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SOCIETY OF PETROLEUM ENGINEERS

SPE NEWS

COPENHAGEN SECTION

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THE SEASON COMES TO AN END

This will be the last Newsletter for the season, and looking back, I think we once again have had a very successful series of meetings.

The last two meetings – at Welltec and Maersk Oil – I have not been able to participate, but I'm told that they were interesting and successful events. You can read a more detailed article on the Welltec meeting in this issue.

The last two technical sessions are hosted by GEUS in April and HESS in May. At GEUS Ketil Sørensen from DTI will give his postponed talk about microbes in oil production as an after dinner talk. The main topic for the evening is the Circum-Arctic Reseource Appraisel carried out between GEUS and USGS. I'm looking forward to learn more about their views, e.g. wit respect to North-East Greenland.

In May Kim Hansen and Ole Vejbæk from HESS will enlighten us on the two consecutive 4D seismic surveys carried out at South Arne and how these results impact the field development decisions. At the May meeting we will also have our Annual Meeting where the Board for 2012-2013 will be elected.

In the current issue you can also find personal profiles of the Board Members. We hope that this initiative will increase the appetite for joining the Board or bring suggestions for improvements forward, and thereby further improve our society.

I would like to end where I started. The end of the season is as always celebrated with the Annual Summer Party sponsored by Schlumberger. This year I am glad to invite you and your spouse to the old Elephant House in Copenhagen Zoo. Please find more information inside this issue.

Lastly, I would like to thank all of you for the support during my period as chairman for the section. I have enjoyed the 2 years and found them interesting and educative, and I also hope that you've found the period rewarding.

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



FUTURE MEETINGS

FOR MORE INFORMATION REGARDING THE PROGRAMME SEE PAGE 6

SPE
COPENHAGEN SECTION

THE BOARD · 2011-2012 SEASON

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Presentation



MORTEN G STAGE, CHAIRMAN OF THE SPE COPENHAGEN CHAPTER.

Subsurface Team Lead, Lead Geomechanical Specialist, Maersk Oil, Copenhagen. I joined the board because I saw the work in the board as an opportunity to strengthen my professional network, and to become involved in building a strong oil & gas community in Copenhagen. I've found it particular rewarding to share views across disciplines, companies and experience; realizing that there are series of topics which we should address as an industry and not as individuals neither single companies.



HANS HORIKX, SPE PROGRAMME CHAIRMAN

Corporate Chief Reservoir Engineer for Maersk Oil. Has served on the Copenhagen SPE board as Programme Chairman for the past 2 years and is a candidate for the Section Chairman position. My main motivation as a board member is to enhance collaboration between all parties in the energy sector and to raise the profile of Danish oil and gas.

MIRIAM LYKKE, SPE NEWSLETTER CHAIRMAN

Senior reservoir engineer, PhD at DONG E&P. Involved in evaluation of opportunities in prospects and mature fields and reservoir management. The work on the board strengthen my personal network and keeps me up to date on the technical aspects of my professional interest. Further, I value the knowledge sharing at the SPE meetings.





CARSTEN M NIELSEN, SPE MEMBERSHIP CHAIRMAN

Senior reservoir engineer at GEUS. Involved in reservoir evaluation for hydrocarbon fields, CCS and geothermal energy production. My SPE (board) membership supports network and knowledge sharing.



SUSANNE POULSEN, SPE TREASURER

Senior Reservoir Engineer, PhD with Maersk Oil. Works in Corporate Production Development Department, in the New Business Team. My work on the board keeps me in contact with old and future colleagues. I generally aim to talk to at least one new person every meeting, and enjoy also meeting the students and discussing career opportunities with them.

BJØRN MARIBO-MOGENSEN, SPE WEBMASTER AND SPE STUDENT CHAPTER CHAIRMAN

PhD Student and Software Manager at the Center for Energy Resources Engineering (CERE), DTU. I work on advanced thermodynamics models for process modeling in the oil and gas industry (primarily mid- and downstream).As a student chapter chairman I work on improving the connections between students and the industry and to expand the students' international network.



OF THE BOARD



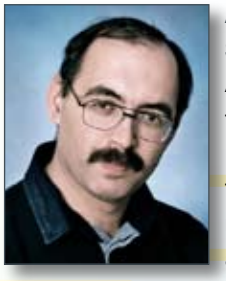
KJELL MUNDHEIM SPE SECRETARY
From Norway. Is a member of Shell's leadership team in Denmark, with specific focus on maturation and implementation of major field (re)developments in DUC. I moved to Copenhagen in September 2011 and became an SPE Board member in January 2012.



HANS PLESSING, SPE BOARD MEMBER
Program Manager for Well Completions at Welltec. 10 years of experience with Field work and Product development in intervention tools and completion products. The work and membership of SPE, allows me to network multi-disciplinary within the Industry. My personal benefit is to gain knowledge on other aspects of upstream challenges to those being faced with at my daily work.

BILL GINTY, SPE BOARD MEMBER
Siri Asset Production Optimisation Team Leader at DONG E&P Involved in daily operations, production engineering and accounting for the Siri Asset (Siri, Stine, Nini, Nini East, Cecilie Fields). The work on the SPE board allows me to personally support the multi-disciplinary, multi company approach to the oil and gas industry that I believe provides the most benefit to the employees, organisations and the overall society.





ALEXANDER SHAPIRO, SPE BOARD MEMBER
Associate Professor, PhD at DTU. Scientist and teacher, coordinator of the Master program in petroleum engineering at the DTU. The work at the board makes it possible to tighten the connections between research and industry, as well as to provide live contacts for the DTU students with their possible future employers.



DAVID HARRISON, SPE BOARD MEMBER
Global Account Director covering all Schlumberger services for key Danish operators. I have been in Copenhagen since May 2011 and this is my 2nd posting to Denmark; I also served on the board of the SPE last time (2002-2005) and in between as treasurer for the SPE in Stavanger.

METTE MUNKHOLM, SPE BOARD MEMBER
Baker Hughes Country Manager - with a background in the petrophysical arena. I have enjoyed my engagement with the board the past two seasons. A key role of the board is to ensure a strong program through the session including selection of presentations from the Annual SPE Distinguished Lecturer List and workshop arrangements to fit our reservoir interest in Denmark. I value the broad representation covering a wide range of companies in our industry which we have on the Copenhagen chapter board.





ERIK JAKOBSEN, SPE BOARD MEMBER
Senior Operations Engineer at Hess Denmark. Board member since 2006. Main SPE related work is within organizing workshops, updating web page, yearly sponsor event and internal board work.



ANDERS KRAG NORMAN, SPE YP REP
Senior Petroleum Engineer at Hess Corporation. Employed in the Production Planning and Optimization team working on the South Arne field in the Danish North Sea.

Bill Ginty and Erik Jacobsen leave the board after this season. Morten Stage, Hans Horikx and Anders Krag Norman step down from their posts, but stay on the board. The rest stay on. Please let the board know if you would like to be considered for a position on the board.

ABSTRACT

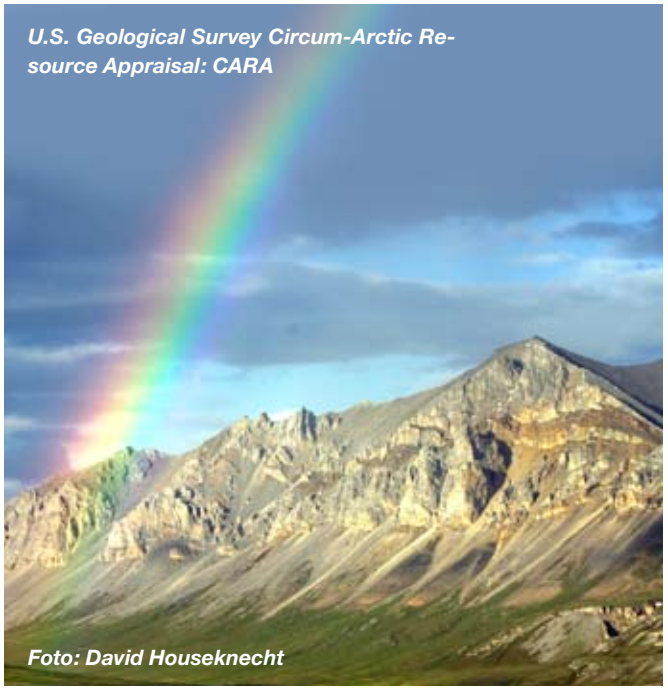
A GEUS perspective on the USGS Circum-Arctíc Petroleum Appraisal

BY FLEMMING G. CHRISTIANSEN & KAI SØRENSEN, GEUS

The recently completed USGS Circum-Arctic Resource Appraisal (CARA) has attracted a high interest among many petroleum geologists, among decission makers within industry and the political-administrative system, and also in the media.

In this presentation the present and former deputy directors of GEUS will go through the background for the studies and the well-established collaboration between USGS and GEUS, mention some of key results from the prototype assessment units of North-East Greenland, and go through the detailed case story of the Lincoln Sea assessment, where GEUS was directly involved.

Furthermore it will be discussed how the described risks and uncertainties together with the actual numbers and statistical distributions can be applied for evaluating future licensing areas, and also how results from CARA and the ongoing collaboration with USGS have been used for planning dedicated research.



U.S. Geological Survey Circum-Arctic Resource Appraisal: CARA

Foto: David Houseknecht

BIOGRAPHY



Biography, Flemming G. Christiansen. Deputy Managing Director, GEUS

Flemming Getreuer Christiansen has been Deputy Managing Director with the Geological Survey of Denmark and Greenland (GEUS) since the start of 2008. He is responsible for oil & gas, energy, minerals and Law of the Sea activities within GEUS. He holds a MSc (1980) and a PhD (1986) in geology from University of Aarhus, Denmark. He has worked with GEUS since 1984, in the early part of his career with research on source rocks and oils in North, North-East and West Greenland, later with broader assessments of all regions in Greenland. He was head of the Petroleum/Stratigraphic department in the period from 1991-2007 where one the main tasks was research on the petroleum geology in Greenland, advise to the authorities and marketing towards industry. Flemming G. Christiansen has a very large network within the administration, academia and industry in relation to Greenland.

BIOGRAPHY



Biography, Kai Sørensen. Retired Deputy Director, GEUS

Kai Sørensen has been employed by GEUS from 1994 to 2007, i.e. untill retirement, first as head of the Geophysics Department and later as Deputy Director with responsibility for the energy and mineral sectors of the survey. He holds a MSC in geology (1971) from Aarhus University and spent the first part of his carreer in academia, working with structural geology and Precambrian geology in Greenland at Aarhus University and later with engineering geology at the Danish Technical University. He benefited greatly from extended stays as a visiting scientist with a number of institutions abroad, in Norway, U.K. and the U.S. From 1985 to 1994 he worked for Statoil, first in Stavanger, and then in Copenhagen. He was exploration manager for a number of years while in Copenhagen. Since retirement Kai Sørensen has been engaged in publishing efforts (Arctic Petroleum Geology memoir of the Geological Society) and in reviving a precambrian study project together with long time colleagues in the Nagssugtoqidian in West Greenland. He stayed with the USGS for six months in 2007/2008 working on the Circum-Arctic Resource Appraisal.

ABSTRACT

THE IMPACT OF MICROBES IN OIL FIELDS AND OIL PRODUCTION

Over the last 5-10 years, the industry has seen a tremendous advance in the understanding of the impact – positive and negative – of microorganisms in oil reservoirs and associated production facilities. Much of this development has been driven by MOG and DONG in collaboration with DTI, and some of the results have already been presented at a number of NACE and SPE conferences. One of the major achievements has been an increased ability to detect and assess Microbiologically influenced Corrosion (MIC) in production facilities, pipelines, and downstream infrastructure.

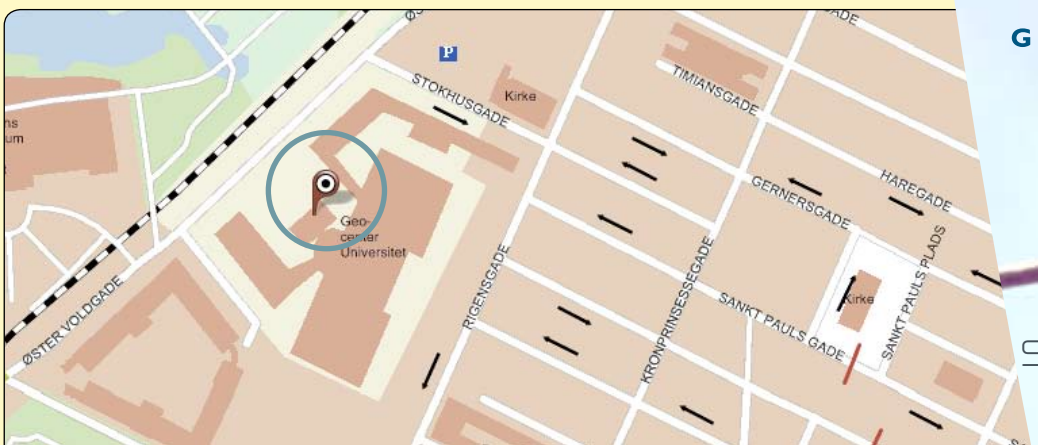
This phenomenon was previously very difficult to assess, and the lack of early-warning caused several major incidents of production losses and shutdown of production platforms in the North Sea alone. Other current initiatives concern the use of microbes to increase oil recovery from mature fields through Microbiologically Enhanced Oil Recovery (MEOR), or the use of nitrate-amendment of injection water for mitigation of reservoir souring. ◄

BIOGRAPHY



Ketil Sørensen, DTI

Ketil Sørensen received a PhD in microbiology in 2002 and subsequently performed research at University of North Carolina, University of Honolulu, and National University of Ireland. In 2007 he joined DTI as a consultant, working on development and industrial application of molecular microbiology tools. Since 2010 he has been the R&D Coordinator at DTI Oil and Gas. ◄



COPENHAGEN
MEETING
TUESDAY 17 APRIL 2012

APRIL

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

SPEAKERS
Flemming G. Christiansen
Deputy Managing Director, GEUS
Kai Sørensen,
Retired Deputy Director, GEUS

TOPIC
A GEUS perspective on the USGS Circum-Arctíc Petroleum Appraisal

DINNER SPEAKER
Ketil Sørensen
DTI

TOPIC
Impact of microbes in oil fields and oil production

ENTRANCE FEE
None

REGISTRATION
Please indicate your attendance by Thursday 12 April by signing up on the internet **www.spe-cph.dk**

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GEUS

SPE COPENHAGEN SECTION
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SPE MEETING SCHEDULE 2011-2012

September 22	MAIN SPEAKER	AFTER DINNER
TOPIC	**E&P Applications of Fiber Optic Technologies**	The Subsea Well Response Project
SPEAKER	Dennis Dria (Myden Energy Consulting PLLC)	Klaas van der Plas (Shell)
LOCATION	Moltkes Palæ	
SPONSOR	SHELL	

October 10	MAIN SPEAKER	AFTER DINNER
TOPIC	**Mechanical Properties of High-Porosity, Low-Cemented Chalk from Survey on Laboratory Results. History matching method combined with geostatistics. Formation damage—an old disaster or a new EOR technology.**	Impact of microbes in oil fields and oil production
SPEAKER	Katrine Andreassen, Yulia Melnikova, Hao Yuan	Ketil Sørensen (DTI)
LOCATION	DTU	POSTPONED TO APRIL
SPONSOR	DTU	

November 22	MAIN SPEAKER	DINNER SPEAKER
TOPIC	**Streamlines in Modern Reservoir Engineering**	Britannia – Recovery Improvement through Field Life Reservoir Management
SPEAKER	Marco R. Thiele (Streamsim Technologies/Stanford University)	Linda van der Bol (Chevron)
LOCATION	Moltkes Palæ	
SPONSOR	Chevron	

January 18	MAIN SPEAKER	AFTER DINNER
TOPIC	**Svane - extreme HPHT gas - a resource for the future?**	Uncertainty and Risk Management for Lifecycle Asset Management Using Examples from the Norwegian and Danish Sectors of the North Sea
SPEAKER	Ole Dalgaard (DONG E&P)	Kelly Tyler (DONG E&P)
LOCATION	DONG Energy	
SPONSOR	DONG Energy	

February 28	MAIN SPEAKER	DINNER SPEAKER / DISCUSSION
TOPIC	**Current Effects on Cable in Open Water**	AVO analysis and rock physics based AVO inversion - Predicting hydrocarbons and the properties of North sea greensand
SPEAKER	Morten Iversen	Asger Johansen
LOCATION	Welltec	(recipient of SPE bursary 2011)
SPONSOR	Welltec	

March 20	MAIN SPEAKER	DINNER SPEAKER
TOPIC	**Twenty Years of Wellwork - Interventions and Innovations at Prudhoe Bay Alaska**	Seismic inversion: turning data into information
SPEAKER	Jennifer Julian (BP Exploration, Alaska)	Igor Escobar, Adam Cherrett (Maersk)
LOCATION	Maersk	
SPONSOR	Maersk	

April 17	MAIN SPEAKER	ANNUAL MEETING
TOPIC	**A GEUS perspective on the USGS Circum-Arctíc Petroleum Appraisal**	Impact of microbes in oil fields and oil production
SPEAKER	Flemming G. Christiansen & Kai Sørensen (GEUS)	Ketil Sørensen (DTI)
LOCATION	GEUS	
SPONSOR	GEUS	

May 10	MAIN SPEAKER	ANNUAL MEETING
TOPIC	**Two Consecutive 4D Seismic Surveys at South Arne Impact Field Development**	Annual General Meeting
SPEAKER	Kim Hansen and Ole Vejbæk (Hess)	
LOCATION	Moltkes Palæ	
SPONSOR	HESS	

June 15	MAIN SPEAKER	DINNER SPEAKER
TOPIC	**SPE Summerparty**	
SPEAKER		
LOCATION	Old Elephant house, Copenhagen ZOO	
SPONSOR	Schlumberger	

Join our

ANNUAL GENERAL MEETING

May 10th 2012 · Moltkes Palæ
Dronningens Tværgade 2 A
1302 København K

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HESS CREATING long-lasting relationships

Everyday, more than 13,000 Hess employees discover, develop, transport, refine and market the energy that powers the world.

A leading global integrated energy company based in New York City, Hess is engaged in the exploration, production, purchase, transportation and sale of crude oil and natural gas, as well as the production and sale of refined petroleum products.

Exploration holding 36.79% and 1.69% respectively. Currently, South Arne produces circa 8% of the oil extracted in the Danish sector of the North Sea and 3% of the sector's gas.

In 2010, Hess and its partners committed to a considerable expansion plan for the asset - South Arne Phase 3 – in order to maximize block recovery. This billion dollar project is being delivered by Hess Denmark in conjunction with Hess' regional team, based in London.







Founded in 1933 as a residential fuel oil delivery service in New Jersey, Hess has Exploration and Production headquarters in Houston and Marketing and Refining headquarters in Woodbridge, New Jersey. Hess continues to build a global franchise through its promising portfolio of assets and its diligent exploration program.

Hess, which produces more than 370,000 barrels of oil per day, has operations in the United States, United Kingdom, Norway, Denmark, France, Russia, Equatorial Guinea, Algeria, Libya, Egypt, Ghana, Malaysia, Indonesia, Thailand, China, Brunei, Azerbaijan, Iraq, Australia, Colombia, Peru and Brazil. The company employs world-class engineers and geoscientists who combine their expertise to deliver cutting-edge technical solutions that enable the company's strong operational performance.

Since 1994, Hess has been the Operator of the South Arne field (block 5604/29) in the Danish Sector. Hess holds a 61.52% share in the field with its partners DONG Energy and Danoil

The project involves construction of two new wellhead platforms, one of which will be bridge-linked to the existing South Arne field platform. The second new wellhead will be 2.5 km north-north-west of the existing installation, and the two will be linked by subsea pipeline bundle and umbilical. The Phase 3 project also includes drilling of 11 new wells.

Explore more about us at **www.hess.com**



THE FEBRUARY MONTH'S SPE MEETING, HELD AT WELLTEC IN ALLEROD, WAS WELL ATTENDED WITH APPROXIMATELY 35 ATTENDEES.

The evening started with a brief soiree in Welltec's modern foyer before moving upstairs to the main conference room. Lars Mangal, CCO, gave a safety overiew, a short but comprehensive overview of Welltec's business and value proposition, and then introduced the main speaker, Morten Iversen.

Morten is a Solutions Advisor in the Global Subsea Intervention group at Welltec. Following up on a fast growing trend of subsea well installation, Welltec has seen a similar trend for subsea interventions off vessels without riser; riserless light well intervention (RLWI). One of the crucial aspects of these interventions is understanding the impact of the sea currents on the e-line cable in order to ensure job feasibility as well as any resulting consequences. Morten presented the background and several results of a mathematical model developed by Welltec to quantify the effects of the currents on the e-line from vessel to sea floor and the impact to the whole.

After a number of questions and discussion the group adjourned to the cantina for a wonderful three course meal. During the dessert portion, Asger Johansen, a student at Technical University of Denmark presented his Master's degree work on "AVO analysis and rock physics based AVO inversion". His work demonstrated that he has developed an algorithm which is helping to analyze seismic data and determine viable reservoir targets in 'green oil sands' offshore Denmark. In resulting Q&A session, it was revealed that a number of these targets have been successfully drilled by Dong Energy.

Following the presentation a shop tour around Welltec's manufacturing facilities was conducted where several tools were displayed.

ALL IN ALL, ANOTHER FUN, EDUCATIONAL AND INFORMATIVE SPE EVENT! THANK YOU WELLTEC!

Aalborg University, Esbjerg campus in final of

"EAGE STUDENT FIELD CHALLENGE - COPENHAGEN 2012"

Team of Oil and Gas Technology students from Aalborg University, Esbjerg Campus are among the 6 finalists for this year ''EAGE Student FIELD Challenge'' (Fully Integrated Evaluation and Development) to be held in June 2012 in Copenhagen during the 74th EAGE Conference & Exhibition. The aim of the event is to promote cross-disciplinary geoscience and engineering integration within universities.

The 6 finalists were selected on the basis of an essay submission, 2000-3000 words in length, on the subject of "The value of integration between Geoscience and Engineering".

Aalborg University Esbjerg, Denmark will be represented by Ismaila A. Jimoh, Mona Lunde, and Yanina Ivanova and they will compete with students from five other universities from around the world for this year event The other finalists are:

- Indian School of Mines, India
- Petroleum Institute (Boys campus), UAE
- University of Calgary, Canada
- NED University of Engineering & Technology, Pakistan
- Ecole Nationale Supérieure de Géologie, France

Each participating university will have a multi-disciplinary team of 3 (full-time) geoscience students, with a maximum of one PhD student per team. The students will be required to analyze and propose a FIELD development plan for a discovered hydrocarbon resource; seismic interpretation, well log analysis, structural model, identification of flow units, static reservoir model property modeling, dynamic reservoir model, forward (appraisal and) development plan.

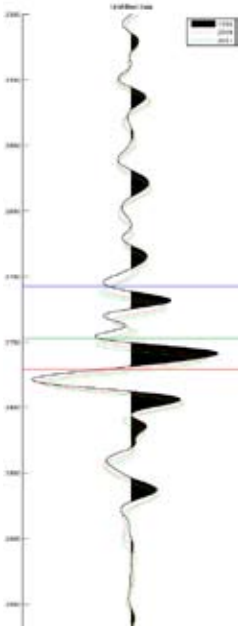
Afterwards, each team will present their FIELD development plan in front of an evaluation jury as well as participate as an audience member for the other presenting University teams.

The winning team of the FIELD development plan presentation will be rewarded with a great prize during a special awarding ceremony!



ABSTRACT

Two consecutive 4D seismic surveys at South Arne Impact Field Development



In 2011 Hess acquired the second 3D seismic monitor survey on South Arne solely for the purpose of reservoir surveillance. A 1995 3-D seismic survey constitutes a pre-production base-line survey and a 2005 3-D seismic survey constitutes the first monitor survey. The 2011 survey was acquired in July 2011, and thanks to a fast track seismic processing scheme, the first results in terms of time-shifts and amplitude changes within 4 weeks after last shot. This fast turn-over was made possible by processing of the base-line and first monitor surveys prior to acquisition of the 2011 survey using a slightly updated fast-track processing sequence. This same processing sequence was then applied to the 2011 survey starting already onboard the seismic vessel.

Due to subtle improvements in the processing scheme we are now able to image separate sweep patterns in the Tor and Ekofisk reservoir units,- both on the new monitor survey and on the old base-line monitor survey pair. The results from the fast track imaging led to changes to the 2011/12 intervention plans which have now been executed and the results are actively used in the well planning for the Northern area development. Ongoing work to history match the fast track results in the subsurface model is likely to influence future development plans and reservoir management. A range of examples from the field will be shown.

BIOGRAPHY



Ole Valdemar Vejbæk,
Geophysical Advisor at Hess

Ole has close to 30 year experience as geologist/geophysicist working mainly with North Sea exploration and production related issues. He has been with Hess for over 4 years and was employed at the Geological survey of Denmark prior to that. He holds a PhD in Geology from Copenhagen University ◄

Kim Hansen,
Production Engineering Advisor at Hess

Kim has 14 years experience working in various subsurface and production engineering roles at Hess operated assets in the North Sea, South East Asia and West Africa. He holds a MEng in Petroleum Engineering from Heriot-Watt University ◄

WHY YP SPE?

Recently a very popular word has sprung up to be used in almost all manners and contexts - innovation. From the likes of Google and Apple to our own backyard - the oil business. Unfortunately, compared to the IT world, our industry is light-years behind with implementing the newest solutions. One might argue: “What about MWDs, LWDs or seismic interpretation, there is a lot of innovative thought and engineering behind these?” Yes, there is, no doubt about it. However, I think the new level of innovation lies in bringing all of those innovations together. With widely spread wireless internet access and, thanks to the recent boom of smartphones and tablets, immense computing power at the palms of our hands, we are more than able nowadays to share and collaborate across disciplines. Not only by being able to check your email on the go, or run an application - that has been around for quite some time now. It is by voluntary participating in knowledge sharing, networking, learning from the experiences of others it will be possible to advance to the next level.

The kind of voluntary participation that created the user base of Facebook, LinkedIn, Twitter and many others. In my opinion this will be (or rather already is) the new field of innovation, not so much the increase in computing power and sophistication. Who better to facilitate the novelties than the very people who by active participation have created the bastion of cooperation, the WWW - the young. This is where the SPE Young Professionals organization comes into play.

SPE has been for many years on the forefront of glueing the industry together, through the promotion of networking and sharing of technical expertise. Up to date our industry, as the majority of other industries, was a hierarchy based mostly on seniority. From now on however, I believe, that it will be the young that will fuel the further advancement of the oil business. We, the young, have been raised and educated in an environment where innovation and collaboration across borders, cultures and backgrounds is not even really innovative any more - it is a given, it is everyday business. Why not help then in creating the future of our industry? Don’t get left behind and get involved by actively joining the SPE YP section :)

Jedrzej Bryla, Senior Well Site Engineer, Maersk Oil

SPE SUMMER PARTY – 15 JUNE

Dear SPE Member,

You and your partner are cordially invited to the SPE Summer Party on the 15th of June 2012, at the Old Elephant House in Copenhagen ZOO.

From 17.00 you will have access to the entire zoo where you are welcome to go for a walk and enjoy what the zoo has to offer.

A welcome drink will be served at 18:30, followed by A three-course dinner inside the magnificent temple-inspired Old Elephant House.

Please register by e-mail to Gitte Jakobsen: gjakobsen2@slb.com and pay 350,- DKK per person to the SPE bank account at Nordea: 2274 - 5360 613 323. Please mark payment: "SPE -Your name".



Deadline for registration and payment: 25th of May.

First come, first served as places are limited.

Dress code: Suit or Black Tie.

COPENHAGEN MEETING

THURSDAY 10 MAY 2012

MAY

PROGRAMME

17:00 - 18:00
Drinks

18:00 - 19:00
Presentation and SPE annual general meeting

19:00 - 21:00
Dinner

LOCATION

Moltkes Palæ
Dronningens Tværgade 2 A
1302 København K

SPEAKERS

Kim Hansen,
Production Engineering Advisor, Hess
Ole Vejbæk, Geophysical Advisor, Hess

TOPIC

Two Consecutive 4D Seismic Surveys at South Arne Impact Field Development

ENTRANCE FEE

None

REGISTRATION

Please indicate your attendance by Monday 7 May by signing up on the internet www.spe-cph.dk

SPONSOR

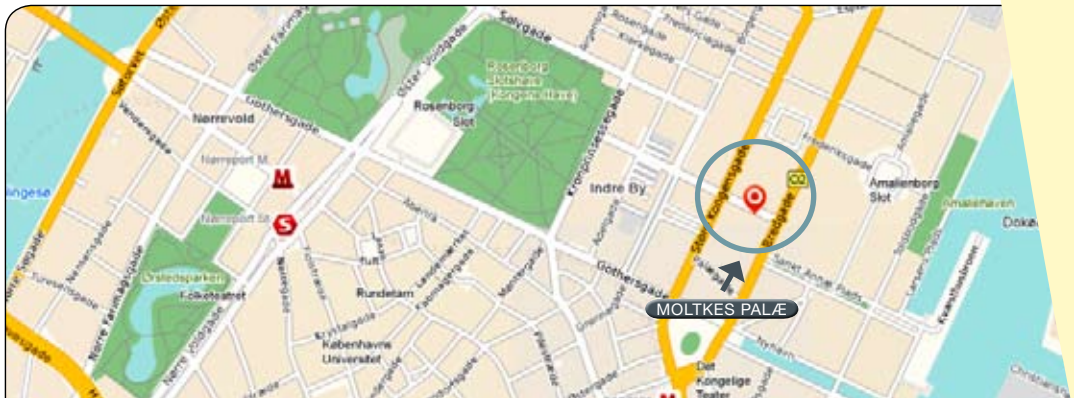
HESS

CO_2 sequestration case study

During the evening it will also be possible to see a poster summarising Marie Aschehoug's (reservoir engineer with Hess) recent SPE paper.

It looks at how the production of a substantial fraction of CO_2 in any hydrocarbon-gas stream poses a significant challenge in terms of separation and sequestration. Both environmental concerns and economic incentives provide the operators to search for safe, cost-effective ways of disposing CO_2.

The poster will present a case study where a pragmatic solution of CO_2 separation at surface and its disposal in a saline aquifer occurs in close proximity to its source. A suite of both modern and classical analytical tools are used to understand production behavior of individual wells. This understanding is imperative because production volume is dictated by the ability to dispose of the associated CO_2 volumes to honor the fault-activation pressure limit. The use of real-time data allows an assessment of in-place volumes for the source gas and the capacity of the aquifer. Injection of supercritical CO_2 suggests that the terminal aquifer pressure has been reached by encountering less-than-expected storage volume and owing to lowering of fracture-pressure gradient. On-time learning has allowed the asset team to search for alternative CO_2 disposal solutions to ensure continuous gas production from this field.



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FASETT



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