymous with rapid mobilization and not least low risk and less disruption. More than 90% of conventional well interventions can be carried out with lightweight e-line and tractor based intervention techniques. Within the next fifteen years more than 10.000 subsea wells will have to be plugged and abandoned worldwide. Smart intervention techniques will enable this to be performed from light vessels instead of rigs with high day-rates.

Smart intervention provides the smart techniques where and when needed and thereby offers a cost-effective approach to accelerating production and increasing well performance.

## Smart techniques and tools enable smart intervention

Robotic based tractor technology is proven and has redefined the standard for well intervention. The ability to deploy tools which can provide real-time well diagnostics and respond accordingly is again redefining the concept of reservoir management and changing drainage philosophies as new frontiers and challenges emerge. Smart intervention also offers the potential to dramatically reduce the environmental impact and carbon footprint in oil and gas well operations. ◀



## Visit by the global SPE President Alain Labastie

The SPE Copenhagen section is being honoured with a visit by global SPE President Alain Labastie on Monday April 4th 2011.

There will be opportunities for SPE members to meet Mr. Labastie at various points in the programme. The preliminary programme is shown below:

- A visit to the DTU in the morning where he will meet with faculty and address the student chapter.
- Lunch with Section Officers and Industry executives.
- A session at Dong Energy with representatives of energy related companies.
- An evening session at Maersk Oil & Gas where he will meet Young Professionals and the wider SPE community in a special SPE meeting.

The presentation to students and young professionals is titled **'YOU and SPE'** and will focus on the development of our industry's young talent, and how SPE can help university students and young professionals to enhance their technical and interpersonal skills. The talk also provides suggestions on ways young members can gain experience and enhance their job prospects by actively participating in SPE.

Highlights: The balance between the global supply and demand for crude oil is becoming progressively tighter, increasingly requiring our industry to face new and unique challenges. Our industry of tomorrow will have to overcome both technical and environmental challenges in producing more energy resources, as well as manpower challenges, including transferring knowledge from an aging workforce, recruiting young talent, and developing their

skills. Meeting these challenges will require huge efforts and also technology, innovation and staff. The new generation will have exciting times, and SPE will have an important role to play to accelerate competency development of younger people, and to stimulate creativity and innovation.

### The title of Mr. Labastie's presentation in the evening session is **'Oil & Gas Industry: What's Next?'**

Facts and data about the following topics will be presented and discussed:

- Energy demand trends
- Role of energy conservation
- Climate security issues, answers of the oil & gas industry
- Role of technology for future supply
- How SPE is contributing

For each topic, there will be a clear separation between the facts and the conclusions which have been derived, in order to allow the attendees to form their own opinion.

More details of the visit, and how to sign up for the evening session, will follow on the SPE Copenhagen website. ◀

# MAXIMUM RESERVOIR EXPLOITATION - HIGHER RETURN ON CAPITAL

By Lars Mangal, CCO, Welltec

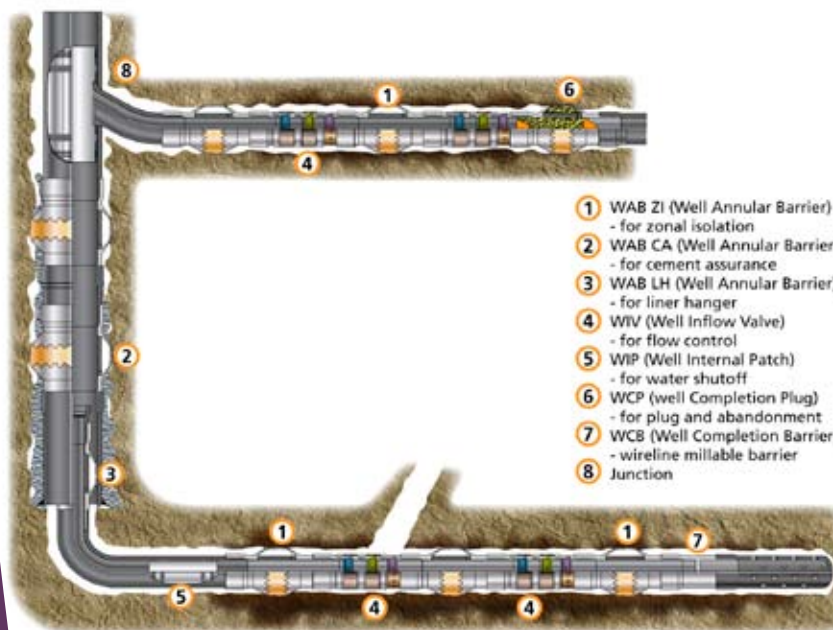
At the current level of production, reserves will be depleted half a century from now. This is commonly acknowledged by the industry. However, the cost of exploration and production hampers the development and exploitation of many fields, thereby effectively reducing the reserves. The industry relies on proven technology and best practices. There is a good reason for this, but there is maybe an even better reason to realign common perception as emerging

technology becomes proven and pushes the envelope of performance.

What does it take to turn a marginal field into being non-marginal? Recovery cost is the obvious culprit and solution. The solution is to dramatically shorten the time to get a well on stream. This can be done by introducing standardized components and re-thinking many of the processes involved, and there is plenty scope

for automating many of the processes – from drilling to completion. It is not merely a question of standardizing components but rather standardizing sub-components which then are integrated into solutions, both during the assembly and installation of the actual equipment but also while fabricating it.

By reducing the completion time a more nimble and scouting approach can be taken, where the accumulated knowledge is used to adapt the recovery strategy and thereby minimize the uncertainty. As a consequence more fields will become viable fiscally. Instrumental in this approach is the ability to carry out well intervention and thereby configure the wells to optimize the recovery and not least to ensure optimal performance. ◀



Smart intervention enabled completion

## BIOGRAPHY

Lars Mangal, Welltec



Lars Mangal joined Welltec in October 2010 as CCO after more than twenty years at Schlumberger. His comprehensive career spans from the early days as a field engineer to a number of senior management positions, latest as Vice President for Schlumberger Stimulation Services. Lars Mangal has worked worldwide extensively in all aspects of oil and gas well development and reservoir drainage projects.

Lars Mangal graduated from the University of Napier, Edinburgh with an honors degree in Mechanical Engineering, following which he attended a post graduate program in International Law and Business at Strathclyde University, Glasgow sponsored by Shell UK Ltd. ◀

# CHEMICALS, THERMODYNAMICS AND THE OIL INDUSTRY

Oil industry was among the first ones to use thermodynamic models for a wide range of applications related to e.g. production and transport of oil and gas. While the preferred models for many years were the simple -and still very popular- cubic equations of state, the increased use of chemicals e.g. for gas hydrate inhibition has meant a change of practices. Based on the experience and collaboration of the author for more than 15 years with the oil industry, the changing practices in the use of thermodynamics in the oil industry will be discussed. Case studies and examples from collaboration projects will also be presented. ◀



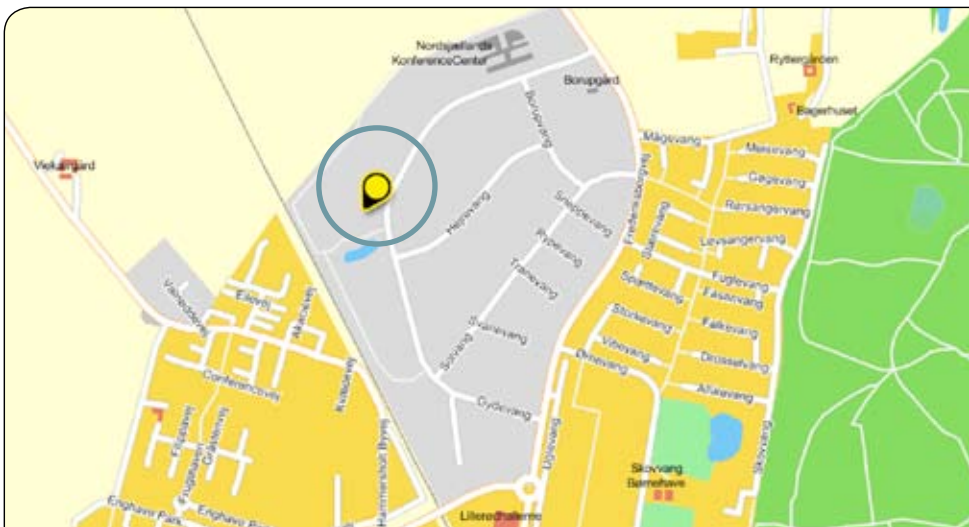
Photo by Christian Ove Carlsen, CERE, DTU

## BIOGRAPHY

Professor Georgios Kontogeorgis, DTU



Professor Georgios Kontogeorgis has a Ph.D. from DTU, Chemical Engineering, 1995. He has been permanently employed by the DTU from 1997. His primary research interests are in the areas of energy (especially, development of the thermodynamic models for oil and gas industry), as well as materials, nanotechnology, polymers and biotechnology. Professor Kontogeorgis has been supervisor of 17 Ph.D. students and the author of over 130 research publications, including one book and several chapters in the books. He is supervising large research projects in collaboration with the industry. ◀



C O P E N H A G E N  
M A R C H  
M E E T I N G  
TUESDAY 15 MARCH 2011

### PROGRAMME

17:00 - 18:00

Drinks

18:00 - 19:00

Presentation and SPE News

19:00 - 21:00

Dinner

### LOCATION

Welltec A/S

Gydevang 25

DK-3450 Allerød

### SPEAKER

Lars Mangal

CCO, Welltec

### TOPIC

Maximum Reservoir Exploitation,  
Higher Return on Capital

### DINNER SPEAKER

Georgios Kontogeorgis

Professor, DTU

### TOPIC

Chemicals, thermodynamics and  
the oil industry

### ENTRANCE FEE

None

### REGISTRATION

Please indicate your attendance  
by Thursday 10 March  
by signing up on the internet  
[www.spe-cph.dk](http://www.spe-cph.dk)

### SPONSOR

Welltec

Welltec®



SPE  
COPENHAGEN  
SECTION

[www.spe-cph.dk](http://www.spe-cph.dk)  
[www.spe.org](http://www.spe.org)

SPE MEETING SCHEDULE

# 2010-2011

|                    |   |  |   |                             |
|--------------------|---|--|---|-----------------------------|
| <b>August 18</b>   |   |  | MAIN SPEAKER  | AFTER DINNER                |
| TOPIC              | <b>EOR Seminar</b>  |  |   |                             |
| SPEAKER            |   |  |   |                             |
| LOCATION           | DTU   |  |   |                             |
| SPONSOR            | SPE   |  |   |                             |
| <b>October 25</b>  |   |  | MAIN SPEAKER  | AFTER DINNER                |
| TOPIC              | <b>Reliability of Expert Judgments and Uncertainty Assessments</b>  |  | The step from IOR to EOR                                |                             |
| SPEAKER            | Steve Begg, SPE DL  |  | Jørgen Hallundbæk                                       |                             |
| LOCATION           | Moltkes Palæ  |  |   |                             |
| SPONSOR            | Chevron   |  |   |                             |
| <b>November 16</b> |   |  | MAIN SPEAKER  | DINNER SPEAKER              |
| TOPIC              | <b>Maturing E&amp;P portfolio - Preparing for new challenges</b>  |  | Geothermal  |                             |
| SPEAKER            | Mike Kramer, Shell  |  | Tim Erdmann   |                             |
| LOCATION           | Moltkes Palæ  |  |   |                             |
| SPONSOR            | Shell   |  |   |                             |
| <b>January 18</b>  |   |  | MAIN SPEAKER  | AFTER DINNER                |
| TOPIC              | <b>DONG E&amp;P's West of Shetland activities</b>   |  | A possible "Green"                                      |                             |
| SPEAKER            | Mike Smith DONG E&P, UK   |  | Hydrate Inhibitor                                       |                             |
| LOCATION           | DONG Energy   |  |   |                             |
| SPONSOR            | DONG Energy   |  | Lars Jensen, DTU.                                       |                             |
| <b>February 16</b> |   |  | MAIN SPEAKER  | DINNER SPEAKER / DISCUSSION |
| TOPIC              | <b>Annular Isolation</b>  |  | Fracturing and faulting in carbonates                   |                             |
| SPEAKER            | Robert L. Dillenbeck III, SPE DL  |  |   |                             |
| LOCATION           | Maersk  |  | John Karlo, Maersk                                      |                             |
| SPONSOR            | Maersk  |  |   |                             |
| <b>March 15</b>    |   |  | MAIN SPEAKER  | DINNER SPEAKER              |
| TOPIC              | <b>Maximum Reservoir Exploitation, Higher Return on Capital</b>   |  | Chemicals, thermodynamics and the oil industry          |                             |
| SPEAKER            | Lars Mangal, Welltec  |  |   |                             |
| LOCATION           | Welltec   |  | Georgios Kontogeorgis, DTU                              |                             |
| SPONSOR            | Welltec   |  |   |                             |
| <b>April 12</b>    |   |  | MAIN SPEAKER  | DINNER SPEAKER              |
| TOPIC              | <b>Upper Jurassic reservoir sandstones in the Danish Central Graben: new insights on distribution and depositional environments</b> |  | The North Sea Fund and its future activities in Denmark |                             |
| SPEAKER            | Peter Johannessen, GEUS   |  | Peter Helmer Steen, Nordsøfonden                        |                             |
| LOCATION           | GEUS  |  |   |                             |
| SPONSOR            | GEUS  |  |   |                             |
| <b>May 17</b>      |   |  | MAIN SPEAKER  | ANNUAL MEETING              |
| TOPIC              | <b>Intelligent Wells</b>  |  | Annual General Meeting                                  |                             |
| SPEAKER            | Younes Jalali, SPE DL   |  |   |                             |
| LOCATION           | Moltkes Palæ  |  |   |                             |
| SPONSOR            | HESS  |  |   |                             |
| <b>June 17</b>     |   |  | MAIN SPEAKER  | DINNER SPEAKER              |
| TOPIC              | <b>SPE Summer party</b>   |  |   |                             |
| SPEAKER            |   |  |   |                             |
| LOCATION           | Regatta Pavillon, Bagsværd  |  |   |                             |
| SPONSOR            | Schlumberger  |  |   |                             |



**HIGH PERFORMANCE WITH A HUMAN FACE**  
 Read more about our E&P activities on [www.dongenergy.com](http://www.dongenergy.com)

**DONG energy**



**Reservoir Solutions You Can Trust**  
 No matter what your challenges – deepwater, unconventional oil and gas, HPHT, production optimization – you can trust Baker Hughes to help you maximize reservoir performance.  
 With a track record of over 100 years, a customer base that includes virtually all the world's top oil and gas companies, and facilities around the world, Baker Hughes brings a full complement of reservoir analysis, drilling and evaluation, and completion and production expertise to every project.  
 Want to know how Baker Hughes solutions can help you meet your challenges? Contact your local Baker Hughes office +45-33147333 or visit our web site [www.bakerhughes.com](http://www.bakerhughes.com)

**BAKER HUGHES**  
 Baker Hughes Denmark  
 Arnslettegade 16 C, st.  
 DK-1256 Copenhagen K  
 Denmark

©2009 Baker Hughes Incorporated. All Rights Reserved.



**Making the most of global resources**  
 Maersk Oil turns opportunities into reality by continuously improving our technical capabilities and developing new innovative solutions.

Explore more at [www.maerskoil.com](http://www.maerskoil.com)

**MAERSK OIL**



**Creating Long-lasting Relationships**  
 At Hess Corporation, we understand the importance of responsible Environment, Health and Safety management to our growth, profitability and long term success. Guided by our company value of Social Responsibility, we are committed to meeting the highest standards of corporate citizenship by protecting the health and safety of our employees, by safeguarding the environment, and by creating long-lasting, positive impact of the communities where we do business. We are committed to continuous environmental, health and safety improvement and have reaffirmed our historic commitment to corporate citizenship.

Hess Denmark ApS · Østergade 26 B · DK-1100 Copenhagen K · Phone: +45 33 30 12 33 · [www.hess.com](http://www.hess.com)

**HESS**



**Human Energy™**



**Investing in the Danish offshore since 1962**  
 Shell Olie- og Gasvinding Danmark B.V. (Holland)  
 Nærum Hovedgade 6, 2850 Nærum

## UPPER JURASSIC RESERVOIR SANDSTONES IN THE DANISH CENTRAL GRABEN: NEW INSIGHTS ON DISTRIBUTION AND

Recently available well data from the northern part of the Danish Central Graben have been analysed to further understand the basin development, biostratigraphy, depositional models, and palaeogeography of Upper Jurassic reservoir sandstones, which are the primary Jurassic exploration targets in this basin. Notably, the discovery of the Hejre accumulation in 2001, where oil has been encountered in Upper Jurassic good reservoir quality sandstones at a depth of more than 5000 m, triggered renewed interest in the Upper Jurassic High Temperature – High Pressure (HTHP) sandstone play in the area.

Overall the Danish Central Graben was transgressed from east to west during the Late Jurassic. During the Late Kimmeridgian, marginal and shallow marine sandstones assigned to the Heno Formation were deposited at the margin of the Feda Graben, and on the Gertrud and Heno Plateaus and constitute the reservoirs in the Freja and Hejre discoveries.

The sandstones are analogues to the UK Fulmar and Norwegian Ula Formations encountered in several hydrocarbon fields.

During the Early Volgian, the transgression continued westwards across the Outer Rough Basin along the margin of the Mid North Sea High, where shoreface sandstones with excellent porosities and permeabilities were deposited close to similar sandstones of the Fulmar Formation in the British Fergus, Fife and Angus fields.

During this overall westward transgression, the eastern and central parts of the Danish Central Graben continued to subside and offshore mudstones accumulated, locally intercalated with gravity-flow sandstones. In the easternmost Danish Central Graben, in the Tail End Graben, Upper Kimmeridgian gravity-flow sandstones of the Svane-1 well have proved the presence of gas at ca. 6 km depth.

Hydrocarbon-bearing Upper Jurassic sandstone reservoirs at significant depths (deeper than 5 km depths) may form the future exploration targets in the northern part of the Danish Central Graben. ◀

## BIOGRAPHY

**Peter N. Johannessen, Ph.D. 1996, University of Copenhagen.**



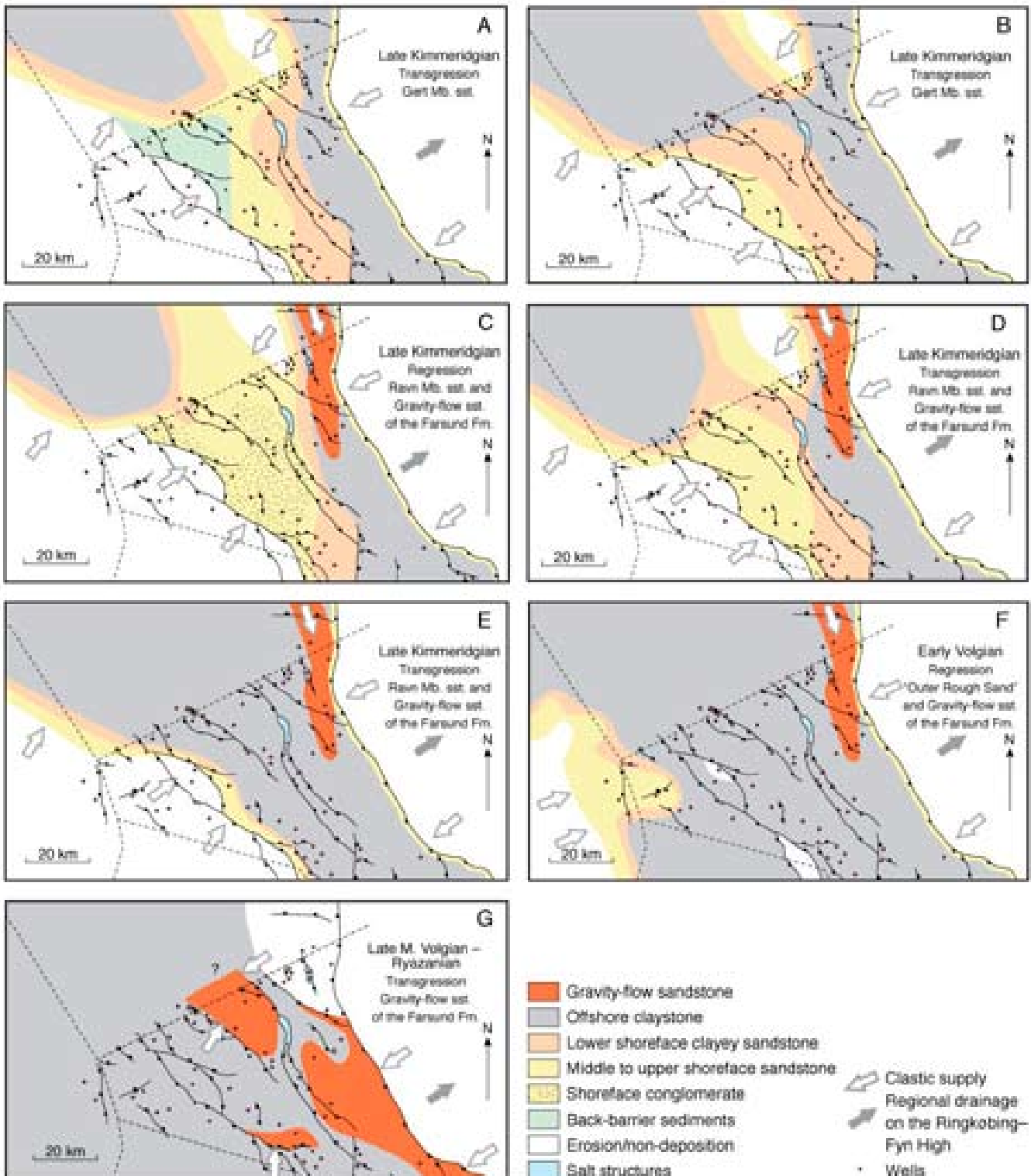
Employed at Geological Survey of Denmark and Greenland (GEUS) since 1984.

Research Scientist, 1984-89, and now Senior Research Scientist from 1989. His main research has been on sedimentology and dynamic stratigraphy of the Jurassic in the Danish Central Graben, North Sea. He has also made research on the sedimentology and the stratigraphy of large scale wave-dominated spit systems and tidal-dominated barrier islands resulting in models which may

be used to understand deeply buried hydrocarbon-bearing reservoir sandstones. Very recently he has started on a multi-client, multi-disciplinary scientific study: “Petroleum Systems in the Danish Central Graben” carried out at GEUS and financially supported by several oil companies. ◀

# RESERVOIR E DANISH

## DEPOSITIONAL ENVIRONMENTS.



# WATERFLOODING AND FORMATION DAMAGE WORKSHOP

The SPE is happy to announce a two-day Waterflooding and Formation Damage Workshop **to be held at the DTU on 26-27 May 2011**. The presenter, **Professor Pavel Bedrikovetsky**, is one of the world's leading experts in both subjects and the author of over 100 SPE and research papers. The registration fee is 300 DKr. The detailed invitation will be sent out shortly. ◀

## Please check your membership status at SPE.org

We have noticed that a significant number of our members have outstanding dues from 2010 and 2011. Out of courtesy we have continued to distribute the Newsletter to overdue members, this practice is not sustainable. **Please check your membership status at SPE.org, ensure that you have paid the membership fee and please also remember to update your account with the correct contact details.** ◀



## SPE summer party

**Friday 17 June 2011**

Regatta Pavillonen, Bagsværd

18:00 Sail tour on Bagsværd Lake

19:00 Dinner and Music

00:00 Finished

Cost 300 DKK / person

# THE NORTH SEA FUND AND ITS FUTURE ACTIVITIES IN DENMARK.

The Danish North Sea Fund is a state-owned oil and gas company founded in 2005. Together with more than 20 Danish and foreign oil and gas companies, the Danish North Sea Fund explore for oil and gas in the Danish sector as a 20 % partner in 21 licenses.

In July 2012 the Danish North Sea Fund becomes 20 % partner in DUC together with Shell, Chevron and Maersk. The North Sea Fund share of the DUC production is expected to be 25-30.000 bbls.o.e. ◀

## BIOGRAPHY

### Peter Helmer Steen, Director General, Danish North Sea Fund



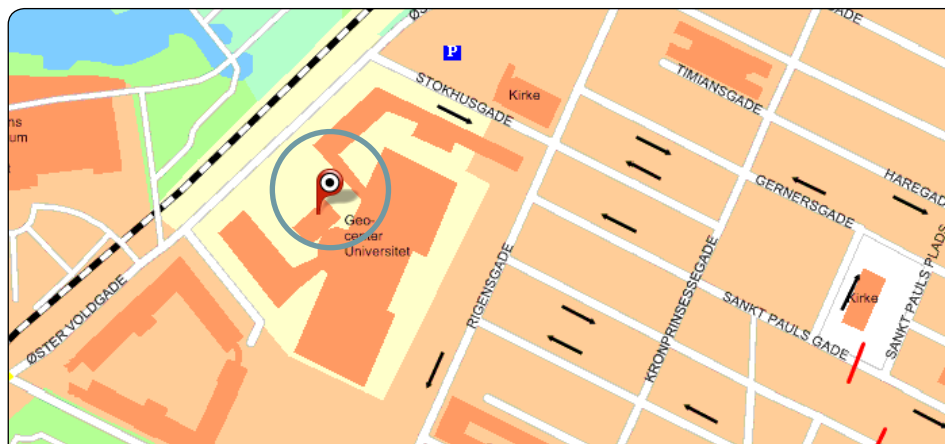
Peter graduated in 1970 from the Danish Engineering Academy (Danmarks Ingeniørakademi) in Civil Engineering.

Until 1976 he worked in the oil and Gas sector as a Consultant in the Norwegian and UK North Sea.

From 1976 until 1992 he worked in different positions within the Danish Ministry of Energy and the Danish Oil and Gas Company, DONG.

From 1992 until 2005 Peter worked as Deputy Director General in the Danish Energy Agency – today a part of the Danish Ministry of Climate and Energy. Among his responsibilities in the Danish Energy Agency were Oil and Gas Exploration and Production.

Since 2005 Peter has been responsible for the Danish North Sea Fund. ◀



### PROGRAMME

17:00 - 18:00

Drinks

18:00 - 19:00

Presentation and SPE News

19:00 - 21:00

Dinner

### LOCATION

GEUS

ØSTERVOLDGADE 10

1350 KØBENHAVN K

### SPEAKER

Peter Johannessen

Senior Research Scientist, GEUS

### TOPIC

Upper Jurassic reservoir sandstones in the Danish Central Graben: new insights on distribution and depositional environments

### DINNER SPEAKER

Peter Helmer Steen

Director General, Nordsøfonden

### TOPIC

The North Sea Fund and its future activities in Denmark

### ENTRANCE FEE

None

### REGISTRATION

Please indicate your attendance by Thursday 7 April by signing up on the internet [www.spe-cph.dk](http://www.spe-cph.dk)

### SPONSOR

GEUS



SPE  
COPENHAGEN  
SECTION

[www.spe-cph.dk](http://www.spe-cph.dk)  
[www.spe.org](http://www.spe.org)



## We see beyond what others may see

- ✱ Some might see a pesky garden pest. Others would analyse all available knowledge and reach the conclusion that this is a Chinese Silkworm. In Noreco that's precisely what we do - we analyse information, we interpret the results and we reach decisions based on our knowledge and understanding. In the North Sea, every day.



# WELL SERVICES



FROM EXPLORATION  
TO PLUG AND ABANDONMENT  
– WITH ROBOTIC PRECISION AND EFFICIENCY

**Welltec**<sup>®</sup>  
welltec.com