Reservoir & Production Management 2019

Tuesday 12. November

HOUR:	DESCRIPTION:
08:30	**Coffee and Registration**
09:00	**Opening and welcome** Chair of the program committee
	Business Environment & New Players Chair: Vincent Kretz, ONE-Dyas Norge & Alexander Shadchnev, Schlumberger
09:10	**Draugen Rejuvenation – the OKEA way** Håvard Morset, Okea
09:40	**Taxation and extraction rates** Petter Osmundsen, University of Stavanger *When designing petroleum taxation, attention is on the sanctioning decision. The tax system should not make projects unprofitable. The presentation is about decisions that are not addressed. The tax system also impacts project design. Cheaper and less flexible development concepts, less pre-drilling and fewer wells lead to lower extraction rates*
	Digitalisation in Reservoir Management
10:10	**Going Digital – change the industry** Bjørn Kvanvik, Petoro
10:40	**Refreshments/networking**
11:10	**The evolution of reservoir modeling on Johan Sverdrup** Per Olav Eide Svendsen, Equinor *While reservoir modeling plays an important role in subsurface digitalization, digitalization is also changing reservoir modeling. Tech and tools are important, but how we work, how we integrate and how we think is also changing. Keywords are ensemble-based methods, automation, Agile, Lean, transparency, T-shaping, web-apps, open source, APIs, a bit of chaos, some friction and lots of fun.*
11:40	**Digitalisation journey in reservoir management – from promise to performance** Alexander Shadchnev, Schlumberger *Digital technology promises solutions for the E&P industry, but we need to make them real – fast, scalable, and cost-efficient. No single organization or system has all the answers. We need to break down barriers to deliver the transformational change digital promises. Operators, service companies, developers, start-ups, tech giants – everyone has a part to play. The digital future is about openness and new partnerships, working together, in order to deliver superior return-on-investment, efficient exploration, capital efficient projects and profitable production in our industry.*
12:10	**Lunch**

HOUR:	DESCRIPTION:
	Chair: Christian Rambech Dahl, Vår Energi & Kari Nordaas Kulkarni, Equinor
13:10	**Using Machine Learning for Production Optimization and Chalk Influx Mitigation** Johan Hatleskog, Cognite *This presentation will showcase how Cognite used Machine Learning to develop and make available data-based recommendation tools and applications for Aker BP's production staff to detect and mitigate chalk influx, enabling increased production efficiency. Leveraging tools for visual inspection, ML, and physics simulators Cognite and Aker BP can detect chalk influx events at Valhall wells in the early stages: Using labeled data to identify low- and high-risk operational regions and giving recommendations about mitigation actions when identifying ongoing events like choke back and adjust gas lift.*
13:40	**Brage Digital Twin** Peter Kronberger, Wintershall Dea *Digital transformation of existing processes using technologies such as big data, advanced data analytics, machine learning, automation and cloud computing will enable continuous performance improvements within the operational sphere. The application of the technology will link the physical and digital world, providing a digital model of physical assets and processes. It will represent the evergreen, wholly integrated digital asset model - from reservoir to export pipeline. The Brage operations team identified processes with the highest potential for digital transformations during an initial opportunity framing workshop. Based on business needs clear emphasis is in the areas of production & well performance optimization, live-data implementation and handling, as well as database integration and dashboarding.*
	IOR / EOR projects
14:10	**Water Shut-Off with Polymer in the Alvheim Field** Kåre Langaas, Aker BP *A drilling-grade xanthan polymer was bullheaded in an Alvheim production well, causing reduced well productivity but also changed water cut trend. The field pilot, follow-up laboratory studies and integrated reservoir modelling point to a potential method for water shut-off and EOR for Alvheim and similar fields.*
14:40	**Refreshments/networking**
15:10	**Extended Screening Tool for EOR on NCS** Sølvi Amundrud, Norwegian Petroleum Directorate *In 2017 NPD performed a technical screening of the EOR potential on the NCS. The technical potential is close to 700 MSm3, when 46 of NCS' largest oil fields and discoveries are screened for 14 EOR methods. The screening study is now extended to include operational, environmental and economic criteria. The presentation shows the results of this extended screening.*
15:40	**OGA's role in getting EOR projects realised on the UKCS** Panteha Ghahri, Oil & Gas Authority UK *This study look at the current state of UKCS EOR projects, OGA activities and collaboration with industry and universities. The OGA currently supports number of EOR joint industry projects (JIPs) and carrying a lab study work to screen low sal EOR for the number of UKCS fields. The results of the first screening test fluid-fluid are out and show a positive response.*

HOUR:	DESCRIPTION:
16:10	**Balder X, with 4D!** Alexandre Bertrand, Vår Energi *Vår Energi took over the operatorship of Balder and Ringhorne in 2017 and initiated a major redevelopment plan to maximize the area potential by extensive infill drilling, increasing processing capacity and extending field life. In 2018, a new seismic monitor survey was acquired to support this new development phase. Results from 4D processing show high repeatability and have been integrated at various stages of the redevelopment project: 4D history match, target de-risking through monitoring of fluid movements, detailed well planning.*
16:40	**Computational fluid dynamics (CFD) for well inflow modeling** Michael Byrne, Lloyd's Register
17:10	**End Day 1**
18:00	**Conference Dinner at Sola Strand Hotel**

Wednesday 13. November

HOUR:	DESCRIPTION:
08:30	**Coffee and Registration**
	Challenging Reservoirs, Reservoir Learning and new technology Chair: Anders Soltvedt, Norwegian Petroleum Directorate & Thom van der Heijden, Equinor
09:00	**Keynote: A significant resource base providing great opportunities** Ingrid Sølvberg, Norwegian Petroleum Directorate
09:30	**Valemon, the bewitched King? Who can break the spell?** Marte Ona Høistad, Equinor *Valemon is an HPHT field discovered in 1985, and the PDO was approved in 2011. At the time of the approval, five exploration wells were drilled in the area and were estimated to have proven 20% of the in-place volume. The 80 % of the resources not proven had a probability of discovery larger than 80%, with a large distribution in the in-place volumes and reserves. Today, 16 producers have been drilled; two of these were not completed due to water, and one did not reach the reservoir. The recovery factor, based on the expected PDO reserves/in-place volumes (oil equivalents) was 44% with 11 production wells. With the current 13 producing wells, the predicted recovery factor based on RNB2020 is 28% (oil equivalents). My presentation will focus on some of the main challenges we have had to understand the low recovery factor at Valemon.*
10:00	**The value of well testing** Søren Hegndal-Andersen, Lundin *Well testing has been an integral part of Lundin Norway's exploration and appraisal strategy for many years. This presentation will illustrate the value and key role well testing has played in the appraisal of Lundin's discoveries, including the Edvard Grieg and Johan Sverdrup fields.*

HOUR:	DESCRIPTION:
10:30	**Refreshments/networking**
11:00	**Ivar Aasen Drainage Strategy and Status after 3 years of Production** Kjell Christoffersen, AkerBP *The presentation will focus on the following key issues: • Drainage strategy • Importance of well design • Water injection challenges • Pressure decline and GOR increase • Drilling 2 new injectors to increase reservoir pressure • Drilling 2 new producers*
11:30	**Gullfaks Shetland the hidden carbonate gem** Elisabeth Iren Dale, Equinor *A fascinating story of a chalk reservoir in the overburden discovered 26 years after the production start of Gullfaks. The presentation will take you through the development from discovery to production, and will describe how Gullfaks manages to maintain production from Shetland without hindering the development of the main reservoir below.*
12:00	**Lunch** Chair: Vincent Kretz, Dyas Norge & Alexander Shadchnev, Schlumberger
13:00	**EMBRACE – minimizing prediction uncertainty in reservoir modelling** Vedad Hadziavdic, Wintershall Dea
13:30	**Groundbreaking and efficient stimulation technique for increased oil recovery on the Norwegian Continental Shelf** Lars Tore Berg, Fishbones *Presentation will view and discuss the three recent (2019) MST installations in the North Sea, in both carbonate and sandstone formations. Multilateral Stimulation Technology (MST) has proven to increase productivity in numerous wells and is experiencing increased attraction in the global E&P industry recovering from the downturn.*
14:00	**Refreshments/networking**
	Sustainability
14:30	**CO2 storage, uncertainty in plume migration - CCS Northern Lights project** Szczepan Polak, Equinor *The Northern Lights Project is a part of the full-scale CCS project. It is a result of the Norwegian government's ambition to develop a full-scale CCS value chain in Norway by 2024. The studies in the project cover capture of CO2 at the waste-to-energy plant and at the cement factory, and the combined transport and storage solution, governed by the collaboration agreement between Equinor, Shell, and Total in the Northern Lights Project. One of the main challenges within underground storage of CO2 is evaluation of its migration in the subsurface after it has been injected. The storage formation in the exploitation license where the project plans to store CO2 has not been previously appraised. This gives high level of uncertainty in the modelling of plume migration.*
15:00	**Sustainable resource development - Hywind Tampen** Jan Addics, Equinor
15:30	**Re-cap by chair of the program committee**

HOUR:	DESCRIPTION:
15:40	**END of conference day 2**