THE LIFECYCLE OF THE WELL
SPE International Bergen One Day Seminar

5 April 2017
Bergen Norway

www.spe.org/go/17berg
Cost saving and smarter ways of meeting the challenges

In retrospect the oil industry may look like a sine curve, cyclic downturns followed by upward movements. The media suggests that the industry has met the final down turn, but the facts suggest that 85% of the global energy consumed is fossil energy, and the expected increase in demand is about 35% over the next 20 years, remind us that there is still, and will continue to be a huge need for oil and gas. Petroleum investments for the NCS met the same level in 2016 as in 2011, and so did the oil and gas production.

COP21 lead to a historic agreement as nearly 200 countries signed up to cut greenhouse gas emissions. The agreement will speed up the transformation of the energy sector by accelerating investments in cleaner technologies and energy efficiency. This historic change in energy delivery will not happen overnight however, oil and gas will still be the primary energy source as we move progressively towards a lower-carbon future.

The industry is uniquely positioned to adapt and evolve in response to the opportunities presented by carbon mitigation technologies and the development of alternative forms of energy. No one will survive by standing still. We need to move on, develop new solutions, new technology and we need to work smarter and more economically as we move to a cleaner energy future.

This conference is the best place to see the latest technology being presented and how we as an industry will tackle the future energy challenges.

Your opportunities to update knowledge and to get in touch with many interesting engineers and companies are of great value to all.

Thorbjørn Kaland
Program committee chair
Take this opportunity to share your experience, concerns, ideas, solutions, and best practices with technical professionals. We are facing unique challenges to drill more advanced wells. Wells to be completed intelligently, to extend the life time and increase production. We need to address challenges to find good options for abandonment when they need to be addressed and in a safe and economical manner. This conference will provide a platform to network with industry professionals, see the latest technology and focus on how to solve the challenges of a low oil price environment.

**Key Professionals Include:**

- Oil and gas professionals, experts, and managers
- Service, supply, and consulting companies
- Universities, research centres, and institutes
- Professional societies and labour unions
- Local, national, and international governmental organizations
- Government regulators
- Non-governmental organisations
- Health, safety, and environment professionals and representatives

**Top Reasons to Attend**

- The conference programme encompasses topical panel discussions and technical sessions composed of research-based presentations
- Hear from 50+ industry experts
- Network with 150+ industry peers across Norway and globally
Programme Chair

Thorbjørn Kaland
Halliburton

Programme Committee Members

Katinka Dahlberg
TechnipFMC

Morten Didriksen
Schlumberger

John E Falstrøm
Halliburton

Kristian Eggum Johnsen
Baker Hughes

Arild Saasen
Aker BP

Peter Frank Smits
Statoil

Norolf Henriksen
Wintershall

Jan-Erik Nortvedt
Epsis

Edel Reiso
Statoil

Terje Skeie
Welltec

Erlend H Vefring
IRIS
## SCHEDULE OF EVENTS

(as of January 2017)

<table>
<thead>
<tr>
<th>Time</th>
<th>Event Description</th>
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<tbody>
<tr>
<td>0730-0850</td>
<td>Registration</td>
</tr>
<tr>
<td>0800-1845</td>
<td>Exhibition Open</td>
</tr>
</tbody>
</table>
| 0900-0945  | Opening Panel Session  
*Key Drivers for Maximising Economic Recovery on the Norwegian Continental Shelf* |
| 0945-1045  | Coffee break / exhibition / Knowledge sharing e-posters                             |
| 1115-1245  | Lunch break / exhibition / Knowledge sharing e-posters                             |
| 1245-1400  | Technical Session: **Reservoir**  
Technical Session: **Production and Operation**  
Technical Session: **Drilling (Fluid/Cement/Risk)**  
Technical Session: **Drilling (Risk/Automation)** |
| 1400-1500  | Lunch break / exhibition / Knowledge sharing e-posters                             |
| 1500-1545  | Coffee break / exhibition / Knowledge sharing e-posters                             |
| 1545-1715  | Technical Session: **Well Intervention**  
Technical Session: **Completion**  
Technical Session: **Drilling ERD**  
Technical Session: **Digital Oilfield and CO₂** |
| 1715-1845  | Conference reception                                                              |
## Wednesday 5 April 2017

<table>
<thead>
<tr>
<th>Time</th>
<th>Room</th>
<th>Session Title</th>
<th>Presenters</th>
<th>Chair</th>
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<tbody>
<tr>
<td>0850-0930</td>
<td>Room: Peer Gynt</td>
<td>Opening Panel Session: Key Drivers for Maximising Economic Recovery on the Norwegian Continental Shelf</td>
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<tr>
<td>0930-1230</td>
<td>Room: Klokkeklang</td>
<td>Technical Session: Reservoir</td>
<td>International Research Institute of Stavanger, Schlumberger, Statoil</td>
<td>Edel Reiso, Statoil</td>
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<tr>
<td></td>
<td><strong>Session Chair:</strong></td>
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<td></td>
<td><strong>Edel Reiso</strong>, Statoil</td>
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<td></td>
<td><strong>The reservoir session shows new reservoir mapping to Ivar Aasen field, new methods in seismic Tie in King Lear discoveries, new laboratory studies of fluid models, localisation for ensemble-based history matching methods, and new models for estimating fluid properties.</strong></td>
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<tr>
<td>0930-1230</td>
<td>Room: Småtroll</td>
<td>Technical Session: Production and Operation</td>
<td>Baker Hughes, Centrica Energy Upstream, ClampOn, Schlumberger, Statoil</td>
<td>Erlend Vefring, Iris</td>
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<td><strong>Session Chair:</strong></td>
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<td><strong>Erlend Vefring</strong>, Iris</td>
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<td><strong>This session will cover a variety of subjects optimising bean-up procedure after well shut-in, integrated water management cycle, EST-DST well testing with new methodologies, development and execution of sand control gas completions in the York Field in UK, and finally the most efficient use of acoustic sand monitors.</strong></td>
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<tr>
<td>0930-1230</td>
<td>Room: Peer Gynt-salen</td>
<td>Technical Session: Drilling (Fluid/Cement/Risk)</td>
<td>Add Energy LLC, Aker BP, Corex (UK) Ltd, Schlumberger, University of Stavanger</td>
<td>Morten Didriksen, Schlumberger</td>
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<td><strong>Session Chair:</strong></td>
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<td><strong>Morten Didriksen</strong>, Schlumberger</td>
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<td><strong>This drilling session will cover new research within cement processes, managed pressure drilling, directional drilling, fluid invasion and Dynamic Kill Operations with the relief well injection spool.</strong></td>
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<td>Session Chair: Sajjad Hussain, Schlumberger</td>
<td>This drilling session will cover drilling mud process control, automation of a laboratory-scale drilling and full scale drilling automation. Other exciting subjects are: well specific blowout contingency plans that cover engineering analysis of the deployment, installation, and soft shut-in, and new tubular design ellipse with backup pressure.</td>
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<tr>
<td>1400-1715</td>
<td>Room: Klokkeklang</td>
<td>Technical Session: Well Intervention</td>
<td>Altus Intervention AS, Maersk Oil, University of Stavanger, ZADCO Petroleum Company</td>
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<td>Session Chair: Terje Skeie, Weltec</td>
<td>The well intervention session will look at plug and abandonment from a riserless intervention, sustained intervention campaigns over a period of 10 years with riserless light well intervention, combining a surface jet pump with nitrogen lifting through coiled tubing, leakage calculator for plugged and abandoned wells, and finally a novel strategy for restoring well integrity by curing high annulus-B pressure and zonal communication.</td>
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### Wednesday 5 April 2017

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<th>Time</th>
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<th>Presentations</th>
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<tr>
<td>1400-1715</td>
<td>Room: Småtroll</td>
<td>Completion</td>
<td>IRIS Petroleum, NOV Completion Tools, Schlumberger, University of Stavanger, Welltec</td>
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<td></td>
<td><strong>Session Chair:</strong> John Fallstrøm, Halliburton</td>
<td>The completion session will cover, a traction tool for liners and sand screens, multistage stimulation technology, development and field wide implementation in a chalk field, next generation annular barrier verification systems, extended reach open hole gravel pack completion, electrical resistivity autonomous inflow control device (ER-AICD) and its application in gravel pack completions.</td>
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<tr>
<td>1400-1715</td>
<td>Room: Peer Gynt-salen</td>
<td>Drilling and ERD</td>
<td>IRIS Petroleum, NOV, Schlumberger, Teknova AS, University of Stavanger</td>
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<tr>
<td></td>
<td><strong>Session Chair:</strong> Peter Smits, Statoil</td>
<td>The drilling and ERD session will cover presentations on optimising ERD wells, logging systems, directional surveying and cementing.</td>
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<tr>
<td>1400-1715</td>
<td>Room: Troldtog</td>
<td>Digital Oilfield and CO$_2$</td>
<td>Halliburton, Pro Well Plan, Sretenovic consulting, University of Bergen, University of Stavanger</td>
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<td></td>
<td><strong>Session Chair:</strong> Jan-Erik Nortvedt, Epsis</td>
<td>The digital oilfield and CO$_2$ session will include cybersecurity risks and exposures to remote operations, offshore exploratory drilling in low oil price periods, maximising value creation from flexibility, CO$_2$ Injection within CH4 hydrate, revisiting the Bow-Tie risk assessment method</td>
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</table>
Coffee Breaks/Luncheon

All coffee breaks and lunch will take place in the exhibition hall and are available to all attendees.

Reception

The conference reception will be held in the Grieghallen exhibition area on 5 April from 1730 to 1845 hours.

Event Registration Fees

**Full delegate registration** includes technical sessions, entry to the exhibition, coffee breaks, lunch, reception, and one copy of the conference Proceedings.

**Student registration** includes technical sessions, entry to the exhibition, coffee breaks, lunch and the reception. The Conference Proceedings are not included, but can be purchased separately.

You can register at [www.spe.org/events/berg](http://www.spe.org/events/berg) and all registration fees are in Norwegian Kroner (NOK) and are subject to 25% local tax.

<table>
<thead>
<tr>
<th>Full Registration Fees (Inc Norwegian VAT)</th>
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<tbody>
<tr>
<td>SPE/AAPG Member</td>
<td>NOK 4350</td>
</tr>
<tr>
<td>Non Member</td>
<td>NOK 5020</td>
</tr>
<tr>
<td>Author/Committee/Session Chair</td>
<td>NOK 3685</td>
</tr>
<tr>
<td>SPE Student Member</td>
<td>NOK 330</td>
</tr>
<tr>
<td>Non Student Member</td>
<td>NOK 400</td>
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</table>

Badges

Attendee badges will be available for collection at the registration desk on Wednesday 5 April from 0730 hours, badges are not mailed in advance.

Cancellations

Cancellations must be submitted in writing to the SPE Office in London. Cancellations received prior to 5 March 2017 will receive a refund less a NOK 650 handling fee. For cancellations received after 5 March 2017, no refunds will be paid although substitutions can be made. Please send requests by email to formslondon@spe.org.

This refund Policy applies to all refunds except in the event that the UK Foreign & Commonwealth Office issues or designates an “Advise against all travel” travel advisory for Bergen and/or Norway for the dates of the event (“Travel Advisory”). In the event of a Travel Advisory, (i) SPE may, at its sole option, change the location and/or dates of the event (“Relocated Event”) and, (ii) delegates may, at their sole option, request a full refund without penalty or, in the event of a Relocated Event, have the registration transferred to the Relocated Event.

In the unlikely case of cancellation of an event by SPE, SPE shall not accept liability for any consequential loss and shall have no liability to reimburse any other costs that may have been incurred, including transport costs, accommodation etc. SPE encourages delegates to take out travel insurance when making travel and accommodation arrangements.
Exhibiting/Sponsorship

Gain more exposure for your company and brand by exhibiting at this leading industry event. The exhibition will run concurrently with the technical conference and will be the location for all refreshment breaks, delegate lunch and the conference drinks reception.

Being part of this renowned event allows you to:

• Showcase your advanced technologies, key services and expertise
• Personally interact with potential and current customers
• Acquire valuable sales leads and customer feedback

Contact Information

For further information about sponsorship or advertising opportunities at the SPE Bergen One Day Seminar contact:

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Sales Manager, Events
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Fax: +44 (0) 207 299 3309
Email: dguest@spe.org

Sustainability Statement

SPE is committed to ensuring that the environmental impact of our events is kept to a minimum. We aim to make progress in the field of sustainability through reducing energy usage, promoting eco-friendly mobility, reducing water consumption and limiting waste, all core values in keeping with those of the oil and gas industry.
The Society of Petroleum Engineers (SPE) is a not-for-profit professional association whose members are engaged in energy resources development and production. SPE serves more than 143,000 members in 147 countries worldwide. SPE is a key resource for technical knowledge related to the oil and gas exploration and production industry and provides services through its publications, events, training courses, and online resources at www.spe.org.

The SPE Norway Council was established in June 2015 to facilitate structured collaboration between the five independent SPE Sections in Norway. The Sections are geographically located in Bergen, Northern Norway, Oslo, Stavanger and Trondheim with local boards and student chapters. The role of the Norway Council is to provide a framework for the Sections within Norway to pursue common interests in technical and professional matters related to SPE’s purpose and scope of technology. The Council consists of two members from each local Section and, new as of this year, the SPE Chair from each Section is also part of the Council. The Council will act as an advisor to the Regional Director on SPE matters in Norway and vice versa.

The SPE Norway Council will not require any funding; all the funding that the SPE Sections in Norway receive from their supporters and partners goes directly to the Sections. The Council will be a place where the Sections can unite their voices and approach players in the Norwegian oil industry who are looking for a national presence and collaboration with SPE in Norway.

Norway is an important country in the world of oil and gas and thus there are many SPE members located here, more than 2500 professionals and around 700 student members. SPE Norway will be a National Council that will focus on the co-ordination of SPE activities at national level as well as collaboration with SPE International. The Council will take part in typical activities that unite the Sections and are of national importance, it shall help grow the total member base in Norway, focus on marketing of SPE and its importance to the Norwegian industry, and interact with other professional societies and interest groups inside Norway. The establishment of SPE Norway Council is a clear sign that Norway is an important country for the SPE. SPE has a strong presence in Norway today which is due to the hard work that each local Section is carrying out every season and providing a technical and social arena for Oil and Gas professionals in Norway.

Karl Ludvig Heskestad
SPE Regional Director North Sea