



Technical
University of
Denmark



DHRTC Technology Conference 2017

Programme

Preliminary programme 05-09-17



14 November

11:00 – 11:30

Welcome

11:30 – 12:30

Making progress, achieving change: How do studies make a difference? How can we avoid wasting time and resources? Mark Bentley, Training Director, AGR TRACS International Ltd

12:30 – 13:30

Lunch

13:30 – 15:00

Parallel Sessions - Presentation and discussion

<p>1) EOR Keynote: “Fifty years of solvent flooding experience in the US and a peek into the future” <i>Larry Lake, Professor, Department of Petroleum and Geosystems Engineering The University of Texas</i></p> <p>Presentation of Demonstration model</p> <p>Technical presentation: “Emulsion formation for EOR applications” <i>Waseem Arshad, DTU</i></p> <p>“Decoding the water flooding processes from produced water composition – A case study from the Halfdan chalk oil field” <i>Niels H. Schovsbo, GEUS</i></p>	<p>2) Maintenance Keynote: “Challenges in safe and efficient facility operation” <i>Nina Hoegh Jensen, Production Operations Excellence manager, Maersk Oil</i></p> <p>Presentation of Demonstration model</p> <p>Technical presentation: “Modular maintenance instructions” <i>Andreas Proschowsky, DTU</i></p> <p>“Fact based optimization of maintenance” <i>Andreas Proschowsky, DTU</i></p>
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15:00 – 15:30

Break

15:30 – 16:30

Parallel Sessions - Presentation and discussion

<p>1) EOR Technical Presentations: “Experimental study of the potential of dimethyl ether EOR in North Sea chalk reservoirs” <i>Hoda Javanmard, DHRTC</i> “Assessment of electric double layer forces in saturated mineral powders by low field NMR” <i>Leonardo Meireles, DTU</i> “An integrated experimental approach to quantify the oil recovery potential of seawater and low-salinity seawater in North Sea chalk oil reservoirs” <i>Mojtaba Seyyedi, DHRTC</i></p>	<p>2) Maintenance Technical Presentations: “Experimental investigation on the effect of seawater ingress on the corrosion behaviour of production tubings” <i>Riccardo Rizzo (Rajan Ambat), DTU</i> “Systematic investigation of scales and corrosion on production tubings” <i>Rajan Ambat, DTU</i> “Kinetics of scale formation in oil and gas production” <i>Petter Lomsøy, DTU</i></p>
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16:30 – 16:45

Break

16:45 – 17:45

Cost Transformation (CTR), Stuart Leigh Bronson,
 Head of Procurement and Supply Chain, Maersk Oil

17:45 – 19:45

Poster Session

20:00 –

Dinner

15 November

08:30 – 10:00

Parallel Sessions

<p>3) Reservoir characterisation Keynote: “Do we know enough about the impact of the relatively small-scale features in our reservoir characterisation?” <i>Patrick Corbett, BG Group Professor of Petroleum Geoengineering, Heriot Watt University</i></p> <p>Presentation of Demonstration model</p> <p>Technical Presentation: “Spatial distribution of silica and its implication for reservoir architecture – towards an improved understanding of Danian reservoir units” <i>Kasper Høj Blinkenberg, KU</i></p> <p>“4D seismic in Kraka” <i>Jesper Søren Dramsch, DHRTC</i></p>	<p>4) Integrity and Reliability Keynote: “Decision Support for integrity management – Costs and benefits.” <i>Michael Faber, Professor AAU</i></p> <p>Presentation of Demonstration model</p> <p>Technical Presentation: “Self-healing cement” <i>Kasper Urup Kjeldsen, AU</i></p> <p>“Risk based inspection planning for sub-sea well integrity management” <i>Simona Miraglia, AAU</i></p>
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10:00 – 10:30

Break

10:30 – 11:30

Parallel Sessions - Presentation and discussion

<p>3) Reservoir characterisation Technical Presentations: “Two P- and S-wave seismic profiles integrated with borehole data, outcrops and photogrammetry on chalk reservoir analogues at Stevns Klint” <i>Janina Kammann, KU</i></p> <p>“Fluid migration through the Chalk Group: examples from 3D seismic data” <i>Florian Smit, DHRTC</i></p> <p>“Evolution of the petrophysical and geomechanical properties of chalk along a water-saturated to oil-bearing interval from base to top of a reservoir (Kraka Field).” <i>Frederic Amour, DHRTC</i></p>	<p>4) Integrity and Reliability Technical Presentations: “Experimental study of the short- and long-term behaviour of the RJD laterals under static and dynamic reservoir conditions” <i>Maiya Medetbekova, DHRTC</i></p> <p>“OMA-based stress estimation in friction systems” <i>Marius Glindtvaad Tarpø, DTU</i></p> <p>“The connection between wave kinematics and wave loads in non-breaking and breaking waves” <i>Erik Damgaard Christensen, DTU</i></p>
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11:30 – 12:30

Lunch

12:30 – 14:00

Parallel Sessions - Presentation and discussion

<p>5) Reservoir modelling/simulation Keynote: “Practical aspects of reservoir simulation for field development support in Danish chalk fields.” <i>Henrik Olsen, Senior Principal Reservoir Engineer, Maersk Oil</i></p> <p>Presentation of Demonstration model</p> <p>Technical Presentation: “High porosity due to compaction-inhibiting flexure” <i>Kenni Dinesen Petersen, AU</i></p> <p>“Oil production optimization by combination of matlab and eclipse (E300)” <i>Steen Hørsholt, DTU</i></p>	<p>6) Topside processes Keynote: “Water flooding: Still challenging after a century of practice.” <i>Rob Harris, Water Flood Manager, Shell Global Solutions International</i></p> <p>Presentation of Demonstration model</p> <p>Technical Presentation: “A project on innovative pipeline concepts” <i>Jørgen Gross, DHRTC</i></p> <p>“Knowledge management for increasing water injection availability” <i>Jing Wu, DTU</i></p>
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14:00 – 14:30

Break

14:30 – 15:30

Parallel Sessions - Presentation and discussion

<p>5) Reservoir modelling/simulation Technical Presentations: “Uncertainties in the mechanistic models of the modified brine water-flooding of chalk” <i>Ali A. Eftekhari, DHRTC</i></p> <p>“The problem of short-circuiting in deformable fractured reservoirs” <i>Saeed Salimzadeh, DHRTC</i></p> <p>“Understanding controls on fracture geometry using a geomechanical model of fracture propagation” <i>Michael Welch & Mikael Lüthje, DHRTC</i></p>	<p>6.) Topside processes Technical Presentations: “Physical-stochastic (Greybox) modeling and optimal control of membrane filtration processes in oil recovery operations” <i>Goran Goranvic, DTU</i></p> <p>“Grey-box modeling of an offshore deoiling hydrocyclone system” <i>Mads Valentin Bram, AAU</i></p> <p>“First pilot demonstration of alarmtracker” <i>Thomas Martini Jørgensen, DHRTC</i></p>
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15:30 – 16:00

Wrap up

Mark Bentley, Ph.D. - AGR TRACS Training Director, Aberdeen

Time: Tuesday 14 November 11.30-12.30

Plenum Speaker



Mark obtained a PhD in Geology at the University of Wales and joined Shell in 1986, initially as a petroleum engineer and subsequently as a geoscientist in the UK, Oman and The Netherlands (Shell Research). In 1998 he moved to TRACS, a consulting and training company, now part of AGR, where he currently directs training.

He has evaluated fields in most of the major petroleum basins of the world, actively publishes and presents in the fields of reservoir modelling and uncertainty-handling, and is co-author of 'Reservoir Model Design'.

His interest in this conference stems from experiences in study teams, where he has experienced technology successes but also failures. The reasons which distinguish the two are the subject of his opening presentation.

Mr. Bentley will give a presentation on:

"Making progress, achieving change – How do studies make a difference? How can we avoid wasting time and resources?"

Larry Wayne Lake, Professor, Department of Petroleum and Geosystems Engineering, The University of Texas

Time: Tuesday 14 November 13.30-14.45

Keynote speaker: Session 1 - EOR



Larry W. Lake is a professor of the Department of Petroleum and Geosystems Engineering at UT Austin and director of the Center for Petroleum Asset Risk Management. He holds B.S.E and Ph.D. degrees in Chemical Engineering from Arizona State and Rice Universities. He is the author or co-author of more than 100 technical papers, the editor of 3 bound volumes and author or co-author of four textbooks.

He was chairman of the PGE department twice. He currently holds the Shahid and Sharon Chair in Petroleum Engineering. Furthermore, he has twice been an SPE distinguished lecturer. He is a member of the US National Academy of Engineers and has won the 1996 Anthony F. Lucas Gold Medal of the SPE; the 1999 Dad's Award for excellence in teaching undergraduates at UT Austin and the 1999 Hocott Award in the College of Engineering for excellence in research. He is also a member of the 2001 Engineering Dream Team awarded by the Texas Society of Professional Engineers.

Mr. Lake will give a presentation on:

“Fifty Years of Solvent Flooding Experience in the US and a Peek into the Future”

Nina Hoegh Jensen, Production Operations Excellence manager, Maersk Oil

Time: Tuesday 14 November 13.30-14.45

Keynote speaker: Session 2 - Maintenance



Mrs Nina H. Jensen has a background in mechanical engineering supplemented with further education within business management. She has been in the oil and gas industry since 2000.

Her career in the oil and gas industry started in the verification and third party inspection arena. However, she has mainly been within operations covering the disciplines construction, maintenance and production. 10 years of the career has been within operations in the Al Shaheen field in Qatar where she has held leadership positions both onshore and offshore. A number of years during the career she has been working offshore. Lately as Offshore Installation Manager in the Gulf in the Middle East.

She brings extensive experience in safe and efficient operation of offshore facilities that supports great ability to bridge between the theoretical conclusions and the practical challenges.

Mrs. Jensen will give a presentation on:
“Challenges in safe and efficient facility operation”

Stuart Leigh Bronson, Head of Procurement and Supply Chain, Maersk Oil

Time: Tuesday 15 November 16.30-17.30

Plenum Speaker



When business are not living up to their true potential, it is not uncommon for the accumulation of many small problems to end up killing the company. My great passion is turning around businesses that are not being as great as they can be. I help businesses that has included oil and gas, property, seafood and entertainment companies, to identify the right way forward, and most importantly, deliver the necessary changes to be successful again. I know that no single approach is the right one for every business and situation, and so I draw on what other industries have done before, and look to see how we can learn from them.

My educational background is an economist (MSc UCL London, and BSc London School of Economics), and Chartered Accountant. I have M&A background, and a track record of delivering business turnarounds in various industries; including with Maersk Oil since 2011.

Mr. Bronson will give a presentation on:

“Oil & Gas evolution – how quickly can we adapt to the changing environment?”

Patrick Corbett, BG Group Professor of Petroleum Geoengineering, Heriot Watt University

Time: Wednesday 15 November 09.00-10.15

Keynote speaker: Session 3 - Reservoir characterisation



Patrick Corbett graduated in 1977 with a degree in Geology followed by a MSc in Micropalaeontology in 1978. From 1978, Patrick worked for 11 years in industry with various positions in international exploration and development geoscience for Unocal in the UK, Netherlands and Indonesia.

Since coming to Heriot-Watt University in 1989, his research focus has been on the integration of geoscience and engineering, and he obtained a PhD in Petroleum Engineering (Heriot-Watt University - 1993) and a DSc “Petroleum Geoengineering” (Heriot-Watt University - 2006). Current research areas include permeability anisotropy modelling, well test interpretation, dynamic upscaling, and genetic petrophysics. From 2012-13 he took up a Visiting Professorship at UFRJ in Rio as the BG Group International Professor of Carbonate Petroleum Geoengineering. He was the AAPG Distinguished Lecturer in Europe for 2013-14 on Carbonate Geoen-
geering which was the last time he visited Denmark.

Mr. Corbett will give a presentation on:

“Do we know enough about the impact of the relatively small-scale features in our reservoir characterisation?”

Michael Faber, Professor, Aalborg University

Time: Wednesday 15 November 09.00-10.15

Keynote speaker: Session 4 - Integrity and Reliability



Henrik Olsen, Senior Principal Reservoir Engineer, Maersk Oil

Time: Wednesday 15 November 12.45-14.00

Keynote speaker: Session 5 - Reservoir modelling/simulation



Mr. Olsen has more than 30 years of experience in reservoir engineering and reservoir simulation, mentoring younger engineers and defining workflows and processes within the reservoir engineering community. His key experience is within field development planning, with some exposure to data room evaluations. Reservoir engineering skills comprise reservoir engineering evaluations at many levels, particularly construction and history matching of simulation models for a variety of reservoir types, thereby enabling characterisation of fluid and reservoir properties to identify and optimize efficient development options. Recently also developed procedures to integrate subsurface uncertainties into probabilistically derived recovery ranges.

He has acquired an excellent knowledge of computer applications and plays a key role in selection of software for reservoir studies. Mr. Olsen has previously worked as a consultant to Oil companies and Government Authorities in Denmark and abroad within a wide range of reservoir engineering disciplines.

Mr. Olsen will give a presentation on:

“Practical aspects of reservoir simulation for field”

Rob Harris, Waterflood Manager, Shell Global Solutions International

Time: Wednesday 15 November 12.45-14.00

Keynote speaker: Session 6 - Topside processes



Mr. Harris has nineteen years of experience with Shell in Waterflood, Chemical EOR as well as conventional field development projects and operations. Beginning as a Drilling and Completions engineer with Shell Canada, Rob quickly moved into Production Technology in assets in Western Canada. Leveraging his background in wells and production, he has led multidiscipline integration in project, asset and technical teams. He has been responsible for management and redevelopment of offshore and onshore assets including Ursa Princess Waterflood in the Gulf of Mexico, North Sabah Waterflood and Chemical EOR projects in Malaysia. Furthermore, he has been responsible for a variety of onshore exploration projects and operating assets in Canada.

Currently, he is the Waterflood Manager responsible for delivery of asset support, technology and best practice deployment across Shell's Global Waterflood portfolio.

Mr. Harris will give a presentation on:

“Waterflooding: Still challenging after a century of practice.”



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