SPE Norway One Day Seminar

14 May 2019  Quality Hotel Edvard Grieg, Bergen, Norway

www.spe.org/go/19berg
Dear Colleague,

After a couple of years with upturn in the oil and gas industry with higher product prices and increased activity levels, we now see rapid fluctuations in product prices. The future, is as always uncertain, both in the short and long term. Population and economic growth still drives the global need for energy to increase. The focus on energy transition is growing, driven by large positive steps forward in global climate discussions and rapid technology development. At the same time, we must remember that changing our sizable and complex global energy system will inevitably take time and oil and gas will have a very important part in the energy mix for decades to come.

To be competitive in an uncertain future, our industry’s ability to increase efficiency, innovate, develop and make use of new technology is ever important. We basically must reduce the cost per produced barrel to remain competitive. Rapidly developing digital technologies will become a game changer for our industry. New ways of collaboration between industry players is vital to challenges and opportunities facing us.

The SPE Norway One Day Seminar will focus on innovation and technology as well as operational challenges and solutions within drilling, reservoir management and production. We believe this seminar represents a great opportunity to see the latest technology, update your knowledge and meet companies and industry colleagues to discuss challenges and opportunities in our changing industry context.

We look forward to meeting you in Bergen in May!

Visit www.spe.org/go/19berg to register for the SPE Norway One Day Seminar
About the Event

The renowned annual seminar from SPE has established itself as a must-attend event providing the highest calibre of peer-selected technical papers tackling the key issues facing the Norwegian Continental Shelf and the wider E&P industry.

The 2019 event, hosted by Equinor, will embrace its tradition of excellence and further strengthen its unique position in the marketplace. Whether your goal is to discover new insights, broaden your professional network or showcase your products, the 2019 SPE Norway One Day Seminar offers an unparalleled opportunity.

Who will Attend

- 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 organisations
- Government regulators
- Non-governmental organisations
- Health, safety, and environment professionals and representatives

Top Reasons to Attend

- The only dedicated event in Norway addressing well, drilling, completion, and intervention issues
- Highly respected and researched technical content encompassing topical panel discussions and technical sessions focusing on Digitalisation and Optimising Operation Efficiency; Low Carbon and HSE; Reservoir; Production and Well Operations; Drilling; Completion and Well Interventions
- Hear from 30+ industry leaders and find out their perspectives on the oil and gas industry in the Norwegian Continental Shelf
- Expand your knowledge on the latest technological innovations
- Broaden your professional network by meeting 250+ industry peers across the region and globally.

Registration is now open

Attend the highly respected SPE Norway One Day Seminar to experience expert technical presentations on a diverse range of oil and gas disciplines as well as an exhibition that will showcase leading organisations active within the sector.


Disciplines

- Multi-disciplinary
- HSE
- Drilling
- Completions
- Management and Information
- Projects Facilities and Construction
- Production and Operations
- Reservoir Description and Dynamics
Transforming the NCS to deliver sustainable value for decades

Specific activities to renew the NCS include:
- Drill up to 3000 wells during the coming decades
- Extend the lifetime of more than 20 installations
- Drill 20-30 exploration wells annually and actively explore for gas
- Explore the possibilities of floating offshore wind and electrification as means to reduce greenhouse gas emissions
- Increase the pace of digitalisation and use of new technology

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VP PETEC, Technology and Competence
Equinor

Alv Bjørn Solheim
Technical Director/Deputy Managing Director
Wintershall

Petter Sørhaug
Chief Geologist
AkerBP

Katinka Dahlberg, TechnipFMC
John Fallstrom, Halliburton
Thorbjørn Kaland, University of Bergen
Tom Koloy, National Oliwell Varco
Jan-Erik Nordtvedt, Epsis

Jørn Opsahl, Tomax AS
Edel Reiso, Equinor
Peter Frank Smits, Equinor
Erlend Vefring, IRIS
Nils Andre Aarseth, AkerBP

Giedre Malinauskaite, Cognite
Kjell-Rune Hoff, Baker Hughes, a GE company
Øystein Arild, University of Stavanger
Olav Flornes, Lundin
Roar Morten Kjelstadli, AkerBP

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## Schedule of Events (as of January 2019)

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<th>Room: Nina</th>
<th>Room: Anitra</th>
<th>Room: Ibsen</th>
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<tr>
<td>Opening/Plenary Session</td>
<td>Technical Session</td>
<td>Technical Session</td>
<td>Technical Session</td>
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**Tuesday 14 May 2019**

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<th>Time</th>
<th>Room: Alexandra</th>
<th>Room: Nina</th>
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<tbody>
<tr>
<td>0800–0900</td>
<td>Registration</td>
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<tr>
<td>0800–1900</td>
<td>Exhibition Open</td>
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<tr>
<td>0900–1030</td>
<td>Opening Panel Session: Value creation on NCS for decades – enabled by technology, innovation and digitalisation</td>
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<tr>
<td>1030–1100</td>
<td>Coffee Break/Exhibition/ Knowledge Sharing e-Posters</td>
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<tr>
<td>1100–1230</td>
<td><strong>Technical Session 1:</strong> Digitalisation and Optimising Operations Efficiency</td>
<td><strong>Technical Session 2:</strong> Drilling – Session 1</td>
<td><strong>Technical Session 3:</strong> Reservoir – Session 1</td>
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<tr>
<td>1230–1330</td>
<td>Lunch</td>
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<tr>
<td>1230–1330</td>
<td>Young Professionals Lunch Session</td>
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<tr>
<td>1330–1500</td>
<td><strong>Technical Session 4:</strong> Production &amp; Well Operations – Field Cases</td>
<td><strong>Technical Session 5:</strong> Drilling – Session 2</td>
<td><strong>Technical Session 6:</strong> Reservoir – Session 2</td>
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<tr>
<td>1500–1530</td>
<td>Coffee Break/Exhibition/ Knowledge Sharing e-Posters</td>
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<tr>
<td>1530–1700</td>
<td><strong>Technical Session 7:</strong> Well Operations – Intervention and Integrity</td>
<td><strong>Technical Session 8:</strong> Drilling – Session 3</td>
<td><strong>Technical Session 9:</strong> Reservoir – Session 1</td>
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<tr>
<td>1700–1800</td>
<td>Conference Reception</td>
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<tr>
<td>1800–2100</td>
<td>(Optional) Post-conference dinner</td>
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**Sessions**

- Opening / Plenary Session
- Panel Session
- Case Study Session
- Special Session
- Multi Discipline
- HSE
- Drillings
- Completions
- Management & Information
- Projects Facilities & Construction
- Production and Operations
- Reservoir Description & Dynamics

Visit [www.spe.org/go/19berg](http://www.spe.org/go/19berg) to register for the SPE Norway One Day Seminar
Technical Programme (as of January 2019)

Tuesday 14 May 2019

SPECIAL WELCOME FROM THE MAYOR OF BERGEN, MARTE MJØS PERSEN

0900 – 1030 Room: Alexandra
Opening Panel Session: Value creation on NCS for decades – enabled by technology, innovation and digitalisation

Session Chairpersons:
- Per Haaland, VP D&W Tech, Equinor
- Karl Johnny Hersvik, CEO, AkerBP
- Arne Kvamsdal, Halliburton Global Account Vice President for Equinor, Aker BP and Aker Energy

Tuesday, 14 May 2019, 1100-1230

01T Digitalisation and Optimising Operations Efficiency
Room: Nina

Session Chair: Katinka Dahlberg, FMC Technologies

The digital transformation of the oil and gas industry is happening right now. This session looks at how digitalisation and data sharing philosophies can change business models, as well as enable optimised operations and efficiency gains through better insight, faster decisions and optimised workprocesses.

Presentation

1100 195602
Digitalization and Data Sharing Changes Business Models in E&P Supply Chain
G. Malinauskaite, F. Laborie, Cognite; H. Geir, Framo; H. Ivar Helge, Aker BP

1130 195631
Data on Work – an Untapped Asset for Operational Improvements
J. Nordtvedt, Epsis AS; H.W. Larsen, Epsis; B. Stafford, Epsis US LLC; T. Unneland, Epsis
## Technical Programme

**02T Drilling I**  
Room: Anitra

**Session Chair:** Thorbjørn Kaland, University of Bergen

The progress of drilling technology is exposed widely in this section. Scientists and engineers from academia, oil companies and service companies are working together to develop new methodology and experiences. The session include Depletion and Re-Pressurization in the Valhall Field, Reconstruction of Pipe Movement, Optimized Trajectory and Efficient Slot Recovery, Model Parameters on Frictional Pressure Loss Uncertainty and Accuracy of Combining Overlapping Wellbore Surveys.

### Presentation

<table>
<thead>
<tr>
<th>Time</th>
<th>Presentation</th>
<th>Authors</th>
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<tbody>
<tr>
<td>1100</td>
<td>Reservoir Stress–Path Measured During Depletion and Re-Pressurization in the Valhall Field</td>
<td>T.G. Kristiansen, A. Bauer, R.E. Flatebø, A. Guida, O. Nes, Ø. Skomedal, Aker BP</td>
</tr>
<tr>
<td>1130</td>
<td>OpenLab: Design and Applications of a Modern Drilling Digitalization Infrastructure</td>
<td>N. Saadallah, J. Gravdal, R. Ewald, S. Moi, B. Daireaux, A. Ambrus, NORCE; D. Sul, UIS; R.J. Shor, University of Calgary; S. Ioan Sandor, AkerBP; M. Chojnacki, J. Odgaard, Maersk Drilling; S. Silvetsen, K. Heiliang, Miles</td>
</tr>
<tr>
<td>1200</td>
<td>Reconstruction of Pipe Movement from Downhole High Frequency Measurements</td>
<td>E. Cayeux, NORCE; P. Seim, L.J. Solvi, Aker BP ASA; H. Ulvik, E. Solbu, NOV</td>
</tr>
<tr>
<td>195632</td>
<td>Drilling Fluids – Lost Circulation Treatments</td>
<td>A. Saasen, University of Stavanger; J.K. Vasshus, K.R. Klungtvæl, European Mud Company; H. Khalifeh, University of Stavanger</td>
</tr>
<tr>
<td>195609</td>
<td>Alternate</td>
<td></td>
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<tr>
<td>195619</td>
<td>Drilling Fluids Power-Law Viscosity Model – Impact of Model Parameters on Frictional Pressure Loss Uncertainty</td>
<td>S. Risoen, F.P. Iversen, NORCE AS; A. Saasen, PRORES AS; M. Khalifeh, R. Brasilheiro, University of Stavanger</td>
</tr>
<tr>
<td>195623</td>
<td>Low Side Whipstock Exits: an Aid to Optimized Trajectory and Efficient Slot Recovery</td>
<td>S. Hussain, Schlumberger</td>
</tr>
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</table>
### Technical Programme

**03T Reservoir I**  
Room: *Ibsen*

**Session Chair:** Edel Reiso, Equinor

This session includes an exciting range of reservoir engineering topics, ranging from laboratory experiments of oil recovery mechanisms with nanoparticles in the injection water to the operational part of our business with real-time fluid mapping and a new method of measuring the water pressure inside a hydrocarbon column. You can look forward to an exciting session that will enlighten you with new knowledge and inspire you!

<table>
<thead>
<tr>
<th>Presentation</th>
<th>Time</th>
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</table>
| **Real-Time Fluid Mapping Improves Reserve Development Through Optimized High-Angle Infill Drilling**  
M.C. Bravo, Schlumberger Norge AS; N. Gueze, A. Kotwicki, Aker BP; M. Baig, M. Horstmann, Y. Blanco, Schlumberger; C. Guevara, Schlumberger Norge AS | 1100 | 195608 |

**Alternate**

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<tr>
<th>Presentation</th>
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</table>
| **Experimental Evaluation Of Oil Recovery Mechanisms Using A Variety Of Nanoparticles In The Injection Water**  
A. Bila, O. Torsaeter, Department of Geoscience and Petroleum, Norwegian University of Science and Technology-NTNU | 1200 | 195638 |

**Frosk: A Success Case for ILX – The Plan for Appraisal and Early Thoughts for Development**  
K.D. Best, AkerBP | 1130 | 195637 |

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<tr>
<th>Presentation</th>
<th>Time</th>
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</table>
| **A Method for Estimation of Minimum Pore Throat Radius from Routine Core Analysis Data in Chalk**  
M. Nourani, GEUS; A.G. Meyer, Natural History Museum, University of Copenhagen; L. Sigalas, GEUS; D. Olsen, Geol Survey-Denmark/Greenland; L. Stemmerik, Natural History Museum, University of Copenhagen | 195598 |

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<tr>
<th>Presentation</th>
<th>Time</th>
<th>ID</th>
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| **Sparse Representation of 4D Seismic Signal Based on Dictionary Learning**  
R.V. Soares, X. Luo, G. Evensen, NORCE AS | 195599 |

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<tr>
<th>Presentation</th>
<th>Time</th>
<th>ID</th>
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</table>
| **Adsorption of Crude Oil Polar Components onto Silica-Rich Chalk and its Impact on Wetting**  
I. Klewiah, I.D. Piñerez Torrijos, S. Strand, T. Puntervold, University of Stavanger; M. Konstantinopoulos, Technical University of Crete | 195603 |
# Technical Programme

**Tuesday, 14 May 2019, 1330-1500**

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<tr>
<td>04T Production &amp; Well Operations – Field Cases</td>
<td>1330</td>
<td>Safe and Efficient Reservoir Injection – History and the Future</td>
<td>F. Uriansrud, Equinor ASA</td>
</tr>
<tr>
<td></td>
<td>1400</td>
<td>AICD Implementation on Oseberg H Vestflanken 2</td>
<td>A. Lien, O. Midttveit, M. Halvorsen, Equinor ASA</td>
</tr>
<tr>
<td>Alternate</td>
<td>1450</td>
<td>Effect of Mud on Cement Sheath Integrity</td>
<td>R. Skorpa, B. Werner, T. Vralstad, SINTEF</td>
</tr>
<tr>
<td></td>
<td>1500</td>
<td>Reducing HSE Risks Through Automation and Closed Loop Systems</td>
<td>O. Nilsson, S. Smith, FourPhase</td>
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<td></td>
<td>1530</td>
<td>The Impact of Production Logging Tool (PLT) on Scale Squeeze Treatment Lifetime and Management of Scale Risk in Norwegian Subsea Production Wells – A Case Study</td>
<td>M.M. Jordan, Nalco Champion, An Ecolab Company</td>
</tr>
</tbody>
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## 05T Drilling II
### Room: Anitra

**Session Chair:** Jørn Opsahl, Tomax AS

Improving efficiency and reducing risk are vital to drilling operations. In harsh and challenging drilling environments, new technologies are required to further ensure safety, efficiency and field prosperity. This session covers three advances within drilling operations to reduce risks and optimise drilling.

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<tr>
<th>Presentation</th>
<th>1330</th>
<th>195624</th>
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<tbody>
<tr>
<td><strong>Disruptive Clamp-on Technology Tested for Mud Measurement</strong></td>
<td>K. Olsvik, K. Toftevåg, R. Kippersund, Xsens AS; I. Kjasnes, G. Elseth, Equinor ASA; M. Hansen Jondahl, USN</td>
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<tr>
<td><strong>1400</strong></td>
<td>195622</td>
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<tr>
<td><strong>Innovative and Established LCM Cementing Solutions Combined to Create Novel LCM Cementing Fluid Train</strong></td>
<td>M. Olsen, I. Viste, K. Rehman, G. Lende, Halliburton; G. Smaaskjaer, P. Haugum, R. Naess, J. Mo, Lundin Norway AS</td>
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<td><strong>1430</strong></td>
<td>195641</td>
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<tr>
<td><strong>Flow Loop Trial of an Autonomous Downhole Choke for Compensation of Rig Heave-Induced Surge and Swab</strong></td>
<td>D. Gorski, M. Kvernland, Heavelock AS; H. Borgen, Techni AS; J. Godhavn, Equinor ASA; O.M. Aamo, S. Sangesland, Norwegian University of Science &amp; Technology</td>
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## 06T Reservoir II
### Room: Ibsen

**Session Chair:** Nils Andre Aarseth, AkerBP

This session includes an exciting range of reservoir engineering topics, ranging from laboratory experiments of oil recovery mechanisms with nanoparticles in the injection water to the operational part of our business with real-time fluid mapping and a new method of measuring the water pressure inside a hydrocarbon column. You can look forward to an exciting session that will enlighten you with new knowledge and inspire you!

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<th>Presentation</th>
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<th>195606</th>
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<tr>
<td><strong>Fast 4D Geomechanical Modeling with Multiple Applications</strong></td>
<td>L. Renli, G. Ke, O. Helstrup, N. Thompson, Equinor ASA</td>
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<td><strong>1400</strong></td>
<td>195639</td>
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<tr>
<td><strong>Water Pressure Measurement Inside a Hydrocarbon Column</strong></td>
<td>T.A. Rolfsvaag, Hydrophilic AS; J. Zuta, R. Askarinezhad, NORCE; C.M. Lindsay, Core Specialist Services Ltd; K.O. Vatne, A. Lohne, Y. Guo, J.E. Iversen, NORCE</td>
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<tr>
<td><strong>1430</strong></td>
<td>195630</td>
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Technical Programme

Tuesday, 14 May 2019, 1530-1700

07T Well Operations – Intervention and Integrity
Room: Nina

Session Chair: Roar Kjelstadli, Aker BP ASA

This session will cover three different studies. First, a paper is presented addressing the loss mechanism for drilling in depleted reservoirs – an issue of particular importance for infill drilling in depleted reservoirs. Then a paper on new intervention technique is presented – also addressing aspects of design, qualification, testing, planning and execution. Finally, a well integrity paper is presented – focusing on risk and safety factors.

Presentation

1530 195605
Loss Mechanisms Understanding – the Key to Successful Drilling in Depleted Reservoirs?
L. Renli, G. Ke, O. Helstrup, N. Thompson, Equinor ASA T. Scheldt, J.S. Andrews, Equinor; A. Lavrov, SINTEF

1600 195604
Well Integrity – Managing the Risk
A. Teigland, B. Brechan, NTNU; S. Sangesland, Norwegian University of Science & Technology; s. dale, NTNU

1630 195614
Successful Deployment of a New Intervention Technology Using a Reinforced, Flexible, High Pressure Hose; a World First
K.M. John, Total SA; N.I. Stubbrud, Quality Intervention

08T Drilling III
Room: Anitra

Session Chair: Kjell-Rune Hoff, Baker Hughes, a GE company

This session puts theory into practice and will cover a wide variety of topics. First, Norway’s leading engineers in wellbore surveying will describe best practices and recommendations to overcome challenges related to magnetic directional surveying in the Barents sea. Then, we will investigate surface and downhole measurements of drillstring vibrations by utilizing high-speed optics in combination with traditional sensors and ultimately end this session by investigate the selection of drill-in and completion fluid of the Dvalin HT Gas Field.

Presentation

1530 195600
Best Practices and Recommendations for Magnetic Directional Surveying in the Barents Sea
I. Edvardsen, Baker Hughes, a GE company; E. Nyrnes, Equinor; M. Gullikstad Johnsen, University of Tromsø

1600 195610
Comparative Study of Surface and Downhole Measurements of Drillstring Vibrations
E. Wiktorski, S. Geekiyanage, E.A. Løken, D. Sui, University of Stavanger

1630 195601
Systematic Selection of Drill-in and Completion Fluids for Development of the Dvalin HT Gas Field
O. Czuprat, DEA Deutsche Erdoel AG; B.O. Dahle, DEA Norge AS; U. Dehmel, DEA Deutsche Erdoel AG; R. Ritschel, J. Storhaug, DEA Norge AS
**Technical Programme**

**09T Completion and Well Intervention**

**Room: Ibsen**

**Session Chair:** Peter Smits, Equinor ASA

This session includes papers from both completion and well intervention operations, combined with new technology. This session will show case technology development and first field trials of lateral jetting. It will investigate cost effective solutions for P&A operation by multi-string logging solution and dive into dissolvable technology to enhance operational efficiency. Presenters are both operators and service companies. In other words this session will be worth a visit!

**Presentation**

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<tr>
<th>Time</th>
<th>Paper Title</th>
<th>Authors</th>
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<tr>
<td>1530</td>
<td>World First Simultaneous Jetting of 72 Laterals with Solids Control – Technology Development and Field Trial</td>
<td>F. Bjørnseth, R. Flatebø, T.G. Kristiansen, T. Reinertsen, Y. Caline, Aker BP ASA; K. Solhaug, M. Leinenbach, Fishbones AS</td>
</tr>
<tr>
<td>1630</td>
<td>Dissolvable Technology Enhances Operational Efficiency of Offshore Completion Operations on the NCS</td>
<td>V. Keerthivasan, T. Koloy, G. Saetre, NOV Completion &amp; Production Solutions</td>
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**Alternate**

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>195636</td>
<td>Stretching Lower Completion Limits: Longest One Screen Run in Horizontal ERD/MLT Well on Troll Field, North Sea</td>
<td>M. Qamar, A. Vold, Equinor Asa</td>
</tr>
<tr>
<td>195635</td>
<td>Precision Surgery for Well Work-Over. An Innovation in Well Intervention</td>
<td>M. Benguergoura, Welltec; J. Bergem, AkerBP</td>
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Visit [www.spe.org/go/19berg](http://www.spe.org/go/19berg) to register for the SPE Norway One Day Seminar
Coffee Breaks/Luncheon
All coffee breaks and lunch will take place in the exhibition hall and are available for all attendees.

Reception
The conference reception will be held in the Exhibition area on 14 May from 1730 to 1830 hours.

Badges
Attendee badges will be available for collection at the registration desk on Tuesday 14 May from 0800 hours, badges are not mailed in advance.

Event Registration Fees
Full delegate 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/en/2019/conference/19berg/register.html and all registrations fees are in Norwegian Kroner (NOK) and are subject to 25% local tax.

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.

Cancellation and Refund Policy
Cancellations must be submitted in writing to the SPE Office in London at formslondon@spe.org. Cancellations prior to 19 March 2019 will receive a full refund less a NOK 703 handling fee. Cancellations received on or between 19 March 2019 and 14 April 2019 inclusive will receive a 50% refund. For cancellations after 14 April 2019, no refunds will be paid although substitutions can be made.

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.

Optional Conference Dinner
The dinner will include a 3-course meal and 3 beverages (Wine, Beer or Mineral Water) for NOK 900.

Full Registration Fees
All fees shown below are in Norwegian Kroner (NOK) and subject to 25% local tax

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<tr>
<th>Category</th>
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<tbody>
<tr>
<td>SPE Member</td>
<td>NOK 4054</td>
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<tr>
<td>Non Member</td>
<td>NOK 4865</td>
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<tr>
<td>Author/Speaker/Committee/Session Chair</td>
<td>NOK 3514</td>
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<tr>
<td>SPE Student Member</td>
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</tbody>
</table>

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